

Colorado Drought – Where are we now, where are we headed, and how can we partner?

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Drought Workshop
La Junta, CO
August 9, 2018



Colorado State University



Current Drought Status

Current USDM

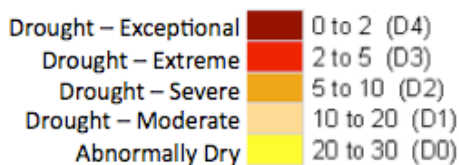
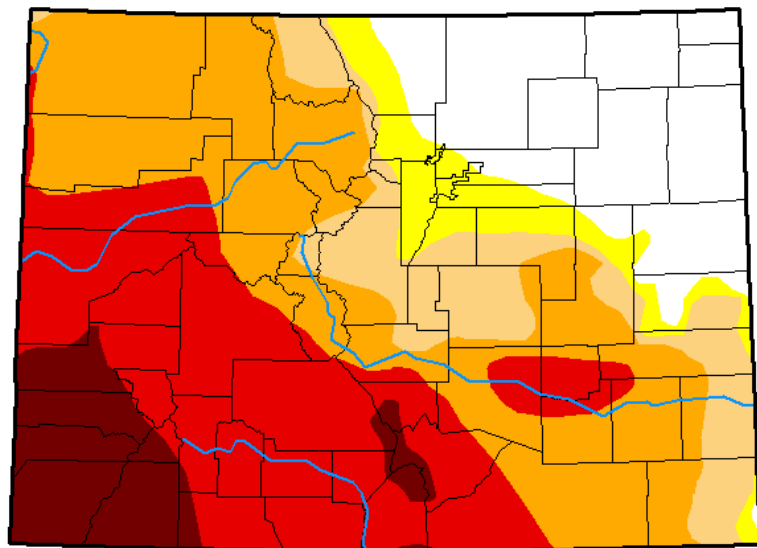
How did we get here?

Impacts



U.S. Drought Monitor Colorado

August 7, 2018
(Released Thursday, Aug. 9, 2018)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	18.20	81.80	75.86	64.65	35.10	8.50
Last Week 07-31-2018	17.95	82.05	76.56	66.29	43.53	10.17
3 Months Ago 05-08-2018	18.02	81.98	67.98	51.57	30.89	7.40
Start of Calendar Year 01-02-2018	6.57	93.43	33.53	7.27	0.00	0.00
Start of Water Year 09-26-2017	67.63	32.37	3.72	0.00	0.00	0.00
One Year Ago 08-08-2017	82.69	17.31	0.00	0.00	0.00	0.00

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

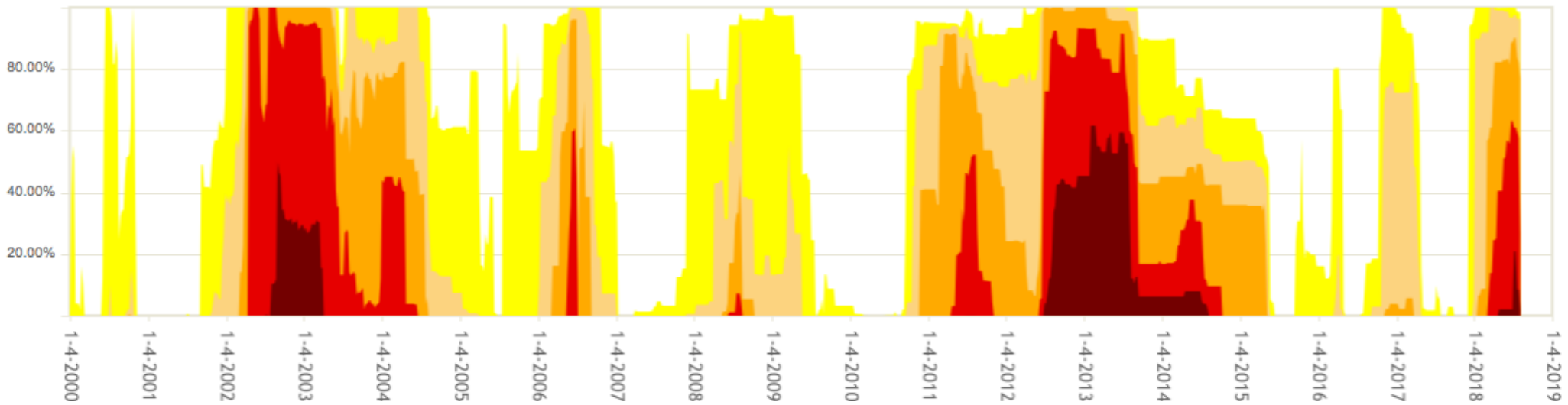
Richard Tinker
CPC/NOAA/NWS/NCEP



<http://droughtmonitor.unl.edu/>



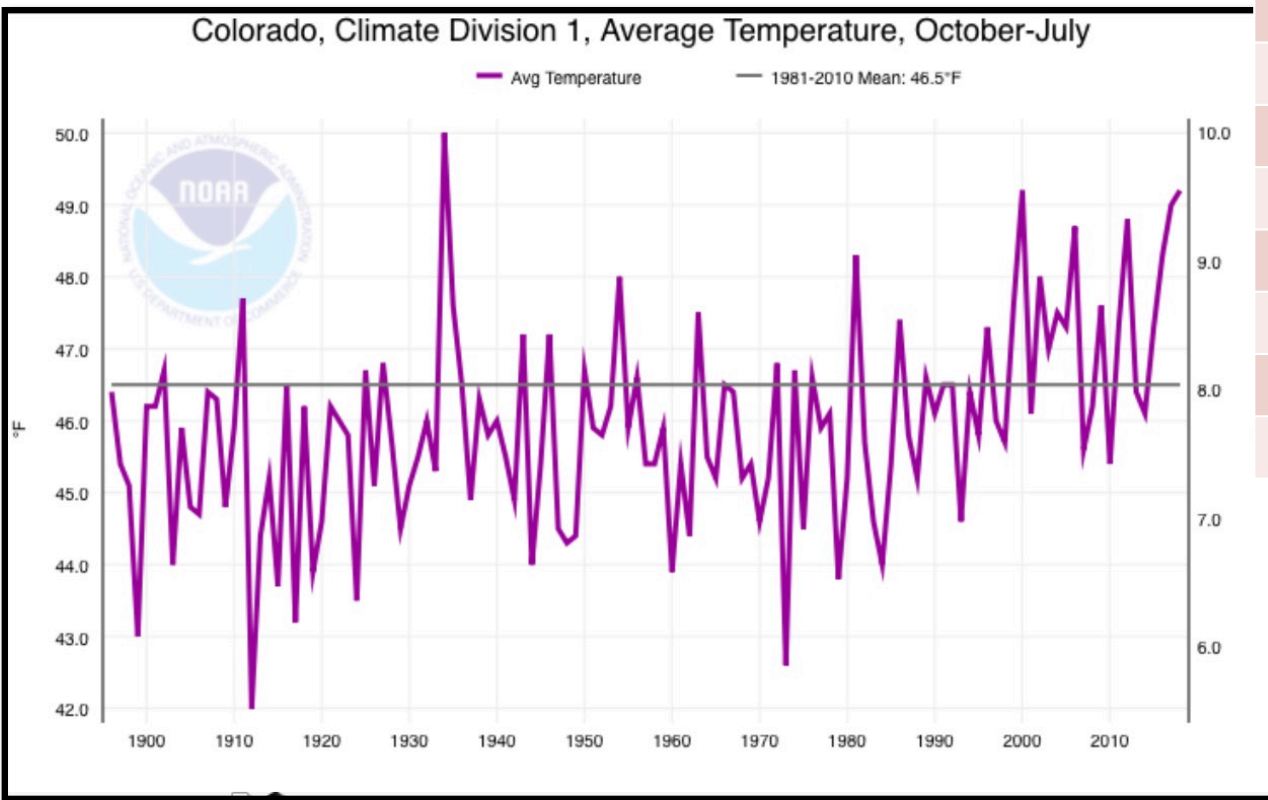
110200 (Upper Arkansas) Percent Area



- Drought – Exceptional 0 to 2 (D4)
- Drought – Extreme 2 to 5 (D3)
- Drought – Severe 5 to 10 (D2)
- Drought – Moderate 10 to 20 (D1)
- Abnormally Dry 20 to 30 (D0)

October-July ranked 3rd warmest, +2.7°F

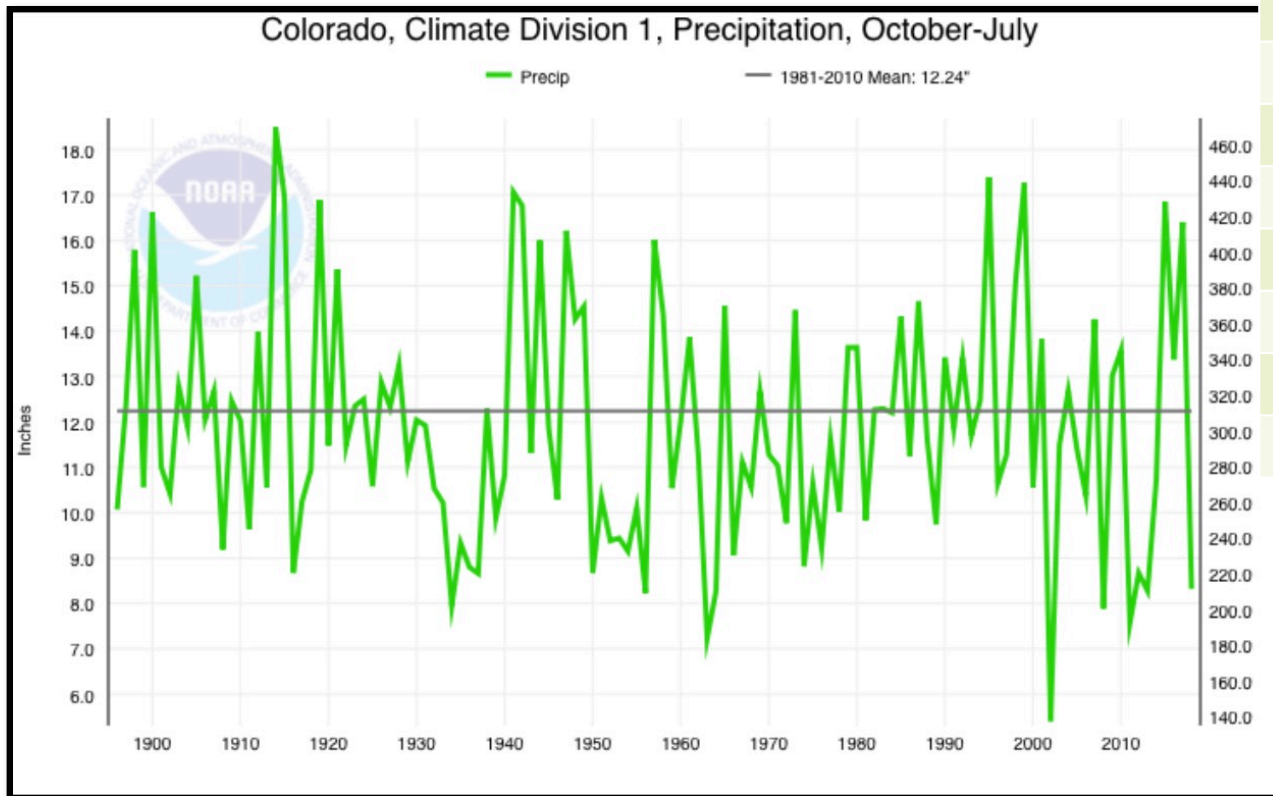
Colorado, Climate Division 1, Average Temperature, October-July



Month	Anomaly	Rank
October	+0.5°F	57 th warmest
November	+6.0°F	3 rd warmest
December	+3.2°F	19 th warmest
January	+3.3°F	16 th warmest
February	0.0°F	near average
March	+2.7°F	16 th warmest
April	-0.8°F	53 rd coolest
May	+5.6°F	2 nd warmest
June	+5.0°F	4 th warmest
July	+1.3°F	21 st warmest



October-July ranked 9th driest, -3.92"

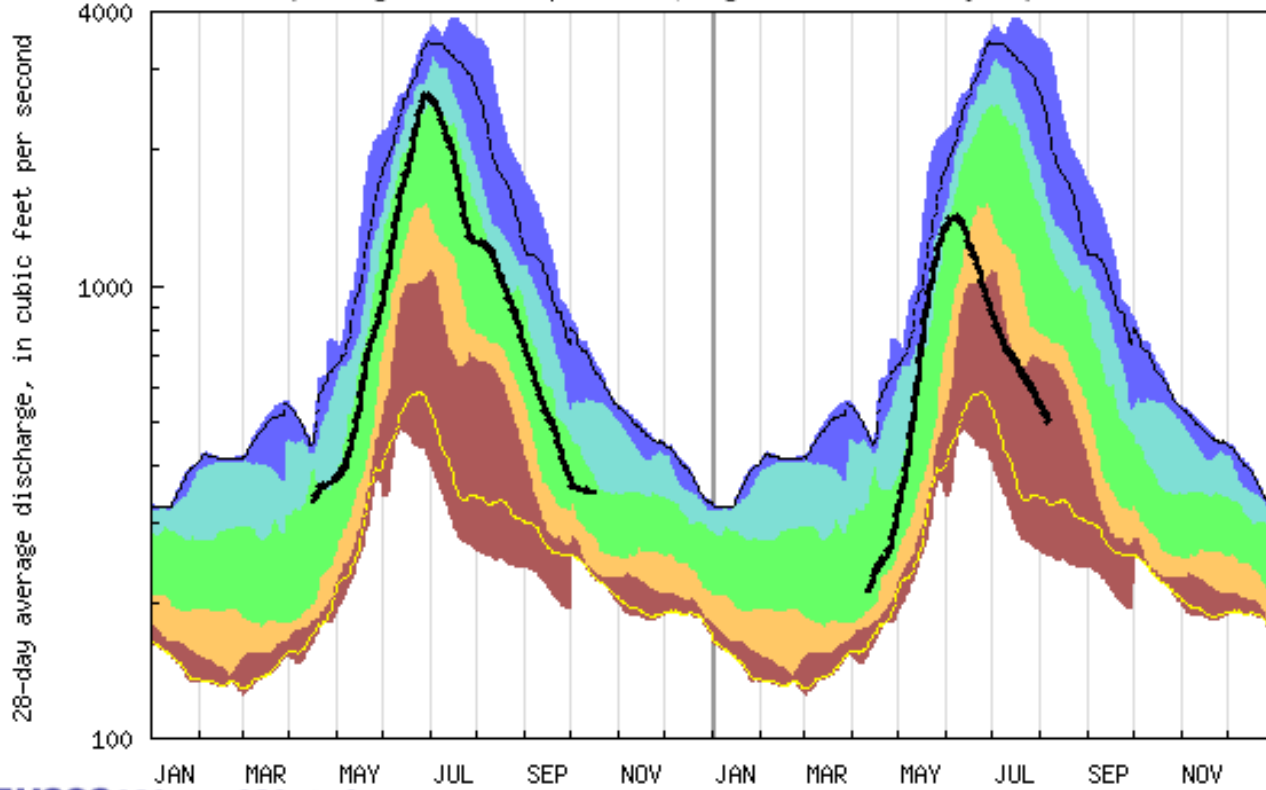


Month	Anomaly	Rank
October	-0.58"	36 th driest
November	-0.41"	28 th driest
December	-0.43"	8 th driest
January	-0.19"	37 th driest
February	-0.14"	46 th driest
March	-0.76"	11 th driest
April	-0.58"	32 nd driest
May	-0.75"	31 st driest
June	-0.93"	24 th driest
July	+0.84"	22 nd wettest





USGS 07091200 ARKANSAS RIVER NEAR NATHROP, CO
 (Drainage area: 1055 square miles, length of record: 22 - 47 years)



USGS WaterWatch

2017

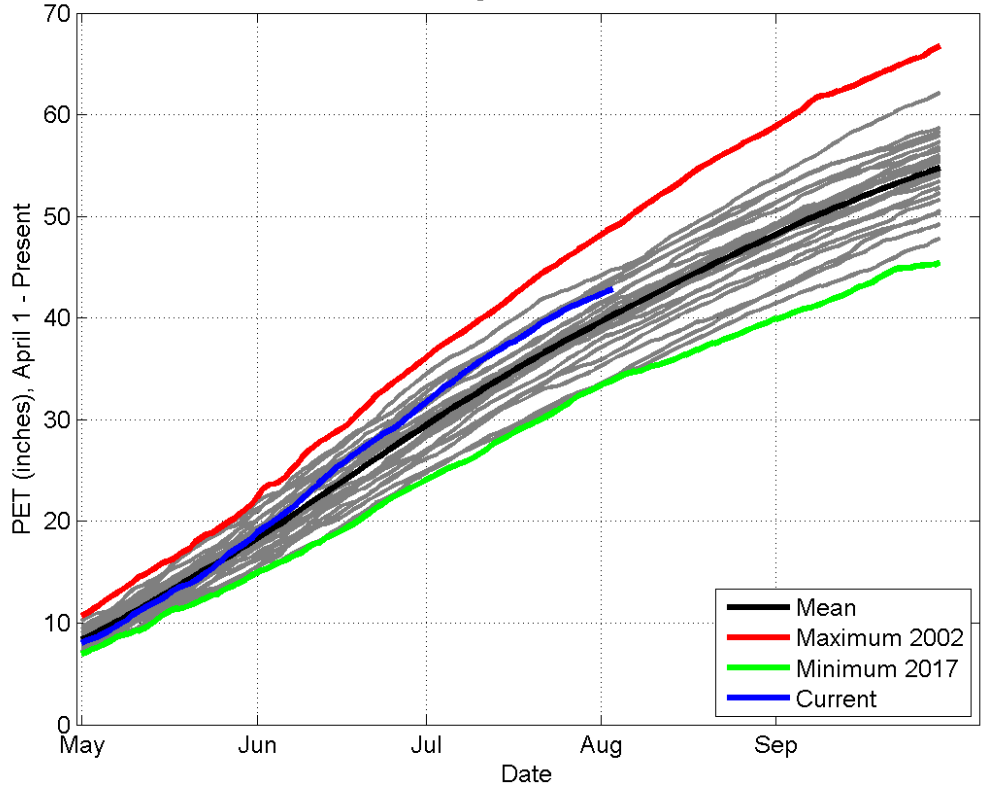
2018

Last updated: 2018-08-08

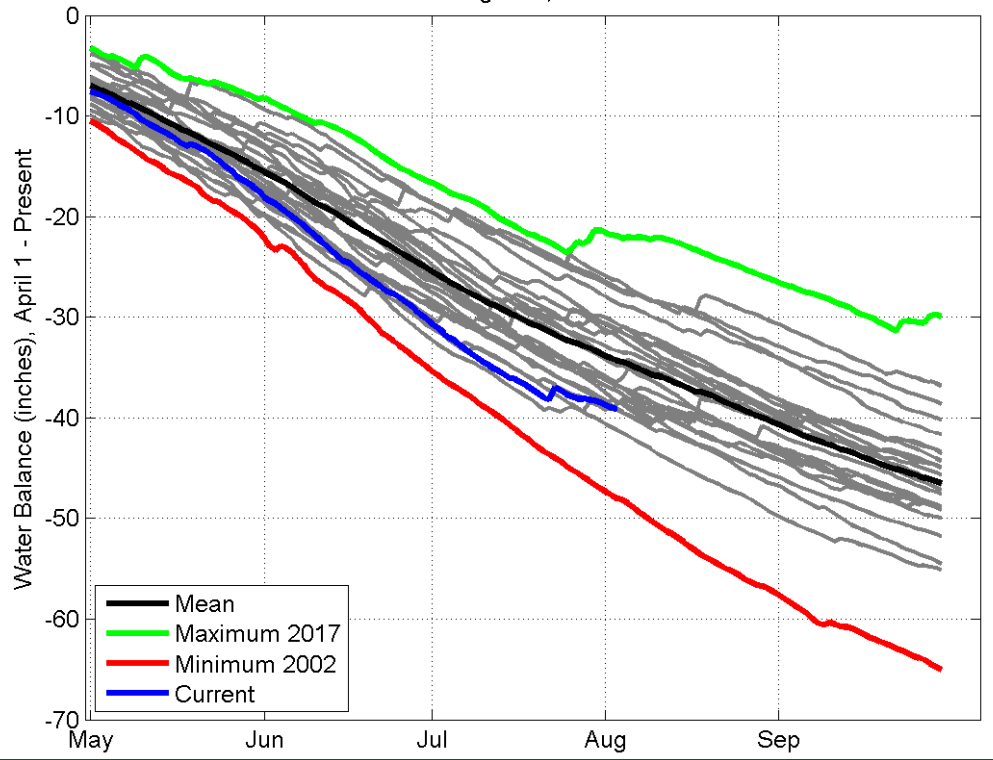
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest
Much below Normal		Below normal	Normal	Above normal		Much above normal
						Flow



Rocky Ford Growing Season Evaporative Demand
August 3, 2018



Rocky Ford Growing Season Water Balance
August 3, 2018



coagmet.colostate.edu

Drought Impact Reporter

droughtreporter.unl.edu

Colorado | 07-08-2018 - 08-08-2018

Impact Counts | Impacts List | Page 1/3 | Report Counts | Reports List | Page 1/5

County Impacts | Colorado **30**

Category			
◆ Agriculture	11	◆ Energy	1
◆ Fire	3	◆ Plants & Wildlife	17
◆ Relief, Response & Restrictions	7	◆ Society & Public Health	1
◆ Tourism & Recreation	7	◆ Water Supply & Quality	12

Report Source	
Media	11
CoCoRaHS	19

User	1
------	---

Legend: 0 (Grey), 1-2 (Yellow), 3 (Light Orange), 4 (Orange), 5 (Red-Orange), 6 (Dark Red)

Opacity: 80%

Refresh

Impacts & Reports | Overlays

Scales: National, Multistate, State, **County**, City

Impacts: Impacts

Reports: Reports, Drought Declarations

Time Period:

Location:

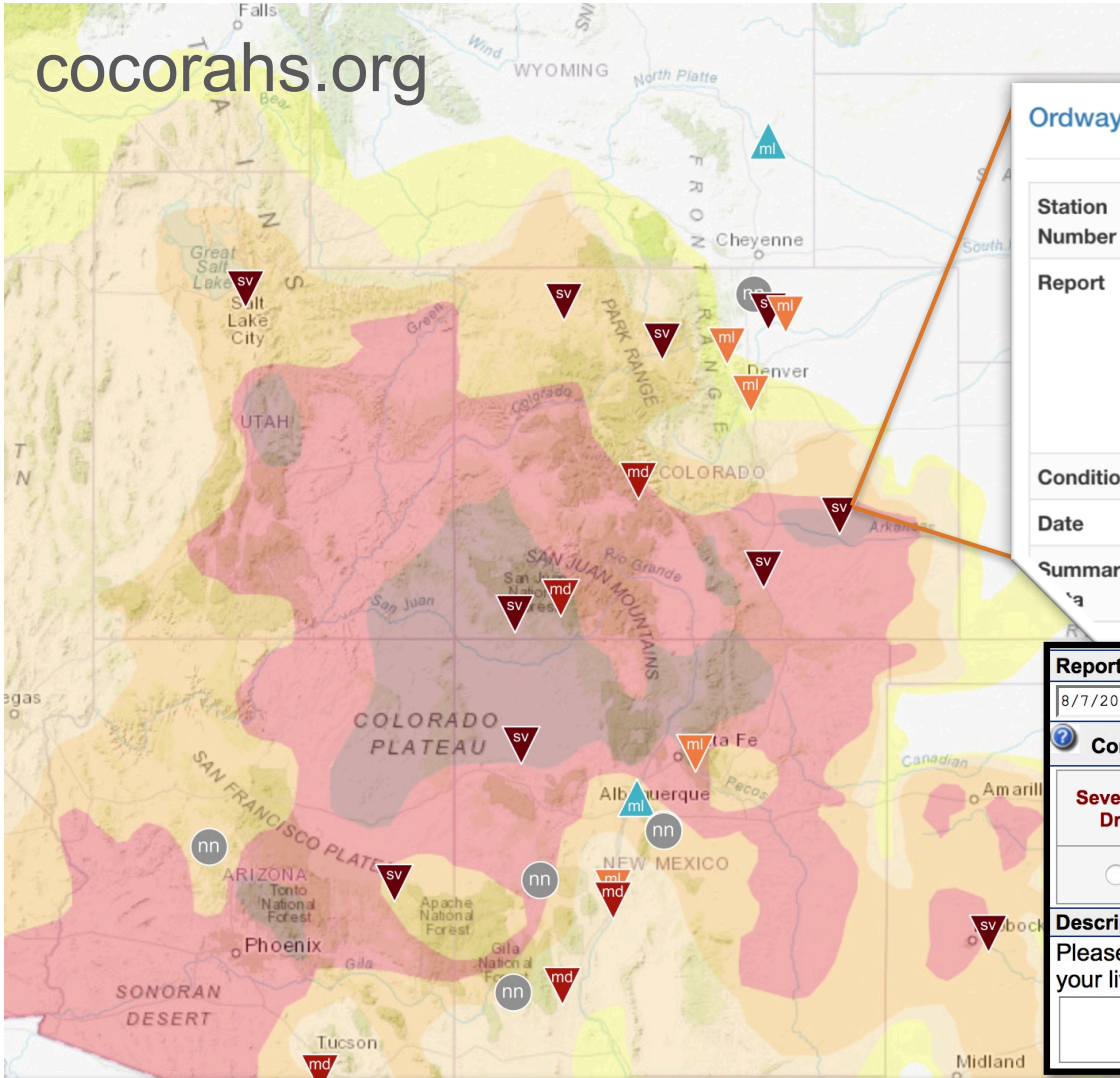
Categories:

Report Types:



cocorahs.org

NEW Condition Monitoring!



Ordway 1.3 E

Station Number	CO-CR-12
Report	Yearly moisture still is below 4". A few showers but no good rains yet. Fire ban briefly lifted with restrictions. Things are greener but not growing much. Quail, coyotes and deer closer to buildings looking for food. Boat restrictions on lakes due to water levels. Nights are usually dusty due to dry feedlot. Hay is scarce and expensive. A lot of producers are feeding hay and cake already. Many are weening and selling early.
Condition	Severely Dry
Date	2018-08-06T00:00:00Z
Summary	CoCoRaHS summary data by week for this station.

Report Date *
8/7/2018

Condition Scale Bar [More information on the scale bar](#)

Severely Dry	Moderately Dry	Mildly Dry	Near Normal	Mildly Wet	Moderately Wet	Severely Wet
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Description
Please provide a description of how dry, normal or wet conditions are affecting you, your livelihood, your activities, etc. *





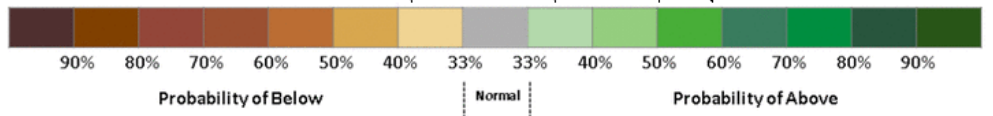
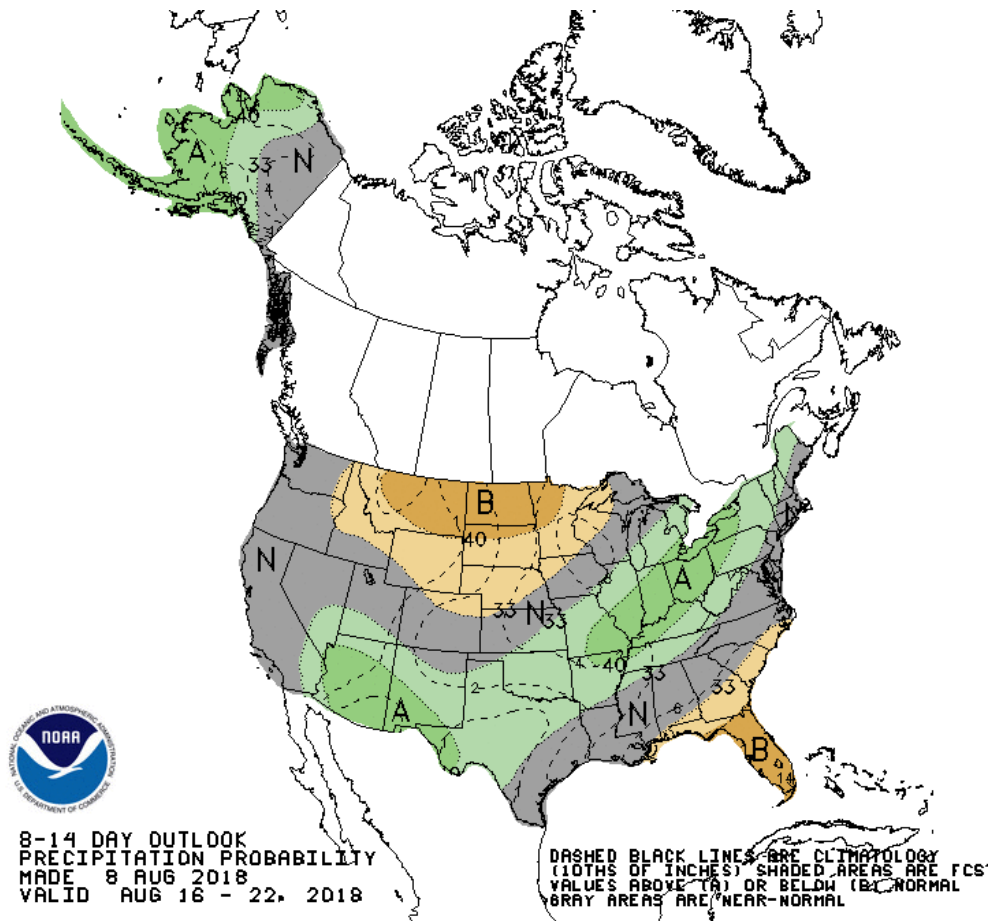
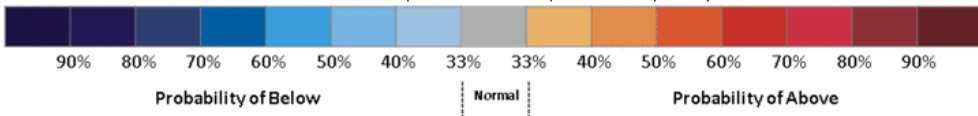
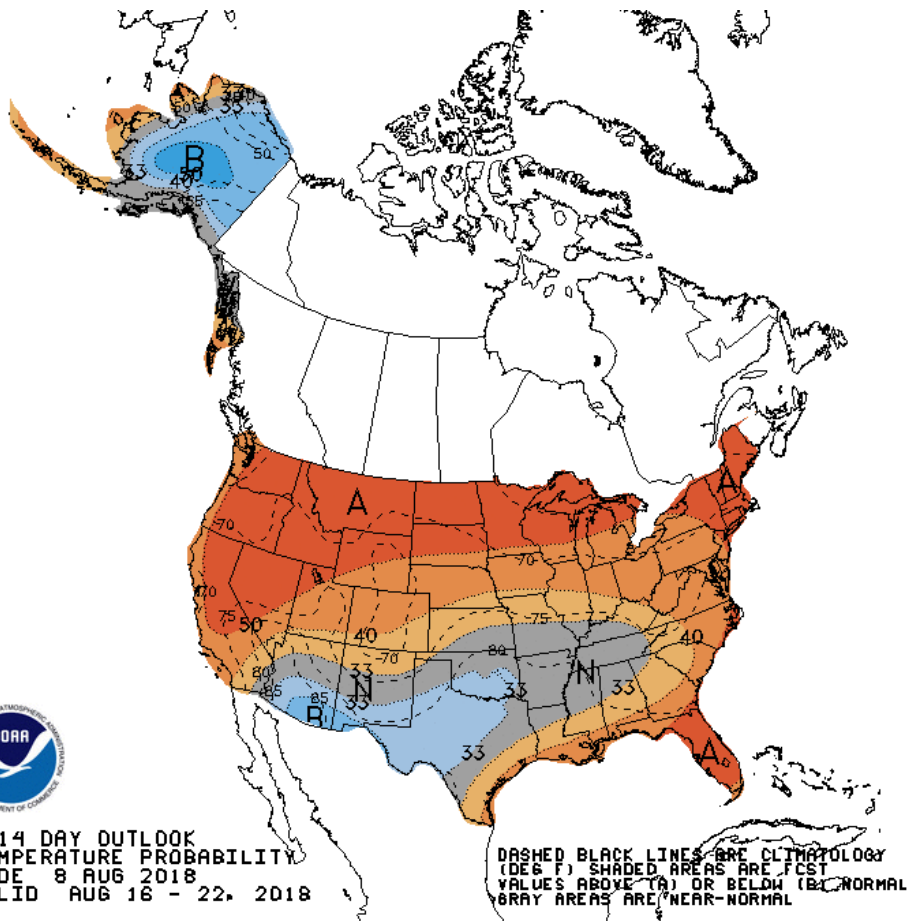
Outlook

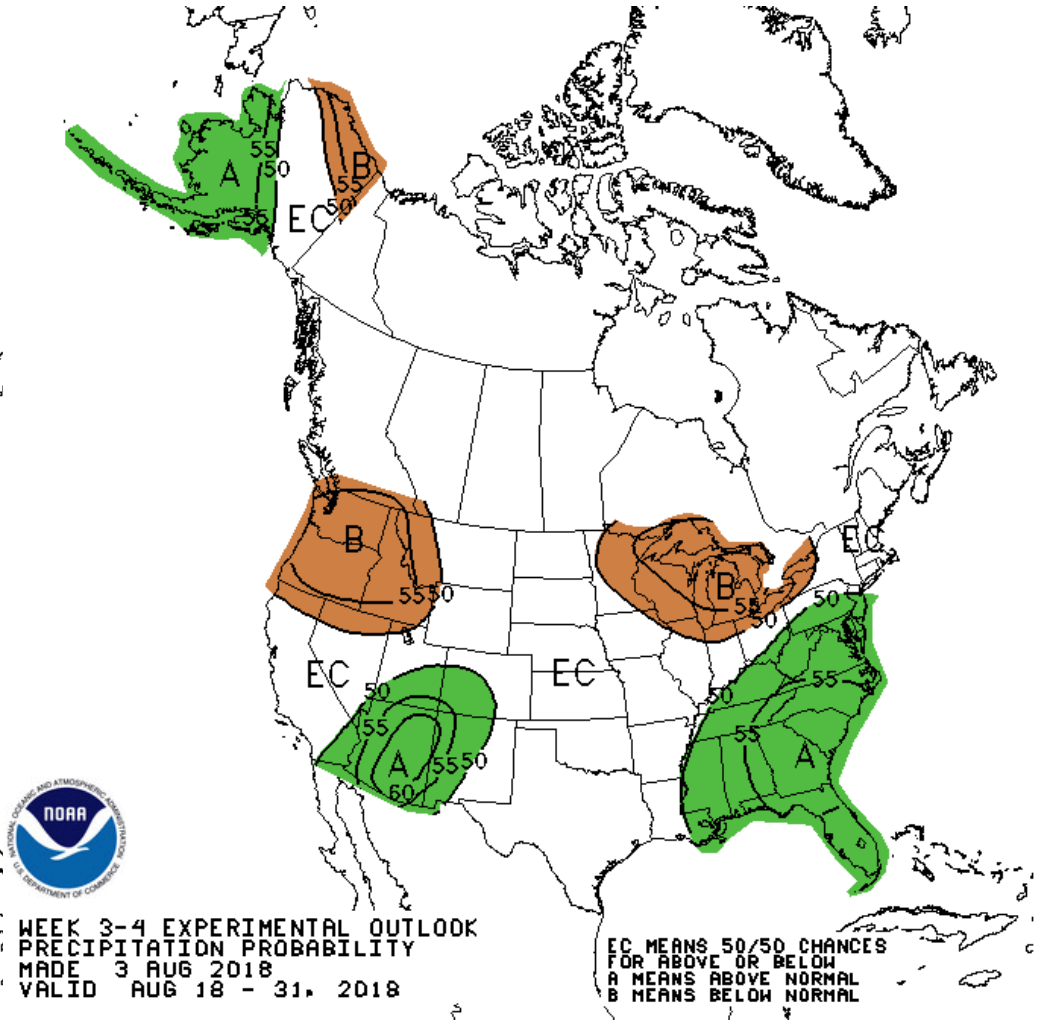
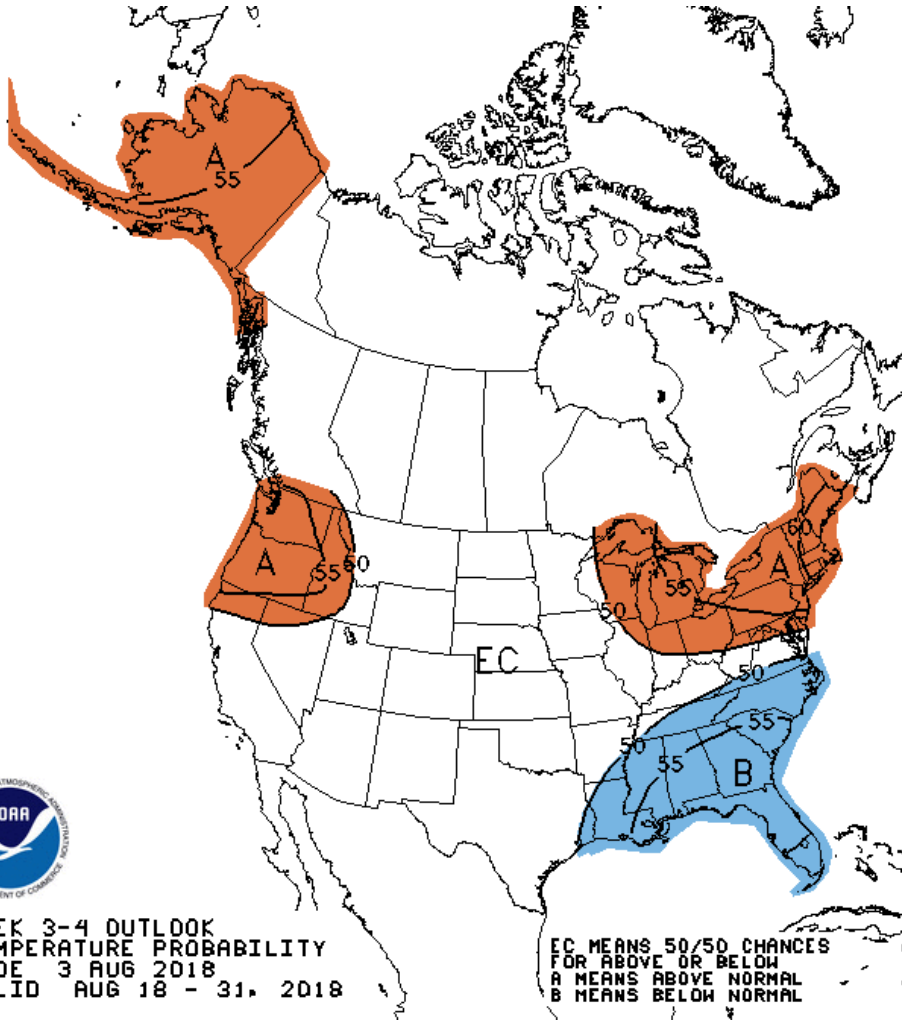
8-14 Day Outlook

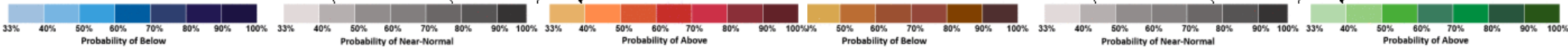
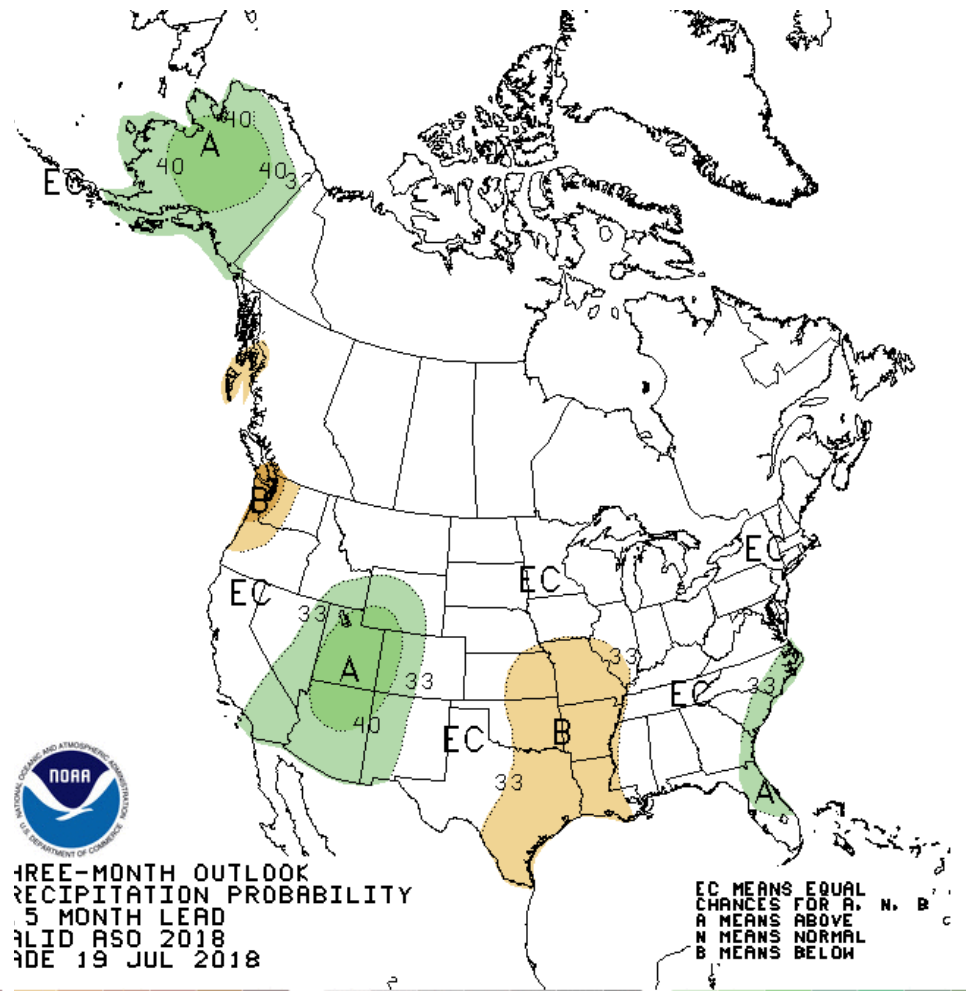
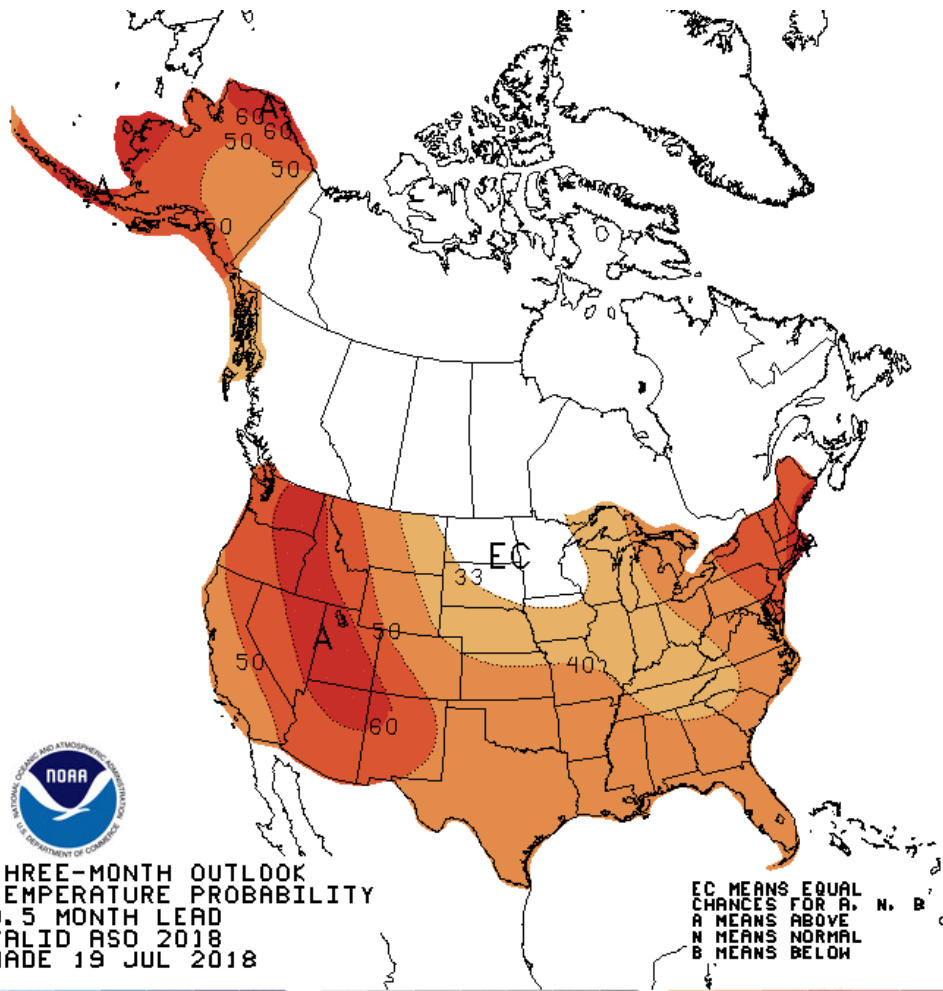
3-4 Week Outlook

Seasonal Outlook and
El Niño



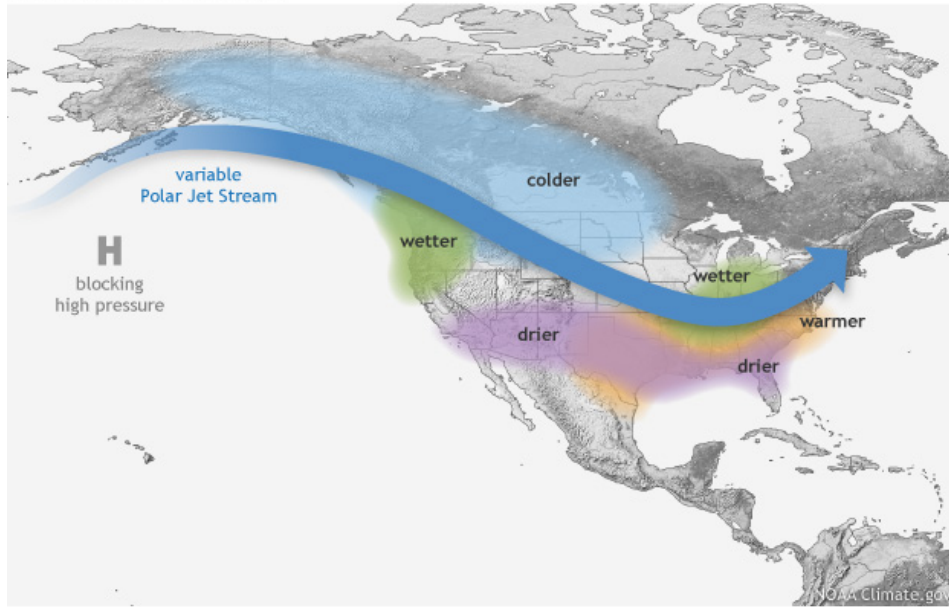






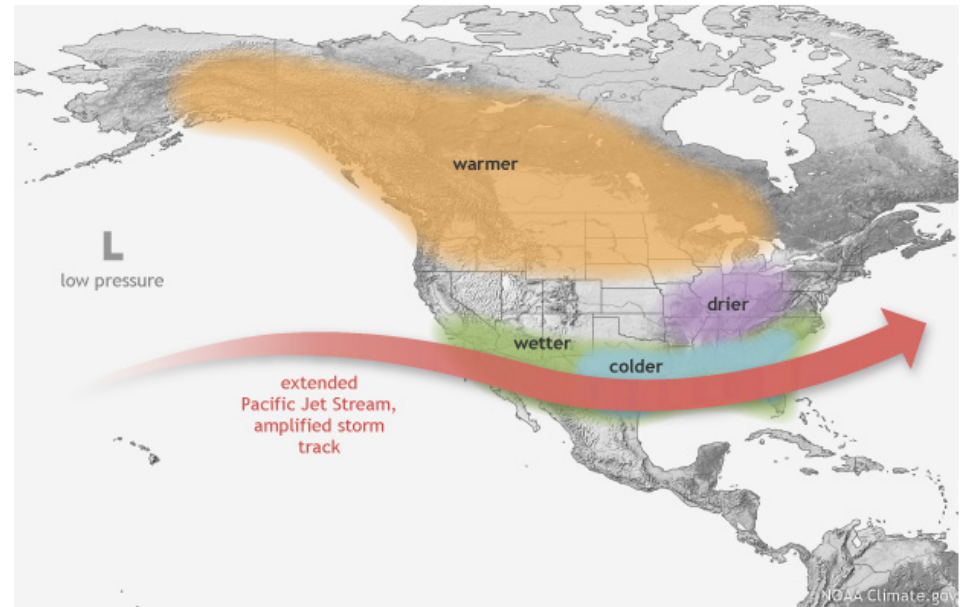
Climate Prediction Center has Issued an El Niño Watch for this fall/winter

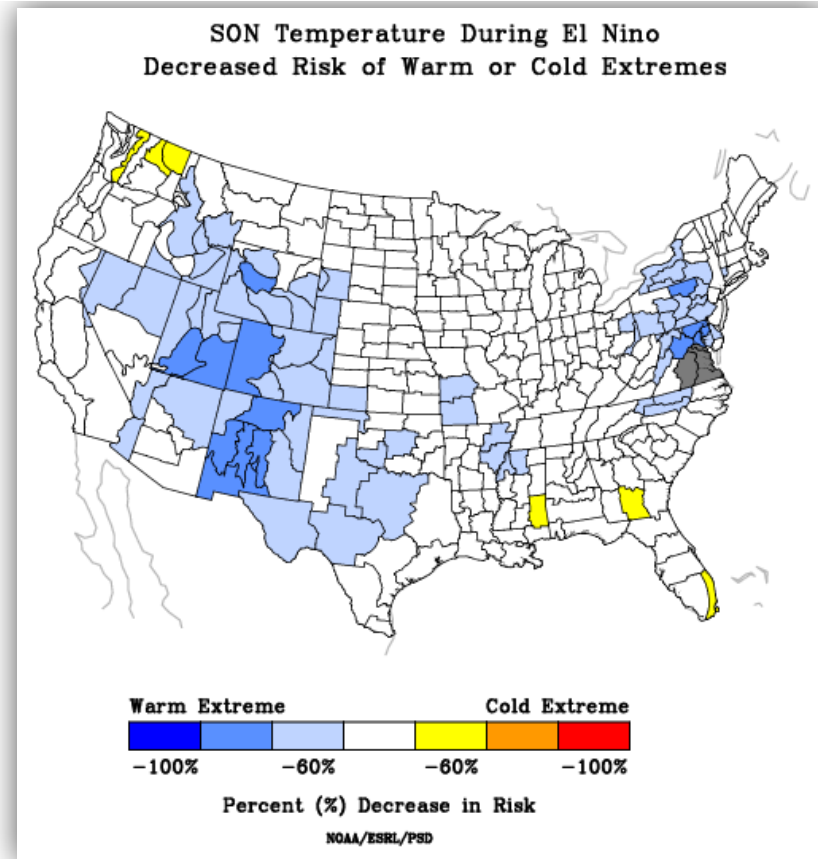
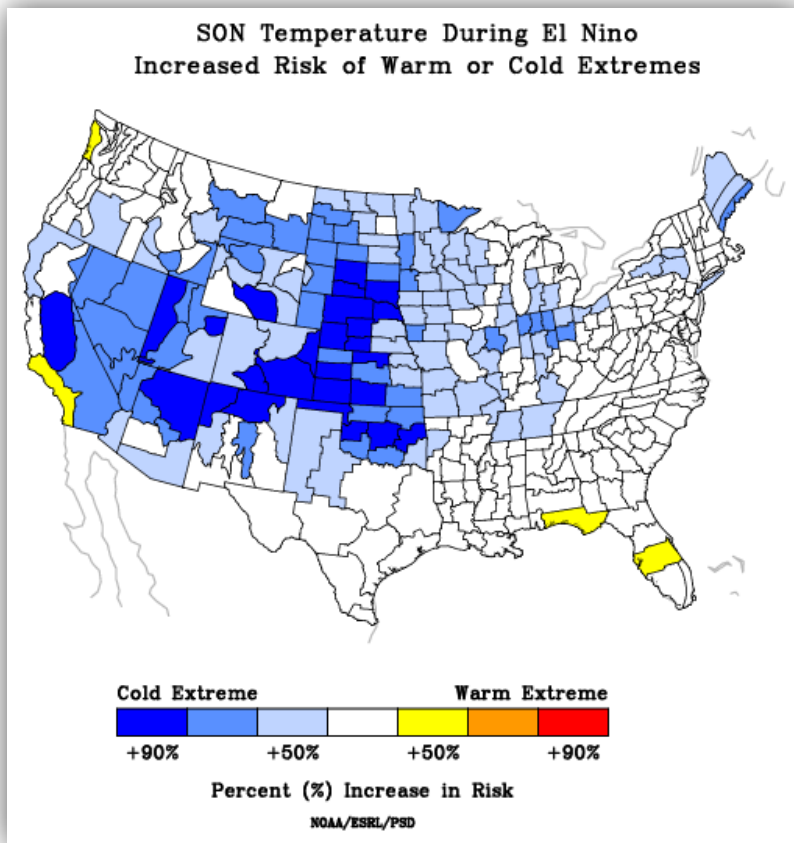
WINTER LA NIÑA PATTERN



from climate.gov

WINTER EL NIÑO PATTERN

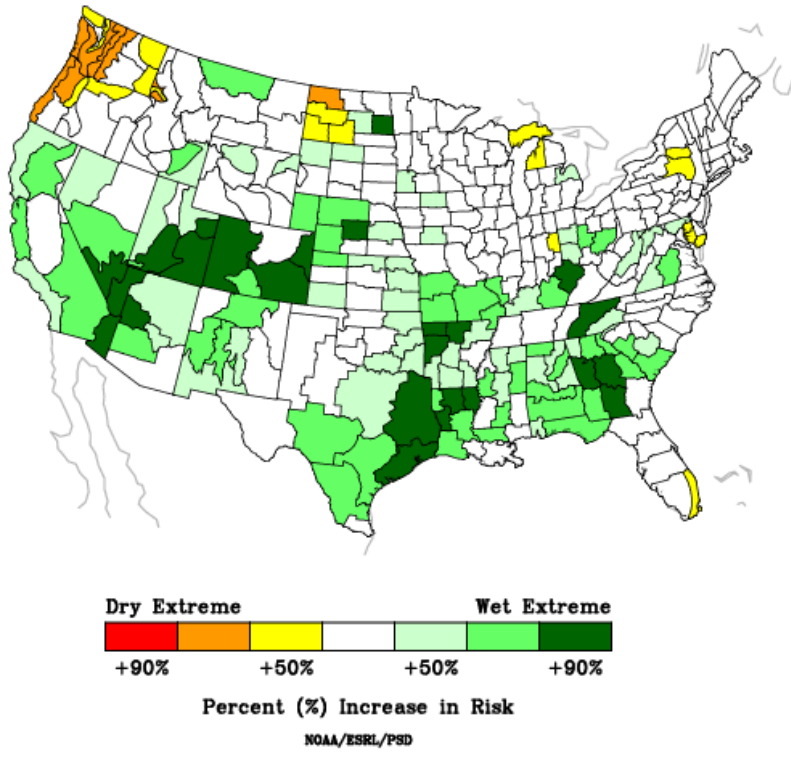




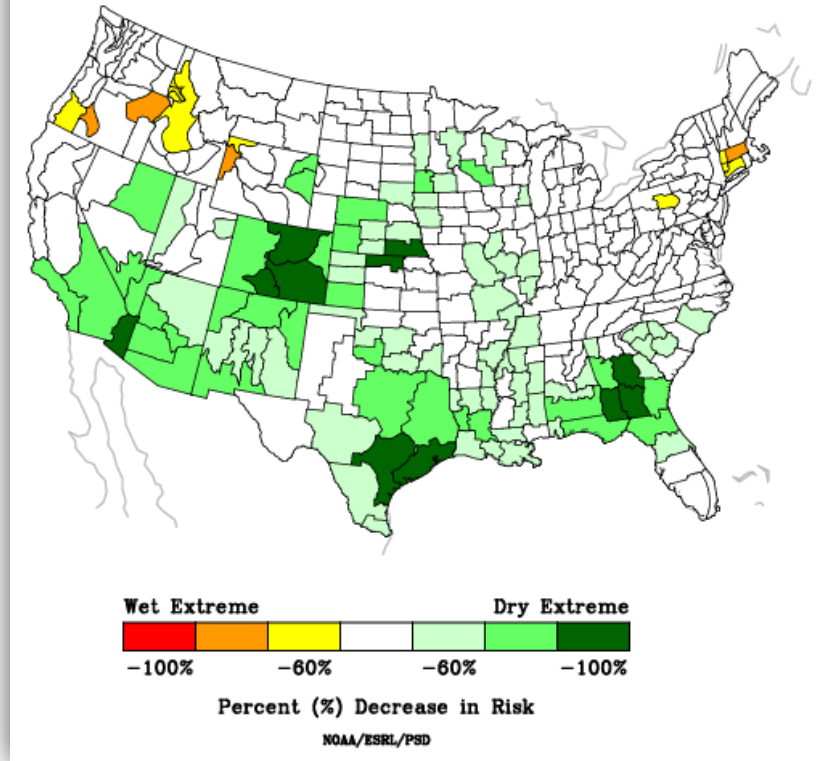
In a nutshell...

Increased risk of colder extremes and decreased risk of warmer extremes

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



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



In a nutshell...

Increased risk of wetter extremes and decreased risk of drier extremes





Partnerships

What can you do
to help us?

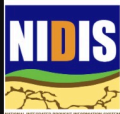
What can we do
to help you?





please help us, as we
celebrate 20 years, by adding
your dot to the map!





**NIDIS Intermountain West
Drought Early Warning System
August 7, 2018**



NIDIS Weekly Summary

Precipitation

Snow

Streamflow

Surface Water

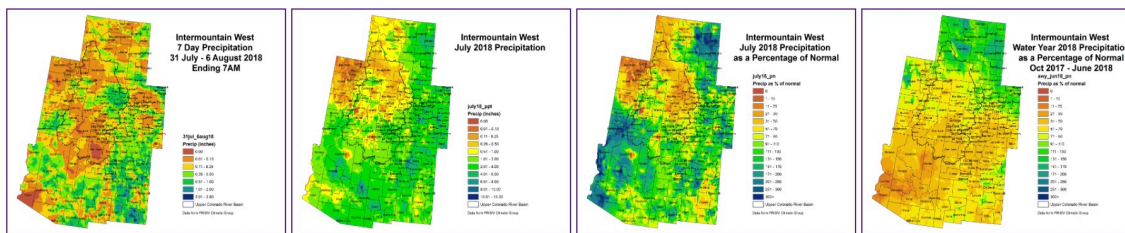
Evaporative Demand

Impacts Reports

Outlook

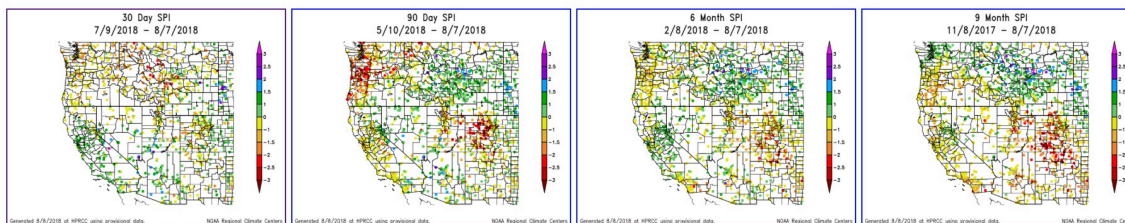
Composite Drought
Evaluator eXperiment
(CoDEX)

Precipitation ⓘ



These images are produced by the Colorado Climate Center and use precipitation data from NWS COOP, NRCS SNOTEL, CoCoRaHS, and CoAgMet stations to generate the gridded products. Images are generally updated every Tuesday. When maps are unable to be updated, AHPs precipitation is shown, courtesy of the [National Weather Service](#).

Standardized Precipitation Index ⓘ



SPI maps are updated daily and are provided by [High Plains Regional Climate Center](#).

SNOTEL Precipitation Percentile ⓘ



www.hprcc.unl.edu/products/maps/acis/wrcc/90dSPIDataWRCCd.png

read our weekly summaries

join our webinar to listen or report conditions and impacts

webinars once to twice a month



RESOURCES

- ✓ Colorado Climate Center
 - ✓ climate.colostate.edu
 - ✓ COOP data access, view climate normals and climate extremes, up-to-date El Niño information, seasonal forecast tool, drought webinar registration, and more!
- ✓ Weekly Drought Summaries
 - ✓ climate.colostate.edu/~drought
 - ✓ weekly updated recommendations to Drought Monitor with assessment of current conditions
- ✓ Colorado Agricultural Meteorological nETwork (CoAgMET)
 - ✓ coagmet.colostate.edu
 - ✓ Access meteorological data from 85 different rural stations across Colorado.
- ✓ Community Collaborative Rain Hail and Snow Network (CoCoRaHS)
 - ✓ cocorahs.org
 - ✓ measure precipitation, report conditions, access data, view maps
- ✓ CoCoRaHS Condition Monitoring
 - ✓ cocorahs.org/Maps/conditionmonitoring/
 - ✓ view current and past conditions, read reports, compare to U.S. Drought Monitor map



What can we do to help you?



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970.491.8506

**Check out our weekly drought summary:
<http://climate.colostate.edu/~drought>**

Thank you



Colorado State University