

Intermountain West Water Year 2018 Wrap-up

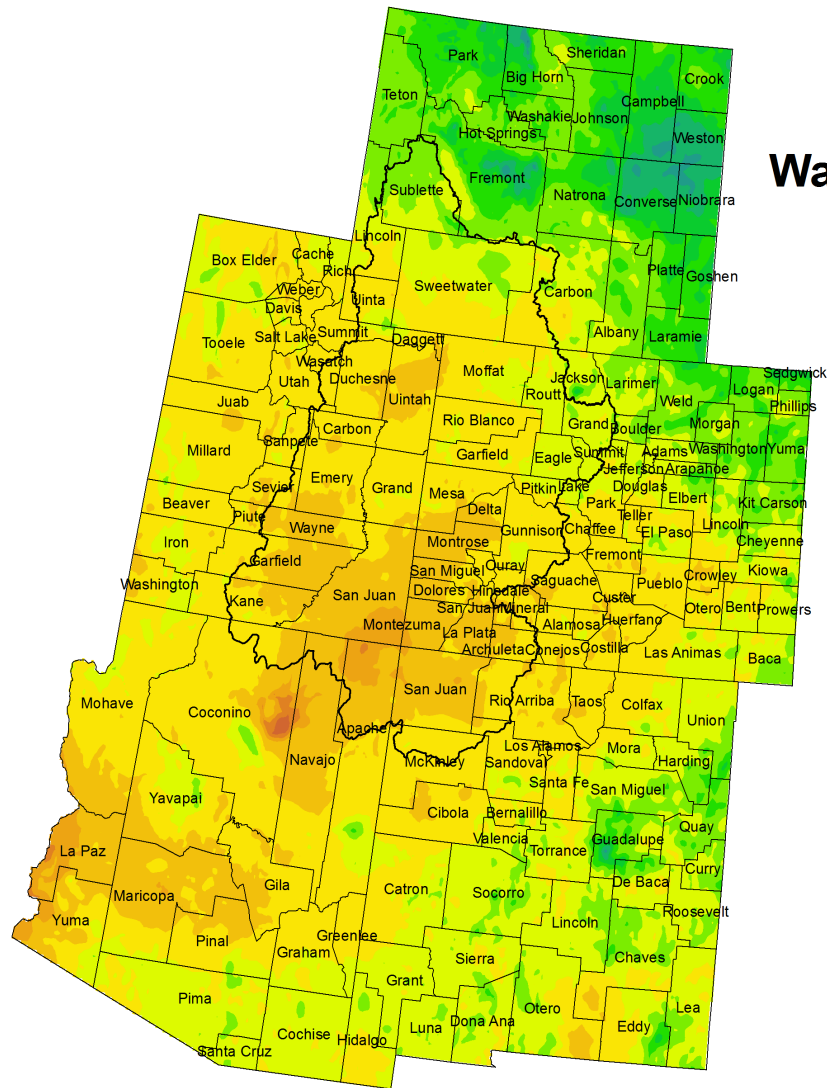
Zach Schwalbe

October 16, 2018

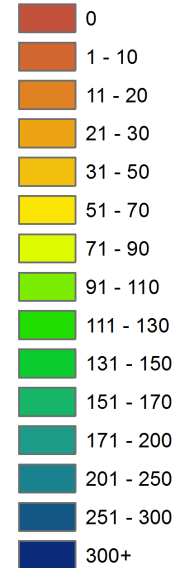


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Intermountain West Water Year 2018 Precipitation



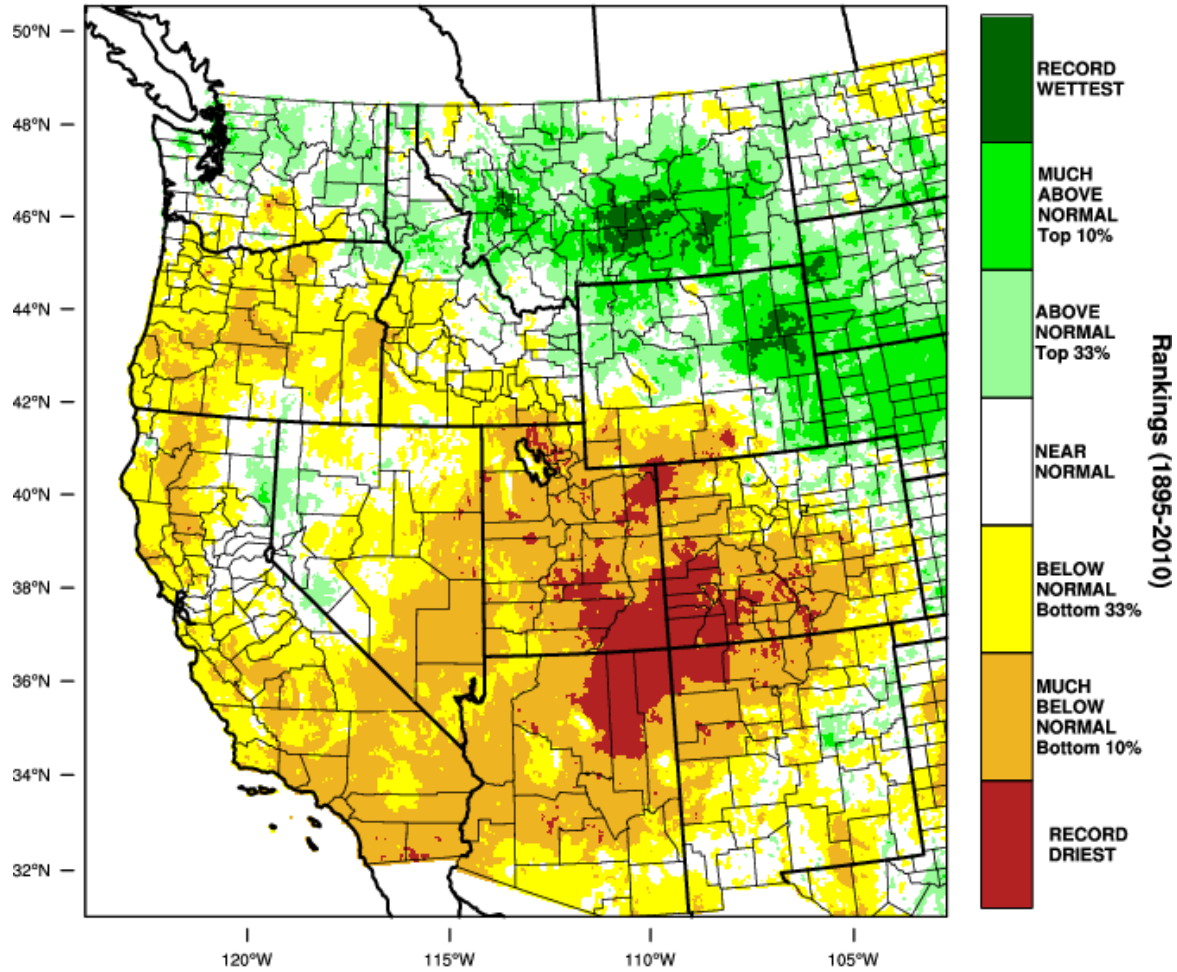
wy2018_pn
Precip as % of Normal



Upper Colorado River Basin

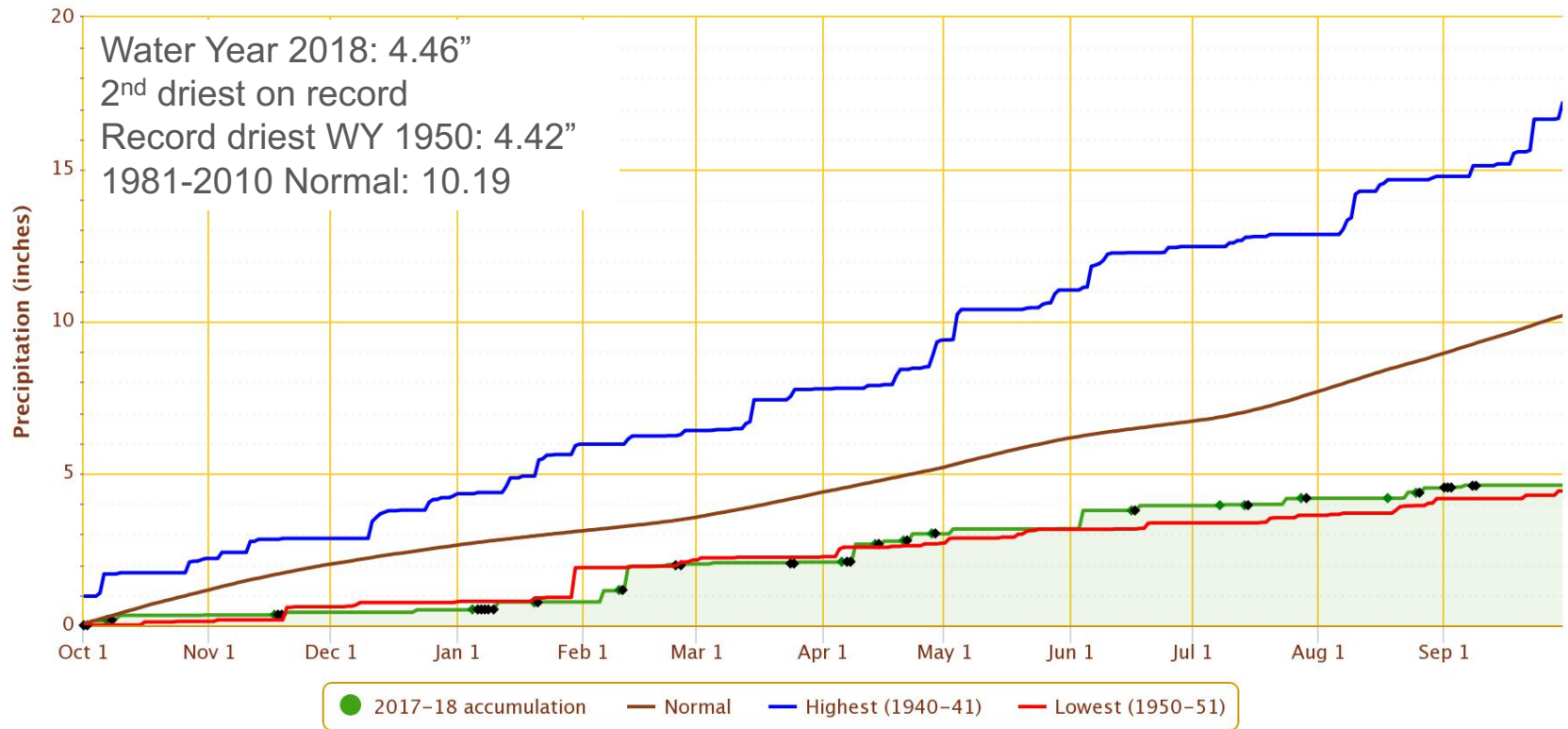
Data from PRISM Climate Group

Western United States - Precipitation October-September 2018 Percentile



Accumulated Precipitation – MONTROSE NO 2, CO

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values

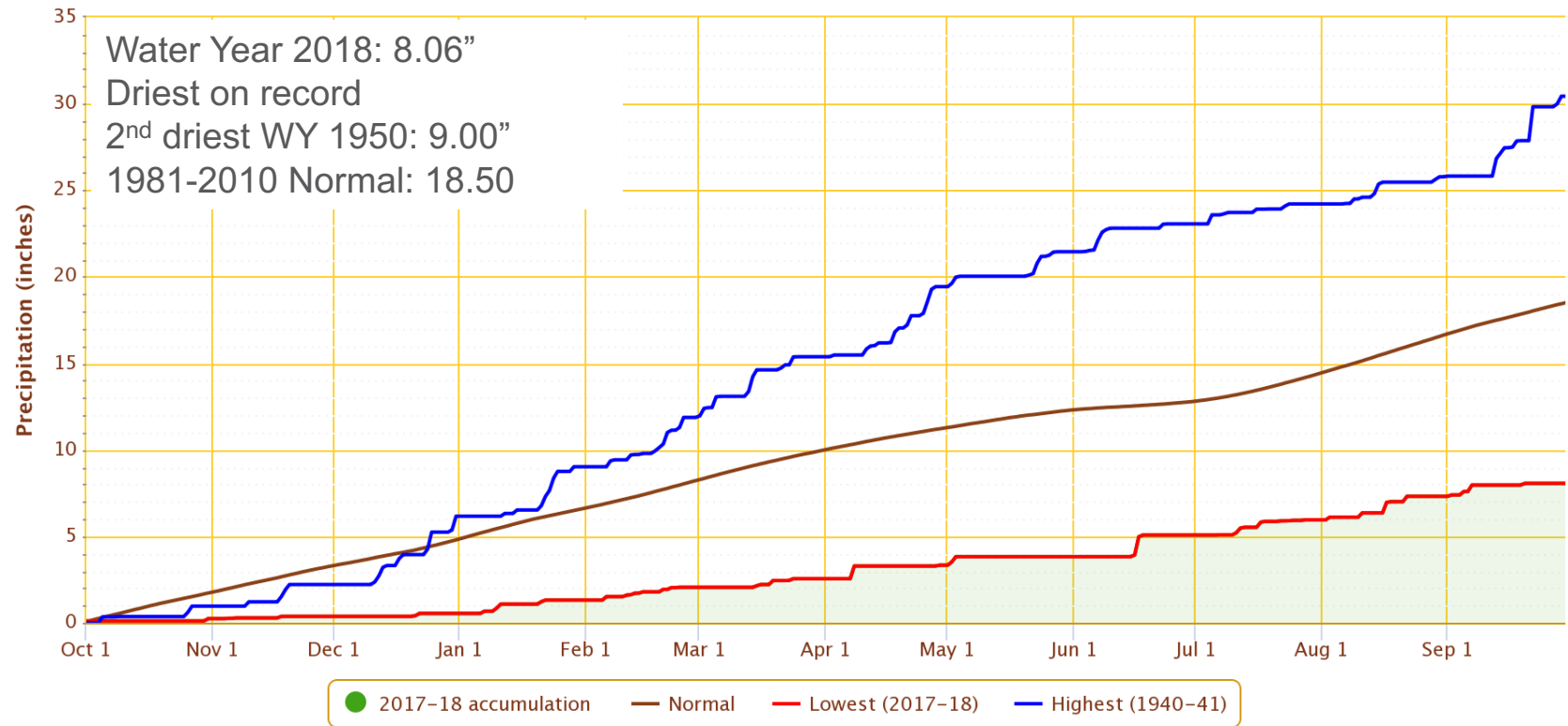


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Accumulated Precipitation – MESA VERDE NP, CO

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values

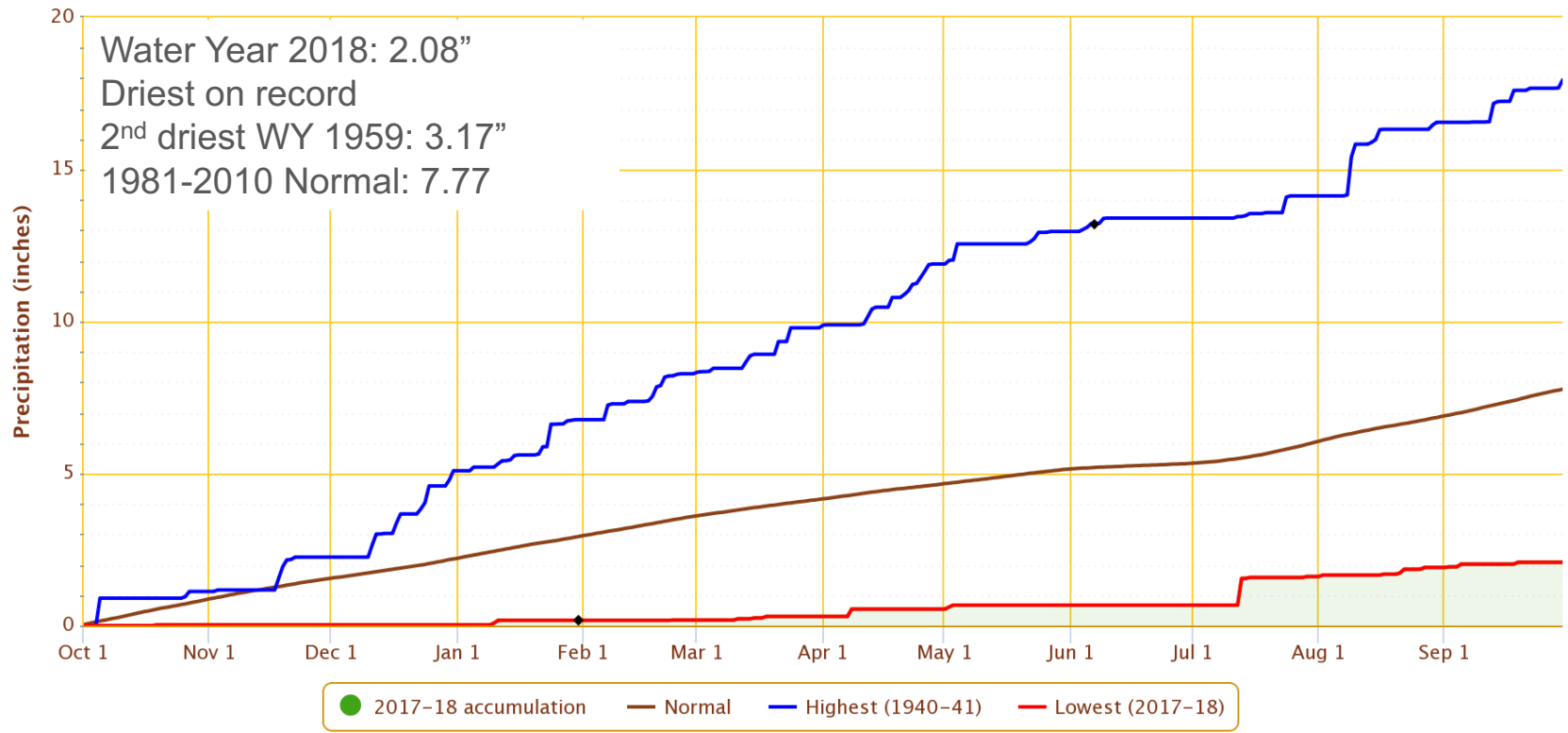


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Accumulated Precipitation - BLUFF, UT

Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



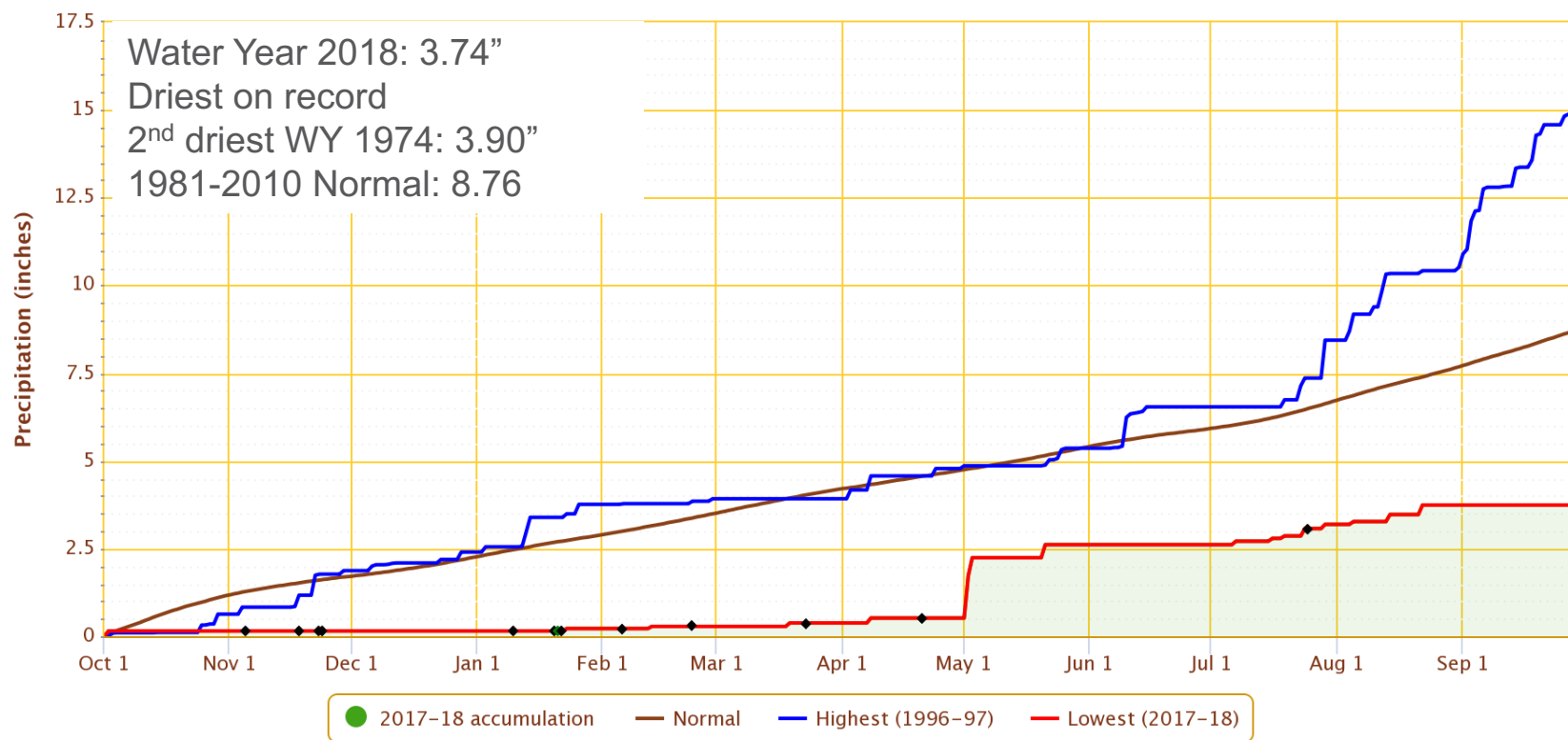
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Emery County, Utah

Accumulated Precipitation - FERRON, UT

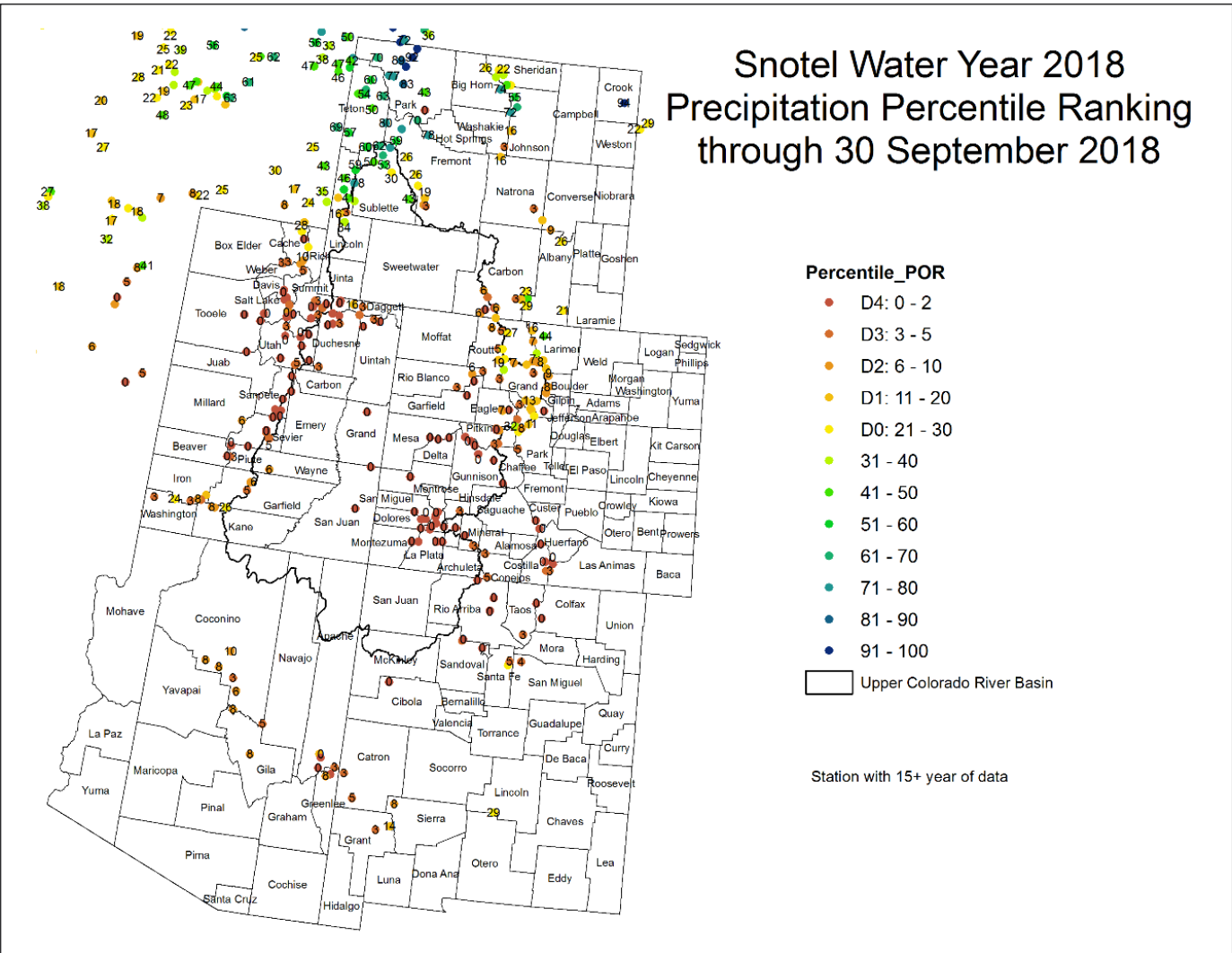
Click and drag to zoom to a shorter time interval; green/black diamonds represent subsequent/missing values



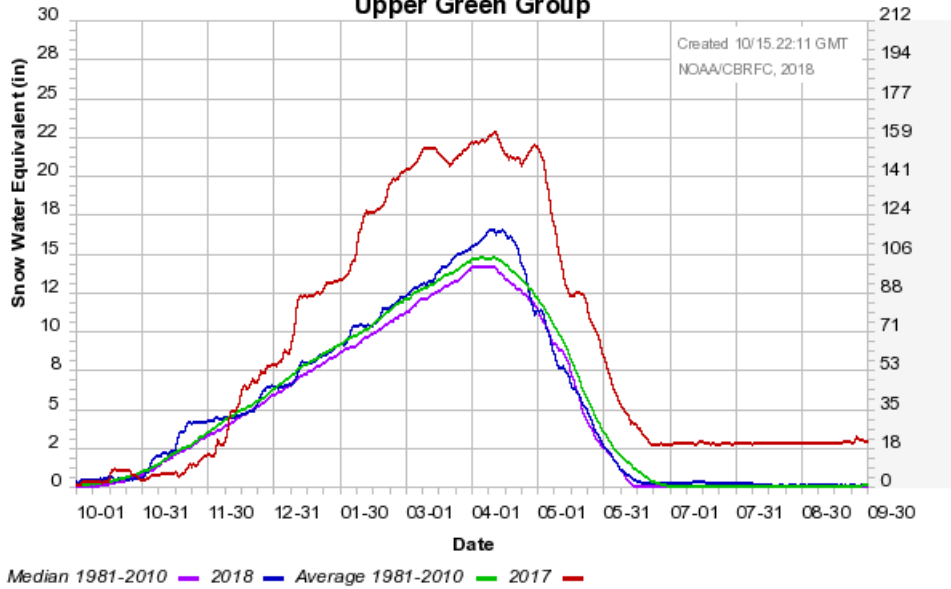
Powered by ACIS



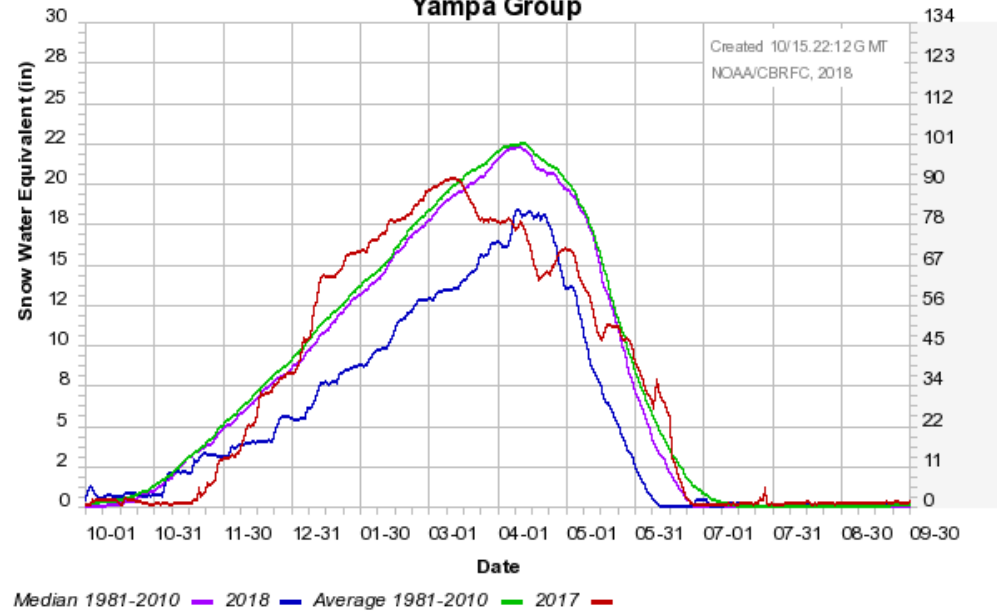
Snotel Water Year 2018 Precipitation Percentile Ranking through 30 September 2018



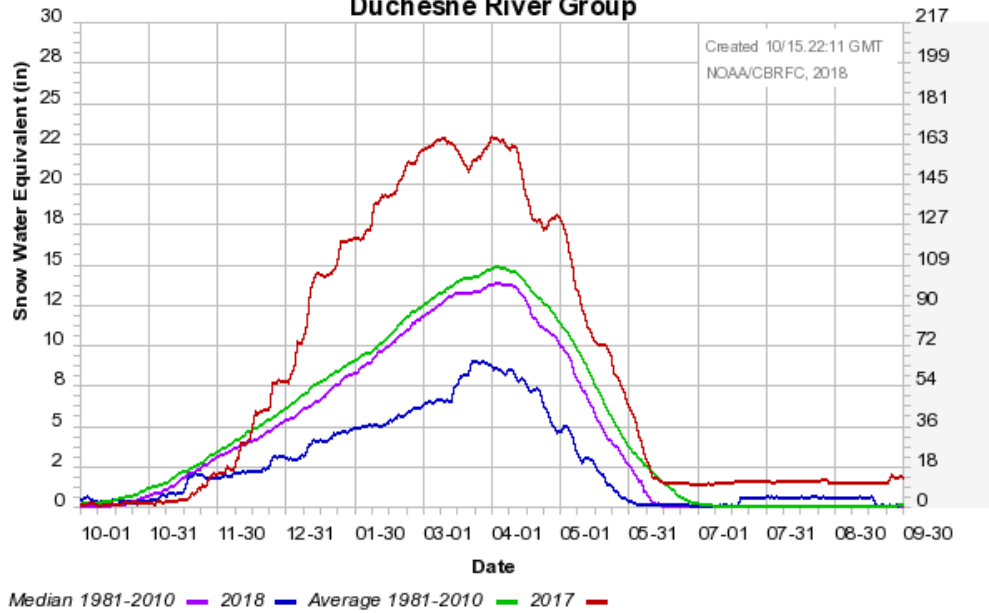
**Colorado Basin River Forecast Center
Upper Green Group**



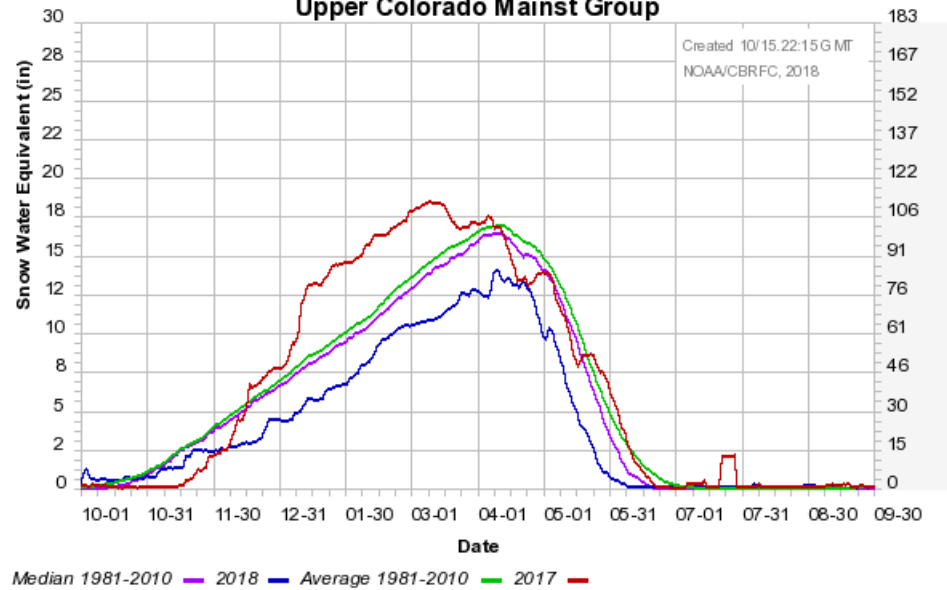
**Colorado Basin River Forecast Center
Yampa Group**



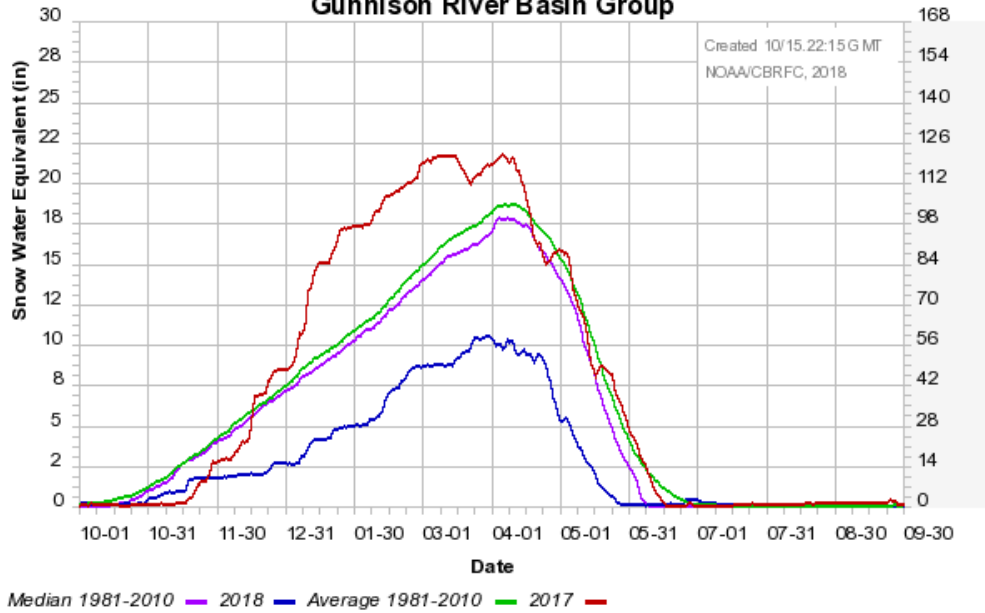
Colorado Basin River Forecast Center
Duchesne River Group



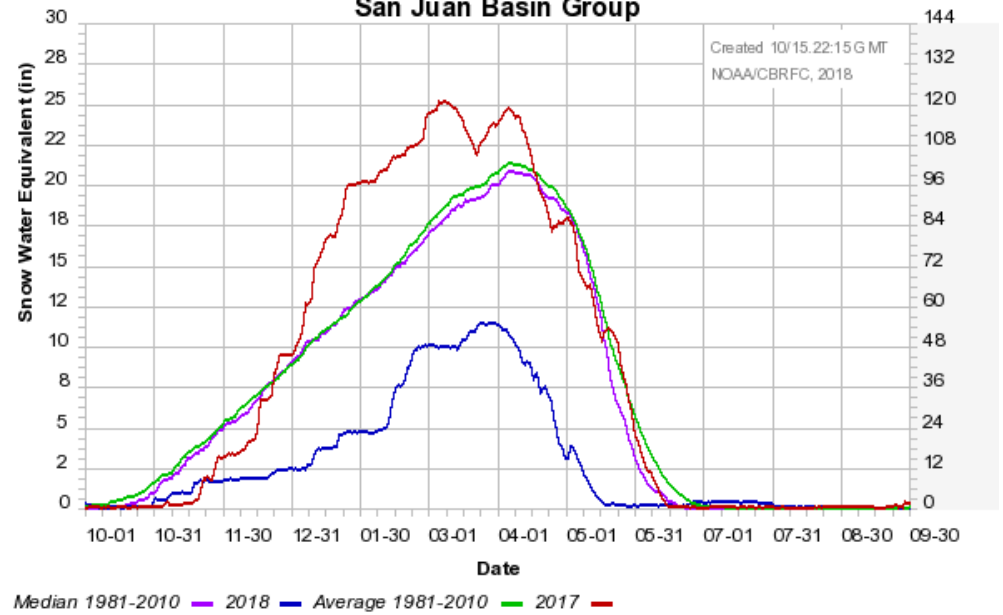
Colorado Basin River Forecast Center
Upper Colorado Mainst Group

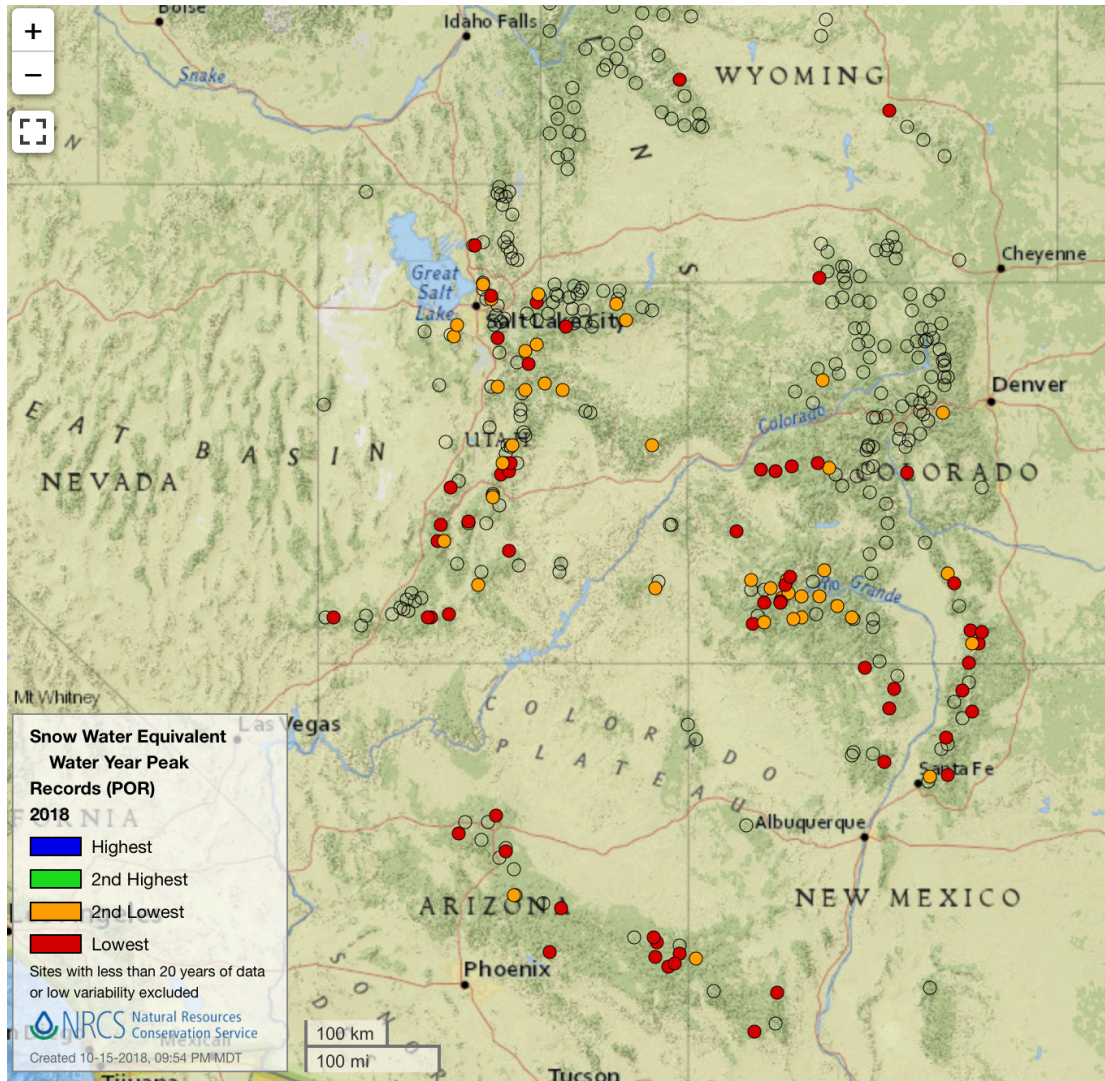


Colorado Basin River Forecast Center Gunnison River Basin Group

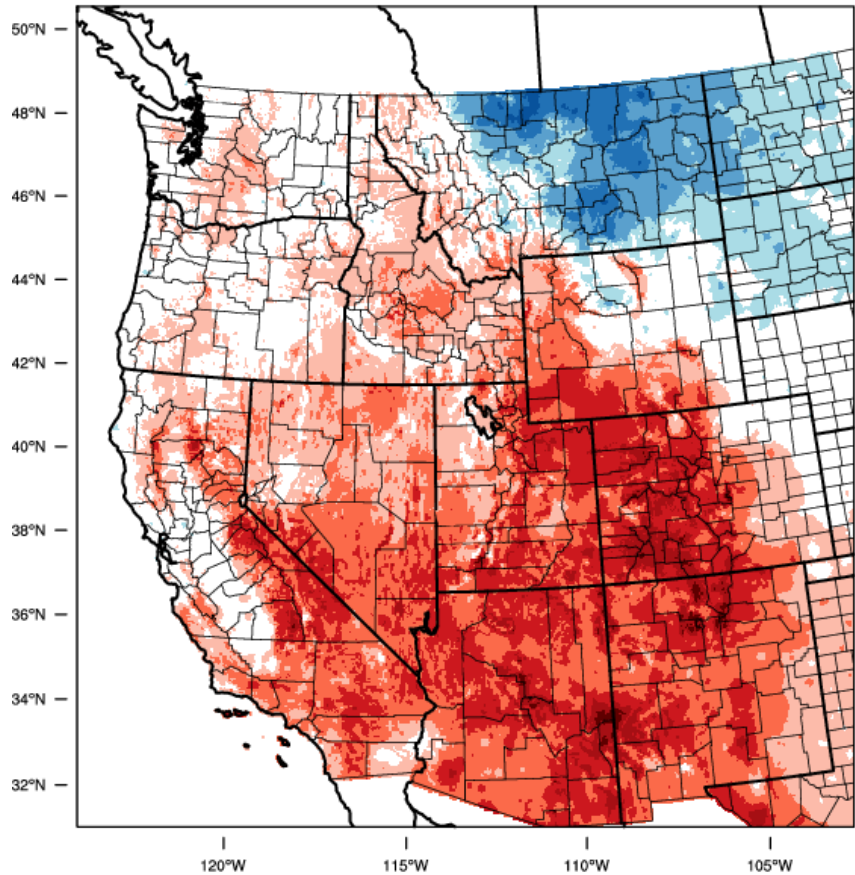


Colorado Basin River Forecast Center San Juan Basin Group



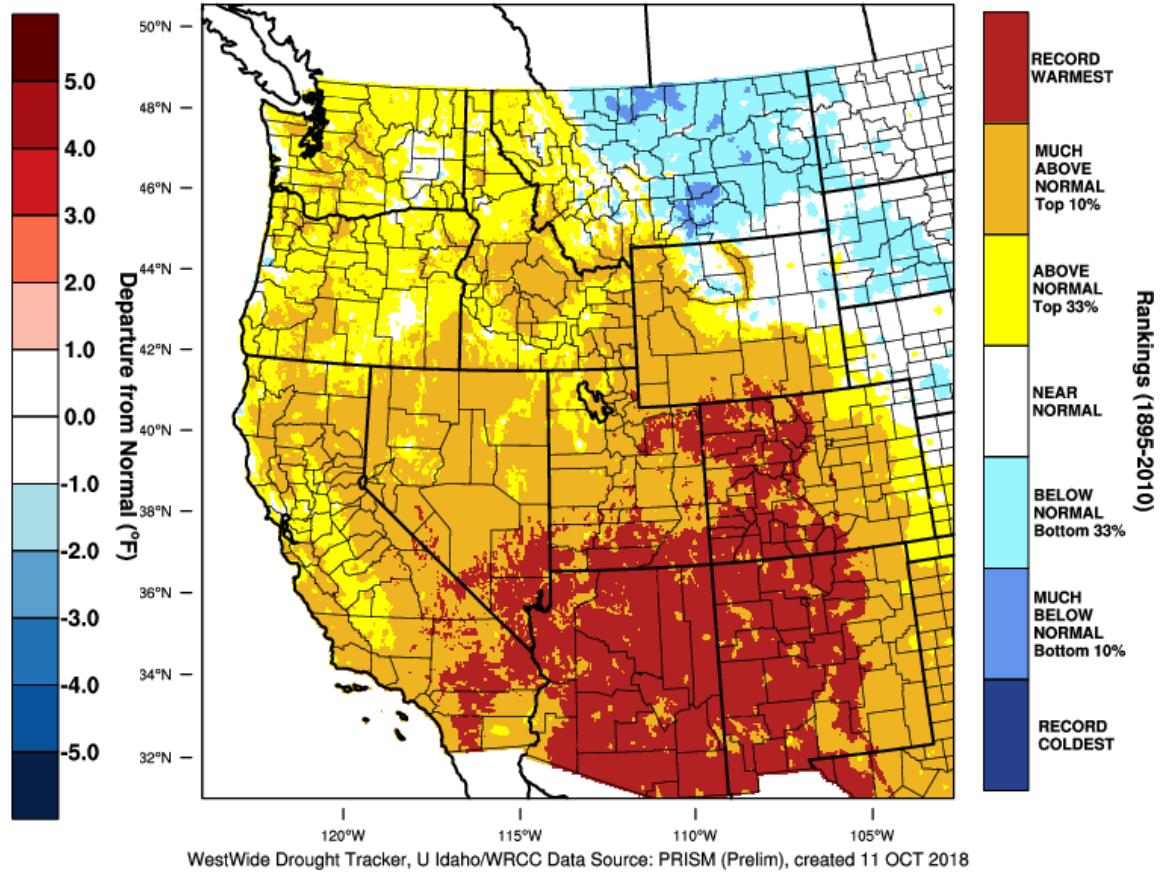


Western United States - Mean Temperature
 October-September 2018 Departure from 1981-2010 Normal



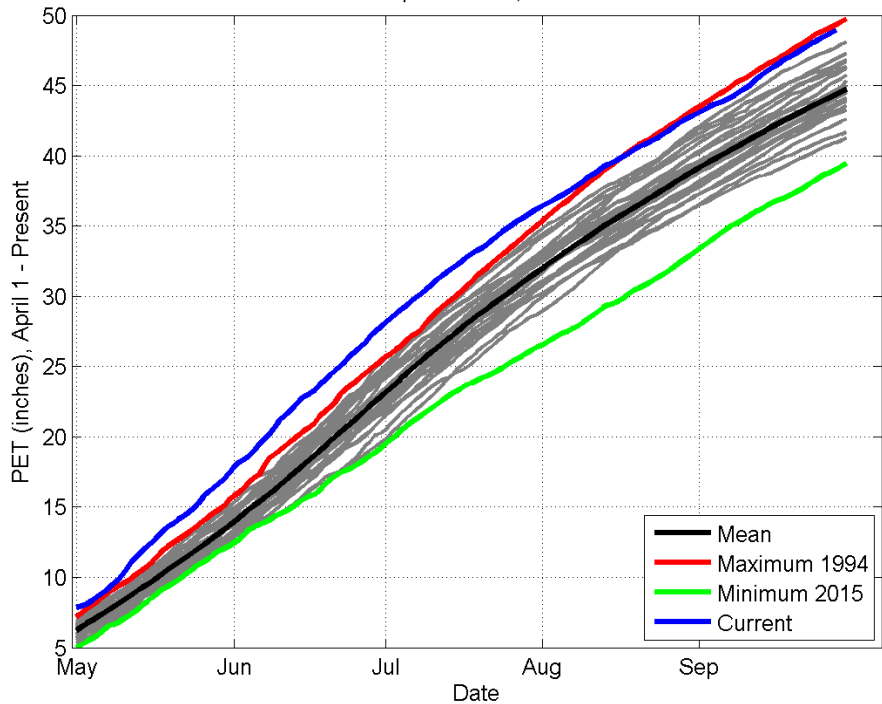
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 11 OCT 2018

Western United States - Mean Temperature
 October-September 2018 Percentile

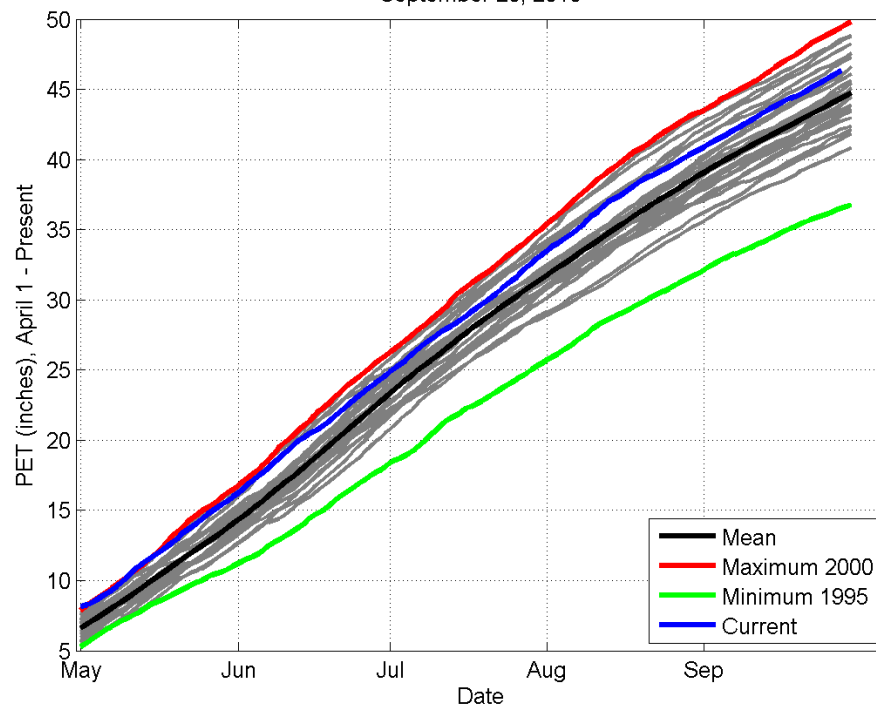


WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 11 OCT 2018

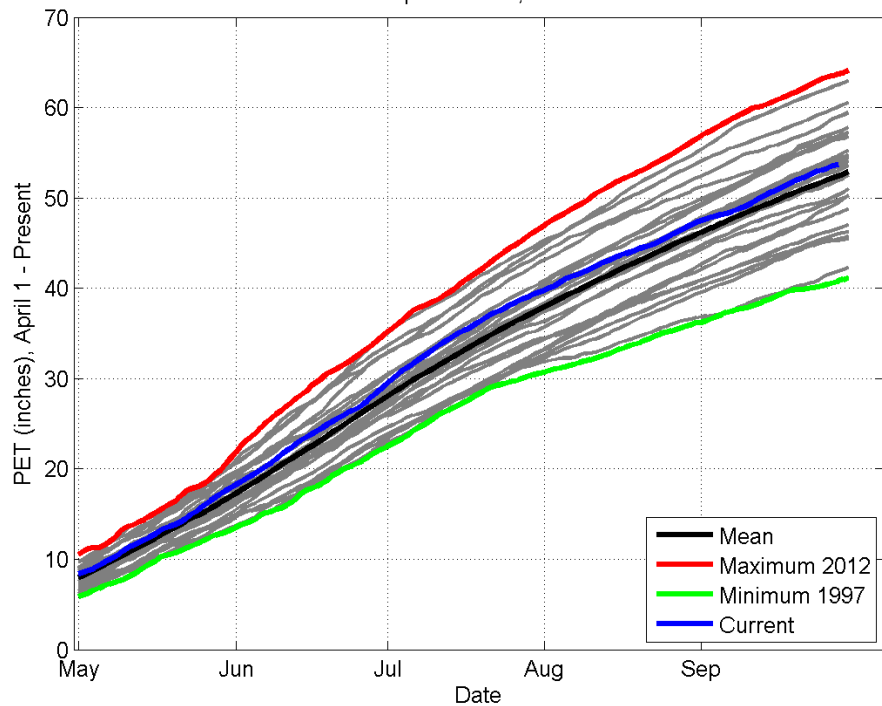
Olathe Growing Season Evaporative Demand
September 28, 2018



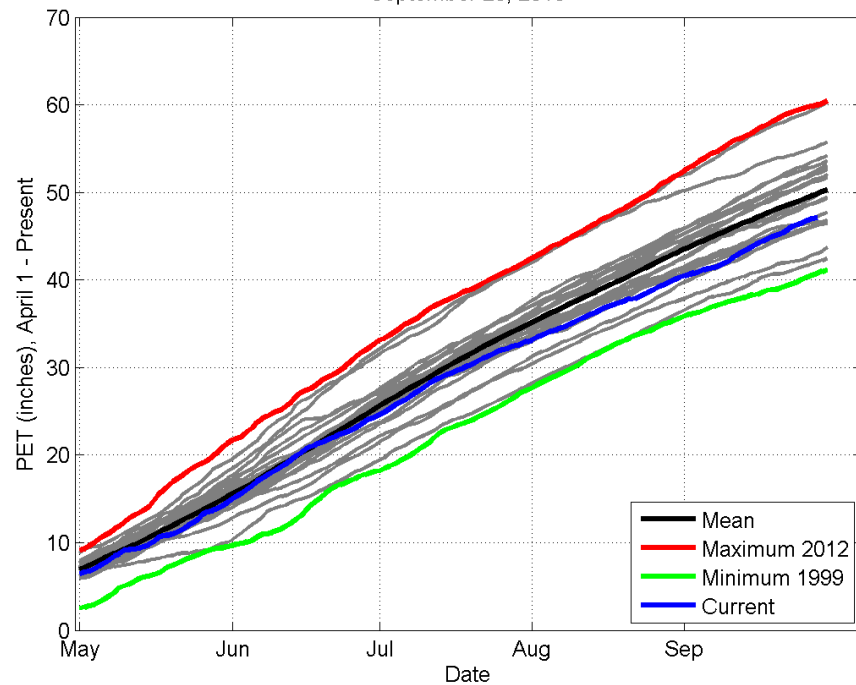
Cortez Growing Season Evaporative Demand
September 28, 2018

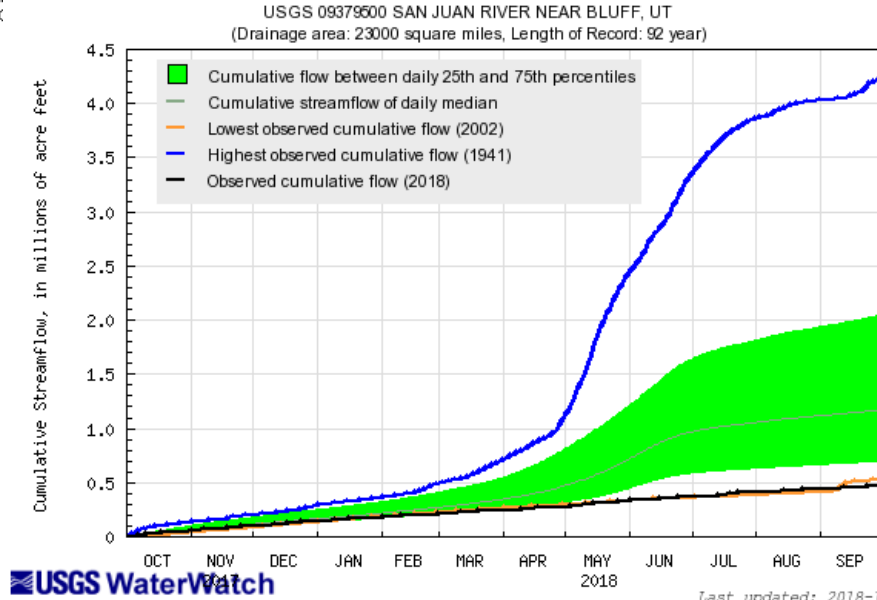
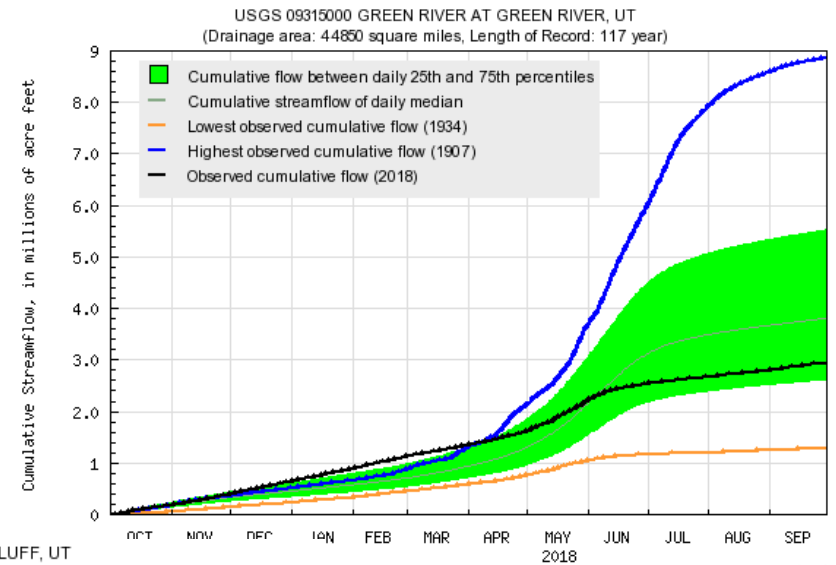
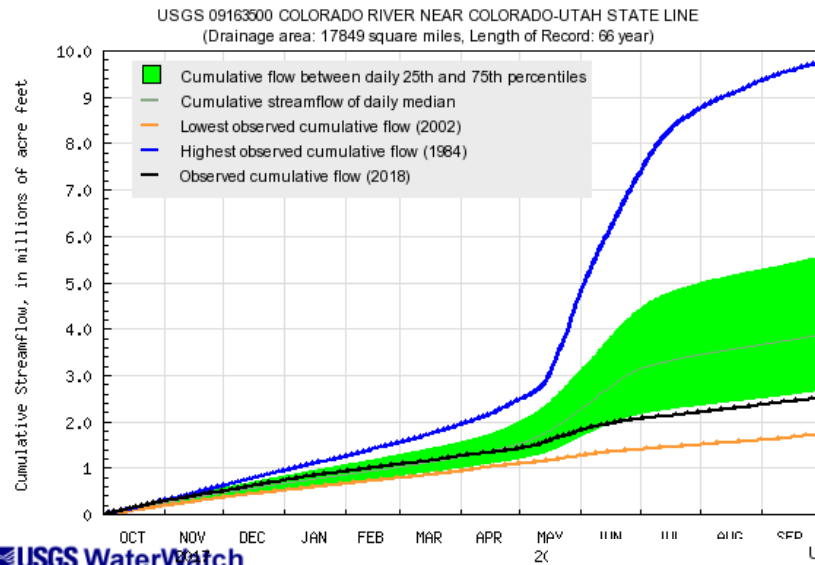


Avondale Growing Season Evaporative Demand
September 28, 2018



Holyoke Growing Season Evaporative Demand
September 28, 2018

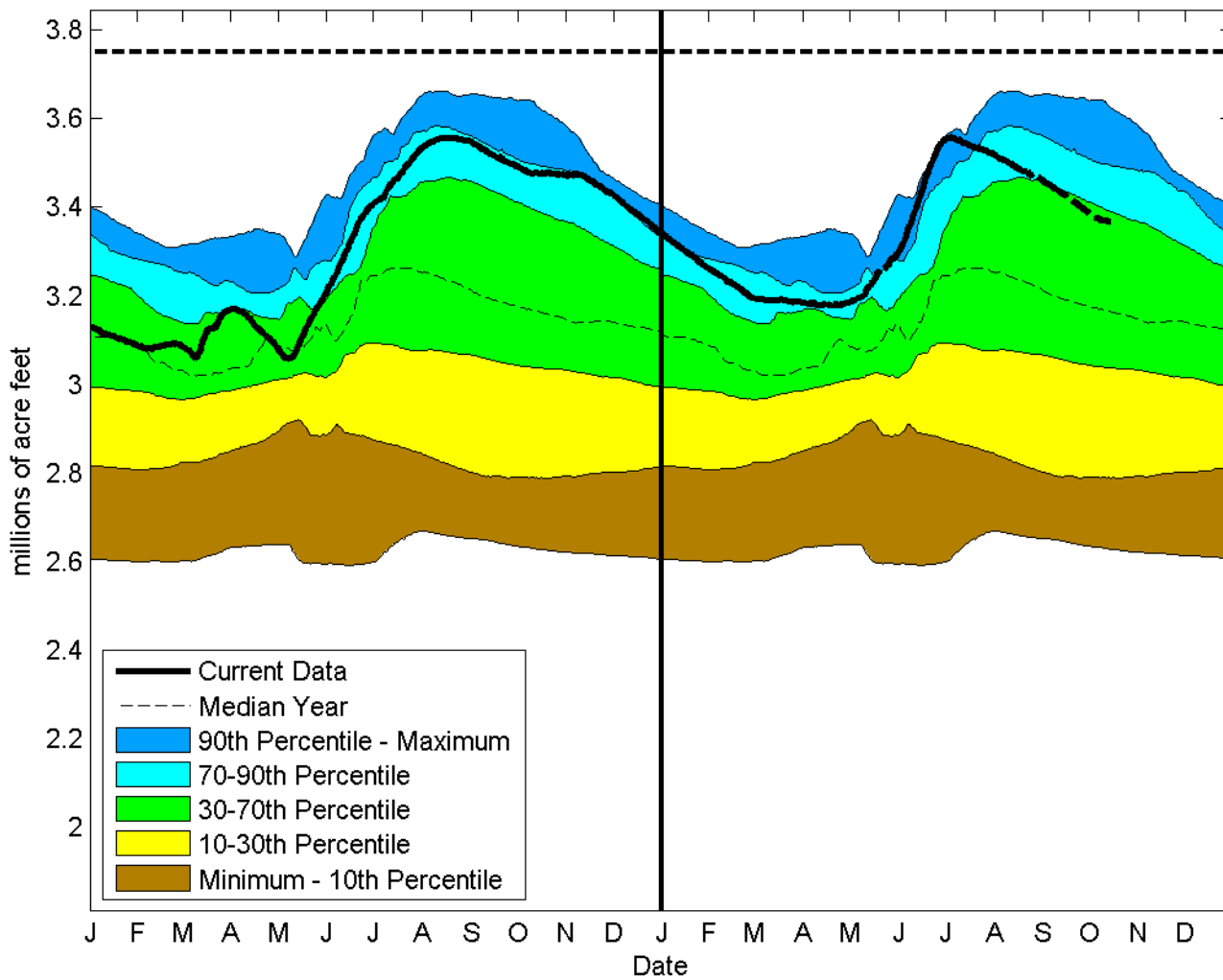




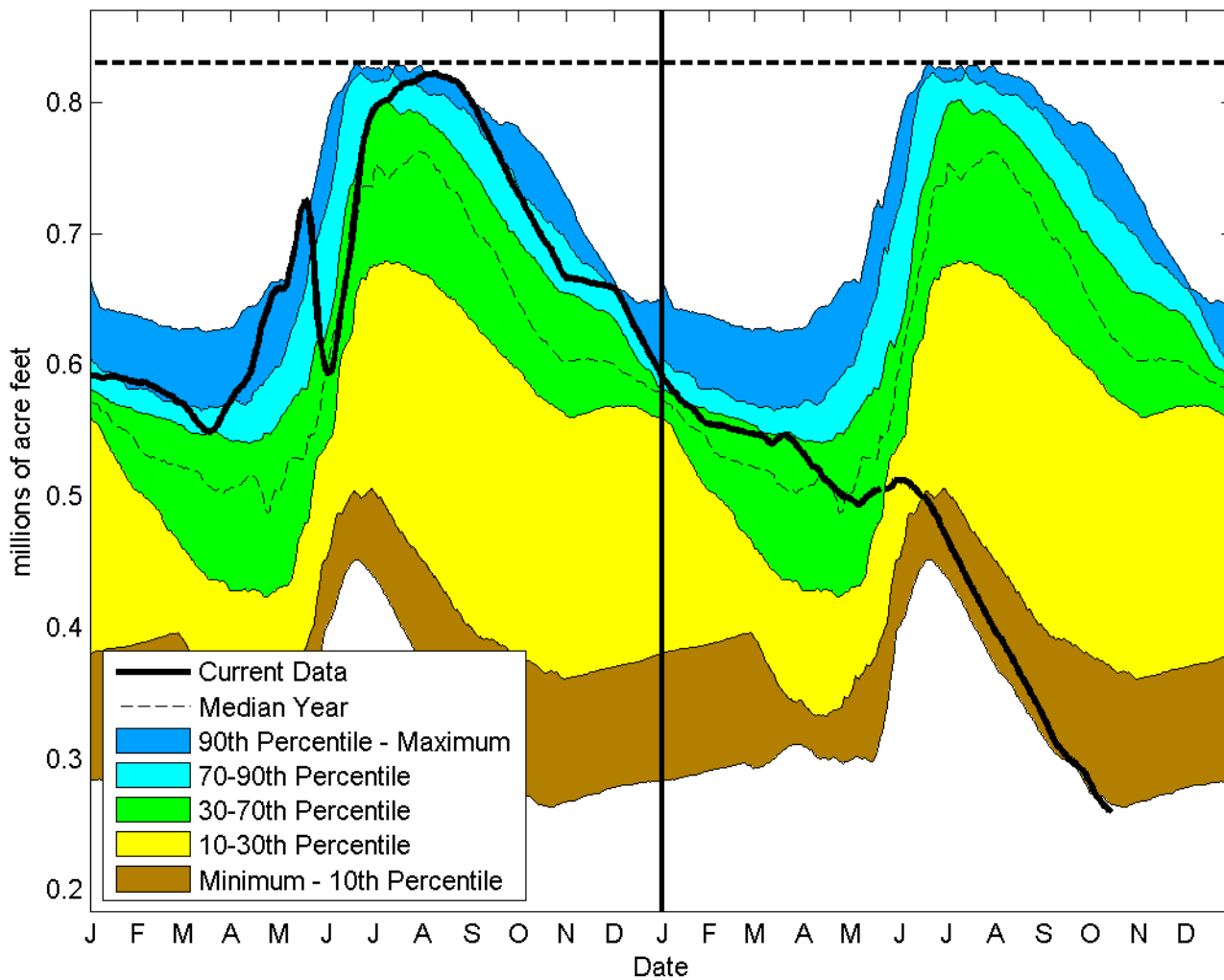
Last updated: 2018-10-15

Last updated: 2018-10-15

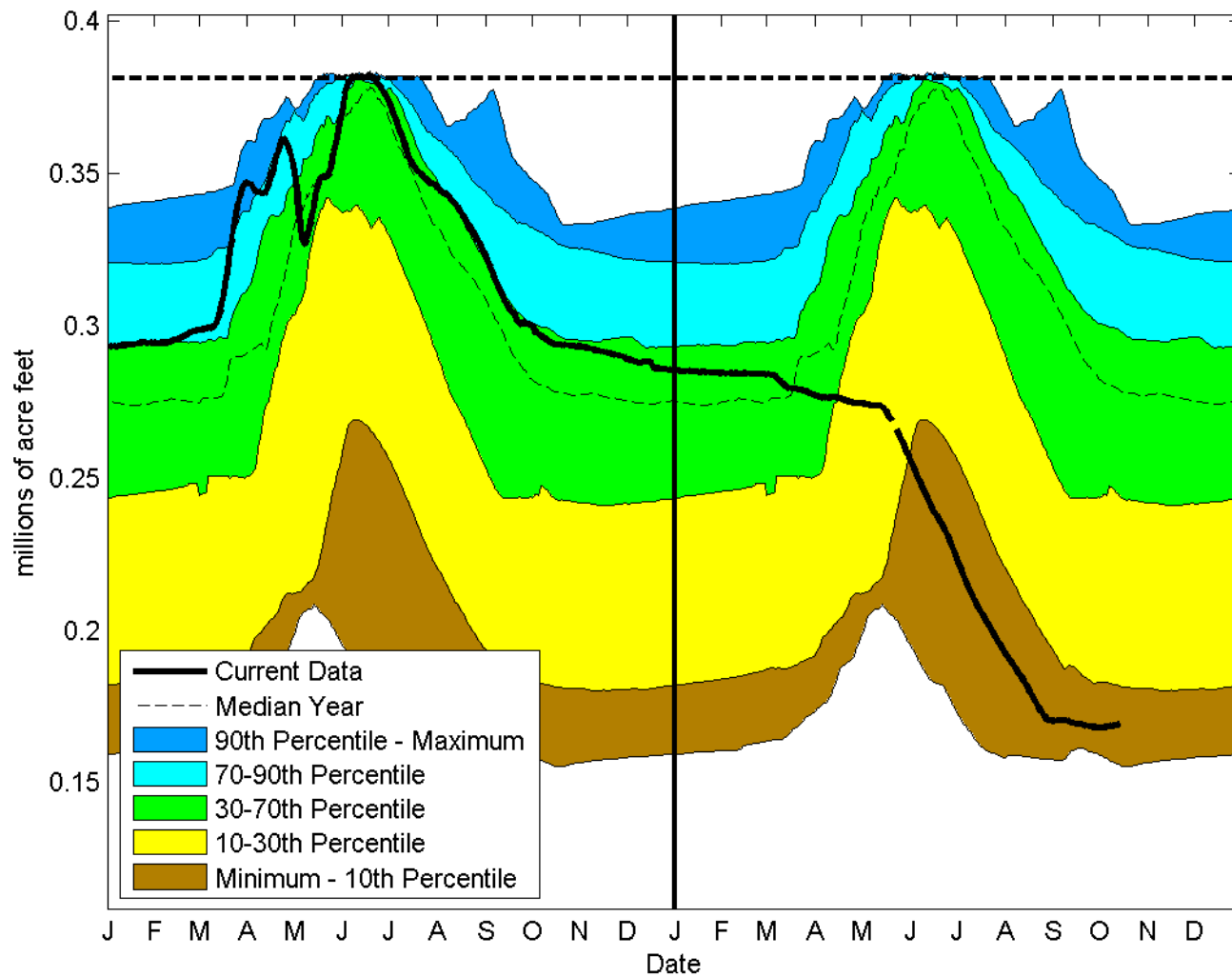
Flaming Gorge Reservoir Level 10/14/2018
106 Percent of 1985-2016 Average



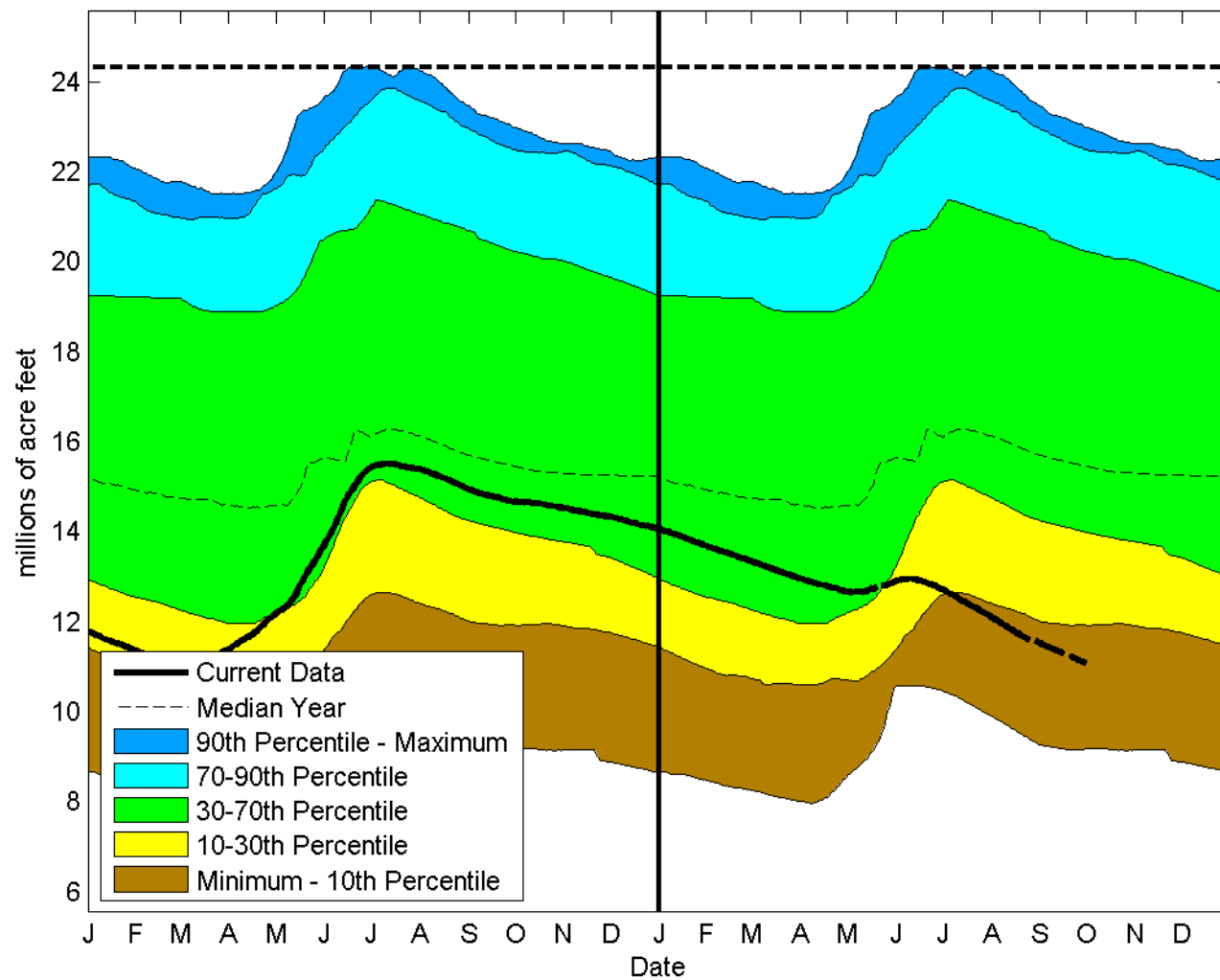
Blue Mesa Reservoir Level 10/14/2018
43 Percent of 1985-2016 Average



McPhee Reservoir Level 10/14/2018
64 Percent of 1987-2016 Average



Lake Powell Reservoir Level 09/30/2018
66 Percent of 1985-2016 Average



Fall/Winter 2018-2019 Seasonal Outlook

Becky Bolinger

October 16, 2018

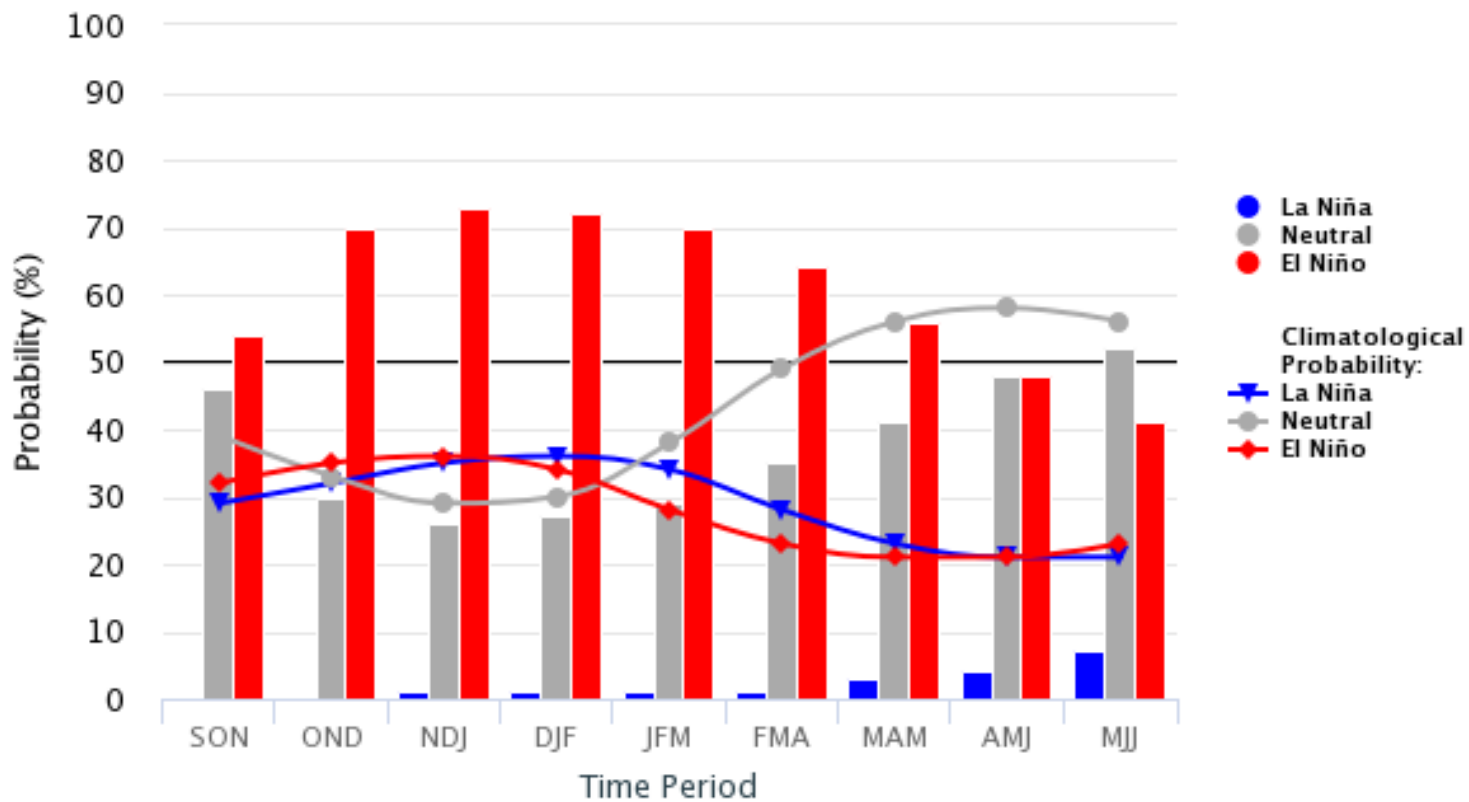


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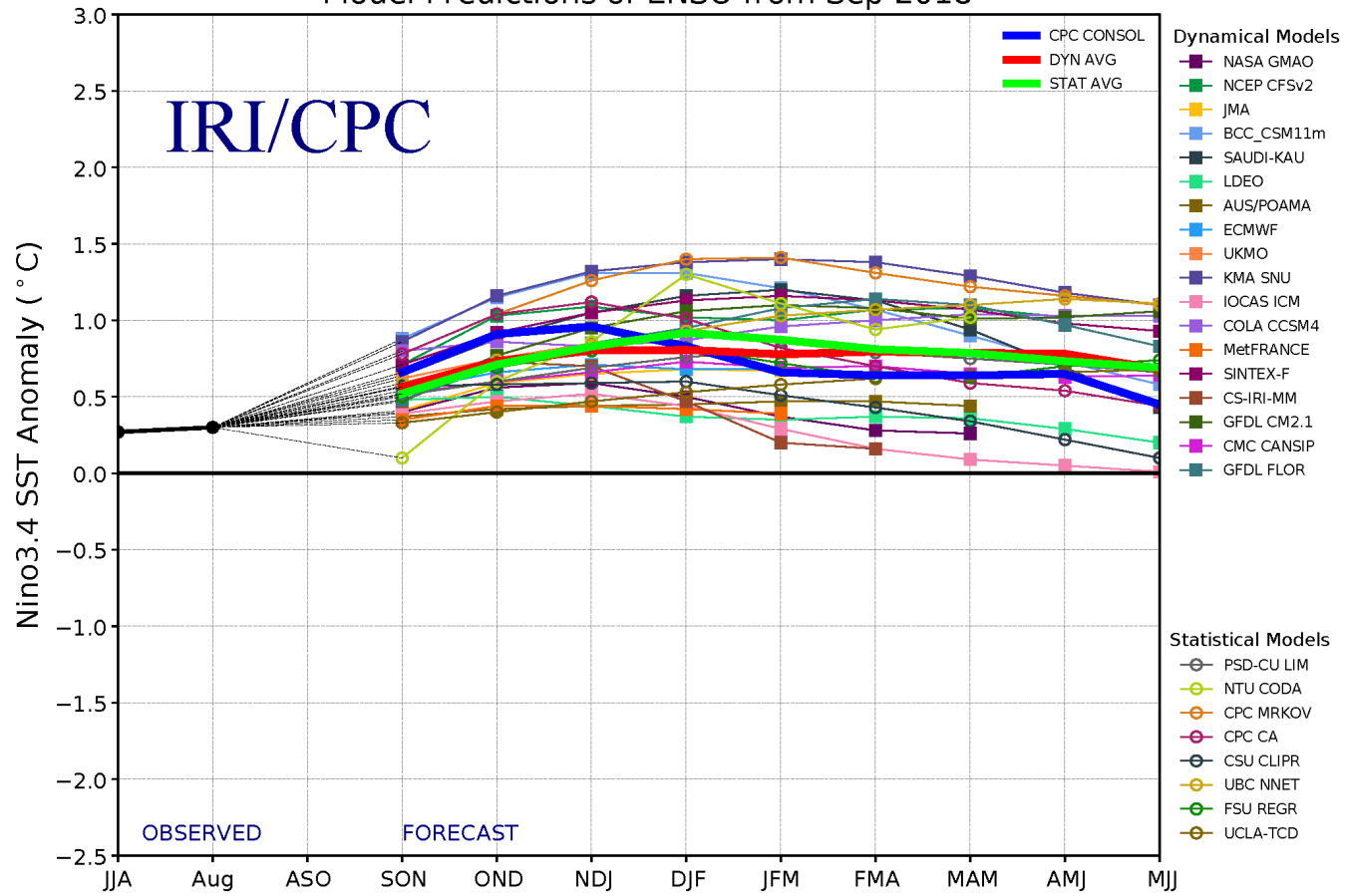
Early-Oct CPC/IRI Official Probabilistic ENSO Forecasts

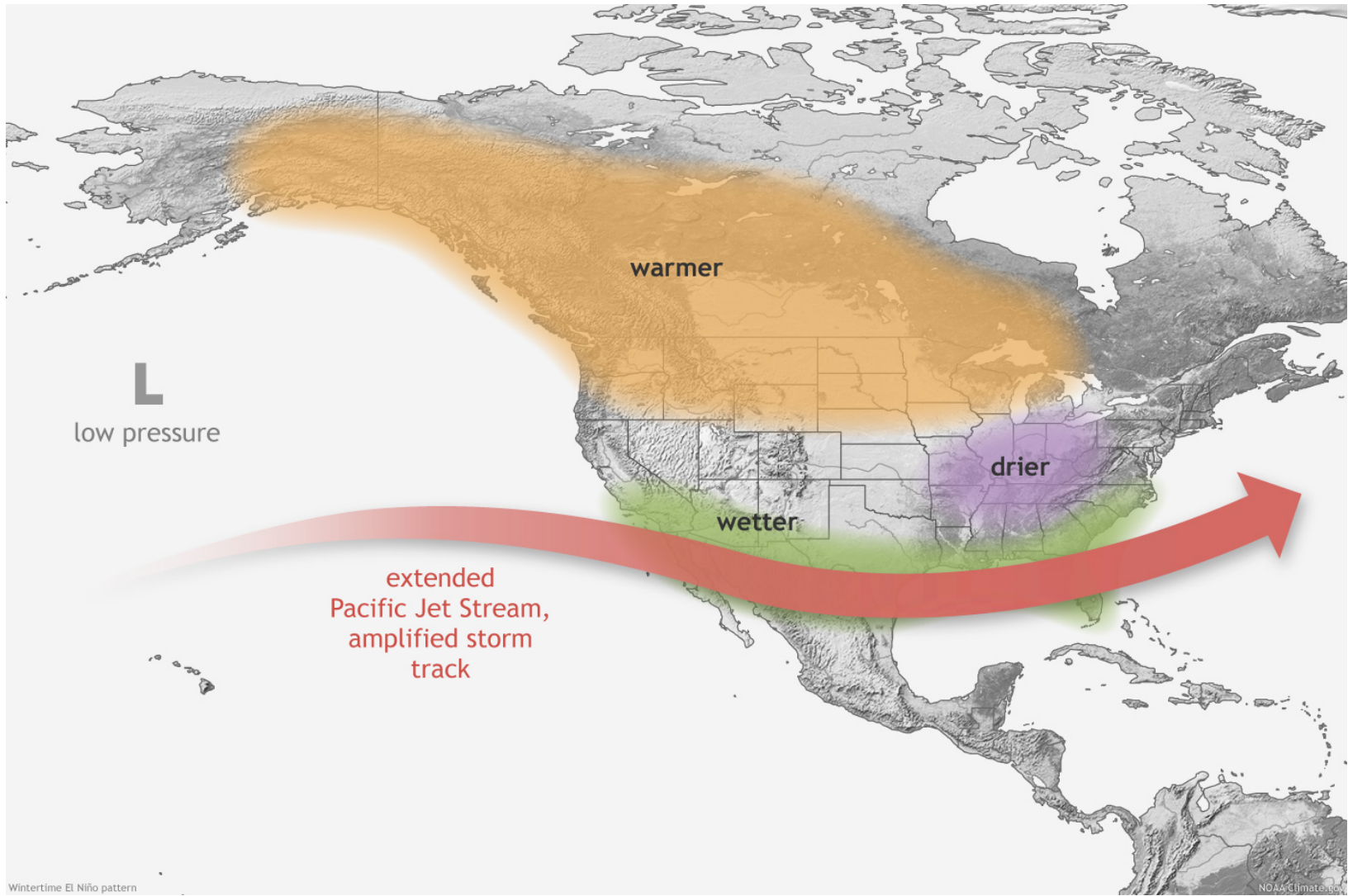
ENSO state based on NINO3.4 SST Anomaly

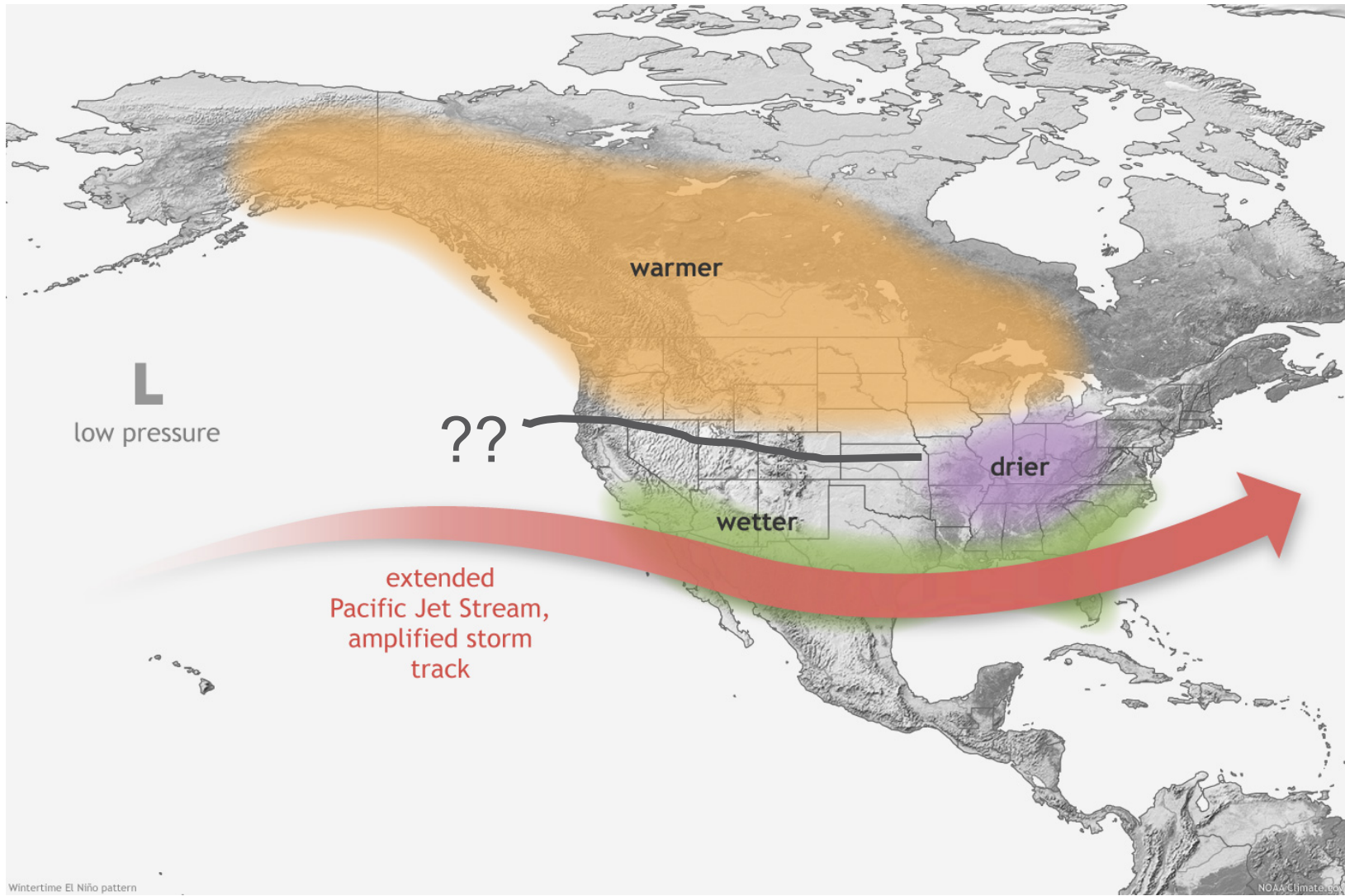
Neutral ENSO: -0.5 °C to 0.5 °C



Model Predictions of ENSO from Sep 2018





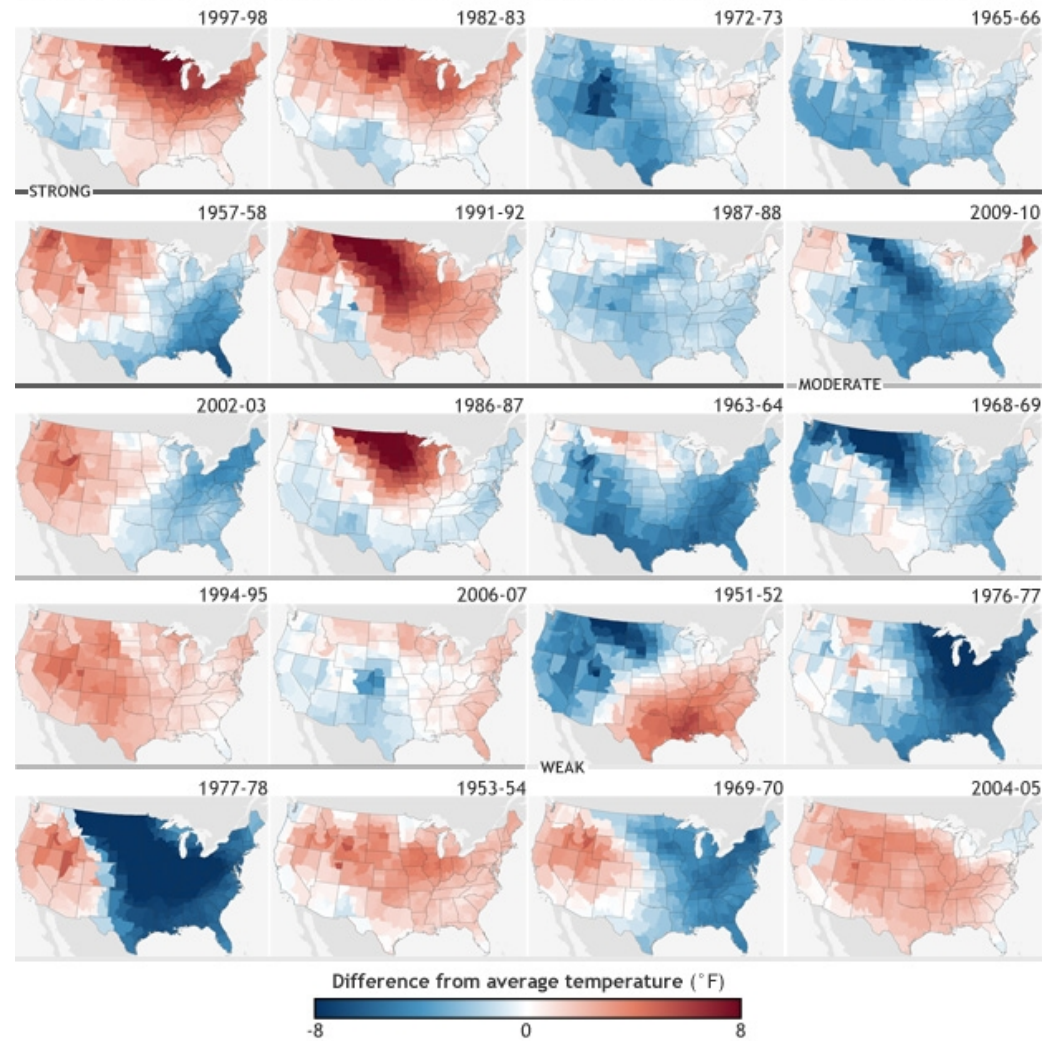


Wintertime El Niño pattern

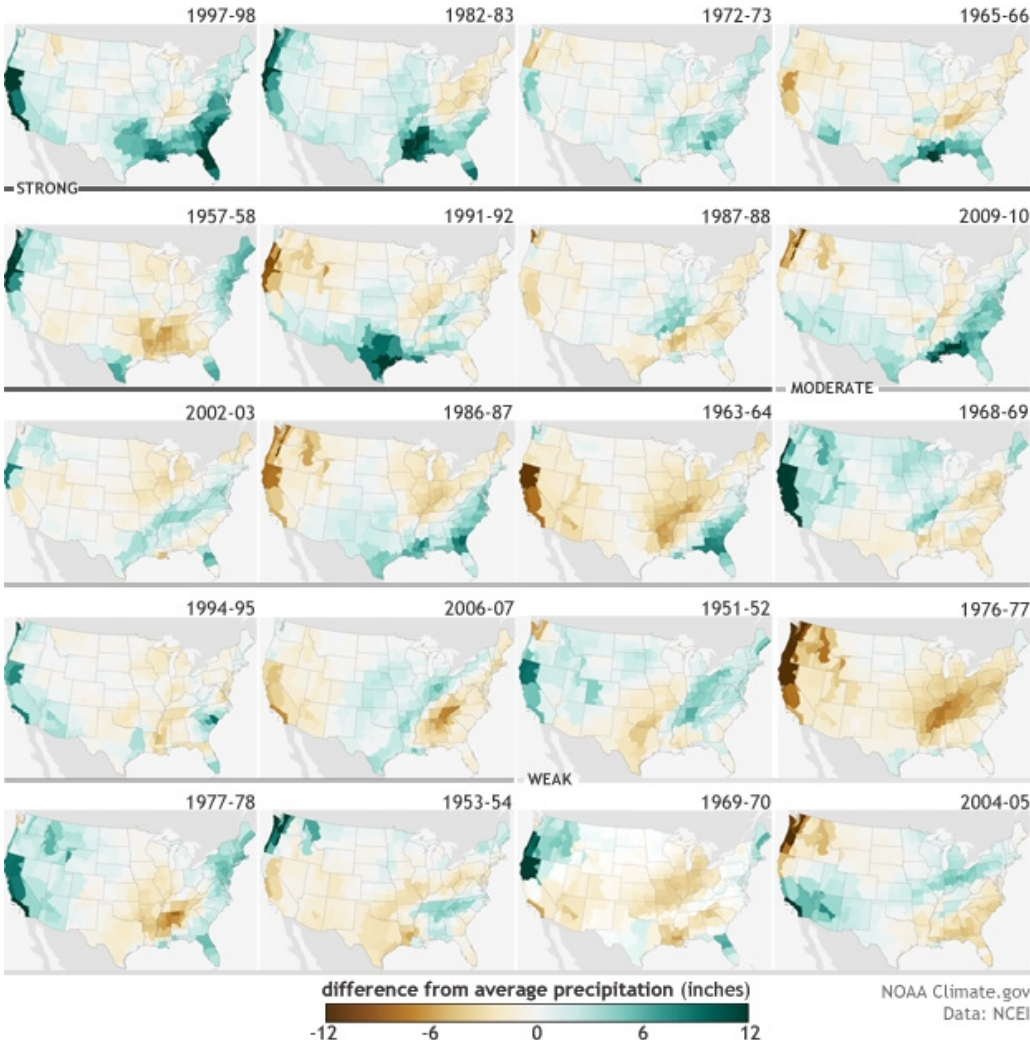
NOAA Climate.gov



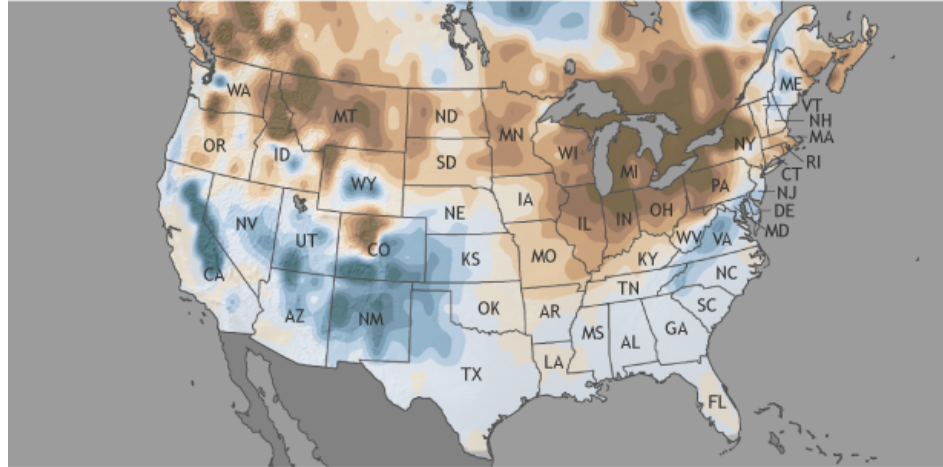
Winter (December-February) temperature during strong, moderate, and weak El Niños since 1950



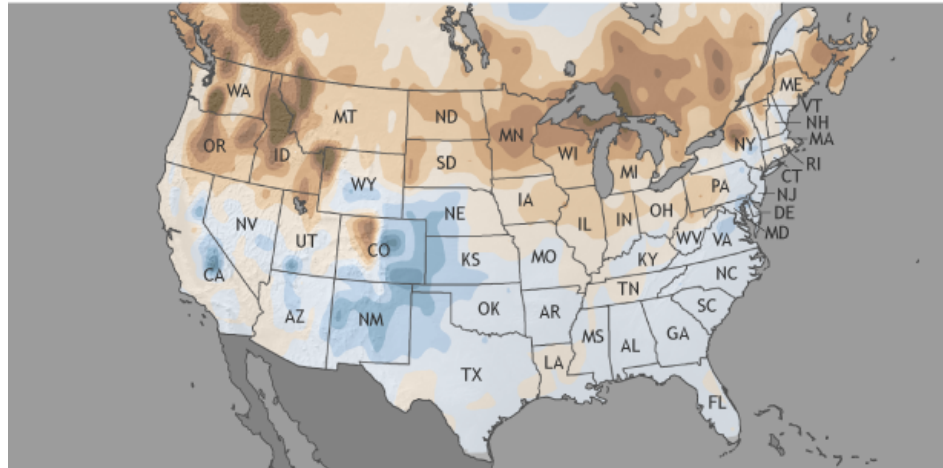
Winter (December-February) precipitation during strong, moderate, and weak El Niños since 1950



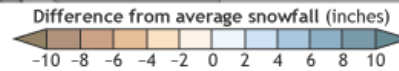
Snow during El Niño winters (1950–2009)
10 strongest events



All events



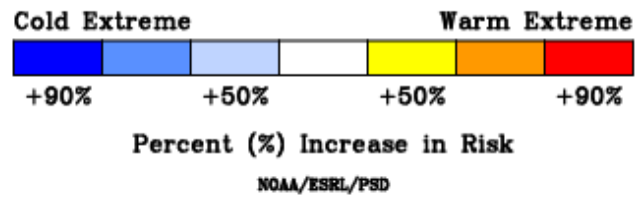
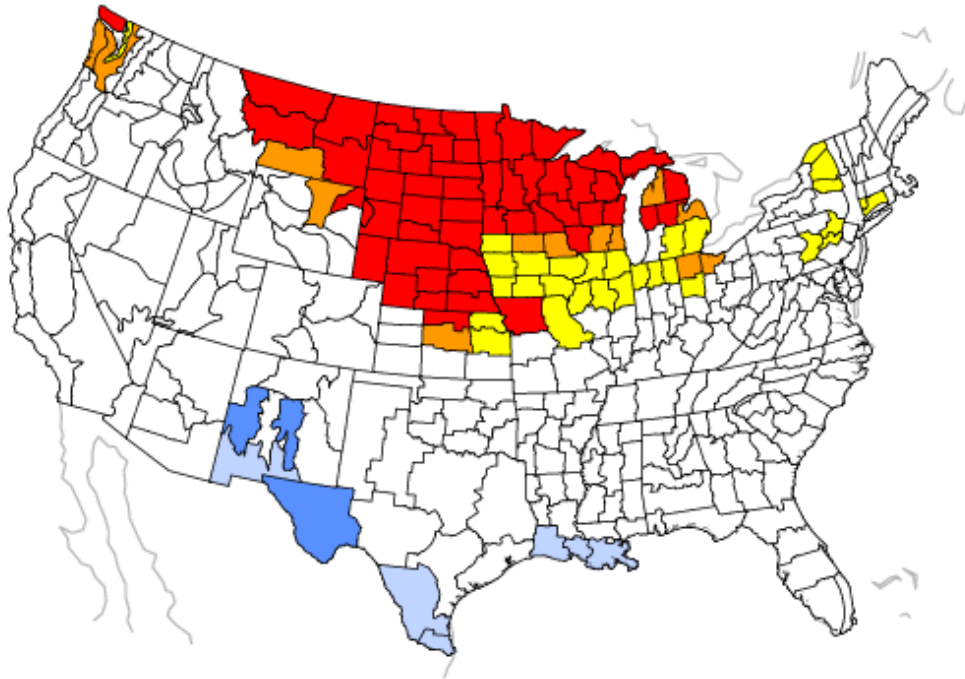
October–April
compared to 1950–2009



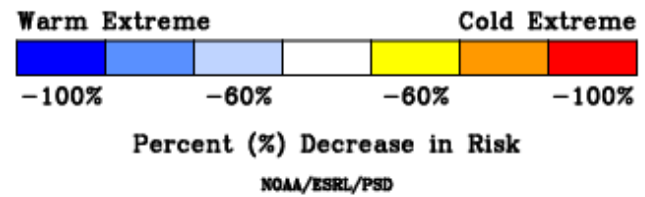
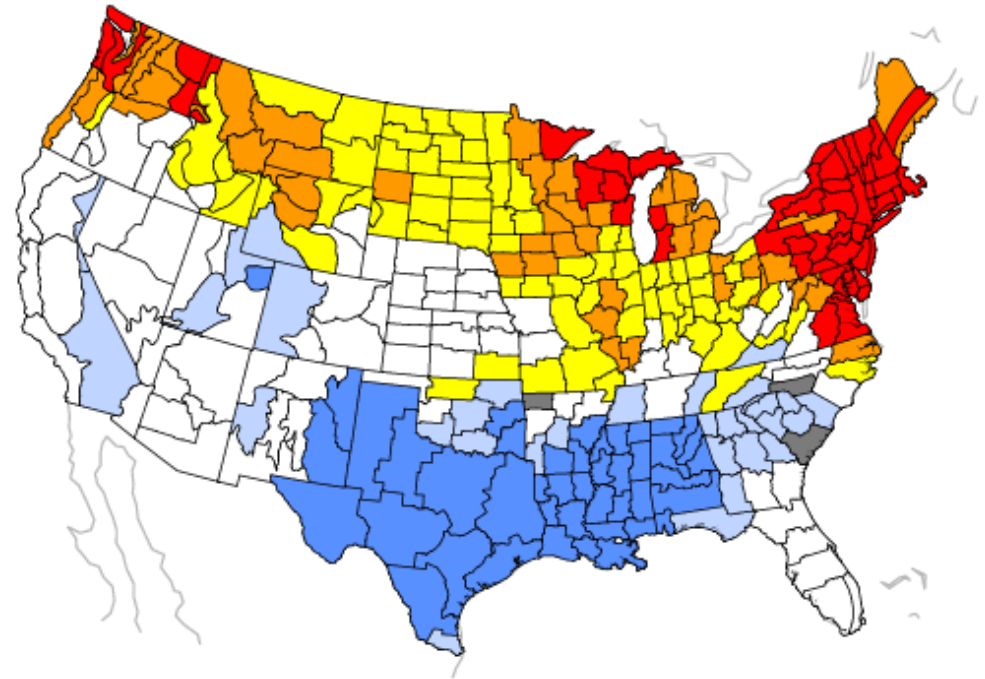
NOAA Climate.gov
Data: Rutgers/CPC



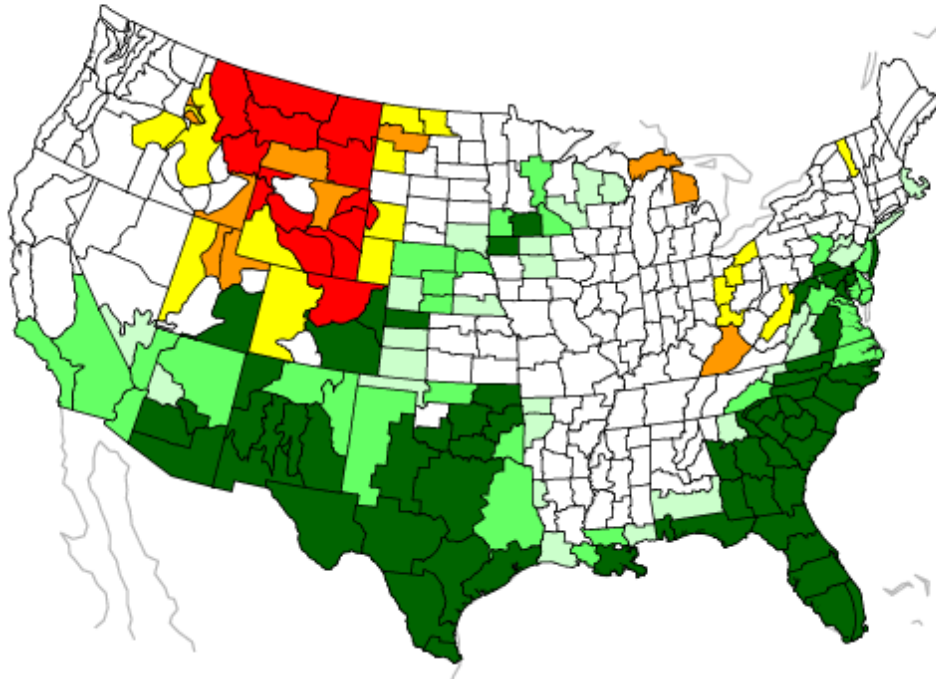
NDJ Temperature During El Nino
Increased Risk of Warm or Cold Extremes



NDJ Temperature During El Nino
Decreased Risk of Warm or Cold Extremes



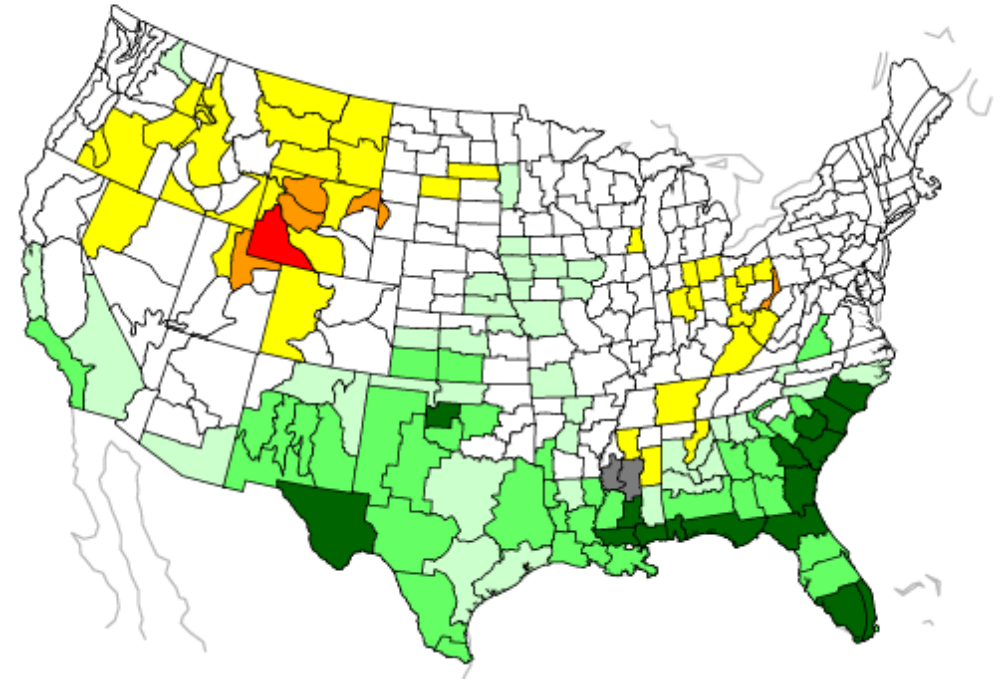
NDJ Precipitation During El Nino
Increased Risk of Wet or Dry Extremes



Percent (%) Increase in Risk

NOAA/ESRL/PSD

NDJ Precipitation During El Nino
Decreased Risk of Wet or Dry Extremes

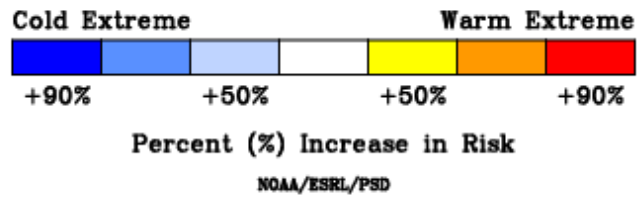
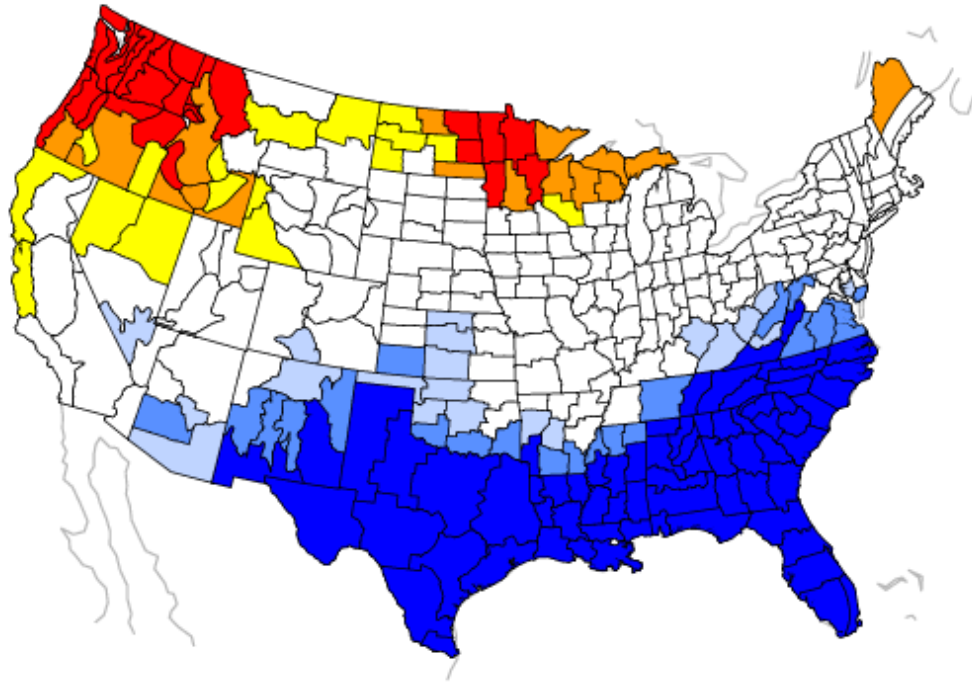


Percent (%) Decrease in Risk

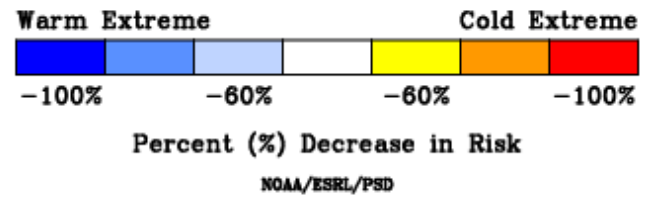
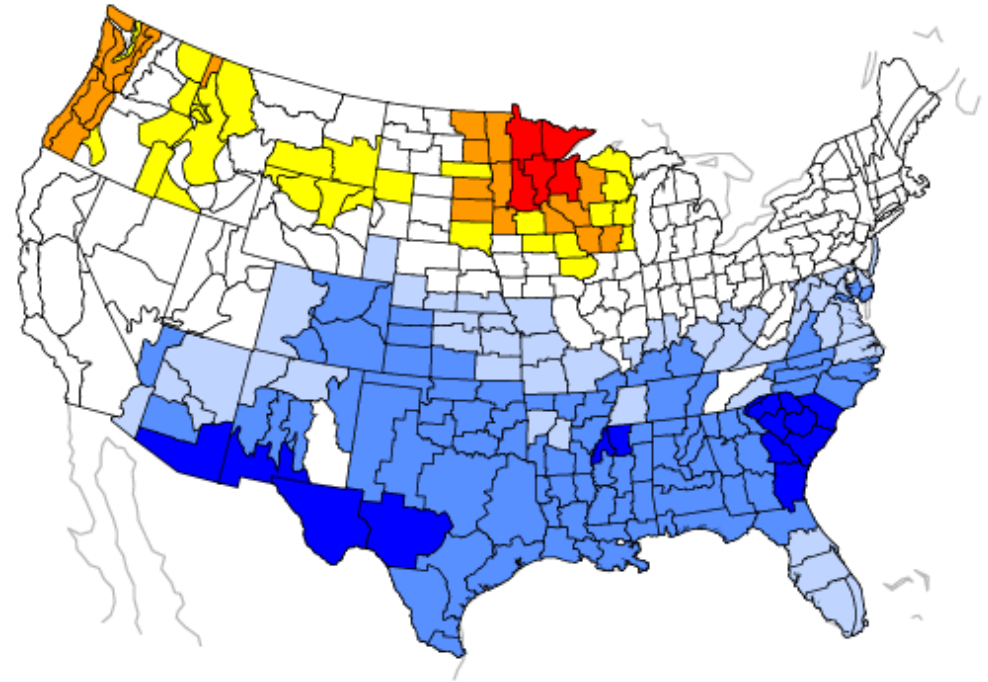
NOAA/ESRL/PSD



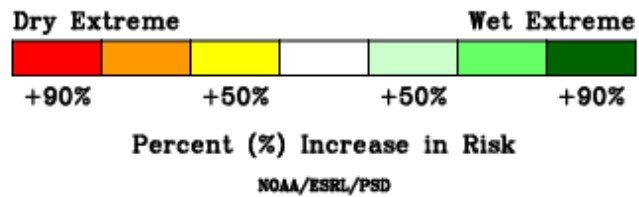
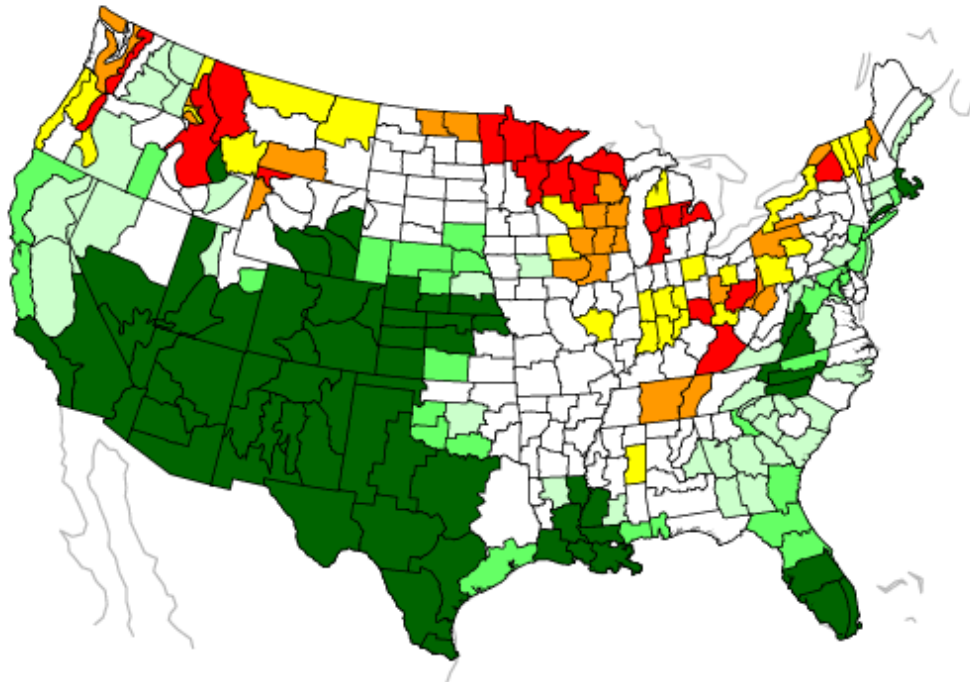
FMA Temperature During El Nino
Increased Risk of Warm or Cold Extremes



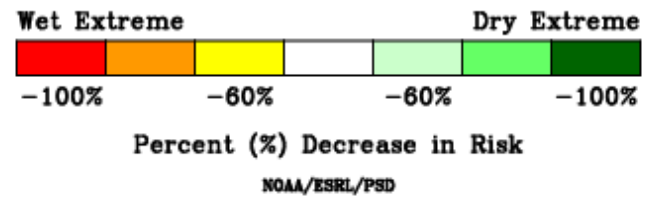
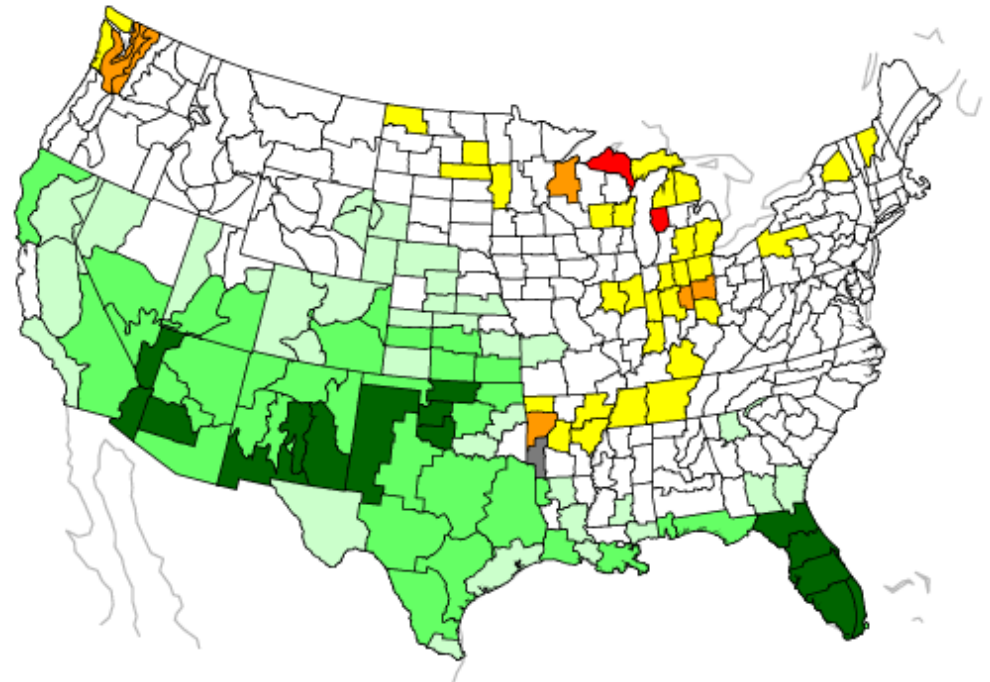
FMA Temperature During El Nino
Decreased Risk of Warm or Cold Extremes



FMA Precipitation During El Nino
Increased Risk of Wet or Dry Extremes



FMA Precipitation During El Nino
Decreased Risk of Wet or Dry Extremes



Key Messages

- A weak-to-moderate El Niño is likely to form in the next couple months
- General drier to the north, wetter to the south pattern... but where will the dividing line end up?
- El Niño is not good news for the northern CO mountains snow season. But a strong El Niño could be good for the Four Corners
- An increased risk of wet extremes and decreased risk of dry extremes in the southern half of the IMW could mean drought relief is on the way
- Expect warmer than average temperatures still, but maybe not quite as warm
- And maybe we can cross our fingers for a good spring blizzard!



<http://climate.colostate.edu/~drought>

Thank you



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