

Drought Status for July 17, 2002

National Weather Service, Albuquerque, NM

Discussion: New Mexico has had some rainfall since mid-June but amounts over the western half of the state have been spotty and light for the most part. Best June and early July rainfall has been in the east, especially the southeast. Thunderstorms were becoming more numerous and beginning to affect other areas of the state with the approach of mid-July.

Precipitation through June has been well below normal for the state for the calendar year and water year. The calendar year statewide average was 45 percent of normal for January through June, while the water year average was 50 percent of normal. For the calendar year, New Mexico has experienced the 8th driest year (January-June) since 1895. The worst calendar year precipitation deficits have been in climate divisions 1 (Northwest), 2 (Northern Mountains), and 4 (West-central Mountains). For the 12 month period of July 2001 through June 2002, New Mexico has experienced the 3rd driest July through June period of the past 107 years.

Recent rainfall has not been sufficient to influence the Palmer Index over most of New Mexico, although some movement toward smaller negative values has been noted in the weekly index over some divisions.

<u>Climate Division</u>	<u>Palmer Drought Severity Index</u>						
	Jan	Feb	Mar	Apr	May	Jun	Jul 13
1	-0.3	-1.3	-2.1	-3.0	-4.1	-5.1	-5.3
2	-2.0	-2.2	-2.9	-4.0	-5.1	-6.1	-6.3
3	-0.5	+0.5	+0.1	-0.3	-1.8	-2.6	-2.9
4	-0.6	-0.8	-1.6	-2.7	-3.8	-4.5	-4.5
5	-0.9	-0.5	-1.0	-2.1	-2.8	-3.3	-2.8
6	-2.2	-1.6	-2.2	-3.0	-4.0	-4.6	-4.3
7	-1.2	-0.3	0.0	+0.6	-1.1	-2.4	-1.6
8	-1.4	-0.4	-1.3	-2.5	-3.0	-3.2	-2.8

Current Climate Division Status

Division 1 Emergency
 Division 2 Emergency
 Division 3 Warning
 Division 4 Emergency
 Division 5 Warning
 Division 6 Emergency
 Division 7 South ½ - Alert, North ½ Warning
 Division 8 Emergency

Palmer Index (monthly average) for 2001

<u>Div.</u>	<u>Jan</u>	<u>Feb</u>	<u>Mar</u>	<u>Apr</u>	<u>May</u>	<u>Jun</u>	<u>Jul</u>	<u>Aug</u>	<u>Sep</u>	<u>Oct</u>	<u>Nov</u>	<u>Dec</u>
1	+2.2	+2.9	+3.2	+2.3	+2.2	+1.3	+1.3	+1.5	-0.5	-1.0	-1.5	-0.4
2	+1.3	+2.8	+3.4	+2.5	+1.9	-0.5	-0.8	-1.1	-2.4	-3.0	-3.2	-2.7
3	+2.5	+3.1	+3.9	+3.8	+4.3	+4.0	+2.3	+1.8	-0.3	-1.5	-1.3	-0.7
4	+3.4	+3.5	+3.2	+2.8	+2.6	+2.8	+2.9	+3.9	+2.2	+0.5	-0.9	-0.5
5	+2.1	+2.1	+2.6	+1.4	+0.9	+0.4	+1.2	+2.4	+1.5	+0.1	-0.5	-0.7
6	-0.5	0.0	+0.9	-0.1	-0.7	-1.7	-1.4	-1.8	-2.4	B3.0	-2.5	-1.9
7	+0.1	+0.3	+1.8	+1.5	+1.5	-0.2	-1.6	-1.8	-2.1	-2.4	-2.0	-1.2
8	+2.4	+2.1	+2.0	-0.2	-0.9	-0.7	+0.2	+0.5	-1.0	-1.5	-1.4	-1.1

<u>Calendar Year 2002 and Water Year 2002 (thru Jun) Precipitation for New Mexico</u>							
National Weather Service Albuquerque, NM							
	2002 (Jan - Jun)			Water Year 2002 (Oct - Jun 02)			
<u>Location</u>	<u>Obs</u>	<u>Normal</u>	<u>%Normal</u>	<u>Obs</u>	<u>Normal</u>	<u>% Normal</u>	
<i>Northwest Plateau</i>							
AZTEC RUINS N/M	0.45	4.05	11%	1.61	6.66	24%	
FENCE LAKE	1.46	4.75	31%	3.54	8.00	44%	
FRUITLAND 2E	0.44	2.80	16%	1.34	4.76	28%	
GALLUP FAA APRT	1.17	4.21	28%	1.91	6.99	27%	
LINDRITH 2SE	1.72	5.78	30%	4.45	8.99	49%	
NAVAJO DAM	1.28	5.66	23%	3.72	9.26	40%	
<i>Northern Mountains</i>							
ALCALDE	2.39	3.40	70%	3.05	5.50	55%	
CANJILON R/S	1.61	6.14	26%	3.74	9.31	40%	
CERRO	2.73	4.87	56%	4.32	7.35	59%	
CHAMA	2.16	9.19	24%	5.35	14.03	38%	
CIMARRON 4SW	1.98	6.84	29%	3.57	9.00	40%	
GHOST RANCH	1.30	4.36	30%	3.10	6.53	47%	

JEMEZ SPRINGS	2.66	6.33	42%		3.40	9.79	35%
JOHNSON RANCH	1.09	3.90	28%		3.01	6.30	48%
LAS VEGAS FAA APRT	1.49	5.80	26%		3.32	8.12	41%
LOS ALAMOS	2.91	6.38	46%		3.69	9.62	38%
RATON KRTN	3.23	7.20	45%		4.31	9.12	47%
RED RIVER	4.65	8.90	52%		8.10	12.73	64%
SANTA FE 2	1.89	5.39	35%		2.64	8.33	32%
WOLF CANYON	2.23	9.07	25%		5.27	14.04	38%
<i>Northeastern Plains</i>							
CLAYTON APRT	1.91	6.90	28%		2.72	8.86	31%
CLOVIS	3.34	7.24	46%		6.25	10.14	62%
CONCHAS DAM	2.53	5.38	47%		4.29	7.42	58%
MOSQUERO 1NE	2.71	6.54	41%		5.91	8.69	68%
PORTALES	2.94	6.62	44%		4.53	9.16	49%
TUCUMCARI 4NE	2.87	6.58	44%		4.93	9.06	54%
<i>Southwestern Mountains</i>							
FORT BAYARD	1.44	4.05	36%		2.17	7.14	30%
GILA HOT SPRINGS	1.11	4.37	25%		2.07	8.34	25%
GRANTS APRT	1.23	3.09	40%		2.00	5.45	37%
QUEMADO ESTATES	2.16	4.19	52%		3.55	6.84	52%
RESERVE R/S	0.98	4.62	21%		2.13	8.74	24%
<i>Central Valley</i>							
ABQ WSFO APRT	1.00	3.01	33%		2.06	4.76	43%
BOSQUE DEL APACHE	1.24	2.48	50%		2.15	4.38	49%
LOS LUNAS 3SSW	0.94	2.71	35%		2.41	4.78	50%
SOCORRO	1.16	2.93	40%		2.40	4.94	49%
<i>Central Highlands</i>							
CAPITAN	2.33	5.59	42%		4.58	7.82	59%
CLOUDCROFT	4.70	7.97	59%		7.63	12.22	62%
ESTANCIA	1.86	4.14	45%		3.91	6.56	60%
MOUNTAINAIR R/S	1.46	4.76	31%		3.85	7.51	51%
RUIDOSO 2NNE	2.81	7.12	39%		5.86	11.14	53%
<i>Southeastern Plains</i>							
ARTESIA 6S	4.54	4.44	102%		6.04	6.54	92%
CARLSBAD	3.21	4.45	72%		4.75	6.80	70%
FORT SUMNER	4.70	5.20	90%		6.23	7.75	80%
ROSWELL CLIMATE	7.15	4.75	151%		9.89	7.04	140%
SANTA ROSA	2.52	5.26	48%		3.34	7.54	44%
TATUM	6.84	6.09	112%		9.58	8.63	111%
<i>Southern Desert</i>							
ANIMAS	1.29	2.57	50%		1.70	5.03	34%
DEMING	1.80	2.26	80%		2.44	4.18	58%
FAYWOOD	1.64	2.82	58%		2.18	5.57	39%
STATE U LAS CRUCES	1.40	2.25	62%		1.64	4.34	38%
TRUTH OR CONSEQ	0.71	2.79	25%		1.17	6.11	19%

TULAROSA	1.83	3.00	61%		2.56	5.07	50%
Divisional Averages							
	2002 (Jan - Jun)				Water Year 2002 (Oct - Jun 02)		
Climate Division		% Nrml				% Nrml	
Northwest Plateau		24%				37%	
Northern Mountains		37%				44%	
Northeastern Plains		42%				54%	
Southwestern Mountains		34%				33%	
Central Valley		39%				48%	
Central Highlands		44%				57%	
Southeastern Plains		96%				90%	
Southern Desert		55%				39%	
All Divisions		45%				50%	

The following table shows the Climate Prediction Center projections for the Palmer index at the end of October, 2002. These projections are based on historical trends of the past 70 years.

Palmer Projections for the end of October, 2002

Division	-3 or less	-2 to -2.9	-1 to -1.9	Near 0	+1 to 1.9	+2 to 2.9	+3 or abv
1	51	14	13	17	3	1	1
2	68	8	14	7	1	0	1
3	21	24	10	21	8	11	4
4	28	18	18	18	10	6	1
5	11	20	13	30	14	6	7
6	35	21	17	13	7	3	4
7	17	25	11	24	0	7	6
8	17	8	18	30	10	7	10

Long-range Forecast: No change from last month. Summer rainfall is expected to average near normal to slightly above normal for the state. Historically, the best chances for above normal summer rainfall with a similar pattern of a developing El Niño are over the western half of the state. The area least likely to benefit from summer rainfall is the extreme southeast. Summer rainfall is expected to ease some aspects of the drought, such as fire danger and surface watering

needs. However, long-term aspects of the drought will linger. Longer-term aspects of the drought will persist until meaningful winter precipitation falls. At this point in time, it's impossible to determine how strong the developing El Niño will be. However, given the present conditions in the Pacific Ocean, this El Niño is not likely to develop into a strong one.

The Interstate Stream Commission is reporting the following lake level conditions:

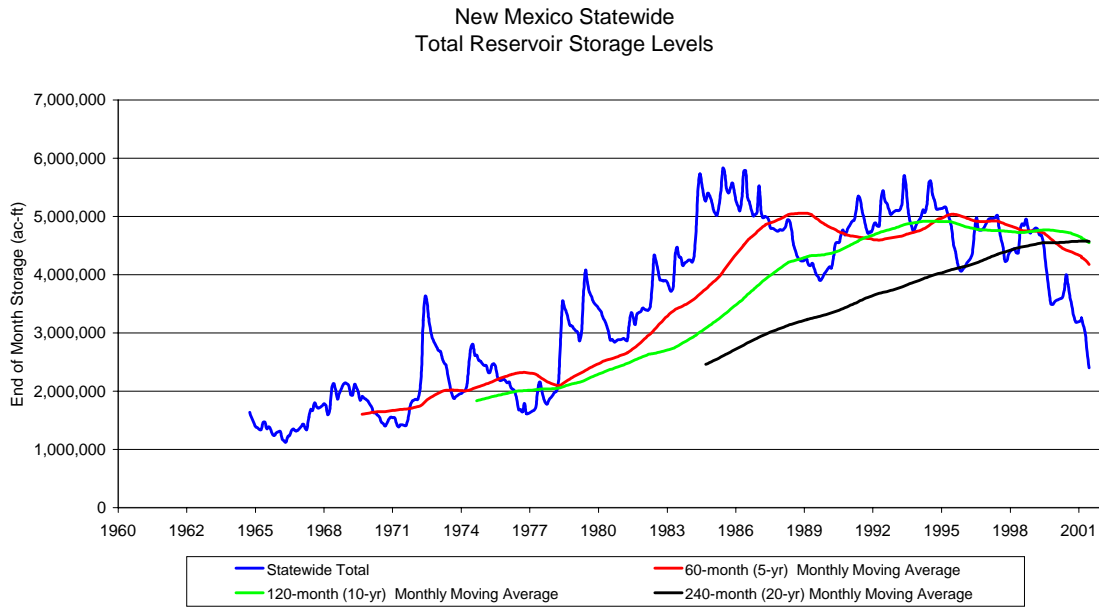
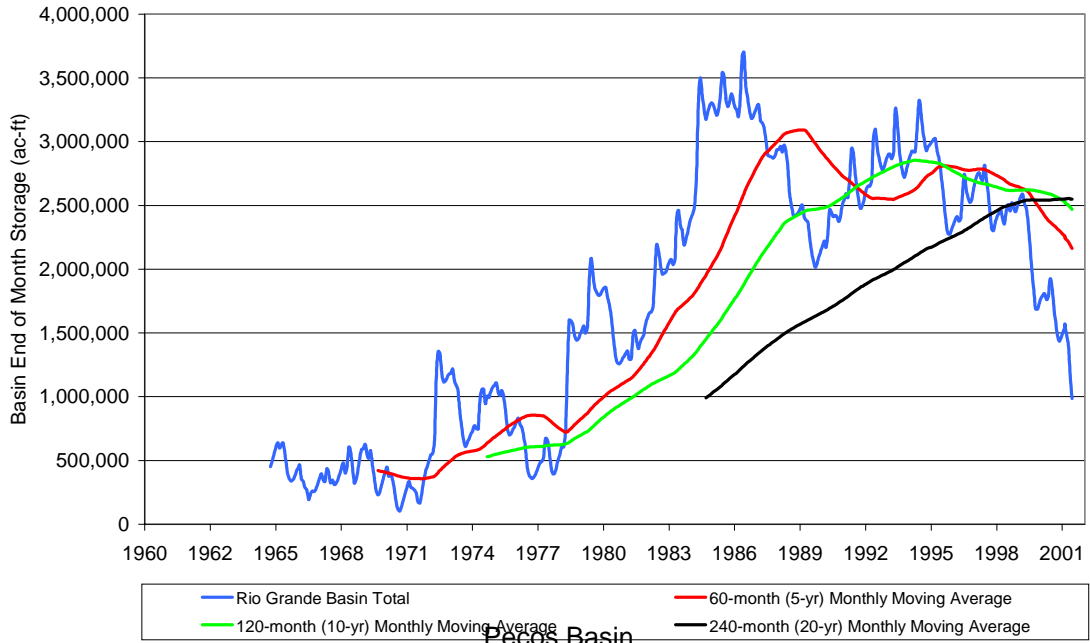


Figure 1 – State-wide Reservoir Levels from October 1965 through June 2002

Rio Grande Basin Total Reservoir Storage



Total Reservoir Storage Levels

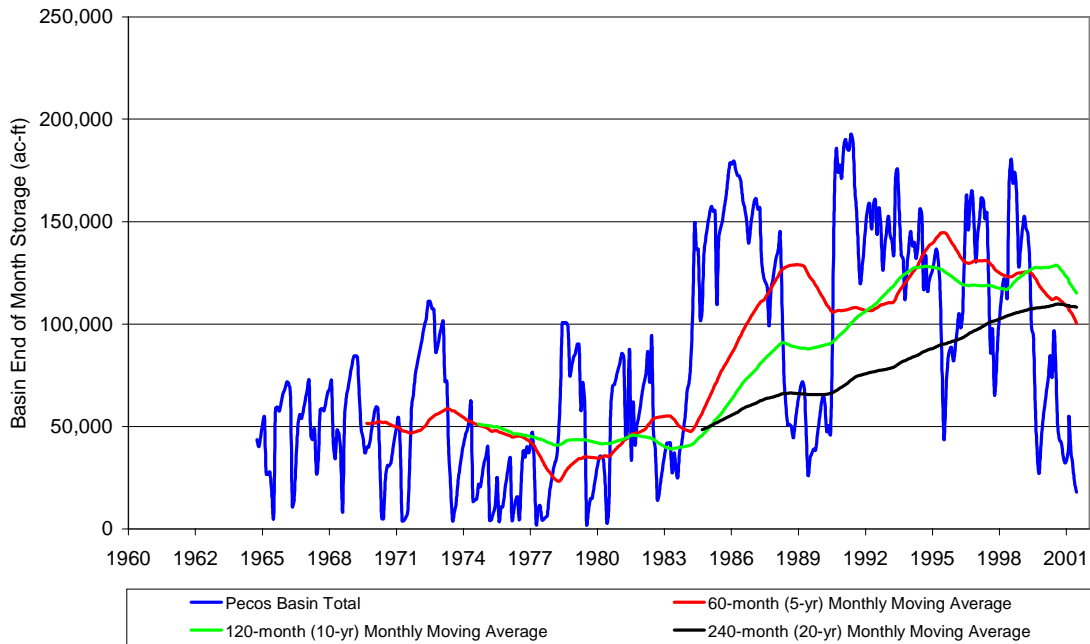


Figure 2 – Rio Grande Basin Reservoir Levels from October 1965 through June 2002

Figure 3 – Pecos Basin Reservoir Levels from October 1965 through June 2002

San Juan Basin Total Reservoir Storage

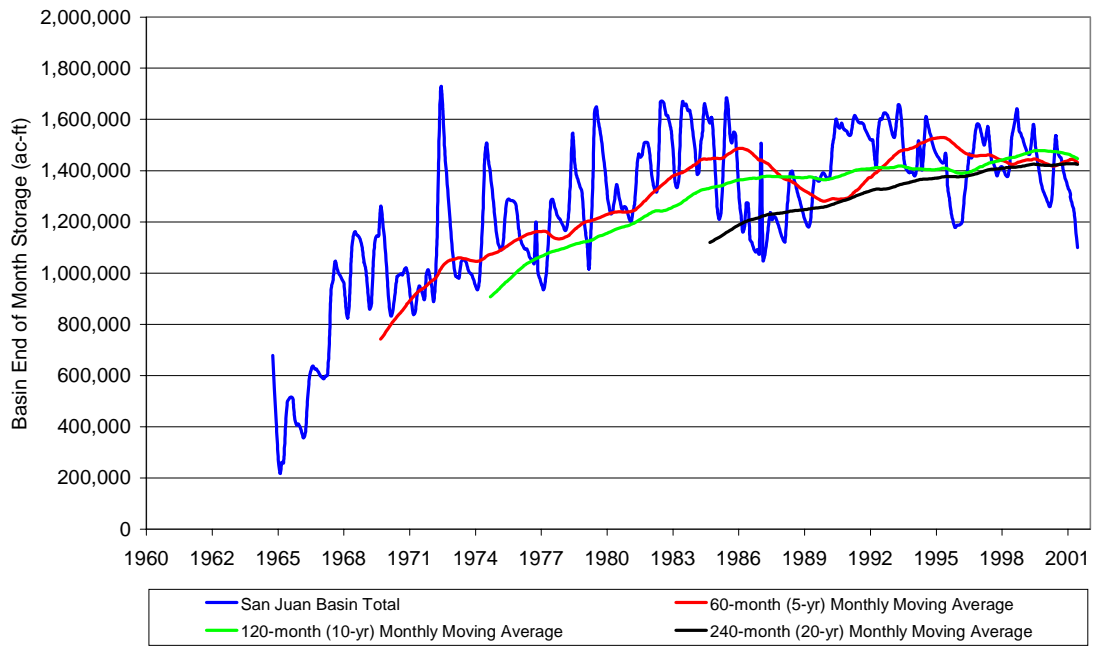


Figure 4 – San Juan Basin Reservoir Levels from October 1965 through June 2002

Table 1 – End of Month Reservoir Levels from January 2000 through June 2002 for Selected NM Reservoirs

END OF MONTH	PECOS BASIN				CANADIAN				SAN JUAN
	SANTA ROSA	SUMNER	BRANTLEY	AVALON	CONCHAS	UTE	LAKE MALOYA	EAGLE NEST	NAVAJO
Jan-00	97,590	35,090	19,790	219	290,520	236,500	3,710	64,800	1,481,200
Feb-00	97,950	16,430	31,280	1,140	291,600	219,900	3,700	65,200	1,464,700
Mar-00	98,840	15,870	27,920	1,030	295,600	202,100	3,730	65,800	1,465,400
Apr-00	83,330	27,930	16,600	1,270	286,400	197,200	3,700	67,400	1,525,700
May-00	48,530	24,950	23,120	1,090	266,460	194,400	3,650	65,200	1,580,900
Jun-00	50,900	26,350	16,020	1,210	252,810	194,600	3,490	62,600	1,498,700
Jul-00	31,910	12,760	11,360	1,270	239,350	188,100	3,310	60,400	1,448,000
Aug-00	2,970	8,740	23,570	1,400	213,640	184,200	3,270	57,500	1,396,100
Sep-00	3,740	6,740	15,470	1,210	189,380	179,200	3,200	55,100	1,356,600
Oct-00	8,830	18,830	11,700	1,330	187,700	195,000	3,280	53,900	1,323,200
Nov-00	11,630	23,760	14,280	2,060	187,880	193,000	3,390	53,600	1,307,300
Dec-00	12,670	28,610	16,580	2,590	188,560	193,000	3,410	53,700	1,288,800
Jan-02	13,740	31,380	19,520	3,030	190,810	193,000	3,310	54,100	1,270,200
Feb-02	15,600	33,580	21,720	3,270	197,730	194,000	3,310	54,400	1,259,800
Mar-02	22,680	36,730	23,800	1,400	206,260	197,000	3,690	56,000	1,297,600
Apr-02	32,490	26,770	13,840	1,150	202,550	194,000	3,650	57,800	1,411,700
May-02	32,490	38,050	25,120	1,210	187,760	193,000	3,590	58,700	1,535,200
Jun-02	33,930	27,600	14,670	1,150	172,420	190,000	3,420	56,200	1,477,400
Jul-02	3,930	29,170	16,240	1,210	149,080	186,000	3,360	53,100	1,456,800
Aug-02	12,560	21,320	8,390	1,210	133,360	190,000	3,290	51,100	1,449,400
Sep-02	13,840	13,480	13,480	1,400	115,550	188,000	3,260	48,900	1,409,200
Oct-02	14,450	9,500	9,500	1,460	105,620	184,000	3,240	47,800	1,376,300
Nov-02	15,720	7,800	7,800	790	104,710	183,000	3,270	47,600	1,354,800
Dec-02	15,980	8,470	8,470	1,520	103,760	181,000	3,340	47,400	1,329,800
Jan-02	16,700	12,200	11,500	2300	103,960	180,578	3,260	45,500	1,313,200
Feb-02	17,125	13,348	21,717	2,794	103,526	179,481	3,250	47,900	1,293,333
Mar-02	4,020	2,000	29,100	3,200	102,236	177,561	3,250	48,200	1,269,796
Apr-02	4,397	1,070	25,050	1,300	101,112	172,928	3,280	45,900	1,240,312
May-02	4,270	87	17,256	1,300	82,668	171,612	3,280	41,092	1,173,637
Jun-02	3,266	1158	12,329	1,209	82,568	176,000	3,250	41,000	1,099,400

Note: Yellow highlights indicate provisional data. Blue shaded cells indicate data not available from USGS ADAPS system. Orange cell indicates an estimate due to data unavailability

Table 2 – End of Month Reservoir Levels for Rio Grande Basin from January 2000 through June 2002

END OF MONTH	COSTILLA	HERON	EL VADO	ABIQUIU	NAMBE FALLS	MCCLURE	NICHOLS	COCHITI	JEMEZ CANYON	ELEPHANT BUTTE	CABALLO
Jan-00	13,900	376,400	139,750	178,220	1,980	2,500	307	51,620	19,160	1,738,300	50,500
Feb-00	14,400	372,930	139,510	179,090	1,856	2,210	471	51,490	19,730	1,678,500	126,480
Mar-00	15,100	347,680	145,900	179,130	1,933	2,280	283	51,490	21,670	1,623,400	117,850
Apr-00	15,500	338,030	175,190	180,680	2,025	1,860	438	50,760	22,360	1,565,700	120,650
May-00	14,000	347,360	167,580	160,580	1,568	1,310	435	49,800	20,330	1,516,000	74,460
Jun-00	10,500	334,620	127,380	138,230	1,110	975	284	50,270	19,150	1,429,700	71,020
Jul-00	7,600	329,590	78,070	115,790	982	603	299	49,670	17,970	1,351,700	44,630
Aug-00	4,820	315,380	49,120	89,700	1,113	623	317	48,550	17,040	1,264,200	38,820
Sep-00	2,460	286,330	31,920	75,280	934	504	289	48,350	10,700	1,198,900	33,890
Oct-00	3,140	280,660	20,380	81,640	985	583	476	48,960	5,550	1,207,700	36,200
Nov-00	3,620	273,100	22,260	87,880	1,150	894	476	51,560	5,160	1,246,600	40,280
Dec-00	4,030	267,389	23,940	91,320	1,306	1,050	405	51,700	4,510	1,285,000	42,850
Jan-02	4,380	266,638	20,987	95,470	1,432	1,150	282	50,960	4,640	1,306,100	42,490
Feb-02	4,750	262,905	22,444	100,010	1,555	1,280	195	50,170	3,990	1,251,000	108,370
Mar-02	5,470	263,231	34,154	105,180	1,848	1,920	274	51,090	3,890	1,199,400	92,790
Apr-02	7,050	261,512	99,163	108,620	2,027	2,660	211	51,090	9,410	1,142,000	96,760
May-02	11,300	308,750	179,913	144,970	2,032	3,260	687	49,780	11,510	1,111,800	98,080
Jun-02	10,000	335,786	177,700	151,920	1,885	2,920	603	50,010	7,940	1,047,600	72,740
Jul-02	6,920	339,473	165,024	132,550	1,479	2,520	319	49,300	6,060	946,000	62,240
Aug-02	5,400	342,322	141,687	121,960	1,246	1,860	479	48,080	5,210	877,400	43,500
Sep-02	2,900	339,100	104,400	115,110	1,090	1,250	440	48,230	3,660	853,700	12,320
Oct-02	3,420	337,000	77,100	109,850	881	733	581	47,860	0	849,300	7,610
Nov-02	3,890	313,400	88,500	120,460	981	722	526	47,920	0	874,300	10,380
Dec-02	4,280	291,600	98,600	131,160	1,112	777	455	50,160	0	897,600	25,490
Jan-02	4,660	279,400	98,900	141,400	1,240	819	481	51,200	0	915,100	47,100
Feb-02	4,983	279,839	100,895	151,258	1,340	871	416	53,725	0	897,200	78,500
Mar-02	5,400	256,500	102,700	154,825	1,458	599	587	52,950	0	834,600	77,800
Apr-02	6,000	254,850	110,800	133,873	1,620	680	466	52,564	0	756,921	73,300
May-02	3,900	244,400	62,018	111,090	936	560	473	51,461	0	638,029	64,857
Jun-02	2,550	213,290	36,002	98,312	540	384	489	50,366	0	541,799	39,725

Note: Yellow highlights indicate provisional data. Blue shaded cells indicate data not available from USGS ADAPS system. Orange cell indicates an estimate due to data unavailability

FARM SERVICE AGENCY reports the following conditions:

Farm Service Agency has approved emergency haying and grazing in 15 counties which include: Bernalillo, Cibola, Colfax, Curry, De Baca, Guadalupe, Harding, Lea, Mora, Quay, Roosevelt, San Juan, Santa Fe, Tarrant and Union.

Initially, CRP haying and grazing was limited to livestock producers located in counties approved for haying and grazing. Authority has been granted to allow CRP participants to donate, rent, or lease haying privileges to an eligible livestock producer located in another county or State. USDA has developed a website for producers to list information concerning the need for available hay. The website address is: www.fsa.usda.gov/haynet.

FSA has implemented the Emergency Conservation Program in Catron, McKinley, San Juan, Santa Fe, Sierra, and Socorro counties. **\$900,000** is available for cost sharing to eligible agricultural producers for supplying emergency water for livestock, orchards, and vineyards. The FSA has submitted a request to implement the ECP in 6 additional counties. They include: Bernalillo, Chaves, De Baca, Lincoln, Otero, and Sandoval. Funds in the amount of **\$750,000** has been requested for the 6 counties. FSA is currently reviewing requests to implement ECP for Cibola, Curry, Eddy, Guadalupe, Union, and Valencia counties.

Emergency low interest loans are being accepted in all Counties in New Mexico.

The USDA Forest Service submitted the following report:

Southwest Area; Wildfire Operations [<http://www.fs.fed.us/r3/fire/>]

"Use Fires" Fires

Creek Fire, which began during a July 10 lightning storm on the Gila National Forest northwest of Truth or Consequences, New Mexico, has burned 230 acres of ponderosa pine, pinyon-juniper, oak, and grass. The fire will be allowed to burn under "fire use" conditions and will be monitored in case later suppression action is needed.

Adobe Fire, another lightning-caused fire on the Gila National Forest northwest of Truth or Consequences, has burned 157 acres of ponderosa pine, pinyon-juniper, oak, and grass. As with the Creek Fire, the Adobe is being managed under "fire use" to allow the fire to burn naturally to reduce forest fuels and encourage a healthier vegetative community.

Cub Fires, on Gila National Forest has burned 13,525 acres. The fire is 20 miles east of Glenwood, NM, in the Gila Wilderness. It is also being managed under "fire use" parameters in a confined area; the fire is being monitored each day. Little growth reported on the south side due to recent precipitation. Growth continues to grow on the north perimeter.

2002 Year-to-Date

		Human Caused Total Fires Acres_	Human Caused Acres	Lightning Caused Fires	Lightning Caused Acres
BIA	245	196	13,481	49	17
BLM	67	24	57	43	14,921
FWS	7	5	22	2	61
NPS	4	83	0	4	11,250
NM State Forestry	610	0	19,602	158	124,165
		143,76			

US Forest Service	81	38,896	298	76,537
	382	115,433		
		760	72,058	555
	1,315	299,009		226,951

All National Forests are open with some fire restrictions.

USDA-NRCS reported the following high elevation precipitation:

High elevation precipitation has remained well below average over the past three and a half months. Most of the basins have declined slightly in percent of average precipitation for the water year.

SNOTEL Precipitation, % of thirty year average (1971-2000)

BASIN	JULY 17	JULY 1	JUNE 1	MAY 1	APRIL 1
Rio Chama	31	39	39	42	45
Upper Rio Grande	41	42	43	47	48
Sangre de Cristo Mts	52	49	48	53	57
Jemez	35	33	33	36	37
San Francisco	31	16	15	28	28
Gila	29	16	16	29	31
Mimbres	29	30	37	40	41
Pecos	56	50	50	54	61
San Juan	39	40	42	45	45
Animas	39	41	42	46	47
Cimarron	61	59	54	60	68
Zuni/Bluewater	51	57	65	69	64

The U.S. Geological Survey reported the following streamflow conditions as of the end of June.

NEW MEXICO STREAMFLOW CONDITIONS-PERCENT OF AVERAGE	PERCE NT OF AVERA GE	OF AVERAGE
STATIO N	NAME	JUNE WATER YEAR TO DATE
ARKANSAS RIVER BASIN		
7203000	VERMIJO RIVER - DAWSON	3 21
7216500	MORA RIVER- GOLONDRINAS	6 17
7221500	CANADIAN RIVER- SANCHEZ	20 10

RIO GRANDE RIVER BASIN

8263500 RIO GRANDE-CERRO	6	36
8269000 RIO PUEBLO DE TAOS	5	29
8279000 EMBUDO CREEK-DIXON	1	20
8284100 RIO CHAMA-LAPUENTE	1	13
8313000 RIO GRANDE- OTOWI	40	47

PECOS RIVER BASIN	
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8378500 PECOS RIVER-PECOS	7	23
8387000 RIO RUIDOSO- HOLLYWOOD	E15	E21 ESTIMATED
8396500 PECOS RIVER-ARTESIA	25	50

SAN JUAN RIVER BASIN

9364500 ANIMAS RIVER- FARMINGTON	6	23
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GILA RIVER BASIN	
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9430500 GILA RIVER- GILA	30	31
9444000 SAN FRANCISCO	33	22

Other Information:

The USDA Bureau of Land Management continues to work with their permittees and the Forest Service on continued use of land they manage, for the purpose of grazing. Range conditions remain dry and short, but the BLM will continue to work through the dry conditions with their permittees.

The Army Corp of Engineers has projected the Middle Rio Grande Conservancy District will be out of water by September.