

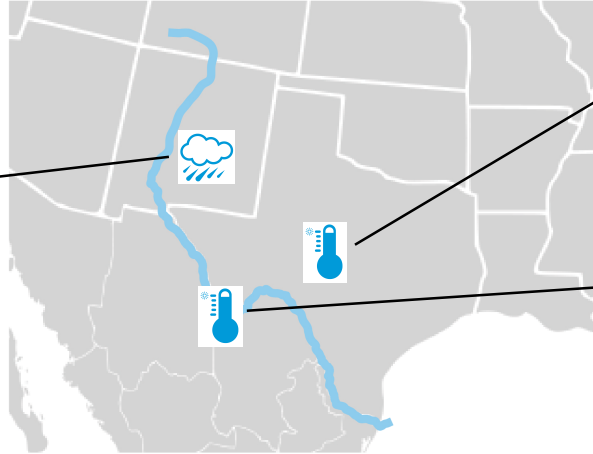
SUMMARY

Forecasts favor below-average temperatures for central Texas and the northern Mexican states, above-average precipitation for the US Southwest, and average to below-average precipitation in northern Mexico.

AT A GLANCE

New Mexico

For the first half of March, precipitation in the state was only 5-50% of average



Texas

Temperatures were 1-4°F (0.5-2.2°C) above average from December through February

Texas-Mexico Border Region

Forecasts favor below-average temperatures through May

REGIONAL CLIMATE OVERVIEW

DECEMBER 2015 – FEBRUARY 2016

From December 1, 2015 through February 29, 2016, the Rio Grande/Bravo Basin received varied precipitation; most of the region experienced precipitation 5-90% of average, with a few small areas in eastern and central New Mexico and southwestern Texas experiencing precipitation as high as 300% of average (Figure 1). Temperatures in central New Mexico fell close to average (varying from 1°F/0.5°C below to 1°F/0.5°C above), while the remainder of the Rio Grande region experienced temperatures 1-4°F (0.5-2.2°C) above average during the December – February period (Figure 2). Precipitation in the region varied greatly the first half of March. New Mexico and eastern Texas experienced precipitation 2-50% below the 1981-2010 average, while central Texas and the Rio Grande corridor along the U.S.-Mexico border experienced precipitation ranging from 200-400% of average. One small area in southern Texas received 800% of average precipitation, attributable to heavy rainstorms on March 8-9 due to a strong low level jet and humid conditions ([NOAA](#)). The region experienced temperatures 3-9°F (1.6-5°C) above average for the same time period.

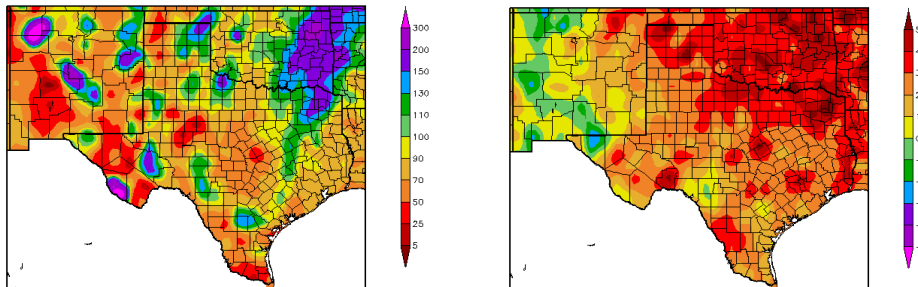


Figure 1 (left): Percent of normal precipitation, 12/1/2015-2/29/2016. Map from [HPRCC](#).

Figure 2 (right): Departure from normal temperature (°F), 12/1/2015-2/29/2016. Map from [HPRCC](#).

DROUGHT

The North American Drought Monitor has classified most of the Rio Grande/Bravo Basin as drought free, with areas in western New Mexico, southeast New Mexico, south Texas and most of Nuevo Leon as abnormally dry. Current drought conditions in the U.S. are expected to remain unchanged through June 2016 according to NOAA's Climate Prediction Center ([CPC](#)).

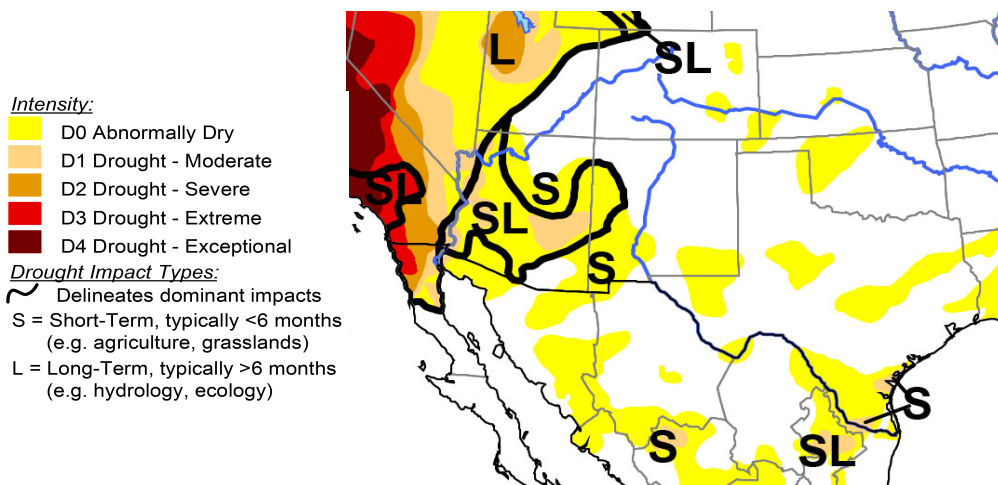


Figure 3: February North American Drought Monitor, released March 11, 2016. Map from [NCDC](#).

FORECAST

APRIL | MAY | JUNE

TEMPERATURE

The three-month NOAA temperature outlook favors increased chances of below-average temperatures in central Texas and equal chances for below-average, average, and above-average temperatures in New Mexico and western Texas (Figure 4). CONAGUA's Servicio Meteorológico Nacional (SMN) forecasts below-average minimum temperatures in April for most of the Rio Grande/Bravo region. In May, SMN forecasts favor below-average minimum temperatures in Chihuahua, northern Coahuila, Nuevo León, and Tamaulipas (Figure 5).

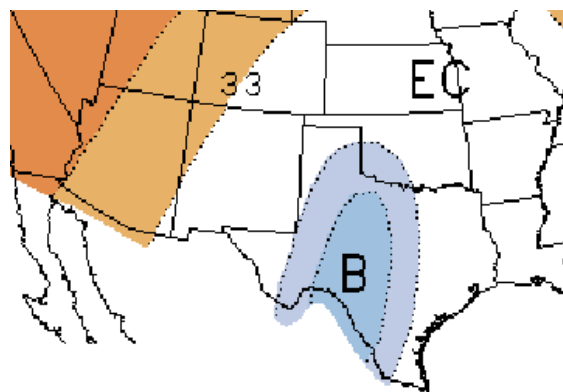


Figure 4 (right): NOAA April through June seasonal temperature outlook. Forecast made on March 17, 2016. Forecast from [CPC](#).

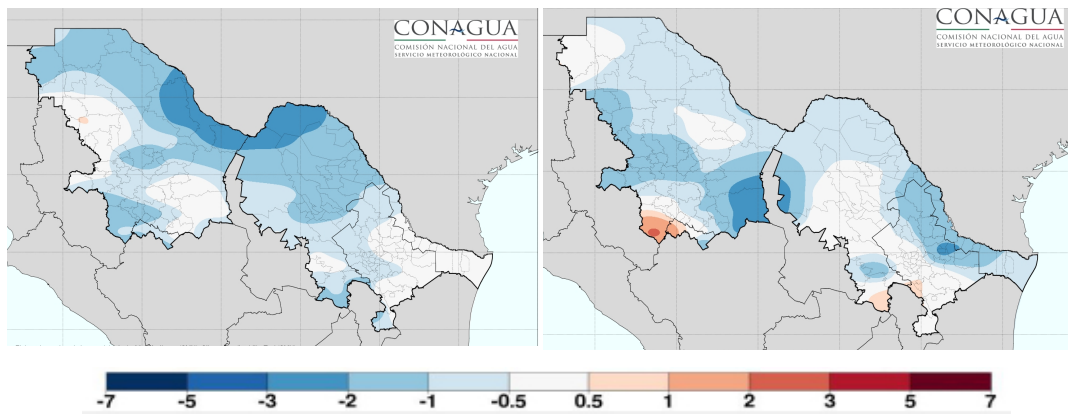


Figure 5: Predicted minimum temperature anomalies for northern Mexico (in °C). April (left) and May (right). Forecast made on March 3, 2016 by [SMN](#).

PRECIPITATION

NOAA precipitation forecasts favor increased chances of above-average precipitation for the entire U.S. Southwest region (Figure 6). In April, SMN forecasts above-average precipitation in the western half of the Rio Grande/Bravo region and below-average precipitation in the east. SMN forecasts favor below-average precipitation in the southwestern portion of the region and above-average precipitation in the east in May (Figure 7).

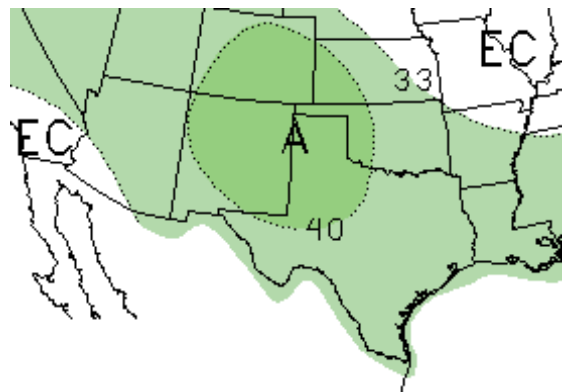


Figure 6 (above): NOAA April through June seasonal precipitation outlook. Forecast made on March 17, 2016. Forecast from [CPC](#).

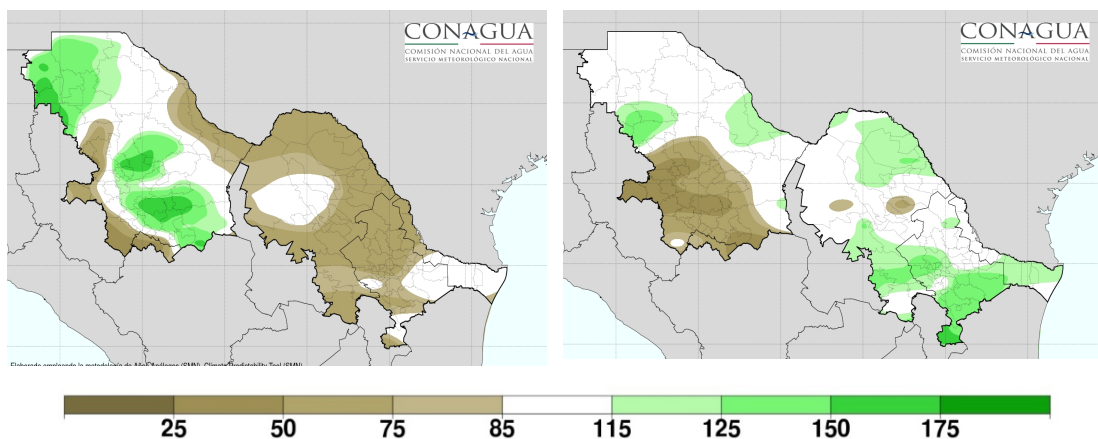


Figure 7 (above): Percent of average precipitation for northern Mexico. April (left) and May (right). Forecast made in March, 2016 by [SMN](#).

FIRE

The Rio Grande/Bravo Basin is expected to have normal fire potential in March 2016, with above-average fire potential forecasted for central and northeastern Texas.

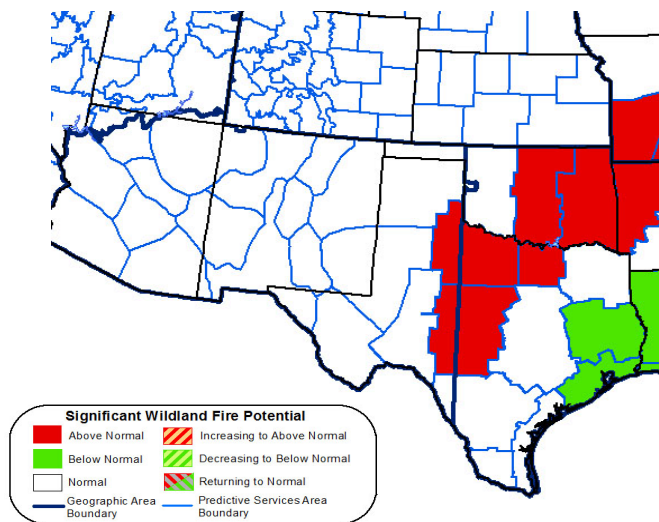


Figure 8 (left): Significant wildfire potential outlook in the U.S. for March 2016. Forecast made on March 1, 2016 from [NIFC](#).

Figure 9 (right): Significant wildfire potential outlook in Mexico for March 2016. Forecast made on March 1, 2016 from SMN.

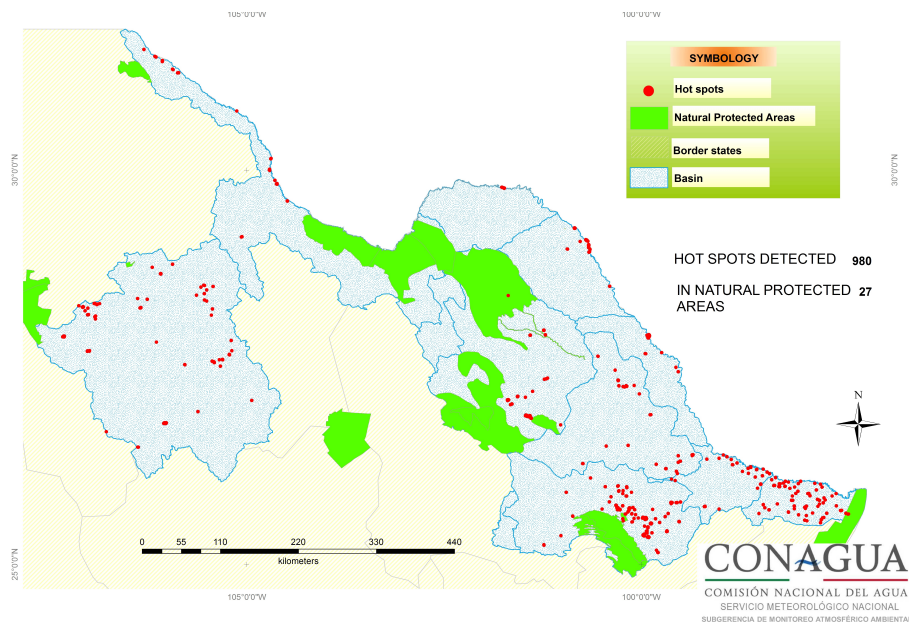


Figure 10 (left): Hotspots detected in the Rio Grande/Bravo Basin in February 2016

Approximately 980 hotspots were detected in the Rio Grande/Bravo Basin in Mexico, 27 of which were located in natural protected areas (Figure 10).

EL NIÑO

The El Niño-Southern Oscillation (ENSO) is a natural climate phenomenon that originates in the equatorial Pacific Ocean and affects weather around the world. Strong El Niño conditions continue to be present in the tropical Pacific Ocean and are predicted to remain through the remainder of the spring, indicating an increased likelihood of above-average precipitation through April for the Rio Grande/Bravo Basin.

This strong El Niño event falls within the top three strongest episodes, as indicated by the magnitude of [SST anomalies](#), since 1950. Past strong episodes, such as 1982-1983 and 1997-1998, resulted in dramatically increased precipitation and flooding in some areas of the U.S.-Mexico border region.

Conditions are predicted to gradually shift to ENSO-neutral conditions by late spring or early summer, as indicated by a probabilistic ENSO forecast (Figure 11) produced by The National Weather Service's Climate Prediction Center (CPC) and the International Research Institute for Climate and Society (IRI). Preliminary forecasts also show a chance for La Niña development in the fall, indicating the possibility of a dry 2016/2017 winter for the region.

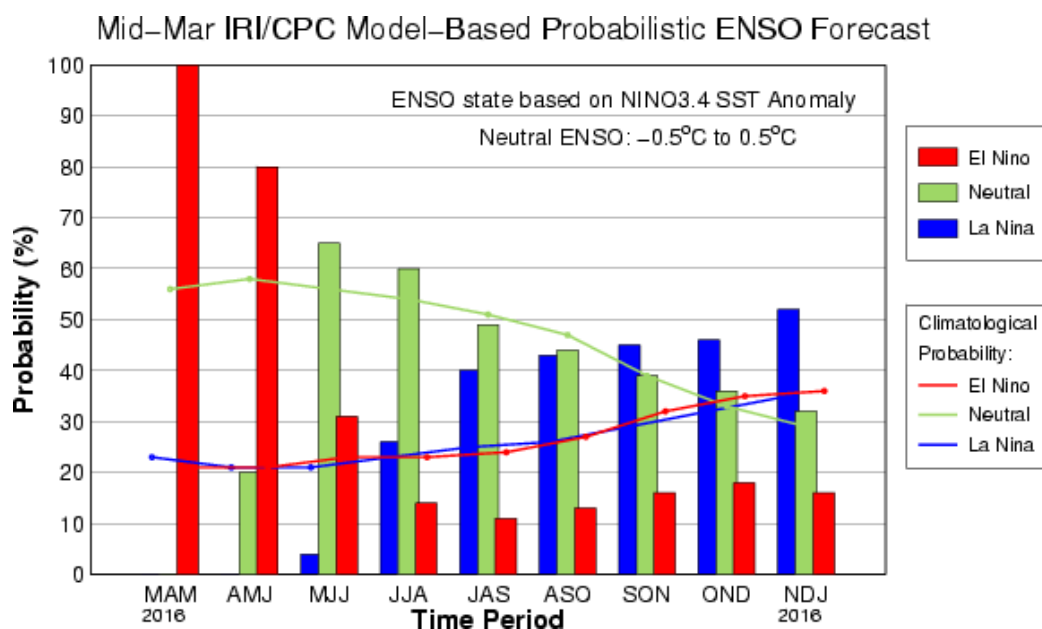


Figure 11 (above): ENSO Probabilistic Forecast from [IRI](#).

For more ENSO information:

English: <http://iri.columbia.edu/our-expertise/climate/enso/enso-essentials/> and <http://www.ncdc.noaa.gov/teleconnections/enso/>.

Spanish: <http://www.smn.gov.ar/?mod=biblioteca&id=67> and <http://www.smn.gov.ar/?mod=biblioteca&id=68>

RIO GRANDE FLOODWAY PROJECT

On March 4, 2016, Senators Tom Udall and Martin Heinrich publicly announced that they have secured \$8.2 million of Army Corps of Engineers funding for three projects along the Rio Grande in New Mexico. The funds provide \$7 million for the continued construction of five miles of structural levees that will prevent flooding between San Acacia Diversion Dam and the Bosque del Apache National Wildlife Refuge, \$1 million for a salinity watershed management study, and \$200,000 for the reformation and funding of the Rio Grande Environmental Management Program. The new levees will eventually be part of a 43-mile spoil bank levee replacement project along the western bank of the Rio Grande and will prevent flooding in Socorro. The Rio Grande Environmental Management Program will allow for “a basin-wide database to be used by stakeholders to track ongoing activities across federal, state, tribal, local, and international entities to improve coordination, avoid duplication, and support climate change studies.”

NEWS HEADLINES

NMSU Ag Researchers Collaborate on Addressing Water Management Challenges, February 29, 2016:
<https://newscenter.nmsu.edu/Articles/view/11725/nmsu-ag-researchers-collaborate-on-addressing-water-management-challenges>

Irrigation Season Starting off Better than Last Season, February 29, 2016:
<http://www.abqjournal.com/732636/news/irrigation-season-starting-off-better-than-last-year.html>

Border Water Dispute- Texas story, February 26, 2016:
<http://www.kltv.com/story/31320549/mexico-covers-rio-grande-water-shortfall-under-border-treaty>

Rio Grande to Flow Again Near Las Cruces come March, February 21, 2016:
<http://www.lcsun-news.com/story/news/local/2016/02/21/rio-grande-flow-again-near-las-cruces-late-march/80576824/>

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