

AUGUST 8, 2002

MONTHLY REPORT

DROUGHT MONITORING COMMITTEE

BY

DAVID A. LUCERO

Leader of Committee

COMMITTEE PARTICIPANTS

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Drought Status for August, 2002

National Weather Service, Albuquerque, NM

Discussion: Summer rainfall has been fairly close to normal for most of the state. Except for division 2, the weekly Palmer Drought Severity Index (PDSI) has shown some improvement with a trend for less negative numbers over the past few weeks. Greatest improvement has been in divisions 5 (Central Valley) and 8 (Southern Desert). The division 5 weekly PDSI has improved from -3.4 on June 29 to -1.3 on July 27. The division 8 weekly PDSI has improved from -3.4 on June 29 to -1.5 on July 27. Some improvement can also be seen in the monthly averages (below), with the greatest improvements in divisions 5 (up 1.0), 8 (up 0.9), 7 (up 0.7), 6 (up 0.6) and 4 (up 0.5).

Palmer Index for 2002:

| <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>July 27</u> | <u>June to July</u> |
|-------------|------------|------------|------------|------------|------------|------------|------------|----------------|---------------------|
| 1 | -0.3 | -1.3 | -2.1 | -3.0 | -4.1 | -5.1 | -5.0 | -4.4 | +0.1 |
| 2 | -2.0 | -2.2 | -2.9 | -4.0 | -5.1 | -6.1 | -6.3 | -6.3 | -0.2 |
| 3 | -0.5 | +0.1 | -0.3 | -1.8 | -2.6 | -2.8 | -2.8 | -2.8 | zero |
| 4 | -0.6 | -0.8 | -1.6 | -2.7 | -3.8 | -4.5 | -4.0 | -3.0 | +0.5 |
| 5 | -0.9 | -0.5 | -1.0 | -2.1 | -2.8 | -3.3 | -2.3 | -1.3 | +1.0 |
| 6 | -2.2 | -1.6 | -2.2 | -3.0 | -4.0 | -4.6 | -4.0 | -3.6 | +0.6 |
| 7 | -1.2 | -0.3 | 0.0 | +0.6 | -1.1 | -2.4 | -1.7 | -1.9 | +0.7 |
| 8 | -1.4 | -0.4 | -1.3 | -2.5 | -3.0 | -3.2 | -2.3 | -1.5 | +0.9 |

Drought Status:

| <u>Division</u> | <u>Status</u> | <u>Justification</u> |
|-----------------|------------------|---|
| 1 | Emergency | PDSI -3 to -4 for 4 months, -4 or less 3 months |
| 2 | Emergency | PDSI -4 or less 4 months |
| 3 | Warning | PDSI -2 to -3 for 3 months |
| 4 | Emergency | PDSI -3 to -4 for 3 months |
| 5 | Warning | PDSI -2 to -3 for 4 months. Would need to improve to -1 or Greater for 2 consecutive months to upgrade. |
| 6 | Emergency | PDSI -4 or less for 3 months. Would need to improve to -1.5 or Greater for 2 consecutive months to upgrade. |
| 7 | Alert Warning | South ½ North ½ |
| 8 | Emergency | PDSI was -3 to -4 for 2 months. Conditions are improving but August and September would need to both be > -1.5 for upgrade. |

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. Greatest improvements in soil moisture conditions will likely continue to be in the southwest and central sections of the state. However, long-term aspects of the drought will linger even if summer rainfall is above average. 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. Given the present conditions in the Pacific Ocean, this El Niño is not likely to develop into a strong one.

The Interstate Stream Commission reported the following Reservoir Conditions:

Table 1 – End of Month Storage Levels For Key Reservoirs in New Mexico. Shaded cells indicate provisional data

| RIO GRANDE BASIN | | | | | | | | | | | |
|------------------|----------|---------|---------|---------|-------------|---------|---------|---------|--------------|----------------|---------|
| 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-01 | 4,380 | 266,638 | 20,987 | 95,470 | 1,432 | 1,150 | 282 | 50,960 | 4,640 | 1,306,100 | 42,490 |
| Feb-01 | 4,750 | 262,905 | 22,444 | 100,010 | 1,555 | 1,280 | 195 | 50,170 | 3,990 | 1,251,000 | 108,370 |
| Mar-01 | 5,470 | 263,231 | 34,154 | 105,180 | 1,848 | 1,920 | 274 | 51,090 | 3,890 | 1,199,400 | 92,790 |
| Apr-01 | 7,050 | 261,512 | 99,163 | 108,620 | 2,027 | 2,660 | 211 | 51,090 | 9,410 | 1,142,000 | 96,760 |
| May-01 | 11,300 | 308,750 | 179,913 | 144,970 | 2,032 | 3,260 | 687 | 49,780 | 11,510 | 1,111,800 | 98,080 |
| Jun-01 | 10,000 | 335,786 | 177,700 | 151,920 | 1,885 | 2,920 | 603 | 50,010 | 7,940 | 1,047,600 | 72,740 |
| Jul-01 | 6,920 | 339,473 | 165,024 | 132,550 | 1,479 | 2,520 | 319 | 49,300 | 6,060 | 946,000 | 62,240 |
| Aug-01 | 5,400 | 342,322 | 141,687 | 121,960 | 1,246 | 1,860 | 479 | 48,080 | 5,210 | 877,400 | 43,500 |
| Sep-01 | 2,900 | 339,100 | 104,400 | 115,110 | 1,090 | 1,250 | 440 | 48,230 | 3,660 | 853,700 | 12,320 |
| Oct-01 | 3,420 | 337,000 | 77,100 | 109,850 | 881 | 733 | 581 | 47,860 | 0 | 849,300 | 7,610 |
| Nov-01 | 3,890 | 313,400 | 88,500 | 120,460 | 981 | 722 | 526 | 47,920 | 0 | 874,300 | 10,380 |
| Dec-01 | 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 |

| | | | | | | | | | | | |
|--------|-------|---------|--------|--------|-----|-----|-----|--------|---|---------|--------|
| Jul-02 | 1,100 | 183,800 | 23,100 | 90,000 | 981 | 433 | 460 | 49,800 | 0 | 444,100 | 40,800 |
|--------|-------|---------|--------|--------|-----|-----|-----|--------|---|---------|--------|

Table 1A – End of Month Storage Levels For Key Reservoirs in New Mexico.
Shaded cells indicate provisional data

| END OF MONTH | PECOS BASIN | | | | CANADIAN | | | SAN JUAN |
|--------------|-------------|--------|----------|--------|----------|---------|------------|-----------|
| | SANTA ROSA | SUMNER | BRANTLEY | AVALON | CONCHAS | UTE | EAGLE NEST | NAVAJO |
| Jan-00 | 97,590 | 35,090 | 19,790 | 219 | 290,520 | 236,500 | 64,800 | 1,481,200 |
| Feb-00 | 97,950 | 16,430 | 31,280 | 1,140 | 291,600 | 219,900 | 65,200 | 1,464,700 |
| Mar-00 | 98,840 | 15,870 | 27,920 | 1,030 | 295,600 | 202,100 | 65,800 | 1,465,400 |
| Apr-00 | 83,330 | 27,930 | 16,600 | 1,270 | 286,400 | 197,200 | 67,400 | 1,525,700 |
| May-00 | 48,530 | 24,950 | 23,120 | 1,090 | 266,460 | 194,400 | 65,200 | 1,580,900 |
| Jun-00 | 50,900 | 26,350 | 16,020 | 1,210 | 252,810 | 194,600 | 62,600 | 1,498,700 |
| Jul-00 | 31,910 | 12,760 | 11,360 | 1,270 | 239,350 | 188,100 | 60,400 | 1,448,000 |
| Aug-00 | 2,970 | 8,740 | 23,570 | 1,400 | 213,640 | 184,200 | 57,500 | 1,396,100 |
| Sep-00 | 3,740 | 6,740 | 15,470 | 1,210 | 189,380 | 179,200 | 55,100 | 1,356,600 |
| Oct-00 | 8,830 | 18,830 | 11,700 | 1,330 | 187,700 | 195,000 | 53,900 | 1,323,200 |
| Nov-00 | 11,630 | 23,760 | 14,280 | 2,060 | 187,880 | 193,000 | 53,600 | 1,307,300 |
| Dec-00 | 12,670 | 28,610 | 16,580 | 2,590 | 188,560 | 193,000 | 53,700 | 1,288,800 |
| Jan-01 | 13,740 | 31,380 | 19,520 | 3,030 | 190,810 | 193,000 | 54,100 | 1,270,200 |
| Feb-01 | 15,600 | 33,580 | 21,720 | 3,270 | 197,730 | 194,000 | 54,400 | 1,259,800 |
| Mar-01 | 22,680 | 36,730 | 23,800 | 1,400 | 206,260 | 197,000 | 56,000 | 1,297,600 |
| Apr-01 | 32,490 | 26,770 | 13,840 | 1,150 | 202,550 | 194,000 | 57,800 | 1,411,700 |
| May-01 | 32,490 | 38,050 | 25,120 | 1,210 | 187,760 | 193,000 | 58,700 | 1,535,200 |
| Jun-01 | 33,930 | 27,600 | 14,670 | 1,150 | 172,420 | 190,000 | 56,200 | 1,477,400 |
| Jul-01 | 3,930 | 29,170 | 16,240 | 1,210 | 149,080 | 186,000 | 53,100 | 1,456,800 |
| Aug-01 | 12,560 | 21,320 | 8,390 | 1,210 | 133,360 | 190,000 | 51,100 | 1,449,400 |
| Sep-01 | 13,840 | 13,480 | 13,480 | 1,400 | 115,550 | 188,000 | 48,900 | 1,409,200 |
| Oct-01 | 14,450 | 9,500 | 9,500 | 1,460 | 105,620 | 184,000 | 47,800 | 1,376,300 |
| Nov-01 | 15,720 | 7,800 | 7,800 | 790 | 104,710 | 183,000 | 47,600 | 1,354,800 |
| Dec-01 | 15,980 | 8,470 | 8,470 | 1,520 | 103,760 | 181,000 | 47,400 | 1,329,800 |
| Jan-02 | 16,700 | 12,200 | 11,500 | 2300 | 103,960 | 180,578 | 45,500 | 1,313,200 |
| Feb-02 | 17,125 | 13,348 | 21,717 | 2,794 | 103,526 | 179,481 | 47,900 | 1,293,333 |
| Mar-02 | 4,020 | 2,000 | 29,100 | 3,200 | 102,236 | 177,561 | 48,200 | 1,269,796 |
| Apr-02 | 4,397 | 1,070 | 25,050 | 1,300 | 101,112 | 172,928 | 45,900 | 1,240,312 |
| May-02 | 4,270 | 87 | 17,256 | 1,300 | 82,668 | 171,612 | 41,092 | 1,173,637 |
| Jun-02 | 3,266 | 1158 | 12,329 | 1,209 | 82,568 | 176,000 | 41,000 | 1,099,400 |
| Jul-02 | 1,000 | 1,300 | 11,000 | 800 | 82,434 | 176,598 | 37,900 | 1,077,200 |

Note: Yellow highlights indicate provisional data.

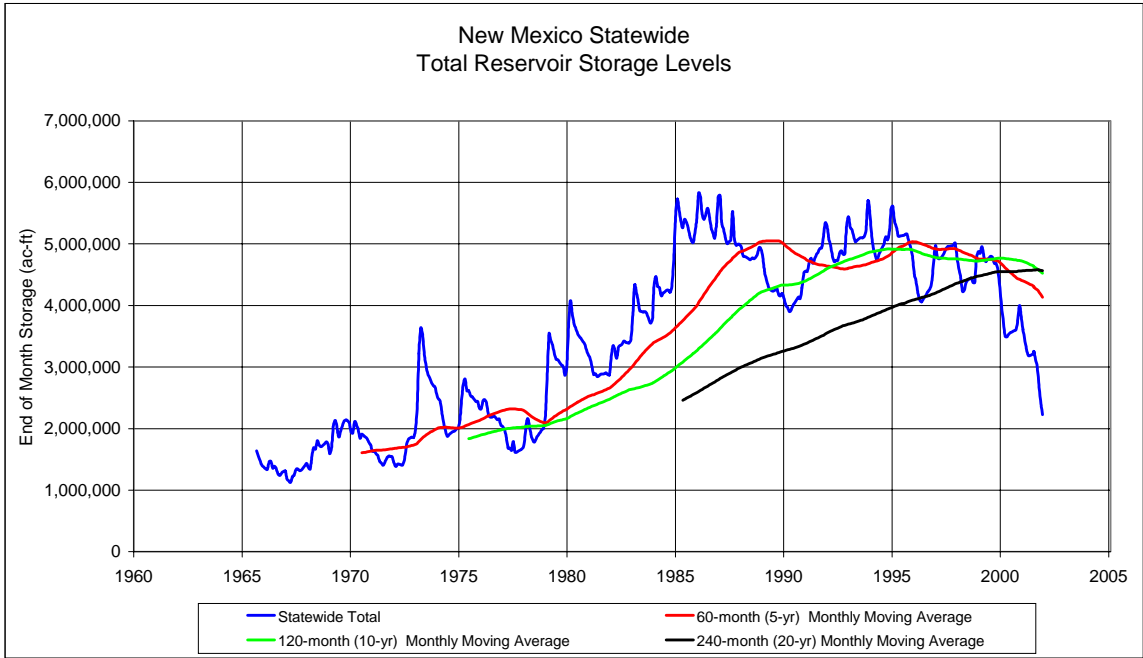


Figure 1 – Historical Statewide Reservoir Levels from October 1965 through July 2002

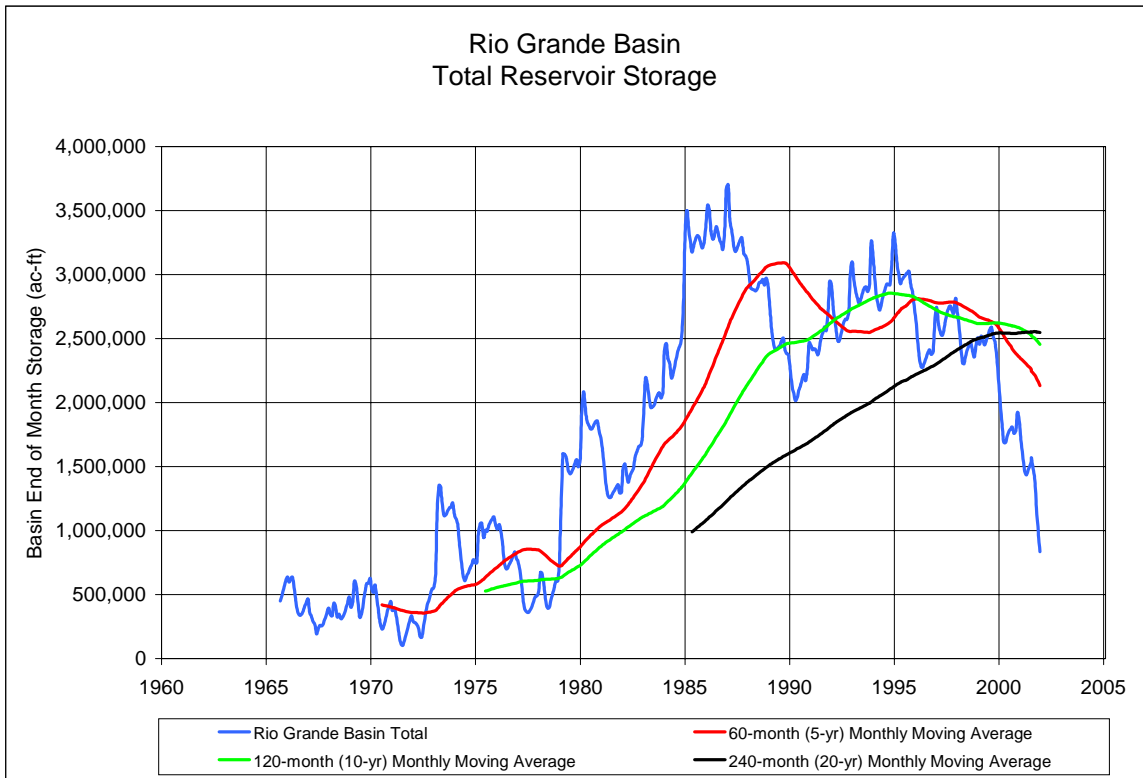


Figure 2 – Historical End of Month Reservoir Storage Levels for the Rio Grande Basin from October 1965 through July 2002

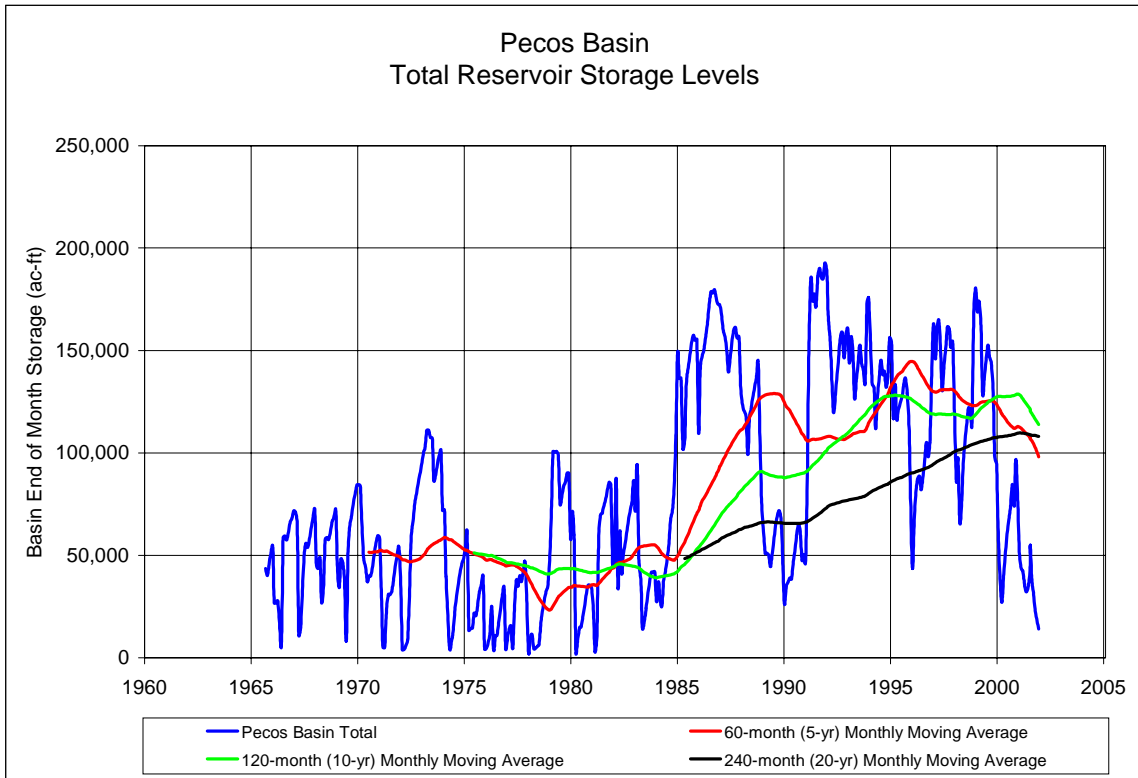


Figure 3 – Historical End of Month Reservoir Storage Levels for the Pecos River Basin from October 1965 through July 2002

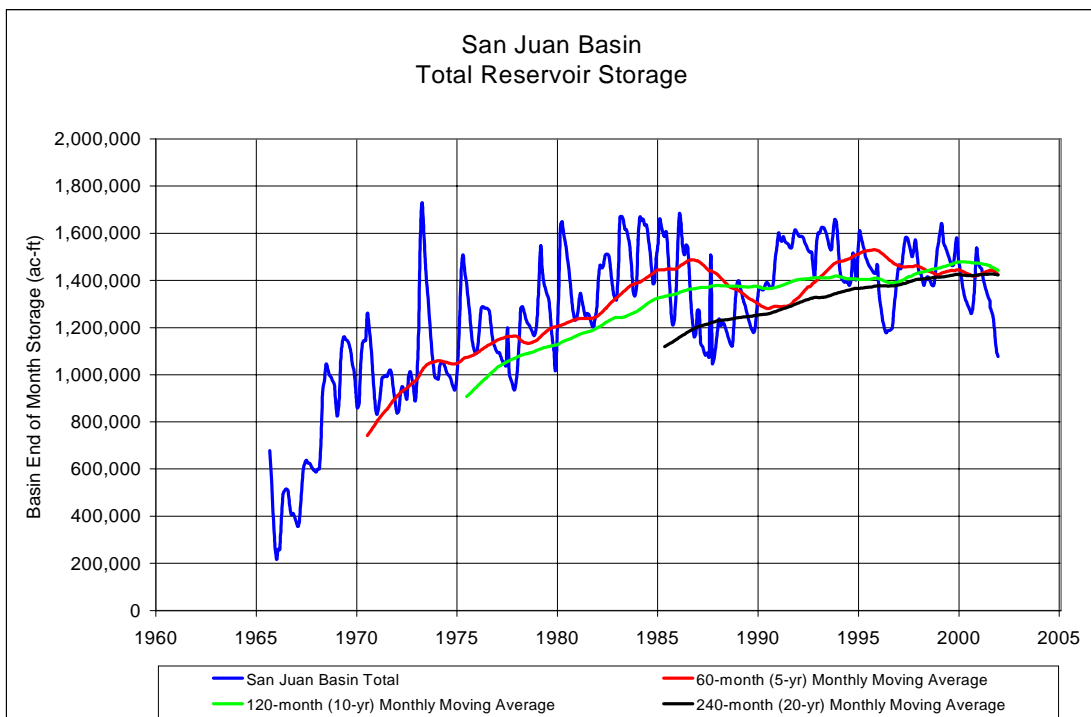


Figure 4 - Historical End of Month Reservoir Storage Levels for the San Juan River Basin from October 1965 through July 2002

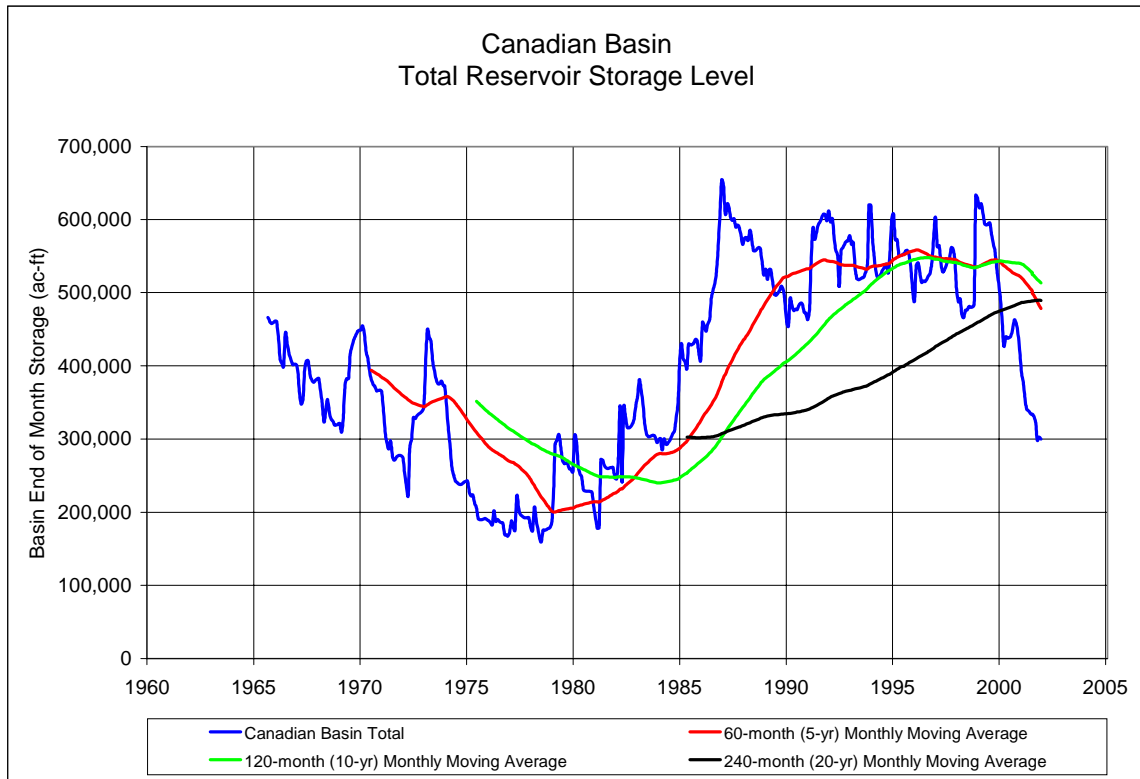


Figure 5 - Historical End of Month Reservoir Storage Levels for the Canadian River Basin from October 1965 through July 2002

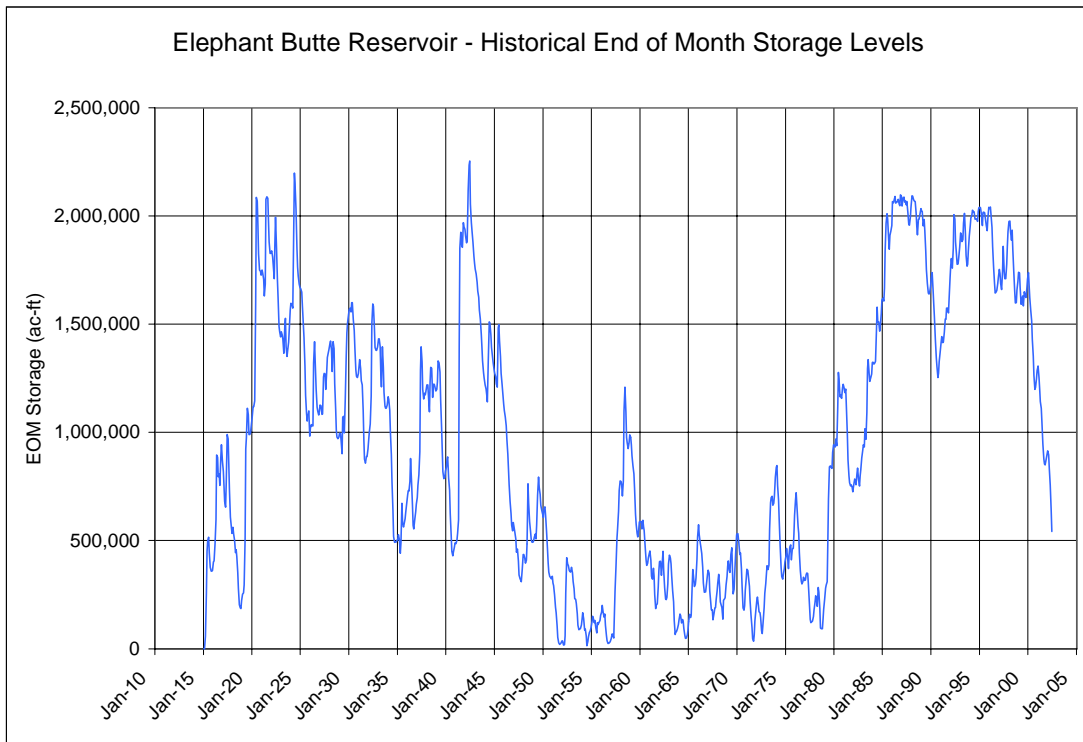


Figure 6 - Historical End of Month Storage Levels for Elephant Butte Reservoir from January 1915 through July 2002
 USDA reported SNOTEL Precipitation:

High elevation water year precipitation (SNOTEL) continues to be well below average. Most of the basins show a slight improvement over the July 1 percentages. The southwest has shown the most improvement over the past two months.

| USDA-NRCS BASIN | Water Year SNOTEL Precipitation - % of 71-00 Avg. | | | | | |
|----------------------|---|----------|----------|----------|----------|----------|
| | 8-Aug-02 | 1-Aug-02 | 1-Jul-02 | 1-Jun-02 | 1-May-02 | 1-Apr-02 |
| Rio Chama | 39 | 39 | 39 | 39 | 42 | 45 |
| Upper Rio Grande | 43 | 45 | 42 | 43 | 47 | 48 |
| Sangre De Cristo Mts | 54 | 54 | 49 | 48 | 53 | 57 |
| Jemez | 40 | 38 | 33 | 33 | 36 | 37 |
| San Francisco | 52 | 49 | 16 | 15 | 28 | 28 |
| Gila | 46 | 41 | 16 | 16 | 29 | 31 |
| Mimbres | 46 | 41 | 30 | 37 | 40 | 41 |
| Pecos | 58 | 59 | 50 | 50 | 54 | 61 |
| San Juan | 42 | 44 | 40 | 42 | 45 | 45 |
| Animas | 42 | 41 | 41 | 42 | 46 | 47 |
| Cimarron | 58 | 60 | 59 | 54 | 60 | 68 |
| Zuni/Bluewater | 62 | 54 | 57 | 65 | 69 | 64 |

USDA-NRCS Monthly SNOTEL Precipitation - % or 71-00 Avg.

| BASIN | July 02 | June-02 | May-02 | April-02 | March-02 |
|-----------------|---------|---------|--------|----------|----------|
| Canadian | 83 | 98 | 6 | 13 | 62 |
| Pecos | 102 | 47 | 17 | 18 | 18 |
| Rio Grande | 65 | 38 | 8 | 26 | 32 |
| Mimbres | 58 | 8 | 13 | 30 | 33 |
| San Francisco | 79 | 14 | 12 | 29 | 13 |
| /Upper Gila | | | | | |
| Zuni/Bluewater | 30 | 10 | 0 | 150 | 65 |
| Animas/San Juan | 59 | 7 | 6 | 32 | 56 |

The Surface Water Supply Index (SWSI) for August 1 indicates that the Canadian, Bluewater, and Pecos basins are in a severe water supply condition; moderate drought level for the San Juan and a normal supply for the Rio Grande. The SWSI ratings are shown in the following table:

| Abundant | Good | Normal | Moderate Drought | Severe Drought |
|----------|------------|--------------|------------------|----------------|
| +3 to +4 | +1.5 to +3 | +1.5 to -1.5 | -1.5 to -3 | -3 to -4 |

FSA Drought Actions

The Farm Service Agency (FSA) has implemented the Emergency Conservation Program in 21 counties in New Mexico. The ECP program will provide cost-share assistance to producers in approved counties who need to seek alternative water sources for livestock, orchards, and vineyards. Counties eligible for ECP funds include Bernalillo, Catron, Chaves, Cibola, Colfax, Curry, De Baca, Eddy, Guadalupe, Lincoln, McKinley, Mora, Otero, San Juan, Santa Fe, San Miguel, Sandoval, Sierra, Socorro, Union, and Valencia counties.

The Secretary of Agriculture's disaster designation makes low interest loans available to all eligible producers statewide. FSA Emergency loans are offered to farmers and ranchers who have suffered a qualifying "physical loss" (such as a water shortage) or who have suffered at least a 30% loss in crop production.

Farm Service Agency has authorized emergency haying and grazing on Conservation Reserve Program (CRP) acreage for 15 New Mexico counties. Counties approved for emergency haying and grazing of CRP acreage include: Bernalillo, Cibola, Colfax, Curry, De Baca, Harding, Lea, Mora, Quay, Roosevelt, San Juan, Santa Fe, Torrance and Union counties. Livestock operations located within an approved county are eligible for emergency haying or grazing of CRP acreage including livestock operations in another county or State. Any CRP acreage hayed or grazed is subject to a 25 percent per acre

annual rental payment reduction unless the haying privilege, grazing privilege, or CRP hay is donated to a livestock producer with a compelling need.

USDA-USGS reported the following stream-flow conditions:

| STATION | NAME | JULY | WATER YEAR TO DATE |
|-------------------------------|-------------------------|------|--------------------|
| ARKANSAS RIVER BASIN | | | |
| 7203000 | VERMIJO RIVER – DAWSON | 8 | 19 |
| 7216500 | MORA RIVER-GOLONDRINAS | 10 | 16 |
| 7221500 | CANADIAN RIVER-SANCHEZ | 11 | 10 |
| RIO GRANDE RIVER BASIN | | | |
| 8263500 | RIO GRANDE-CERRO | 11 | 34 |
| 8269000 | RIO PUEBLO DE TAOS | 16 | 28 |
| 8279000 | EMBUDO CREEK-DIXON | 3 | 19 |
| 8284100 | RIO CHAMA-LAPUENTE | 4 | 12 |
| 8313000 | RIO GRANDE-OTOWI | 62 | 48 |
| PECOS RIVER BASIN | | | |
| 8378500 | PECOS RIVER-PECOS | 34 | 24 |
| 8387000 | RIO RUIDOSO-HOLLYWOOD | 21 | 21 ESTIMATED |
| 8396500 | PECOS RIVER-ARTESIA | 18 | 45 |
| SAN JUAN RIVER BASIN | | | |
| 9364500 | ANIMAS RIVER-FARMINGTON | 2 | 20 |
| GILA RIVER BASIN | | | |
| 9430500 | GILA RIVER-GILA | 58 | 33 |
| 9444000 | SAN FRANCISCO | 39 | 22 |

NOTE: STREAMFLOW CONDITIONS FOR THE SELECTED INDEX STATIONS DID NOT IMPROVE FOR JULY

USDA Forest Service submitted the following fire report:

Fire and Burned Areas

**For
New Mexico
8-Aug-02**

Gila NF continues to have two large fires placed in Wildland Fire Use status, Adobe Fire Use and Creek Fire Use, and one fire placed in confinement status, Cub Fire Use.

| | Human Caused Acres | | Lightning Caused Acres | | Total | Acres |
|-------|-----------------------|--------|---------------------------|---------|-------|---------|
| BIA | 198 | 13,481 | 61 | 24 | 259 | 13,505 |
| BLM | 28 | 57 | 131 | 14,953 | 159 | 15,010 |
| F&WS | 5 | 22 | 2 | 61 | 7 | 83 |
| NPS | 0 | 0 | 6 | 15,850 | 6 | 15,850 |
| NMSF | 451 | 19,602 | 163 | 124,166 | 614 | 143,768 |
| FS | 84 | 38,325 | 354 | 76,137 | 438 | 114,462 |
| Total | 766 | 71,487 | 717 | 231,191 | 1,483 | 302,678 |

**What is the Energy Release Component (ERC)?
Previous Years:**

The Energy Release Component (ERC) is based on the estimated potential available energy released per unit area in the flaming front of a fire. The day-to-day variations of the ERC are caused by changes in the moisture contents of the various fuel classes, including the 1,000 hour timelag class. The ERC is derived from predictions of (1) the rate of heat release per unit area during flaming combustion and (2) the duration of flaming.

Other Indicators:

The Bureau of Land Management is reporting ranchers continue to reduce cattle numbers. Some ranchers are down to 10 percent of normal stocking rates. They are also working with the Forest Service and permittees who will be transferring cattle from forest allotments to the Bureau of Land Management land.