

Oregon Water Supply Availability Committee
December 12, 2019



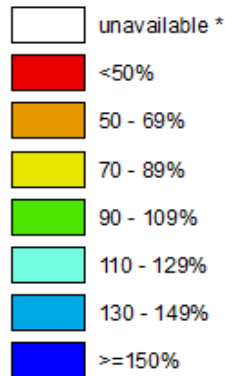
H. Scott Oviatt
Snow Survey Supervisory Hydrologist
USDA Natural Resources Conservation Service
Scott.Oviatt@or.usda.gov
503-414-3271
<http://www.nrcs.usda.gov/wps/portal/nrcs/main/or/snow/>

Statewide SNOTEL Snow Water Equivalent is 52% of normal

Oregon SNOTEL Current Snow Water Equivalent (SWE) % of Normal

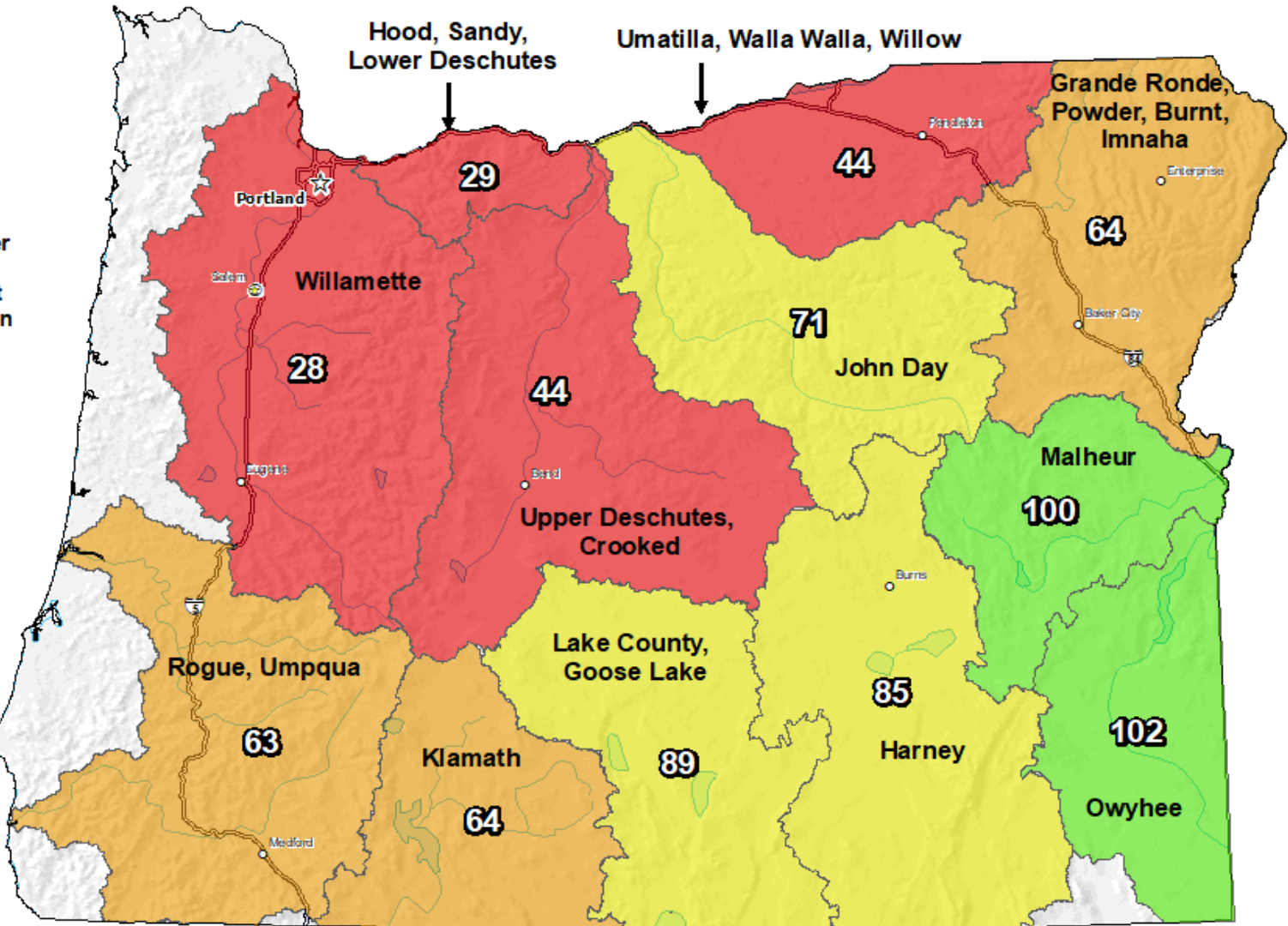
Dec 12, 2019

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

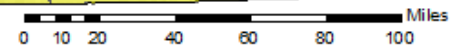


* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional Data
Subject to Revision

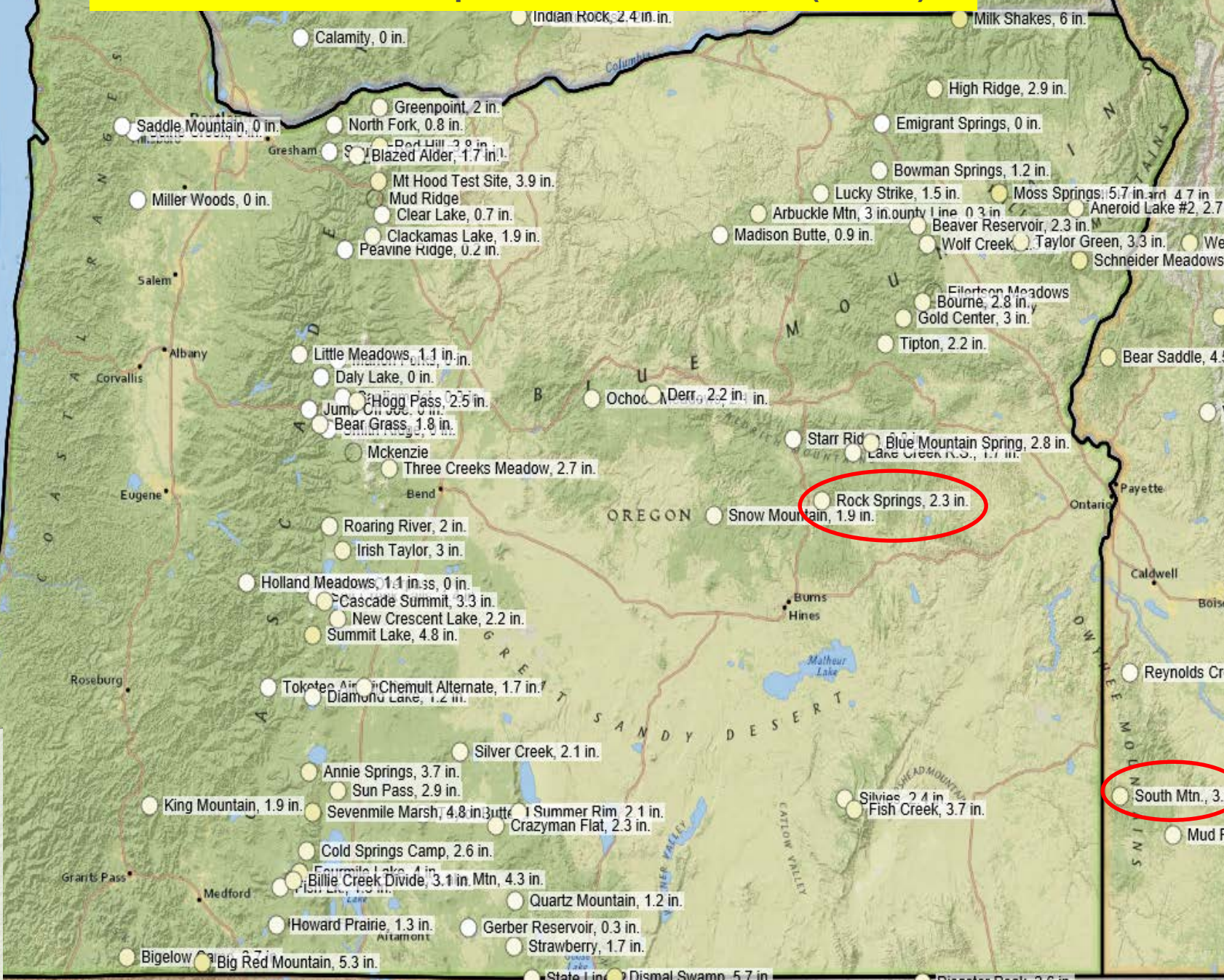


The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).



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

SNOTEL Snow Water Equivalent Station Values (inches)

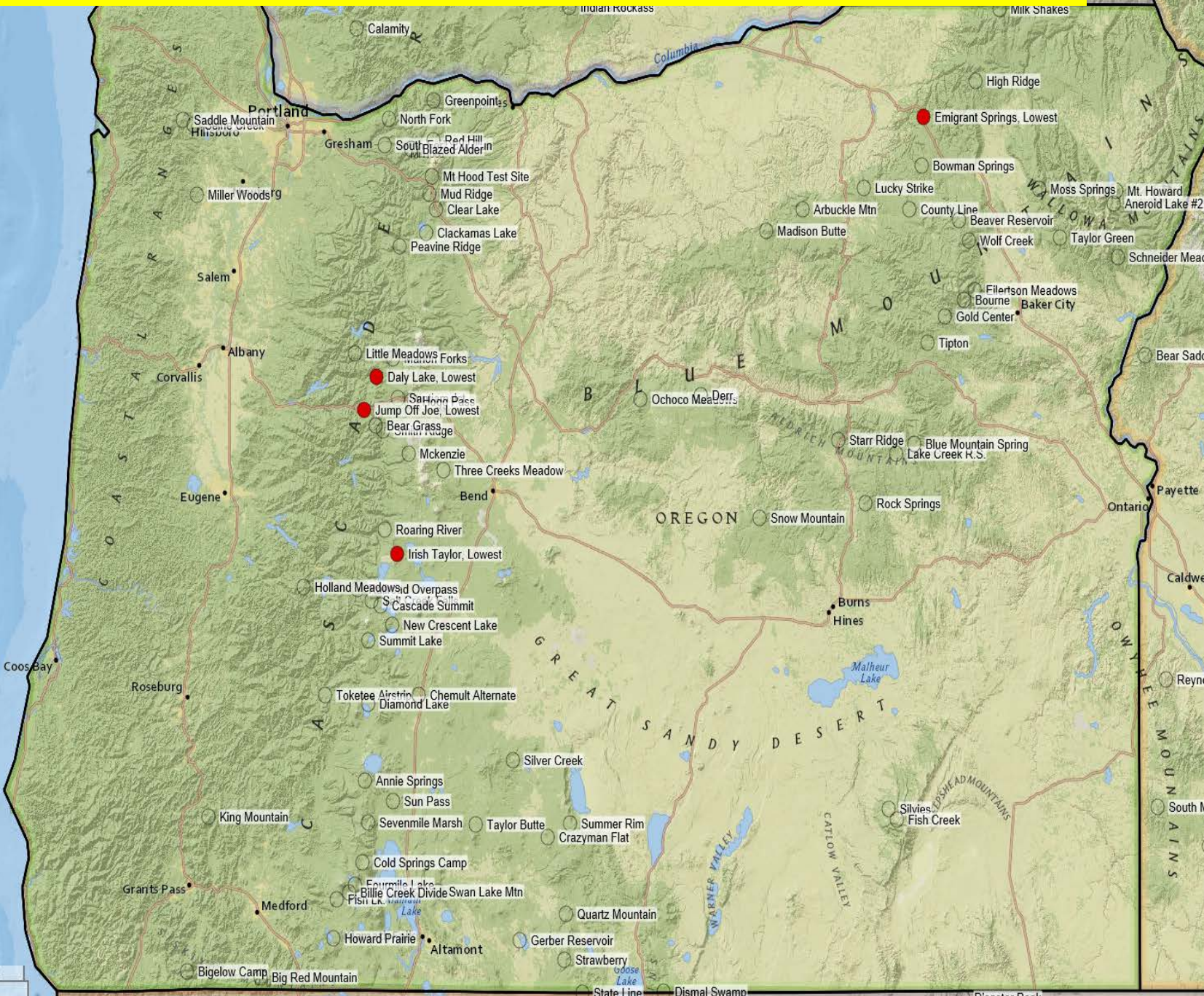


Snow Water Equivalent
December 11, 2019, end of day

- ≥ 50 in.
- 43.75 in.
- 37.5 in.
- 31.25 in.
- 25 in.
- 18.75 in.
- 12.5 in.
- 6.25 in.
- ≤ 0 in.

NRCS Natural Resources Conservation Service
Created 12-12-2019 05:41 AM PST

SNOTEL Snow Water Equivalent Station Record Lows – December 11, 2019



Snow Water Equivalent Records (POR)
 December 11, 2019, end of day

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

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

Created 12-12-2019, 05:52 AM PST

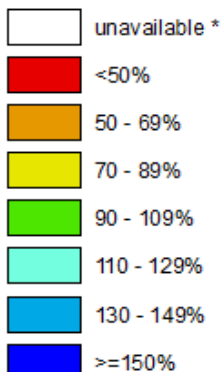
30 km
20 mi

Statewide SNOTEL Precipitation is 47% of normal

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

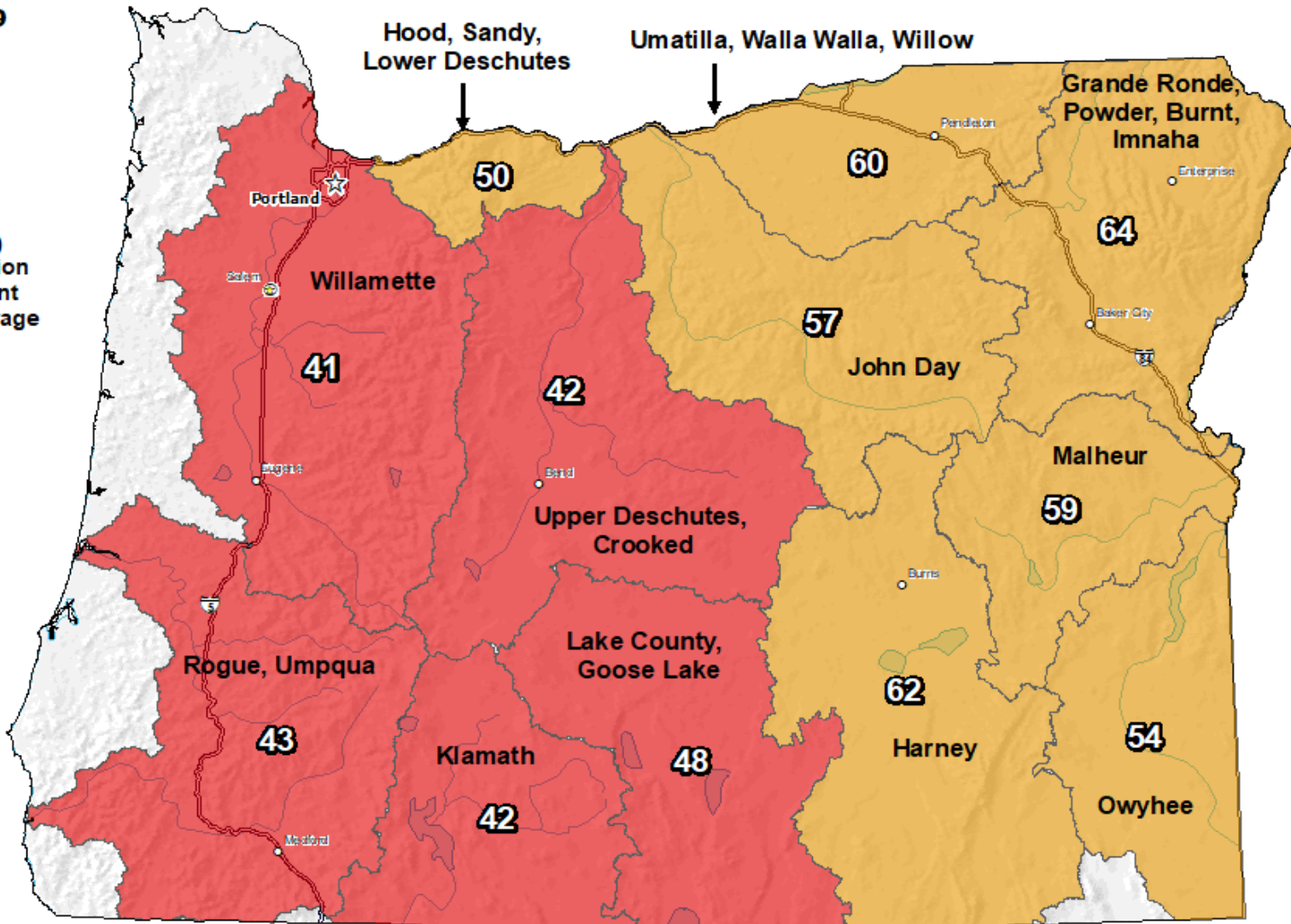
Dec 12, 2019

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

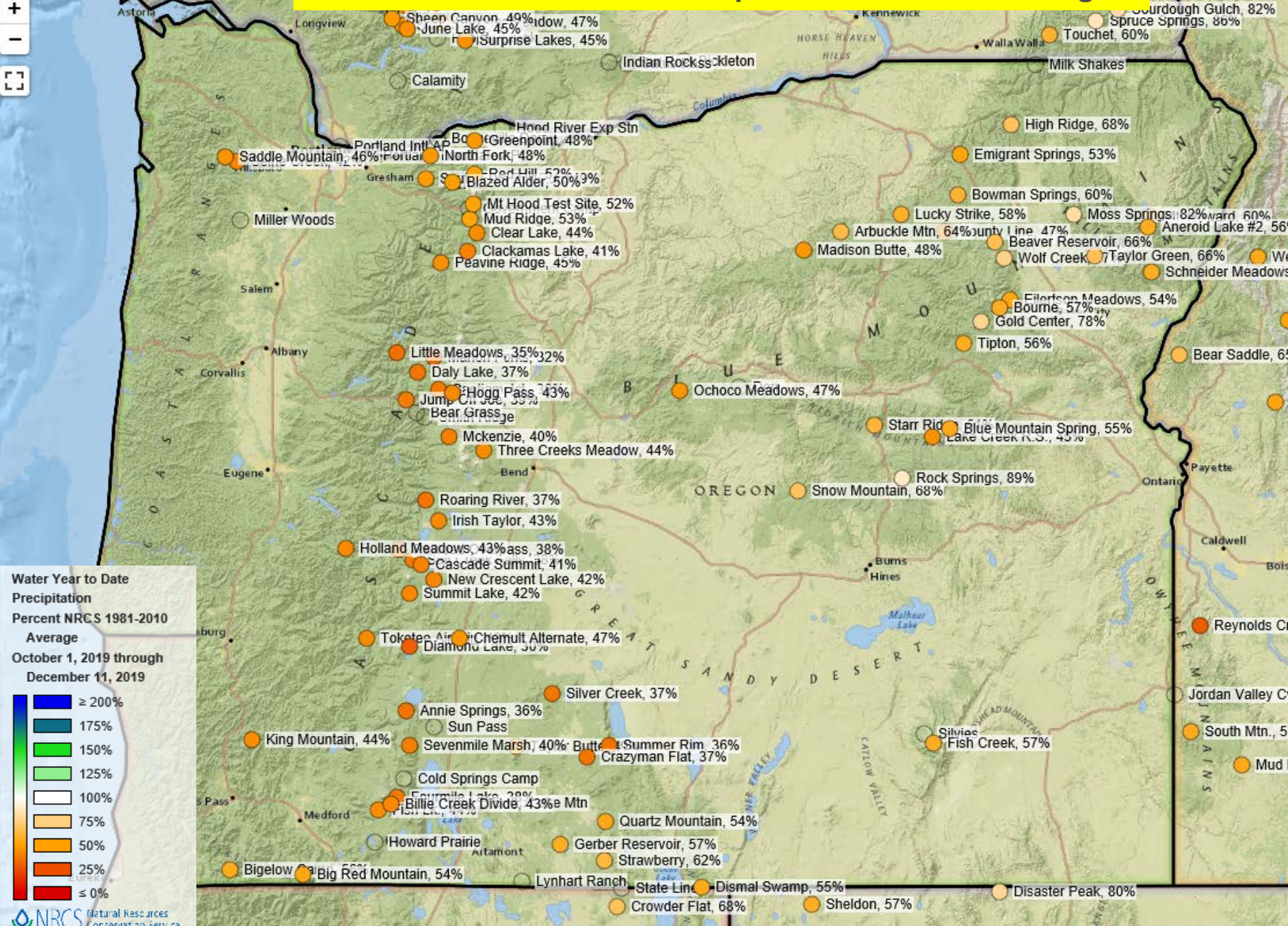


The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).

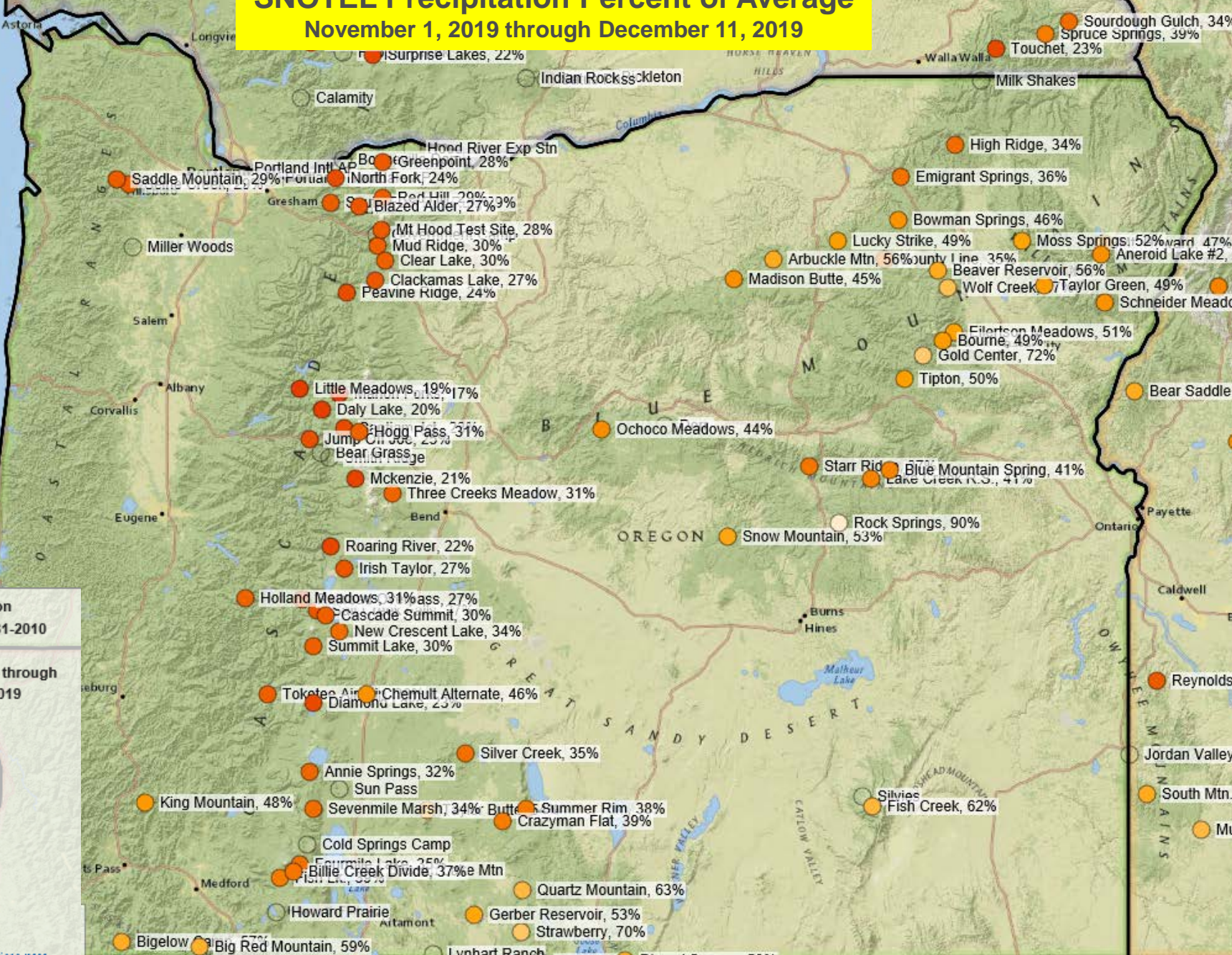
0 10 20 40 60 80 100 Miles

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

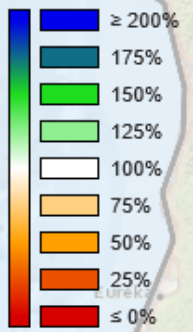
2019 Water Year SNOTEL Precipitation Percent of Average



SNOTEL Precipitation Percent of Average November 1, 2019 through December 11, 2019



41 day Precipitation
Percent NRCS 1981-2010
Average
November 1, 2019 through
December 11, 2019



SNOTEL Water Year Precipitation Record Lows – December 11, 2019

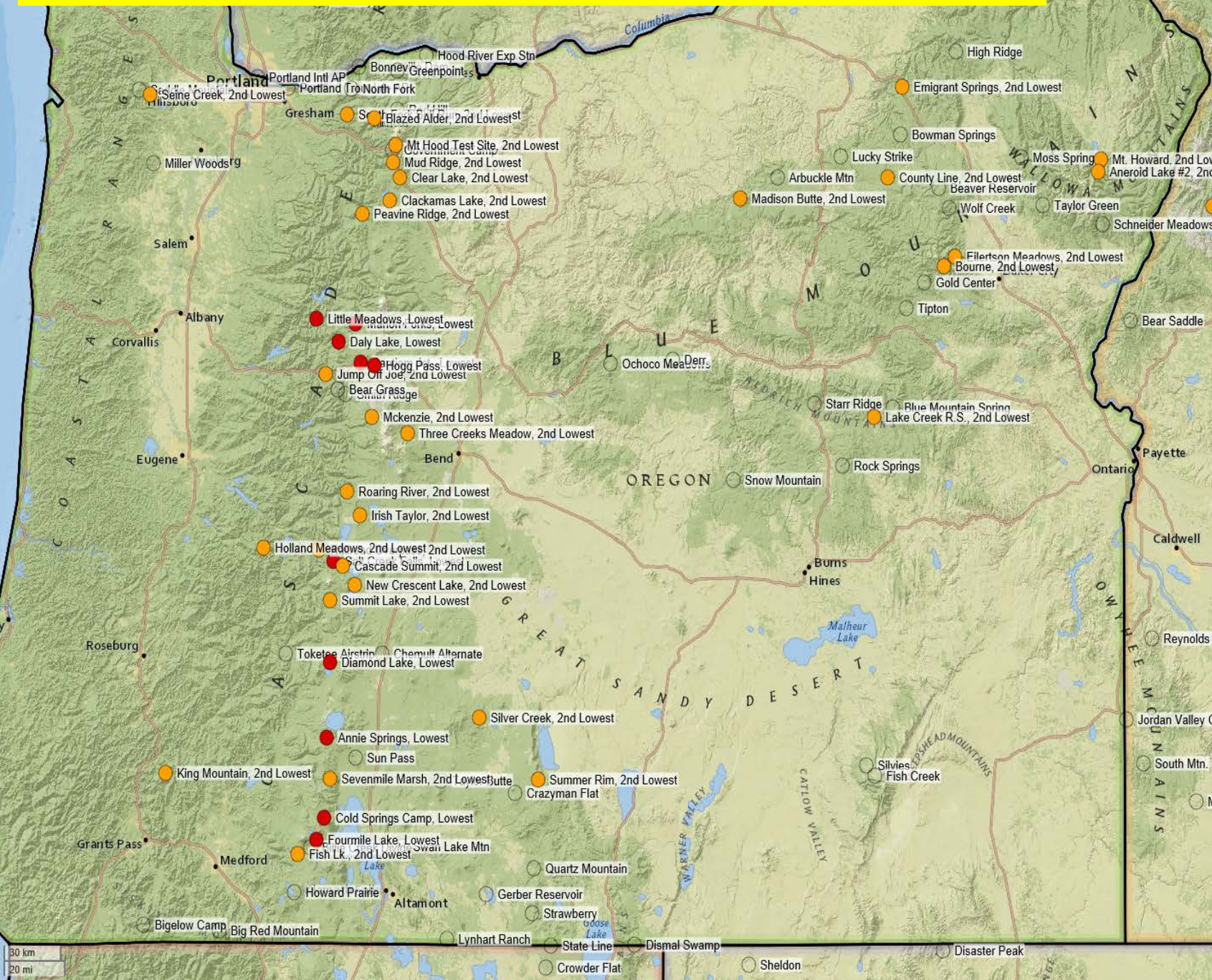


**Water Year to Date
Precipitation
Records (POR)**
October 1, 2019 through
December 10, 2019

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

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

Created 12-12-2019, 06:55 AM PST



Oregon Water Supply Availability Committee
December 12, 2019



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<http://www.nrcs.usda.gov/wps/portal/nrcs/main/or/snow/>

Thank you

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Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.



Oregon Water Supply Availability

December 12, 2019

National Weather Service Update

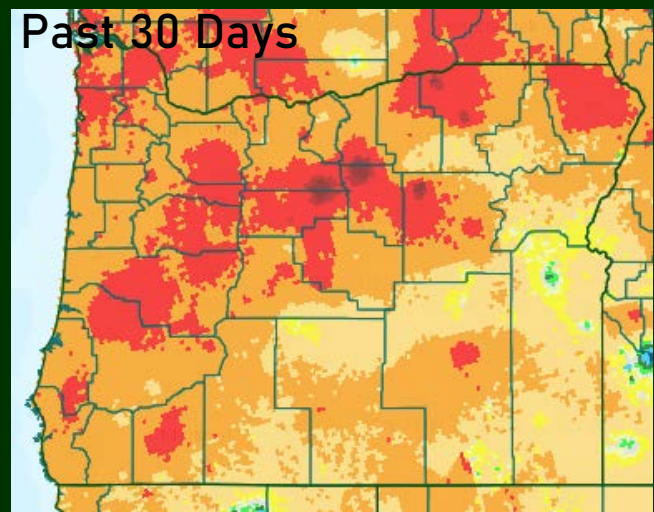
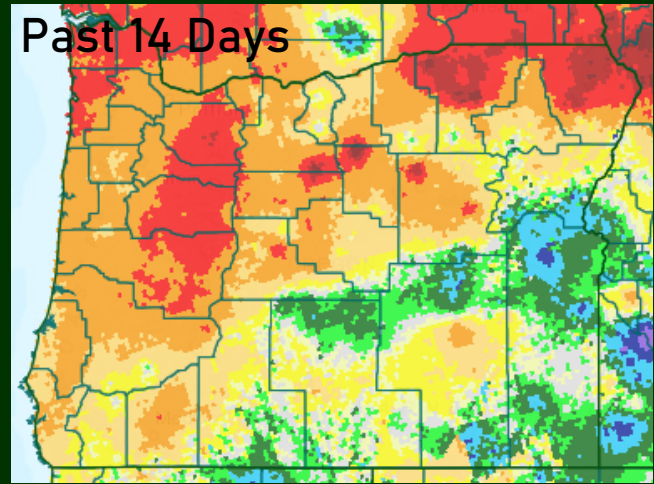
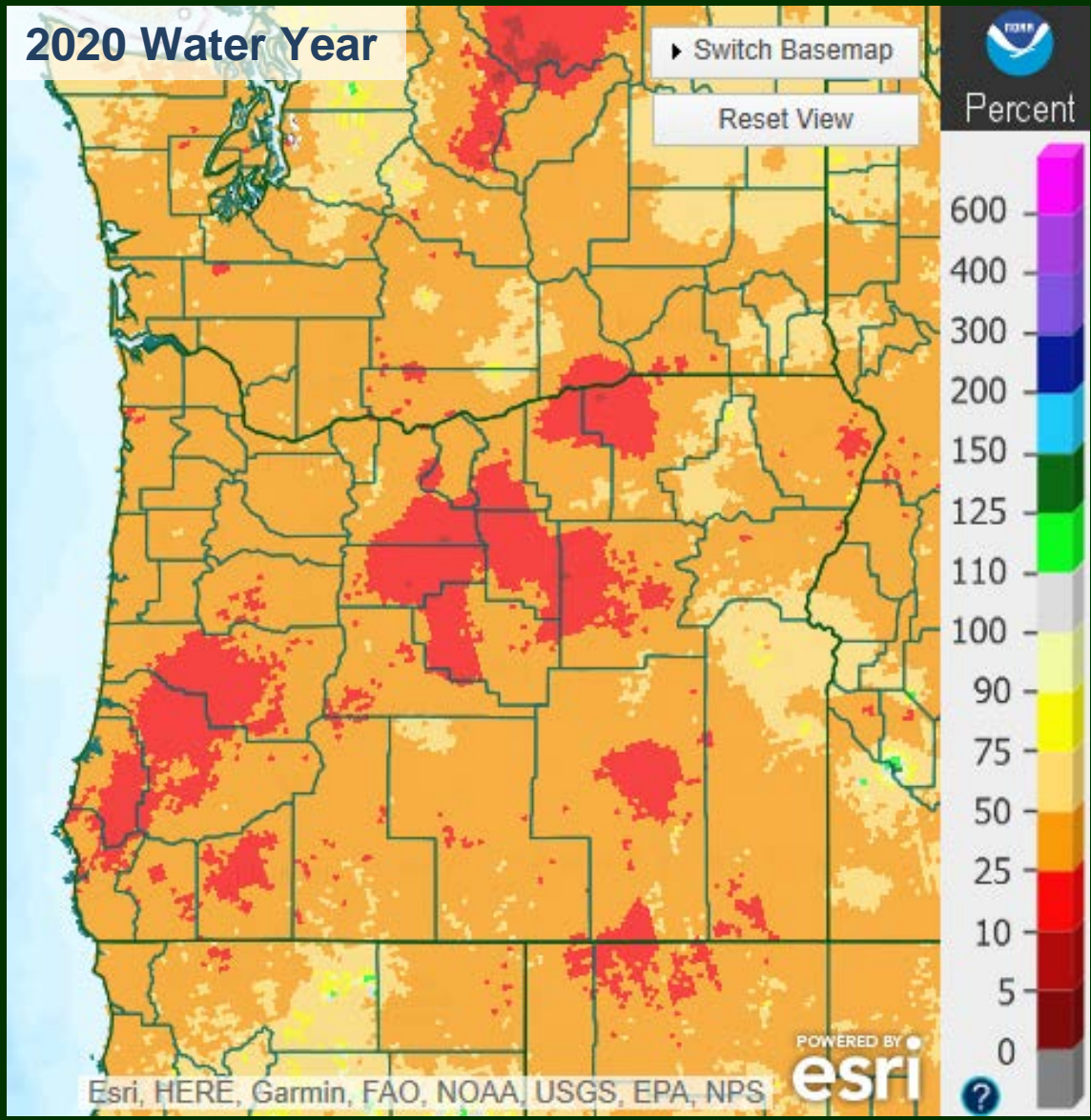
Trib to Gales Creek in the Coast Range

Andy Bryant
NOAA/NWS Portland
Weather Forecast Office

Amy Burke
NOAA/NWS/Northwest River Forecast Center



Precipitation % of Average

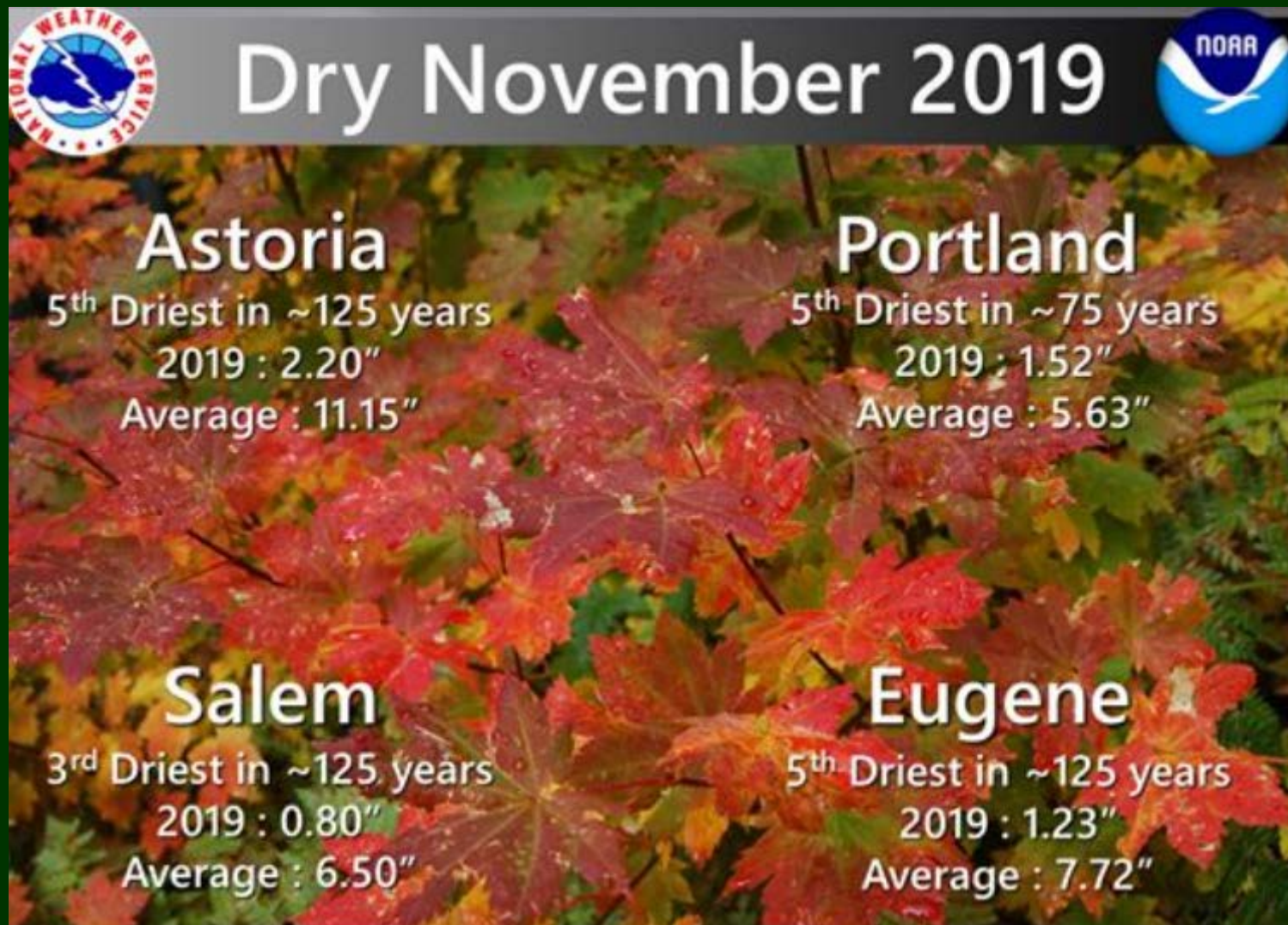


Precipitation Data as of Dec 11, 2019

Source: water.weather.gov/precip/index.php?location_type=wfo&location_name=pqr

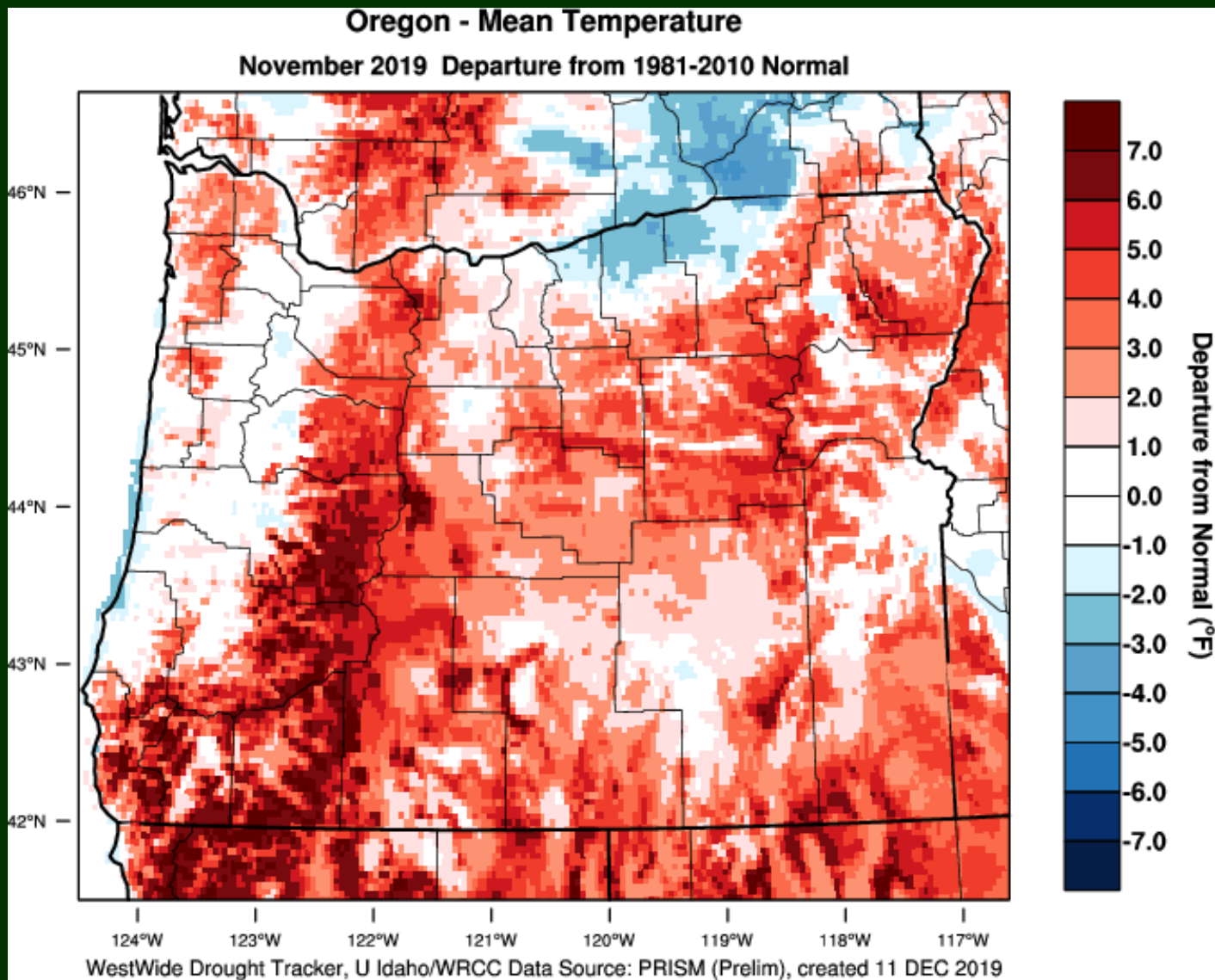


Notable November Precipitation



Recent Temperatures

November 2019





Drought Monitor

U.S. Drought Monitor

November 5, 2019

West

(Released Thursday, Nov. 7, 2019)

Valid 7 a.m. EST

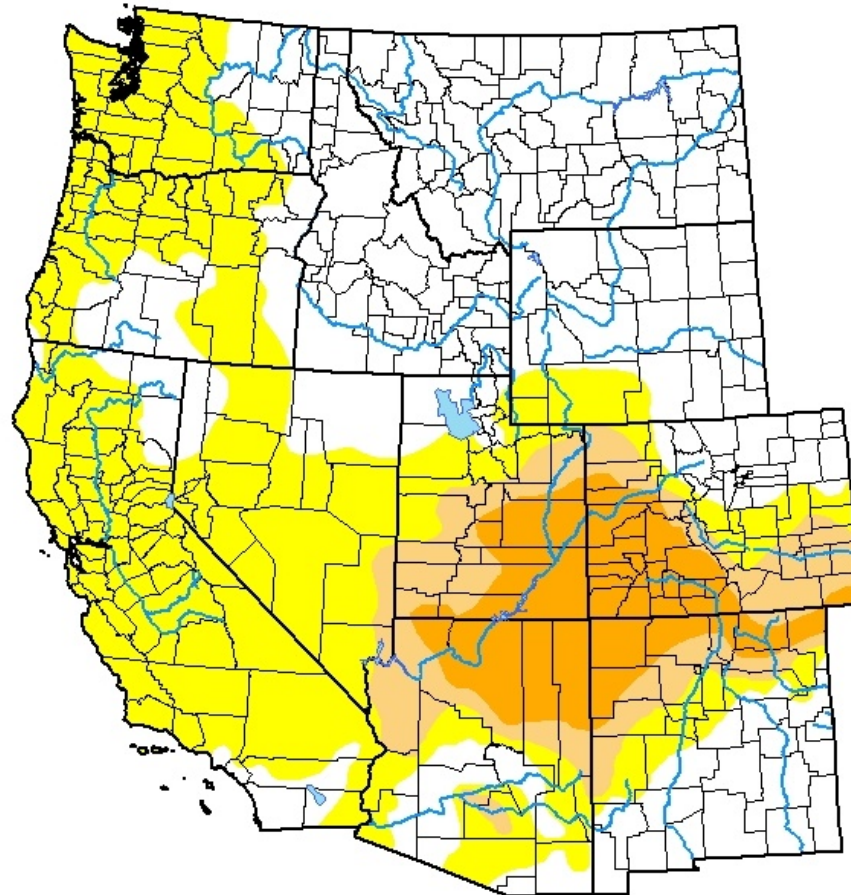
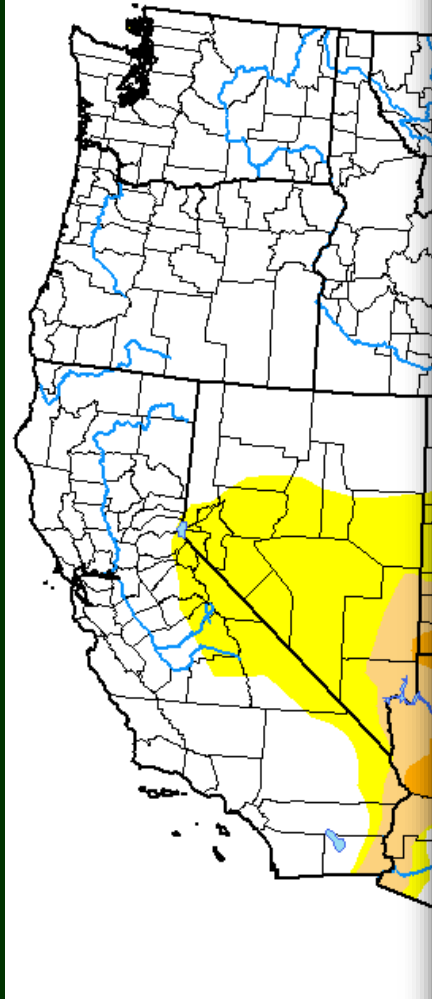
U.S. Drought Monitor

December 3, 2019

West

(Released Thursday, Dec. 5, 2019)

Valid 7 a.m. EST



Intensity:

- None
- 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. For more information on the Drought Monitor, go to <http://droughtmonitor.unl.edu/About.aspx>

Author:

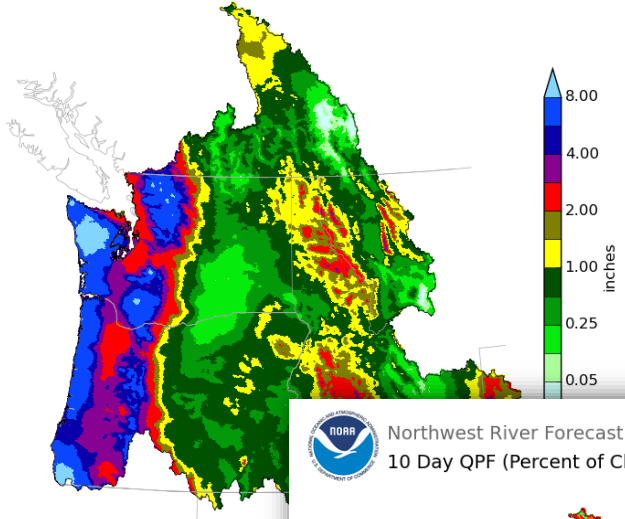
Deborah Bathke
National Drought Mitigation Center





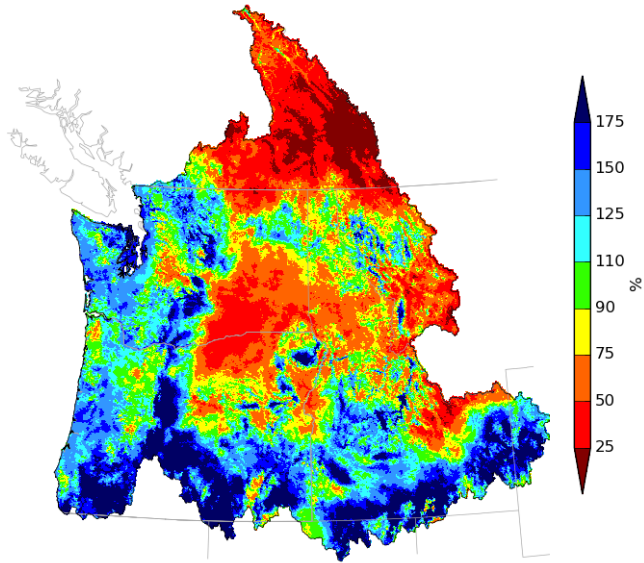
Mid/Late December Outlook

Northwest River Forecast Center
10 Day QPF, Ending 12Z, 12/21/19

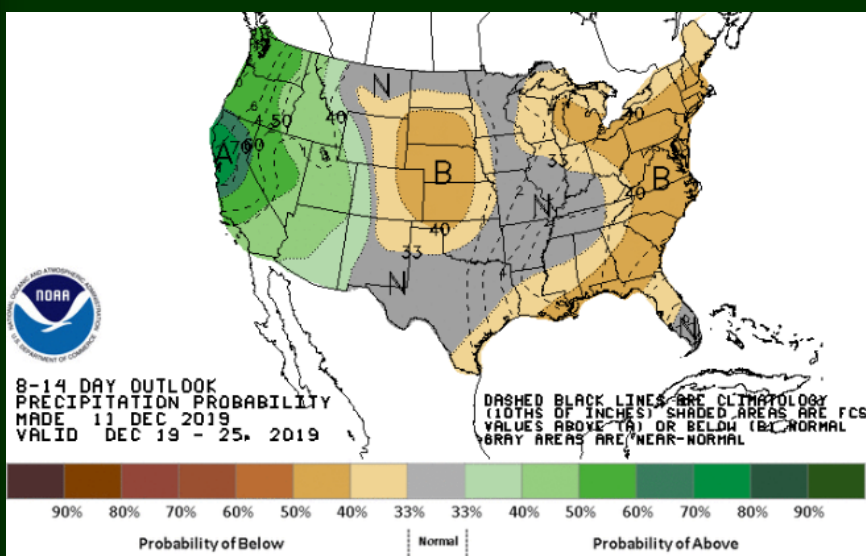
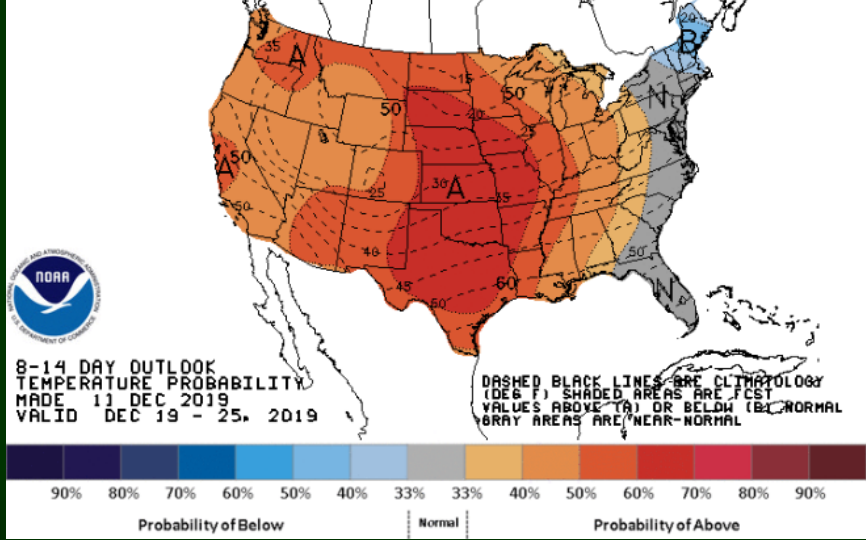


Creation Time: Wed Dec 11 23:17:52 UTC 2019

Northwest River Forecast Center
10 Day QPF (Percent of Climatology), Ending 12Z, 12/21/19

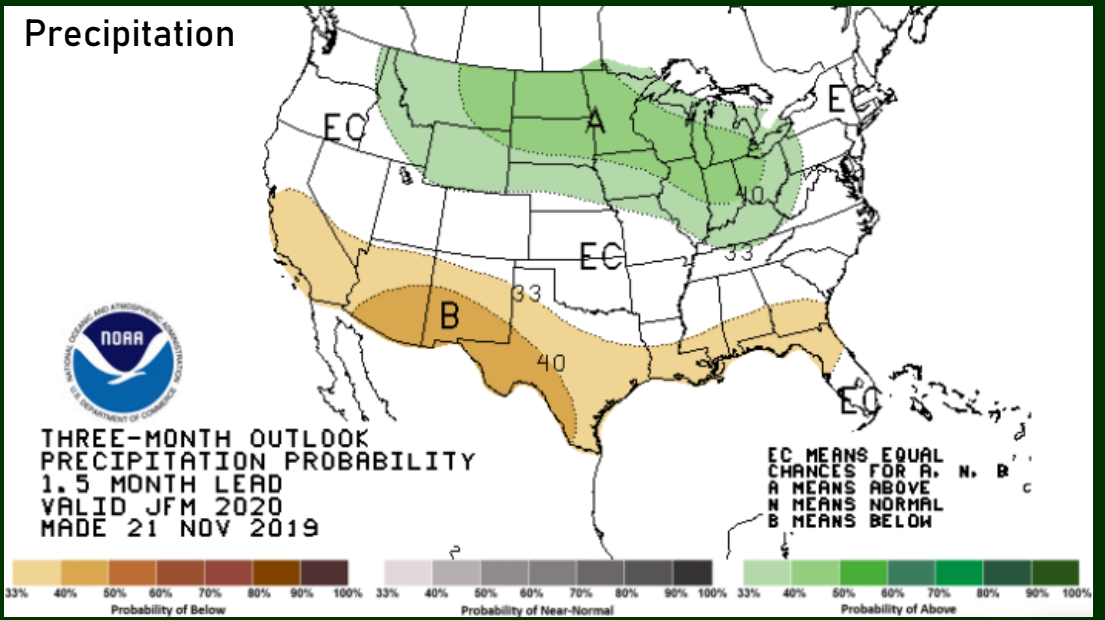
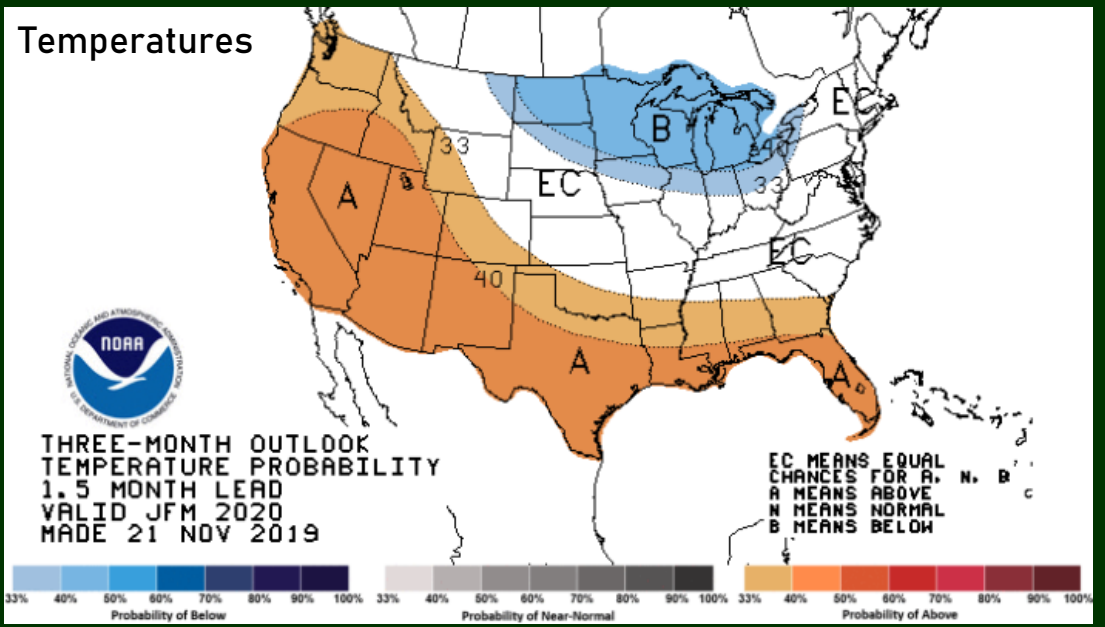


Creation Time: Wed Dec 11 23:18:51 UTC 2019





Climate Prediction Center Outlook Jan-Feb-Mar 2020



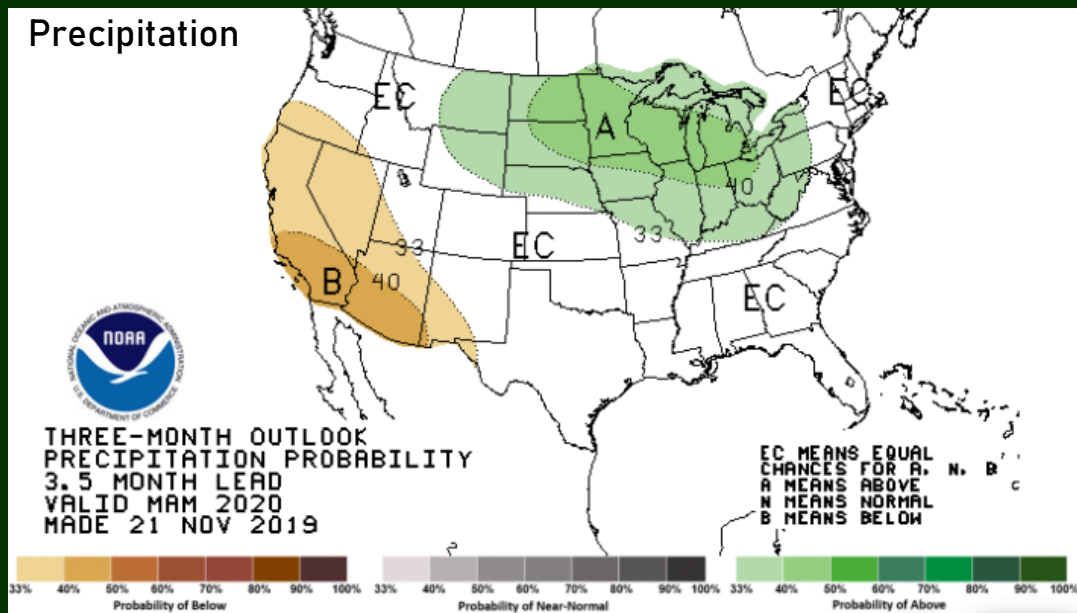
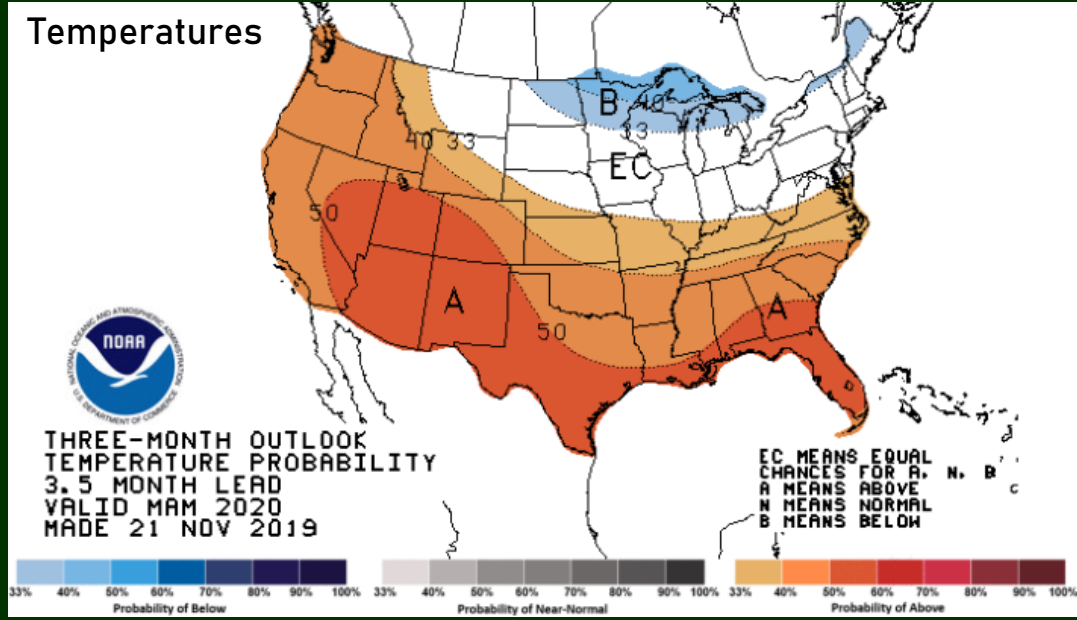
NWS Portland Winter Outlook 2019-2020

weather.gov/portland &
mobile.weather.gov
www.nwrfc.noaa.gov





Climate Prediction Center Outlooks Mar-Apr-May 2020



NWS Portland Winter Outlook 2019-2020

weather.gov/portland & mobile.weather.gov
www.nwrfc.noaa.gov

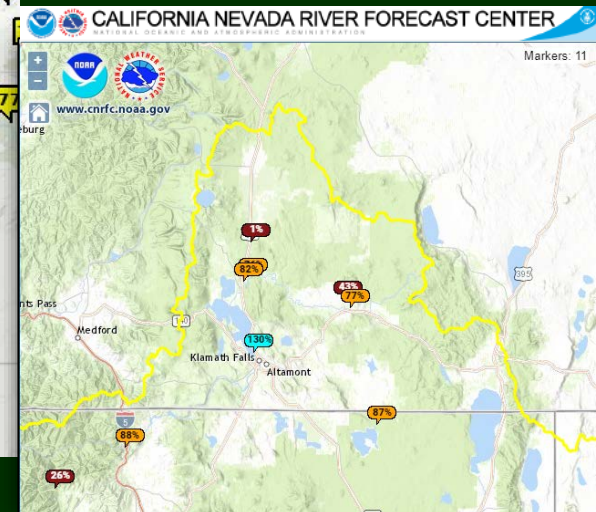
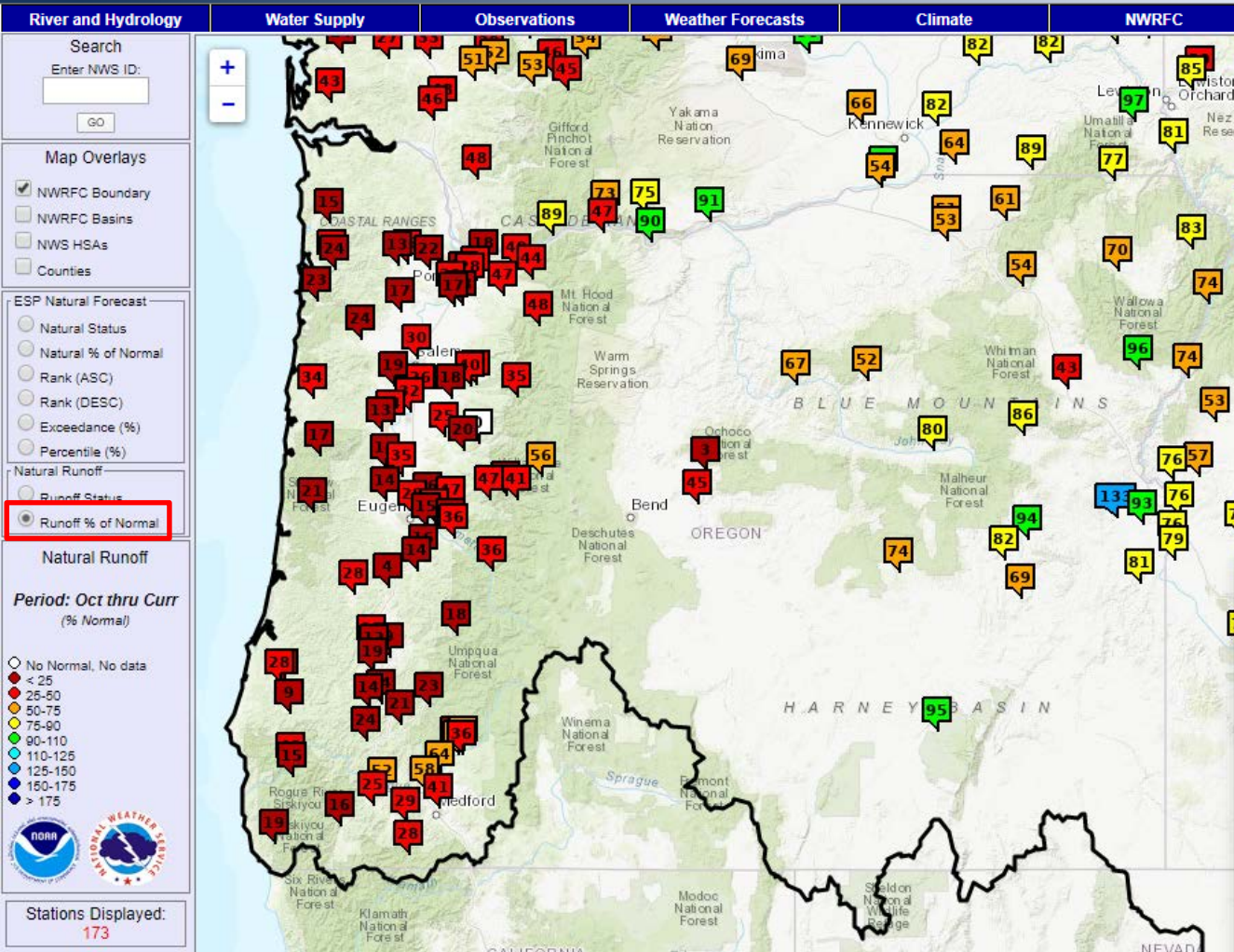




Observed Adjusted WY20 Runoff thus far



Northwest River Forecast Center Observed Water Year Natural Runoff



<https://www.nwrfc.noaa.gov/natural/index.html?version=20181015v2>

<https://www.cnrfc.noaa.gov/ol.php?product=espWS>



Seasonal Water Supply Forecasts



Northwest River Forecast Center ESP Natural Forecast



River and Hydrology	Water Supply	Observations	Weather Forecasts	Climate	NWRFC
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Search
Enter NWS ID:

GO

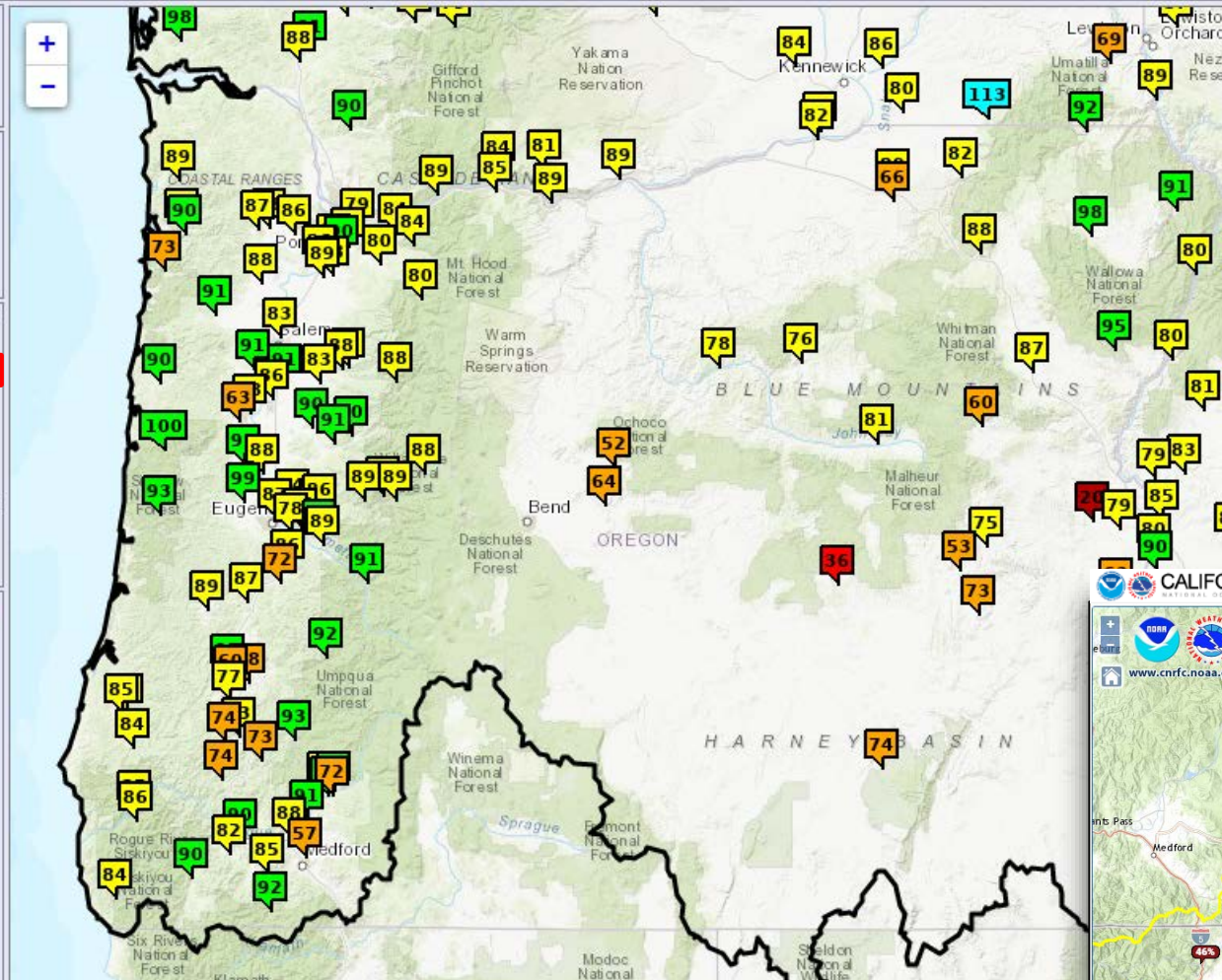
Map Overlays
 NWRFC Boundary
 NWRFC Basins
 NWS HSAs
 Counties

ESP Natural Forecast
 Natural Status
 Natural % of Normal
 Rank (ASC)
 Rank (DESC)
 Exceedance (%)
 Percentile (%)

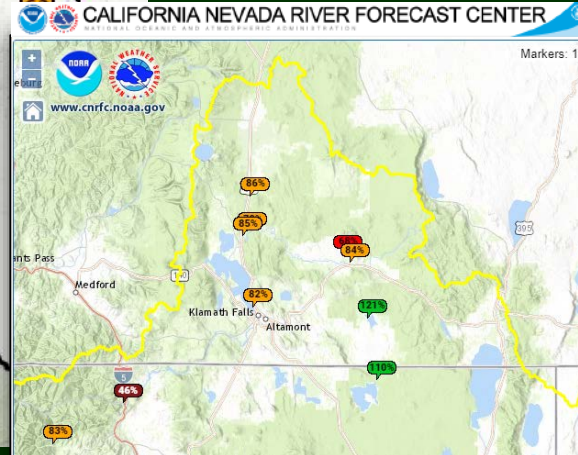
Natural Runoff
 Runoff Status
 Runoff % of Normal

ESP Natural Forecast
Period: APR-SEP
 Forecast (% Normal)

No Normal, No Data
 < 25
 25-50
 50-75
 75-90
 90-110
 110-125
 125-150
 150-175
 > 175



Forecast runoff volume for April – September 2020





Link to Northwest River Forecast Center ESP Natural Forecasts

<https://www.nwrfc.noaa.gov/natural>

Live Water Supply Briefings

First Thursday of each month January through late spring.

2020 Schedule for Live Water Supply Briefings					
Jan	Feb	Mar	Apr	May	June
9	6	5	2	7	TBD
<i>All presentations held at 10:00am PDT/PST, unless noted otherwise</i>					
Click here for Registration Information					

Online schedule: https://www.nwrfc.noaa.gov/water_supply/ws_schd.cgi

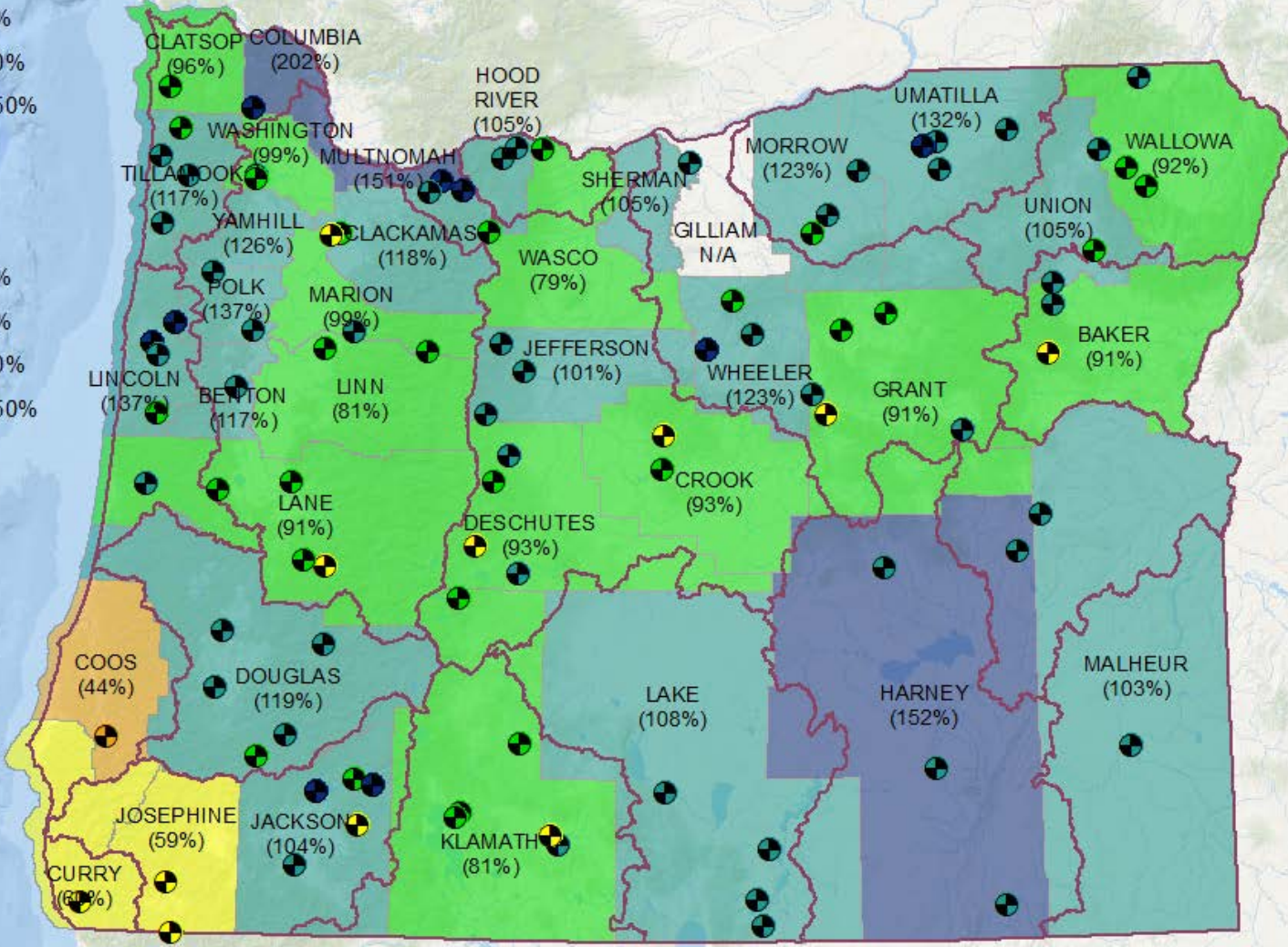
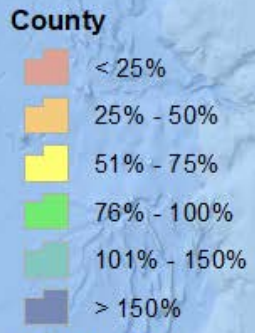
Water Supply Conditions Report

Water Supply Availability Committee



Ken Stahr
Oregon Water Resources
Department
December 12, 2019

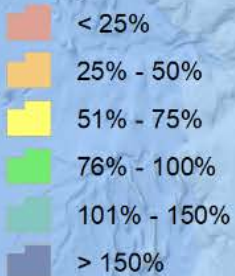
Percent of Average Streamflow October, 2019



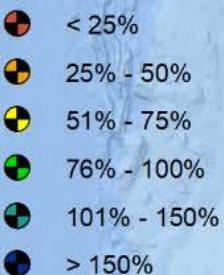
Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.

Percent of Average Streamflow November, 2019

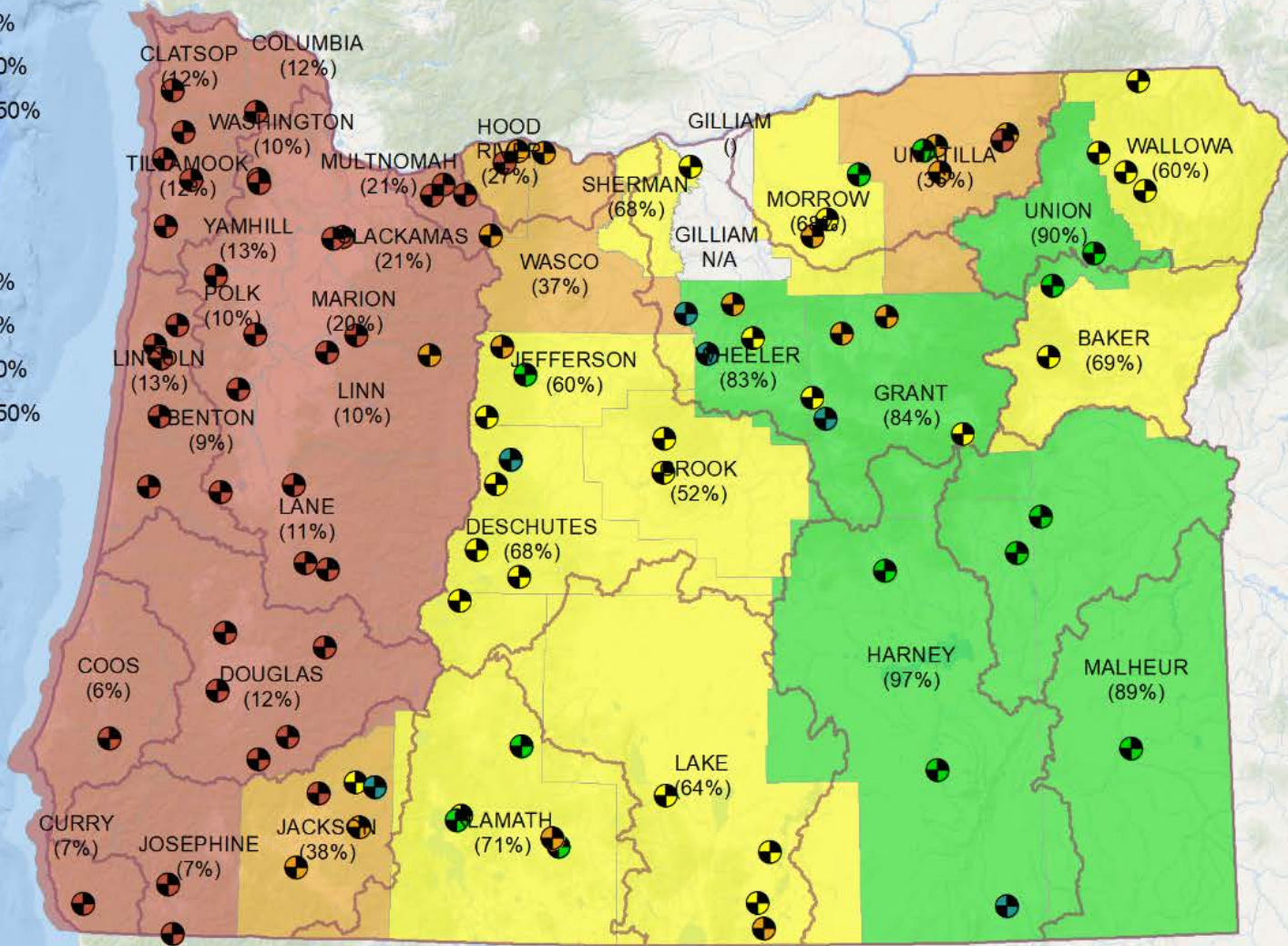
County



Stream gage



WRD Basin

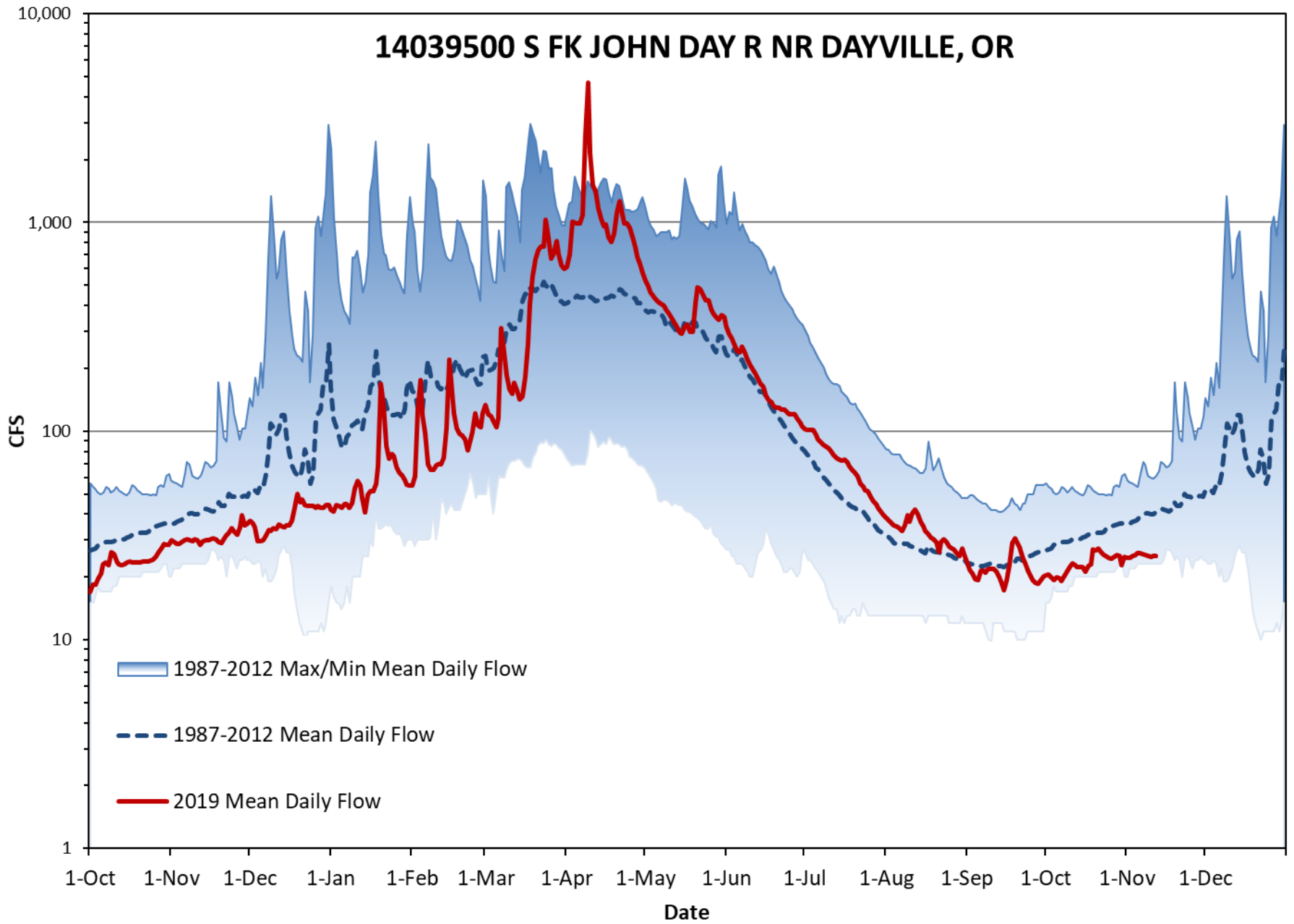


Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.

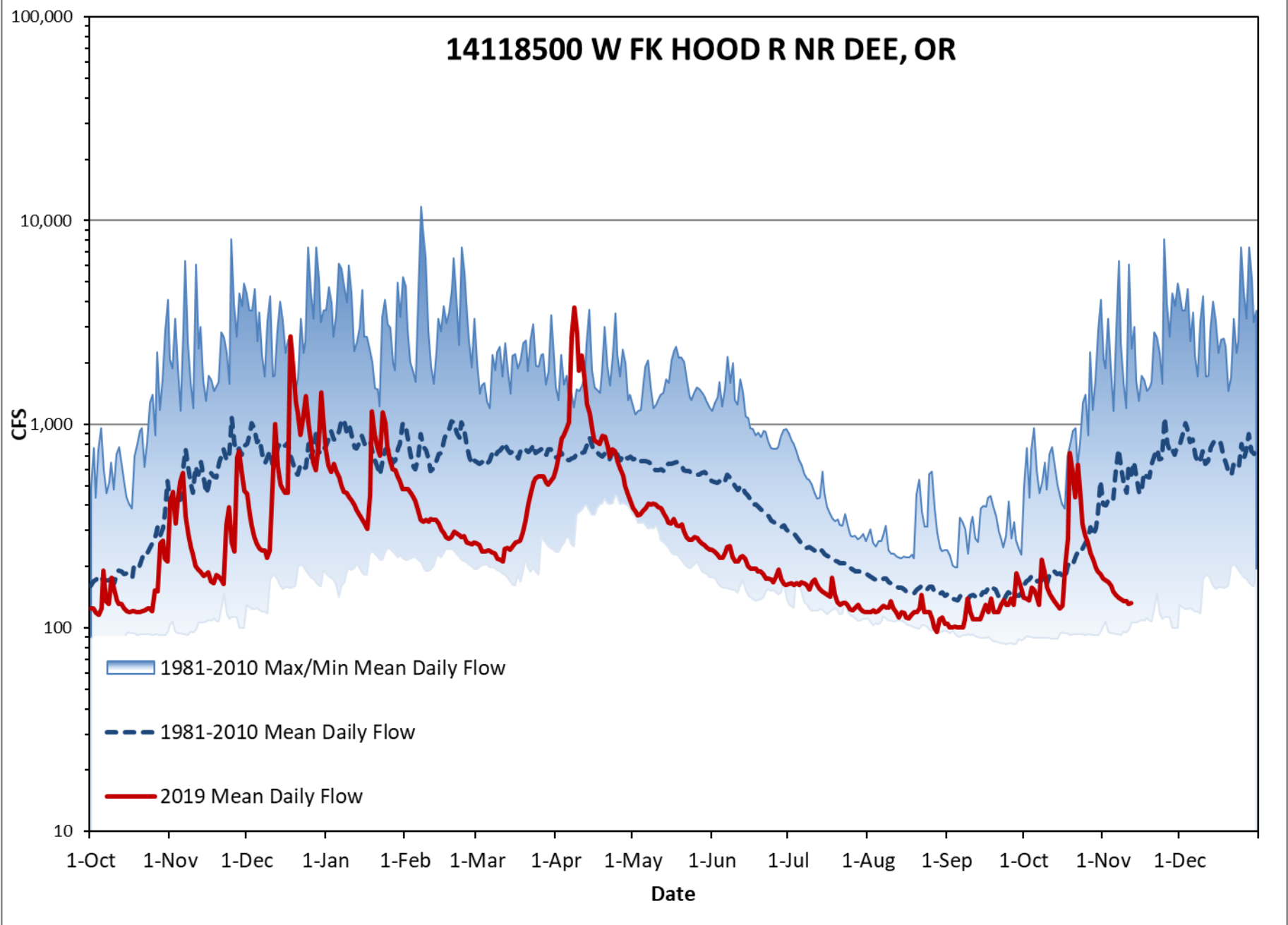


Basin	Water Year % of average through November, 2019	% of average for November	% of average for 12/10/2019	# of data points
West Side	31%	16%	20%	44
East Side	81%	69%	61%	45
State	62%	49%	45%	89

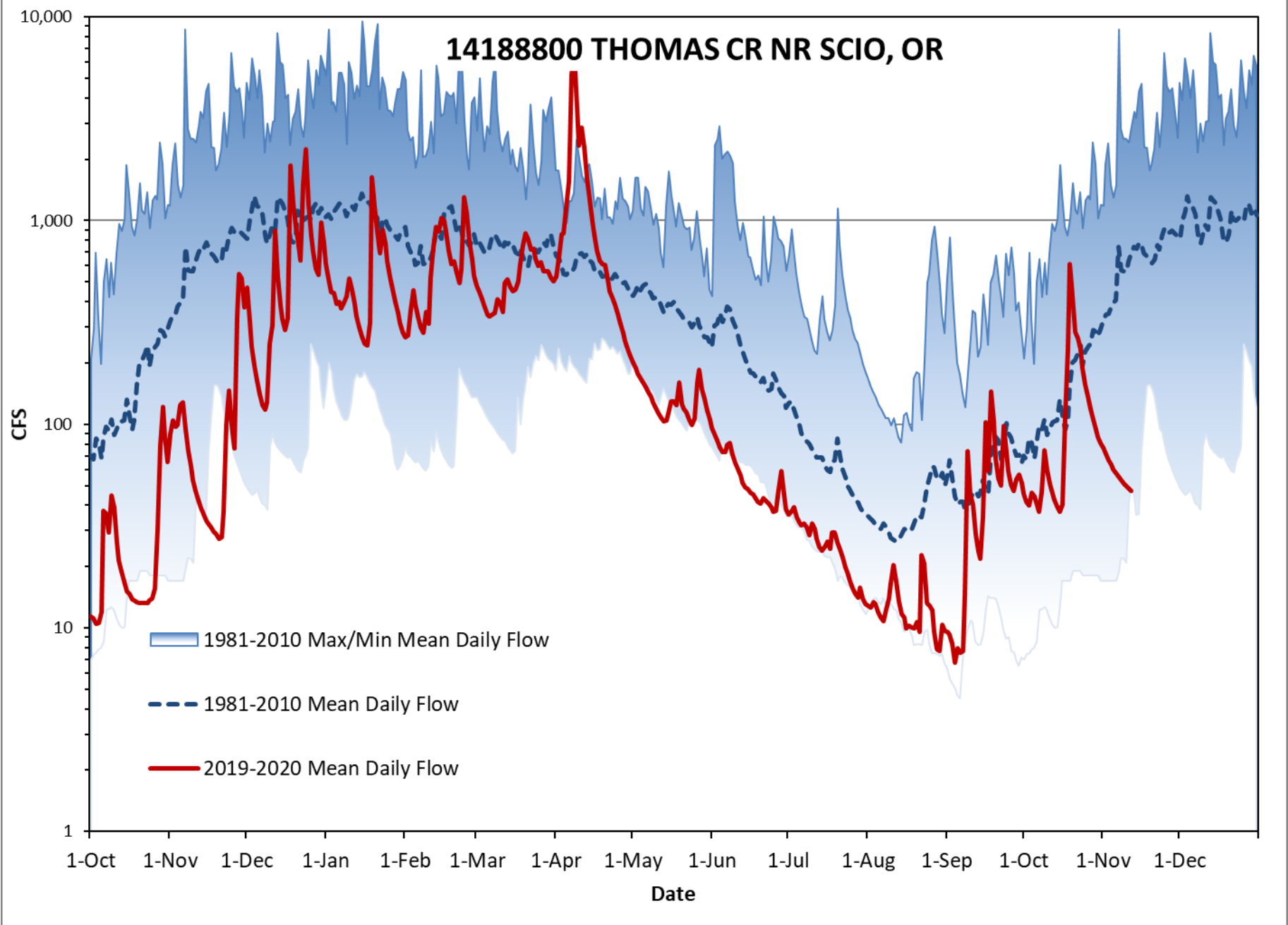
14039500 S FK JOHN DAY R NR DAYVILLE, OR



14118500 W FK HOOD R NR DEE, OR



14188800 THOMAS CR NR SCIO, OR





OREGON



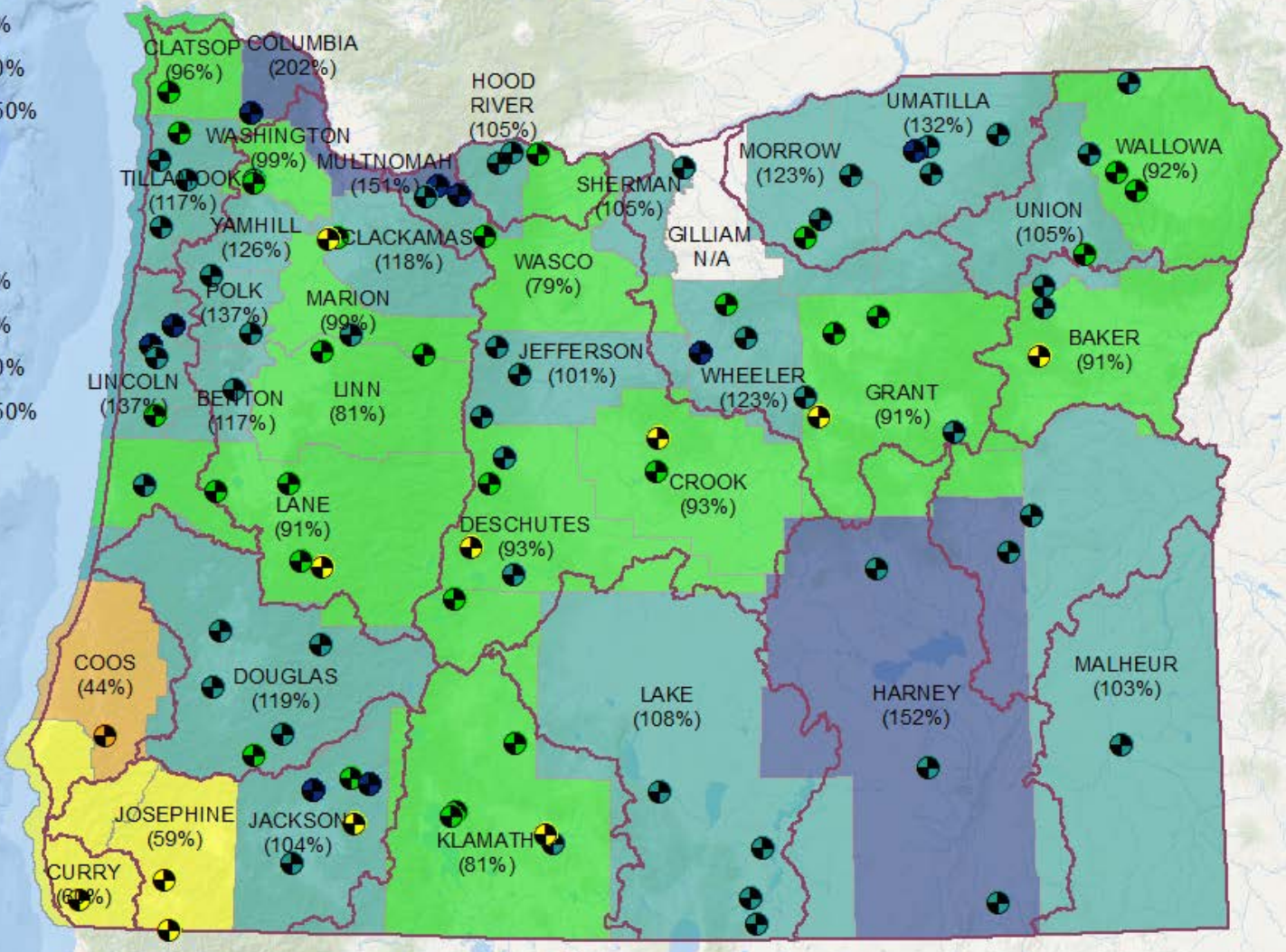
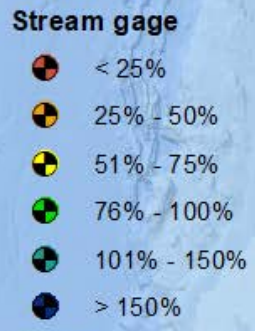
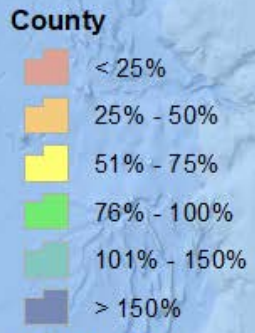
WATER RESOURCES
DEPARTMENT

Thank you

Oregon Water Supply Availability Meeting

December 2019

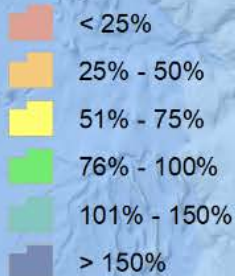
Percent of Average Streamflow October, 2019



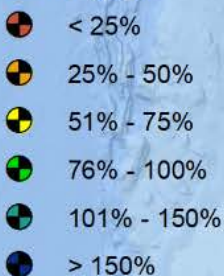
Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.

Percent of Average Streamflow November, 2019

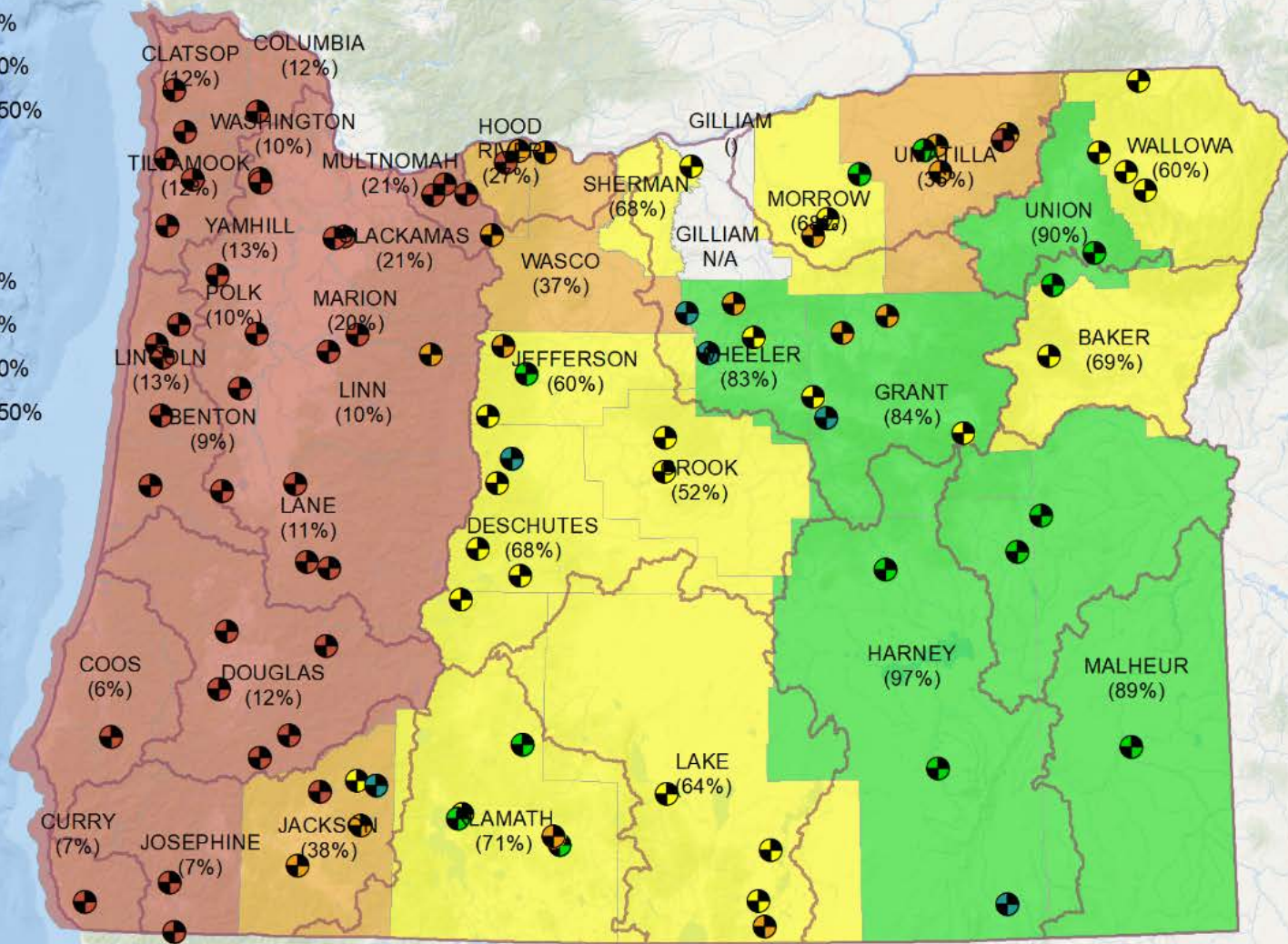
County



Stream gage



WRD Basin

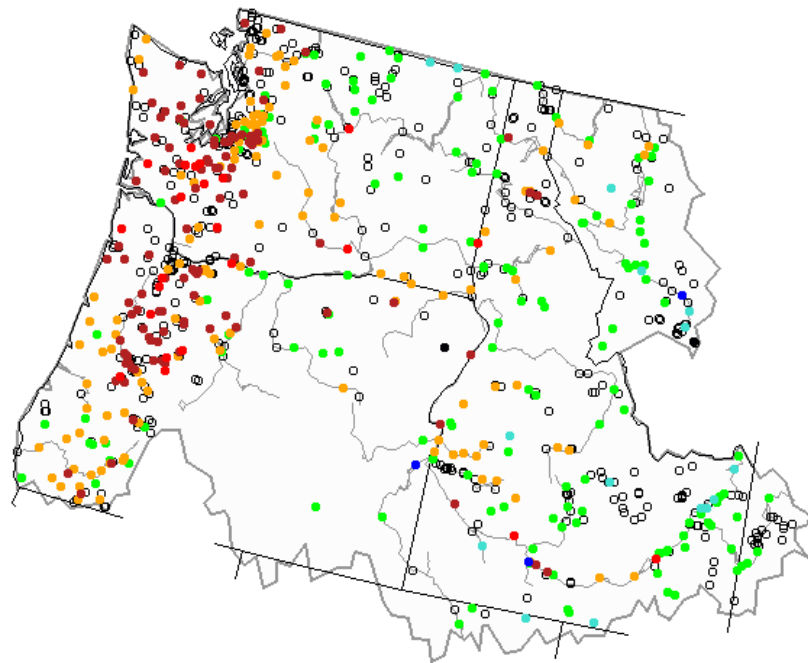


Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.



Basin	Water Year % of average through November, 2019	% of average for November	% of average for 12/10/2019	# of data points
West Side	31%	16%	20%	44
East Side	81%	69%	61%	45
State	62%	49%	45%	89

Hednesday, December 11, 2019 09:30ET



Map of Current 7-day average streamflow (left) compared to historical streamflow for the day of the year (Pacific Northwest)

and

28-day average (below).



Search USGS streamgage

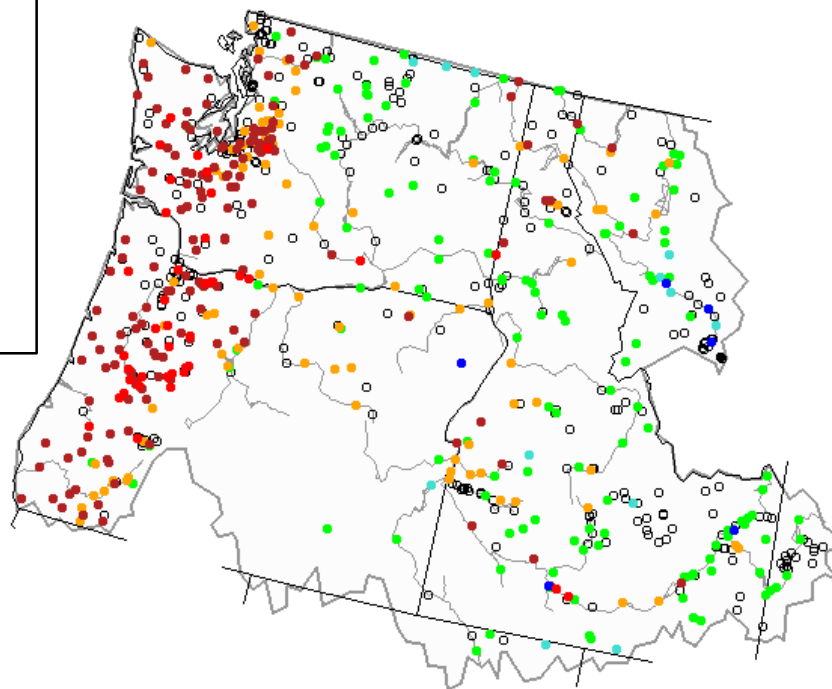
Choose a data retrieval option and select a location on the map

Single station Peak flow

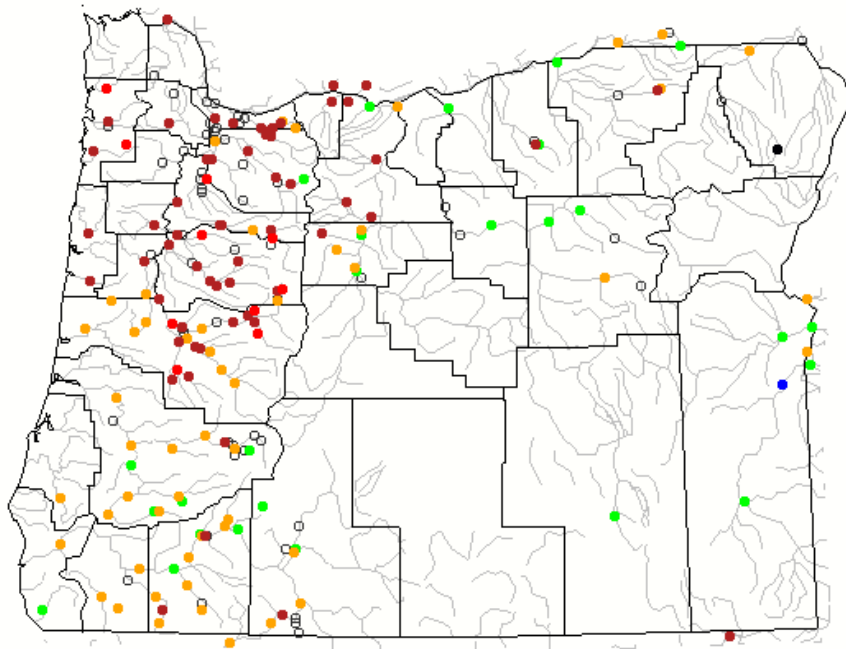
Explanation - Percentile classes

Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

Tuesday, December 10, 2019



Tuesday, December 10, 2019



Map of daily streamflow compared to historical streamflow for the day of the year (Oregon)



Search USGS streamgage

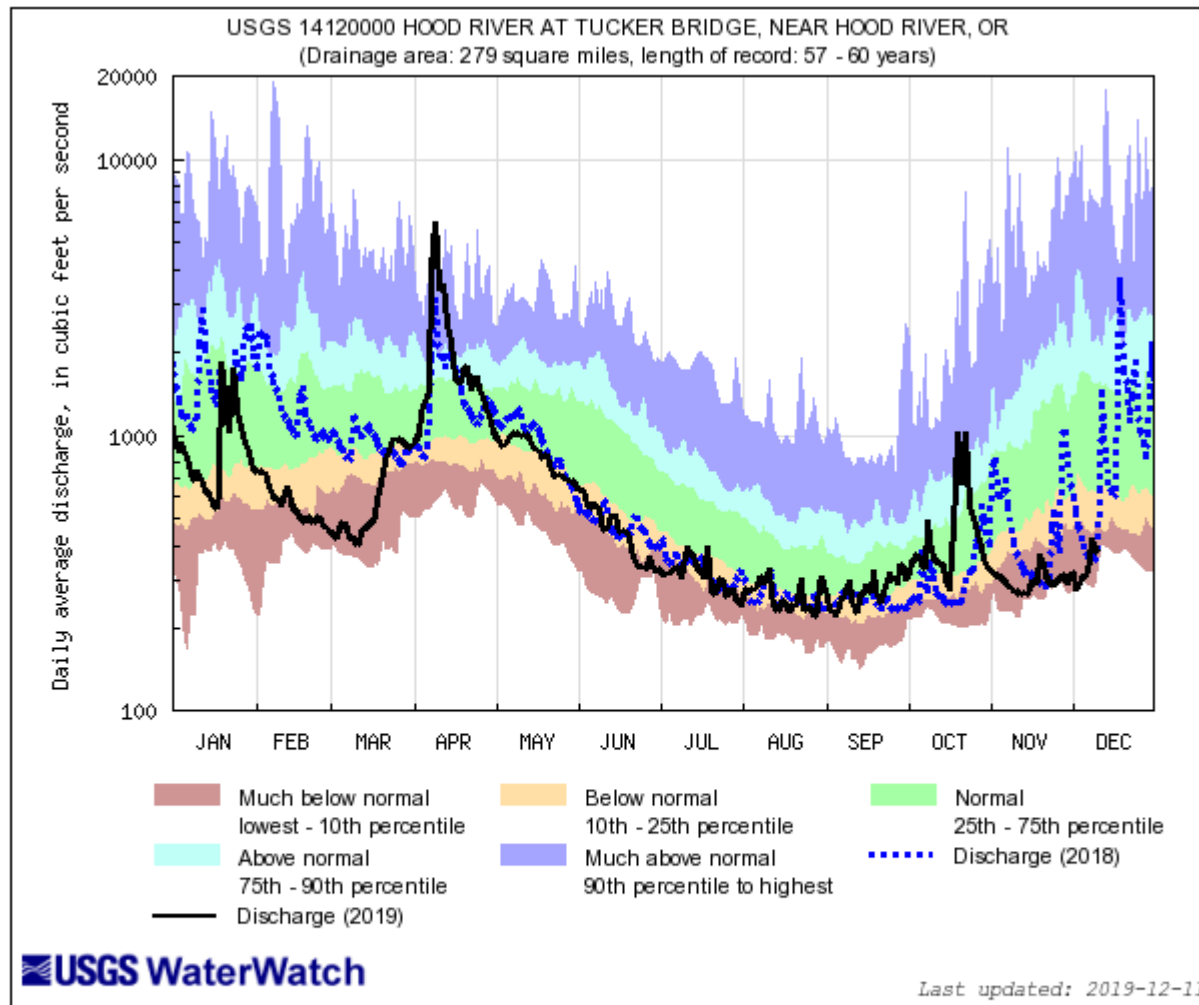
Choose a data retrieval option and select a location on the map

- List of all stations Single station Nearest stations Peak flow

Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

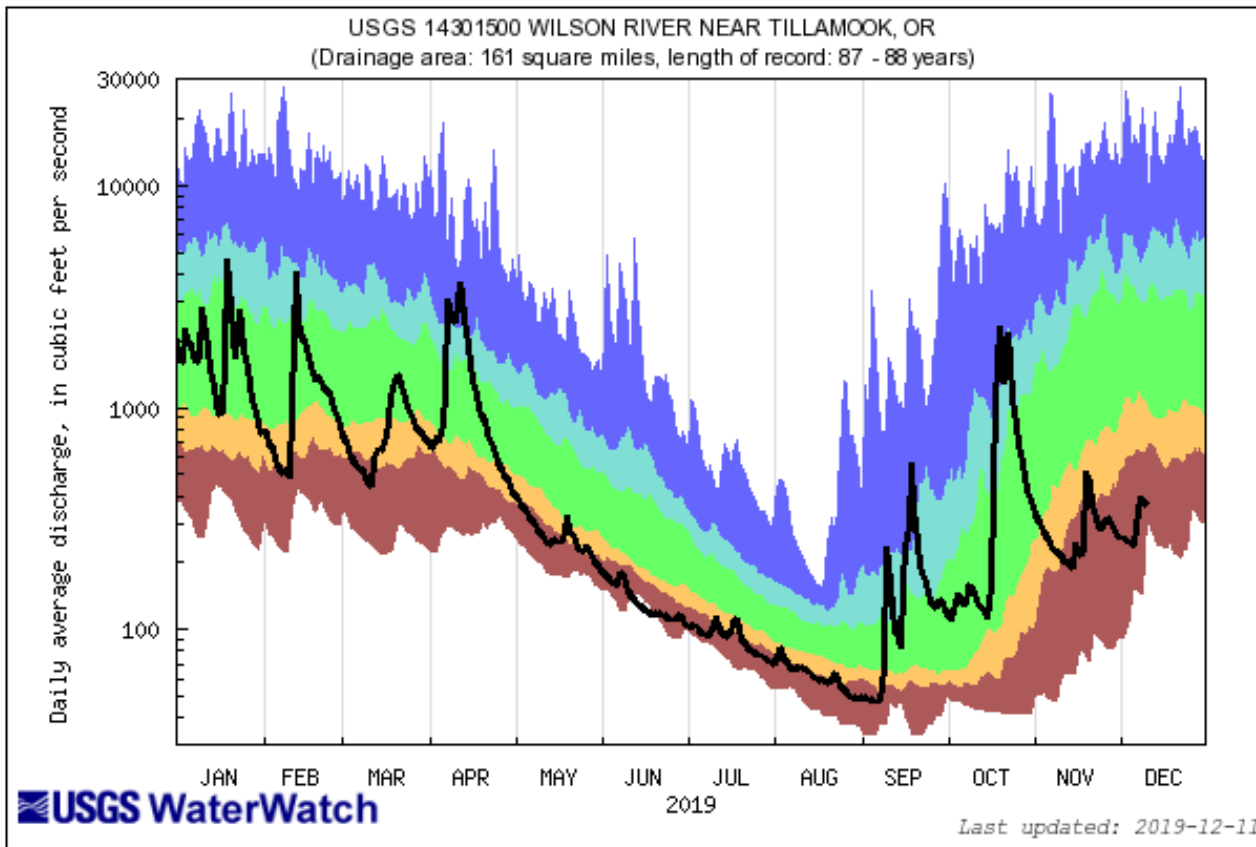


14120000 Hood R at Tucker Bridge

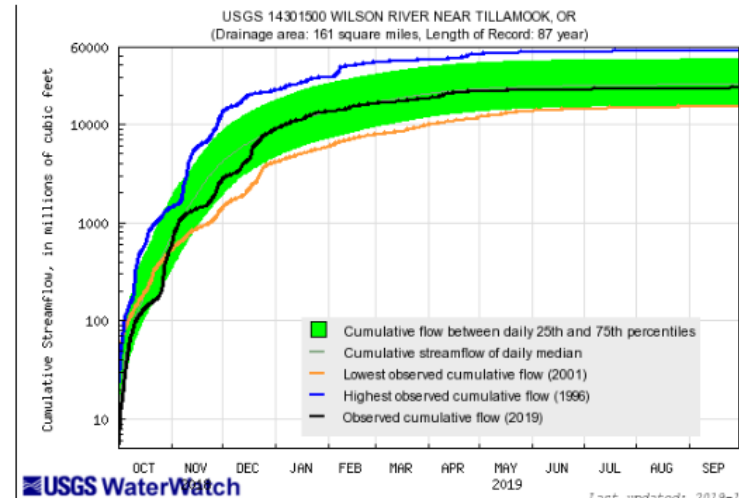


Explanation - Percentile classes					
lowest-10th percentile	10-24	25-75	76-90	90th percentile -highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	

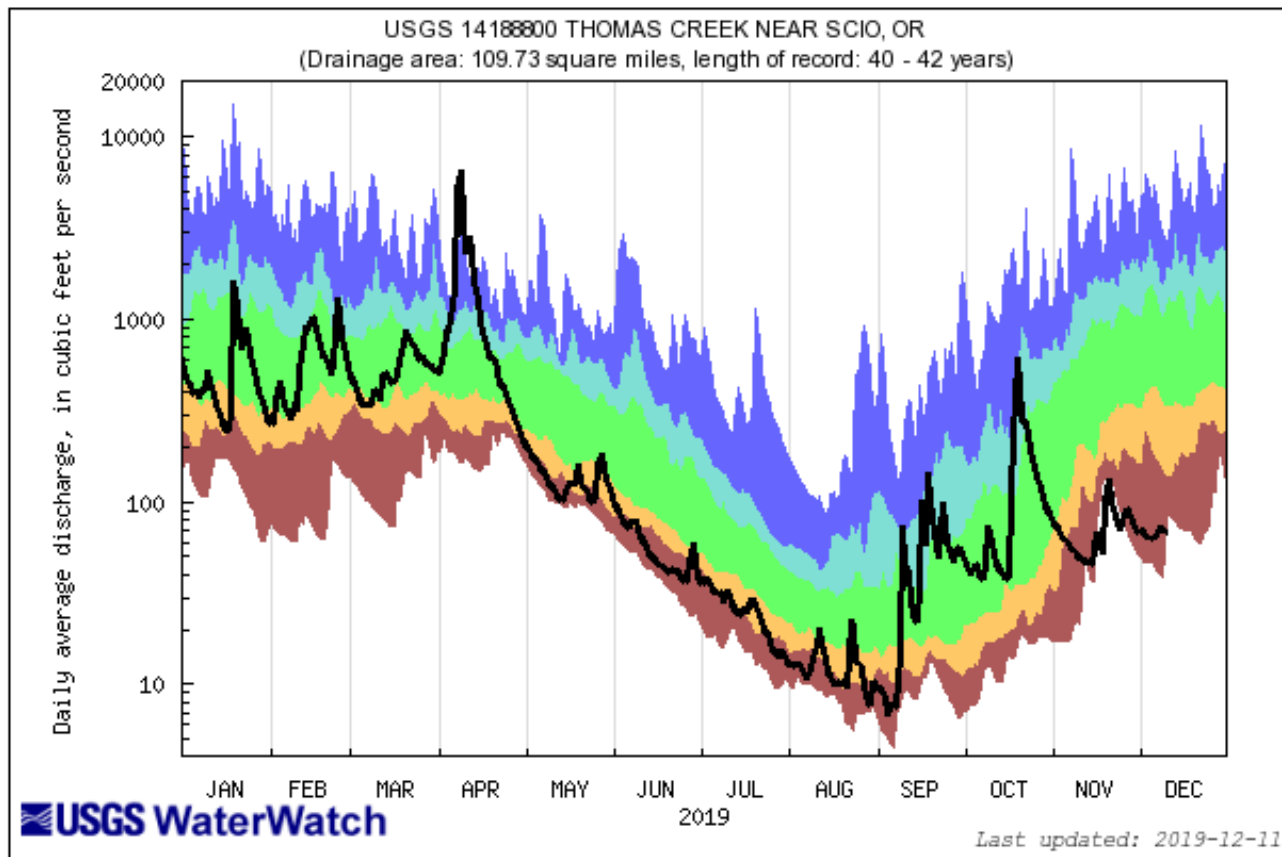
14301500 Wilson River nr Tillamook



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

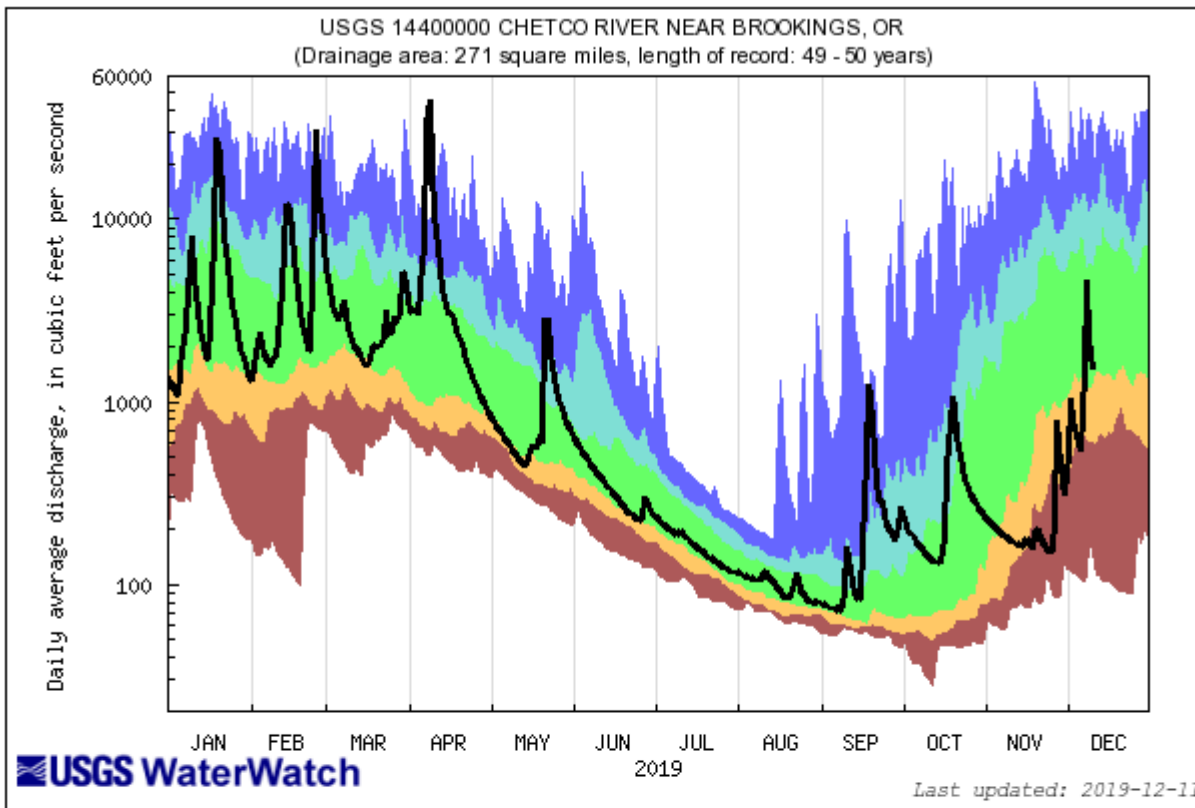


14188800 Thomas Cr near Scio, OR

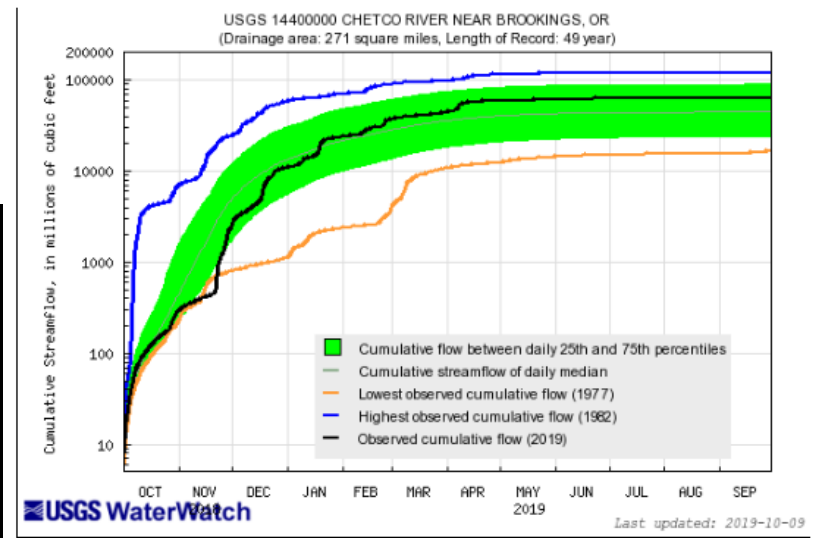


Explanation - Percentile classes					
lowest-10th percentile	10-24	25-75	76-90	90th percentile-highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	

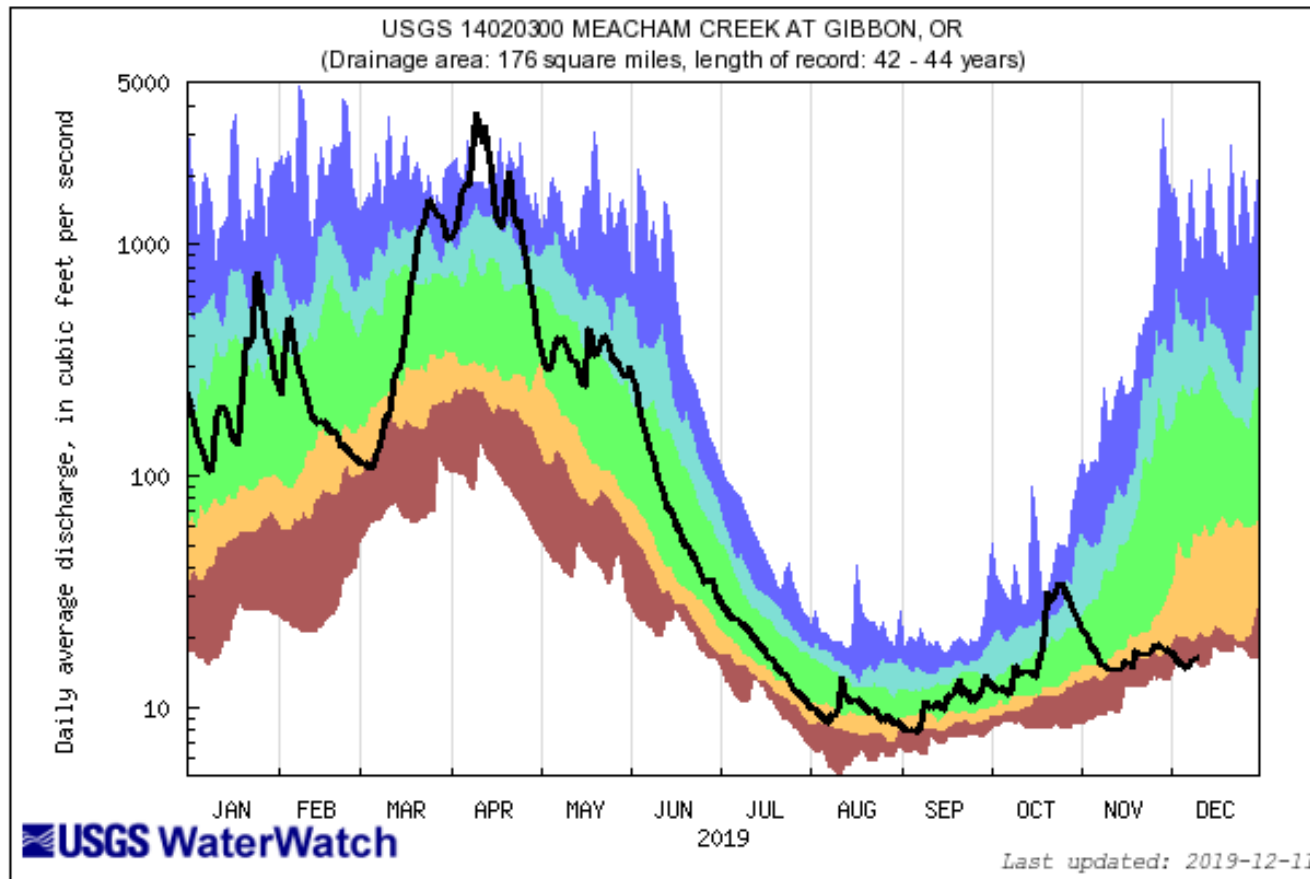
14400000 Chetco River nr Brookings



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

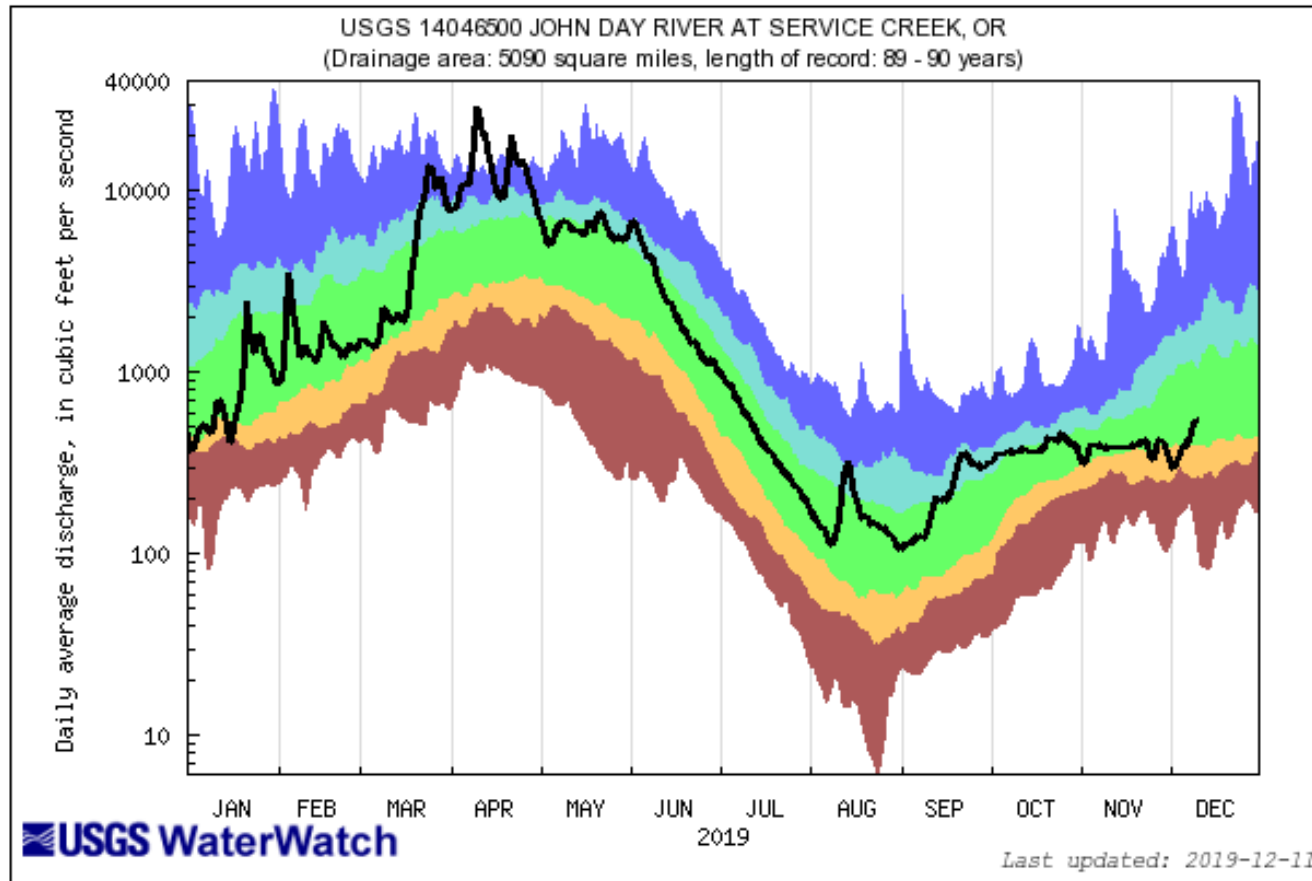








14020300 Meacham Cr at Gibbon, OR



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

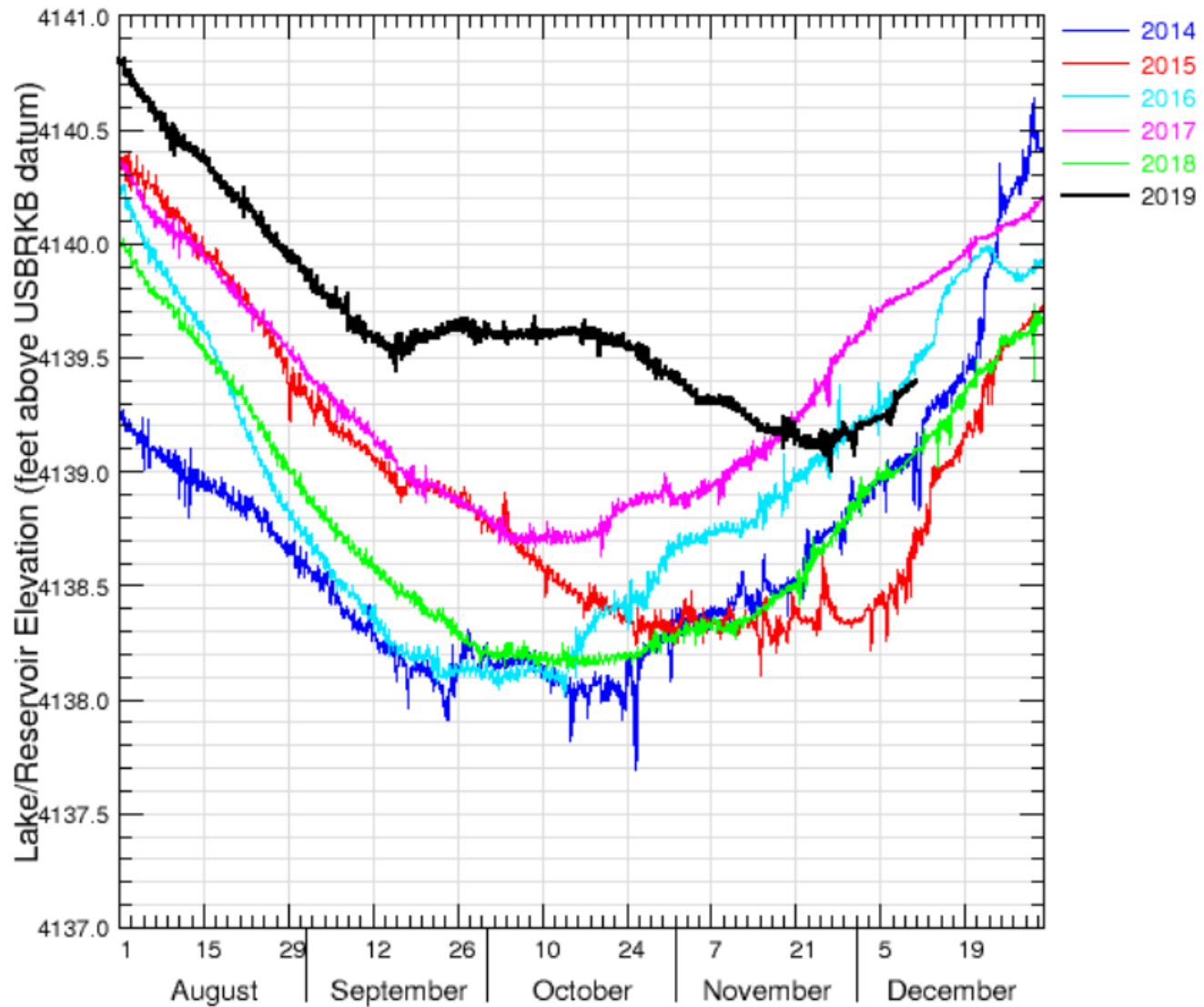
14046500 John Day R at Service Cr, OR



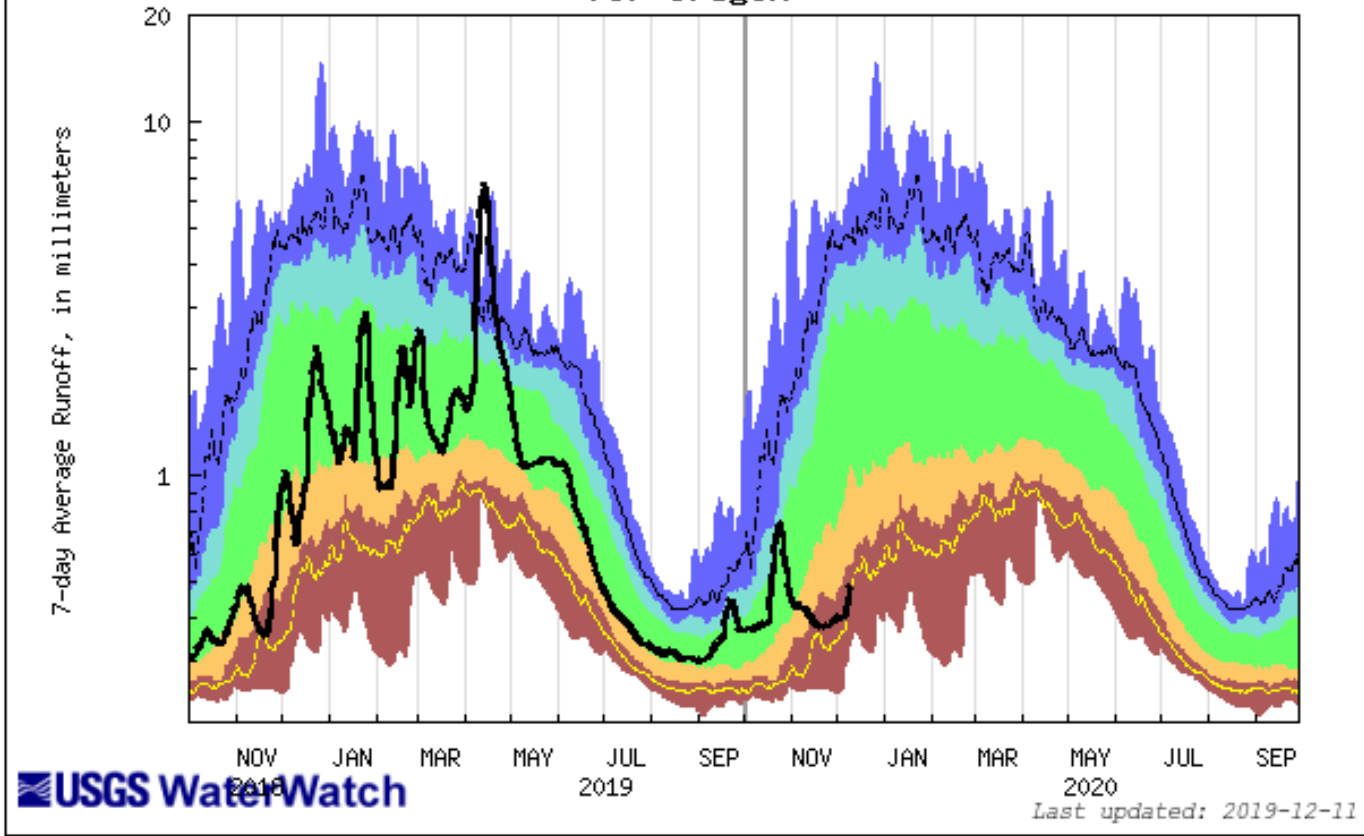
Explanation - Percentile classes					
					
lowest-10th percentile	10-24	25-75	76-90	90th percentile-highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	

Upper Klamath Lake nr Klamath Falls, OR [weighted/mean] (11507001)

Data from U.S. Geological Survey



Duration hydrograph of 7-day average runoff for Oregon



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