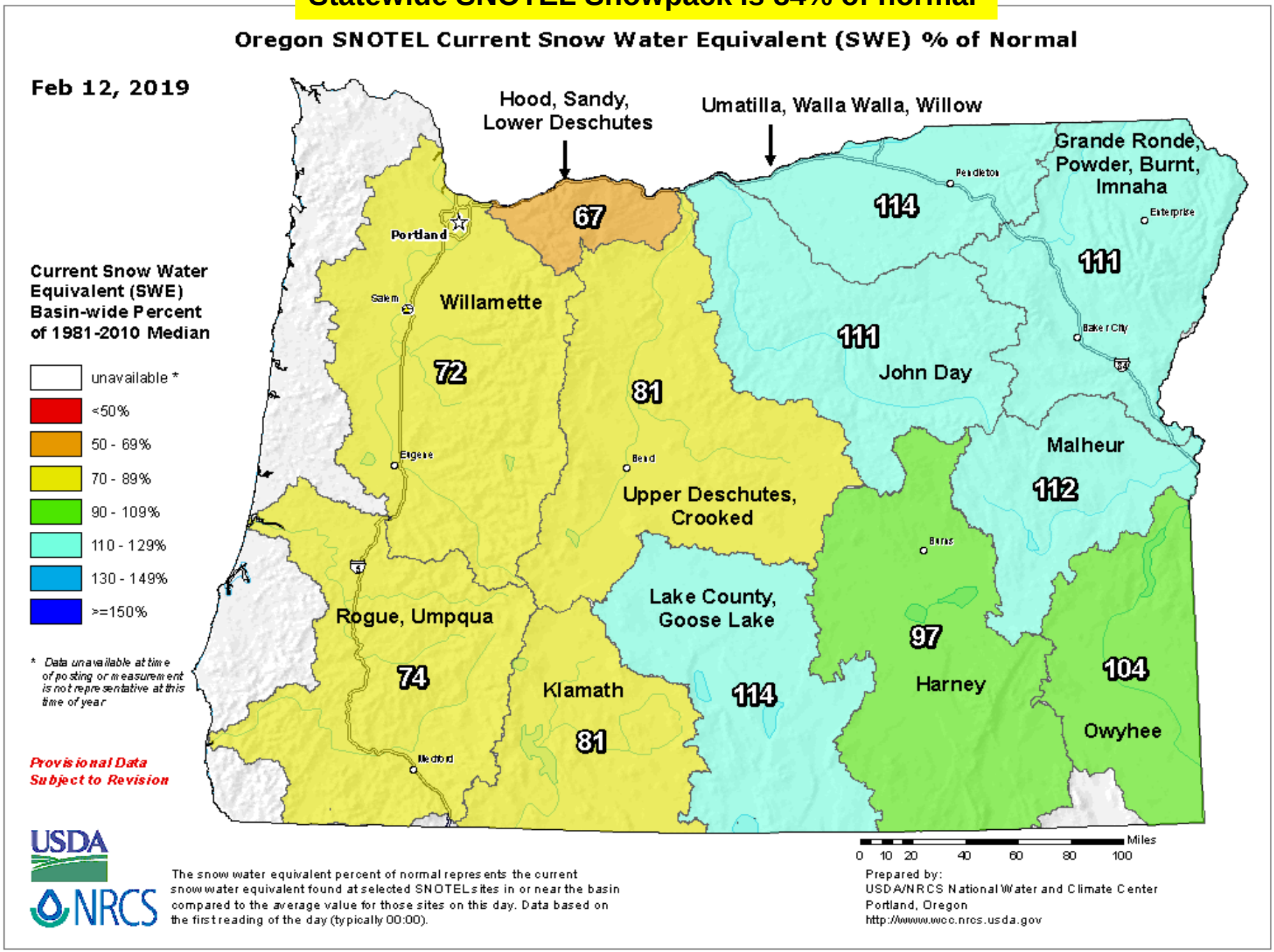
Oregon Water Supply Availability Committee
February 12, 2019

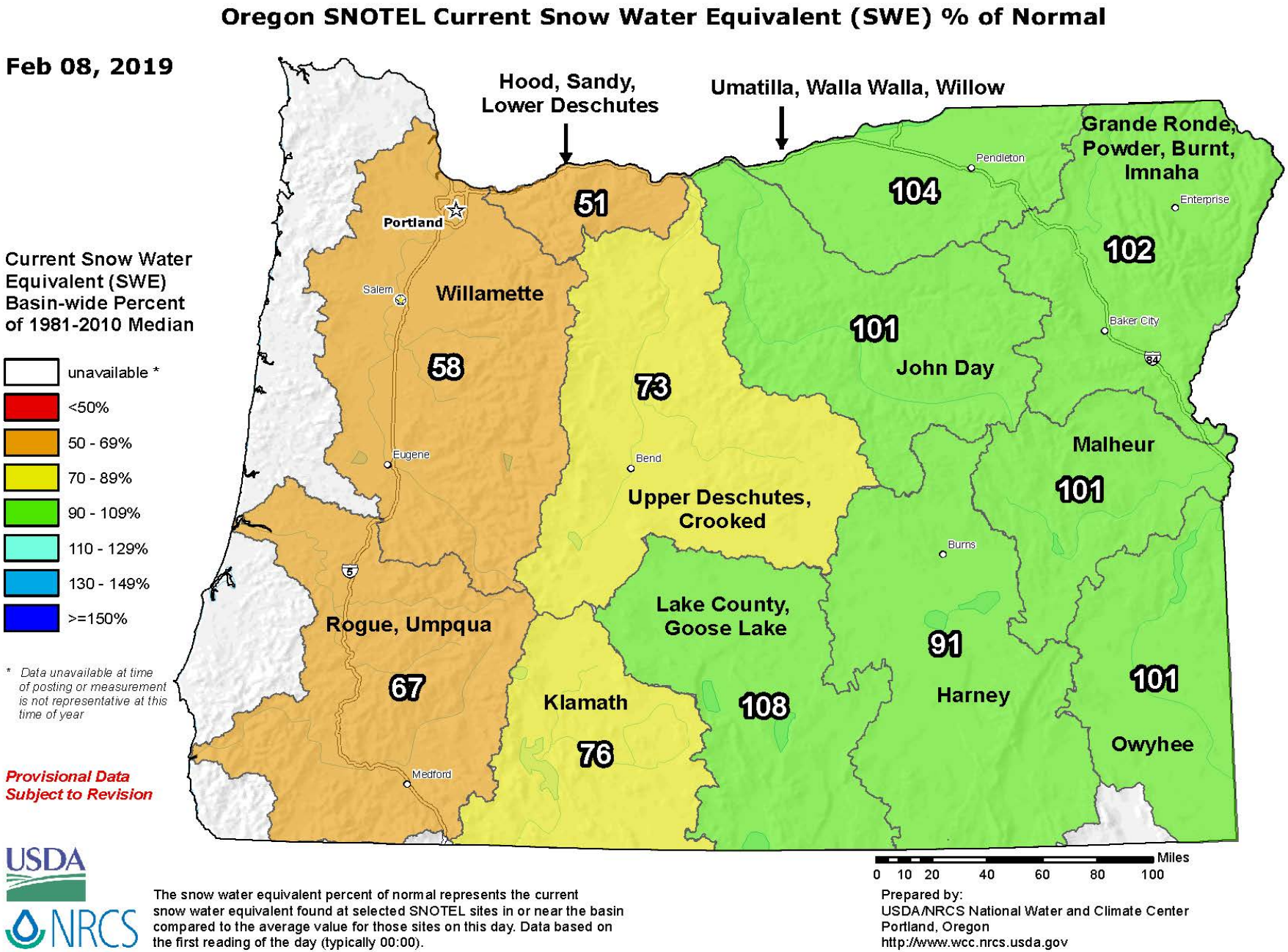
Greenpoint SNOTEL Site
Hood River County
02/08/2019
SWE = 5.4”
37% Normal
Elev = 3310’

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

Statewide SNOTEL Snowpack is 84% of normal



Statewide SNOTEL Snowpack was 72% of normal



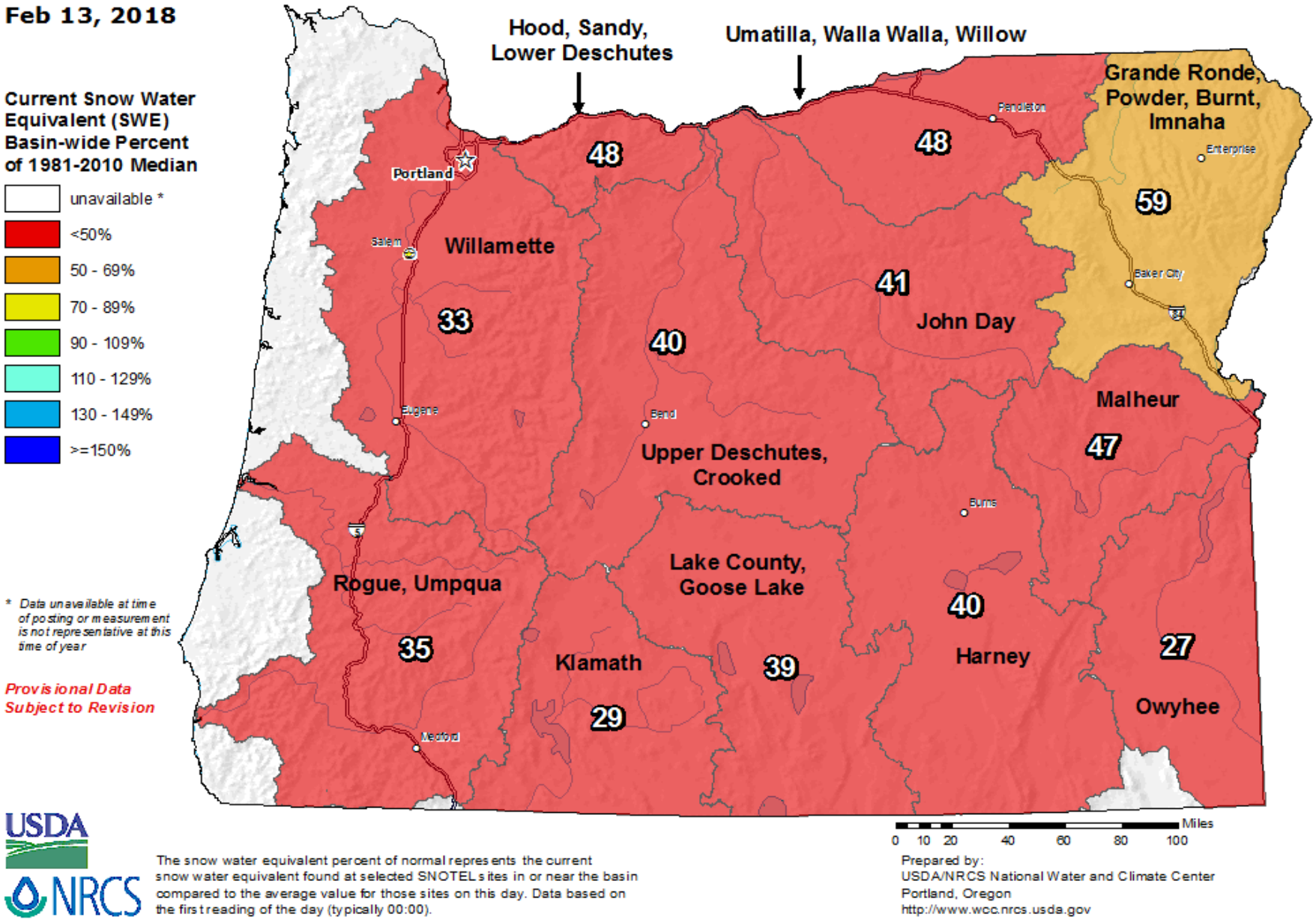
USDA NRCS

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).

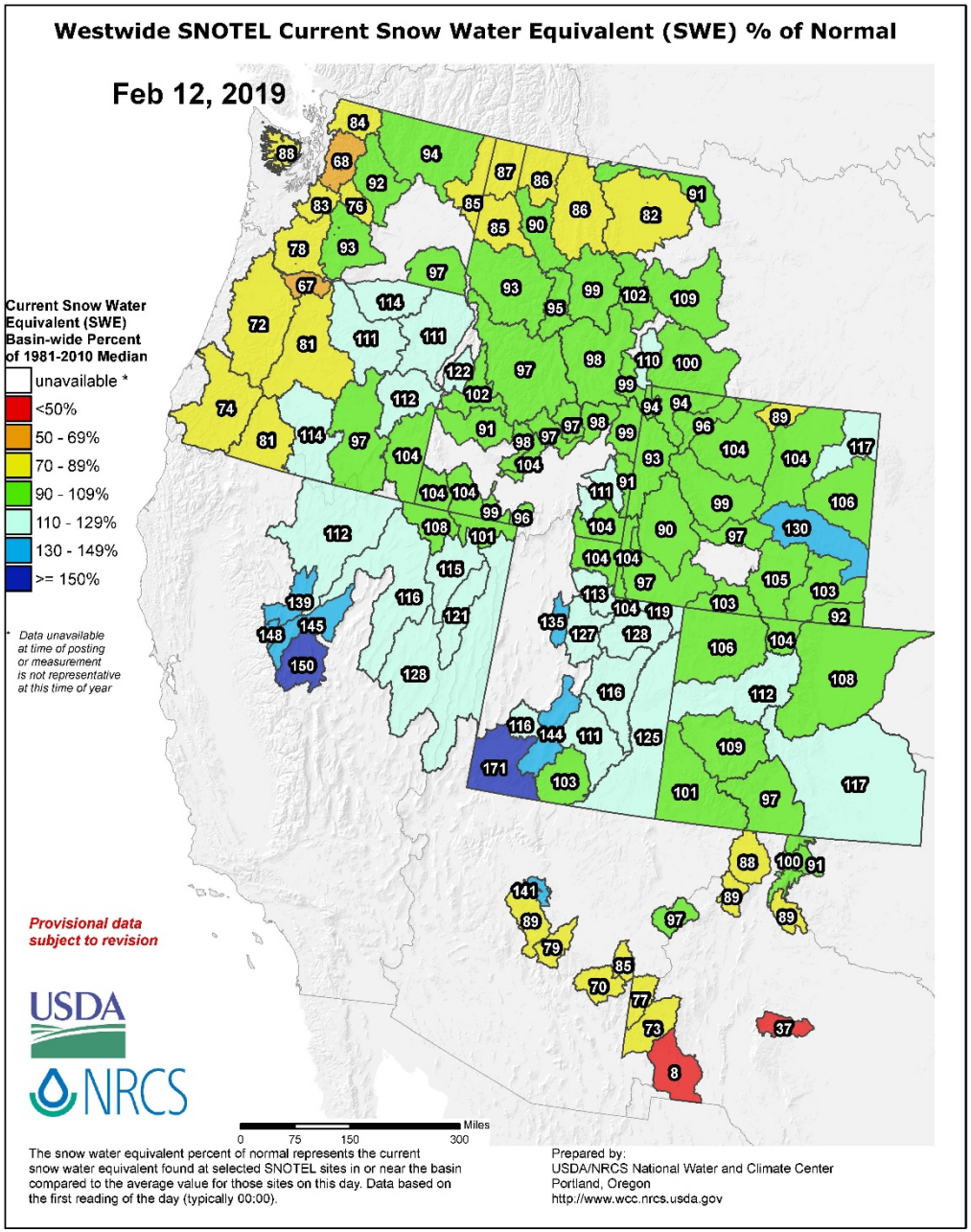
Prepared by:
USDA/NRCS National Water and Climate Center
Portland, Oregon
http://www.wcc.nrcs.usda.gov

Statewide SNOTEL Snowpack is 39% of normal (25% of Normal In 2015)

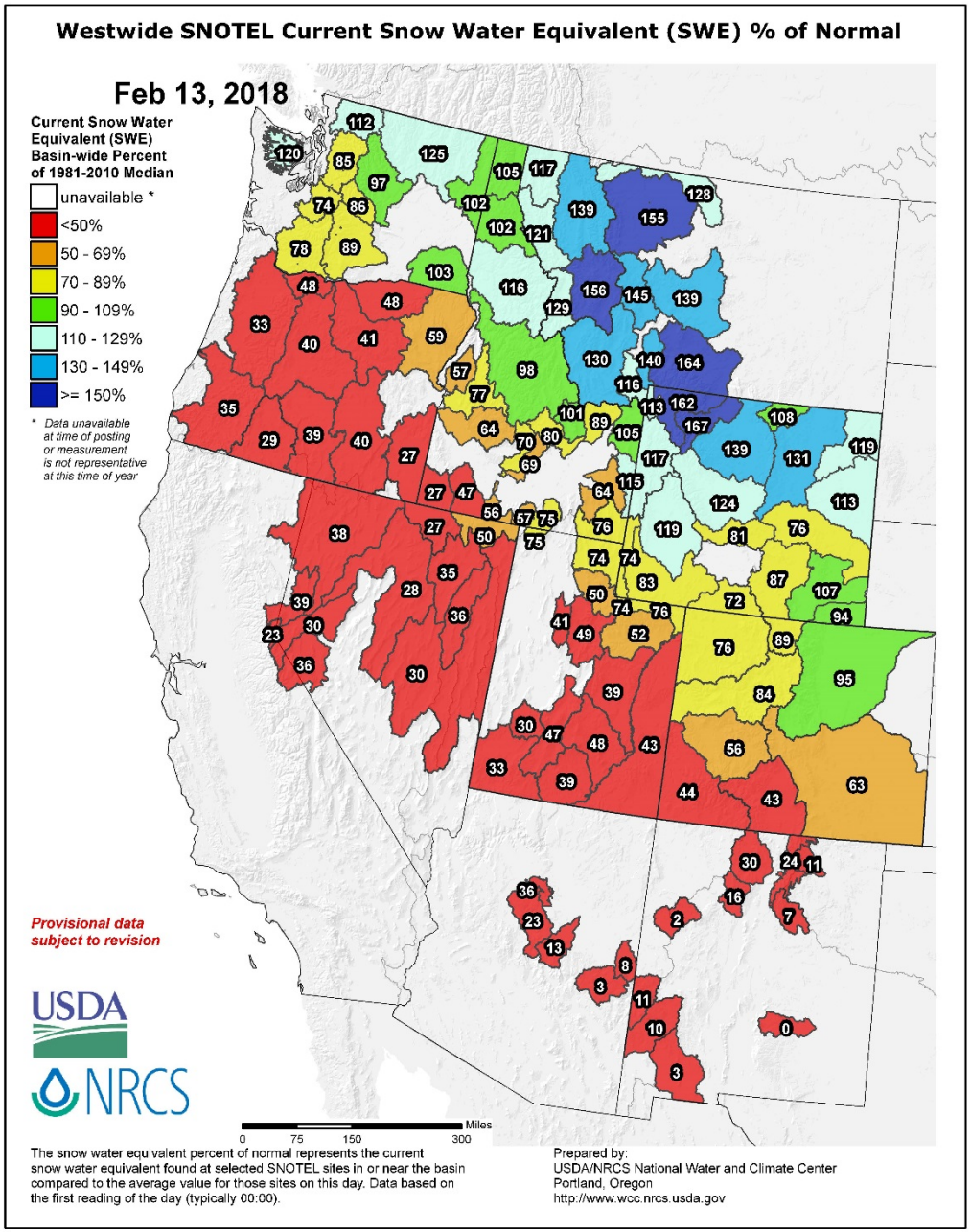
Oregon SNOTEL Current Snow Water Equivalent (SWE) % of Normal



West-Wide Snowpack – February 12, 2019

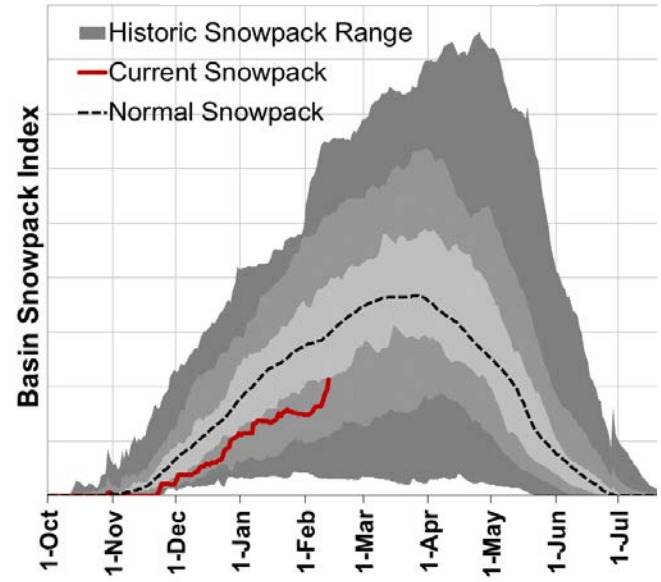


West-Wide Snowpack – February 13, 2018

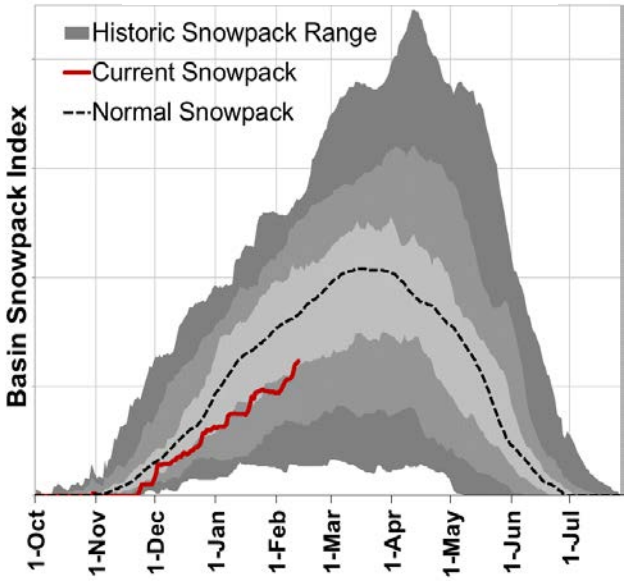


February 12, 2019

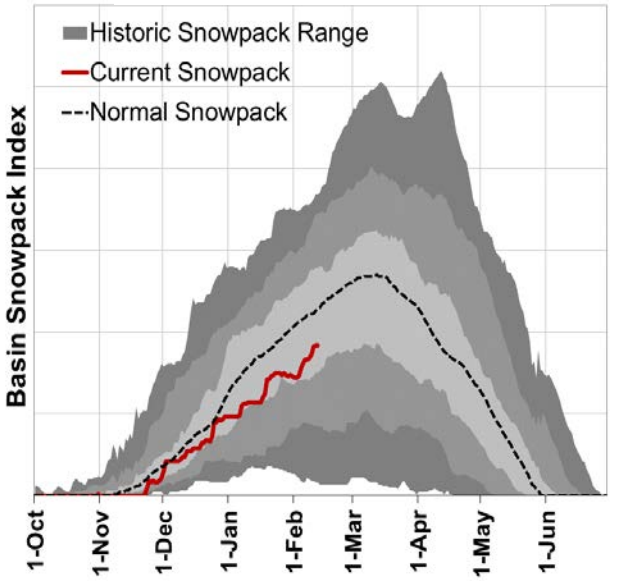
Willamette



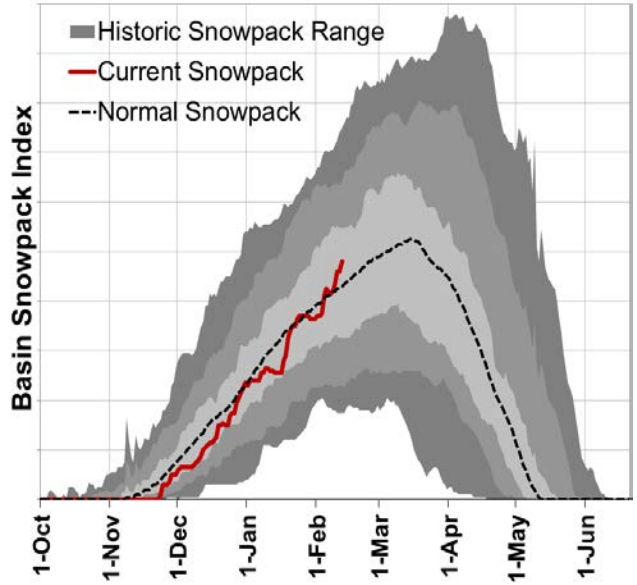
Rogue/Umpqua



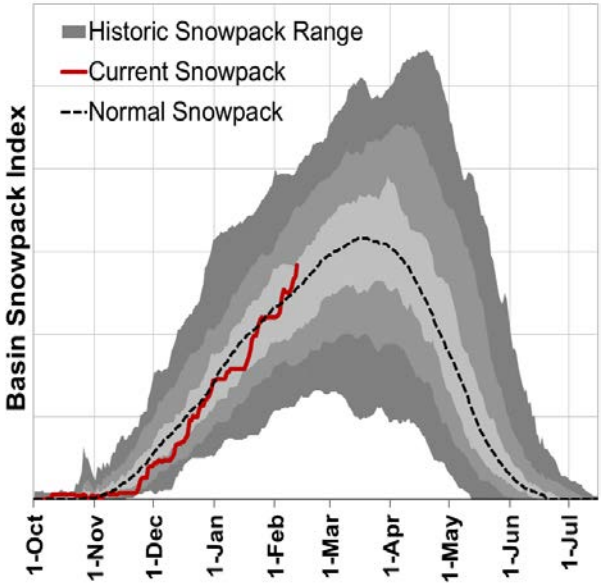
Klamath



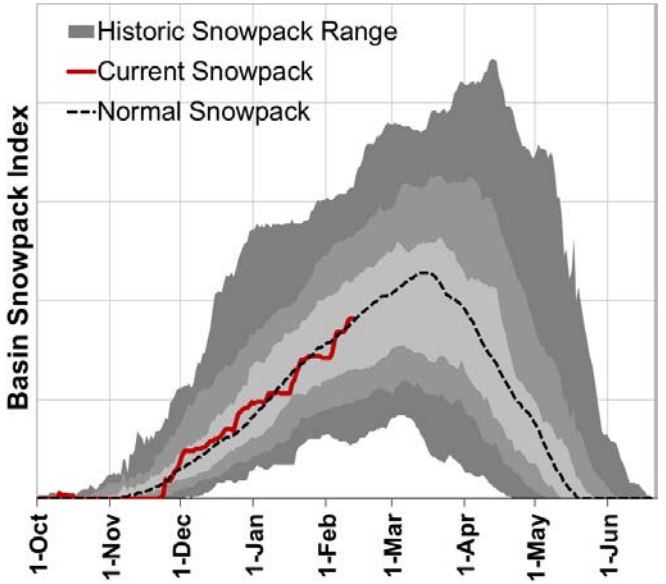
John Day



Grande Ronde/Powder/Burnt

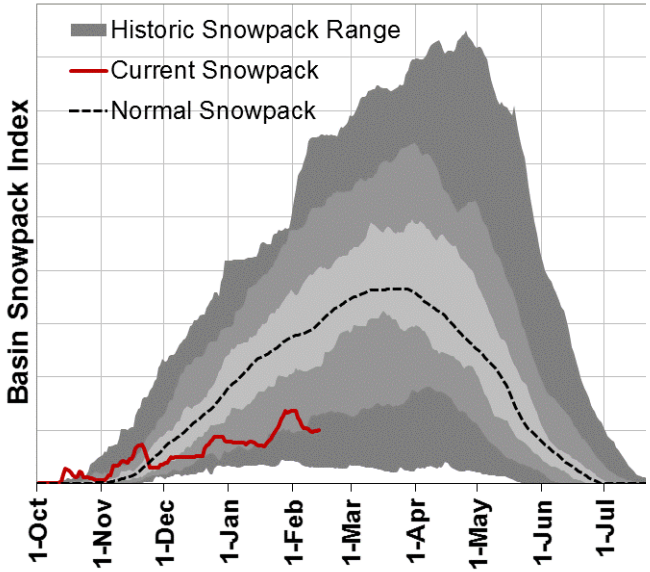


Owyhee/Malheur

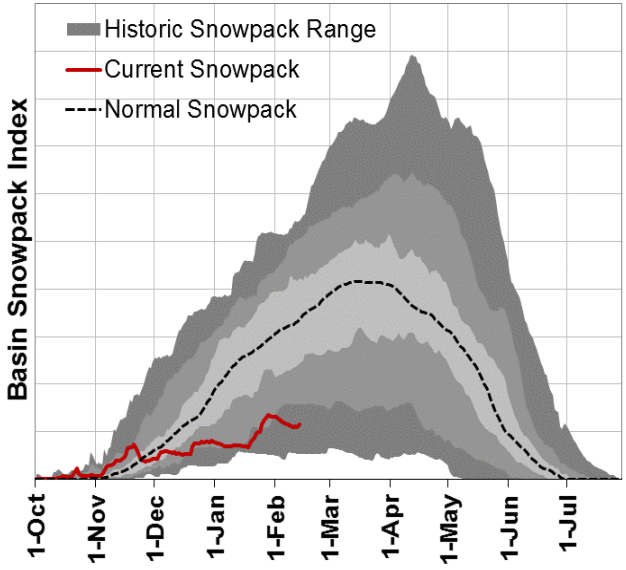


February 13, 2018

Willamette



Rogue/Umpqua



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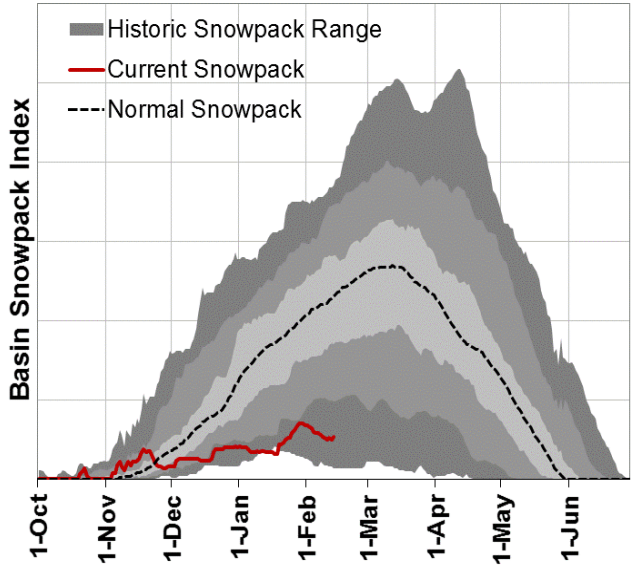
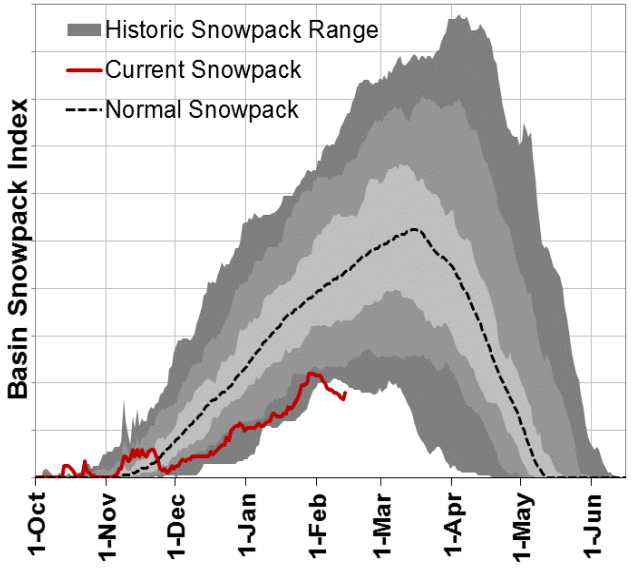
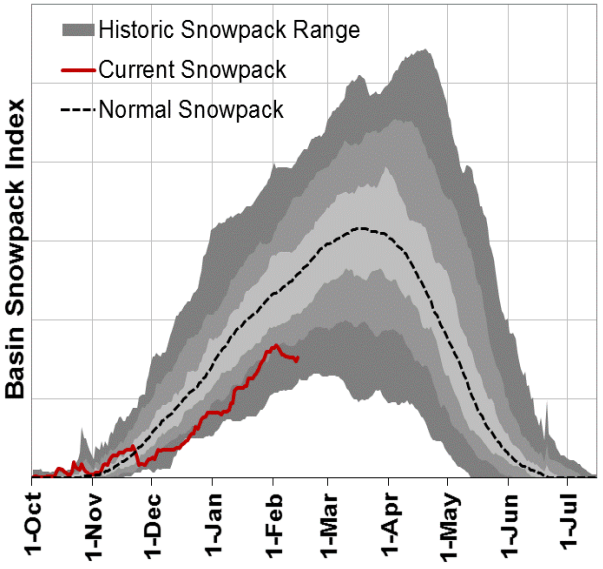


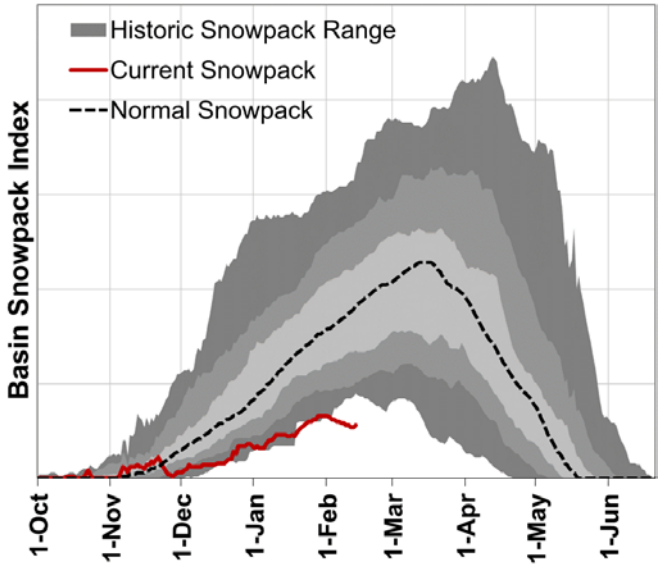
John Day



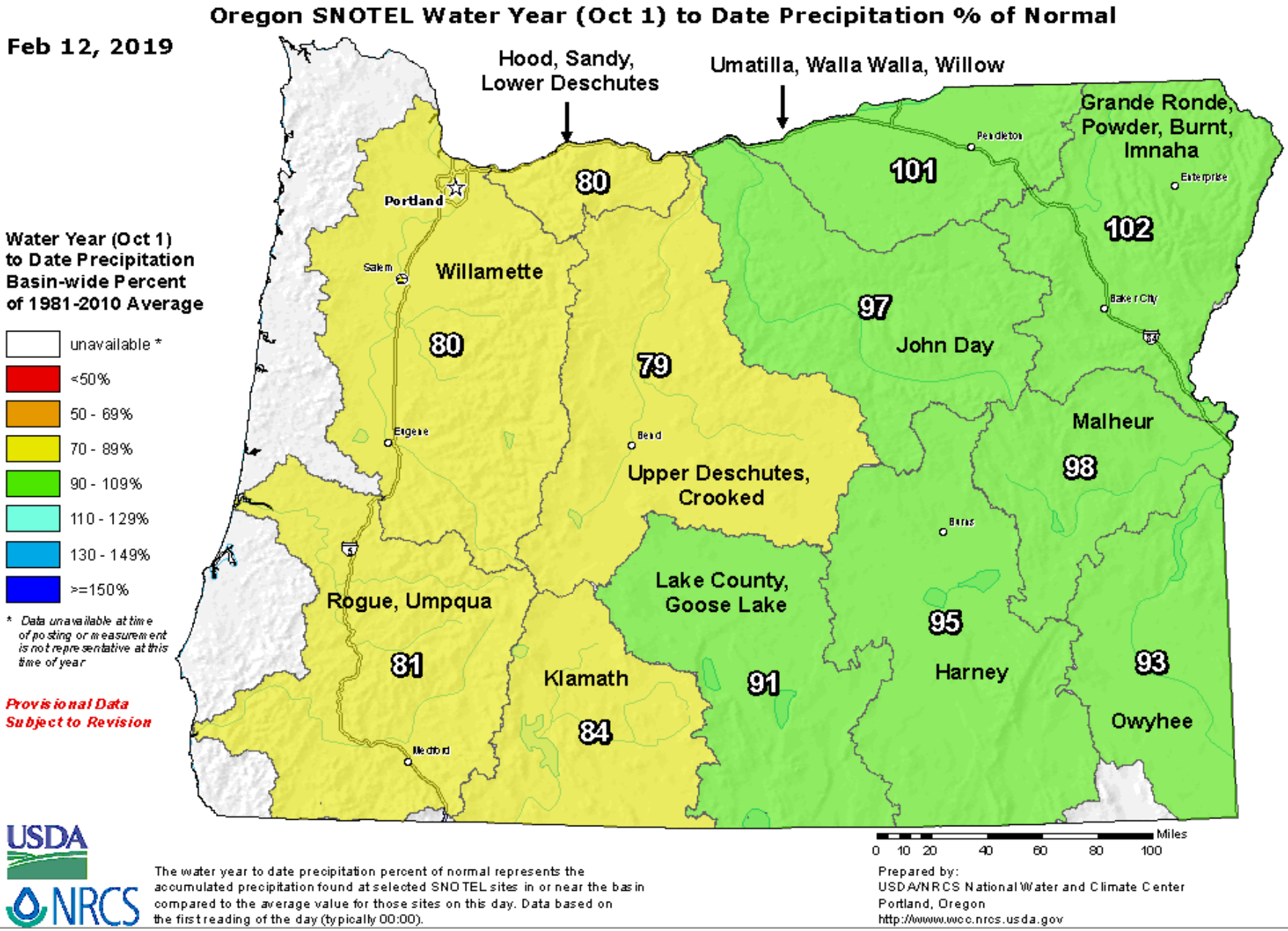
Grande Ronde/Powder/Burnt



Owyhee/Malheur



Statewide SNOTEL Precipitation is 84% of normal



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:
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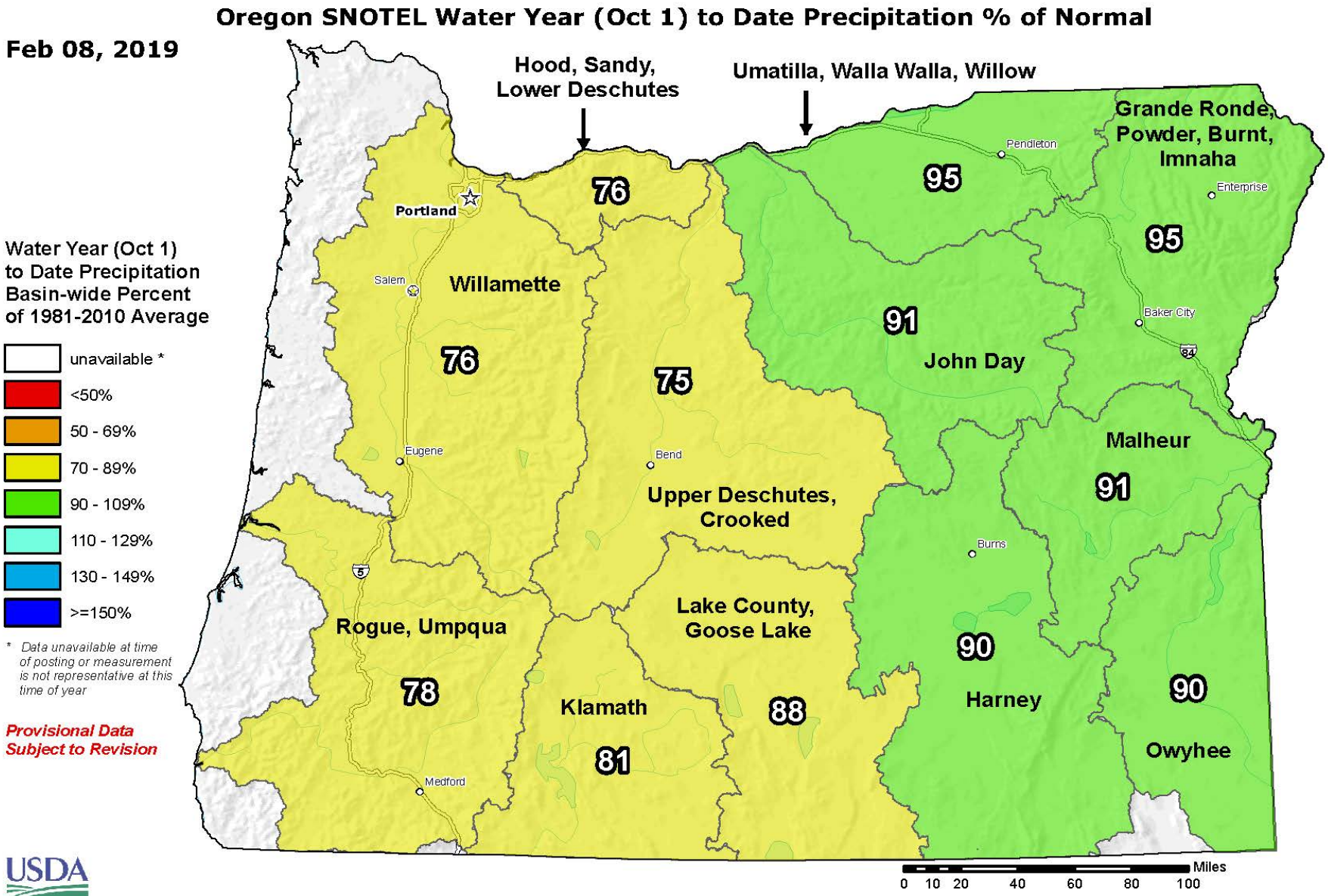
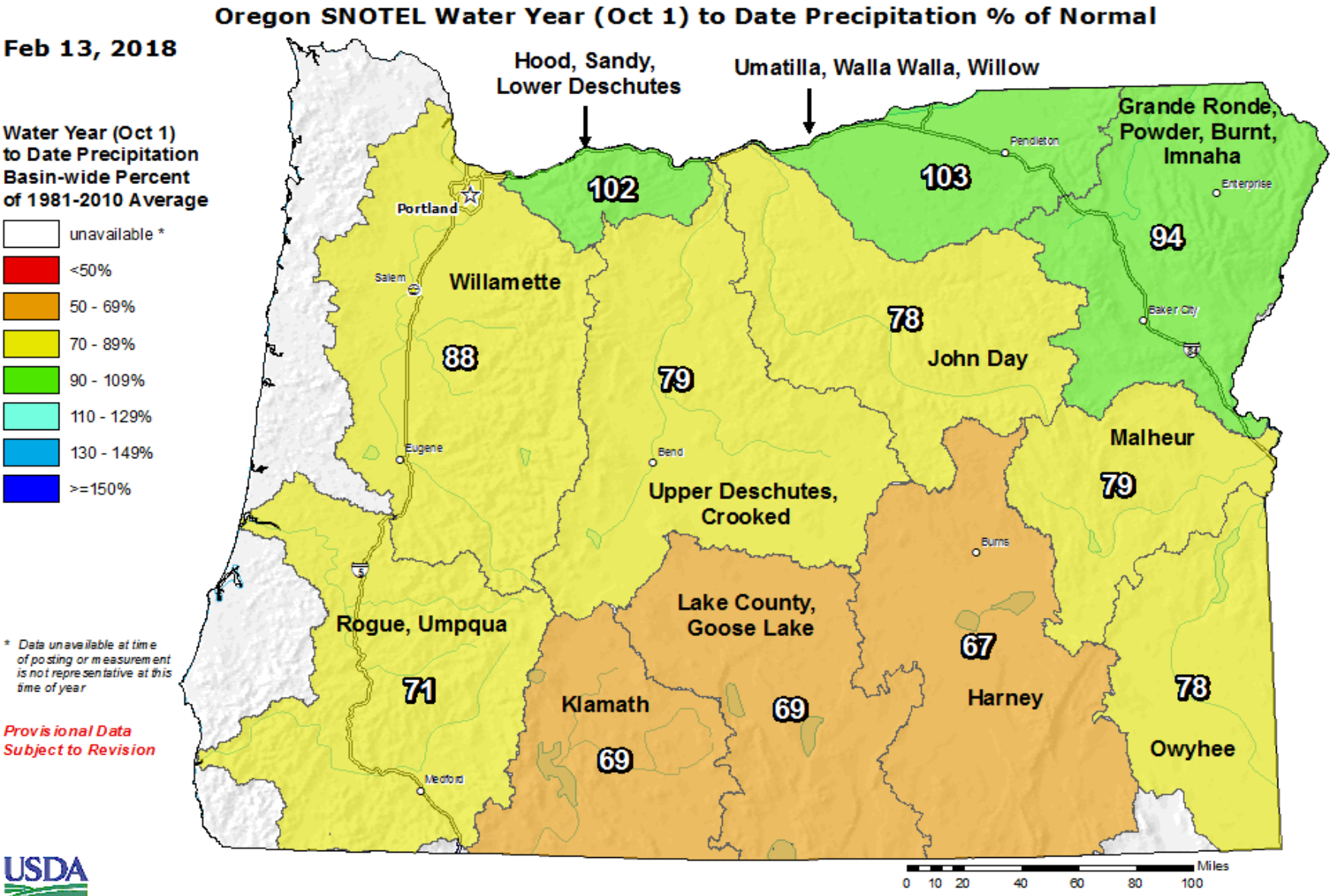
Portland, Oregon
http://www.wcc.nrcs.usda.gov

Statewide SNOTEL Precipitation was 80% of normal



Statewide SNOTEL Precipitation is 86% of normal (104% of Average in 2015)



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).

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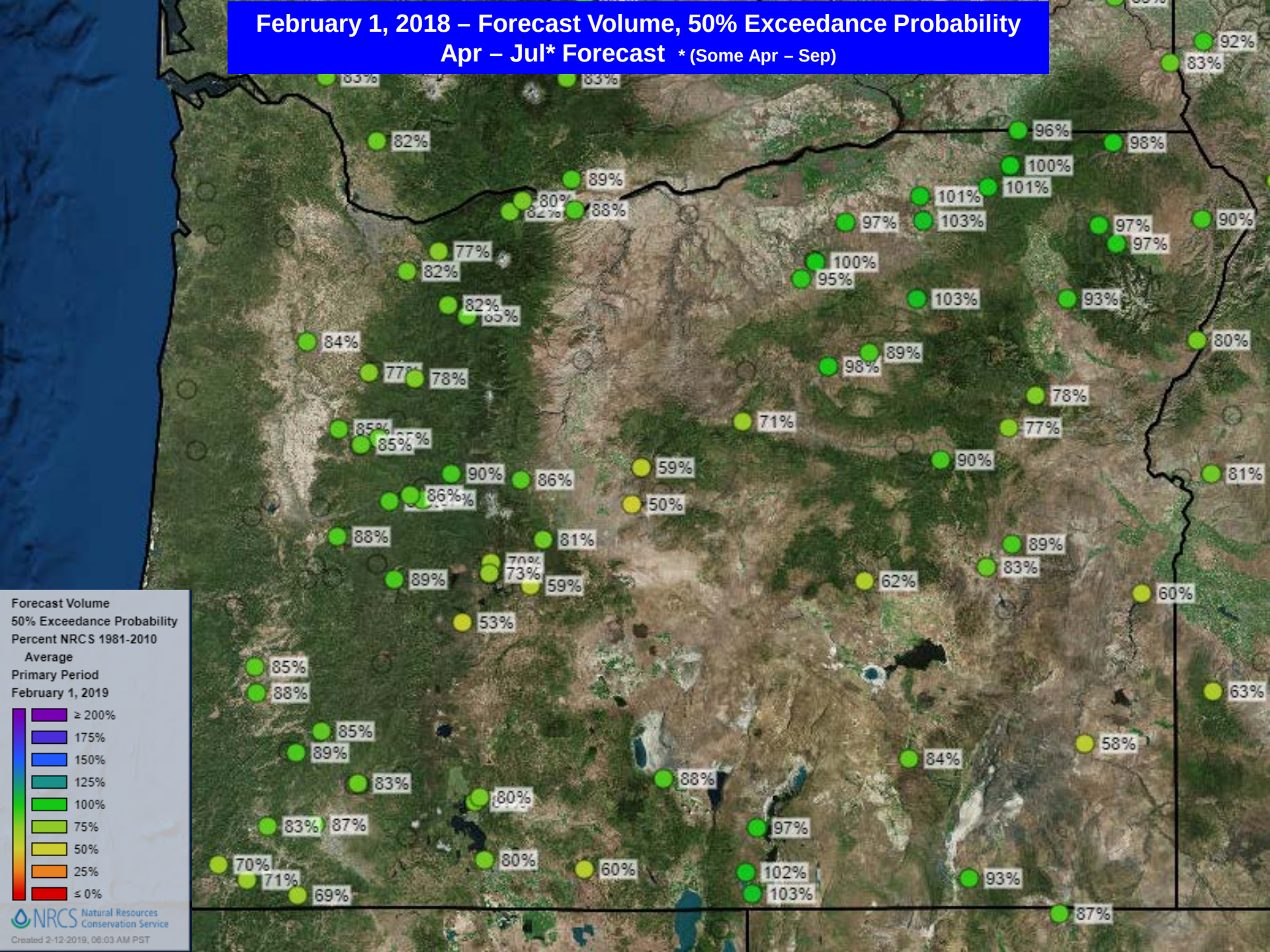
February 1, 2018 – Forecast Volume, 50% Exceedance Probability
Apr – Jul* Forecast * (Some Apr – Sep)



Forecast Volume
50% Exceedance Probability
Percent NRCS 1981-2010 Average
Primary Period
February 1, 2019

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

NRCS Natural Resources Conservation Service

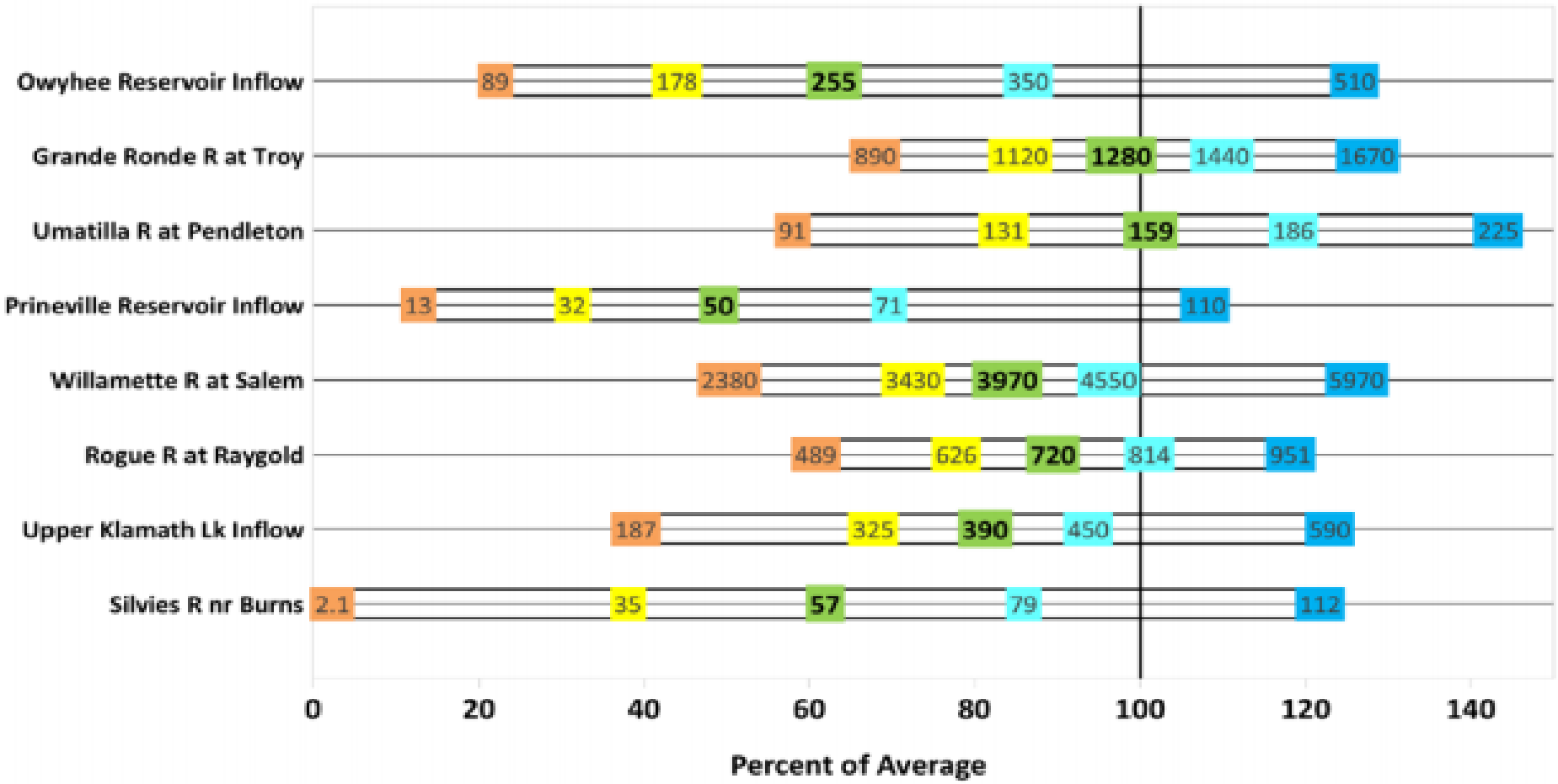
Created 2-12-2019, 06:03 AM PST

February 1, 2019

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

Thank you

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February 12, 2019

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SWE = 5.4”
37% Normal
Elev = 3310’

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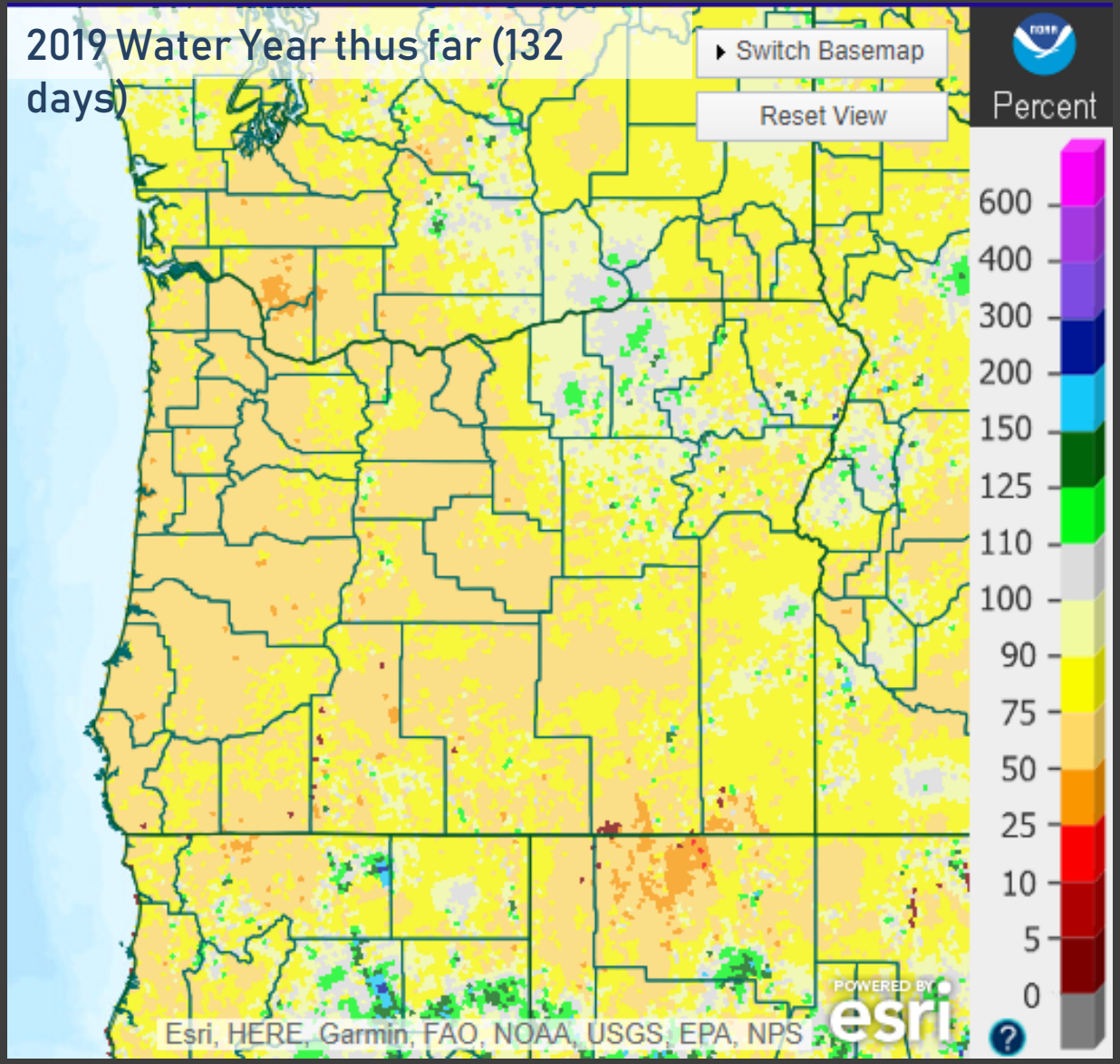
Oregon Water Supply Availability

February 11, 2019
National Weather Service Update

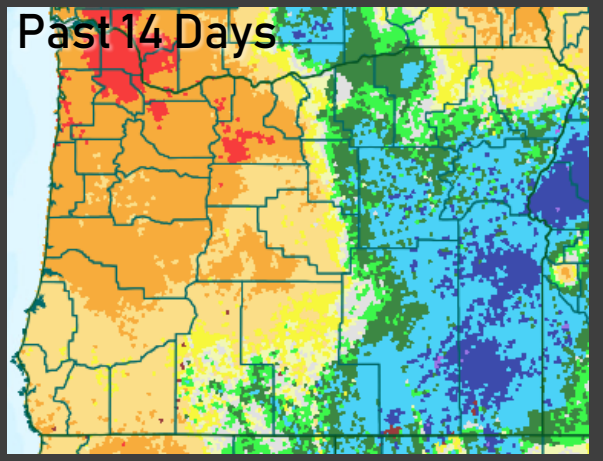
Andy Bryant, NWS Portland Weather Forecast Office
Geoffrey Walters & Steve King, NWS Northwest River Forecast Center

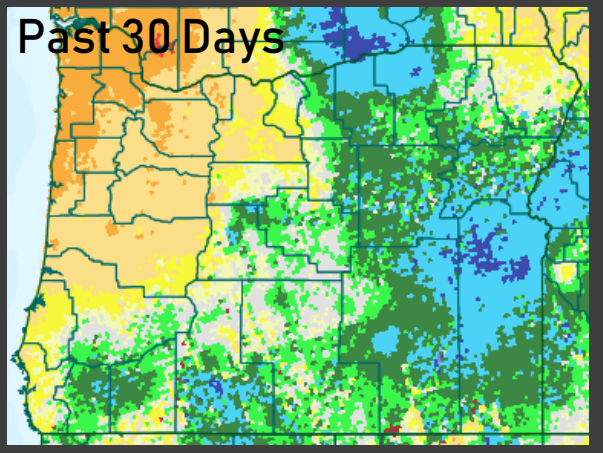
Precipitation % of Average

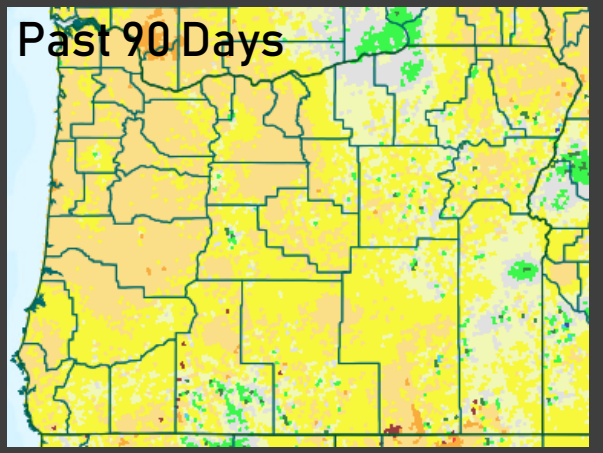


Precipitation Data as of January 7th, 2019

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

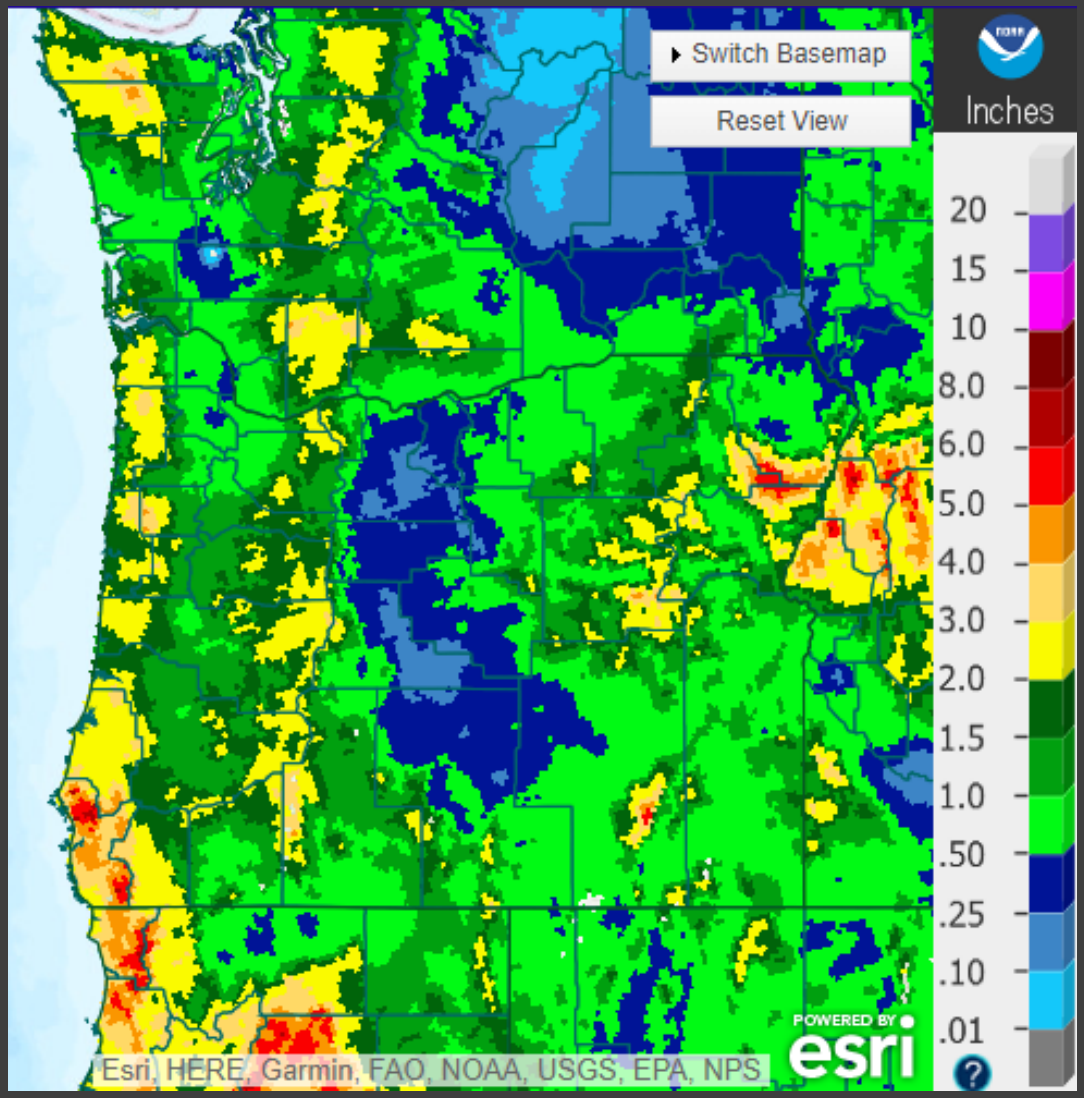




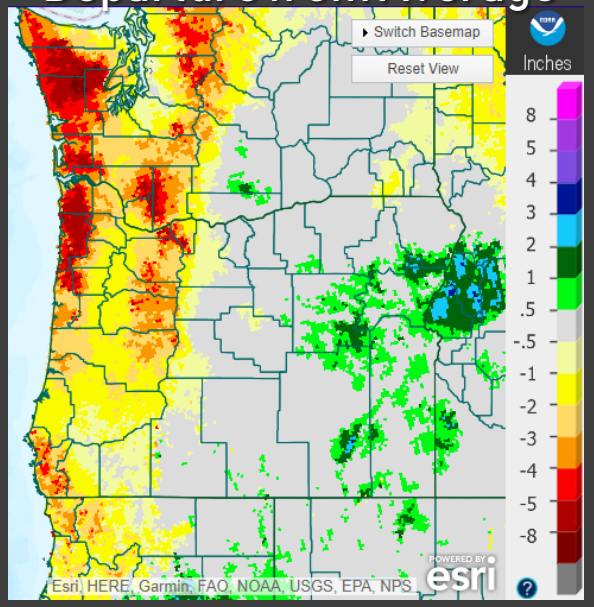


Precipitation Past 30 Days

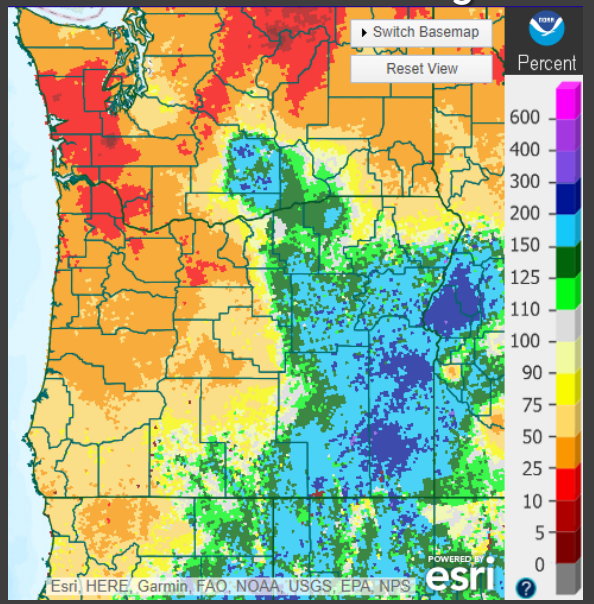
Precipitation Totals



Departure from Average



Percent of Average

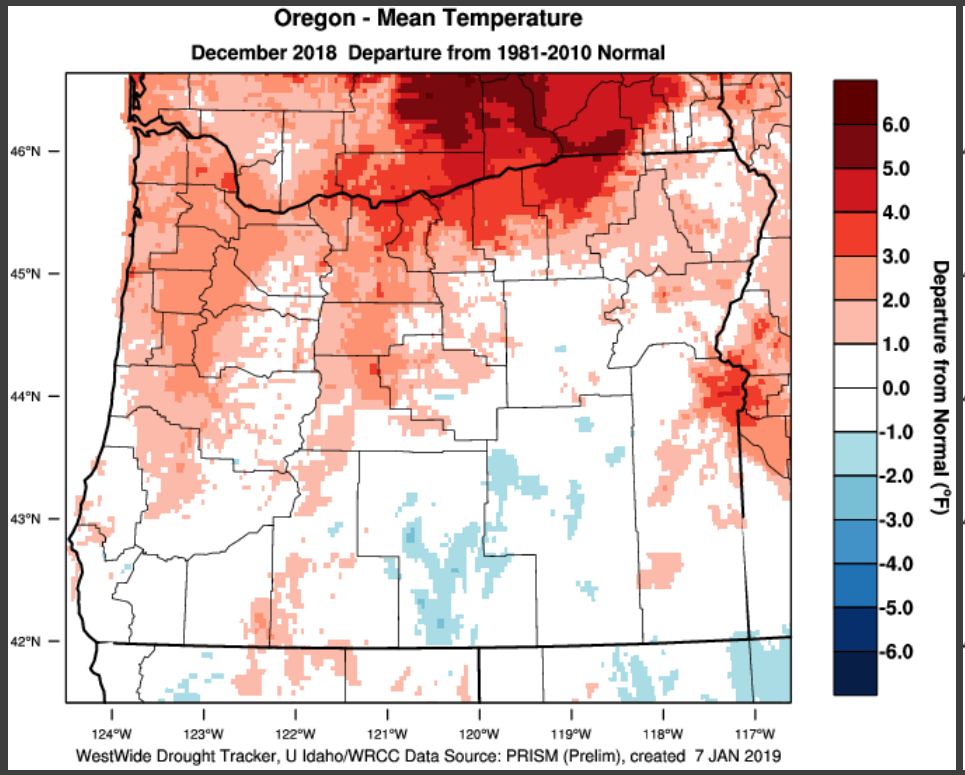


Precipitation Data as of February 11, 2019

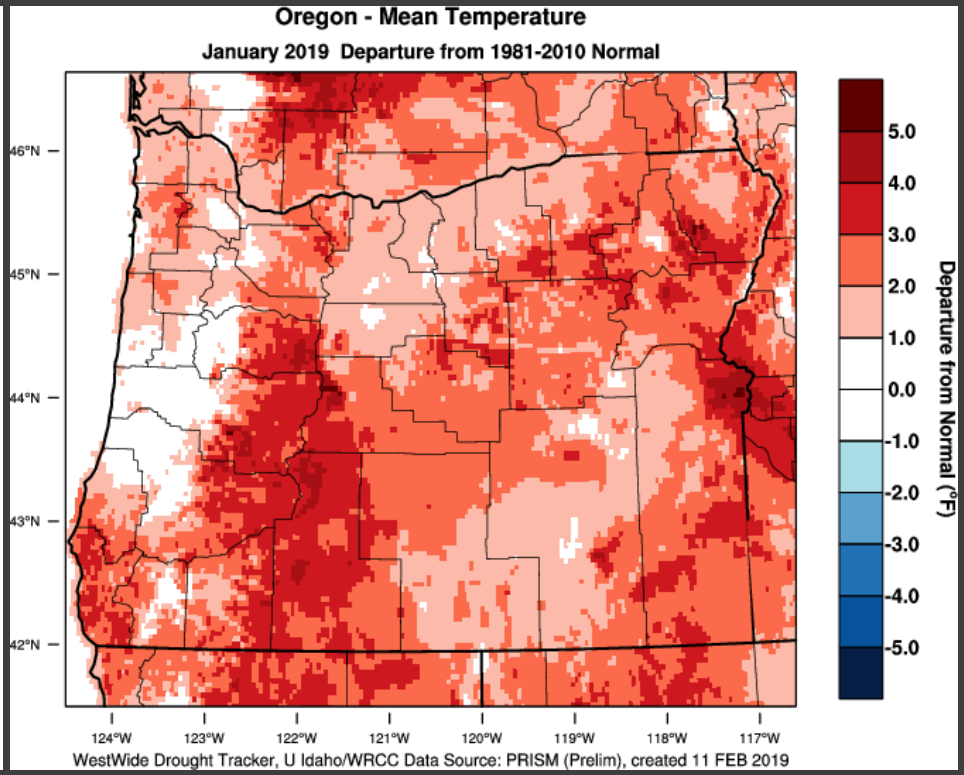
Source: water.weather.gov/precip/index.php?location_type=wfo&location_name=pqr

Recent Temperatures

December 2018



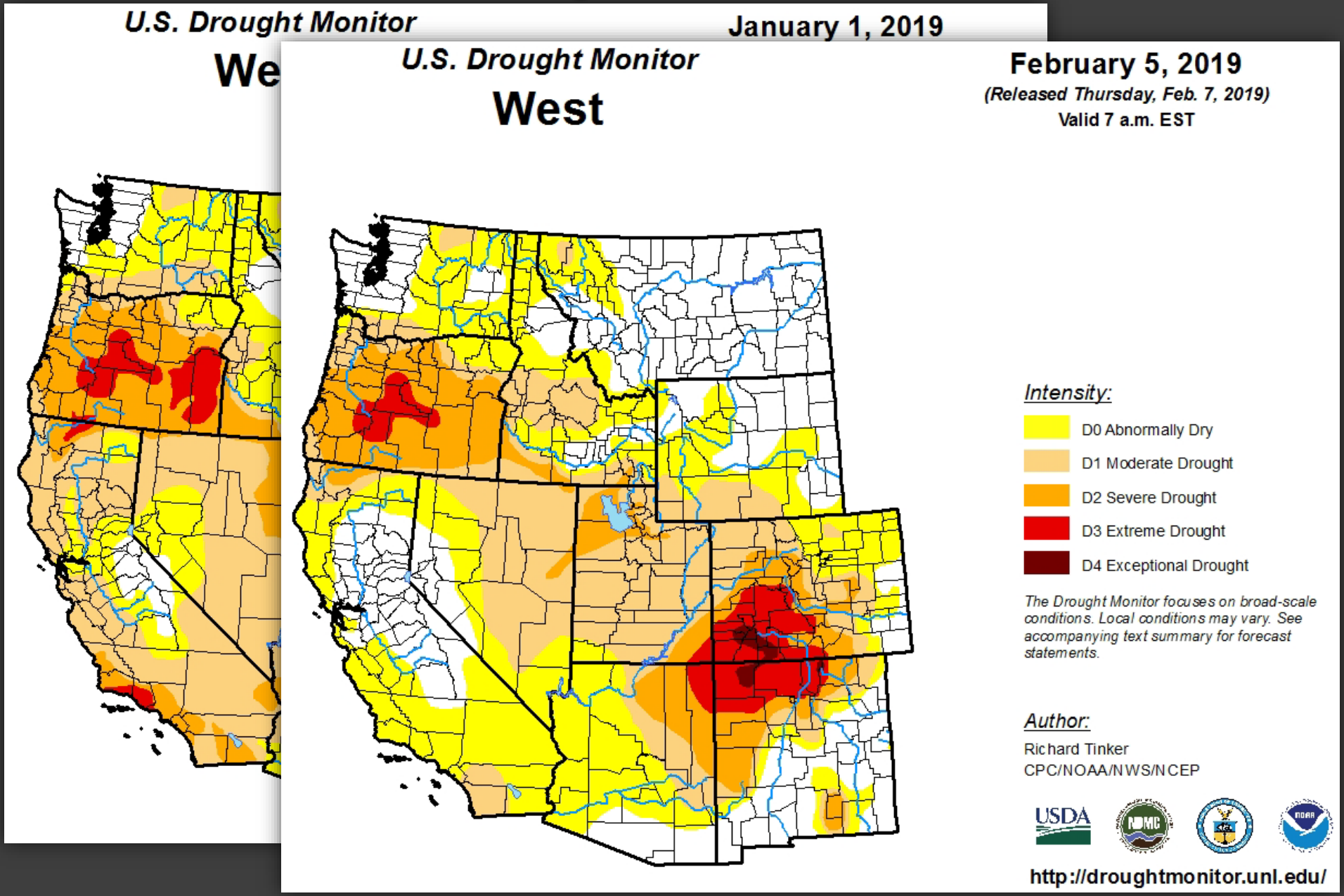
January 2019



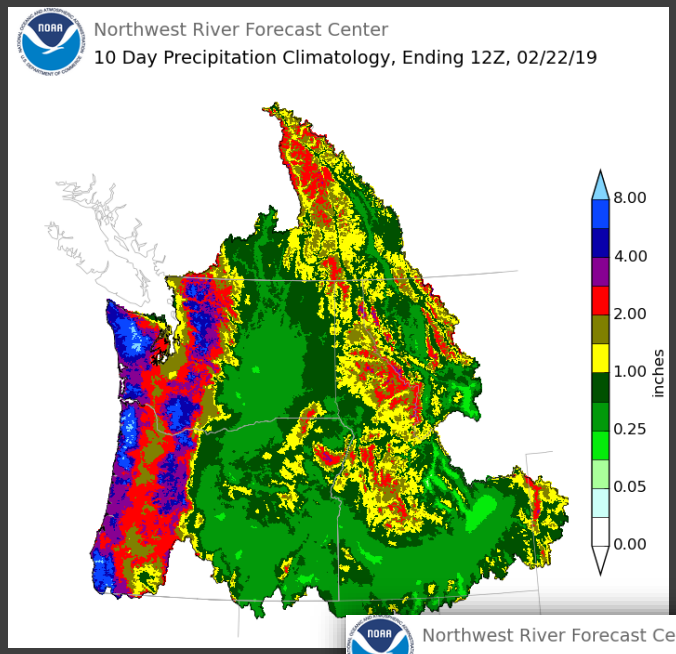
Temperatures thus far in February are 5 to 10 degrees below normal.

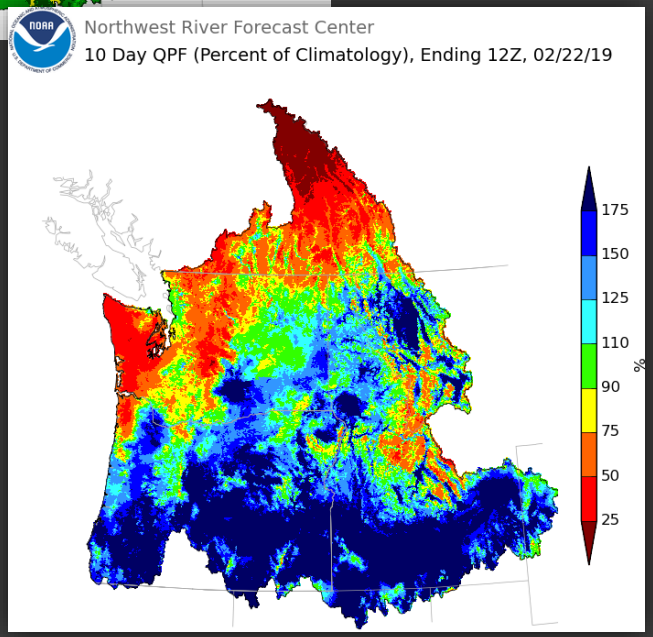
https://wrcc.dri.edu/wwdt/current.php?folder=mdn1

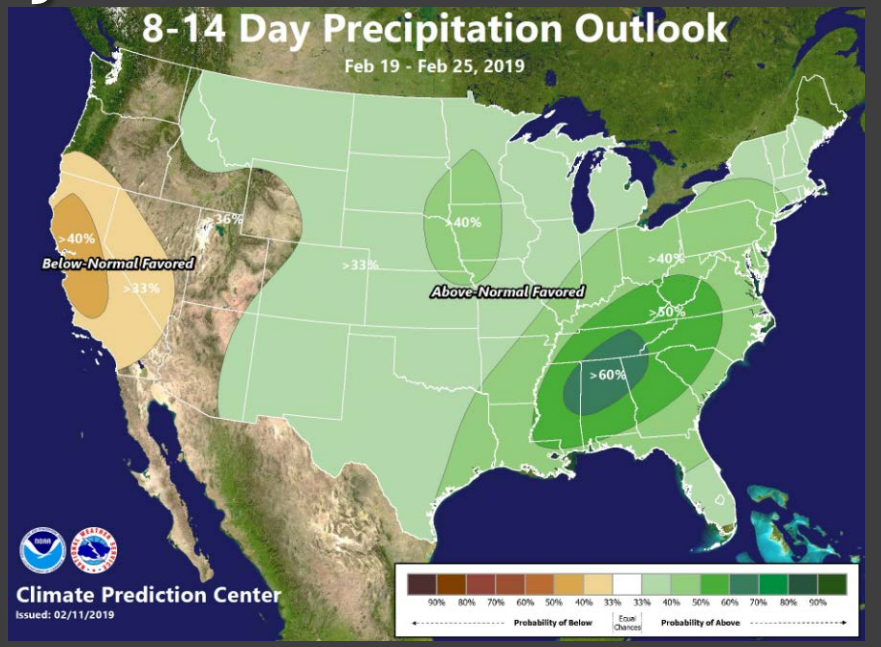
Drought Monitor

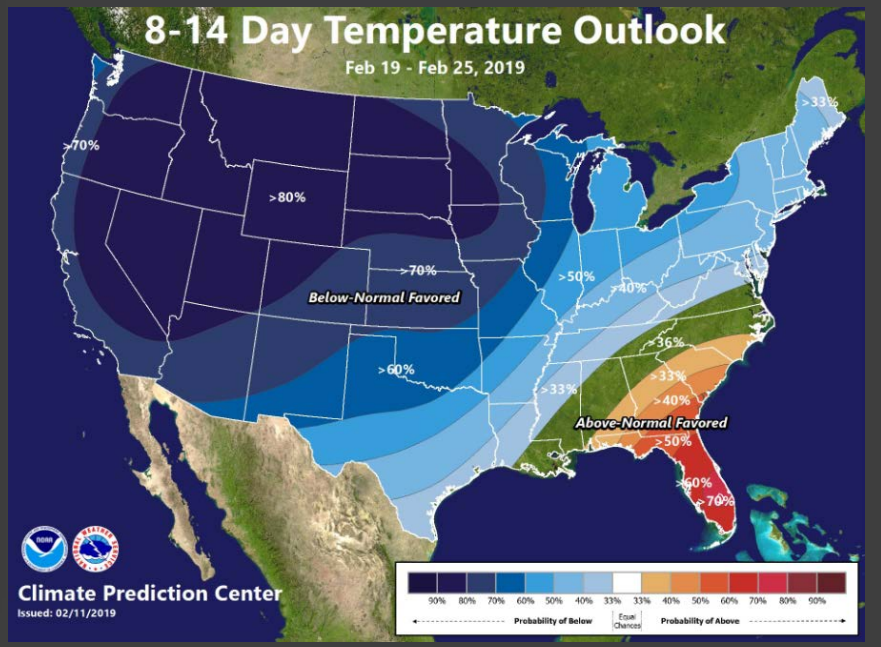


Mid-February Outlook



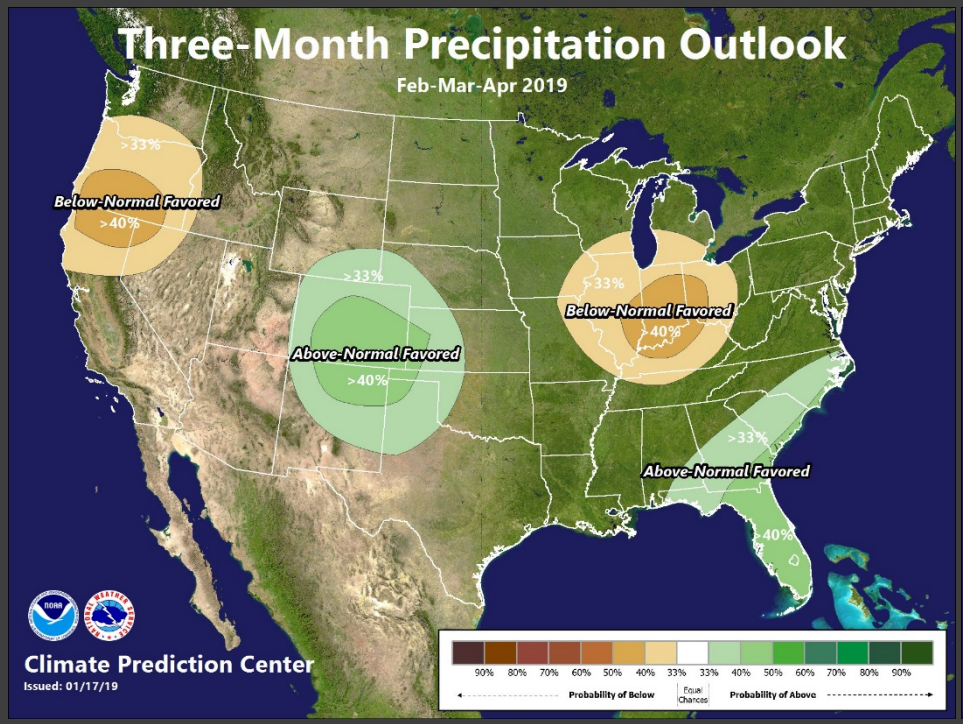


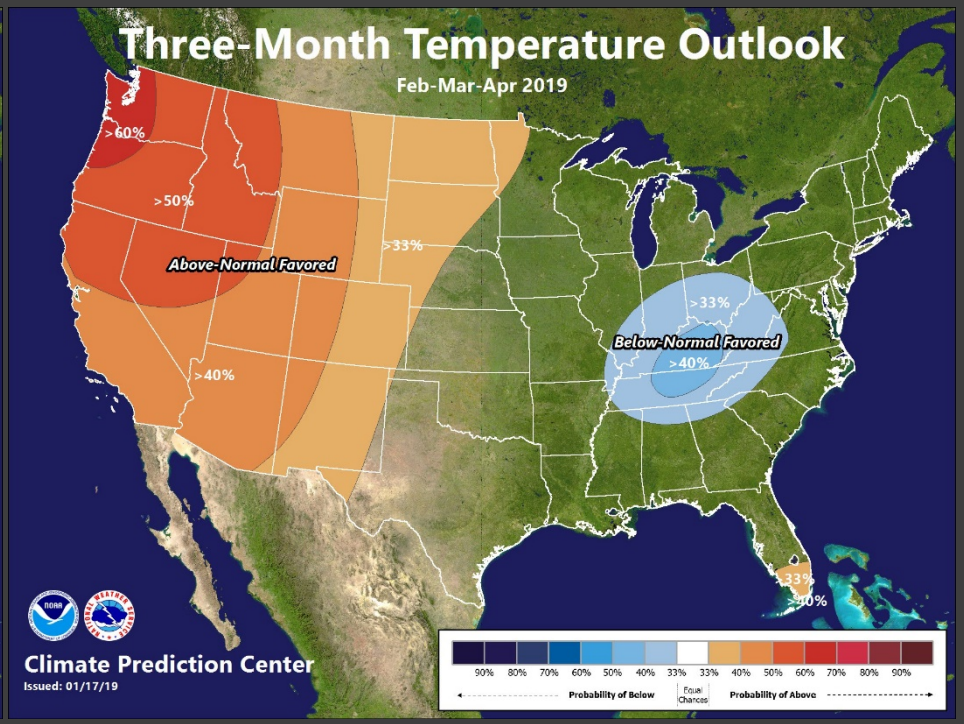




https://www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php?tab=3

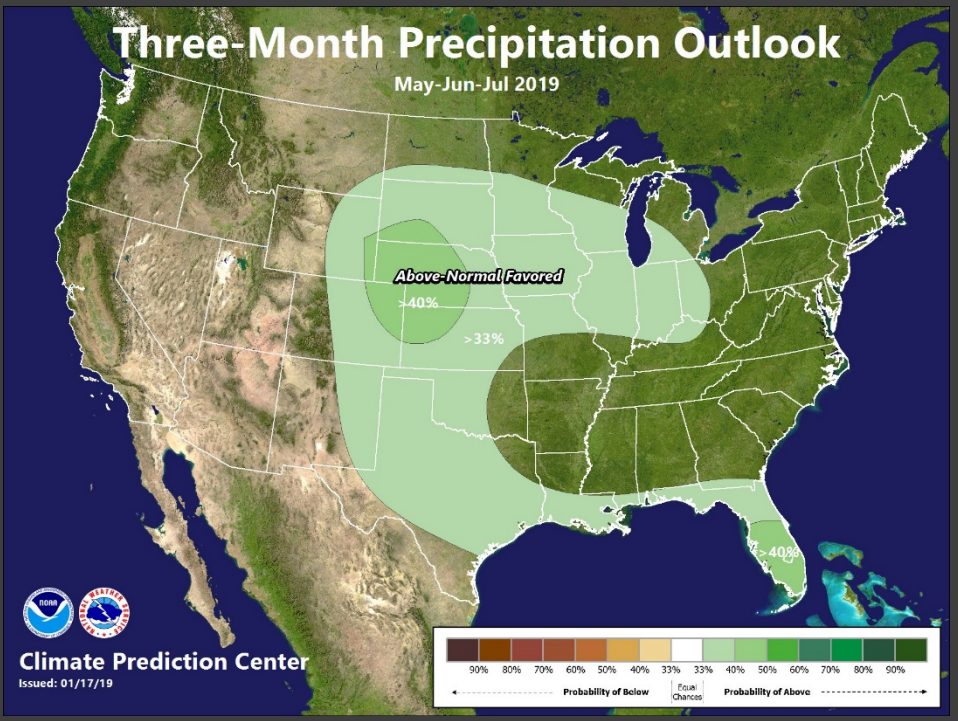
February-March-May Outlook

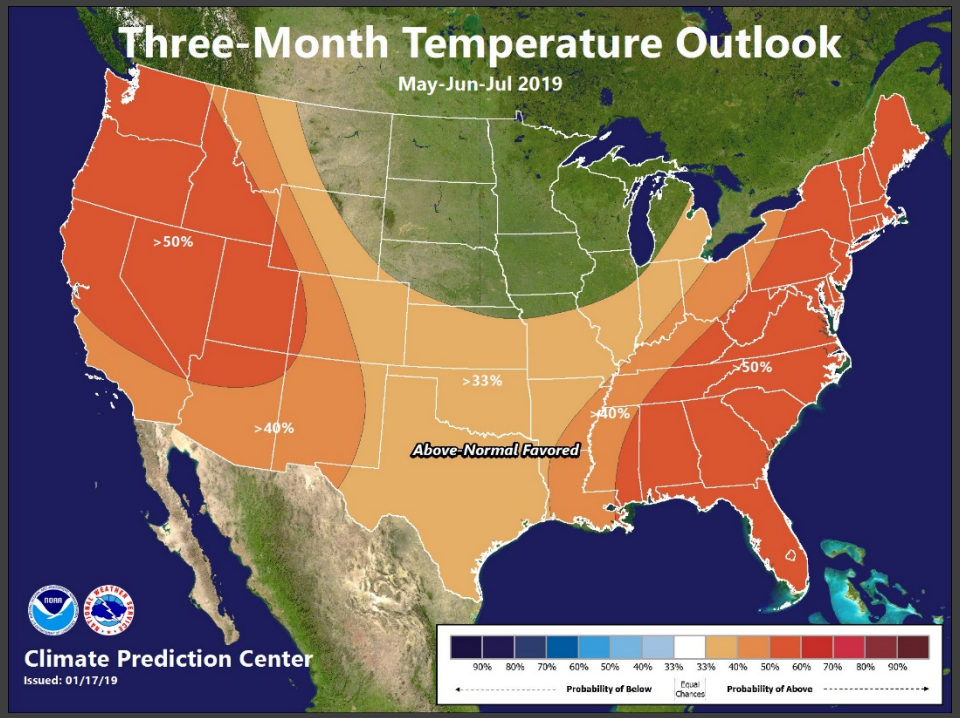




https://www.wrh.noaa.gov/images/sto/GIS_NEW/

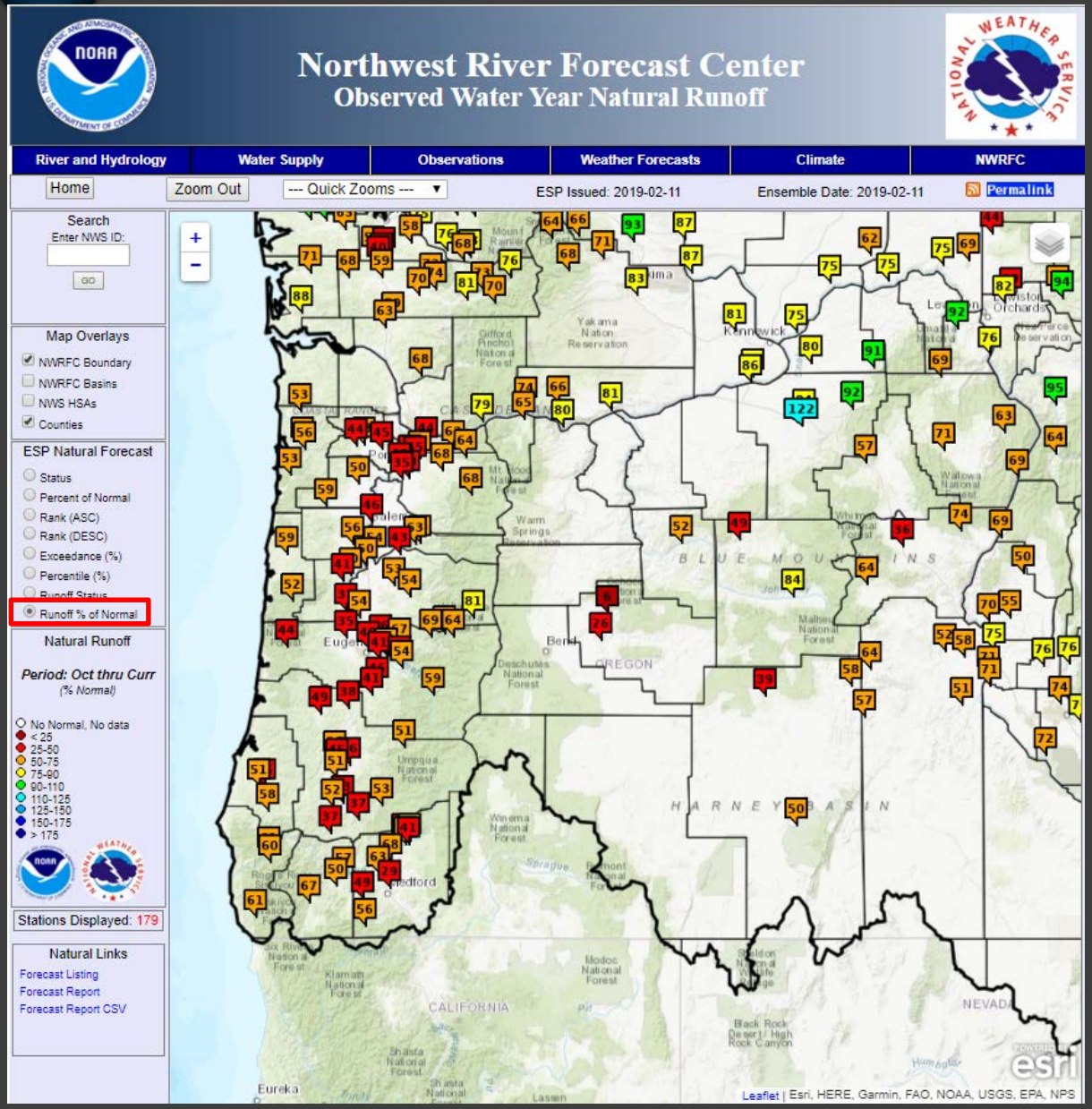
May-June-July Outlook



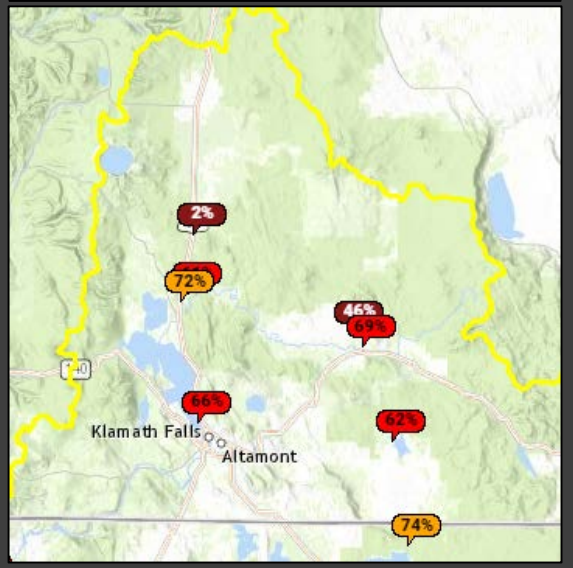


https://www.wrh.noaa.gov/images/sto/GIS_NEW/

Observed WY19 Runoff thus far

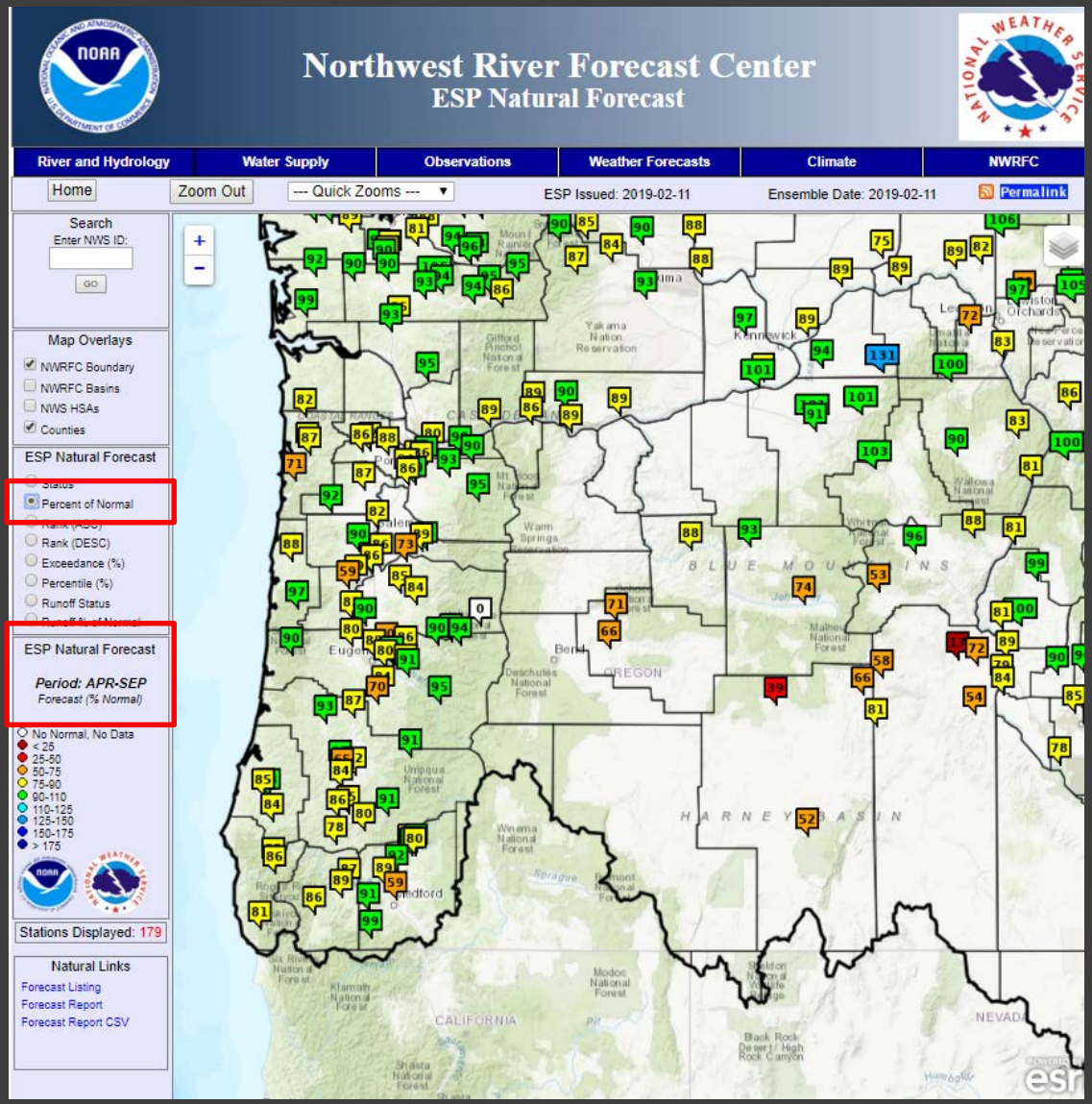


via California Nevada RFC



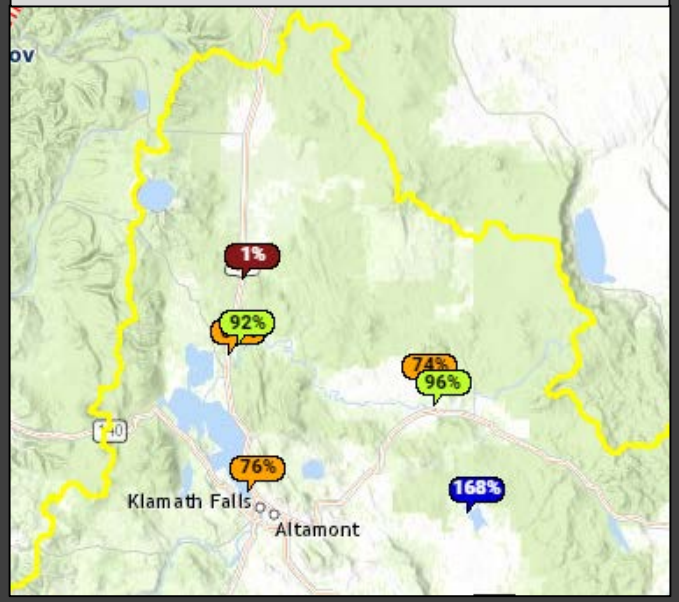
https://www.nwrfc.noaa.gov/natural/index.html?version=20181015v2
https://www.cnrfc.noaa.gov/ol.php?product=espWS

Seasonal Water Supply Forecasts



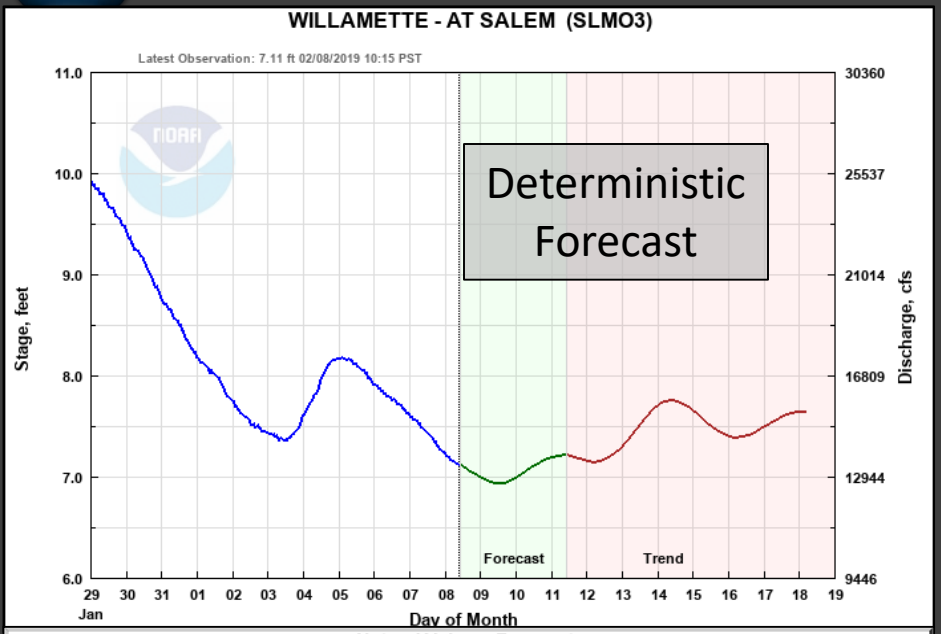
Forecast runoff volume for April – September 2019

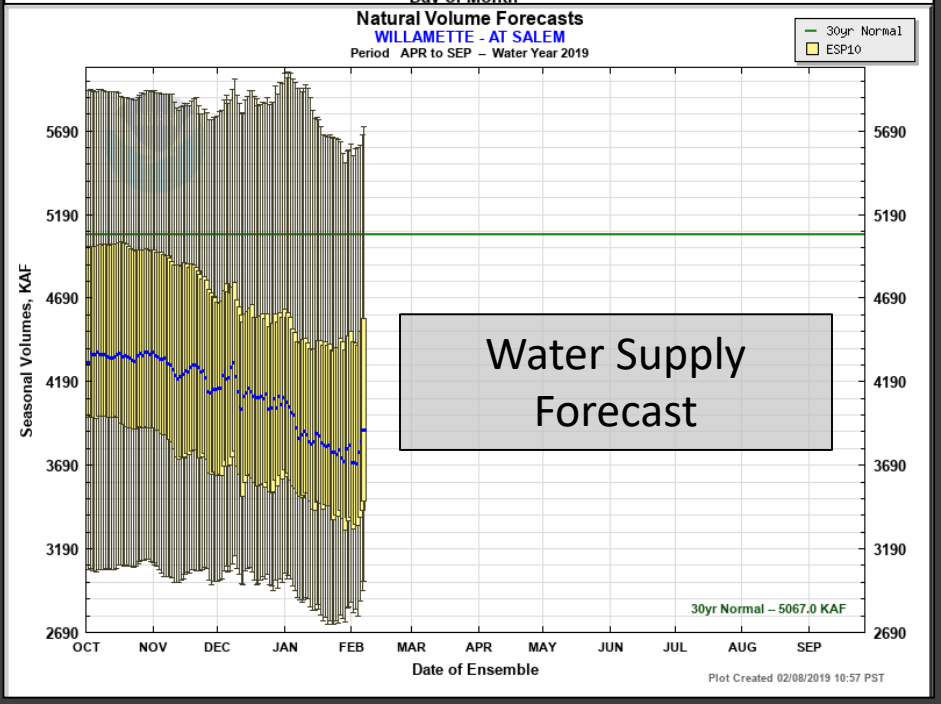
via California Nevada RFC



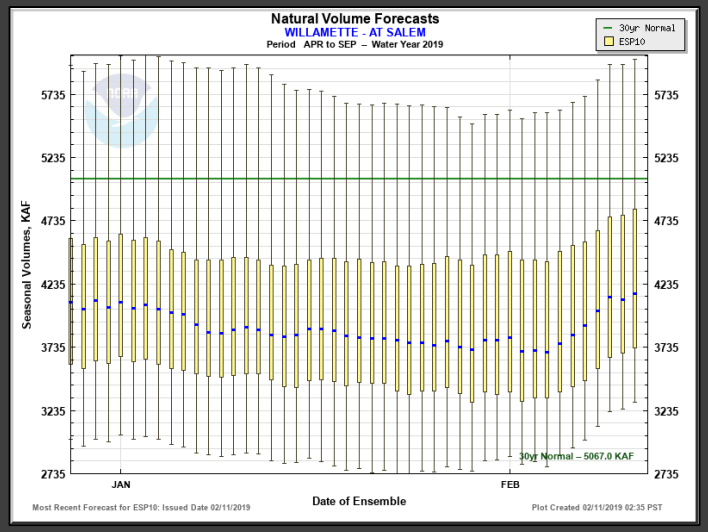
https://www.nwrfc.noaa.gov/natural/index.html?version=20181015v2
https://www.cnrfc.noaa.gov/ol.php?product=espWS

Deterministic vs Water Supply Forecasts

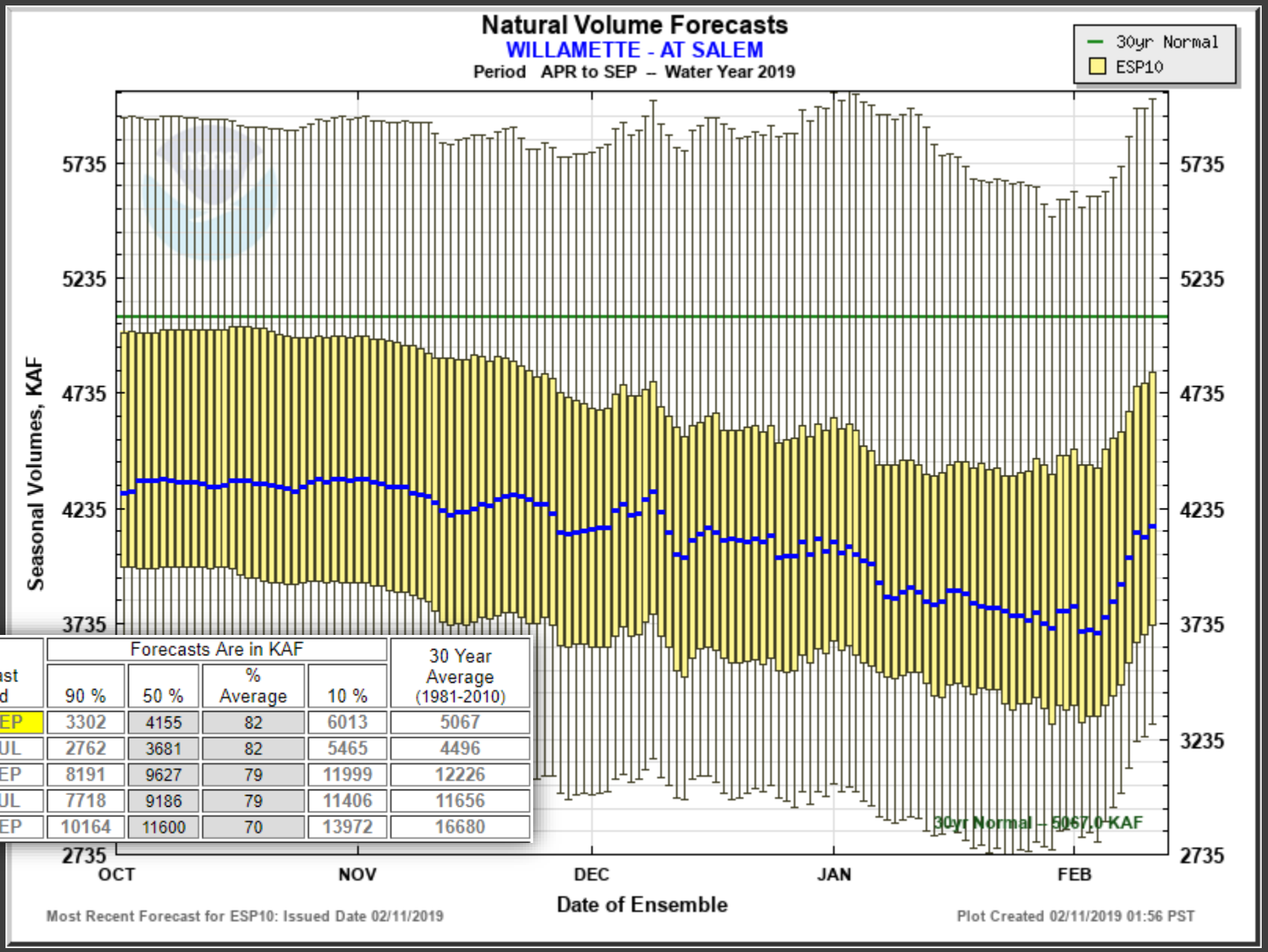




- Deterministic Forecast:
  - Streamflow forecast for next 10 days
- Water Supply (WS) Forecast:
  - Parts include: runoff, 10-day deterministic forecast, and ensemble streamflow prediction (ESP)
  - ESP: Uses historical precipitation and temperature (1948-2008) beyond deterministic forecast WS Forecast are issued daily
- Natural Volume Forecast: absence of man made regulation and diversions

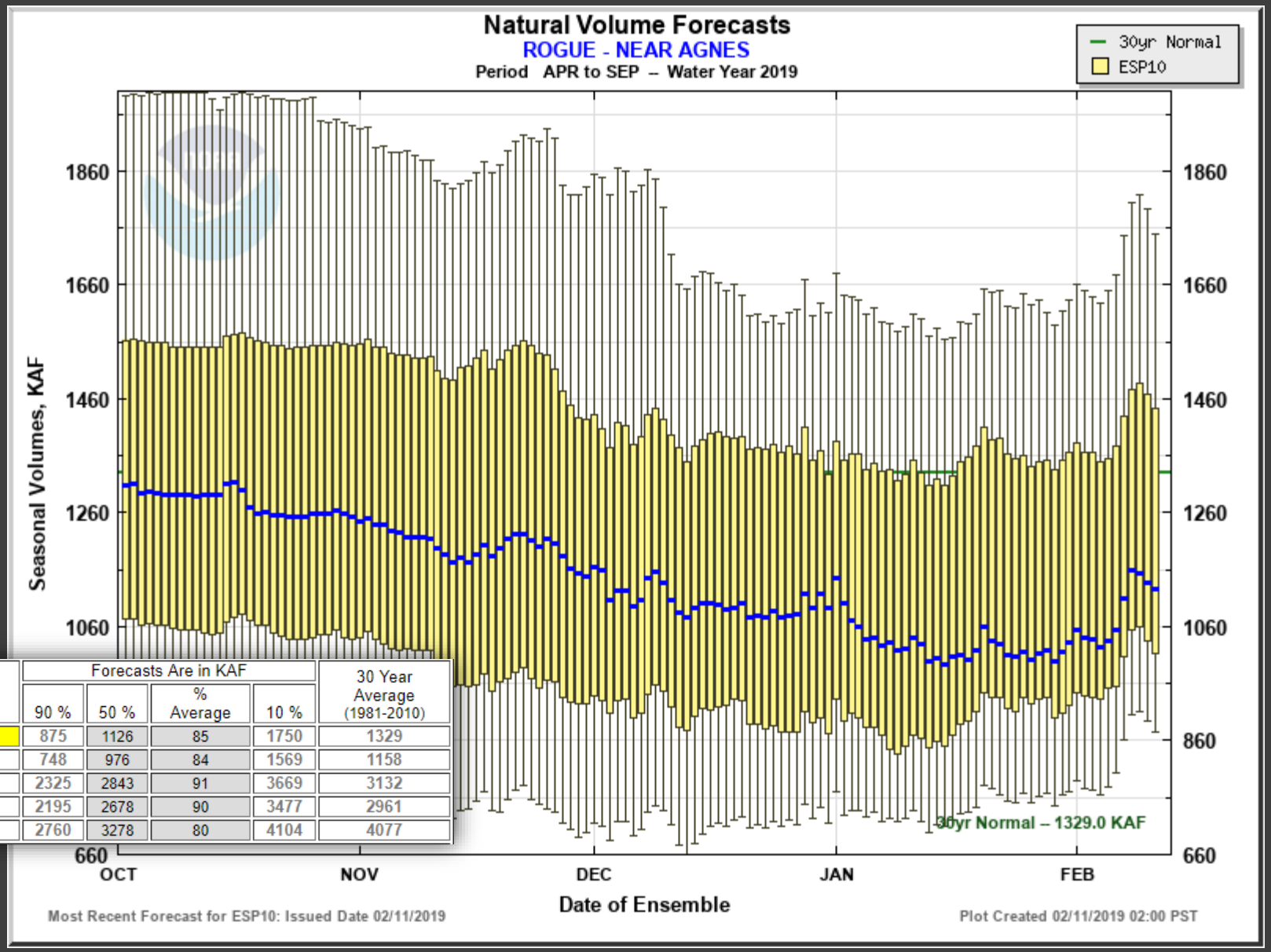


Natural Water Supply Forecasts (1/5)



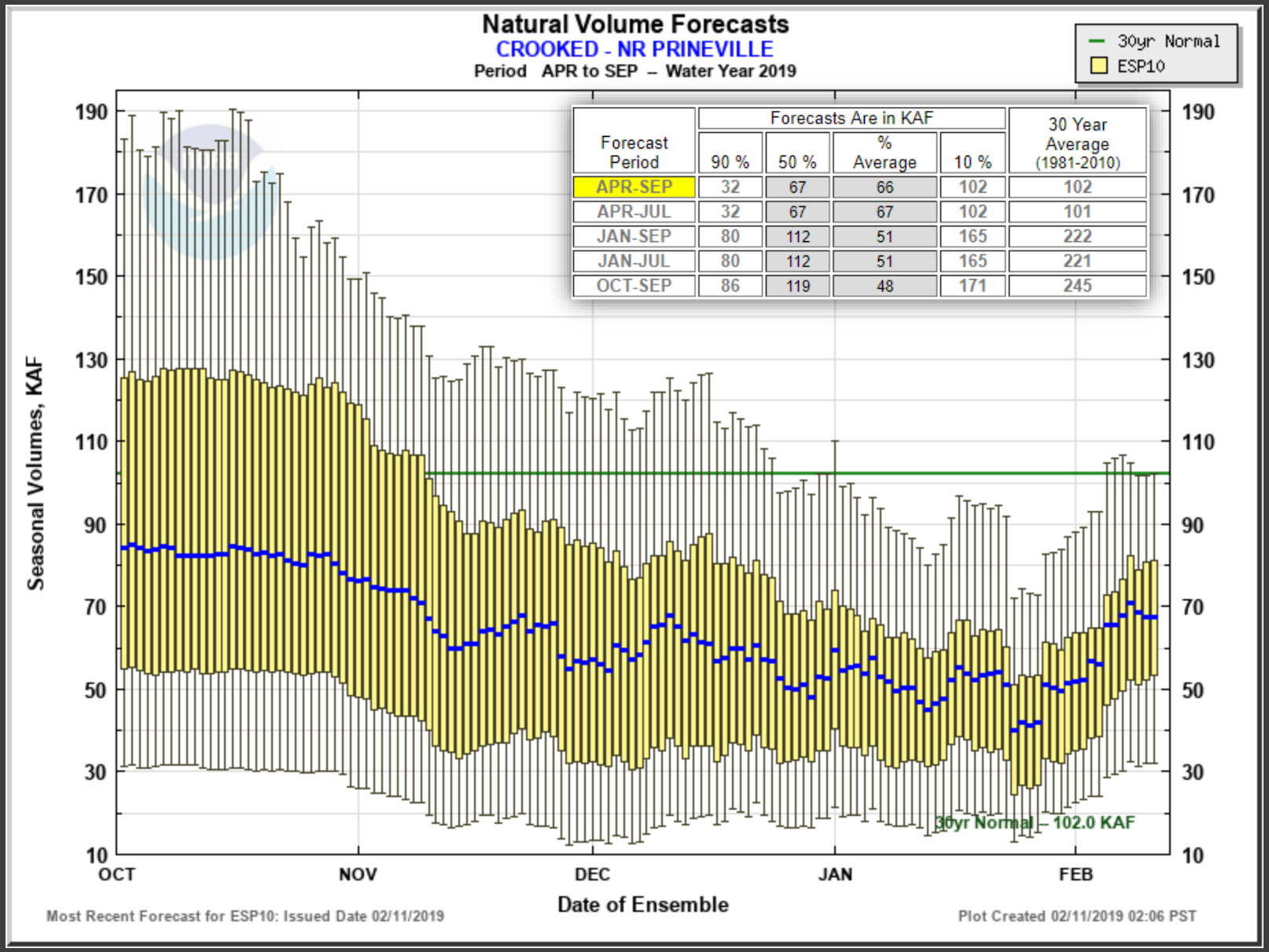
Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	3302	4155	82	6013	5067
APR-JUL	2762	3681	82	5465	4496
JAN-SEP	8191	9627	79	11999	12226
JAN-JUL	7718	9186	79	11406	11656
OCT-SEP	10164	11600	70	13972	16680

Natural Water Supply Forecasts (2/5)

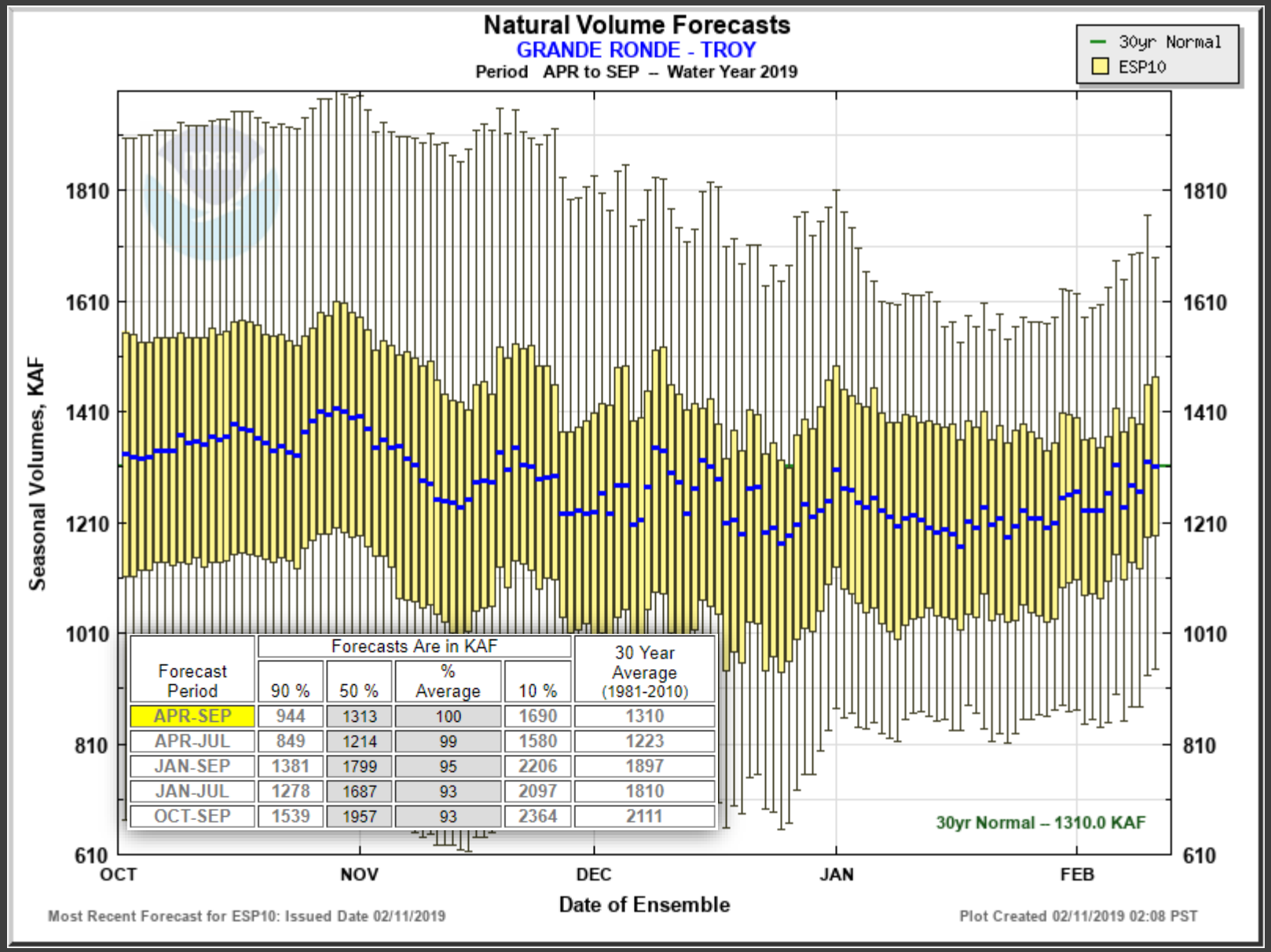


Forecast Period	Forecasts Are in KAF				30 Year Average (1981-2010)
	90 %	50 %	% Average	10 %	
APR-SEP	875	1126	85	1750	1329
APR-JUL	748	976	84	1569	1158
JAN-SEP	2325	2843	91	3669	3132
JAN-JUL	2195	2678	90	3477	2961
OCT-SEP	2760	3278	80	4104	4077

Natural Water Supply Forecasts (3/5)

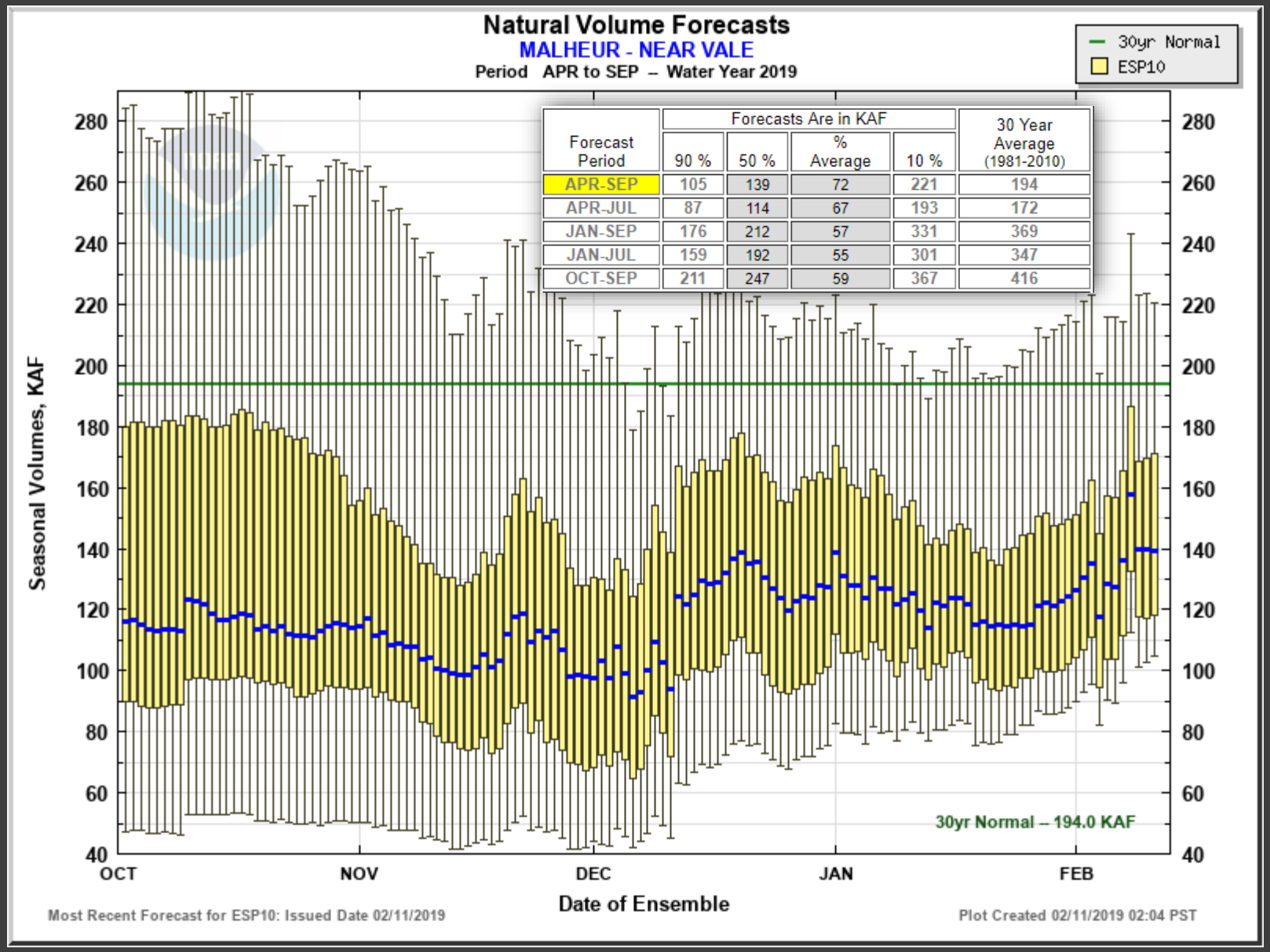


Natural Water Supply Forecasts (4/5)



Forecast Period	Forecasts Are in KAF 90 %	50 %	% Average	10 %	30 Year Average (1981-2010)
APR-SEP	944	1313	100	1690	1310
APR-JUL	849	1214	99	1580	1223
JAN-SEP	1381	1799	95	2206	1897
JAN-JUL	1278	1687	93	2097	1810
OCT-SEP	1539	1957	93	2364	2111

Natural Water Supply Forecasts (5/5)



Link to Northwest River Forecast Center ESP Natural Forecasts

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

Live Water Supply Briefings

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

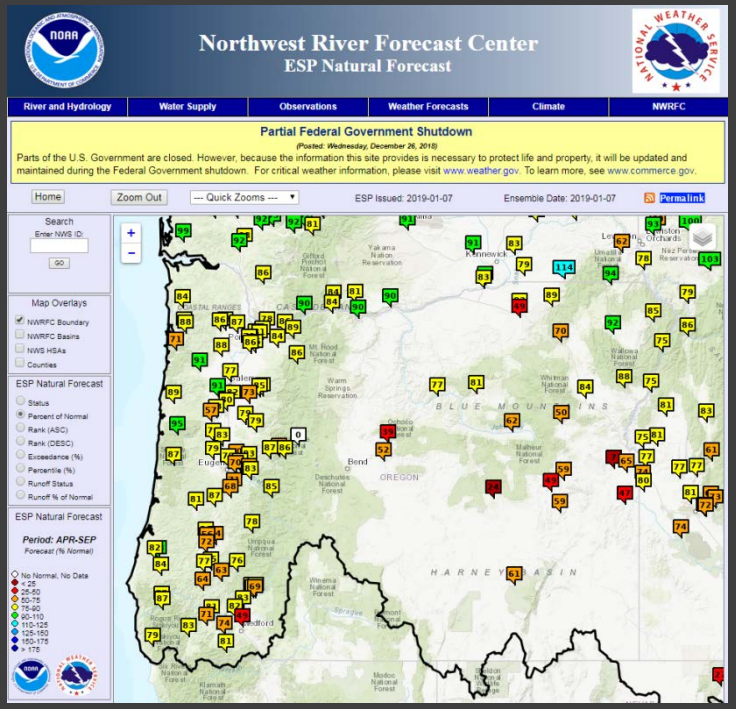
NWRFC Water Supply Forecast Monthly Briefing Schedule

Monthly water supply briefings will be held January through late spring on the first Thursday of each month. Please refer to the schedule below for briefing dates and times. The briefings are composed of two parts, a telephone conference call and a web-based presentation. The conference call can be joined by calling the number provided below prior to start of the briefing. Enter the provided access code when prompted. To view the web-based presentations, you will need to register prior to each briefing. The briefing slides will be available from the NWRFC presentations page soon after the briefing.

2019 Schedule for *Live* Water Supply Briefings					
Jan	Feb	Mar	Apr	May	June
3	7	7	4	2	6
All presentations held at 10:00am PDT/PST, unless noted otherwise					
Click here for Registration Information					

Telephone Conference Call Number (same for each month's brief):
(415) 655-0060
Pass Code:
217-076-304

Presentation Archive Download Link



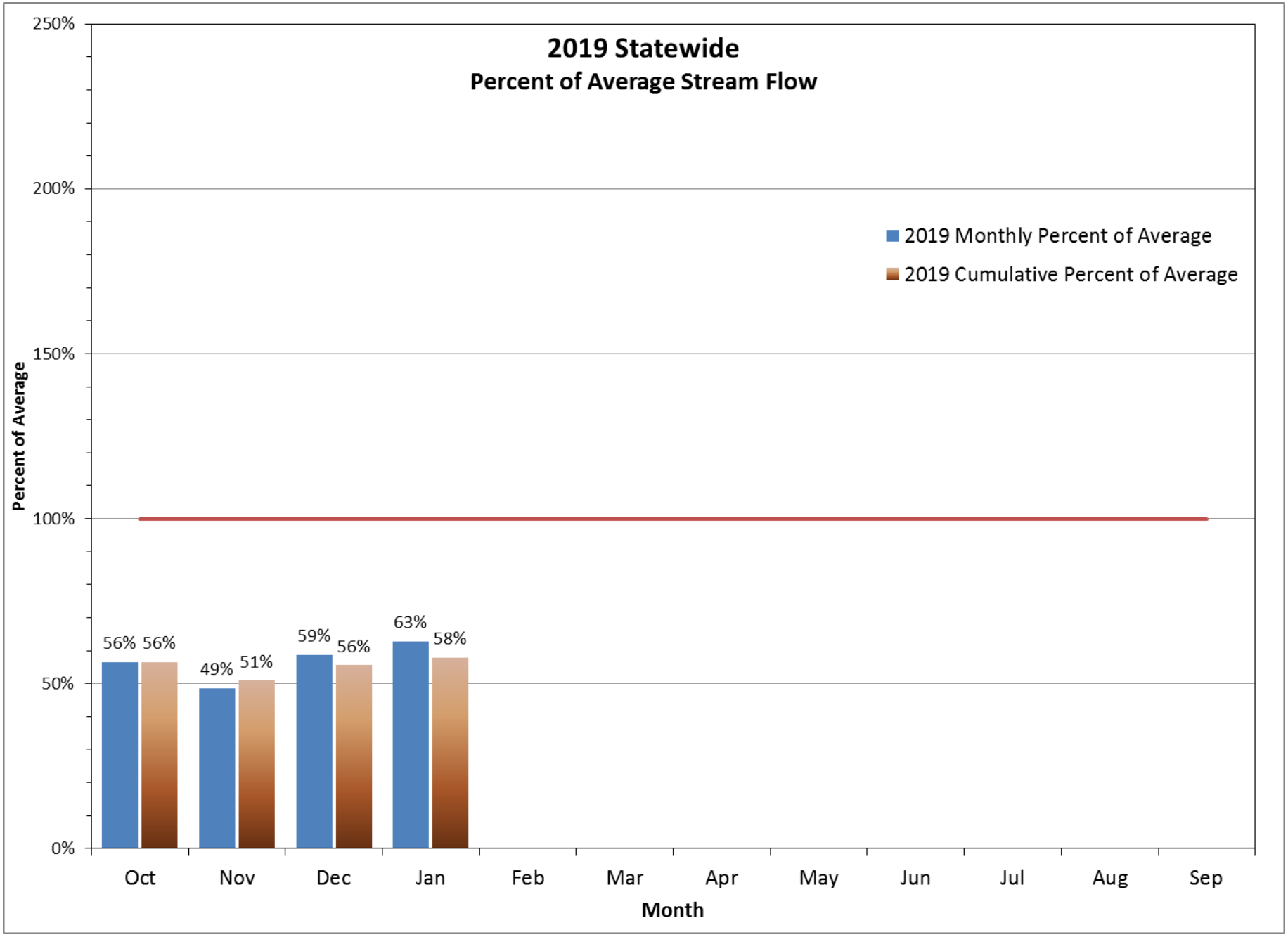
Water Supply Conditions Report

Water Supply Availability Committee

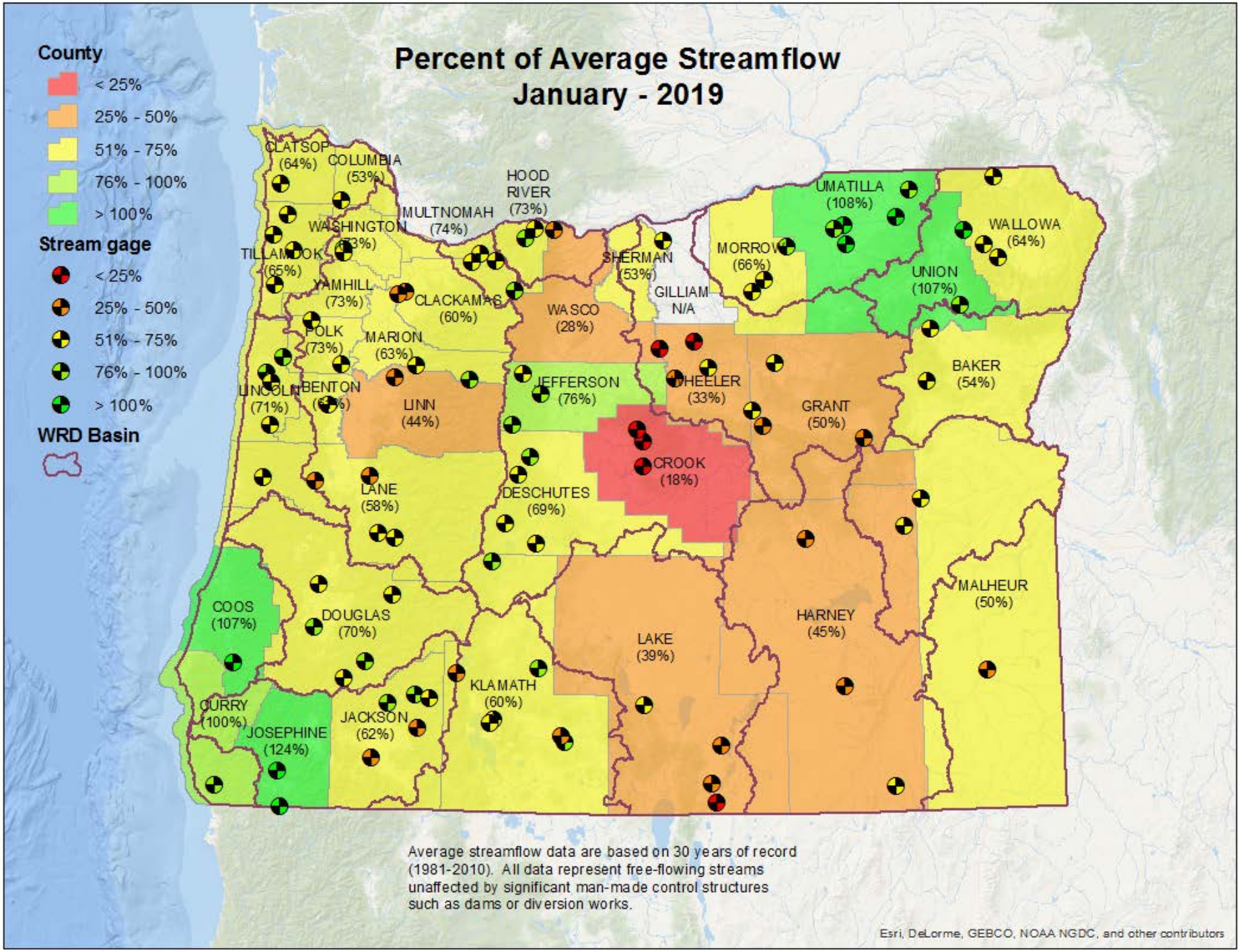
OREGON
WATER RESOURCES DEPARTMENT

Ken Stahr
Oregon Water Resources Department

February 12, 2019


2019 Statewide
Percent of Average Stream Flow
2019 Monthly Percent of Average
2019 Cumulative Percent of Average
Percent of Average
250%
200%
150%
100%
50%
0%
56% 56%
49% 51%
59% 56%
63% 58%
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Month

Percent of Average Streamflow
January - 2019

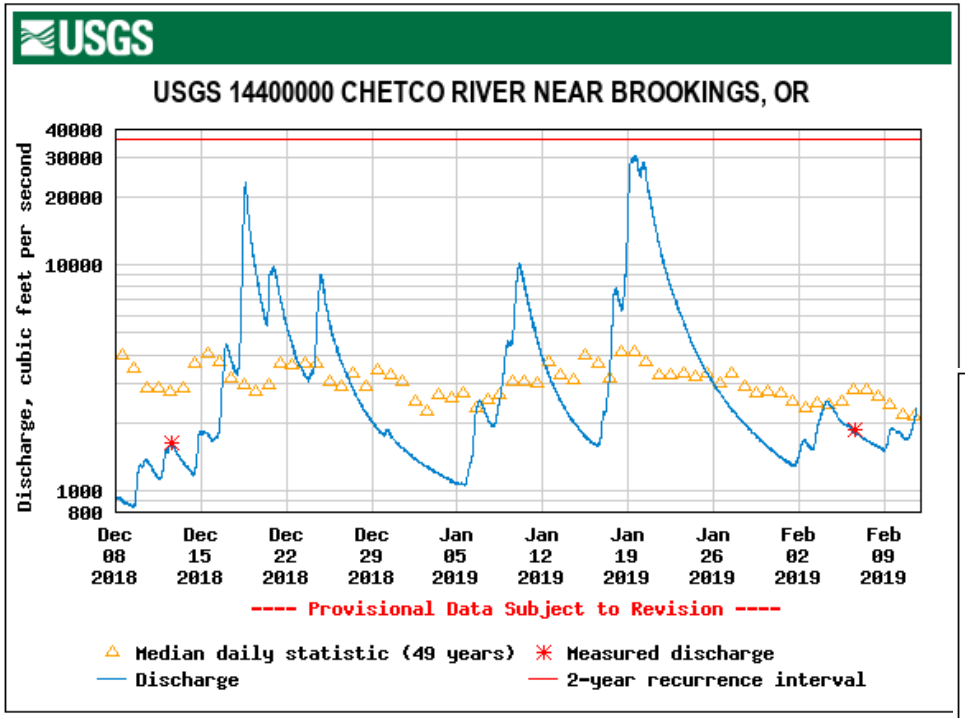


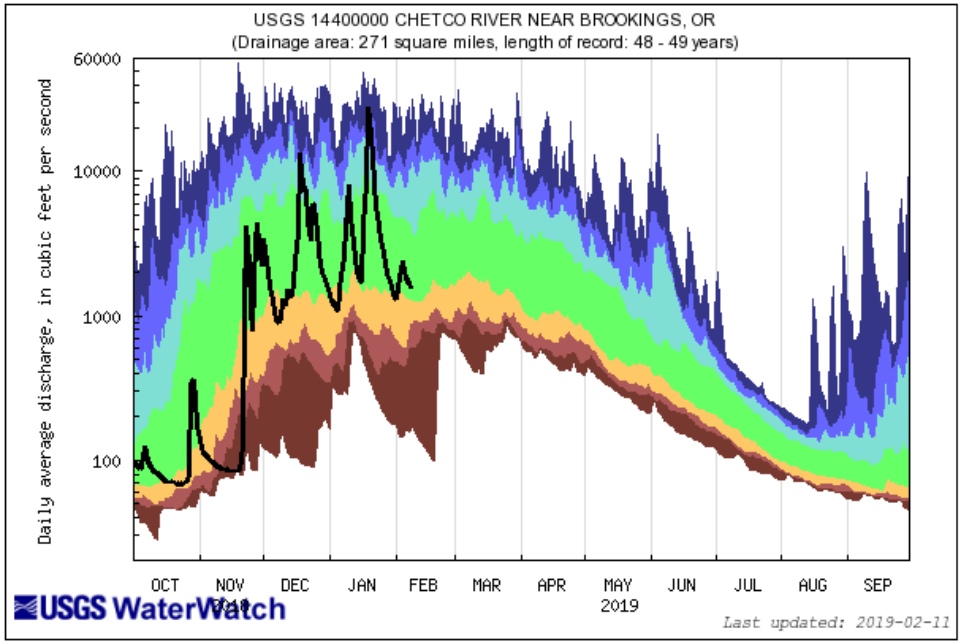
Average streamflow data are based on 30 years of record (1981-2010). All data represent free-flowing streams unaffected by significant man-made control structures such as dams or diversion works.

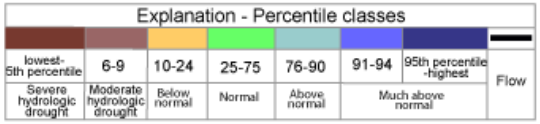
OREGON
WATER RESOURCES DEPARTMENT

Basin	Water Year % of average through January, 2019	% of average for January	# of data points
West Side	59%	74%	45
East Side	57%	55%	44
State	58%	63%	89

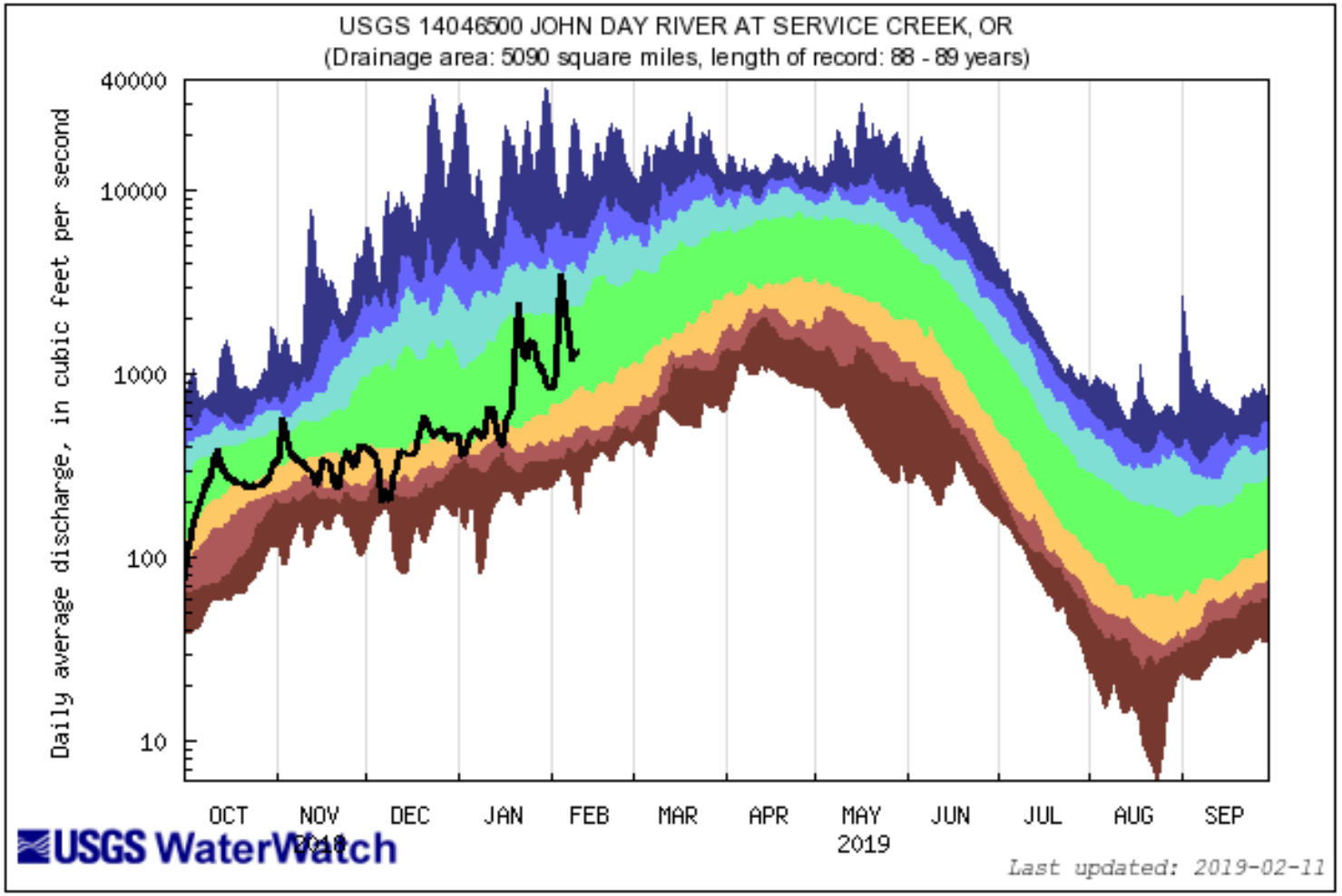
Peaks are better but still pretty unimpressive this water year.

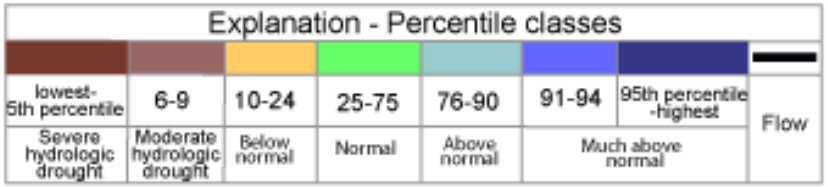




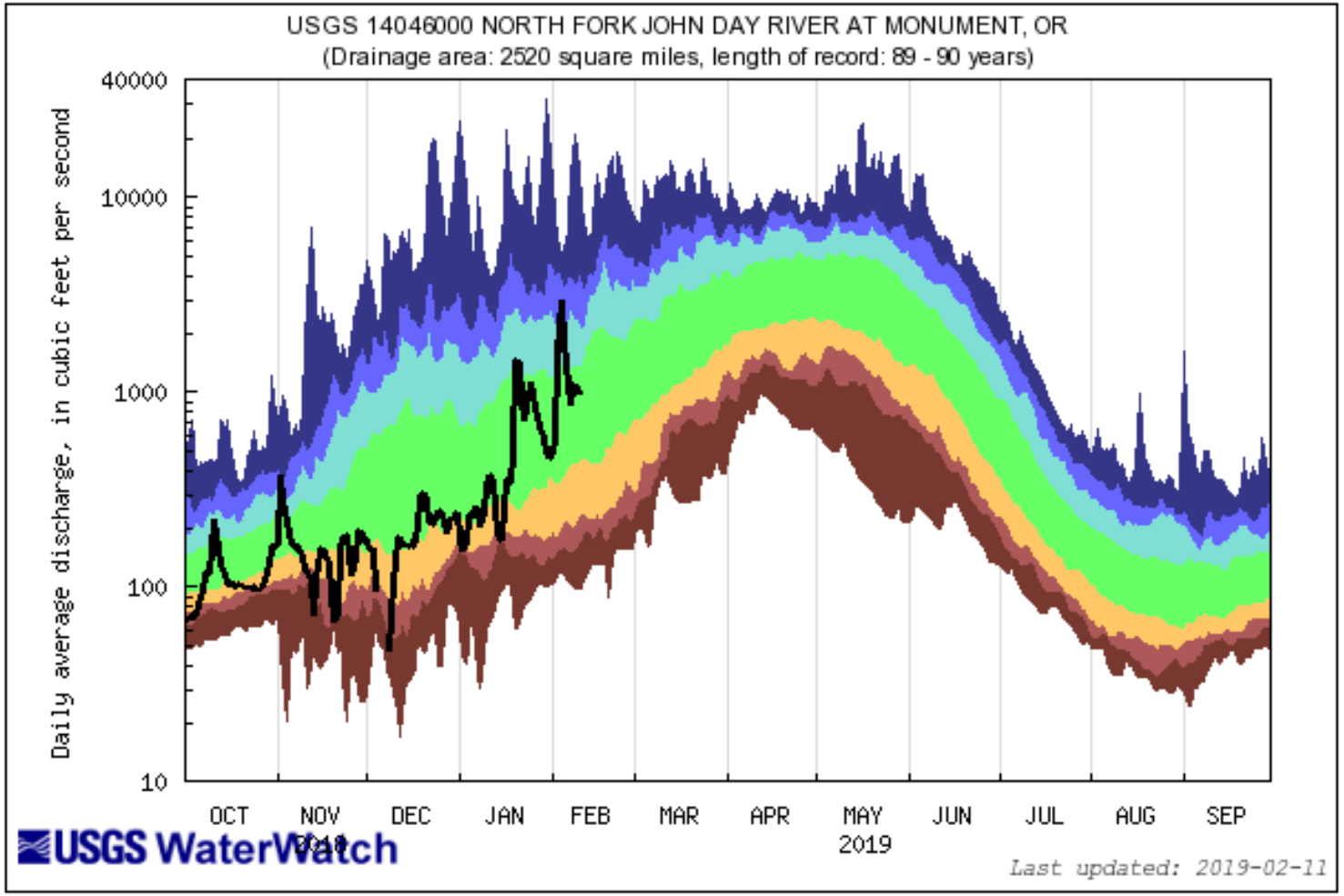


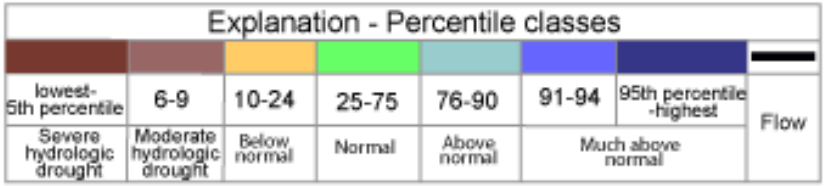
John Day River in Wheeler County



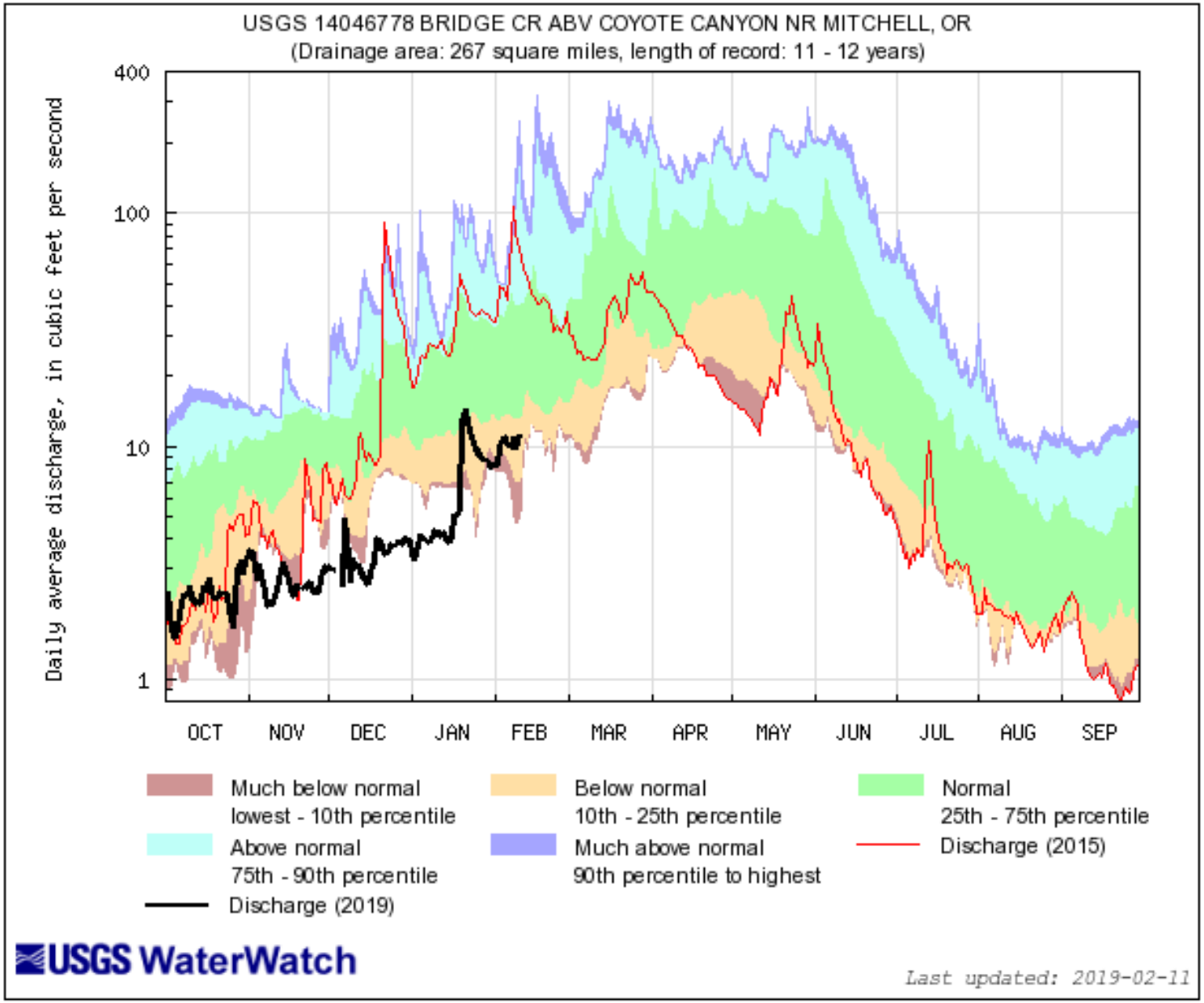


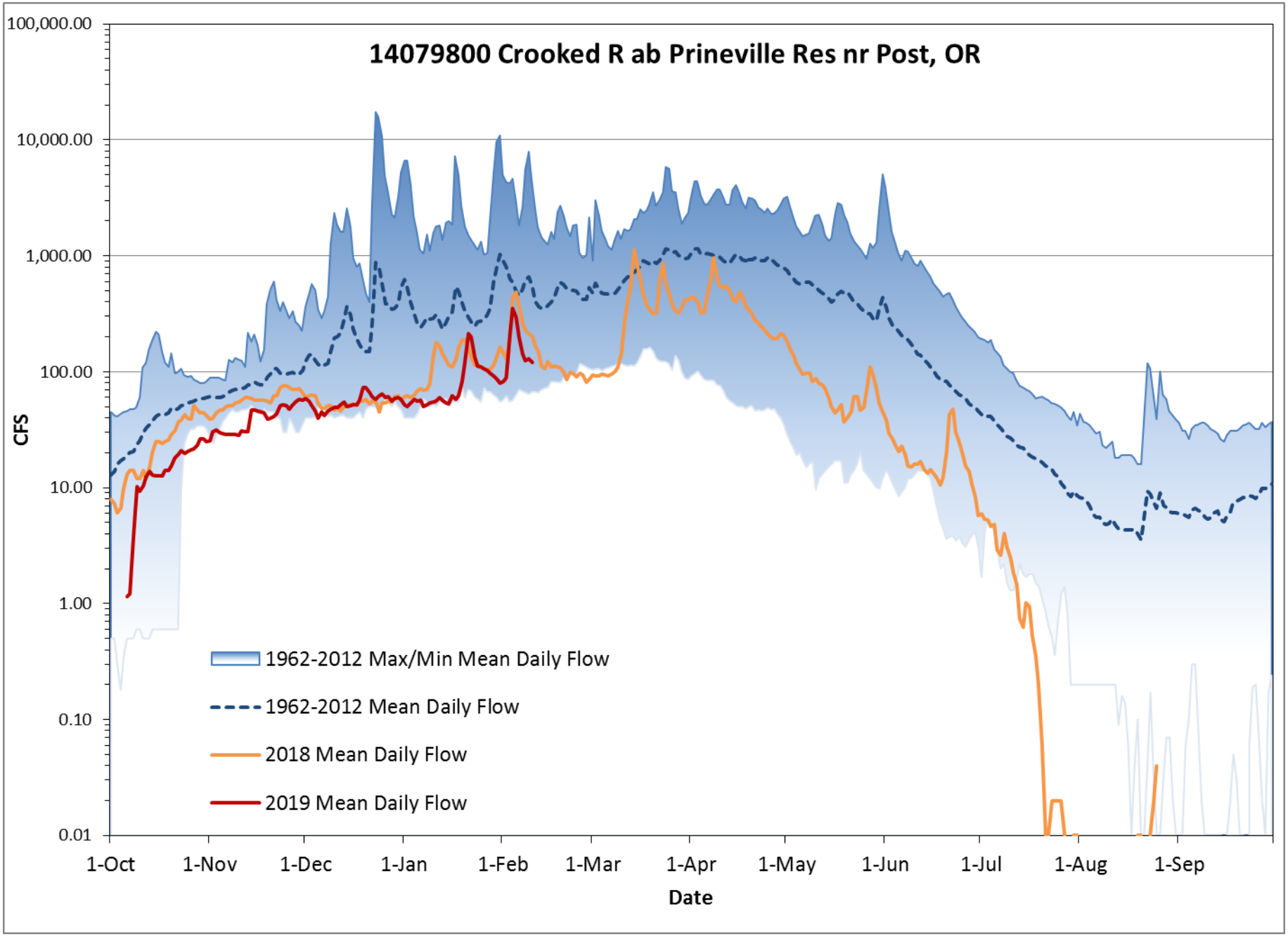
N Fk John Day River in Wheeler County

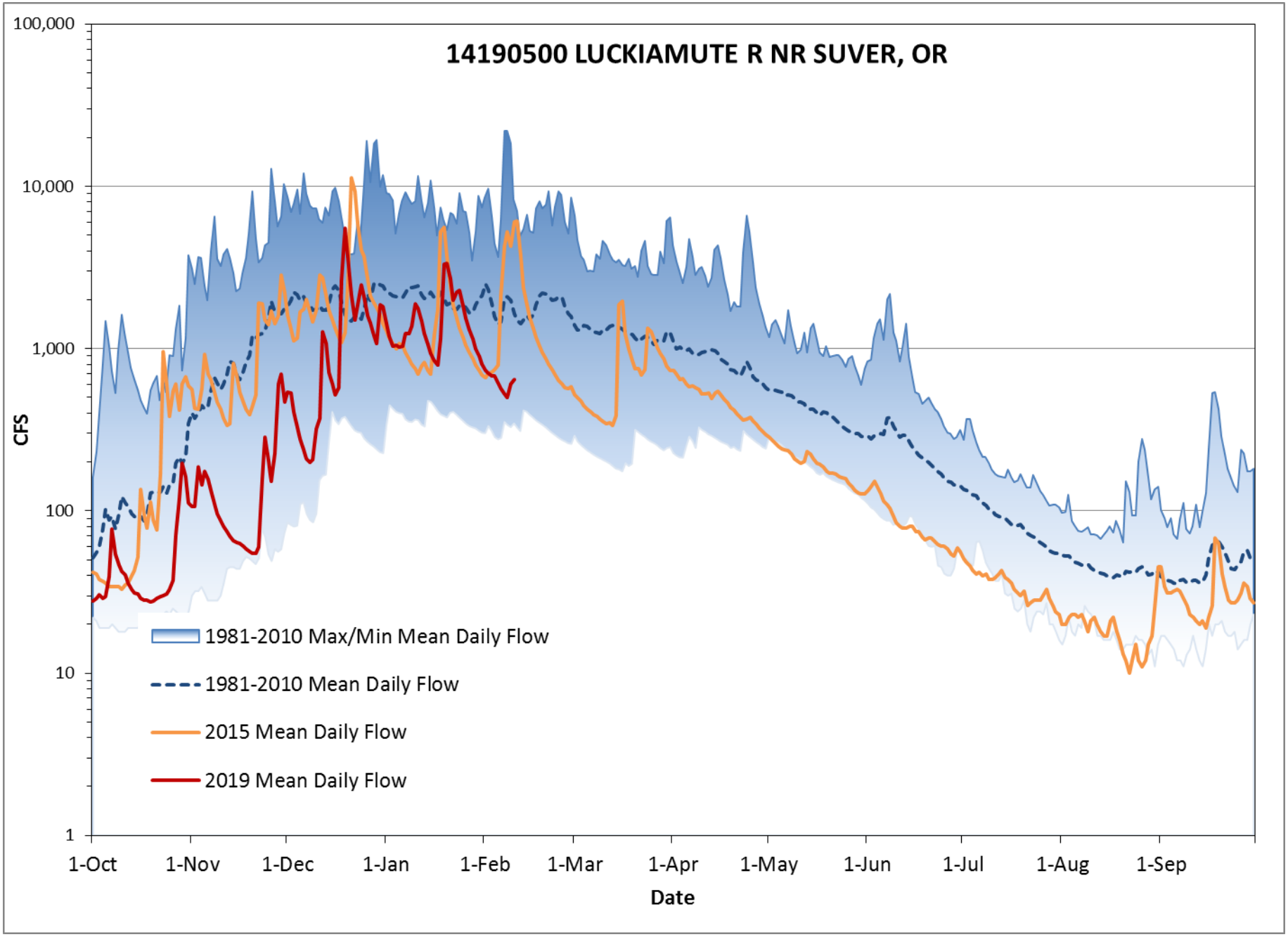


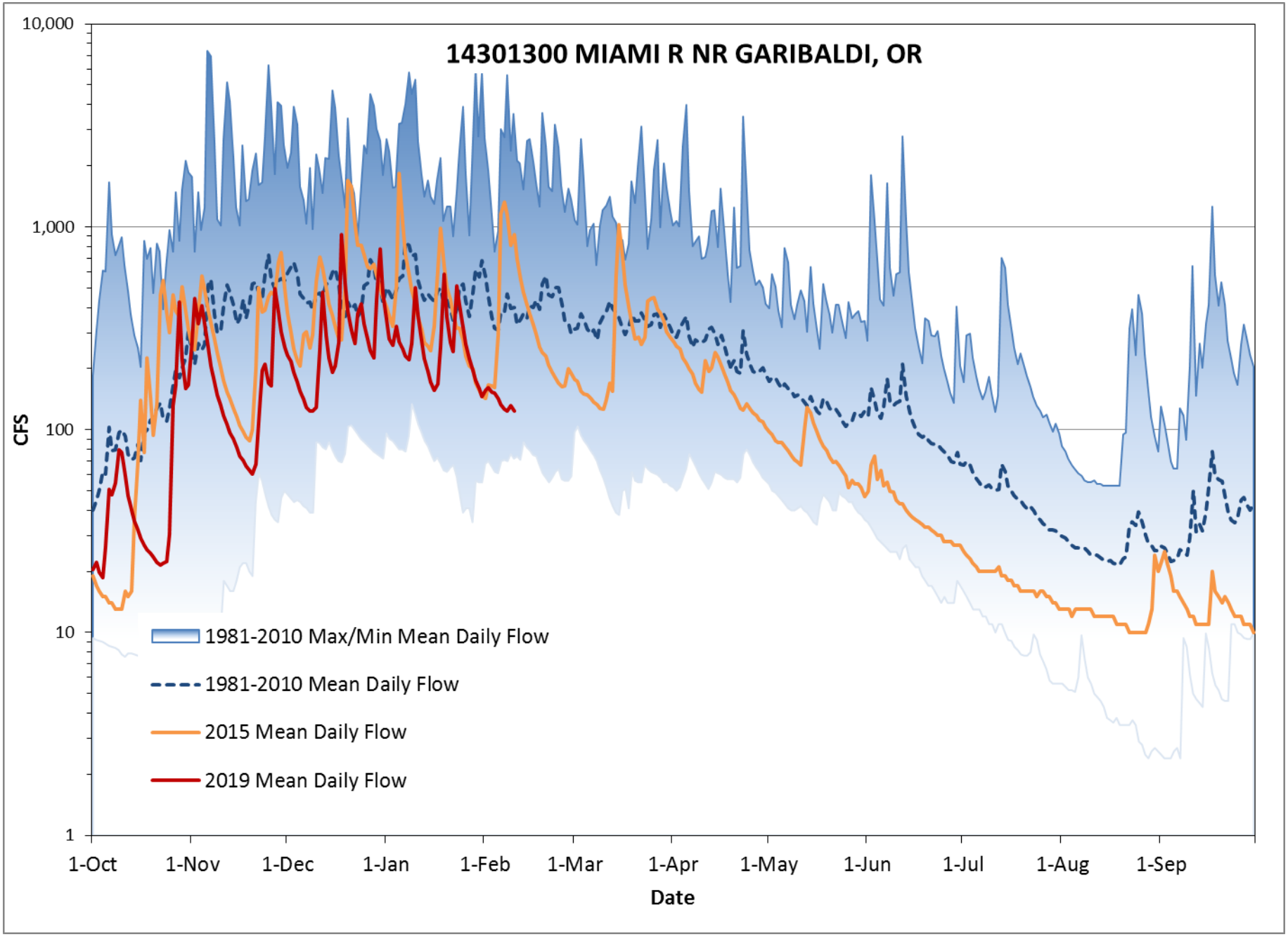


Bridge Cr in Wheeler County




14079800 Crooked R ab Prineville Res nr Post, OR
100,000.00
10,000.00
1,000.00
100.00
10.00
1.00
0.10
0.01
CFS
1962-2012 Max/Min Mean Daily Flow
1962-2012 Mean Daily Flow
2018 Mean Daily Flow
2019 Mean Daily Flow
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
Date


14190500 LUCKIAMUTE R NR SUVER, OR
100,000
10,000
1,000
100
10
1
CFS
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
Date
1981-2010 Max/Min Mean Daily Flow
1981-2010 Mean Daily Flow
2015 Mean Daily Flow
2019 Mean Daily Flow


14301300 MIAMI R NR GARIBALDI, OR
10,000
1,000
100
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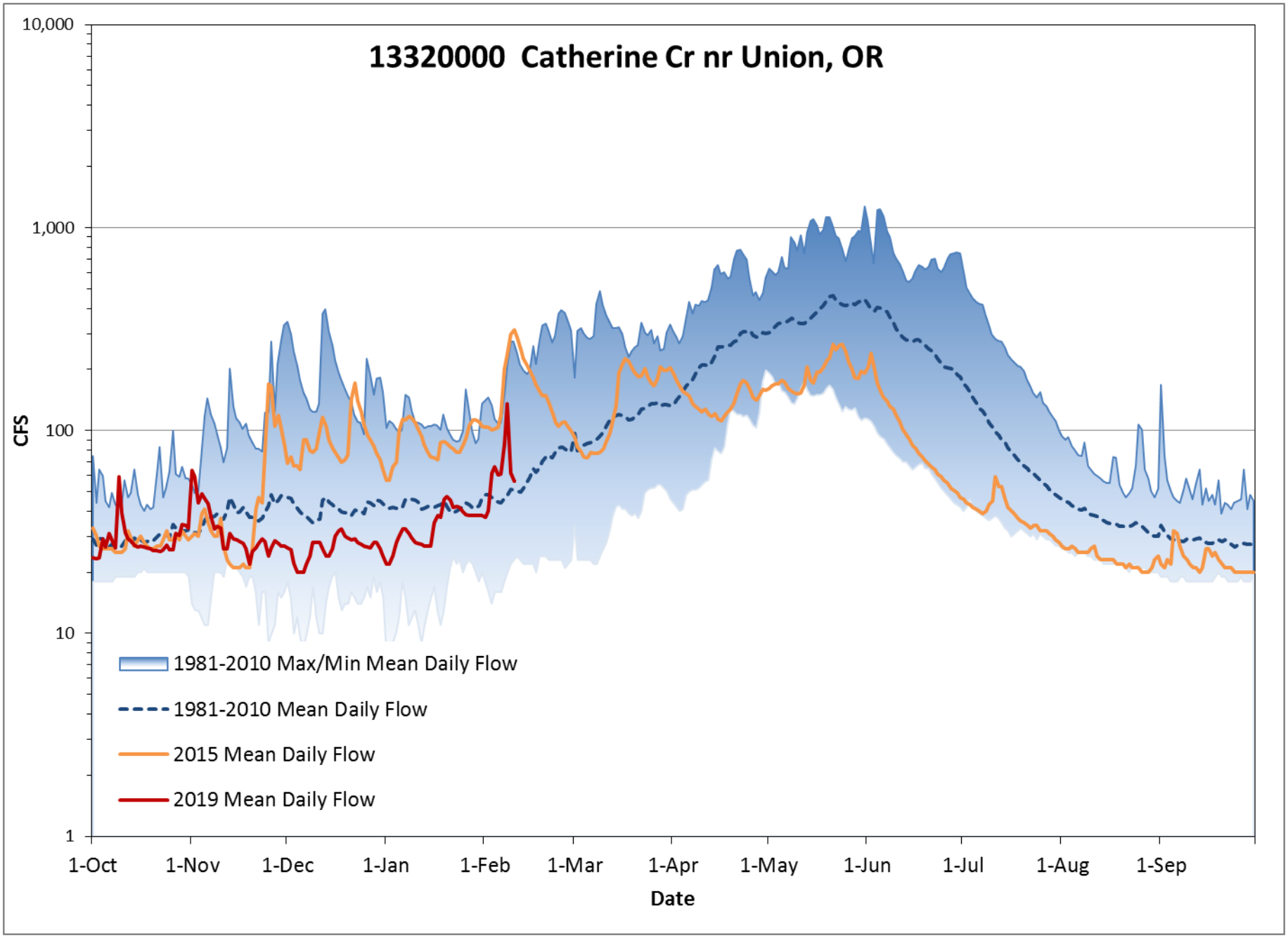
1
CFS
1981-2010 Max/Min Mean Daily Flow
1981-2010 Mean Daily Flow
2015 Mean Daily Flow
2019 Mean Daily Flow
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
Date


13320000 Catherine Cr nr Union, OR
10,000
1,000
100
10
1
CFS
1981-2010 Max/Min Mean Daily Flow
1981-2010 Mean Daily Flow
2015 Mean Daily Flow
2019 Mean Daily Flow
1-Oct
1-Nov
1-Dec
1-Jan
1-Feb
1-Mar
1-Apr
1-May
1-Jun
1-Jul
1-Aug
1-Sep
Date

OREGON
WATER RESOURCES
DEPARTMENT

Thank you.

USGS
science for a changing world

Oregon Water Supply Availability Meeting

February 2019

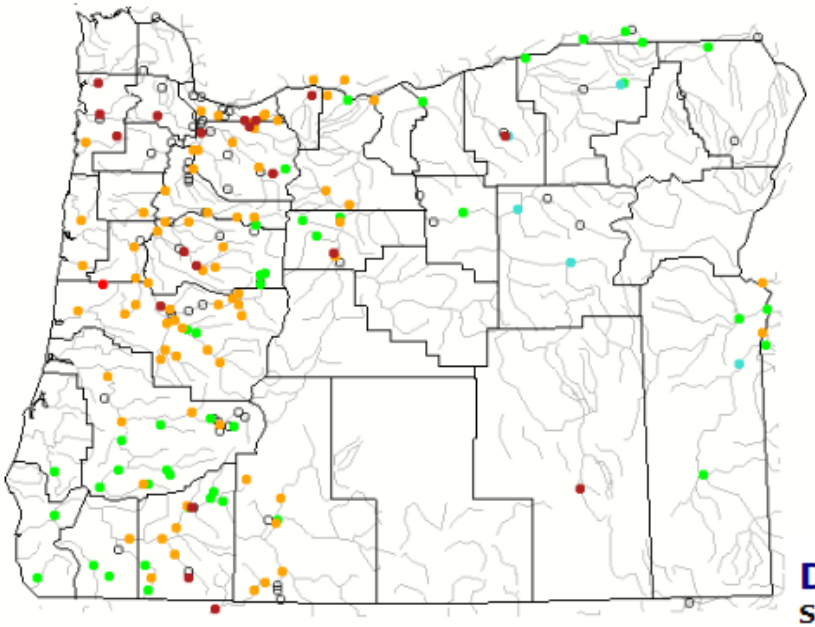
U.S. Department of the Interior
U.S. Geological Survey

USGS Update on Surface Water Conditions

Marc Stewart & Carrie Boudreau

Oregon Water Science Center

Sunday, February 10, 2019



Map of 7-day average streamflow compared to historical streamflow for the day of the year & current flows for today

USGS

Search USGS streamgage

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

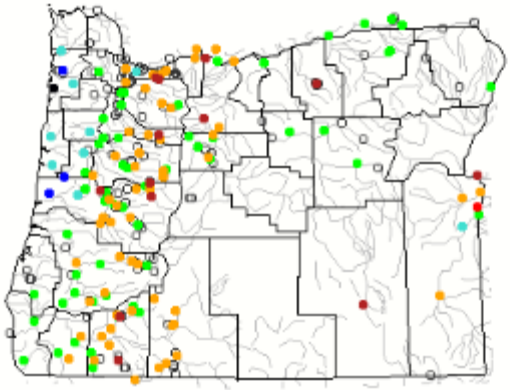
List of all stations | Single station | Nearest stations

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

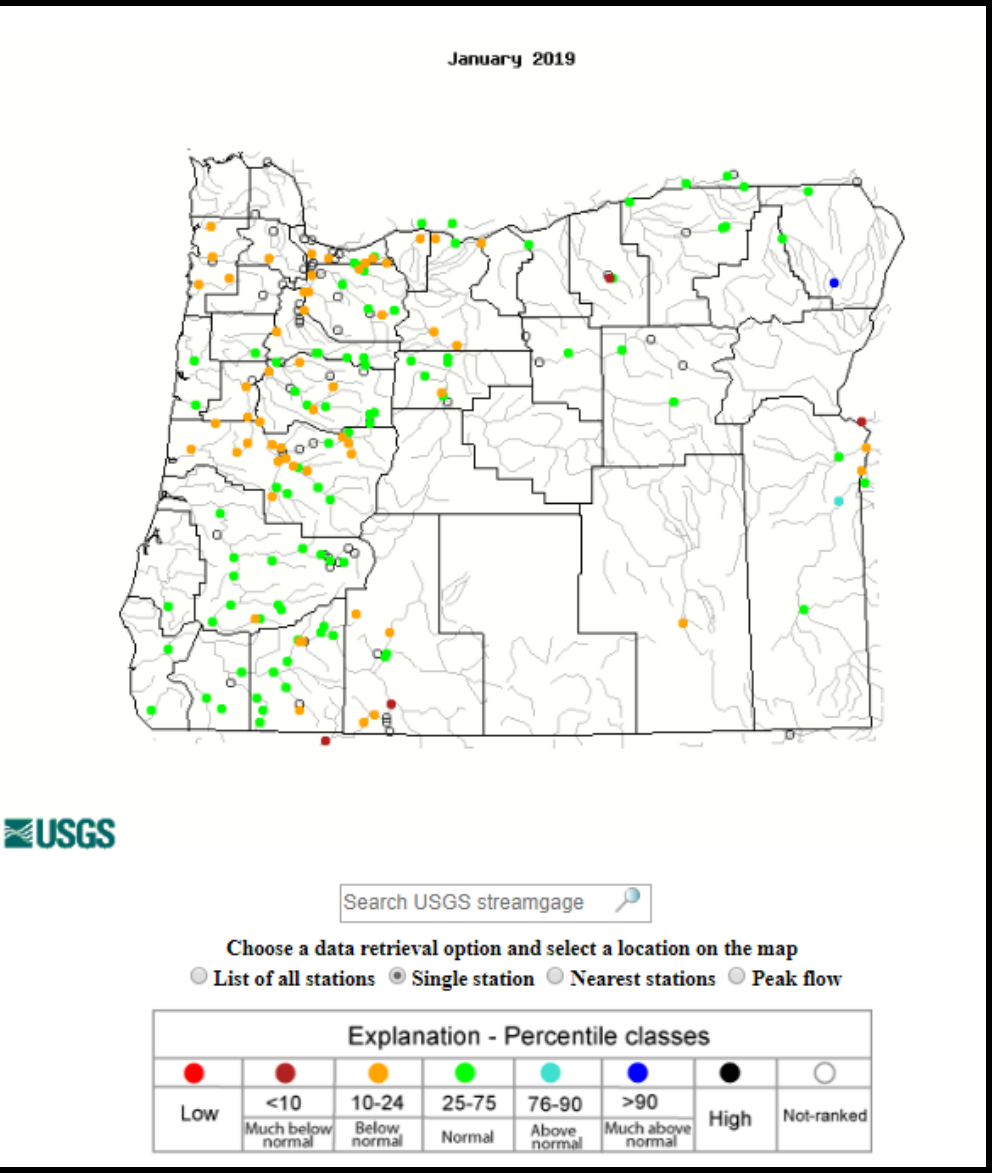
Daily Streamflow Conditions

Select a site to retrieve data and station information.

Tuesday, February 12, 2019 11:30ET



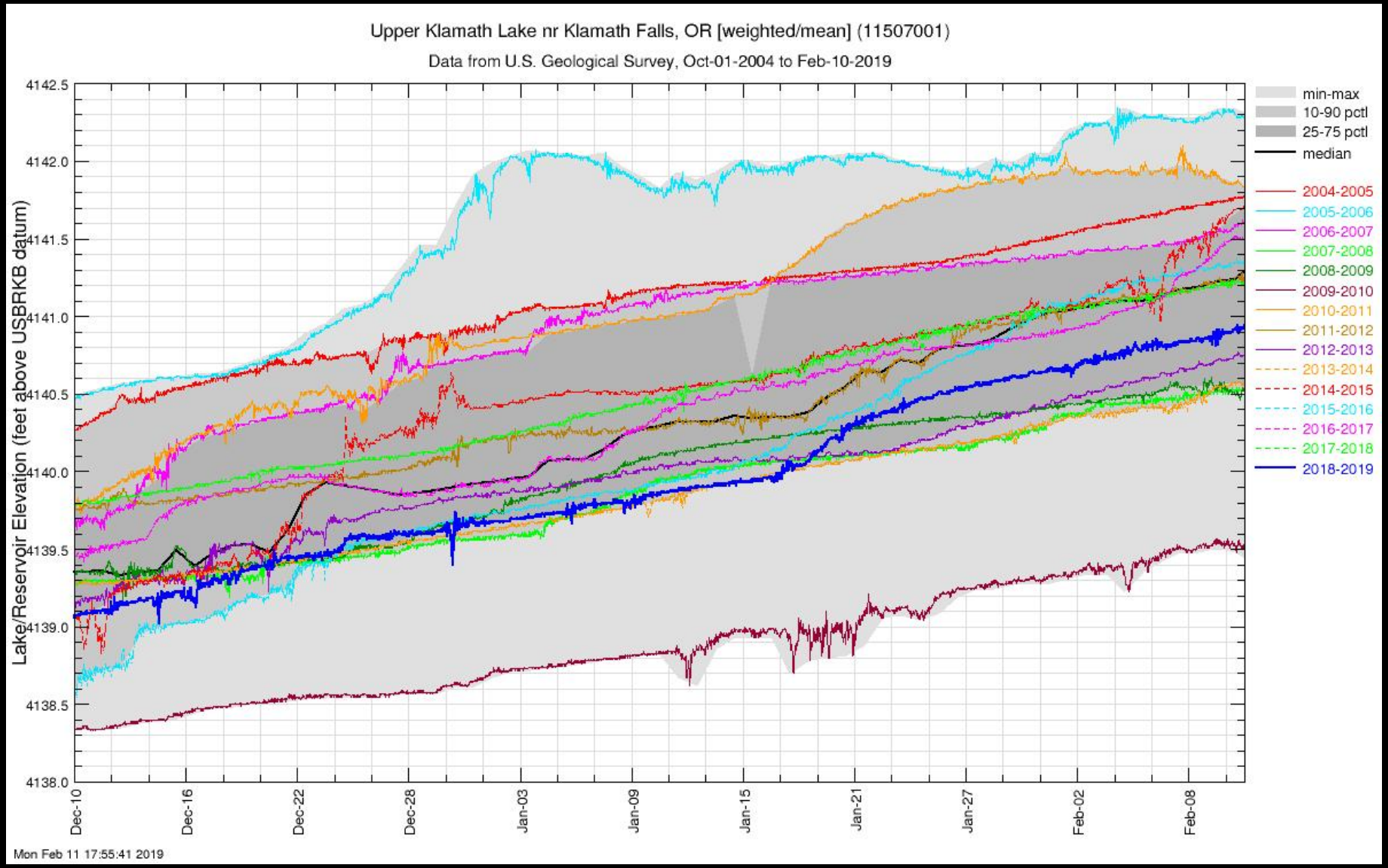
USGS



Pacific Northwest map of monthly Streamflow compared to historical streamflow for month of January.

USGS

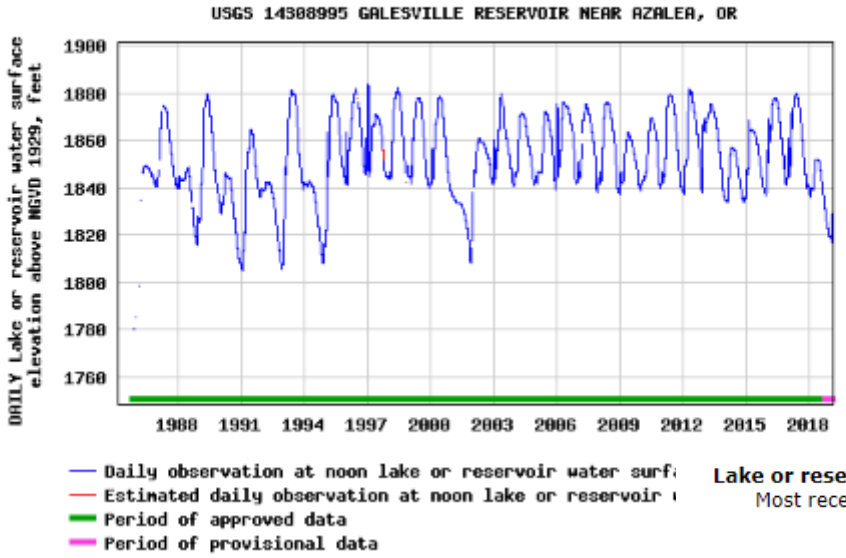
Klamath Basin



USGS

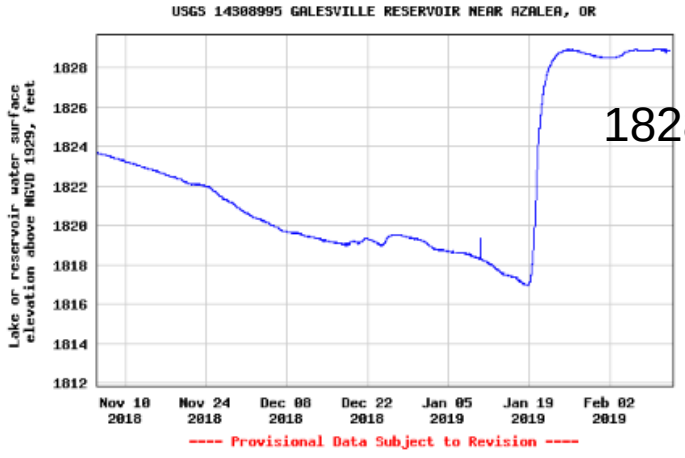
Douglas

Lake or reservoir water surface elevation above NGVD 1929, feet



Lake or reservoir water surface elevation above NGVD 1929, feet

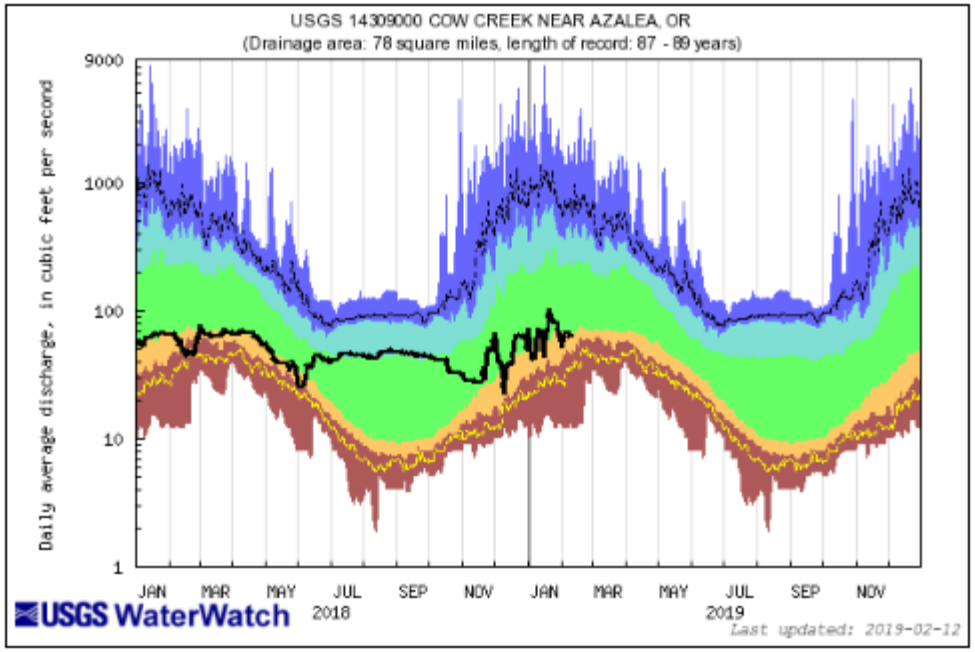
Most recent instantaneous value: 1828.87 02-12-2019 08:00 PST

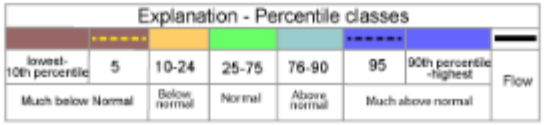


1828.9 ft.

USGS

Douglas





USGS

US GEOLOGICAL SURVEY, OREGON WATER SCIENCE CENTER
WATER AVAILABILITY REPORT FOR JANUARY 2019

Station	NRCS SWSI Basin	Monthly mean discharge: Cubic feet per second	Monthly mean discharge: Percent of average	Change in discharge from previous month (percent)	Accumulated Runoff For the Period Oct. to Jan.: Percent of average
Donner Und Blitzen nr Frenchglen	Harney	28	42	4	51
*)Deep Creek above Adel	Lake County	28	34	65	34
*)Chewaucan River near Paisley	Lake County	58	59	66	61
Williamson River near Chiloquin	Klamath	680	65	17	73
Owyhee River near Rome	Owyhee	224	43	27	54
*)NF Malheur River near Beulah	Malheur	38	52	-12	71
Grande Ronde R at Troy	Grande Ronde Powder/Burnt	1,320	68	34	72
Umatilla River nr Gibbon	Umatilla Lower John Day	273	105	36	95
John Day River at Service Crk	Upper John Day	828	51	108	49
*)Little Deschutes River nr LaPine	Upper Deschutes	81	49	-8	61
Hood River nr Hood River	Lower Deschutes Mt.Hood	910	64	-12	68
Willamette River at Salem	Willamette	26,702	59	17	51
Wilson River near Tillamook	North Coast	1,768	71	-24	70
Umpqua River near Elkton	Rogue/Umpqua	10,077	69	81	50
Rogue River near Agness	Rogue/Umpqua	8,530	83	135	61
SF Coquille River at Powers	South Coast	1,767	105	61	66
Chetco River near Brookings	South Coast	4,844	98	50	65

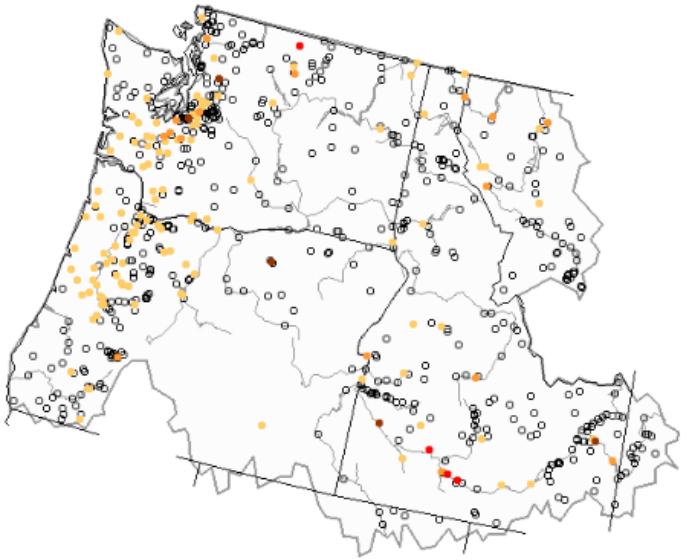
All data should be considered provisional and subject to revision.
Percent of average computed using 30-year base period, water years 1981-2010.
(*) provided by Oregon Water Resources Department

2/4/2019

Map of below normal 28-day average streamflow compared to historical streamflow for the day of year (Pacific Northwest)

State or 17 Pacific Northwest

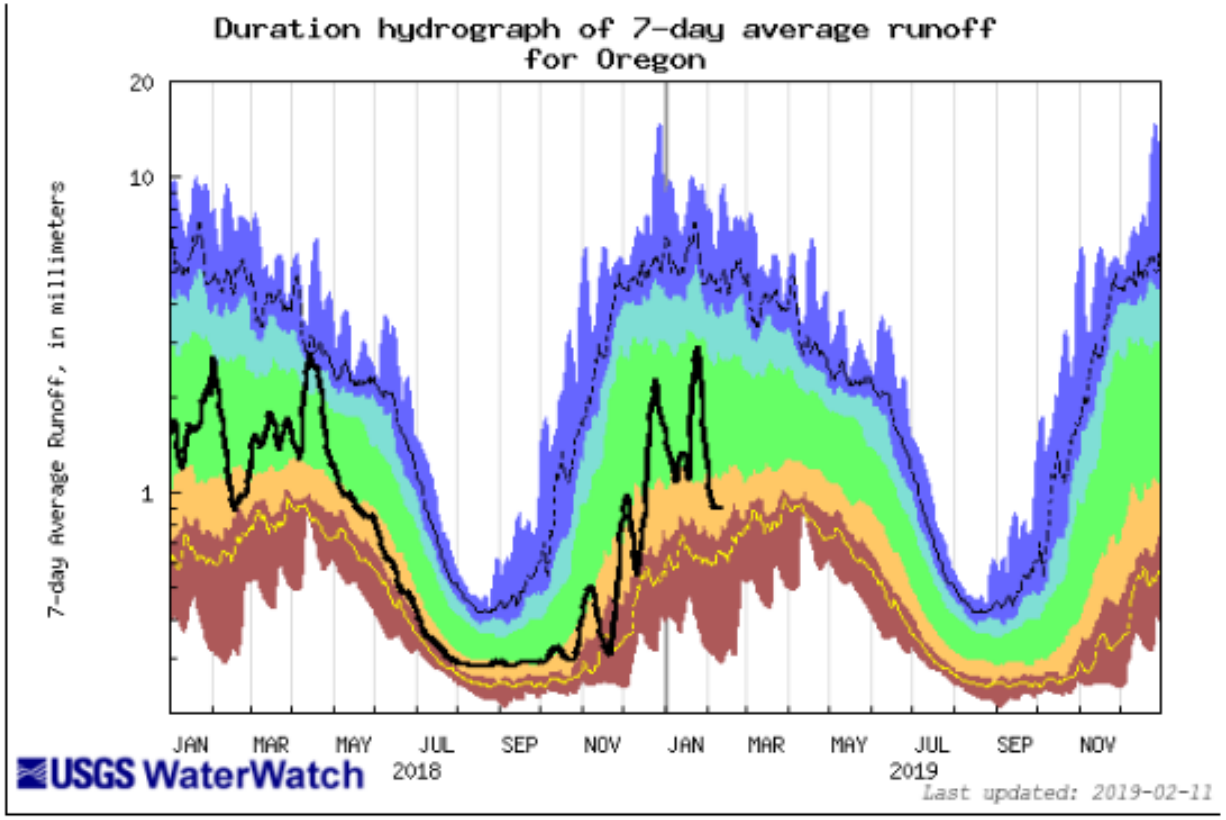
Monday, February 11, 2019



USGS

Search USGS streamgage

Explanation - Percentile classes				
New low	<=5	6-9	10-24	Not ranked
Extreme hydrologic drought	Severe hydrologic drought	Moderate hydrologic drought	Below normal	



Provisional Data Statement
Data are provisional and subject to revision until they have been thoroughly reviewed and received final approval.

Power Point “USGS Update on Surface Water Conditions”

By: Marc Stewart & Carrie Boudreau USGS ORWSC

Water Availability Report By: Tiffany Rae Jacklin

Pictures: Amarys Acosta -- USGS ORWSC

USGS

RECLAMATION

Managing Water in the West

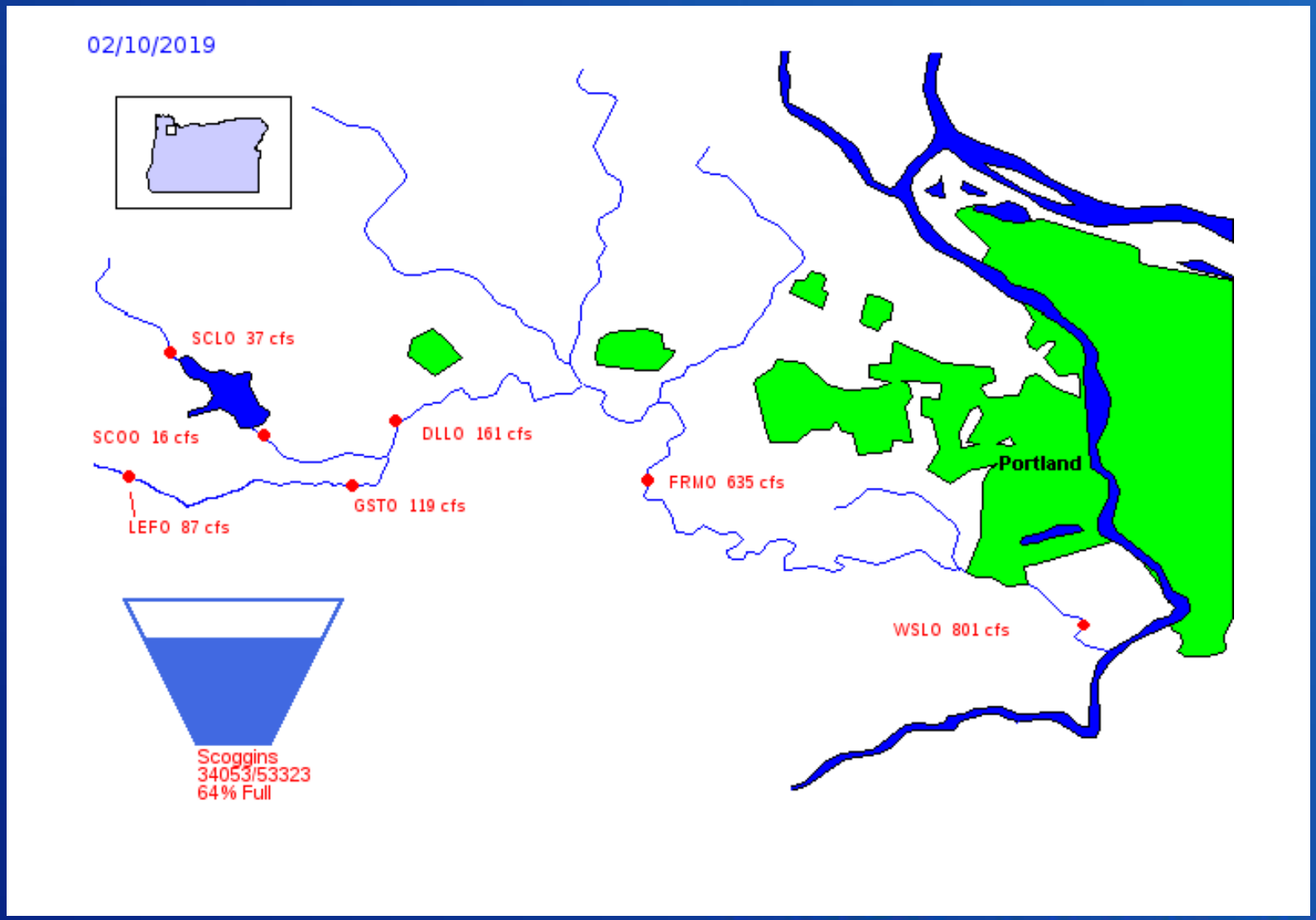
Oregon Water Supply Availability Committee Meeting

Pacific Northwest Regional Office
River and Reservoir Operations
Feb 11, 2019

U.S. Department of the Interior
Bureau of Reclamation

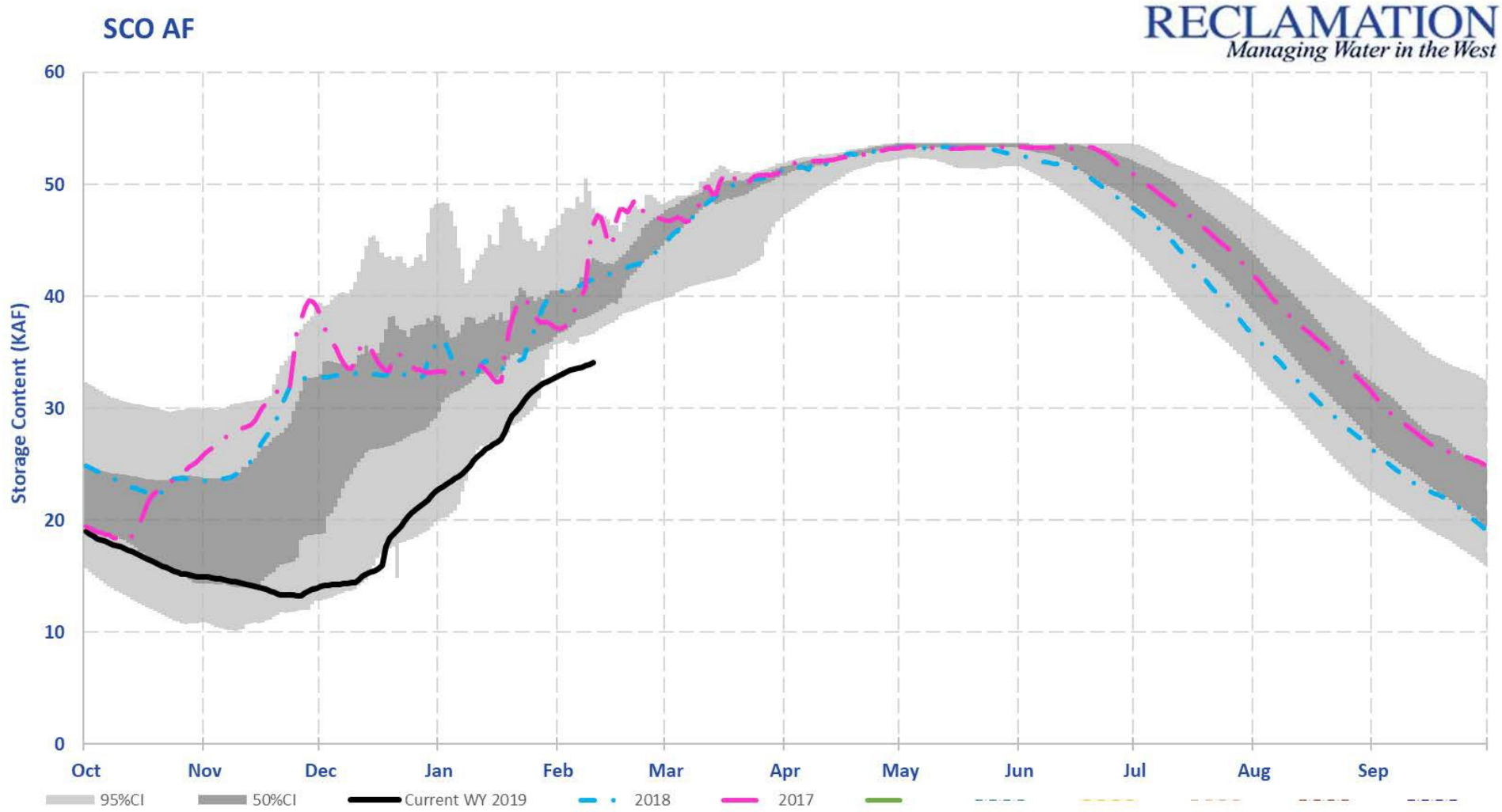
Current Conditions

Tualatin River Basin



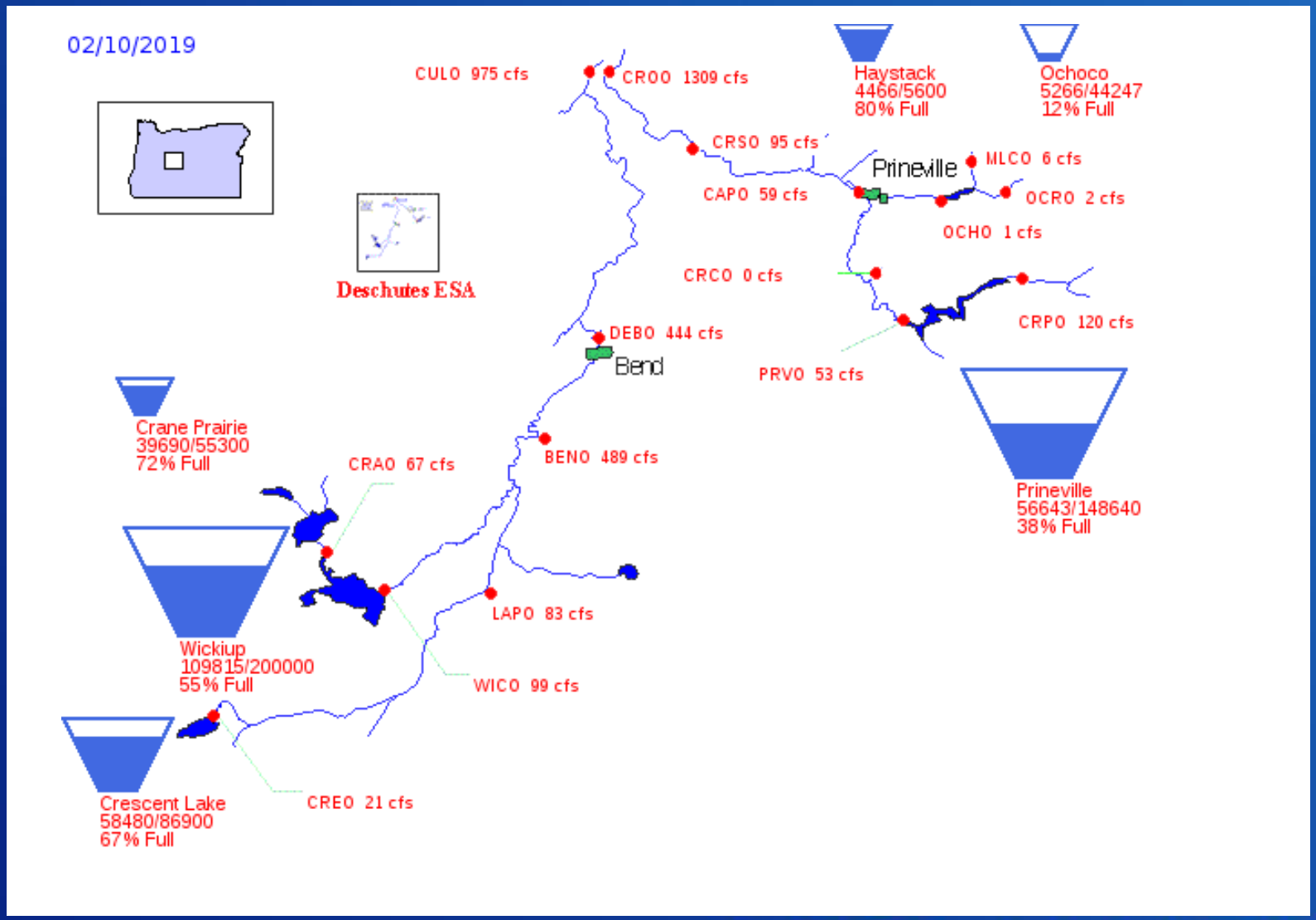
RECLAMATION

Tualatin River Basin: Scoggins



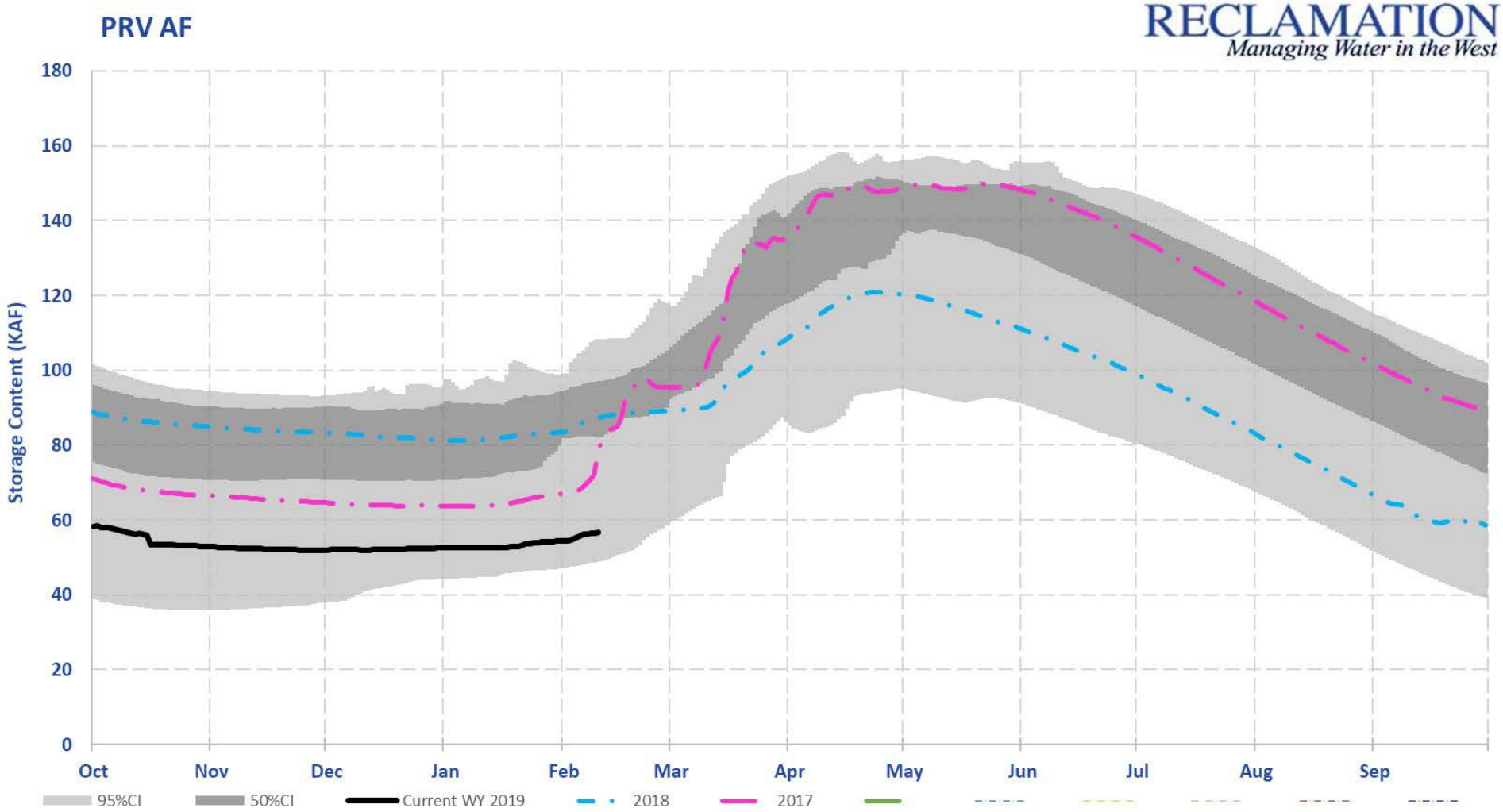
RECLAMATION

Deschutes River Basin



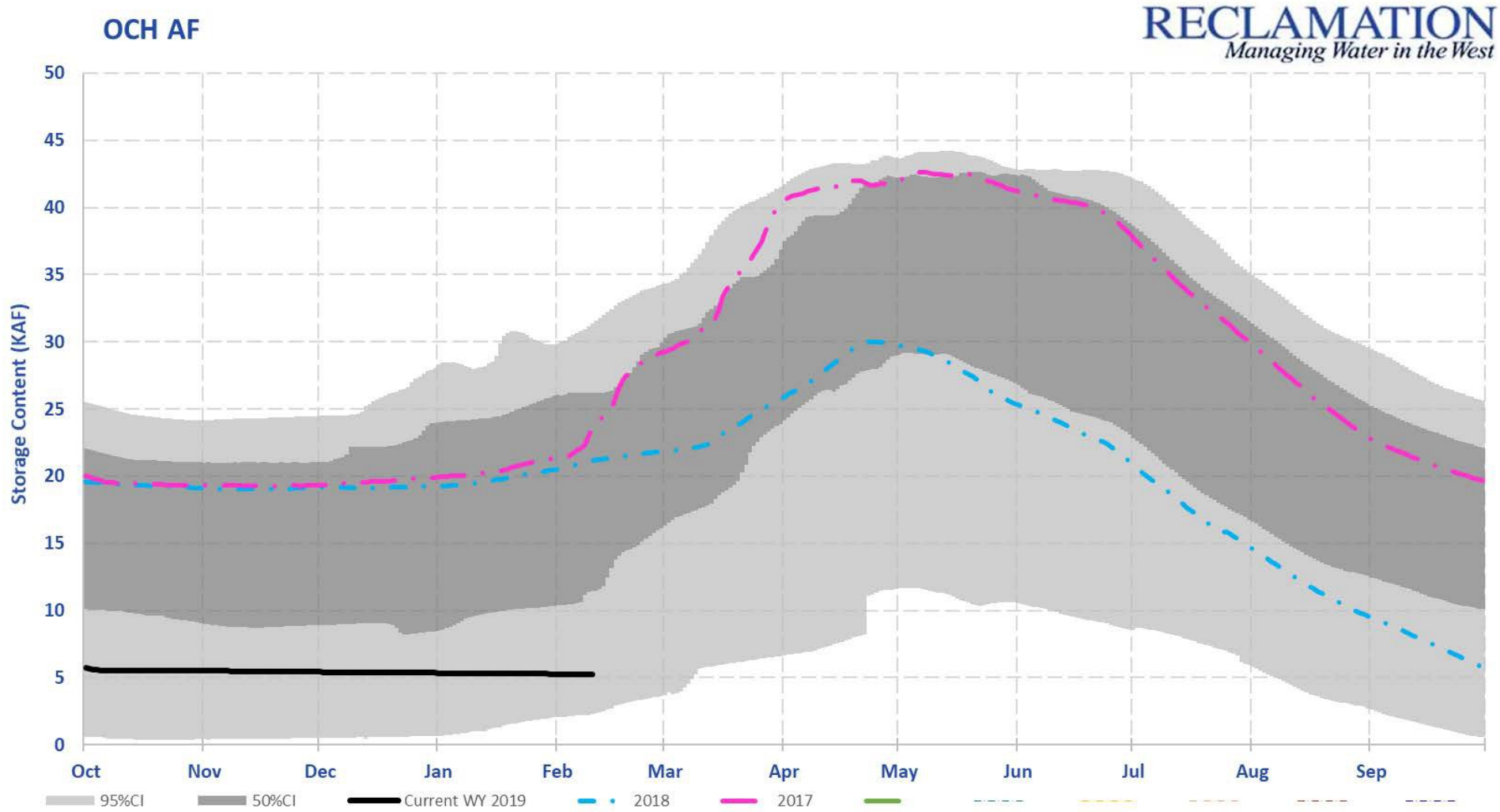
RECLAMATION

Deschutes River Basin: Prineville



RECLAMATION

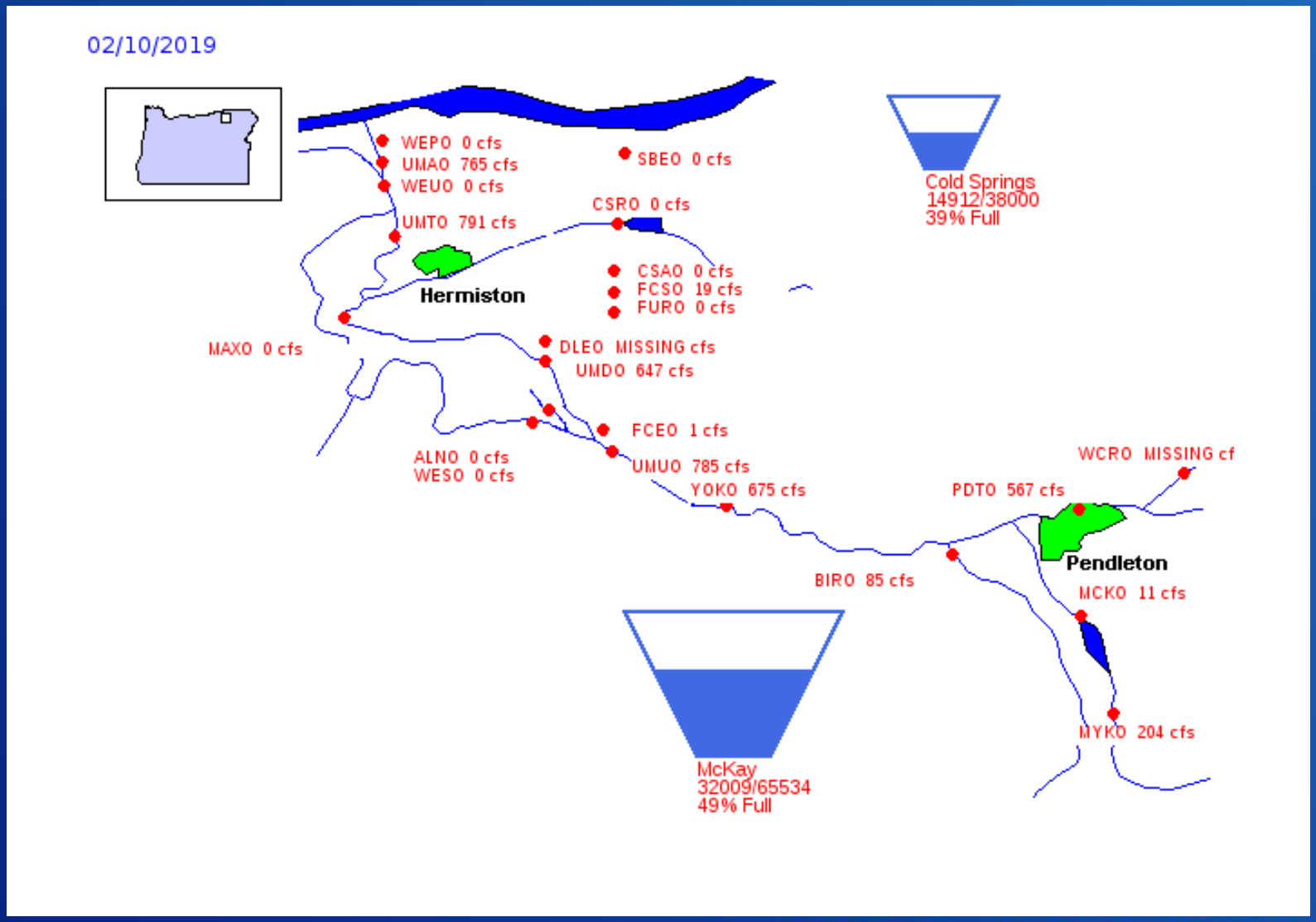
Deschutes River Basin: Ochoco



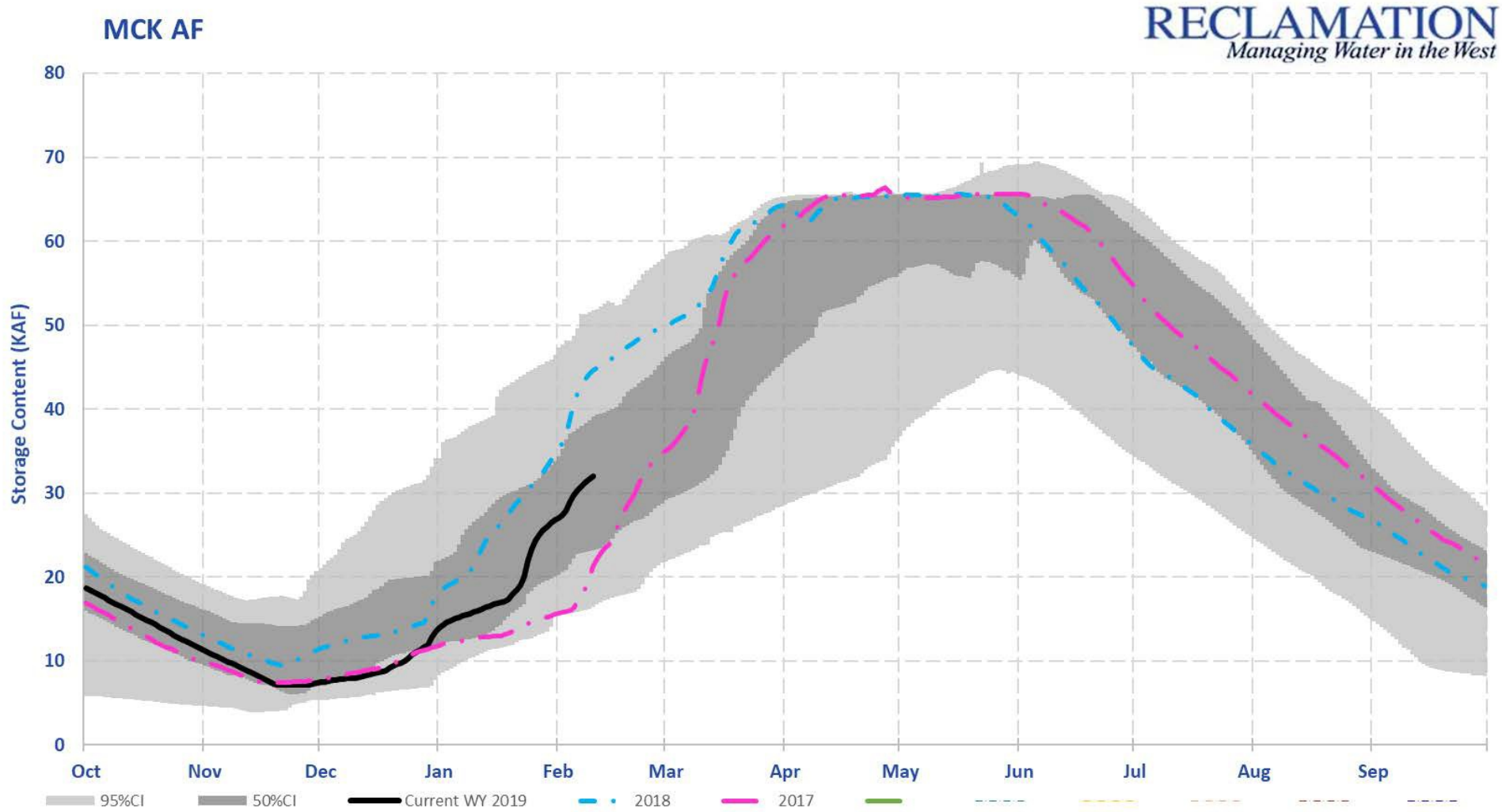
We are currently having issues with this gage – data is likely to be erroneous.

RECLAMATION

Umatilla River Basin

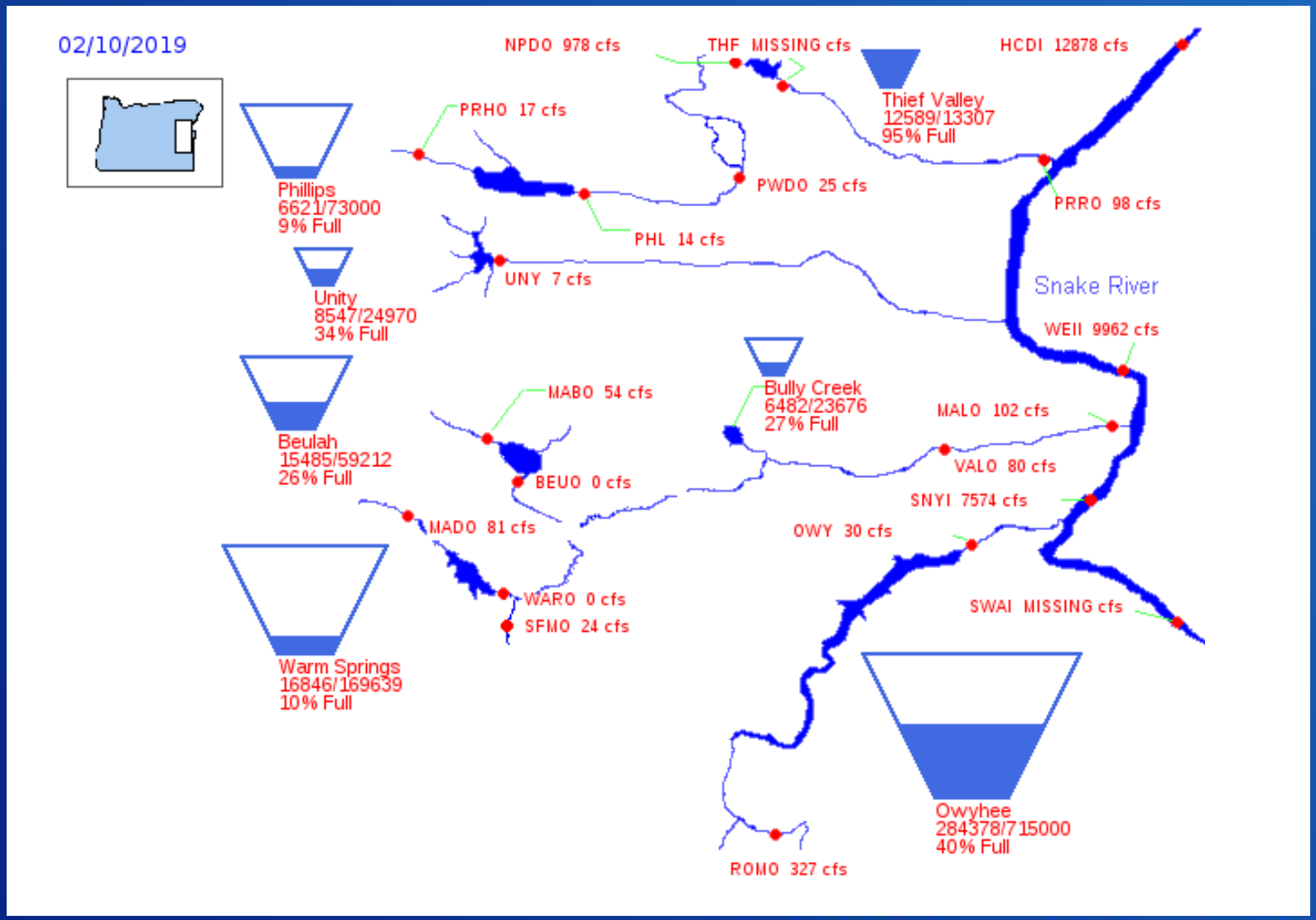


Umatilla River Basin: McKay



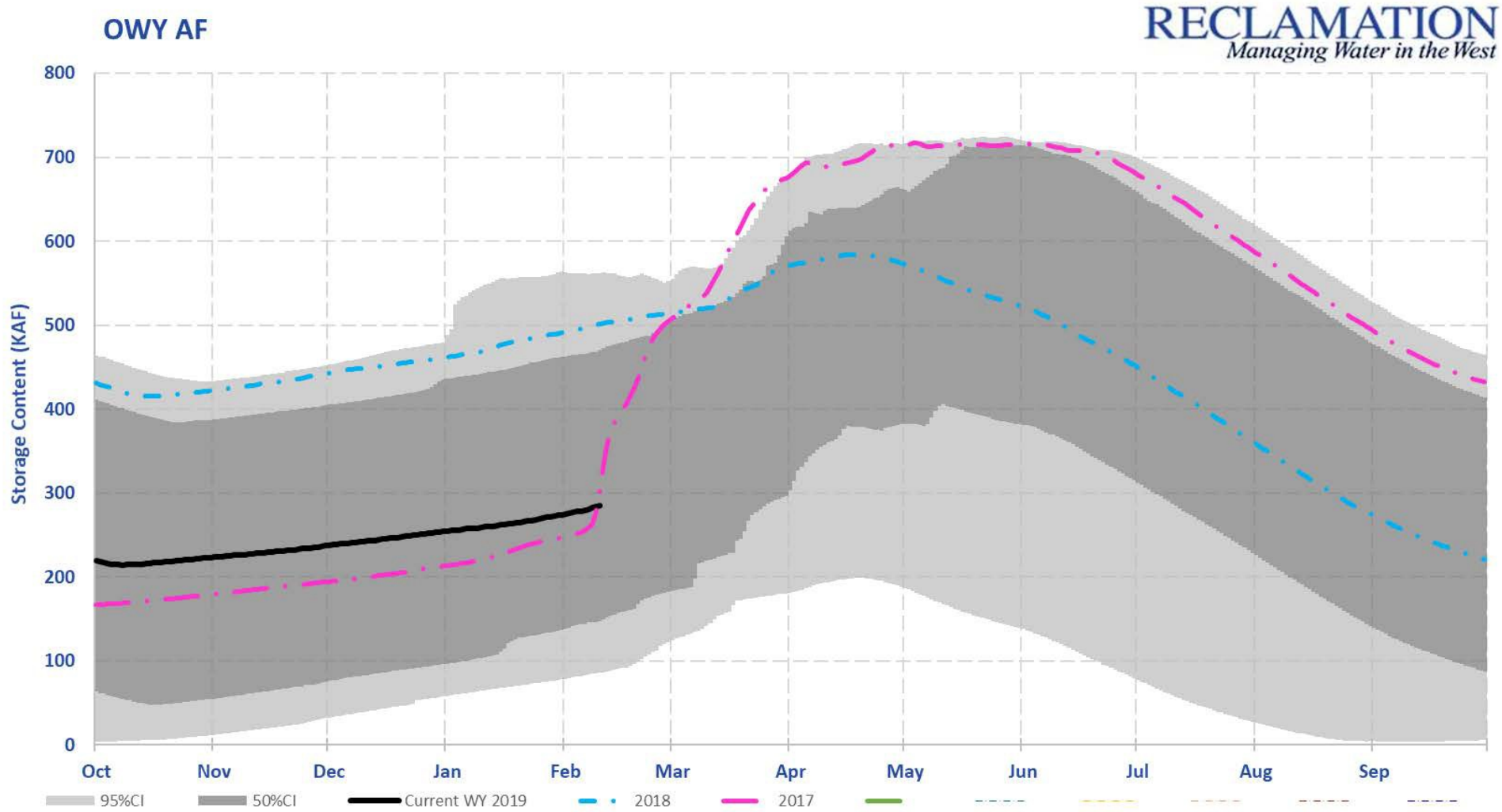
RECLAMATION

Southeastern Oregon



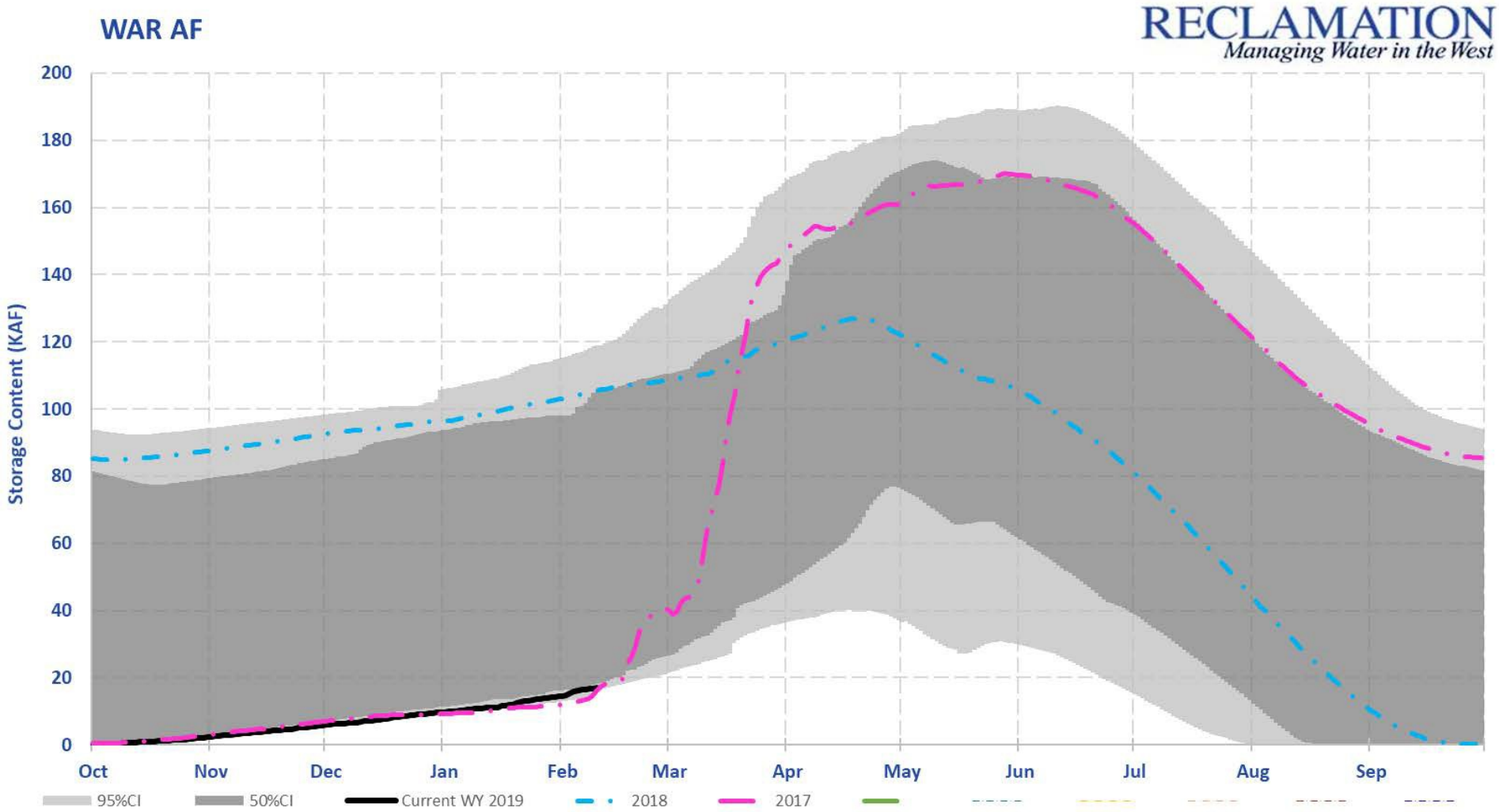
RECLAMATION

Owyhee River Basin: Owyhee



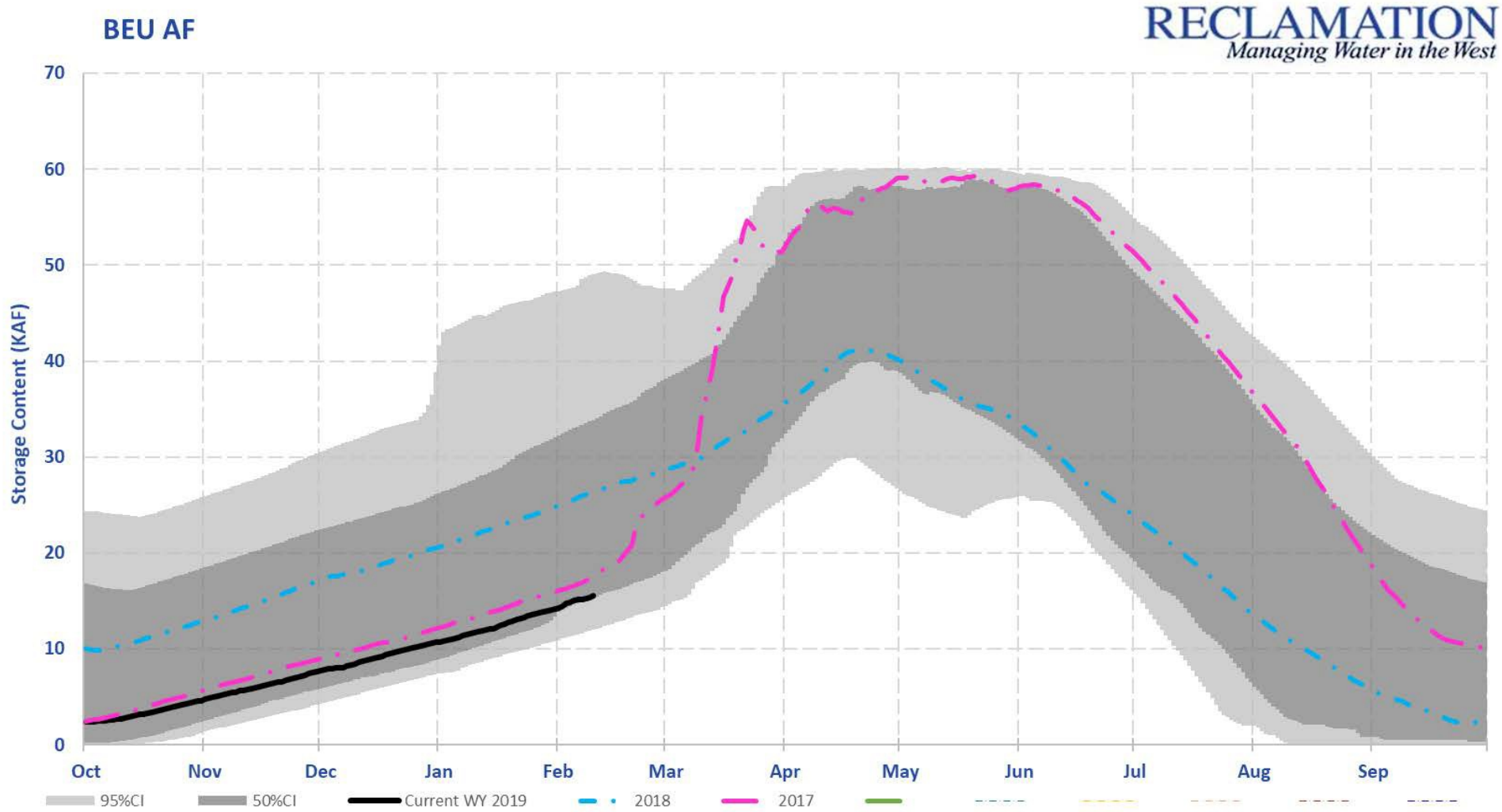
RECLAMATION

Malheur River Basin: Warm Springs



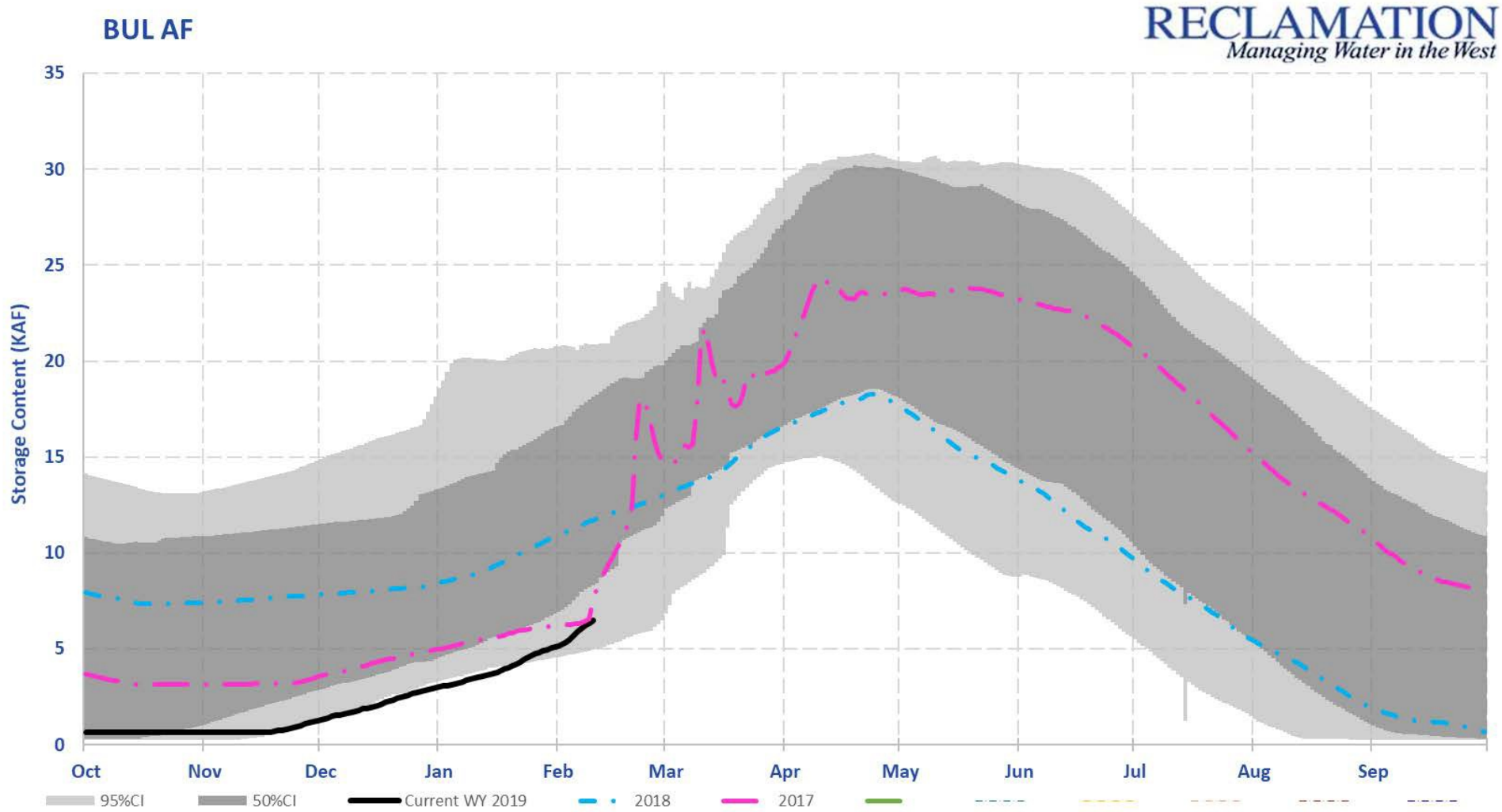
RECLAMATION

Malheur River Basin: Beulah



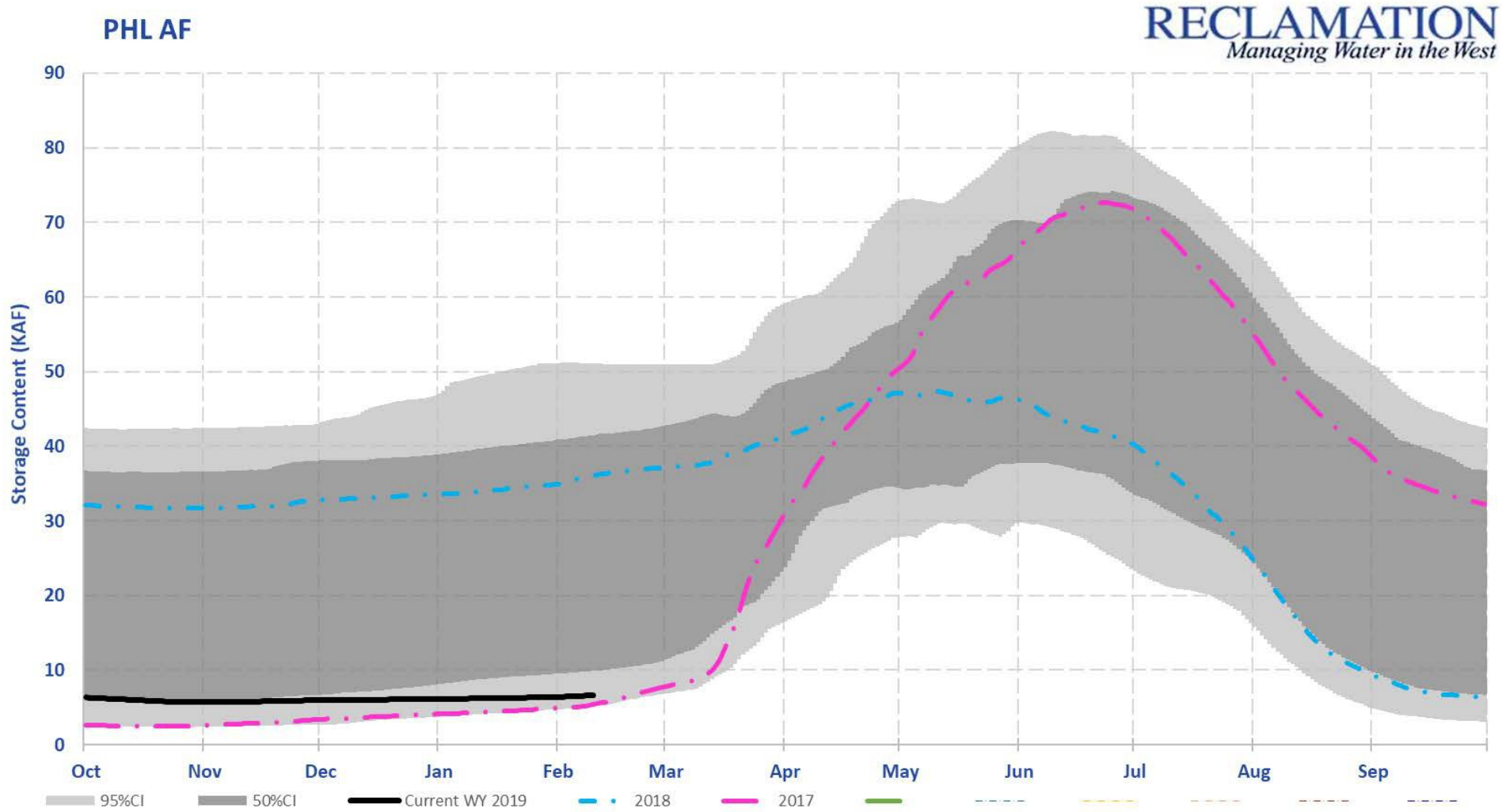
RECLAMATION

Malheur River Basin: Bully Creek



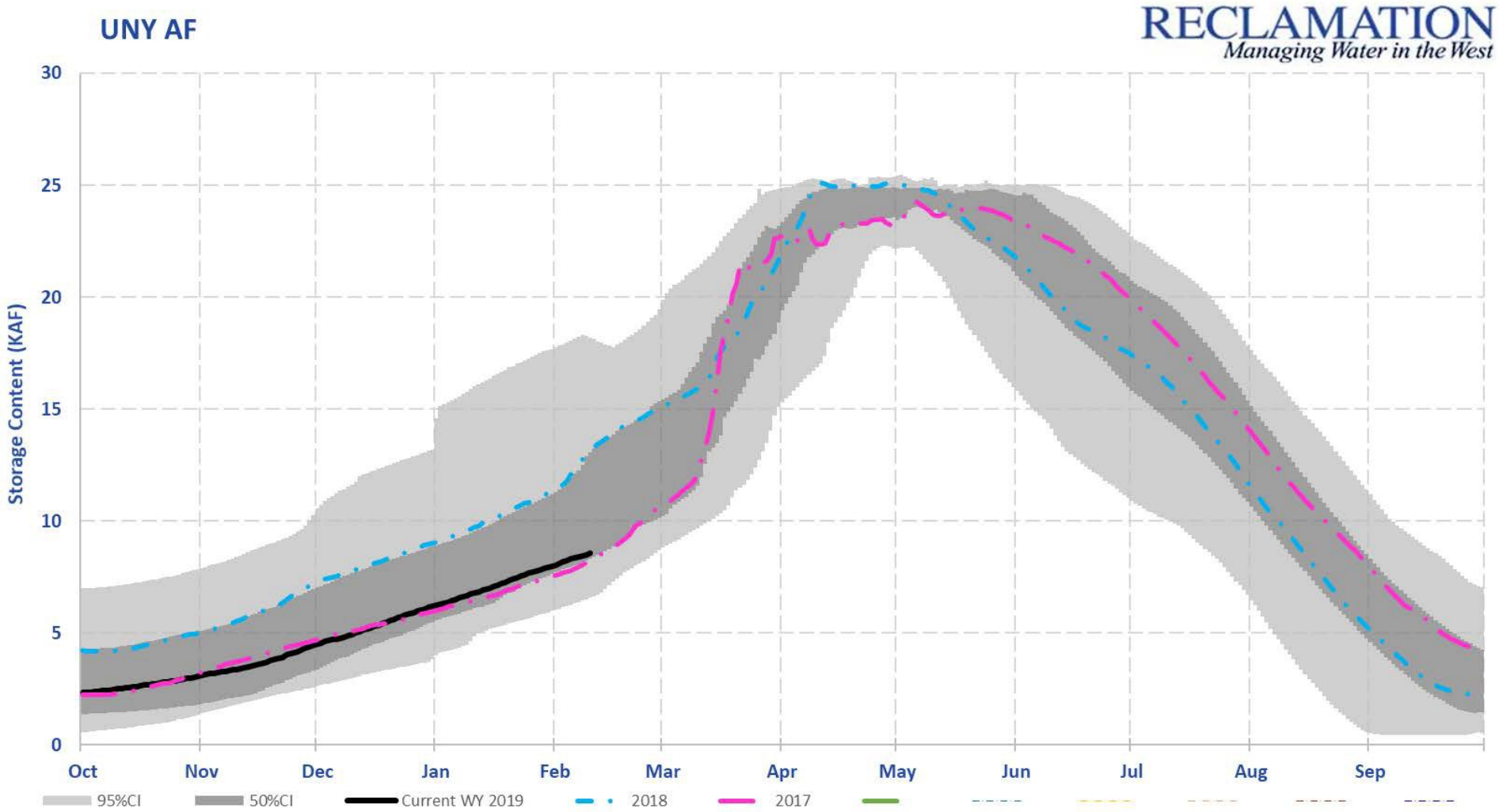
RECLAMATION

Powder River Basin: Phillips



RECLAMATION

Burnt River Basin: Unity



RECLAMATION

Reservoir Inflow Forecasts

Forecast Reservoir	Forecast Period	1981-2010 Average (KAF)	USBR Forecast (KAF)	% Average	Available Space (KAF)
Phillips	Feb-Jul	74	65	88%	67
Beulah	Feb-Jun	80	64	80%	44
Bully Creek	Feb-Jun	34	26	77%	17
McKay	Feb-Jun	58	63	108%	33
Ochoco	Feb-Jun	42	29	70%	39
Owyhee	Feb-Jun	612	481	79%	430
Prineville	Feb-Aug	203	143	71%	92
Unity	Feb-Jul	51	40	78%	17
Warm Springs	Feb-Jun	127	96	76%	153

Forecasts dated 01-FEB
Space as of 11-FEB

Questions