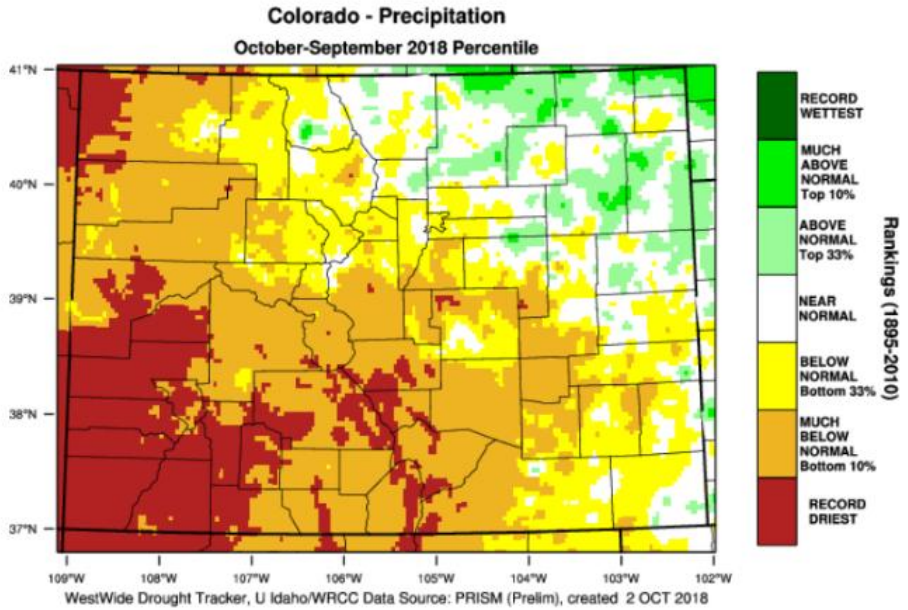
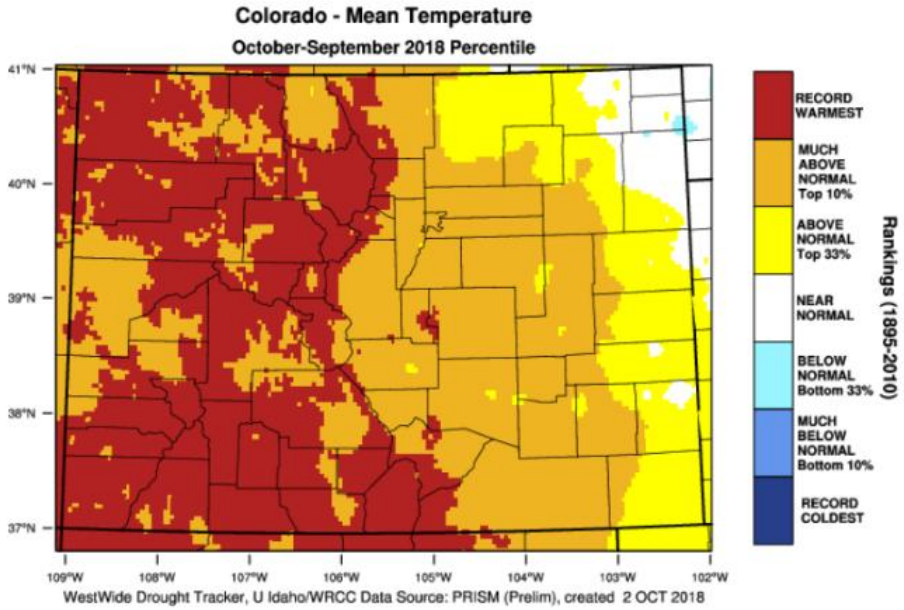
Colorado Drought Briefing

Oct 18, 2018

2018 Water Year in Review

★ Record Warmest
★ 2nd Driest
★ 124 year record





Source: A Recap of Colorado's Water Year 2018; Colorado Climate Center

CO STATEWIDE RANKING in 124-YEAR RECORD

MONTH	T RANK	P RANK
Oct 2017	near average	37th driest
Nov 2017	record warmest	18th driest
Dec 2017	8th warmest	7th driest
Jan 2018	8th warmest	37th driest
Feb 2018	near average	near average
Mar 2018	25th warmest	26th driest
Apr 2018	near average	34th driest
May 2018	2nd warmest	38th driest
Jun 2018	3rd warmest	26th driest
Jul 2018	10th warmest	near average
Aug 2018	33rd warmest	25th driest
Sep 2018	3rd warmest	19th driest
Water Year	record warmest	2nd driest

From NOAA NCEI's National Temperature and Precipitation Rank Maps:
www.ncdc.noaa.gov/sotc/national

NUMBER OF DAILY AND MONTHLY STATION RECORDS BROKEN in CO

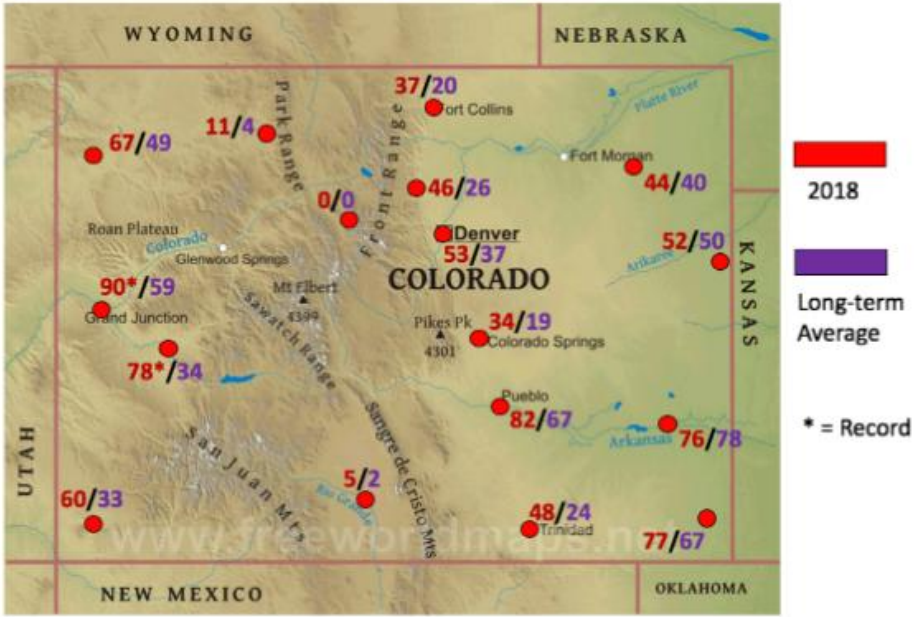
Weather Record Broken	Record broken for a day	Record broken for a month
Highest Max Temperature	1,696	22
Highest Min Temperature	2,971	100
Lowest Max Temperature	560	0
Lowest Min Temperature	292	0
Highest Precipitation	786	17
Highest Snowfall	196	2

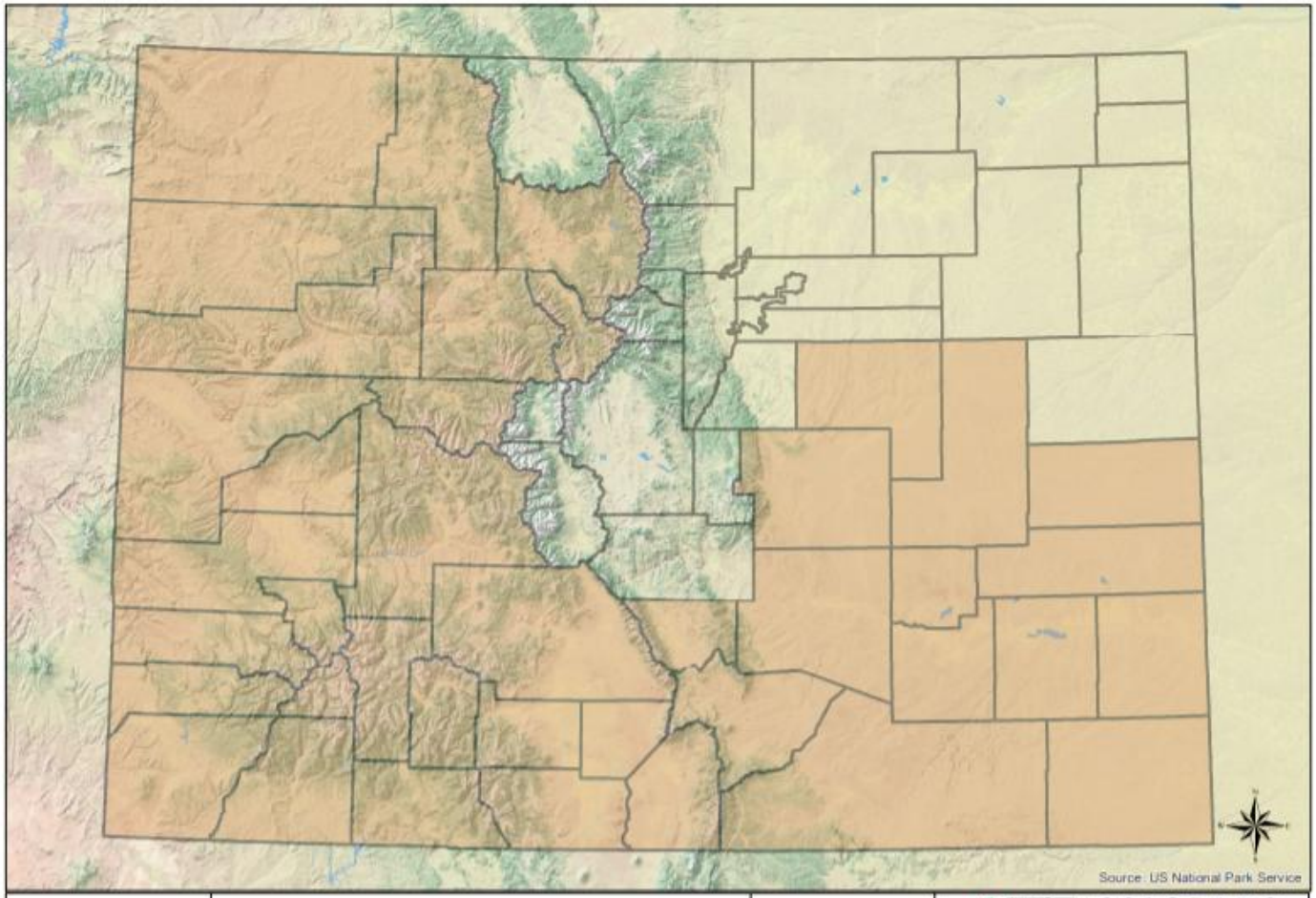
From NOAA NCEI's Select U.S. Records: www.ncdc.noaa.gov/extremes/records

	90° days	Rank	Normal	Record	Record Year
Denver	53	7th of 70	37	67	2012
Fort Collins	37	10th of 121	20	57	2012
Boulder	46	10th of 104	26	60	1952
Colorado Springs	34	T4th of 70	19	49	2012
Pueblo	82	T7th of 65	67	90	2000
Burlington	52	40th of 85	50	88	1954
Lamar	76	T66th of 114	78	129	1934
Walsh	77	9th of 51	67	95	2011
Alamosa	5	T10th of 71	2	20	2003
Cortez	60	2nd of 78	33	69	2002
Grand Junction	90	T1st of 119	59	90	2018
Montrose	78	1st of 113	34	78	2018
Steamboat Springs	11	T13th of 98	4	29	2002
Lake Dillon	0	NA	0	0	NA
Rangely	67	T5th of 58	49	71	1955
Akron	44	T30th of 79	40	73	2012
Trinidad	48	T7th of 97	24	62	2002

Data gathered by Peter Goble (Colorado Climate Center)

Number of 90 Degree Days





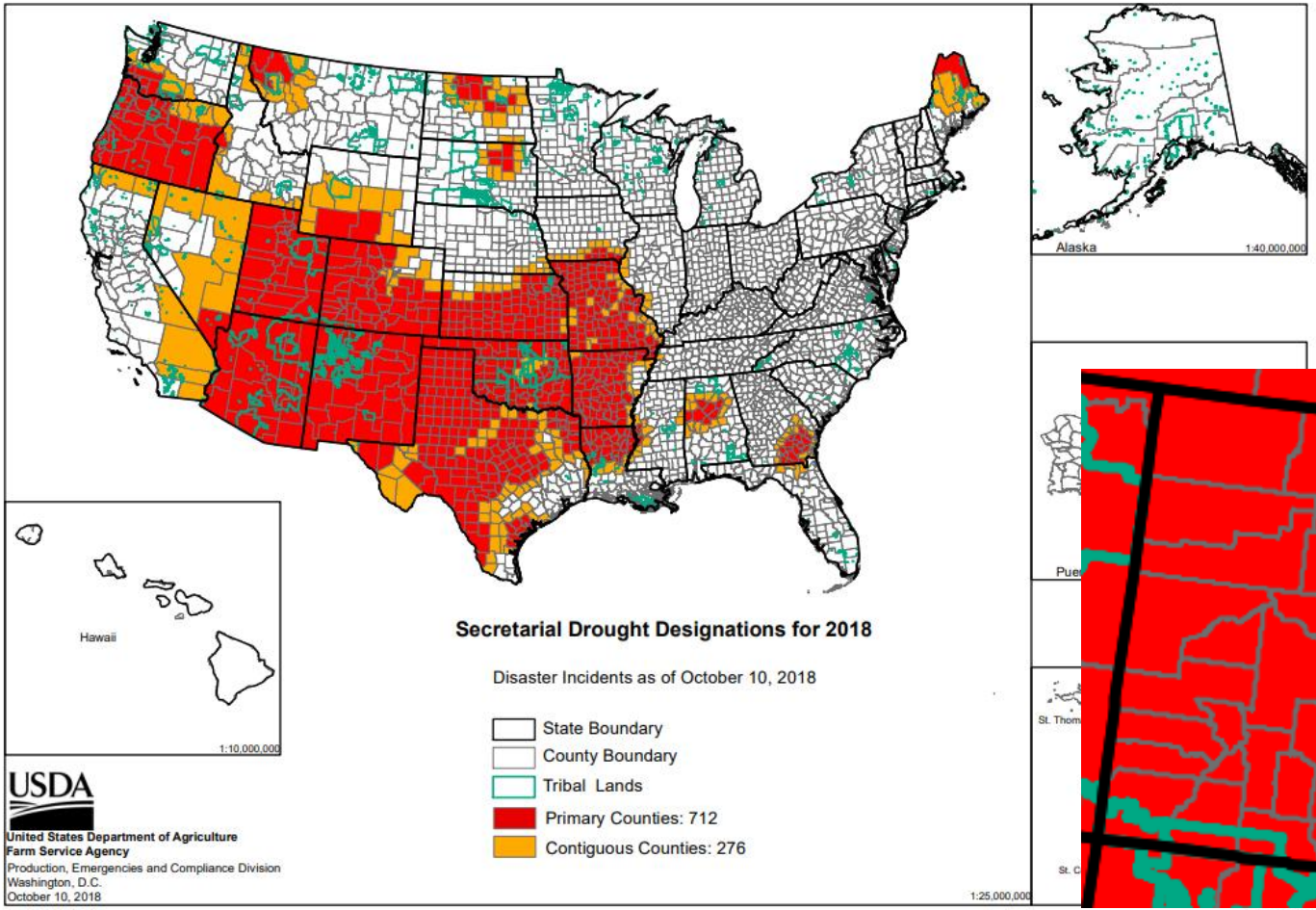
0 10 20 30
Miles

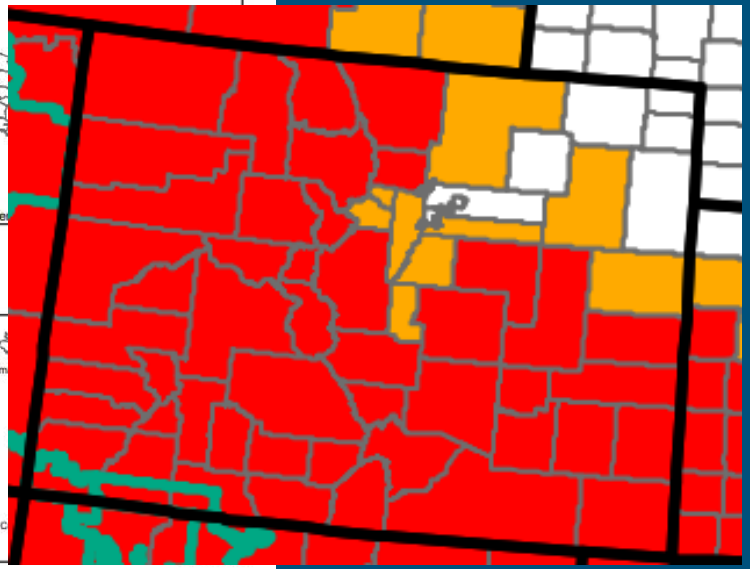
Counties with Drought Activation

Date: 10/1/2018

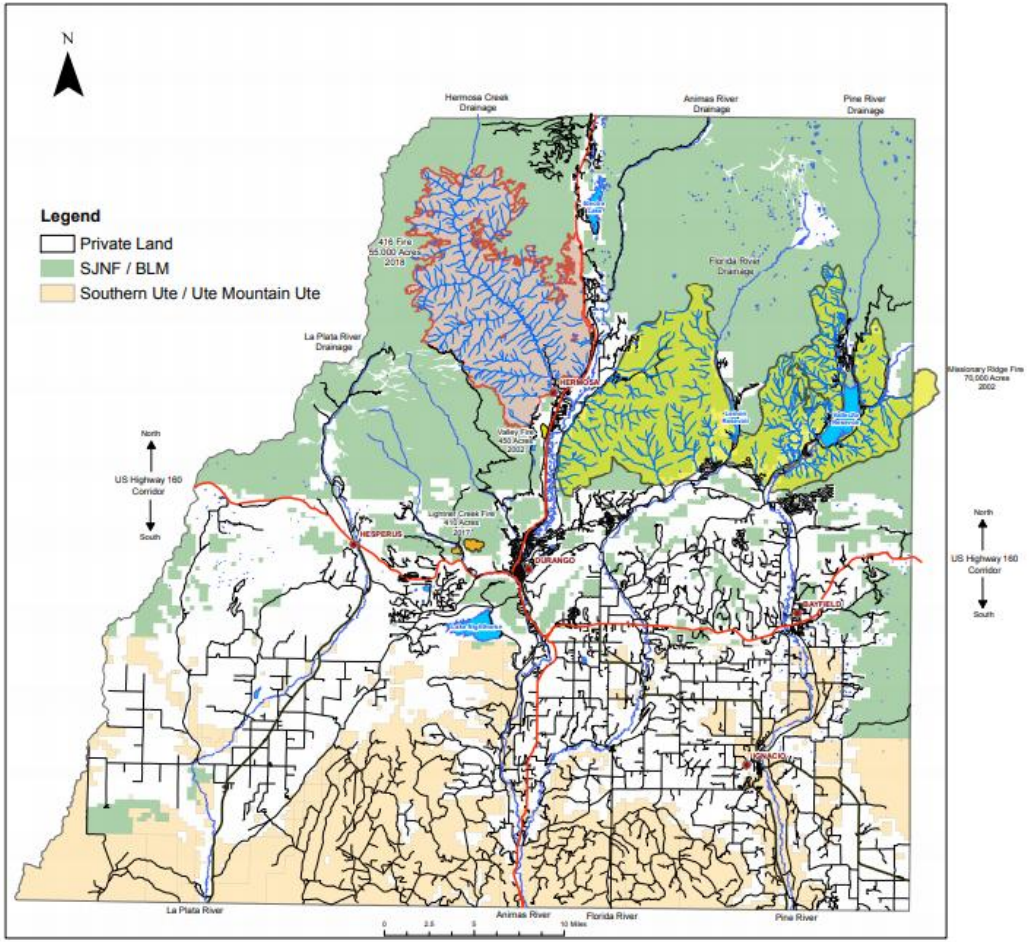
COLORADO
Colorado Water Conservation Board
Department of Natural Resources

2018 Secretarial Drought Designations - All Drought



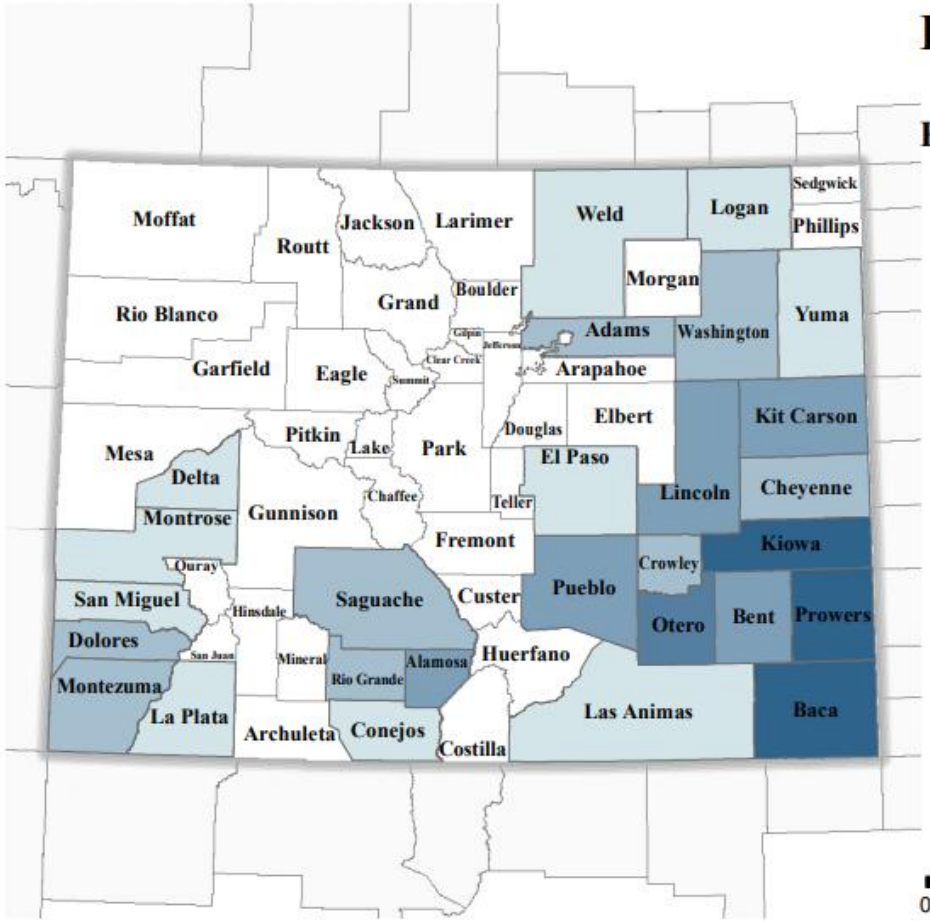


La Plata County, Colorado



Prevent Plant Acres in Colorado

Reported as of 08.27.2018



Prevent Plant Acres

- 21.40 - 1165.88
- 1165.89 - 3438.75
- 3438.76 - 9503.20
- 9503.21 - 13543.25
- 13543.26 - 28164.19

N
W E
S

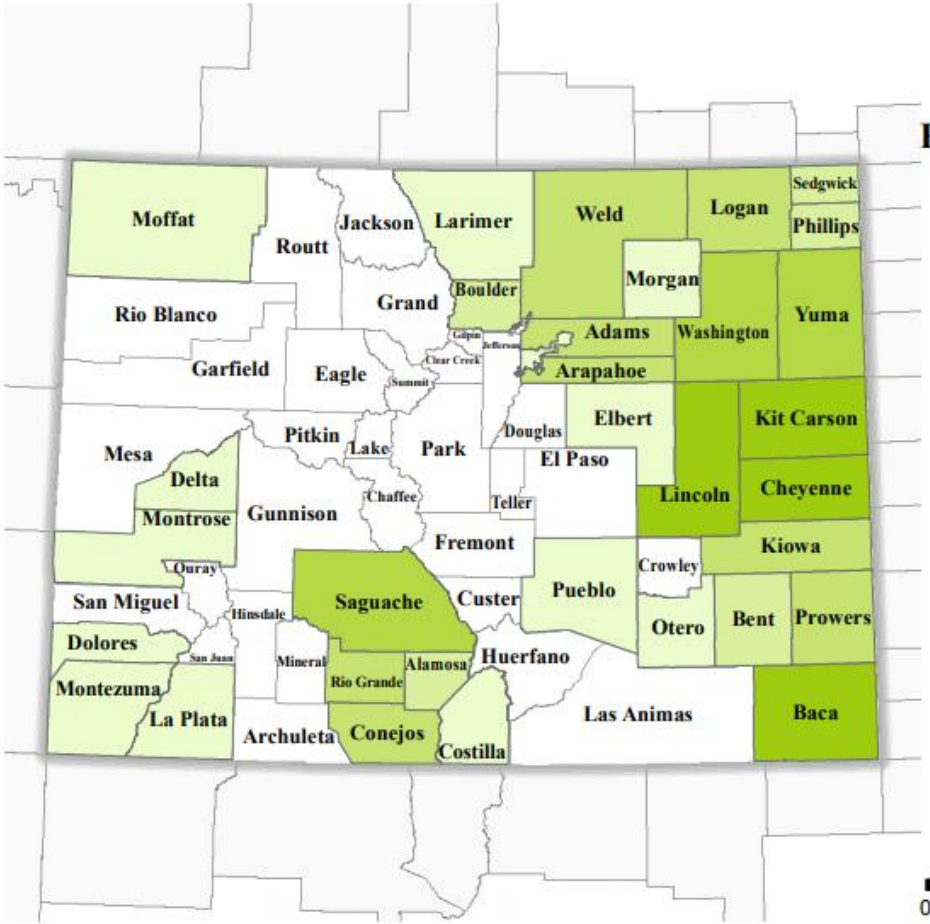
0 20 40 80 120 160 Miles

USDA United States Department of Agriculture
Farm Service Agency
Colorado State Office

Map is intended for Farm Service Agency (FSA) business purposes only.
Map depicts serves only as a general reference map.
USDA is an equal opportunity provider and employer.
Source: USDA Farm Service Agency and the State of Colorado.

Failed Acres in Colorado

Reported as of 08.27.2018



Acres Failed

- 6.62 - 505.73
- 505.74 - 1362.99
- 1363.00 - 4354.63
- 4354.64 - 9287.80
- 9287.81 - 18460.30

N
W E
S

0 20 40 80 120 160 Miles

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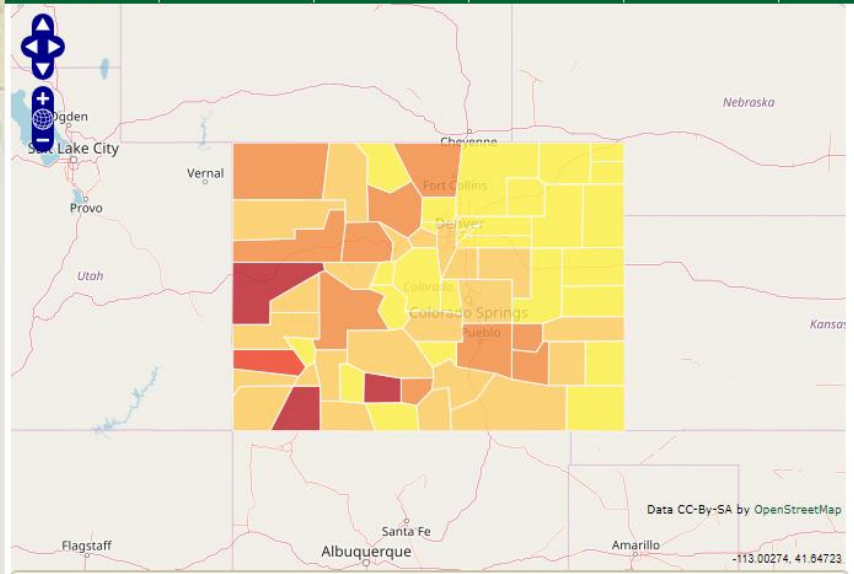
Source: USDA Farm Service Agency and the State of Colorado.

NATIONAL DROUGHT MITIGATION CENTER

NDMC Drought Impact Reporter

Map | Advanced Search | Submit a Report | About the DIR | Help



Refresh

Impacts & Reports | Overlays

- Scales
- Impacts

Opacity 80%

Impacts

- 0
- 2 - 6
- 7 - 11
- 12 - 15
- 16 - 19
- 20 - 23

- Reports
- Drought Declarations
- Time Period

Customize

Start: 10-01-2017

End: 09-30-2018

- Location
- Categories
- Report Types

Colorado | 10-01-2017 - 09-30-2018 |

Impact Counts | Impacts List | Page 1/22 | Report Counts | Reports List | Page 1/62

County Impacts | Colorado **216**

Category

Agriculture	73	Business & Industry	11
Energy	1	Fire	65
Plants & Wildlife	96	Relief, Response & Restrictions	52
Society & Public Health	14	Tourism & Recreation	34
Water Supply & Quality	74		

Report Source

Media	69	User	15
CoCoRaHS	135		

Prevent Plant & Failed Acres - 8.27.2018

Colorado Summary:	
Total Farms Reported:	25,516
Initial Planted Acres:	24,320,701 ac
Prevent Plant Acres:	149,830 ac
Failed Acres:	122,303 ac

Historic Totals:	Prevent	Failed
2008	88,693.64	171,975.66
2009	18,986.04	60,800.17
2010	8,144.60	47,353.10
2011	97,798.63	243,270.08
2012	124,460.93	98,096.76
2013	326,551.57	644,971.98
2014	139,185.08	282,006.91
2015	247,990.08	123,948.98
2016	26,477.87	123,086.47
2017	135,551.61	225,802.19

County Breakdown:	Prevent Plant	Failed Acres
Adams	2,378.47	4,342.00
Alamosa	9,503.20	1,362.99
Arapahoe		2,524.66
Baca	24,931.60	17,407.20
Bent	6,419.20	683.2
Boulder		674.89
Cheyenne	1,629.88	18,460.30
Conejos	377.94	2,391.03
Costilla		505.73
Crowley	2,317.65	
Delta	21.4	6.62
Denver		63
Dolores	2,985.31	38.47
Elbert		262.84
El Paso	141.72	
Kiowa	28,164.19	2,294.79
Kit Carson	6,146.57	13,045.66
La Plata	36.57	80.35
Larimer		120
Las Animas	893.04	
Lincoln	8,070.02	17,983.76
Logan	387.01	2,396.66
Moffat		91.68
Montezuma	1875.76	184.73
Motrose	119	12.42
Morgan		183.26
Otero	13,543.25	54.86
Phillips		1062.65
Prowers	24,479.86	4,131.36
Pueblo	4,999.61	
Rio Grande	1873	4,354.63
Saguache	3,438.75	7,015.27
Sedgwick		1139.4
San Miguel	26.22	
Washington	3,404.30	7,649.68
Weld	1,165.88	2,491.48
Yuma	500.61	9,287.80

WY2018 Noteworthy Events By Becky Bolinger (Colorado Climate Center)

For the first time ever, a call was placed on the Yampa River on August 22, when flows at Deerlodge Park were a meager 19 cubic feet per second.

*photo courtesy Becky Bolinger

A severe hailstorm battered Colorado Springs on August 6. Baseball-sized hail fell at the Cheyenne Mountain Zoo, killing 5 zoo animals and injuring 14 people. This was one of many large hail events in a very active season.

*photo courtesy Emma Pinell (Facebook)

Two tornadoes were reported in Park County over the summer, taking their total number of tornadoes ever recorded in the county to 7.

*photo courtesy CBS Denver

The Spring Creek Fire and 416 Fire burned a combined 162,000 acres in southern CO. The Spring Creek Fire was human caused on June 27 and the suspect charged with 141 counts of arson. It grew to over 100,000 acres to become the state's 3rd largest wildfire on record.

*photo courtesy Tomi Price (Facebook)

On April 17, a cold front brought significant winds. Extensive damage was reported from the Front Range across the eastern plains where gusts were 70-90mph. Wind was blamed for shutting down DIA runways and starting the Badger Hole Fire in Baca County, which burned more than 30,000 acres.

*photo courtesy Jeremiah Bellile (Twitter)

Colorado Water Year 2018 By The Numbers

16
Number of long-term SNOTEL stations that reported record low peak snowpack.

64% increase in the percent of the state in severe drought from Oct 1 – Sep 30.

46 days
Number of days in a row without any precipitation reported at Gateway, October 3 – November 17.

3 wildfires
cracked the top 10 list for largest state wildfires on record. Spring Creek, 416, and MM 117 burned more than 200,000 acres in 2018.

74°F
All-time highest minimum temperature ever recorded at Trinidad Perry Stokes Airport on June 28.

450,000 acre feet
volume lost from Blue Mesa Reservoir, almost half its maximum capacity.

67
Number of 2 inch or larger hail reports made, which is more than double the average of 26.

77.1mph Highest wind gust in 30 years reported at La Junta on April 17.

Becky Bolinger (Colorado Climate Center)

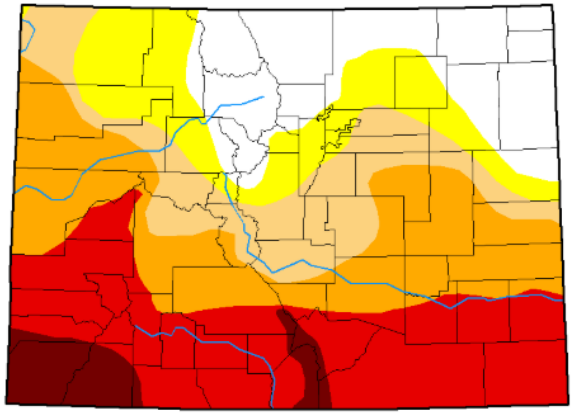
Current Conditions

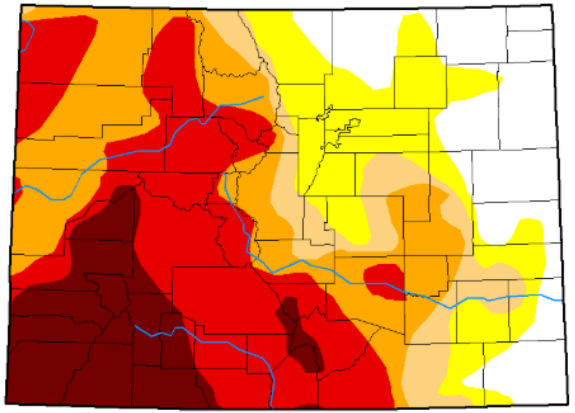
and projections

Area type: State | Area: Colorado | Statistics type: Cumulative Percent Area

Drought Classification

None | D0 (Abnormally Dry) | D1 (Moderate Drought) | D2 (Severe Drought) | D3 (Extreme Drought) | D4 (Exceptional Drought)





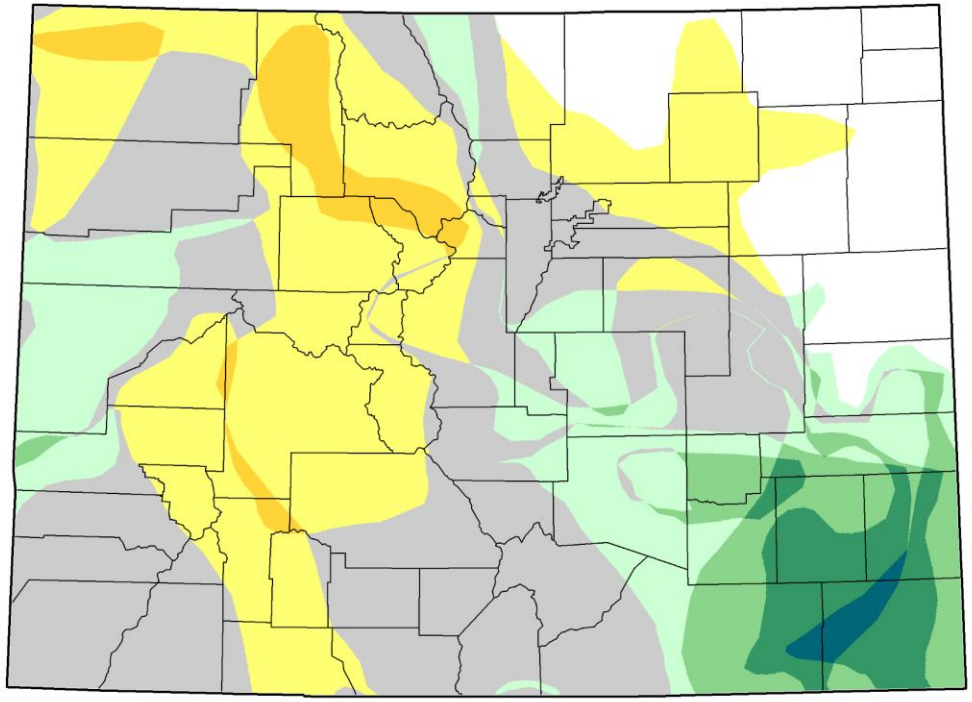
May 1, 2018

October 16, 2018

Statistics Comparison

Week	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
2018-05-01	18.47	81.53	67.98	53.65	30.89	5.02	239
2018-10-16	16.64	83.36	67.83	59.23	39.09	13.64	263
Change	-1.83	1.83	-0.15	5.58	8.20	8.62	24

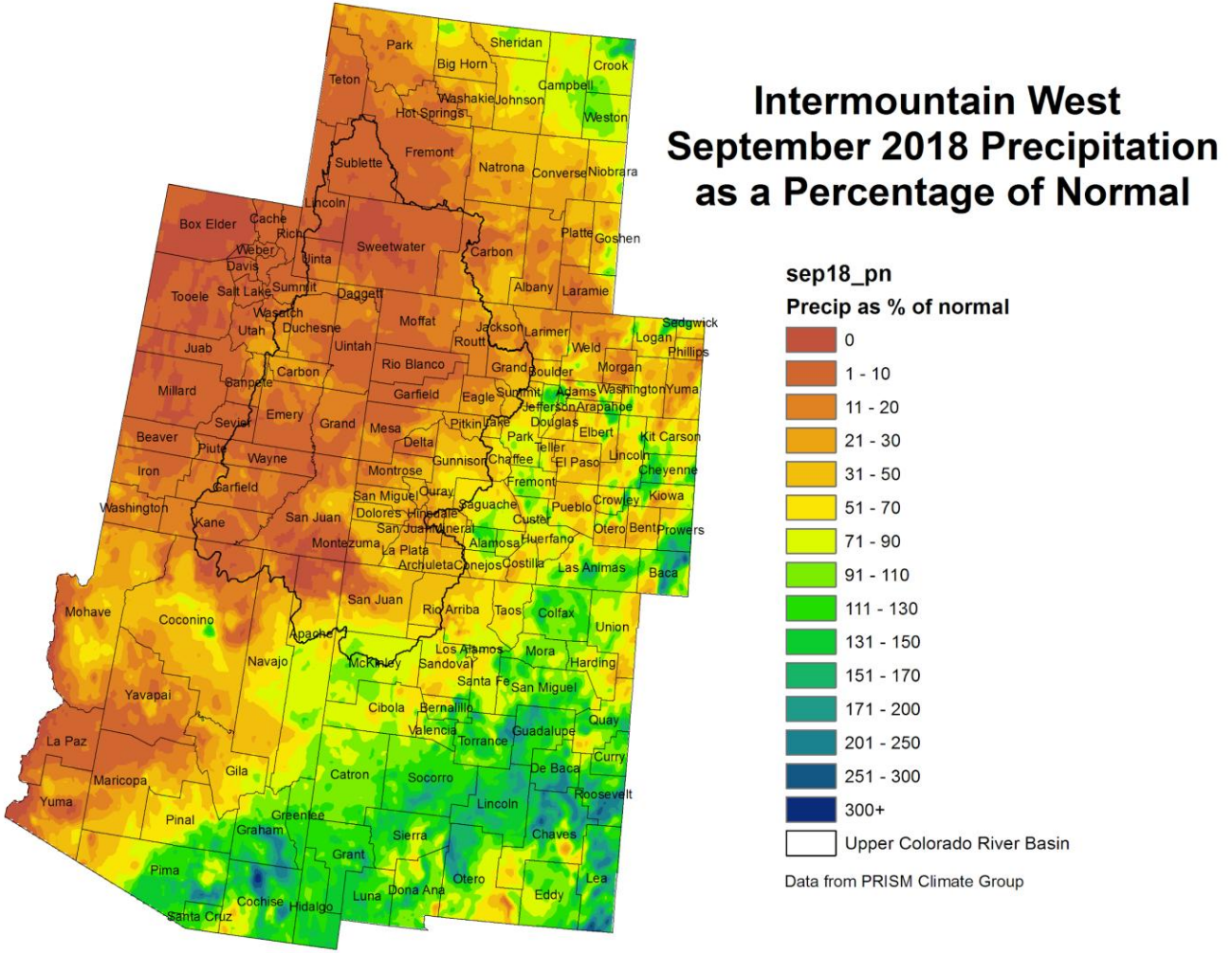
U.S. Drought Monitor Class Change - Colorado
3 Months



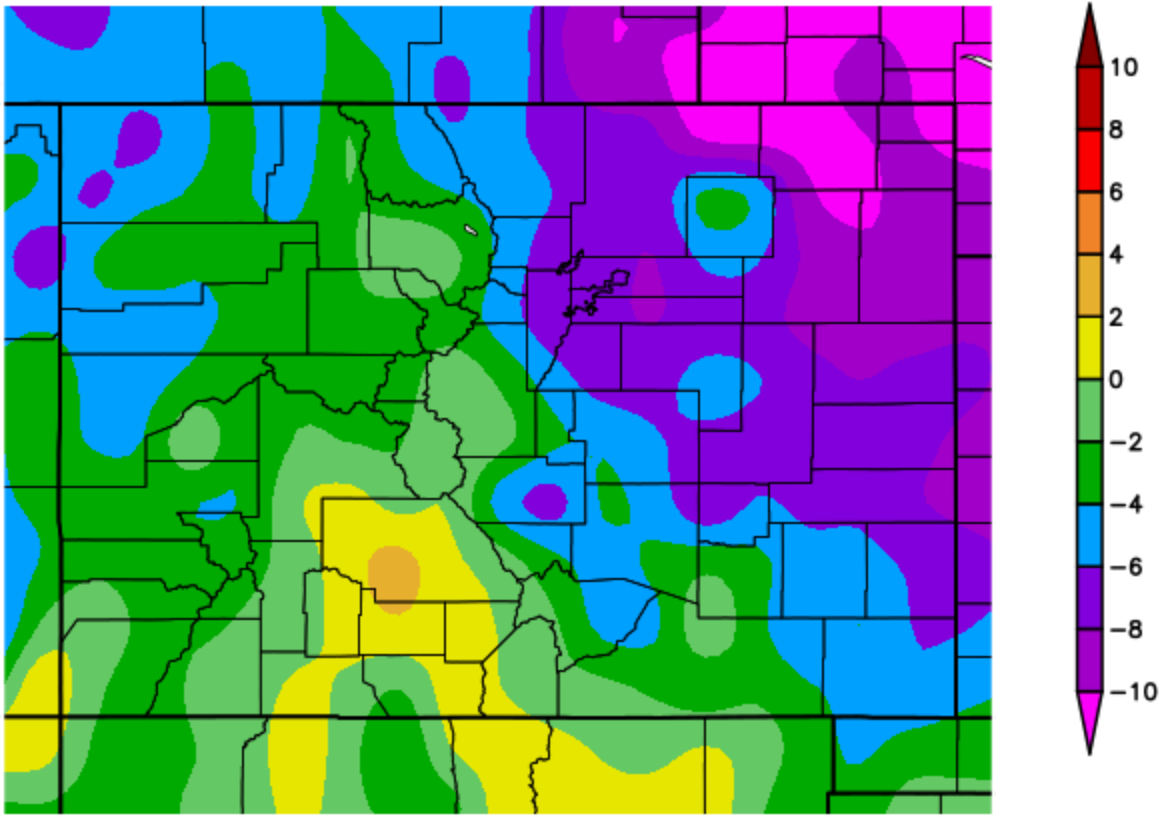
October 16, 2018
compared to
July 24, 2018

http://droughtmonitor.unl.edu

- 5 Class Degradation
- 4 Class Degradation
- 3 Class Degradation
- 2 Class Degradation
- 1 Class Degradation
- No Change
- 1 Class Improvement
- 2 Class Improvement
- 3 Class Improvement
- 4 Class Improvement
- 5 Class Improvement


Intermountain West
September 2018 Precipitation
as a Percentage of Normal
sep18_pn
Precip as % of normal
0
1 - 10
11 - 20
21 - 30
31 - 50
51 - 70
71 - 90
91 - 110
111 - 130
131 - 150
151 - 170
171 - 200
201 - 250
251 - 300
300+
Upper Colorado River Basin
Data from PRISM Climate Group
Park
Sheridan
Big Horn
Crook
Teton
Campbell
Washakie
Johnson
Hot Springs
Weston
Fremont
Natrona
Converse
Niobrara
Sublette
Lincoln
Box Elder
Cache
Rich
Platte
Goshen
Weber
Sweetwater
Carbon
Uinta
Davis
Albany
Laramie
Tooele
Salt Lake
Summit
Daggett
Wasatch
Moffat
Sedgwick
Utah
Duchesne
Jackson
Larimer
Logan
Juab
Uintah
Routt
Weld
Phillips
Rio Blanco
Grand
Boulder
Morgan
Carbon
Millard
Sanpete
Garfield
Eagle
Summit
Adams
Washington
Yuma
Jefferson
Arapahoe
Sevier
Emery
Grand
Pitkin
Lake
Douglas
Beaver
Mesa
Park
Elbert
Kit Carson
Delta
Teller
Piute
Wayne
Gunnison
Chaffee
El Paso
Lincoln
Iron
Montrose
Cheyenne
Garfield
Fremont
San Miguel
Ouray
Crowley
Kiowa
Washington
Dolores
Hinsdale
Saguache
Pueblo
Kane
San Juan
San Juan
Mineral
Custer
Otero
Bent
Prowers
Montezuma
La Plata
Alamosa
Huerfano
Archuleta
Conejos
Costilla
Las Animas
Baca
San Juan
Mohave
Rio Arriba
Taos
Colfax
Union
Coconino
Apache
Los Alamos
Mora
Navajo
McKinley
Sandoval
Harding
Santa Fe
San Miguel
Yavapai
Cibola
Bernalillo
Quay
Valencia
Guadalupe
La Paz
Torrance
Curry
Maricopa
Gila
Catron
Socorro
De Baca
Roosevelt
Yuma
Lincoln
Pinal
Greenlee
Graham
Sierra
Chaves
Grant
Pima
Otero
Lea
Dona Ana
Eddy
Cochise
Hidalgo
Luna
Santa Cruz

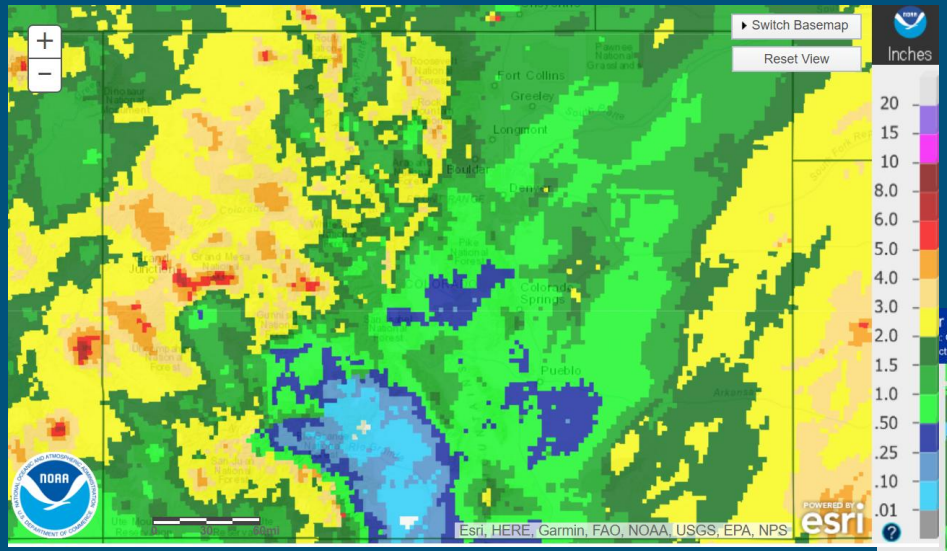
Departure from Normal Temperature (F)
10/1/2018 – 10/16/2018



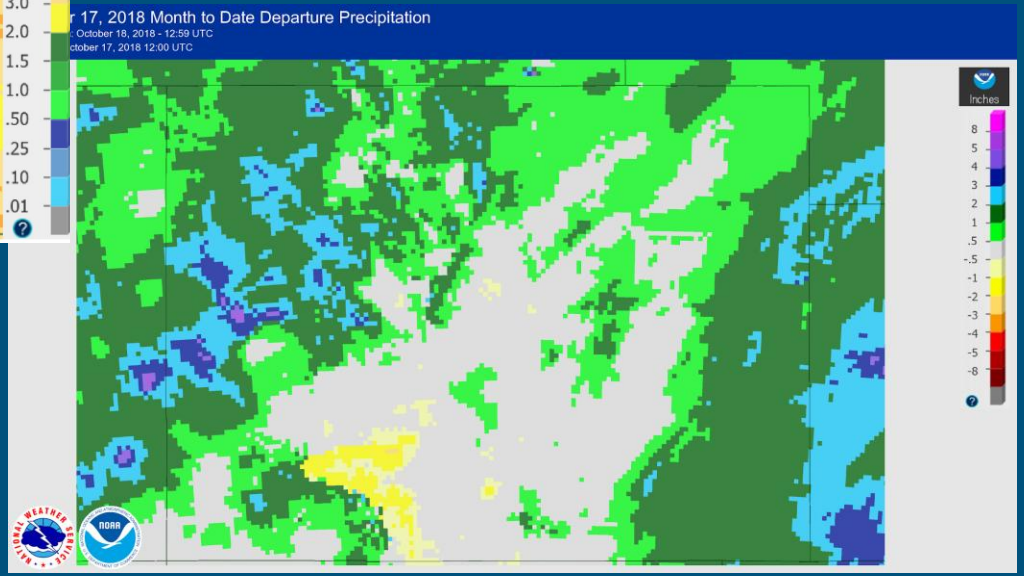
Generated 10/17/2018 at HPRCC using provisional data.

NOAA Regional Climate Centers

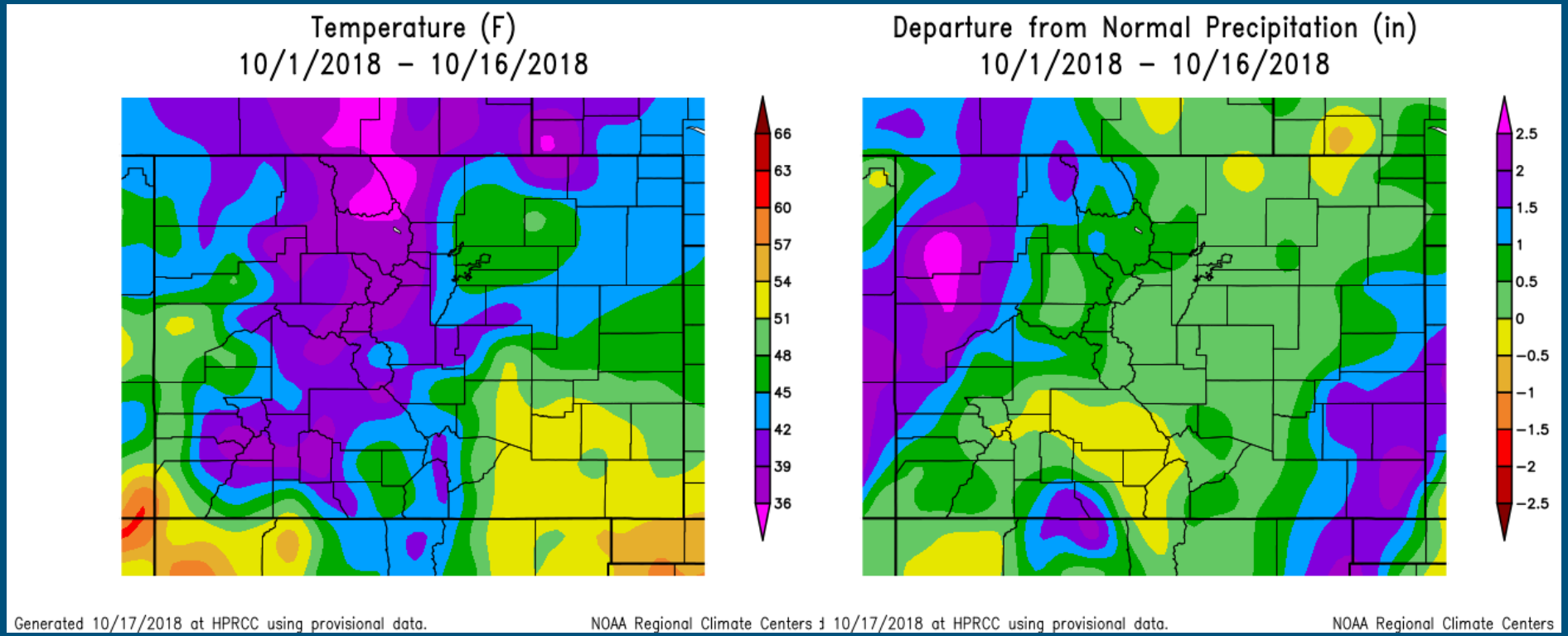
Month to date Precipitation



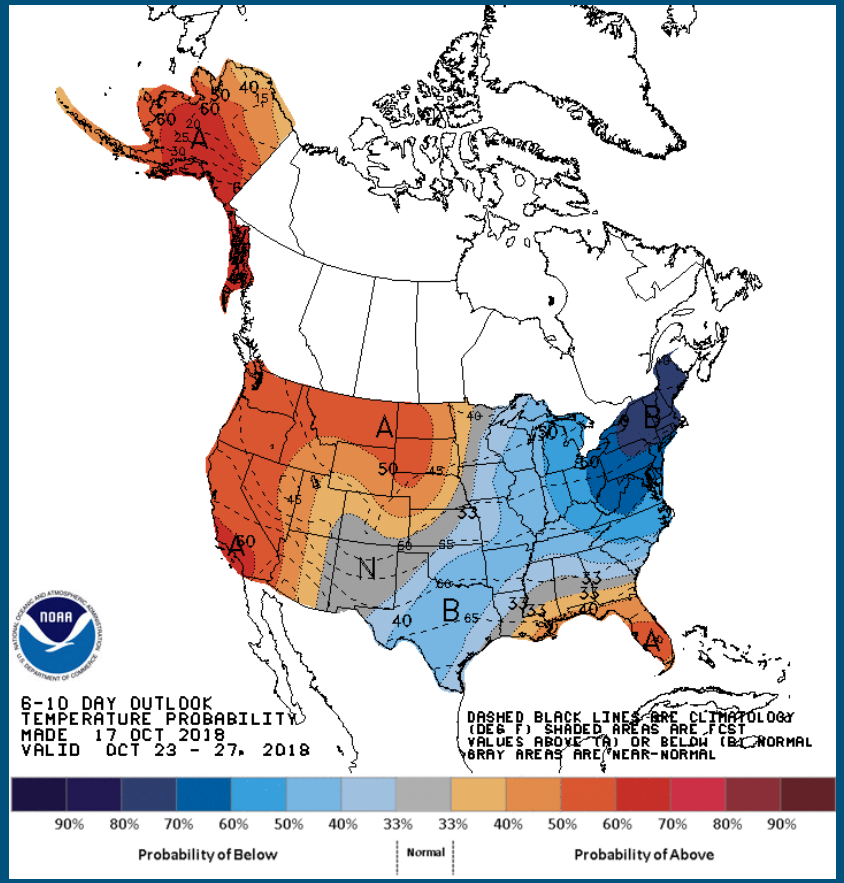
Total Precip.

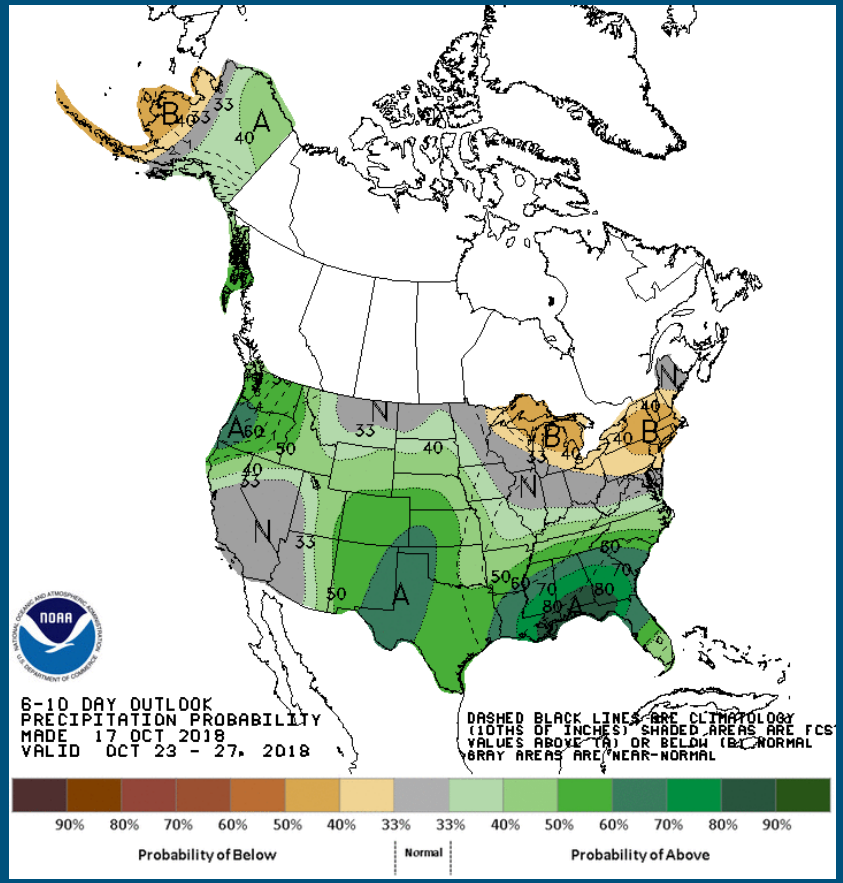


Month to date Temperature

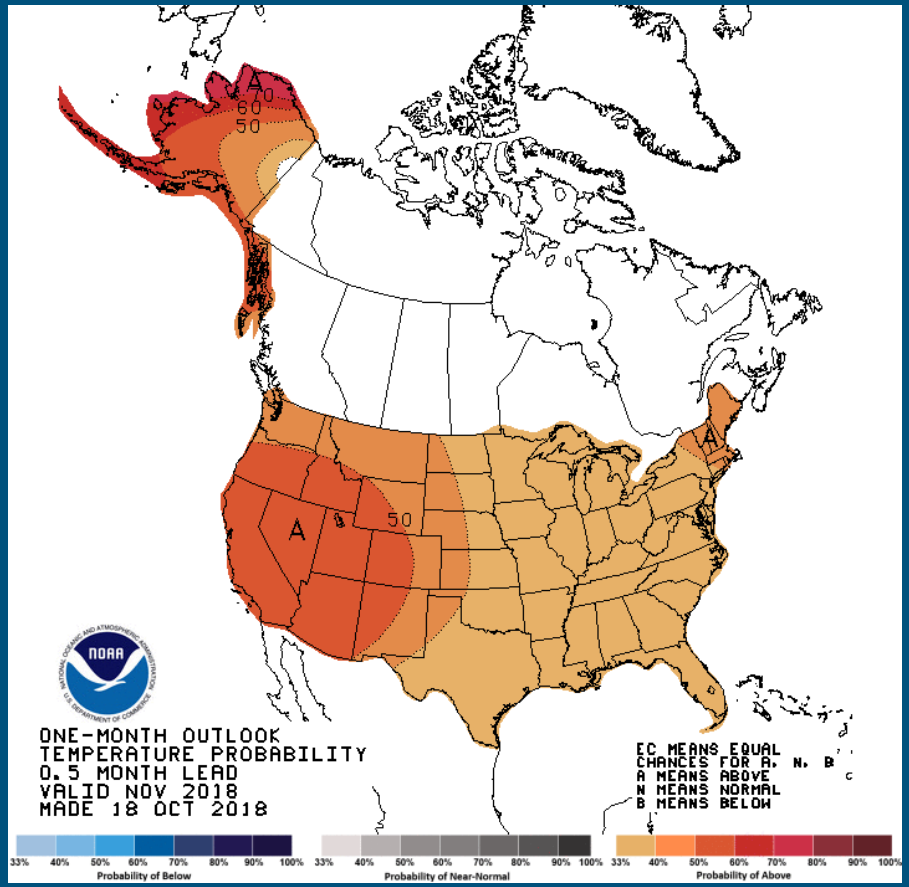


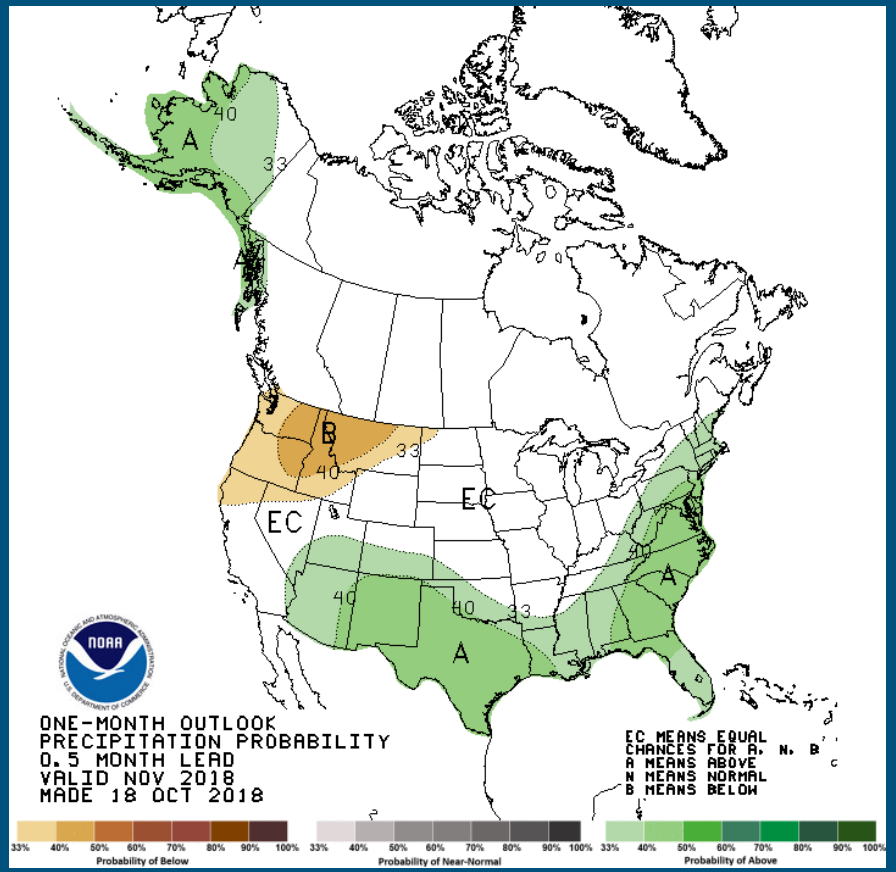
6-10 day outlook





One month outlook

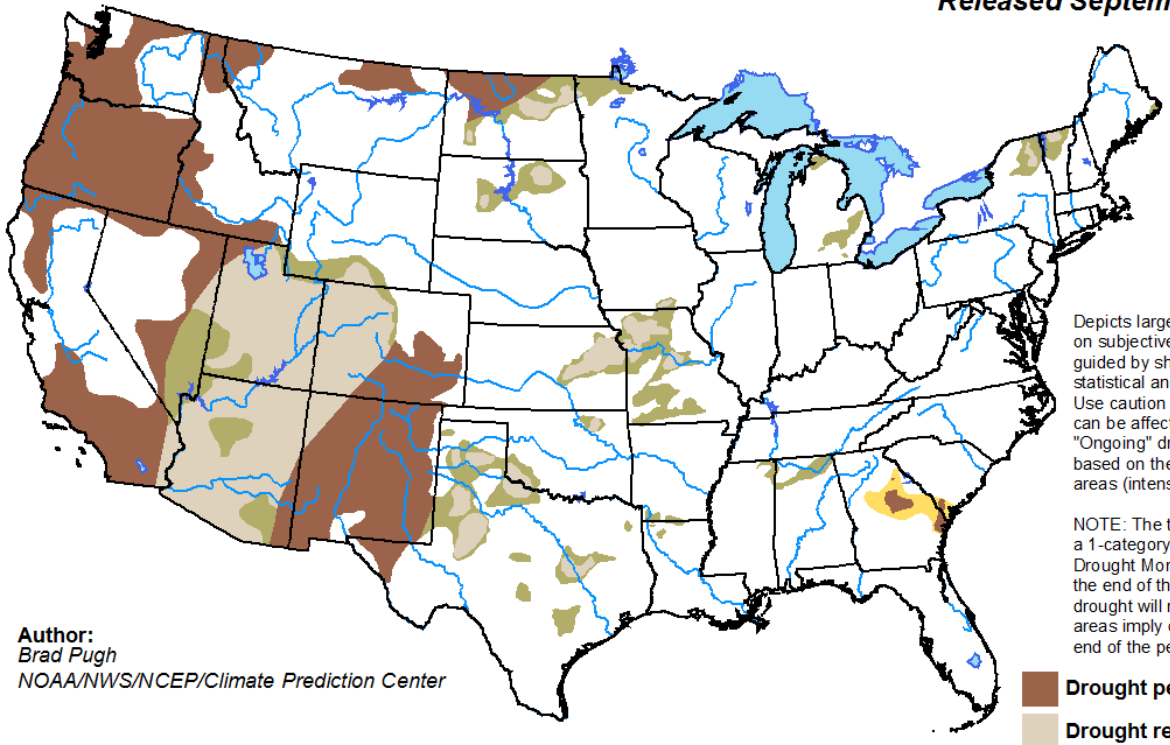




U.S. Monthly Drought Outlook

Drought Tendency During the Valid Period

Valid for October 2018
Released September 30, 2018



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).

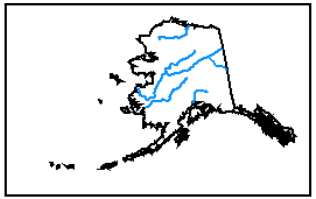
Drought persists

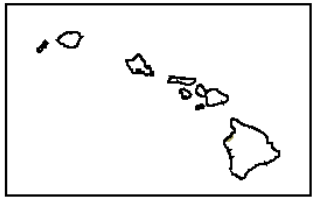
Drought remains but improves

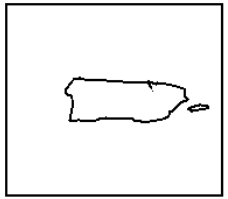
Drought removal likely

Drought development likely

Author:
Brad Pugh
NOAA/NWS/NCEP/Climate Prediction Center

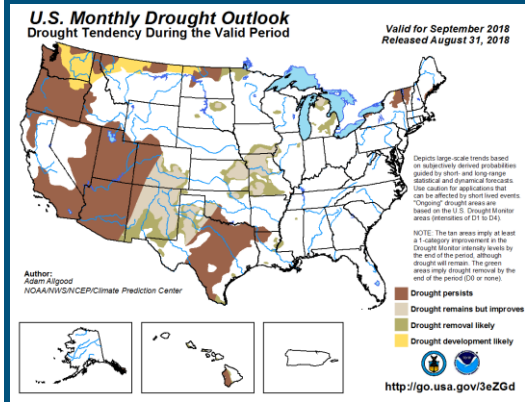






http://go.usa.gov/3eZGd

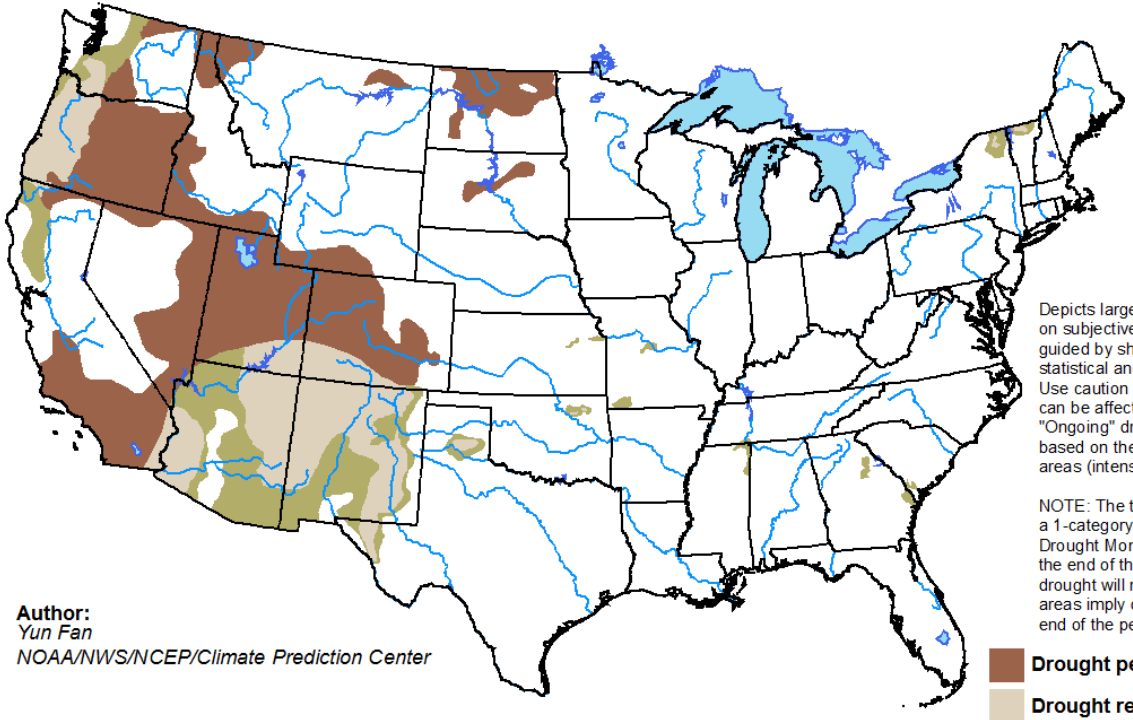
Last month's outlook below



U.S. Seasonal Drought Outlook

Drought Tendency During the Valid Period

Valid for October 18 - January 31, 2019
Released October 18, 2018



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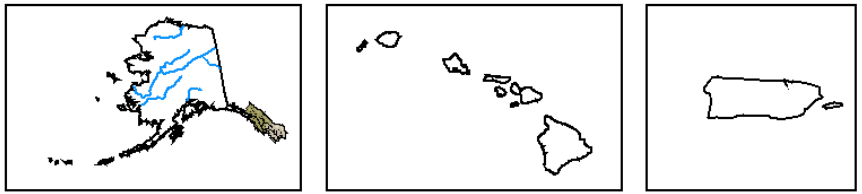
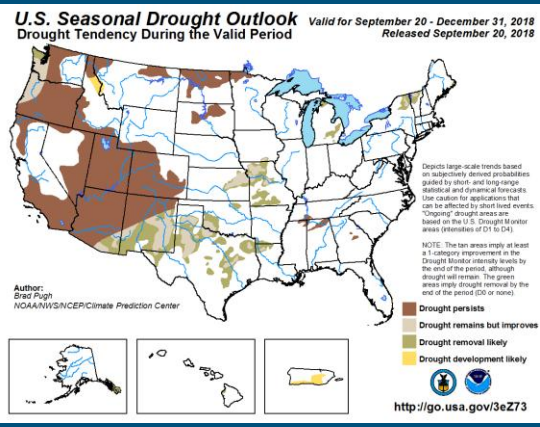
Drought persists
Drought remains but improves
Drought removal likely
Drought development likely

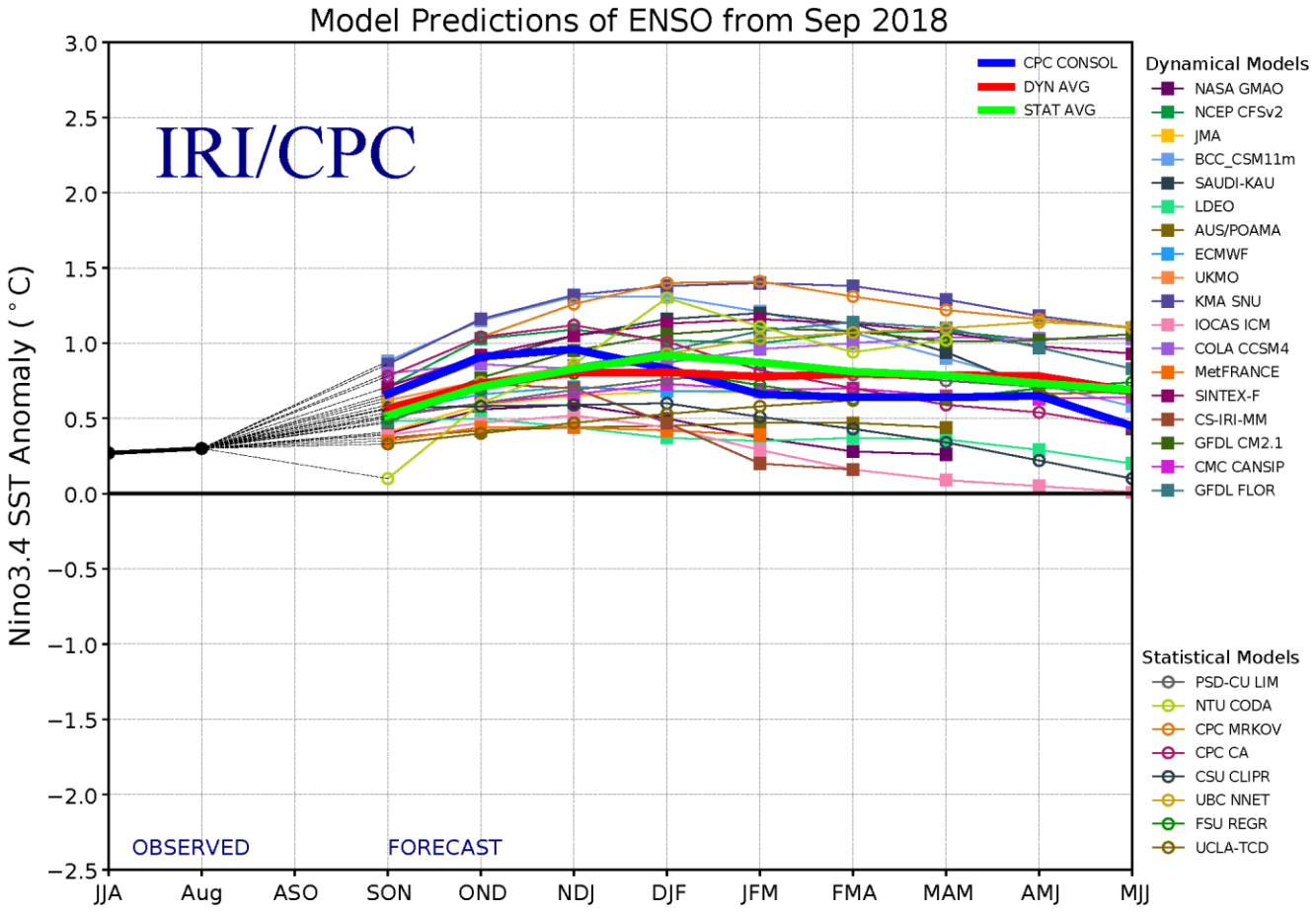
Author:
Yun Fan
NOAA/NWS/NCEP/Climate Prediction Center



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

Last month's outlook below





The majority of models predict El Niño to develop during September-November 2018.

Official forecast is a 70-75% chance of El Niño for winter

In general, El Nino winters are wetter than normal in southern mountains and often also on eastern Plains; less connection for northern/central mtns

Questions?