NAVAJO NATION DROUGHT STATUS REPORT

NN Dept. of Water Resources, Water Management Branch

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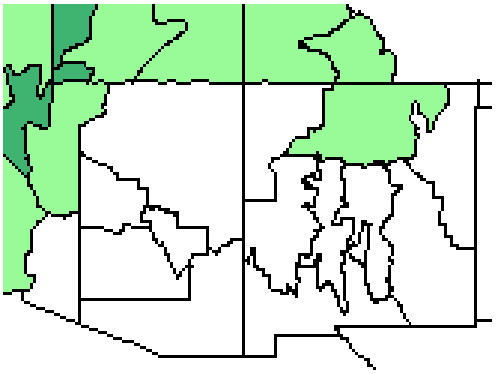


- +3.00 and above (exceptionally wet)
- +2.00 to +2.99 (extremely wet)
- +1.25 to +1.99 (very wet)
- +0.75 to +1.24 (moderately wet)
- -0.74 to +0.74 (near normal)
- -1.24 to -0.75 (moderately dry)
- -1.99 to -1.25 (very dry)
- -2.99 to -2.00 (extremely dry)
- -3.00 and below (exceptionally dry)

Navajo Nation Drought Stage

Location	6 month SPI April	Stage as of April
NE AZ	0.45	Normal
NW NM	0.68	Normal
SE UT	1.18	Normal

Drought Intensity Category

NN Drought	*US Drought*	
Normal	Normal	D0
Alert	Moderate	D1
Warning	Severe	D2
Emergency	Extreme/Exceptional	D3 & D4

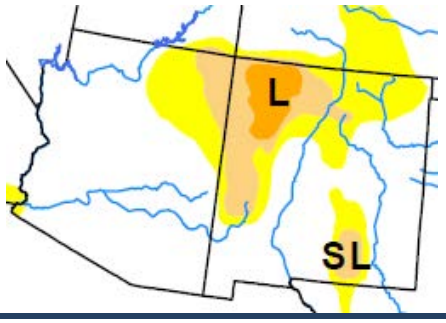
Intensity:
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

Drought Impact Types:

Delineates dominant impacts

S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)

L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)



National Drought Summary for April 30, 2019

Summary: An active weather pattern maintained historically low drought coverage across the contiguous United States, with only a few areas currently experiencing dryness (D0) or moderate to severe drought (D1 to D2). Prior to April 2019, the record-low drought coverage across the Lower 48 States during the 20-year history of the U.S. Drought Monitor stood at 4.52% on May 23, 2017. During the drought-monitoring period ending on the morning of April 30, locally significant precipitation fell in dryness- and drought-affected areas across the Rockies, Intermountain West, northern Plains, and parts of the South. In contrast, little or no precipitation fell in the Far West and the southern Atlantic region.

West: Minimal changes were introduced in the Far West, while slight reductions in the coverage of abnormal dryness (D0) and moderate drought (D1) were made in the Rockies and environs on the strength of late-season precipitation, robust high-elevation snowpack, and increasing confidence in favorable spring and summer runoff.

Looking Ahead: During the next couple of days, showers and thunderstorms across the nation's mid-section will gradually shift into the South, East, and lower Midwest. Five-day rainfall totals could reach 1 to 5 inches or more along an axis stretching from the southeastern Plains into the lower Great Lakes region. In contrast, areas west of the Rockies will experience mostly dry weather and a gradual warming trend. During the weekend, a new surge of cold air will arrive across the northern Plains and upper Midwest, accompanied by rain and snow showers.

The NWS 6- to 10-day outlook for May 7 – 11 calls for the likelihood of wetter-than-normal weather nearly nationwide. Below-normal precipitation should be limited to northern California and the Pacific Northwest. Meanwhile, warmer-than-normal conditions across the Southeast and the Far West should contrast with below-normal temperatures in most other regions, including a large area stretching from the Southwest into large sections of the Rockies, Plains, and upper Midwest.

For further enquires contact Mr. Carlee McClellan, Senior Hydrologist, Ph. (928) 729-4125, Email: cmcclellan@navajo-nsn.gov

Southwest Drought At Glance

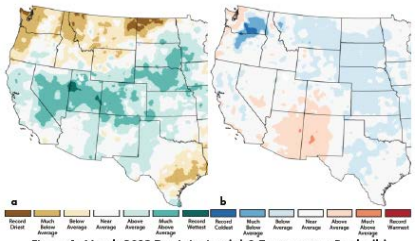


Figure 1: March 2019 Precipitation (a) & Temperature Ranks (b)

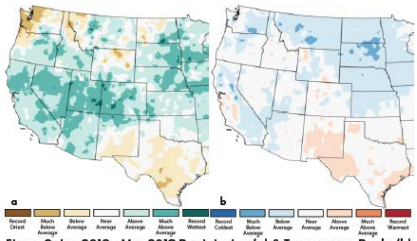


Figure 2: Jan 2019 - Mar 2019 Precipitation (a) & Temperature Ranks (b)

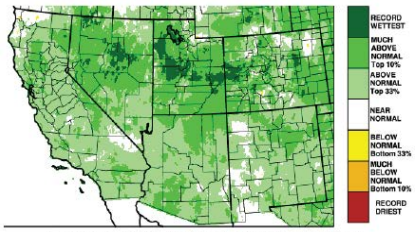


Figure 3: Oct 2018 - Mar 2019 - Precipitation Rankings

Climate Summary by CLIMAS April 2019

March Precipitation and Temperature: March precipitation was average to above-average across most of Arizona, New Mexico and west Texas, while the upper basin of the Colorado River was much above-average (Fig. 1a). March temperatures were average to above-average in Arizona and New Mexico, despite most of the United States being average to below-average (Fig. 1b).

Seasonal Precipitation and Temperature: Jan-Mar precipitation demonstrated a distinct pattern; Arizona and most of the Southwest recorded above-average to much above-average precipitation, while most of New Mexico and west Texas were average to below-average (Fig. 2a). Temperatures for the same period were average to above-average in New Mexico and west Texas, and average to below-average in Arizona and much of the rest of the Southwest (Fig. 2b). Water year precipitation (since Oct. 1) highlights wetter-than-average conditions in the west, with most of Arizona and New Mexico above normal (top 33-percent) or much above-normal (top 10-percent) (Fig. 3).

Drought: The Apr. 9 U.S. Drought Monitor (USDM) continues to show improvements in drought conditions in the western United States. Arizona is mostly clear of drought designations, and the intense drought in the four corners region and northern New Mexico have shown additional improvements in the USDM drought categorization compared to last month (Fig. 4).

Snowpack & Water Supply: Snow water equivalent (SWE) for stations in southern and central Arizona and New Mexico are below 25-percent of average, although late season calculations can be deceptive given low average values.

Snowpack & Water Supply (continued): The northern (higher elevation) stations in AZ and NM range from 110- to over 200-percent of average (Fig. 5), and the lower Colorado River Basin stations range from 125- to over-200 percent of average.

Wildfire, Health, and Safety: Wildfire risk maps reflect the wet winter, with normal to below-normal fire risk in the Southwest in May, but above-normal risk across southern Arizona in June (Fig. 6), an increase tied to concerns over senescence of abundant fine fuels in lower elevations. Wet winter conditions and a warm spring also catalyzed a tremendous wildflower season in the Southwest, although allergy sufferers will note the trade-offs associated with air quality and abundant pollen.

El Niño Tracker: Atmospheric and oceanic conditions are in line with a weak El Niño, and the sea surface temperature (SST) anomalies officially reached the threshold for an El Niño event spanning from late 2018 to present. The current discussion is focused on when these conditions might revert to normal, likely in mid-to-late 2019, but with the possible persistence of this El Niño through 2019 and into early 2020.

Precipitation and Temperature Forecast: The three-month outlook for May through July calls for increased chances of above-normal precipitation in eastern Arizona and western New Mexico, and increased chances of below-normal precipitation in western Arizona, eastern New Mexico, and west Texas (Fig. 7, top). The three-month temperature outlook calls for equal chances of normal, above-normal, and below-normal temperatures across Arizona, New Mexico, and Northern Mexico (Fig. 7, bottom).

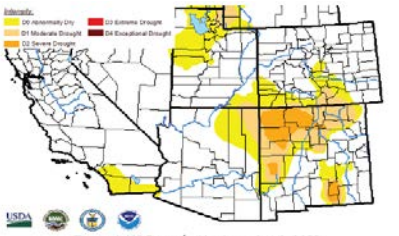


Figure 4: US Drought Monitor - Apr 9, 2019

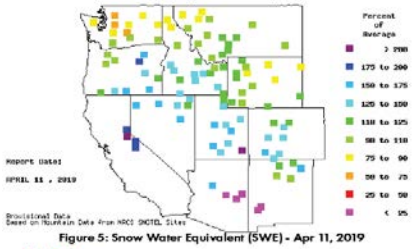
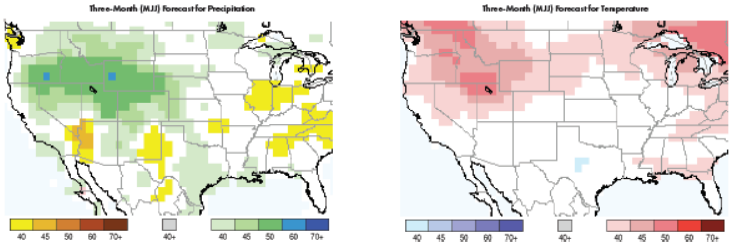


Figure 5: Snow Water Equivalent (SWE) - Apr 11, 2019

Figure 6: Significant Wildland Fire Potential June 2019

Figure 7:



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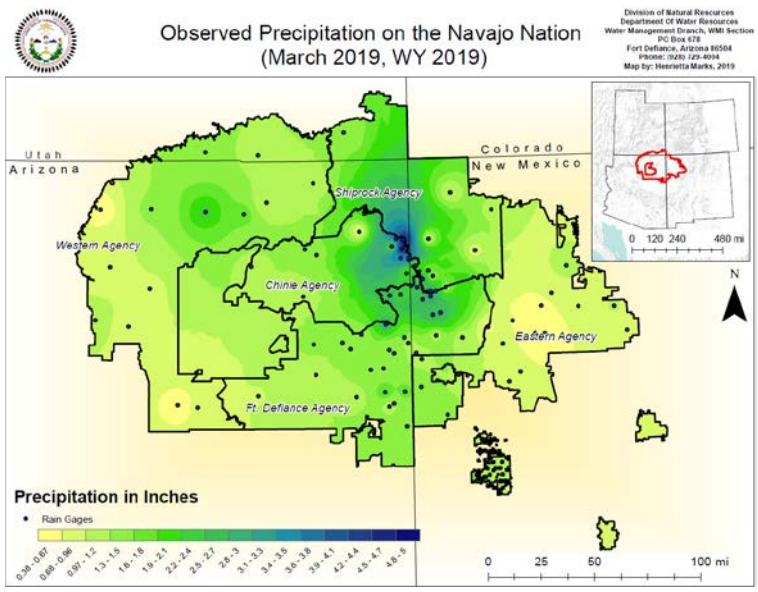
Navajo Nation Precipitation Summary

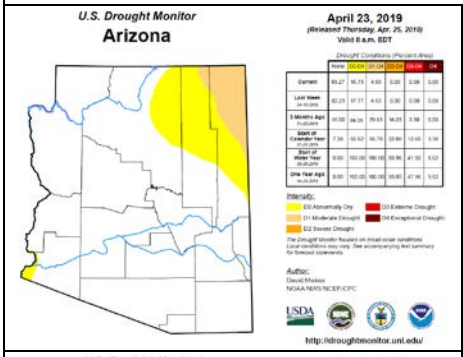


Agency	March	Avg	% of Avg
Chinle	2.40	1.07	224%
Eastern	0.86	0.63	137%
Fort Defiance	1.70	0.89	191%
Shiprock	1.75	0.87	201%
Western	1.06	0.57	186%

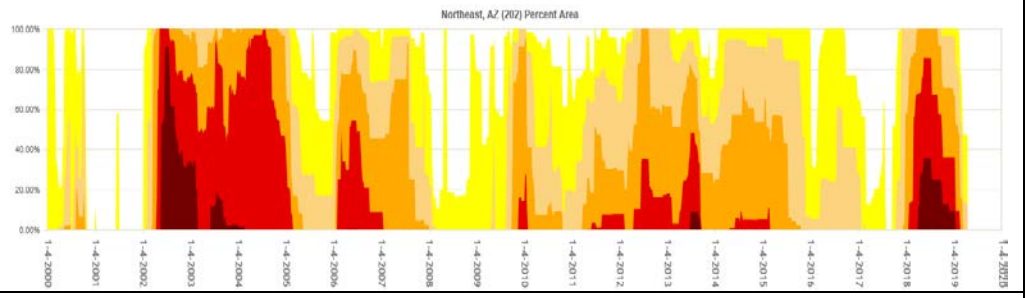
Useful Drought Related Sites:

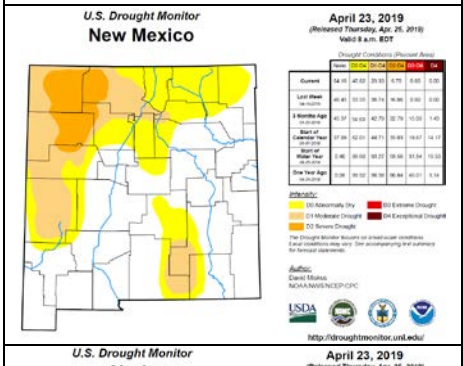
NWS-CPC Seasonal Outlook
www.drought.unl.edu
USGS Daily Stream Flow
www.usgs.gov/water/
Western Regional Climate Center
www.wrcc.dri.edu
CLIMAS Southwest Climate Outlook
www.climas.arizona.edu

New Mexico Governor's Drought Task Force
http://www.ose.state.nm.us/DroughtTask Force/index.html
ADWR Drought Program
http://www.azwater.gov/azdwr/StatewidePlanning/Drought
Utah Division of Water Resources
http://www.water.utah.gov/DroughtConditions/
Navajo DWR-Water Management Branch
http://www.frontiernet.net/~nndwr_wmb/

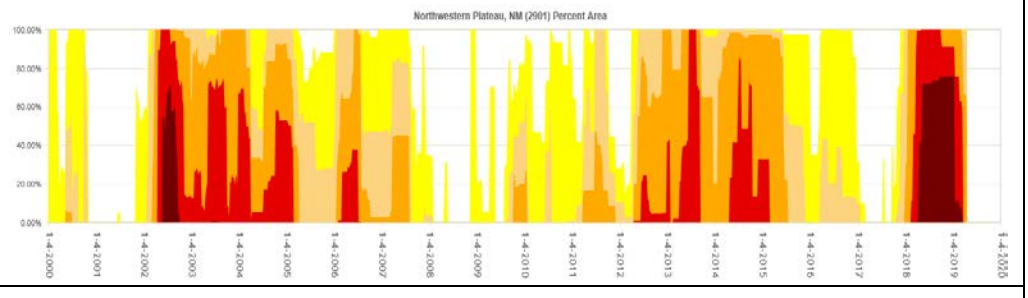


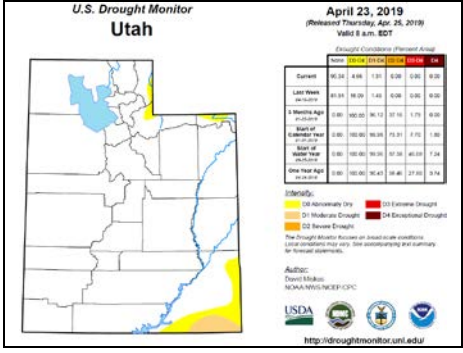
Northeast, AZ (202) Percent Area



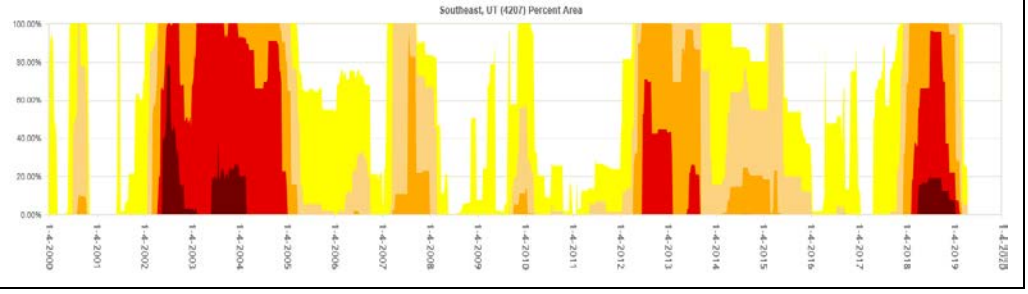


Northwestern Plateau, NM (2901) Percent Area





Southeast, UT (4207) Percent Area



April 2019