

Oregon Water Supply Availability Committee
March 10, 2020



Hungry Flat Snow Course
February 28, 2020
Elev = 4,400'

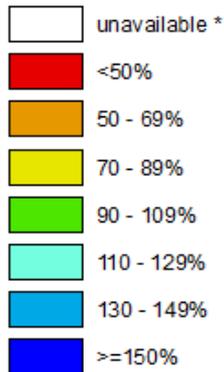
H. Scott Oviatt
USDA – Natural Resources Conservation Service
scott.oviat@usda.gov
503-414-3271

Statewide SNOTEL Snowpack was 95% of normal

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

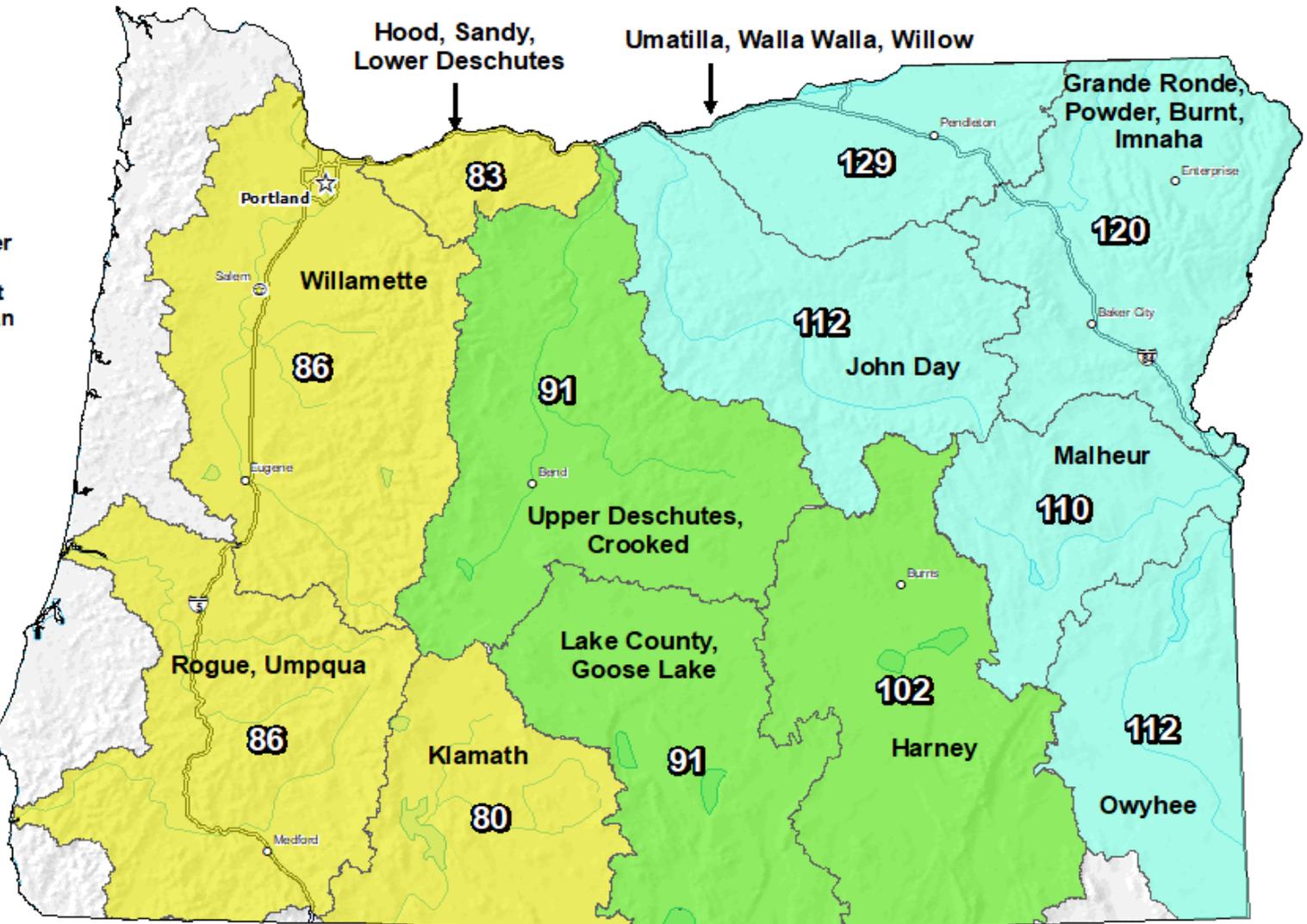
Feb 13, 2020

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

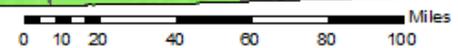


* Data unavailable at time of posting or measurement is not representative at this time of year

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).



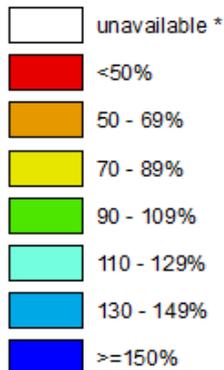
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Statewide SNOTEL Snowpack is 86% of normal

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

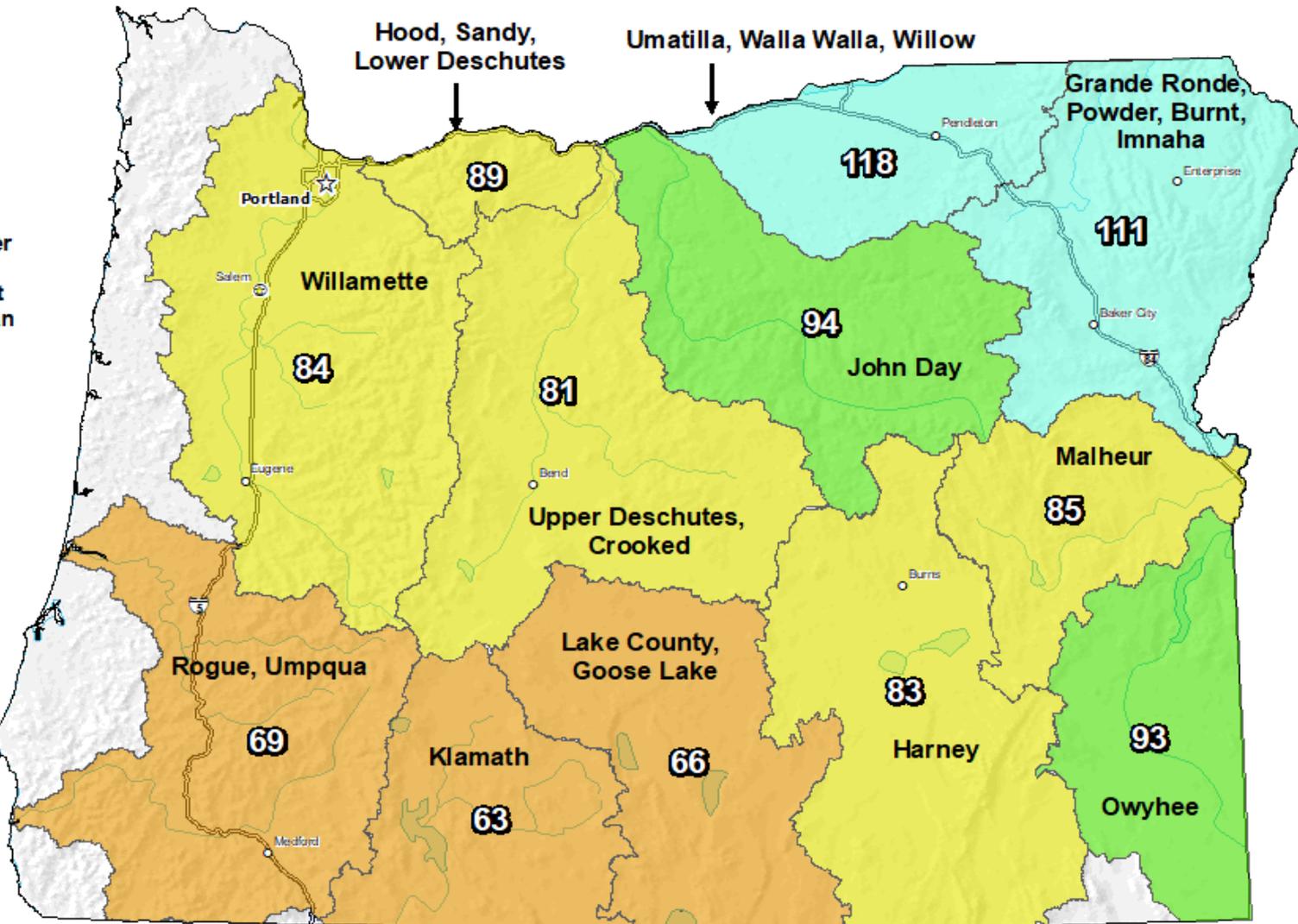
Mar 10, 2020

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

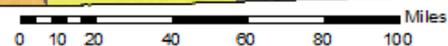


* Data unavailable at time of posting or measurement is not representative at this time of year

Provisional Data
Subject to Revision

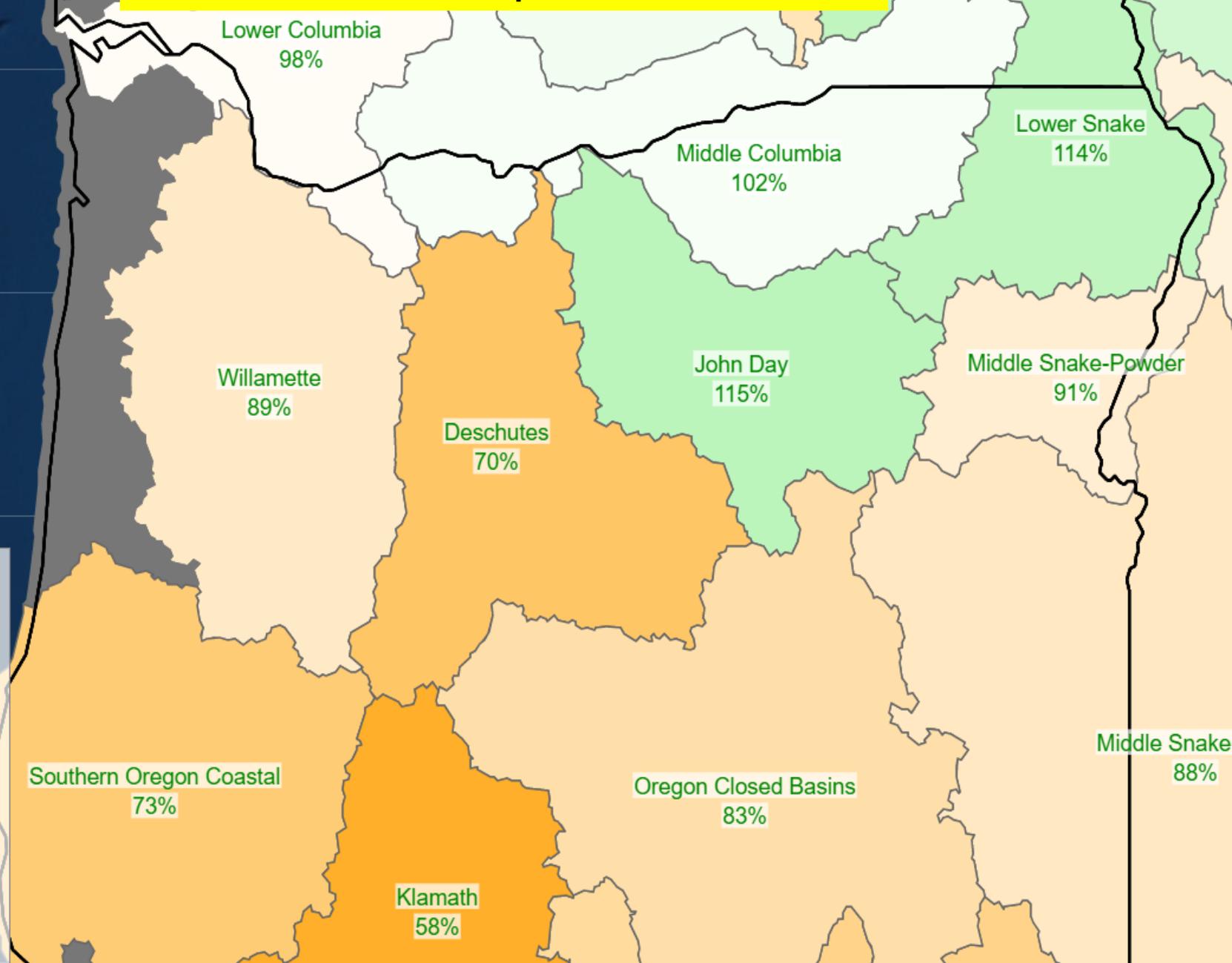


The snow water equivalent percent of normal represents the current snow water equivalent found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).



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

Statewide SNOTEL Snowpack is 86% of normal



Snow Water Equivalent
Percent NRCs 1981-2010
Median
March 9, 2020, end of day

- ≥ 200%
- 175%
- 150%
- 125%
- 100%
- 75%
- 50%
- 25%
- ≤ 0%

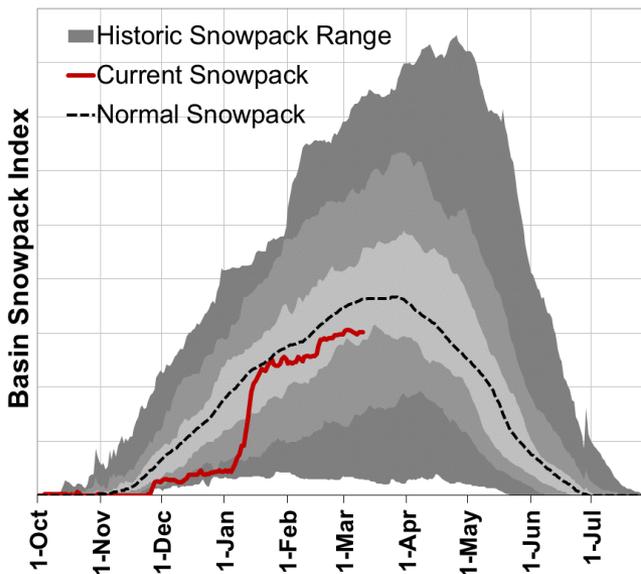
No basin value

Watershed Boundaries
— Basin (6-Digit HUC)
Basins with fewer than 3 sites with value and normal excluded

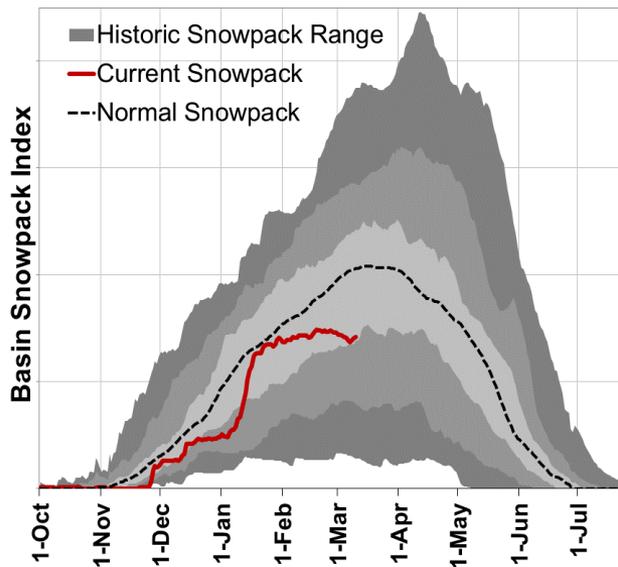
50 km
30 mi

March 10, 2020

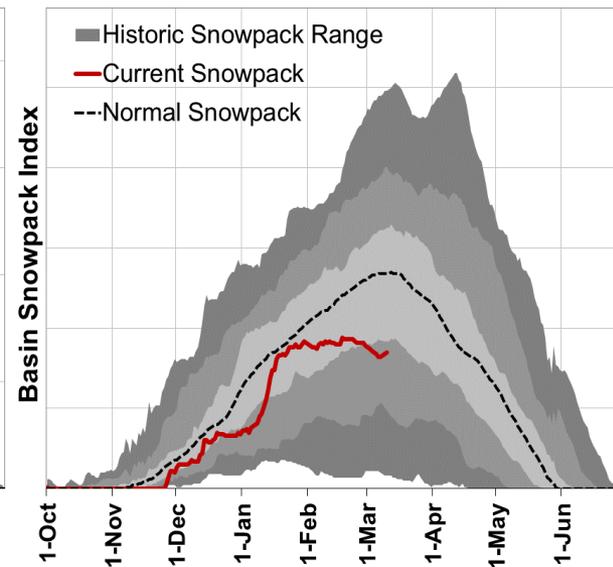
Willamette



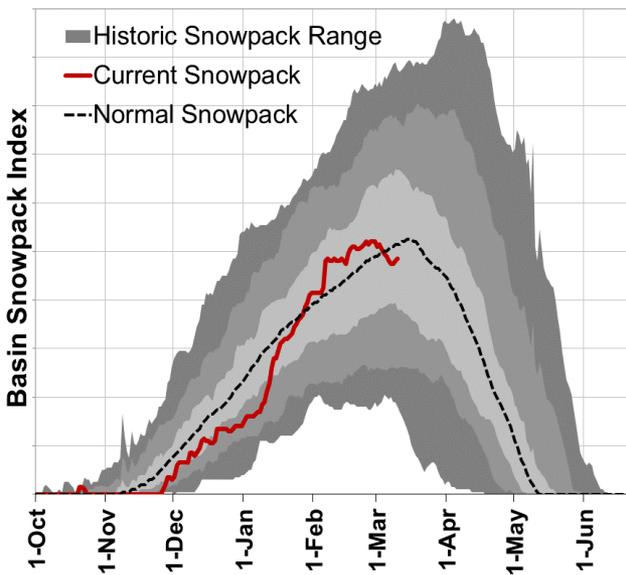
Rogue/Umpqua



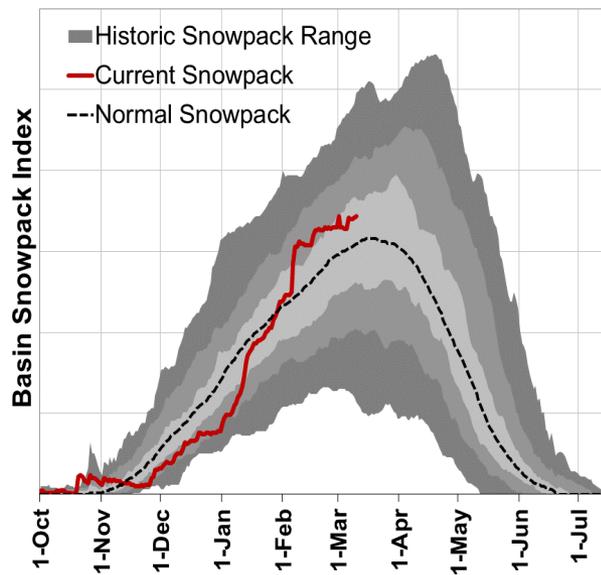
Klamath



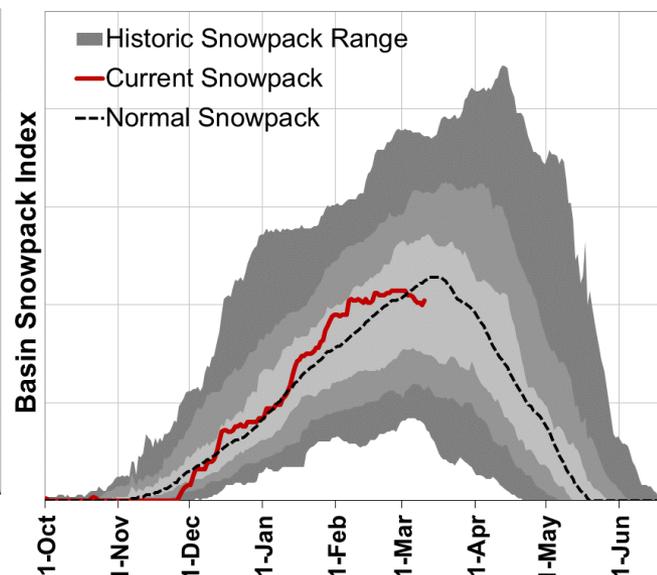
John Day



Grande Ronde/Powder/Burnt



Owyhee/Malheur

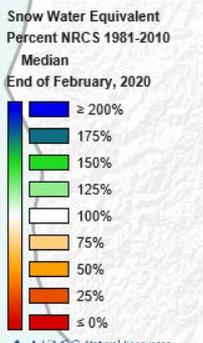


February 2020 SNOTEL SWE - % of normal

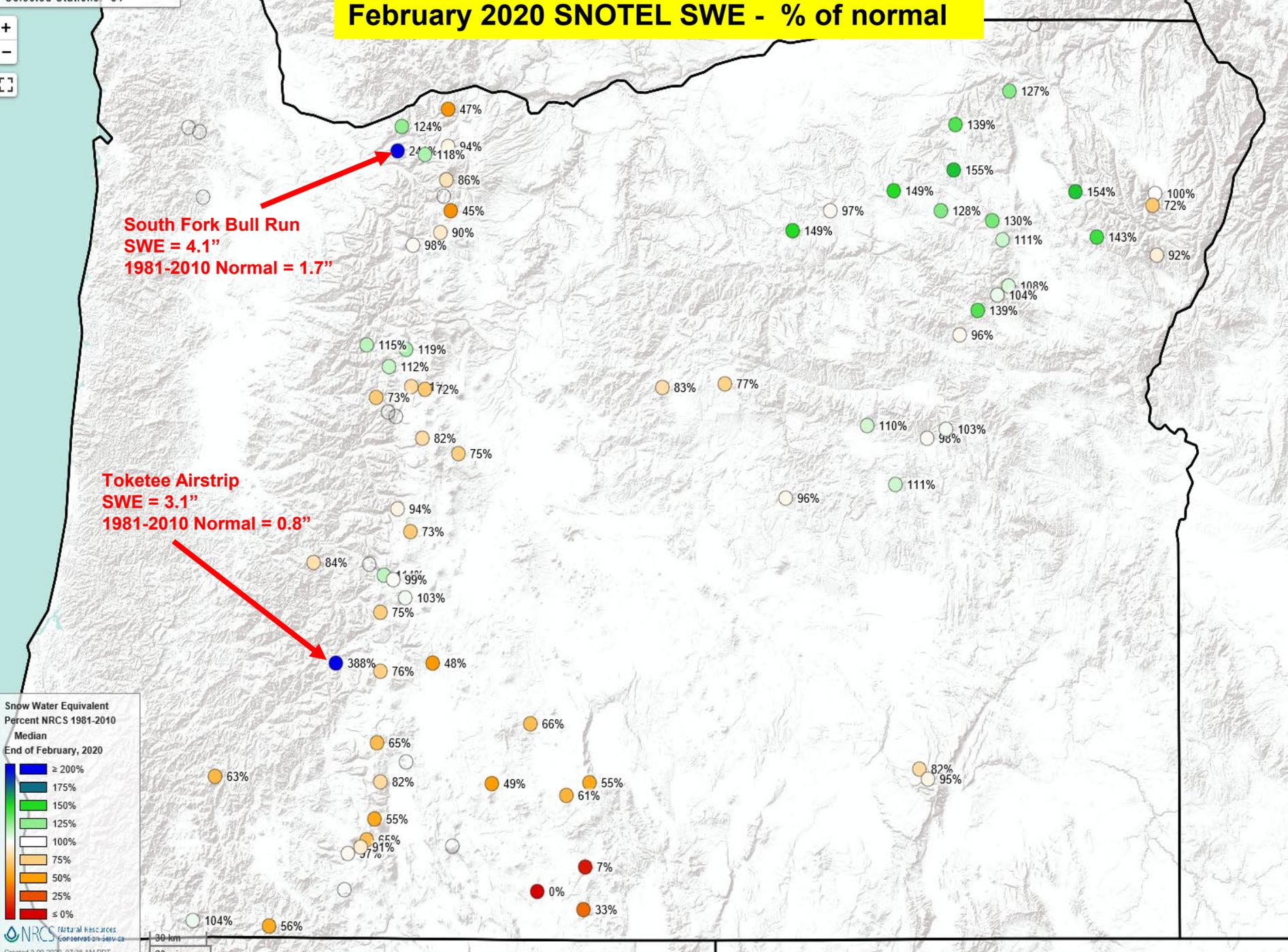


South Fork Bull Run
SWE = 4.1"
1981-2010 Normal = 1.7"

Toketee Airstrip
SWE = 3.1"
1981-2010 Normal = 0.8"



30 km
20 mi

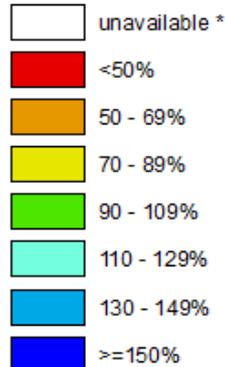


Statewide SNOTEL Precipitation was 84% of normal

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

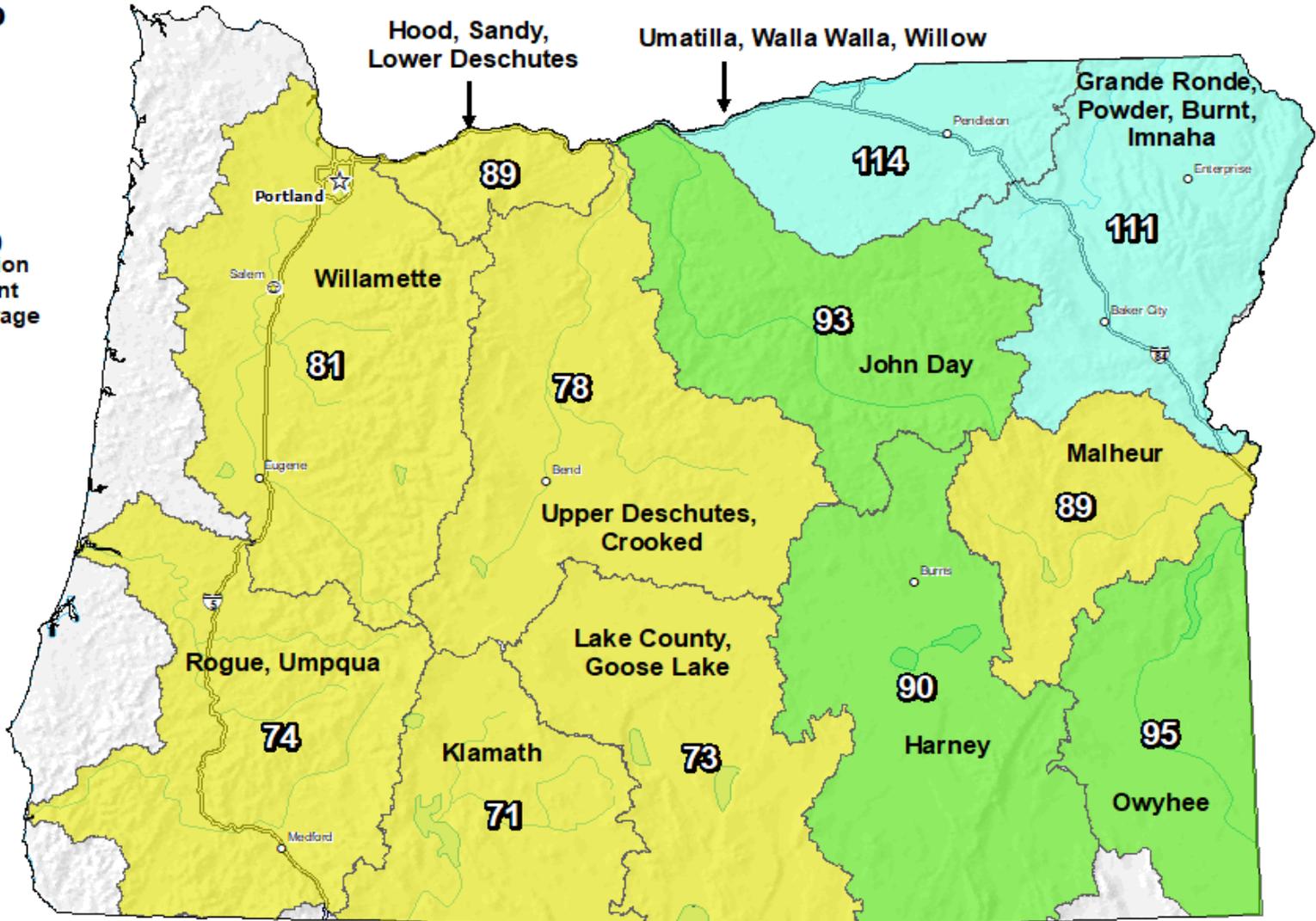
Feb 13, 2020

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

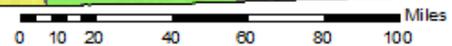


* Data unavailable at time
of posting or measurement
is not representative at this
time of year

*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).



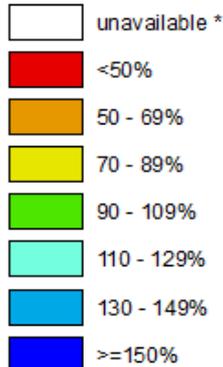
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
<http://www.wcc.nrcs.usda.gov>

Statewide SNOTEL Precipitation is 79% of normal

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

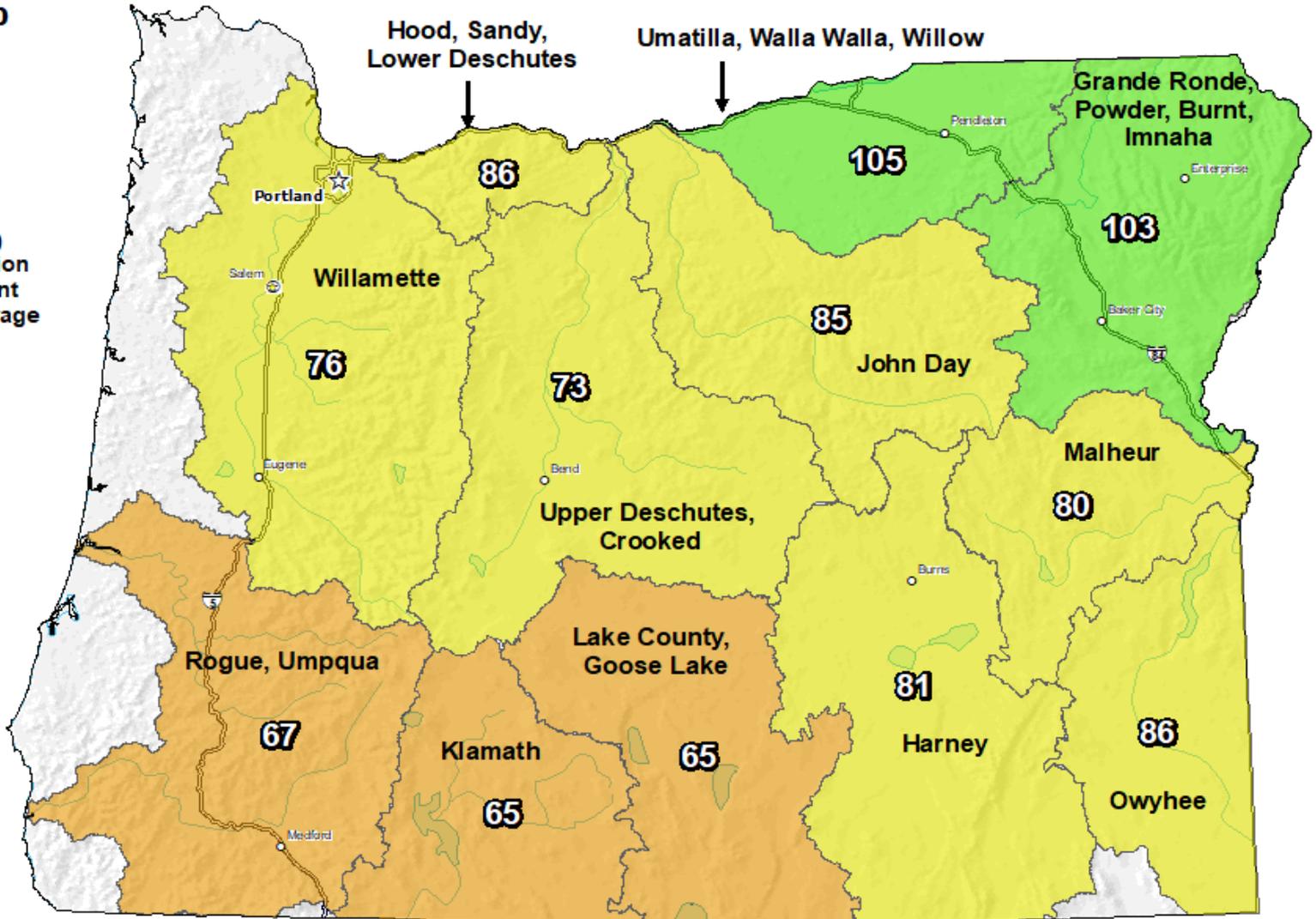
Mar 10, 2020

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

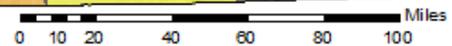


* Data unavailable at time
of posting or measurement
is not representative at this
time of year

*Provisional Data
Subject to Revision*

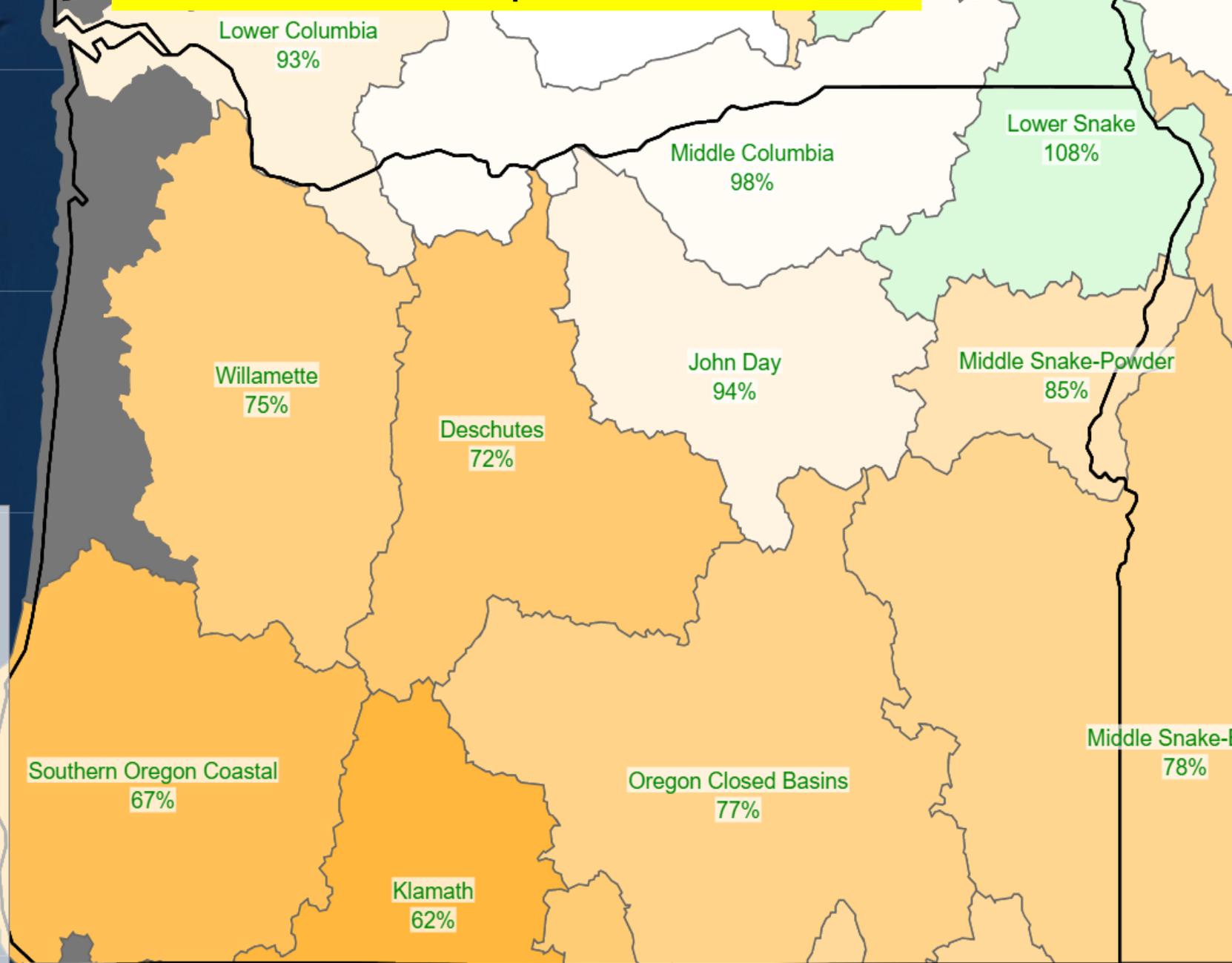


The water year to date precipitation percent of normal represents the accumulated precipitation found at selected SNOTEL sites in or near the basin compared to the average value for those sites on this day. Data based on the first reading of the day (typically 00:00).



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

Statewide SNOTEL Precipitation is 79% of normal



Water Year to Date
Precipitation
Percent NRCS 1981-2010
Average
October 1, 2019 through
March 9, 2020

- ≥ 200%
- 175%
- 150%
- 125%
- 100%
- 75%
- 50%
- 25%
- ≤ 0%
- No basin value

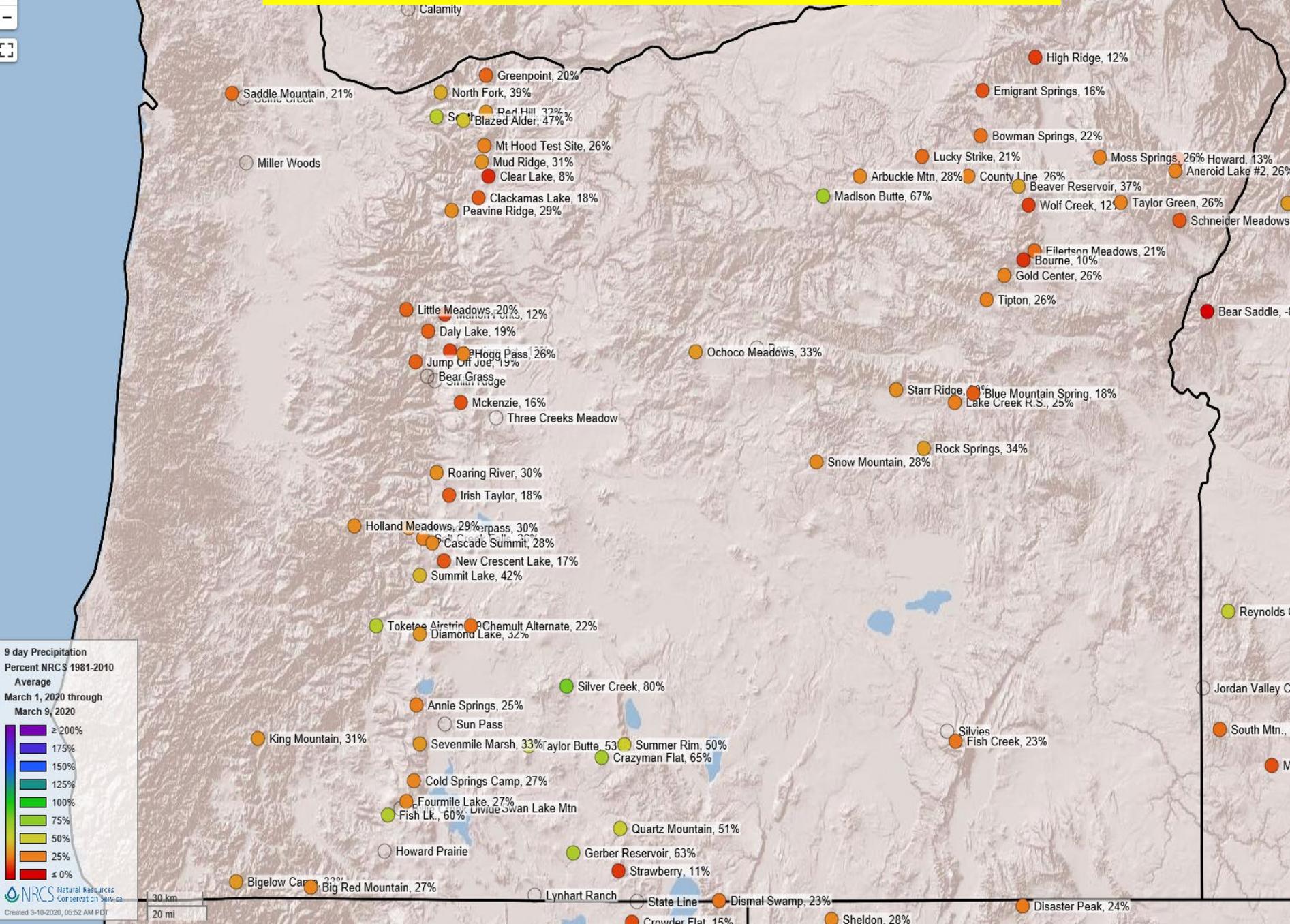
Watershed Boundaries
— Basin (6-Digit HUC)
Basins with fewer than 3 sites with
value and normal excluded

Natural Resources
Conservation Service

50 km
30 mi

Created 3-10-2020, 05:50 AM PDT

March 1-9, 2020 SNOTEL Precipitation - % of Average



9 day Precipitation
Percent NRCS 1981-2010
Average
March 1, 2020 through
March 9, 2020

- ≥ 200%
- 175%
- 150%
- 125%
- 100%
- 75%
- 50%
- 25%
- ≤ 0%

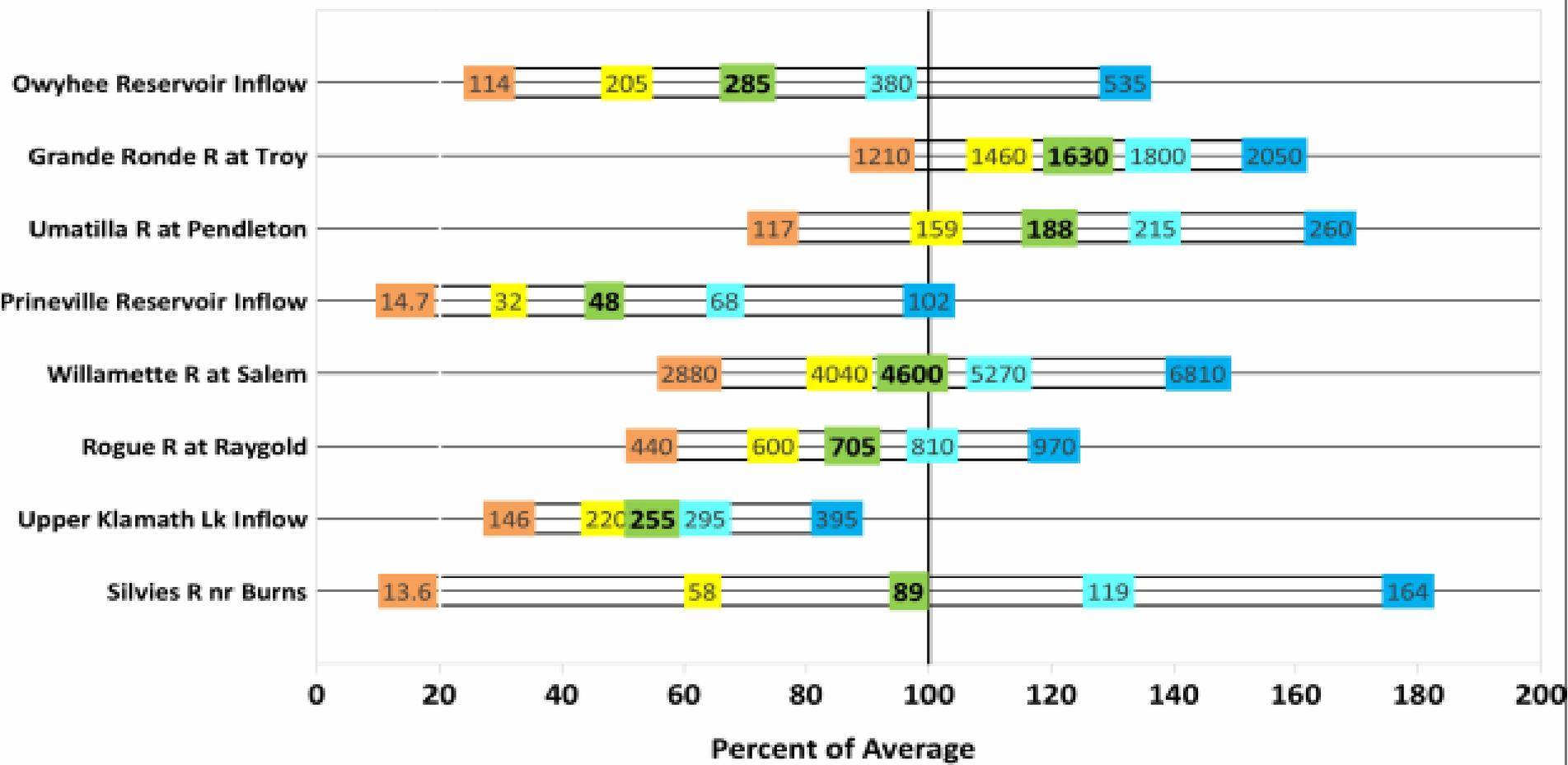
NRCS Natural Resources Conservation Service
Created 3-10-2020, 05:52 AM PDT

30 km
20 mi

March 1, 2020

Summary of Streamflow Forecasts across Oregon

April through September Forecast Volumes at a Selection of Streamflow Points
(Volumes listed in KAF)



Legend: ←-----Drier-----Future Conditions-----Wetter-----→

 90% Exceedance Forecast (KAF) There is a 90% chance that flows will exceed this volume.	 70% Exceedance Forecast (KAF) There is a 70% chance that flows will exceed this volume.	 50% Exceedance Forecast (KAF) There is a 50% chance that flows will exceed this volume.	 30% Exceedance Forecast (KAF) There is a 30% chance that flows will exceed this volume.	 10% Exceedance Forecast (KAF) There is a 10% chance that flows will exceed this volume.
--	---	---	---	---



Oregon Water Supply Availability Committee
March 10, 2020

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity, in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident. 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.

Hungry Flat Snow Course
February 28, 2020
Elev = 4,400'

H. Scott Oviatt
USDA – Natural Resources Conservation Service
scott.oviatt@usda.gov
503-414-3271



March 10, 2020

NWS Update

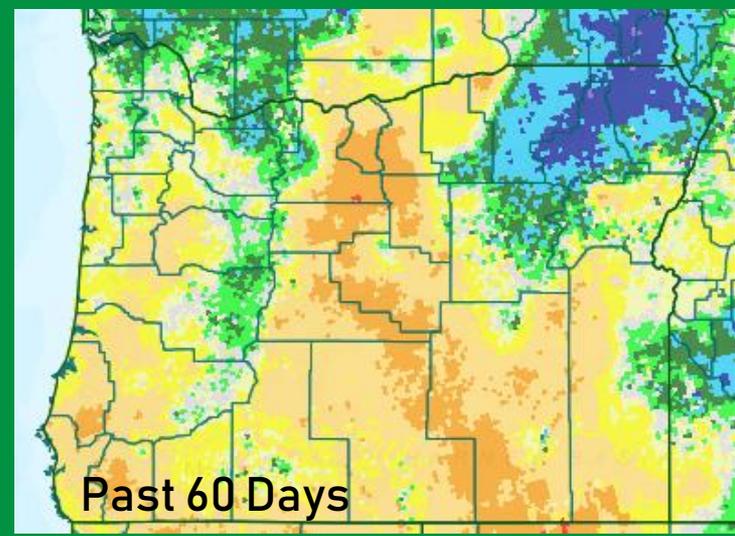
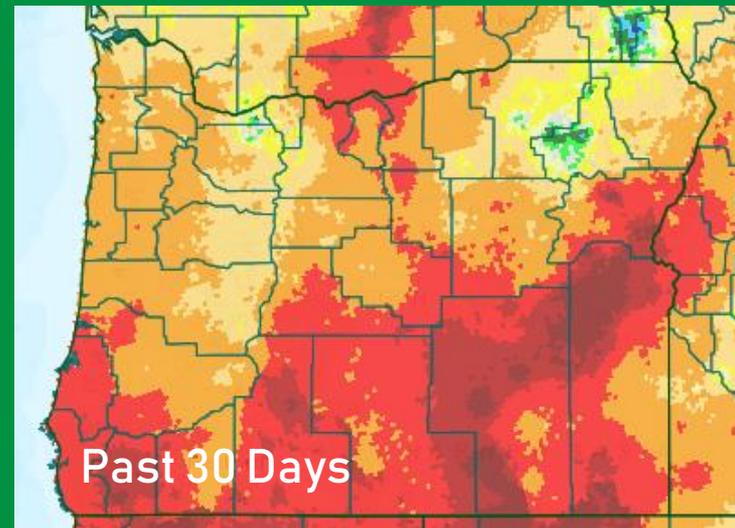
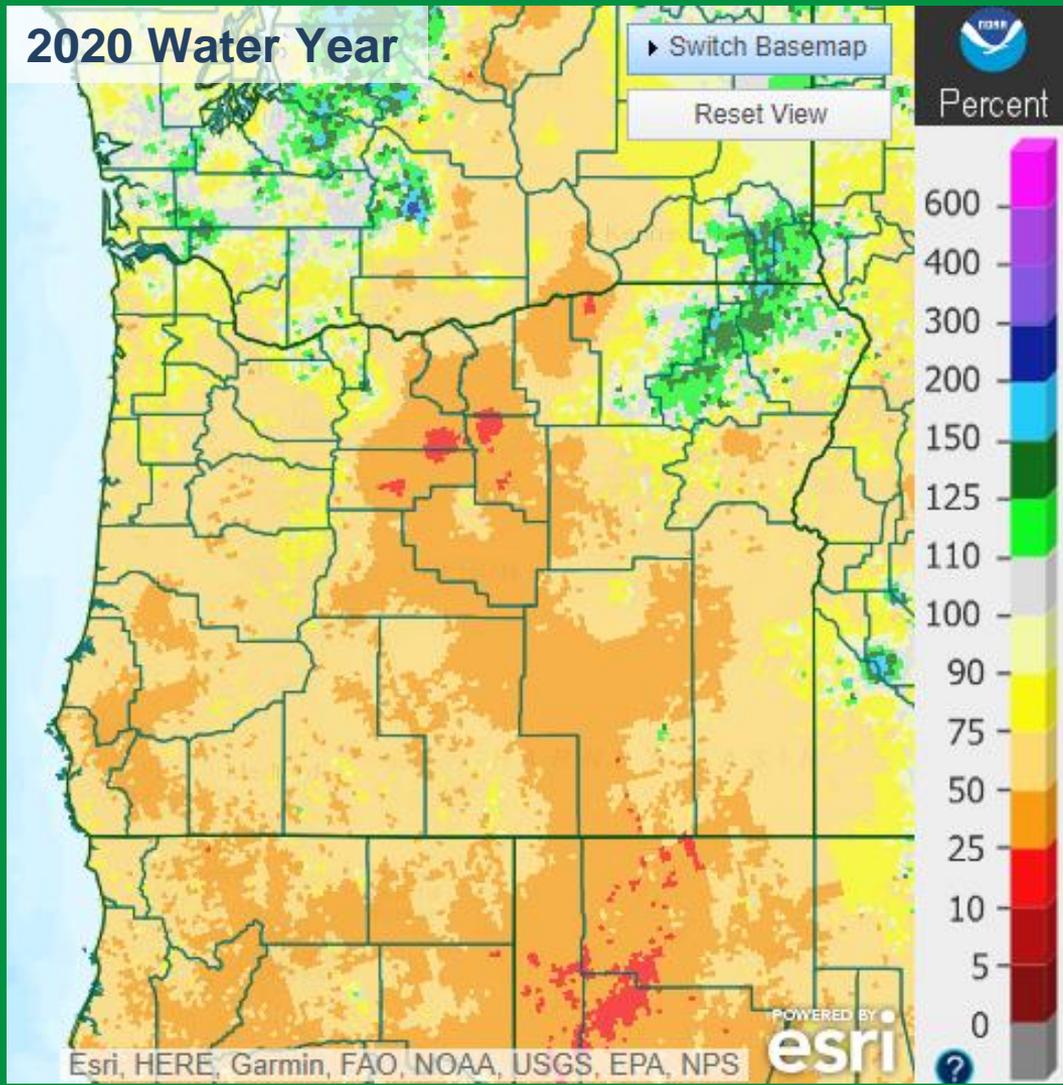
Oregon WSAC



Andy Bryant
NOAA/NWS Portland
Weather Forecast Office



Precipitation % of Average



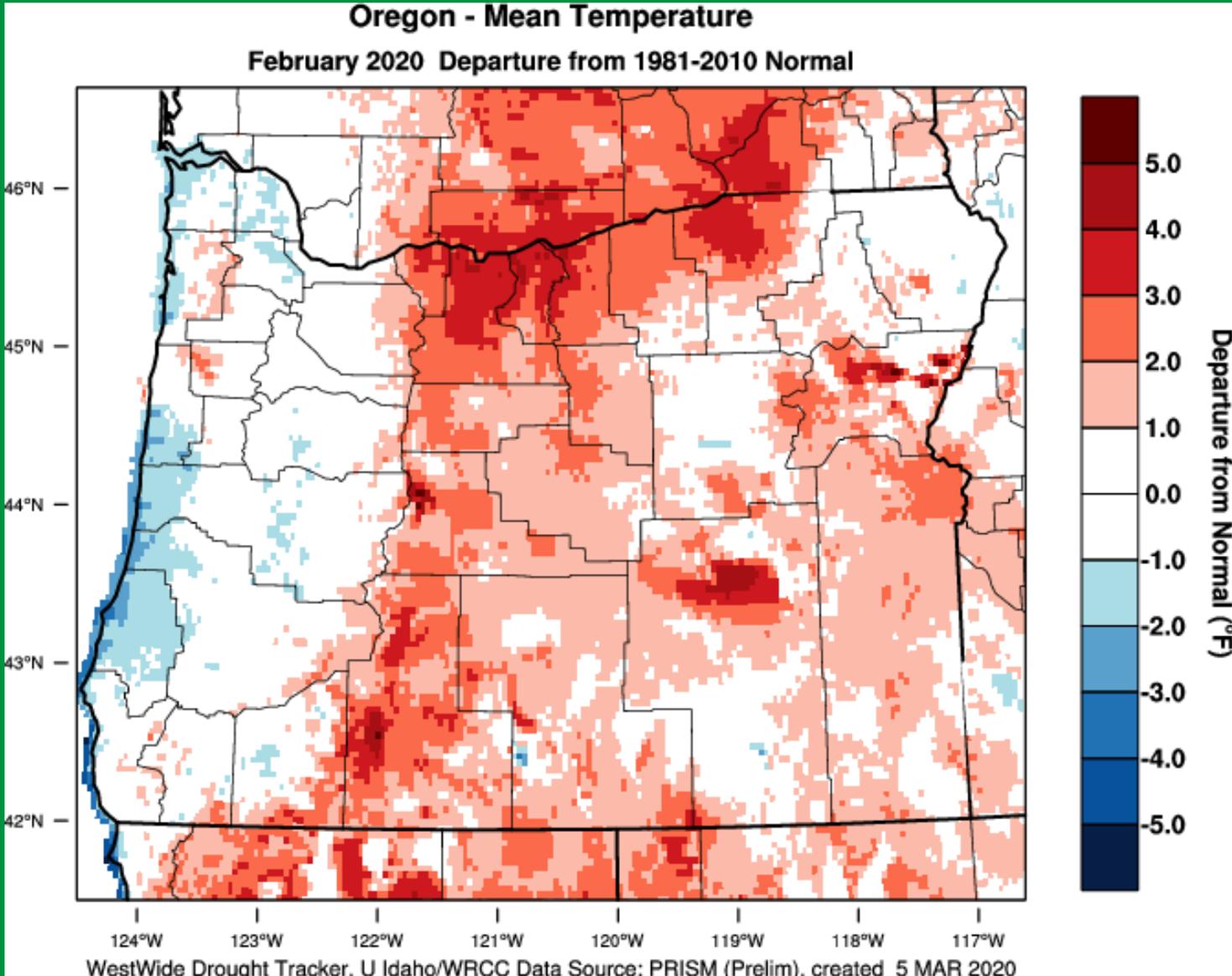
Precipitation Data as of March 9, 2020

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



Recent Temperatures

February 2020

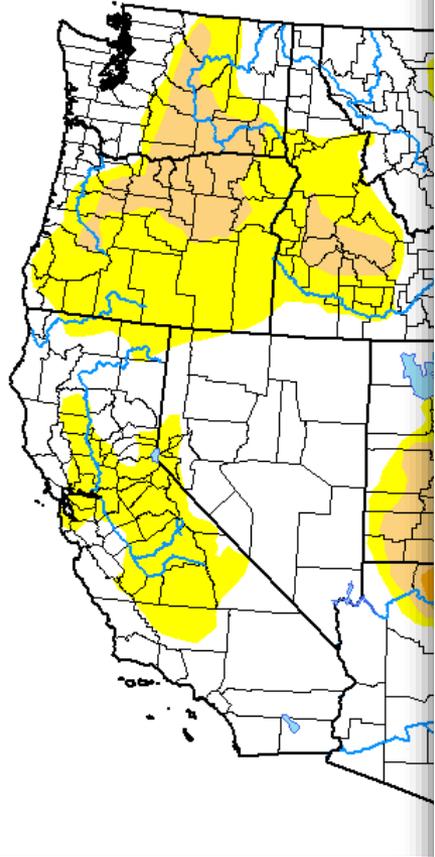




Drought Monitor

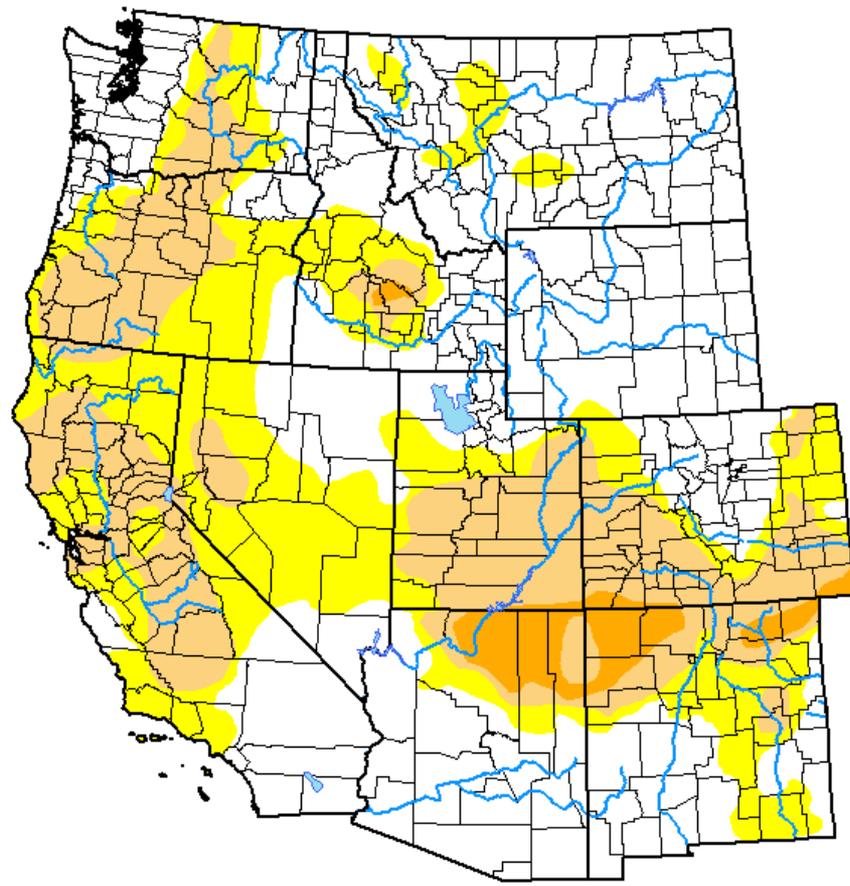
U.S. Drought Monitor West

February 4, 2020
(Released Thursday, Feb. 6, 2020)



U.S. Drought Monitor West

March 3, 2020
(Released Thursday, Mar. 5, 2020)
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 <https://droughtmonitor.unl.edu/About.aspx>

Author:

Adam Hartman
NOAA/NWS/NCEP/CPC



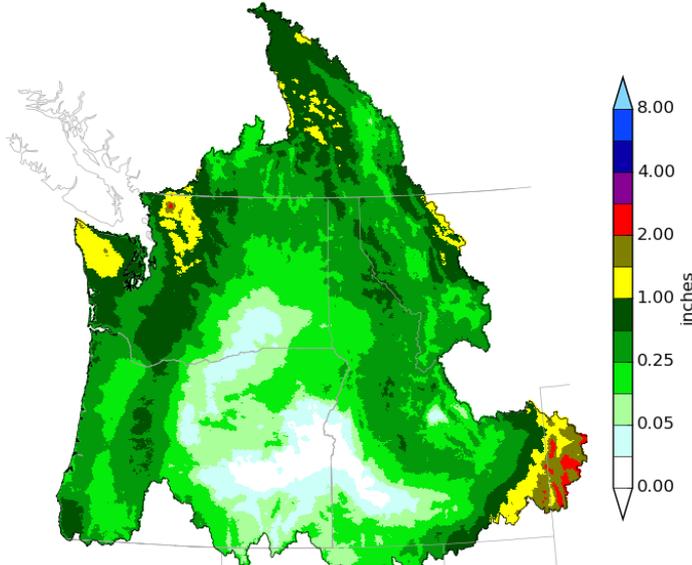


Mid/Late March Outlook

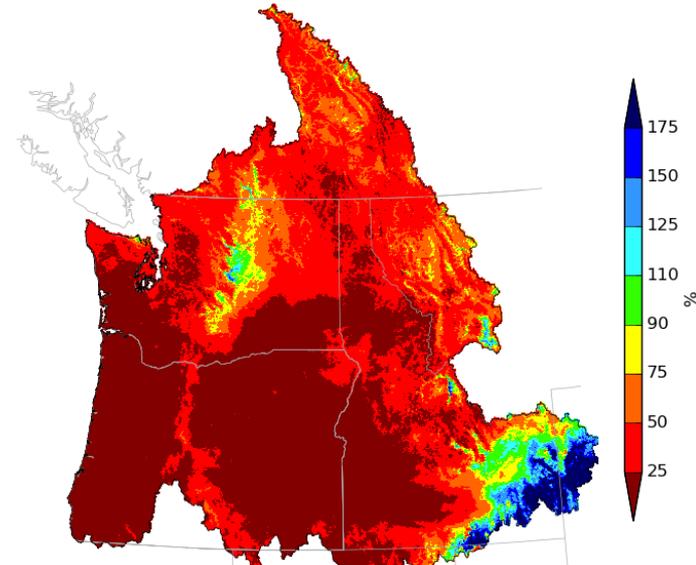
NWRFC 10-DAY PRECIPITATION



Northwest River Forecast Center
10 Day QPF, Ending 12Z, 03/19/20



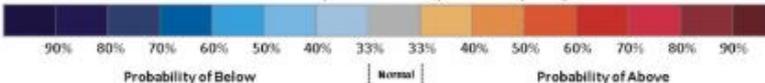
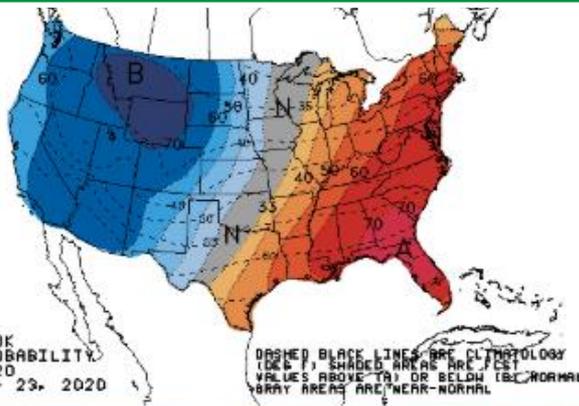
Northwest River Forecast Center
10 Day QPF (Percent of Climatology), Ending 12Z, 03/19/20



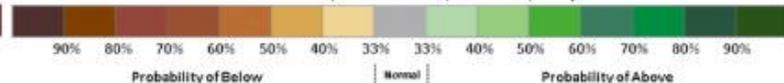
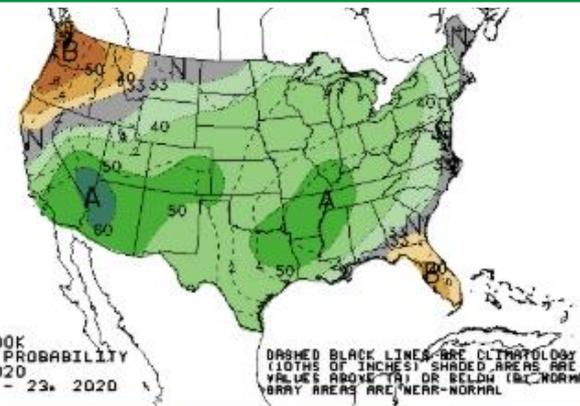
CPC 8 - 14 DAY OUTLOOK



8-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 9 MAR 2020
VALID MAR 17 - 23, 2020



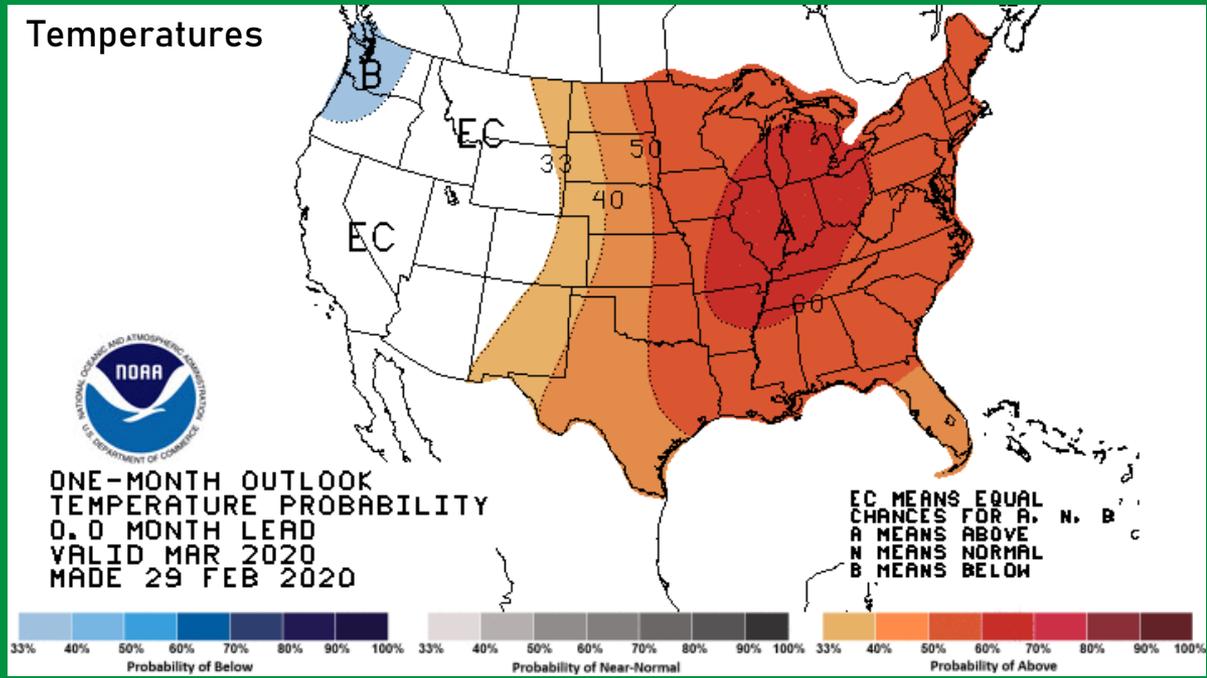
8-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
MADE 9 MAR 2020
VALID MAR 17 - 23, 2020



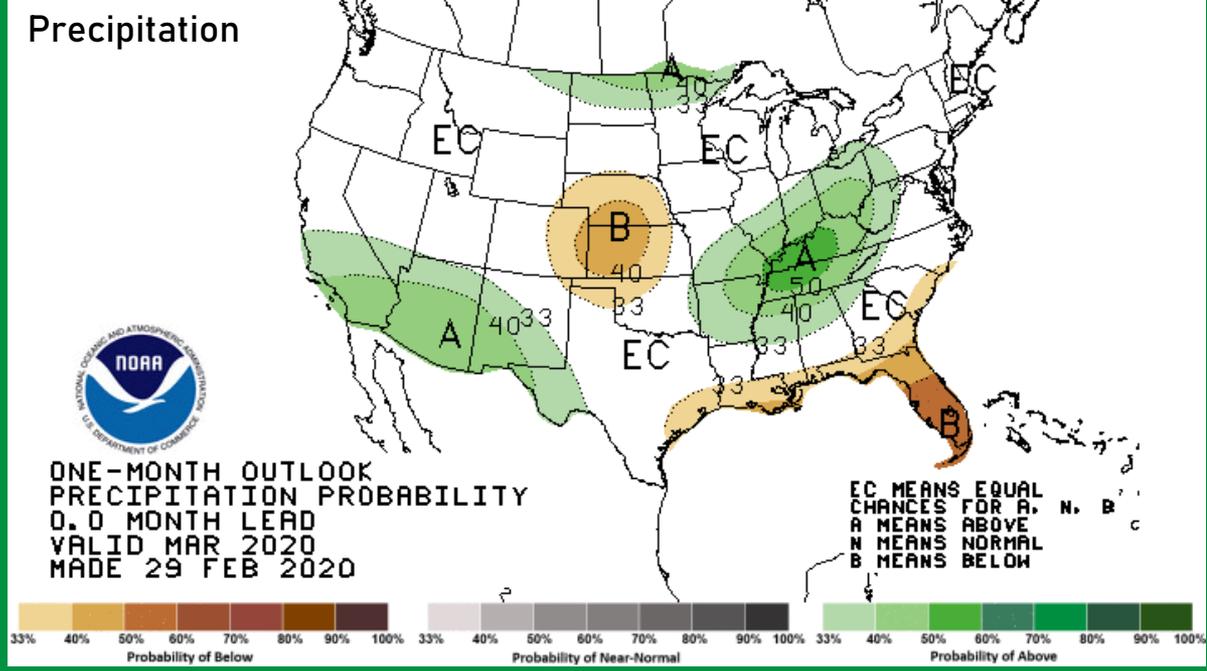


Climate Prediction Center Outlook March 2020

Temperatures

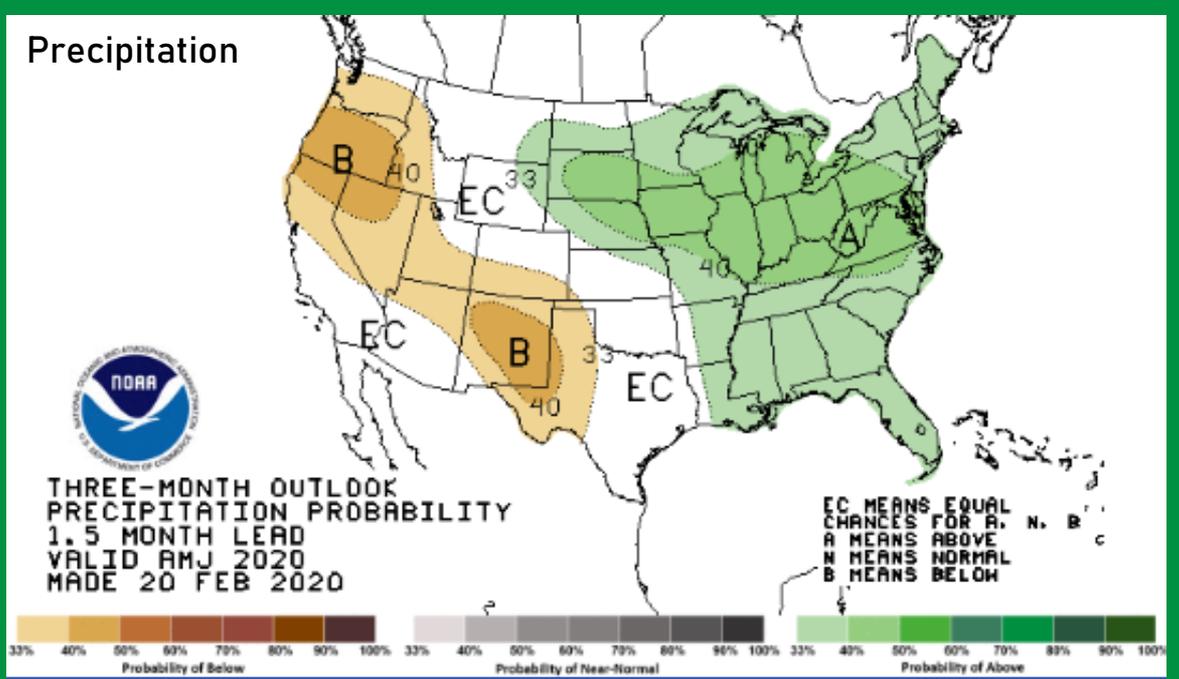
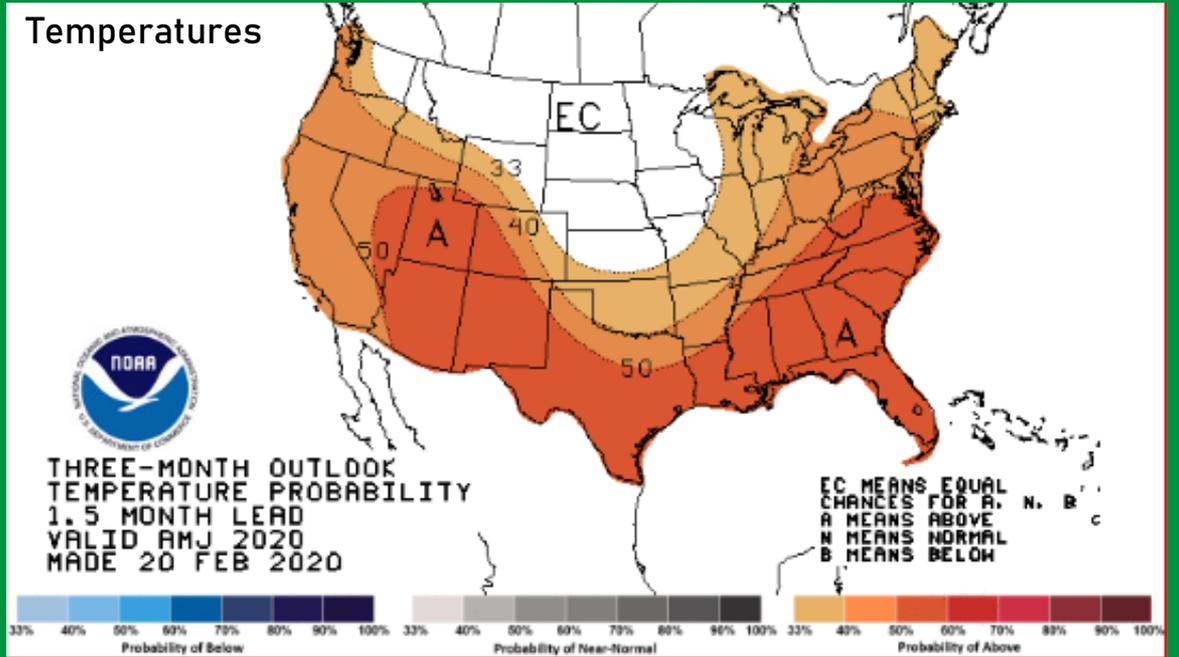


Precipitation





Climate Prediction Center Outlook Apr - May - Jun 2020





Observed Adjusted WY20 Runoff thus far



Northwest River Forecast Center Observed Water Year Natural Runoff



- River and Hydrology
- Water Supply
- Observations
- Weather Forecasts
- Climate
- NWRFC

Home Zoom Out --- Quick Zooms --- ESP Issued: 2020-03-09 Ensemble Date: 2020-03-09 Permalink

Search
Enter NWS ID:
GO

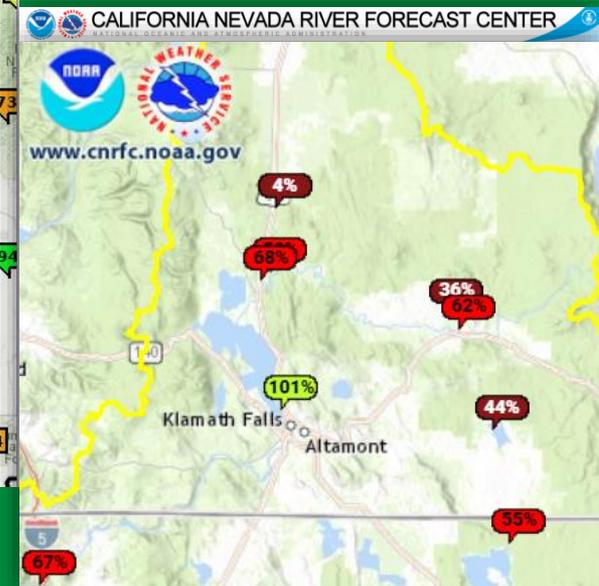
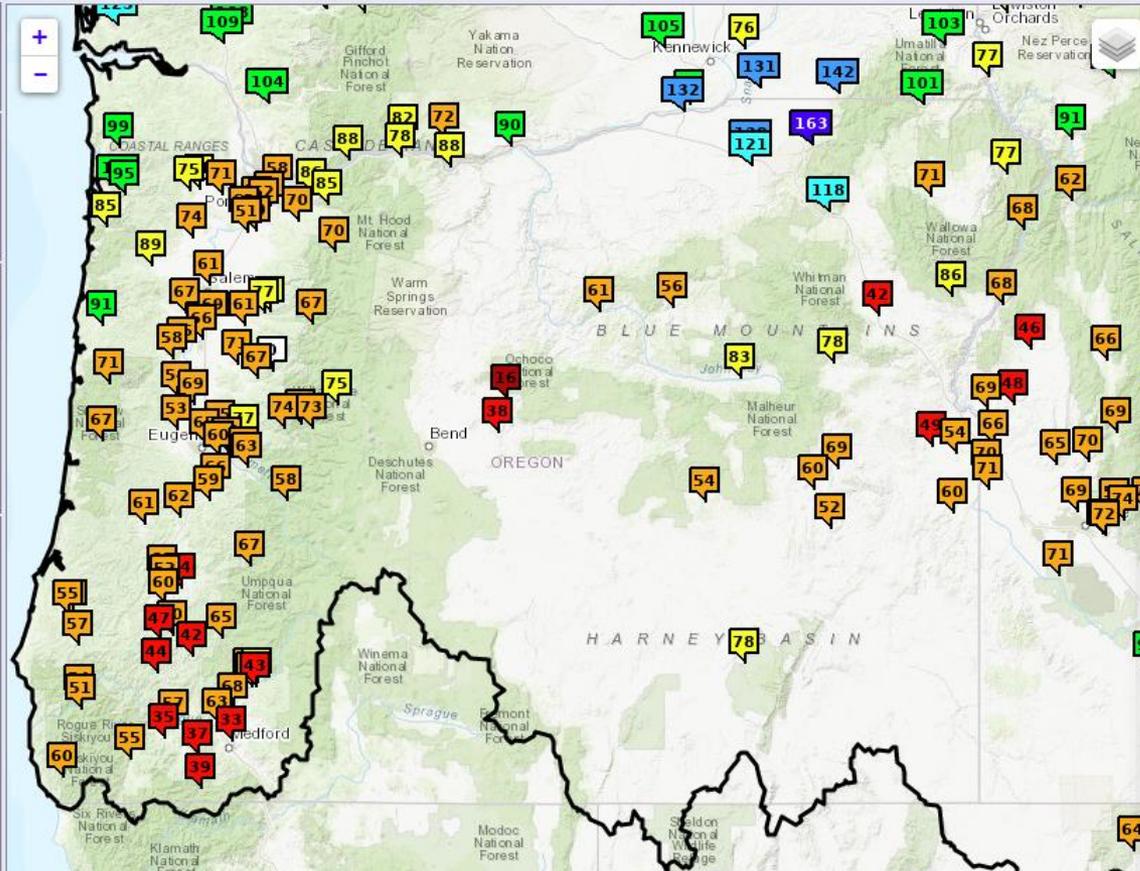
Map Overlays
 NWRFC Boundary
 NWRFC Basins
 NWS HSAs
 Counties

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

Natural Runoff
 Runoff Status
 Runoff % of Normal

Natural Runoff
 Period: Oct thru Curr (% Normal)

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



<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

Home | Zoom Out | --- Quick Zooms --- | ESP Issued: 2020-03-09 | Ensemble Date: 2020-03-09 | Permalink

Search
Enter NWS ID:

GO

- Map Overlays
- NWRFC Boundary
 - NWRFC Basins
 - NWS HSAs
 - Counties

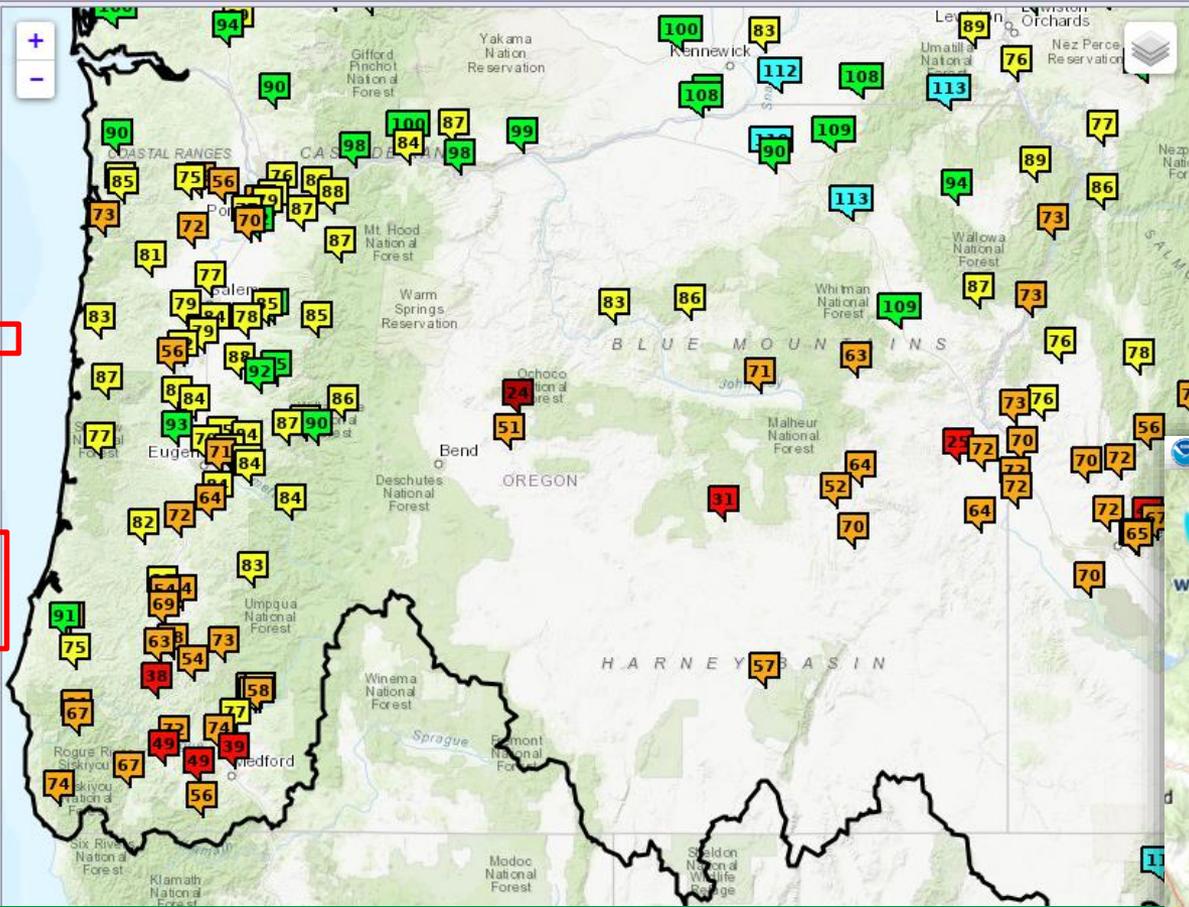
- ESP Natural Forecast
- Natural Status
 - Natural % of Normal
 - Rank (ASC)
 - Rank (DESC)
 - Exceedance (%)
 - Percentile (%)

- Natural Runoff
- Runoff Status
 - Runoff % of Normal

ESP Natural Forecast

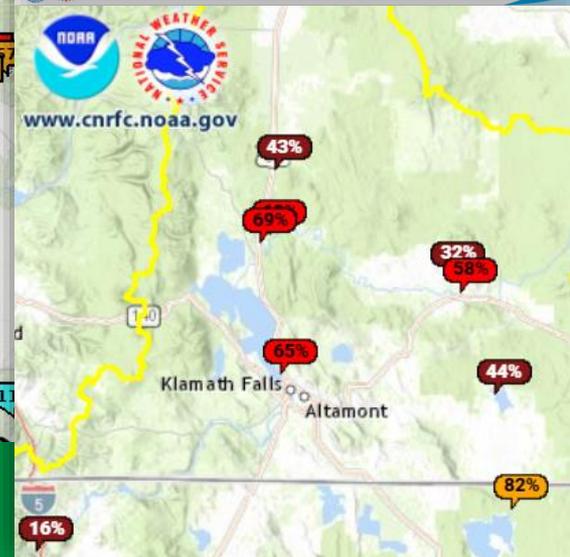
Period: APR-SEP
Forecast (% Normal)

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



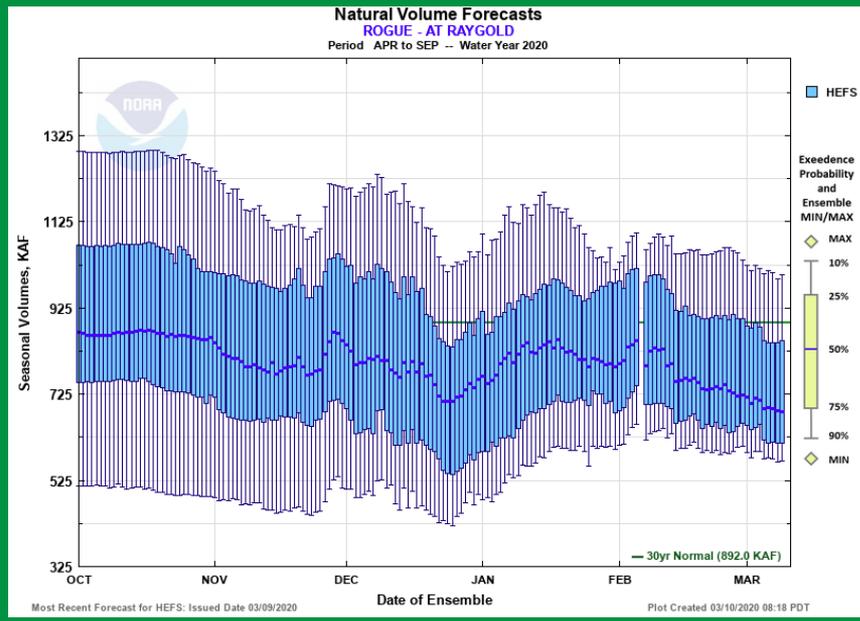
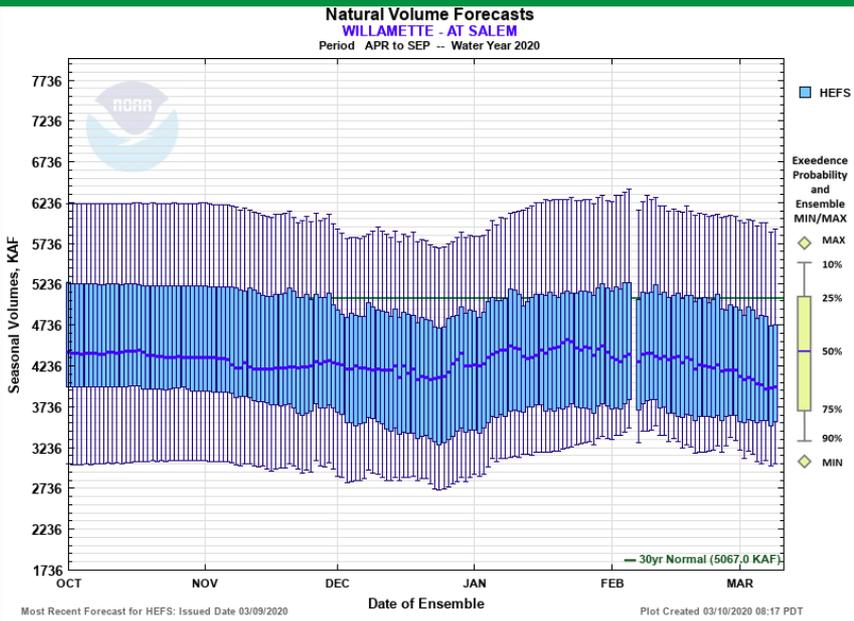
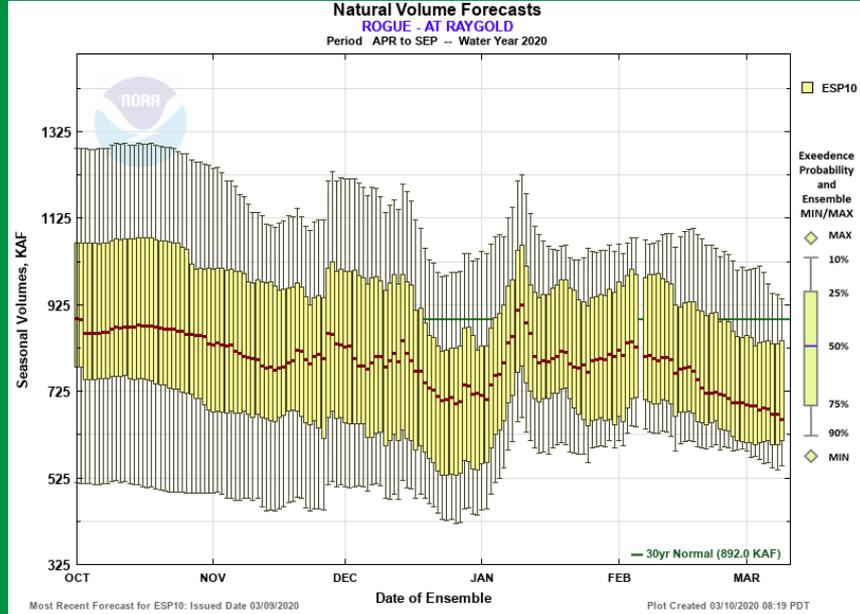
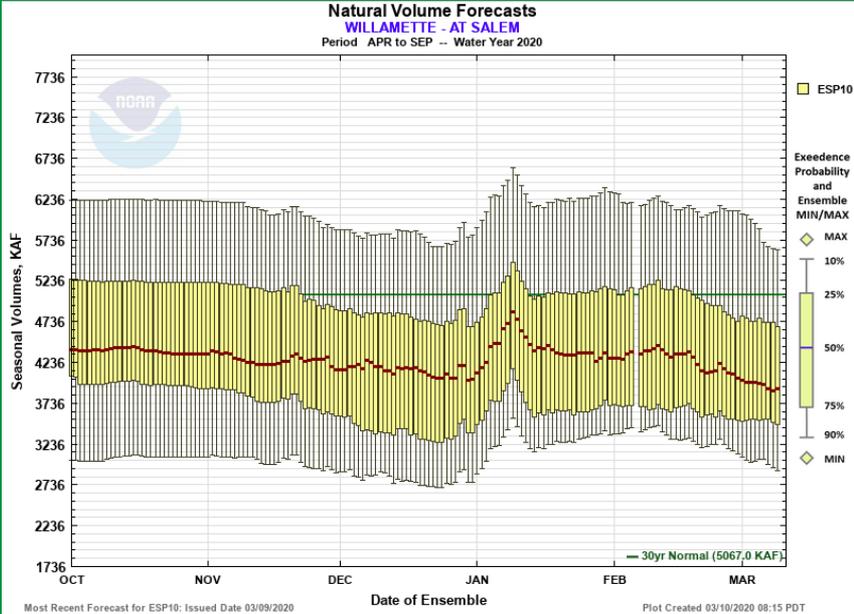
Forecast runoff volume for April - September 2020

CALIFORNIA NEVADA RIVER FORECAST CENTER



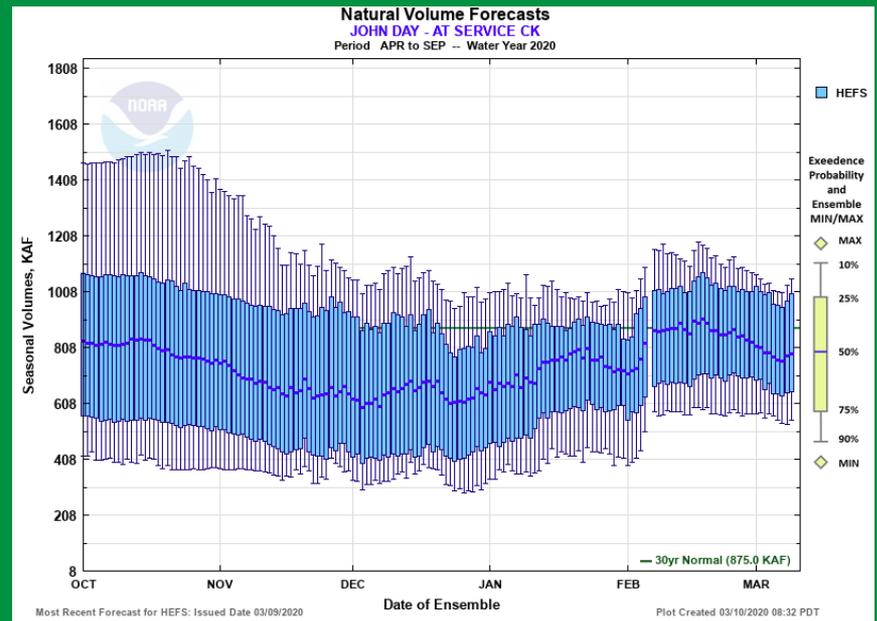
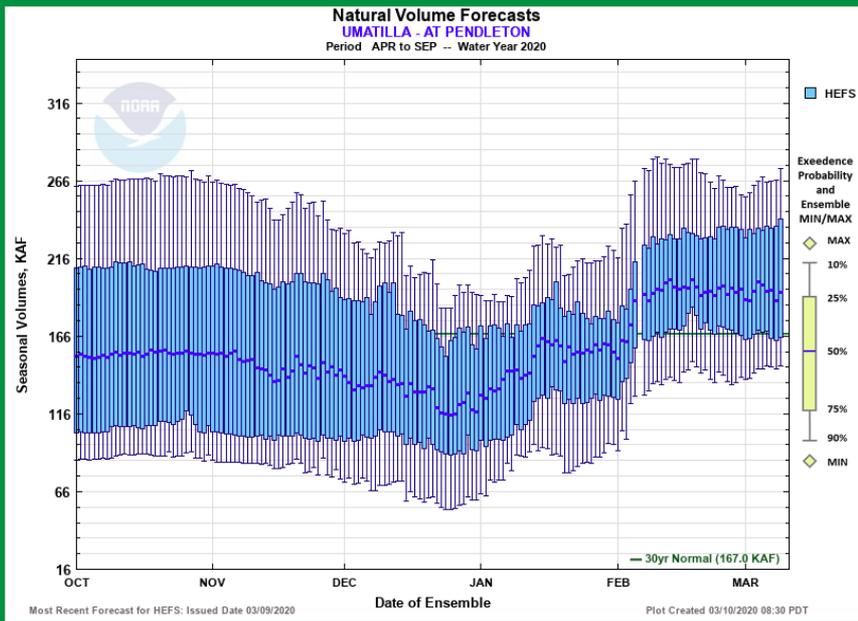
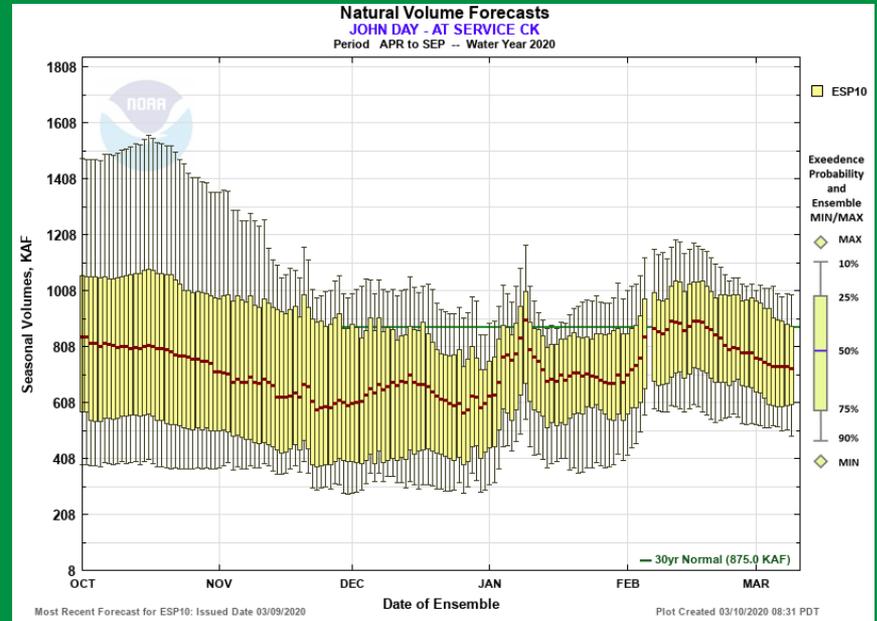
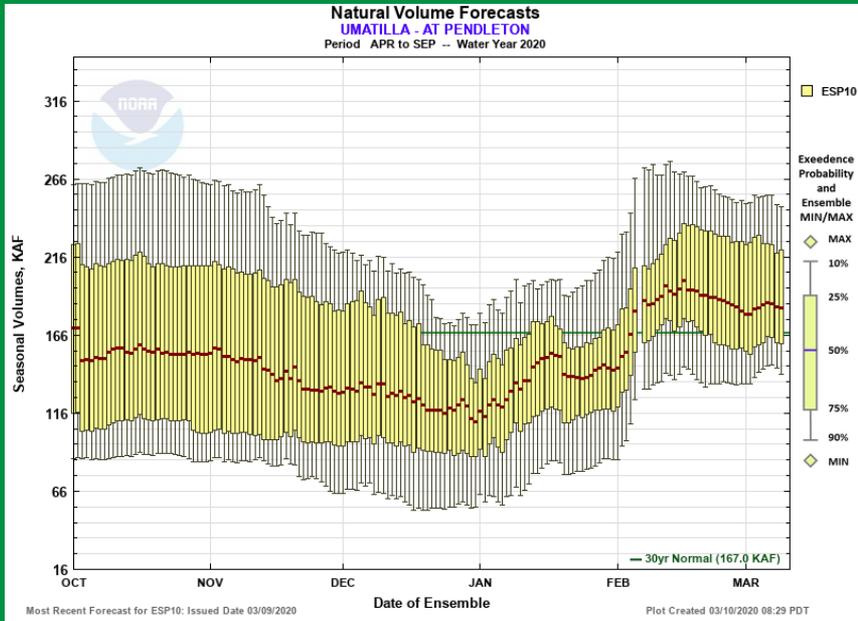


Natural Water Supply Forecasts (West)



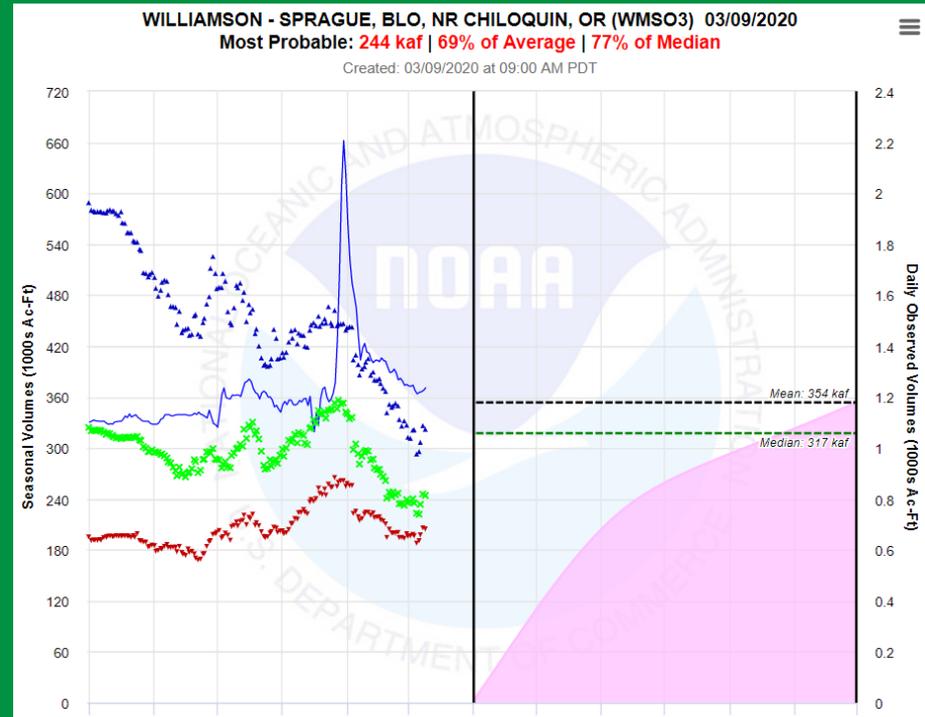
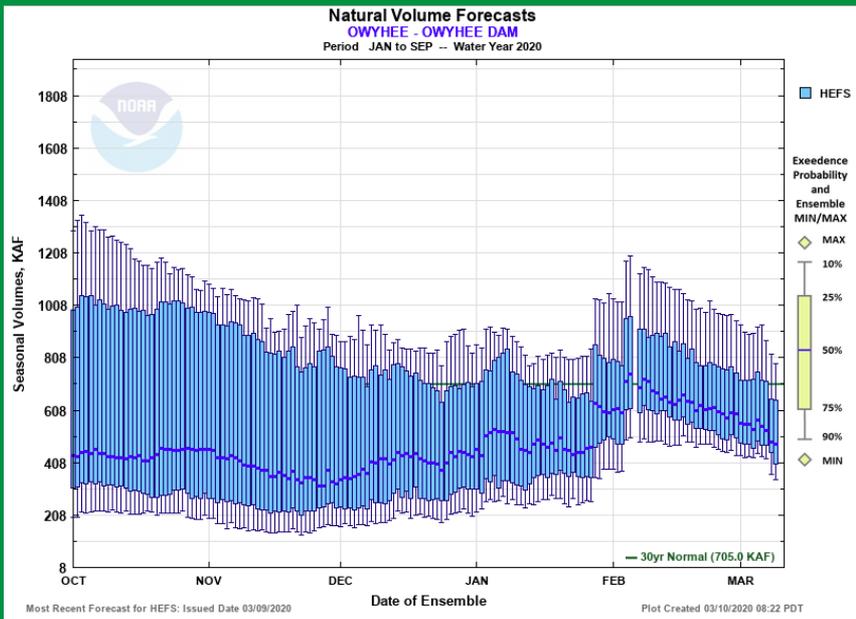
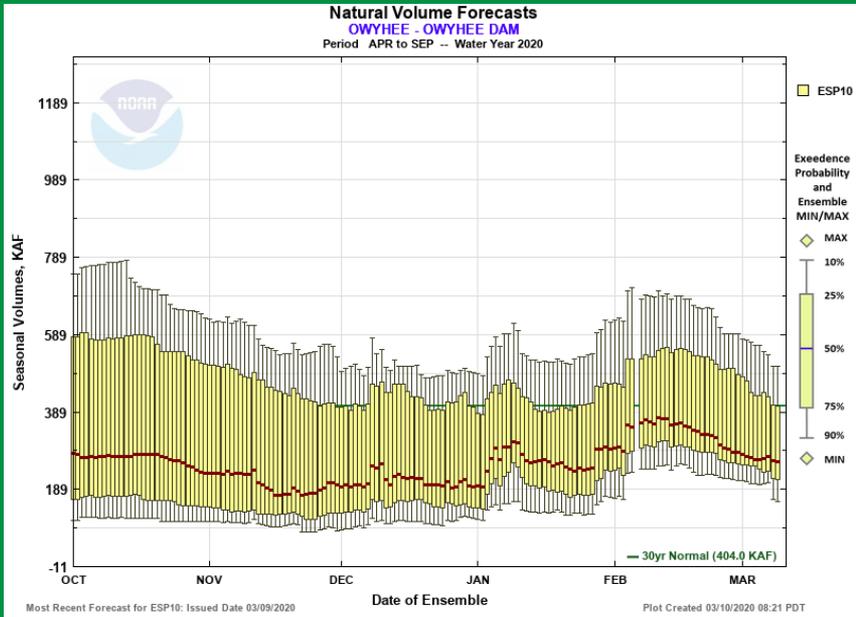


Natural Water Supply Forecasts (NE)





Natural Water Supply Forecasts (SE/SC)





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 though late spring.

2020 Schedule for <i>Live Water Supply Briefings</i>					
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

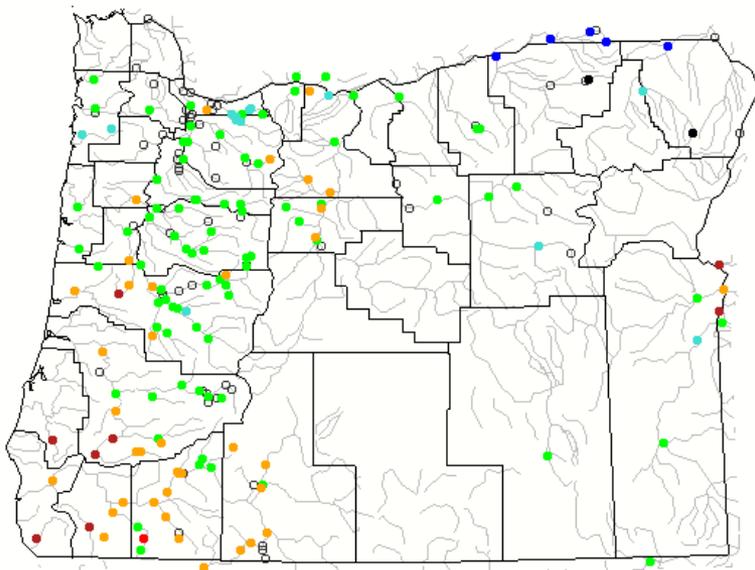
Oregon Water Supply Availability Meeting

March 2020

USGS Update on Surface Water Conditions
Carrie Boudreau & Marc Stewart
Oregon Water Science Center
Photo: Amarys Acosta, USGS gage 14091500

Monthly Average Streamflow (as compared to Historical Record)

February 2020



Search USGS streamgage

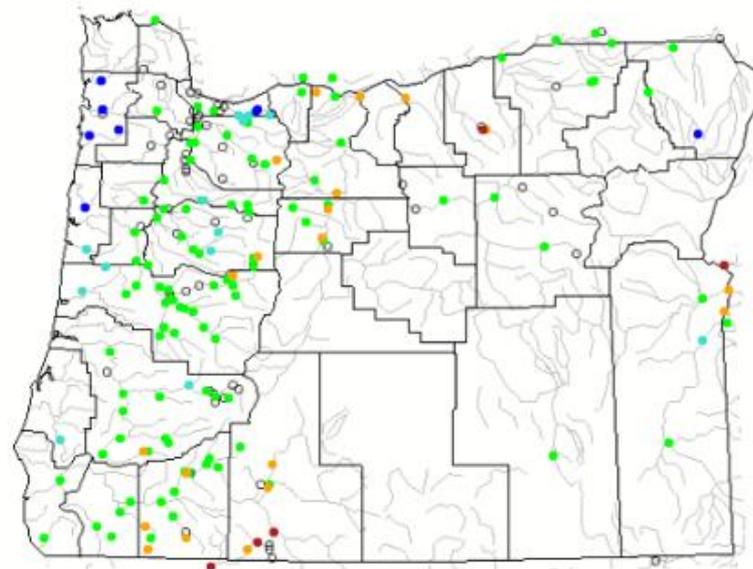
Choose a data retrieval option and select a location on the map

- List of all stations Single station Nearest stations Peak flow

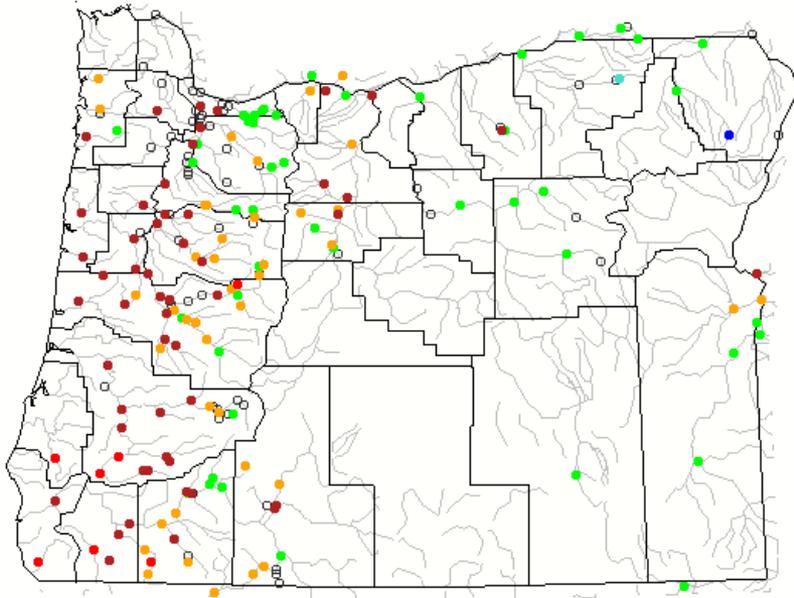
Explanation - Percentile classes

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

January 2020



Sunday, March 08, 2020



Search USGS streamgage

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

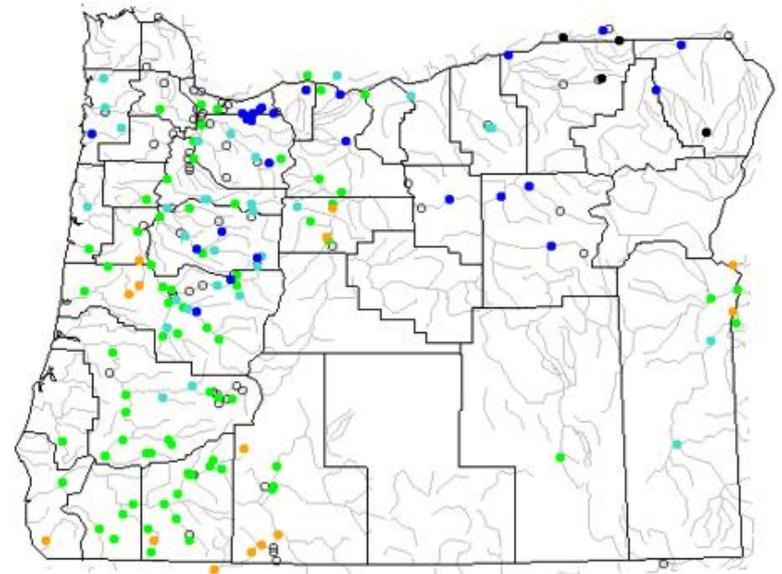
- List of all stations Single station Nearest stations

Explanation - Percentile classes

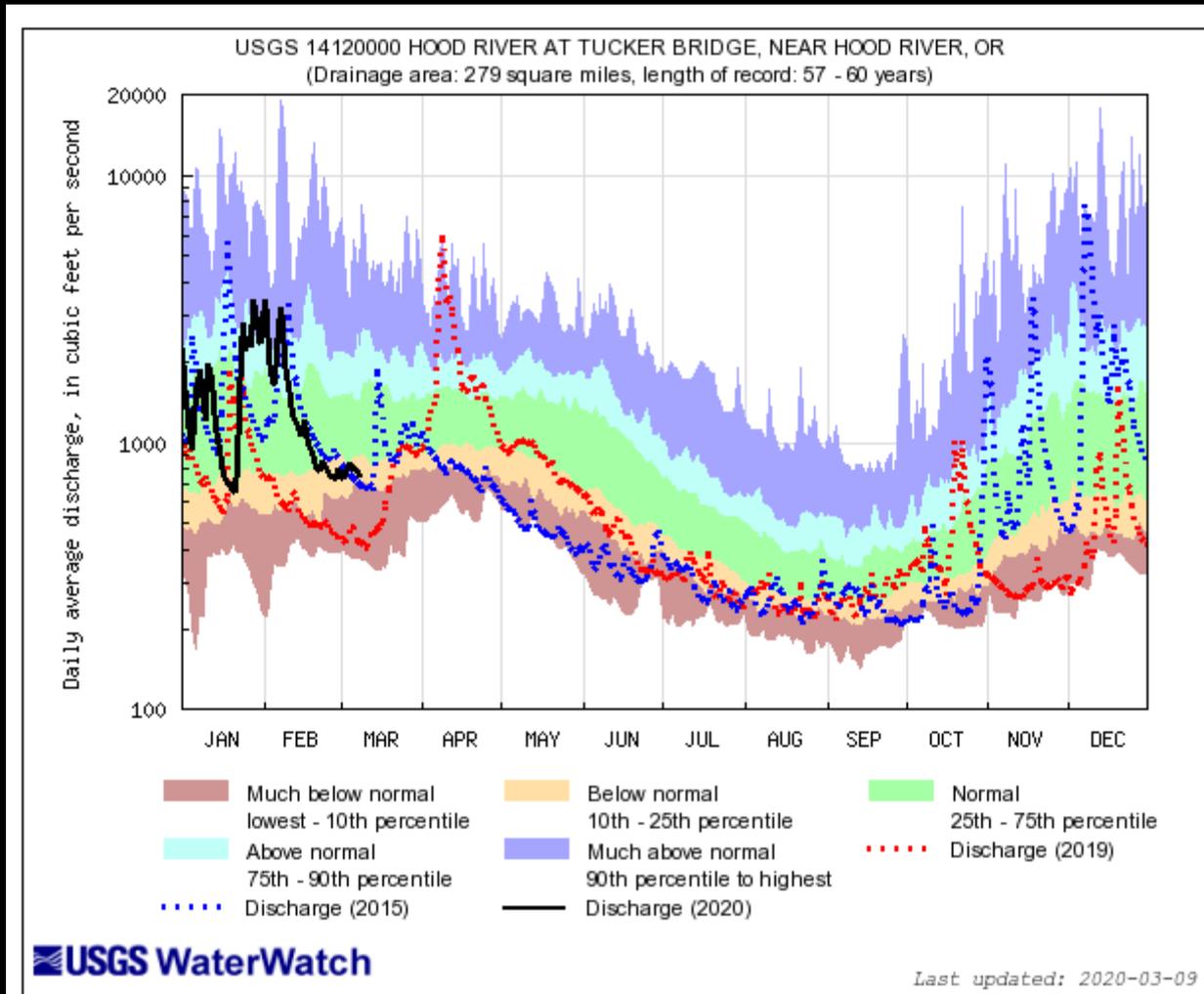
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

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

Tuesday, February 11, 2020

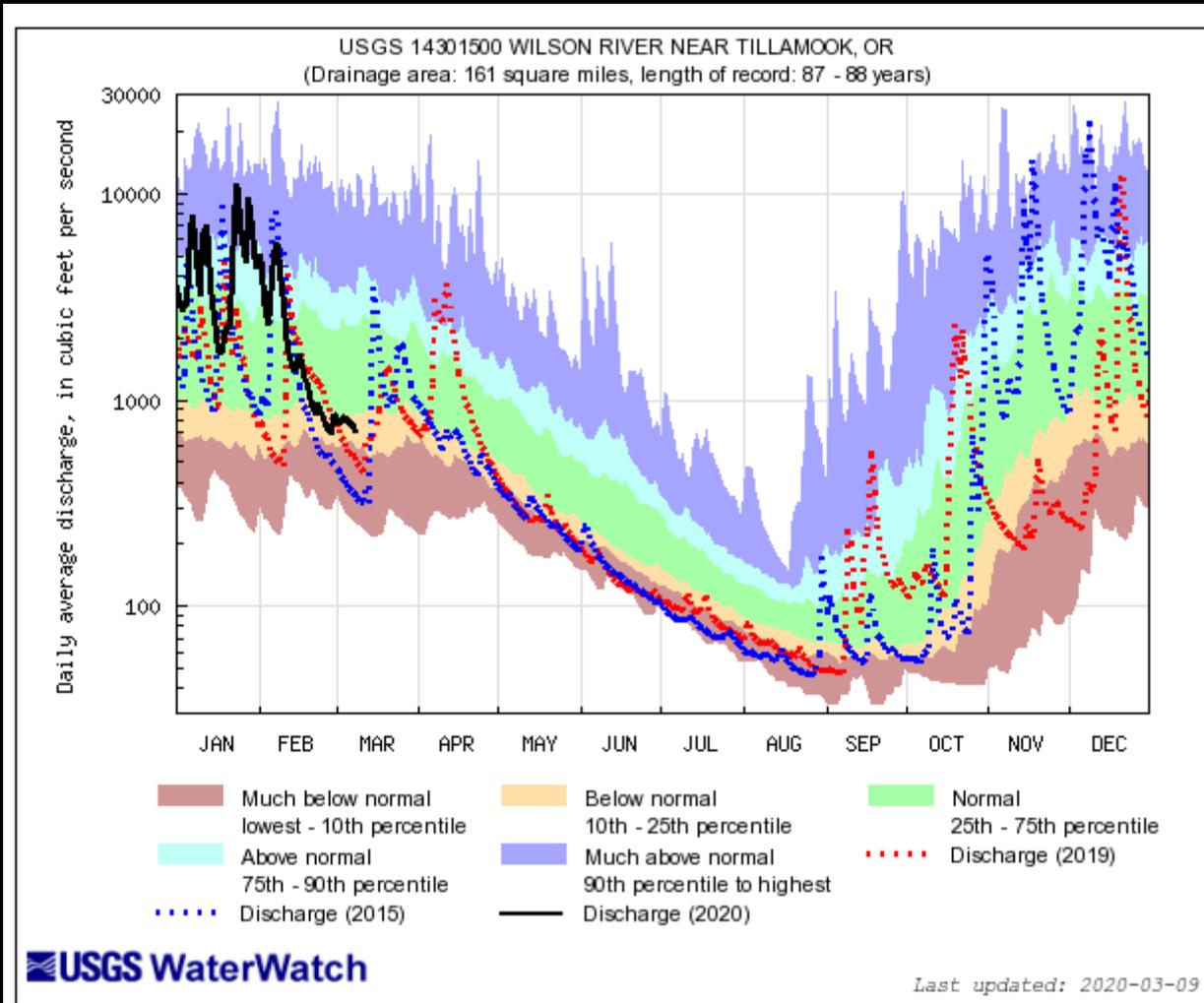


14120000 Hood R at Tucker Bridge



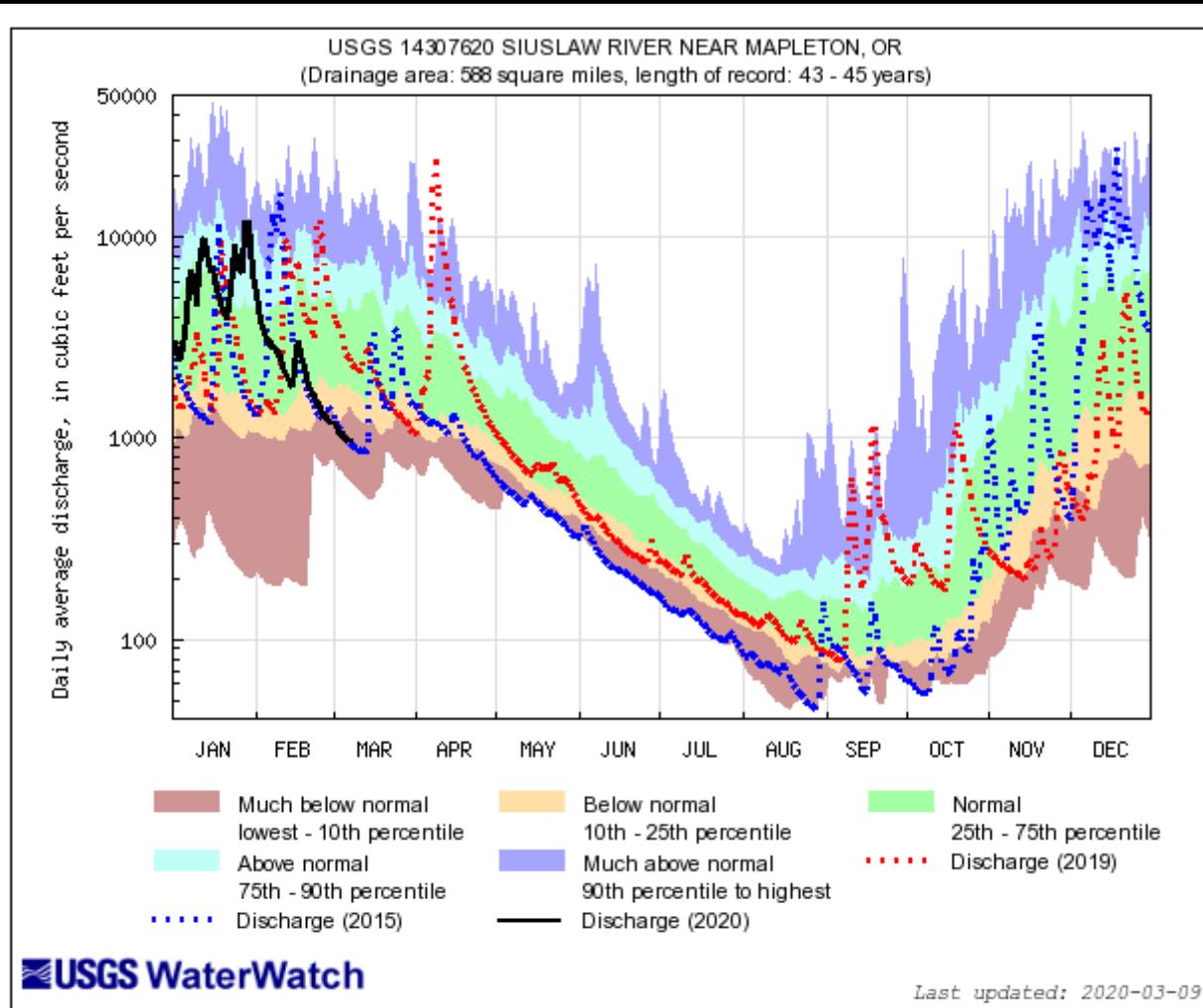
Explanation - Percentile classes					
lowest-10th percentile	10-24	25-75	76-90	90th percentile - highest	FLOW
Much below normal	Below normal	Normal	Above normal	Much above normal	

14301500 Wilson River nr Tillamook



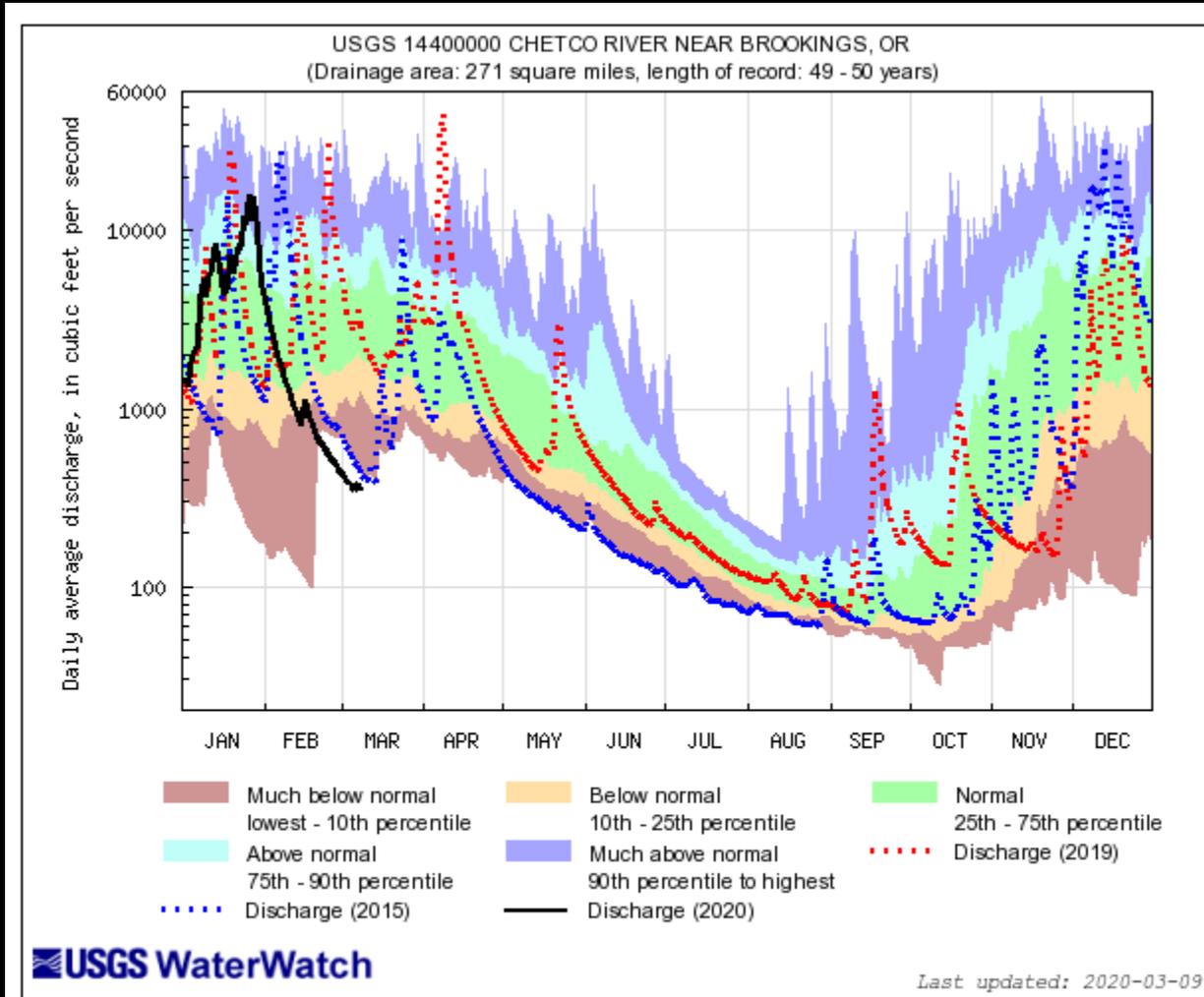
Explanation - Percentile classes					
lowest-10th percentile	10-24	25-75	76-90	90th percentile - highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	

14307620 Siuslaw River nr Mapleton



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	

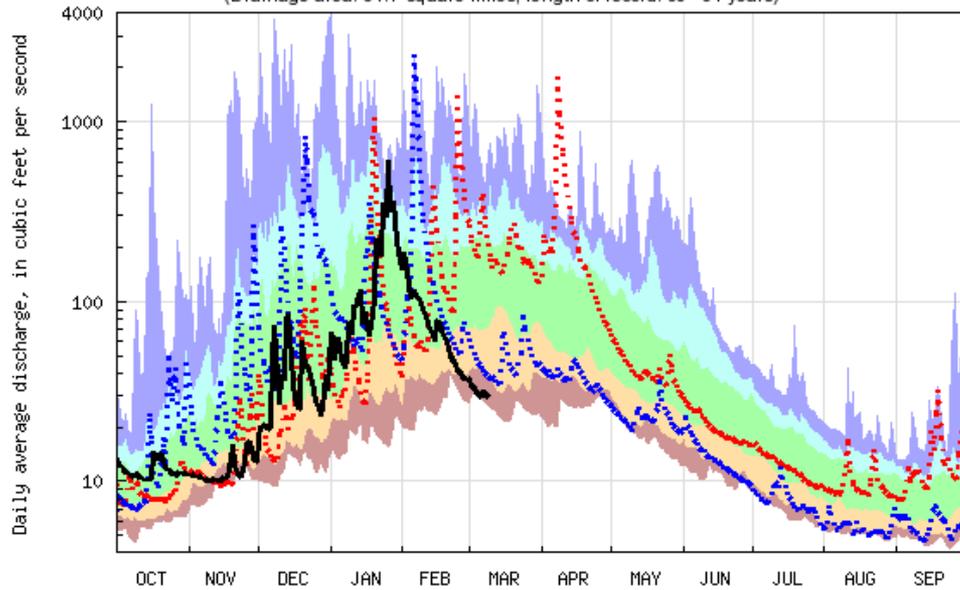
14400000 Chetco River nr Brookings



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

14308990 Cow Creek abv Galesville

USGS 14308990 COW CREEK ABV GALESVILLE RES, NR AZALEA, OR.
(Drainage area: 64.7 square miles, length of record: 33 - 34 years)



- Much below normal
- Below normal
- Normal
- Above normal
- Much above normal
- Discharge (2019)
- Discharge (2015)
- Discharge (2020)

USGS WaterWatch

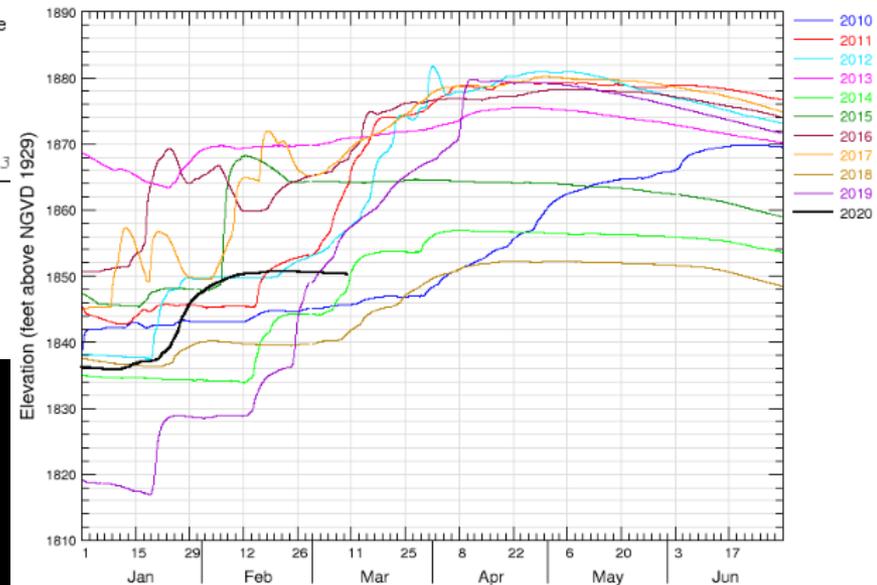
Last updated: 2020-03

Explanation - Percentile classes

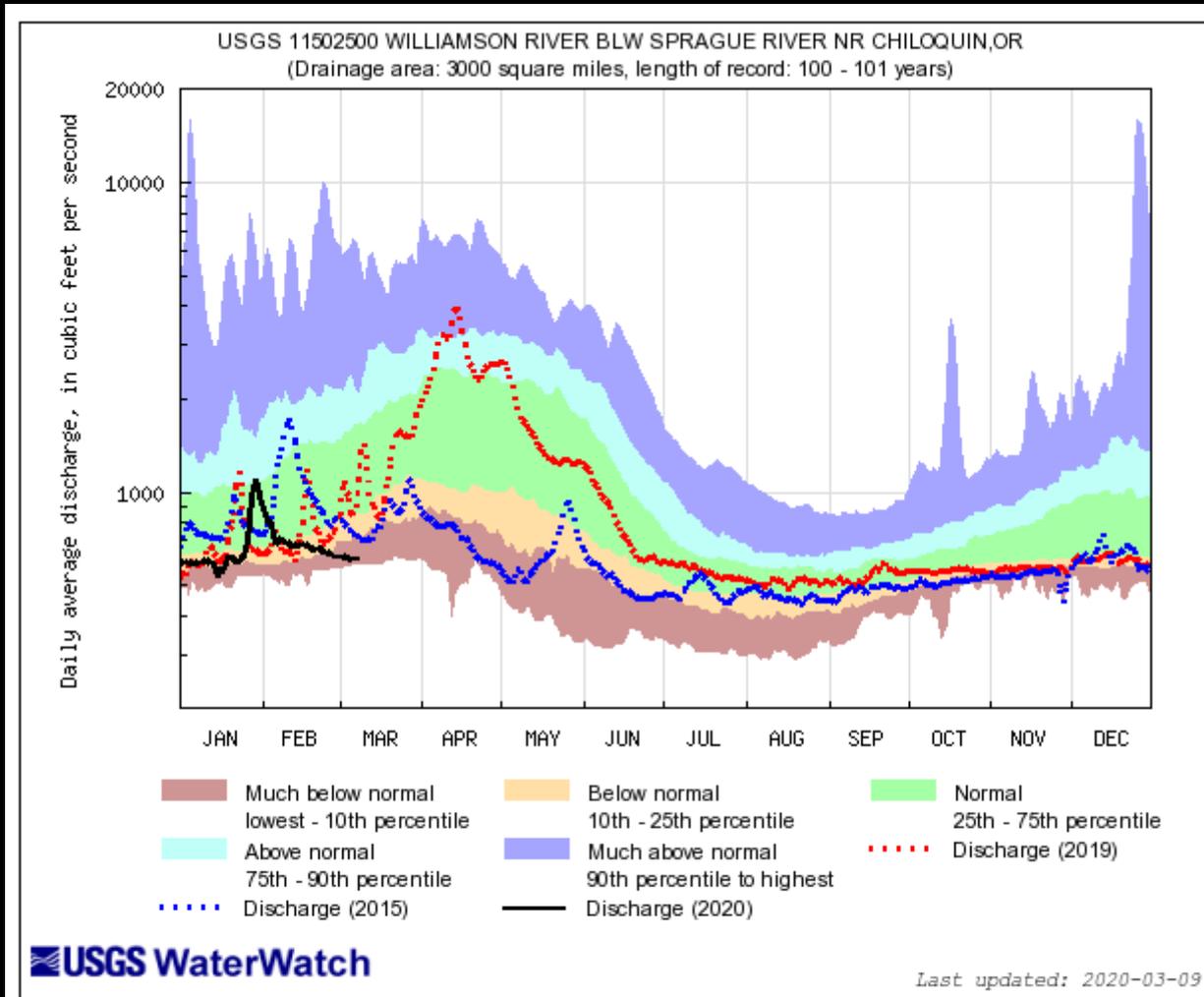
lowest-10th percentile	10-24	25-75	76-90	90th percentile-highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	

Galesville Reservoir near Azalea, OR (14308995)

Data from U.S. Geological Survey



11502500 Williamson R blw Sprague R

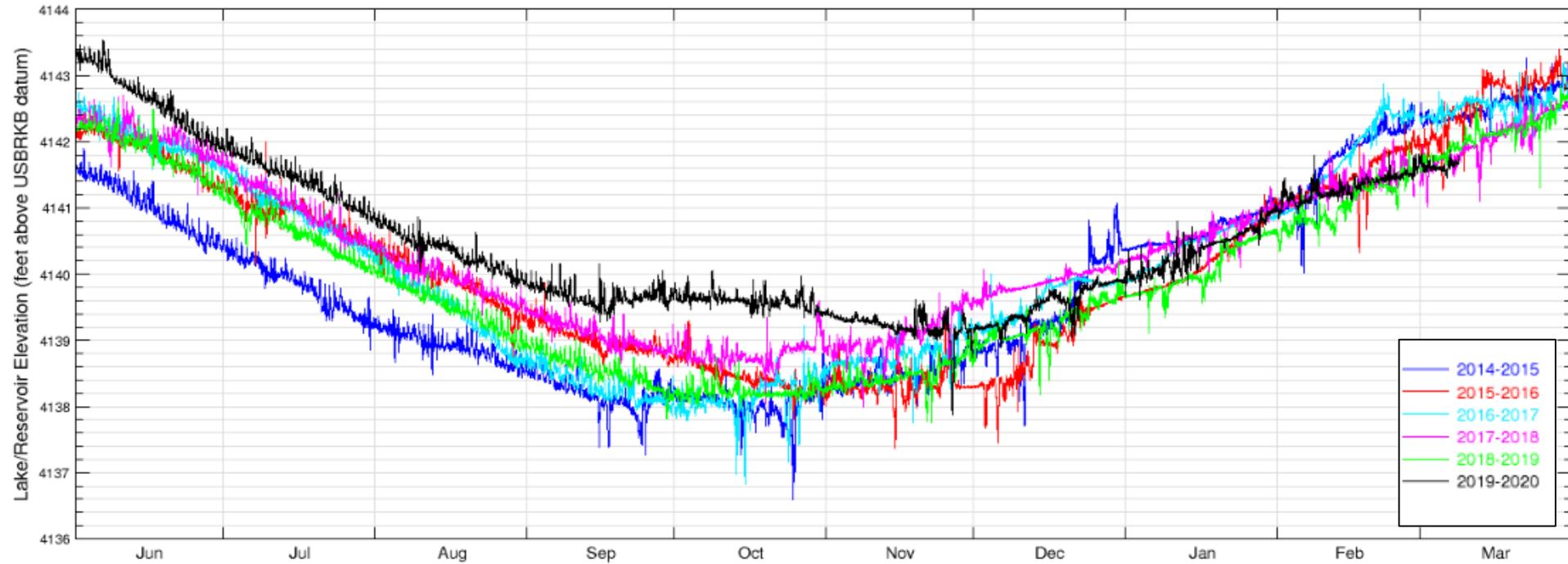


Explanation - Percentile classes					
lowest-10th percentile	10-24	25-75	76-90	90th percentile-highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	

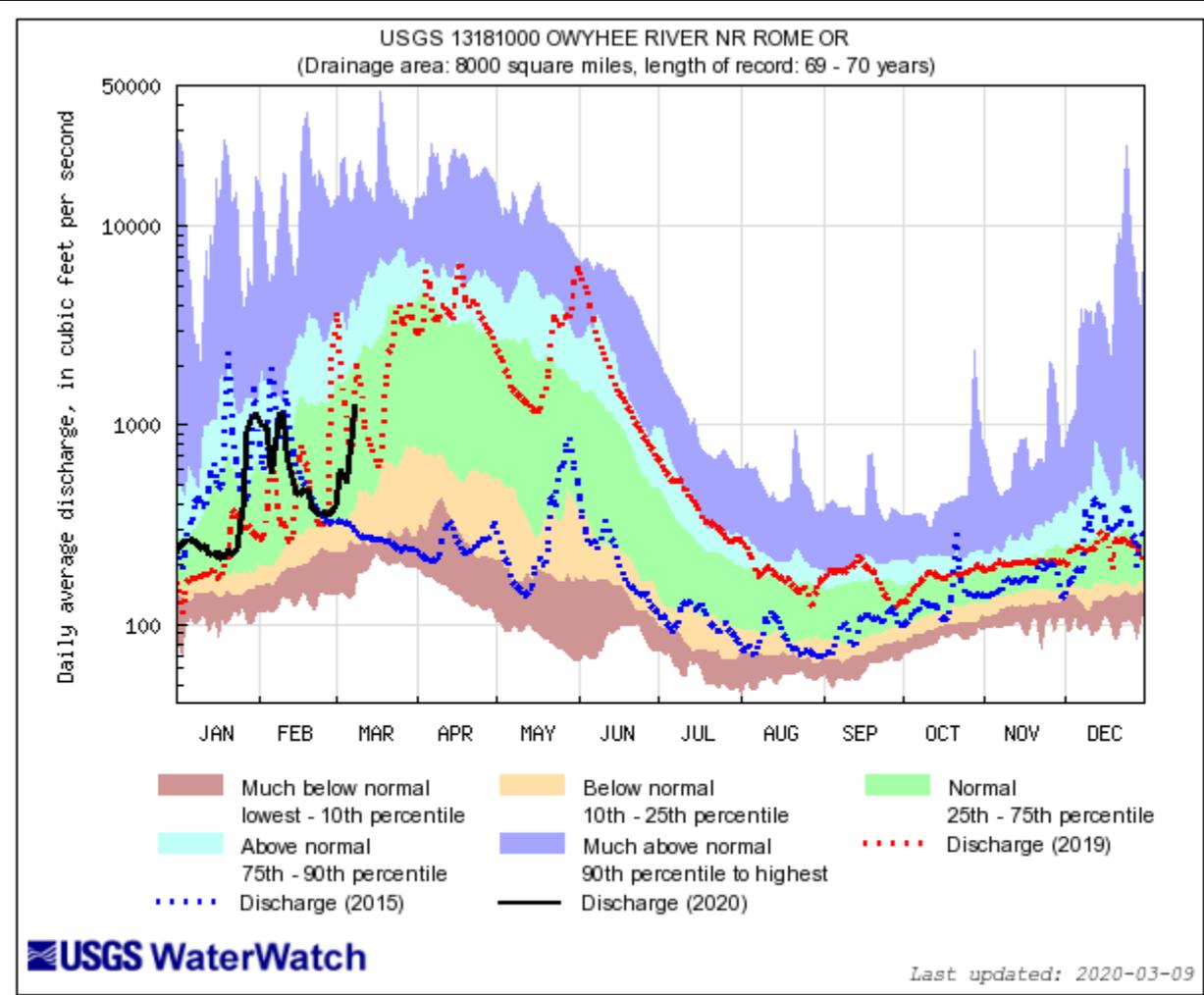
11507000 Upper Klamath Lake

Upper Klamath Lake near Klamath Falls, OR (11507000)

Data from U.S. Geological Survey



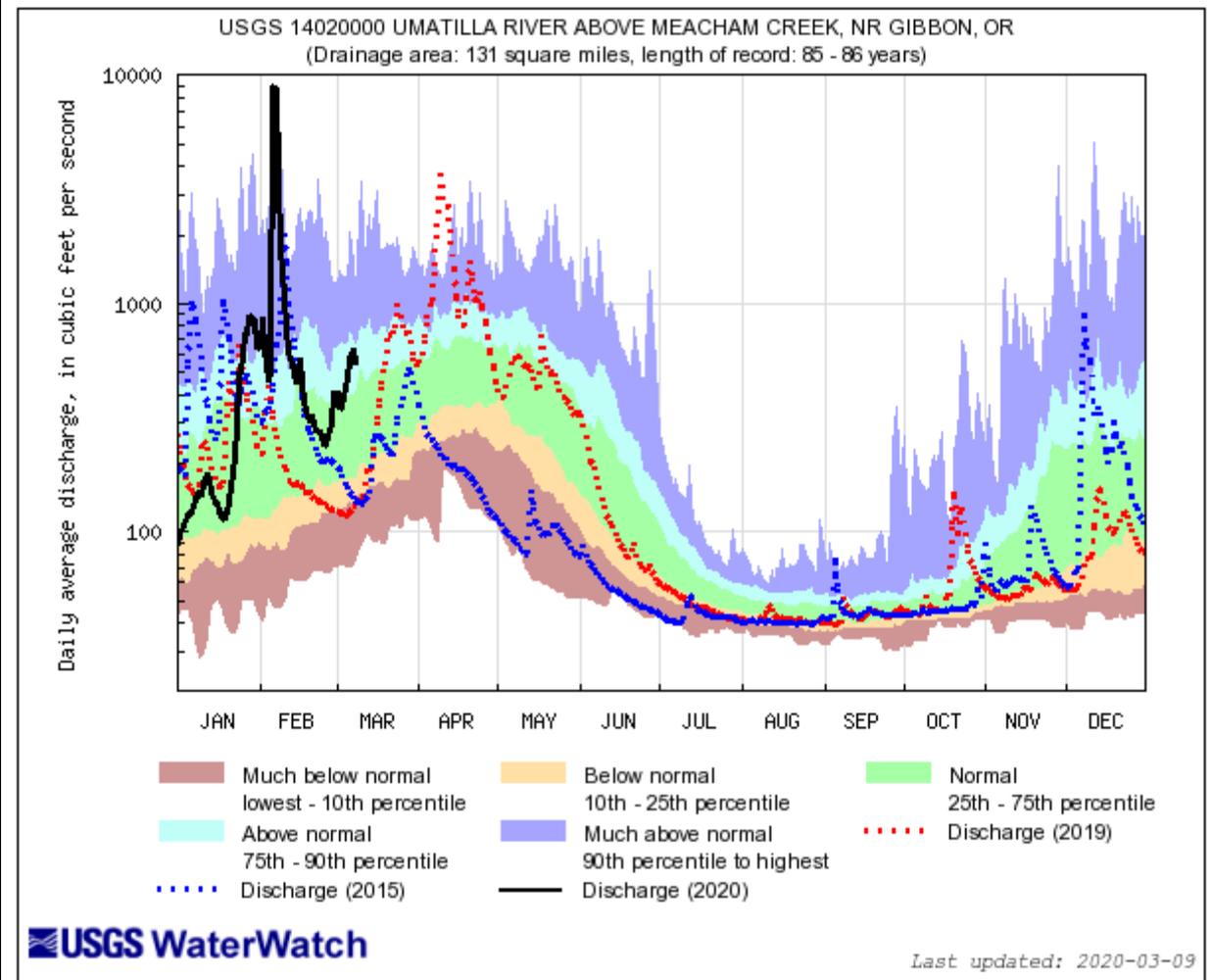
13181000 Owyhee R nr Rome



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

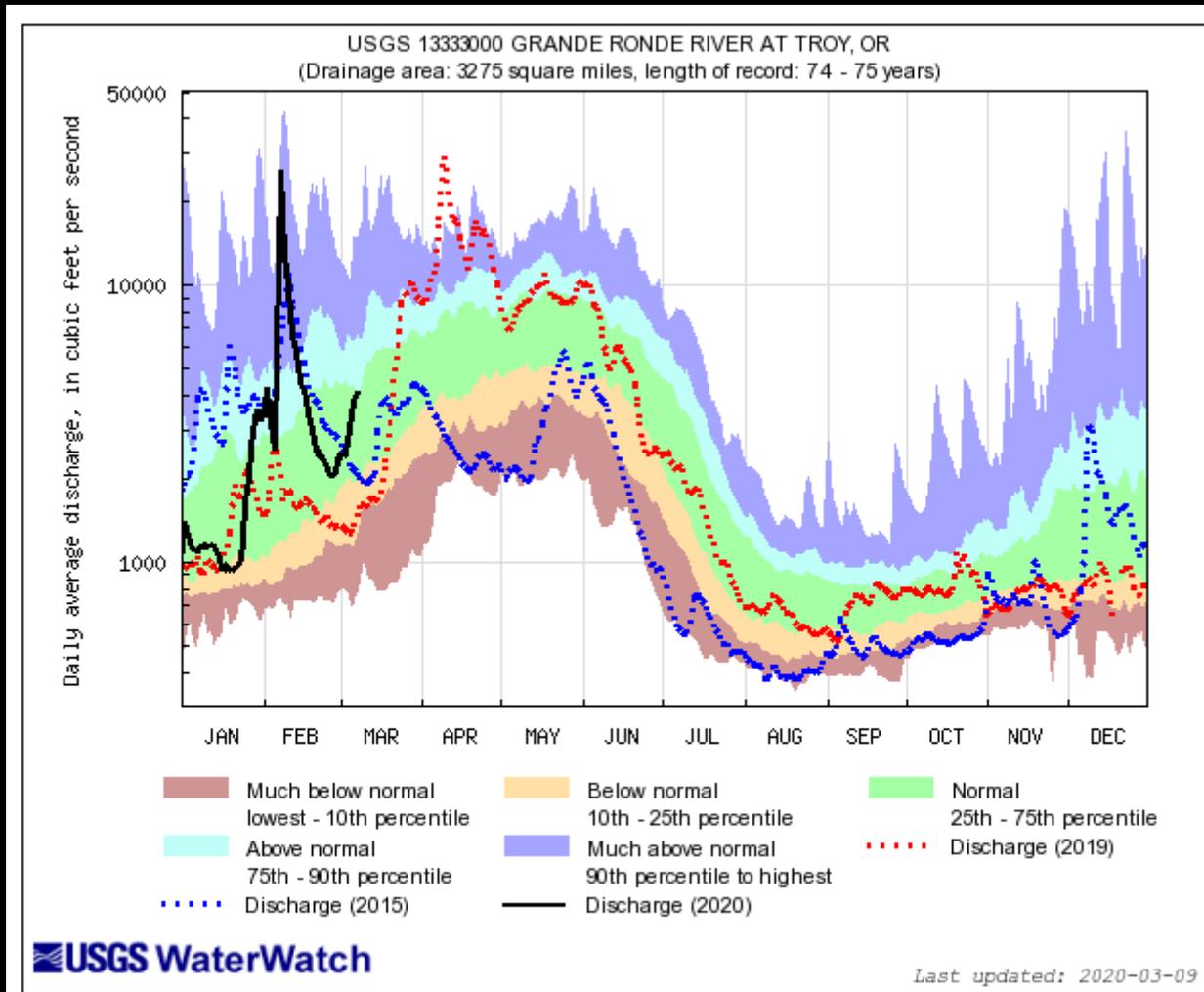


14020000 Umatilla R above Meacham



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	

13333000 Grand Ronde R at Troy



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	

US GEOLOGICAL SURVEY, OREGON WATER SCIENCE CENTER
WATER AVAILABILITY REPORT FOR FEBRUARY 2020

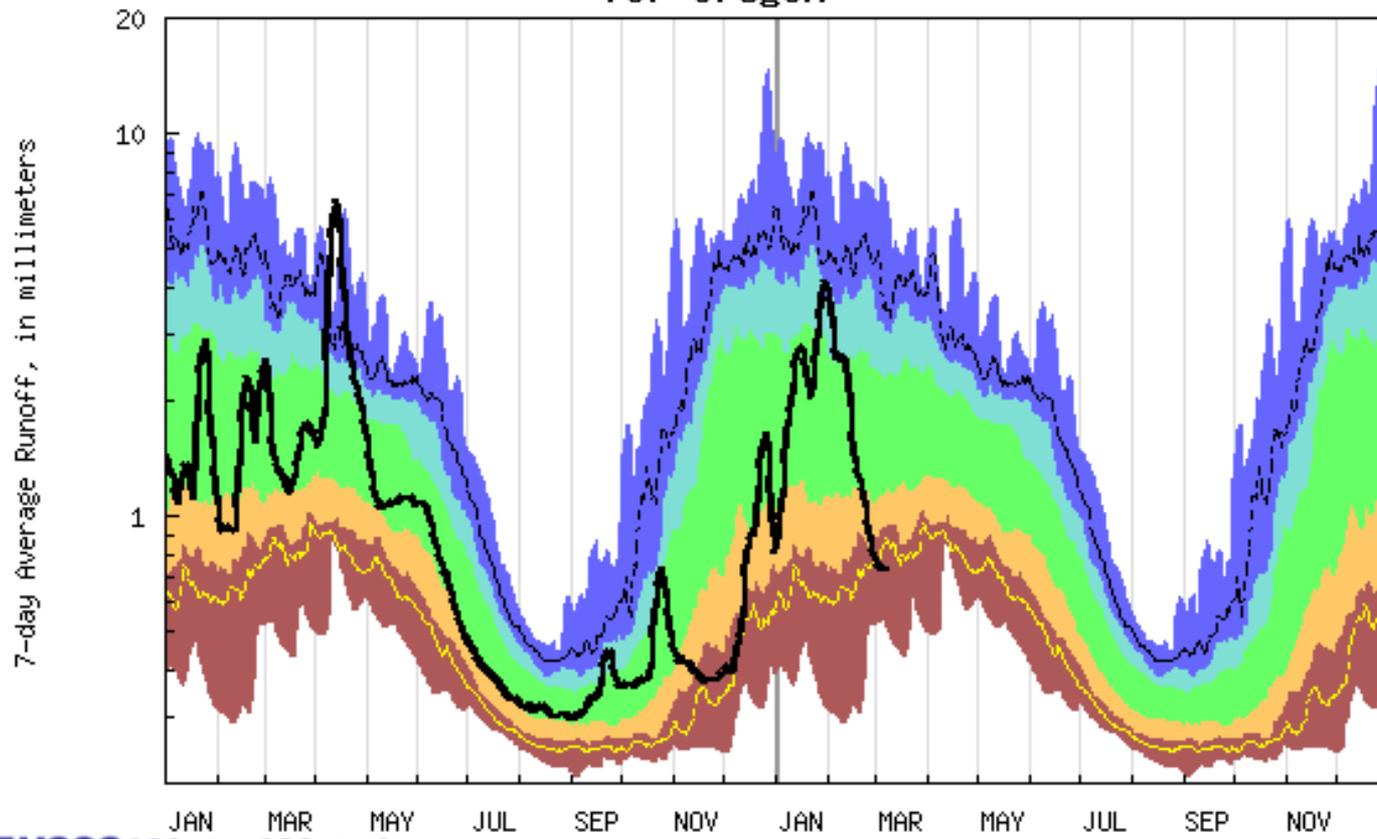
Station	NRCS SWSI Basin	Monthly mean discharge		Change in dis- charge from	Accumulated Runoff For the Period Oct. to Feb.
		Cubic feet per second	Percent of average	previous month (percent)	Percent of average
Donner Und Blitzen nr Frenchglen	Harney	57	62	-16	86
(*)Deep Creek above Adel	Lake County	61	51	0	59
(*)Chewaucan River near Paisley	Lake County	60	48	7	62
Williamson River near Chiloquin	Klamath	691	54	5	69
Owyhee River near Rome	Owyhee	616	52	63	67
(*)NF Malheur River near Beulah	Malheur	75	64	15	85
Grande Ronde R at Troy	Grande Ronde Powder/Burnt	5,410	169	268	106
Umatilla River nr Gibbon	Umatilla Lower John Day	1,157	327	300	163
John Day River at Service Crk	Upper John Day	2,256	86	222	65
(*)Little Deschutes River nr LaPine	Upper Deschutes	100	56	14	62
Hood River nr Hood River	Lower Deschutes Mt.Hood	1,444	99	-10	78
Willamette River at Salem	Willamette	31,289	92	-30	66
Wilson River near Tillamook	North Coast	2,151	104	-55	103
Umpqua River near Elkton	Rogue/Umpqua	8,907	67	-45	63
Rogue River near Agness	Rogue/Umpqua	4,137	44	-49	54
SF Coquille River at Powers	South Coast	538	35	-78	62
Chetco River near Brookings	South Coast	1,316	29	-79	63

All data should be considered provisional and subject to revision.
Percent of average computed using 30-year base period, water years 1981-2010.
(*) provided by Oregon Water Resources Department

3/3/2020



Duration hydrograph of 7-day average runoff for Oregon



USGS WaterWatch

2019

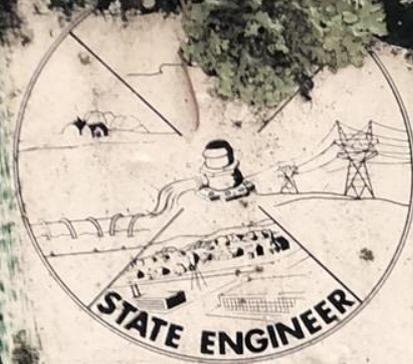
2020

Last updated: 2020-03-09

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

Water Supply Conditions Report

Water Supply Availability Committee

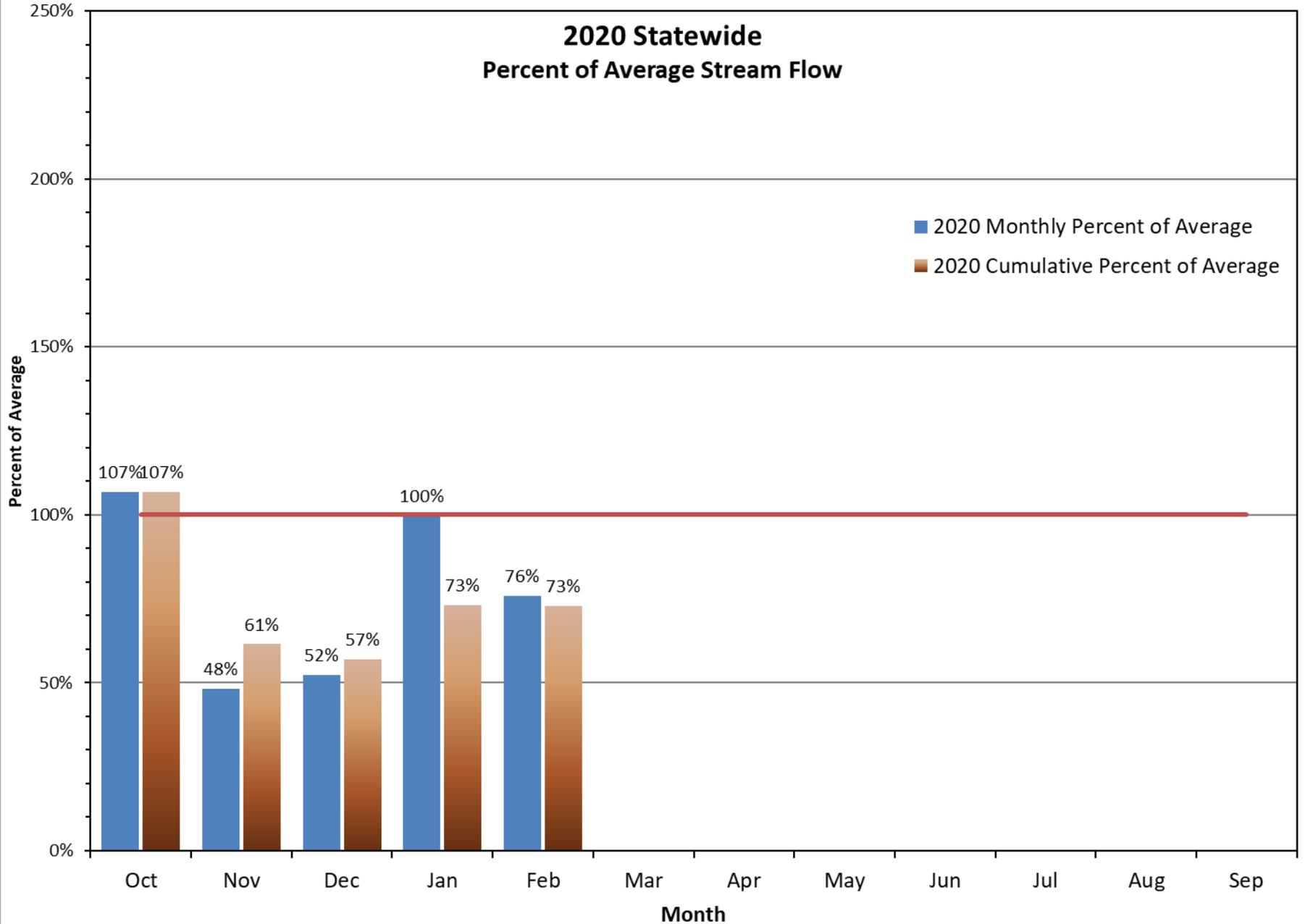


**STREAM
GAGING STATION
STATE ENGINEER**

WITH U. S. GEOLOGICAL SURVEY COOPERATION

Ken Stahr
Oregon Water Resources
Department
March 10, 2020

2020 Statewide Percent of Average Stream Flow





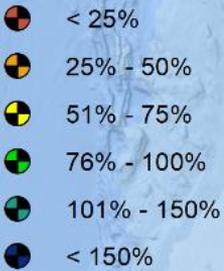
Basin	Water Year % of average thru February	% of average for February	% of average for 03/09/2020	# of data points
West Side	74%	76%	34%	45
East Side	73%	79%	53%	48
State	74%	78%	46%	93

Percent of Average Streamflow January, 2020

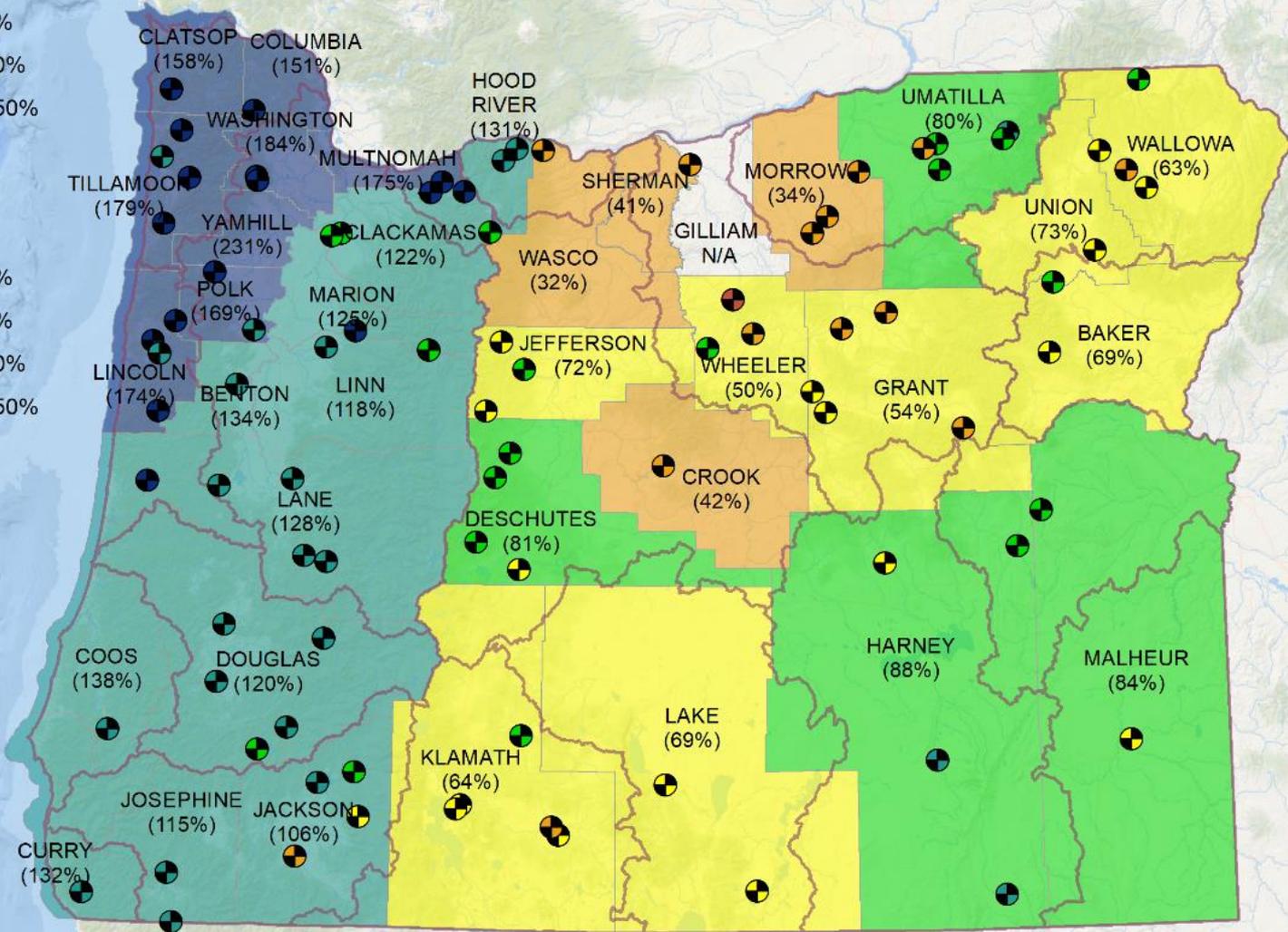
County



Stream gage



WRD Basin



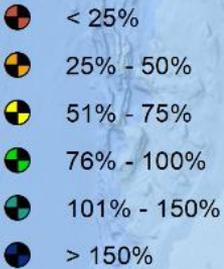
Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.

Percent of Average Streamflow February, 2020

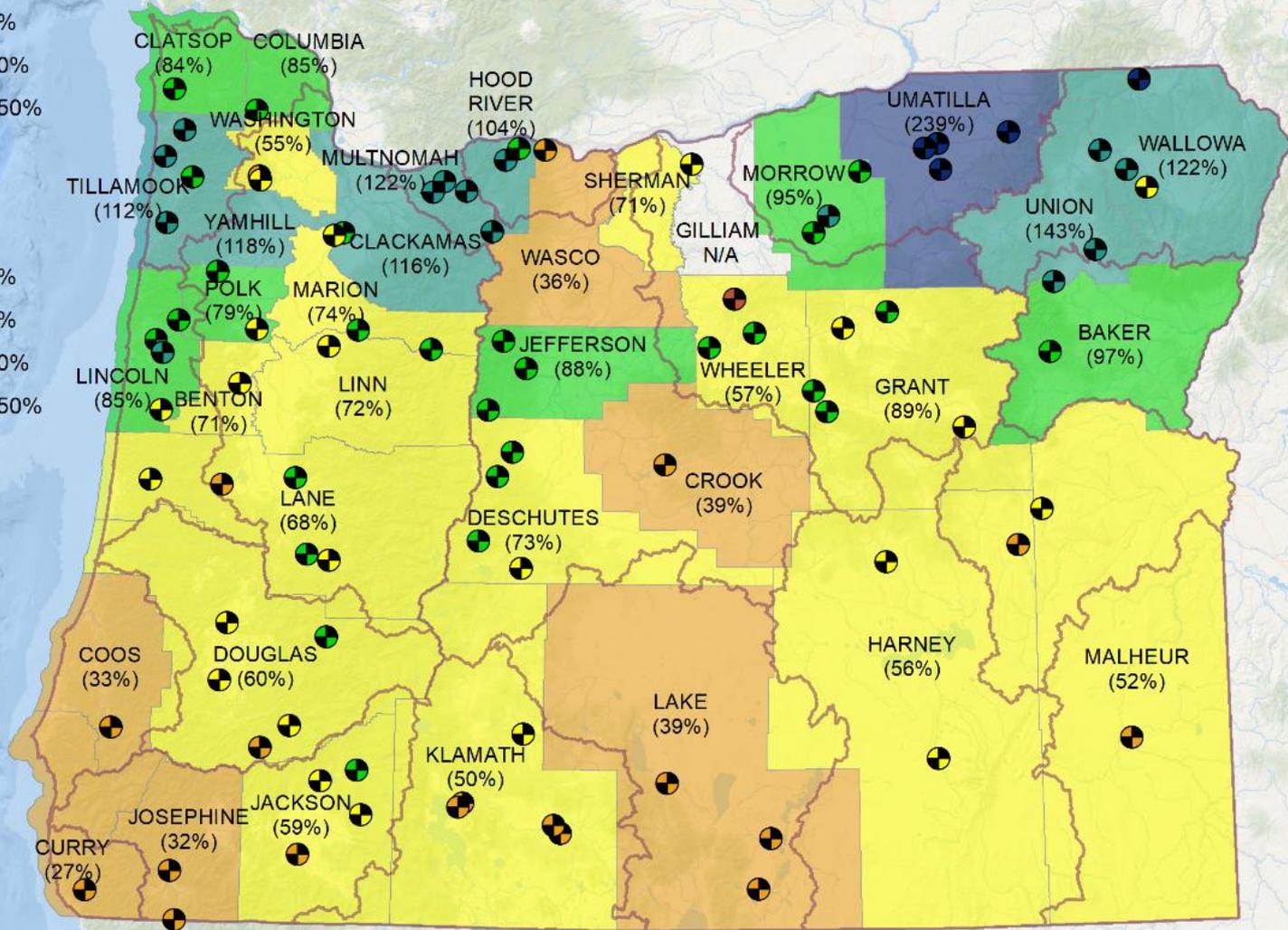
County



Stream Gauge

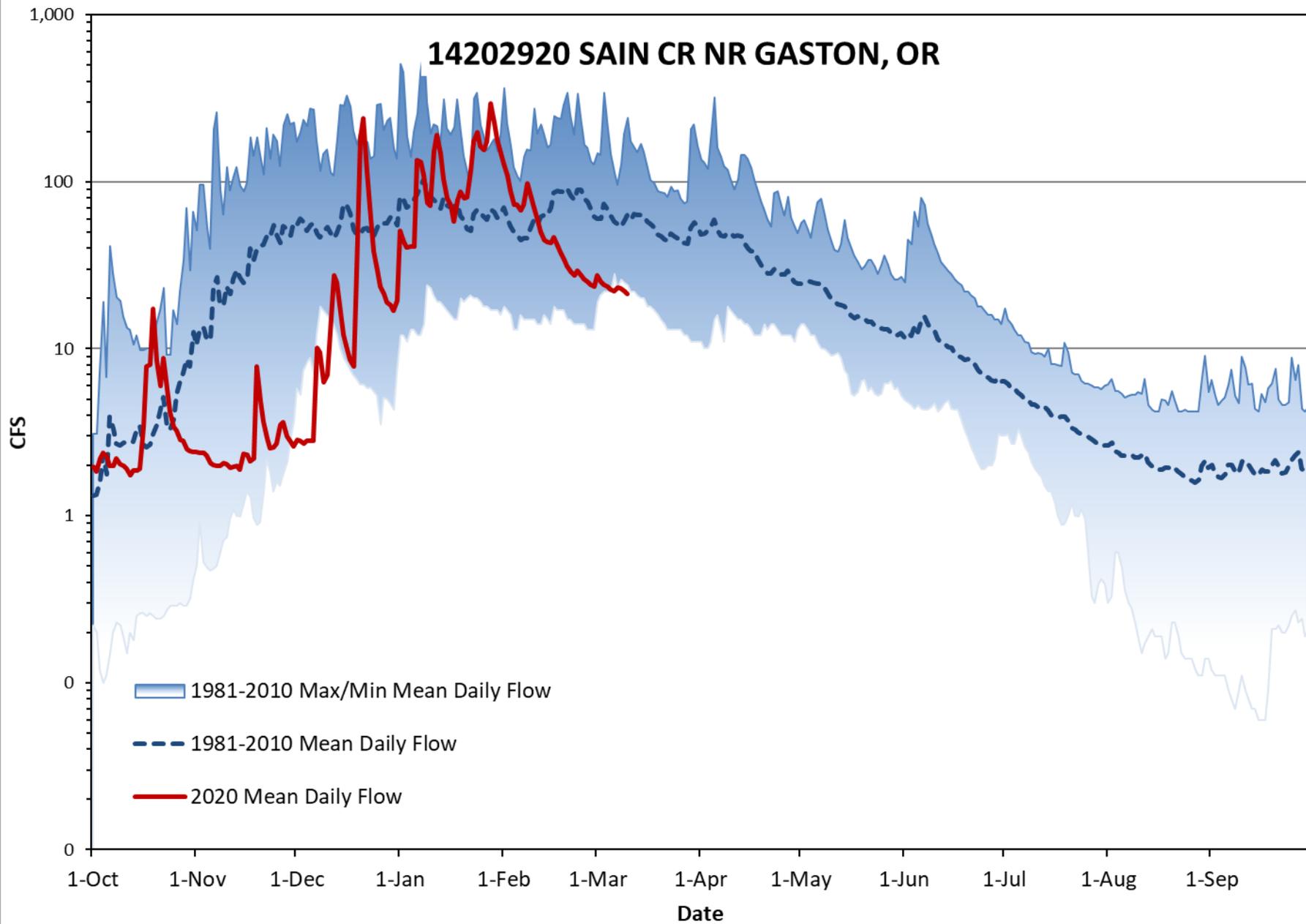


WRD Basin

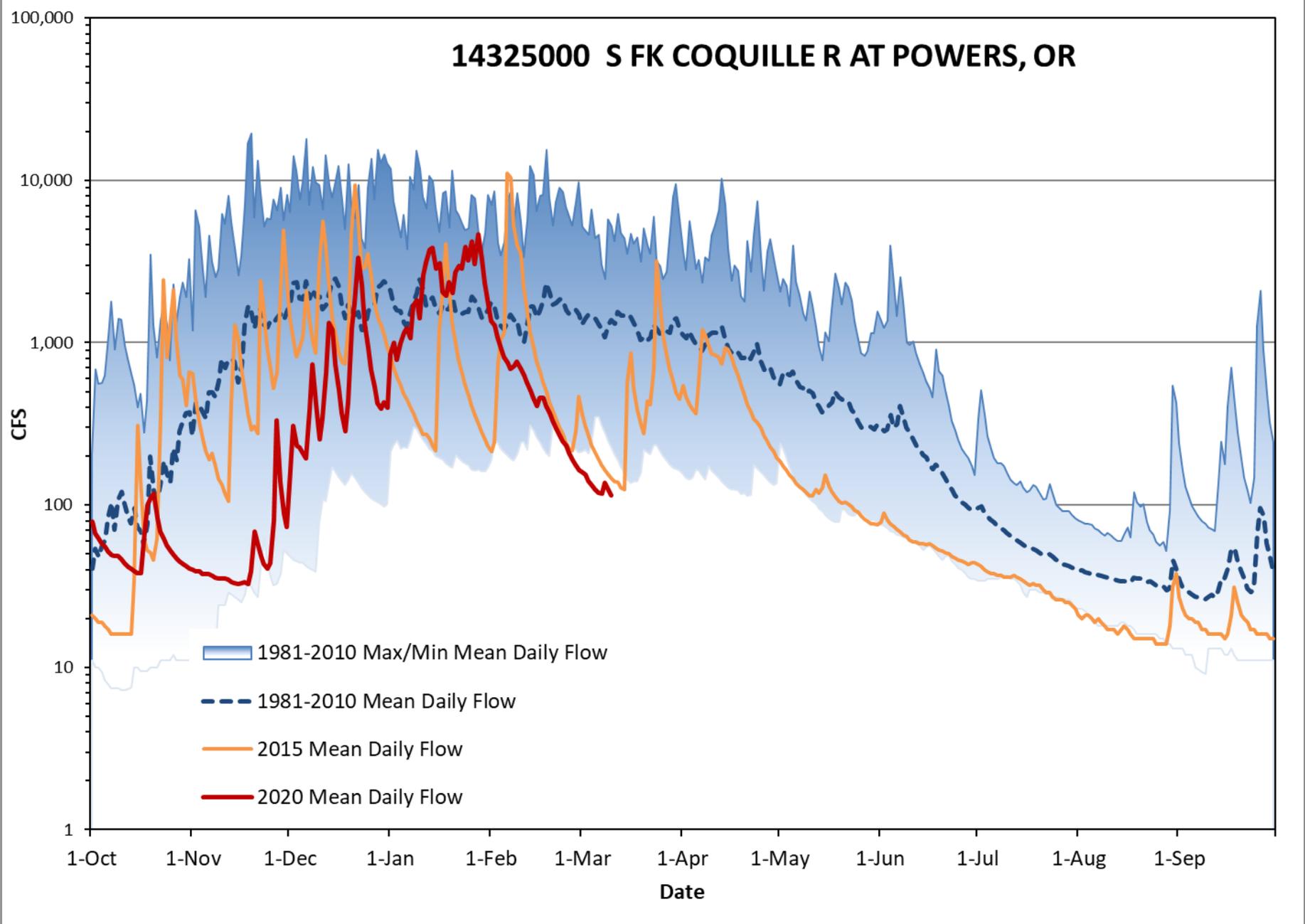


Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.

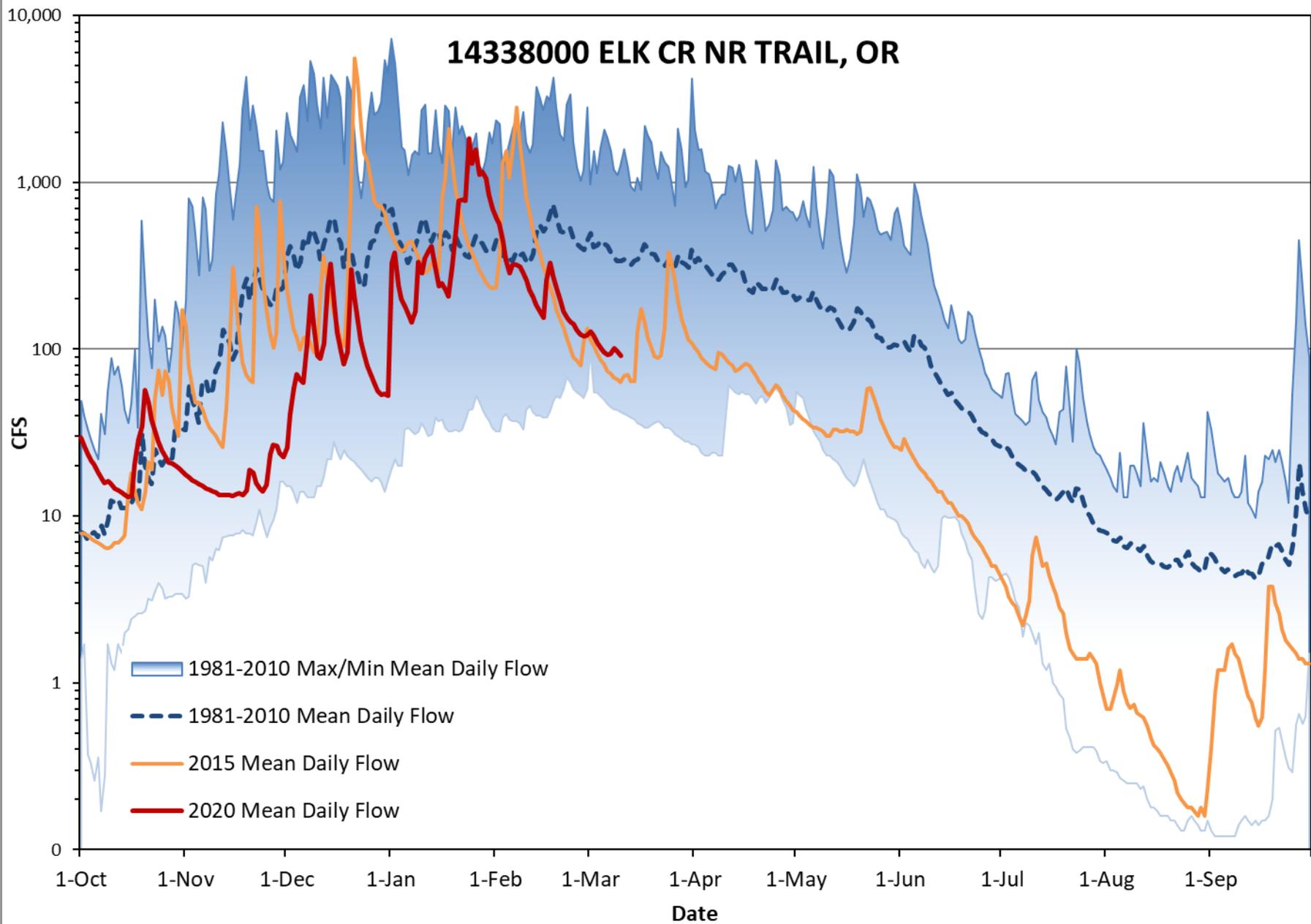
14202920 SAIN CR NR GASTON, OR



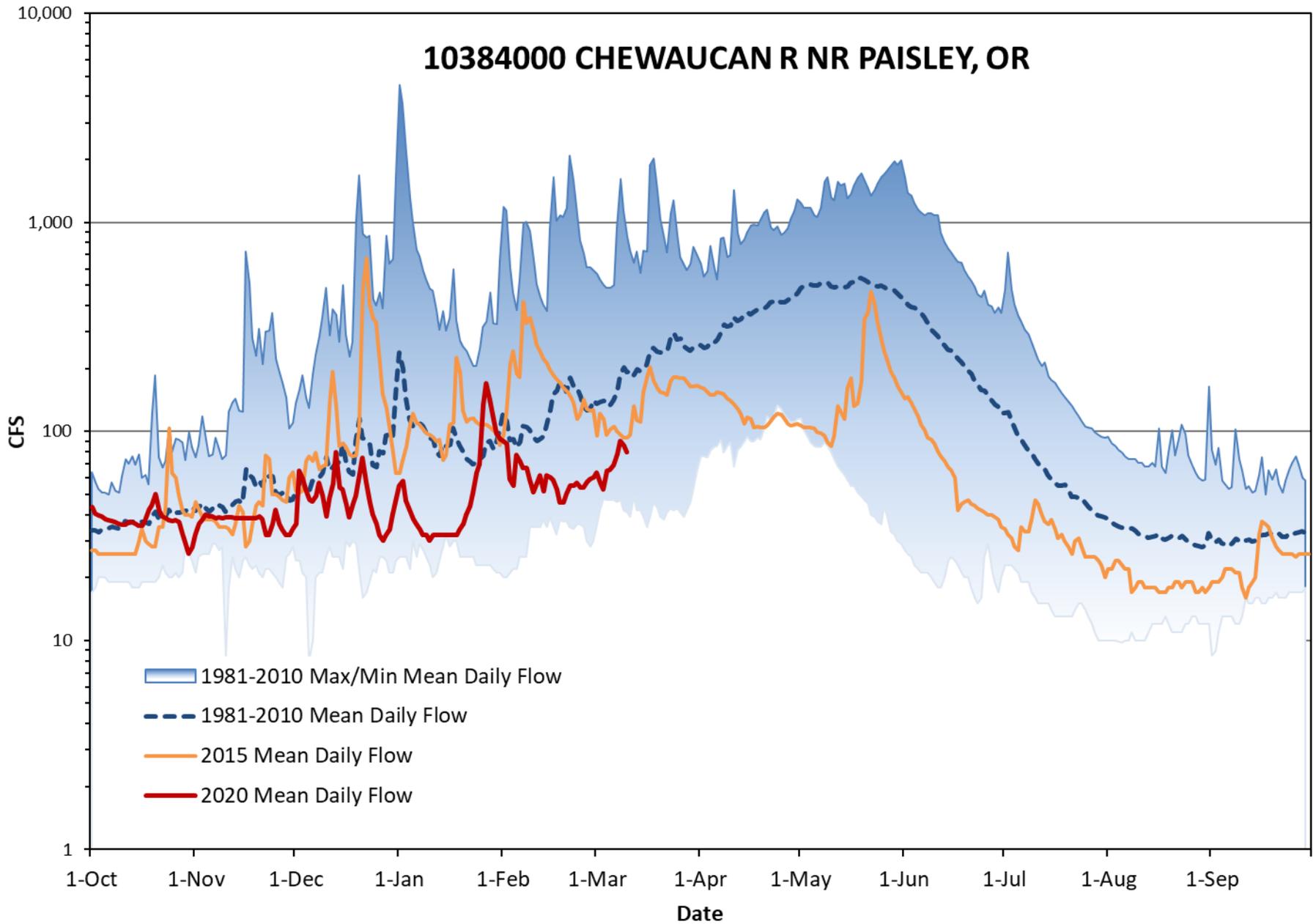
14325000 S FK COQUILLE R AT POWERS, OR



14338000 ELK CR NR TRAIL, OR



10384000 CHEWAUCAN R NR PAISLEY, OR



OREGON



WATER RESOURCES
DEPARTMENT

Thank you

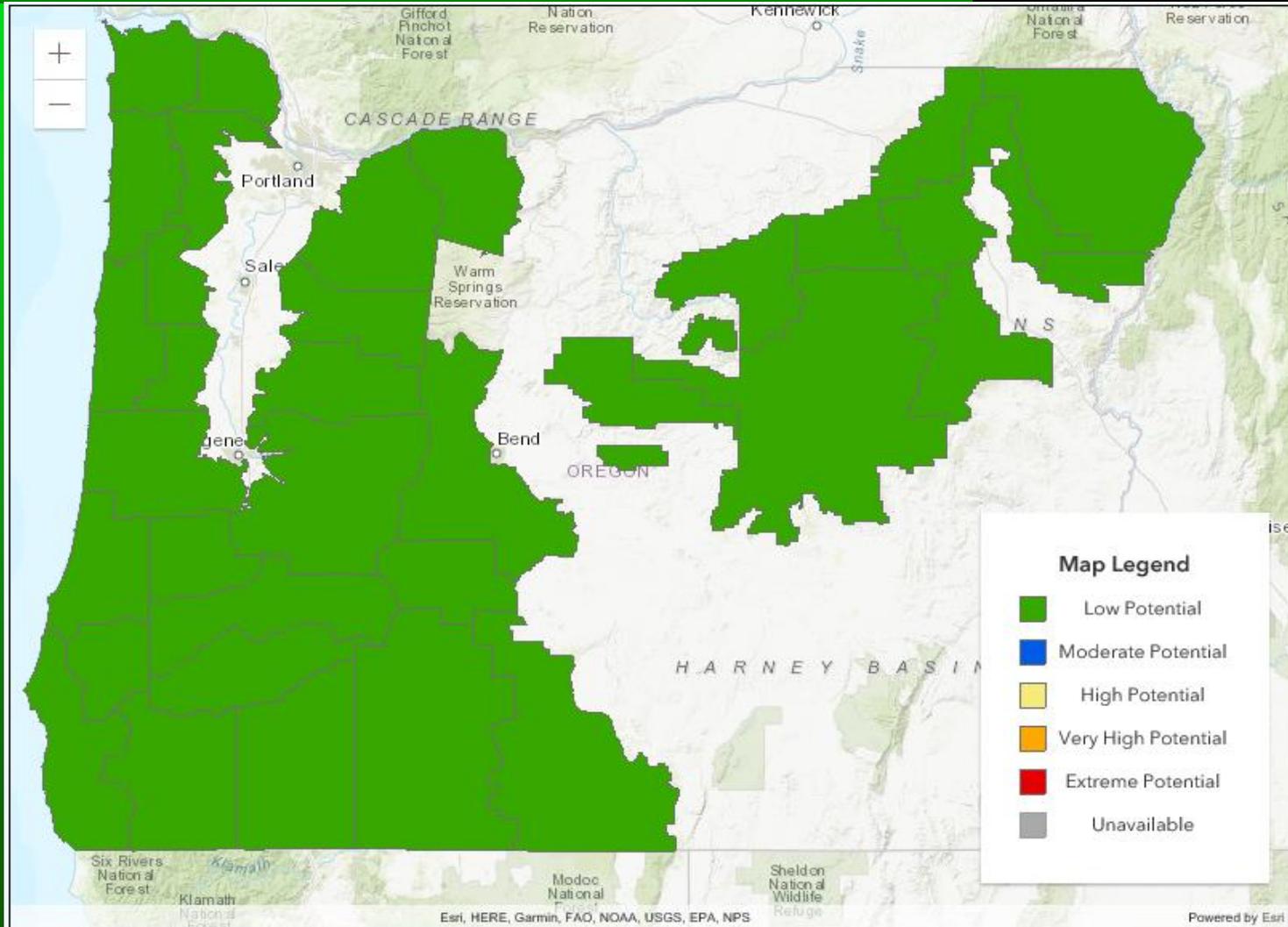


Water Supply Availability Committee



March 2020

Sig Fire Potential - 3/9



7 Day Sig Fire Potential – 3/10



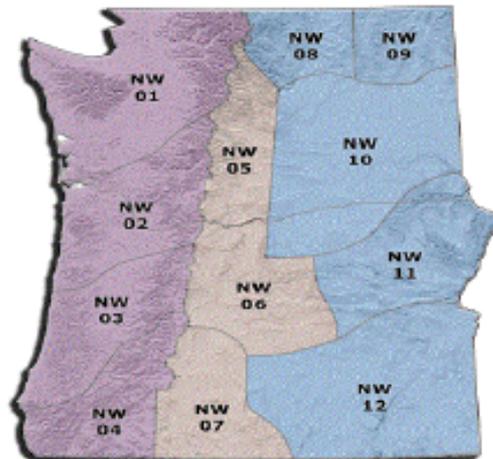
Pacific Northwest 7 Day Significant Fire Potential



Tuesday, March 10, 2020

Predictive Service
Areaac

	ytd	tdy	Wed	Thu	Fri	Sat	Sun	Mon
NW01								
NW02								
NW03								
NW04								
NW05								
NW06								
NW07								
NW08								
NW09								
NW10								
NW11								
NW12								



Legend

Fire Environment (FEN) 4 levels

Minimal	- The Overall Fire Environment suggests a very low risk for Large fires (less than 1% chance)
Normal	- The Overall Fire Environment suggests a normal risk for large fires (1 - 4% chance)
Elevated	- The Overall Fire Environment suggests a moderately high risk for large fires (5 - 19% chance)
High Risk	- The risk for large fire(s) is very high ($\geq 20\%$) Triggers: 1. \mathcal{N} (Significant Lightning) 2. BEN (Critical Burn Environment)

The assessment of the overall fire environment considers multiple factors including weather, lightning amount and fuel dryness. Large Fire probabilities are derived objectively via statistical methods. High Risk levels ($\geq 20\%$ probability of a large fire) are almost always due to significant lightning as burning conditions alone rarely result in a large fire probability much above about 10%.

Fire Weather: A weak system brings some showers to higher elevations in Western Washington, Northwest Oregon and maybe Northeast Washington later today into tomorrow before things dry out again Thursday. Cooler air will drop down from Canada Friday along with more widespread showers across the region for the weekend. General winds will be light, but could get breezy through the Columbia Gorge Wednesday and across the east side next weekend. See your local NWS forecast for details in your area.

Fire Potential: Significant fire potential will stay low through the next week. Units conducting burns should check spot forecasts for wind impacts.

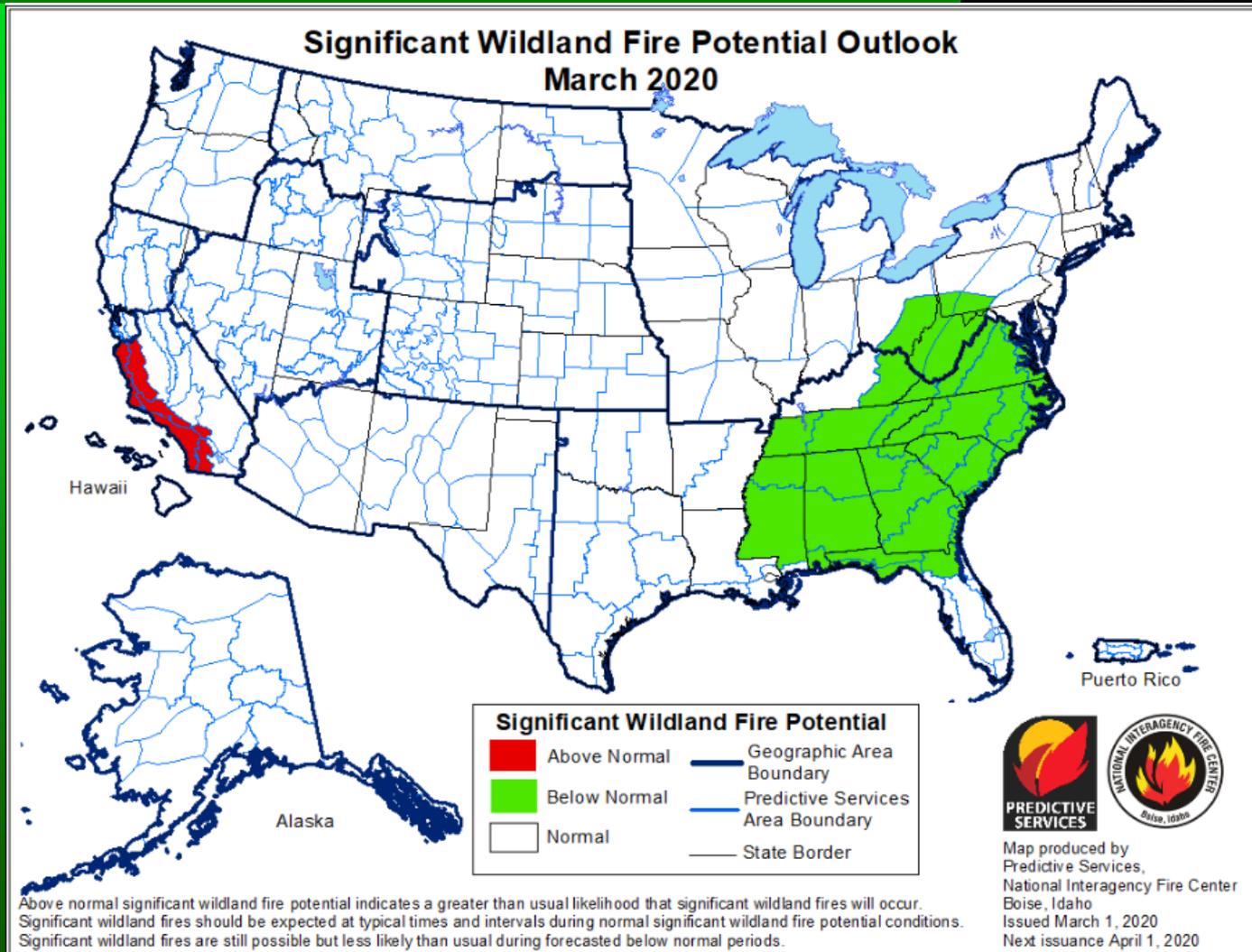
Preparedness Level:

Northwest: 1
National: 1

- Eric Wise

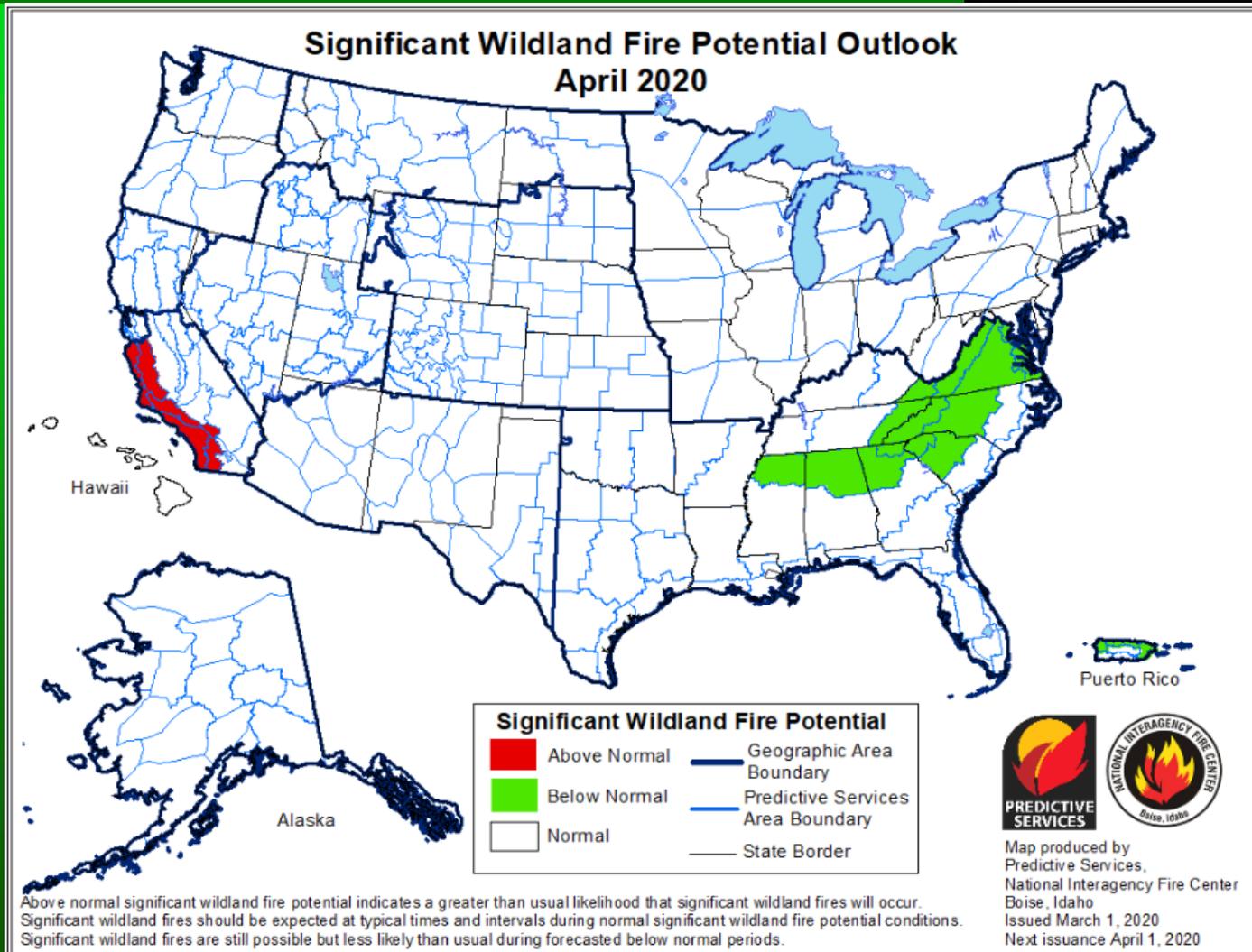
Sig Fire Potential Outlook

March



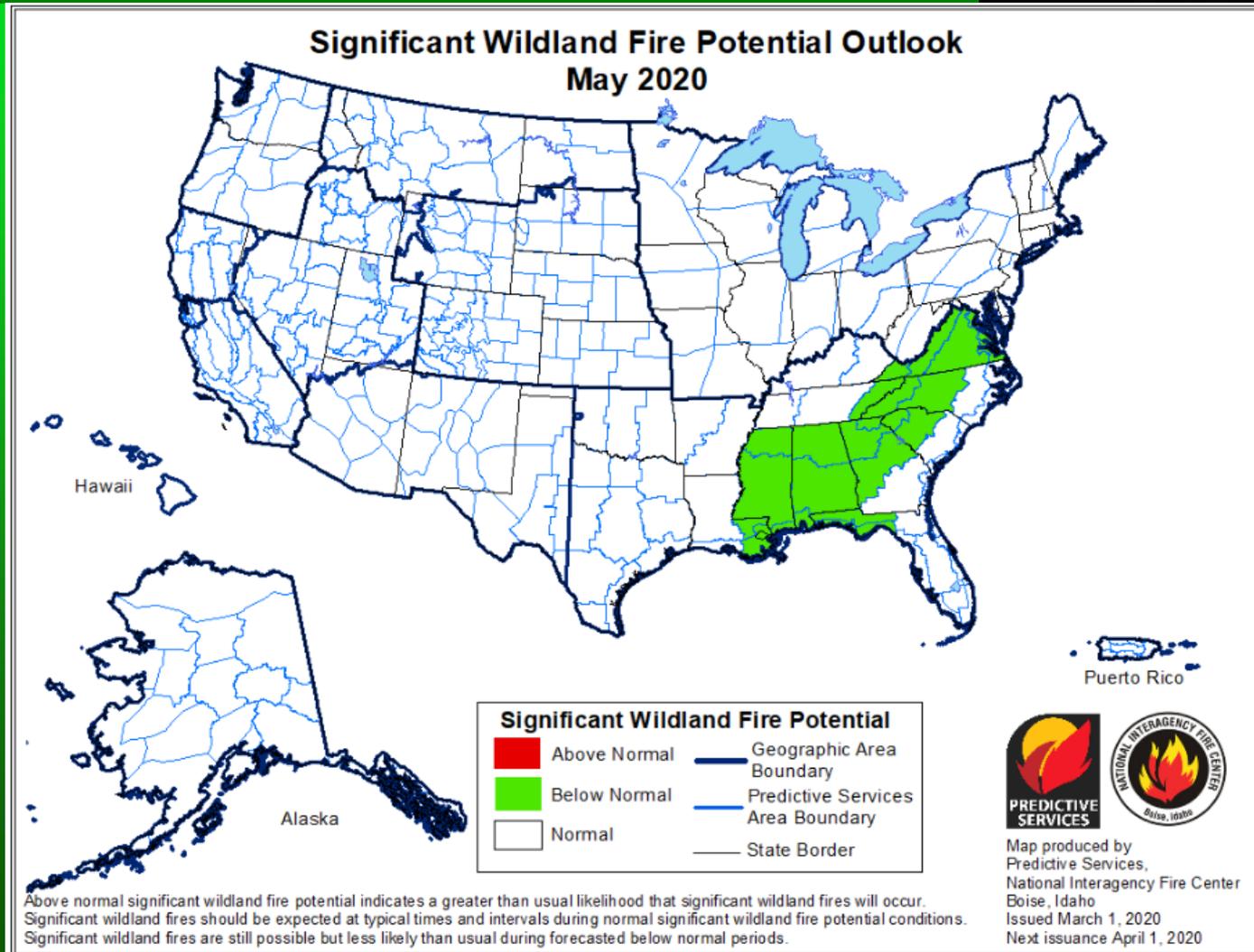
Sig Fire Potential Outlook

April



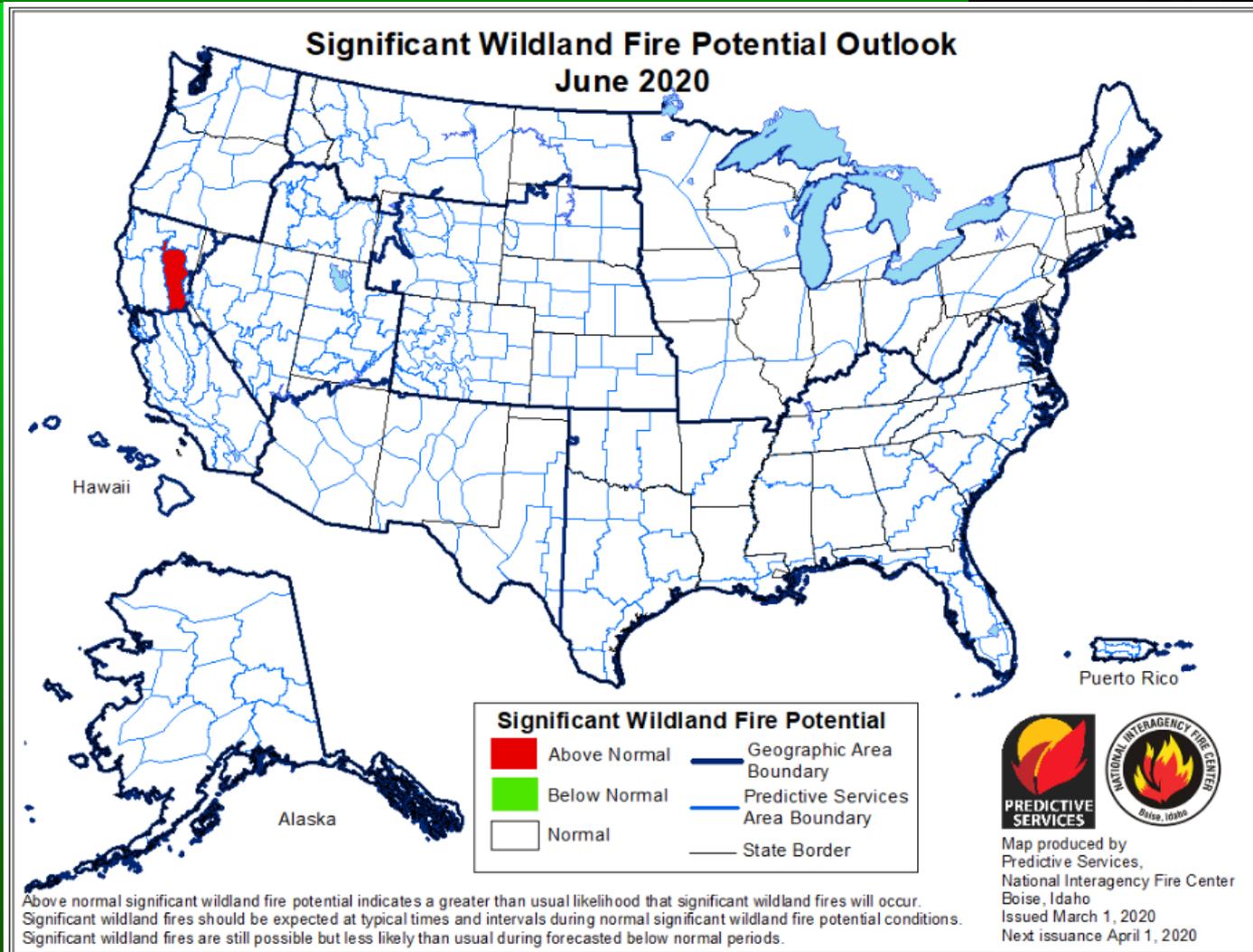
Sig Fire Potential Outlook

May



Sig Fire Potential Outlook

June





Sig Fire Potential Update



Nick.J.Yonker@Oregon.gov