United States Department of Agriculture

Natural Resources Conservation Service

New Mexico Basin Outlook Report May 1, 2016

Winter comes to a close in the northern mountains. Hematite manual snow course.
Photo courtesy of: Aaron Miller (NRCS)

Basin Outlook Reports
and
Federal - State - Private
Cooperative Snow Surveys

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http://www.nrcs.usda.gov/wps/portal/nrcs/main/nm/snow/

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.

Summary

As the month of April comes to a close so to does New Mexico's hopes of an epic El Nino winter to make up for the consecutive years of drought. This winter was however an improvement over previous years. The state started off strong with November and December storms delivering a measurable amount of snow early in the season. The end of January marked a change in our weather as storm after storm tracked north to taunt us from the state line between Colorado and New Mexico. February and March brought unseasonably high temperatures and high winds which quickly chipped away at what was once an impressive snowpack. March was an exceptionally dry month for New Mexico and ultimately led to complete melt off in the southern half of the state. Despite this, the month of April renewed our hopes for a better than average water year bringing with it 115 percent of the average precipitation, and a small dose of snow to the northern mountains. In the end there just wasn't enough snow or precipitation throughout the winter to elevate this water year above average. Overall, statewide snowpack is currently at 76 percent of the median as compared to 45 percent last year at this time. Water year-to-date precipitation across New Mexico is 97 percent of the average which is also above last year's value of 82 percent. On average our reservoirs are at 45 percent of capacity. This water year's snowpack and precipitation filled 69 percent of that average. This is 10 percent above last year's total. At this stage the El Nino signature is rapidly weakening as New Mexico transitions to neutral conditions through late spring or early summer. There is however a light at the end of the tunnel. Currently a La Nina watch has been issued which brings with it the possibility of above average precipitation for most of the state. This would aid soil moisture to those areas suffering from long-term drought, as well as contribute to our reservoirs. I am ever hopeful for precipitation in any form over the next three months, however as always I strongly encourage water users to closely monitor conditions throughout May.

Snowpack

April was a relief after following on the heels of one of the driest Marches on record. Several decent weather systems moved through the state pushing the Canadian River Basin to 104 percent of median. If you remember, at the end of March this same basin was at 28 percent of median. The Pecos also saw some small gains falling just short of the median at 92 percent. Additionally, the northern mountains affecting the Rio Grande Basin received measurable snow bringing the total from 58 to 73 percent of median. The San Juan Basin remained stable from the previous month at 77 percent. Unfortunately the temperatures are just too warm to hold snow in the south and those basins have completely melted out. As a whole New Mexico is currently at 76 percent of the median for snowpack.

NEW MEXICO STATEWIDE SNOWPACK	Percent of Median	Last Year Percent of Median
CANADIAN RIVER BASIN	104	61
PECOS RIVER BASIN	92	53
RIO GRANDE BASIN	73	38
MIMBRES RIVER BASIN	0	0
SAN FRANCISCO-UPPER GILA RIVER BASIN	0	0
ZUNI-BLUEWATER BASINS	0	0
SAN JUAN RIVER BASIN	77	33
CHUSKA MOUNTAINS	0	0
RIO HONDO BASIN	0	0
Statewide Snowpack Total	**76**	**45**
# of sites	23	23

Precipitation

For much of the state April provided much needed relief from such a dry March. Except for the southwest corner of the state all basins received average to above average precipitation for the month. Overall, April delivered 119 percent of the average precipitation. Additionally, all basins except the Zuni/Bluewater Basins have cumulatively received above average amounts of precipitation for the water year-to-date. This currently puts New Mexico at 97 percent of average for the water year. Water-wise, the month of April helped to pull the state out of a hole that the previous couple of months helped create. Water year-to-date averages range from 132 percent in the Rio Hondo Basin to 75 percent in the Zuni/Bluewater Basins. As a whole this is a marginal increase over last month, yet still 15 percent above last year's total rainfall. The long range weather forecast continues to favor a wet weather pattern over the next three months, and I remain optimistic that we will receive more moisture in the form of rain as we move into the spring season.

Reservoirs

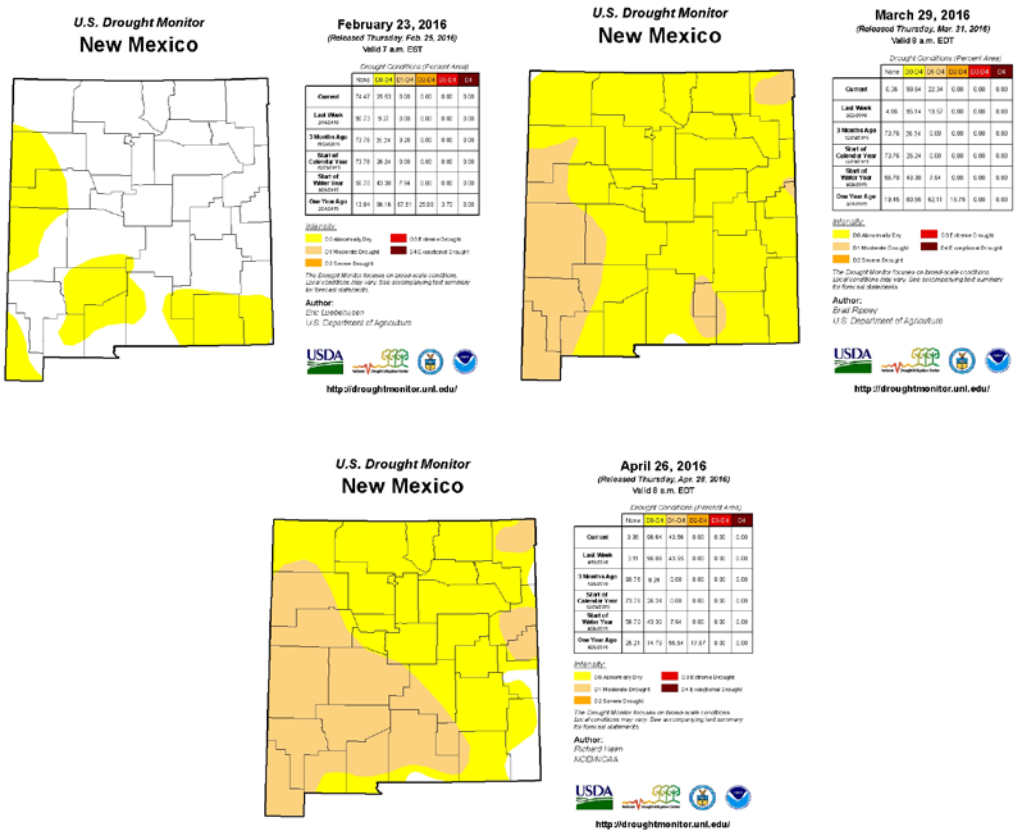
Storage levels across the state range from 2 to 88 percent of capacity. The statewide average is 31 percent of capacity as compared to 26 percent last year. The current percent of average statewide remains at 69 percent, as compared to 59 percent at this time last year. Storage levels are still below capacity at all reservoirs across the state. Navajo Reservoir located in the San Juan Basin is almost to capacity holding 1491 KAF which is 88 percent of capacity. Costilla Reservoir is at 73 percent of capacity, which is 139 percent of the average. With April storms refreshing snowpack in the northern mountains and southern Colorado I would expect basins in that region to improve slightly as temperatures increase during spring. Water users should closely monitor the runoff forecasts and reservoir levels through May.

NEW MEXICO STATEWIDE	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Abiquiu Reservoir	132.2	129.1	162.8	1192.8	11%	11%	14%	81%	79%
Bluewater Lake	2.0	2.3	11.1	38.5	5%	6%	29%	18%	21%
Brantley Lake nr Carlsbad	24.5	73.5	24.9	1008.2	2%	7%	2%	98%	295%
Caballo Reservoir	63.1	35.3	95.1	332.0	19%	11%	29%	66%	37%
Cochiti Lake	46.7	48.5	64.3	491.0	10%	10%	13%	73%	75%
Conchas Lake	131.1	75.6	198.9	254.2	52%	30%	78%	66%	38%
Costilla Reservoir	11.7	5.7	8.4	16.0	73%	36%	53%	139%	68%
Eagle Nest Lake nr Eagle Nest, NM	33.8	22.4	58.0	79.0	43%	28%	73%	58%	39%
El Vado Reservoir	90.7	61.6	133.2	190.3	48%	32%	70%	68%	46%
Elephant Butte Reservoir	334.6	393.3	1269.0	2195.0	15%	18%	58%	26%	31%
Heron Reservoir	82.8	70.5	285.4	400.0	21%	18%	71%	29%	25%
Lake Avalon	2.4	1.4	1.4	4.0	60%	35%	35%	170%	99%
Lake Sumner	39.7	36.0	27.1	102.0	39%	35%	27%	146%	133%
Navajo Reservoir	1491.0	1170.5	1361.0	1696.0	88%	69%	80%	110%	86%
Santa Rosa Reservoir	104.7	74.4	56.6	438.3	24%	17%	13%	185%	131%
Basin-wide Total	2591.0	2200.0	3757.2	8437.3	31%	26%	45%	69%	59%
# of reservoirs	15	15	15	15	15	15	15	15	15

Streamflow

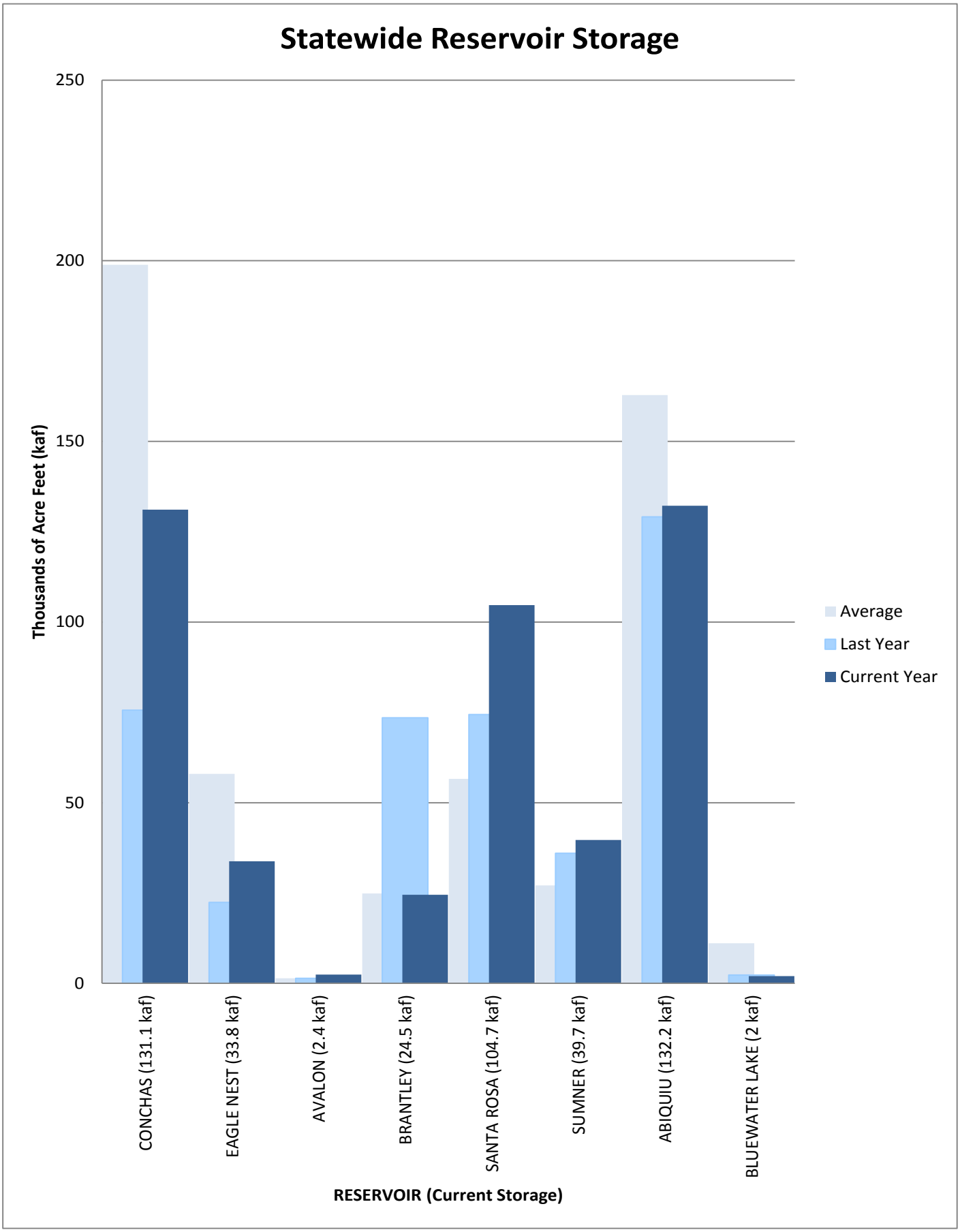
The May 1, 2016 forecast numbers from the NRCS continue to show that all of New Mexico is below average as the season comes to a close. The May to June and July forecasts are substantially better for those basins and forecast points located in the northern half of the state. The May to June forecasts for the Canadian River Basin range from 48 to 82 percent of average. For May to July, the Rio Grande Basin has a large range from 31 percent at San Marcial to 87 percent at Costilla. The Pecos River Basin ranges from 72 to 88 percent of average. The San Juan Basin currently ranges from 72 to 79 percent of average. Lastly, the Rio Hondo Basin is currently forecast to be 36 percent of average at the Rio Ruidoso at Hollywood.

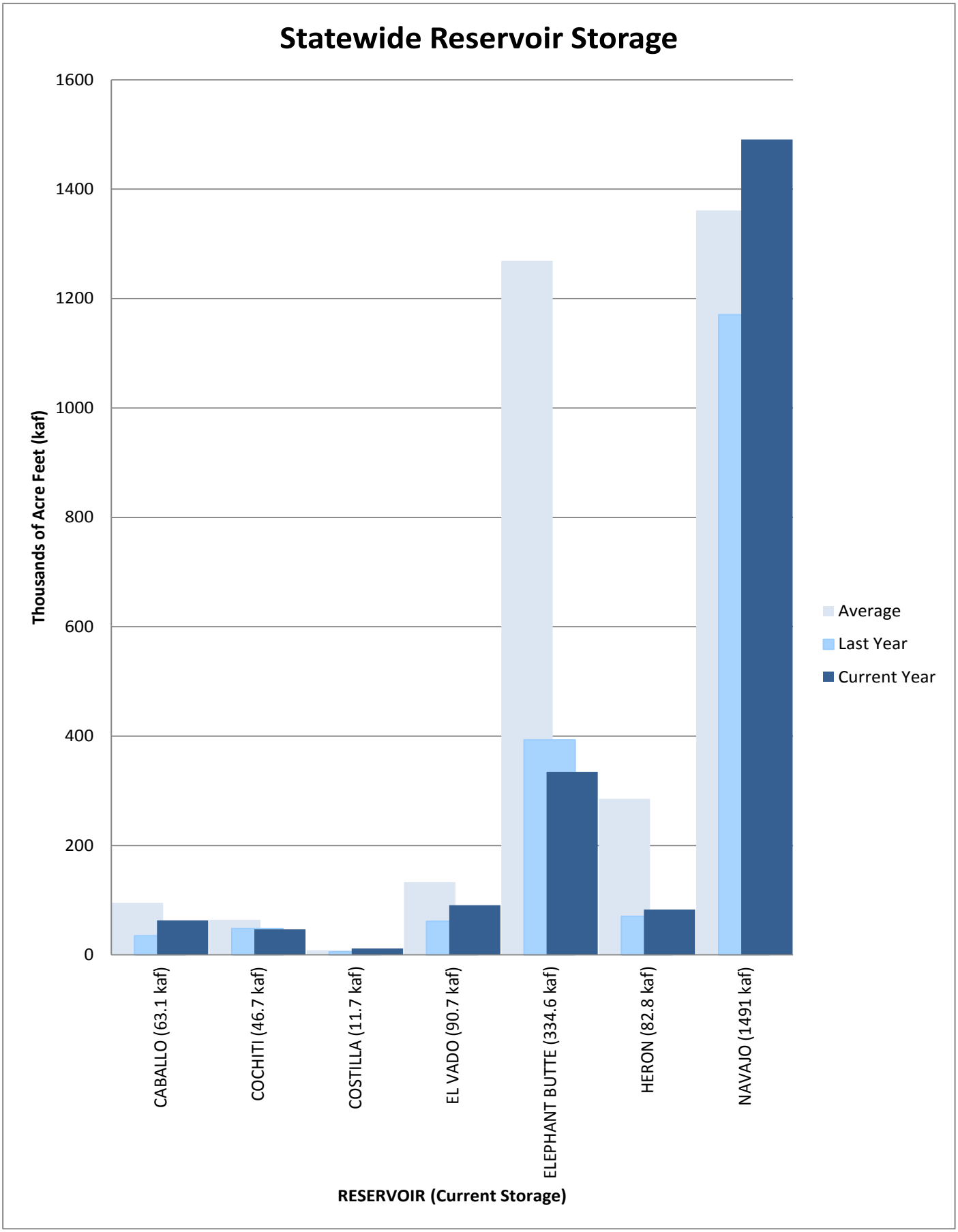
New Mexico Drought Monitor, real versus perceived conditions?



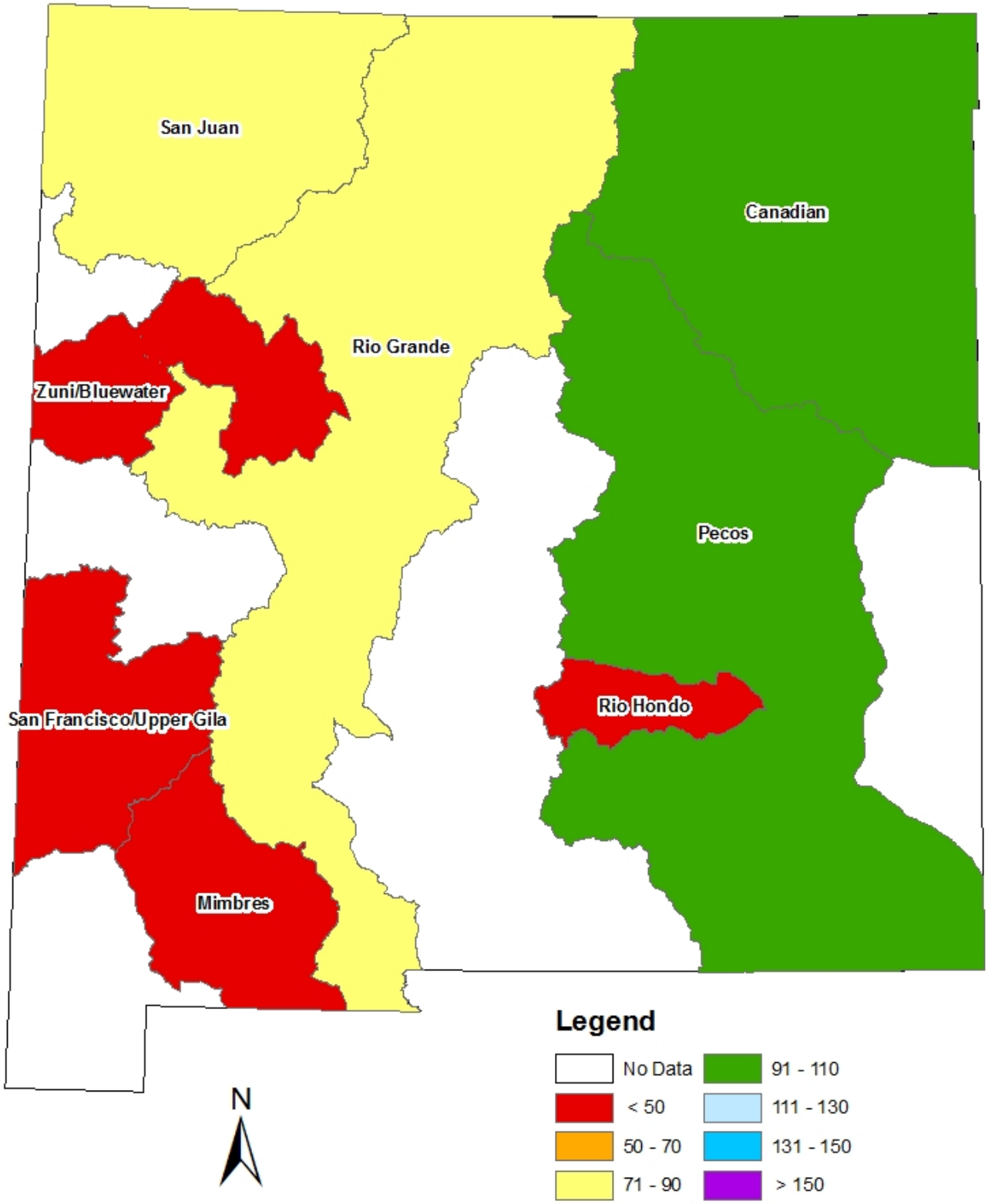
Every week**,** The U.S. Drought Monitor is produced in partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. This useful tool uses multiple inputs, including precipitation received, to give an indication of the extent and severity of drought conditions nationwide. During the first week of April D0 conditions worsened to D1 in southern New Mexico. The following week brought 0.5 to 2.5 inches of precipitation throughout central New Mexico, yet in contrast only a few tenths of an inch fell on the southern half of the Rockies, and only scattered areas to the north reported measurable precipitation. The next seven days brought little or no precipitation and aided the expansion of D1 conditions across the southern and western portions of New Mexico. So as not to end the water year on a bad note, the final days of April delivered measurable precipitation across much of the northern half of the state and isolated areas in the south. However, by the end of April moderate drought still encompasses 44 percent of the state and it remains abnormally dry almost everywhere else. In northern New Mexico WYTD (water year-to-date) basin average precipitation ranges from 92 to a high of 108 percent of the average in the Pecos Basin. Monthly averages for April in the northern mountains were from 99 to a high of 125 percent. In the west and south WYTD average precipitation ranges from 75 to a high of 132 percent in the Rio Hondo Basin. Monthly averages range from a high of 150 percent of average in the Zuni-Bluewater Basins to 76 percent in the Gila River Basin. The statewide WYTD average is currently 97 percent of the average as compared to 82 percent last year at this time.

An El Nino advisory still remains in effect however conditions are rapidly weakening. As New Mexico transitions into spring, neutral conditions are likely with the possibility of La Nina conditions in late summer and into fall. The May precipitation outlook favors above average precipitation throughout much of the state along with below average temperatures. The summer outlook (Jun-Aug) trends toward above average precipitation for the entire state with above average temperatures in the west, and an equal chance for above or below temperatures for the remainder of New Mexico.

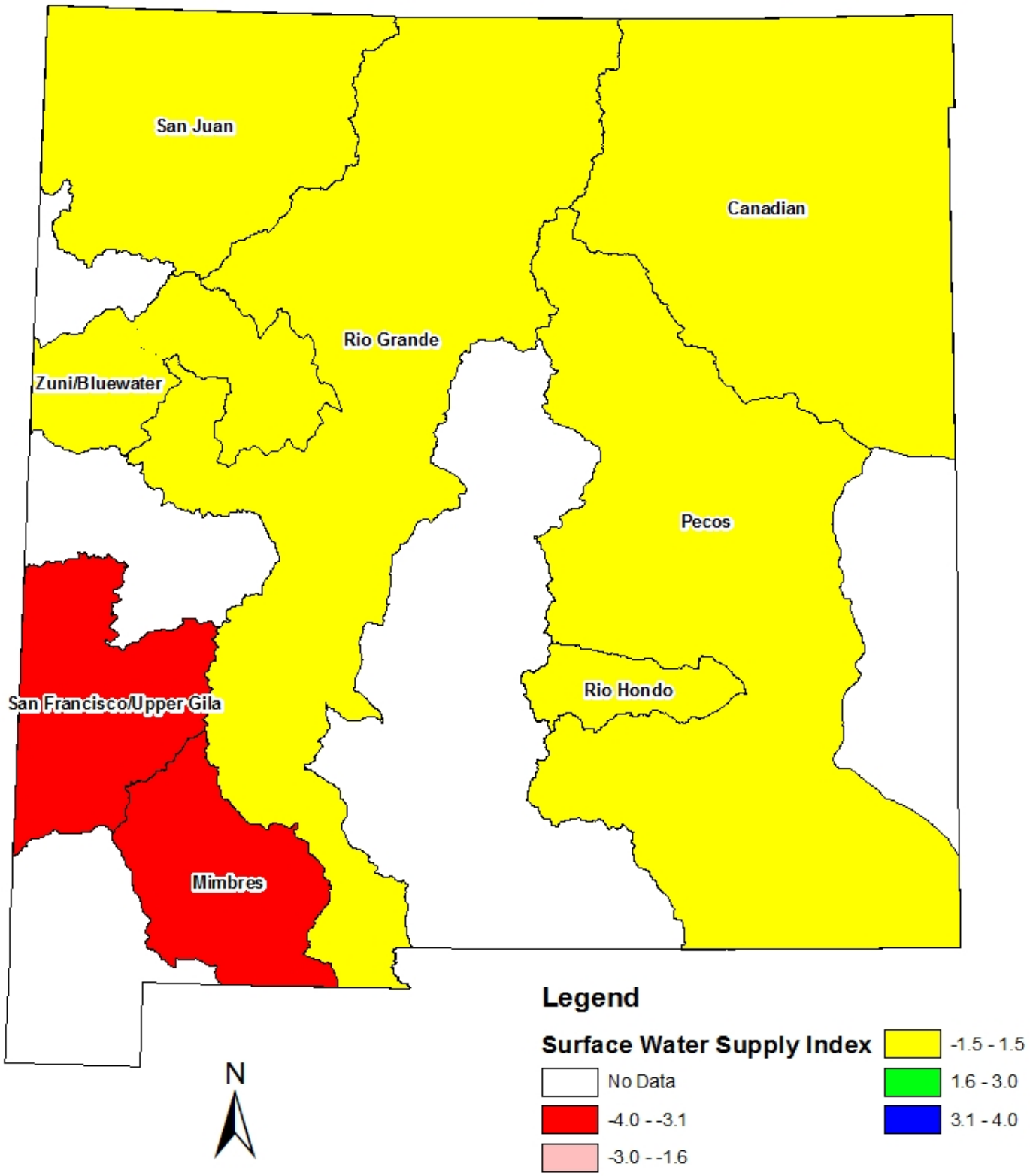

Statewide Reservoir Storage
250
200
150
100
50
0
Thousands of Acre Feet (kaf)
CONCHAS (131.1 kaf)
EAGLE NEST (33.8 kaf)
AVALON (2.4 kaf)
BRANTLEY (24.5 kaf)
SANTA ROSA (104.7 kaf)
SUMNER (39.7 kaf)
ABIQUIU (132.2 kaf)
BLUEWATER LAKE (2 kaf)
RESERVOIR (Current Storage)
Average
Last Year
Current Year


Statewide Reservoir Storage
1600
1400
1200
1000
800
600
400
200
0
Thousands of Acre Feet (kaf)
Average
Last Year
Current Year
CABALLO (63.1 kaf)
COCHITI (46.7 kaf)
COSTILLA (11.7 kaf)
EL VADO (90.7 kaf)
ELEPHANT BUTTE (334.6 kaf)
HERON (82.8 kaf)
NAVAJO (1491 kaf)
RESERVOIR (Current Storage)

New Mexico
Percent of Median Snowpack
as of May 1, 2016

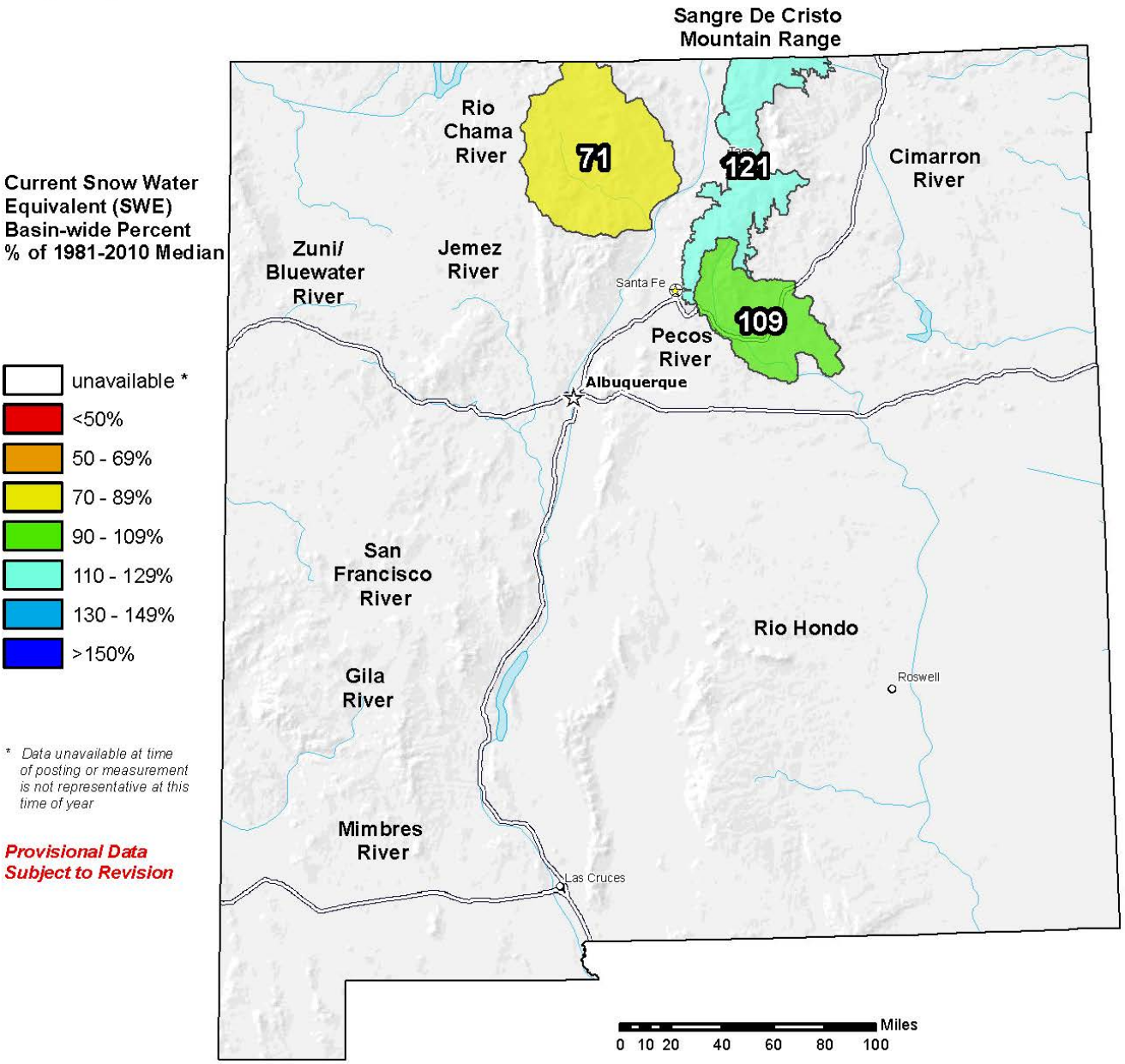


New Mexico
Surface Water Supply Index
as of May 1, 2016



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

May 05, 2016



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

- unavailable *
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >150%

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

Provisional Data Subject to Revision

USDA NRCS

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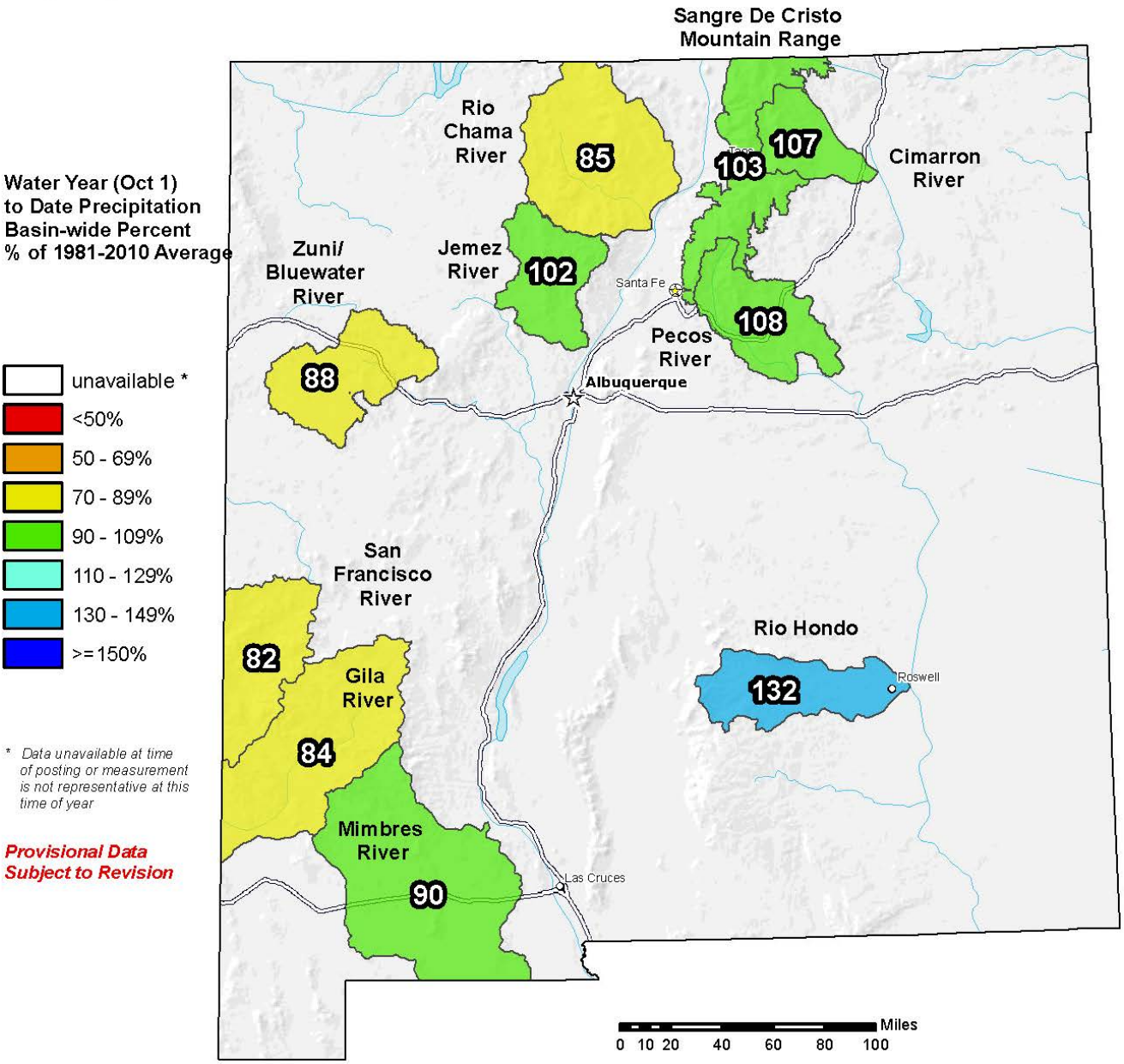
New Mexico
SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

May 05, 2016



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

- unavailable *
- <50%
- 50 - 69%
- 70 - 89%
- 90 - 109%
- 110 - 129%
- 130 - 149%
- >=150%

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

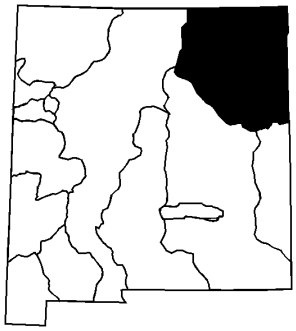
Provisional Data Subject to Revision

USDA NRCS

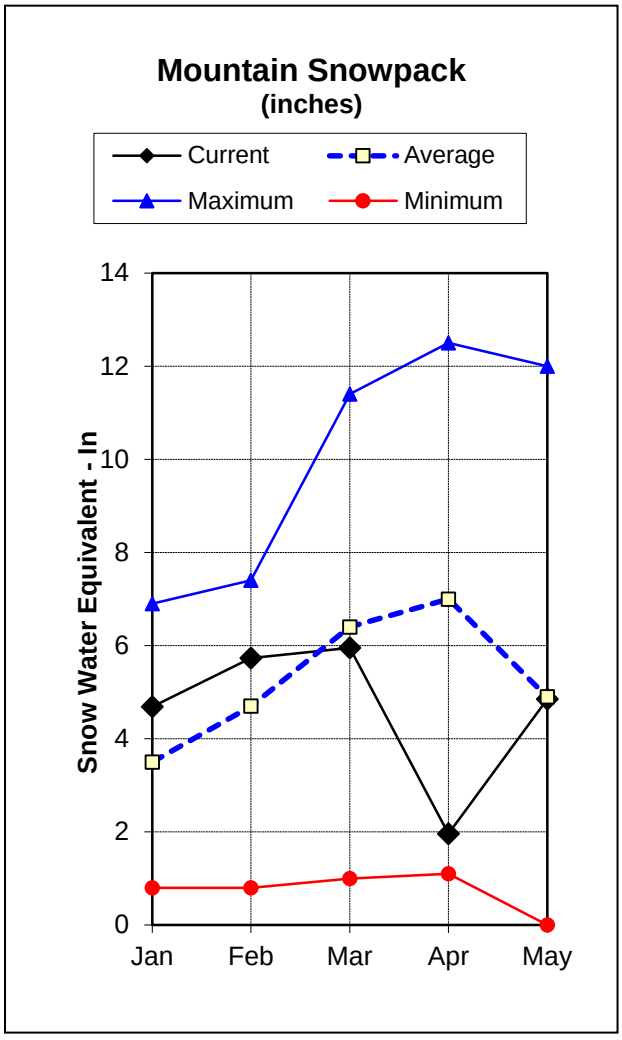
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

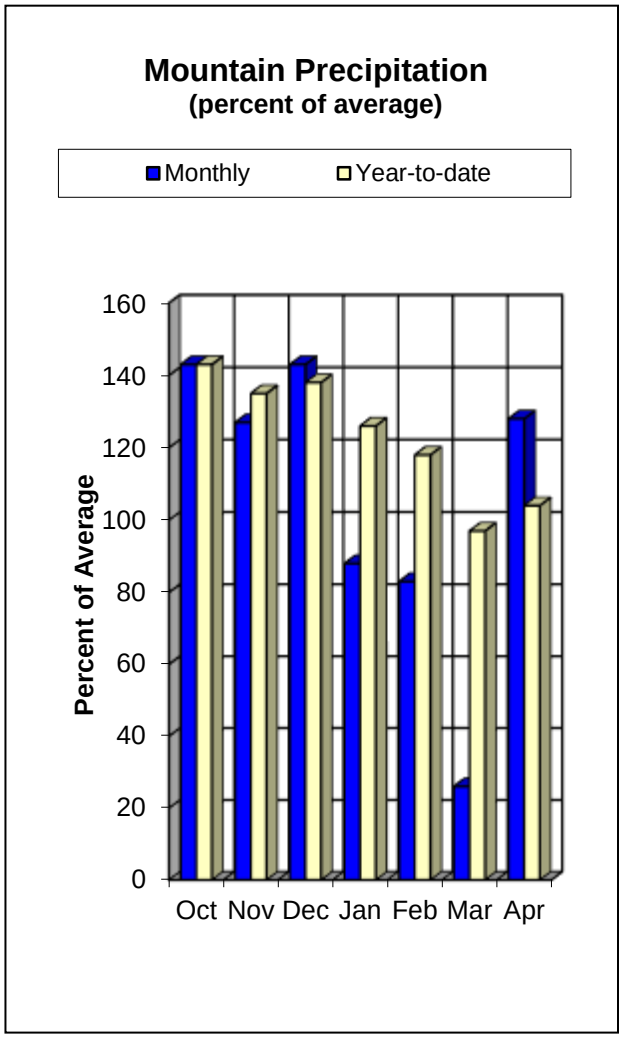
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
http://www.wcc.nrcs.usda.gov

Canadian River Basin
Water Supply Outlook Report
as of May 1, 2016



The Canadian River Basin forecasts for the May to June time period now range from 59 percent of average for the Cimarron River near Cimarron, to 82 percent of average at the Conchas Reservoir inflow. Water year-to-date precipitation in the Canadian River Basin is at 102 percent of average which is a 5 percent increase over last month. This is due to receiving 121 percent of the average monthly precipitation for April. Snowpack in the basin has increased significantly throughout April. It is now at 104 percent of median as compared to 28 percent the previous month. This is an increase of 43 percent from what the basin had at this time last year. Reservoirs are currently holding 164,900 acre-feet of storage which is an increase of 66,900 acre feet from last year at this time. Reservoir storage in the Canadian River Basin is at 49 percent of capacity as compared to 29 percent last year at the end of April.





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Canadian River Basin
Streamflow Forecasts - May 1, 2016

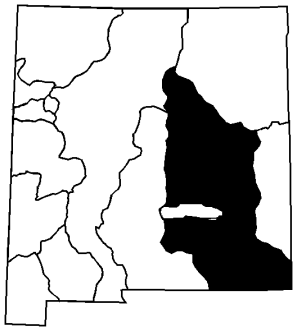
CANADIAN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
		Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
Vermejo R nr Dawson								
	MAR-JUN	2.5	3.4	4.3	55%	5.4	7.2	7.8
	MAY-JUN	1.25	2.2	3	52%	4.2	6	5.8
Eagle Nest Reservoir Inflow								
	MAR-JUN	2.8	3.8	5.6	50%	8.6	15.9	11.2
	MAY-JUN	0.19	1.19	3	61%	6	13.3	4.9
Cimarron R nr Cimarron[2]								
	MAR-JUN	0.5	1.44	7.7	49%	14	23	15.8
	MAY-JUN	-1	1.6	4	48%	10.3	19.5	8.3
Ponil Ck nr Cimarron								
	MAR-JUN	3.2	3.8	4.4	61%	5.1	6.3	7.2
	MAY-JUN	1.19	1.79	2.8	61%	3.1	4.3	4.6
Rayado Ck nr Cimarron								
	MAR-JUN	3.4	3.8	4.1	59%	4.4	5	7
	MAY-JUN	1.63	2.1	2.4	56%	2.8	3.4	4.3
Conchas Reservoir Inflow[3]								
	MAR-JUN	3.9	10.2	17	57%	26	45	30
	MAY-JUN	2.6	8	14.2	82%	23	42	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

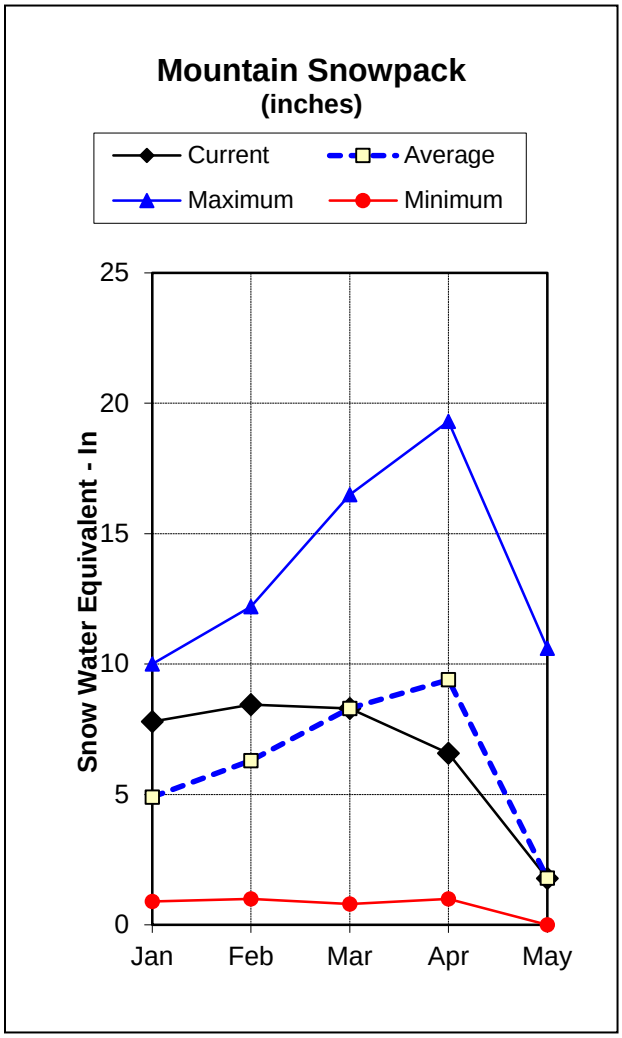
Reservoir Storage End of April, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Conchas Lake	131.1	75.6	198.9	254.2
Eagle Nest Lake nr Eagle Nest, NM	33.8	22.4	58.0	79.0
Basin-wide Total	164.9	98.0	256.9	333.2
# of reservoirs	2	2	2	2

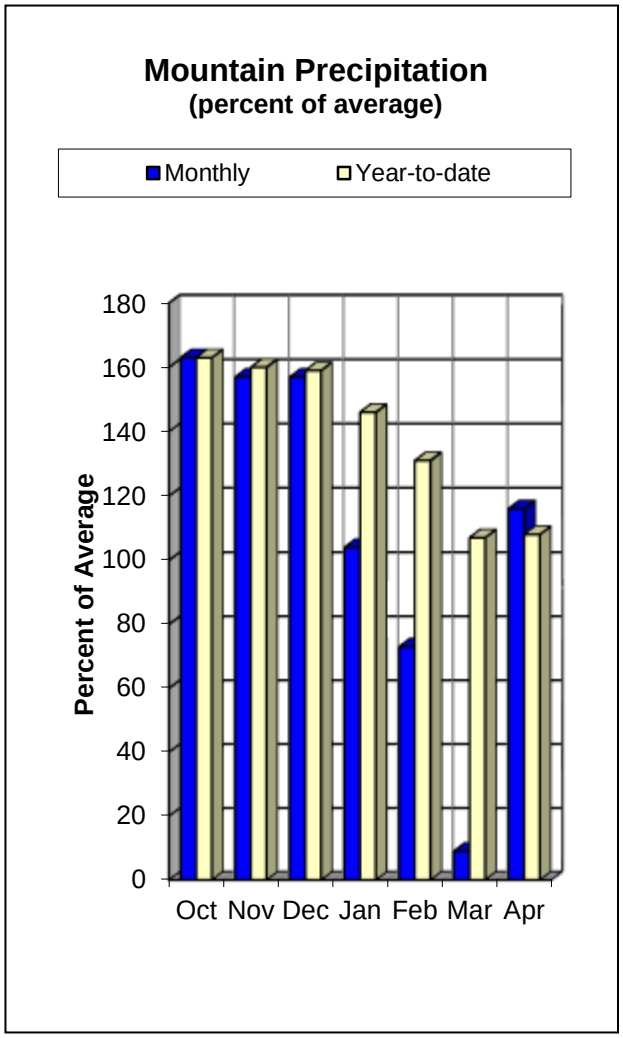
Watershed Snowpack Analysis May 1, 2016	# of Sites	% Median	Last Year % Median
CANADIAN RIVER BASIN	4	104%	61%

Pecos River Basin
Water Supply Outlook Report
as of May 1, 2016



Streamflow forecasts in the Pecos River Basin for the May to July timeframe range from 72 percent of average for the Pecos River above Santa Rosa Lake to 78 percent of average for the Pecos River near Pecos. The Pecos Basin received 116 percent of the average precipitation during the month of April. This currently puts the Pecos River Basin at 108 percent of average for the water year, which is an increase of 11 percent from last month. The late April storms helped to refresh snowpack levels in the Pecos River Basin. Snowpack in the basin has increased from 70 percent of median to 92 percent. This is almost 40 percent more than the basin had at this time last year. As of May 1st reservoir storage in the basin is at 171,300 acre-feet, which remains just 11 percent of capacity. This is however 156 percent of the average, and a slight decrease of 14,000 acre feet from last year at this time.





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Pecos River Basin
Streamflow Forecasts - May 1, 2016

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

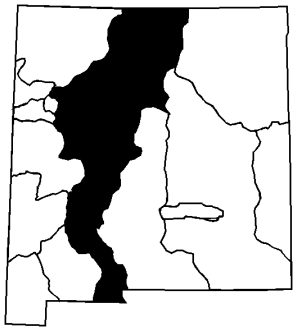
PECOS RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Pecos R nr Pecos								
	MAR-JUL	37	44	50	88%	56	67	57
	MAY-JUL	22	29	35	78%	41	52	45
Pecos R nr Anton Chico								
	MAR-JUL	35	44	52	83%	61	76	63
	MAY-JUL	15.7	25	33	73%	42	57	45
Gallinas Ck nr Montezuma								
	MAR-JUL	5.2	6.6	7.8	80%	9.3	11.8	9.8
	MAY-JUL	1.37	2.8	4	67%	5.5	8	6
Pecos R ab Santa Rosa Lk								
	MAR-JUL	24	33	41	73%	50	65	56
	MAY-JUL	13.7	23	31	72%	40	55	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

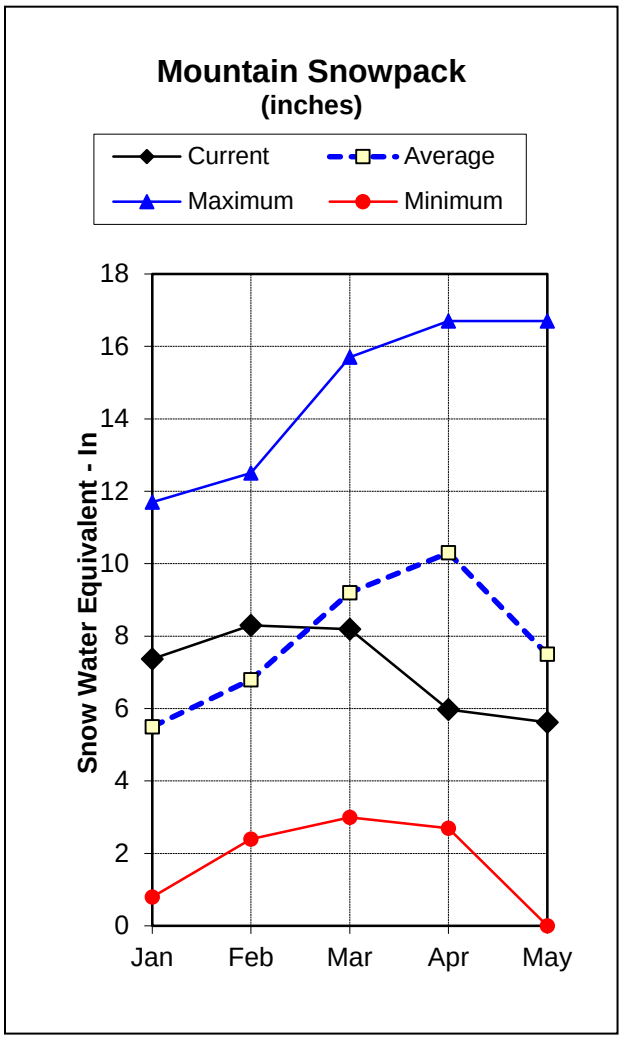
Reservoir Storage End of April, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Lake Avalon	2.4	1.4	1.4	4.0
Brantley Lake nr Carlsbad	24.5	73.5	24.9	1008.2
Santa Rosa Reservoir	104.7	74.4	56.6	438.3
Lake Sumner	39.7	36.0	27.1	102.0
Basin-wide Total	171.3	185.3	110.0	1552.5
# of reservoirs	4	4	4	4

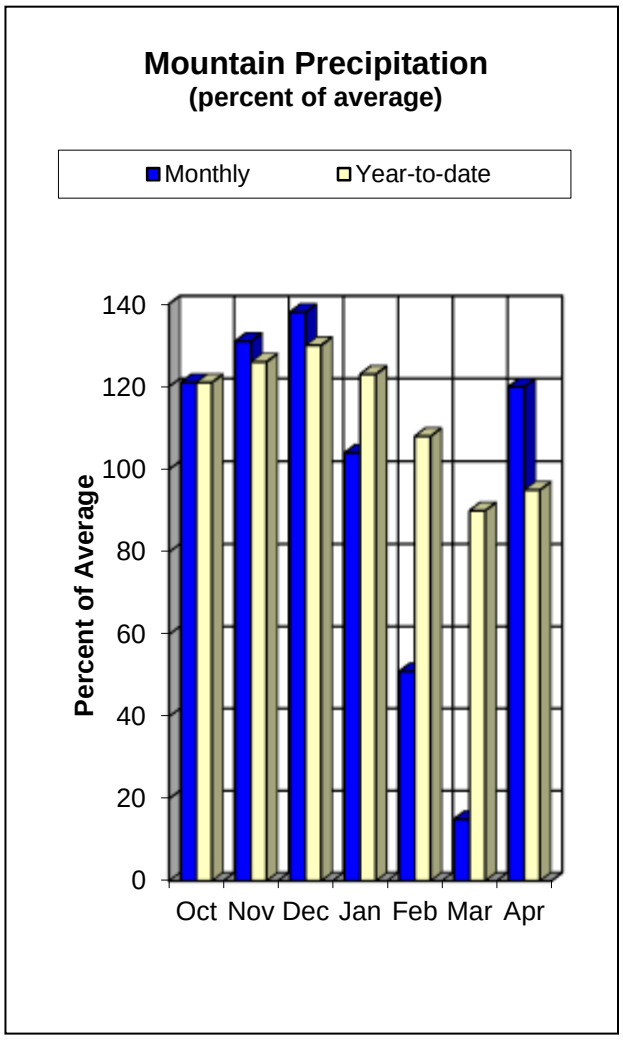
Watershed Snowpack Analysis May 1, 2016	# of Sites	% Median	Last Year % Median
PECOS RIVER BASIN	4	92%	53%

Rio Grande Basin
Water Supply Outlook Report
as of May 1, 2016



The May streamflow forecasts for the Rio Grande Basin range from 31 percent of average for the Rio Grande at San Marcial to 87 percent at the Costilla Reservoir inflow. Year-to-date precipitation has actually increased by 5 percent, and is now at 95 percent of average. This is 15 percent increase from last year's total at the end of April. To make up for a dry March, the month of April in the Rio Grande Basin received 125 percent of the average precipitation. This is an increase of 87 percent from last year at this time! April storms paired with decreased temperatures in the northern mountains have help to contribute to a dwindling snowpack. The month of April saw an increase of 15 percent to 73 percent of the median. This is 35 percent above last year's average. Snowpack in southern Colorado affecting the Rio Grande is now at 77 percent of median. Southern Colorado's snowpack is up 52 percent from this time last year which will definitely help to improve runoff forecasts for the Rio Grande. Current reservoir storage in the basin is 763,800 acre-feet, which is an increase of 17,600 acre-feet from last year at this time. As of May 1st this remains only 16 percent of capacity and 38 percent of the average. This is just 1 percent above last year's average.





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Rio Grande Basin
Streamflow Forecasts - May 1, 2016

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

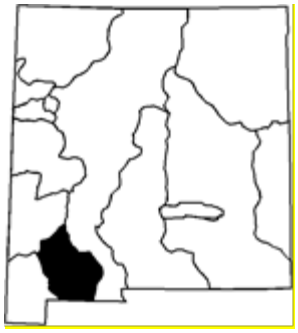
RIO GRANDE BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Grande nr Del Norte [2]								
	APR-SEP	365	410	445	86%	480	530	515
	MAY-SEP	305	350	385	82%	420	470	470
Platoro Reservoir Inflow								
	APR-JUL	37	42	45	80%	49	54	56
	APR-SEP	40	46	50	81%	54	61	62
	MAY-JUL	34	39	42	79%	46	51	53
	MAY-SEP	37	43	47	80%	51	58	59
Conejos R nr Mogote [2]								
	APR-SEP	120	137	149	77%	162	182	194
	MAY-SEP	105	122	134	76%	147	167	177
Costilla Reservoir Inflow								
	MAR-JUL	6.4	8	9.2	83%	10.5	12.5	11.1
	MAY-JUL	4.9	6.5	7.7	87%	9	11	8.9
Costilla Ck nr Costilla [2]								
	MAR-JUL	14.1	17.9	21	81%	24	30	26
	MAY-JUL	9.2	13	16	82%	19.2	25	19.6
Red R bl Fish Hatchery nr Questa								
	MAR-JUL	19.7	25	28	82%	32	39	34
	MAY-JUL	12.4	17.3	21	78%	25	32	27
Rio Hondo nr Valdez								
	MAR-JUL	10.4	13.1	15.2	83%	17.5	21	18.4
	MAY-JUL	7.9	10.6	12.7	82%	15	18.7	15.4
Rio Pueblo de Taos nr Taos								
	MAR-JUL	8.7	11.3	13.4	79%	15.8	19.7	17
	MAY-JUL	4.9	7.5	9.6	77%	12	15.9	12.5
Rio Lucero nr Arroyo Seco								
	MAR-JUL	5.2	7.2	8.9	82%	10.8	14	10.9
	MAY-JUL	3.7	5.7	7.4	82%	9.3	12.5	9
Rio Pueblo de Taos bl Los Cordovas								
	MAR-JUL	12.6	18	22	61%	28	37	36
	MAY-JUL	6.7	12.1	16.6	64%	22	31	26
Embudo Ck at Dixon								
	MAR-JUL	24	31	37	77%	44	56	48
	MAY-JUL	14.3	22	28	78%	35	47	36
El Vado Reservoir Inflow [2]								
	MAR-JUL	116	129	138	61%	148	163	225
	APR-JUL	100	115	125	61%	137	154	205
	MAY-JUL	59	72	81	53%	91	106	153
Santa Cruz R at Cundiyo								
	MAR-JUL	11.7	14	15.7	86%	17.6	21	18.3
	MAY-JUL	6	8.3	10	75%	11.9	15	13.4
Nambe Falls Reservoir Inflow								
	MAR-JUL	4	4.7	5.3	82%	5.9	6.9	6.5
	MAY-JUL	2.2	2.9	3.5	69%	4.1	5.1	5.1
Tesuque Ck ab diversions								
	MAR-JUL	0.66	0.88	1.07	80%	1.28	1.65	1.34
	MAY-JUL	0.29	0.51	0.7	78%	0.91	1.28	0.9
Rio Grande at Otowi Bridge [2]								
	MAR-JUL	350	400	435	60%	475	540	720
	MAY-JUL	164	215	250	52%	290	355	485
Santa Fe R nr Santa Fe [2]								
	MAR-JUL	2.8	3.2	3.6	84%	4	4.6	4.3
	MAY-JUL	1.67	2.1	2.5	86%	2.9	3.5	2.9
Jemez R nr Jemez								
	MAR-JUL	21	23	25	60%	27	29	42
	MAY-JUL	5.3	7.4	9	46%	10.8	13.6	19.4
Jemez R bl Jemez Canyon Dam								
	MAR-JUL	13.7	16.4	19	56%	22	29	34
	MAY-JUL	1.14	3.8	6.4	38%	9.7	16	17
Rio Grande at San Marcial [2]								
	MAR-JUL	96	179	235	46%	290	375	510
	MAY-JUL	-34	49	105	31%	161	245	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 End of April, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Abiquiu Reservoir	132.2	129.1	162.8	1192.8
Bluewater Lake	2.0	2.3	11.1	38.5
Caballo Reservoir	63.1	35.3	95.1	332.0
Cochiti Lake	46.7	48.5	64.3	491.0
Costilla Reservoir	11.7	5.7	8.4	16.0
El Vado Reservoir	90.7	61.6	133.2	190.3
Elephant Butte Reservoir	334.6	393.3	1269.0	2195.0
Heron Reservoir	82.8	70.5	285.4	400.0
Basin-wide Total	763.8	746.2	2029.3	4855.6
# of reservoirs	8	8	8	8

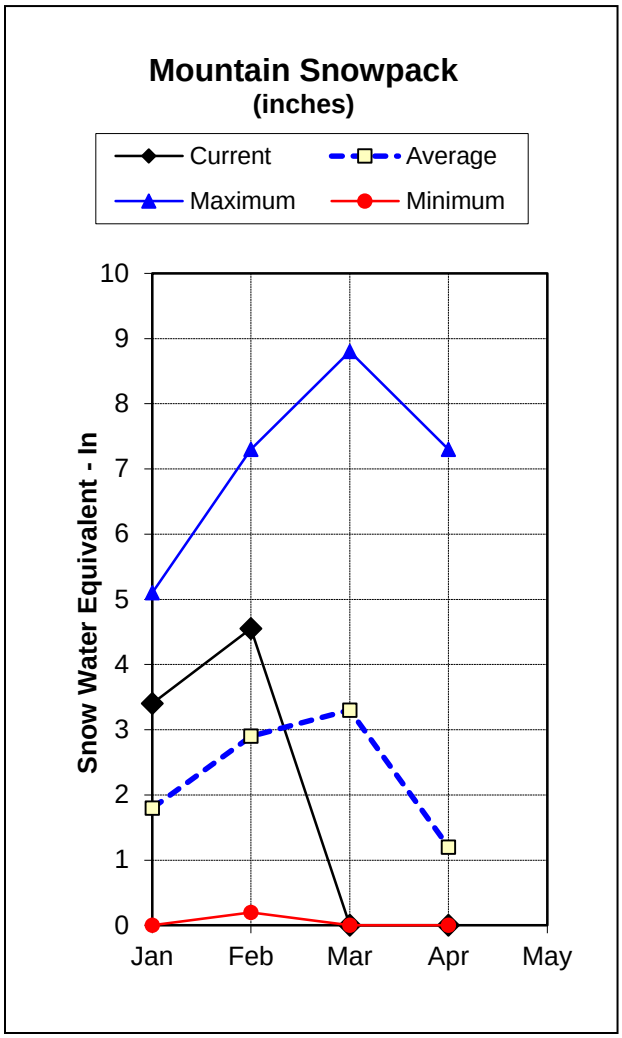
Watershed Snowpack Analysis May 1, 2016	# of Sites	% Median	Last Year % Median
RIO GRANDE BASIN	14	73%	38%

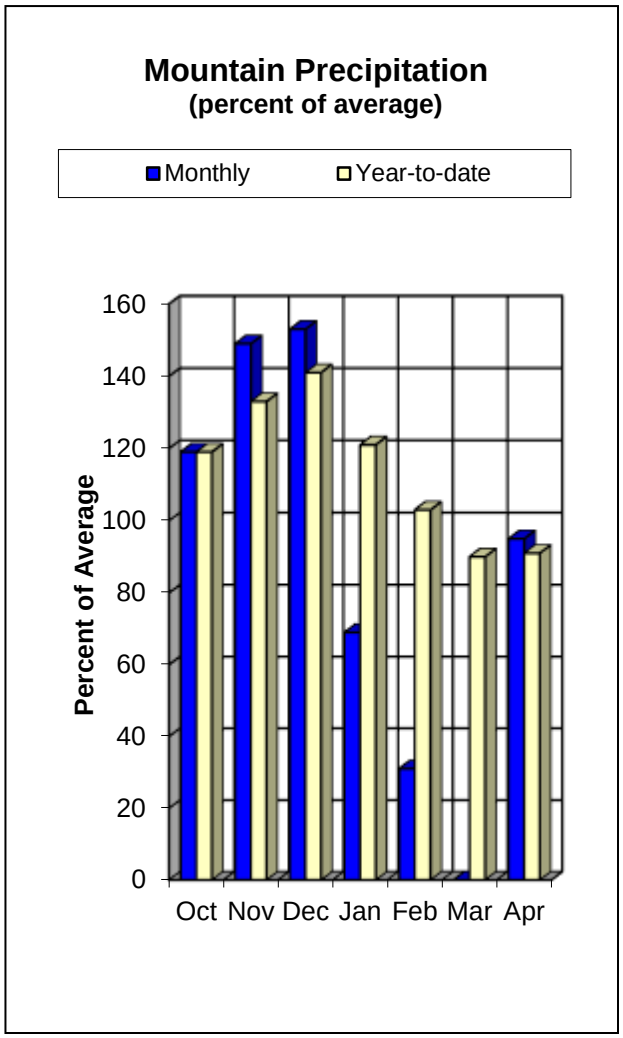
Mimbres River Basin
Water Supply Outlook Report
as of May 1, 2016



There are no May forecasts for the Mimbres River Basin at this time. Compared to March the Mimbres Basin had an average April receiving 100 percent of the expected precipitation. Water year-to-date precipitation remains consistent at 91 percent of average. Melt off has already occurred in the Mimbres Basin and there is no snow left at this time.

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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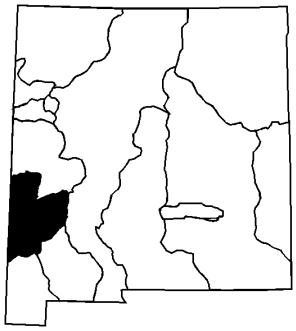
Mimbres River Basin - May 1, 2016

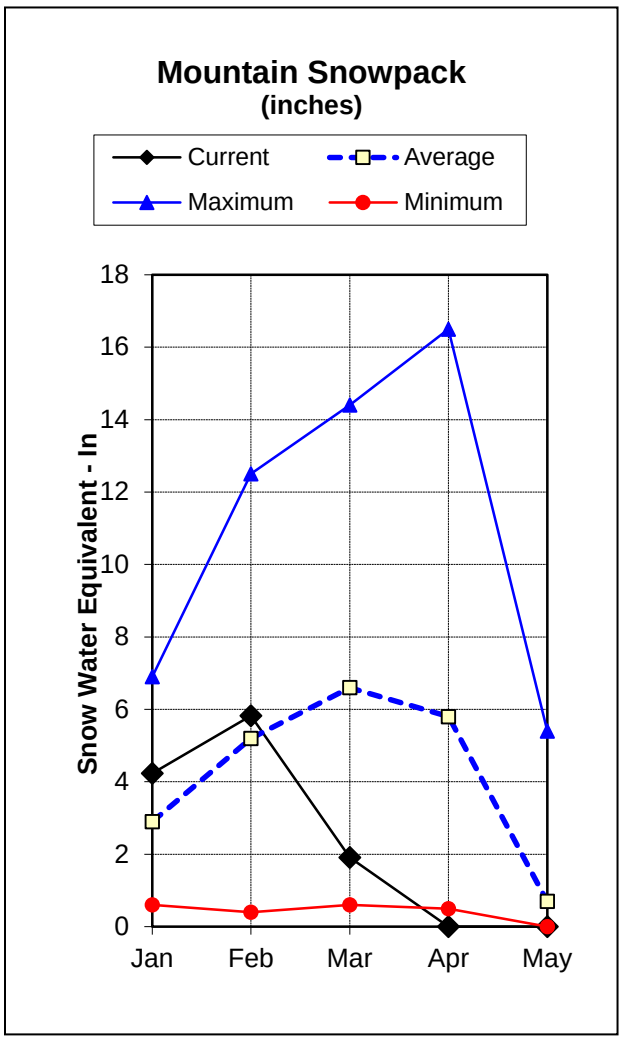
Watershed Snowpack Analysis May 1, 2016	# of Sites	% Median	Last Year % Median
MIMBRES RIVER BASIN	2		

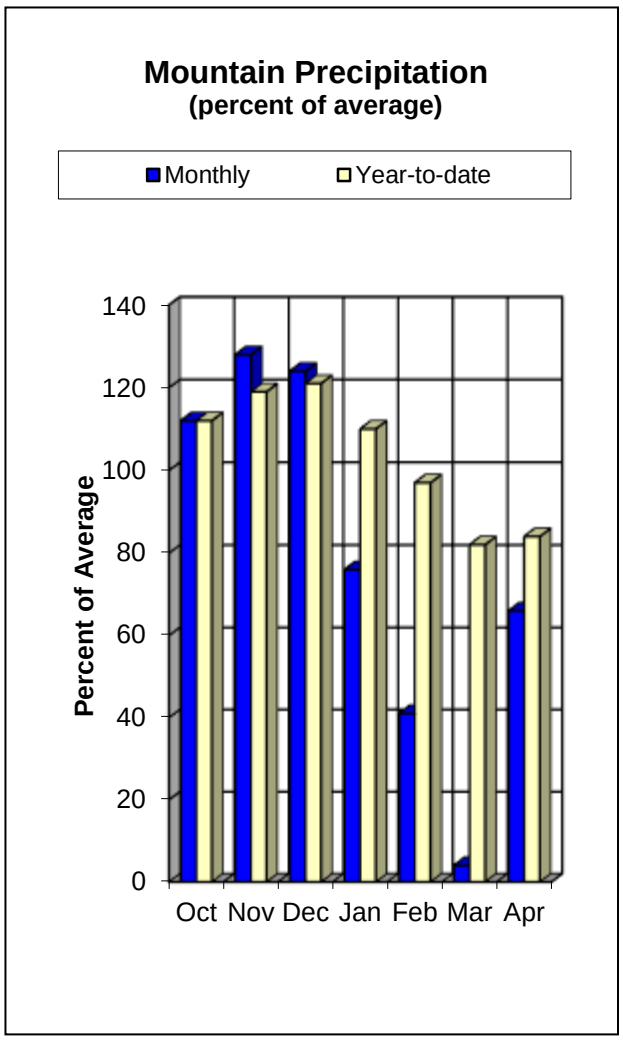
San Francisco / Upper Gila River Basin Water Supply Outlook Report as of May 1, 2016



There are no May forecasts for the San Francisco/Upper Gila River Basin at this time. The wet April did not impact the basin as it did others in the state, and water year-to-date precipitation remains at 82 percent of average. April did however receive 76 percent of the average precipitation which is 10 percent above last year at this time. The last of the snowpack in the basin has melted off over the past month. There is currently zero snowpack in the San Francisco/Upper Gila River Basin. Last year at this time the basin also had no snow.

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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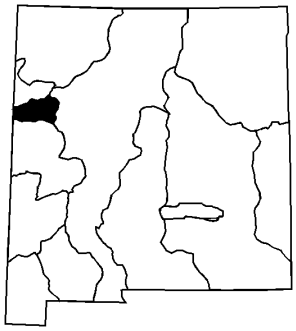
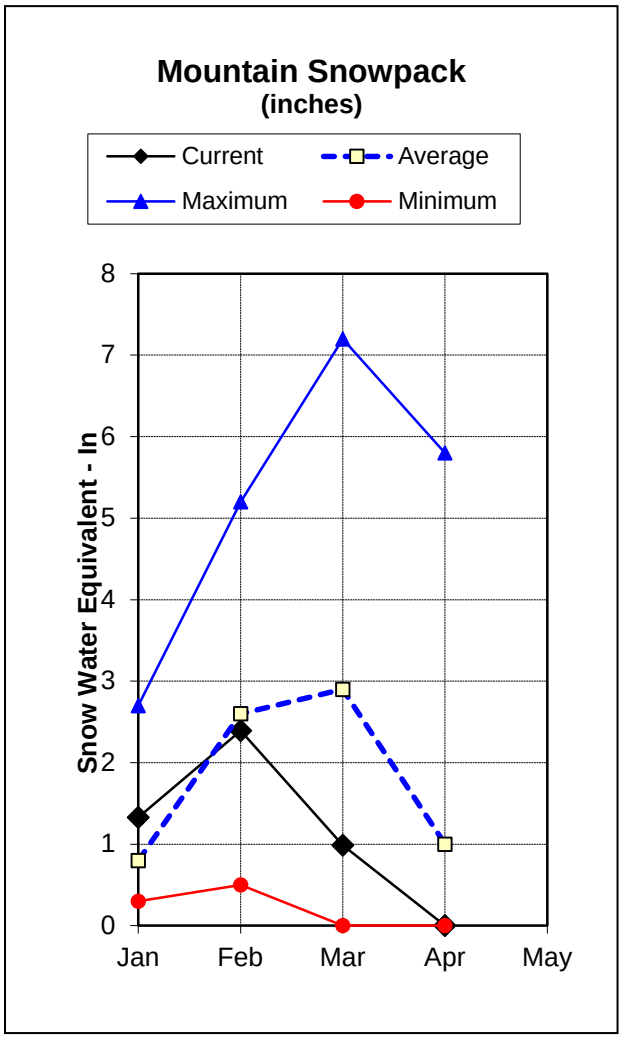
San Francisco-Upper Gila River Basin - May 1, 2016

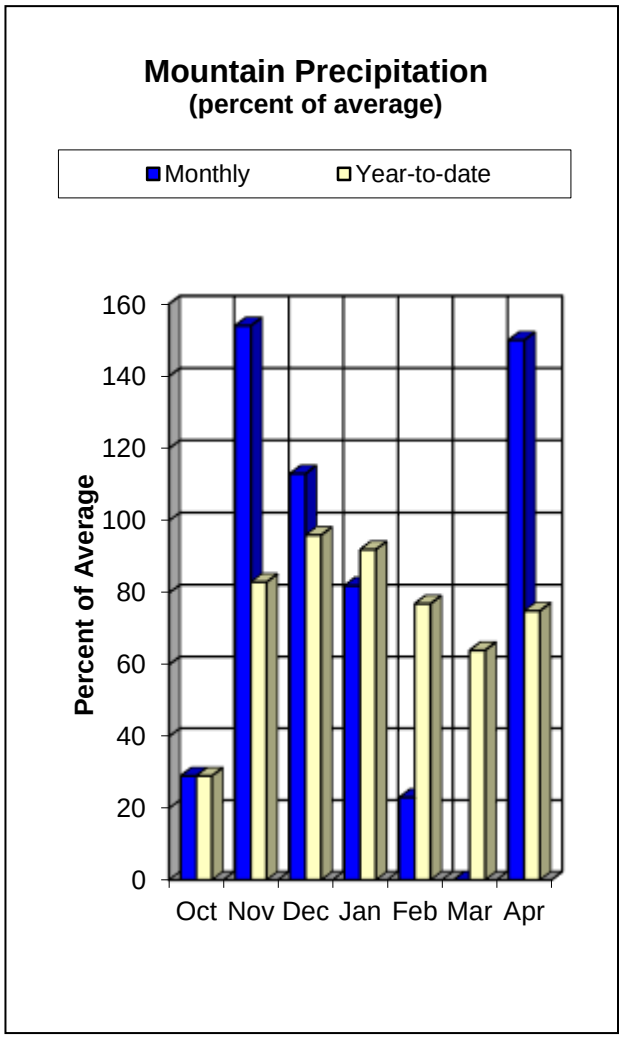
Watershed Snowpack Analysis May 1, 2016	# of Sites	% Median	Last Year % Median
SAN FRANCISCO-UPPER GILA RIVER BASIN	4		

Zuni / Bluewater Basins
Water Supply Outlook Report
as of May 1, 2016



There are no May forecasts for the Zuni/Bluewater Basins at this time. April delivered 150 percent of the average monthly precipitation for the Zuni/Bluewater Basins! This now puts the basins at 75 percent of average for the water year-to-date. This is however a decrease of 10 percent from last year at this time. The snowpack melted off over a month ago which is consistent with last year's timeline. Bluewater Lake has dropped slightly to 2,000 acre feet as compared to last year's 2,300 acre feet at the end of April. This remains only 5 percent of capacity and 18 percent of the average.





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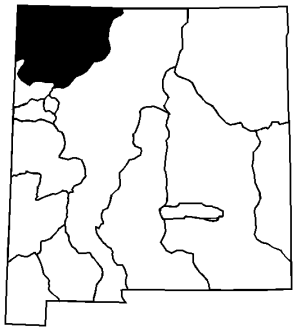
Zuni-Bluewater Basins - May 1, 2016

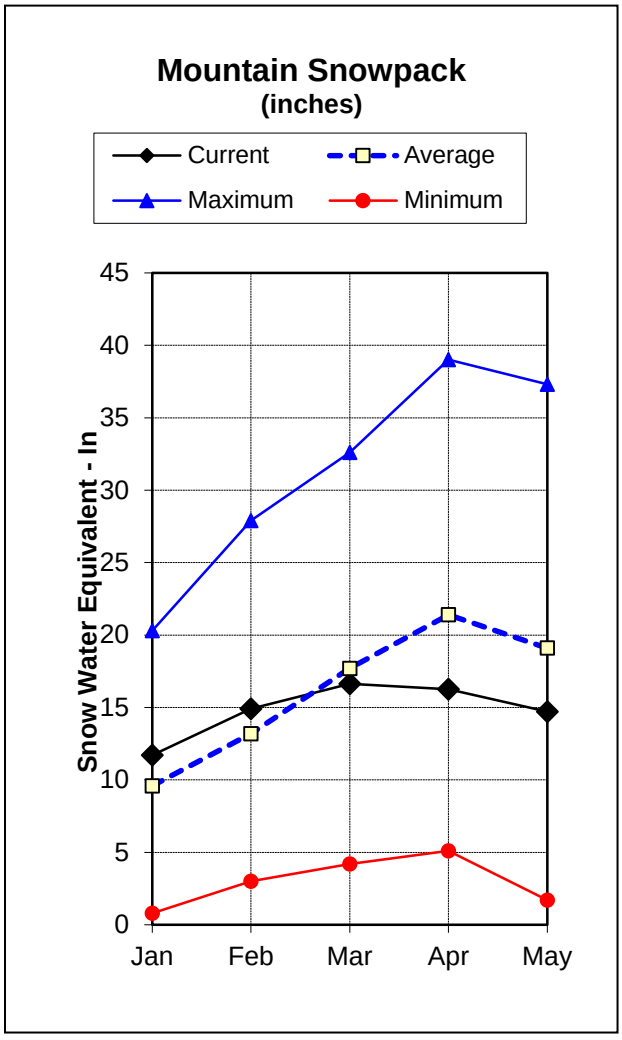
Reservoir Storage End of April, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Bluewater Lake	2.0	2.3	11.1	38.5
Basin-wide Total	2.0	2.3	11.1	38.5
# of reservoirs	1	1	1	1

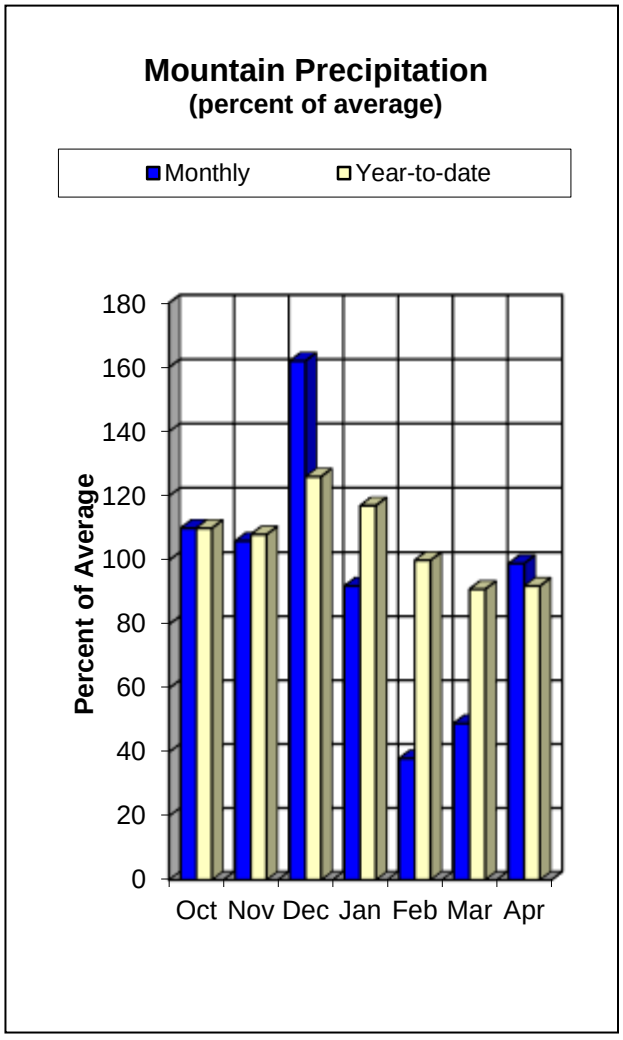
Watershed Snowpack Analysis May 1, 2016	# of Sites	% Median	Last Year % Median
ZUNI-BLUEWATER BASINS	1		

San Juan River Basin
Water Supply Outlook Report
as of May 1, 2016



The May forecasts for the San Juan Basin range from 72 percent of average at the Navajo Reservoir inflow, to 79 percent for the Animas River at Durango. Year-to-date precipitation has held steady and is 92 percent of average, which remains a 28 percent increase from last year at this time. April was productive for the San Juan's which received 99 percent of the average monthly rainfall. This is an increase of 72 percent from last year at this time. Current snowpack levels have also remained consistent at 77 percent of median. This is notable increase of 44 percent from last year as this time. Navajo Reservoir is boasting some impressive numbers this April and currently contains 1,491,000 acre-feet, or 110 percent of the average. This is now 88 percent of capacity which is an increase from last year's 69 percent, or 1,170,500 acre-feet at the end of April.





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San Juan River Basin
Streamflow Forecasts - May 1, 2016

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

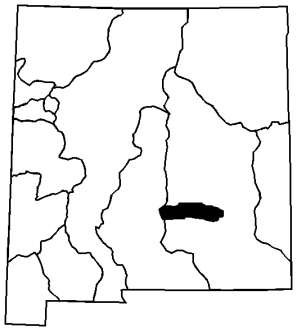
SAN JUAN RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Blanco at Blanco Diversion [2]								
	APR-JUL	33	37	41	76%	44	50	54
	MAY-JUL	26	30	34	76%	37	43	45
Navajo R at Oso Diversion [2]								
	APR-JUL	39	45	49	75%	53	60	65
	MAY-JUL	31	37	41	76%	45	52	54
Navajo Reservoir Inflow [2]								
	APR-JUL	415	470	510	69%	550	615	735
	MAY-JUL	310	365	405	72%	445	510	565
Animas R at Durango								
	APR-JUL	280	315	335	81%	355	390	415
	MAY-JUL	235	270	290	79%	310	345	365
La Plata R at Hesperus								
	APR-JUL	14.2	15.9	17.1	74%	18.3	20	23
	MAY-JUL	11.2	12.9	14.1	77%	15.3	17.3	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, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Navajo Reservoir	1491.0	1170.5	1361.0	1696.0
Basin-wide Total	1491.0	1170.5	1361.0	1696.0
# of reservoirs	1	1	1	1

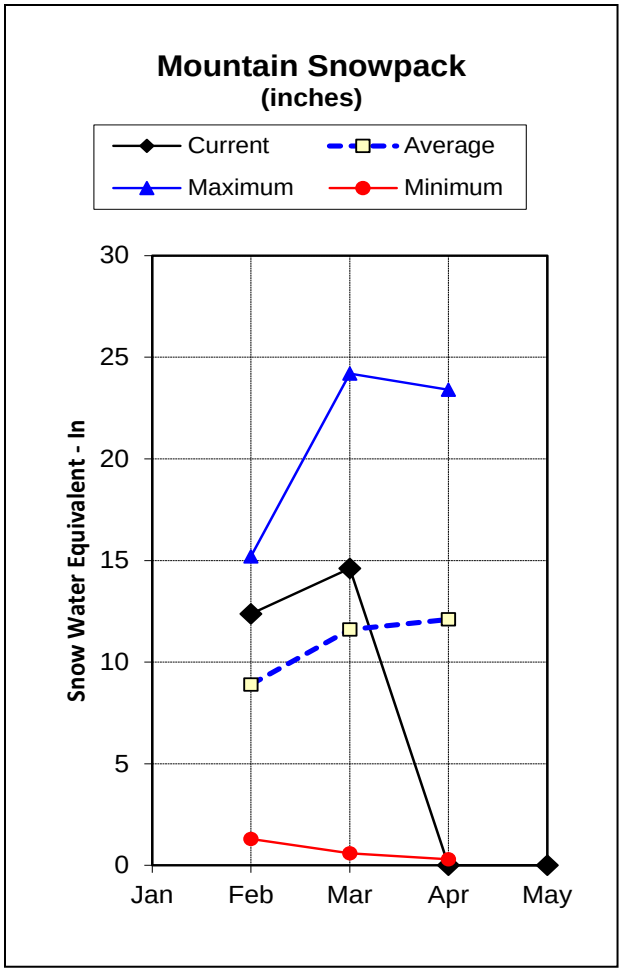
Watershed Snowpack Analysis May 1, 2016	# of Sites	% Median	Last Year % Median
SAN JUAN RIVER BASIN	13	77%	33%

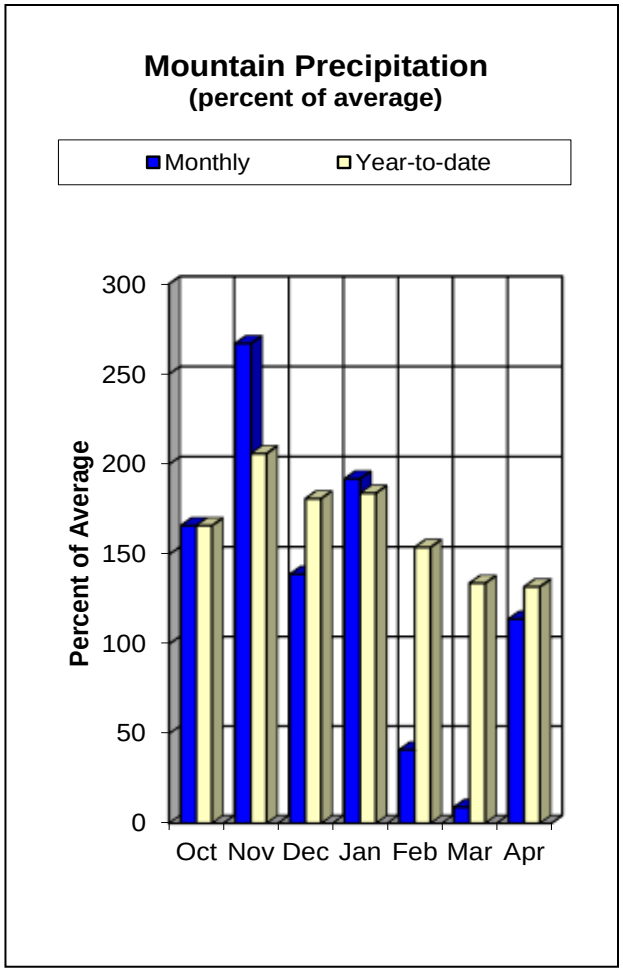
Rio Hondo Basin
Water Supply Outlook Report
as of May 1, 2016



The May forecast for the Rio Hondo Basin is currently 36 percent of average for the Rio Ruidoso at Hollywood. The Rio Hondo Basin had a slightly above average April, and received 114 percent of the average monthly rainfall. This is however a decrease from last April which received 143 percent of the average monthly precipitation. In contrast, for the water year-to-date the basin is at 132 percent of average. Due to the warm temperatures over the past several months melt off has already occurred, leaving the basin with no snow. At this time last year the basin also had zero snowpack left in the higher elevations. This measurement however should be used with caution as the Sierra Blanca SNOTEL site was impacted by the Little Bear Fire three and half years ago.

It should be noted that the switch to using median snowpack values three 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, 2016

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

RIO HONDO BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Ruidoso at Hollywood								
	MAR-JUN	3	3.4	3.8	57%	4.3	5.1	6.7
	MAY-JUN	0.22	0.62	1	36%	1.48	2.3	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

Watershed Snowpack Analysis May 1, 2016	# of Sites	% Median	Last Year % Median
RIO HONDO BASIN	1		

NEW MEXICO STATEWIDE	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Alamitos	SC	9320						
Aztec #2	SC	9880						
Bateman	SNOTEL	9300	1	0.1	4.6	2%	0.0	0%
Boon	SC	8140						
Bowl Canyon	SC	8980						
Chamita	SNOTEL	8400	0	0.0	0.0		0.0	
Dan Valley	SC	7640						
Elk Cabin	SNOTEL	8210	0	0.0	0.0		0.0	
Emory Pass #2	SC	7800						
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	23	7.7	14.0	55%	2.5	18%
Hummingbird - Aerial And Snow Course	SC	10550						
Lookout Mountain	SNOTEL	8500	0	0.0	0.0		0.0	
Mcgaffey	SC	8120						
Mcknight Cabin	SNOTEL	9240	0	0.0	0.0		0.0	
Mcknight Cabin Aerial Marker	SC	9300						
Mcknight Cabin Snow Course	SC	9300						
Missionary Spring	SC	7940						
Navajo Whiskey Ck	SNOTEL	9050	3	0.1			0.0	
North Costilla	SNOTEL	10600	5	1.3	0.5	260%	0.0	0%
Ojo Redondo	SC	8200						
Palo	SNOTEL	9350	2	0.4			0.0	
Palo	SC	9300						
PanchueLa	SC	8400						
Post Office Flats	SC	8400						
Quemazon	SNOTEL	9500	2	0.2	0.0		0.0	
Red River Pass #2	SNOTEL	9850	5	0.4	0.0		0.0	
Rice Park	SNOTEL	8460	1	0.1	0.0		0.0	
Rice Park	SC	8460						
Rio En Medio	SC	10300	4	1.4	4.2	33%	0.0	0%
Rio Santa Barbara	SNOTEL	10664	28	13.3			8.1	
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	50	18.6	17.5	106%	11.1	63%
Senorita Divide #2	SNOTEL	8600	0	0.0	0.0		0.0	
Shuree	SNOTEL	10100	2	0.7			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	67	19.7			16.5	
Taos Powderhorn	SC	11250	56	21.3	26.8	79%	15.5	58%
Tolby	SNOTEL	10180	4	0.4	0.0		0.8	
Tolby	SC	10180						
Tres Ritos	SNOTEL	8600	0	0.0			0.0	
Tres Ritos	SC	8600						
Vacas Locas	SNOTEL	9306	1	0.3	0.0		0.0	
Wesner Springs	SNOTEL	11120	26	10.5	11.6	91%	6.6	57%
Whiskey Creek	SC	9050						
Whitewater - Aerial And Snow Course	SC	10750						
Basin Index						**76%**		**45%**
# of sites						23		23

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Conservation Service
U.S. Department of Agriculture

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New Mexico
Basin Outlook Report

Natural Resources Conservation Service
Albuquerque, NM