



2019 MONSOON SEASON

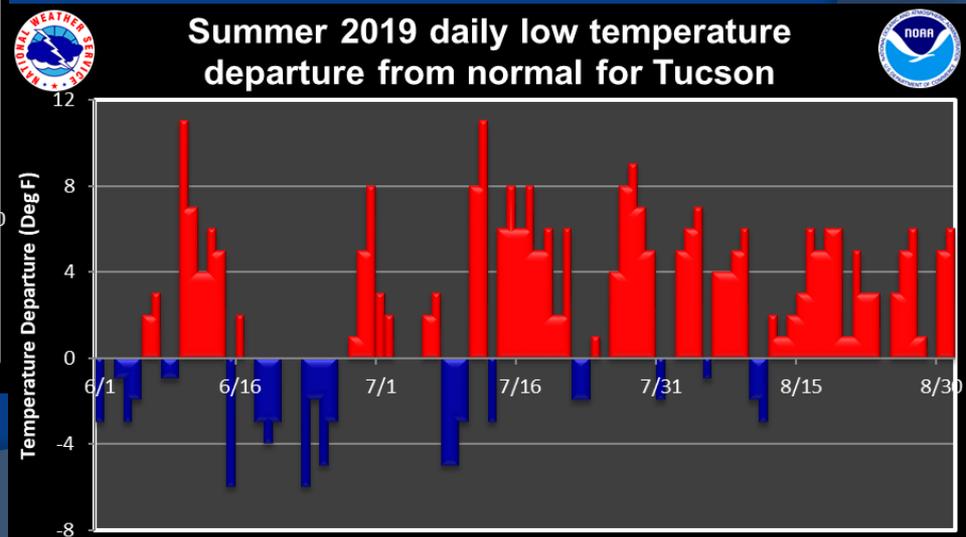
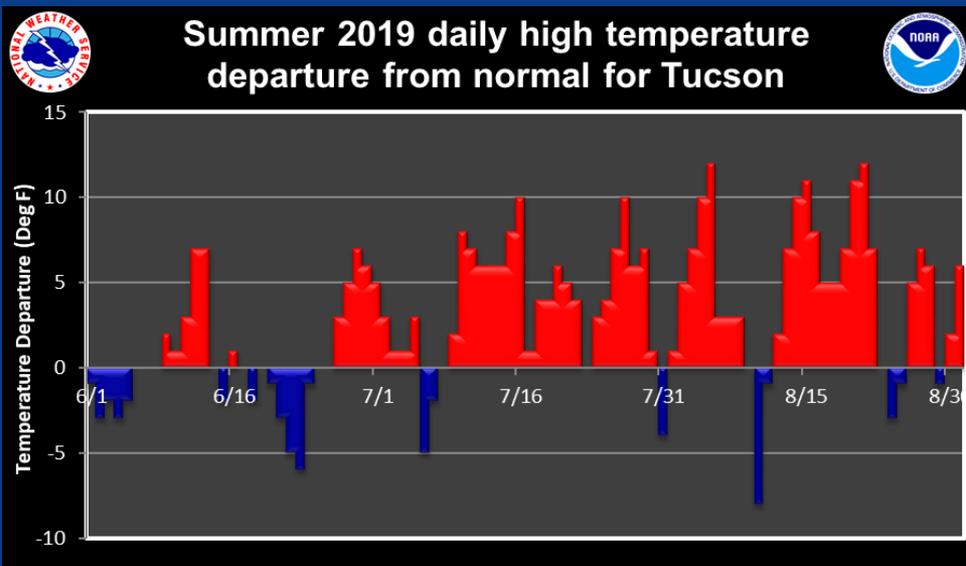
National Weather Service Tucson, Arizona
Pima County Local Drought Impact Group Meeting
September 11, 2019



Summer 2019

June - August

- **2nd Hottest** & **19th Driest**
- 2.64" rainfall at Tucson Airport, normal is 4.84"
- Driest Summer since 2009
- Rainlog & Pima ALERT recorded 1" to 6" in the mountains

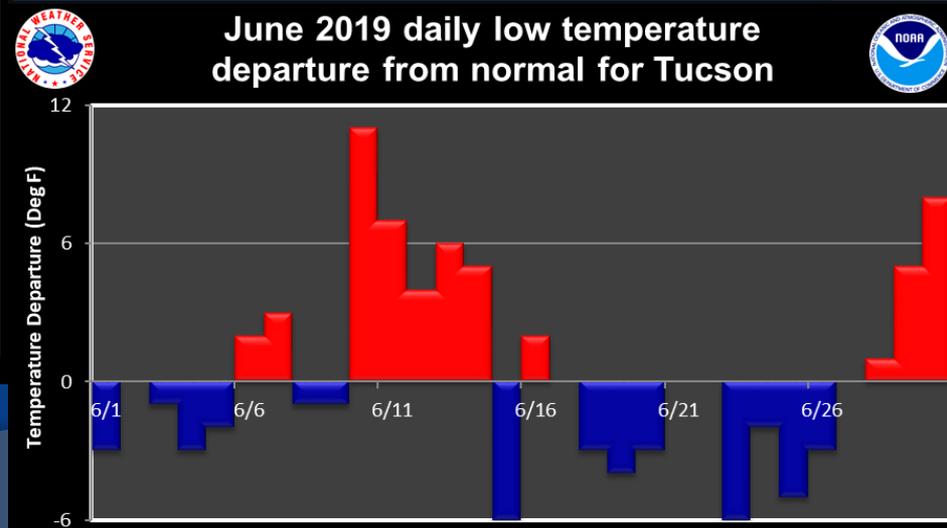
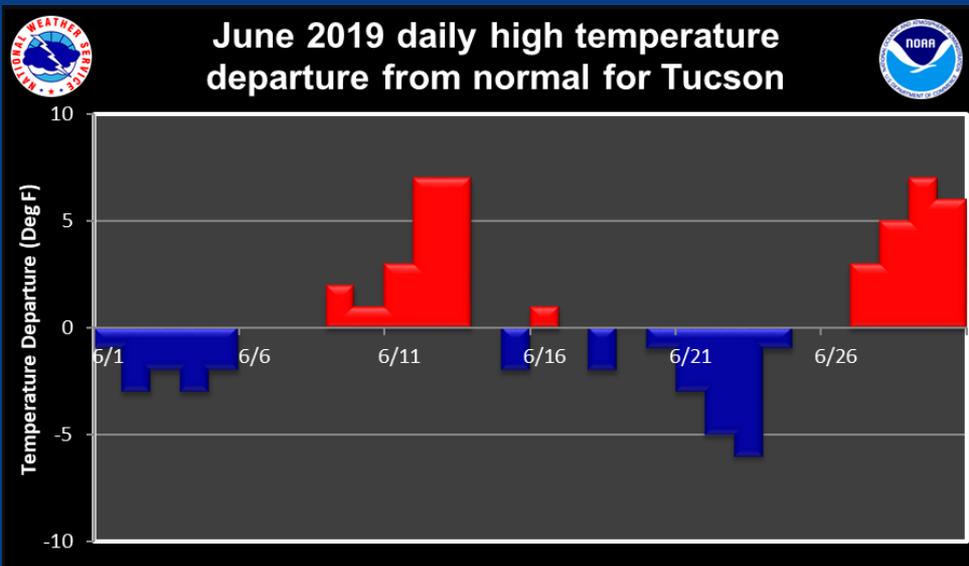




JUNE



- 34th Warmest
- 16th Driest: Trace of rainfall, normal 0.20"
- 32nd June with no measurable rain at Tucson Airport
- Rainlog & Pima ALERT gages recorded 0" to 0.25"





June Observed Precipitation



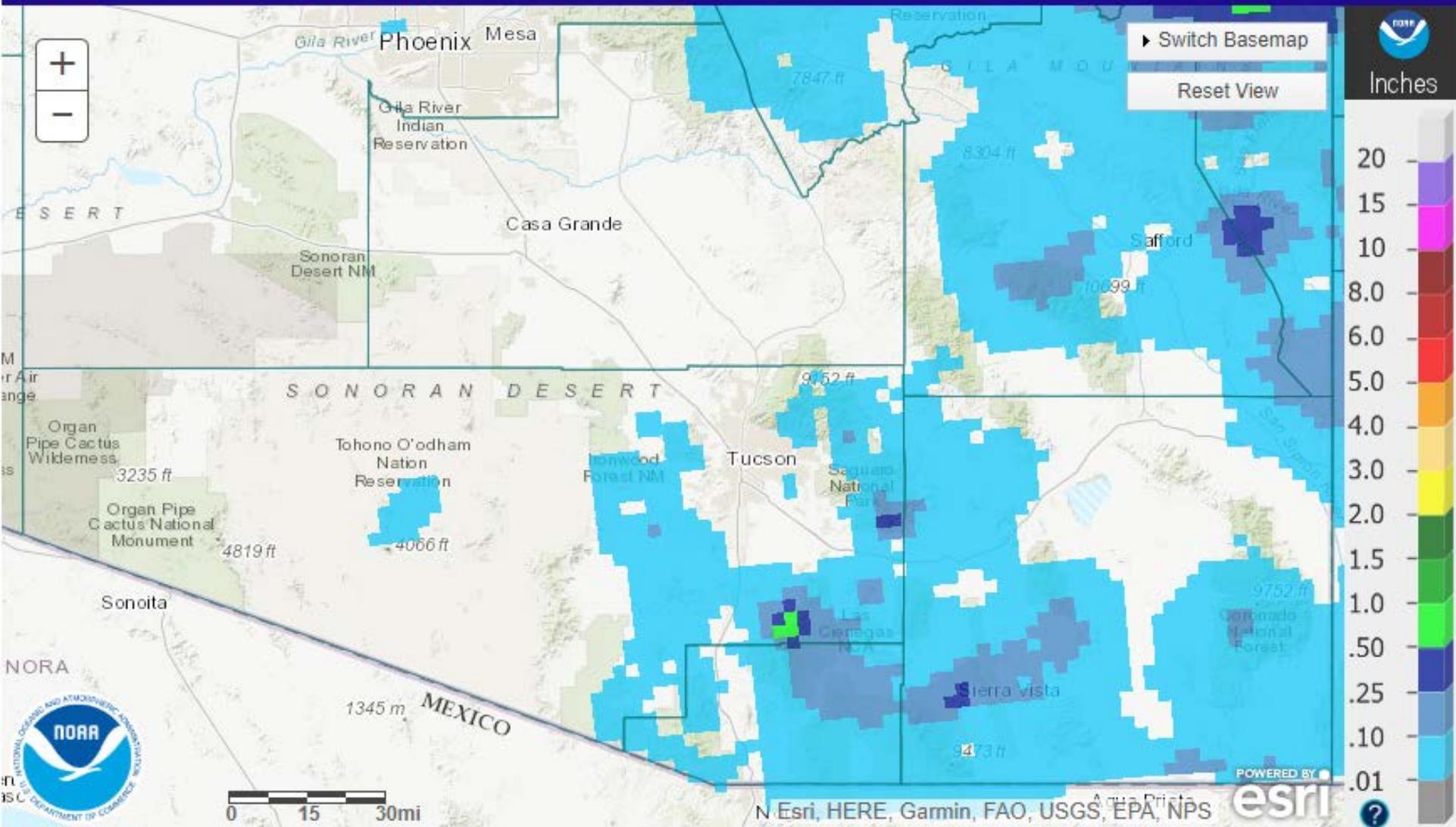
Tucson, AZ: June, 2019 Monthly Observed Precipitation
Valid on: July 01, 2019 12:00 UTC

Print this map Permalink BOOKMARK

What is UTC time?

Map Help

Find address or location





June Departure from Normal Precipitation

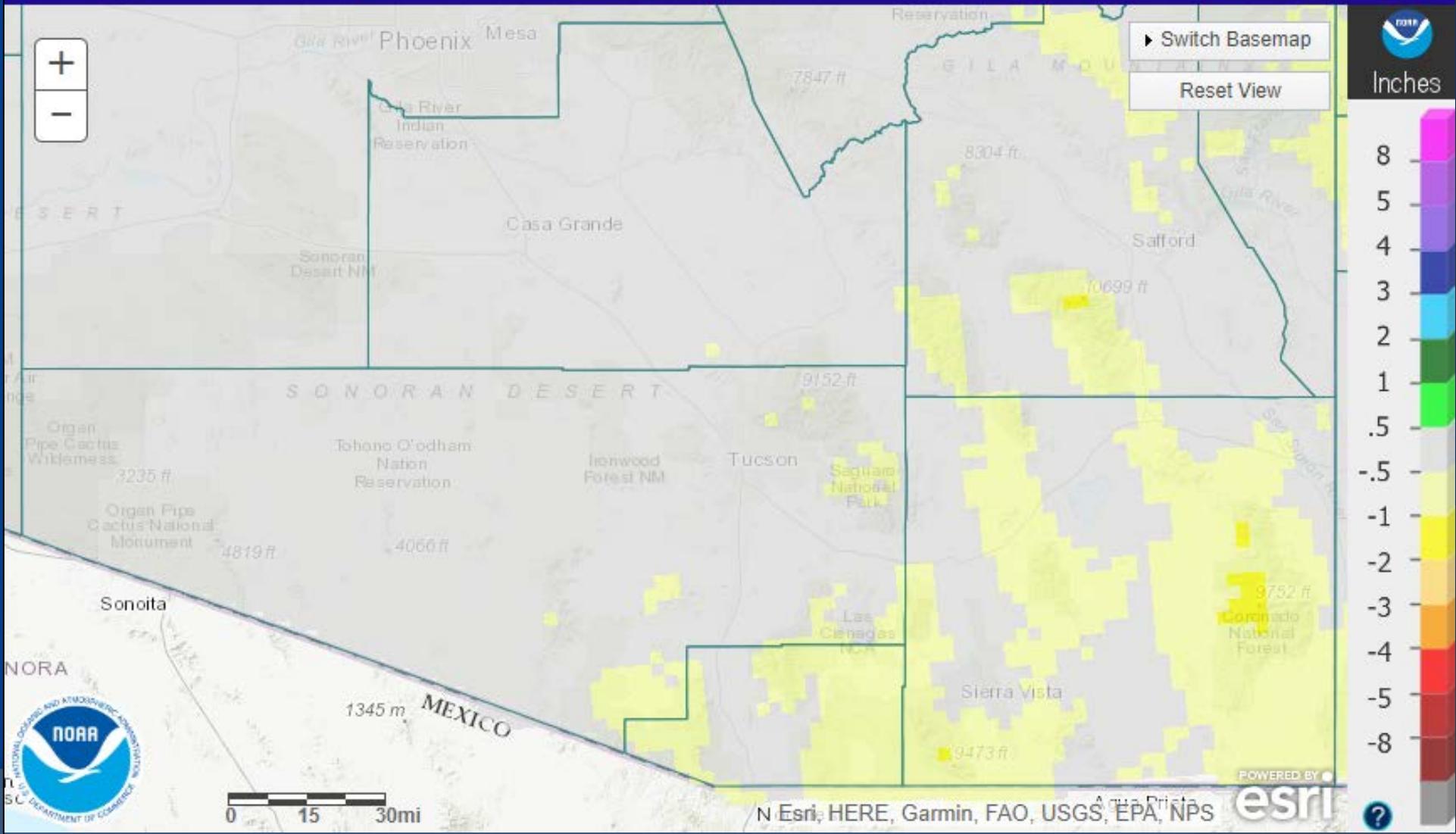
Tucson, AZ: June, 2019 Monthly Departure from Normal Precipitation
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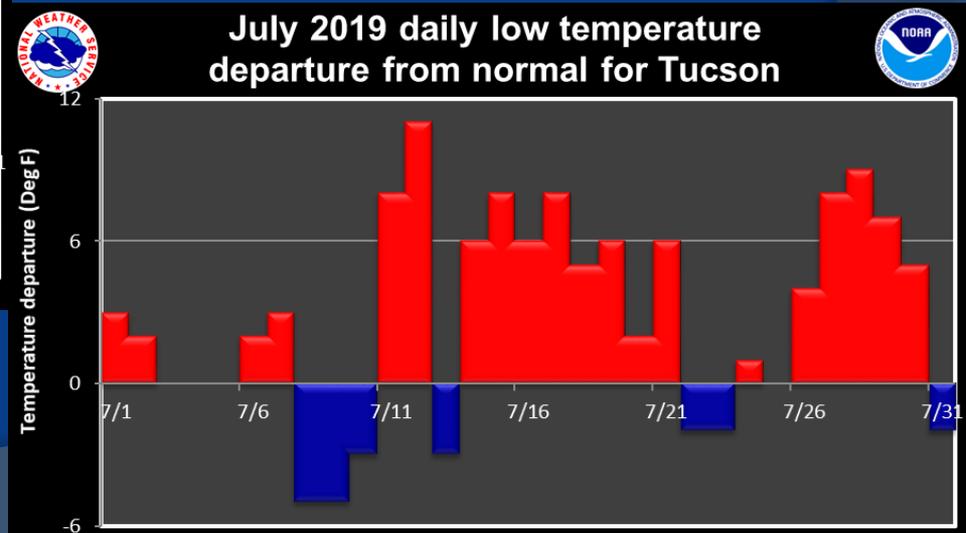
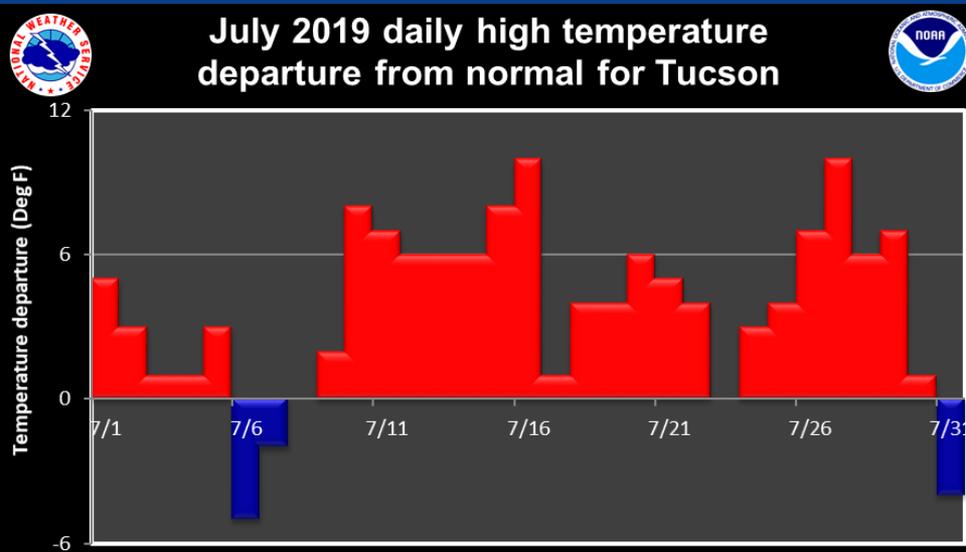




JULY



- 3rd **Hottest** and 3rd hottest month on record
- 25th Driest: 1.07" rainfall at Tucson Airport, normal is 2.25"
- Rainlog & Pima ALERT gages recorded 0.25" to over 2.50"





July Observed Precipitation



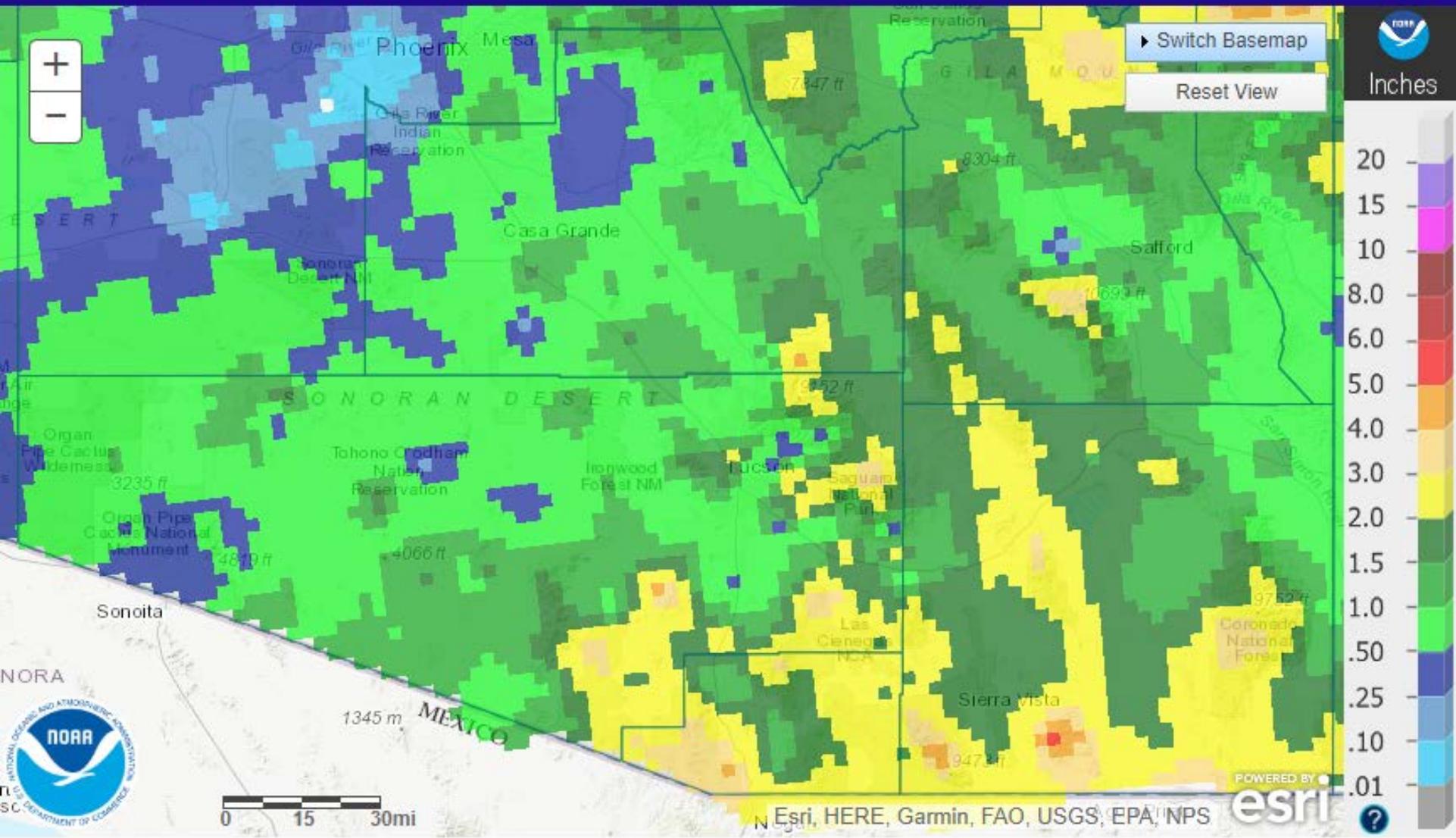
Tucson, AZ: July, 2019 Monthly Observed Precipitation
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July Departure from Normal Precipitation



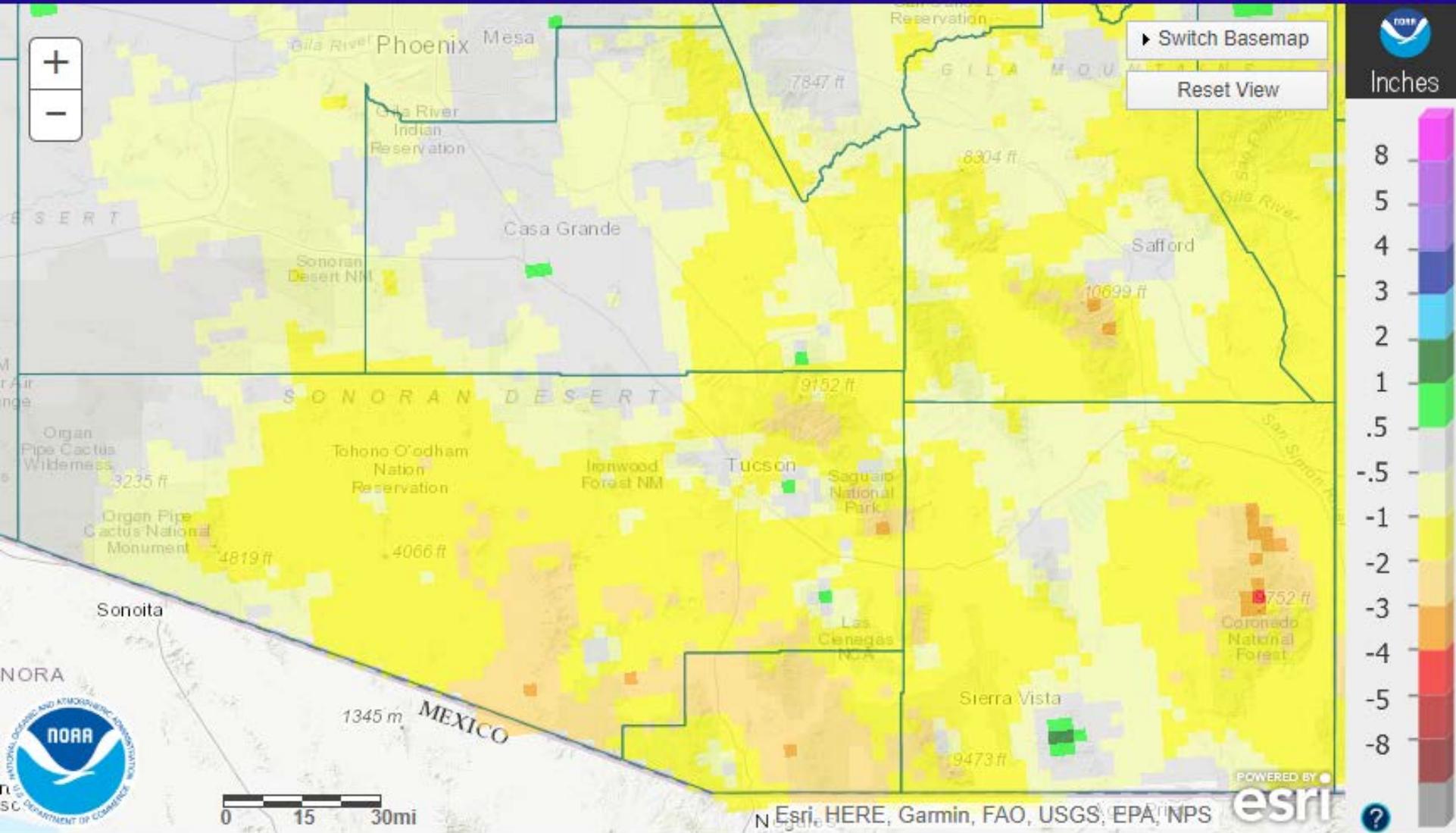
Tucson, AZ: July, 2019 Monthly Departure from Normal Precipitation
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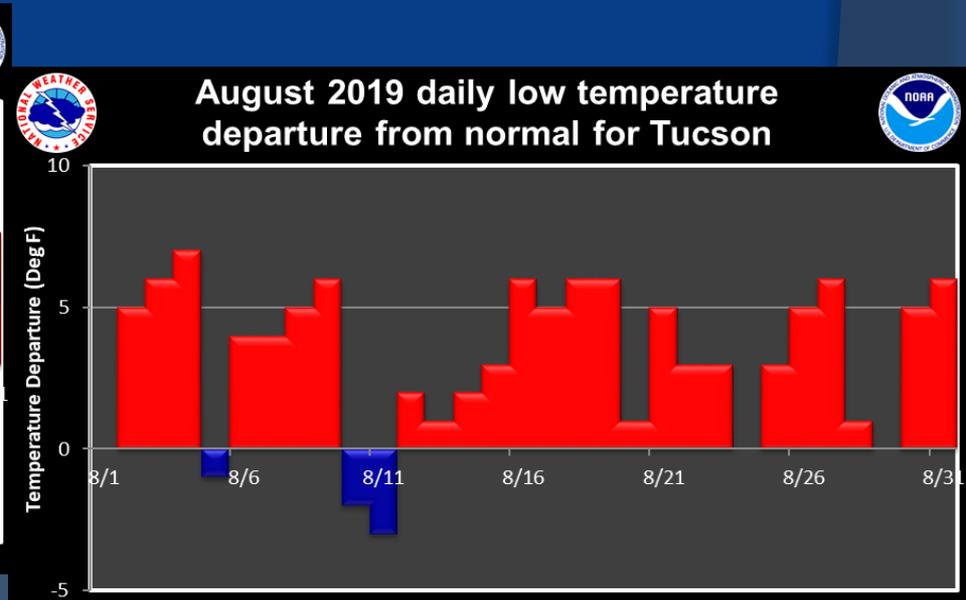
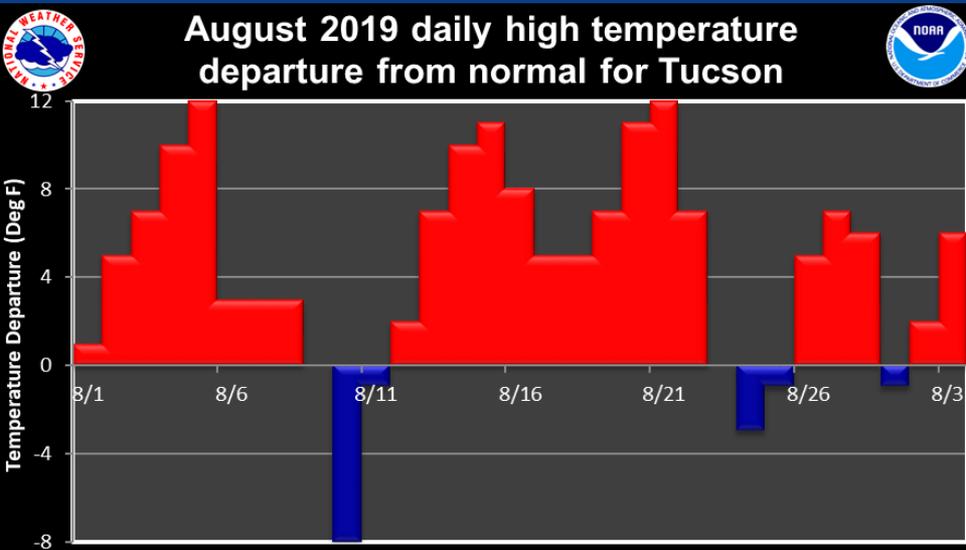




AUGUST



- **2nd Hottest** & 45th Driest
- 1.57" rainfall at Tucson Airport, normal is 2.39"
- Rainlog & Pima ALERT gages recorded 0.75" to over 4"
- Tucson Airport Rainfall through August
Calendar Year = 7.67" (7.91" Normal)
Water Year = 12.11" (10.30" Normal)





August Observed Precipitation



Tucson, AZ: August, 2019 Monthly Observed Precipitation
Valid on: September 01, 2019 12:00 UTC



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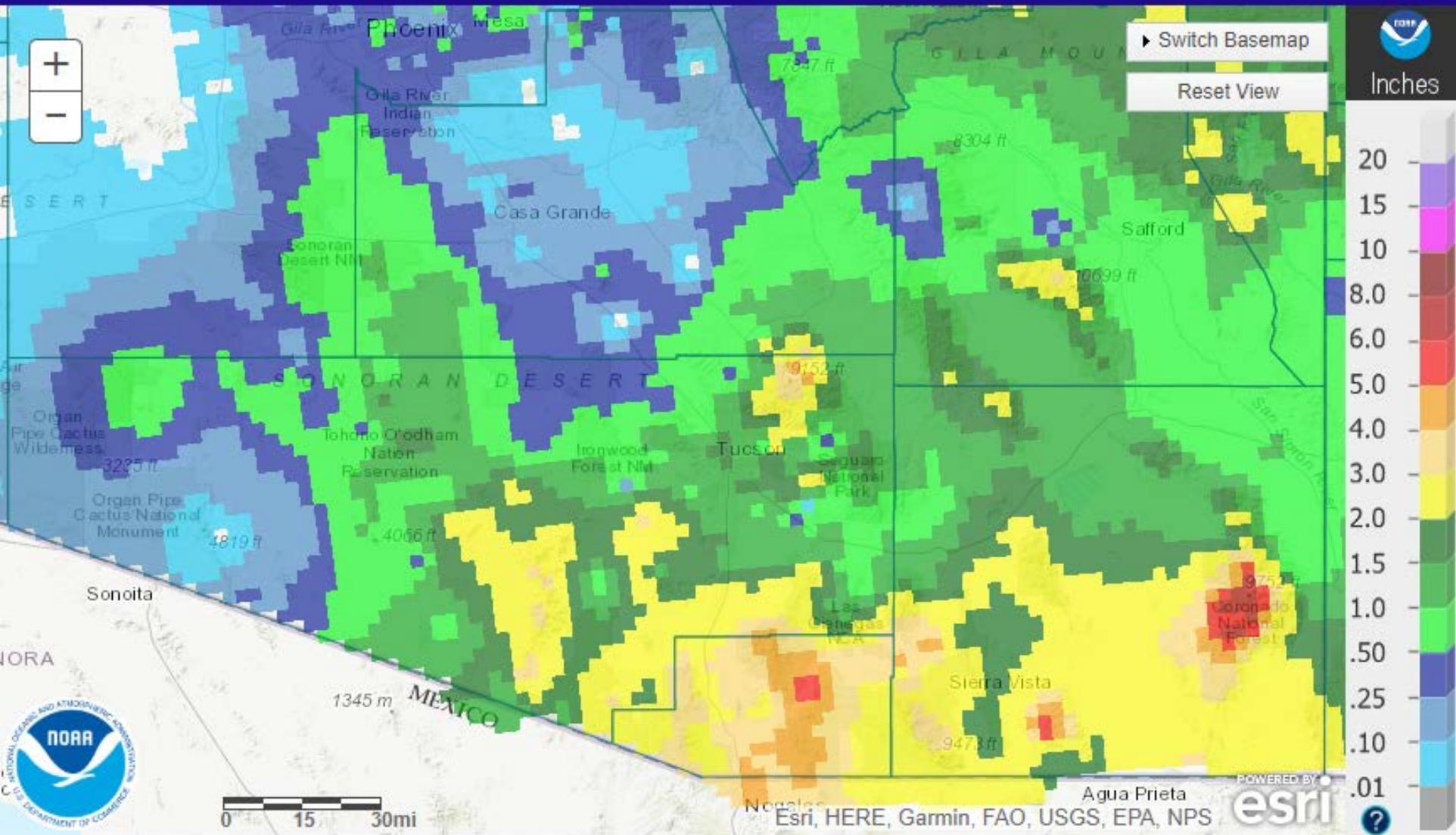
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August Departure from Normal Precipitation



Tucson, AZ: August, 2019 Monthly Departure from Normal Precipitation
Valid on: September 01, 2019 12:00 UTC



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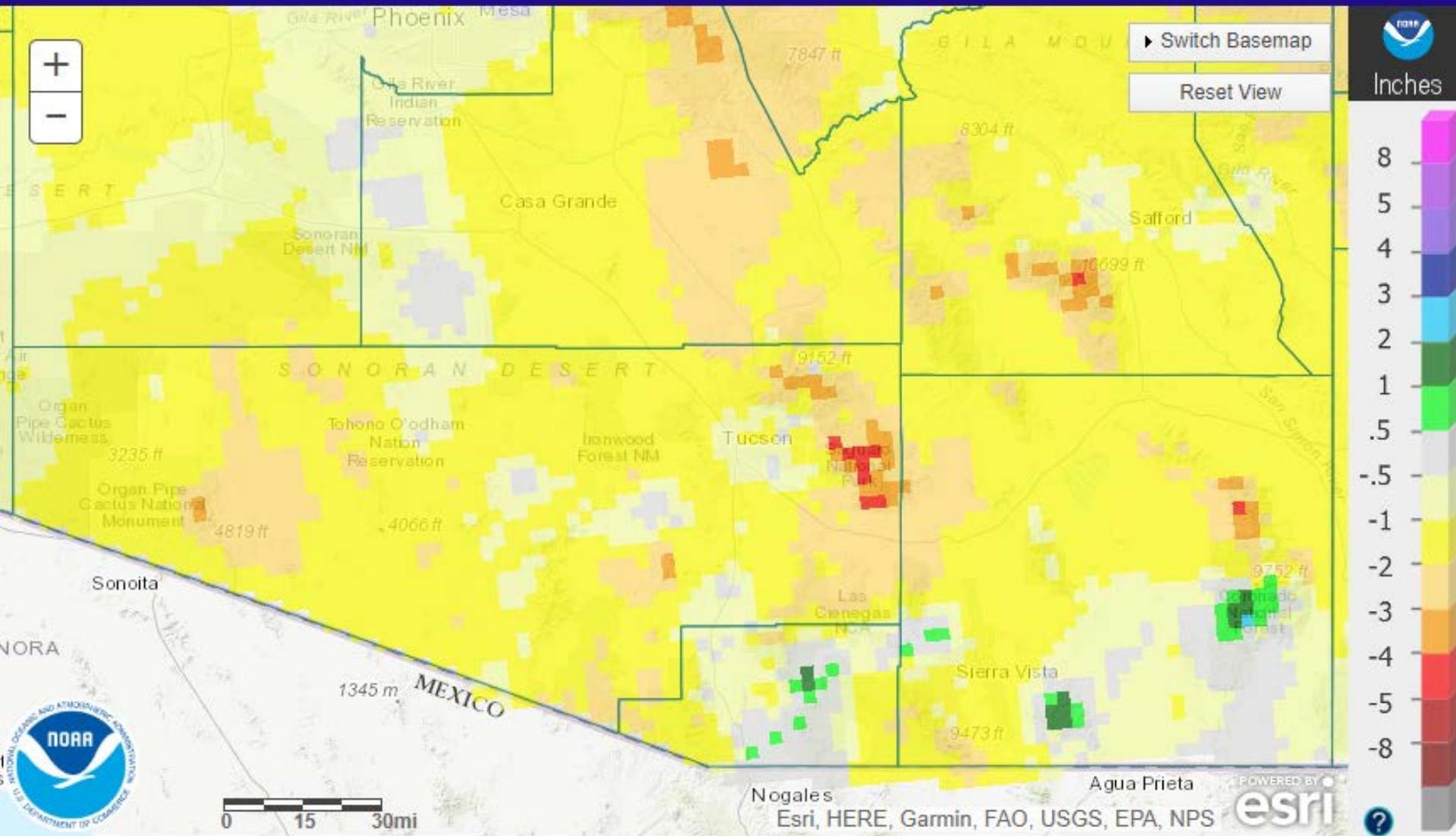
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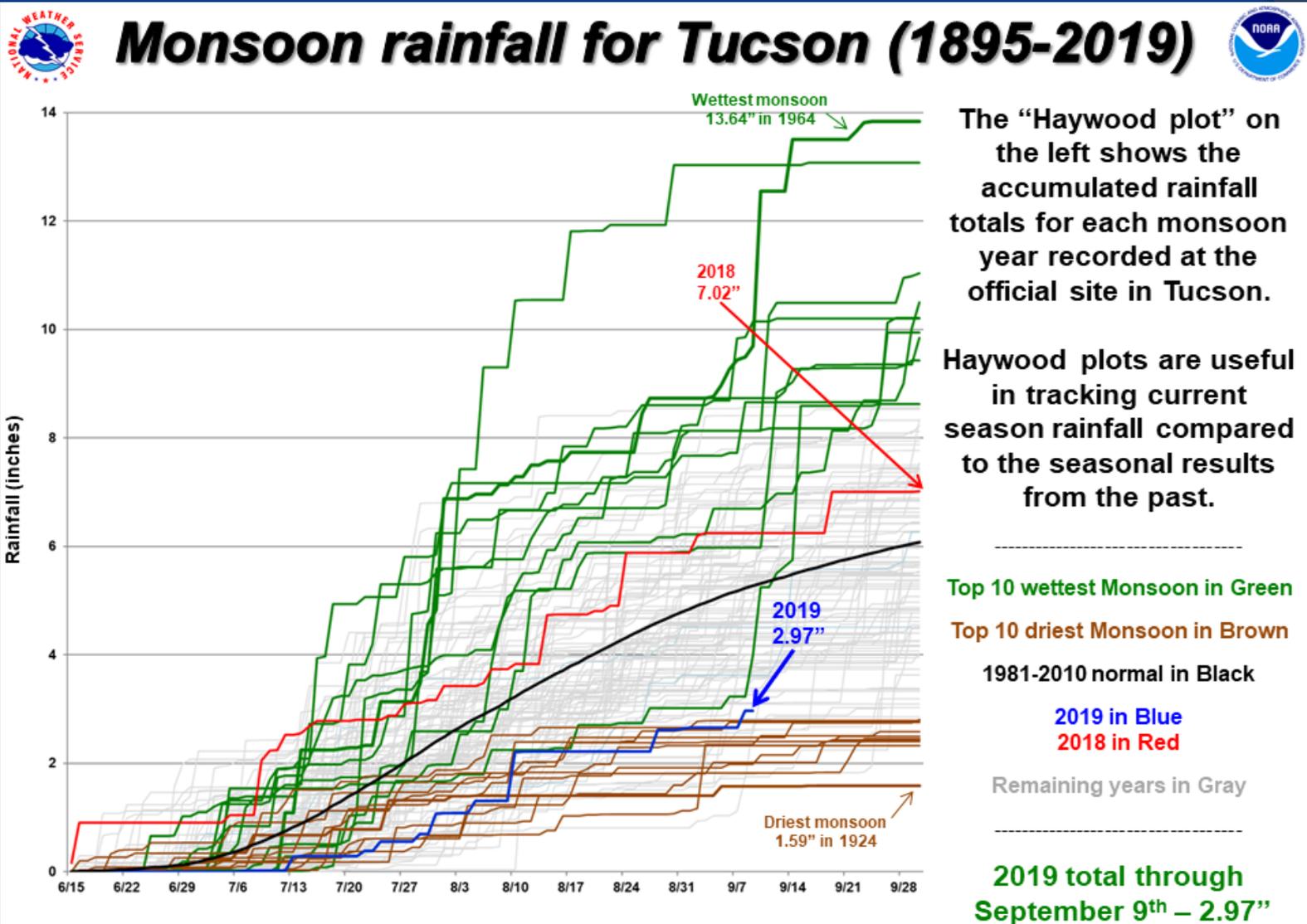




Monsoon Season thru Sept 9th

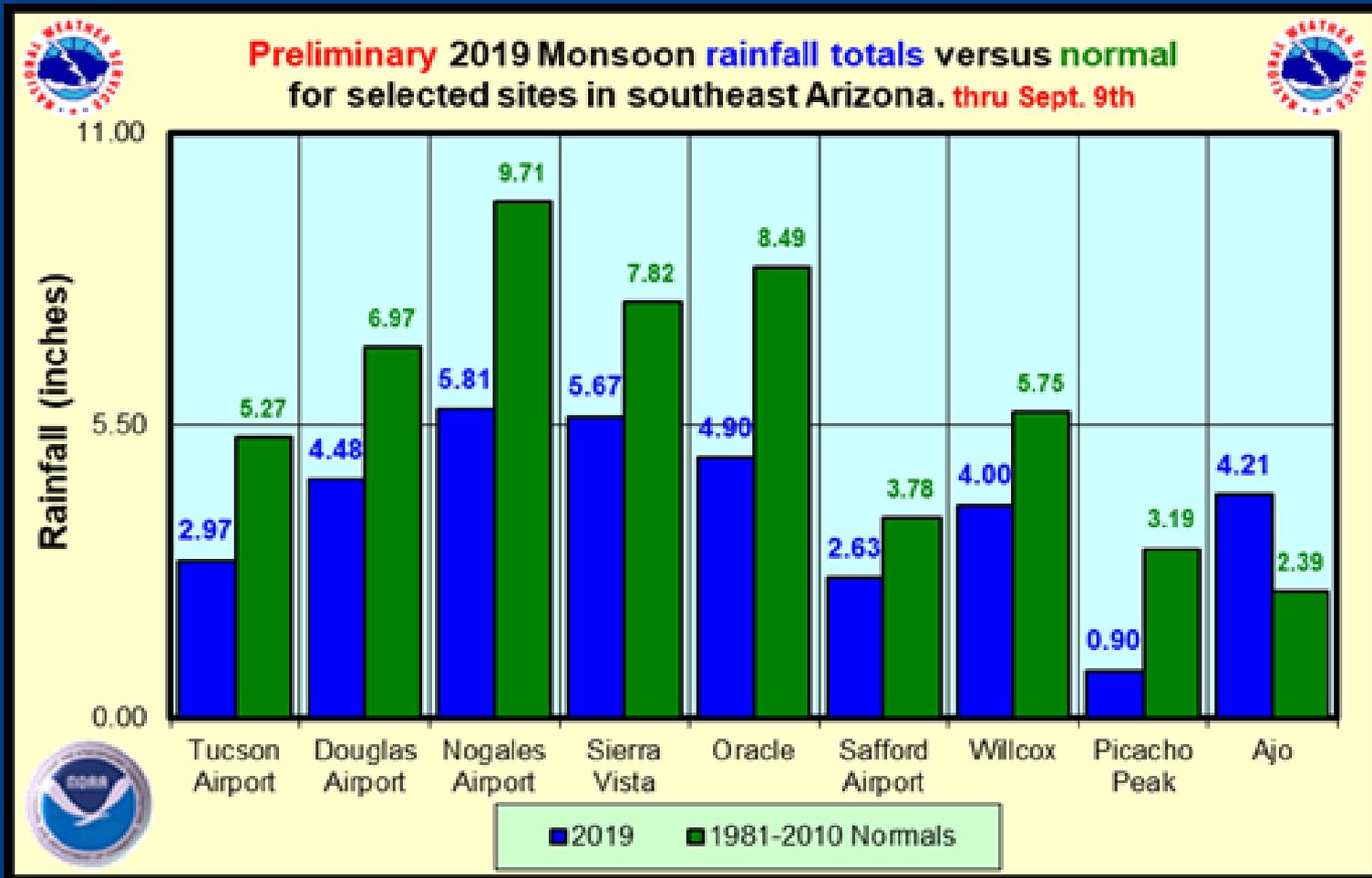


- Sept 1-9 0.33" rain at Tucson Airport, monthly normal 1.29"





Monsoon Season through September 9th





Monsoon Season 2019

- 21st Driest since 1895
- 12th driest if no additional rain in September

Top 10 Driest Monsoon	
1) 1.59"/1924	6) 2.50"/1902
2) 2.33"/1973	7) 2.58"/1994
3) 2.40"/1989	8) 2.75"/1913
4) 2.42"/2004	9) 2.79"/1918
5) 2.45"/1900	10) 2.81"/2001

- Nearly all of AZ below normal. Phoenix 2nd driest
- Wet & cool Spring delayed northward migration of Monsoon high to 4 corners area
- High positioned in late July, but moved back south in mid-August

Change in Drought Conditions

Drought Classification

None

D0 (Abnormally Dry)

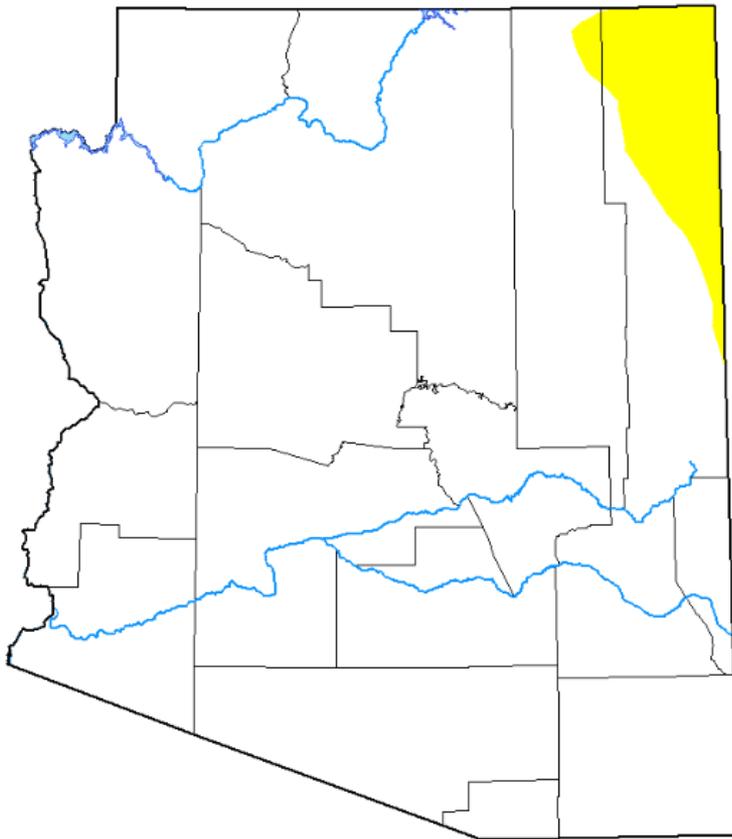
D1 (Moderate Drought)

D2 (Severe Drought)

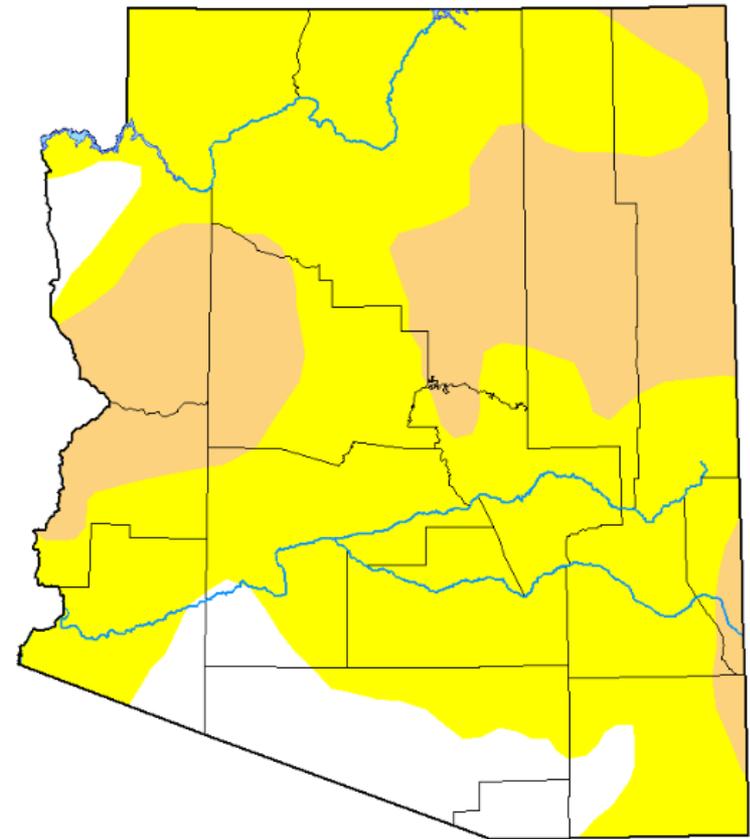
D3 (Extreme Drought)

D4 (Exceptional Drought)

No Data



June 11, 2019

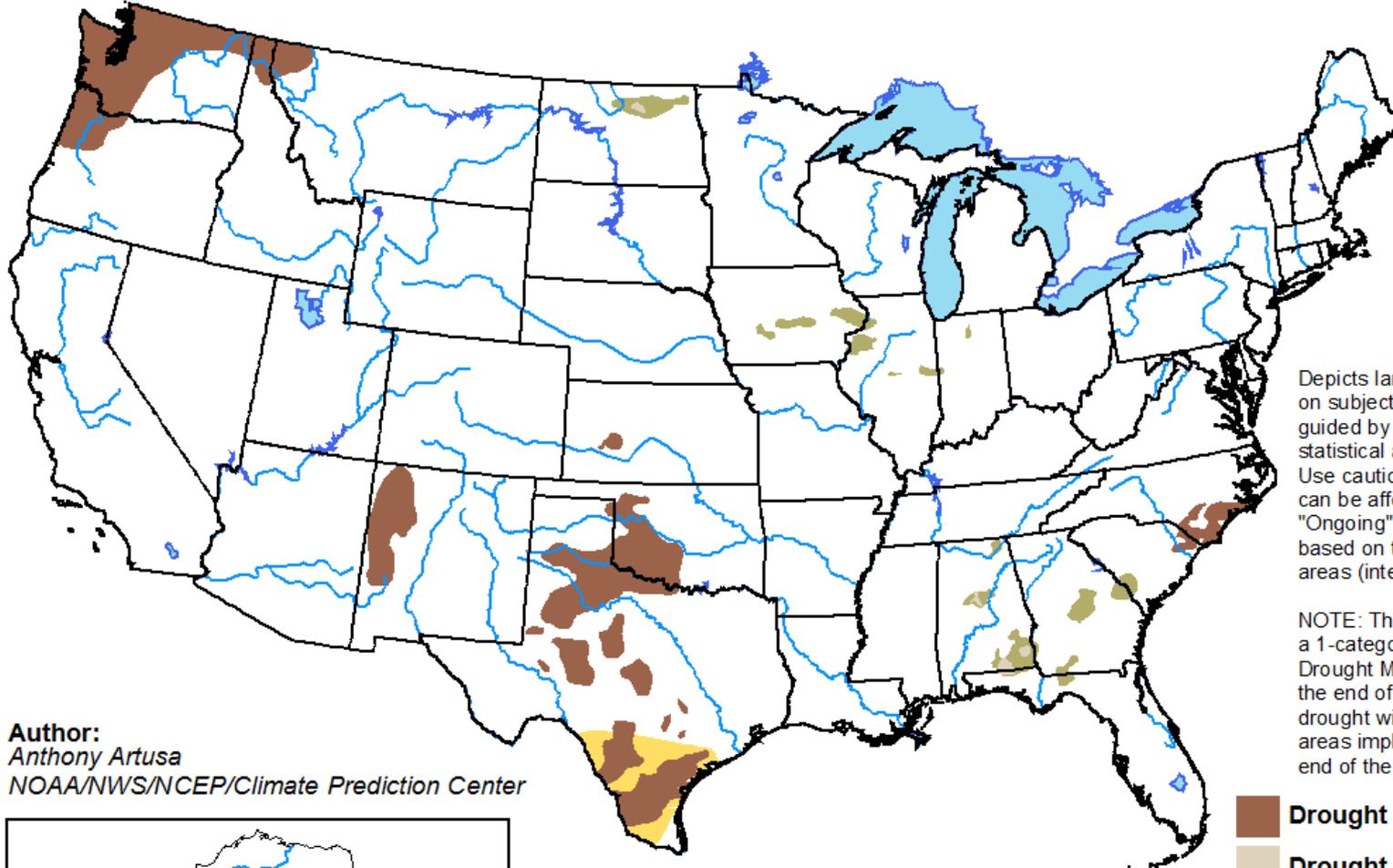


September 3, 2019

U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for August 15 - November 30, 2019
Released August 15

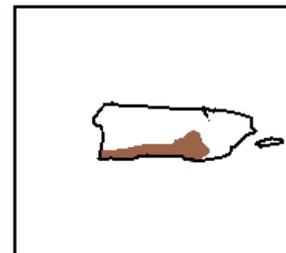
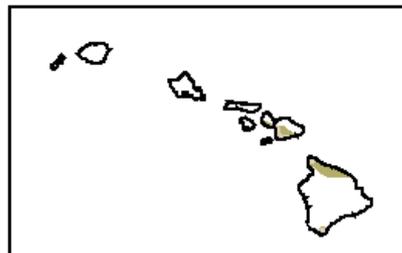
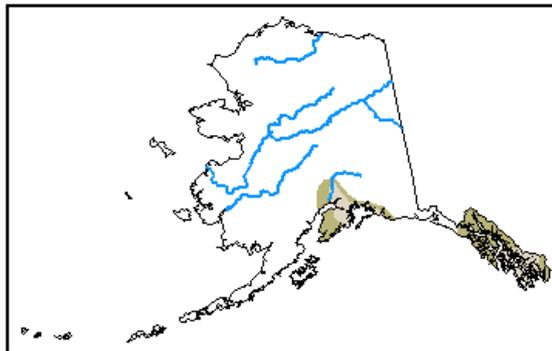


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Anthony Artusa
NOAA/NWS/NCEP/Climate Prediction Center

-  Drought persists
-  Drought remains but improves
-  Drought removal likely
-  Drought development likely

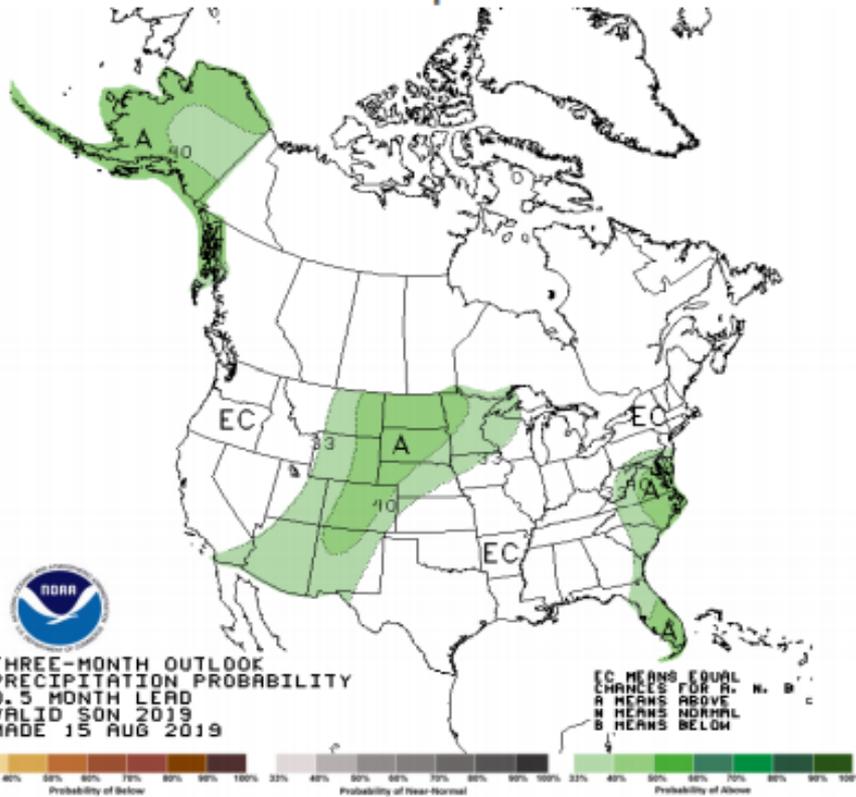


<http://go.usa.gov/3eZ73>

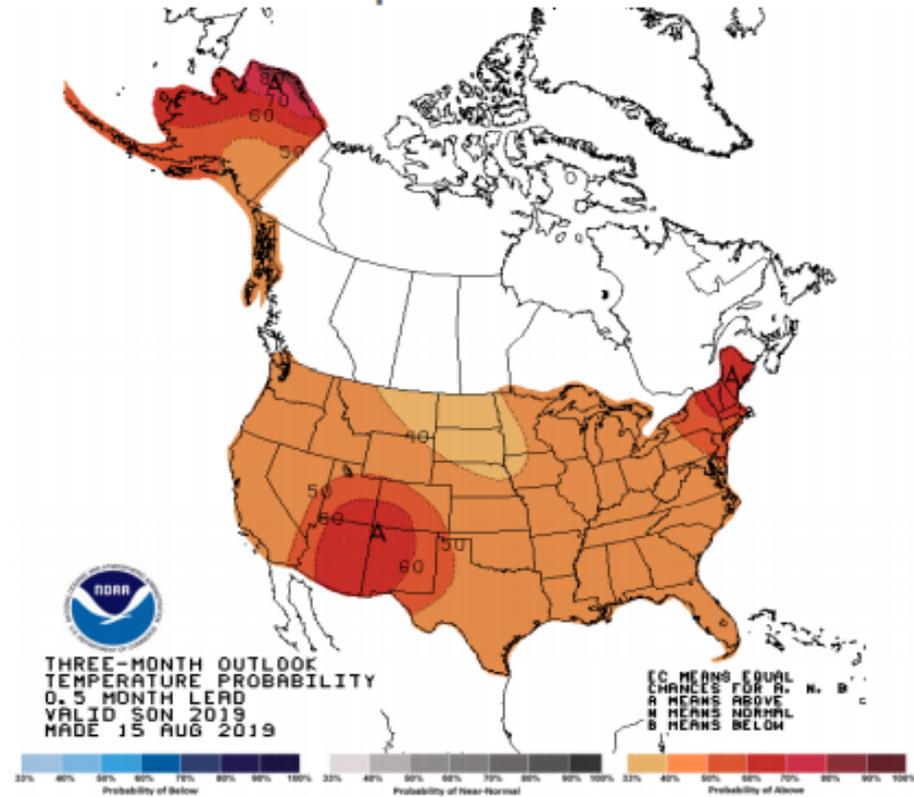


September - November Outlook

Precipitation



Temperature



THREE-MONTH OUTLOOK
PRECIPITATION PROBABILITY
0.5 MONTH LEAD
VALID SON 2019
MADE 15 AUG 2019

THREE-MONTH OUTLOOK
TEMPERATURE PROBABILITY
0.5 MONTH LEAD
VALID SON 2019
MADE 15 AUG 2019



COLORADO BASIN RIVER FORECAST CENTER

NATIONAL WEATHER SERVICE / NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Colorado Basin Precipitation

