NWS ABQ & GJT

Water Supply

and

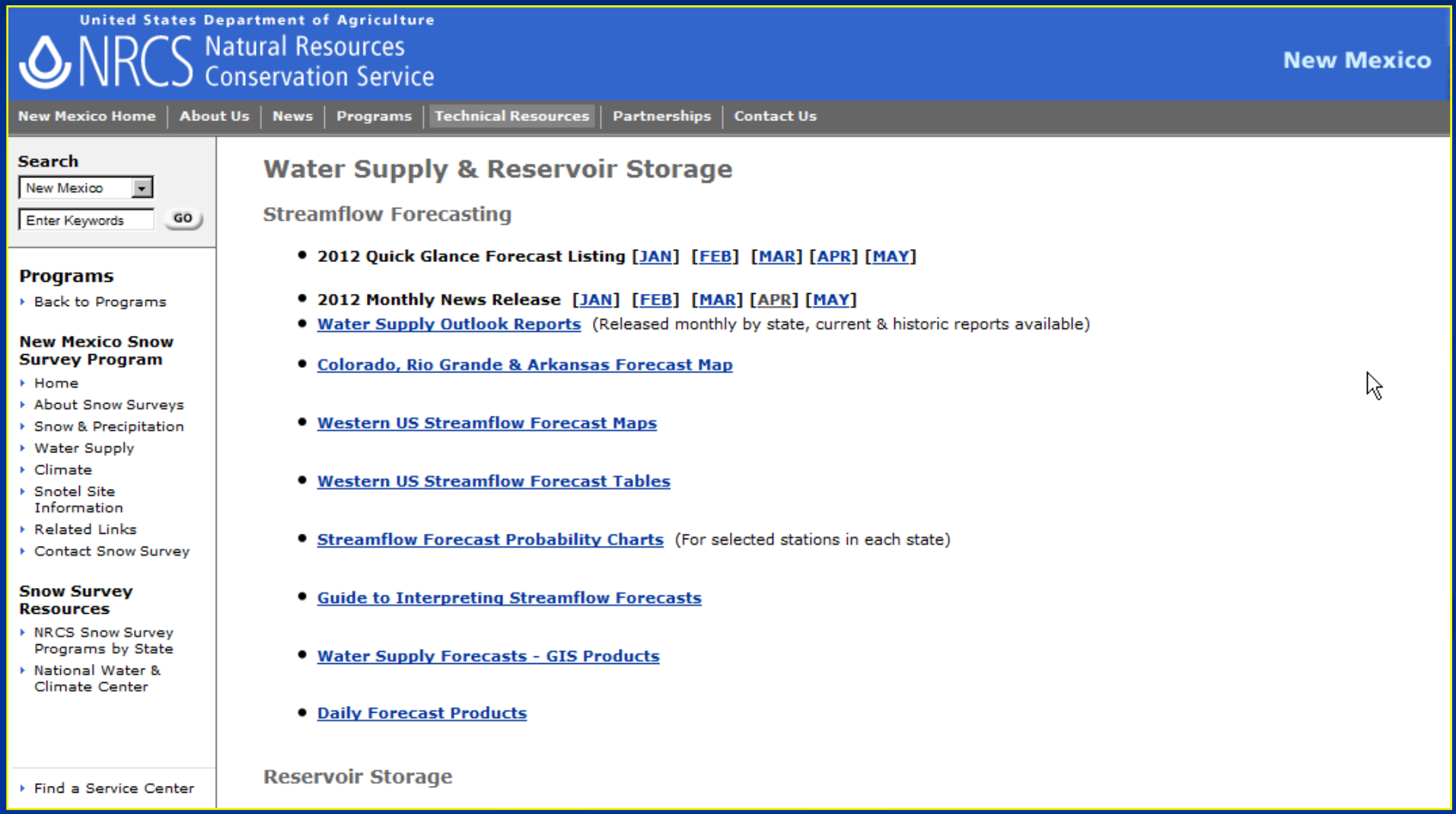
Drought Briefing

Activities

November 27, 2012

National Weather Service

NM Water Supply News Releases
from WFO ABQ hosted on NRCS website



NM Water Supply News Release

- Generated as soon as coordinated NRCS – NWS flow volume forecasts available during first week of the month from January through May.
- Consists of a one page narrative, SWE levels from selected SNOTELS, and a one page table of select water supply forecast site values (uses 50% confidence levels).
- Written from a meteorological/hydrologic perspective.
- Short paragraphs highlighting: Past month's weather with emphasis on mountain regions, Select reservoir inflow (percent of normal) forecasts, Statewide precipitation for past month and water year to date, NRCS basin snowpack summaries, Reservoir storages, climate outlook (if any).

WATER SUPPLY FORECAST – April 2012

Contact: NWS - Ed Polasko (505) 244-9147 ext 228
NRCS – Wayne Sleep (505) 761-4431

Coordinated Release: National Weather Service and Natural Resources Conservation Service

A drier than normal March, a mid month five day episode of unusually warm temperatures, and a final ten day stretch of near record-breaking warmth to end March served to crush any hopes of a normal snow melt runoff season for New Mexico. The warm temperatures forced an early start to the snow melt process beginning in mid March, a time when most northern New Mexico mountain regions would normally be adding to a snowpack that would peak near the end of March or early in April. Warm dry winds during March also helped reduce the snowpack through sublimation so that a snow storm that produced a foot or more of new snow in the north central New Mexico Mountains from April 2nd through the 3rd only covered up bare ground with new snowfall rather than adding to a near-peak snowpack.

Current spring runoff forecasts have decreased 20 to 50 percent from the forecasts issued in early March. Forecast flows for the Rio Grande now include 44 percent of normal into Cochiti Lake and only 30 percent of normal for Elephant Butte Lake. Other reservoir forecast inflows include 49 percent of normal at El Vado Lake and 58 percent of normal for Santa Rosa Lake. Navajo Reservoir is expecting 57 percent of normal inflow.

Precipitation during March 2012 was generally well below normal at most locations in the state with near normal precipitation limited to a few spots along the east slopes of the Sangre de Cristo Mountains and adjacent northeastern highlands. Seasonal precipitation, October 2011 through March 2012, ranged from above normal in parts of southwest New Mexico to below normal in the Rio Chama Basin.

Surveys by the U.S. Department of Agriculture's Natural Resources Conservation Service indicate that snowpack water content in the Rio Grande Basin as of April 1 was 44 percent of normal and 107 percent of one year ago. In the San Juan Basin the snowpack water content was 53 percent of normal and 62 percent of the total of March 1, 2012.

The Rio Grande Basin snowpack water content average was 84 percent of normal as of the first of March, but a warm dry month with few storms resulted in a rapidly diminishing snowpack especially during the last 10 days of March. The April 1, 2012 snowpack water content of 44 percent of average represented the fifth lowest April 1 snowpack water content average for the Rio Grande Basin since 1993.

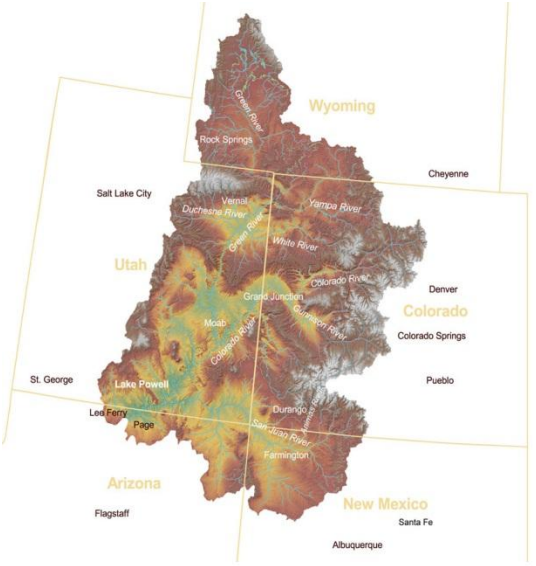
New Mexico reservoir storage is well below normal in the Rio Grande Basin, Canadian Basin, and Pecos Basin, but slightly above normal at Navajo Lake. In the Rio Grande basin, storage is 51 percent of the 1971 to 2000 normal and 91 percent of last years storage at this time. In the San Juan basin, Navajo Reservoir storage is 106 percent of the 30 year normal, and 99 percent of the storage of one year ago.

This water supply forecast reflects conditions as of early April 2012 and assumes near normal to below normal precipitation through the remainder of the spring.

2012 SNOTEL DATA

SNOTEL Site	April 1, 2012 - Water Content Inches	1971-2000 Average - Water Content Inches
Chamita	0.2	9.2
Red River	1.2	7.3
Santa Fe	8.8	14.5
Cumbres Trestle	16.8	26.9
Wolf Creek Summit	23.3	33.3

Regional



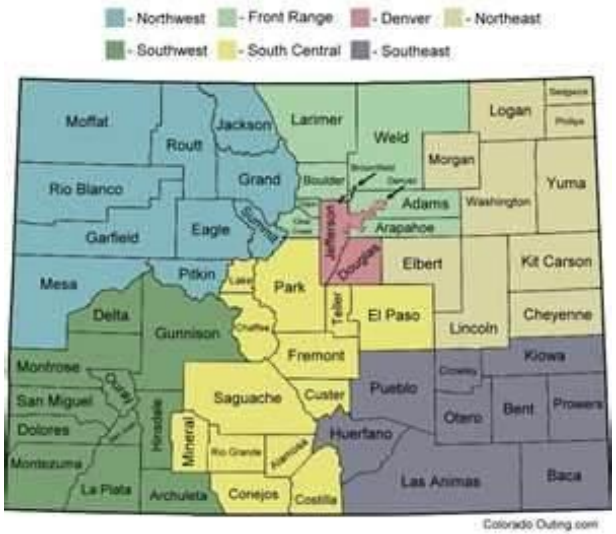
Source: Upper Colorado River Endangered Fish Recovery Program, www.coloradoriverrecovery.org

Weekly Conference Calls

- CROS - Coordinated Reservoir Operations
  - interested in the high water peaks and timing
- HUP - Historic User Pool
  - interested in the low water, after the spring peaks
- These groups include - Federal, State, Local and private entities
  - Dam operators, Water providers, Irrigation providers, Fish and Wildlife and other water users.
- The WFO presents the weather forecast and also provides longer term outlooks
- The CBRFC presents the river forecast.

Regional

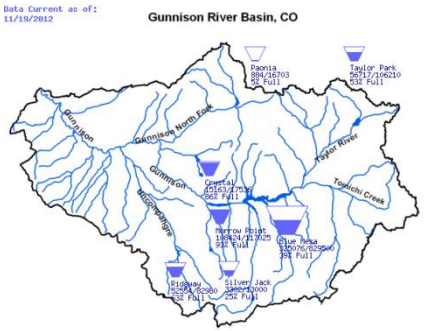
- Host Spring Runoff Conference calls
  - Grand Junction NWS
  - Colorado Emergency Managers
    - Northwest (covers GJT and BOU HSA)
    - Southwest
  - Boulder NWS
  - CBRFC



- Calls are monthly or weekly as needed.
- EMs have been historically more interested with the peak forecast but a few are now looking at volume and low water forecasts.

USBR

- Coordination calls with Bureau of Reclamation
  - Aspinall Unit
    - Weather forecast and runoff timing



  - Flaming Gorge Reservoir –
    - Coordination with forecast and reservoir releases.
    - Worked with USBR on wording of public notice and outlook products for the Green River.

- CBRFC prepares forecasts and coordinates with these units directly

County and Local level

- Annual Local, county and community meetings
  - Mud and Flood
  - MACG meeting.
- Coordination Meetings with Mesa Co – includes each municipality, EMS, Public works, Local water supply managers, and irrigation water providers. (on site briefing)
- Coordination Calls with each of the Individual Emergency Managers as needed.
- Local Water provider on site briefing and coordination.

New Mexico

Meteorological

Drought Status

and

Climate/Weather Outlook

November 19, 2012

National Weather Service Albuquerque, NM
http://weather.gov/abq

National Weather Service

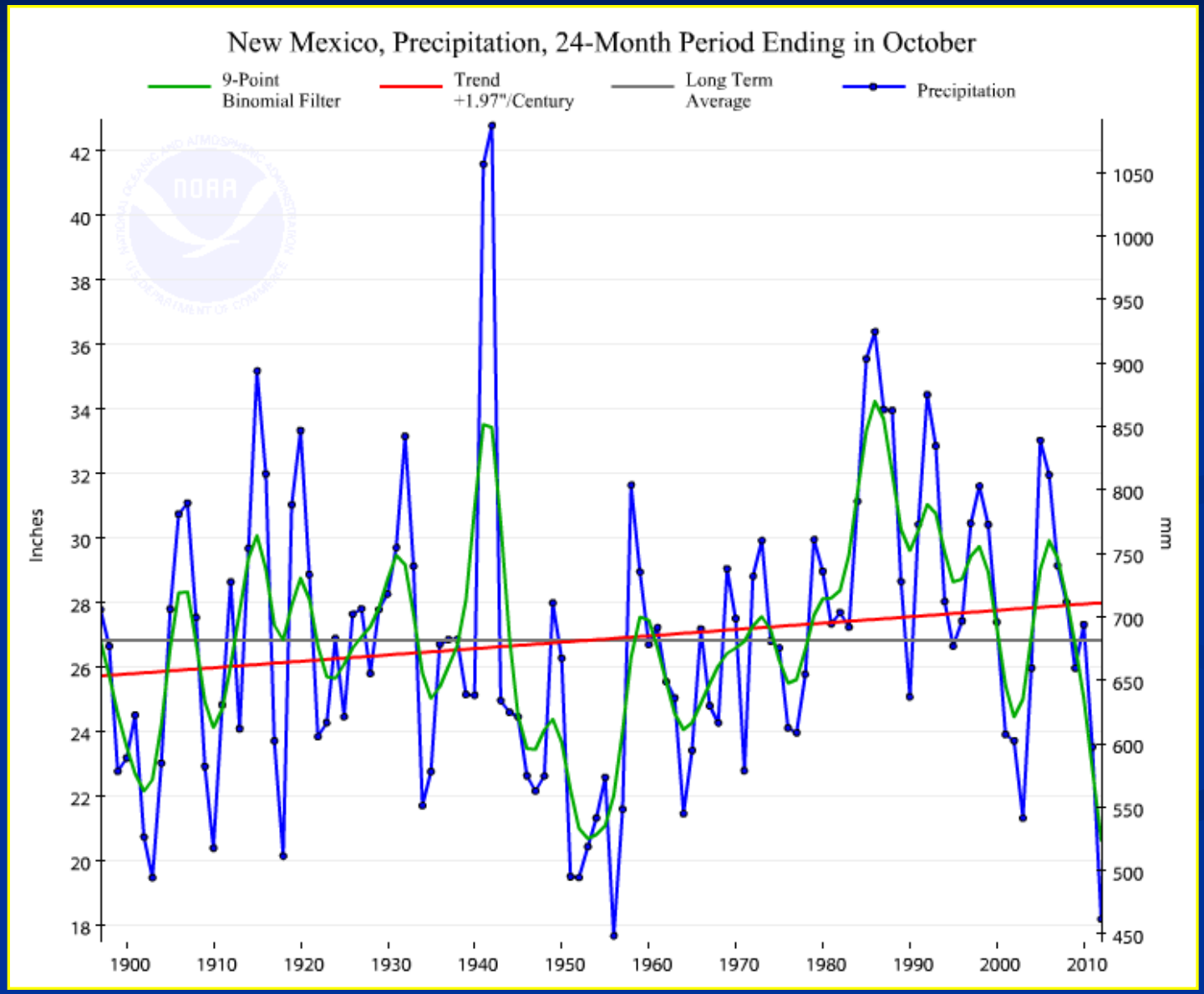
New Mexico Precipitation Rankings
(January through October 2012)

- The first Ten months of 2012 was the 6th ***Driest January-to-October*** on record for New Mexico.
  (Jan – Oct 2011 was the 2nd driest on record)
  The last 24 months were the 2nd driest 24 month period (ending in Oct) on record for NM (behind 1956).

Period	Amount	20th Century Average	Departure	Rank	Wettest/Driest Since	Record Year
Jun - Oct 2012 5-month period	5.89" (149.61 mm)	8.68" (220.47 mm)	-2.79" (-70.86 mm)	**10th Driest** 109th Wettest	Driest since: 2003 Wettest since: 2011	Driest: 1956 Wettest: 1941
Jan - Oct 2012 10-month period	8.01" (203.45 mm)	12.23" (310.64 mm)	-4.22" (-107.19 mm)	**6th Driest** 113rd Wettest	Driest since: 2011 Wettest since: 2010	Driest: 1956 Wettest: 1941
Nov 2010 - Oct 2012 24-month period	18.18" (461.77 mm)	27.03" (686.56 mm)	-8.85" (-224.79 mm)	**2nd Driest** 115th Wettest	Driest since: 1956 Wettest since: 2011	Driest: 1956 Wettest: 1942

New Mexico Precipitation (24 months)

(November 2010 - October 2012... 2nd Driest on Record)

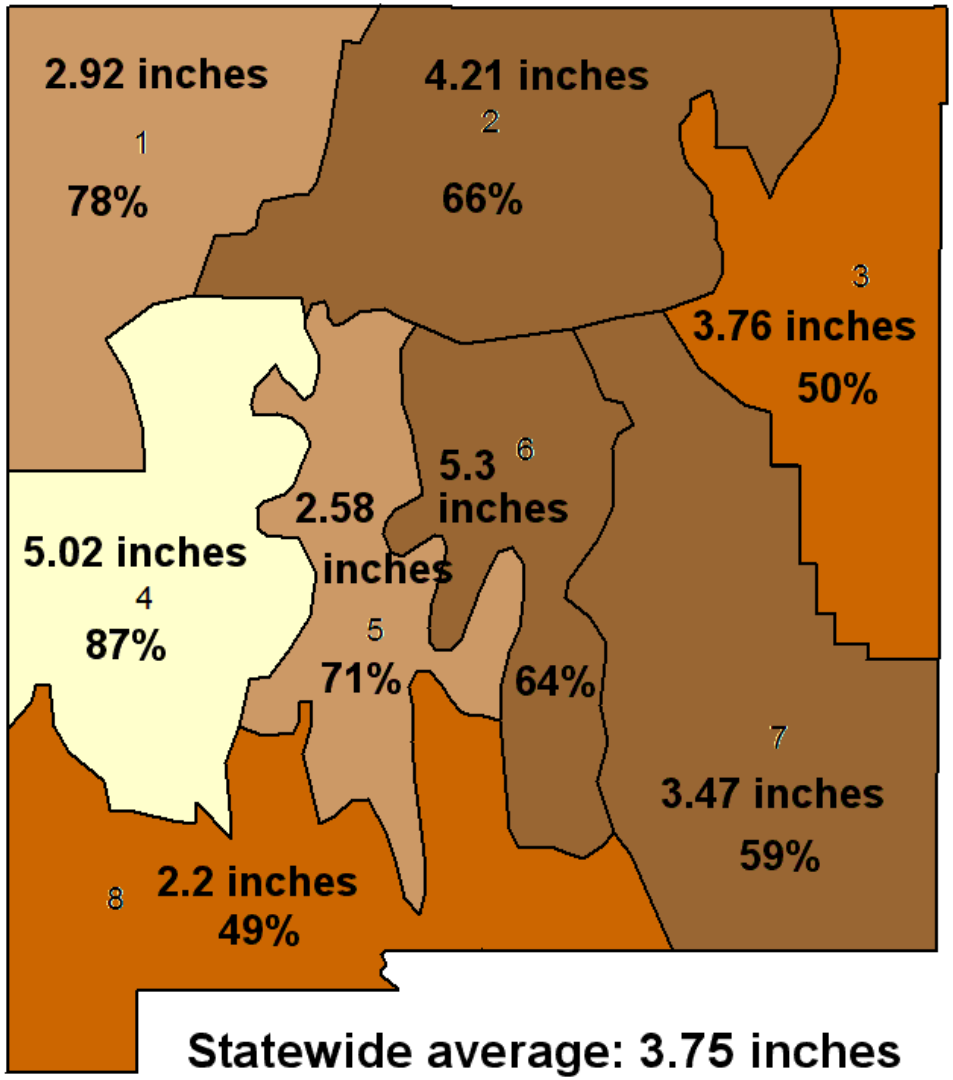


2012 Precipitation Deficits

- 2012 Precipitation Totals & Deficits (**Jan – Oct 2012**):

	CY 2012	***Dprt fm Nrml***	***% Normal***
Rio Rancho #2	3.66 in.	-6.04 in.	38%
Santa Fe 2	5.22	-6.89	43%
Tucumcari 4NE	6.46	-8.31	44%
Fort Sumner 5S	4.89	-9.18	37%
Portales	7.93	-7.70	51%
Estancia 4N	5.55	-5.99	48%
Elephant Butte Dam	4.22	-4.41	51%
Glenwood	5.87	-7.66	43%
Jemez Dam	1.73	-6.18	22%
Gallup Airport	5.40	-4.25	56%
Farmington Ag Cntr	2.78	-4.36	37%

Summer 2012 Precipitation (June - August).
New Mexico Climate Division average (inches) and percent of normal.



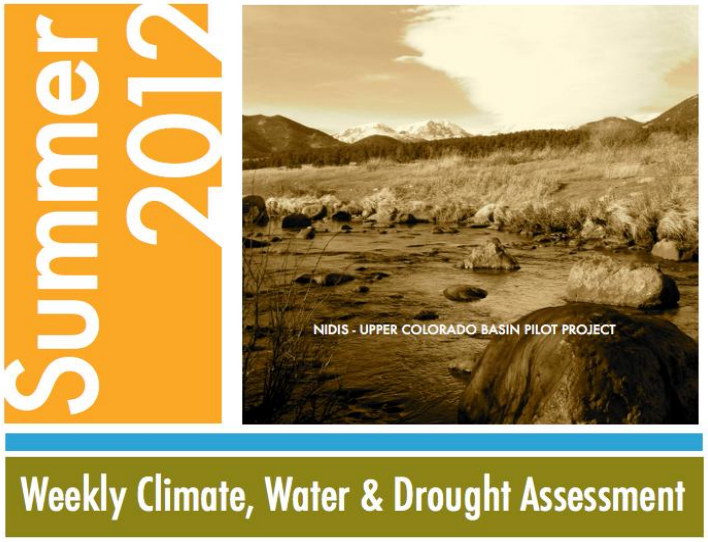
Statewide average: 3.75 inches
(64 percent of normal)

Summer Precipitation
(and Percent of normal)

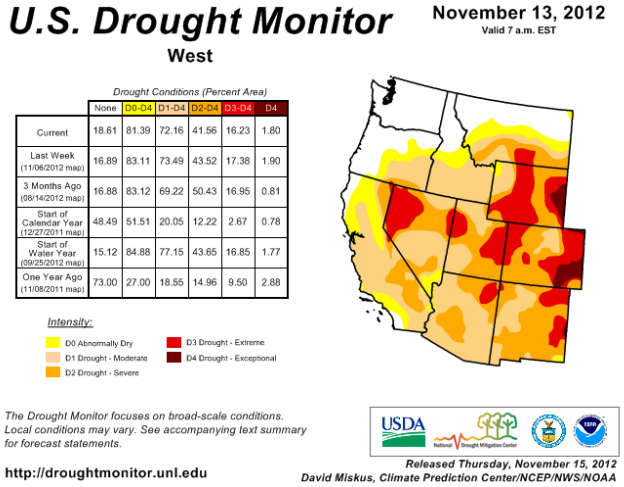
Albuquerque	2.93”	84%
Los Lunas	2.22	62%
Navajo Dam	2.84	83%
Red River	5.97	80%
Eagle Nest	4.88	73%
Chama	4.63	78%
Cloudcroft	8.41	71%
Capitan	6.59	86%
Luna R/S	7.89	112%
Grants	4.90	114%
NMSU	1.86	46%
Deming	2.40	57%
Carlsbad	3.10	60%

Drought

- NIDIS: Upper Colorado River Basin Pilot Project –
  - Weekly Climate, Water and Drought Assessment – Weekly presenter on webinar. Project lead by Colorado State Climate Center.



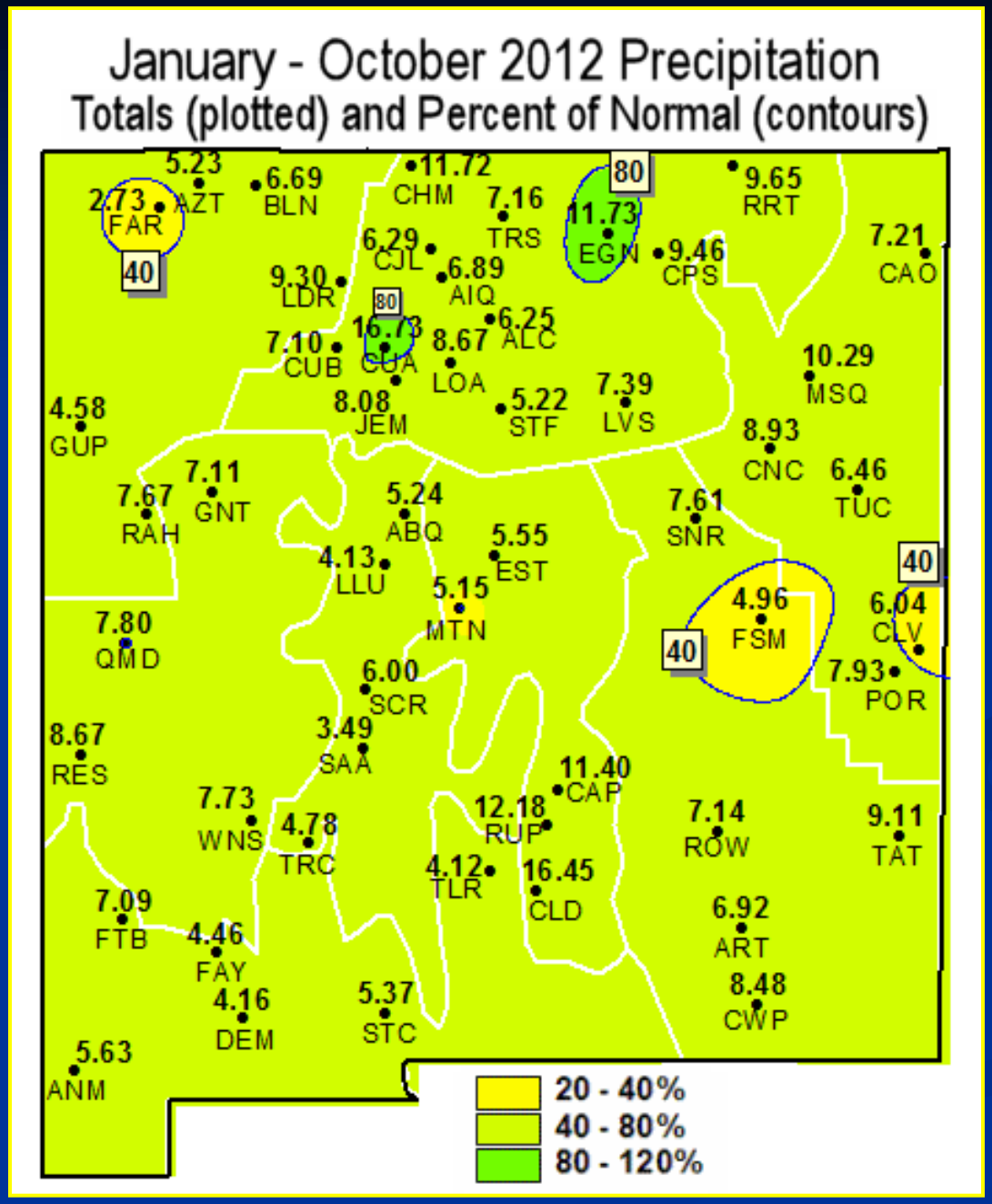
GJT



Media

- Media interviews about Spring runoff
  1. Snowpack
  2. Peak flow forecast
  3. Water Supply
  4. Drought

- During National Flood Awareness Week
  - Promote awareness of current snowpack and what that means for the Western Slope
    - Recreation, Potable water supply, Irrigation, Flood potential



CY 2012 Precipitation

(January – October)

Statewide Avg: 60% of normal

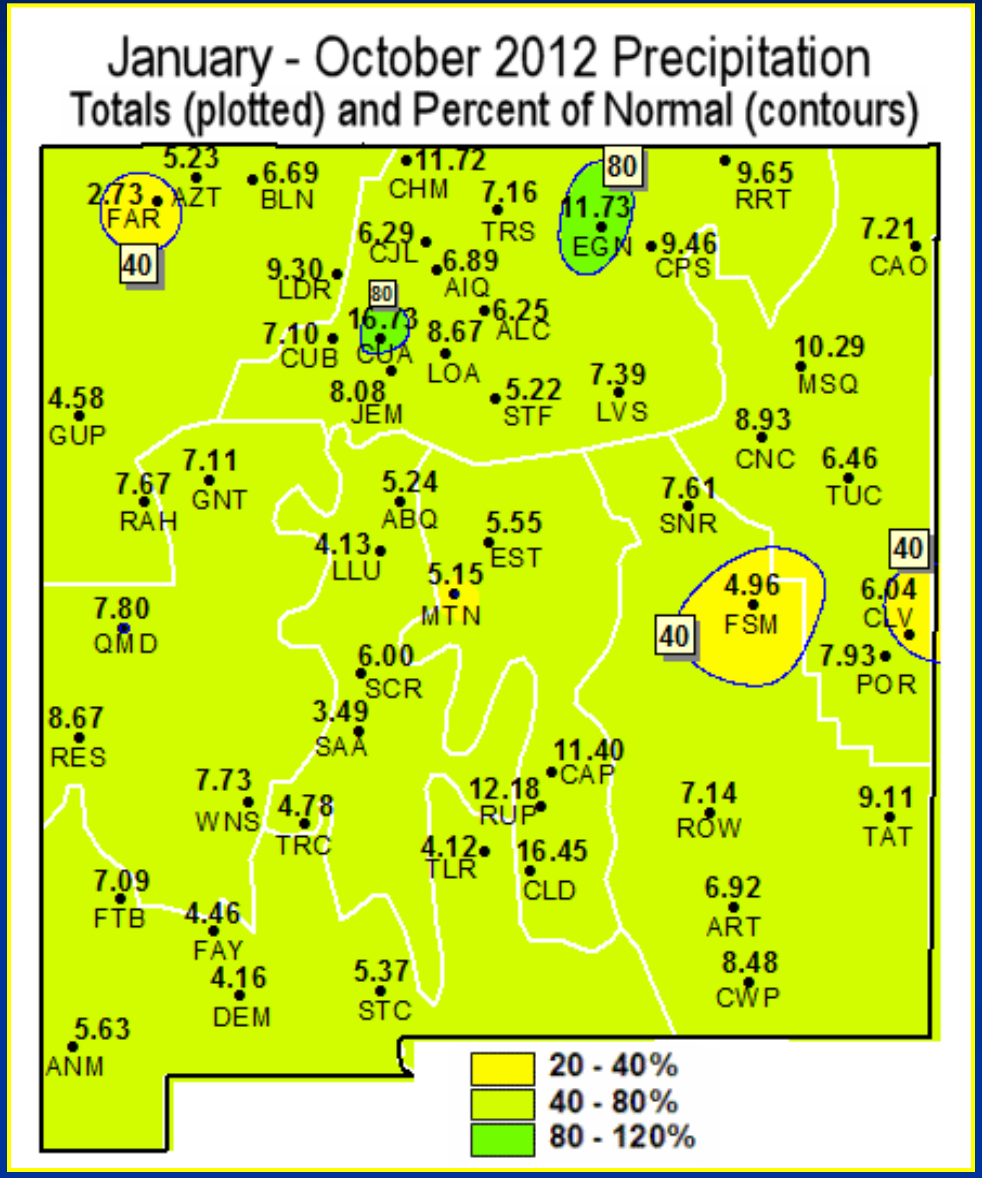
Northwest Plateau & Northern Mountains: 60% - 62% of normal

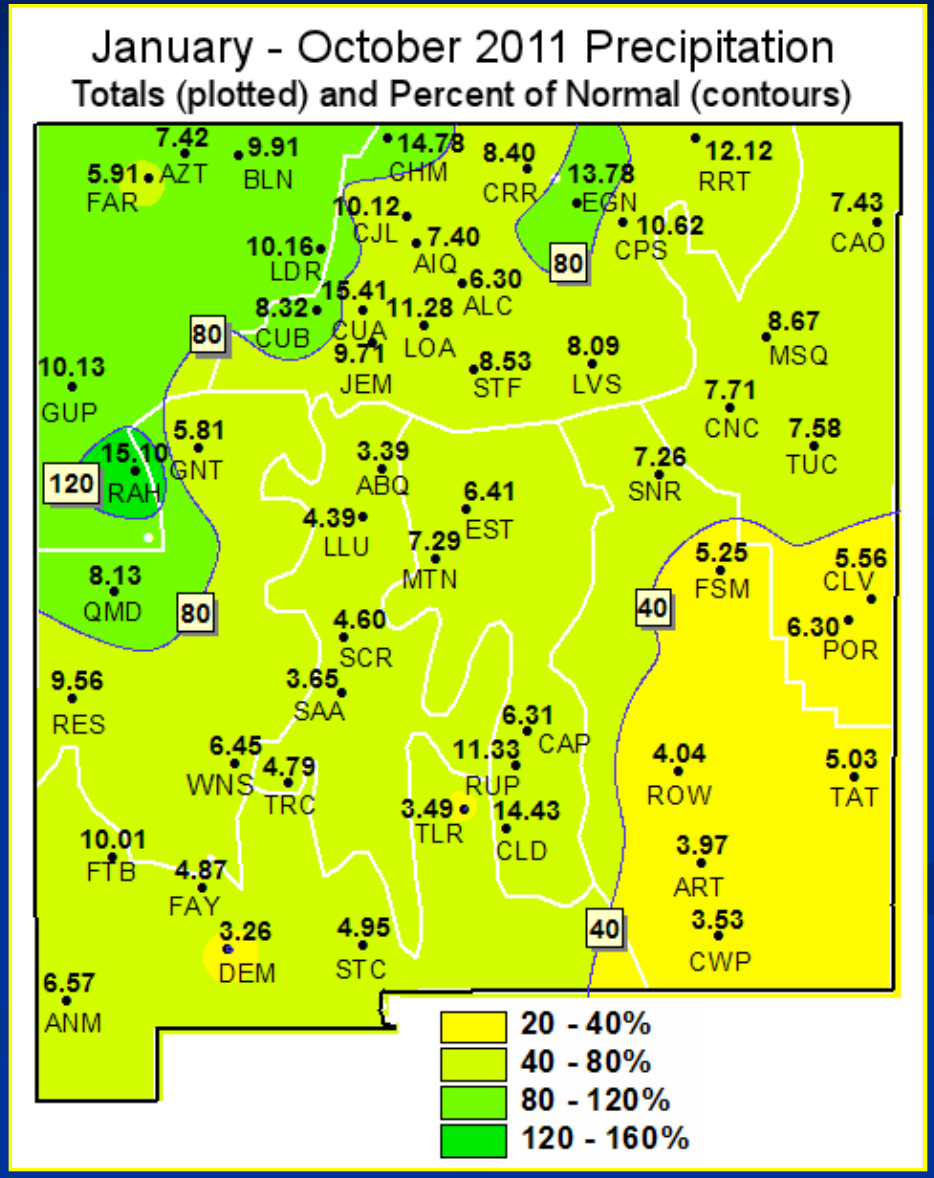
Southwestern Mtns: 67% of normal

Northeast Plains: 52% of normal

Jan – Oct New Mexico Precipitation

(60% of Normal)...2012 vs 2011...(63% of Normal)





Nov 15: New Mexico Drought Status

- Nearly **75%** of NM in **Severe Drought** (or worse).
- October precip was far below normal in the western third of NM.
  Nrn Mountain precip was 15% to 70% of normal during October.

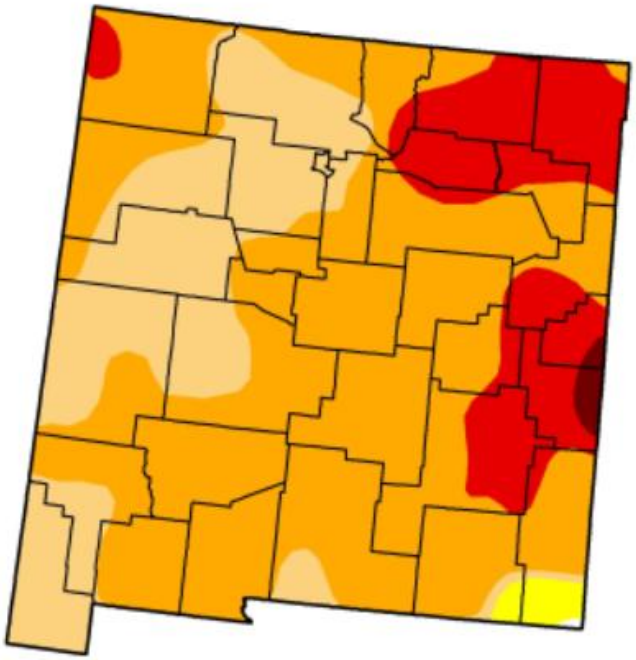
U.S. Drought Monitor

New Mexico

November 13, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.07	99.93	98.80	74.51	16.30	0.68
Last Week (11/06/2012 map)	0.07	99.93	98.80	74.87	16.28	0.68
3 Months Ago (08/14/2012 map)	0.00	100.00	100.00	85.11	25.88	0.00
Start of Calendar Year (12/27/2011 map)	8.63	91.37	87.60	72.15	23.37	7.57
Start of Water Year (09/25/2012 map)	0.00	100.00	100.00	62.56	12.25	0.66
One Year Ago (11/08/2011 map)	6.30	93.70	90.73	85.62	63.05	26.41



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

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

http://droughtmonitor.unl.edu

Released Thursday, November 15, 2012
David Miskus, Climate Prediction Center/NCEP/NWS/NOAA

New Mexico Drought: 1 Month Change

U.S. Drought Monitor

New Mexico

November 13, 2012
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.07	99.93	98.80	74.51	16.30	0.68
Last Week (11/06/2012 map)	0.07	99.93	98.80	74.87	16.28	0.68
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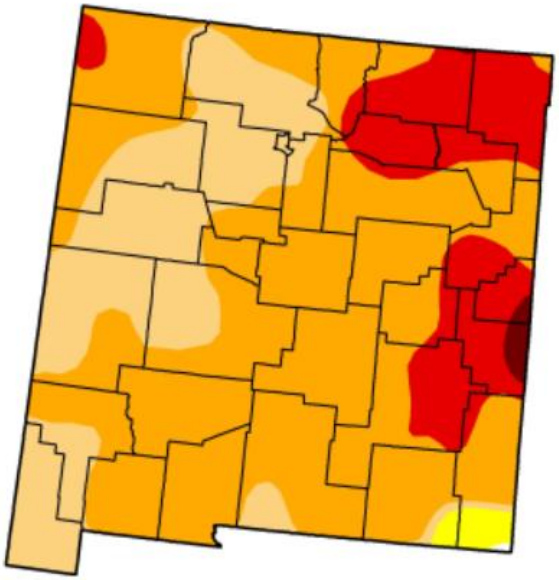
One Year Ago (11/08/2011 map)	6.30	93.70	90.73	85.62	63.05	26.41



Intensity:

- D0 Abnormally Dry
- D1 Drought - Moderate
- D2 Drought - Severe
- D3 Drought - Extreme
- D4 Drought - Exceptional

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

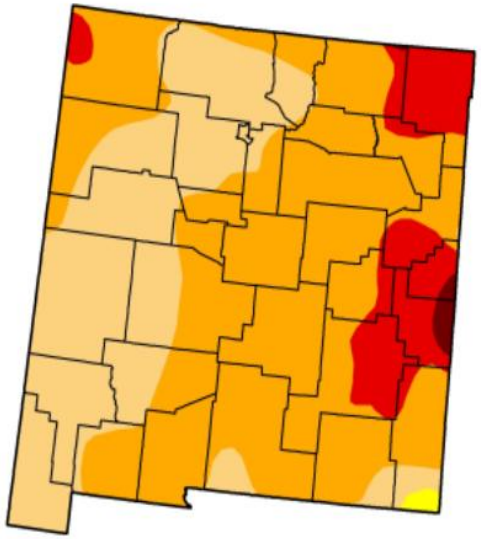
http://droughtmonitor.unl.edu

Released Thursday, November 15, 2012
David Miskus, Climate Prediction Center/NCEP/NWS/NOAA

- Extreme drought (D3) expanded in NE NM; more areas of Severe drought in SW NM.

...Monitor

October 16, 2012
Valid 7 a.m. EST



- D1 Drought - Moderate
- D2 Drought - Severe
- D4 Drought - Exceptional

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

http://droughtmonitor.unl.edu

Released Thursday, October 18, 2012
Matthew Rosencrans, NOAA/NWS/NCEP/CPC

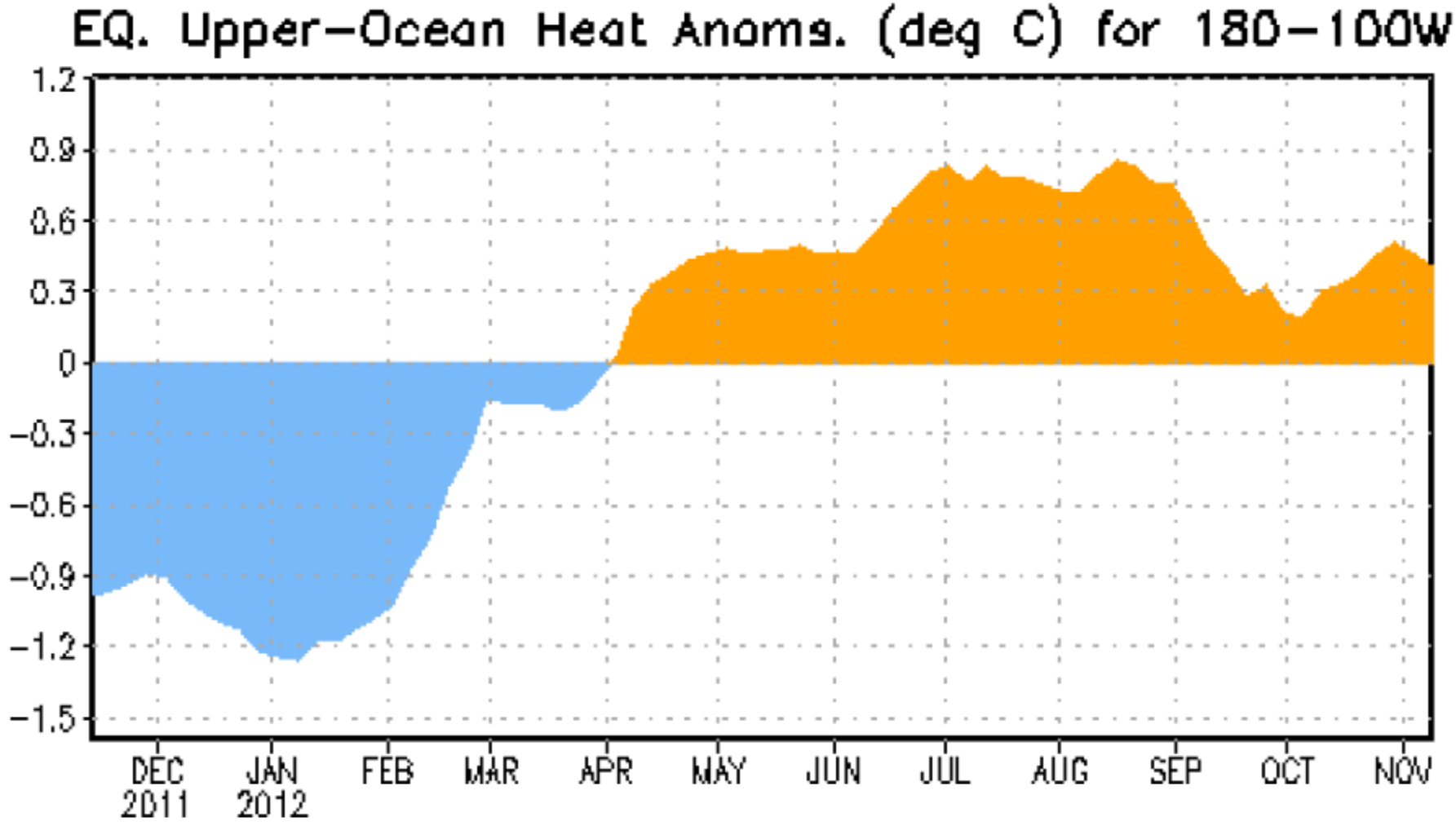
- ***One year ago***...no drought in the far nw corner of NM due to wet Sept/Oct 2011.

CPC - NWS Weather Outlook

National Weather Service

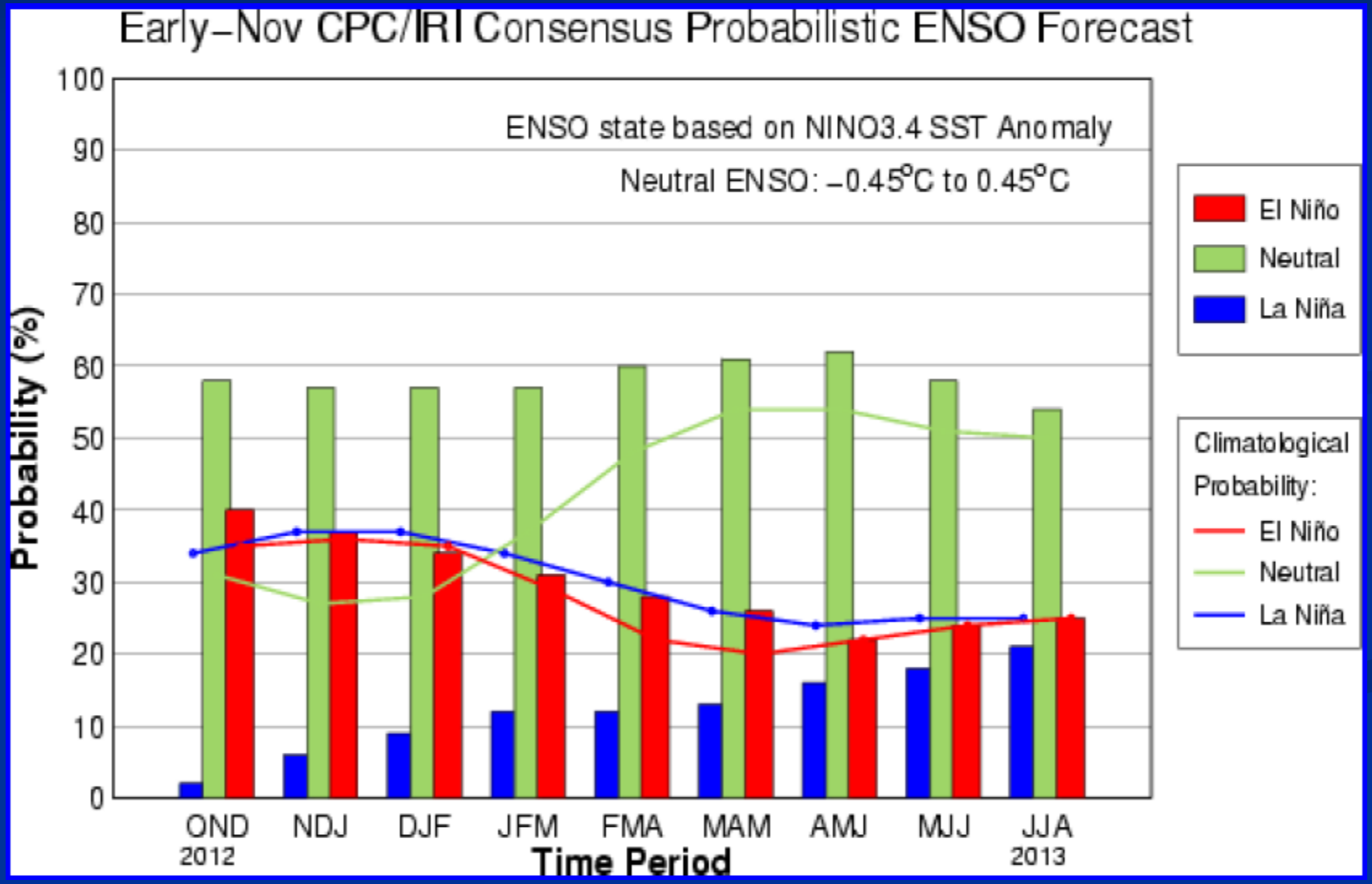
The “Fizzling” El Niño

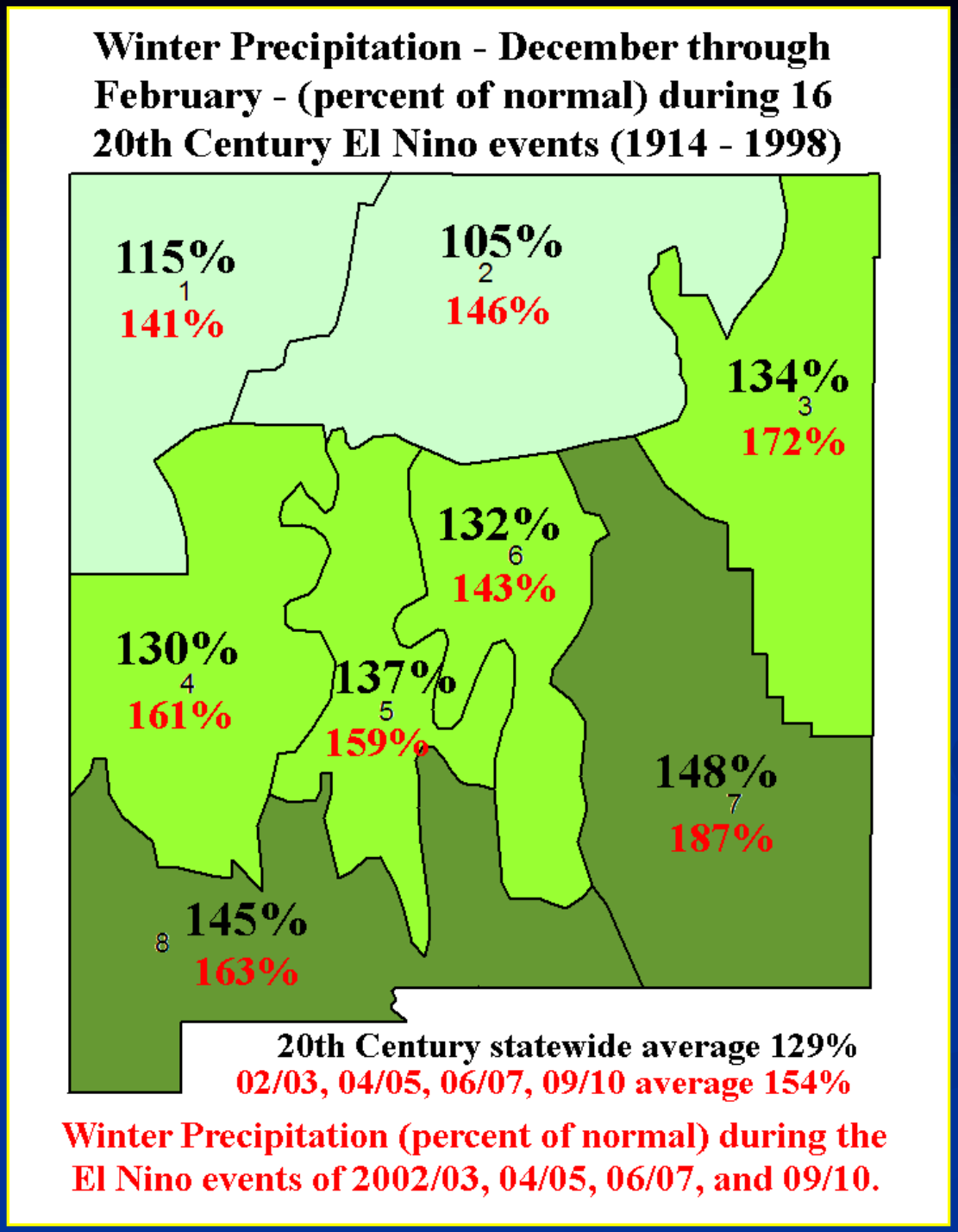
Unusual to have a summer El Niño weaken during the fall.



El Niño Watch Canceled!

An ENSO-Neutral pattern now favored this winter (2012 – 2013)

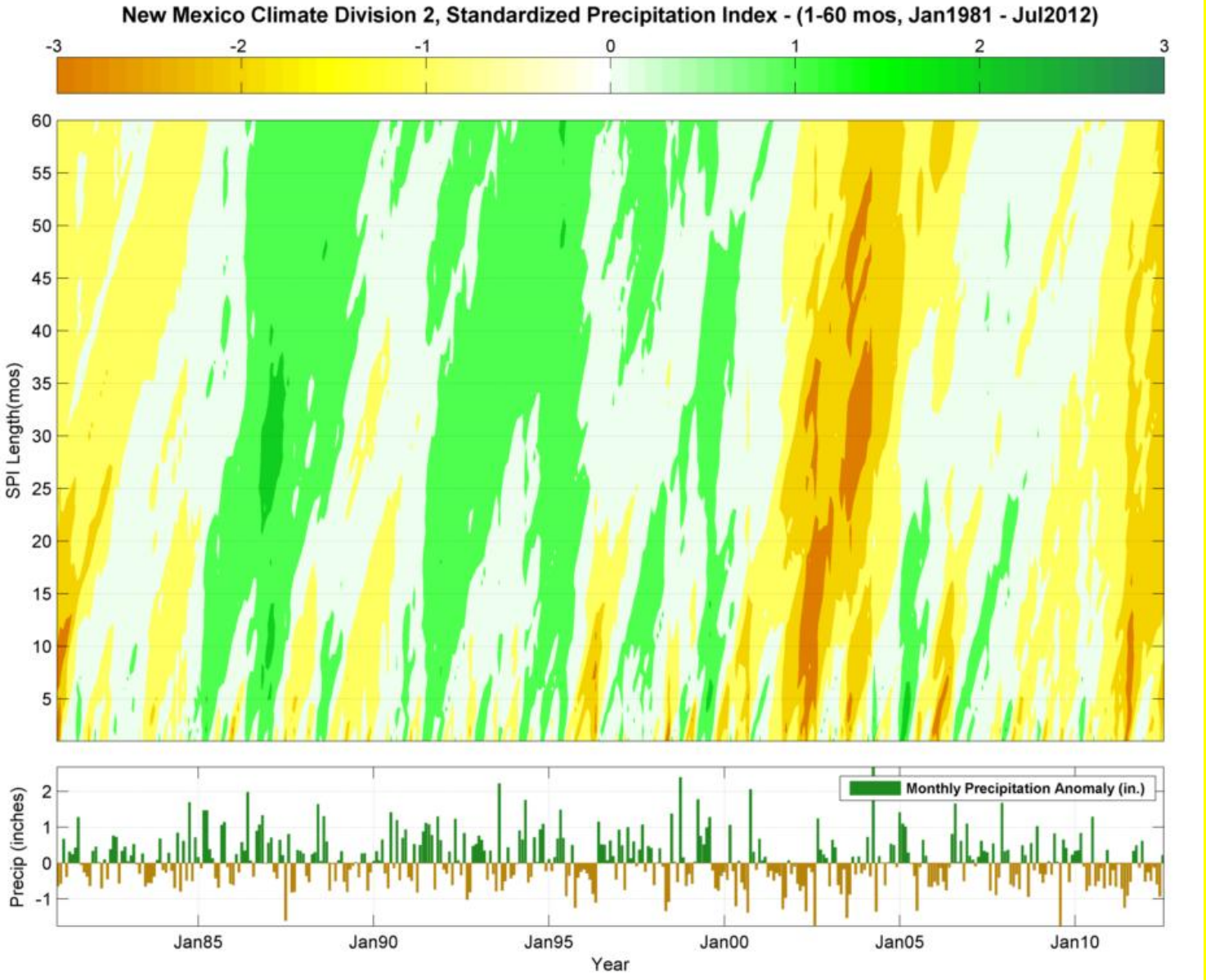




Winter precipitation during El Niño events had been generally higher in southern and eastern NM in the 20th century, and that pattern has so far been *further enhanced* for the first four El Niño events since 2000.

(Southeast NM wetter than northwest NM)

SPI Time Series: NM North Central Mtns.



- Time series ranges from 1 month (at bottom) to 60 months (at top).
- Note the droughts that began in 2002 and 2010 - 2011.
- Courtesy of Michael A. Crimmins, U of AZ.