



United States
Department of
Agriculture

Natural
Resources
Conservation
Service

New Mexico Basin Outlook Report April 1, 2017



Late March storms deliver over 20 inches of snow to the Taos Ski Valley keeping it open an extra week!

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.

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Summary

Warmer than normal temperatures and below average monthly precipitation dominated New Mexico for most of March. Over the past month New Mexico experienced significant decreases in snow pack for most basins in the state. Those basins located in the southern and western portions of the state were well into melt off by the end of March if not completely dry. Additionally, with a dry weather signal hanging over New Mexico for the past 60 days drought conditions have continued to expand in the east ultimately affecting the Canadian and Pecos River streamflow forecasts. However, the last days of March and early April brought with them the promise of fresh snow in the northern mountains which would replenish a quickly dwindling snowpack. This moisture-laden Pacific storm made its way to New Mexico as the month wrapped up producing a swath of rain and mountain snow across the northern tier of the state. However, despite locally heavy rain and mountain snow this system largely bypassed those areas still experiencing long-term drought. During the first week of April a similar weather scenario played out once again delivering copious amounts of rain and snow to the northern mountains. This system did once again bypass southern and most of eastern New Mexico leaving those regions with below average precipitation totals. April continues to be a transitional month affected by varying weather patterns. I highly encourage everyone to continue to monitor the weather and read future water supply reports to see how this water year wraps up.

Snowpack

March brought with it significant declines in the snowpack statewide. Across New Mexico the snowpack dropped by another 25 percent throughout March to 77 percent of the median. Yet, despite this loss the state is still over 30 percent above where we were last year at this time. The Rio Grande Basin's snowpack decreased from 119 percent of median to 98. The Canadian Basin dropped significantly from 97 percent of the median to 52, yet still well above last year's total. The San Juan Basin decreased by 29 percent, however still remains above the median at 122 percent. Those basins located in the western and southern portions of the state have felt the effects of the above average temperatures the hardest. Throughout the month of March the Mimbres, Gila, Rio Hondo, and Zuni-Bluewater basins experienced melt off as the remaining snow was subjected to above average temperatures. Water users and managers should continue to monitor conditions throughout April to determine the impacts of spring conditions on New Mexico's water supply.

NEW MEXICO STATEWIDE SNOWPACK	Percent of Median	Last Year Percent of Median
CANADIAN RIVER BASIN	52	28
PECOS RIVER BASIN	58	70
RIO GRANDE BASIN	98	58
MIMBRES RIVER BASIN	0	0
SAN FRANCISCO-UPPER GILA RIVER BASIN	0	0
ZUNI-BLUEWATER BASINS	0	0
SAN JUAN RIVER BASIN	122	77
CHUSKA MOUNTAINS	67	21
RIO HONDO BASIN	0	0
Statewide Snowpack Total	77	45
# of sites	38	38

Precipitation

New Mexico statewide received only 69 percent of the average precipitation throughout the month of March. Water year-to-date precipitation statewide remains above the average at 108 percent. Those basins located in the northern and western portions of the state received an average of 75 percent of the monthly precipitation for March. In contrast the southern half of the state only received an average of 27 percent of the monthly precipitation. With runoff in full swing down south some desperately needed spring precipitation would aid streamflow and counteract a diminished snowpack. Water users and managers should pay close attention to how April unfolds.

Reservoirs

Storage levels remain below capacity at all reservoirs across the state. Navajo Reservoir continues to remain the closest to actual reservoir capacity at 86 percent. The average percent of capacity statewide is still 44 percent. The current percent of average storage statewide has increased marginally to 66 percent. Water-users should continue to closely monitor streamflow forecasts affecting reservoir levels as runoff occurs in the south and daily temperatures begin to rise in the north.

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	122.4	133.4	153.9	1192.8	10%	11%	13%	80%	87%
Bluewater Lake	11.3	2.1	9.7	38.5	29%	5%	25%	116%	22%
Brantley Lake nr Carlsbad	34.9	32.5	30.1	1008.2	3%	3%	3%	116%	108%
Caballo Reservoir	77.0	39.8	84.6	332.0	23%	12%	25%	91%	47%
Cochiti Lake	47.7	46.8	58.0	491.0	10%	10%	12%	82%	81%
Conchas Lake	72.3	137.0	202.7	254.2	28%	54%	80%	36%	68%
Costilla Reservoir		10.8	7.3	16.0		68%	46%		148%
Eagle Nest Lake nr Eagle Nest, NM	34.1	32.3	55.6	79.0	43%	41%	70%	61%	58%
El Vado Reservoir	58.6	48.3	113.0	190.3	31%	25%	59%	52%	43%
Elephant Butte Reservoir	312.7	407.3	1283.0	2195.0	14%	19%	58%	24%	32%
Heron Reservoir	86.7	73.4	287.7	400.0	22%	18%	72%	30%	26%
Lake Avalon	1.7	1.5	1.6	4.0	43%	38%	39%	109%	96%
Lake Sumner	30.1	42.8	29.7	102.0	30%	42%	29%	101%	144%
Navajo Reservoir	1464.7	1440.6	1310.0	1696.0	86%	85%	77%	112%	110%
Santa Rosa Reservoir	54.6	99.9	52.4	438.3	12%	23%	12%	104%	191%
Basin-wide Total	2408.8	2537.7	3672.0	8421.3	29%	30%	44%	66%	69%
# of reservoirs	14	14	14	14	14	14	14	14	14

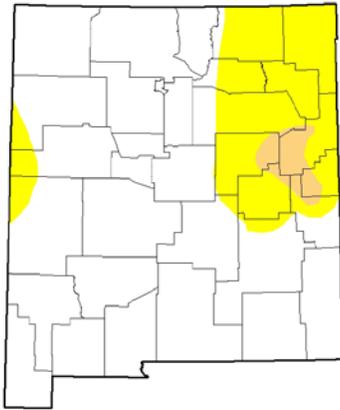
* Due to a gauge malfunction Costilla Reservoir data is unavailable at this time

Streamflow

For most basins across the state the month of March was marginal for both snowpack and precipitation. Average to above average snowpack in the Rio Grande and San Juan basins is evident in the streamflow forecasts for that region. With northern forecast points averaging above 100 percent in both basins we can expect decent runoff this spring. The Zuni-Bluewater Basins continue to reap the rewards of an above average winter. Steady precipitation throughout the water-year has also benefited recent forecasts which are well above 100 percent of the average. With melt off in full swing the Mimbres Basin forecast increased to 175 of the average! However, the Canadian River Basin which missed out on a majority of the recent snowfall in the north dropped by 20 percent. Forecasts for that region are now all below average. Additionally, the Pecos River Basin forecasts dropped another 20 percent and now range from 77 to 56 percent of the average. The San Francisco-Upper Gila River Basin forecasts also saw slight decreases and now range from 90 to 103 percent of the average. Lastly, and perhaps the most disappointing would be the Rio Hondo Basin which declined by another 10 percent to 36 percent of the average. As always, weather conditions in New Mexico this time of year can vary dramatically. It is not uncommon to receive April snow and when timed right spring rains can increase streamflow forecasts. Please continue to monitor conditions and read the May report to see how the water-year comes to a close.

New Mexico Drought Monitor, real versus perceived conditions?

U.S. Drought Monitor New Mexico



February 28, 2017
(Released Thursday, Mar. 2, 2017)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	77.00	23.00	2.49	0.00	0.00	0.00
Last Week 02-23-2017	86.71	13.29	2.49	0.00	0.00	0.00
3 Months Ago 10-23-2016	48.23	53.77	4.00	0.00	0.00	0.00
Start of Calendar Year 01-01-2017	66.20	33.80	4.28	0.00	0.00	0.00
Start of Water Year 07-01-16	53.33	46.67	3.00	0.00	0.00	0.00
One Year Ago 02-28-16	67.54	32.46	0.00	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

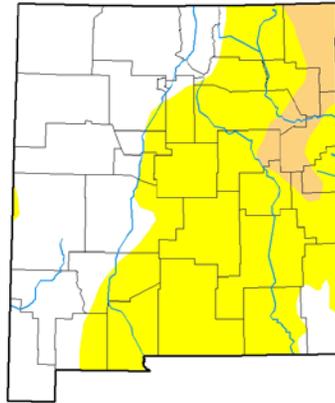
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
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<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor New Mexico



March 21, 2017
(Released Thursday, Mar. 23, 2017)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	44.41	55.59	6.72	0.00	0.00	0.00
Last Week 03-14-2017	70.02	29.98	3.24	0.00	0.00	0.00
3 Months Ago 10-23-2016	48.05	53.95	4.00	0.00	0.00	0.00
Start of Calendar Year 01-01-2017	66.20	33.80	4.28	0.00	0.00	0.00
Start of Water Year 07-01-2016	53.33	46.67	3.00	0.00	0.00	0.00
One Year Ago 03-23-2016	4.80	95.14	18.57	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

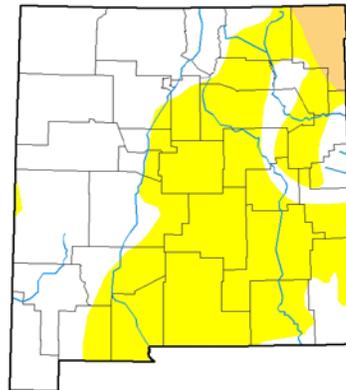
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
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<http://droughtmonitor.unl.edu/>

U.S. Drought Monitor New Mexico



April 4, 2017
(Released Thursday, Apr. 6, 2017)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	50.58	49.42	2.52	0.00	0.00	0.00
Last Week 03-28-2017	45.04	54.96	6.72	0.00	0.00	0.00
3 Months Ago 10-23-2016	66.20	33.80	4.28	0.00	0.00	0.00
Start of Calendar Year 01-01-2017	66.20	33.80	4.28	0.00	0.00	0.00
Start of Water Year 07-01-2016	53.33	46.67	3.00	0.00	0.00	0.00
One Year Ago 04-03-2016	3.15	96.85	43.20	0.00	0.00	0.00

Intensity:
■ D0 Abnormally Dry ■ D3 Extreme Drought
■ D1 Moderate Drought ■ D4 Exceptional Drought
■ D2 Severe Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

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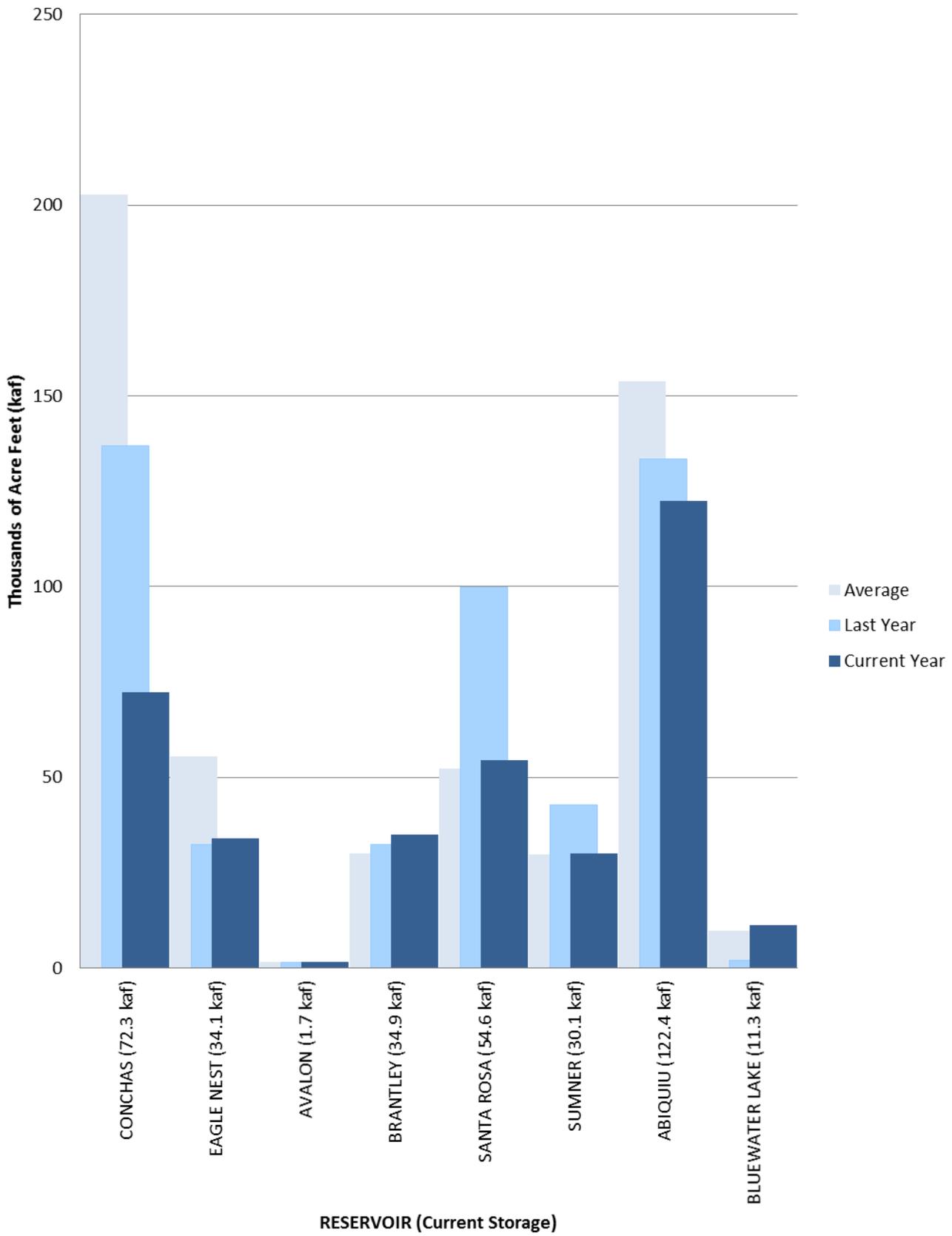


<http://droughtmonitor.unl.edu/>

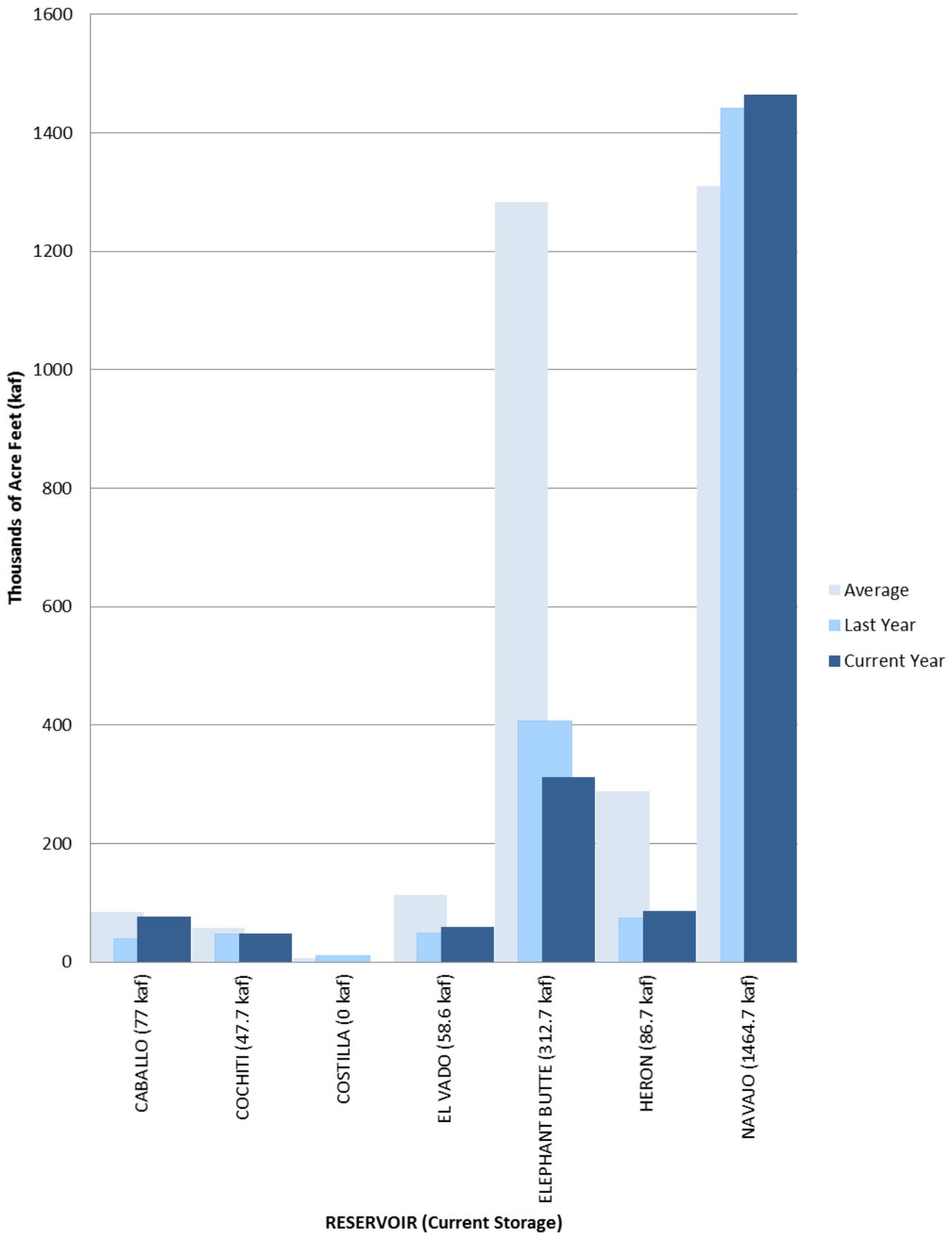
Every week, The U.S. Drought Monitor is produced in partnership between the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. This useful tool uses multiple inputs, including precipitation received, to give an indication of the extent and severity of drought conditions nationwide.

Drought expanded rapidly over most of New Mexico during the month of March as an anomalously strong ridge of high pressure set up over the Western US, keeping the state out of the main storm track for the first three weeks of the month. This ridge allowed daily temperatures to soar over the region with many areas experiencing temperatures normally expected in May rather than March. Preliminary data from NOAA/National Center for Environmental Information (NCEI) has March 2017 as the warmest March on record for New Mexico with a statewide average maximum temperature of 68.6F. This is departure of 10.1°F above the 1901-2000 average (58.5° F). The average temperature for New Mexico also set a record with a statewide average of 51.4° F, which is +7.9° F above the 1901-2000 average (43.5° F). Simultaneously, precipitation over the state during this time was mainly limited to the Northern Mountains with many stations west of the Central Mountain Chain reporting zero precipitation during this time. This combination of rapidly increasing temperatures along with very low precipitation totals created a “flash drought” over much of the state as evapotranspiration demand soared. A pattern shift during the last week of the month brought some significant precipitation totals to much of the state, thus slightly improving drought conditions over the Eastern Plains.

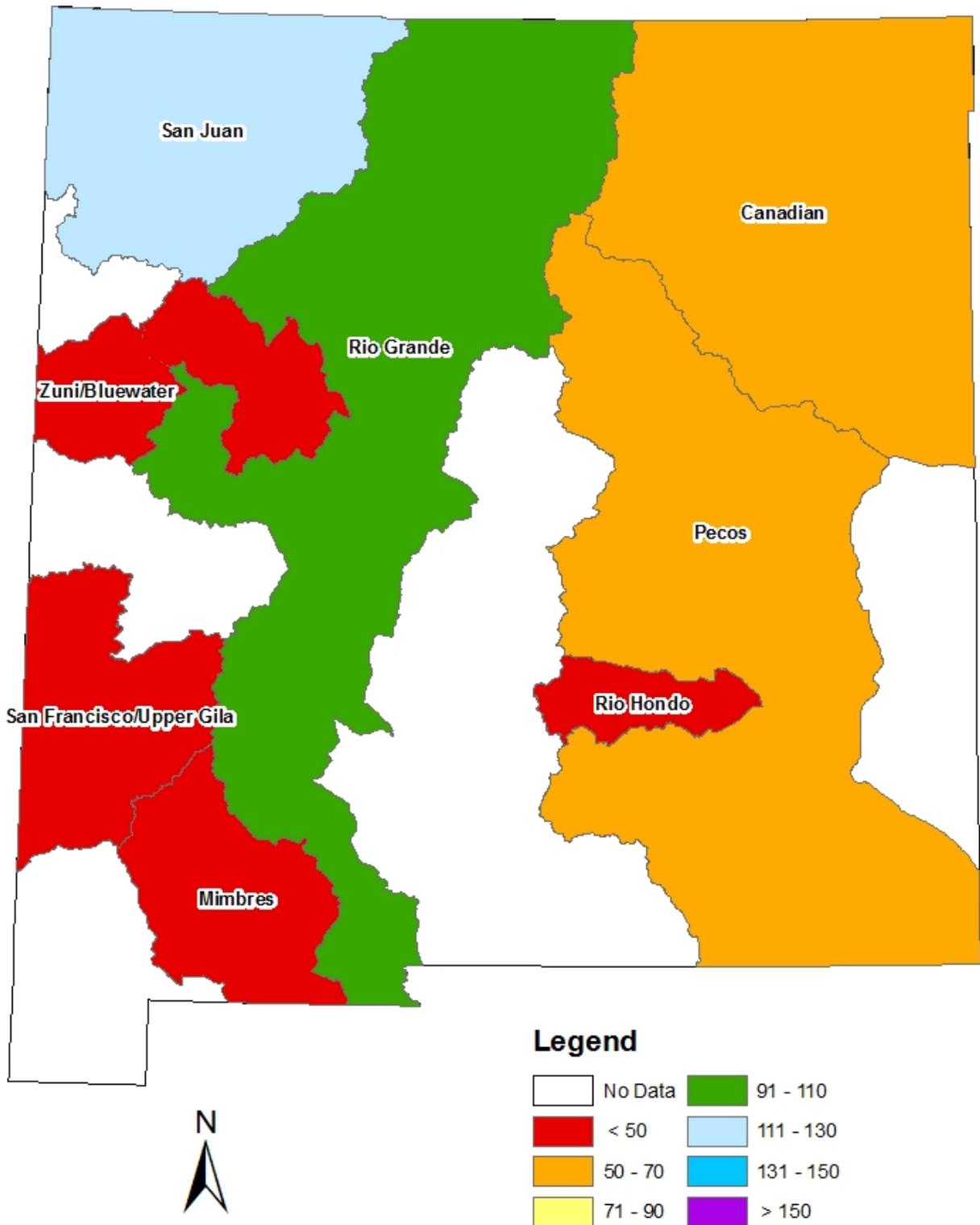
Statewide Reservoir Storage



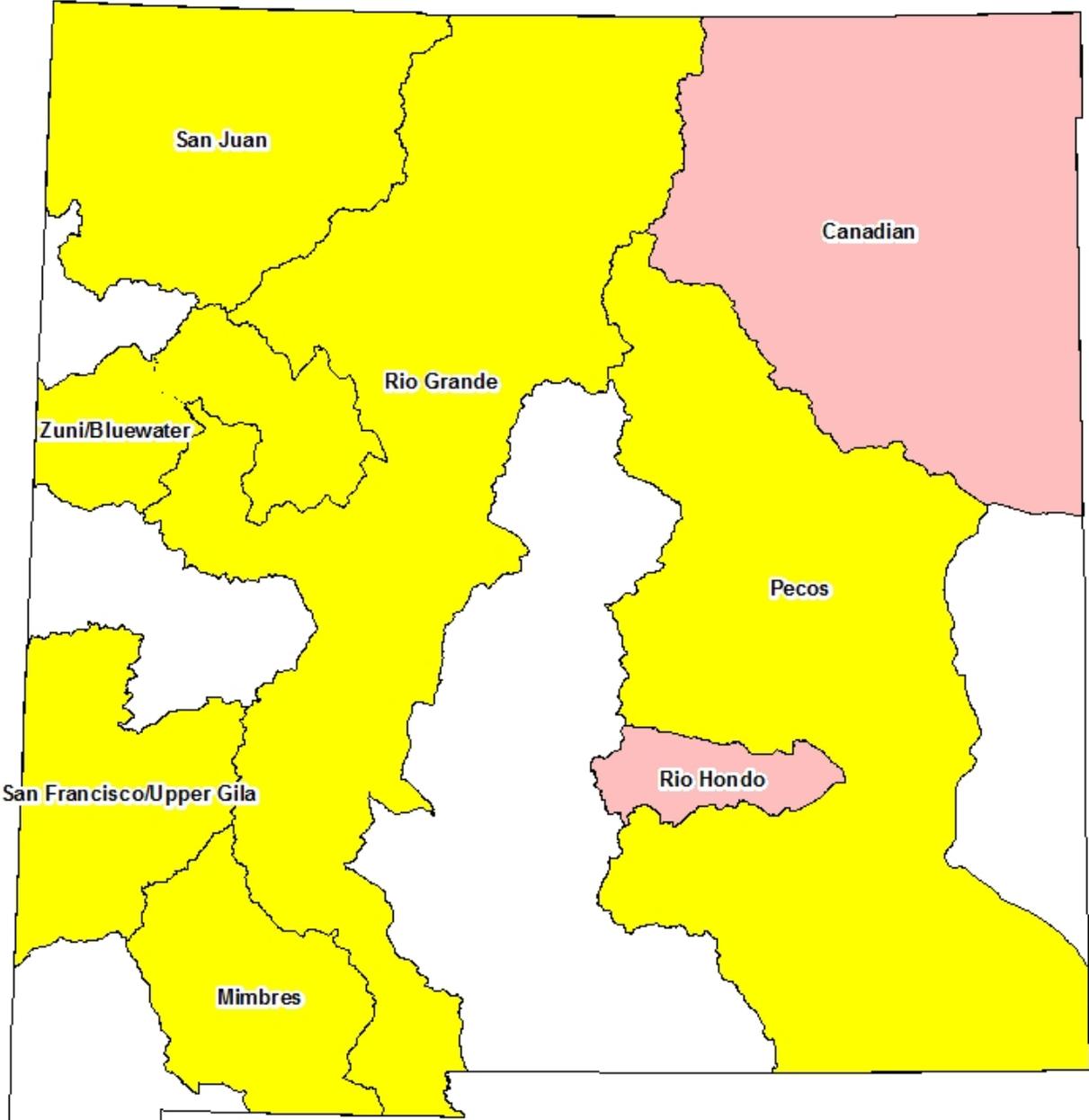
Statewide Reservoir Storage



New Mexico Percent of Median Snowpack as of April 1, 2017



New Mexico Surface Water Supply Index as of April 1, 2017



Legend

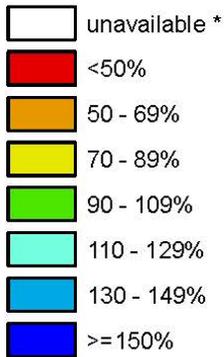
Surface Water Supply Index	
White	No Data
Yellow	-1.5 - 1.5
Red	-4.0 - -3.1
Pink	-3.0 - -1.6
Green	1.6 - 3.0
Blue	3.1 - 4.0

New Mexico

SNOTEL Current Snow Water Equivalent (SWE) % of Normal

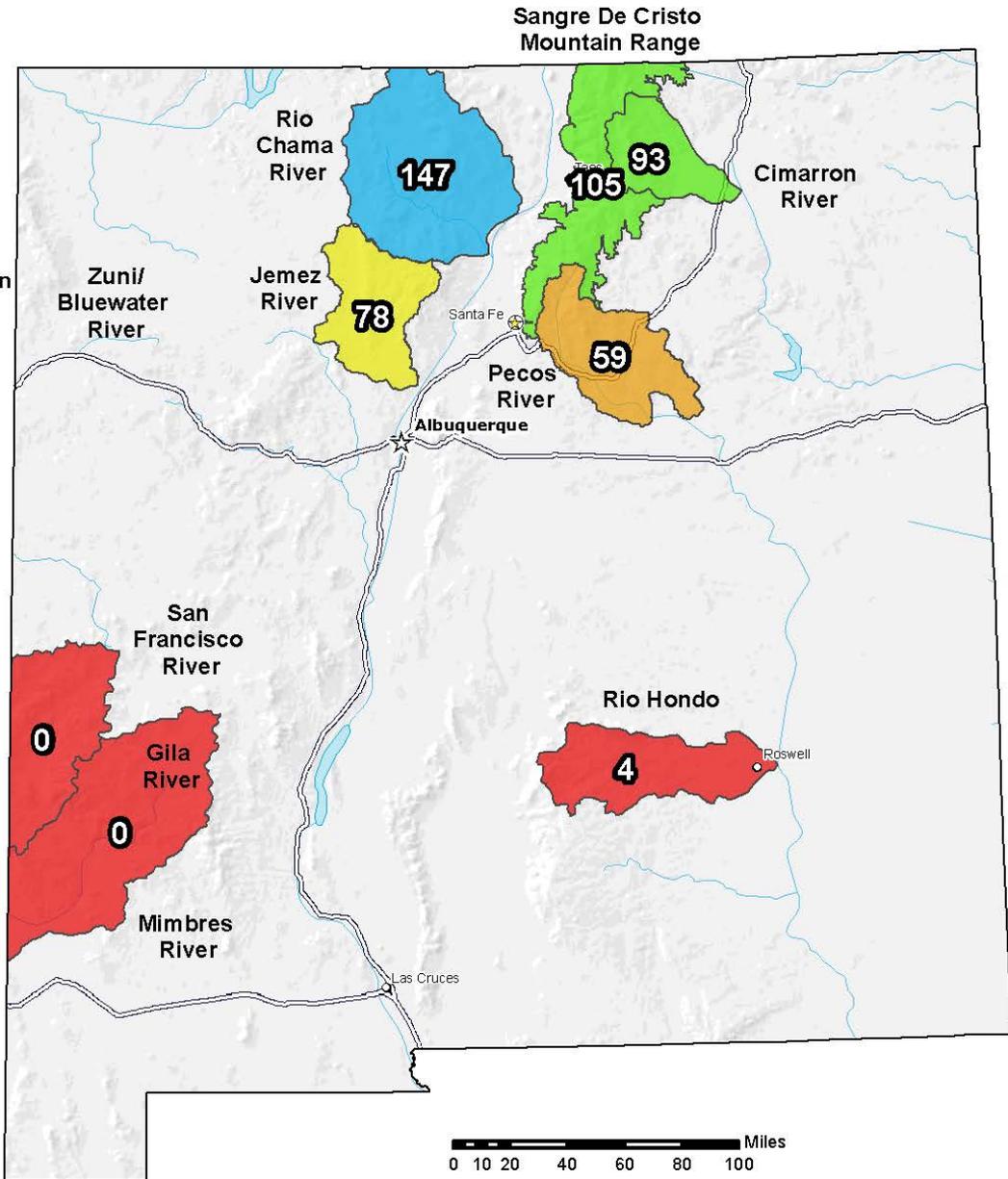
Apr 06, 2017

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).

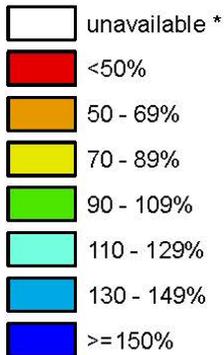
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

New Mexico

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

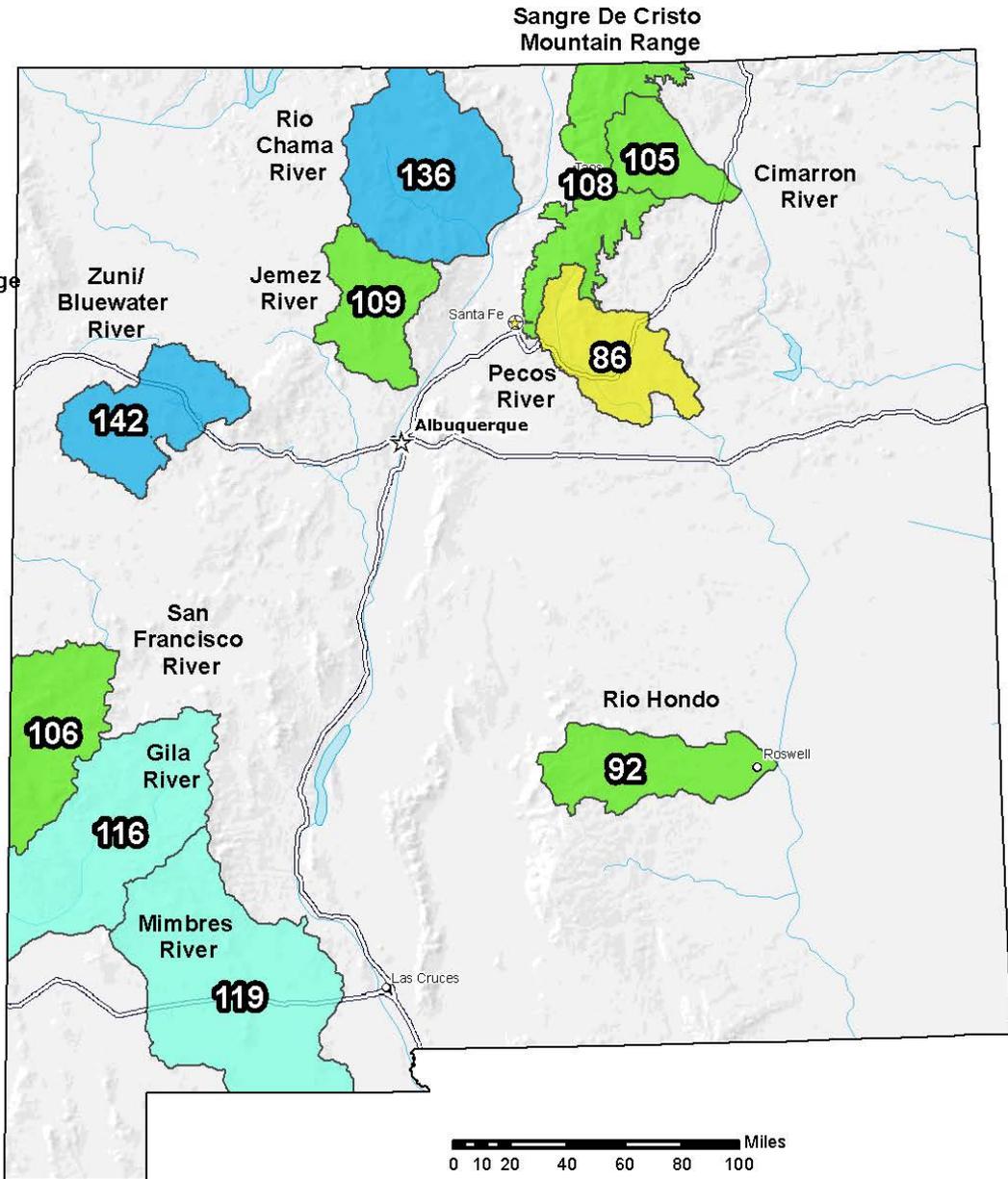
Apr 06, 2017

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

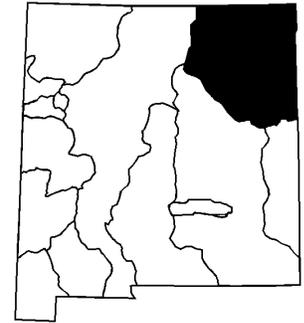
**Provisional Data
Subject to Revision**



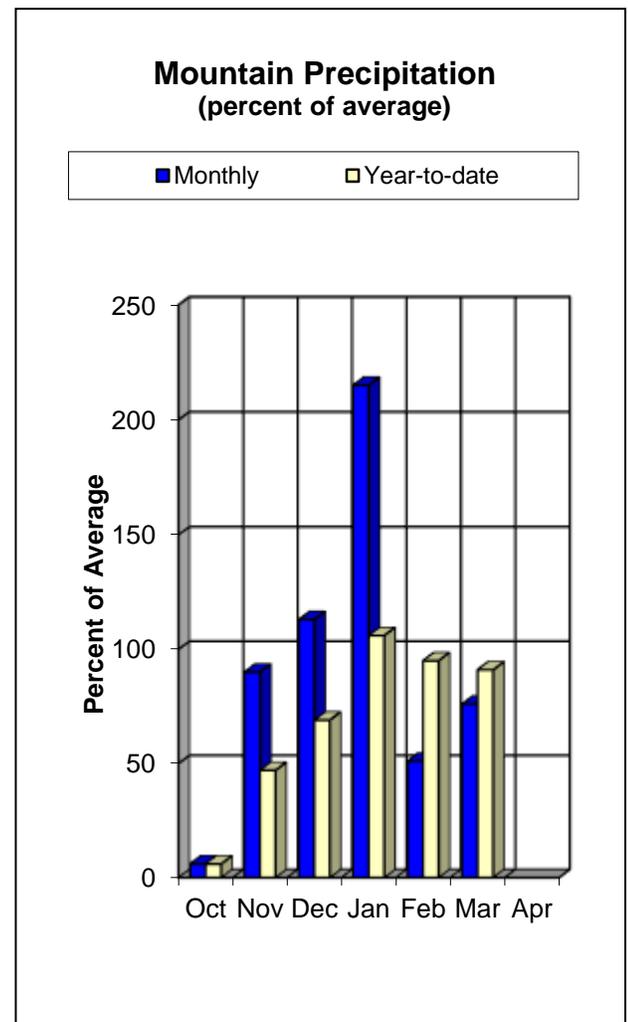
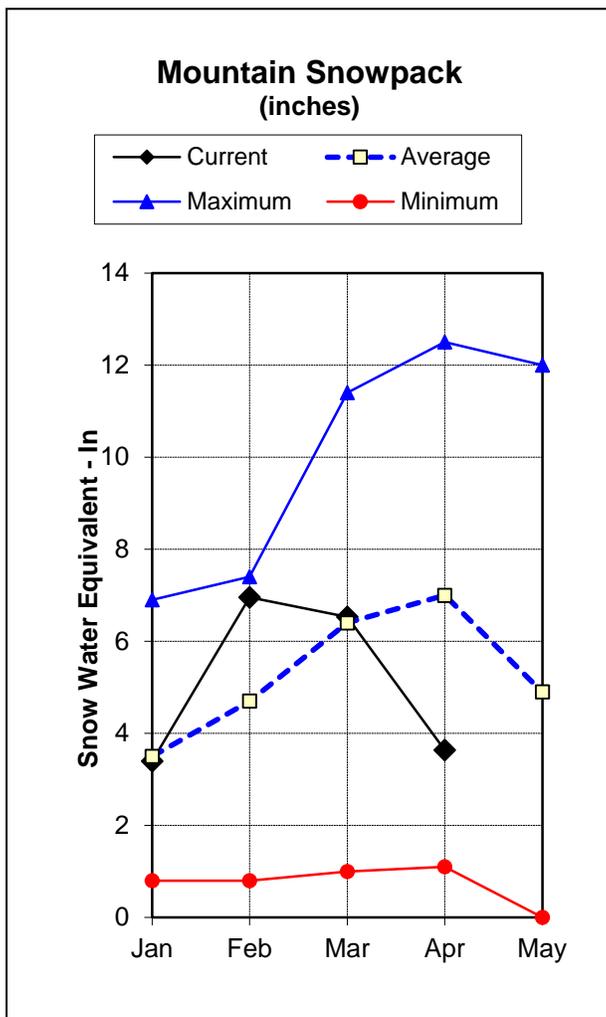
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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 April 1, 2017



The Canadian River Basin forecasts for the April to June time period have decreased over the past month at almost all points. The forecast for the Vermejo River near Dawson has decreased by 13 percent to 90 percent of the average. Additionally the forecast for the Cimarron River near Cimarron has also decreased, and is now at 80 percent of the average. The Conchas Reservoir Inflow is forecast at 100 percent of the average, however this is a challenging forecast point due to the influence of future weather over current conditions. Monthly precipitation for March in the basin was below normal at 76 percent of the average. Water year-to-date precipitation in the Canadian River Basin still remains close to average at 91 percent. This is primarily due to precipitation it received early in the water year. Snowpack in the basin has decreased by half from 97 percent of the median to 52 percent. Reservoirs are currently holding 106,400 acre-feet of storage which is a decrease of 62,900 acre feet from last year at this time. Reservoir storage in the Canadian River Basin remains at 32 percent of capacity which is 41 percent of the average storage.



Canadian River Basin Streamflow Forecasts - April 1, 2017

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	3.4	5.4	7	90%	9	12.8	7.8
	APR-JUN	2.9	4.9	6.5	90%	8.5	12.3	7.2
Eagle Nest Reservoir Inflow	MAR-JUN	4.2	7	9.5	85%	12.5	18	11.2
	APR-JUN	2.2	4.7	7.2	81%	10.4	16.8	8.9
Cimarron R nr Cimarron ²	MAR-JUN	0.57	8.3	13.5	85%	18.7	26	15.8
	APR-JUN	0.1	5.6	10.6	80%	15.6	23	13.2
Ponil Ck nr Cimarron	MAR-JUN	3.1	4.8	6.2	86%	7.9	10.9	7.2
	APR-JUN	2.7	4.3	5.7	85%	7.4	10.5	6.7
Rayado Ck nr Cimarron	MAR-JUN	1.94	3.8	5.5	79%	7.7	11.9	7
	APR-JUN	1.25	2.9	4.6	72%	6.9	11.4	6.4
Conchas Reservoir Inflow ³	MAR-JUN	4.9	14.3	25	83%	40	71	30
	APR-JUN	4.2	13.3	24	100%	39	72	24

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

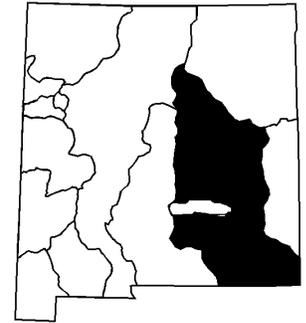
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

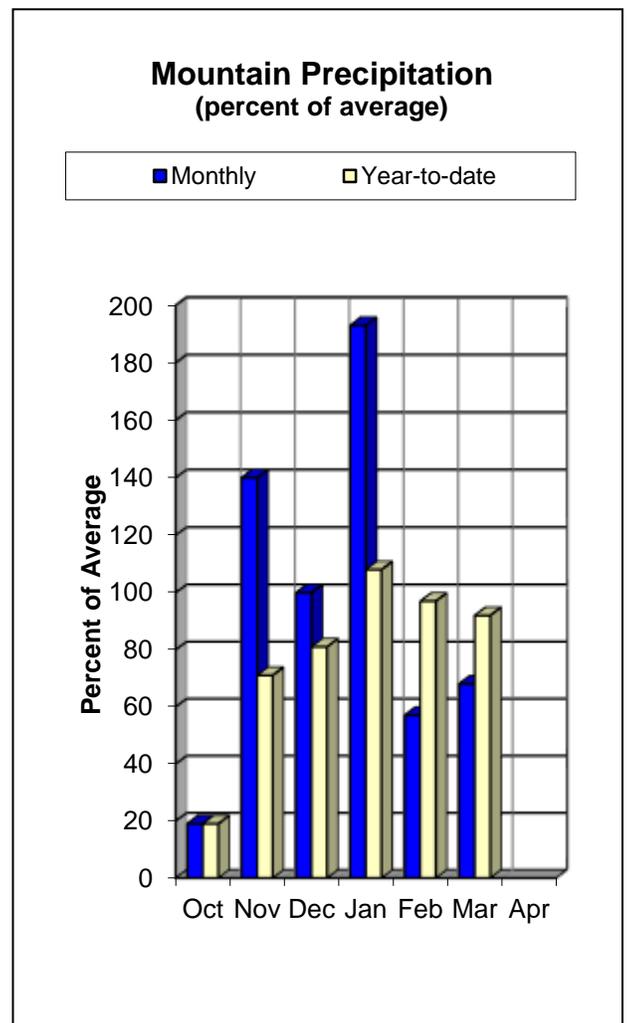
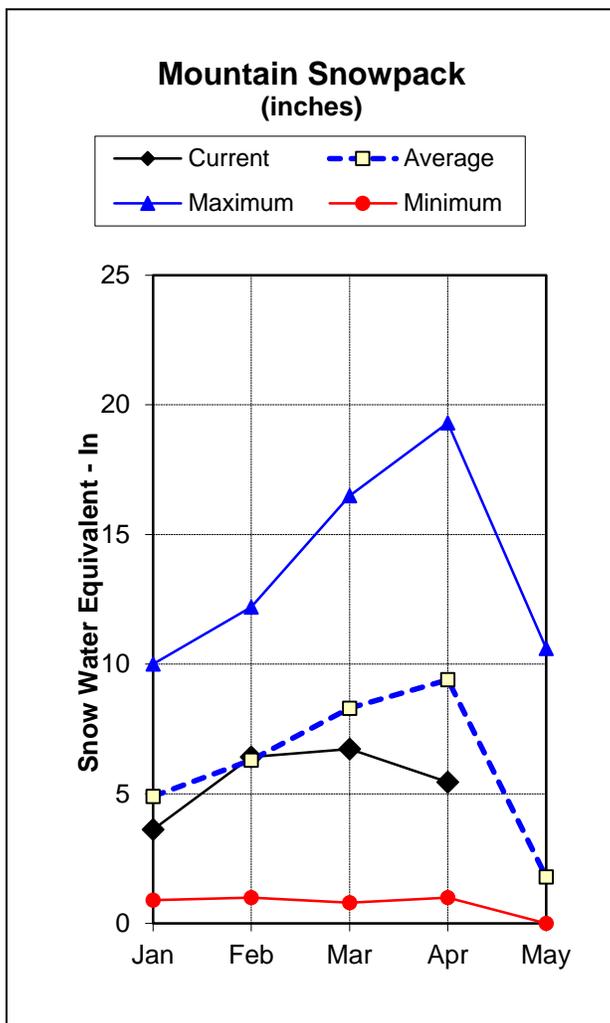
Reservoir Storage End of March, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Conchas Lake	72.3	137.0	202.7	254.2
Eagle Nest Lake nr Eagle Nest, NM	34.1	32.3	55.6	79.0
Basin-wide Total	106.4	169.3	258.3	333.2
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
CANADIAN RIVER BASIN	10	52%	28%

Pecos River Basin Water Supply Outlook Report as of April 1, 2017



Streamflow forecasts for the Pecos River Basin for the April to July timeframe have decreased slightly throughout March and are now all below average. They now range from 70 percent of average for the Pecos River near Anton Chico to 64 percent of average for Gallinas Creek near Montezuma. The Pecos River above Santa Rosa Lake is now 56 percent of the average. March received only 68 percent of the average precipitation for the month which puts the Pecos at 92 percent of average for the water year-to-date. This is a 15 percent decrease from last year's 107 percent. Snowpack levels in the Pecos River Basin have decreased by another 20 percent to 58 percent of the median. Last year at this time the basin had received 70 percent of the median snowpack. As of April 1st reservoir storage in the basin is at 121,300 acre-feet, which remains 7 percent of the average capacity and 8 percent of the actual capacity. This is 107 percent of the average as compared to 155 percent at this time last year.



Pecos River Basin Streamflow Forecasts - April 1, 2017

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

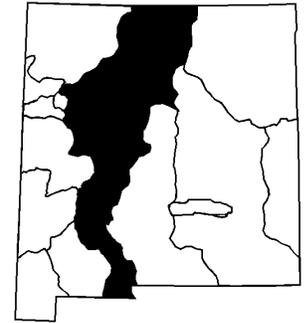
PECOS RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Pecos R nr Pecos	MAR-JUL	24	35	44	77%	54	71	57
	APR-JUL	17.5	28	37	70%	47	64	53
Pecos R nr Anton Chico	MAR-JUL	17	31	44	70%	60	88	63
	APR-JUL	9.3	23	36	63%	52	80	57
Gallinas Ck nr Montezuma	MAR-JUL	2.2	4.3	6.3	64%	8.8	13.3	9.8
	APR-JUL	1.32	3.5	5.5	64%	8	12.5	8.6
Pecos R ab Santa Rosa Lk	MAR-JUL	11.9	23	34	61%	48	72	56
	APR-JUL	7.1	18.6	29	56%	43	67	52

- 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

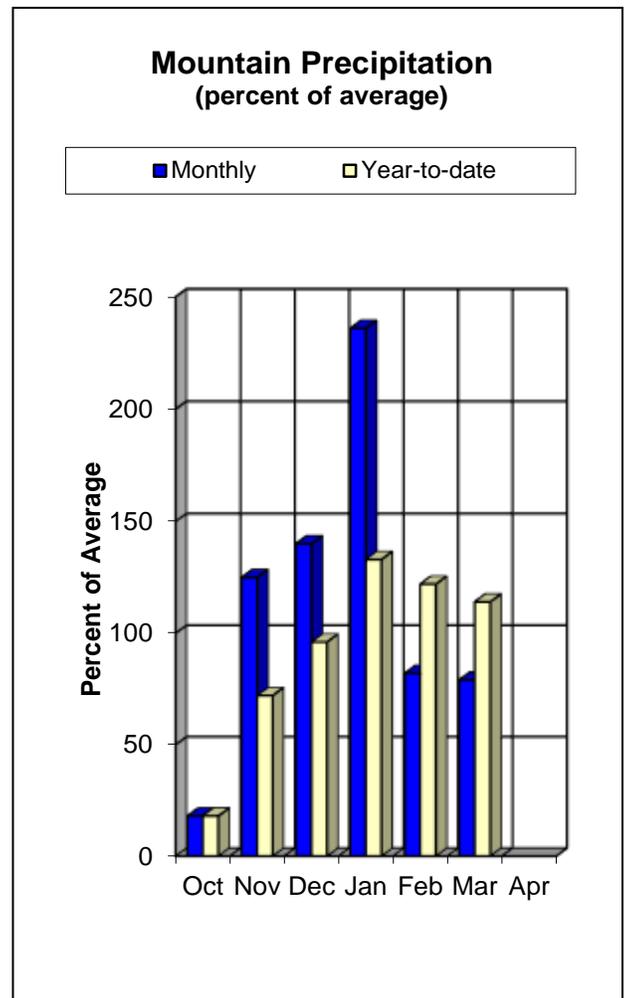
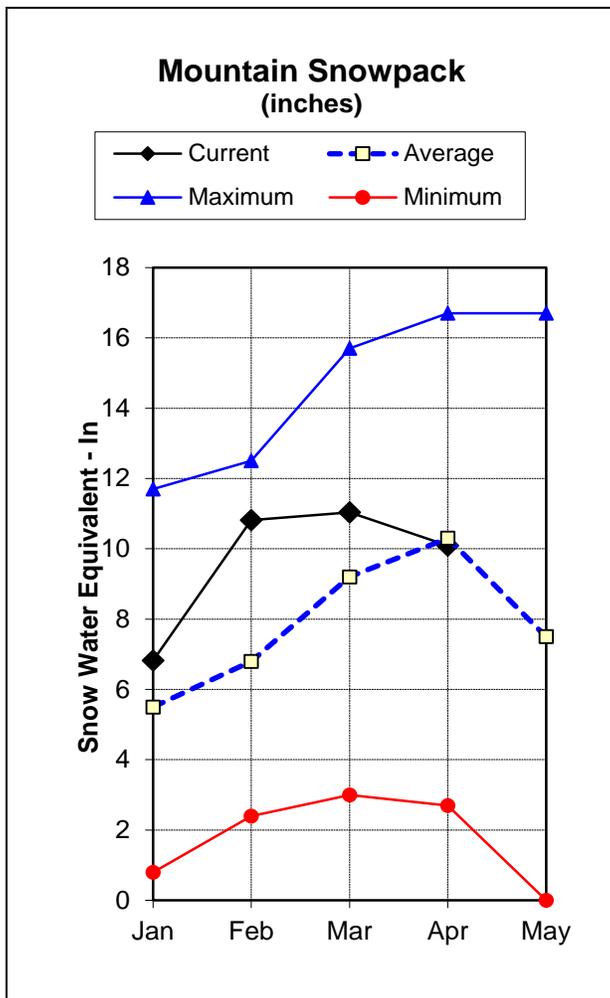
Reservoir Storage End of March, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Lake Avalon	1.7	1.5	1.6	4.0
Brantley Lake nr Carlsbad	34.9	32.5	30.1	1008.2
Santa Rosa Reservoir	54.6	99.9	52.4	438.3
Lake Sumner	30.1	42.8	29.7	102.0
Basin-wide Total	121.3	176.7	113.8	1552.5
# of reservoirs	4	4	4	4

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
PECOS RIVER BASIN	5	58%	70%

Rio Grande Basin Water Supply Outlook Report as of April 1, 2017



The April 1st streamflow forecasts for the Rio Grande Basin look promising with most northern points above 100 percent of the average. South of Taos they drop between 94 and 76 percent and then flows increase toward San Marcial. The headwaters of the Rio Grande range from 106 to 109 percent of the average near Del Norte. The El Vado Reservoir inflow has also remained fairly constant at 154 percent of the average. Additionally, forecasts for the Jemez River below Jemez Canyon Dam have decreased and are now at 55 percent of the average. The Rio Grande at San Marcial has also decreased slightly and is now 119 percent of the average. March was a much drier month only receiving 79 percent of the average precipitation. Therefore, water year-to-date precipitation is down another 8 percent to 114 percent of the average. Snowpack in the basin remains close to the median at 98 percent which is 40 percent above last year's value at this time. Snowpack in southern Colorado affecting the Rio Grande has decreased slightly but still looks great at 108 percent of median. This is an increase of 30 percent from last year at this time. Current reservoir storage in the basin is 716,400 acre-feet which is a decrease of 34,700 acre-feet from last year at this time. This equates to 36 percent of the average water storage. Currently the basin is at 41 percent of the average capacity which is 15 percent of actual reservoir capacity. Costilla Reservoir's totals were not obtainable this month due to gauge issues so please keep that in mind. The last reading of 5300 acre-feet for Costilla Reservoir was at the beginning of January.



Rio Grande Basin Streamflow Forecasts - April 1, 2017

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

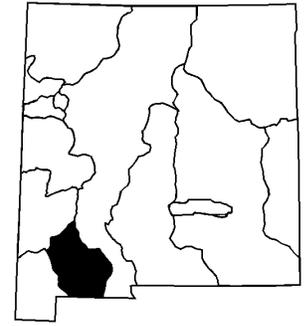
RIO GRANDE BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Grande nr Del Norte ²	APR-SEP	400	490	560	109%	630	745	515
Platoro Reservoir Inflow	APR-JUL	47	55	60	107%	66	75	56
	APR-SEP	51	60	67	108%	74	85	62
Conejos R nr Mogote ²	APR-SEP	175	205	230	119%	255	295	194
Costilla Reservoir Inflow	APR-JUL	7.4	10.2	12.4	112%	14.7	18.6	11.1
Costilla Ck nr Costilla ²	APR-JUL	14.7	22	27	104%	34	44	26
Red R bl Fish Hatchery nr Questa	MAR-JUL	23	29	34	100%	39	47	34
	APR-JUL	19.2	25	30	97%	35	43	31
Rio Hondo nr Valdez	MAR-JUL	14.1	17.3	19.7	107%	23	27	18.4
Rio Pueblo de Taos nr Taos	APR-JUL	12.4	15.6	18	103%	21	25	17.4
	MAR-JUL	11	14.6	17.3	102%	20	25	17
Rio Lucero nr Arroyo Seco	APR-JUL	8.7	12.3	15	94%	18	23	15.9
	MAR-JUL	7.3	9.3	10.9	100%	12.6	15.4	10.9
Rio Pueblo de Taos bl Los Cordovas	APR-JUL	6.4	8.4	10	97%	11.7	14.5	10.3
	MAR-JUL	15.5	23	29	81%	36	49	36
Embudo Ck at Dixon	APR-JUL	11	18.7	25	76%	32	45	33
	MAR-JUL	21	33	42	88%	53	71	48
El Vado Reservoir Inflow ²	APR-JUL	17.3	29	38	86%	49	67	44
	MAR-JUL	280	325	360	160%	395	450	225
Santa Cruz R at Cundiyo	APR-JUL	235	280	315	154%	350	405	205
	MAR-JUL	10	13.7	16.7	91%	20	26	18.3
Nambe Falls Reservoir Inflow	APR-JUL	7.3	11	14	84%	17.3	23	16.7
	MAR-JUL	3.6	4.8	5.8	89%	6.9	8.7	6.5
Tesuque Ck ab diversions	APR-JUL	2.8	4	5	82%	6.1	7.9	6.1
	MAR-JUL	0.51	0.85	1.13	84%	1.46	2	1.34
Rio Grande at Otowi Bridge ²	APR-JUL	0.38	0.72	1	84%	1.33	1.91	1.19
	MAR-JUL	675	815	920	128%	1030	1200	720
Santa Fe R nr Santa Fe ²	APR-JUL	535	675	780	123%	890	1060	635
	MAR-JUL	2.1	2.8	3.4	79%	4.1	5.2	4.3
Jemez R nr Jemez	APR-JUL	1.53	2.3	2.9	76%	3.6	4.7	3.8
	MAR-JUL	23	28	31	74%	35	42	42
Jemez R bl Jemez Canyon Dam	APR-JUL	12.5	17.3	21	60%	25	32	35
	MAR-JUL	15.8	21	25	74%	30	37	34
Rio Grande at San Marcial ²	APR-JUL	7.1	12	16	55%	21	28	29
	MAR-JUL	390	515	605	119%	690	820	510
	APR-JUL	310	435	525	119%	610	740	440

- 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 March, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Abiquiu Reservoir	122.4	133.4	153.9	1192.8
Bluewater Lake	11.3	2.1	9.7	38.5
Caballo Reservoir	77.0	39.8	84.6	332.0
Cochiti Lake	47.7	46.8	58.0	491.0
Costilla Reservoir		10.8	7.3	16.0
El Vado Reservoir	58.6	48.3	113.0	190.3
Elephant Butte Reservoir	312.7	407.3	1283.0	2195.0
Heron Reservoir	86.7	73.4	287.7	400.0
Basin-wide Total	716.4	751.1	1989.9	4839.6
# of reservoirs	7	7	7	7

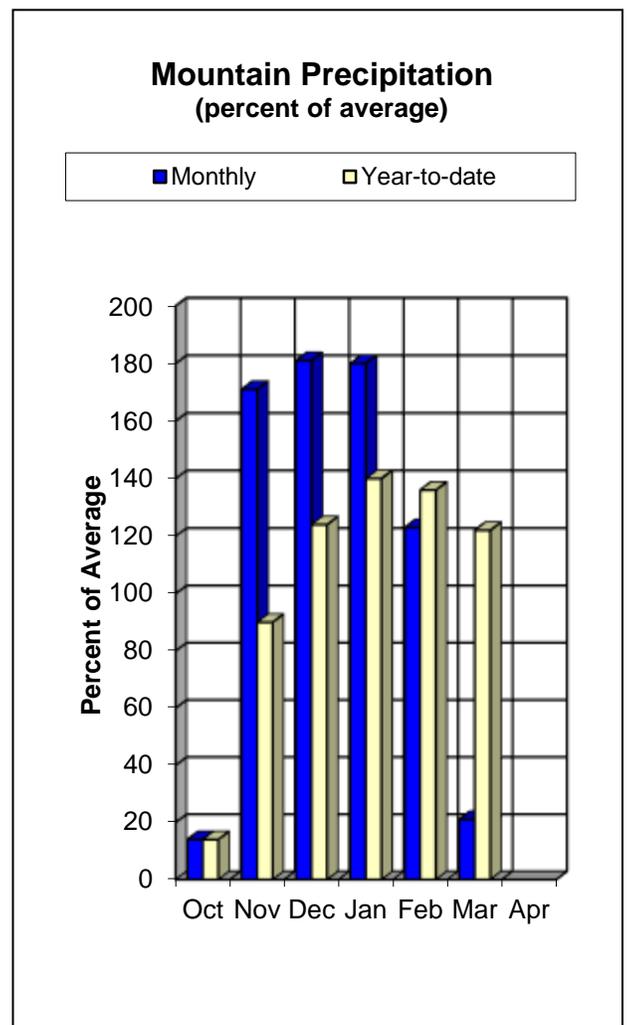
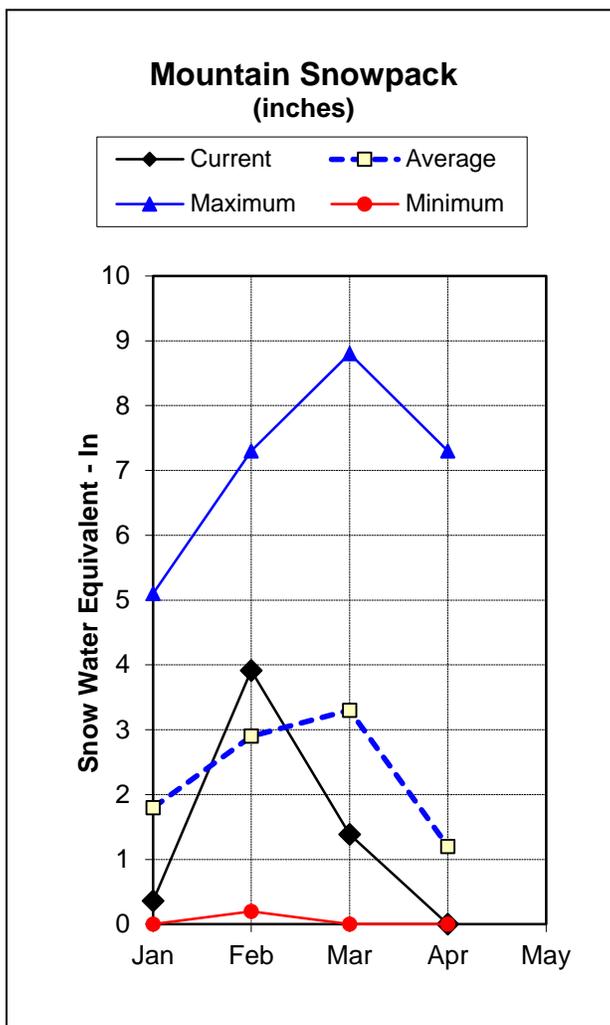
Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
RIO GRANDE BASIN	19	98%	58%

Mimbres River Basin Water Supply Outlook Report as of April 1, 2017



The April forecast for the Mimbres River at Mimbres has increased from the previous month due to snowmelt. It is now at 175 percent of the average! Water year-to-date precipitation is still above average at 122 percent, as compared to 90 percent at this time last year. March was a dry month for the Mimbres Basin which received only 21 percent of the average rainfall for the month. With above average March temperatures and little precipitation the snowpack has melted off. Last year at this time there was also bare ground in the Mimbres Basin.

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.



Mimbres River Basin Streamflow Forecasts - April 1, 2017

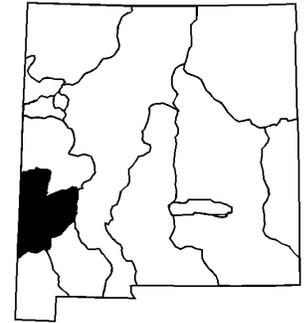
Forecast Exceedance Probabilities for Risk Assessment
Chance that actual volume will exceed forecast

MIMBRES RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Mimbres R at Mimbres ³	APR-MAY	0.76	1.36	1.91	175%	2.6	3.9	1.09

- 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

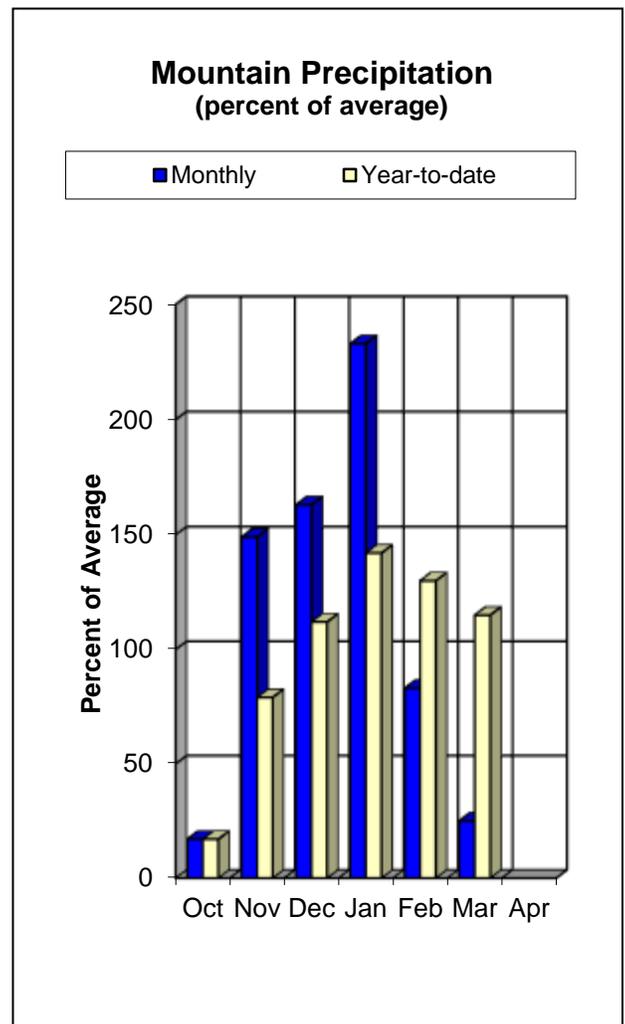
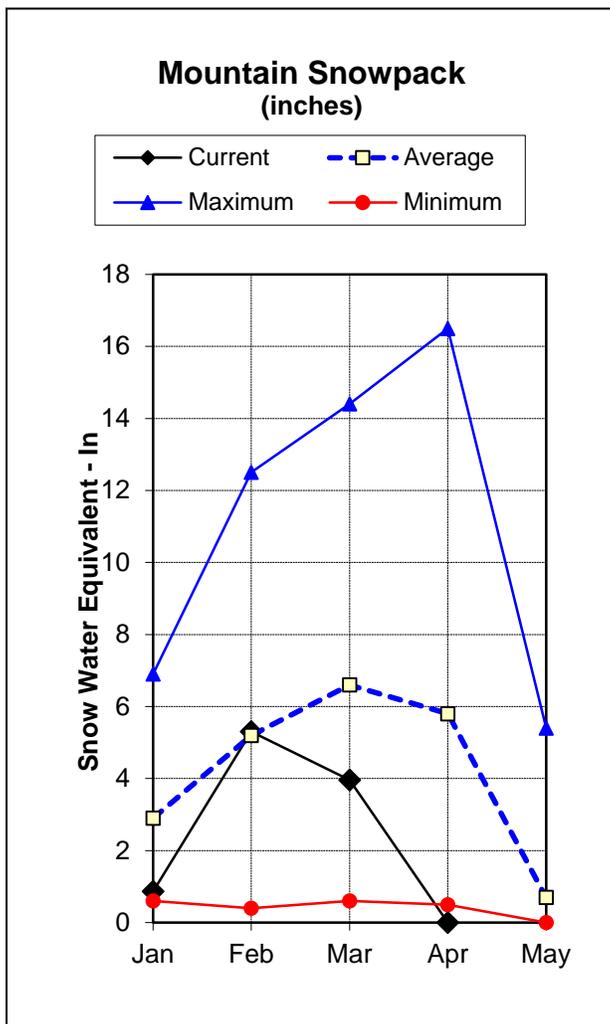
Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
MIMBRES RIVER BASIN	2		

San Francisco / Upper Gila River Basin Water Supply Outlook Report as of April 1, 2017



For the April to May forecasts the Gila River at Gila is now at 103 percent of the average. For the same time period the San Francisco River at Clifton is forecasting 90 percent of the average. Total water year-to-date precipitation through March is 122 percent of the average. The month of March was very dry receiving only 25 percent of the average precipitation. With the continued above average temperatures and the lack of precipitation snowpack in the basin has melted off. Last year at this time the basin also had zero snowpack.

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.



San Francisco-Upper Gila River Basin Streamflow Forecasts - April 1, 2017

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

SAN FRANCISCO-UPPER GILA RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Gila R at Gila ³	APR-MAY	10	13.9	17	103%	21	27	16.5
Gila R bl Blue Ck nr Virden ³	APR-MAY	8.8	15.6	21	100%	28	39	21
San Francisco R at Glenwood ³	APR-MAY	3.1	5.2	7	96%	9.3	13.4	7.3
San Francisco R at Clifton ³	APR-MAY	6.4	11.6	15.5	90%	21	30	17.3

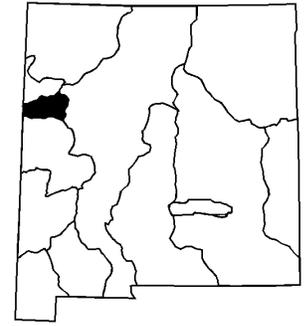
1) 90% and 10% exceedance probabilities are actually 95% and 5%

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

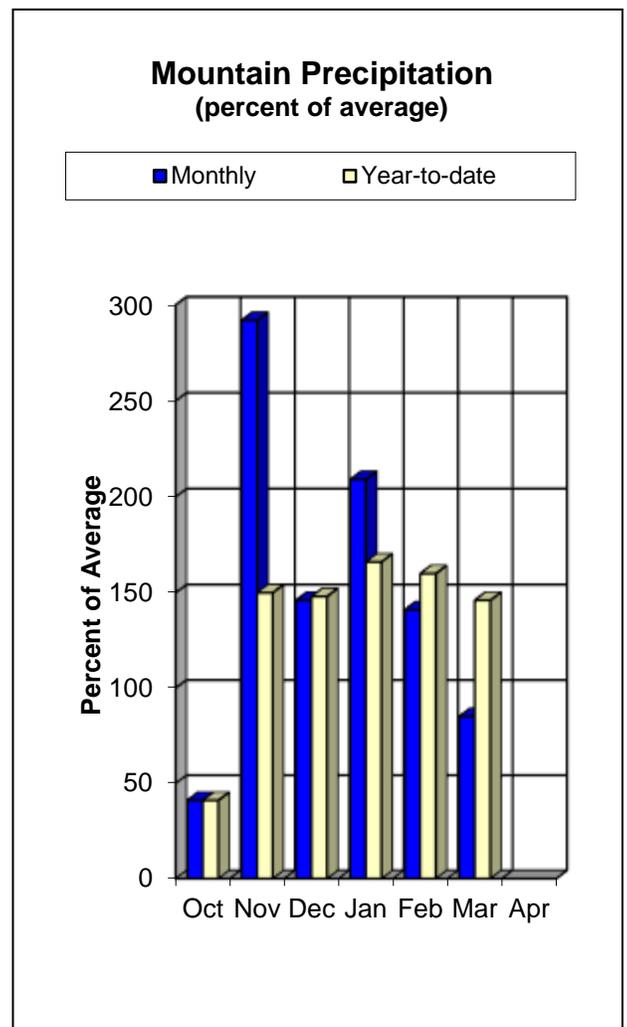
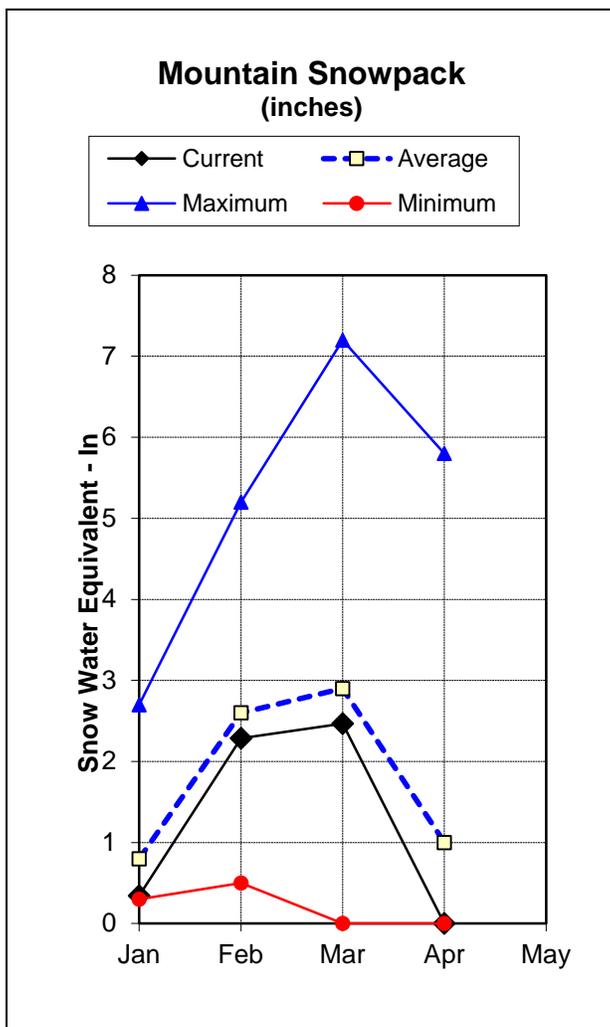
3) Median value used in place of average

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
SAN FRANCISCO-UPPER GILA RIVER BASIN	7	0%	0%

Zuni / Bluewater Basins Water Supply Outlook Report as of April 1, 2017



The Zuni and Bluewater Basins continue to benefit from both continued precipitation and early water year snowpack. The Rio Nutria near Ramah is forecast to be 216 percent of the average for the April to May time frame. Although it has decreased the Zuni River above Black Rock remains above the average at 130 percent. The Zuni-Bluewater Basins received 146 percent of the average precipitation for the water year-to-date, and 85 percent of the average for the month of March. Snowpack in the basins has melted off. Bluewater Lake is higher than it has been in years and is now at 11,300 acre feet versus 2,100 at this time last year! This is 116 percent of the average, and 39 percent of the actual capacity.



Zuni-Bluewater Basins Streamflow Forecasts - April 1, 2017

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

ZUNI-BLUEWATER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Nutria nr Ramah ³	APR-MAY	0.01	0.09	0.24	126%	0.49	1.12	0.19
Zuni R ab Black Rock Reservoir ³	APR-MAY	0	0.02	0.13	130%	0.54	1.67	0.1

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

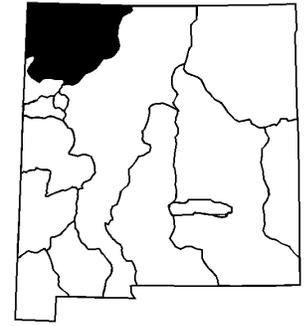
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

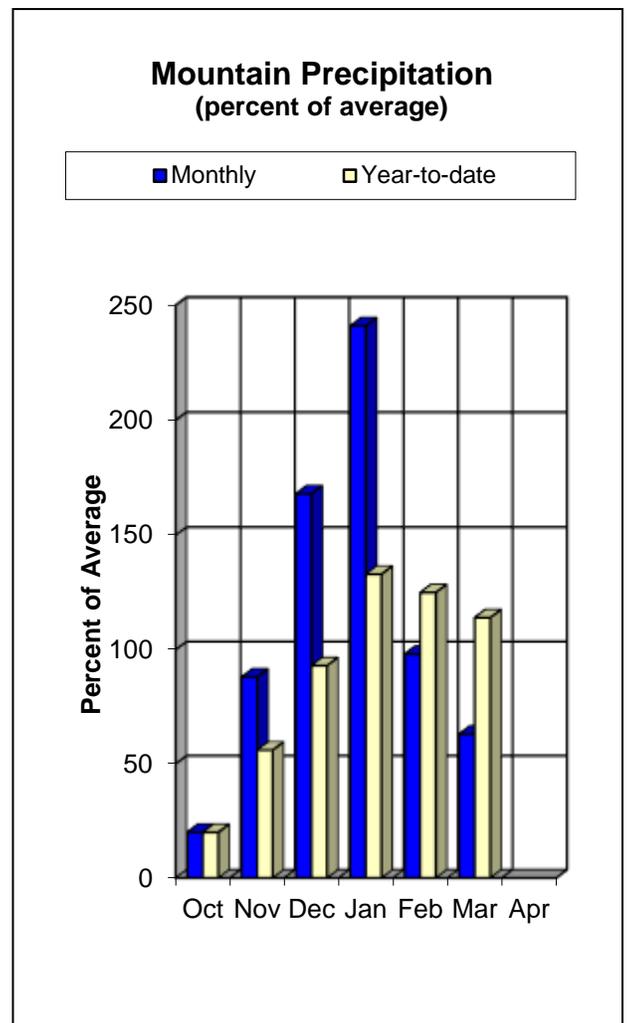
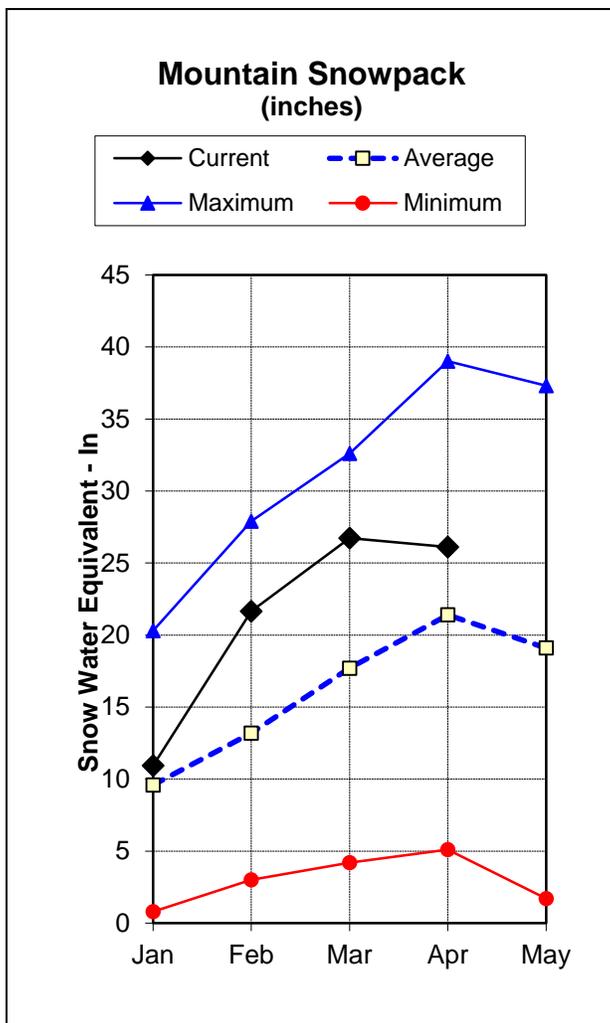
Reservoir Storage End of March, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Bluewater Lake	11.3	2.1	9.7	38.5
Basin-wide Total	11.3	2.1	9.7	38.5
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
ZUNI-BLUEWATER BASINS	5	0%	0%

San Juan River Basin Water Supply Outlook Report as of April 1, 2017



Overall the April to July forecasts have decreased, yet most points remain above the average until south of Cortez, Colorado and the state line. The Rio Blanco is forecast to be 117 percent of the average with the La Plata at Hesperus also above average at 123 percent. Additionally, the Animas River at Durango has only dropped by 6 percent to 114 percent of the average. Water year-to-date precipitation is at 114 percent of the average, which remains a 23 percent increase from last year at this time. March was a below average month for rainfall receiving only 63 percent of the average precipitation for the month. Snowpack in the basin remains above the median at 122 percent. This is an increase of 45 percent from last year at this time. Navajo reservoir's storage increased to 1,464,700 acre-feet which equates to 112 percent of the average! This surpasses last year's 1,440,600 acre-feet at the end of March and equates to 77 percent of the average capacity for the reservoir.



San Juan River Basin Streamflow Forecasts - April 1, 2017

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	47	56	63	117%	70	81	54
Navajo R at Oso Diversion ²	APR-JUL	57	67	75	115%	83	96	65
Navajo Reservoir Inflow ²	APR-JUL	595	710	785	107%	860	970	735
Animas R at Durango	APR-JUL	375	435	475	114%	515	575	415
La Plata R at Hesperus	APR-JUL	21	24	27	117%	29	34	23

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

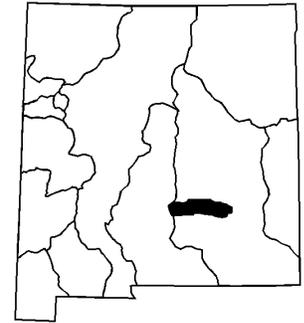
2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

3) Median value used in place of average

Reservoir Storage End of March, 2017	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Navajo Reservoir	1464.7	1440.6	1310.0	1696.0
Basin-wide Total	1464.7	1440.6	1310.0	1696.0
# of reservoirs	1	1	1	1

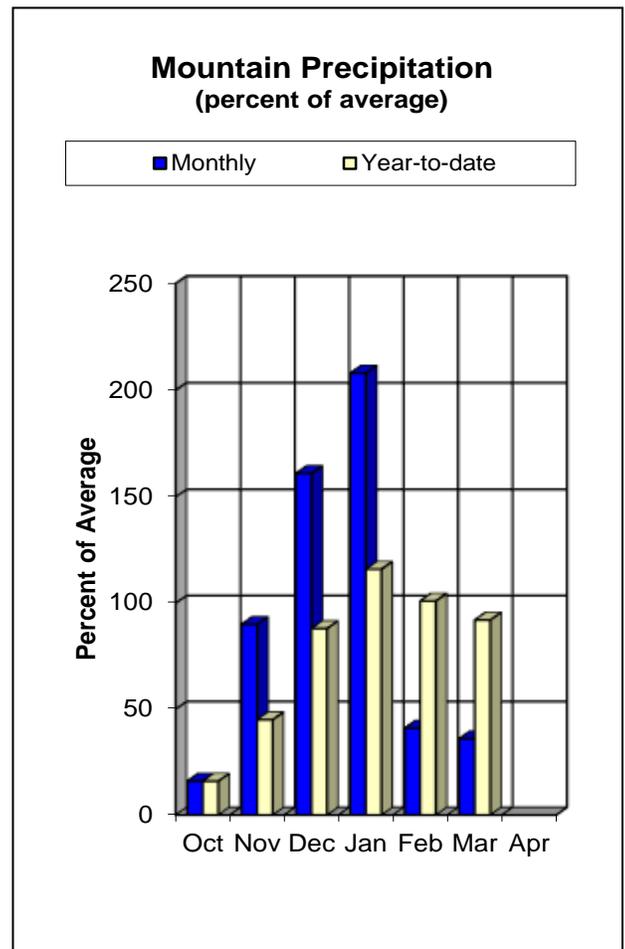
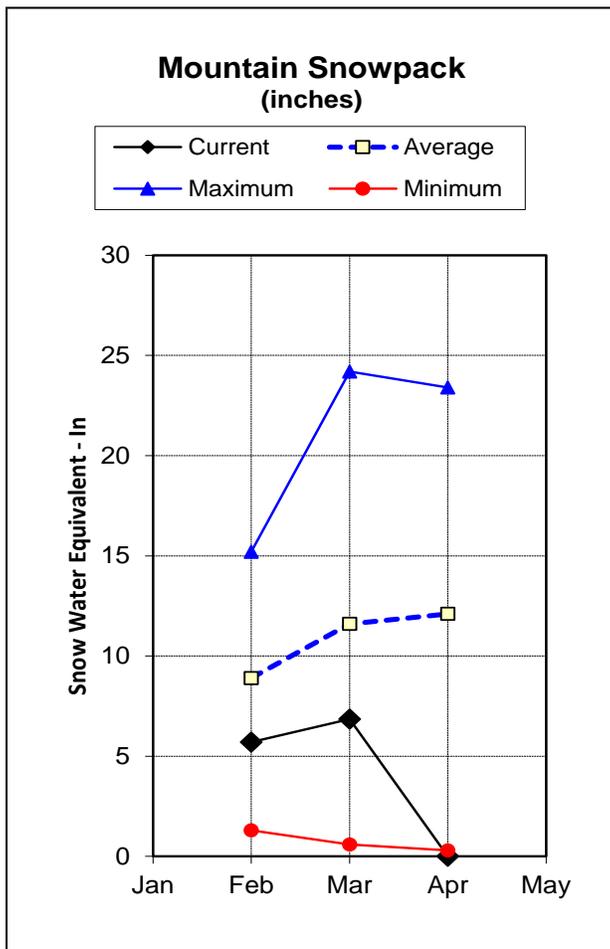
Watershed Snowpack Analysis April 1, 2017	# of Sites	% Median	Last Year % Median
SAN JUAN RIVER BASIN	13	122%	77%

Rio Hondo Basin Water Supply Outlook Report as of April 1, 2017



Streamflow forecasts for the April to June time period in the Rio Hondo Basin have decreased by another 10 percent to 36 percent of average for the Rio Ruidoso at Hollywood. Water year-to-date precipitation is 92 percent of the average. This continues to be largely due to moisture being front loaded in December and January. Following a dry February, the month of March received only 36 percent of the monthly average precipitation. Snowpack in the basin has melted off. This measurement however should be used with caution as the Sierra Blanca SNOTEL site was impacted by the Little Bear Fire three 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.



Rio Hondo Basin Streamflow Forecasts - April 1, 2017

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	1.9	2.5	3	45%	3.6	4.7	6.7
	APR-JUN	0.68	1.3	1.82	36%	2.4	3.5	5

- 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 April 1, 2017	# of Sites	% Median	Last Year % Median
RIO HONDO BASIN	1	0%	0%

NEW MEXICO STATEWIDE	Network	Elevation (ft)	Depth (in)	SWE (in)	Median (in)	% Median	Last Year SWE (in)	Last Year % Median
Alamitos	SC	9320	0	0.0	5.2	0%	0.2	4%
Aztec #2	SC	9880	0	0.0	4.3	0%	0.4	9%
Bateman	SNOTEL	9300	36	15.3	12.2	125%	7.1	58%
Boon	SC	8140	0	0.0	0.8	0%	0.0	0%
Bowl Canvon	SC	8980	18	7.2	7.8	92%	2.8	36%
Chamita	SNOTEL	8400	23	10.0	7.9	127%	3.1	39%
Dan Valle	SC	7640	0	0.0	0.1	0%	0.0	0%
Elk Cabin	SNOTEL	8210	0	0.0	0.6	0%	0.0	0%
Emory Pass #2	SC	7800			0.0			
Frisco Divide	SNOTEL	8000	0	0.0	0.0		0.0	
Gallegos Peak	SNOTEL	9800	20	7.6	10.4	73%	6.8	65%
Hematite Park	SC	9500	16	4.2	3.6	117%	0.5	14%
Hidden Valley	SC	8480	6	2.5			0.0	
Hopewell	SNOTEL	10000	66	25.7	19.5	132%	12.8	66%
Hummingbird - Aerial And Snow Course	SC	10550			9.0			
Lookout Mountain	SNOTEL	8500	0	0.0	0.0		0.0	
McGaffey	SC	8120	0	0.0	0.0		0.0	
Mcknight Cabin	SNOTEL	9240	0	0.0	0.0		0.0	
Mcknight Cabin Aerial Marker	SC	9300						
Mcknight Cabin Snow Course	SC	9300			1.1			
Missionary Spring	SC	7940	0	0.0	0.0		0.0	
Navajo Whiskey Ck	SNOTEL	9050	2	0.3			0.0	
North Costilla	SNOTEL	10600	17	4.6	4.8	96%	2.6	54%
Ojo Redondo	SC	8200	0	0.0	0.2	0%	0.0	0%
Palo	SNOTEL	9350	0	0.0			0.0	
Palo	SC	9300	10	3.2	7.4	43%	2.4	32%
Panchuelo	SC	8400					0.0	
Post Office Flats	SC	8400			0.0		0.0	
Quemazon	SNOTEL	9500	0	0.0	7.0	0%	0.0	0%
Red River Pass #2	SNOTEL	9850			7.4		0.4	5%
Rice Park	SNOTEL	8460	0	0.0	0.0		0.0	
Rice Park	SC	8460			0.8			
Rio En Medio	SC	10300	17	4.4	9.1	48%	5.0	55%
Rio Santa Barbara	SNOTEL	10664	46	14.9			14.9	
San Antonio Sink	SNOTEL	9100	26	12.0			5.5	
San Antonio Sink	SC	9200	28	9.8	7.5	131%	2.4	32%
Santa Fe	SNOTEL	11445	43	14.7	15.9	92%	16.7	105%
Senorita Divide #2	SNOTEL	8600	14	4.1	8.5	48%	3.4	40%
Shuree	SNOTEL	10100	8	3.3			0.5	
Shuree	SC	10097	8	2.2	2.6	85%	0.0	0%
Sierra Blanca	SNOTEL	10280	0	0.0	5.9	0%	0.0	0%
Signal Peak	SNOTEL	8360	0	0.0	0.0		0.0	
Silver Creek Divide	SNOTEL	9000	0	0.0	7.0	0%	0.0	0%
State Line	SC	8000	0	0.0	0.0		0.0	
Taos Canyon	SC	9100	3	1.1	4.4	25%	0.2	5%
Taos Powderhorn	SNOTEL	11057	101	33.7			15.5	
Taos Powderhorn	SC	11250	84	29.1	25.8	113%	19.1	74%
Tolbv	SNOTEL	10180	14	3.9	7.6	51%	0.0	0%
Tolbv	SC	10180			9.8			
Tres Ritos	SNOTEL	8600	1	0.3			0.0	
Tres Ritos	SC	8600	2	0.6	4.4	14%	0.2	5%
Vacas Locas	SNOTEL	9306	17	7.9	8.1	98%	4.0	49%
Wesner Springs	SNOTEL	11120	23	8.1	16.0	51%	10.9	68%
Whiskey Creek	SC	9050	20	8.1	8.7	93%	2.2	25%
Whitewater - Aerial And Snow Course	SC	10750			22.6			
Basin Index						77%		46%
# of sites						37		37

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New Mexico
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Natural Resources Conservation Service
Albuquerque, NM

