

New Mexico Basin Outlook Report January 1, 2021



Sangre de Cristos Mountains near Santa Fe, New Mexico
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.

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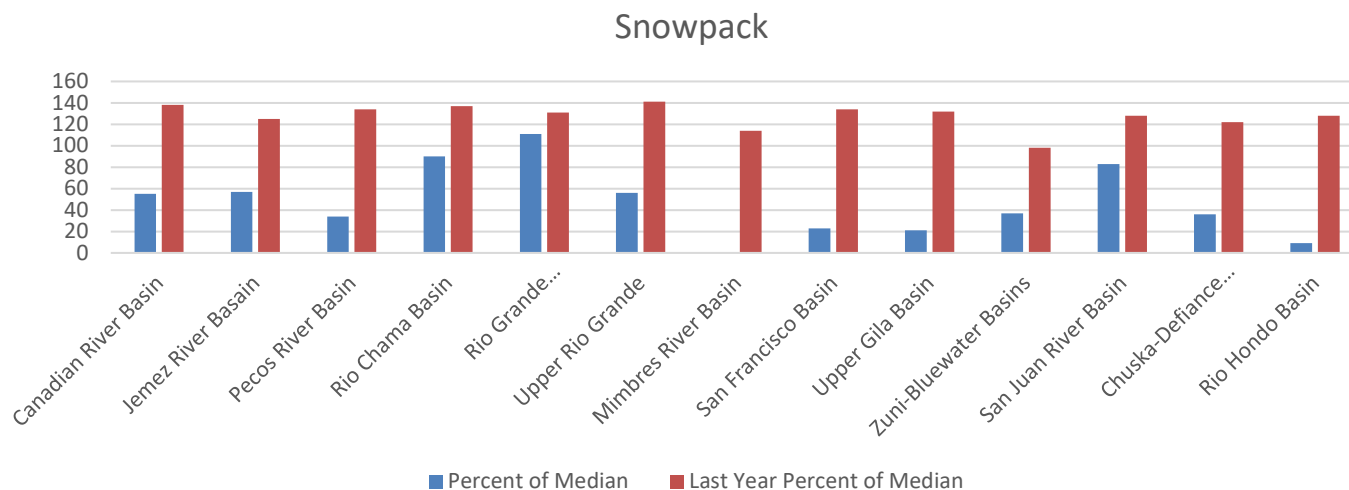
Summary

Most of the state entered into snow season in drought conditions (D2-D4) following a weak summer monsoon. Snowfall has also been low, carrying drought conditions into the winter. While conditions are slightly better in the Rio Grande Headwaters, conditions in the rest of New Mexico are challenging. Due to the poor summer monsoon season, New Mexico is headed into the winter with soil moisture levels well below average. Unless significant snowfall accumulates during the remainder of the season, these soil moisture levels will negatively impact spring runoff. Water users should continue to monitor weather conditions to evaluate their water needs as the winter progresses.

Snowpack

All basins are currently below the median percent of snowpack reported last year. Snowpack levels ranged from a high of 111 percent of median in the Rio Grande Headwaters to a low of 0 percent in the Mimbres Basin. Statewide snowpack average is 79 percent of median as compared to 130 percent at this time last year.

New Mexico Statewide Snowpack	Percent of Median	Last Year Percent of Median
Canadian River Basin	55	138
Jemez River Basain	57	125
Pecos River Basin	34	134
Rio Chama Basin	90	137
Rio Grande Headwaters	111	131
Upper Rio Grande	56	141
Mimbres River Basin	0	114
San Francisco Basin	23	134
Upper Gila Basin	21	132
Zuni-Bluewater Basins	37	98
San Juan River Basin	83	128
Chuska-Defiance Basins	36	122
Rio Hondo Basin	9	128
Statewide Snowpack	79	130
<i># of sites</i>	<i>50</i>	<i>50</i>



Precipitation

Water year precipitation starting October 1 through January is currently at 66 percent of average. All basins saw below average precipitation values throughout the month of December. The highest amount of precipitation fell in the Rio Grande Headwaters at 97 percent of average, primarily in Colorado. The lowest amount of precipitation fell in the San Francisco Basin at 32 percent. Water users and managers should continue to monitor the evolution of the forecast to help determine their water supply needs as the water-year progresses.

Basin	Monthly Total Precipitation for December 2020		Water Year to Date Precipitation through December 2020	
	Percent of Average	Last Year Percent of Average	Percent of Average	Last Year Percent of Average
Canadian River Basin	73	112	69	105
Jemez River Basain	79	126	73	89
Pecos River Basin	51	110	41	116
Rio Chama Basin	93	154	81	93
Rio Grande Headwaters	97	136	59	94
Upper Rio Grande	75	120	62	108
Mimbres River Basin	35	100	37	153
San Francisco Basin	32	124	40	127
Upper Gila Basin	34	100	42	125
Zuni-Bluewater Basins	50	100	61	107
San Juan River Basin	75	160	66	102
Rio Hondo Basin	32	74	37	156
Statewide Precipitation	73	136	66	105
# of sites	45	45	46	46

NOTE: Precipitation values are from SNOTEL sites only.

Reservoirs

Total reservoir storage is 1,501,300 acre-feet as compared to 2,404,700 acre-feet last year. This equates to 40 percent of the average capacity and 16 percent of the actual capacity. Water-users should continue to monitor weather conditions to evaluate their water needs as the winter progresses.

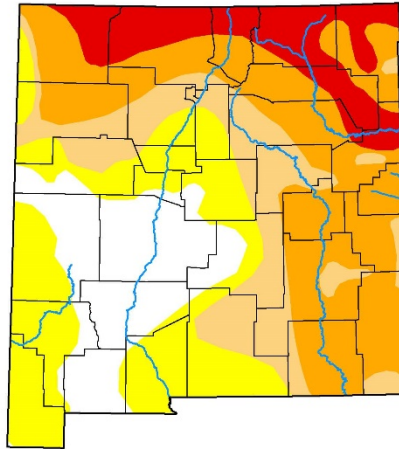
NEW MEXICO STATEWIDE	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)	Current % Capacity	Last Year % Capacity	Average % Capacity	Current % Average	Last Year % Average
Abiquiu Reservoir	66.4	81.9	152.7	1198.5	6%	7%	13%	44%	54%
Bluewater Lake	3.3	6.6	5.7	38.5	9%	17%	15%	58%	116%
Brantley Lake	9.3	42.1	17.1	1008.2	1%	4%	2%	54%	246%
Caballo Reservoir	29.4	33.9	68.0	332.0	9%	10%	20%	43%	50%
Cochiti Lake	42.4	47.8	63.1	491.0	9%	10%	13%	67%	76%
Conchas Lake	15.5	74.0	197.9	254.4	6%	29%	78%	8%	37%
Costilla Reservoir	2.4	6.2	6.0	16.0	15%	39%	38%	40%	104%
Eagle Nest Lake	35.1	44.8	53.0	79.0	44%	57%	67%	66%	85%
El Vado Reservoir	18.6	30.6	102.8	184.8	10%	17%	56%	18%	30%
Elephant Butte Reservoir	127.3	557.3	1267.0	2195.0	6%	25%	58%	10%	44%
Heron Reservoir	53.3	106.2	308.0	400.0	13%	27%	77%	17%	34%
Lake Avalon	1.6	0.0	2.0	4.0	40%	0%	50%	80%	0%
Lake Sumner	13.6	21.5	26.7	102.0	13%	21%	26%	51%	81%
Navajo Reservoir	1079.5	1325.7	1341.0	1696.0	64%	78%	79%	80%	99%
Santa Rosa Reservoir	3.7	26.0	54.4	432.2	1%	6%	13%	7%	48%
Basin-wide Total	1501.3	2404.7	3665.4	8431.6	16%	23%	40%	43%	74%
# of reservoirs	15	15	15	15	15	15	15	15	15

Streamflow

Forecasts across the state are at or below average. This is largely due to a very dry summer and fall across the state which has created soil moisture and groundwater deficits that may limit snowmelt runoff generation next spring and summer. This may be overcome by an above average snowpack later in the water-year. Water users and managers should continue to watch the forecasts as water supply conditions evolve across the state.

New Mexico Drought Monitor

U.S. Drought Monitor New Mexico



July 7, 2020
(Released Thursday, Jul. 9, 2020)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	17.61	82.39	58.16	40.83	11.17	0.00
Last Week 06-30-2020	24.94	75.06	52.71	41.32	11.35	0.00
3 Months Ago 04-07-2020	55.52	44.48	26.31	11.75	0.00	0.00
Start of Calendar Year 12-31-2019	52.86	47.14	28.33	15.29	0.00	0.00
Start of Water Year 10-01-2019	37.27	62.73	29.82	6.81	0.00	0.00
One Year Ago 07-08-2019	70.14	29.86	8.74	0.00	0.00	0.00

Intensity:
 None
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought

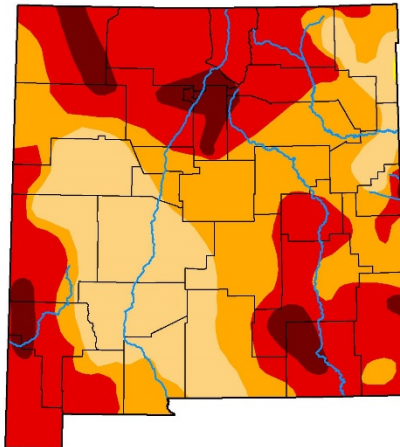
The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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droughtmonitor.unl.edu

U.S. Drought Monitor New Mexico



October 6, 2020
(Released Thursday, Oct. 8, 2020)
Valid 8 a.m. EDT

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.94	76.30	45.01	6.82
Last Week 09-29-2020	0.00	100.00	99.82	73.05	39.88	2.90
3 Months Ago 07-07-2020	17.61	82.39	58.16	40.83	11.17	0.00
Start of Calendar Year 12-31-2019	52.86	47.14	28.33	15.29	0.00	0.00
Start of Water Year 10-01-2019	0.00	100.00	99.92	73.05	39.88	2.90
One Year Ago 10-06-2019	80.03	39.97	18.07	7.58	0.00	0.00

Intensity:
 None
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought

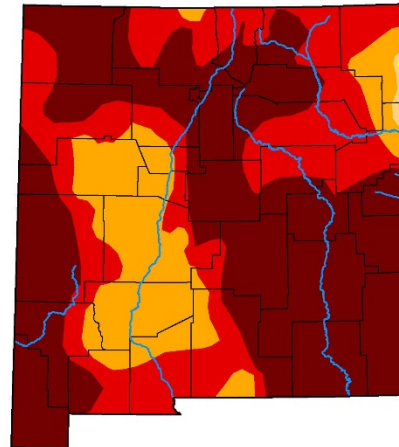
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droughtmonitor.unl.edu

U.S. Drought Monitor New Mexico



January 5, 2021
(Released Thursday, Jan. 7, 2021)
Valid 7 a.m. EST

	Drought Conditions (Percent Area)					
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	99.96	99.59	82.26	63.20
Last Week 12-29-2020	0.00	100.00	99.97	99.59	82.26	63.20
3 Months Ago 10-08-2020	0.00	100.00	99.94	78.30	45.01	6.82
Start of Calendar Year 12-31-2019	0.00	100.00	99.97	99.59	82.26	63.20
Start of Water Year 10-01-2019	0.00	100.00	99.92	73.05	39.88	2.90
One Year Ago 01-07-2020	50.18	49.84	28.31	12.75	0.00	0.00

Intensity:
 None
 D0 Abnormally Dry
 D1 Moderate Drought
 D2 Severe Drought
 D3 Extreme Drought
 D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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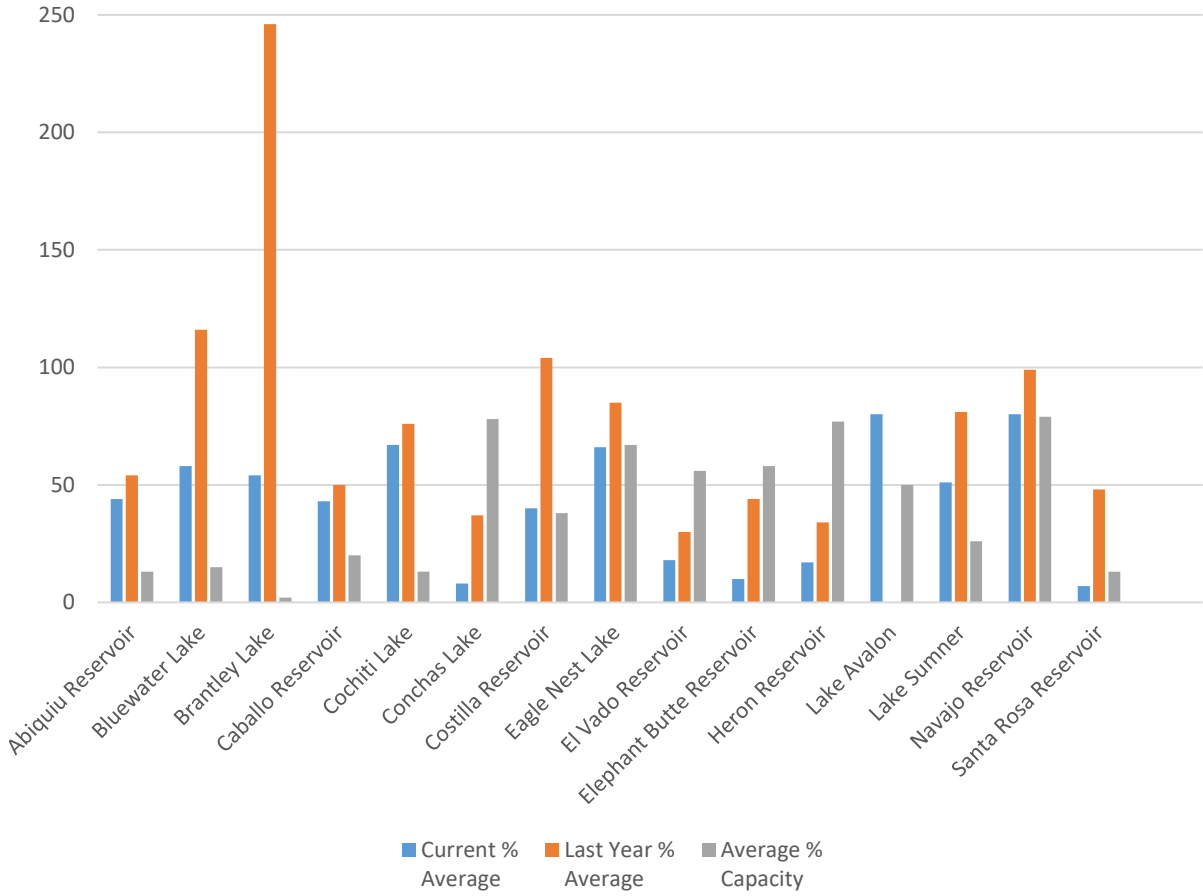


droughtmonitor.unl.edu

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.

Due to a very limited monsoon season and sparse fall snows, drought conditions have worsened across New Mexico. While conditions were relatively good in July, conditions for the vast majority of the state are now Severe (D2) to Exceptional (D4). As a result, antecedent soil moisture conditions across the state are low. Without significant increases in snowfall and precipitation through the rest of the winter and into the spring, drought conditions are expected to continue.

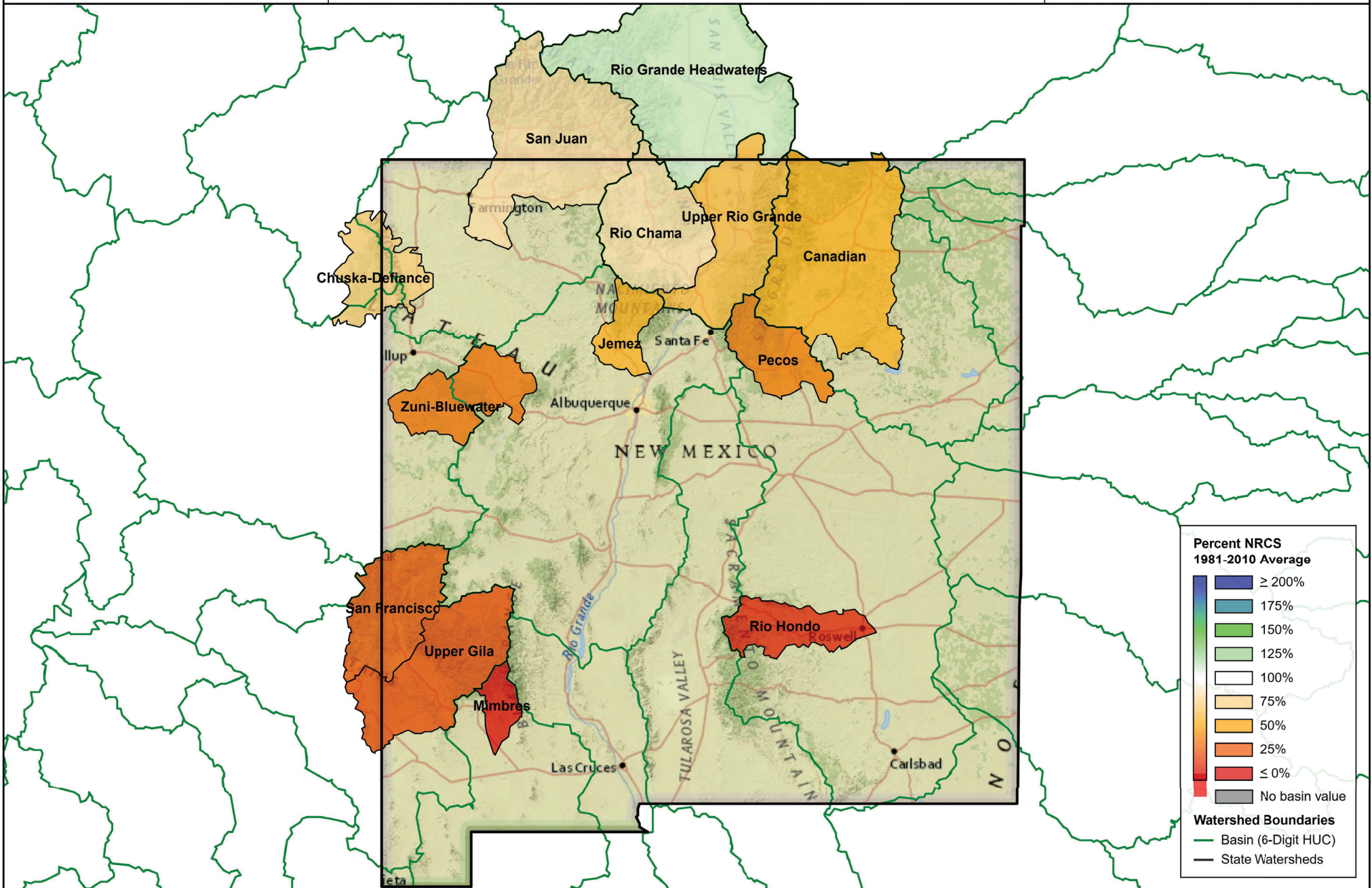
Statewide Reservoir Storage



Snow Water Equivalent

Percent NRCS 1981-2010 Average

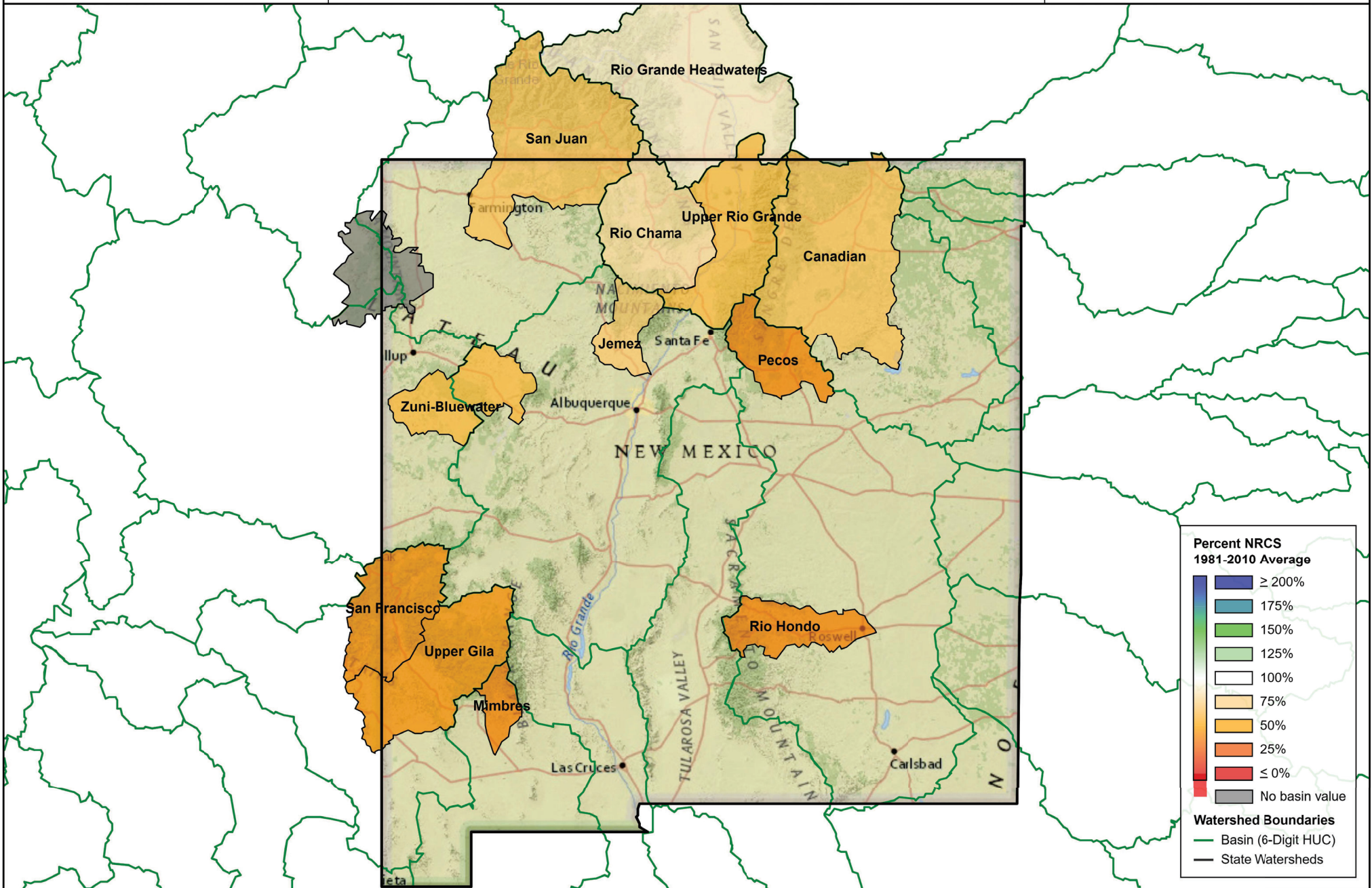
End of December, 2020



3 month Precipitation

Percent NRCS 1981-2010 Average

October 1, 2020 - December 31, 2020



Canadian River Basin Water Supply Outlook Report as of January 1, 2021

The month of December received 73 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 69 percent as compared to 105 percent last year at this time. Snowpack in the basin is at 55 percent of the median. This is a significant decrease from 138 percent at this time last year. Forecasts are all below average with the highest being 67 percent of average at Ponil Creek near Cimarron. Reservoirs are currently holding 50,600 acre-feet of storage, which is a decrease of 118,800 acre-feet from last December. This equates to 75 percent of the average capacity and 20 percent of the average stored water for the basin at the end of December.

Canadian Streamflow Forecasts - January 1, 2021

CANADIAN	Forecast Period	Forecast Exceedance Probabilities for Risk Assessment Chance that actual volume will exceed forecast						
		90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Vermejo R nr Dawson	MAR-JUN	1.24	2.9	4.5	58%	6.7	11	7.8
Eagle Nest Reservoir Inflow	MAR-JUN	1	5	7	63%	9.5	14.3	11.2
Cimarron R nr Cimarron ²	MAR-JUN	1	3.3	9.9	63%	16.5	26	15.8
Ponil Ck nr Cimarron	MAR-JUN	1.56	3.2	4.8	67%	6.9	10.8	7.2
Rayado Ck nr Cimarron	MAR-JUN	1.14	2.8	4.5	64%	6.8	11.5	7
Conchas Reservoir Inflow ³	MAR-JUN	1.79	9	19	63%	35	70	30

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 December, 2020	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Conchas Lake	15.5	74.0	197.9	254.4
Eagle Nest Lake nr Eagle Nest, NM	35.1	44.8	53.0	79.0
Basin-wide Total	50.6	118.8	250.9	333.4
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis January 1, 2021	# of Sites	% Median	Last Year % Median
CANADIAN	4	55%	138%

Chuska-Defiance

Water Supply Outlook

Report

as of January 1, 2021

Snowpack in the basin is at 36 percent of the median. This is a decrease from 122 percent at this time last year. Forecasts are below average with the highest being 44 percent of average at Bowl Canyon Creek.

Chuska-Defiance Streamflow Forecasts - January 1, 2021

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

CHUSKA-DEFIANCE	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Bowl Canyon Ck ab Asaayi Lake	MAR-MAY	0.01	0.24	0.57	44%	1.06	2	1.3
Captain Tom Wash nr Two Gray Hills	MAR-MAY	0.05	0.23	0.7	27%	2.4	5.3	2.6
Wheatfields Ck nr Wheatfields	MAR-MAY	0.02	0.2	0.7	33%	1.52	3.3	2.1

- 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

Watershed Snowpack Analysis January 1, 2021	# of Sites	% Median	Last Year % Median
CHUSKA-DEFIANCE	2	36%	122%

Jemez River

Water Supply Outlook

Report

as of January 1, 2021

The month of December received 79 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 73 percent as compared to 89 percent last year at this time. Snowpack in the basin is at 57 percent of the median. This is a significant decrease from 125 percent at this time last year. Forecasts are below average in the watershed.

Jemez Streamflow Forecasts - January 1, 2021

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

JEMEZ	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Jemez R nr Jemez	MAR-JUL	5	10.8	16	38%	22	33	42
Jemez R bl Jemez Canyon Dam	MAR-JUL	1.76	6.3	11	32%	17	28	34

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 January 1, 2021	# of Sites	% Median	Last Year % Median
JEMEZ	3	57%	125%

Mimbres River Basin Water Supply Outlook Report as of January 1, 2021

The month of December received 35 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 37 percent as compared to 153 percent last year at this time. As of January 1, 2021, there was no measurable snowpack in the basin. This is a decrease from 141 percent at this time last year. The forecast for the basing is at 35 percent

Mimbres River Basin Streamflow Forecasts - January 1, 2021

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	JAN-MAY	0.36	0.43	0.9	38%	1.63	3.3	2.4

- 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 January 1, 2021	# of Sites	% Median	Last Year % Median
MIMBRES RIVER BASIN	2	0%	114%

Pecos River Basin Water Supply Outlook Report as of January 1, 2021

The month of December received 51 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 41 percent as compared to 116 percent last year at this time. Snowpack in the basin is at 34 percent of the median. This is a significant decrease from 134 percent at this time last year. Forecasts are variable with the highest being 80 percent of average at Lake Avalon and the lowest being 7% at Santa Rosa Reservoir. Reservoirs are currently holding 28,100 acre-feet of storage, which is a decrease from 89,600 acre-feet last year at this time. This equates to 6 percent of the average capacity and 28 percent of the average stored water for the basin at the end of December.

Pecos Streamflow Forecasts - January 1, 2021

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

PECOS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Pecos R nr Pecos	MAR-JUL	6.8	10.2	17	30%	26	41	57
Pecos R nr Anton Chico	MAR-JUL	2	4.1	13	21%	27	57	63
Gallinas Ck nr Montezuma	MAR-JUL	0.5	1.18	3	31%	5.7	11.1	9.8
Pecos R ab Santa Rosa Lk	MAR-JUL	1	2.4	9	16%	19.9	44	56

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 December, 2020	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Lake Avalon	1.6	0.0	2.0	4.0
Brantley Lake nr Carlsbad	9.3	42.1	17.1	1008.2
Santa Rosa Reservoir	3.7	26.0	54.4	432.2
Lake Sumner	13.6	21.5	26.7	102.0
Basin-wide Total	28.1	89.6	100.2	1546.4
# of reservoirs	4	4	4	4

Watershed Snowpack Analysis January 1, 2021	# of Sites	% Median	Last Year % Median
PECOS	3	34%	134%

Rio Chama

Water Supply Outlook

Report

as of January 1, 2021

The month of December received 93 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 81 percent as compared to 93 percent last year at this time. Snowpack in the basin is at 90 percent of the median. This is a decrease from 137 percent at this time last year. Forecasts are variable with the highest being 77 percent of average at Heron Reservoir and the lowest being 13 percent at Abiquiu Reservoir. Reservoirs are currently holding 138,300 acre-feet of storage, which is a decrease from 218,700 acre-feet last year at this time.

Rio Chama Streamflow Forecasts - January 1, 2021

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

RIO CHAMA	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
El Vado Reservoir Inflow ²	MAR-JUL	57	104	145	64%	192	275	225
	APR-JUL	49	93	130	63%	174	250	205

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 December, 2020	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Abiquiu Reservoir	66.4	81.9	152.7	1198.5
El Vado Reservoir	18.6	30.6	102.8	184.8
Heron Reservoir	53.3	106.2	308.0	400.0
Basin-wide Total	138.3	218.7	563.5	1783.3
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2021	# of Sites	% Median	Last Year % Median
RIO CHAMA	4	90%	137%

Rio Grande Headwaters Water Supply Outlook Report as of January 1, 2021

The month of December received 97 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 89 percent as compared to 94 percent last year at this time. Snowpack in the basin is at 111 percent of the median. This is a decrease from 131 percent at this time last year. Forecasts are at or below average with the highest being 100 percent of average at Culebra Creek and the lowest being 58 percent at San Antonio River. Reservoirs are currently holding 65,500 acre-feet of storage, which is a decrease from 78,600 acre-feet last year at this time.

Rio Grande Headwaters Streamflow Forecasts - January 1, 2021

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

RIO GRANDE HEADWATERS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Grande nr Del Norte ²	APR-SEP	240	330	400	78%	475	600	515
Platoro Reservoir Inflow	APR-JUL	34	43	50	89%	57	69	56
	APR-SEP	37	47	54	87%	62	75	62
Conejos R nr Mogote ²	APR-SEP	107	140	166	86%	194	240	194
Los Pinos R nr Ortiz	APR-SEP	31	45	56	77%	68	88	73
San Antonio R at Ortiz	APR-SEP	3.1	6.2	9	58%	12.3	18	15.6
Culebra Ck at San Luis	APR-SEP	12.5	18.4	23	100%	28	37	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 December, 2020	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Beaver Reservoir	3.5	3.8	4.1	4.5
Continental Reservoir	8.0	15.0	3.8	27.0
Mountain Home Reservoir	1.2	4.6	3.2	18.0
Platoro Reservoir	14.2	18.6	24.0	60.0
Rio Grande Reservoir	16.8	0.0	14.8	51.0
Sanchez Reservoir	4.0	8.0	27.5	103.0
Santa Maria Reservoir	13.6	21.5	10.4	45.0
Terrace Reservoir	4.3	7.1	5.5	18.0
Basin-wide Total	65.5	78.6	93.3	326.5
# of reservoirs	8	8	8	8

Watershed Snowpack Analysis January 1, 2021	# of Sites	% Median	Last Year % Median
RIO GRANDE HEADWATERS	13	111%	131%

Rio Hondo

Water Supply Outlook

Report

as of January 1, 2021

The month of December received 32 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 37 percent as compared to 102 percent last year at this time. Snowpack in the basin is at 9 percent of the median. This is a decrease from 128 percent at this time last year. Forecasts are below average at 24% of average.

Rio Hondo Streamflow Forecasts - January 1, 2021

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

RIO HONDO	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Ruidoso at Hollywood	MAR-JUN	0.3	0.49	1.6	24%	3.4	7.1	6.7

- 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 January 1, 2021	# of Sites	% Median	Last Year % Median
RIO HONDO	1	9%	128%

San Francisco

Water Supply Outlook

Report

as of January 1, 2021

The month of December received 32 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 40 percent as compared to 127 percent last year at this time. Snowpack in the basin is at 23 percent of the median. This is a decrease from 134 percent at this time last year. Forecasts are below average with the highest being 38 percent of average at Clifton.

San Francisco Streamflow Forecasts - January 1, 2021

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

SAN FRANCISCO	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
San Francisco R at Glenwood ³	JAN-MAY	1.62	5	8.7	41%	14.6	27	21
San Francisco R at Clifton ³	JAN-MAY	1.03	10.5	23	38%	39	72	61

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 January 1, 2021	# of Sites	% Median	Last Year % Median
SAN FRANCISCO	5	23%	134%

San Juan

Water Supply Outlook

Report

as of January 1, 2021

The month of December received 75 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 66 percent as compared to 102 percent last year at this time. Snowpack in the basin is at 83 percent of the median. This is a decrease from 128 percent at this time last year. Forecasts are below average with the highest being 75 percent of average at Carracus. December reservoir storage was at 1,125,800 acre feet. Storage at this time last year was 1,418,800 acre feet.

San Juan Streamflow Forecasts - January 1, 2021

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

SAN JUAN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Blanco at Blanco Diversion ²	APR-JUL	26	35	43	▼ 80%	51	65	54
Navajo R bl Oso Diversion ²	APR-JUL	30	42	52	▼ 80%	63	80	65
San Juan R nr Carracas	APR-JUL	156	230	285	▼ 75%	350	455	380
Piedra R nr Arboles	APR-JUL	62	99	130	▼ 62%	165	225	210
Vallecito Reservoir Inflow	APR-JUL	76	106	130	▼ 67%	156	199	194
Navajo Reservoir Inflow ²	APR-JUL	250	375	470	▼ 64%	580	760	735
Animas R at Durango	APR-JUL	134	199	250	▼ 60%	305	400	415
Lemon Reservoir Inflow	APR-JUL	18.6	28	35	▼ 64%	43	56	55

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 December, 2020	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Lemon Reservoir	10.6	17.6	20.7	40.0
Navajo Reservoir	1079.5	1325.7	1341.0	1696.0
Vallecito Reservoir	35.8	75.4	62.4	126.0
Basin-wide Total	1125.8	1418.8	1424.1	1862.0
# of reservoirs	3	3	3	3

Watershed Snowpack Analysis January 1, 2021	# of Sites	% Median	Last Year % Median
SAN JUAN	12	83%	128%

Upper Gila Water Supply Outlook Report as of January 1, 2021

The month of December received 32 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 40 percent as compared to 127 percent last year at this time. Snowpack in the basin is at 21 percent of the median. This is a decrease from 134 percent at this time last year. Forecasts are below average with the highest being 38 percent of average at Gila.

Upper Gila Streamflow Forecasts - January 1, 2021

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

UPPER GILA	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Gila R at Gila ³	JAN-MAY	6.1	13.3	21	38%	30	49	56
Gila R bl Blue Ck nr Virden ³	JAN-MAY	0.77	9.8	22	29%	38	71	76

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 January 1, 2021	# of Sites	% Median	Last Year % Median
UPPER GILA	3	21%	132%

Upper Rio Grande Water Supply Outlook Report as of January 1, 2021

The month of December received 75 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 62 percent as compared to 108 percent last year at this time. Snowpack in the basin is at 56 percent of the median. This is a decrease from 141 percent at this time last year. Forecasts are at or below average with the highest being 102 percent of average at Costilla Reservoir and the lowest being 35 percent at Tesuque Creek. Reservoirs are currently holding 202,600 acre-feet of storage, which is a decrease from 646,900 acre-feet last year at this time.

Upper Rio Grande Streamflow Forecasts - January 1, 2021

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

UPPER RIO GRANDE	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Costilla Reservoir Inflow	MAR-JUL	6.9	9.4	11.3	102%	13.3	16.7	11.1
Costilla Ck nr Costilla ²	MAR-JUL	14.3	21	26	100%	31	40	26
Red R bl Fish Hatchery nr Questa	MAR-JUL	10.8	15.9	20	59%	25	32	34
Rio Hondo nr Valdez	MAR-JUL	5.4	9	12	65%	15.4	21	18.4
Rio Pueblo de Taos nr Taos	MAR-JUL	2.7	6	9	53%	12.6	18.9	17
Rio Lucero nr Arroyo Seco	MAR-JUL	2.9	4.9	6.5	60%	8.4	11.6	10.9
Rio Pueblo de Taos bl Los Cordovas	MAR-JUL	2.8	8.4	14	39%	21	34	36
Embudo Ck at Dixon	MAR-JUL	4.6	12.5	20	42%	29	46	48
Santa Cruz R at Cundiyo	MAR-JUL	2.6	5.5	8	44%	11	16.4	18.3
Nambe Falls Reservoir Inflow	MAR-JUL	0.87	1.84	2.7	42%	3.7	5.5	6.5
Tesuque Ck ab diversions	MAR-JUL	0.06	0.26	0.47	35%	0.76	1.3	1.34
Rio Grande at Otowi Bridge ²	MAR-JUL	184	300	395	55%	505	690	720
Rio Grande at San Marcial ²	MAR-JUL	-146	52	186	36%	320	520	510

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 December, 2020	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Costilla Reservoir	2.4	6.2	6.0	16.0
Nambe Falls Reservoir	1.1	1.7	1.6	1.7
Cochiti Lake	42.4	47.8	63.1	491.0
Elephant Butte Reservoir	127.3	557.3	1267.0	2195.0
Caballo Reservoir	29.4	33.9	68.0	332.0
Basin-wide Total	202.6	646.9	1405.7	3035.7
# of reservoirs	5	5	5	5

Watershed Snowpack Analysis January 1, 2021	# of Sites	% Median	Last Year % Median
UPPER RIO GRANDE	6	56%	141%

Zuni/Bluewater Water Supply Outlook Report as of January 1, 2021

The month of December received 50 percent of the average amount of precipitation for the month. This puts the water year-to-date average amount of precipitation at 61 percent as compared to 107 percent last year at this time. Snowpack in the basin is at 37 percent of the median. This is a decrease from 98 percent at this time last year. Forecasts are below average with the highest being 43 percent of average at Black Rock Reservoir. December reservoir storage was at 3,300 acre feet at Bluewater Lake. Storage at this time last year was 6,600 acre feet.

Zuni-Bluewater Streamflow Forecasts - January 1, 2021

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

ZUNI-BLUEWATER	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Nutria nr Ramah ³	JAN-MAY	0.04	0.16	0.3	21%	0.84	2.4	1.42
Zuni R ab Black Rock Reservoir ³	JAN-MAY	0.01	0.11	0.2	43%	0.61	0.85	0.47

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 December, 2020	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Bluewater Lake	3.3	6.6	5.7	38.5
Basin-wide Total	3.3	6.6	5.7	38.5
# of reservoirs	1	1	1	1

Watershed Snowpack Analysis January 1, 2021	# of Sites	% Median	Last Year % Median
ZUNI-BLUEWATER	3	37%	98%

NEW MEXICO BASIN OUTLOOK REPORT
Natural Resources Conservation Service
Albuquerque, New Mexico

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