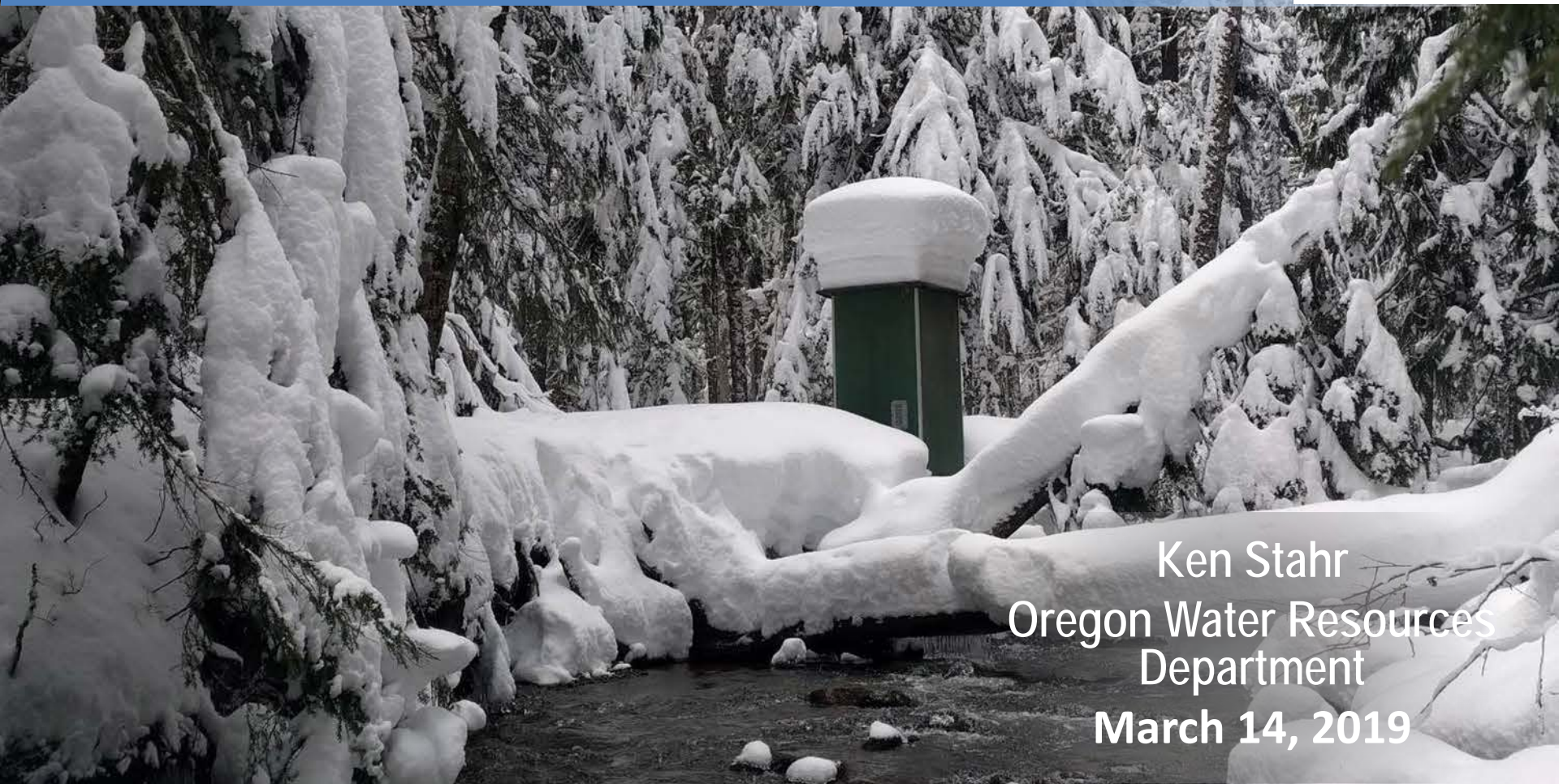


# Water Supply Conditions Report

## Drought Readiness Council



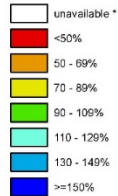
Ken Stahr  
Oregon Water Resources  
Department  
March 14, 2019

## Statewide SNOTEL Snowpack was 73% of normal

Feb 08, 2019

Alternate maps:  
<https://go.usa.gov/knzxk>

Current Snow Water Equivalent (SWE)  
 Basin-wide Percent  
 of 1981-2010 Median



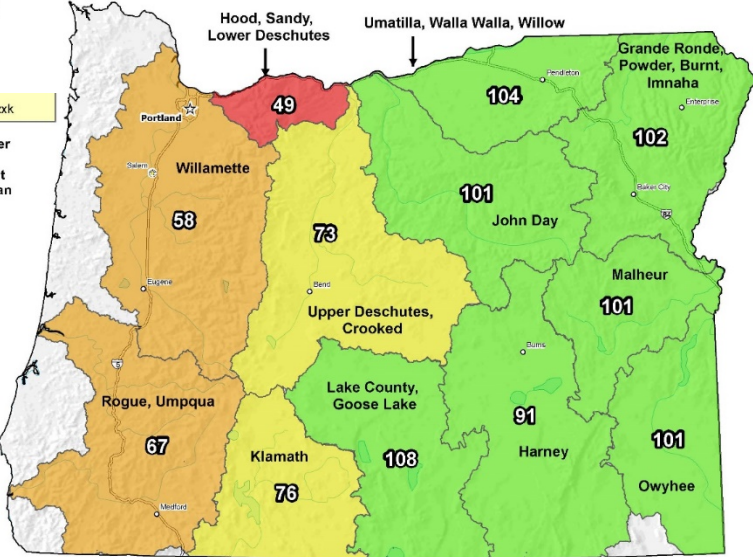
\* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional Data  
 Subject to Revision



The snow water equivalent percent of normal represents the current snow water equivalent 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).

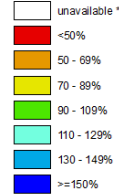
Prepared by:  
 USDA/NRCS National Water and Climate Center  
 Portland, Oregon  
<http://www.wcc.nrcs.usda.gov>



## Statewide SNOTEL Snowpack is 121% of normal

Mar 12, 2019

Current Snow Water Equivalent (SWE)  
 Basin-wide Percent  
 of 1981-2010 Median



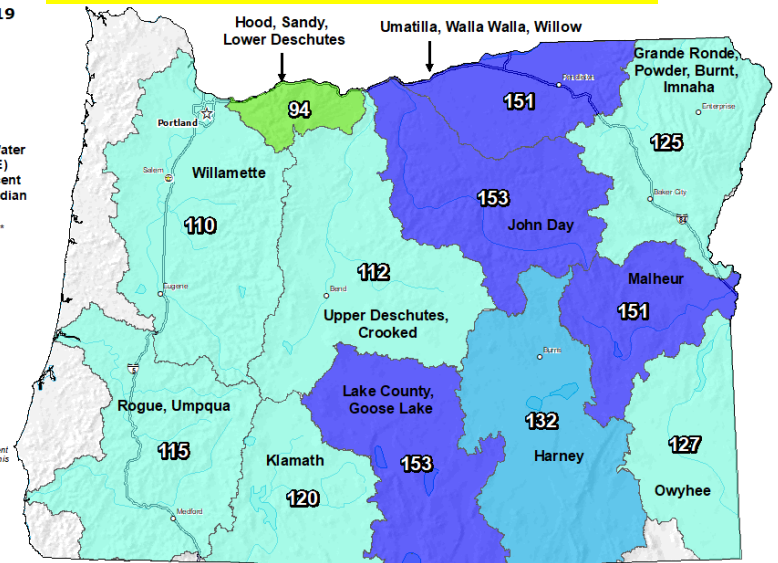
\* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional Data  
 Subject to Revision



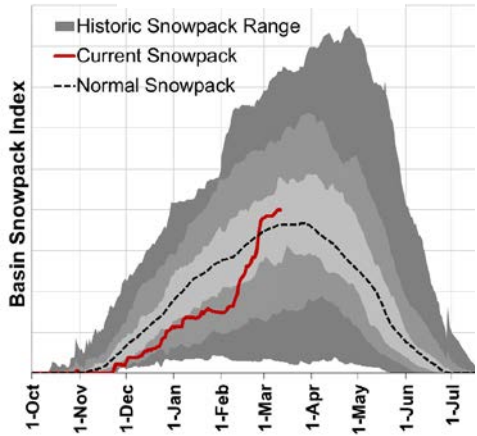
The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

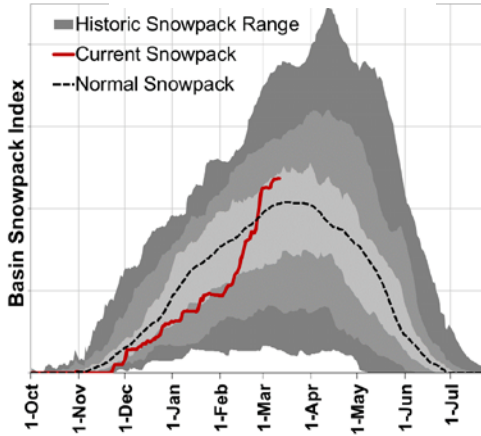


March 12, 2019

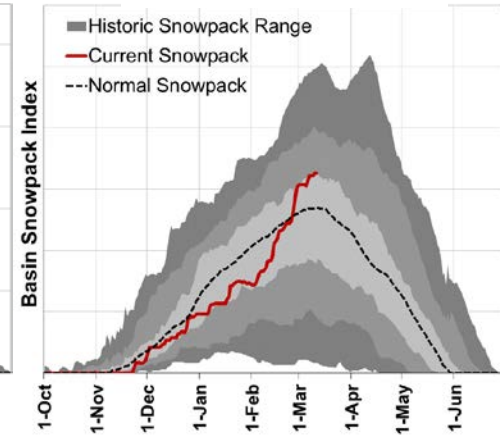
Willamette



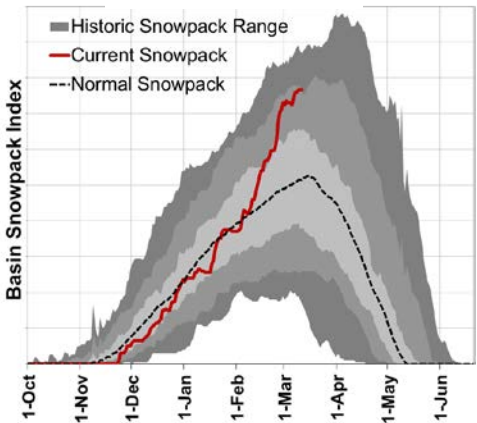
Rogue/Umpqua



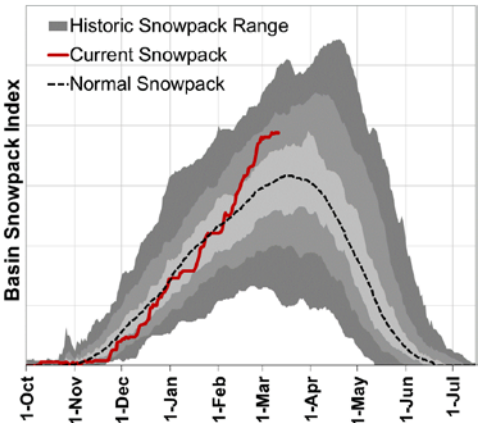
Klamath



John Day



Grande Ronde/Powder/Burnt



Owyhee/Malheur

Snow Water Equivalent

Records (POR)

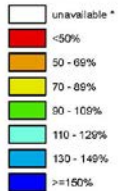
March 10, 2019, end of day



## Statewide SNOTEL Precipitation was 80% of normal

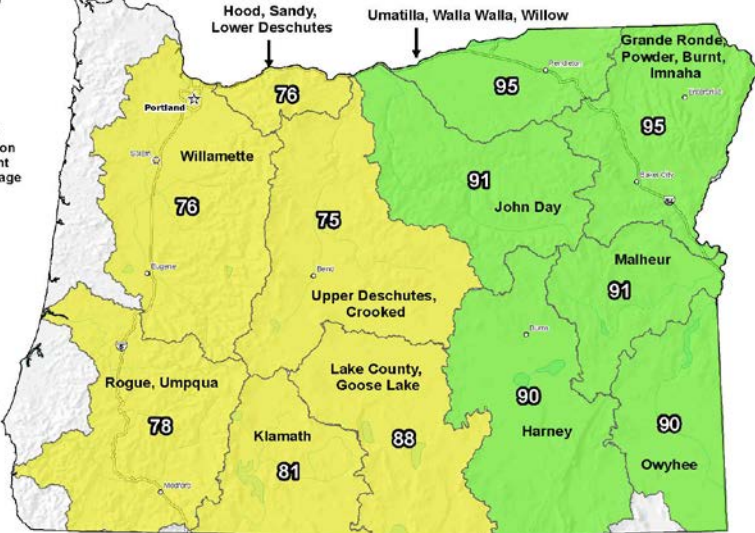
Feb 08, 2019

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



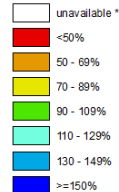
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

## Statewide SNOTEL Precipitation is 93% of normal

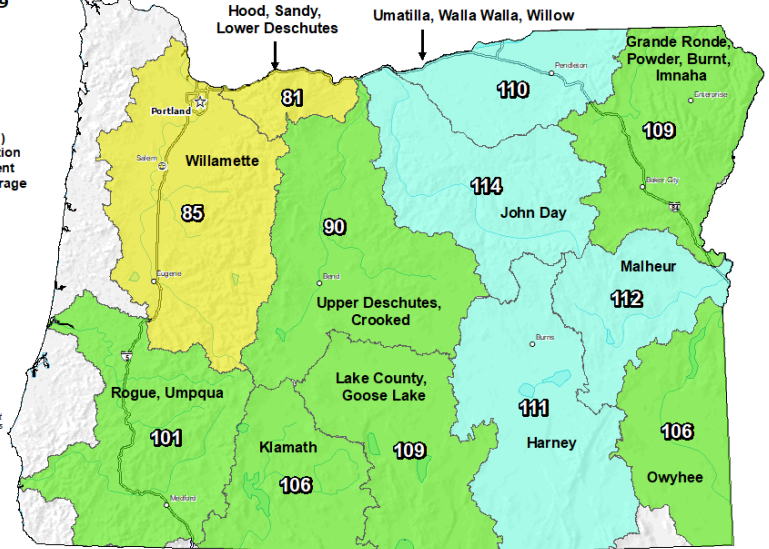
Mar 12, 2019

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



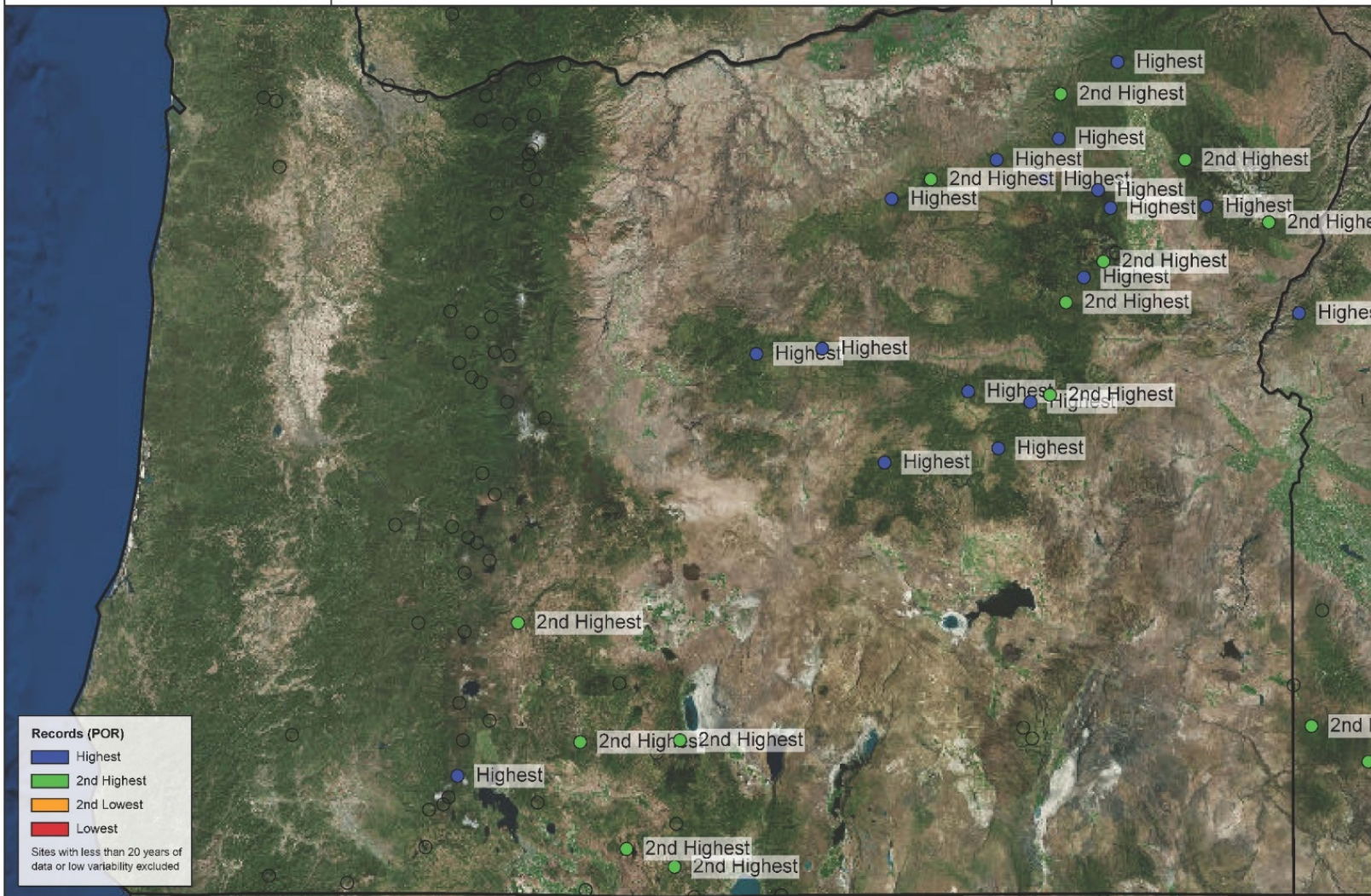
The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

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

28 day Precipitation

Records (POR)

February 1, 2019 - February 28, 2019



**Records (POR)**

- Highest
- 2nd Highest
- 2nd Lowest
- Lowest

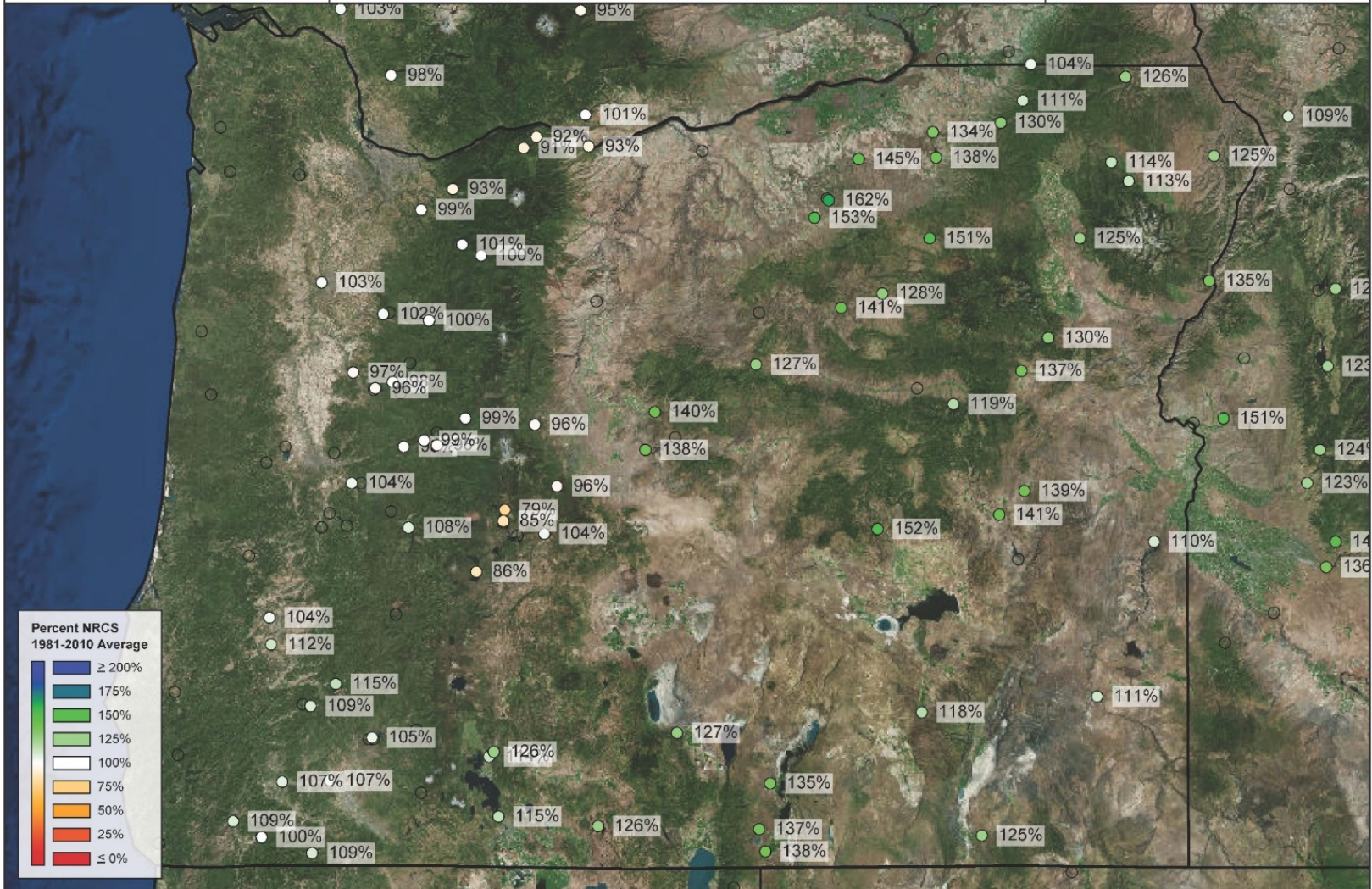
Sites with less than 20 years of data or low variability excluded



Forecast Volume,  
50% Exceedance Probability

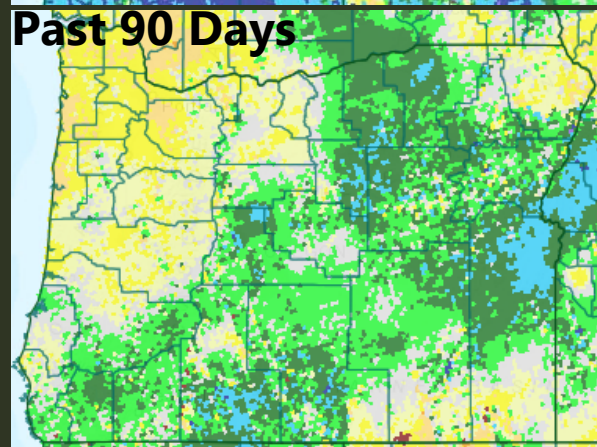
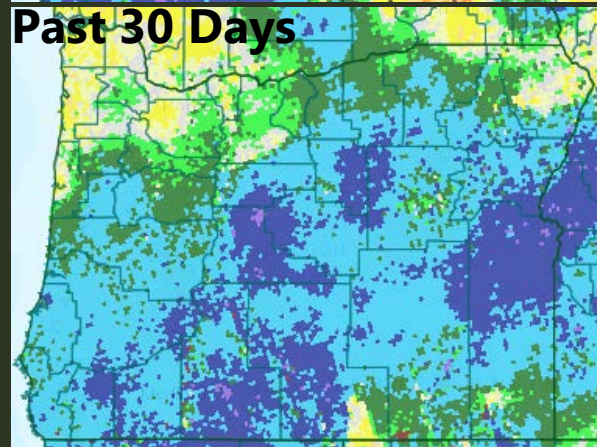
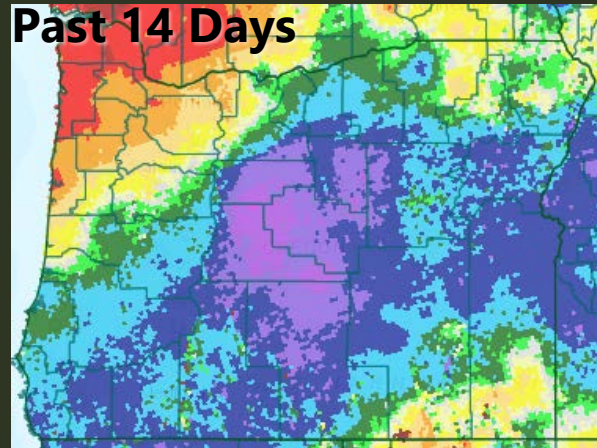
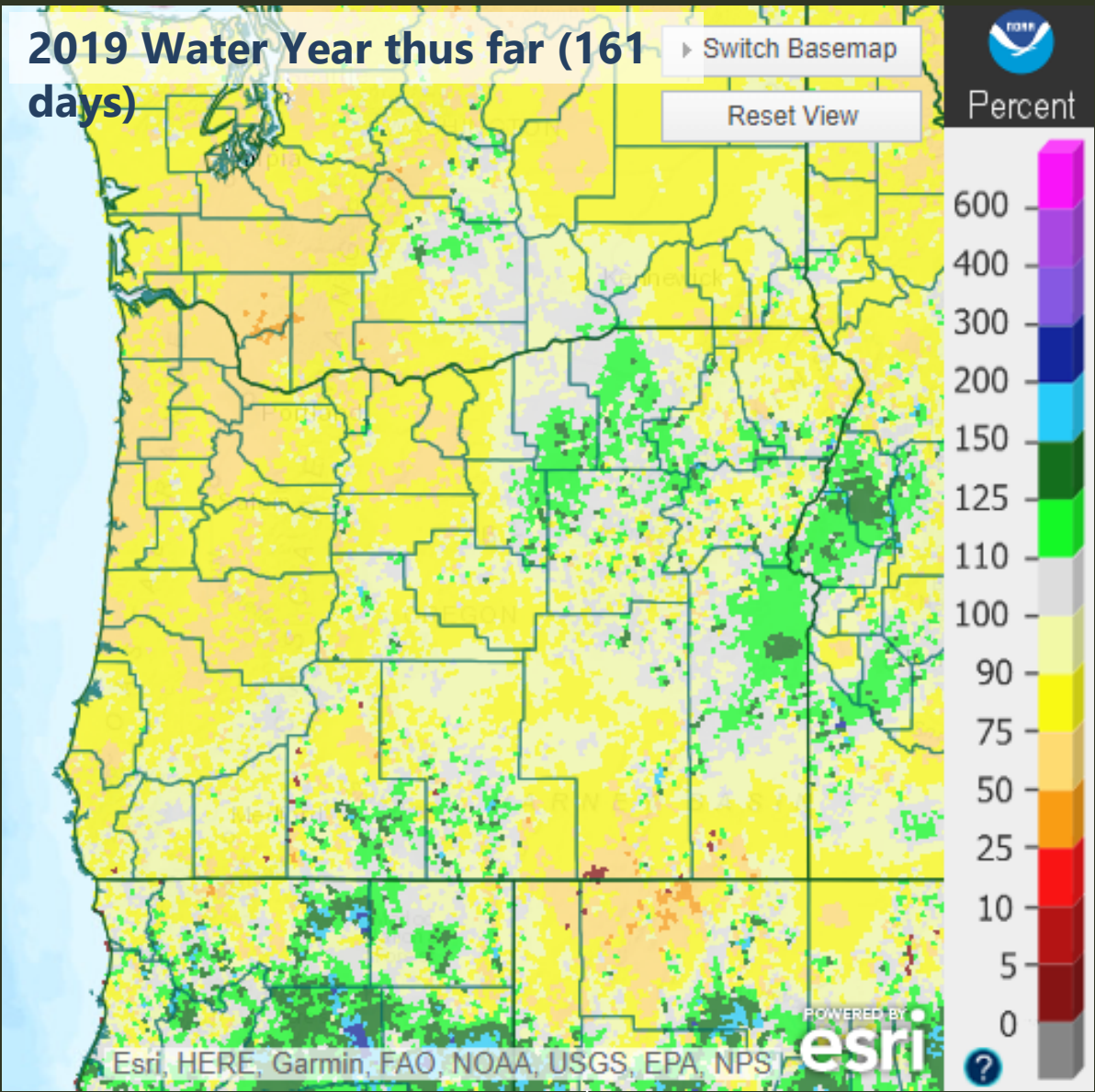
Percent NRCS 1981-2010 Average

April - September, March 1, 2019





# Precipitation % of Average



Precipitation Data as of March 10<sup>th</sup>, 2019

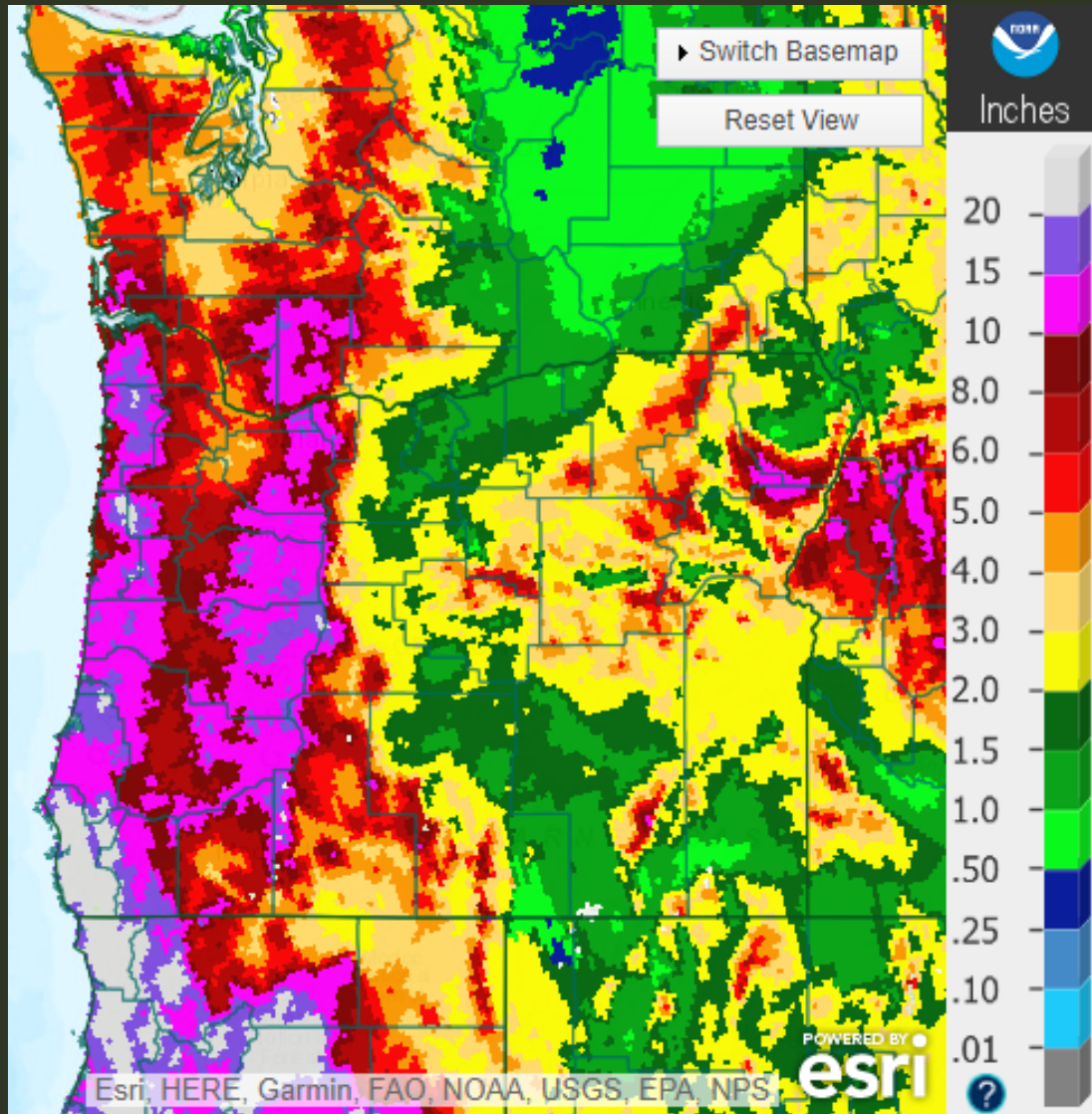
Source: [water.weather.gov/precip/index.php?location\\_type=wfo&location\\_name=pqr](http://water.weather.gov/precip/index.php?location_type=wfo&location_name=pqr)



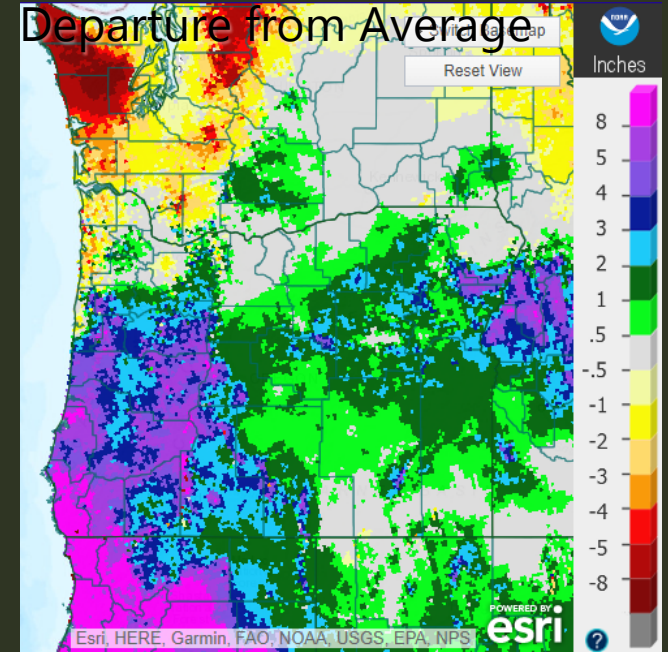


# Precipitation Past 30 Days

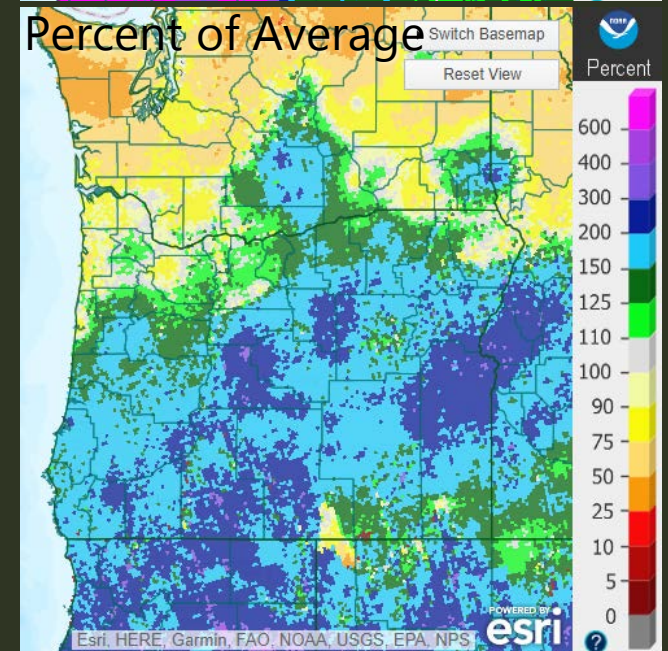
## Precipitation Totals



## Departure from Average



## Percent of Average



Precipitation Data as of March 10<sup>th</sup>, 2019

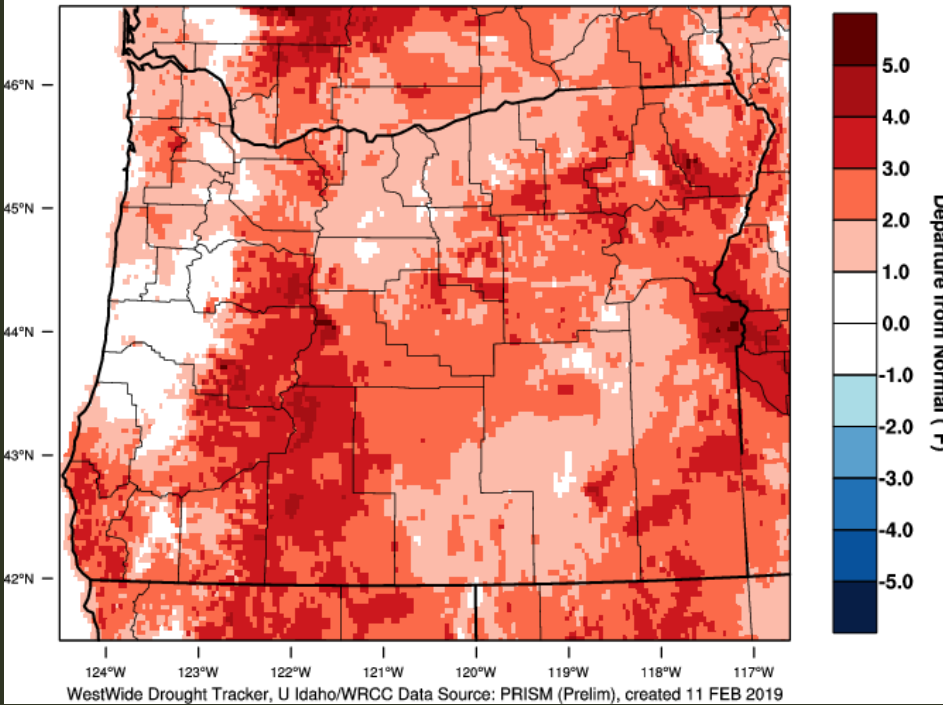
Source: [water.weather.gov/precip/index.php?location\\_type=wfo&location\\_name=pqr](http://water.weather.gov/precip/index.php?location_type=wfo&location_name=pqr)

# Recent Temperatures

January 2019

Oregon - Mean Temperature

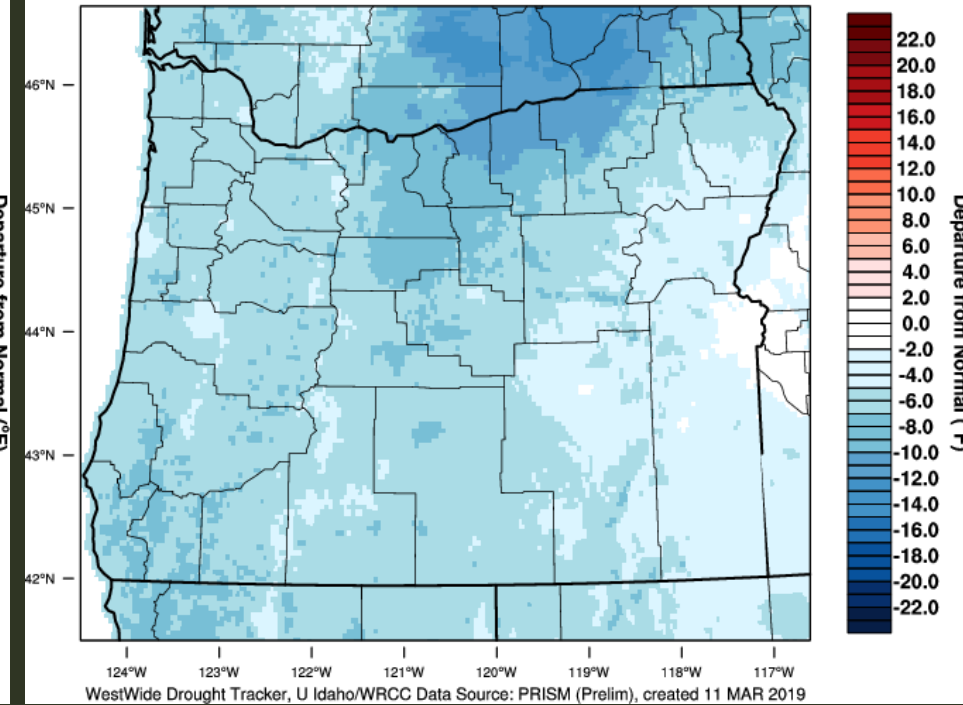
January 2019 Departure from 1981-2010 Normal



February 2019

Oregon - Mean Temperature

February 2019 Departure from 1981-2010 Normal



Temperatures thus far in March 2019:

- 5 to 10 degrees below normal for western Oregon
- 10 to 20 degrees below normal for northeast Oregon
- 2 to 5 degrees below normal for southeast Oregon



# Drought Monitor

U.S. Drought Monitor

February 5, 2019

West

U.S. Drought Monitor

West

March 5, 2019

(Released Thursday, Mar. 7, 2019)

Valid 7 a.m. EST

## Oregon Stats

Week	Date	None	D0-D4	D1-D4	D2-D4	D3-D4	D4	DSCI
Current	2019-03-05	15.93	84.07	63.89	25.91	0.00	0.00	174
Last Week	2019-02-26	14.64	85.36	68.86	31.54	0.00	0.00	186
3 Months Ago	2018-12-04	0.00	100.00	98.65	86.21	34.26	0.00	319
Start of Calendar Year	2019-01-01	0.00	100.00	91.78	78.16	23.39	0.00	293
Start of Water Year	2018-09-25	0.00	100.00	97.68	87.81	31.62	0.00	317
One Year Ago	2018-03-06	23.86	76.14	38.32	0.00	0.00	0.00	114

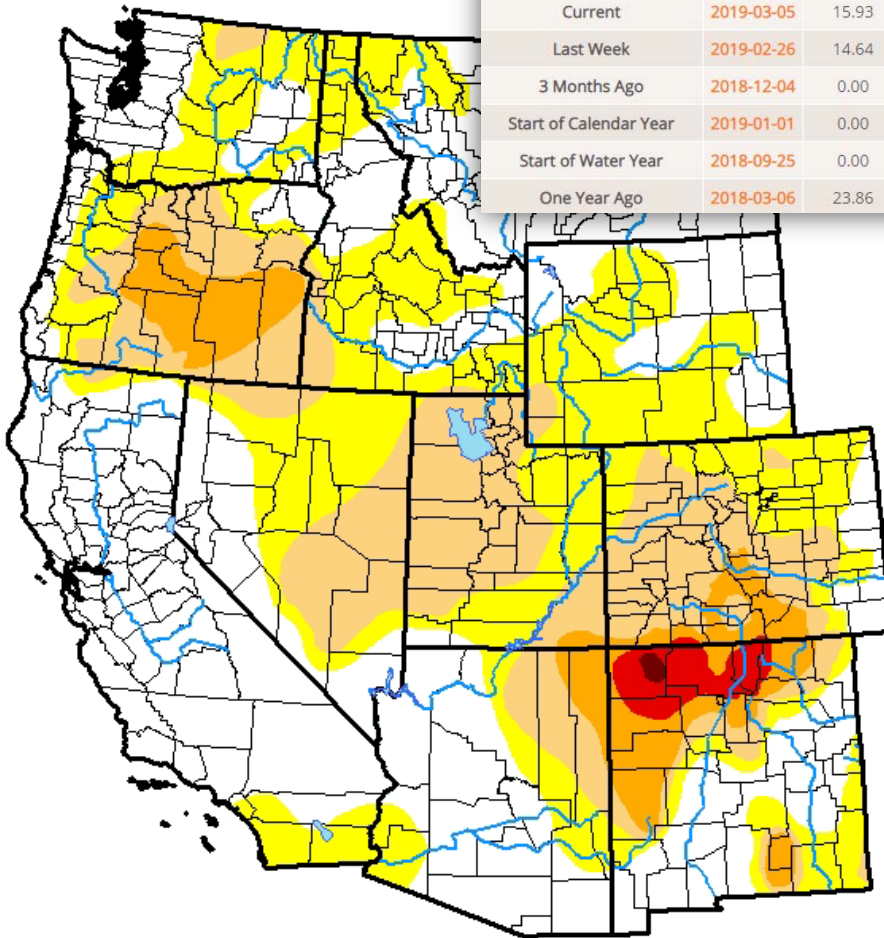
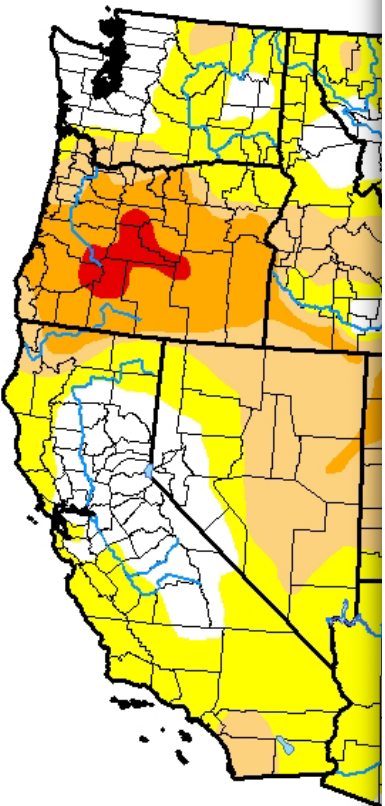
### Intensity:

-  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.

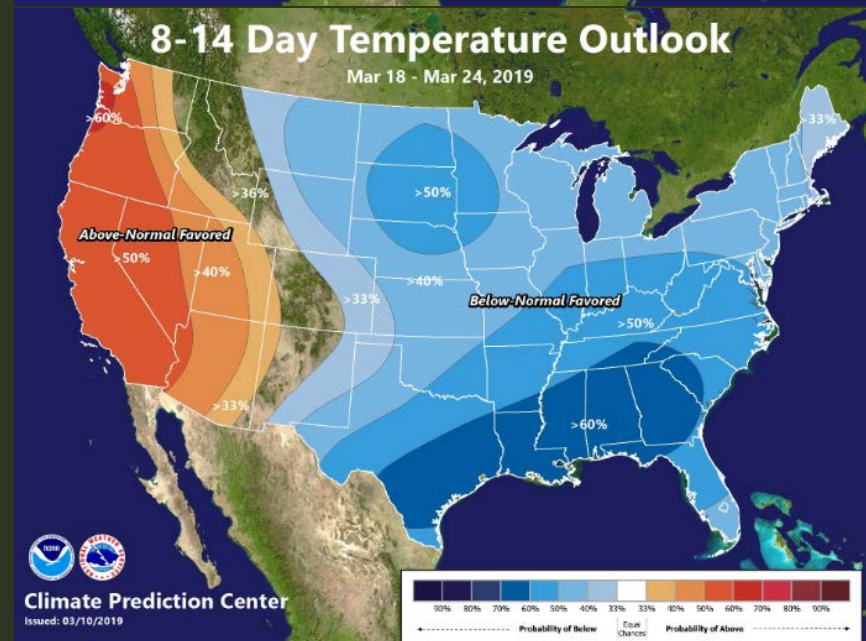
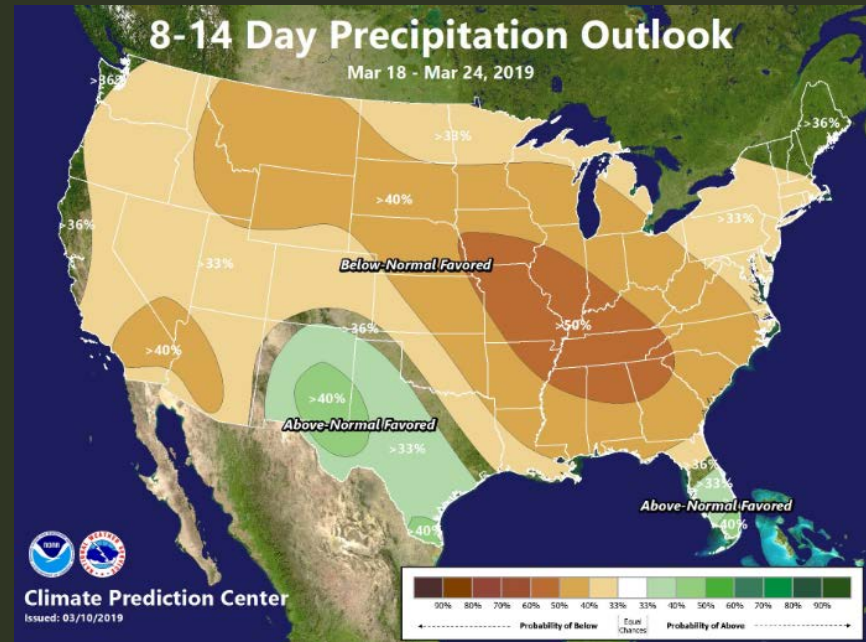
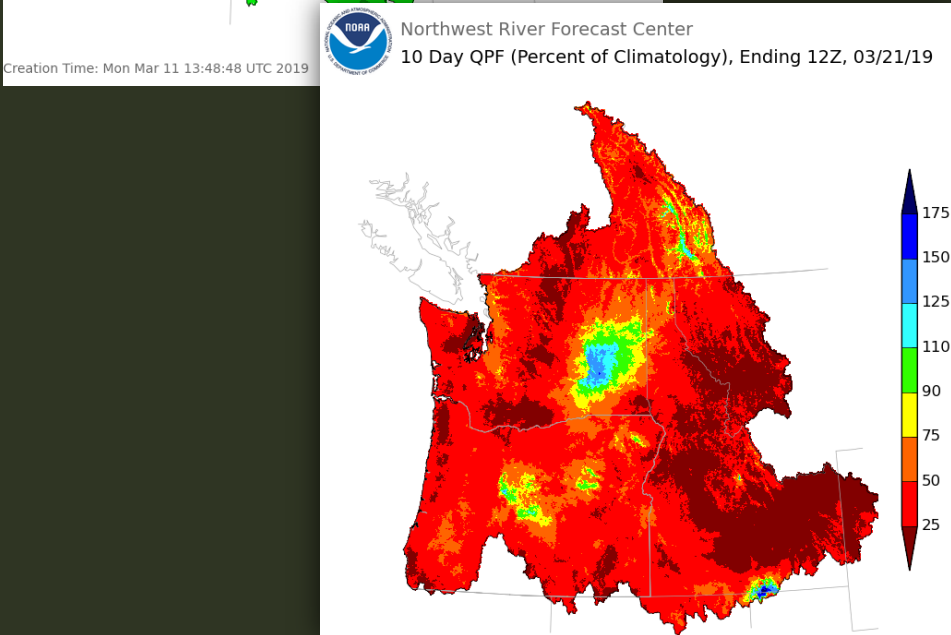
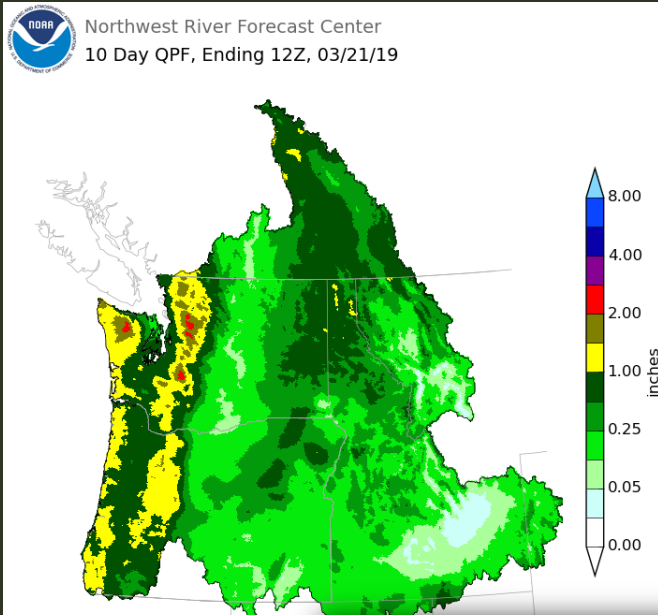
### Author:

Eric Luebehusen  
U.S. Department of Agriculture



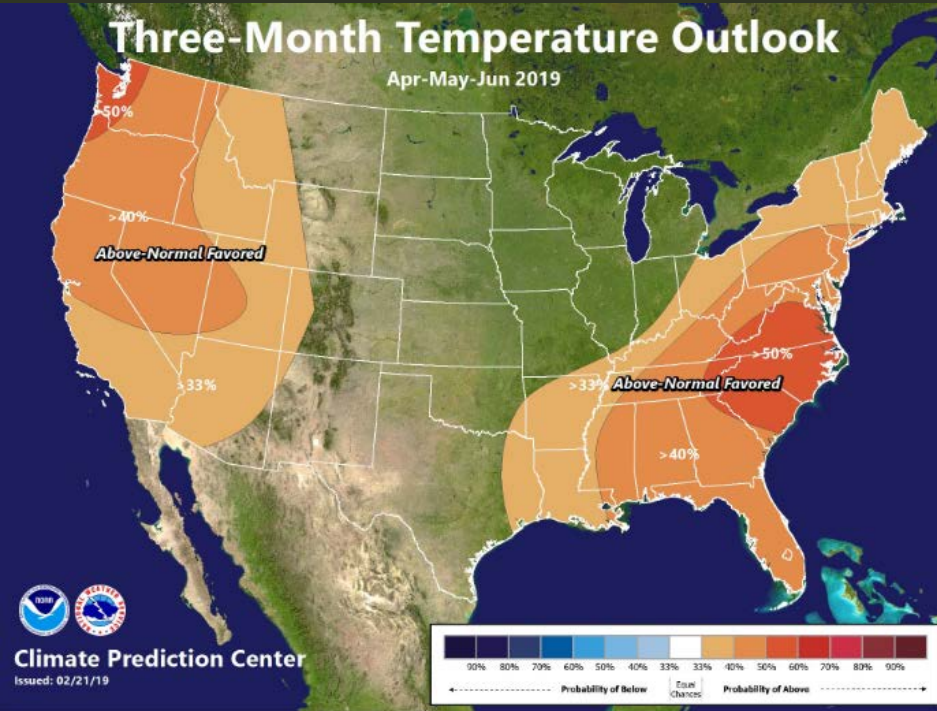
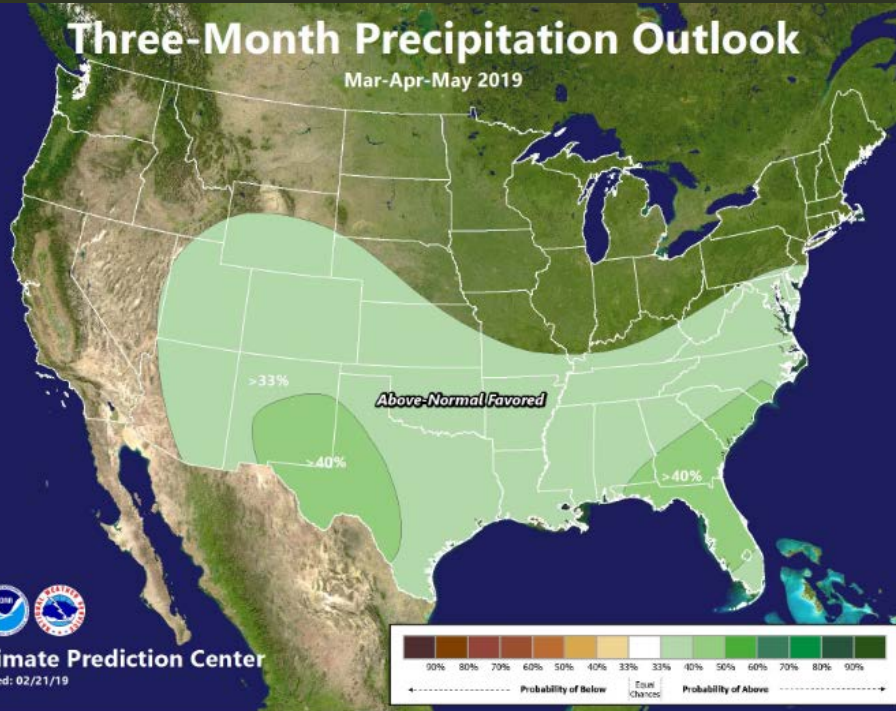


# Mid-March Outlook



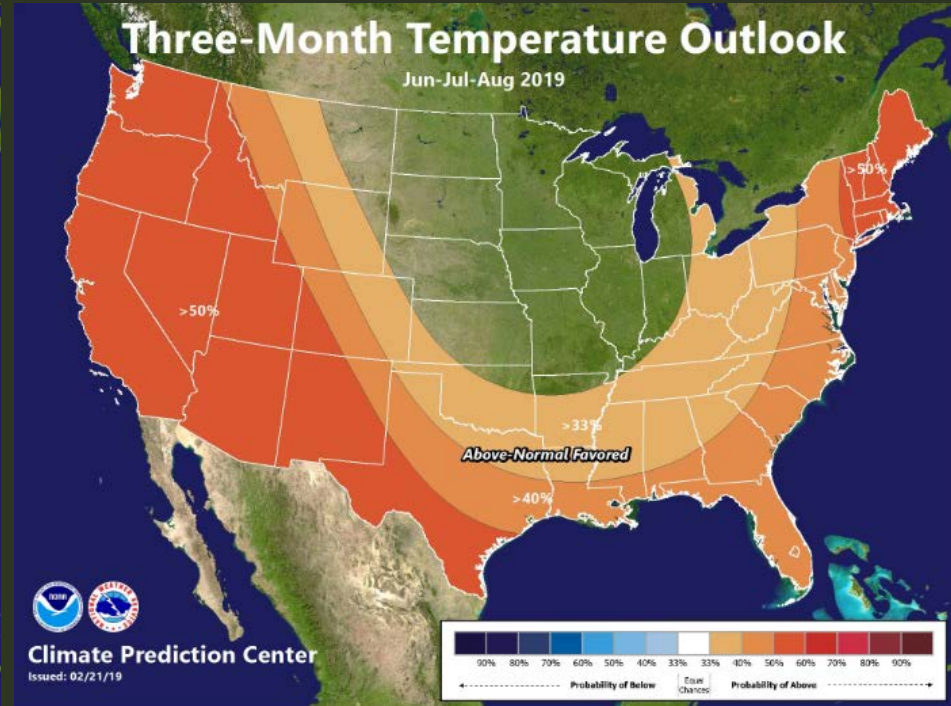
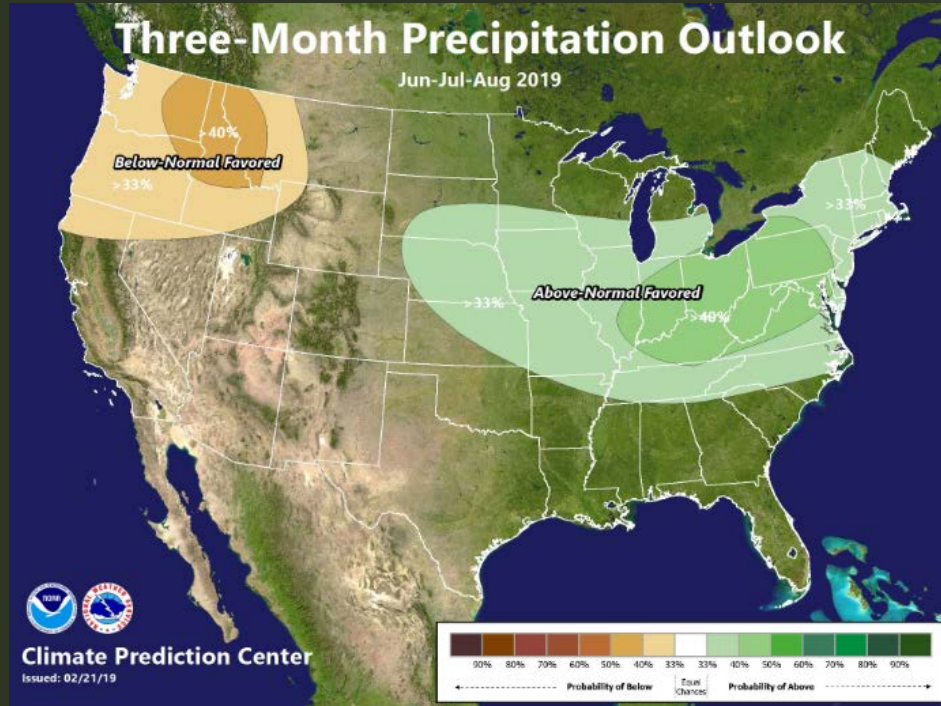


# March-April-May Outlook



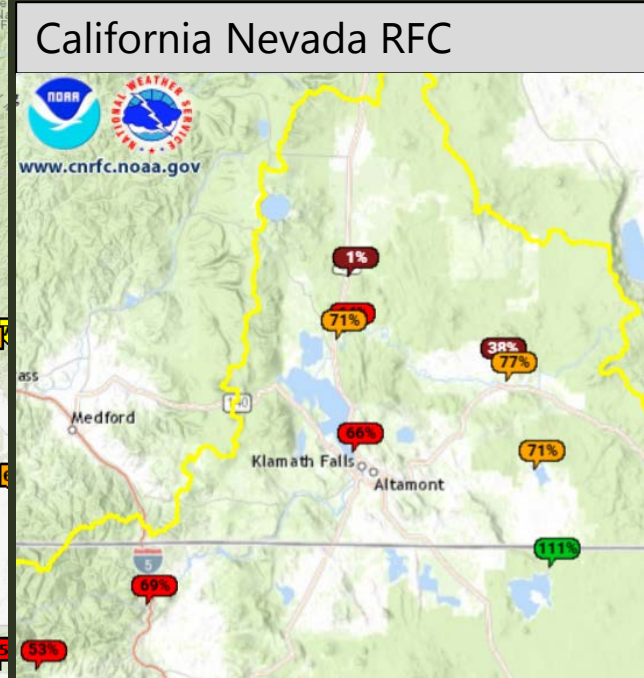
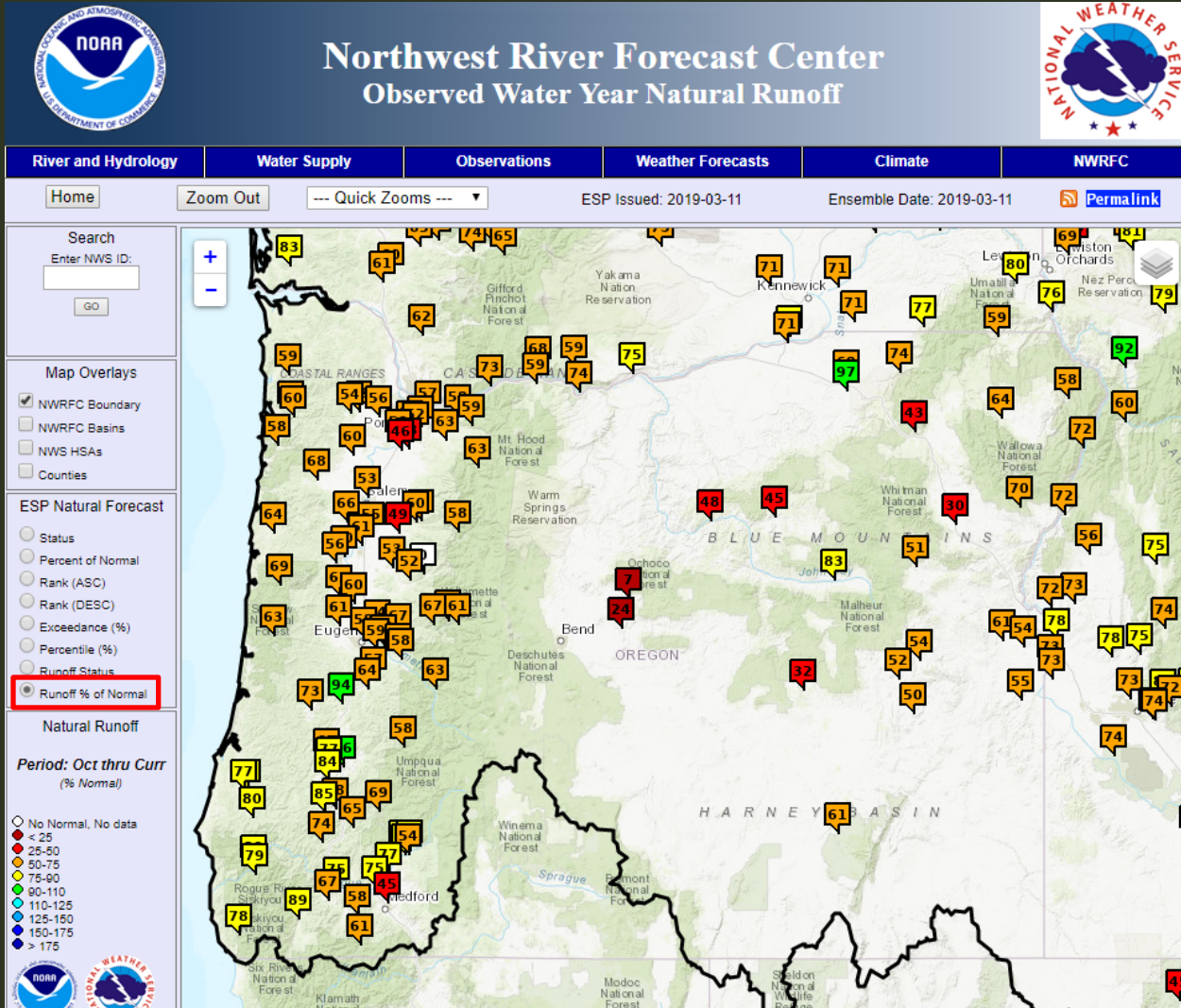


# June-July-August Outlook





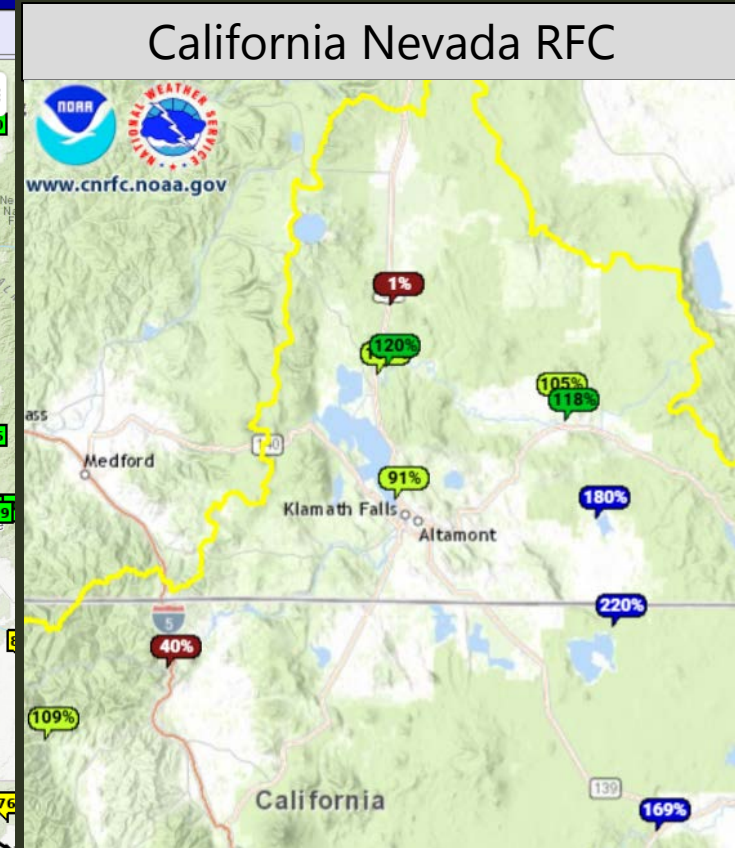
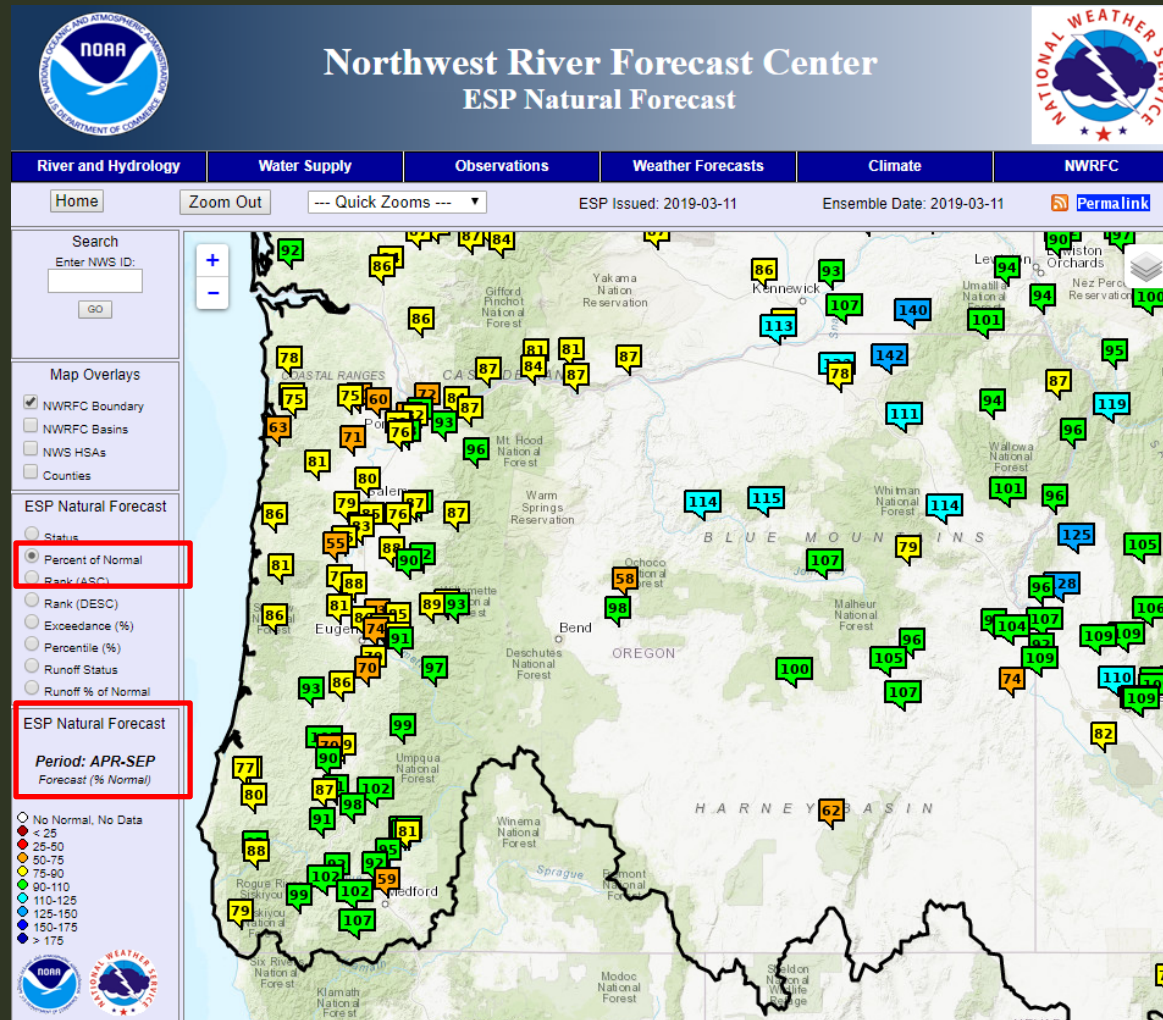
# Observed WY19 Runoff thus far





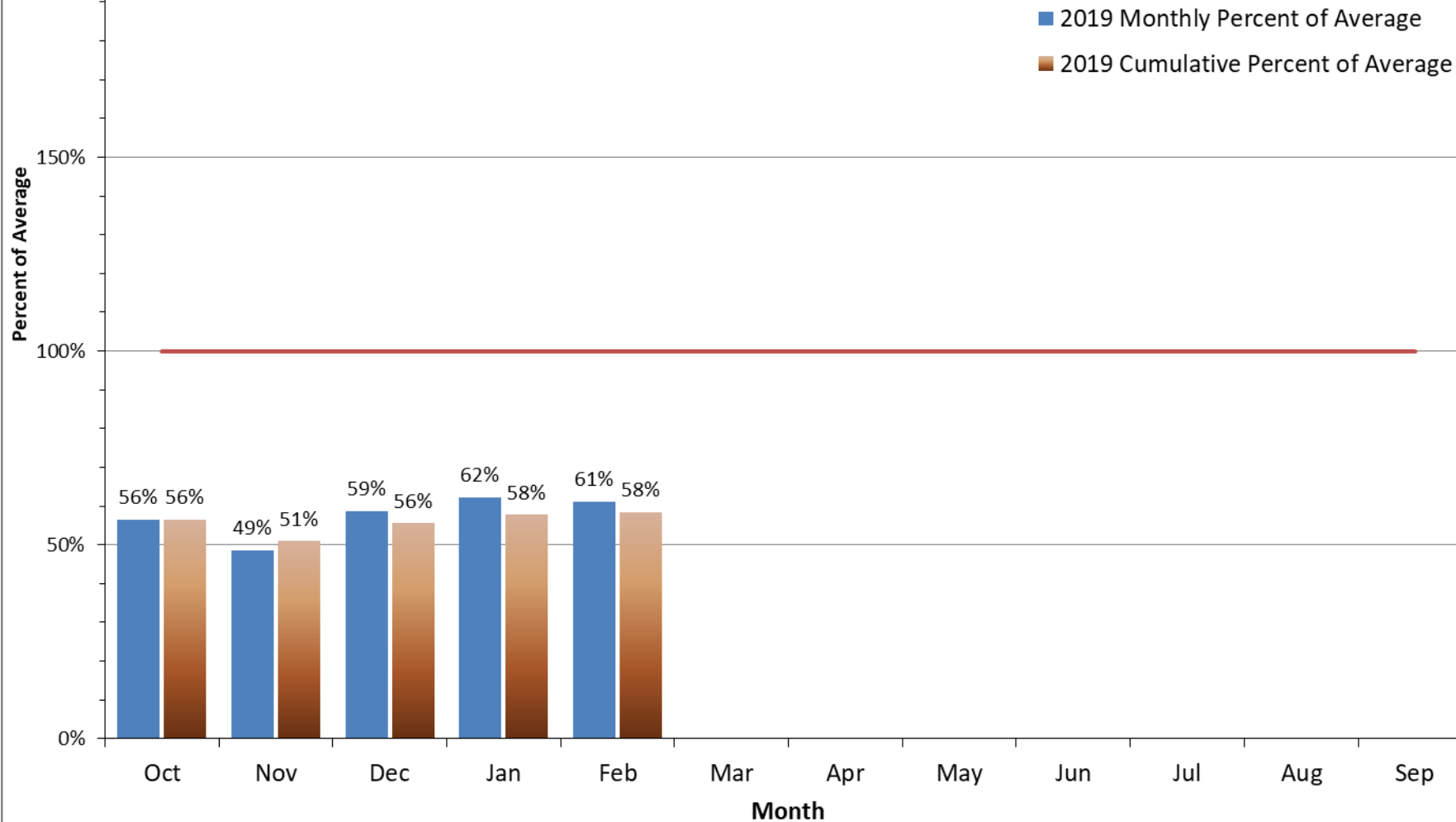
# Seasonal Water Supply Forecasts

Forecast runoff volume for April – September 2019

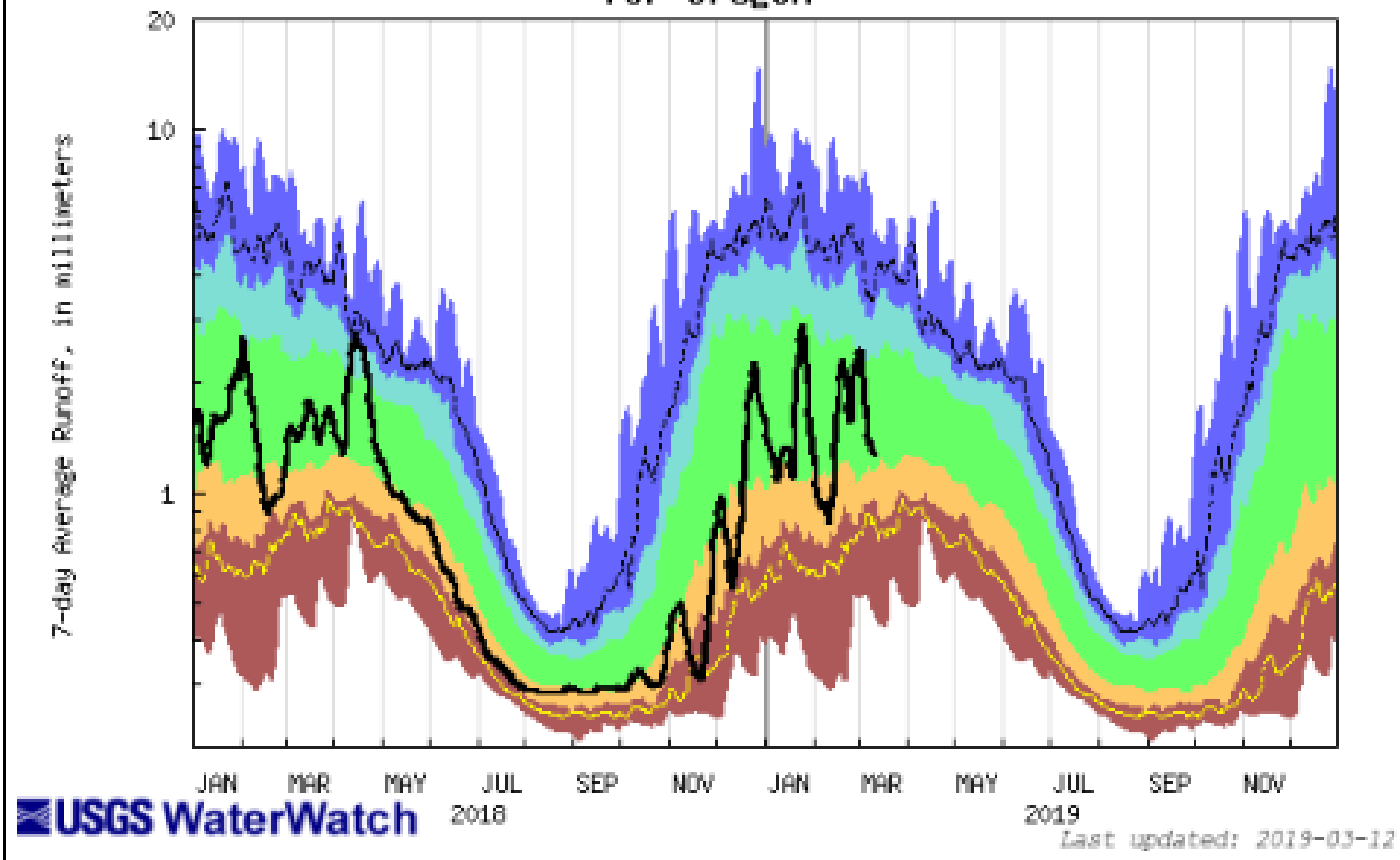




# 2019 Statewide Percent of Average Stream Flow



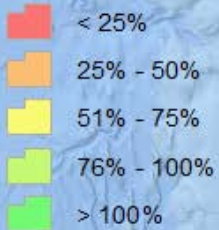
Duration hydrograph of 7-day average runoff for Oregon



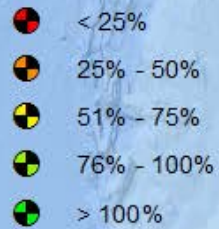
Explanation - Percentile classes							
lowest-10th percentile	5	10-24	25-75	76-90	95	95th percentile-highest	Runoff
Much below Normal		Below normal	Normal	Above normal		Much above normal	

# Percent of Average Streamflow February - 2019

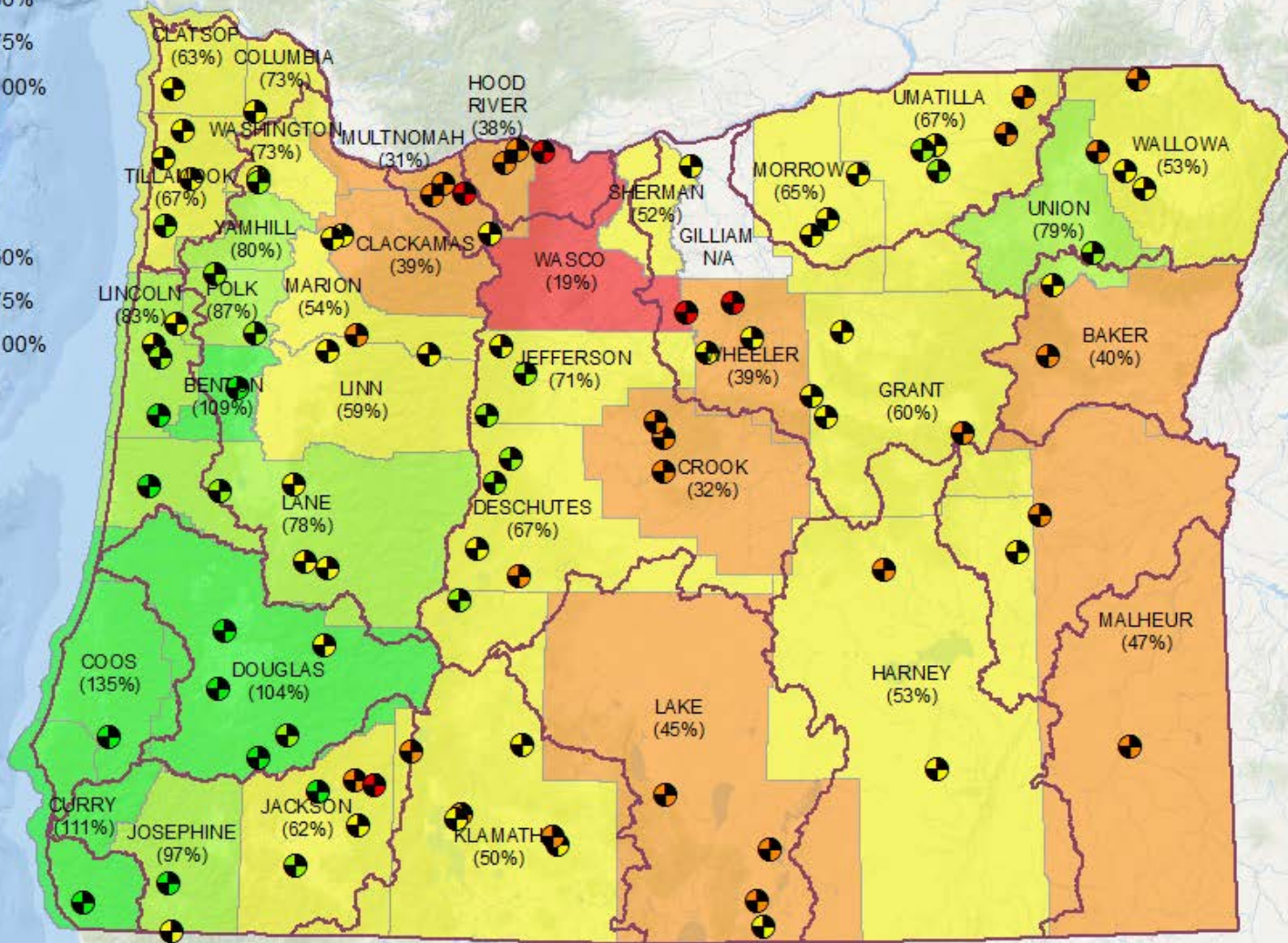
## County



## Stream gage

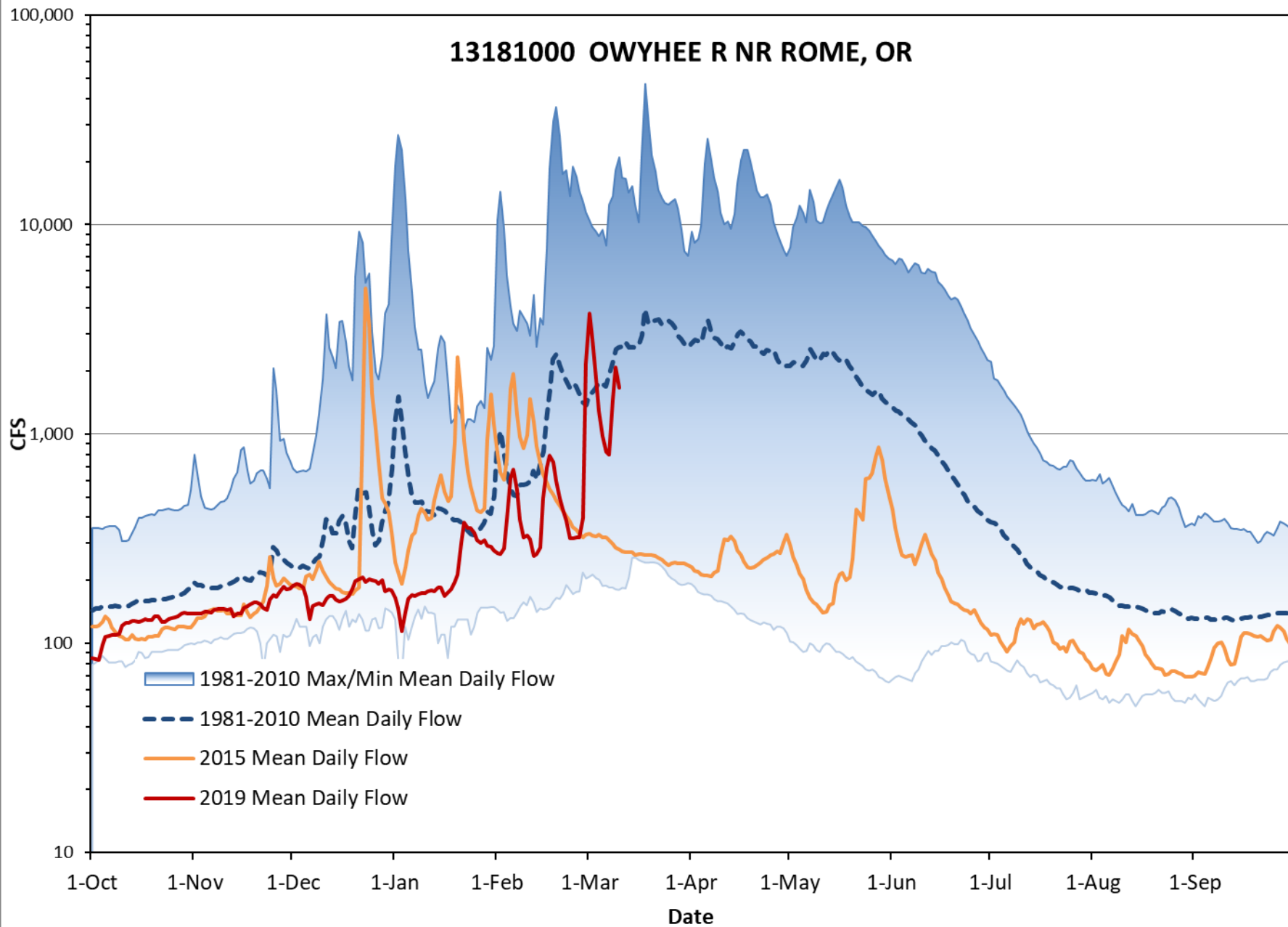


## WRD Basin

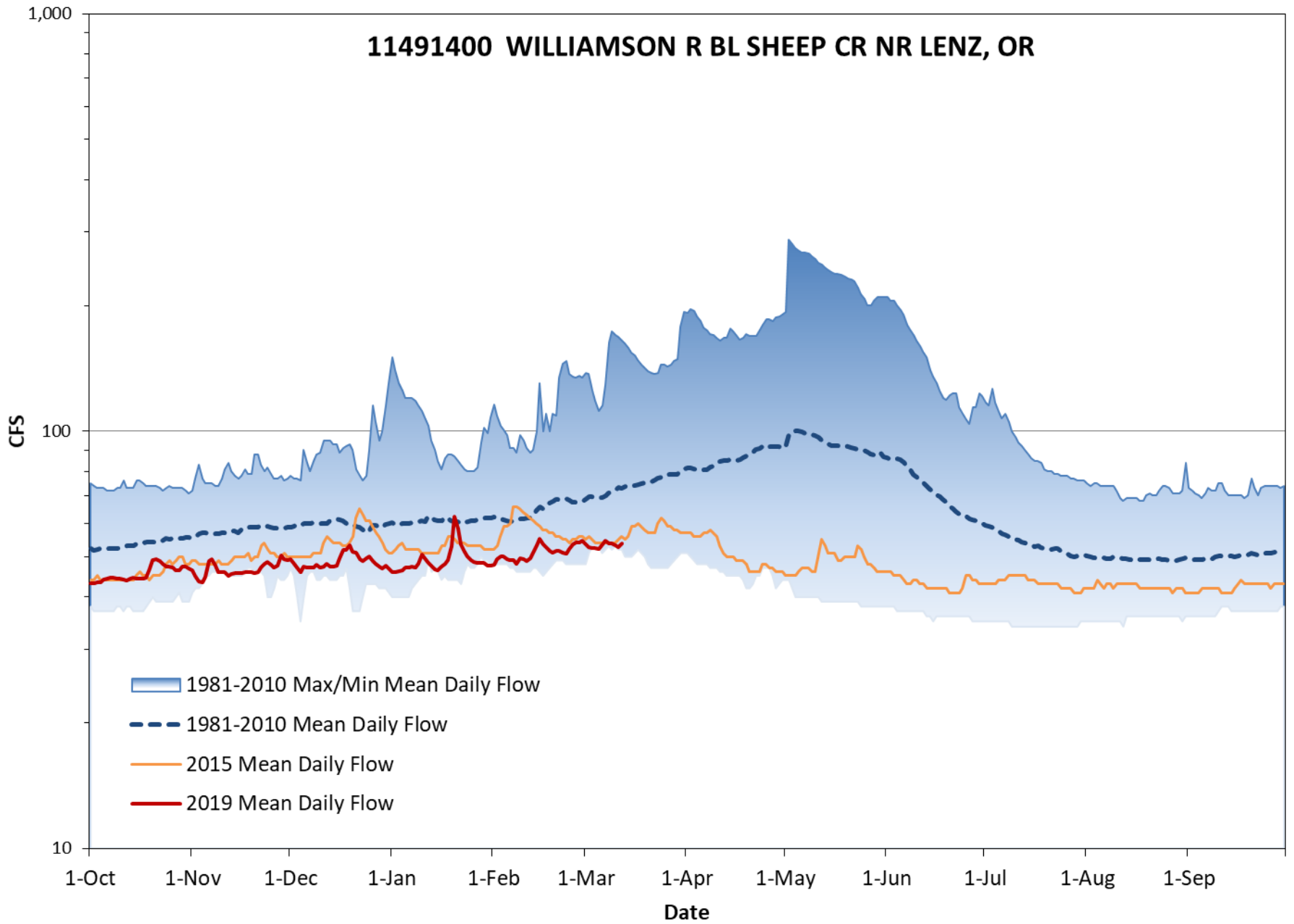


Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.

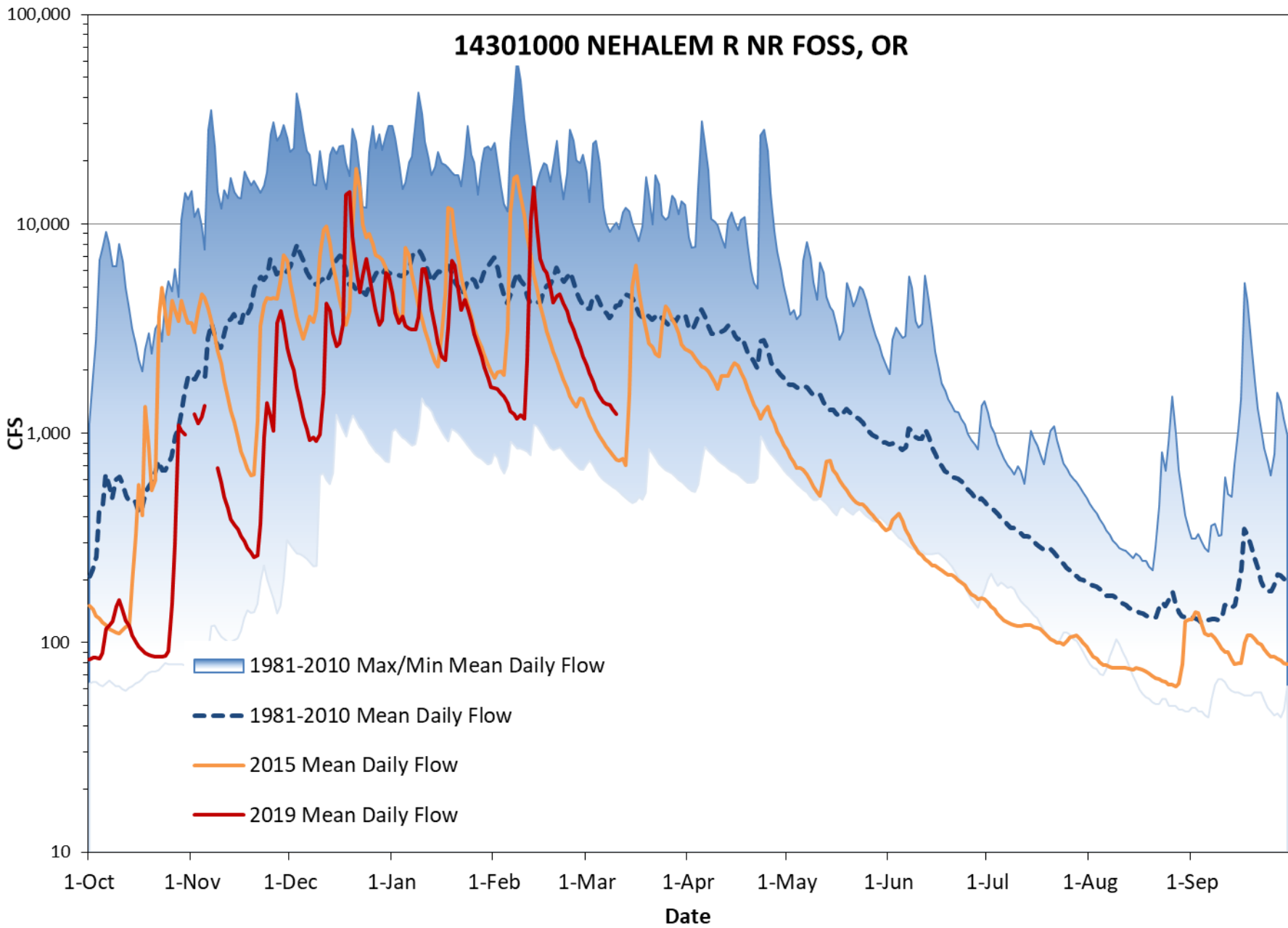
# 13181000 OWYHEE R NR ROME, OR



# 11491400 WILLIAMSON R BL SHEEP CR NR LENZ, OR



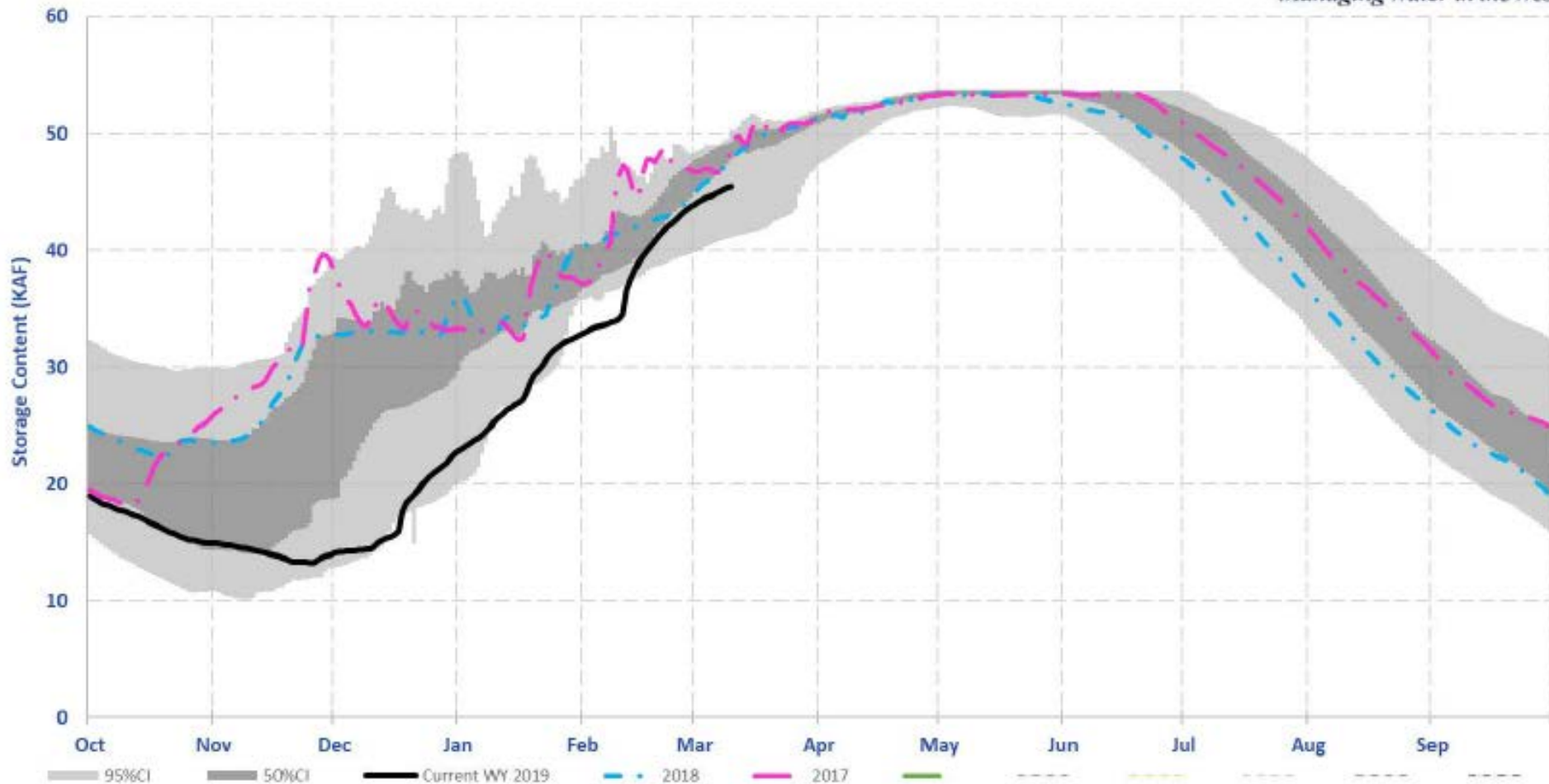
# 14301000 NEHALEM R NR FOSS, OR



# Tualatin River Basin: Scoggins

SCO AF

RECLAMATION  
*Managing Water in the West*

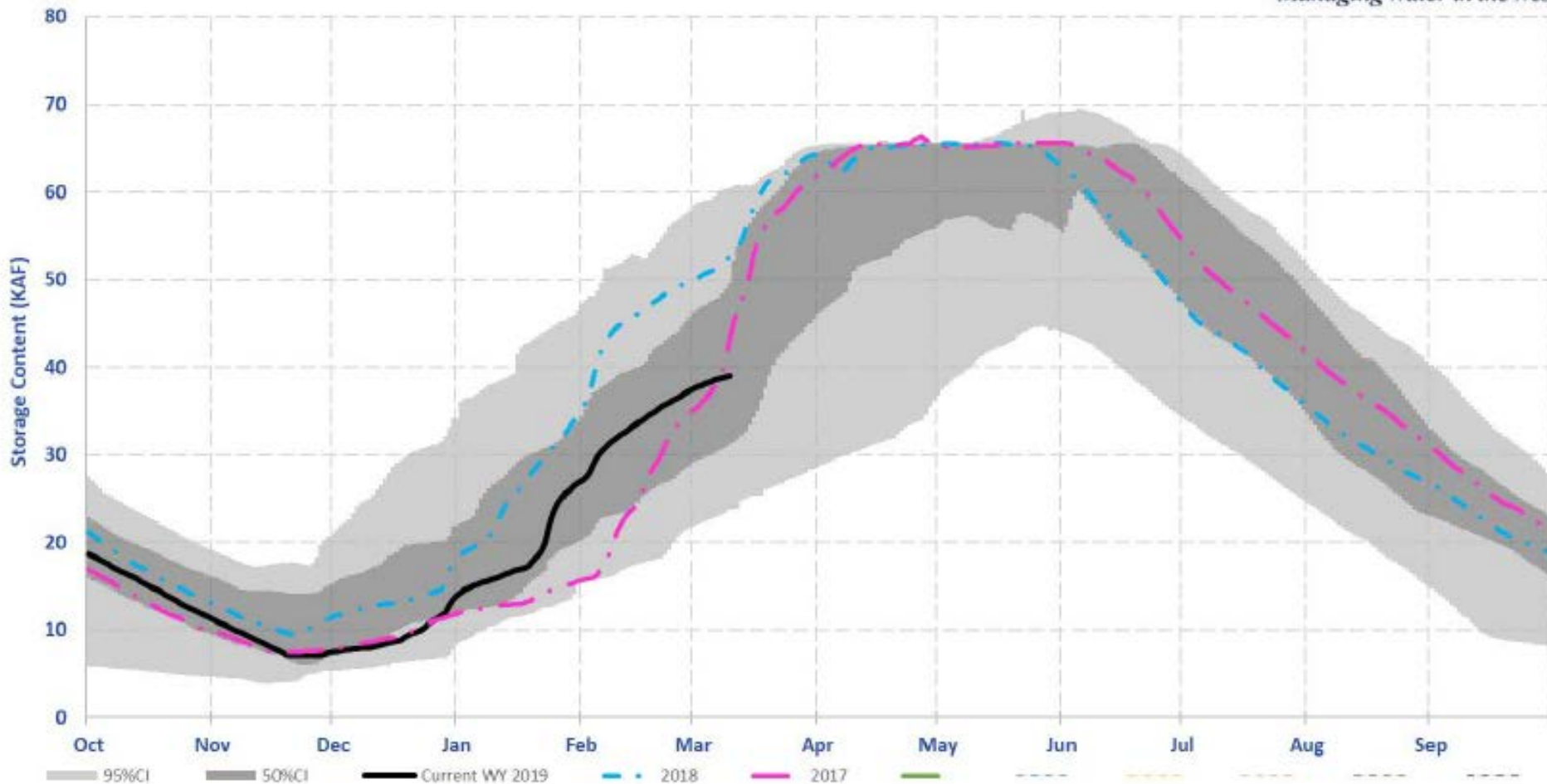


RECLAMATION

# Umatilla River Basin: McKay

MCK AF

RECLAMATION  
*Managing Water in the West*



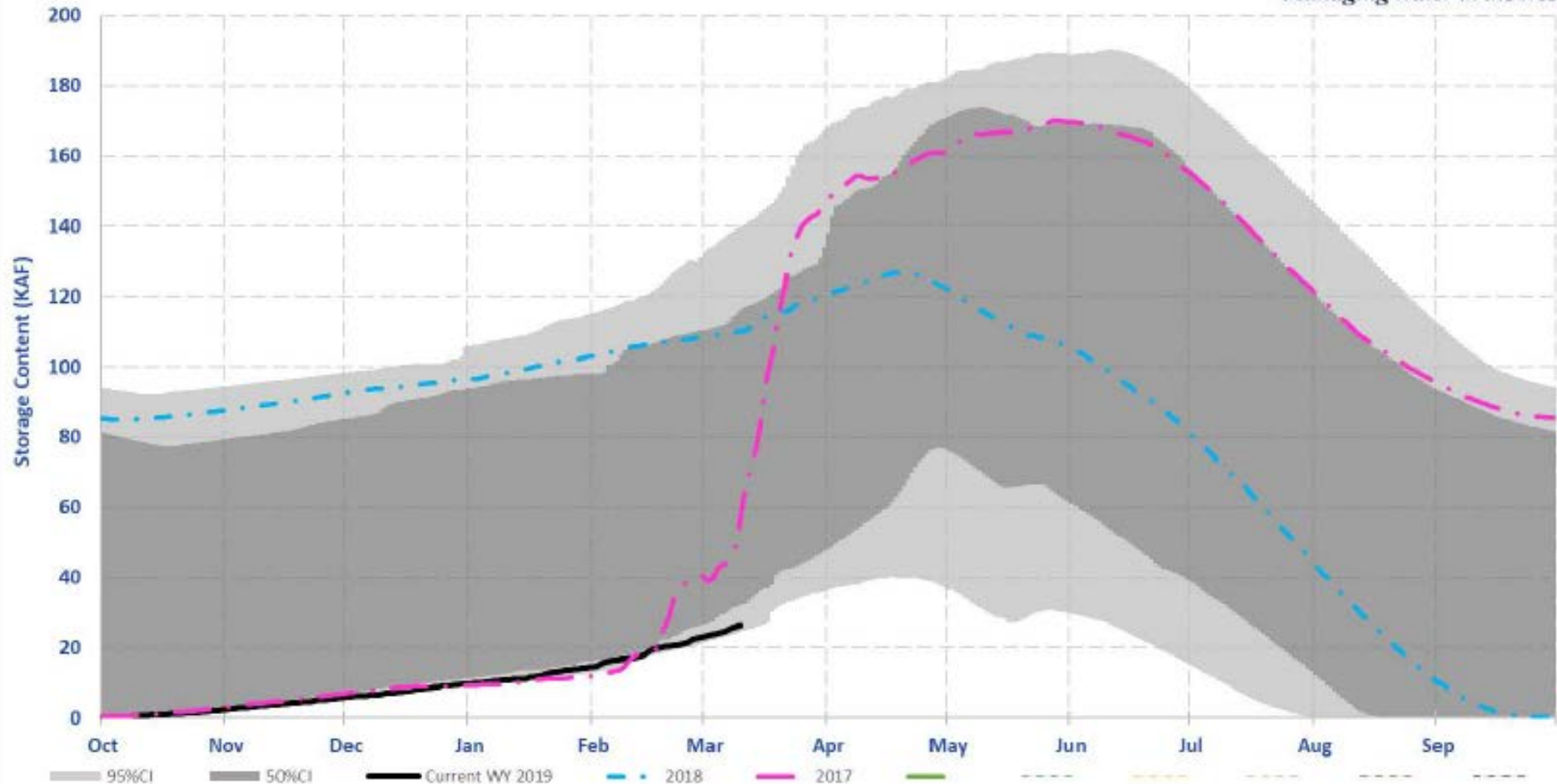
RECLAMATION



# Malheur River Basin: Warm Springs

RECLAMATION  
*Managing Water in the West*

WAR AF



RECLAMATION

# Reservoir Inflow Forecasts

Forecast Reservoir	Forecast Period	1981-2010 Average (KAF)	USBR Forecast (KAF)	% Avg	Available Space (KAF)
Phillips	Mar-Jul	70	89	127%	66
Beulah	Mar-Jun	72	115	160%	40
Bully Creek	Mar-Jun	26	46	178%	12
McKay	Mar-Jun	45	74	163%	27
Ochoco	Mar-Jun	34	53	154%	37
Owyhee	Mar-Jun	534	768	144%	372
Prineville	Mar-Aug	171	265	155%	85
Unity	Mar-Jul	47	63	135%	15
Warm Springs	Mar-Jun	109	173	159%	143

*Forecasts dated 05-MAR  
Space as of 11-MAR*

OREGON



WATER RESOURCES  
DEPARTMENT

**Thank you.**