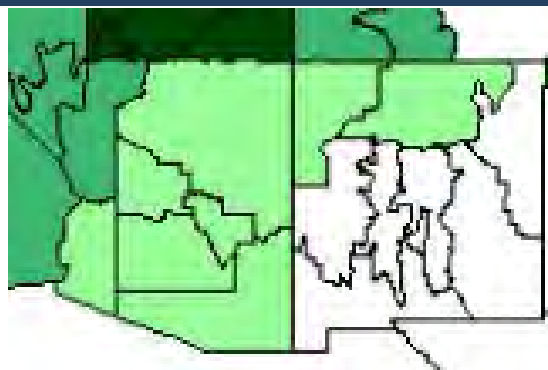




NAVAJO NATION DROUGHT STATUS REPORT

NN Dept. of Water Resources, Water Management Branch

P.O. Drawer 678 Fort Defiance, Arizona 86504 Ph. (928) 729-4004, Fax (928) 729-4126



- +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 June	Stage as of June
NE AZ	1.22	Normal
NW NM	1.18	Normal
SE UT	2.06	Normal

Drought Intensity Category

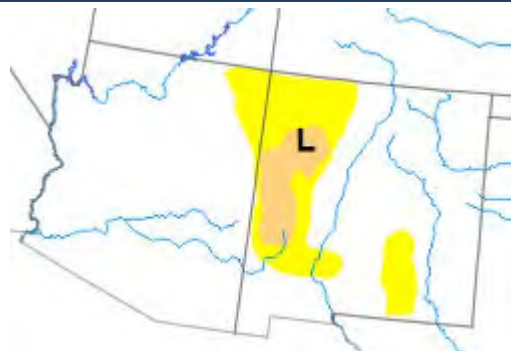
NN Drought	US Drought	
Normal	Normal	D0
Alert	Moderate	D1
Warning	Severe	D2
Emergency	Extreme/Exceptional	D3 & D4

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 June 25, 2019

Summary: Multiple cold fronts progressed across the central and eastern U.S. during mid to late June with widespread showers and thundershowers from the Great Plains east to the East Coast. During the past week (June 18 to 24), heavy rainfall (2 to 6 inches) maintained excessively wet conditions across eastern portions of the Great Plains, middle Mississippi Valley, and Ohio Valley. Diurnal convection resulted in locally heavy rainfall (more than 2 inches) from the Florida Panhandle south to the central Florida Peninsula. An unseasonably strong low pressure system resulted in accumulating snow to the northern and central Rockies on the first full day of the summer. More than a foot of snow was observed at elevations above 9,000 feet in the Colorado Rockies. During mid to late June, cooler-than-normal temperatures persisted throughout the western and central Corn Belt. Above average rainfall has occurred throughout a majority of the central and eastern U.S. during the past 30 days, with below average rainfall limited to scattered areas of the Southeast, south Texas, the northern Great Plains, upper Mississippi Valley, and Pacific Northwest.

West: Following a dry spring across northeast Montana, more frequent rainfall occurred this past week (June 18 to 24) with 7-day rainfall amounts mostly above 2 inches. Due to this wet week and increase in topsoil moisture, an elimination of moderate drought (D1) was warranted. Moderate drought (D1) was expanded south across northern Idaho due to increasing 30 to 90-day precipitation deficits. Since 28-day stream flows have fallen below the 10th percentile, severe drought (D2) was introduced to parts of northern Idaho and adjacent areas of northwest Montana and northeast Washington. Also, 90-day SPI values generally support the expansion of moderate drought and addition of severe drought. Based on the Vegetative Health Index, the long-term drought (D1) area was reduced across western New Mexico. Following notable changes in the spatial extent and severity of drought conditions in the Pacific Northwest the previous week, no changes were necessary this week due in part to much cooler temperatures. Severe drought (D2) remains over parts of Washington which experienced its 13th driest March to May on record.

Looking Ahead: During the next 5 days (June 27-July 1, 2019), an area of upper-level high pressure is likely to strengthen over the north-central U.S., resulting in a major warming trend across the Great Plains, Corn Belt, and Midwest. Maximum temperatures are forecast to peak in the middle 90s to near 100 (degrees F) across the central Plains and western Corn Belt. Due to the strengthening ridge aloft, the axis of heaviest rainfall (locally more than 1 inch) is expected to become focused from the northern Great Plains east to the upper Mississippi Valley and Great Lakes. An easterly wave of low pressure is forecast to shift west from the Gulf of Mexico and enhance scattered thundershowers with locally heavy rainfall across the western Gulf Coast. Scattered showers and below-normal temperatures are forecast across drought-stricken areas of the Pacific Northwest through June 28. Much above-normal temperatures along with below-average precipitation is forecast throughout much of Alaska. Ongoing heavy rainfall is expected to gradually ease across the western Hawaiian Islands. Below-average rainfall is likely to continue for Puerto Rico into the beginning of July.

The CPC 6-10 day outlook (July 2-6, 2019) favors above-normal temperatures across the north-central and eastern U.S. with the highest odds over the Southeast. Near to below-normal temperatures are most likely across the western U.S. Elevated chances for above-normal precipitation were forecast for much of the central and eastern U.S. although near to below-normal precipitation is favored across the Southeast. Increased chances for below-normal precipitation is forecast for the desert Southwest to begin July. A relatively warm and dry pattern is likely to persist across the Alaska Panhandle and southern mainland Alaska.

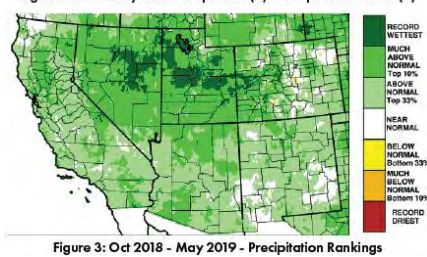
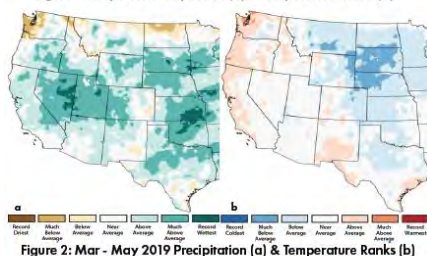
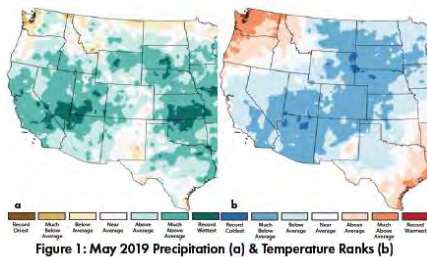
For further enquires contact Mr. Carlee McClellan, Senior Hydrologist, Ph. (928) 729-4125, Email: cmcclellan@navajo-nsn.gov

June 2019

Southwest Drought At Glance

Climate Summary by CLIMAS June 2019

May Precipitation and Temperature: May precipitation was mostly above average to record wettest in Arizona, and New Mexico ranged from below average to much above average but most of the state was average or above-average (Fig. 1a). May temperatures were below average or much below average across most of the Southwest (Fig. 1b).



Seasonal Precipitation and Temperature: Spring precipitation (Mar-Apr-May) was average to above average across most of Arizona and New Mexico (Fig 2a). Temperatures for the same period were mostly average in Arizona and mostly average to above average in New Mexico (Fig. 2b).

Drought: Water year precipitation highlights the wet conditions since Oct. 1, which have led to above normal (top 33%) for a vast majority of the Southwest, along with much above normal (top 10%) and smaller pockets of record wettest in Utah, Nevada, and Colorado (Fig. 3). The Jun. 11 U.S. Drought Monitor (USDM) continues to show improvements in regional drought conditions in the Southwest with Arizona nearly clear of drought designations, and the intensity of drought characterizations in the four corners region and northern New Mexico further reduced compared to last month (Fig. 4).

Snowpack & Water Supply: Late season snowpack and snow water equivalent (SWE) measurements are all but absent in Arizona and New Mexico this time of year, while upper elevation areas in Utah and Colorado that feed into reservoirs are mostly over 200-percent of average (Fig. 5).

Wildfire, Health, and Safety: May weather conditions (including wetter than average precipitation, mild temperatures, and elevated relative humidity), helped tamp down fire risk in May and into June. Wildfire outlooks for July identify above normal fire risk in lower elevation regions (Fig. 6), linked to widespread fine fuel growth driven by above-average precipitation across the cool season.

El Niño Tracker: Atmospheric and oceanic conditions remain in line with a weak El Niño, and most forecasts call for this event to last at least through summer, and possibly longer.

Precipitation and Temperature Forecast: The three-month outlook for July through September calls for increased chances of below-normal precipitation in eastern Arizona, western New Mexico, and the four corners region, with equal chances of above- or below-normal precipitation in much of the rest of Arizona, New Mexico, west Texas, and northern Mexico (Fig. 7, top). The three-month outlook calls for increased chances of above-normal temperatures in Arizona, and parts of northern New Mexico and northern Mexico (Fig. 7, bottom).



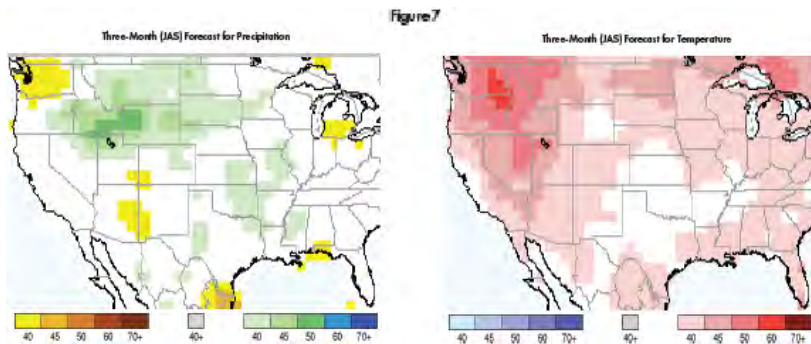
Figure 4: US Drought Monitor - Jun 11, 2019



Figure 5: Snow Water Equivalent (SWE) - Jun 16, 2019



Figure 6: Significant Wildland Fire Potential July 2019



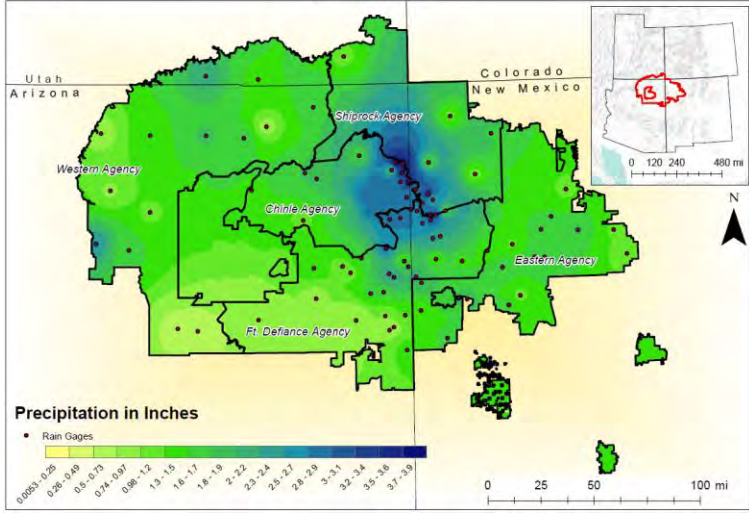
Published by the Climate Assessment for the Southwest (CLIMAS), with support from University of Arizona Cooperative Extension, the Arizona State Climate Office, and the New Mexico State Climate office.

Navajo Nation Precipitation Summary



Observed Precipitation on the Navajo Nation
(May 2019, WY 2019)

Division of Natural Resources
Department of Water Resources
Water Management Branch, WMI Section
PO Box 678
Fort Defiance, Arizona 86504
Phone: (929) 729-4004
Map by: Henrietta Marks, 2019



Agency	May	Avg	% of Avg
Chinle	2.33	0.79	295%
Eastern	1.43	0.48	298%
Fort Defiance	1.76	0.69	255%
Shiprock	2.16	0.70	309%
Western	1.34	0.44	305%

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/DroughtTaskForce/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/

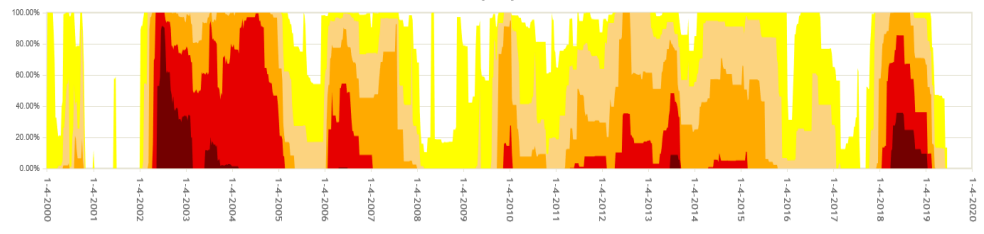
U.S. Drought Monitor Arizona

June 25, 2019
(Released Thursday, Jun. 27, 2019)
Valid 9 a.m. EDT



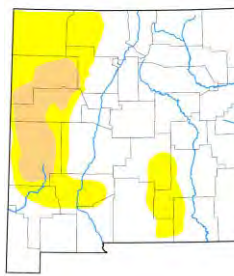
Drought Conditions (Percent Area)	None	D0	D1	D2	D3	D4
Current	95.51	4.09	0.00	0.00	0.00	0.00
Last Week	95.51	4.09	0.00	0.00	0.00	0.00
3 Months Ago	92.22	7.77	4.02	0.00	0.00	0.00
12 Months Ago	7.73	50.00	40.00	12.00	0.00	0.00
Start of Month	0.00	100.00	100.00	0.00	0.00	0.00
Start of Year	0.00	100.00	100.00	0.00	0.00	0.00
One Year Ago	0.00	100.00	100.00	0.00	0.00	0.00

Northeast, AZ (202) Percent Area



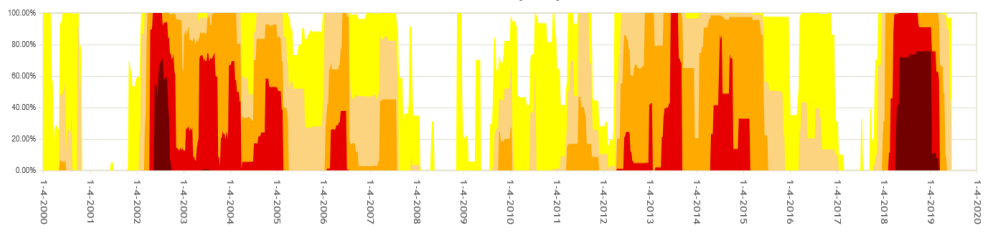
U.S. Drought Monitor New Mexico

June 25, 2019
(Released Thursday, Jun. 27, 2019)
Valid 9 a.m. EDT



Drought Conditions (Percent Area)	None	D0	D1	D2	D3	D4
Current	70.14	29.86	0.00	0.00	0.00	0.00
Last Week	70.14	29.86	0.00	0.00	0.00	0.00
3 Months Ago	42.20	54.96	30.74	0.00	0.00	0.00
12 Months Ago	0.00	100.00	44.71	33.00	16.17	0.00
Start of Month	0.00	100.00	100.00	0.00	0.00	0.00
Start of Year	0.00	100.00	100.00	0.00	0.00	0.00
One Year Ago	0.00	100.00	100.00	0.00	0.00	0.00

Northwestern Plateau, NM (2901) Percent Area



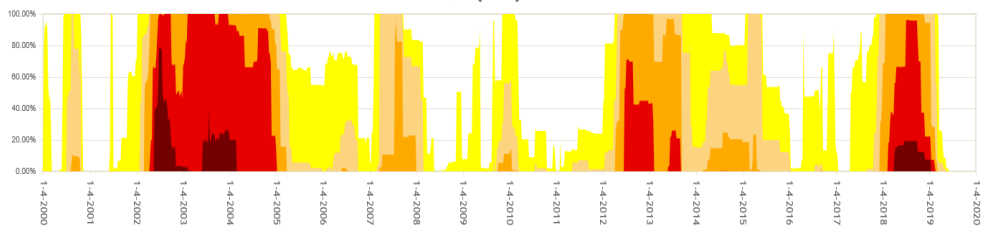
U.S. Drought Monitor Utah

June 25, 2019
(Released Thursday, Jun. 27, 2019)
Valid 9 a.m. EDT



Drought Conditions (Percent Area)	None	D0	D1	D2	D3	D4
Current	99.57	0.00	0.00	0.00	0.00	0.00
Last Week	99.57	0.00	0.00	0.00	0.00	0.00
3 Months Ago	92.24	0.00	2.24	0.00	0.00	0.00
12 Months Ago	0.00	100.00	99.99	0.00	0.00	0.00
Start of Month	0.00	100.00	100.00	0.00	0.00	0.00
Start of Year	0.00	100.00	100.00	0.00	0.00	0.00
One Year Ago	0.00	100.00	100.00	0.00	0.00	0.00

Southeast, UT (4207) Percent Area



June 2019