

**September 13, 2018 Drought Readiness Council Meeting Materials**

# Water Supply Conditions Report

## Drought Readiness Council



Ken Stahr  
Oregon Water Resources  
Department  
September 13, 2018

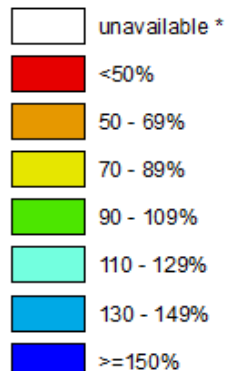
# Statewide SNOTEL Precipitation is 85% of normal

## Oregon SNOTEL Water Year (Oct 1) to Date Precipitation % of Normal

Sep 11, 2018

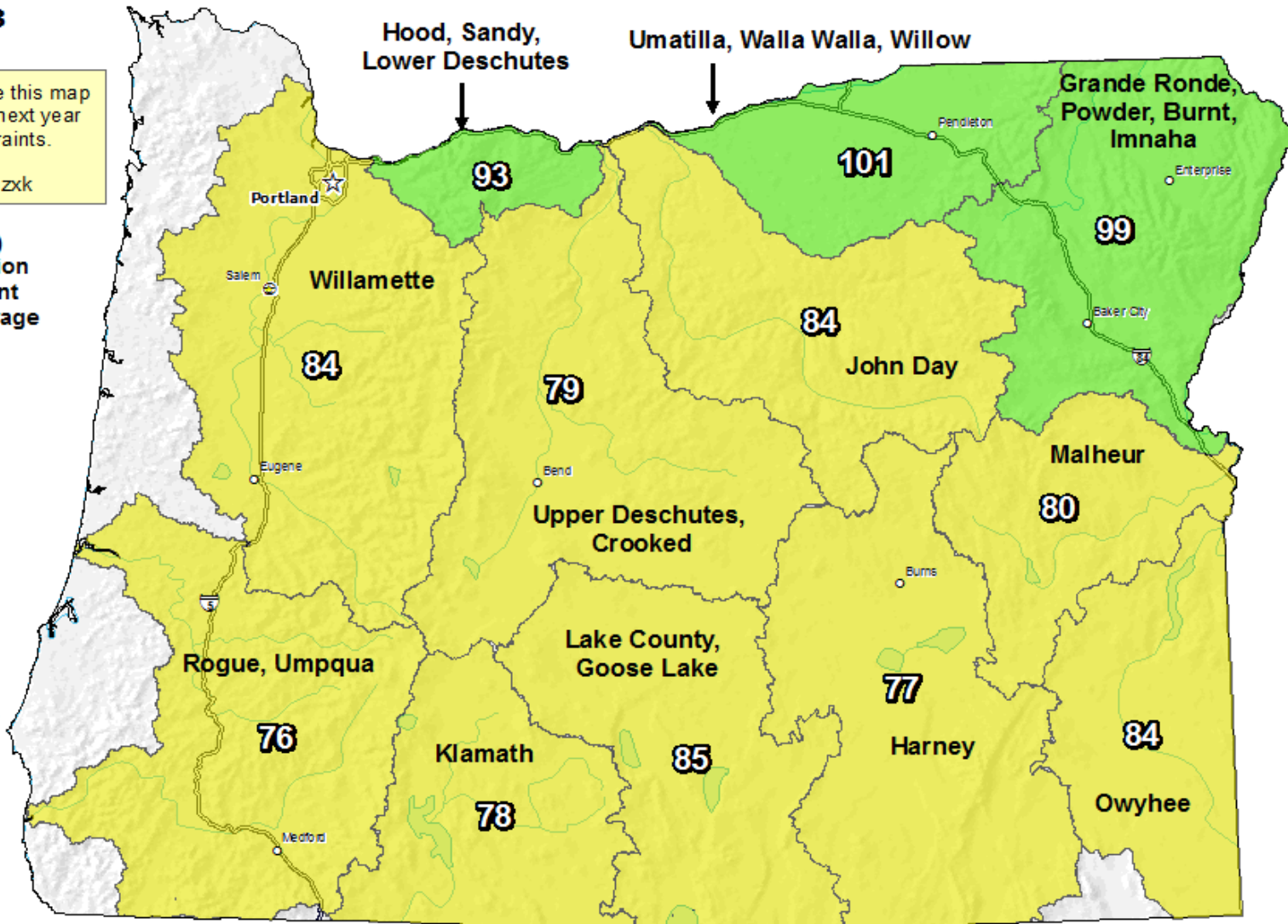
Notice: We anticipate this map will not be available next year due to staffing constraints. Alternate maps: <https://go.usa.gov/xnzxk>

Water Year (Oct 1) to Date Precipitation Basin-wide Percent of 1981-2010 Average



\* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional Data  
Subject to Revision



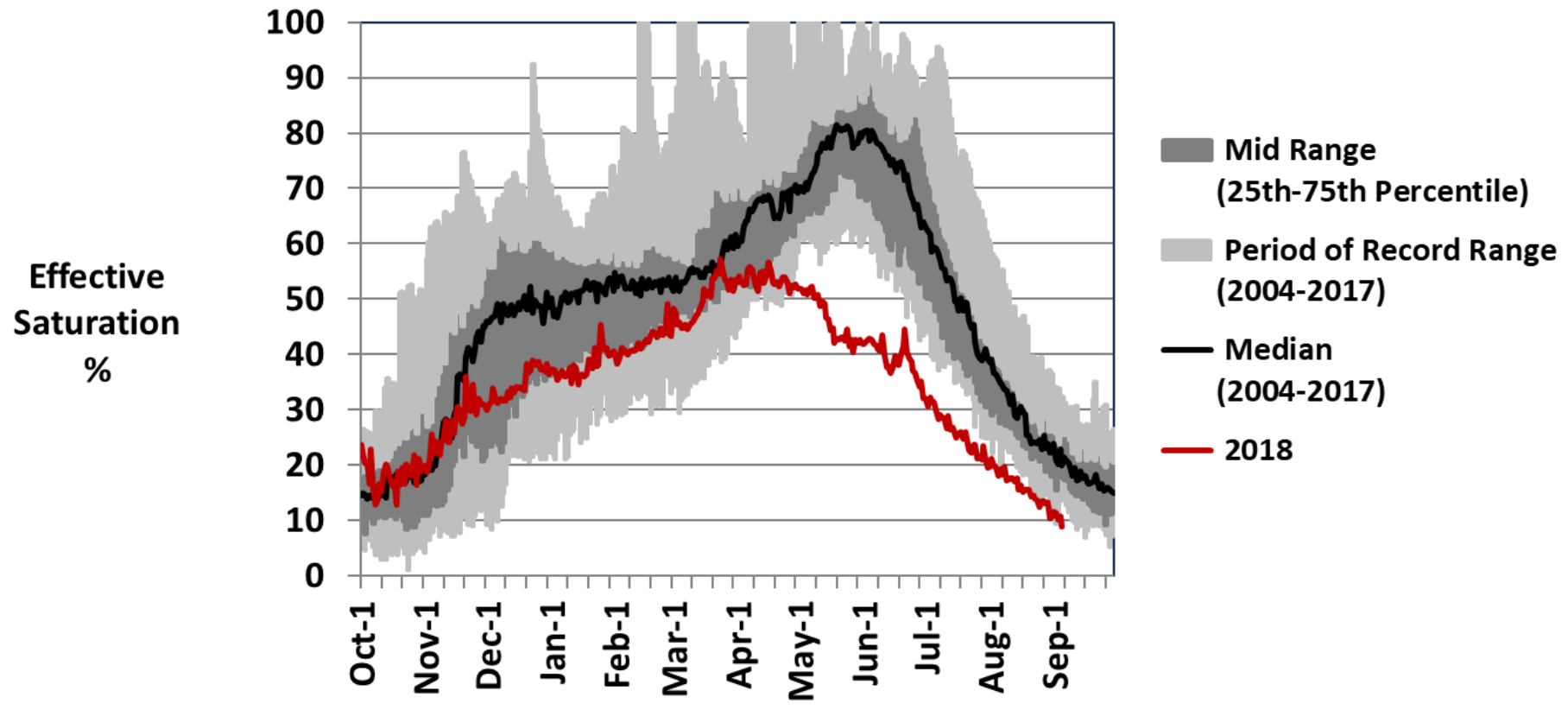
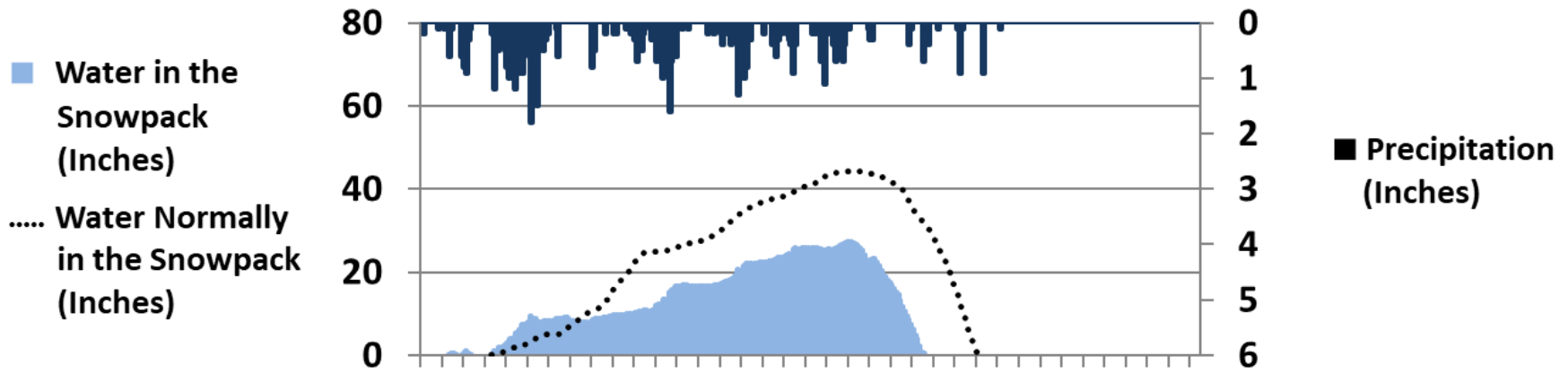
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

0 10 20 40 60 80 100 Miles

Prepared by:  
USDA/NRCS National Water and Climate Center  
Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>

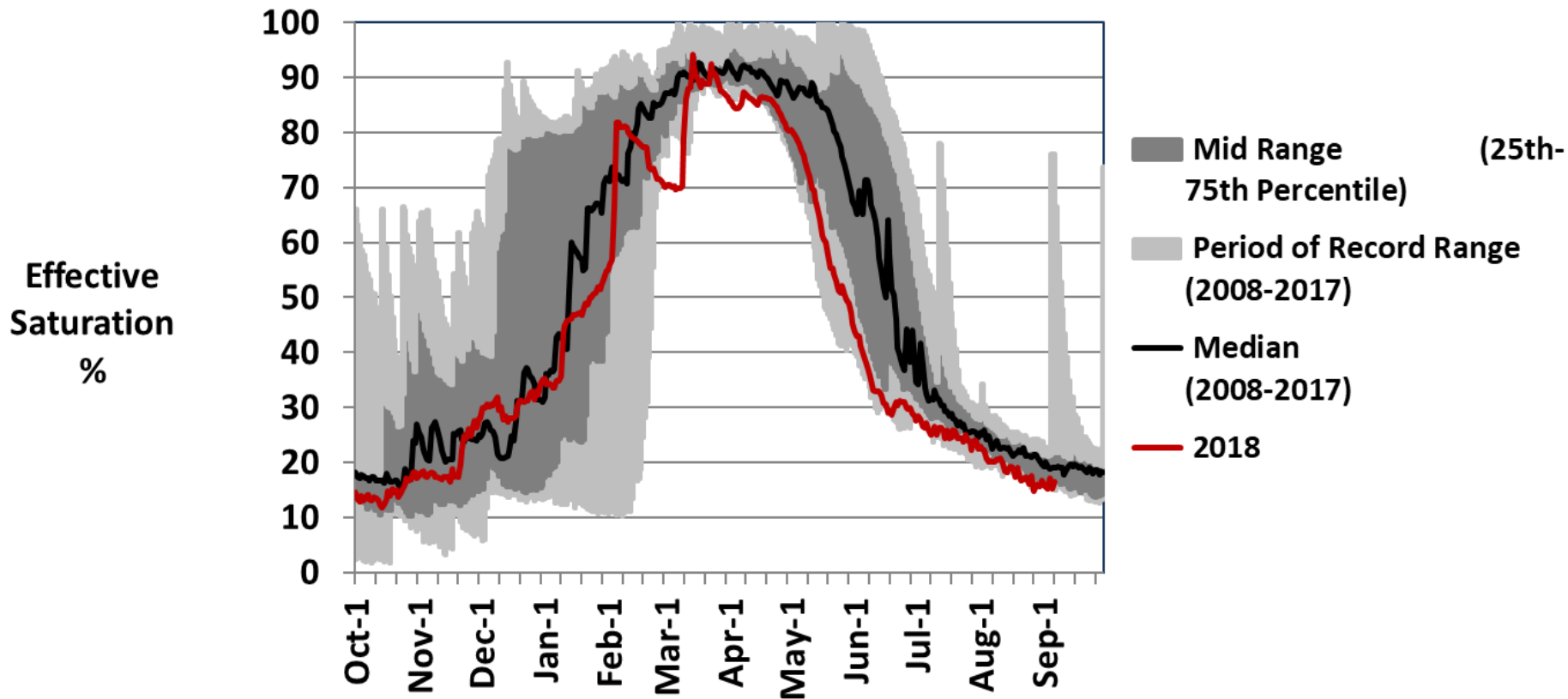
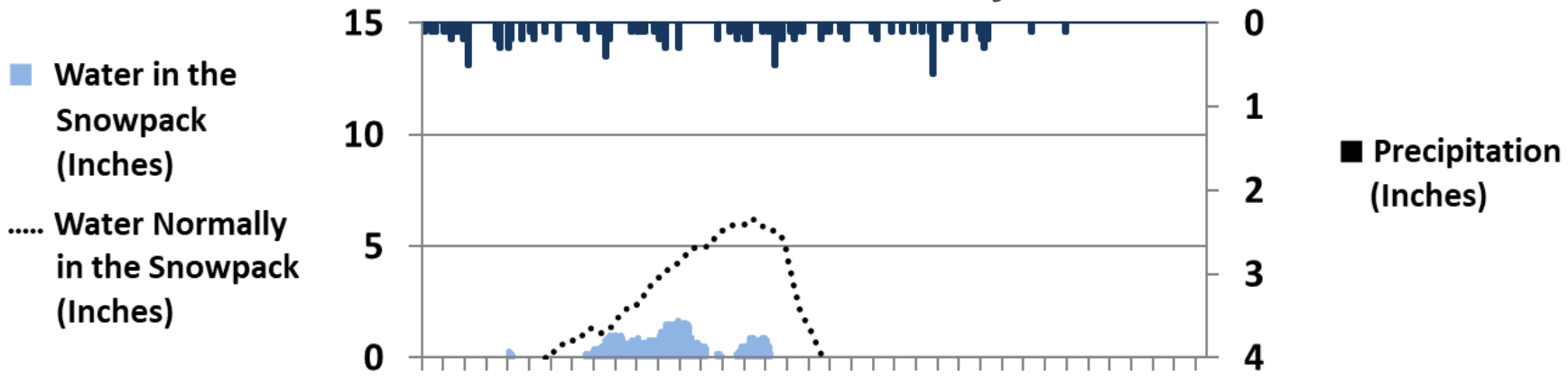


# ANNIE SPRINGS – Klamath – Elev = 6010'



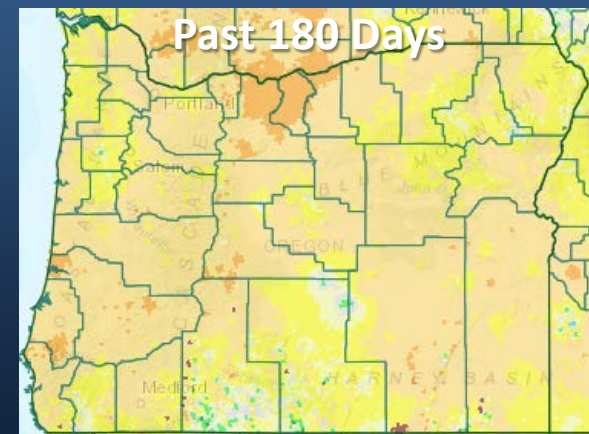
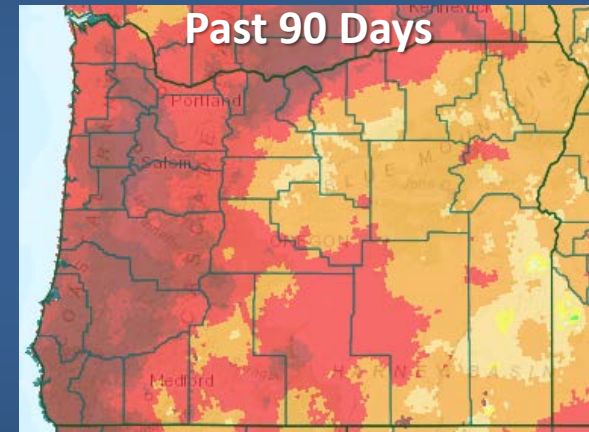
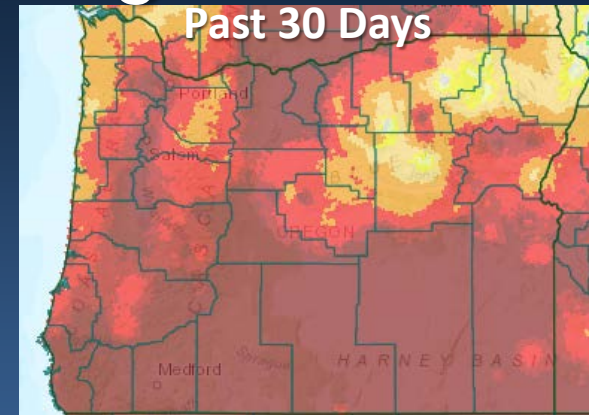
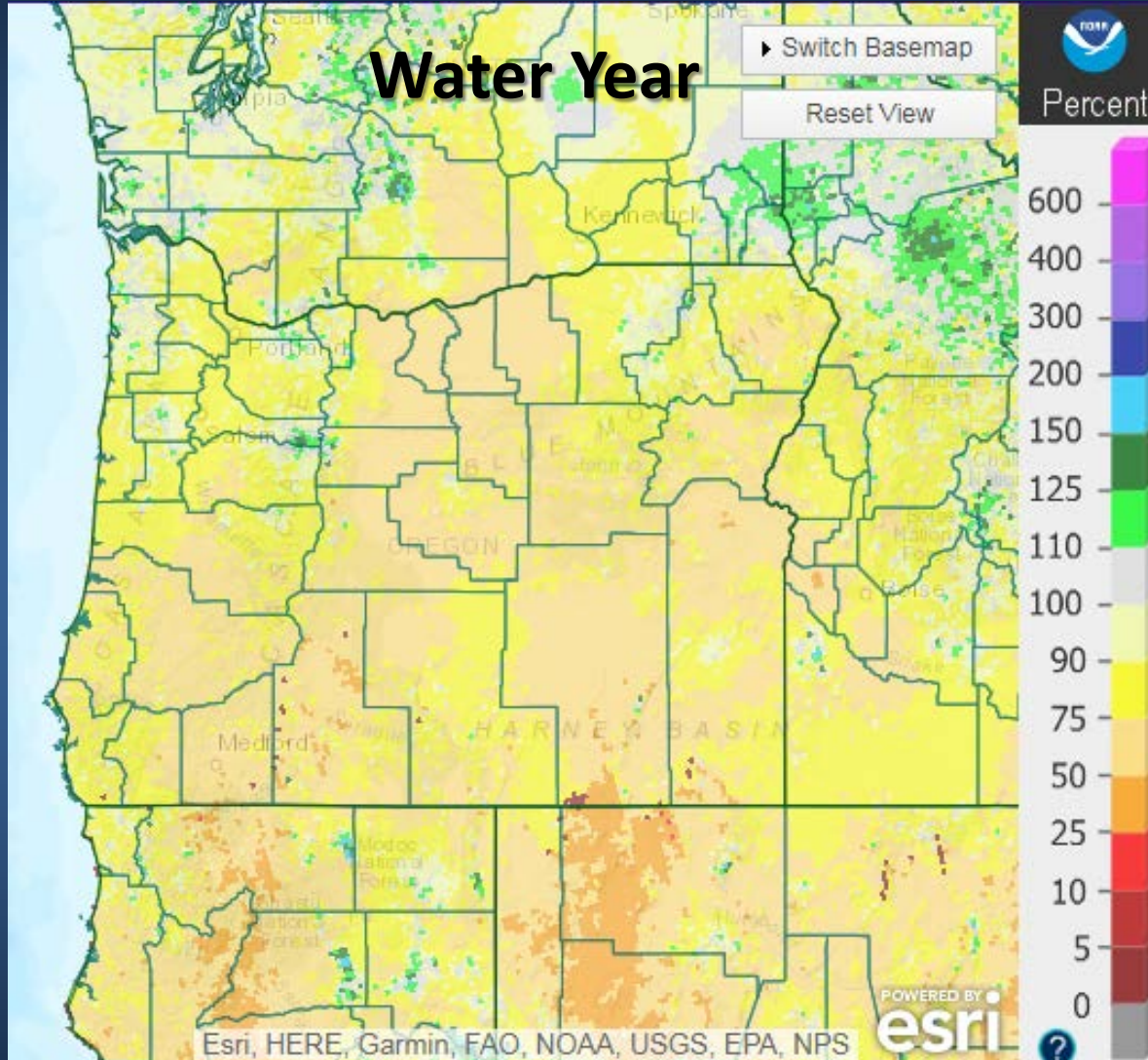


# ROCK SPRINGS – Grant/Harney – Elev = 5290'





# Precipitation % of Average



*Precipitation Data as of Sept 10<sup>th</sup>, 2018*

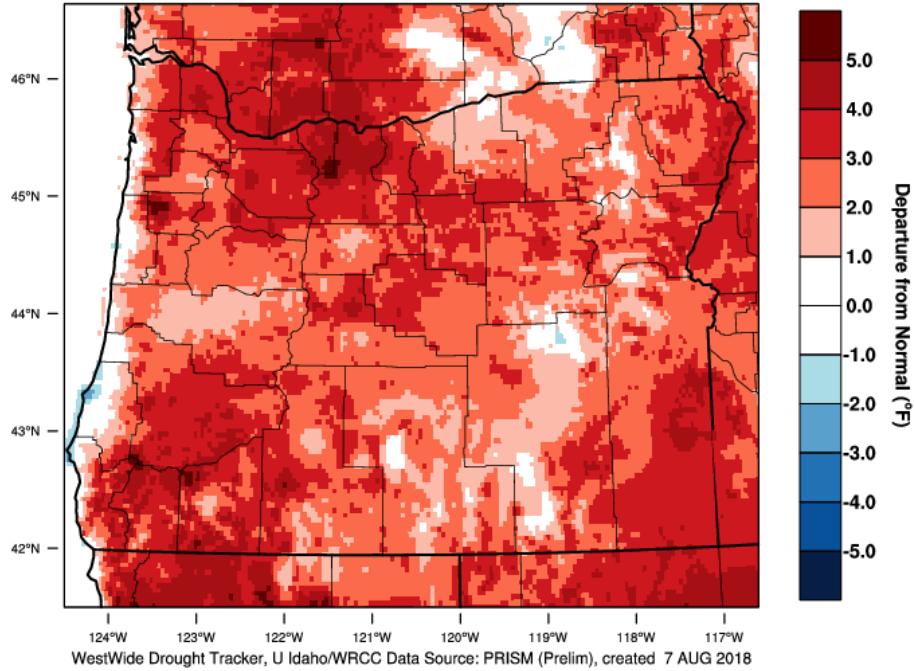
Source: [water.weather.gov/precip/index.php?location\\_type=wfo&location\\_name=pqr](http://water.weather.gov/precip/index.php?location_type=wfo&location_name=pqr)



# Recent Temperatures

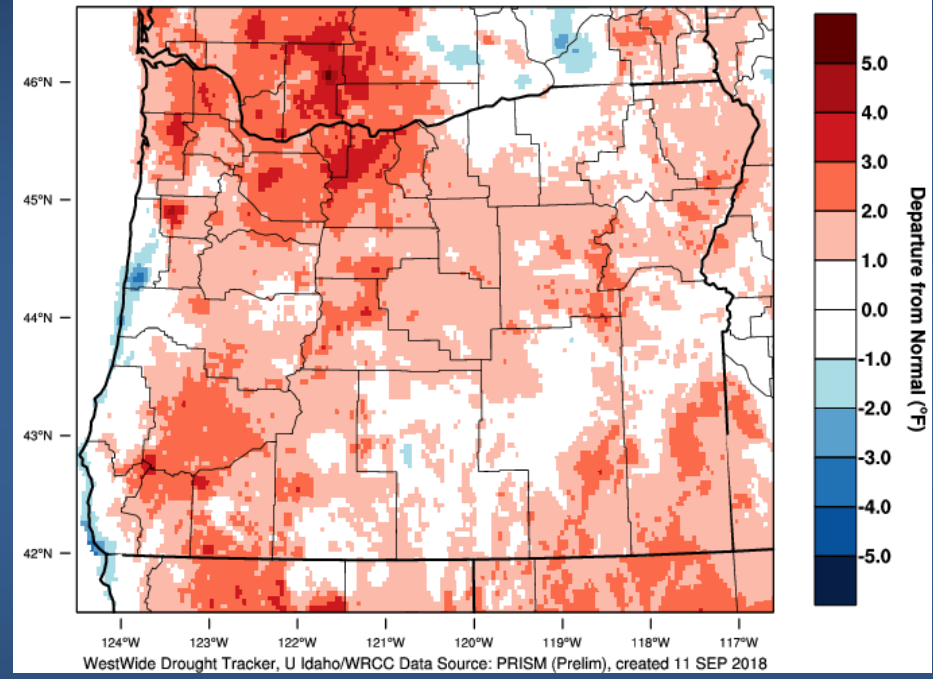
## July 2018

Oregon - Mean Temperature  
July 2018 Departure from 1981-2010 Normal



## August 2018

Oregon - Mean Temperature  
August 2018 Departure from 1981-2010 Normal

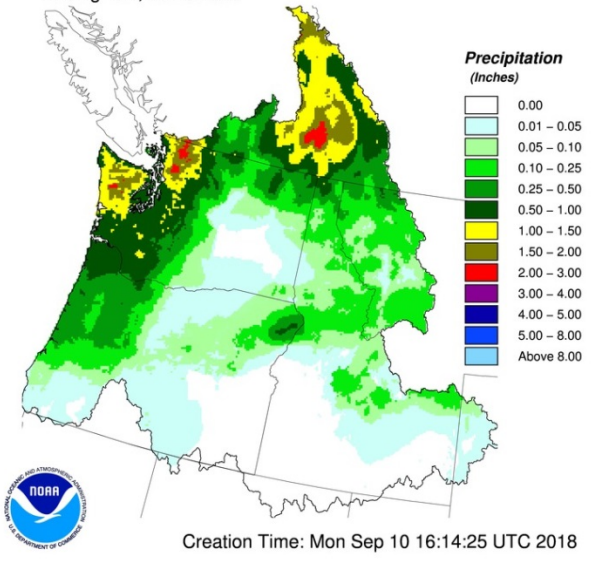




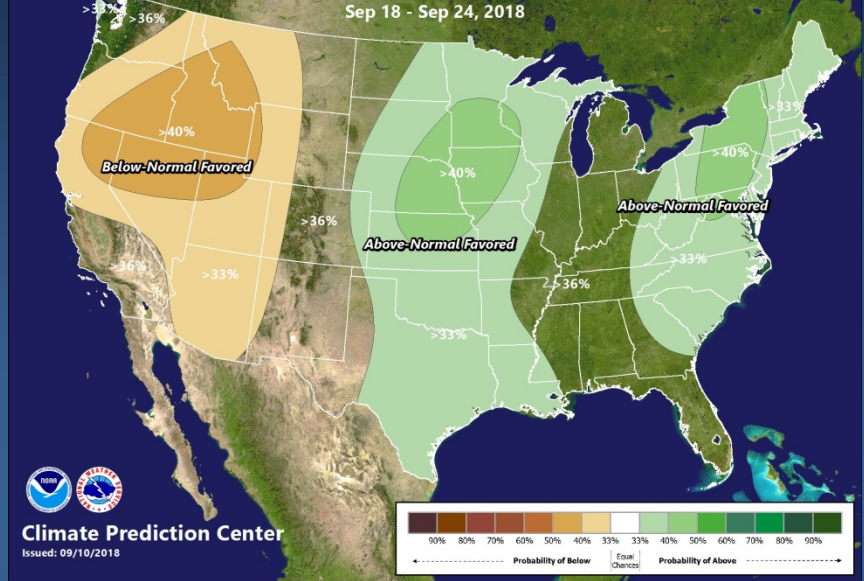


# Mid/Late-September Outlook

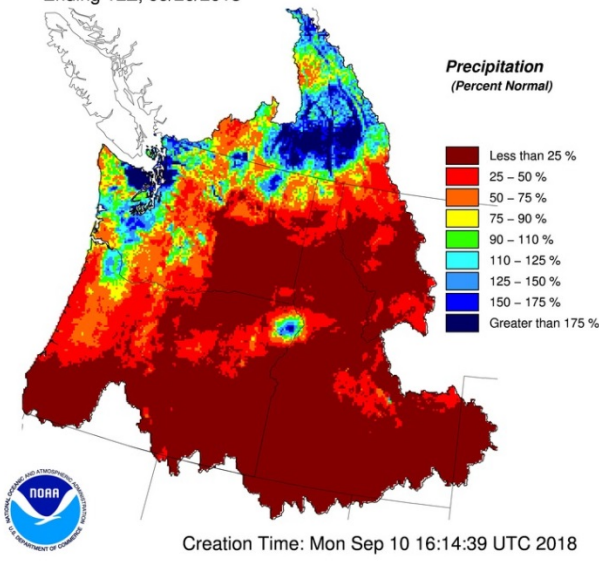
10 Day QPF  
Ending 12Z, 09/20/2018



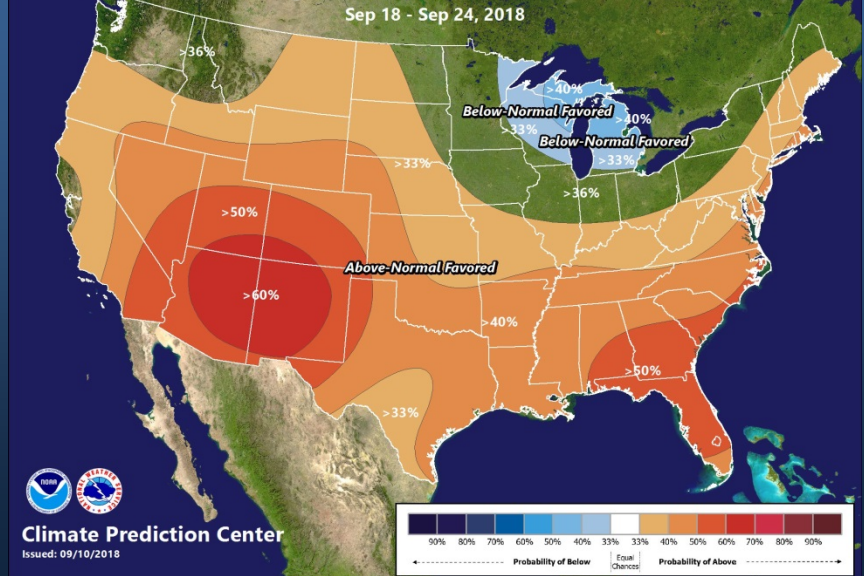
8-14 Day Precipitation Outlook  
Sep 18 - Sep 24, 2018



10 Day QPF (Percent of Climatology)  
Ending 12Z, 09/20/2018



8-14 Day Temperature Outlook  
Sep 18 - Sep 24, 2018

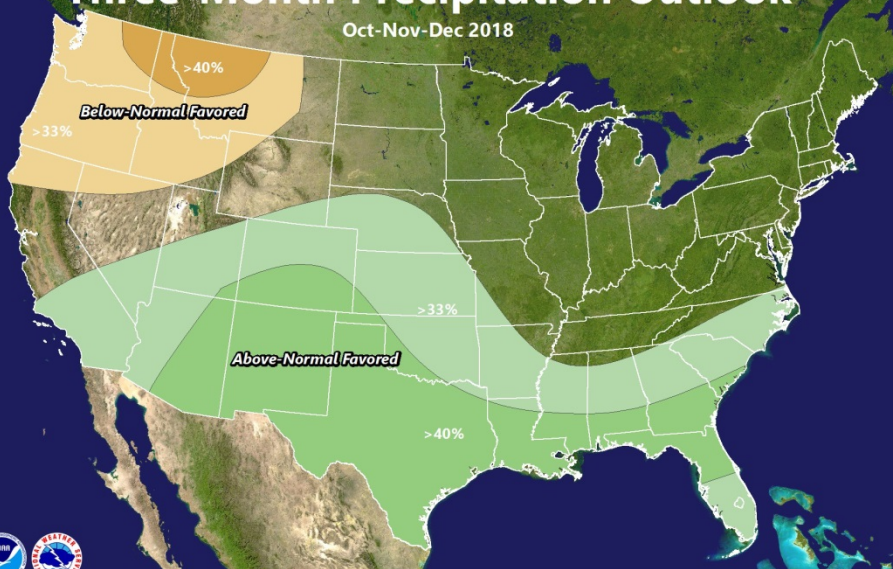




# Outlook for October-November-December 2018

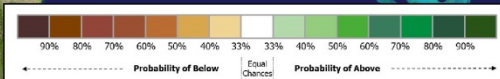
## Three-Month Precipitation Outlook

Oct-Nov-Dec 2018



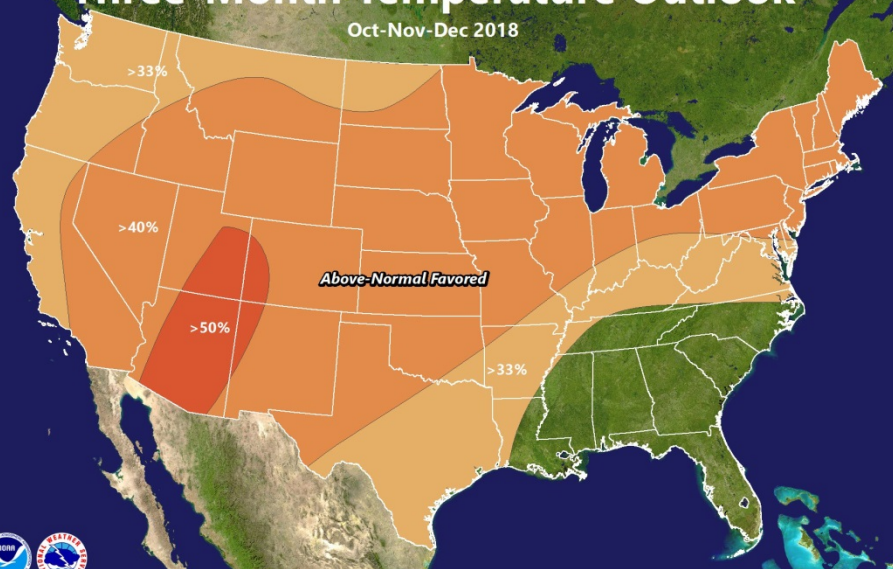
Climate Prediction Center

Issued: 08/16/18



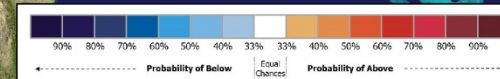
## Three-Month Temperature Outlook

Oct-Nov-Dec 2018



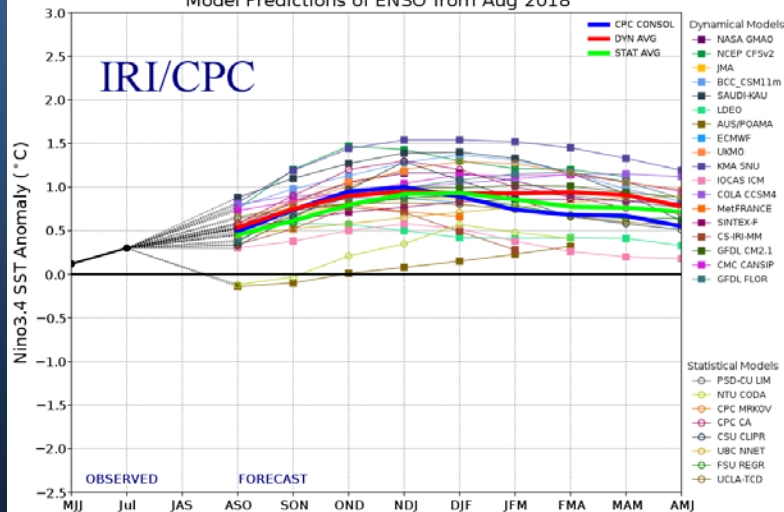
Climate Prediction Center

Issued: 08/16/18

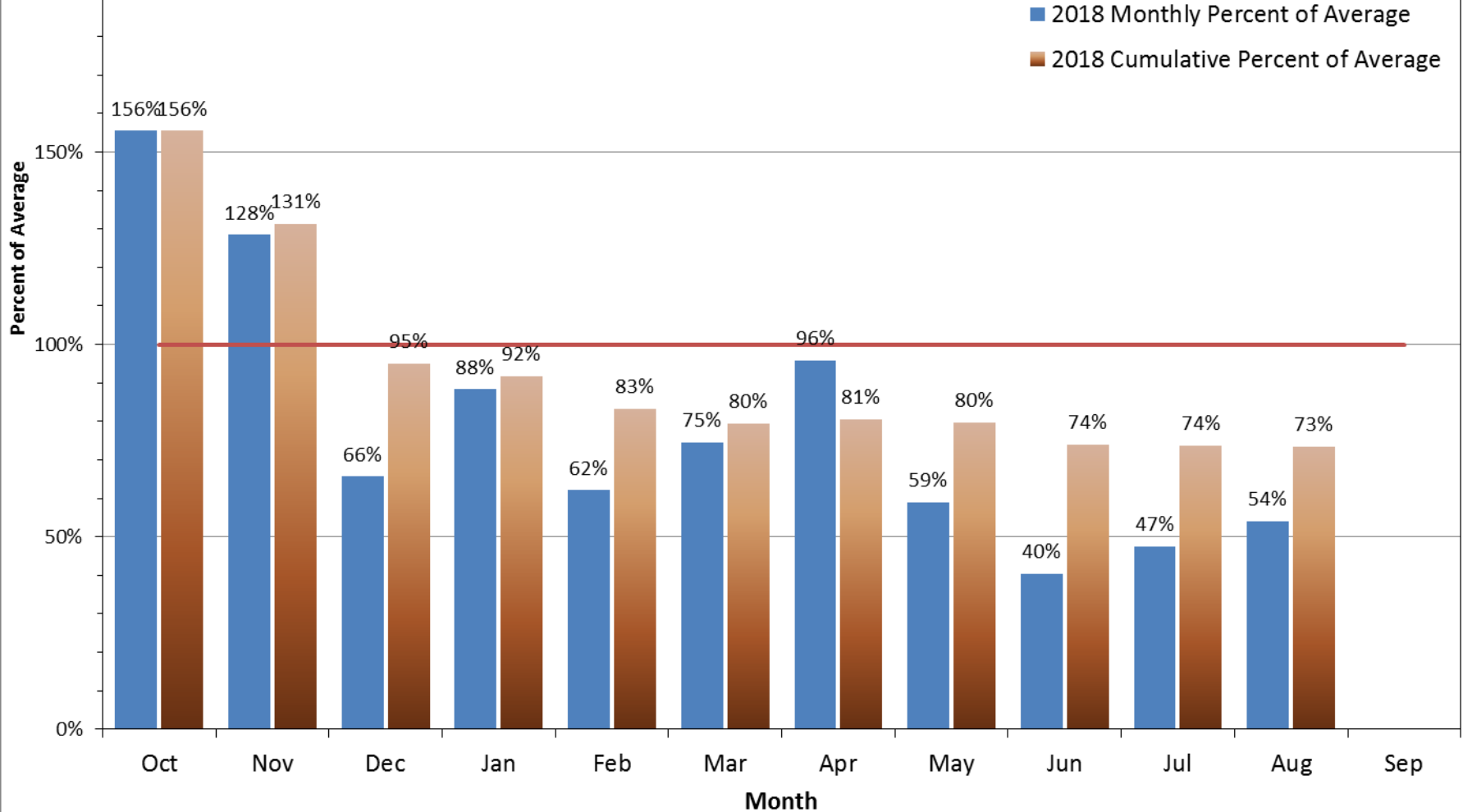


ENSO Prediction based on consensus of model guidance

Model Predictions of ENSO from Aug 2018

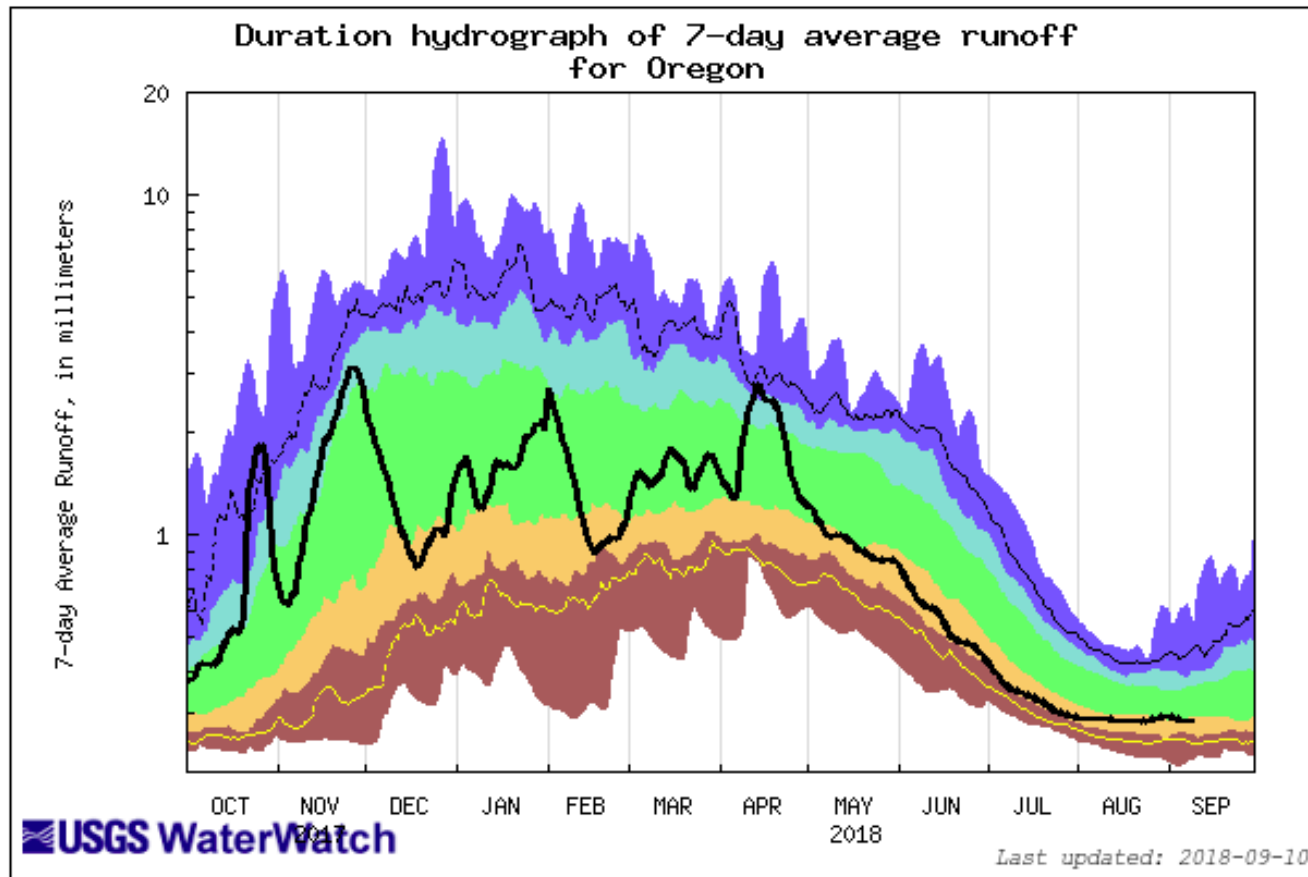


## 2018 Statewide Percent of Average Stream Flow





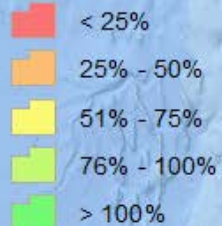
# Oregon 7 Day Average



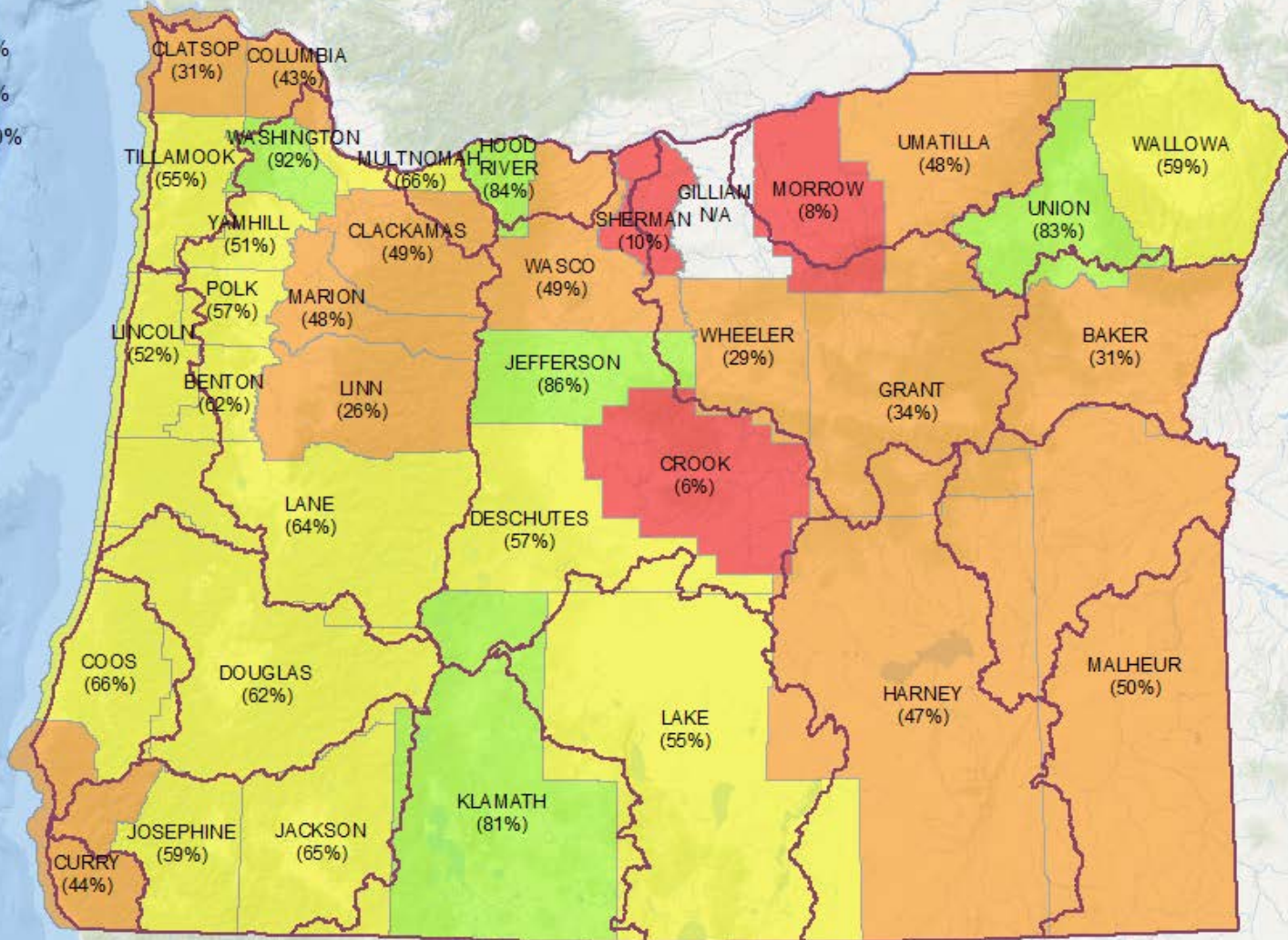
Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Runoff

# Percent of Average Streamflow August, 2018

## County

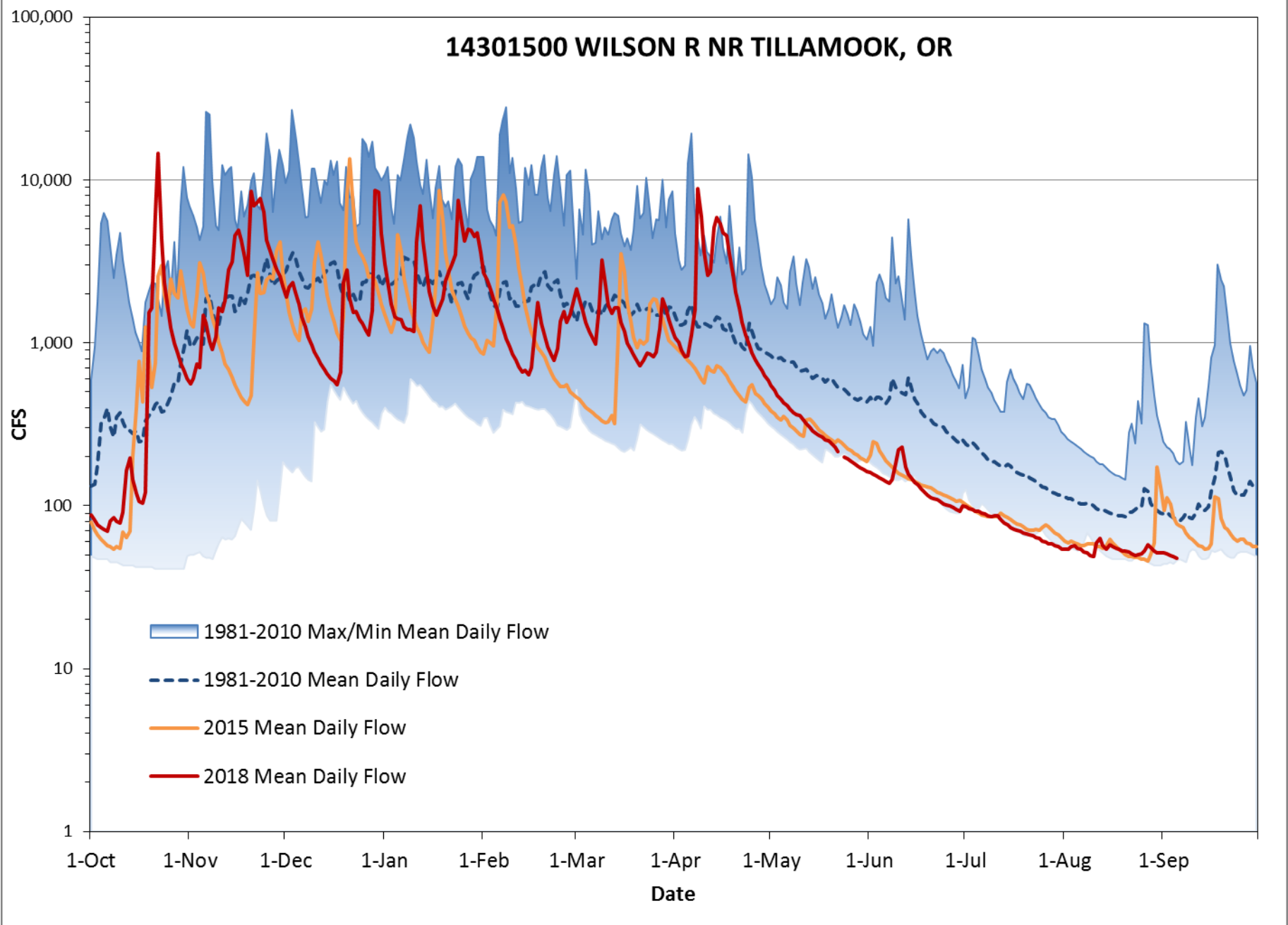


## WRD Basin



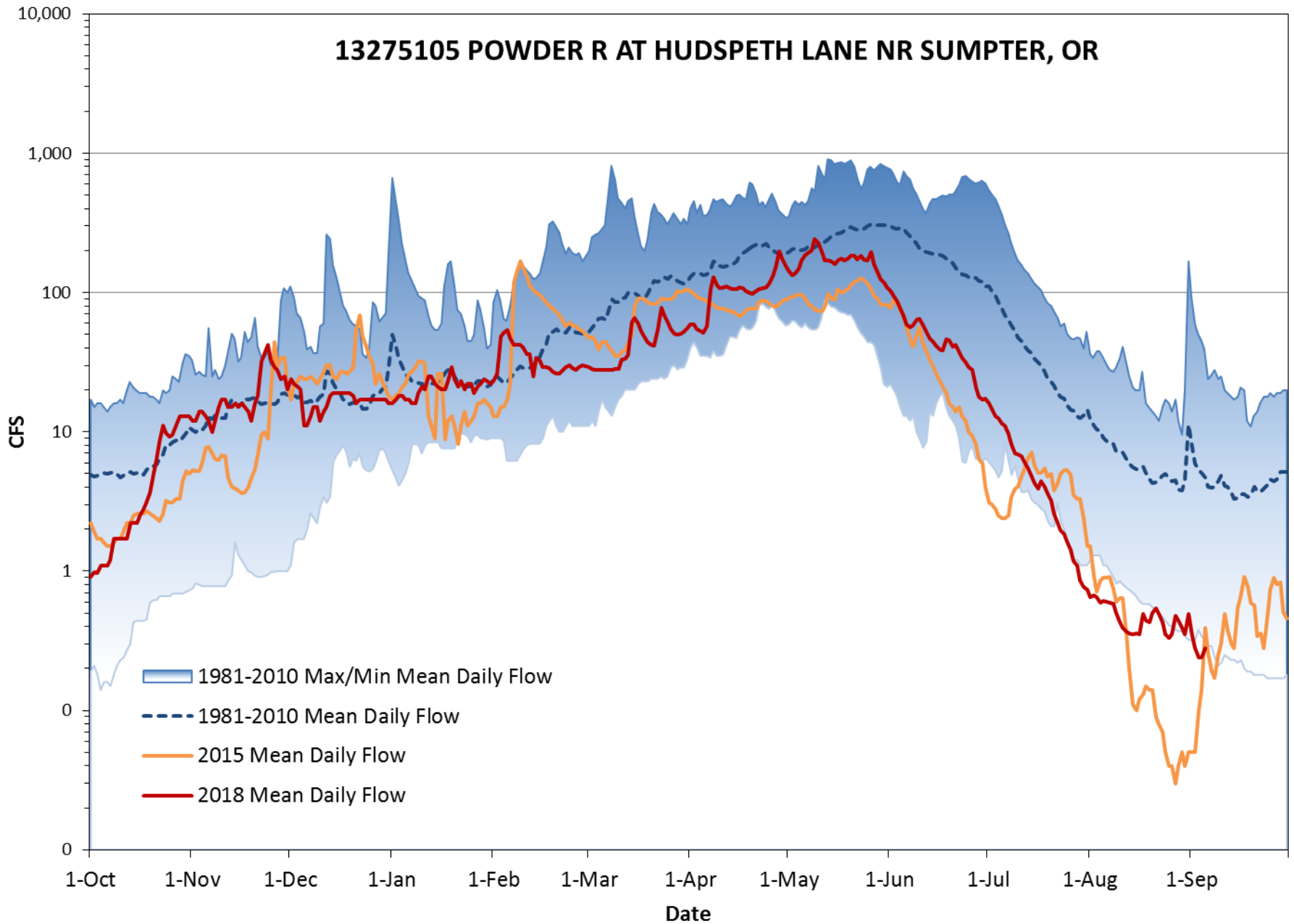
Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.

# 14301500 WILSON R NR TILLAMOOK, OR



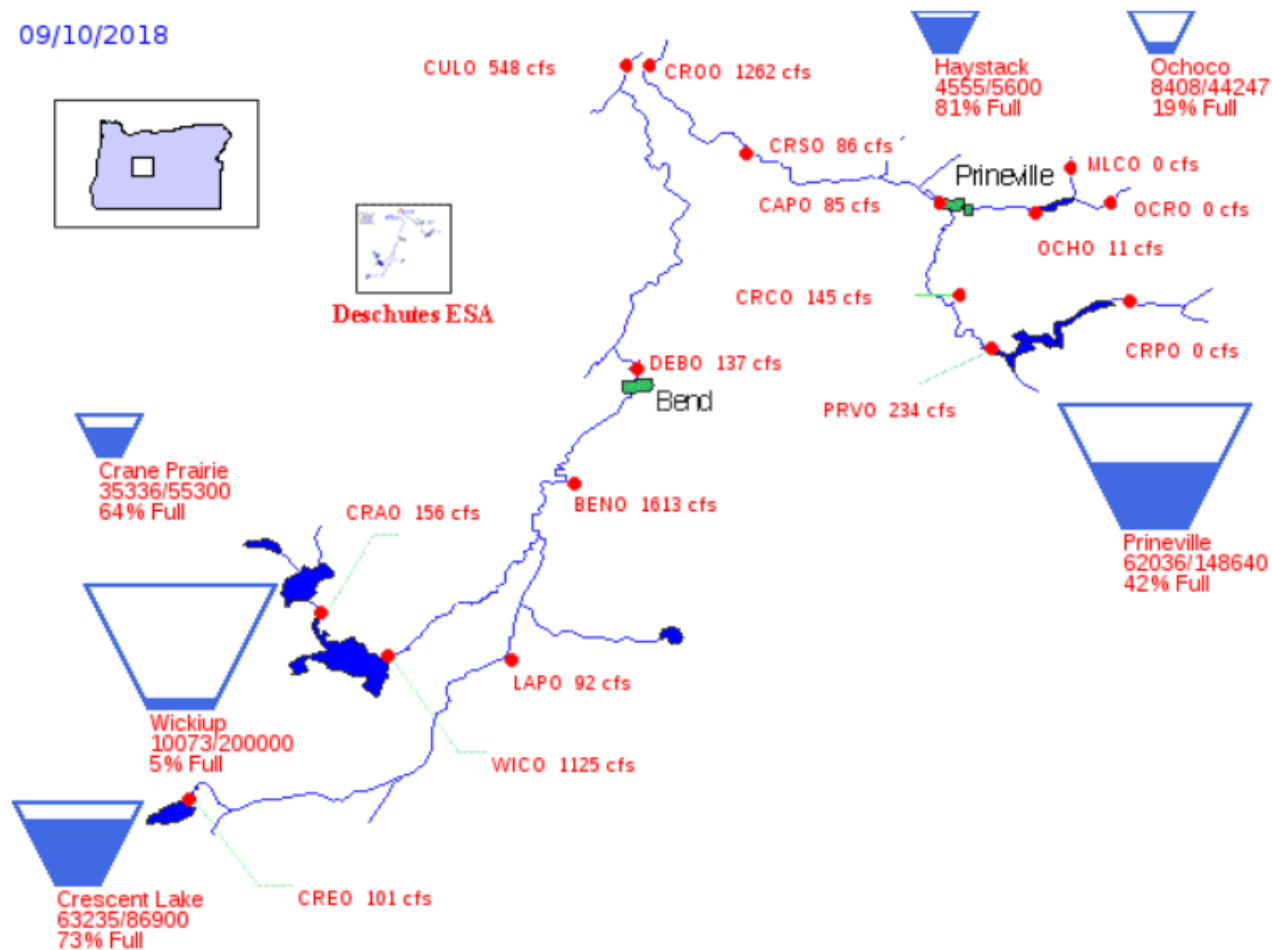


# 13275105 POWDER R AT HUDSPETH LANE NR SUMPTER, OR



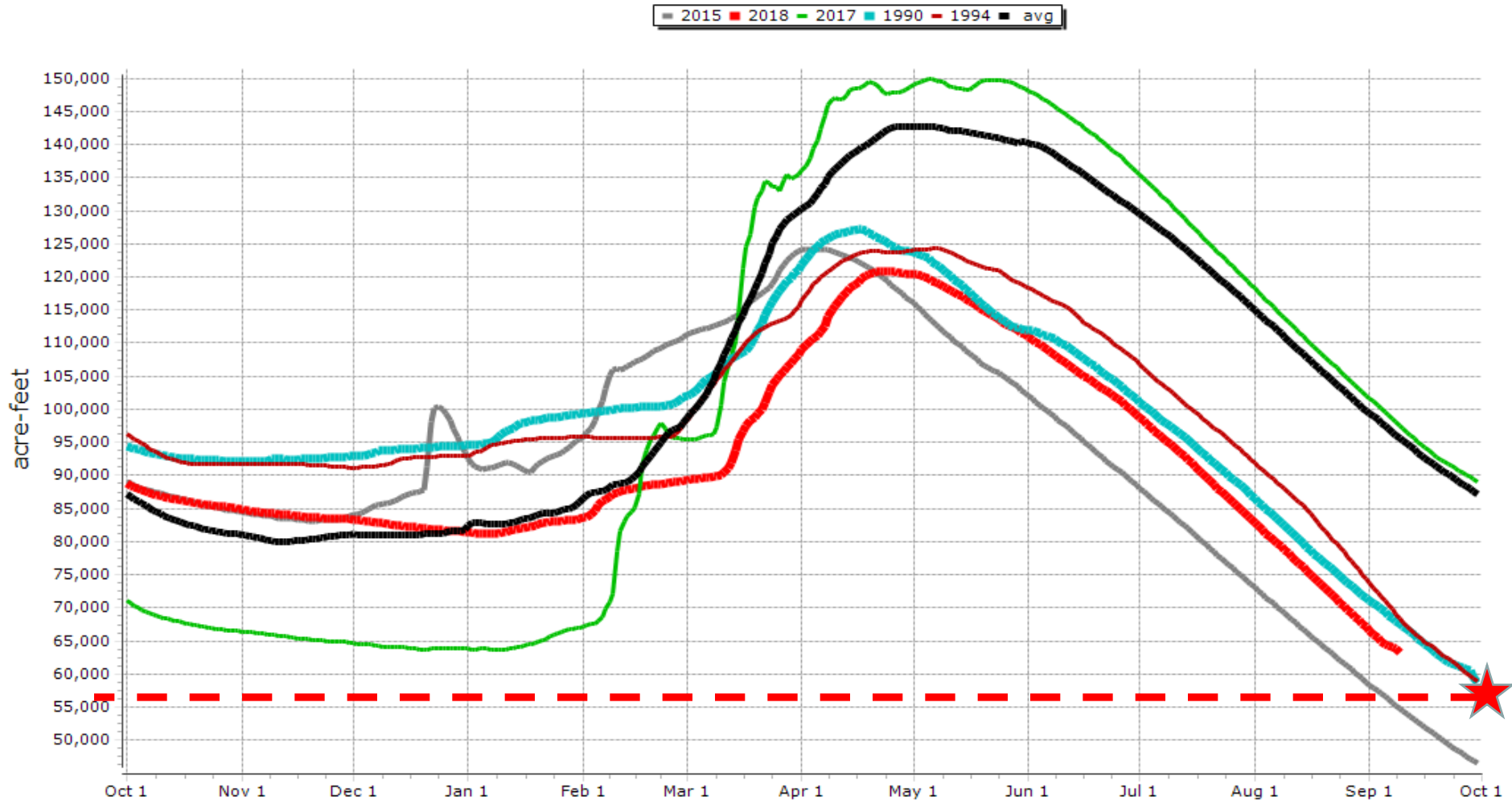
# US Bureau of Reclamation, Pacific Northwest Region Major Storage Reservoirs in the Deschutes River Basin

09/10/2018



RECLAMATION

Prineville Reservoir nr Prineville, OR Elevation:3264.000

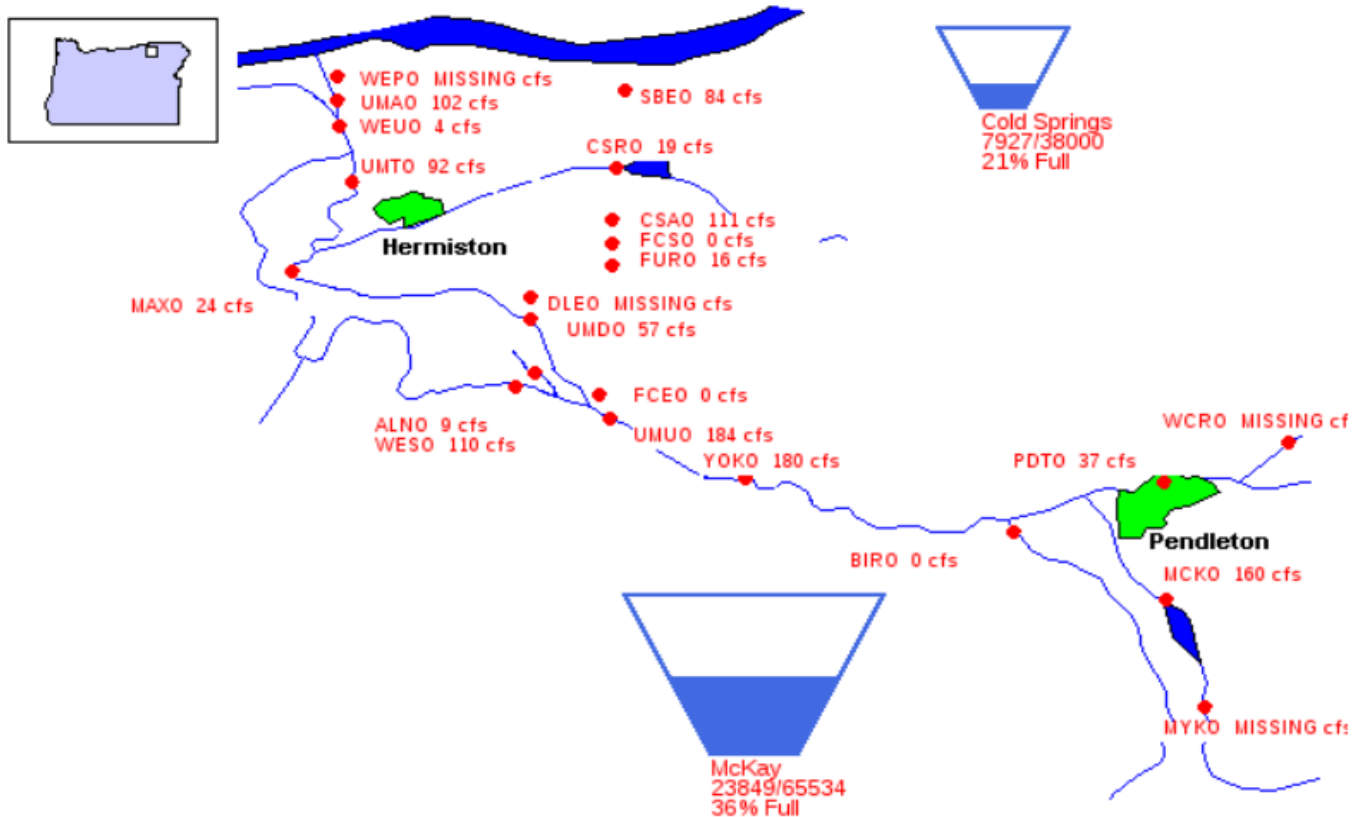


RECLAMATION



# Bureau of Reclamation, Pacific Northwest Region Umatilla River Basin Storage and Flow Diagram

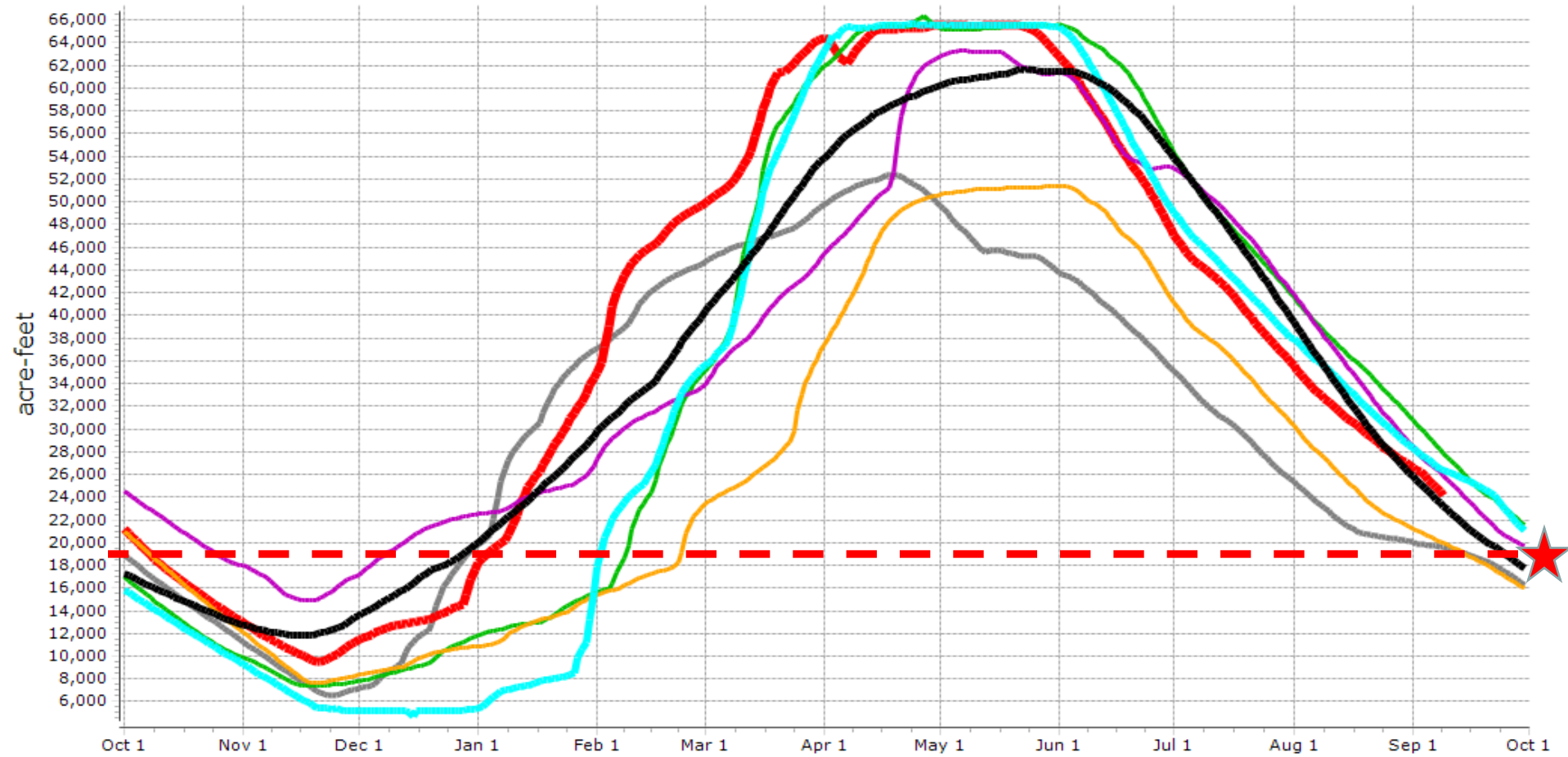
09/10/2018



# RECLAMATION

McKay Reservoir near Pendleton, OR Elevation:1333.000

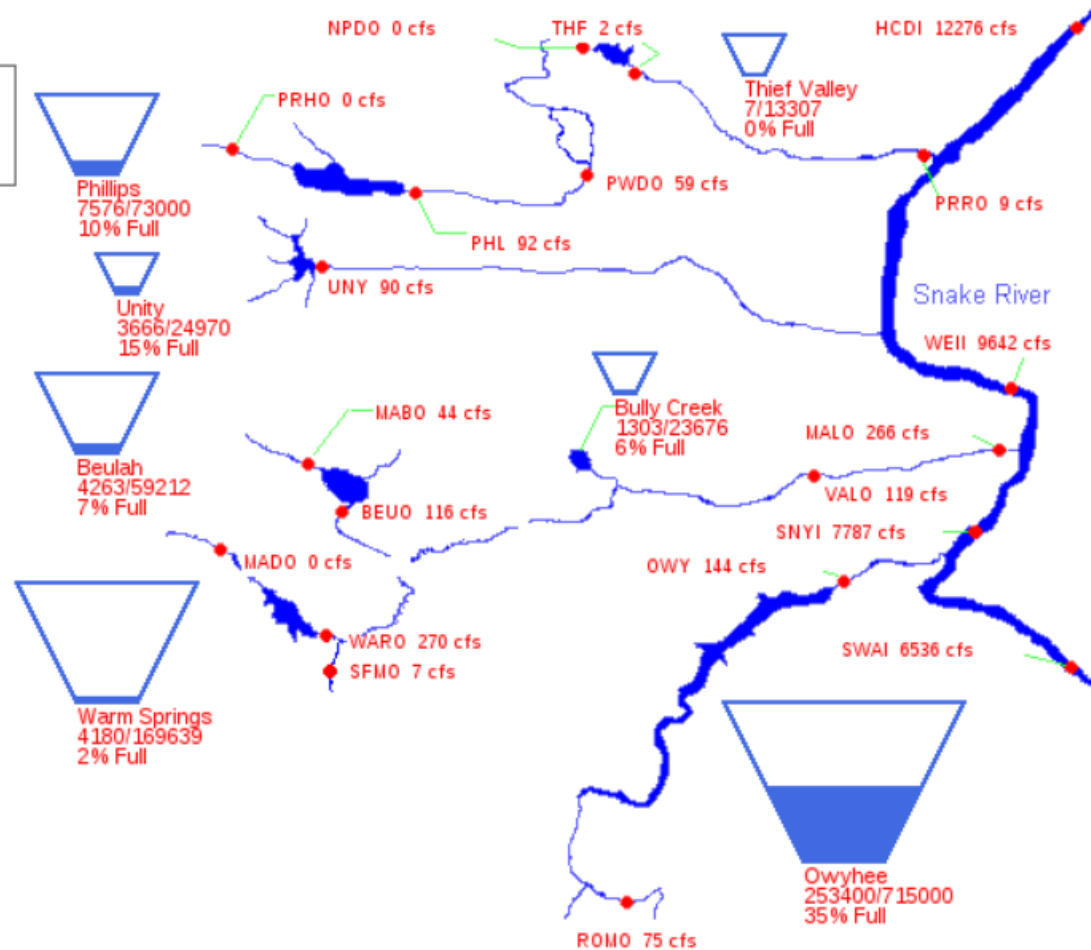
2015 2018 2017 2002 2013 2003 avg



RECLAMATION

# US Bureau of Reclamation, Pacific Northwest Region Major Storage Reservoirs in Southeastern Oregon

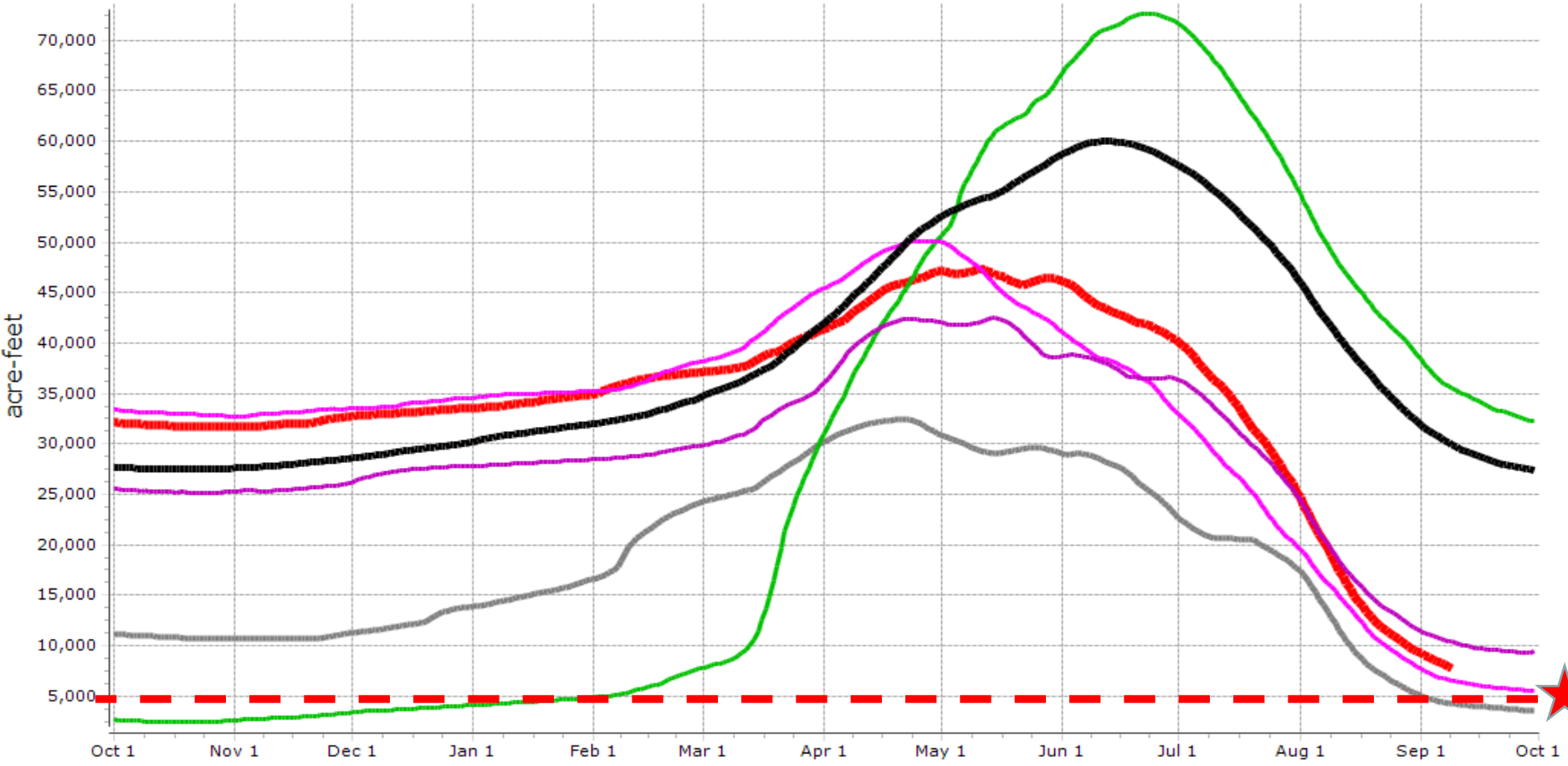
09/10/2018





Mason Dam and Phillips Lake near Sumpter, OR Elevation:3898.000

■ 2015 ■ 2018 ■ 2017 ■ 2007 ■ 2013 ■ avg



RECLAMATION

# Reservoir Storage Summary for the end of August, 2018

## Percent of Average Storage

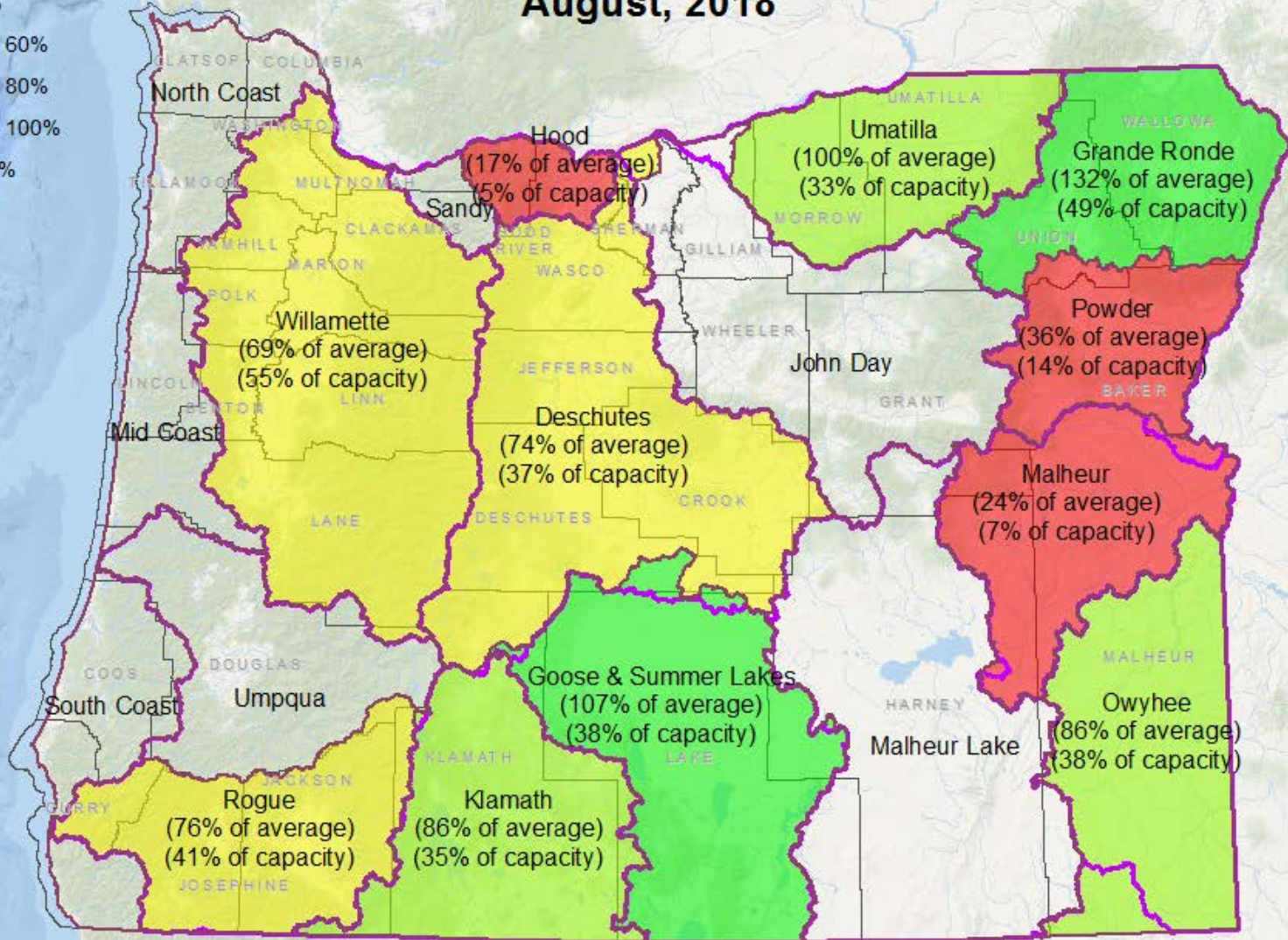
WRD Basin

- < 40%
- 40% - 60%
- 61% - 80%
- 81% - 100%
- > 100%

NRCS Basin



County



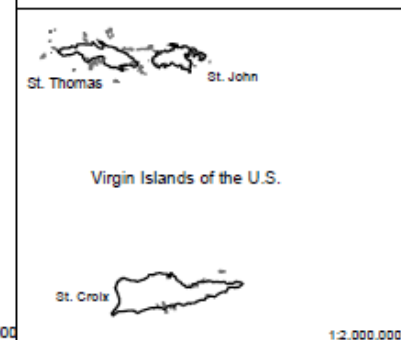
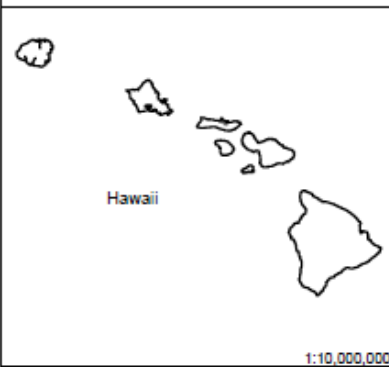
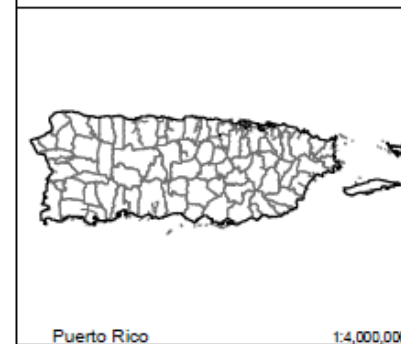
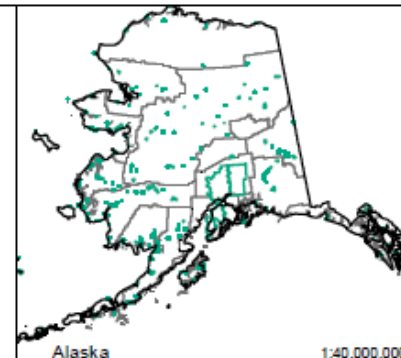
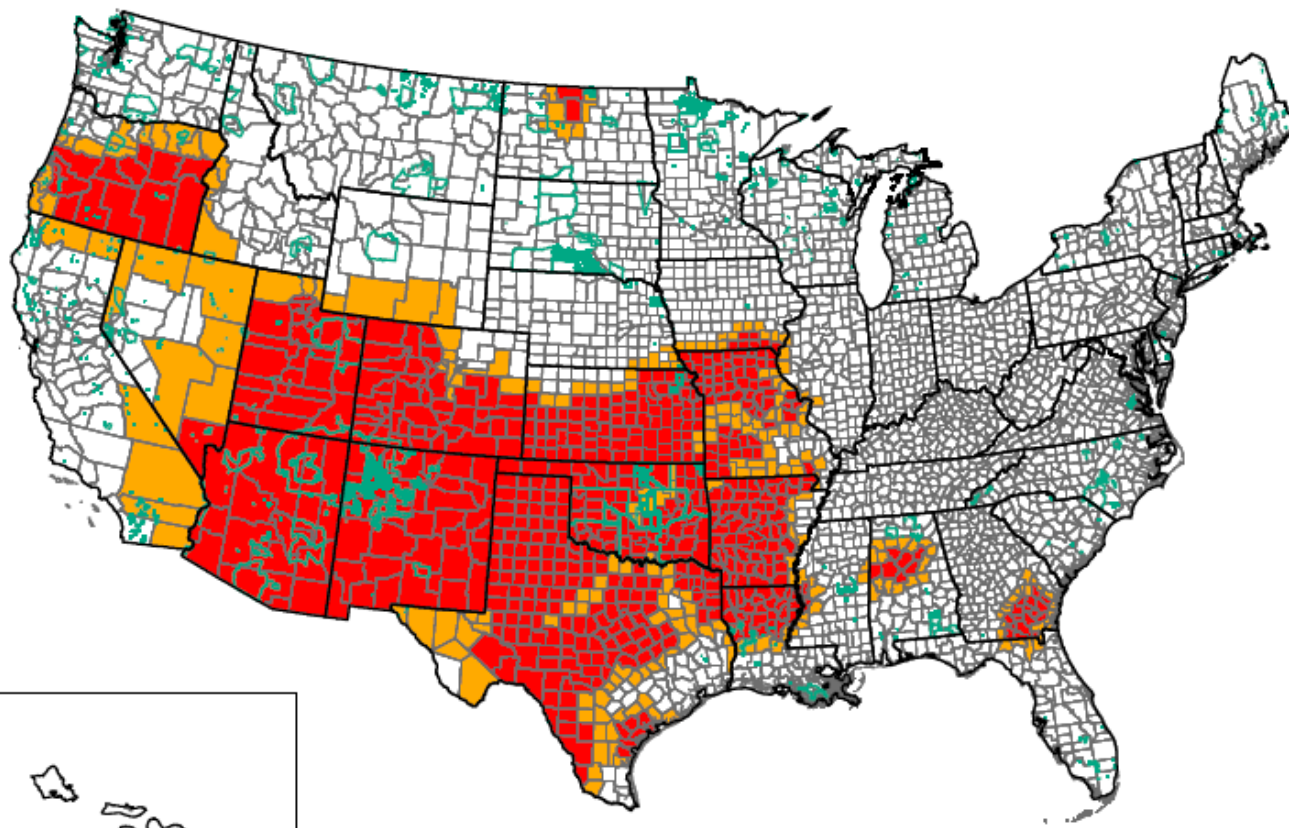
NRCS Basinwide Summary: September 1, 2018  
(averages based on 1981-2010 reference period)







# 2018 Secretarial Drought Designations - All Drought



## Secretarial Drought Designations for 2018

Disaster Incidents as of September 5, 2018

- State Boundary
- County Boundary
- Tribal Lands
- Primary Counties: 630
- Contiguous Counties: 250



United States Department of Agriculture  
Farm Service Agency  
Production, Emergencies and Compliance Division  
Washington, D.C.  
September 5, 2018

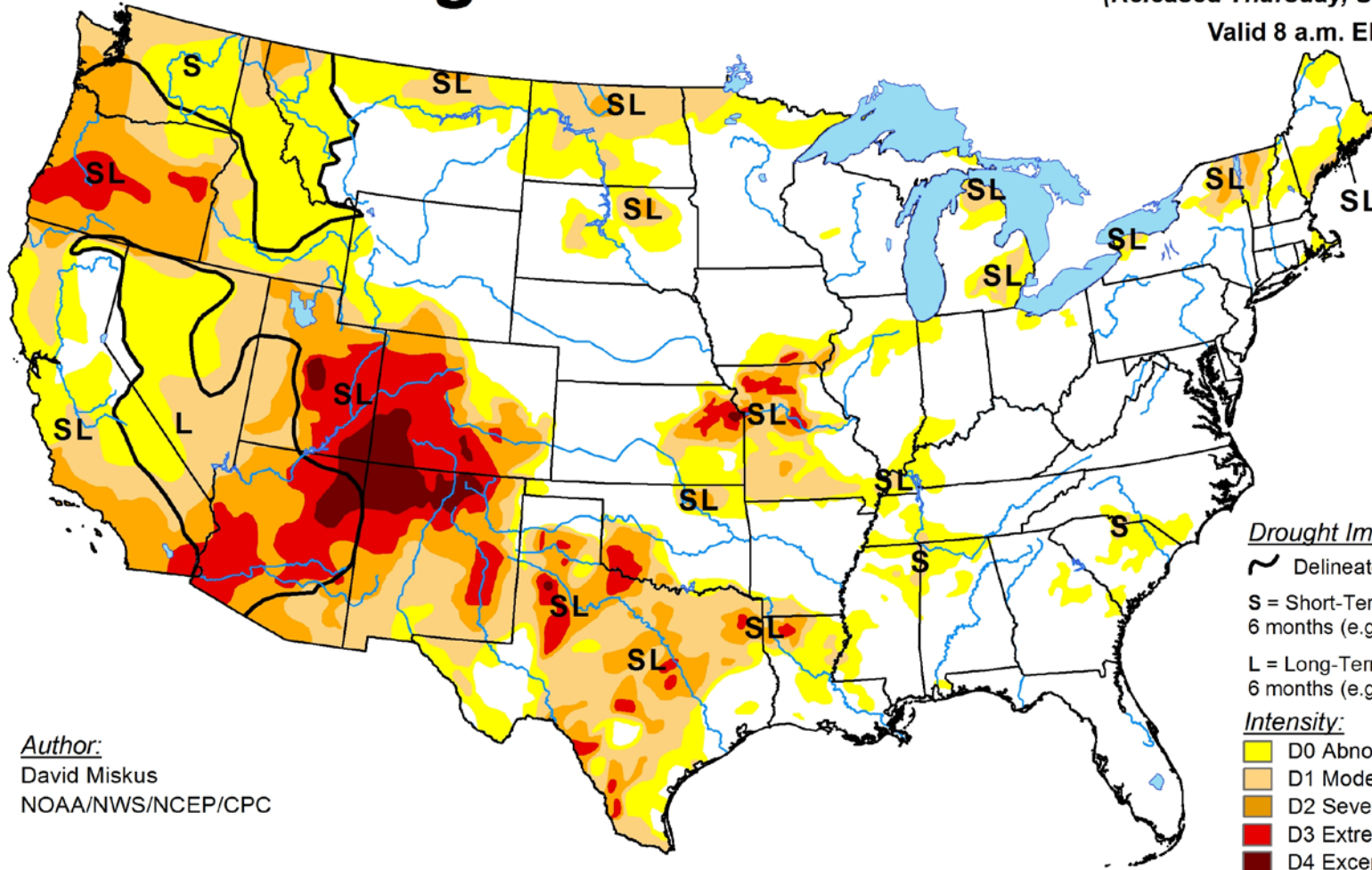
1:25,000,000

1:2,000,000

# U.S. Drought Monitor

September 4, 2018  
(Released Thursday, Sep. 6, 2018)

Valid 8 a.m. EDT



Author:  
David Miskus  
NOAA/NWS/NCEP/CPC

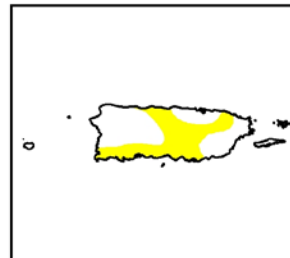
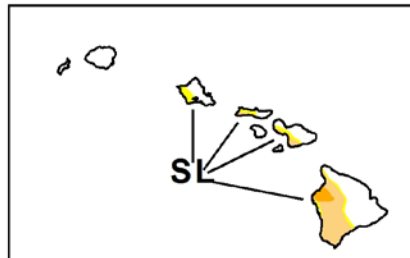
Drought Impact Types:

- Delineates dominant impacts
- S = Short-Term, typically less than 6 months (e.g. agriculture, grasslands)
- L = Long-Term, typically greater than 6 months (e.g. hydrology, ecology)

Intensity:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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

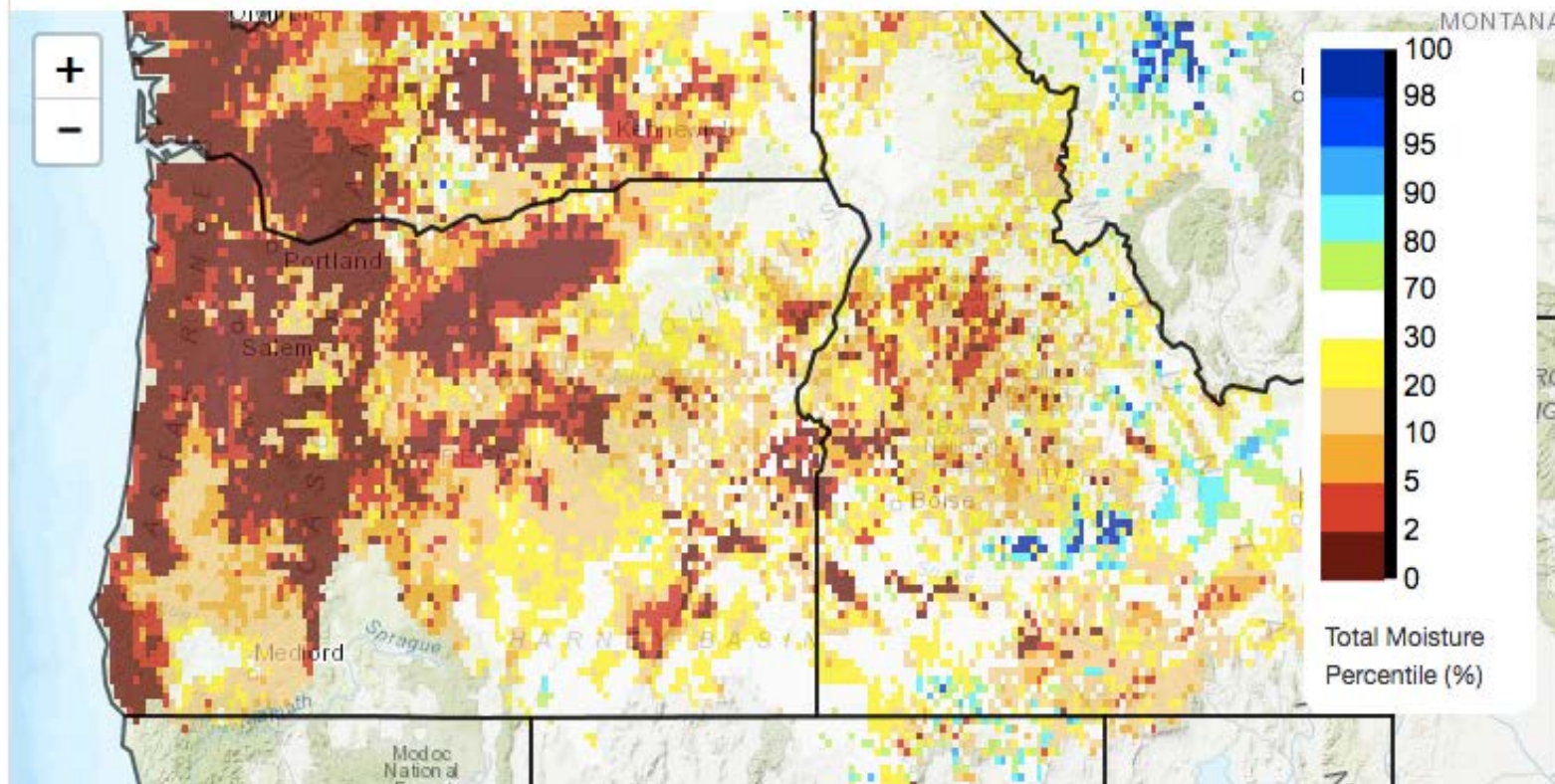


<http://droughtmonitor.unl.edu/>



# Total Moisture Percentile (1981-2010), Yesterday

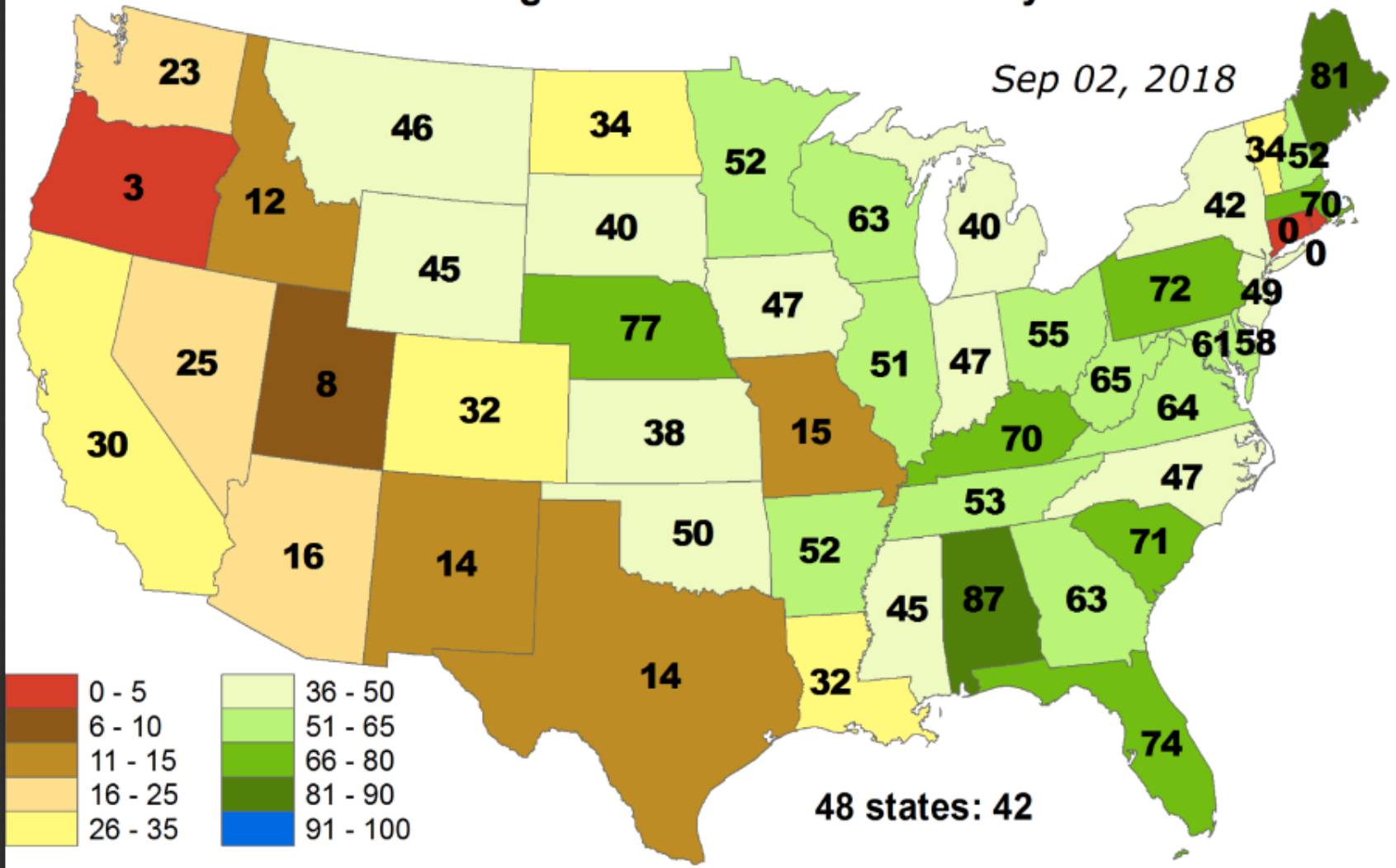
2018/09/09



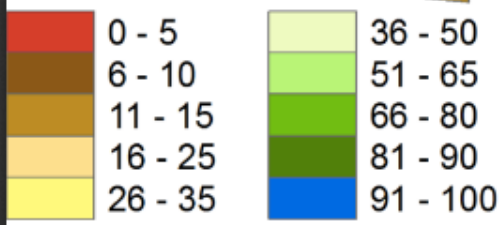


# Percent of Pasture & Range Land in "Good" or "Very Good" Condition

Sep 02, 2018

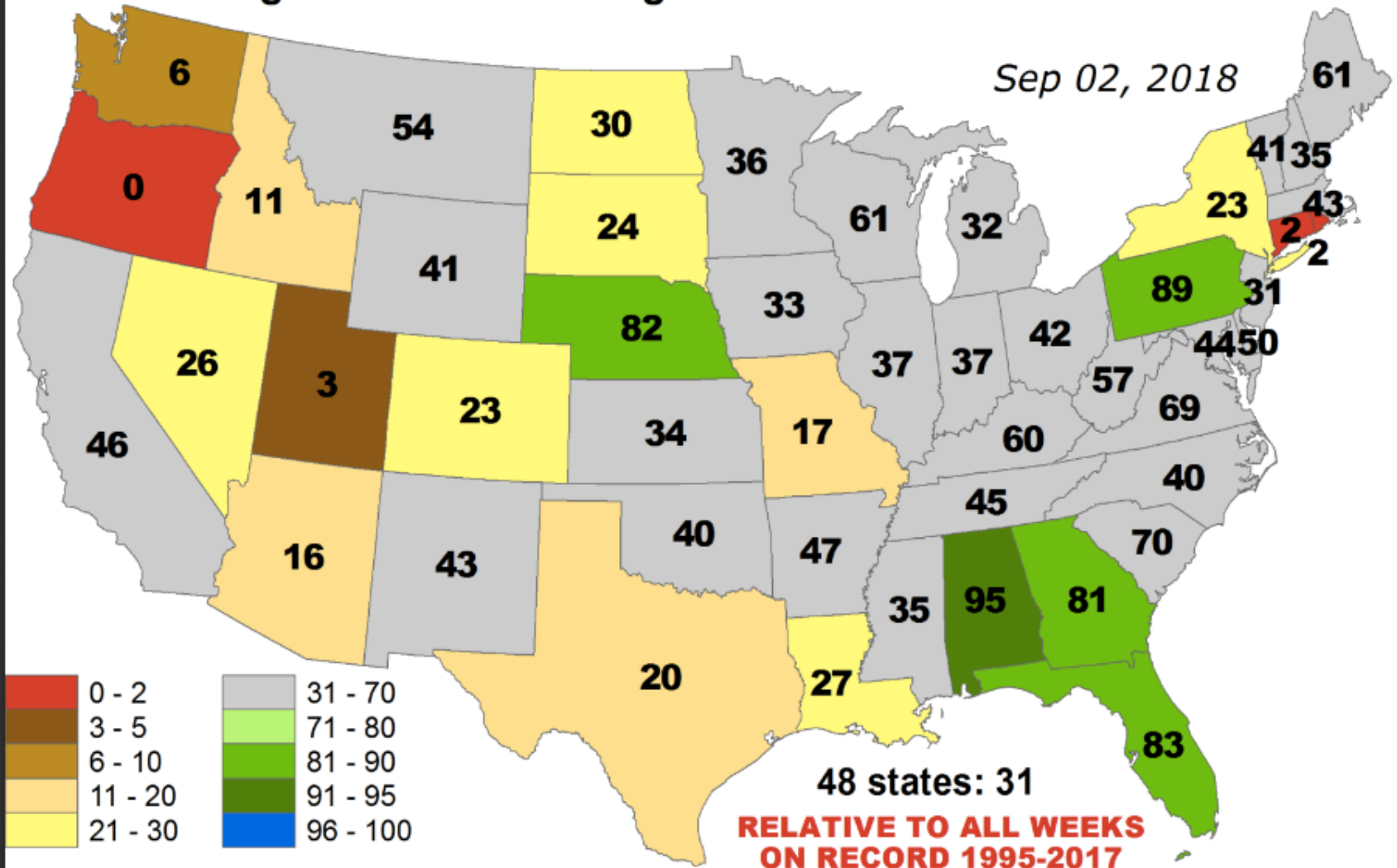


48 states: 42



# Average Pasture and Range Land Condition PERCENTILE

Sep 02, 2018



OREGON



WATER RESOURCES  
DEPARTMENT

**Thank you.**



## County Court

221 S. Oregon St. PO Box 427 Condon, OR 97823  
Office: 541.384.6351 Admin: 541.384.3303 Fax: 541.384.3304



Dr. Brenda Bateman  
Technical Services Division Administrator  
Oregon Water Resources Department  
Co-Chair, Oregon Drought Readiness Council  
725 Summer Street NE, Suite A  
Salem, OR 97301  
Via Email: [brenda.o.bateman@oregon.gov](mailto:brenda.o.bateman@oregon.gov)

Ms. Sonya Andron  
Operations and Preparedness Manager  
Oregon Office of Emergency Management  
Co-Chair, Oregon Drought Readiness Council  
P.O. Box 14370  
Salem, OR 97301  
Via Email: [Sonya.Andron@state.or.us](mailto:Sonya.Andron@state.or.us)

RE: Gilliam County Drought  
Date: 9/6/2018  
Dr. Bateman and Ms. Andron:

Gilliam County, by and through its County Elected Officials, requests that the Governor of Oregon issue an executive order for all of Gilliam County under the provisions of ORS 536 as a direct result of severe and continuing/projected drought conditions.

There is the potential for the Gilliam County agricultural and livestock, natural resources, recreational, tourism, and related economies to experience widespread and severe damage resulting from extreme weather conditions within the county. We are already experiencing large wildland fires with extreme fire behavior, historically low stream flows, and minimal precipitation. These conditions are negatively affecting our recreational & tourism economies as well as our crop and livestock production driven agricultural economy.

The county has already formally declared a drought, and has attached a copy of the adopted resolution for your files.

The Gilliam County Court has determined that additional action by and support from the state is needed. This may include assistance from the Oregon Water Resources Department and other Oregon executive branch agencies, operating within their statutory authorities.

Gilliam County Court therefore requests an executive order from the Governor, declaring drought in Gilliam County.

We extend in advance our appreciation for your consideration on this matter.

Sincerely,

Judge Steven Shaffer  
Gilliam County Court

**Judge Steve Shaffer**  
[steve.shaffer@co.gilliam.or.us](mailto:steve.shaffer@co.gilliam.or.us)

**Commissioner Michael Weimar**  
[mike.weimar@co.gilliam.or.us](mailto:mike.weimar@co.gilliam.or.us)

**Commissioner Leslie Wetherell**  
[leslie.wetherell@co.gilliam.or.us](mailto:leslie.wetherell@co.gilliam.or.us)

IN AND FOR THE COUNTY COURT OF THE STATE OF OREGON  
FOR GILLIAM COUNTY

RESOLUTION NO. 2018-13

A RESOLUTION DECLARING A STATE OF )  
DROUGHT EMERGENCY IN GILLIAM COUNTY )

**THIS MATTER**, coming before the County Court for Gilliam County sitting as the County governing body at a regularly scheduled meeting on this 5<sup>th</sup> day of September, 2018; and

**WHEREAS**, the total precipitation for the area is significantly below average; and

**WHEREAS**, Gilliam County is faced with potential crop failures both in dry land and irrigated areas that are served by streams as well as a 50% reduction in available range forage for livestock, likely necessitating livestock feed assistance; and

**WHEREAS**, Gilliam County's drought conditions have been further exacerbated by the wildfires that have recently burned 54,221 acres in the Stubblefield Fire and 5,056 acres in the Lonerock Fire; and

**WHEREAS**, the County Court of Gilliam County, Oregon hereby declares that a state of emergency exists within Gilliam County; and

**NOW, THEREFORE BE IT RESOLVED**, the Gilliam County Court is requesting that Governor Brown declare a state of drought emergency for Gilliam County.

**NOW, THEREFORE BE IT FURTHER RESOLVED**, the Gilliam County Court is requesting that Governor Brown request that the United States Secretary of Interior and the United States Secretary of Agriculture issue Drought Disaster Declaration for Gilliam County.

Adopted by the Gilliam County Court this 5<sup>th</sup> day of September, 2018.

  
\_\_\_\_\_  
Steve Shaffer, Gilliam County Judge

  
\_\_\_\_\_  
Leslie Wetherell, Gilliam County Commissioner

  
\_\_\_\_\_  
Michael Weimar, Gilliam County Commissioner



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**Gilliam County Soil and Water Conservation District**  
PO Box 106, 333 S. Main St. – Condon, OR 97823 – Phone (541) 384-2672 x108

August 14<sup>th</sup> 2018

Gilliam County Court  
221 S. Oregon St.  
P.O. Box 427  
Condon, OR 97823

To the  
Honorable Steve Shaffer  
And  
Commissioners of Gilliam County

The Gilliam County Soil and Water Conservation District formally requests that the Gilliam County Court consider and approve an emergency declaration of drought for Gilliam County. We request that the Gilliam County Court, in coordination with the Gilliam County Emergency Management Department pursue the necessary steps to attain an emergency drought declaration from the Governor's office. The following points are our basis for request as are the attached documents:

- As of August 8<sup>th</sup>, 2018, 10.69% of Oregon is considered abnormally dry, 22.65% in moderate drought, and 66.66% in severe drought. Gilliam County is currently listed by the U.S. Drought Monitor as being in moderate drought.
- The U.S. Monthly Drought Outlook for August forecast drought persistence for Gilliam County. The U.S. Seasonal Drought Outlook valid through October 31, 2018 also forecast drought persistence for Gilliam County.
- The National Oceanic and Atmospheric Administration (NOAA) one-month outlook for Gilliam County forecast a 40-50% probability that temperatures will be above normal and a 33-40% probability that precipitation will be below normal. The NOAA three-month outlook forecast a 60-70% probability that temperatures will be above normal and near normal precipitation amounts.
- The daily discharge in cubic feet per second (cfs) for August 14 2018 at McDonalds Ferry was 22.2. The average cfs for August 14 is 177 cfs based on 111 years of record.

Throughout Gilliam County the effects of the current drought conditions can already be seen in crop health and yields, reduced upland grass production, reduced spring flows, and extremely low river and stream water levels.

A county declaration of drought emergency is the first step in receiving the declaration from the Governor. We need the Governor's declaration to allow our local producers' access to State and Federal drought assistance programs.

Please feel free to contact me with any questions.

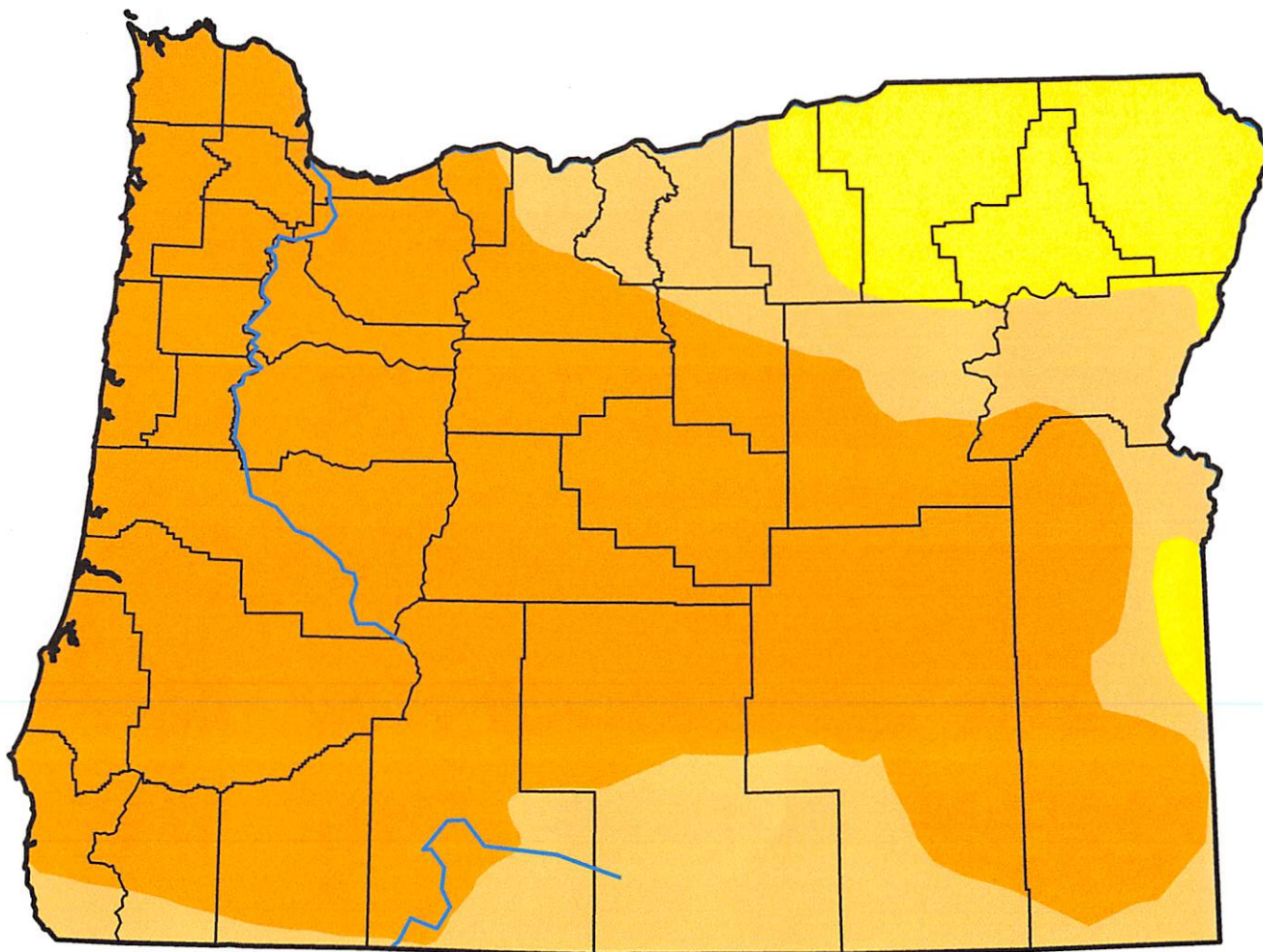
Sincerely,

Christina Kirwan  
Office Manager



# U.S. Drought Monitor Oregon

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



### Intensity:

-  D0 Abnormally Dry
-  D1 Moderate Drought
-  D2 Severe Drought
-  D3 Extreme Drought
-  D4 Exceptional Drought

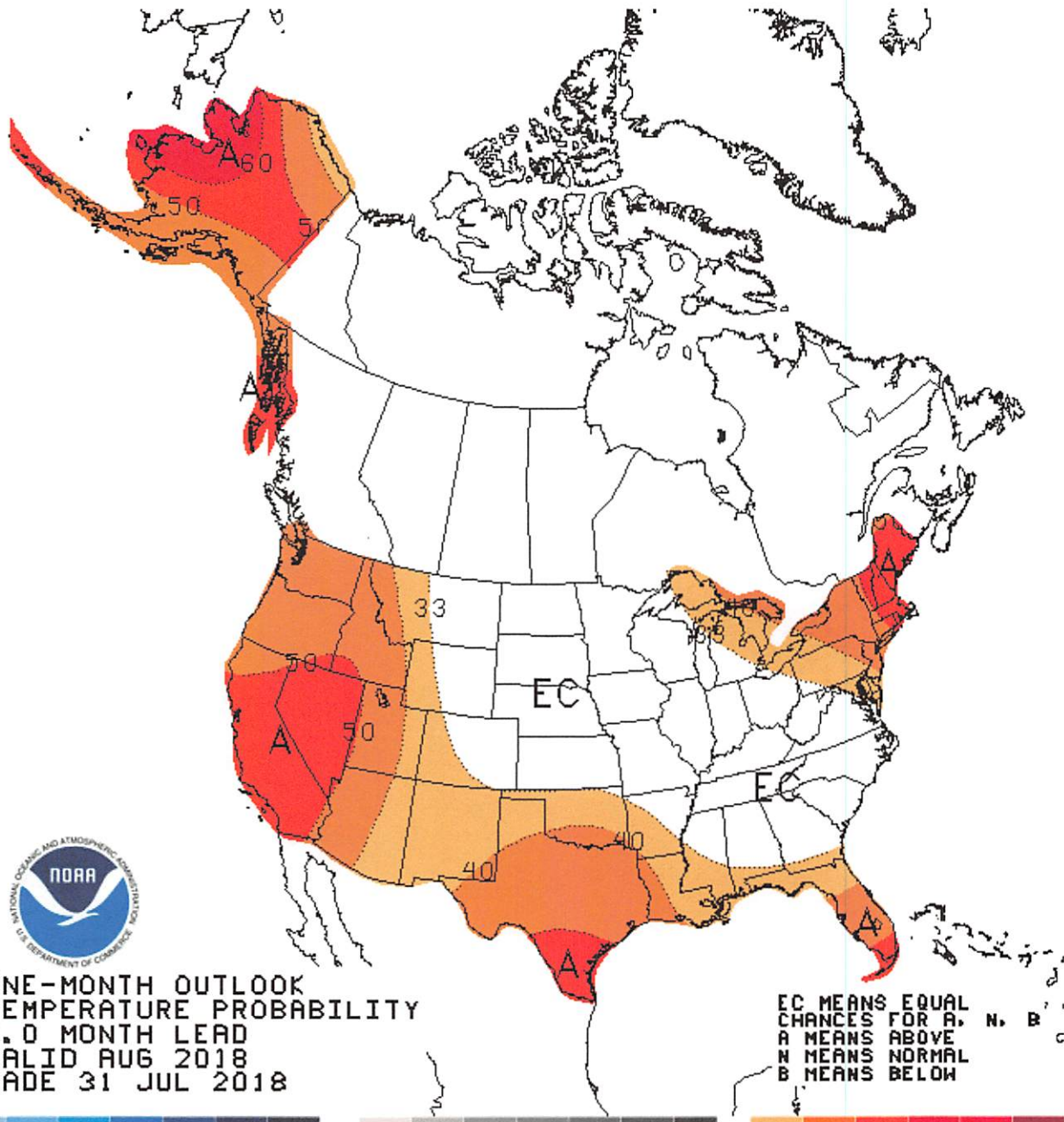
*The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.*

### Author:

Richard Tinker  
CPC/NOAA/NWS/NCEP



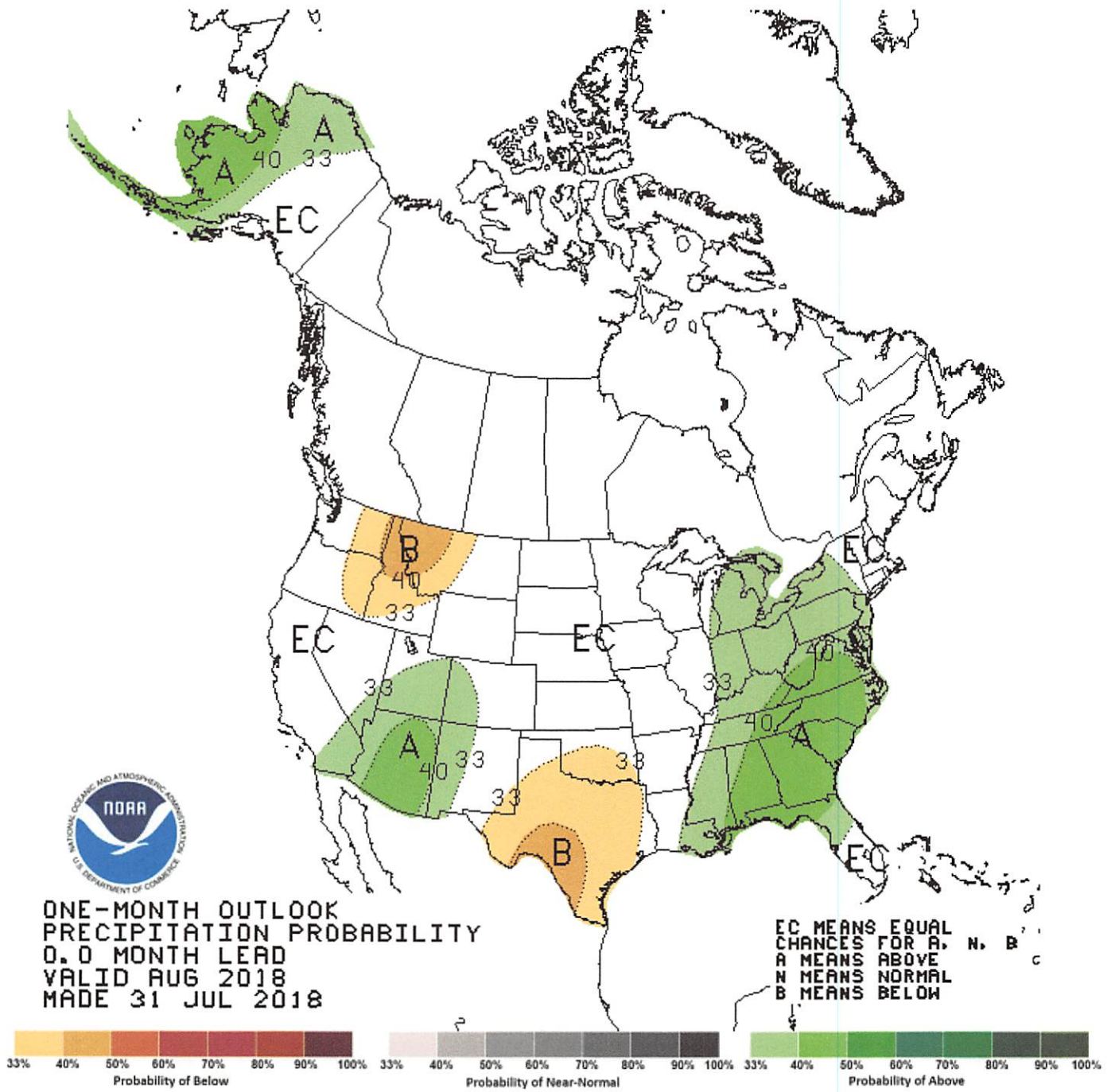
<http://droughtmonitor.unl.edu/>



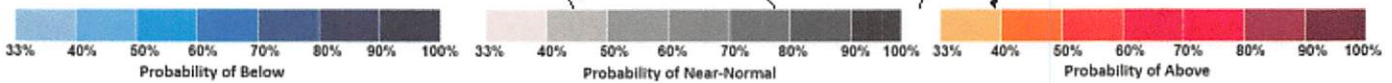
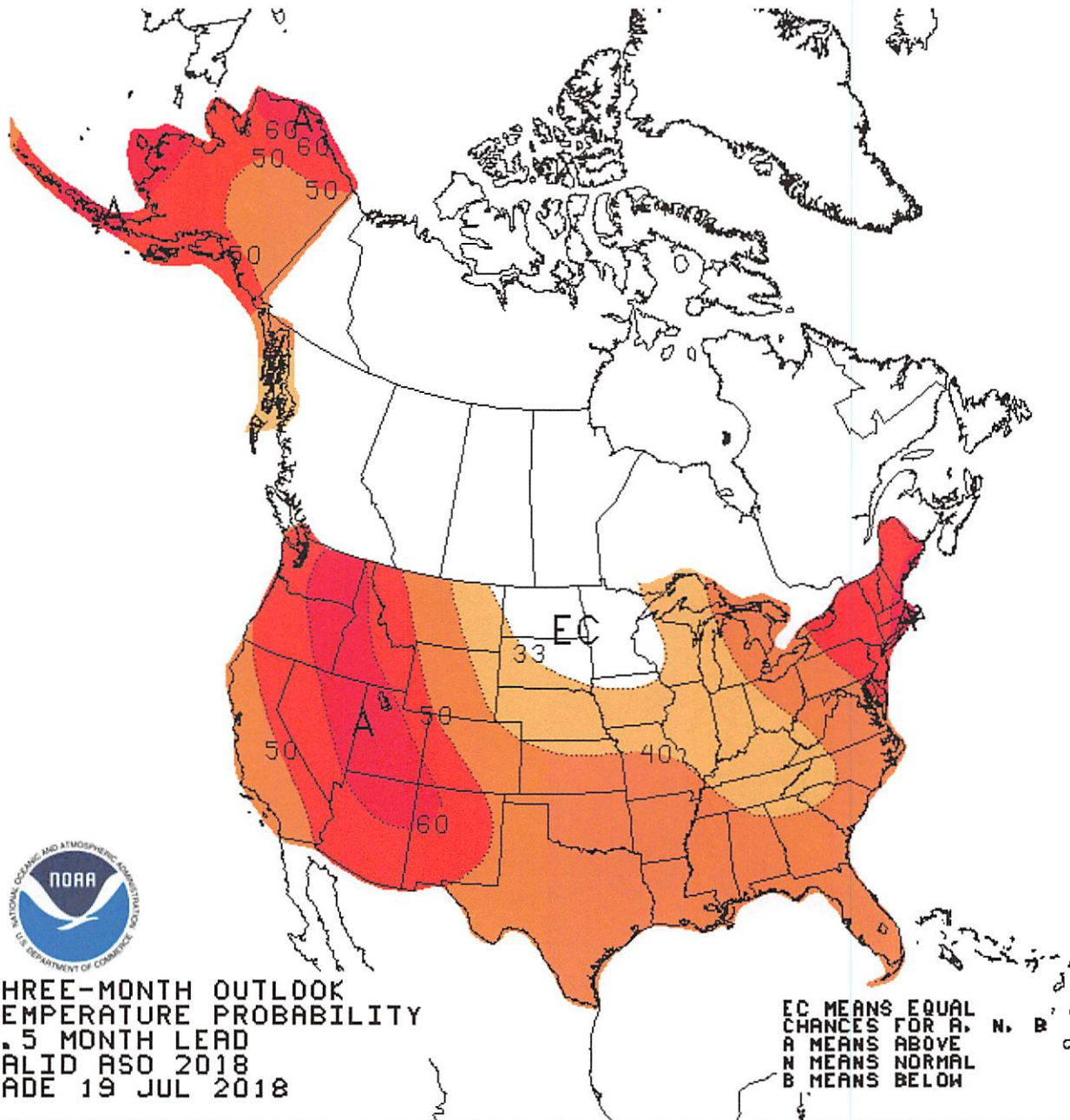
ONE-MONTH OUTLOOK  
TEMPERATURE PROBABILITY  
0.0 MONTH LEAD  
VALID AUG 2018  
MADE 31 JUL 2018

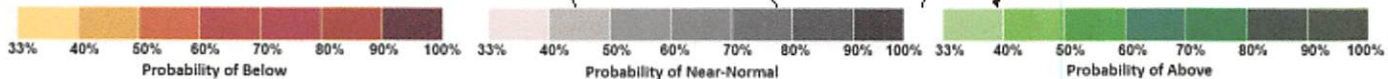
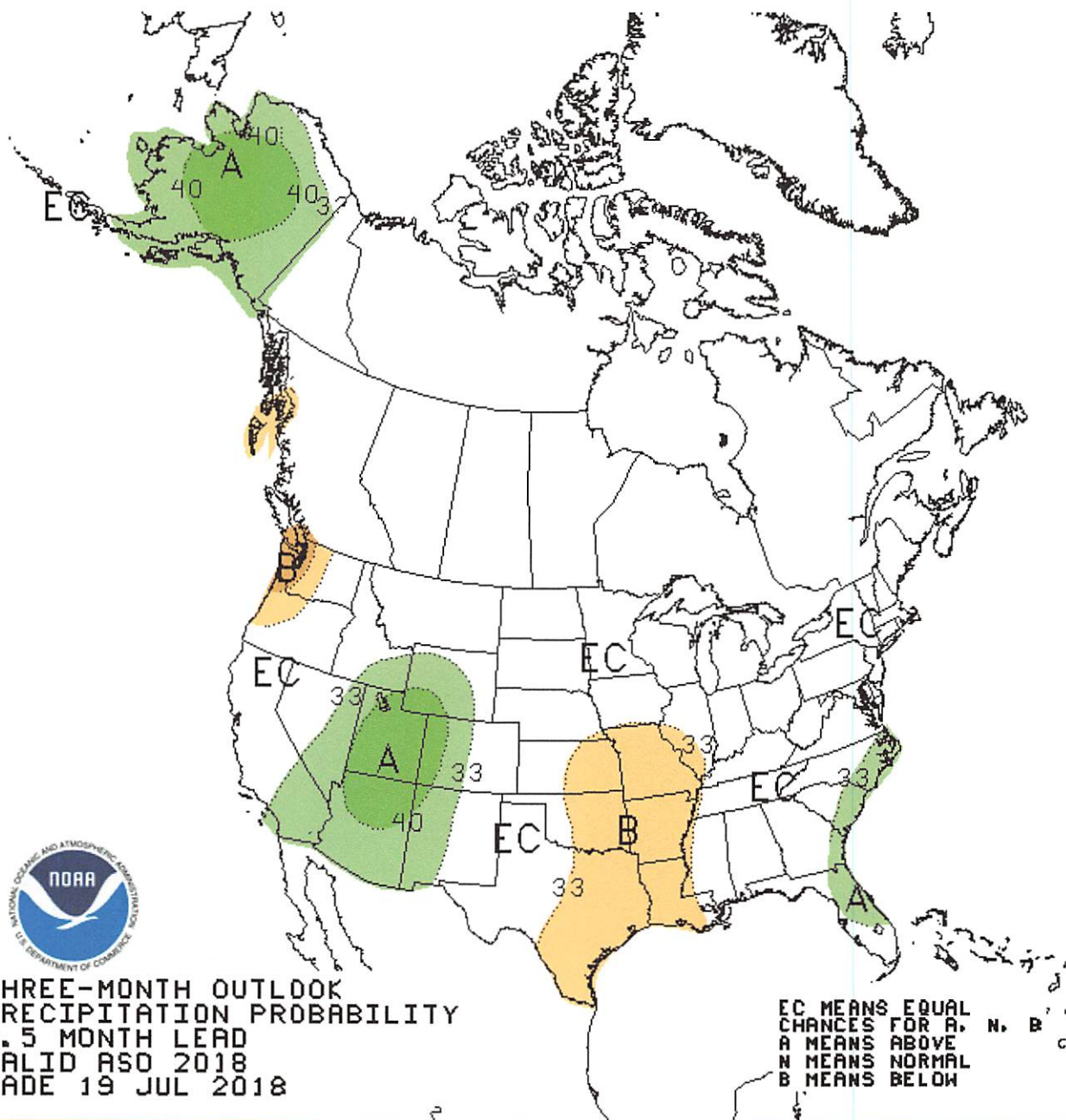
EC MEANS EQUAL  
CHANCES FOR A, N, B  
A MEANS ABOVE  
N MEANS NORMAL  
B MEANS BELOW







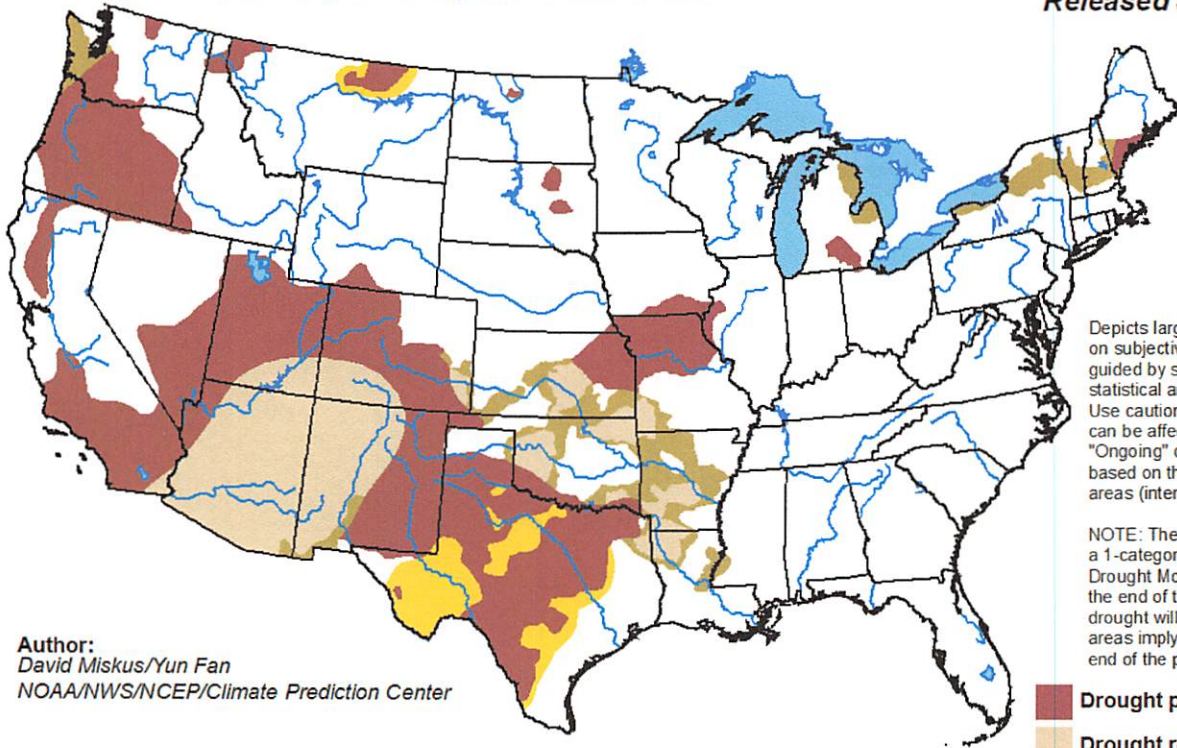




# U.S. Monthly Drought Outlook

## Drought Tendency During the Valid Period

Valid for August 2018  
Released July 31, 2018



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

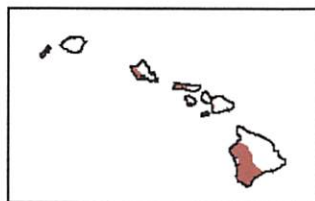
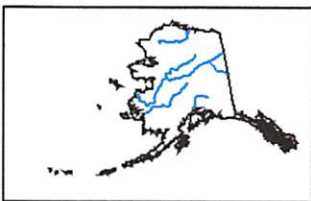
Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to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



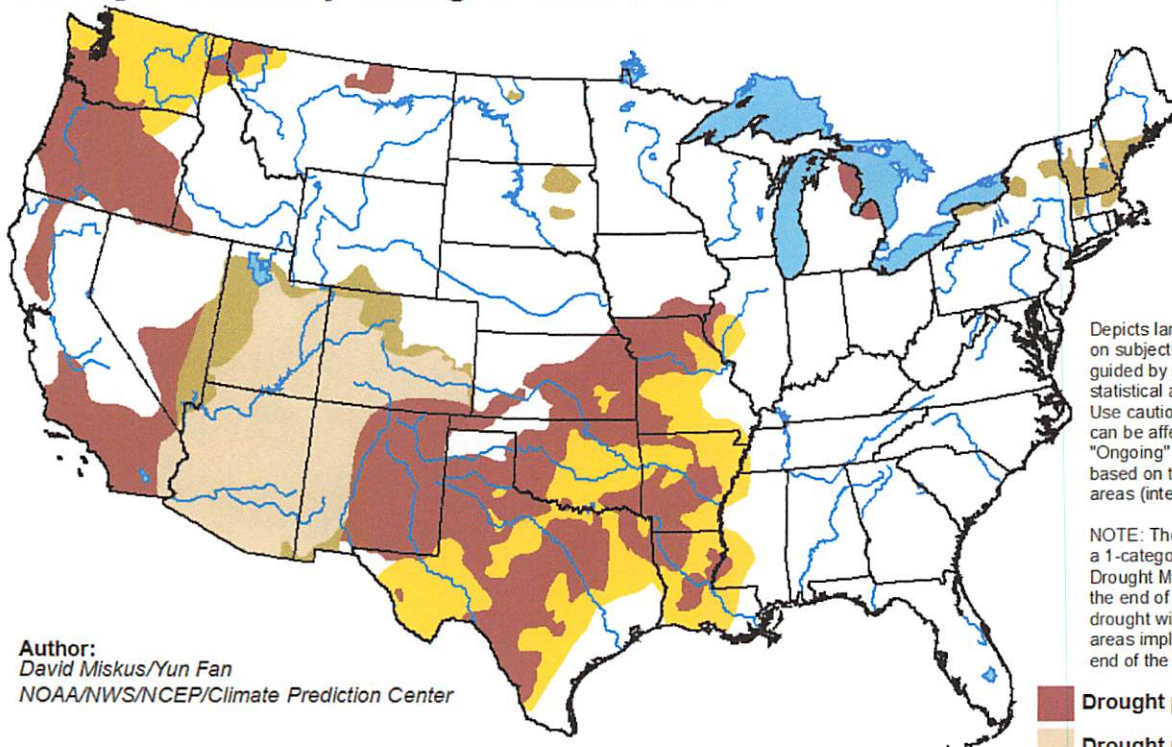
<http://go.usa.gov/3eZGd>





# U.S. Seasonal Drought Outlook Drought Tendency During the Valid Period

Valid for July 19 - October 31, 2018  
Released July 19, 2018

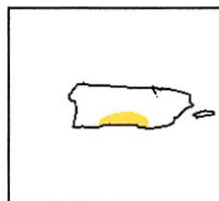
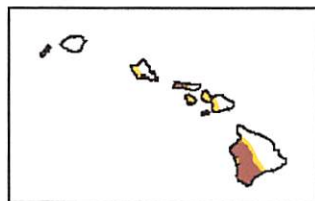
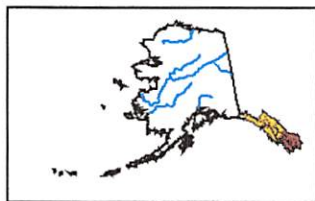


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- Drought development likely



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



# Oregon

Kate Brown, Governor

Water Resources Department

Watermaster 21

Gilliam County Courthouse

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## 2018 Drought Information

August 27, 2018

Gilliam County Court

Dear Gilliam County Commissioners,

This is to notify you of the low flow conditions throughout the county with no significant rain fall since late June and the lowest flows that I have witnessed in the 7 years of regulating in the area.

The most recent water condition reports show that all of Gilliam County is in Moderate Drought Status, and has been attached for your information.

The following figure shows a snapshot in time showing the last 5 years data from the Service Creek Gage on the John Day River to help reflect the low flow conditions that I have seen this season.

Wed. 8/15/2018 **JD @ SC 24 CFS**

Thur. 8/10/2017 **JD @ SC 108 CFS**

Thur. 8/11/2016 **JD @ SC 54 CFS**

Fri. 8/14/2015 **JD @ SC 37 CFS**

Fri. 8/15/2014 **JD @ SC 94 CFS**

Fri. 8/16/2013 **JD @ SC 47 CFS**

As the data suggests, this is the lowest flow in the last 7 years.

I also documented that the Rock Creek drainage dried up about a month earlier than I have ever observed.

This season I regulated two systems that I have never regulated before due to extremely low flows.

I hope this will be helpful. Please contact me if you have further questions.

Sincerely,

Ken Thiemann Jr.

Watermaster, District 21

Att: Gilliam County Commissioners

cc: Mike Ladd, NC Region Manager