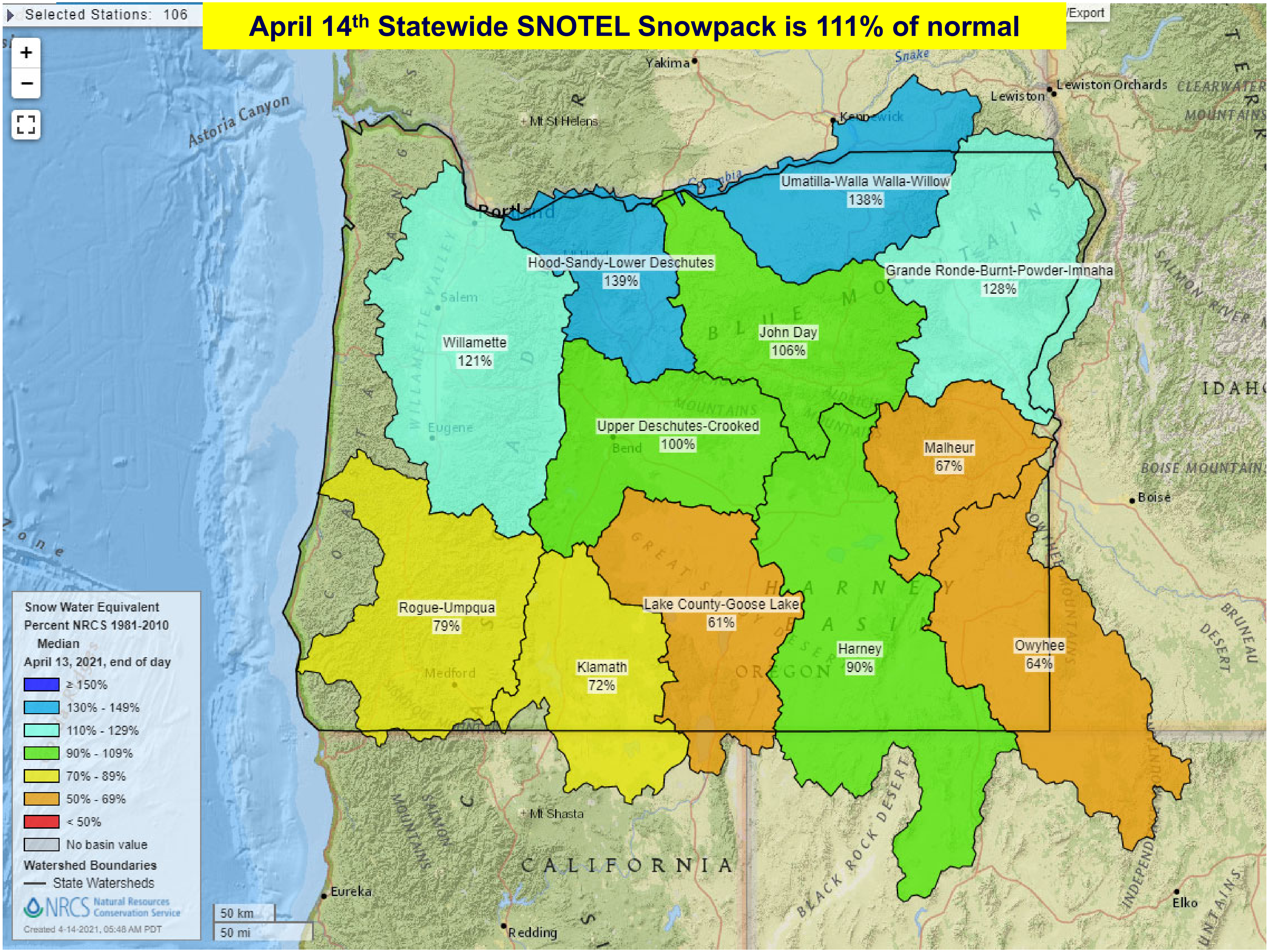
Oregon Water Supply Availability Committee – April 14, 2021

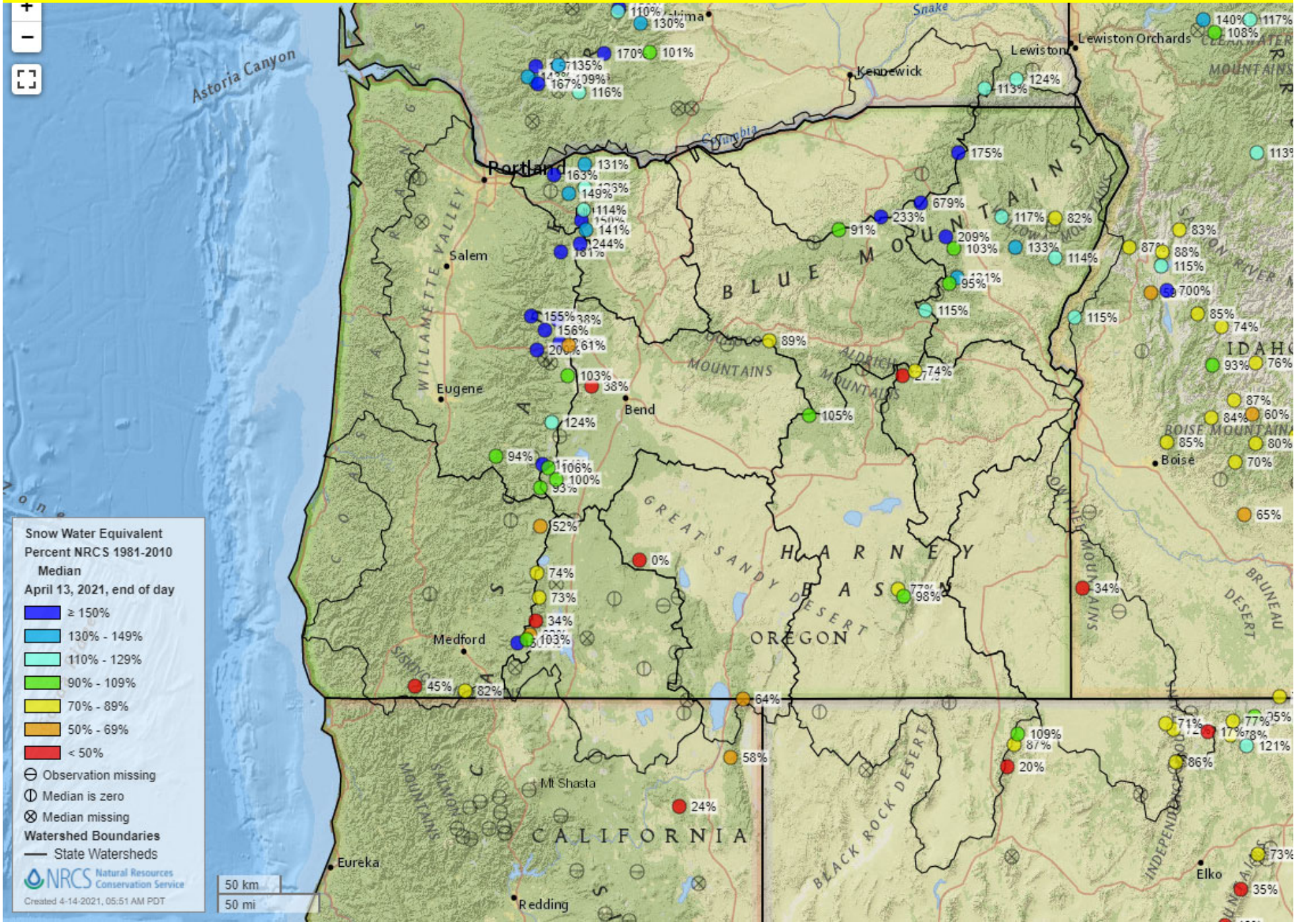
Crater Lake NP, Park HQ – April 1, 2021

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

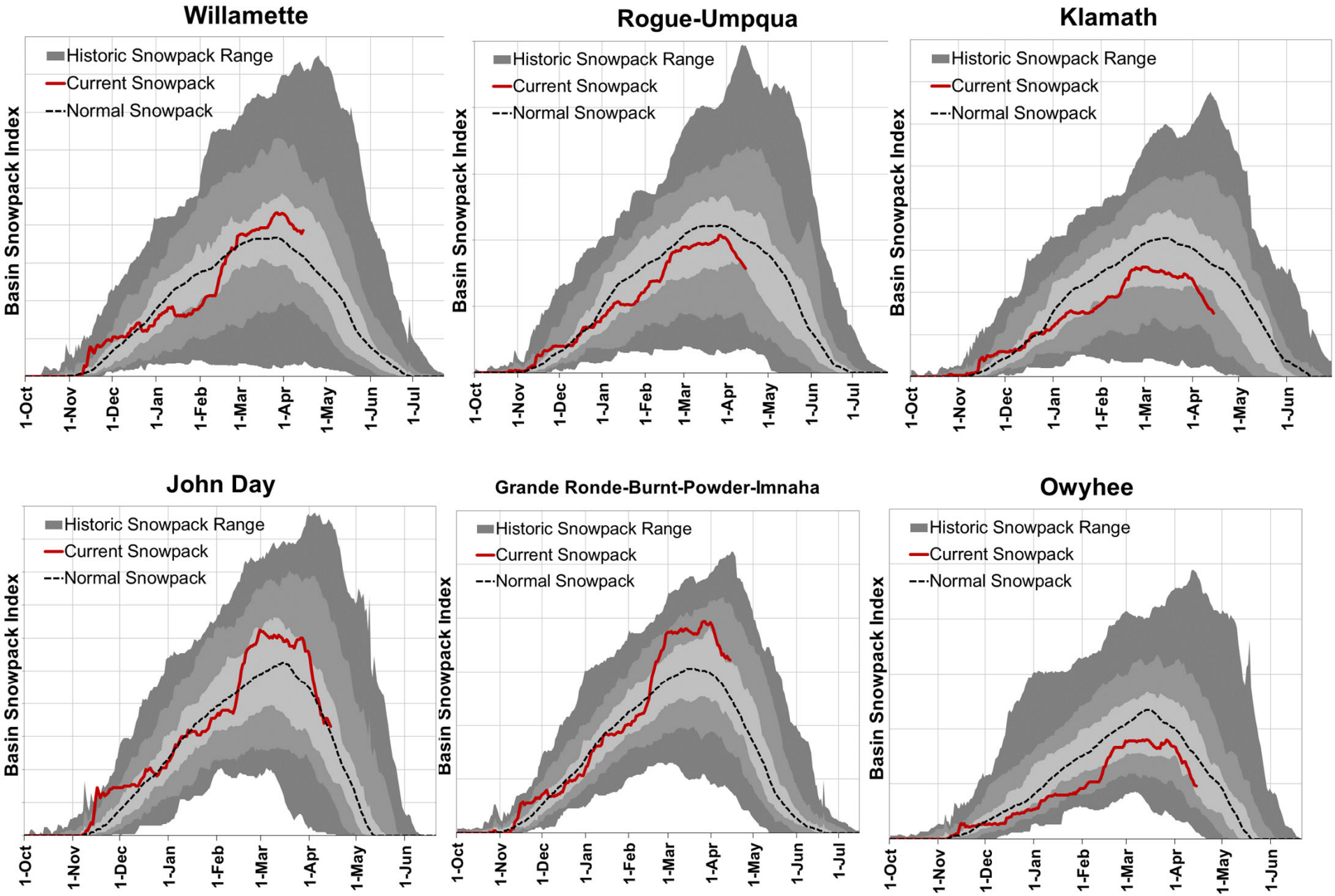
April 14th Statewide SNOTEL Snowpack is 111% of normal



April 14th Oregon SNOTEL % of median by station

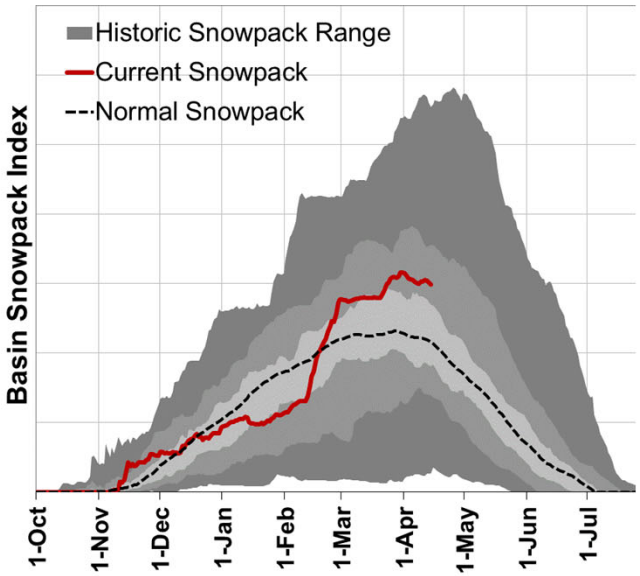


OREGON SNOWPACK GRAPHS – April 14, 2021

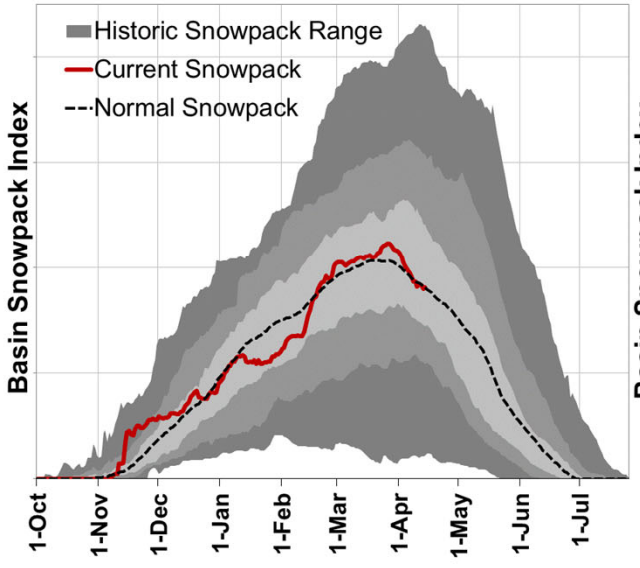


OREGON SNOWPACK GRAPHS – April 14, 2021

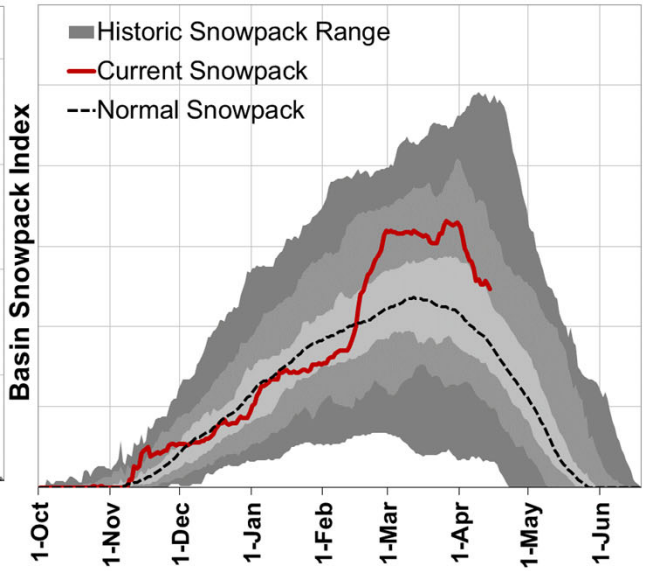
Hood-Sandy-Lower Deschutes



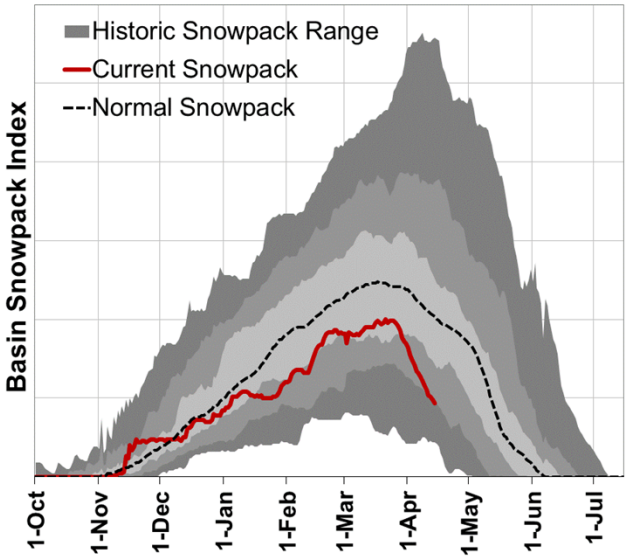
Upper Deschutes-Crooked



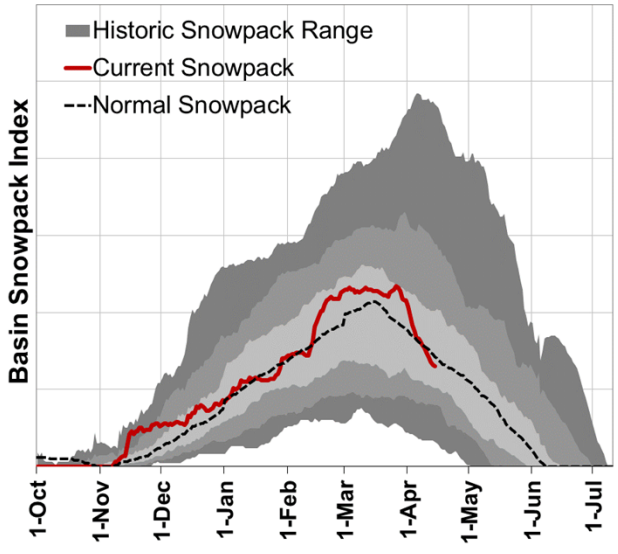
Umatilla-Walla Walla-Willow



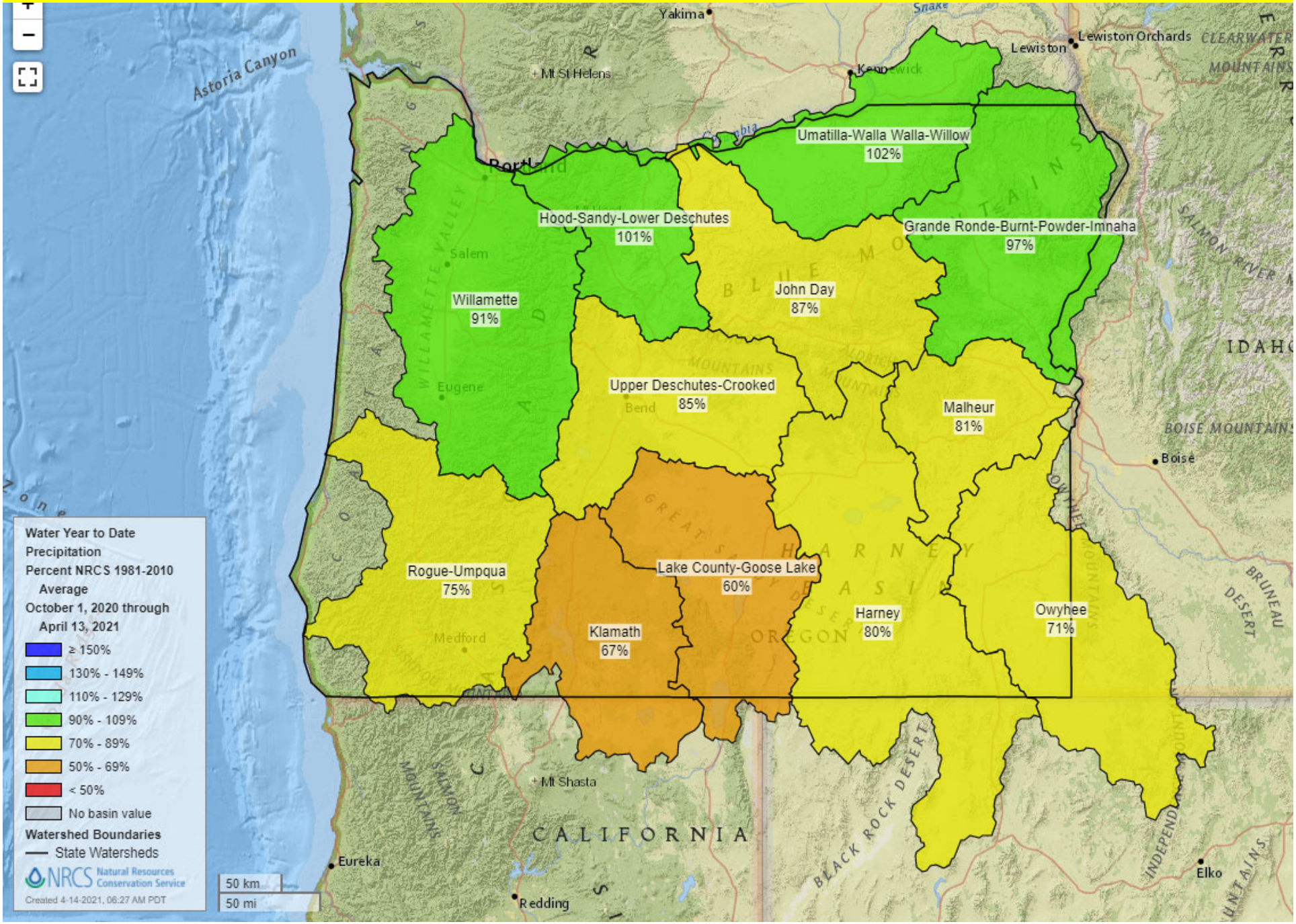
Lake County-Goose Lake

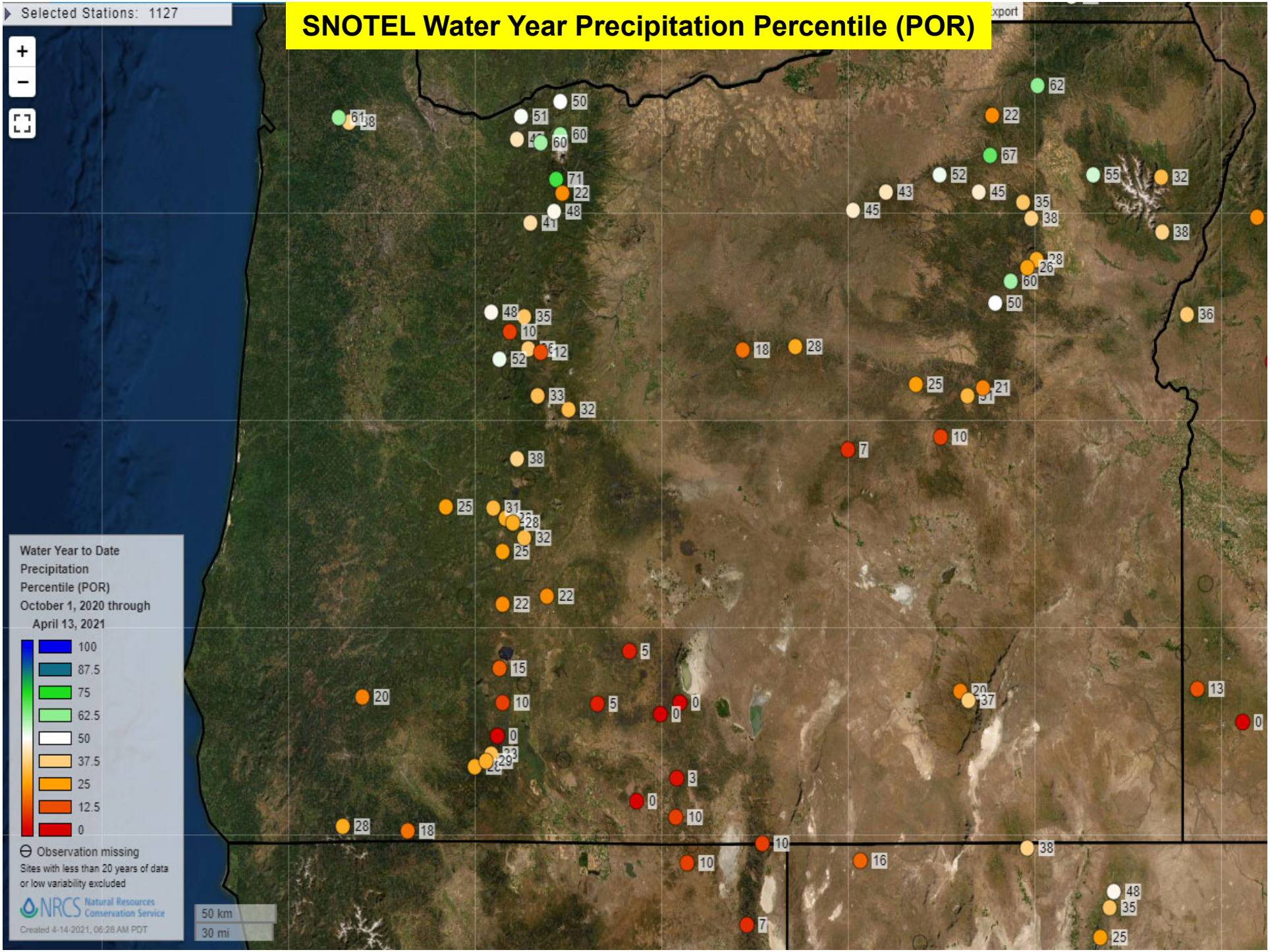


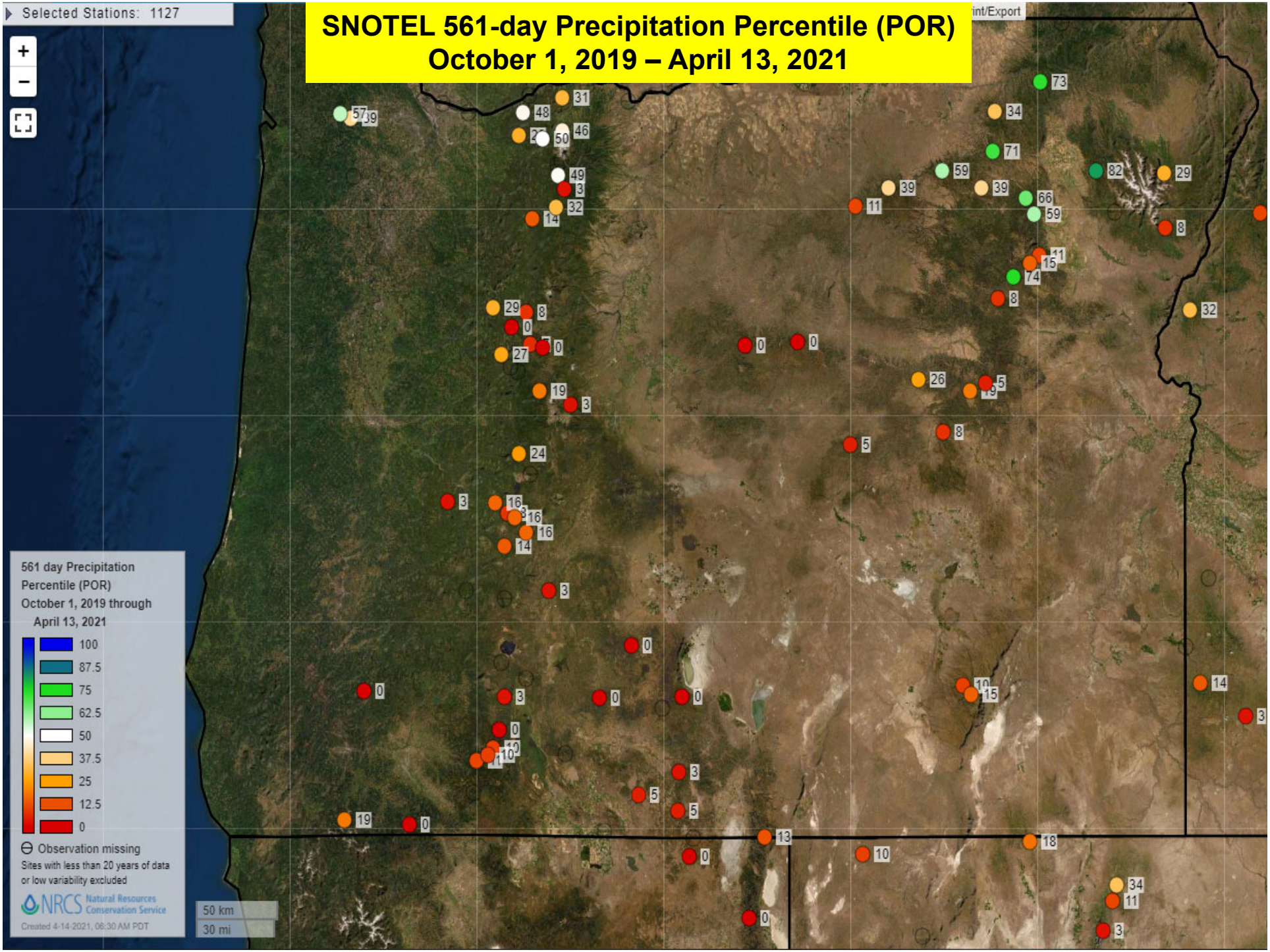
Harney

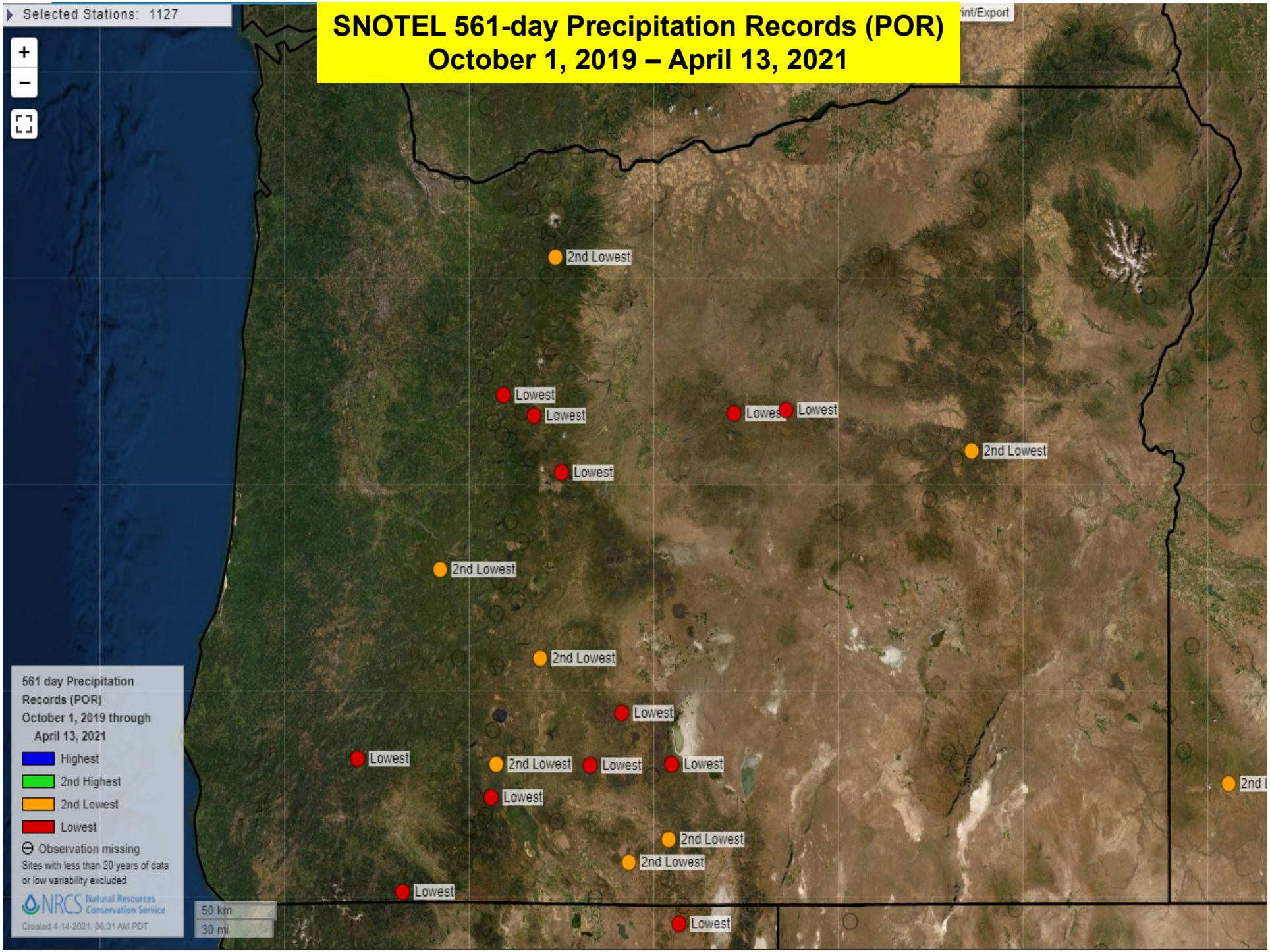


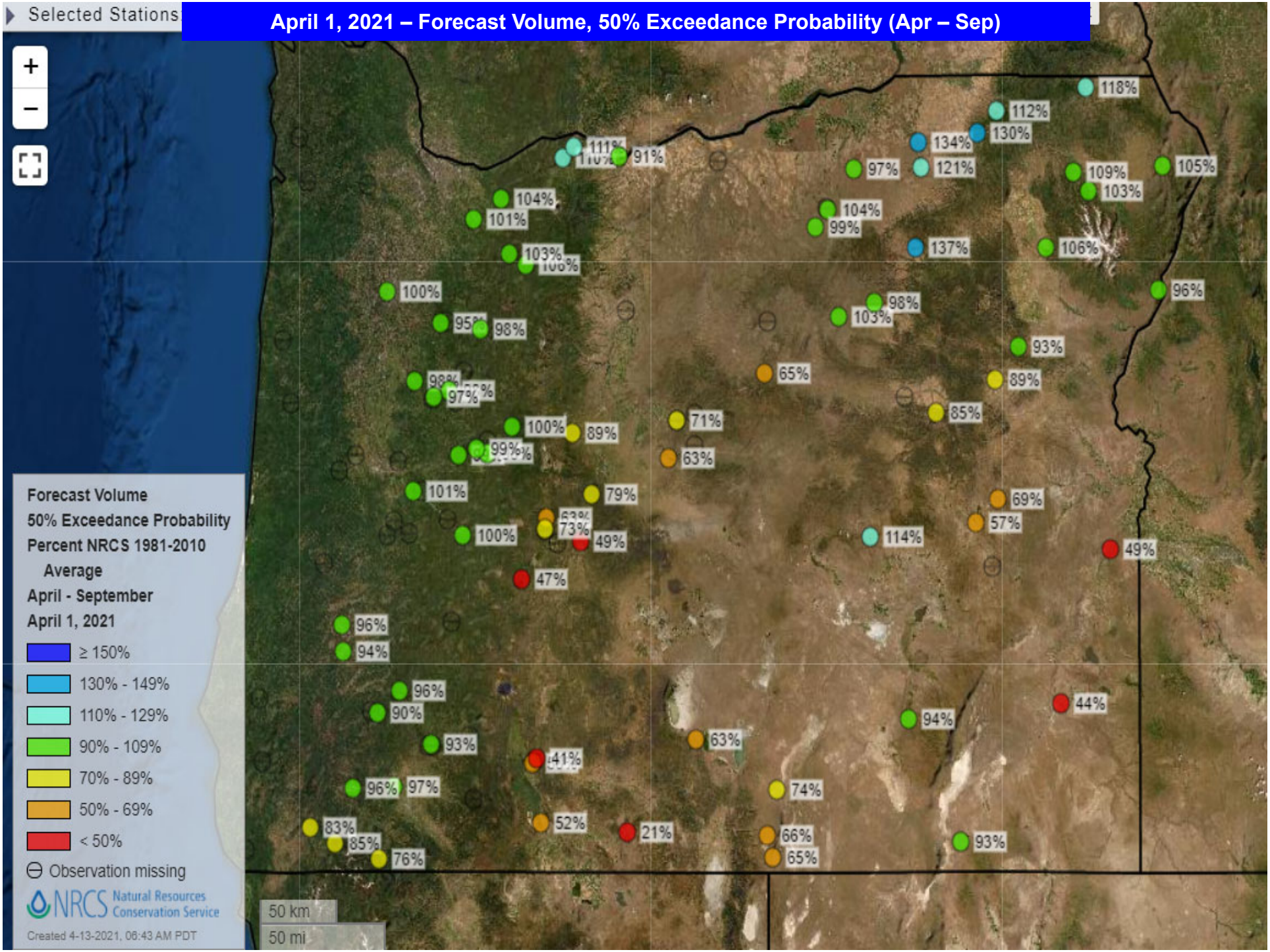
April 14th Statewide SNOTEL Water Year Precipitation is 88% of average




SNOTEL Water Year Precipitation Percentile (POR)
Selected Stations: 1127
Water Year to Date
Precipitation
Percentile (POR)
October 1, 2020 through
April 13, 2021
100
87.5
75
62.5
50
37.5
25
12.5
0
Observation missing
Sites with less than 20 years of data
or low variability excluded
NRCS Natural Resources Conservation Service
Created 4-14-2021, 06:28 AM PDT
50 km
30 mi


SNOTEL 561-day Precipitation Percentile (POR)
October 1, 2019 – April 13, 2021
Selected Stations: 1127
int/Export
561 day Precipitation
Percentile (POR)
October 1, 2019 through
April 13, 2021
100
87.5
75
62.5
50
37.5
25
12.5
0
Observation missing
Sites with less than 20 years of data
or low variability excluded
NRCS Natural Resources Conservation Service
Created 4-14-2021, 06:30 AM PDT
50 km
30 mi


Selected Stations: 1127
SNOTEL 561-day Precipitation Records (POR)
October 1, 2019 – April 13, 2021
2nd Lowest
Lowest
Lowest
Lowest
Lowest
2nd Lowest
Lowest
2nd Lowest
2nd Lowest
Lowest
Lowest
2nd Lowest
Lowest
Lowest
Lowest
2nd Lowest
2nd Lowest
Lowest
Lowest
561 day Precipitation Records (POR)
October 1, 2019 through April 13, 2021
Highest
2nd Highest
2nd Lowest
Lowest
Observation missing
Sites with less than 20 years of data or low variability excluded
NRCS Natural Resources Conservation Service
Created 4-14-2021, 06:31 AM PDT
50 km
30 mi

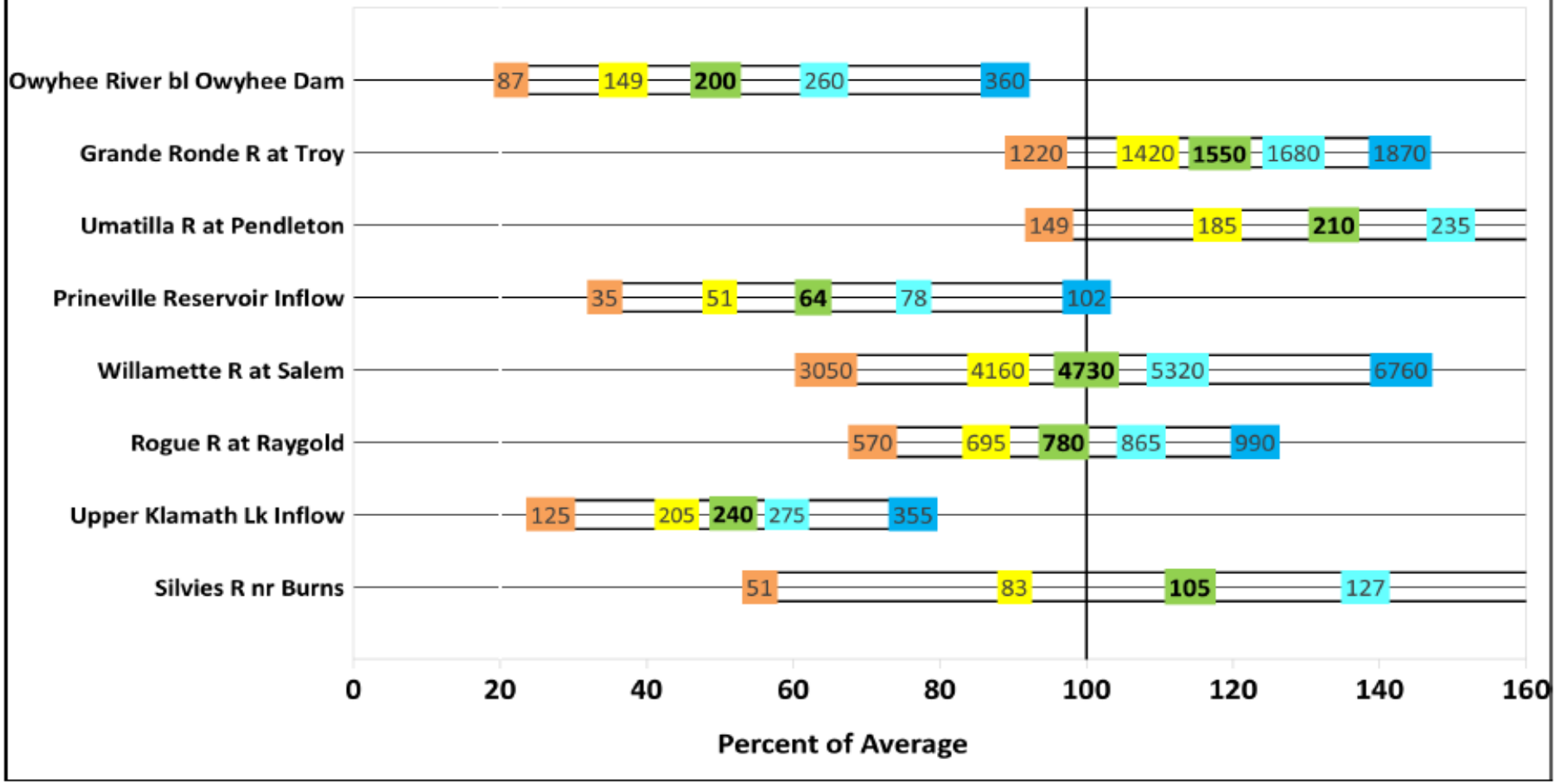

Selected Stations
April 1, 2021 – Forecast Volume, 50% Exceedance Probability (Apr – Sep)
Forecast Volume
50% Exceedance Probability
Percent NRCS 1981-2010
Average
April - September
April 1, 2021
≥ 150%
130% - 149%
110% - 129%
90% - 109%
70% - 89%
50% - 69%
< 50%
Observation missing
NRCS Natural Resources Conservation Service
Created 4-13-2021, 06:43 AM PDT
50 km
50 mi
118%
112%
130%
134%
91%
97%
121%
109%
105%
103%
104%
101%
104%
99%
137%
106%
103%
100%
96%
98%
103%
93%
65%
89%
97%
85%
71%
100%
89%
63%
101%
79%
69%
73%
57%
100%
49%
114%
49%
47%
96%
94%
96%
90%
44%
93%
94%
63%
41%
96%
97%
74%
52%
83%
21%
66%
93%
85%
65%
76%

April 1, 2021

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

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.

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Oregon Water Supply Availability Committee – April 14, 2021

Crater Lake NP, Park HQ – April 1, 2021

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

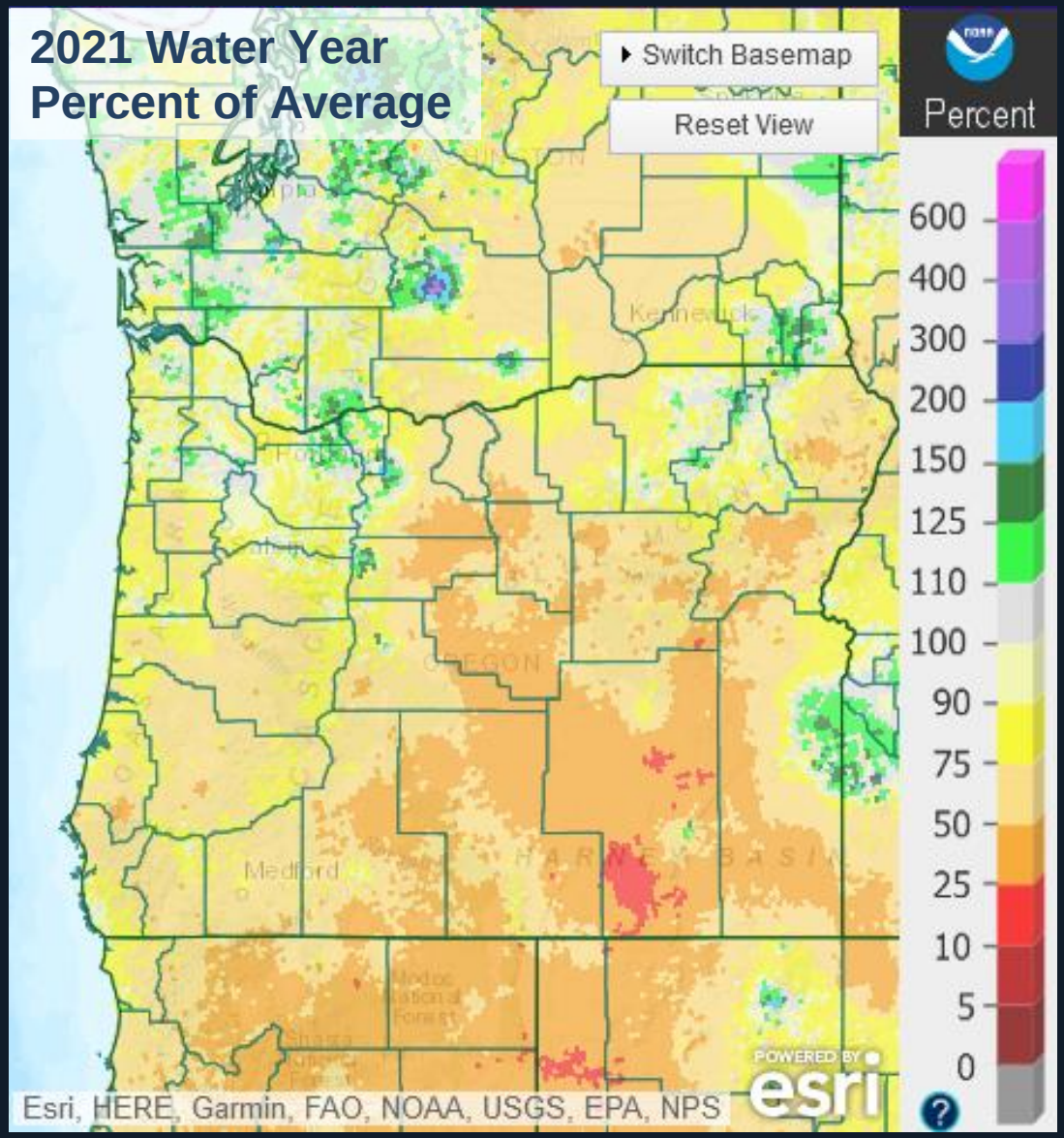
Oregon WSAC

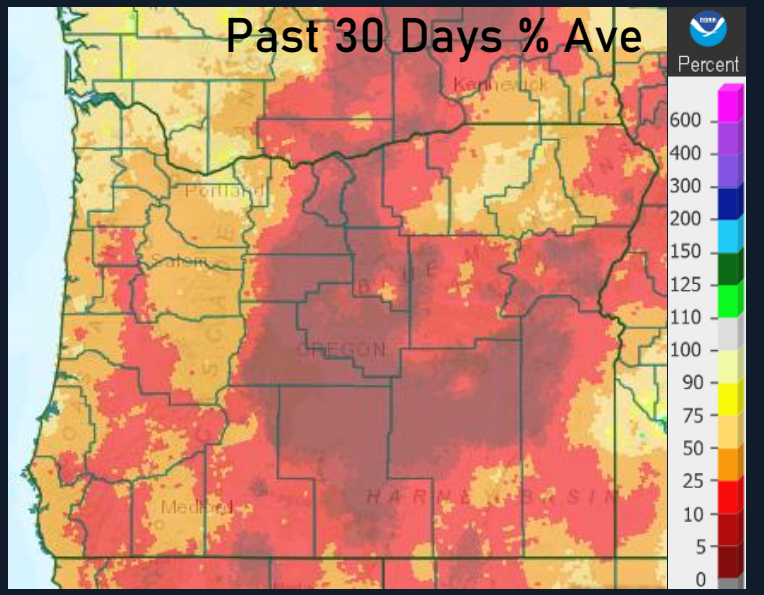
April 14, 2021

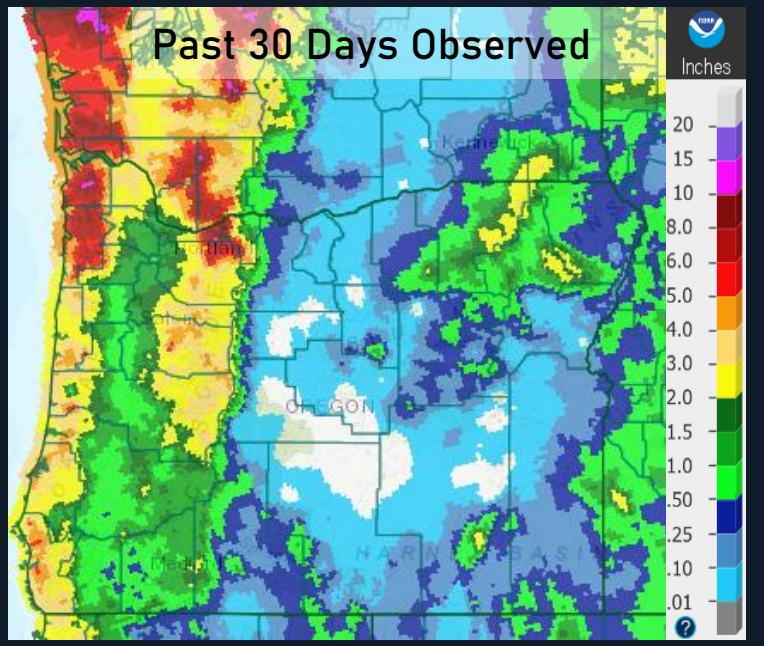
NWS Update on Precipitation, Temperatures, & Rivers

Henry Pai
NOAA/NWS Portland
Northwest River Forecast Center

Precipitation





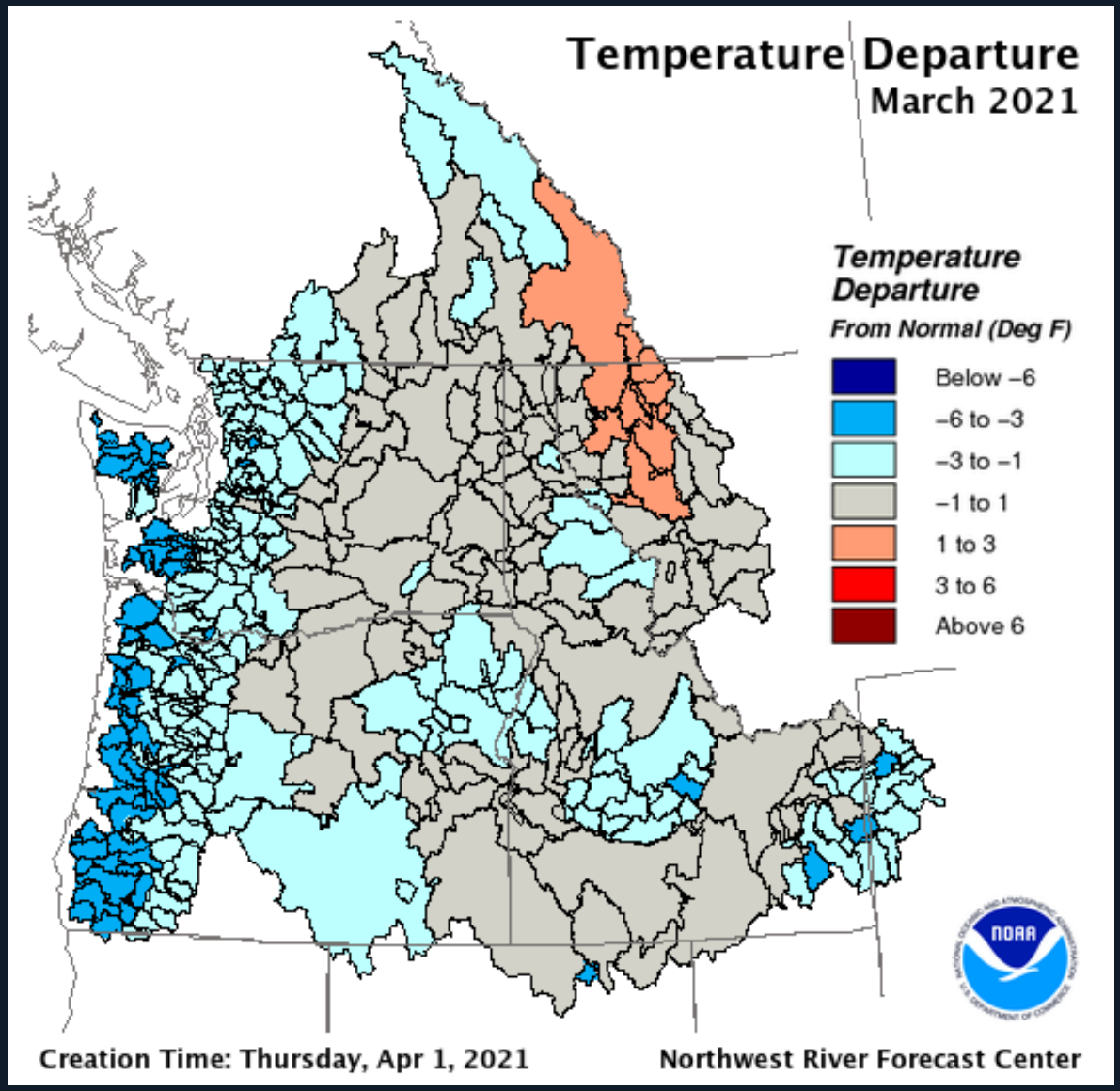


Precipitation Data as of April 13, 2021

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

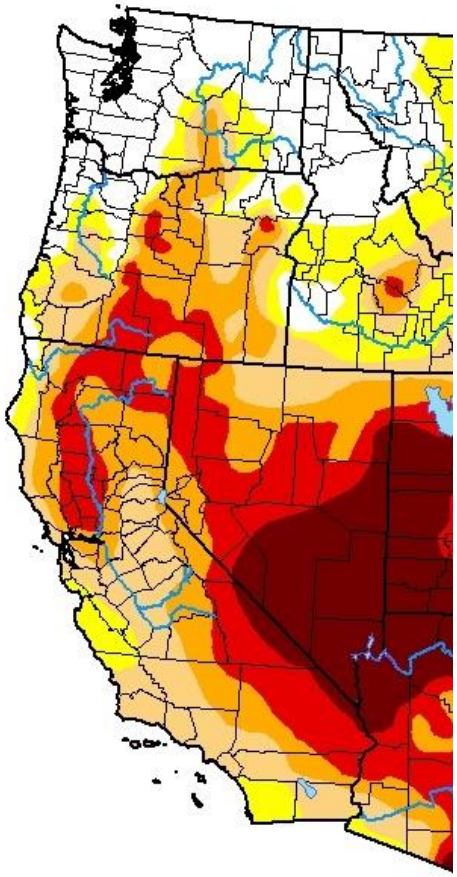
Recent Temperatures

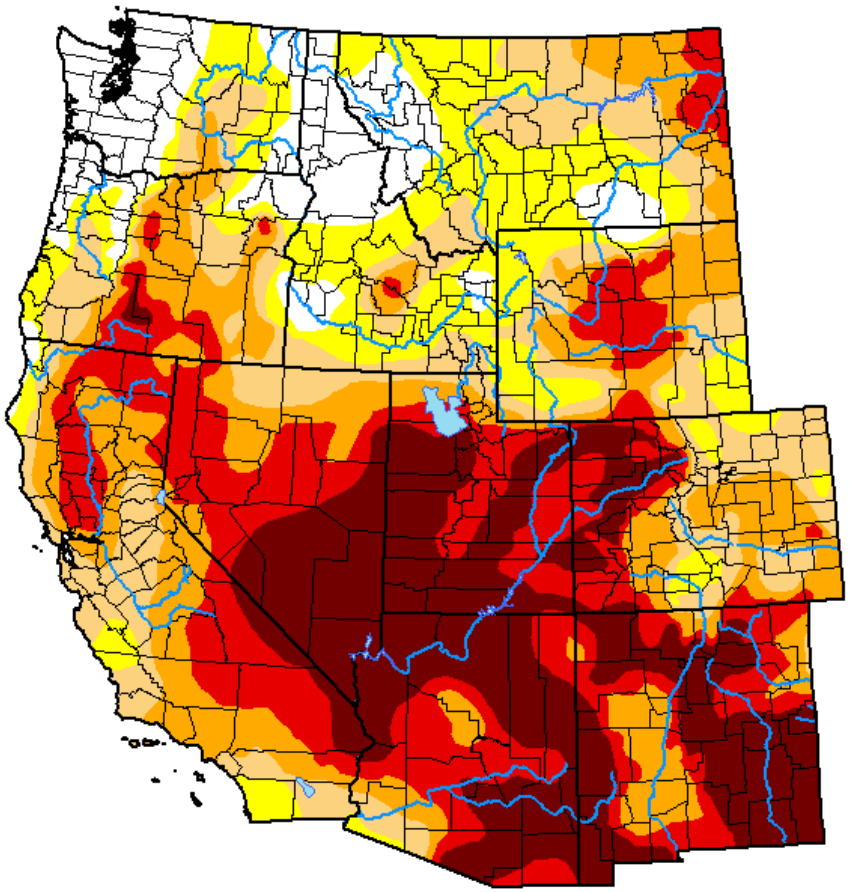
March 2021



https://www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php?date=04/01/2021&tab=2

Drought Monitor





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

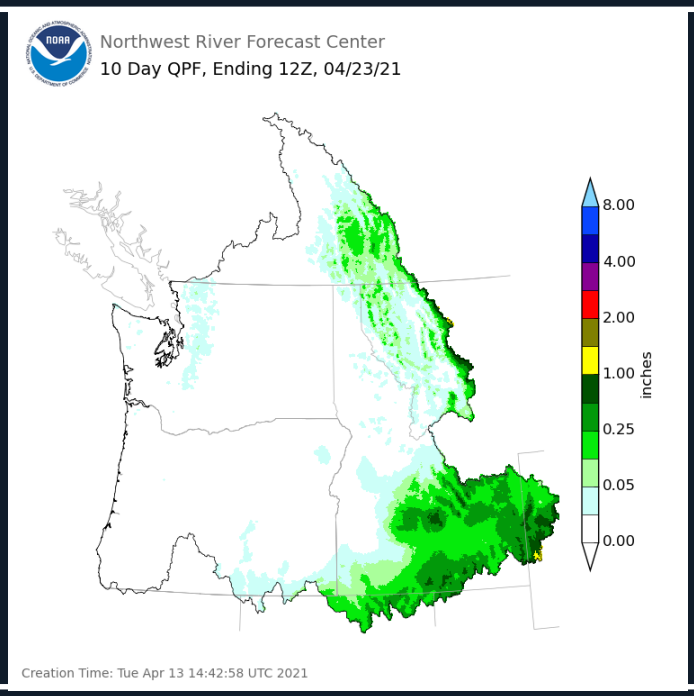
Author:

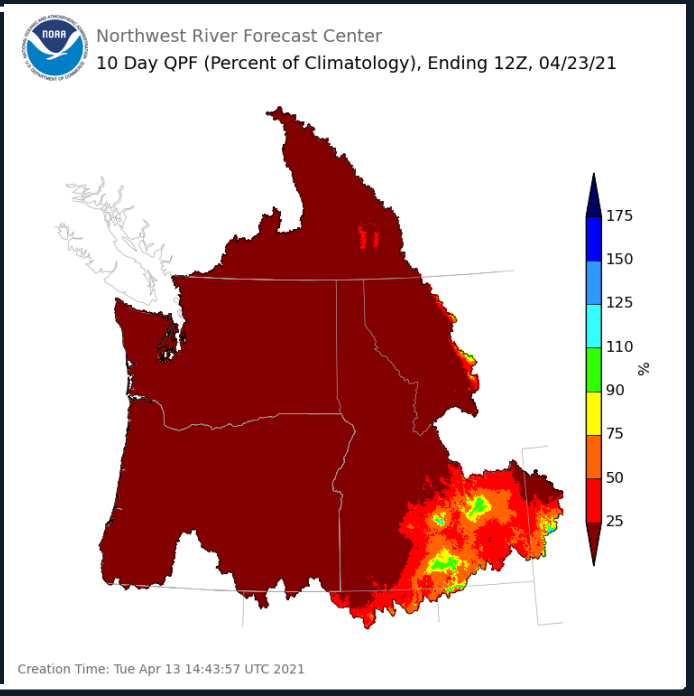
Deborah Bathke
National Drought Mitigation Center

droughtmonitor.unl.edu

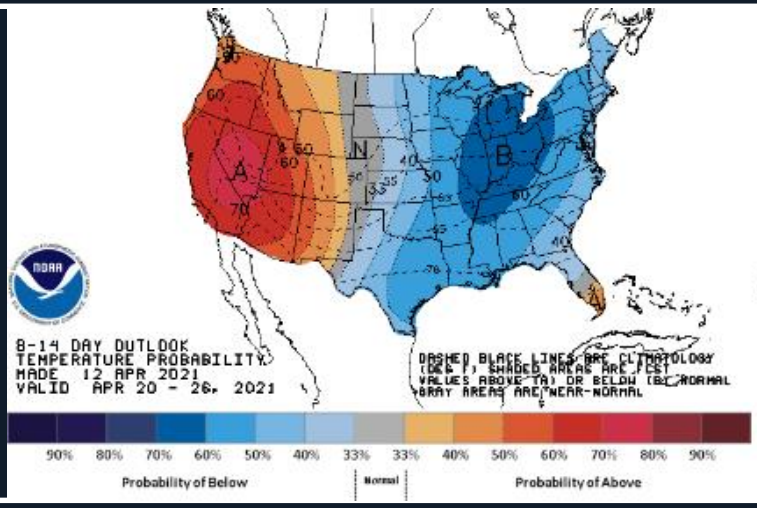
Mid/Late April Outlook

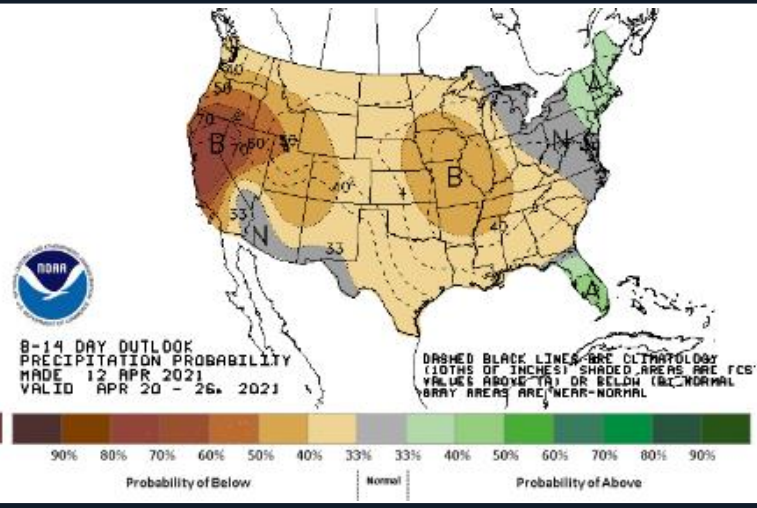
NWRFC
10-DAY
PRECIPITATION





CPC
8 – 14 DAY
OUTLOOK





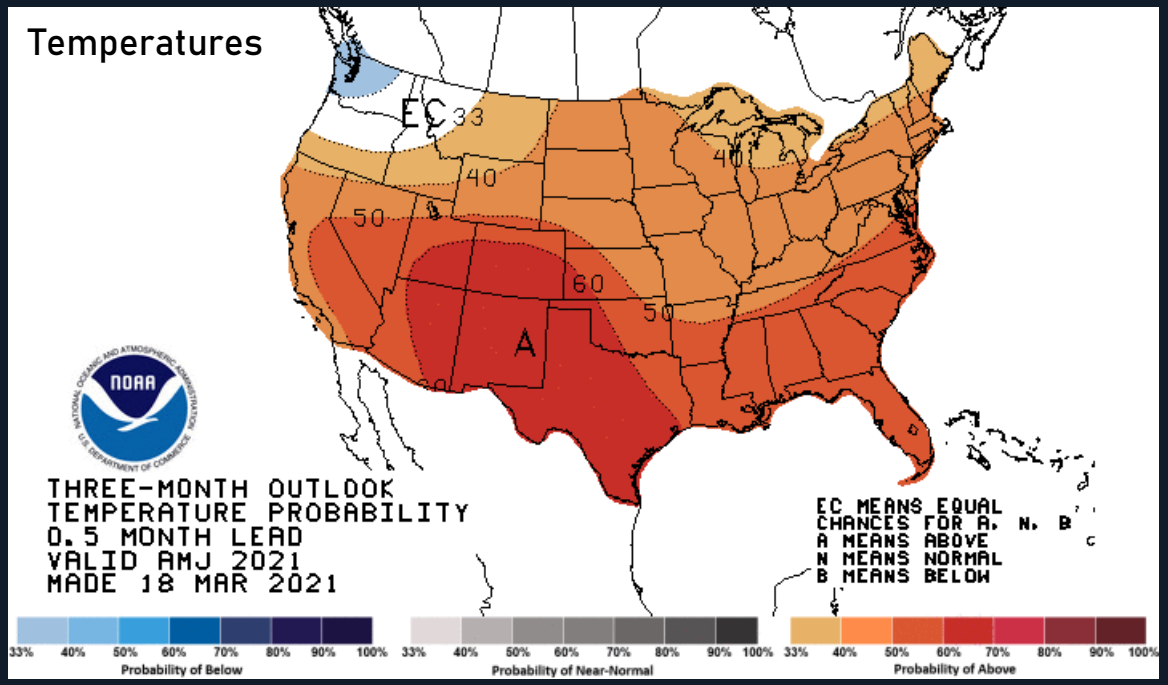
https://www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php?t

https://www.cpc.ncep.noaa.gov/products/predictions/814day/

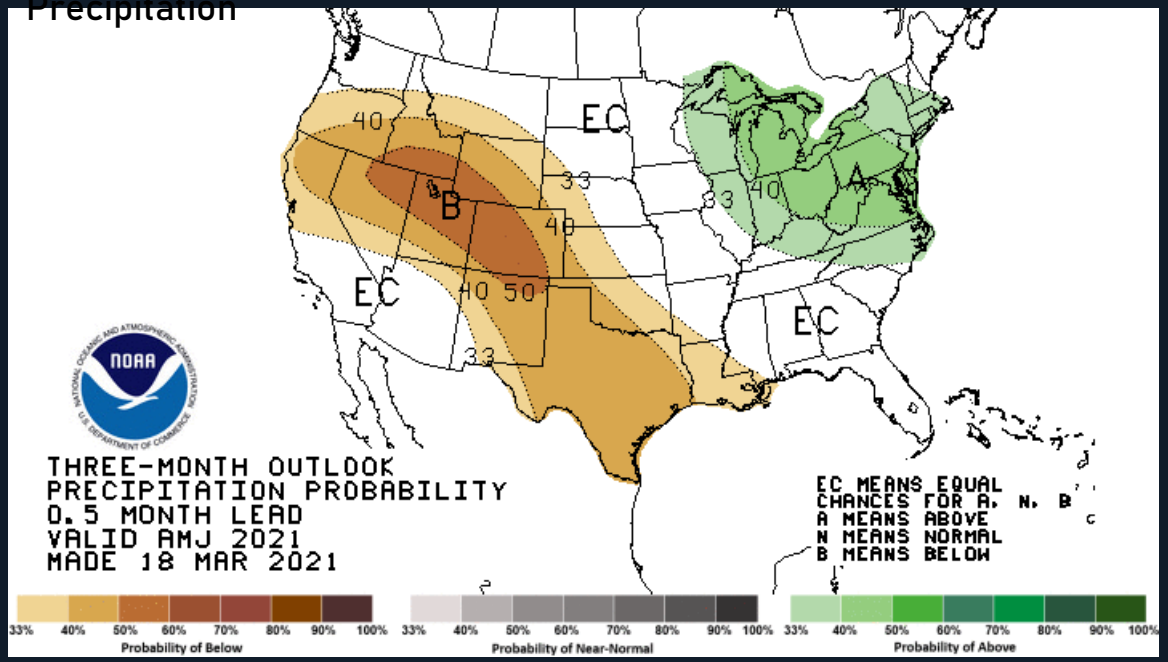
Climate Prediction Center Outlook

Apr – May - Jun 2021

Temperatures



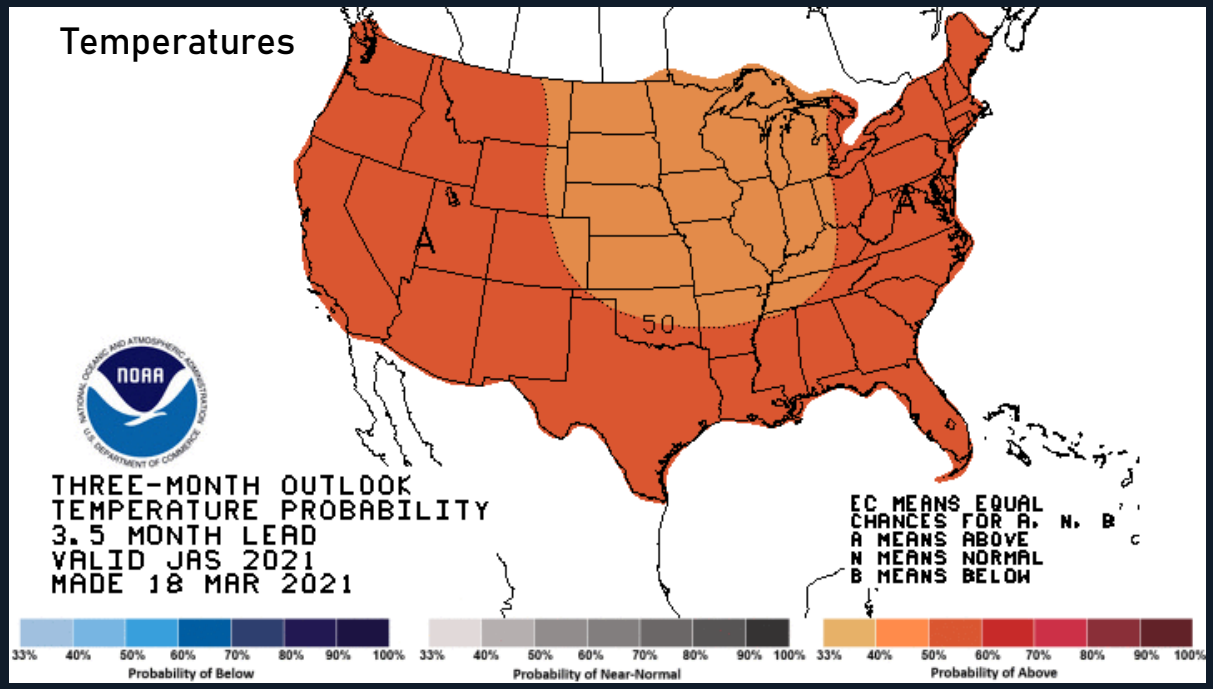
Precipitation

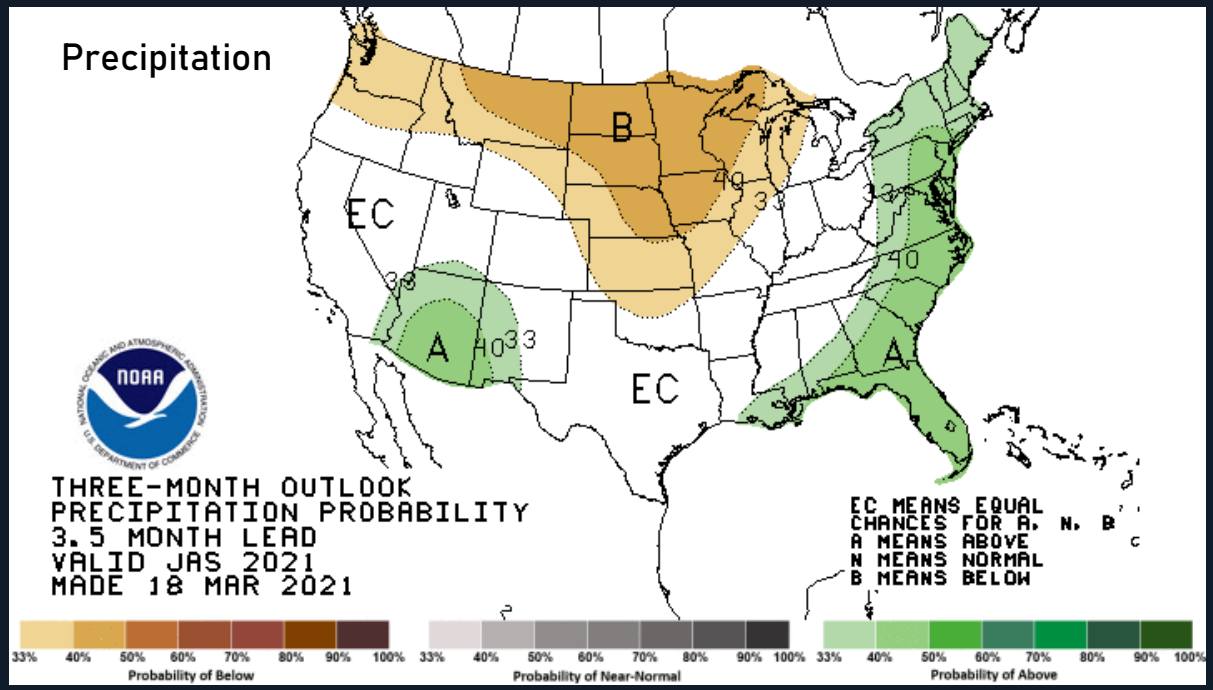


https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=1

Climate Prediction Center Outlook

Jul – Aug – Sep 2021



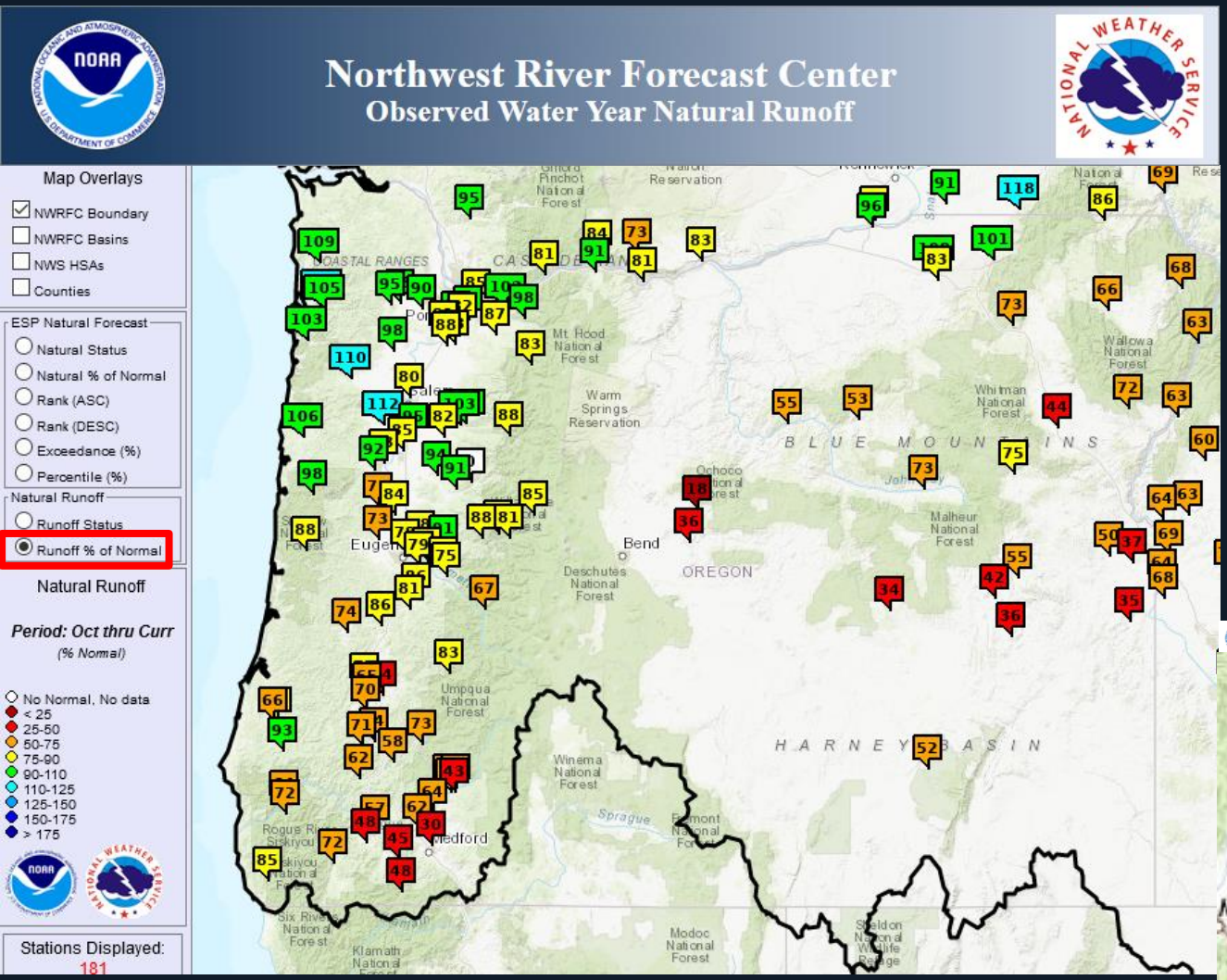


https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=4

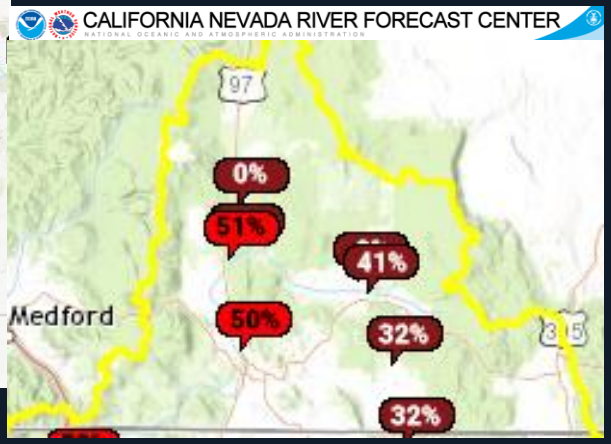
From Andy

“I'm curious what the USBR and USACE reps will have to say about spring refill for reservoirs”

Observed Adjusted WY21 Runoff thus far

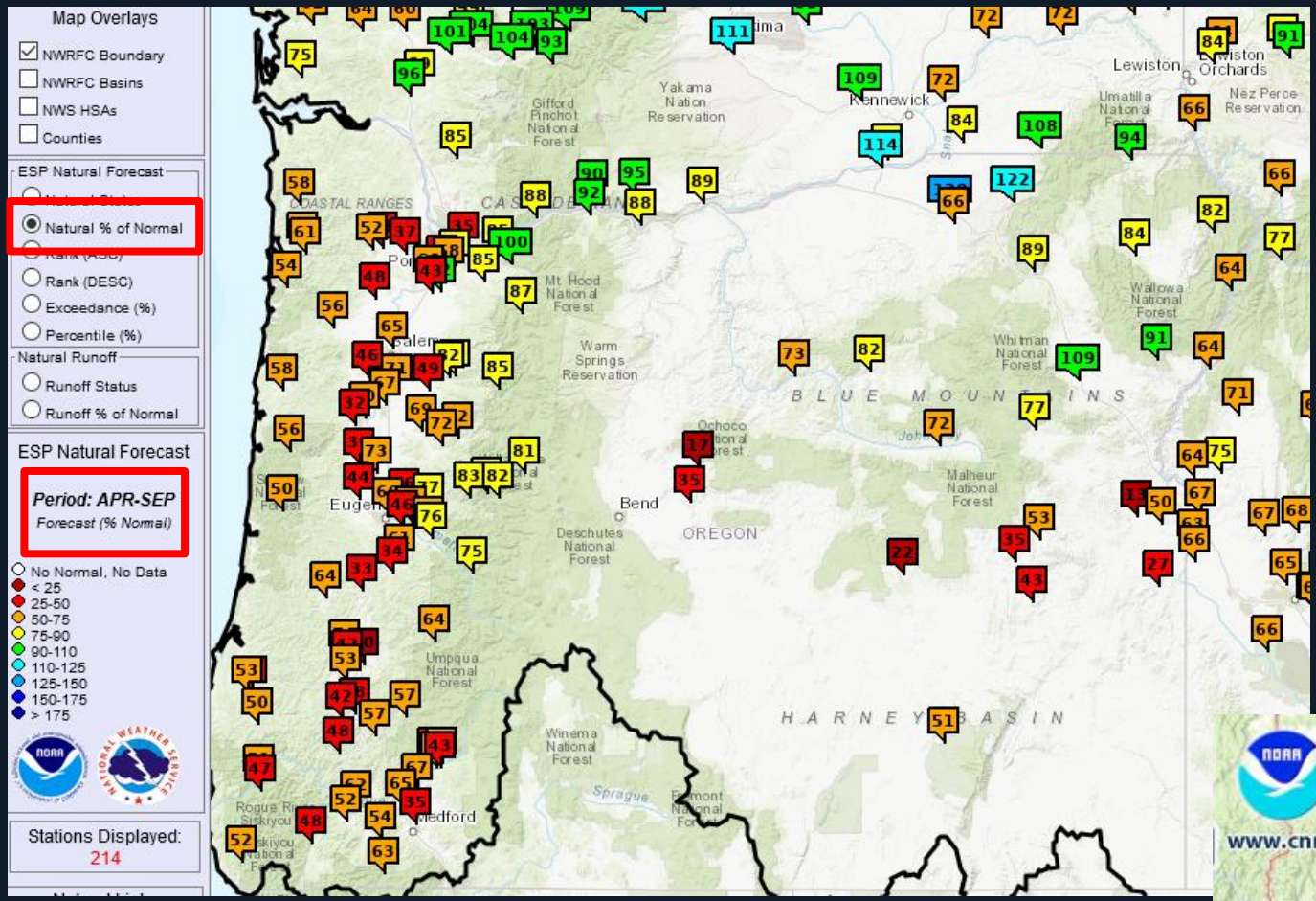


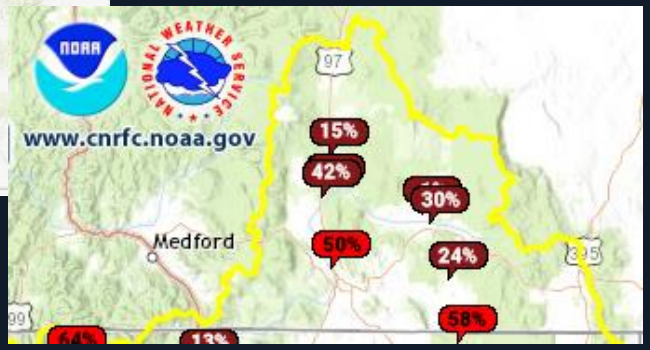
Slight decreases in runoff percent of normals



https://www.nwrfc.noaa.gov/natural/index.html?version=20190313v1
https://www.cnrfc.noaa.gov/ol.php?product=espWS

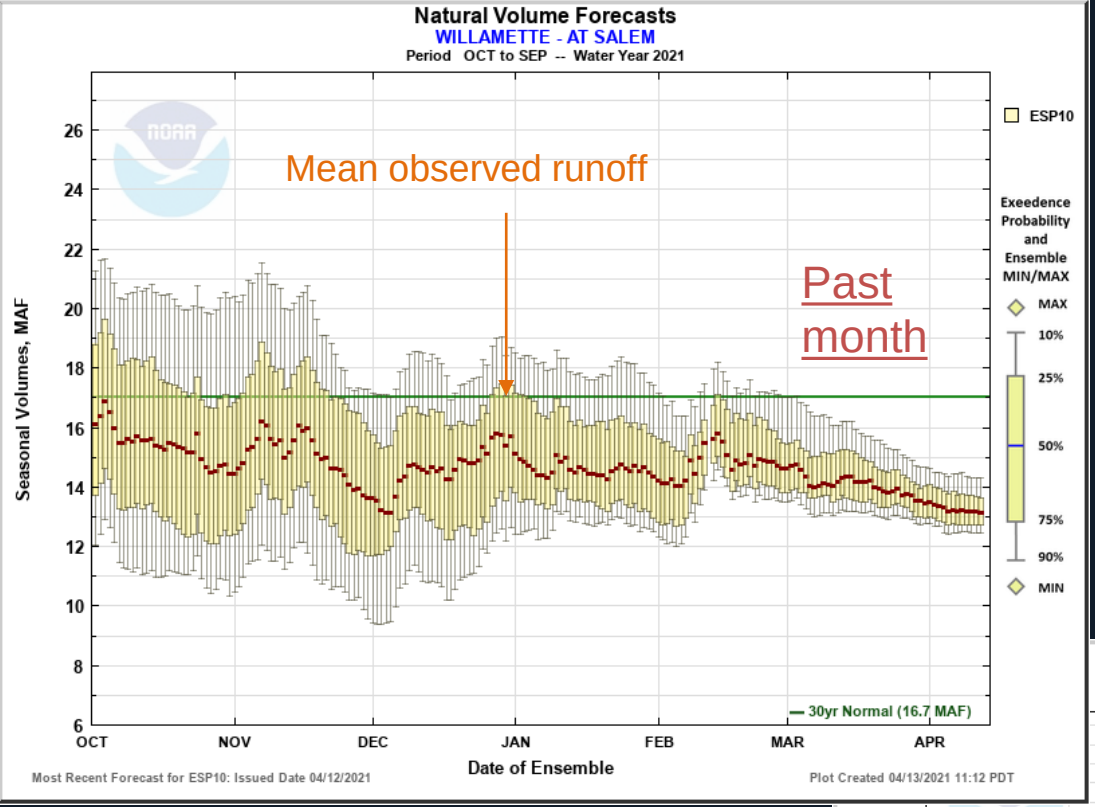
WY21 Apr-Sep Forecast, Percent of Normal



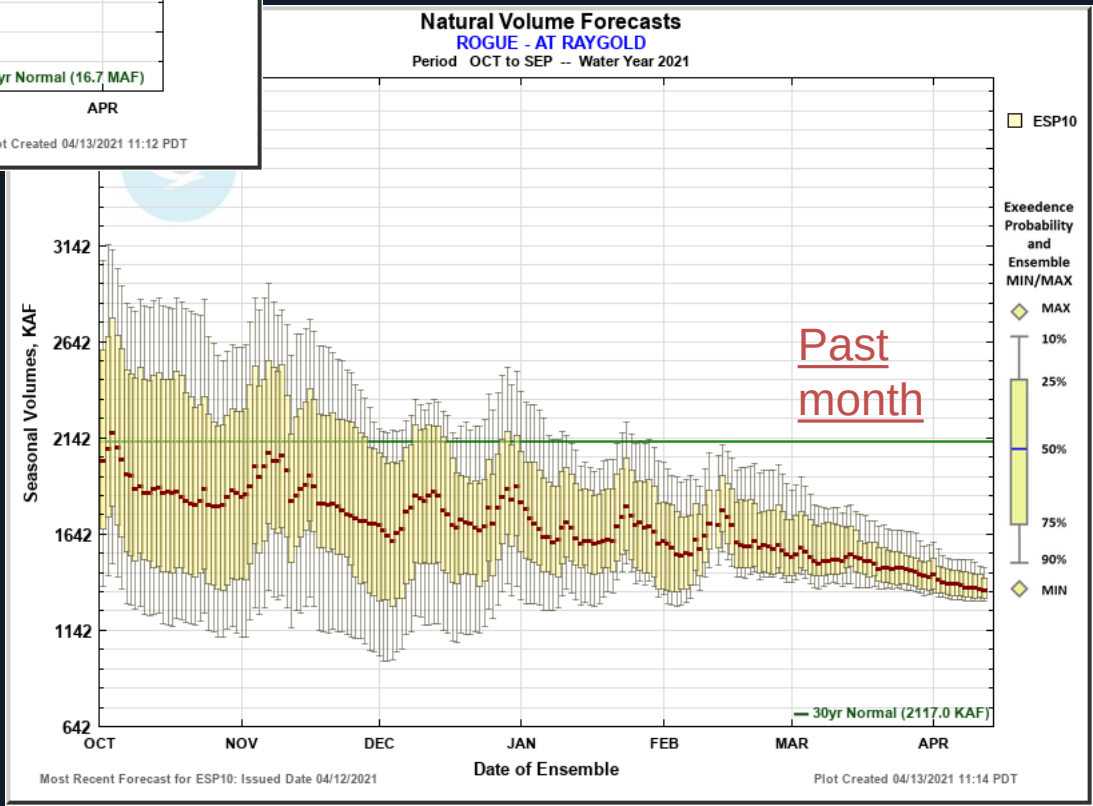


West OR WY21 Volume Forecast Progression

← Willamette at Salem, y-axis in MAF

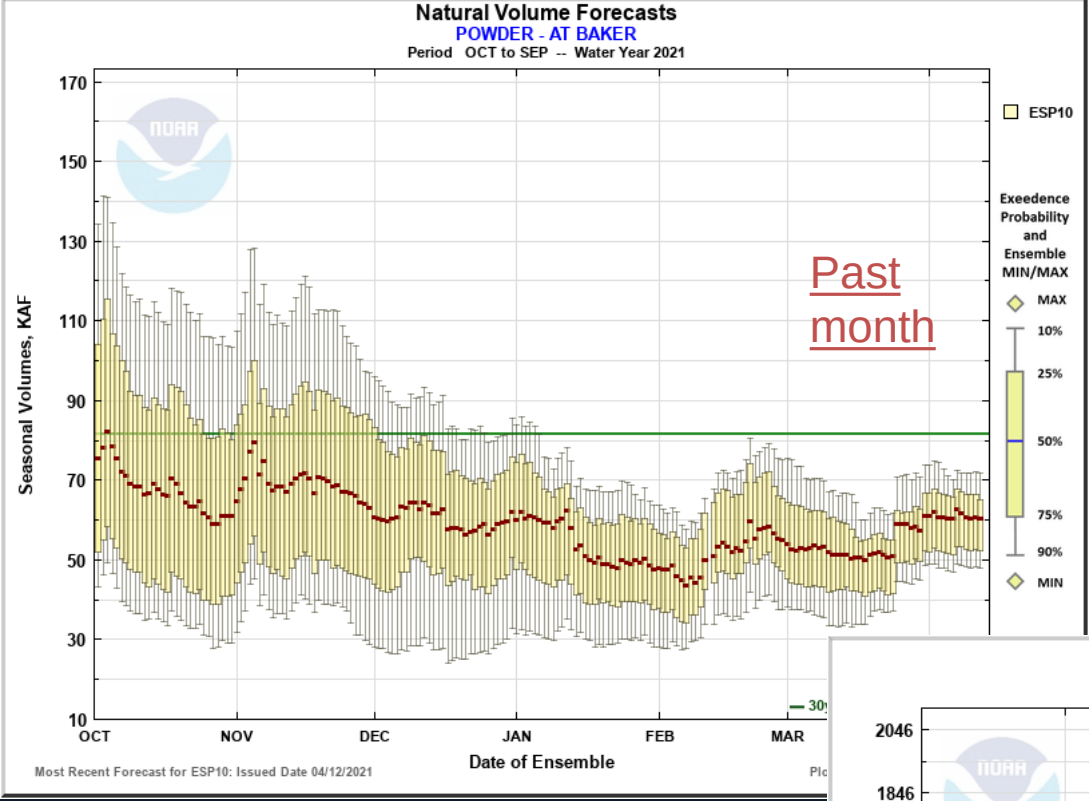


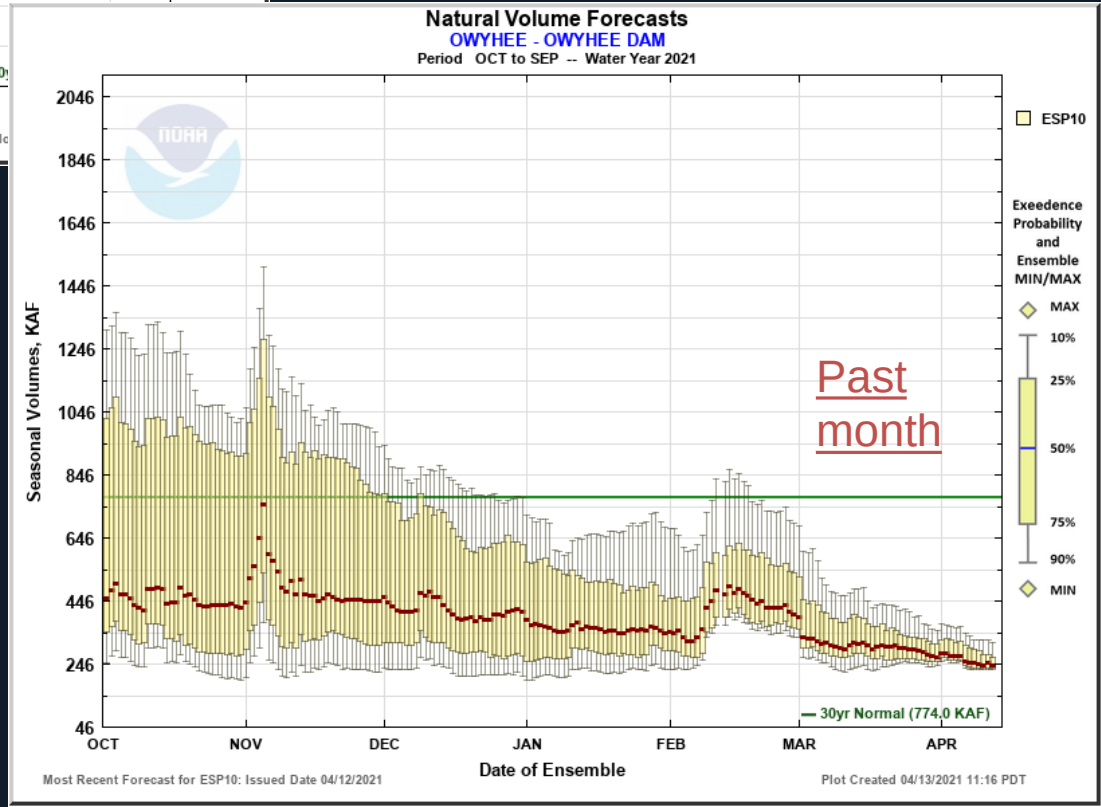
Rogue at Raygold → y-axis in KAF



East OR WY21 Volume Forecast Progression

← Powder at Baker, y-axis in KAF





Owyhee →
y-axis in KAF

NWRFC Water Supply Briefings Schedule

2021 Schedule for *Live* Water Supply Briefings				
Jan	Feb	Mar	Apr	May
7	4	4	1	6
All presentations held at 10:00am PDT/PST, unless noted otherwise				
Click here for Registration Information				

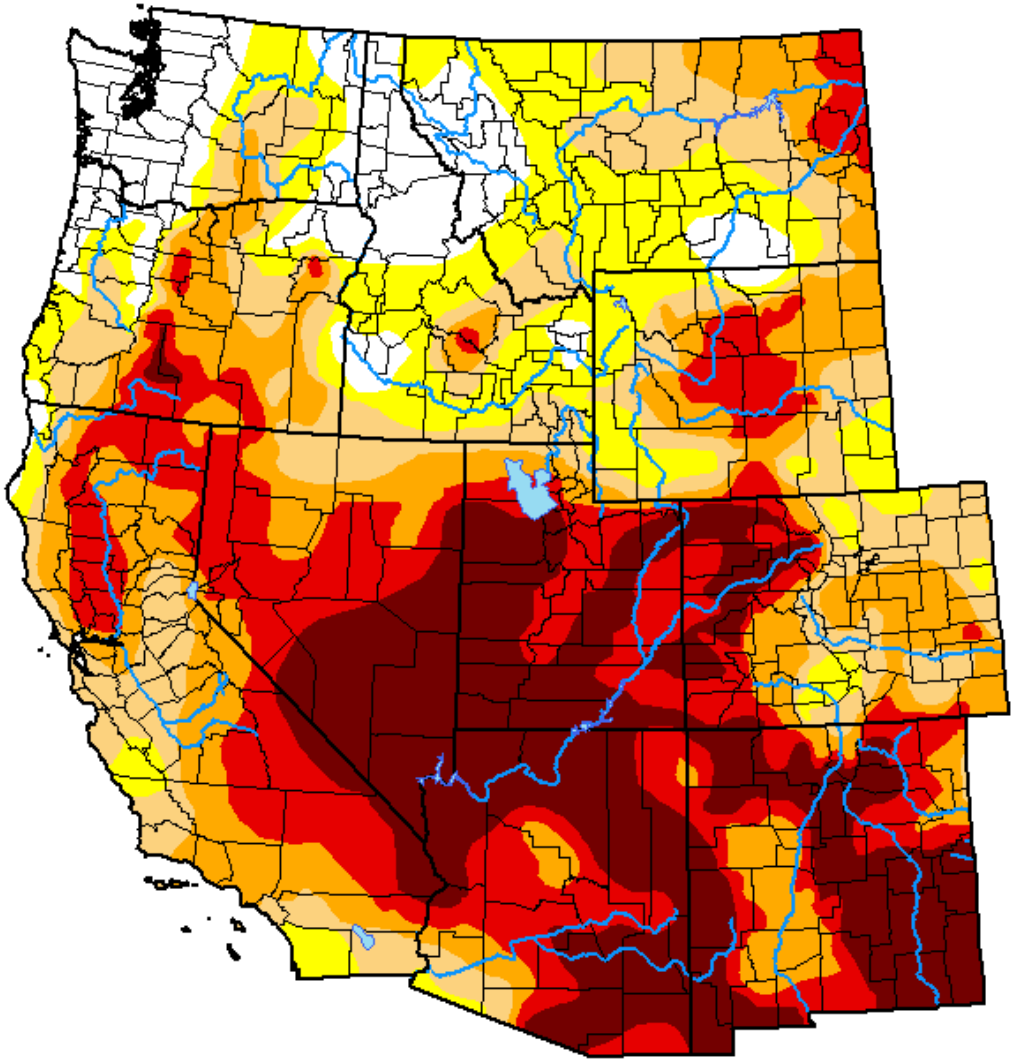
https://register.gotowebinar.com/register/5346269444947566623

Oregon WSAC/DRC
Monthly Update and Drought Status

Larry O'Neill
CEOAS/Oregon State University
Oregon Climate Service/Oregon Climate Change Research Institute
AASC State Climatologist of Oregon
larry.oneill@oregonstate.edu

Wednesday, April 14, 2021

U.S. Drought Monitor
West



April 6, 2021

(Released Thursday, Apr. 8, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	9.62	90.38	76.04	59.49	40.80	20.71
Last Week *03-30-2021*	10.10	89.90	75.22	58.59	39.39	20.56
3 Months Ago *01-05-2021*	11.89	88.11	78.01	64.59	46.50	22.16
Start of Calendar Year *12-29-2020*	11.57	88.43	78.63	65.18	46.49	22.16
Start of Water Year *09-29-2020*	8.51	91.49	76.07	54.55	33.11	2.31
One Year Ago *04-07-2020*	52.56	47.44	27.90	4.48	0.00	0.00

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

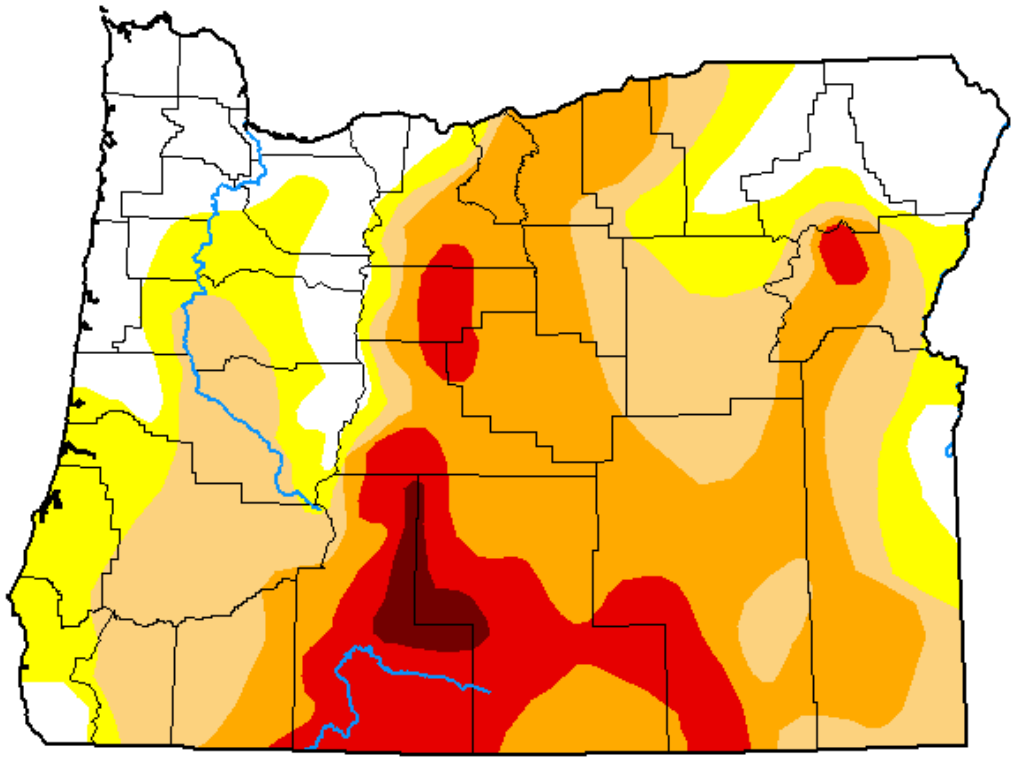
Author:

Deborah Bathke

National Drought Mitigation Center

droughtmonitor.unl.edu

U.S. Drought Monitor
Oregon



April 6, 2021
(Released Thursday, Apr. 8, 2021)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	17.73	82.27	65.94	41.68	13.22	1.48
Last Week *03-30-2021*	21.14	78.86	66.01	41.25	12.55	0.00
3 Months Ago *01-05-2021*	8.91	91.09	78.46	62.68	28.26	0.00
Start of Calendar Year *12-29-2020*	8.57	91.43	83.53	68.71	27.74	0.00
Start of Water Year *09-29-2020*	6.50	93.50	84.77	65.53	33.59	0.00
One Year Ago *04-07-2020*	13.99	86.01	55.61	13.05	0.00	0.00

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:
Deborah Bathke
National Drought Mitigation Center

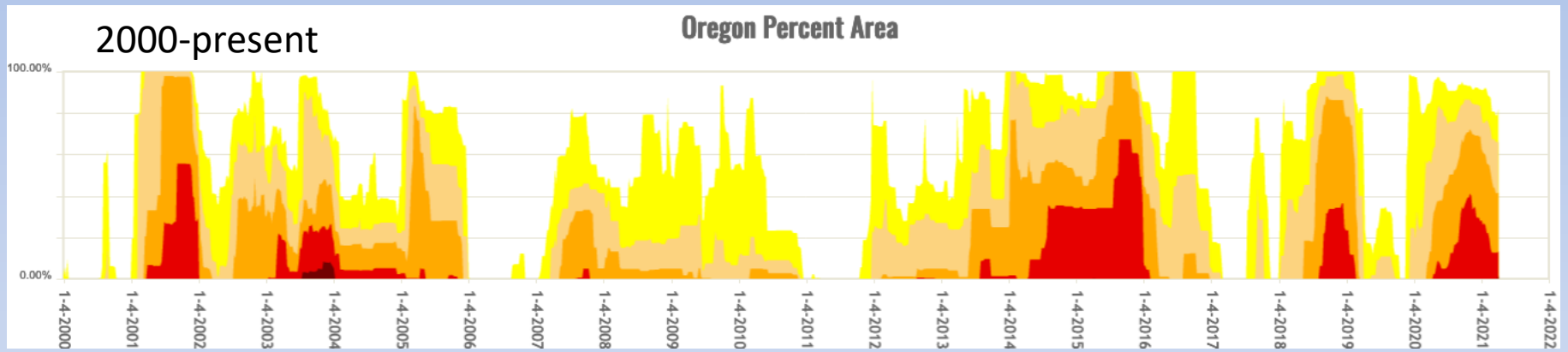
droughtmonitor.unl.edu

Only second time D4 in Oregon since USDM began in ~2000, with the only other time being in mid-late 2003 in part of Malheur County

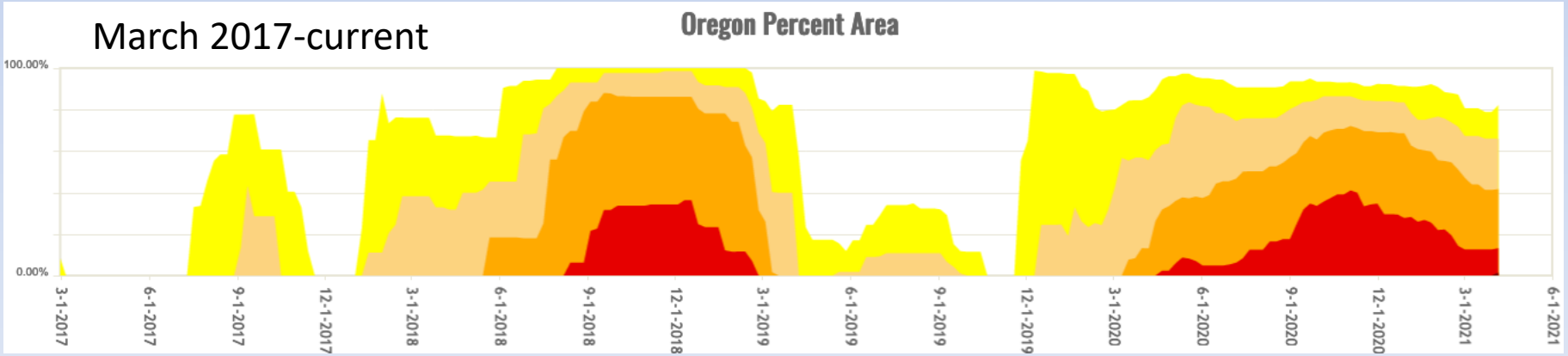
US Drought Monitor statewide time series

Time series of fraction of area in each drought category

2000-present

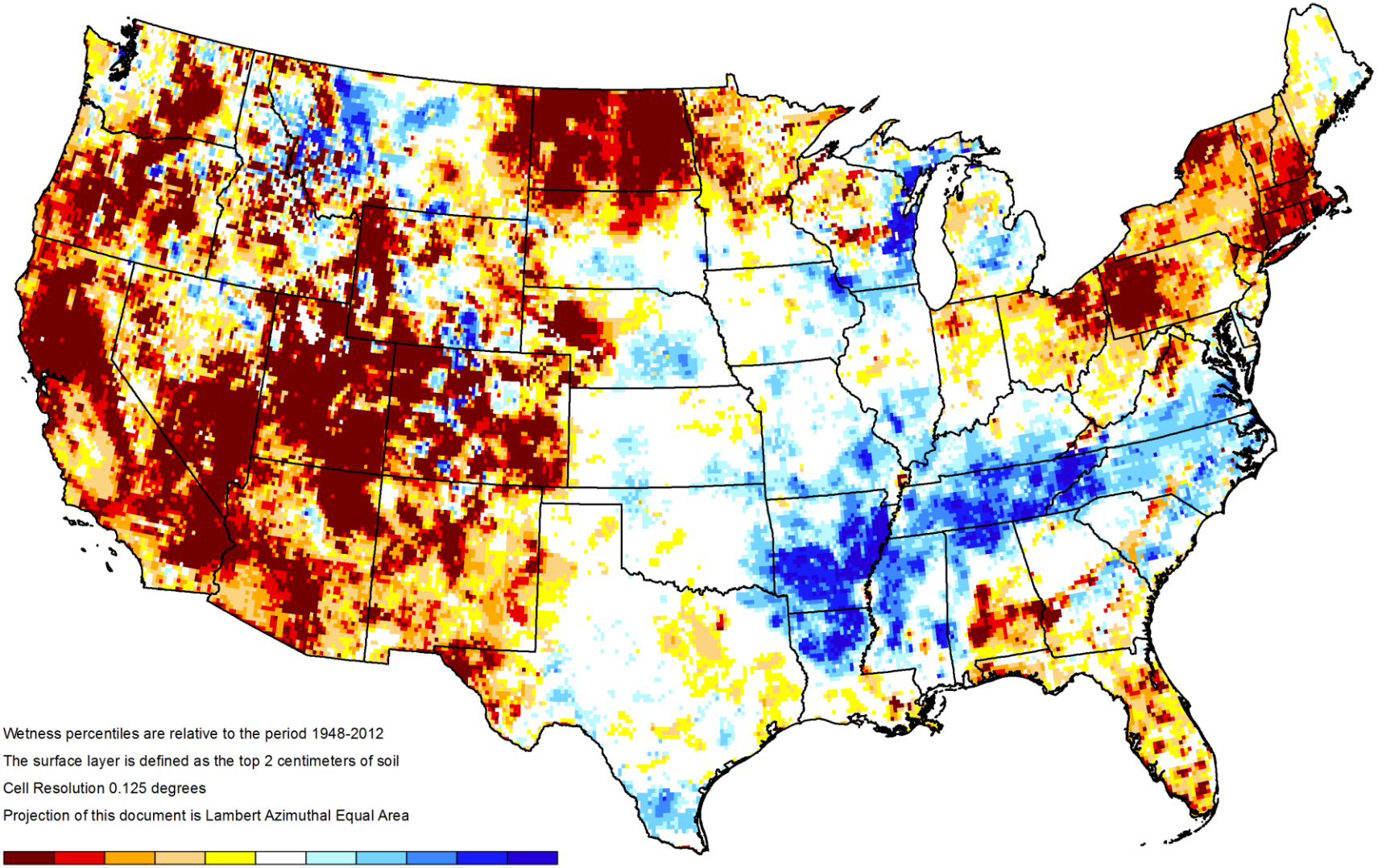


March 2017-current



GRACE-Based Surface Soil Moisture Drought Indicator

April 05, 2021



Wetness percentiles are relative to the period 1948-2012

The surface layer is defined as the top 2 centimeters of soil

Cell Resolution 0.125 degrees

Projection of this document is Lambert Azimuthal Equal Area

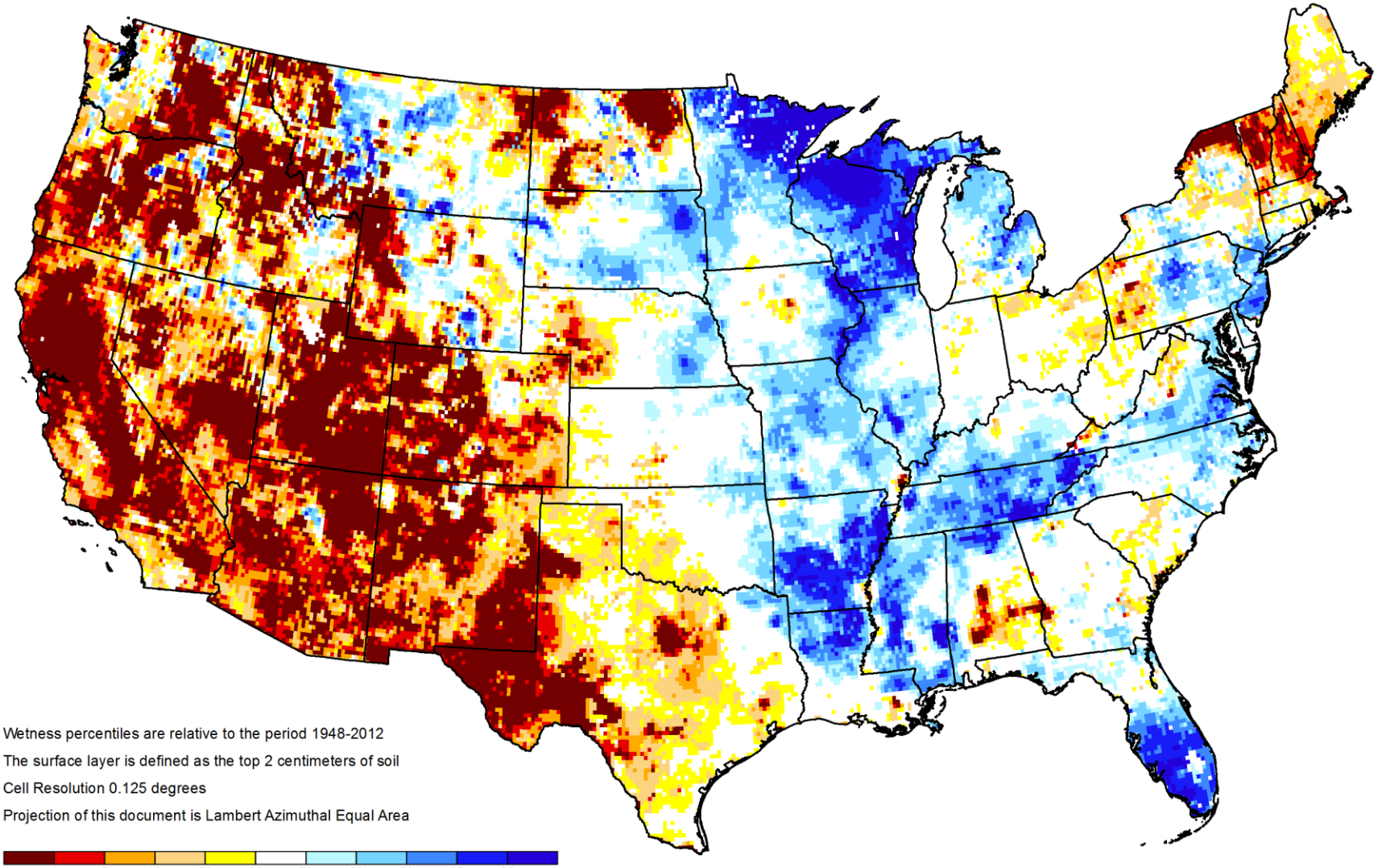
2 5 10 20 30 70 80 90 95 98

Wetness Percentile

https://nasagrace.unl.edu

GRACE-Based Surface Soil Moisture Drought Indicator

April 12, 2021



Wetness percentiles are relative to the period 1948-2012

The surface layer is defined as the top 2 centimeters of soil

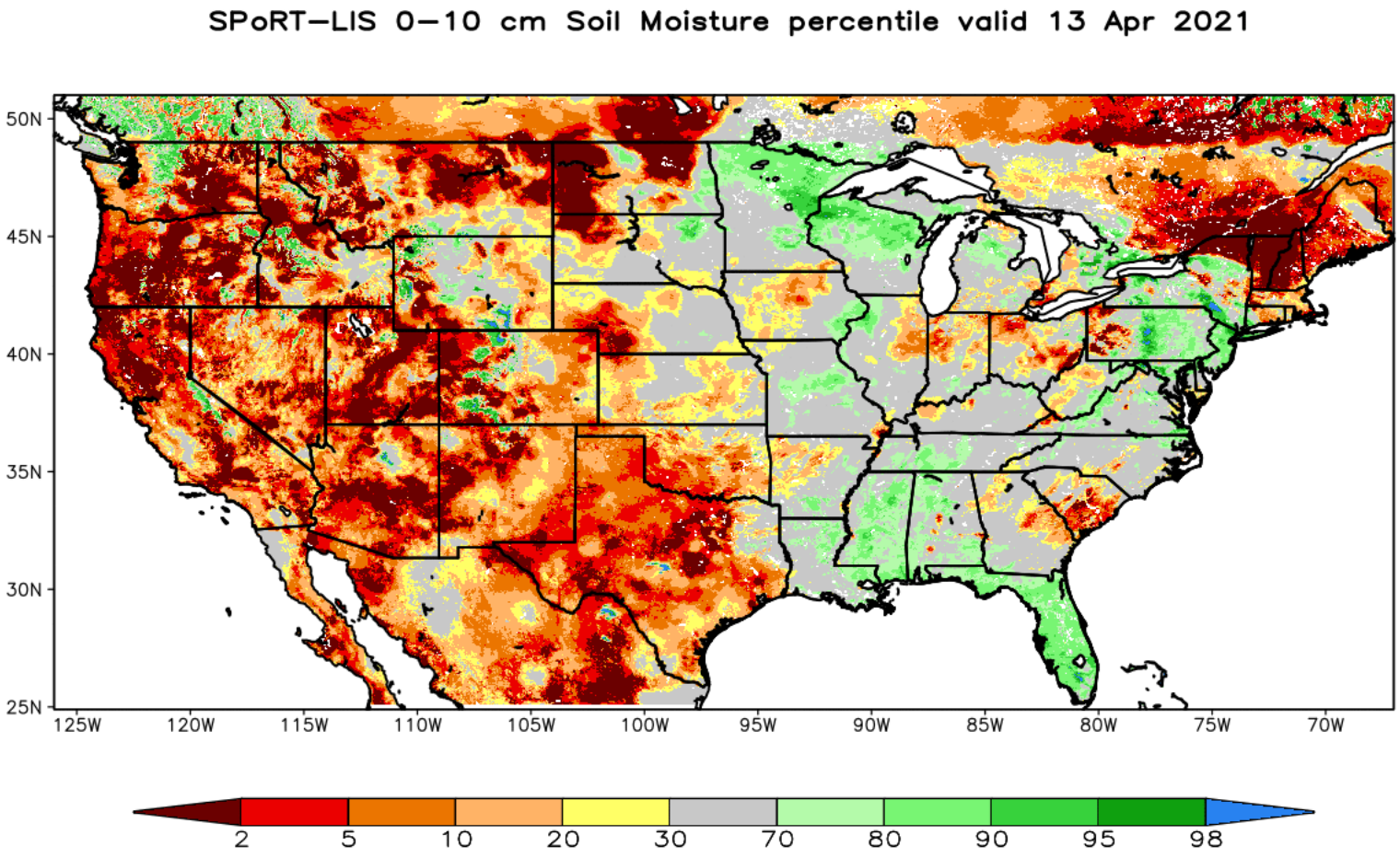
Cell Resolution 0.125 degrees

Projection of this document is Lambert Azimuthal Equal Area

2 5 10 20 30 70 80 90 95 98

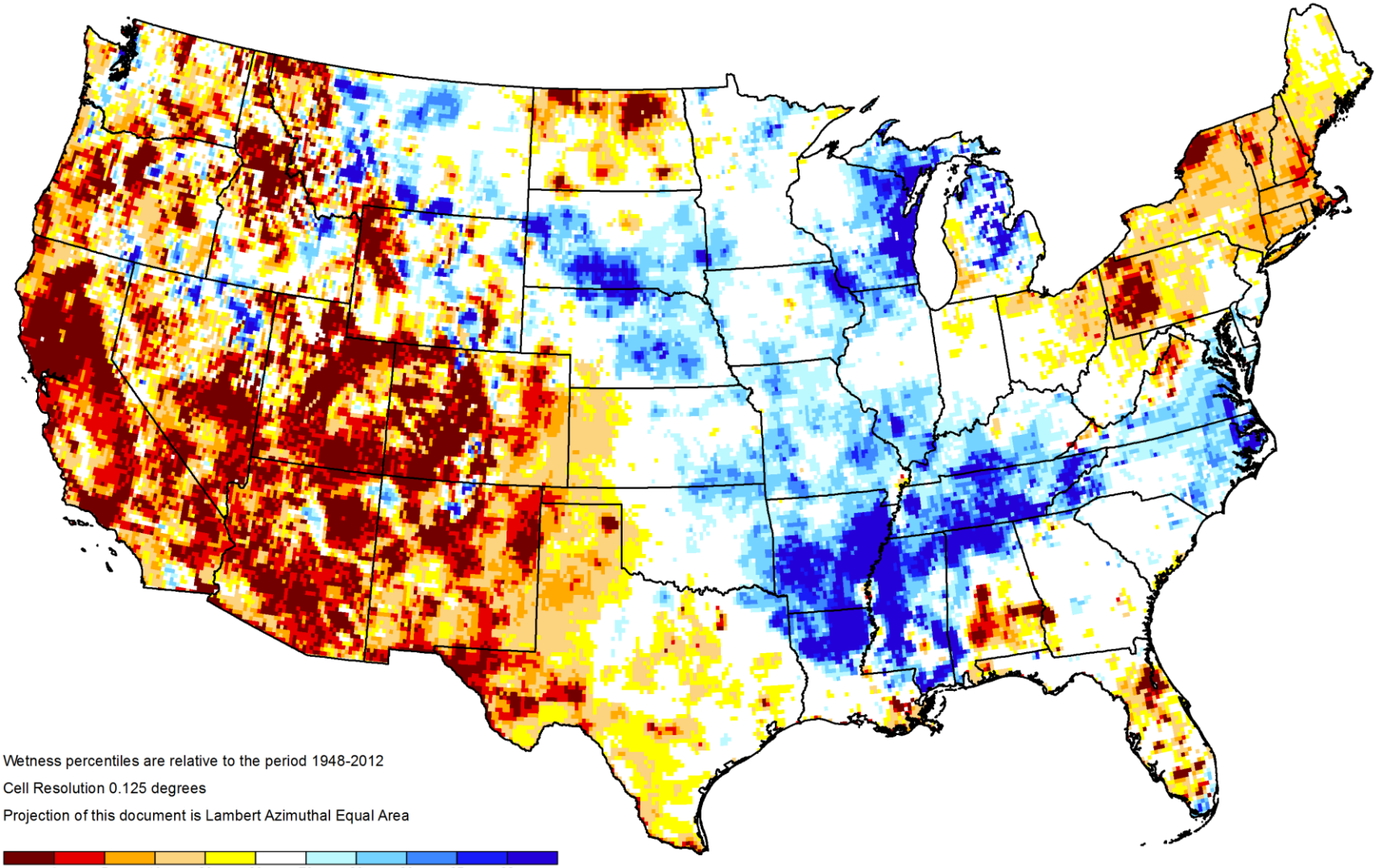
Wetness Percentile

https://nasagrace.unl.edu

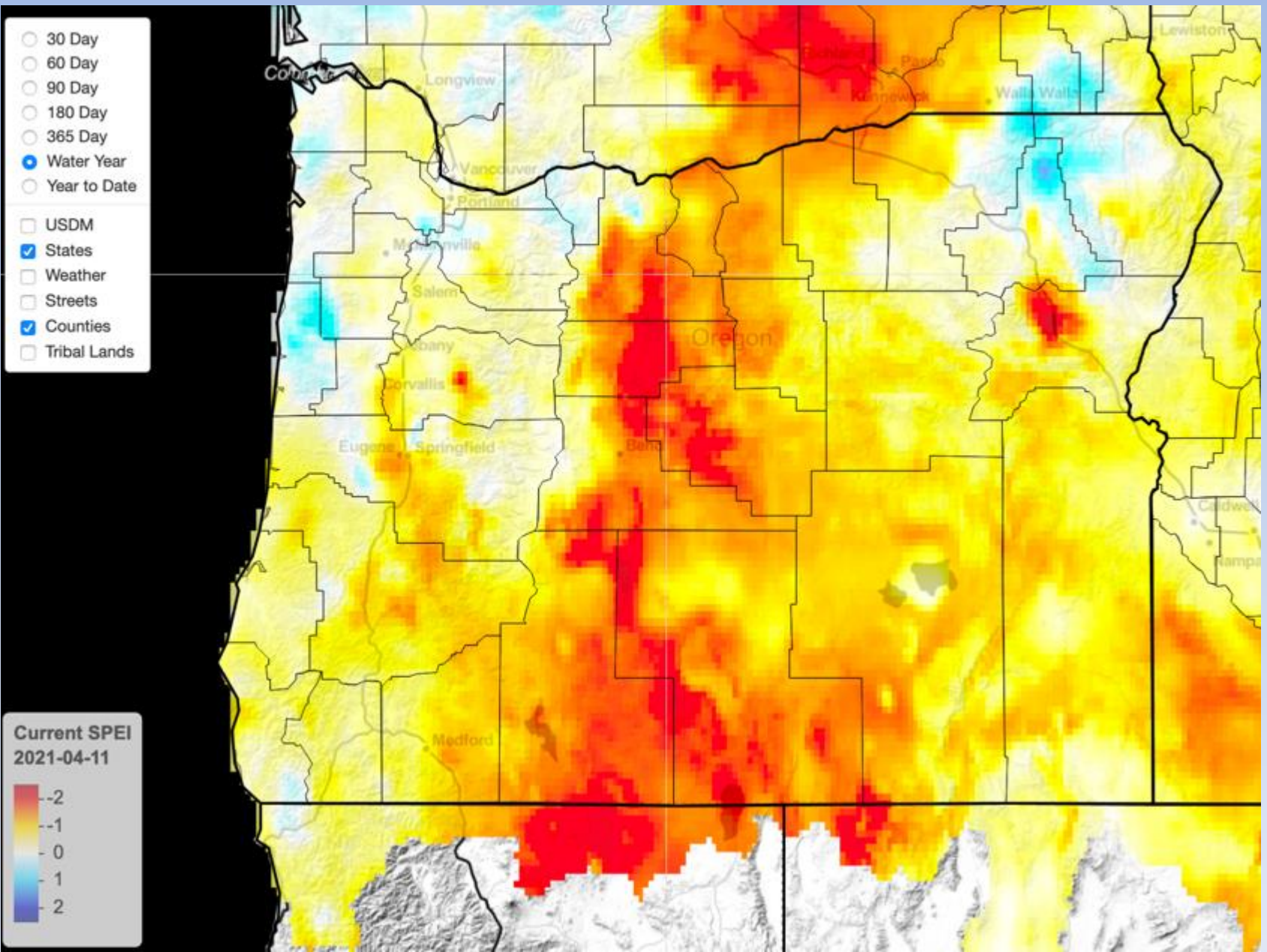

SPoRT–LIS 0–10 cm Soil Moisture percentile valid 13 Apr 2021
50N
45N
40N
35N
30N
25N
125W
120W
115W
110W
105W
100W
95W
90W
85W
80W
75W
70W
2
5
10
20
30
70
80
90
95
98

GRACE-Based Shallow Groundwater Drought Indicator

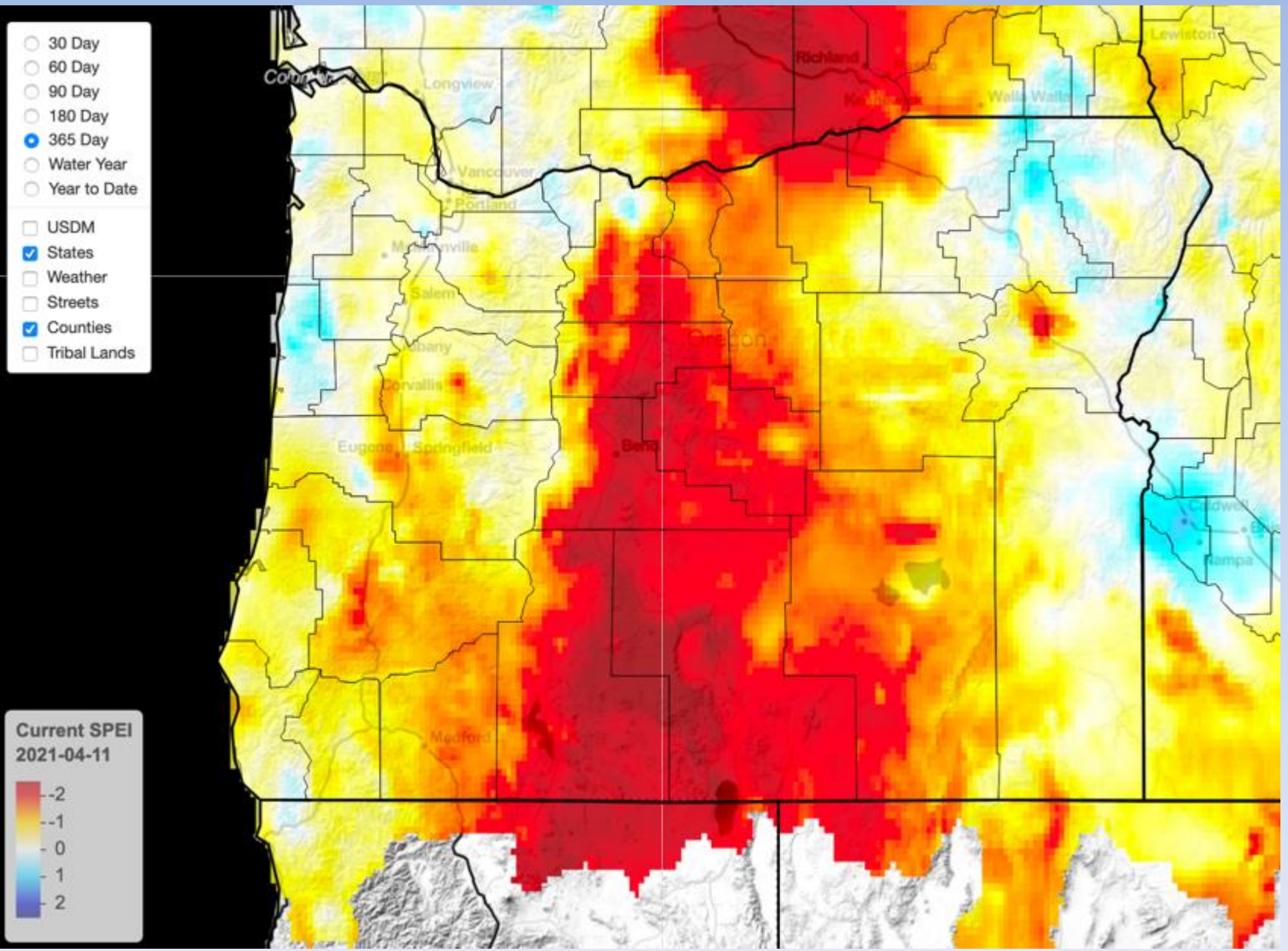
April 12, 2021



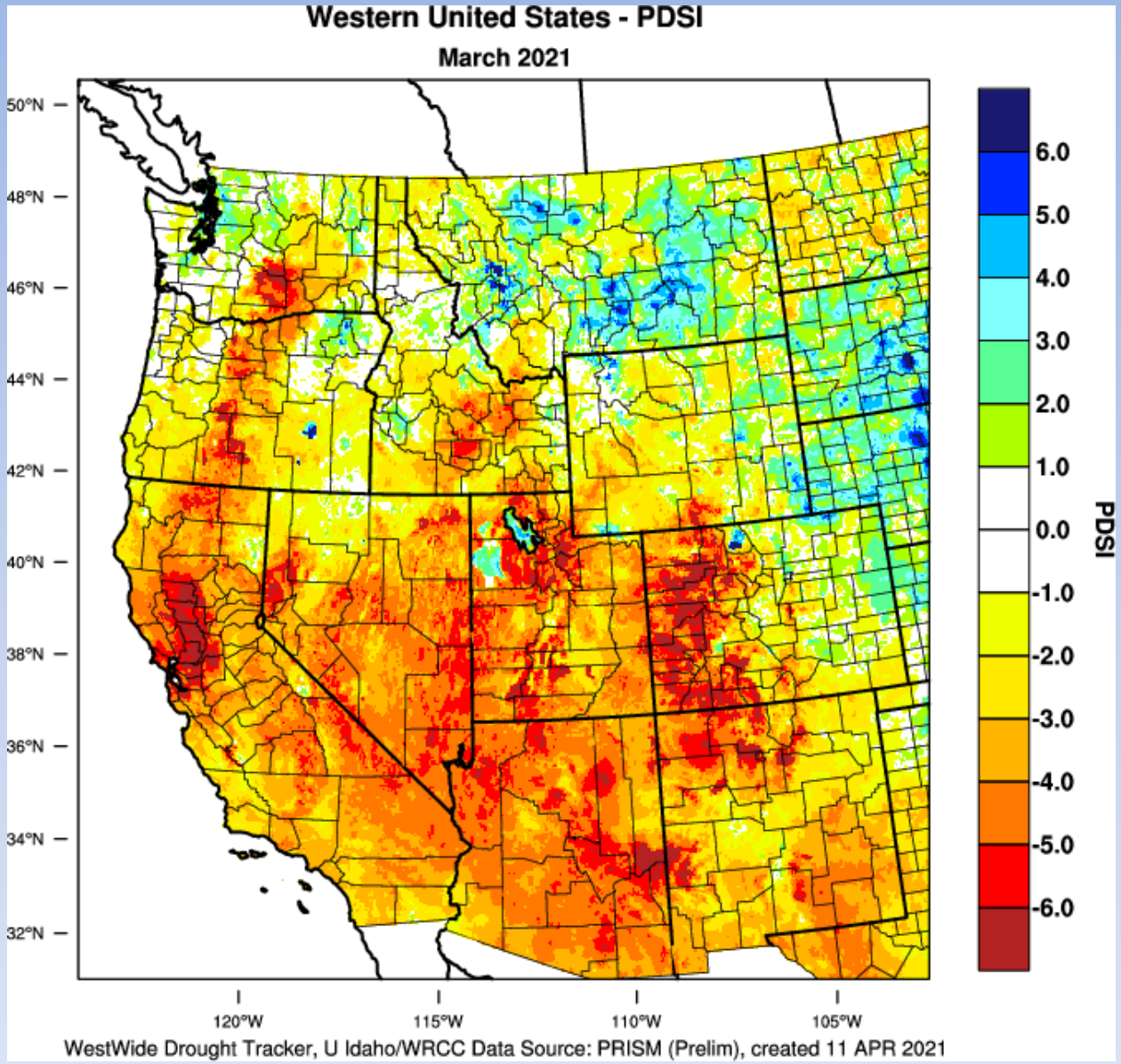
WYTD SPEI

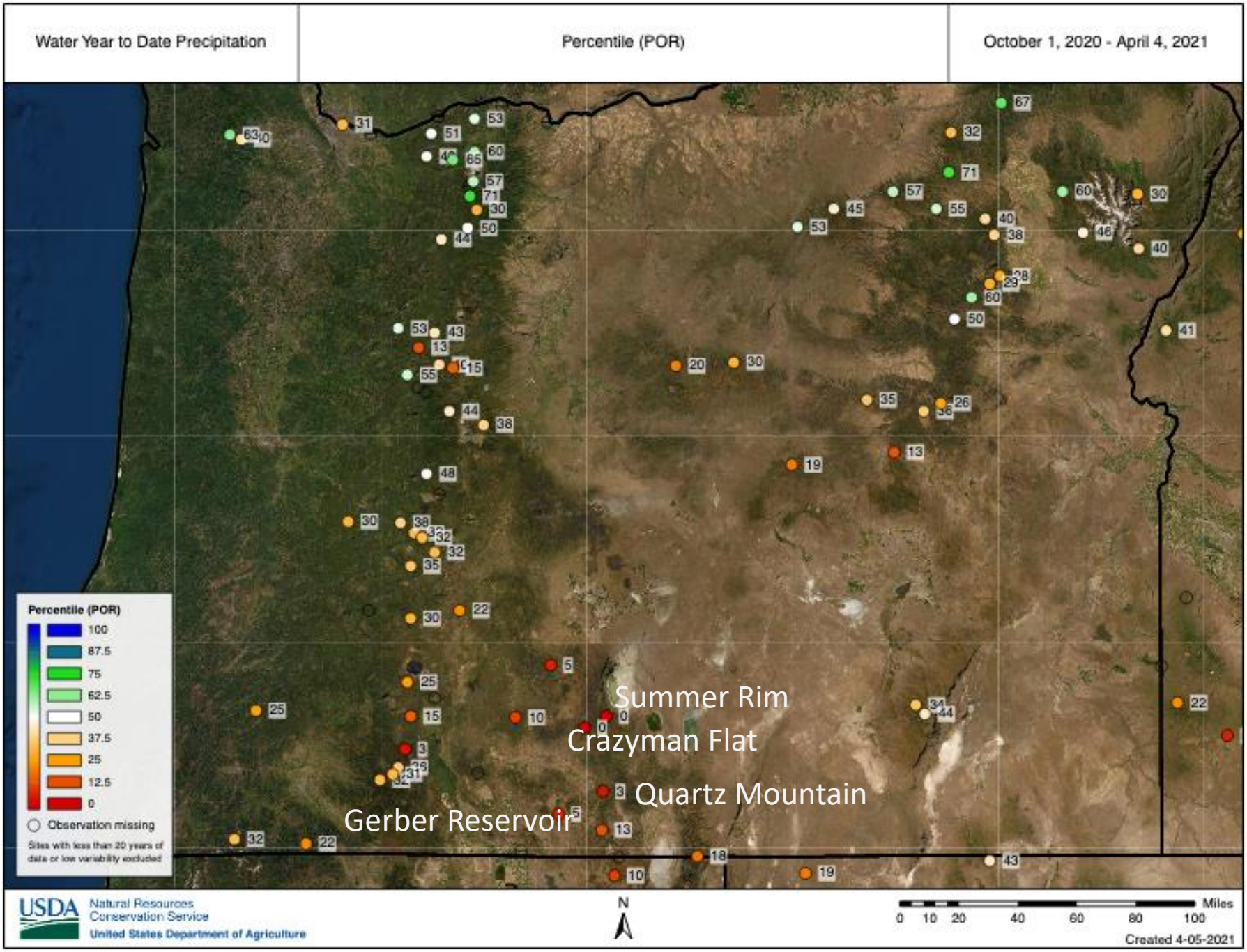

30 Day
60 Day
90 Day
180 Day
365 Day
Water Year
Year to Date
USDM
States
Weather
Streets
Counties
Tribal Lands
Current SPEI
2021-04-11
-2
-1
0
1
2
Longview
Vancouver
Portland
Salem
Oregon
Eugene
Springfield
Medford
Lewiston
Walla Walla

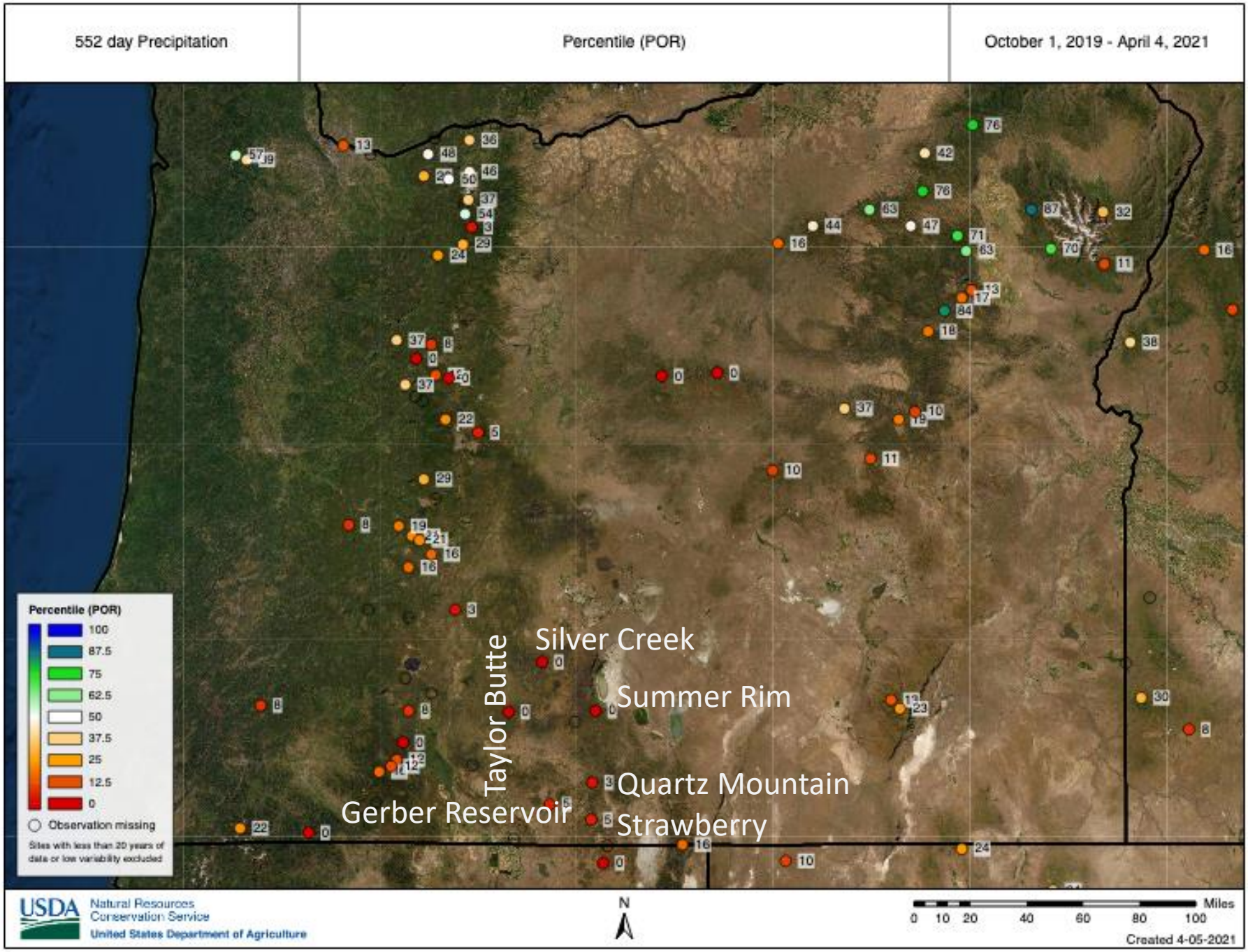
12-month SPEI

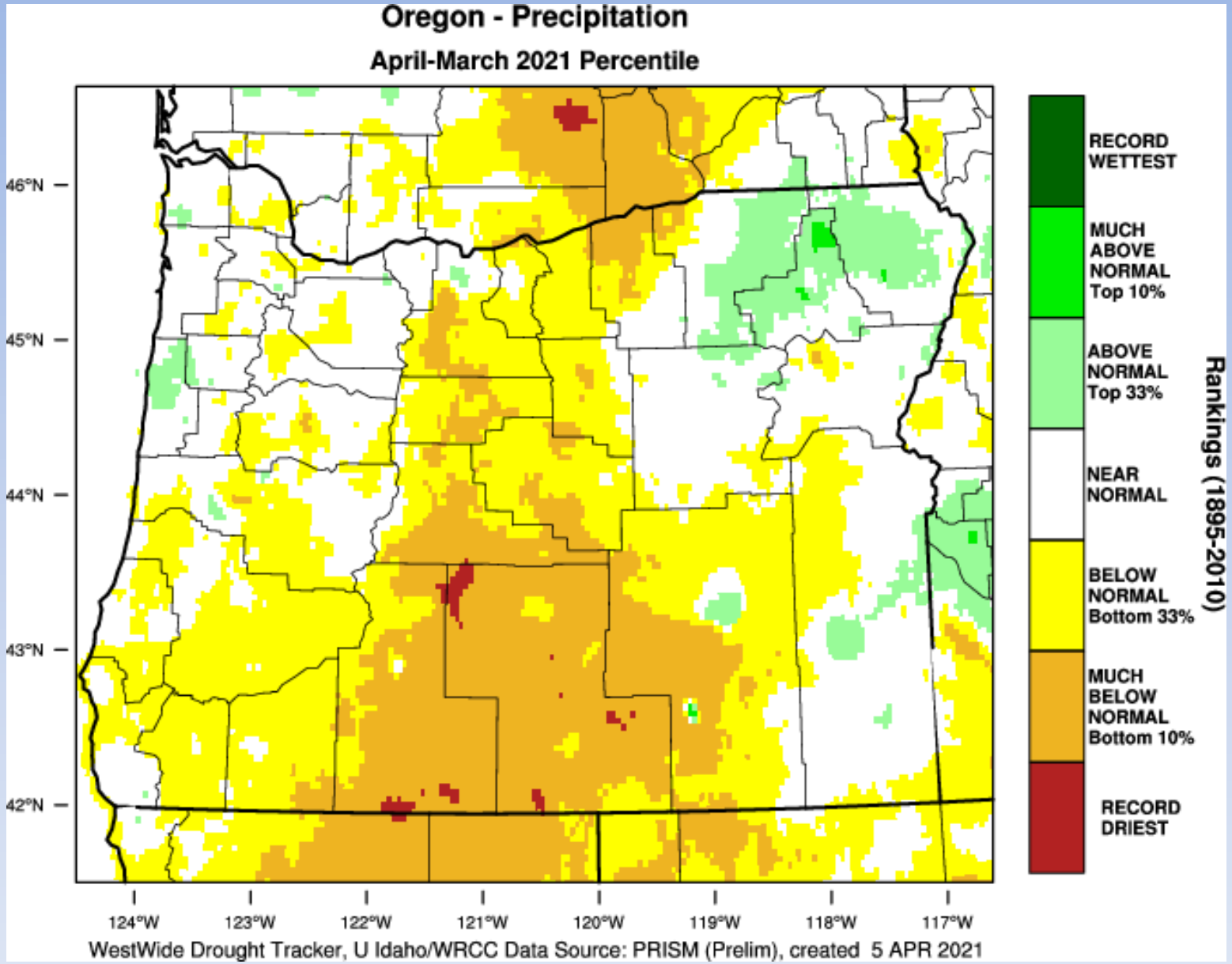


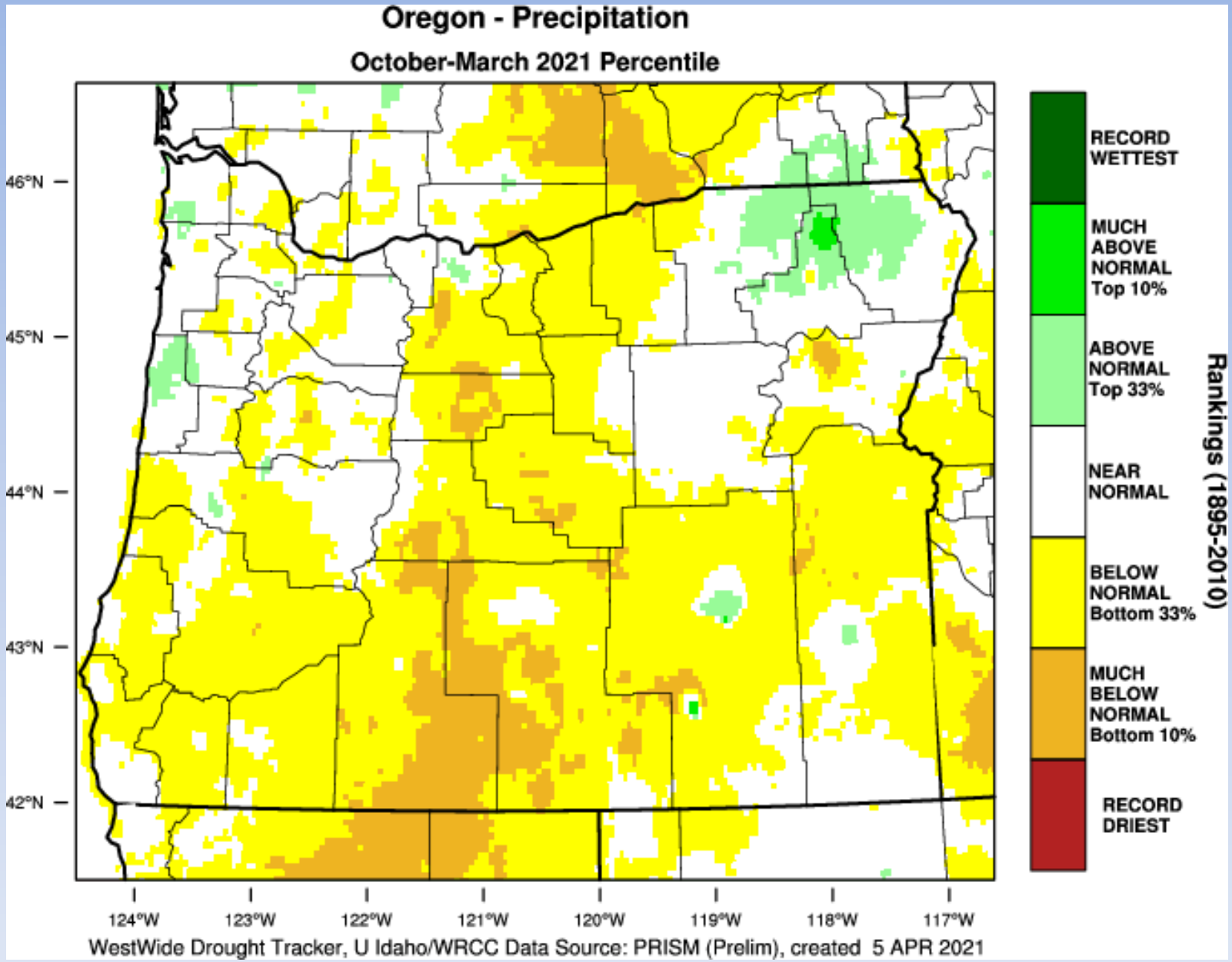
Latest Westwide Drought Tracker PDSI (based on PRISM)

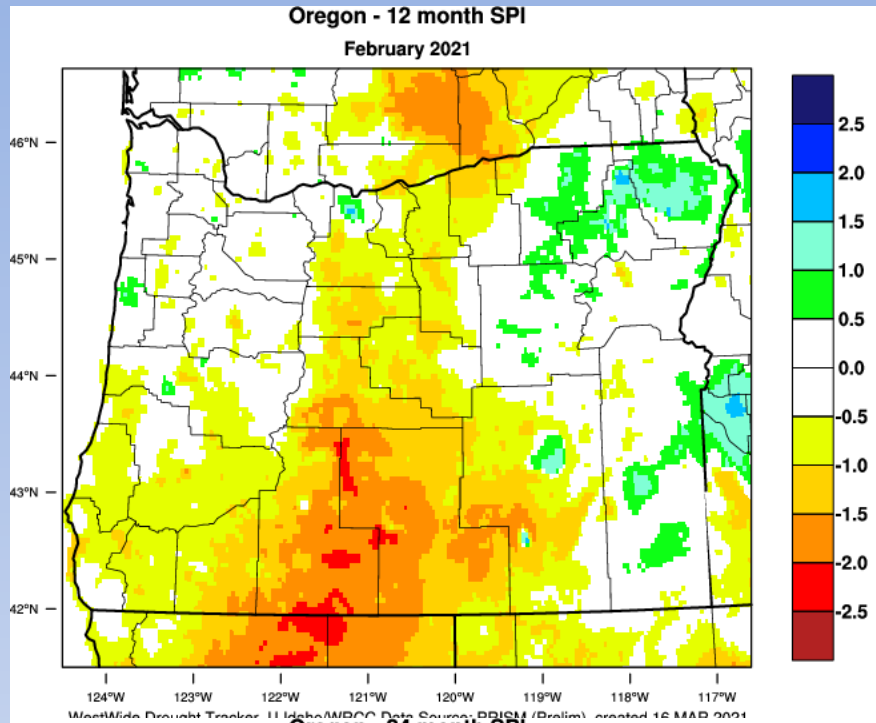


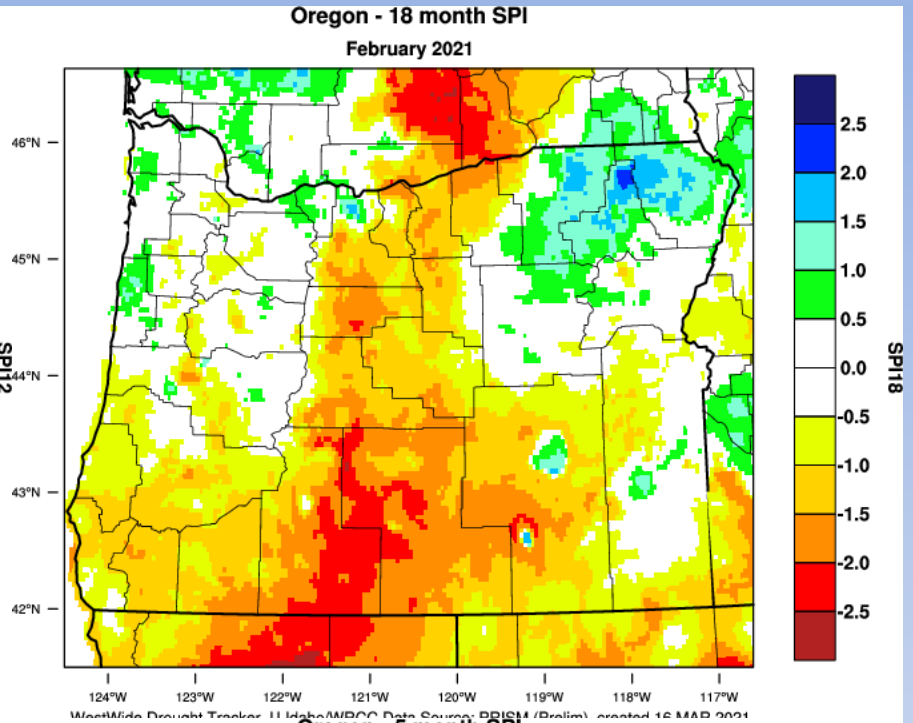

Water Year to Date Precipitation
Percentile (POR)
October 1, 2020 - April 4, 2021
Percentile (POR)
100
87.5
75
62.5
50
37.5
25
12.5
0
Observation missing
Sites with less than 20 years of data or low variability excluded
Summer Rim
Crazyman Flat
Quartz Mountain
Gerber Reservoir
USDA
Natural Resources Conservation Service
United States Department of Agriculture
N
Miles
0 10 20 40 60 80 100
Created 4-05-2021

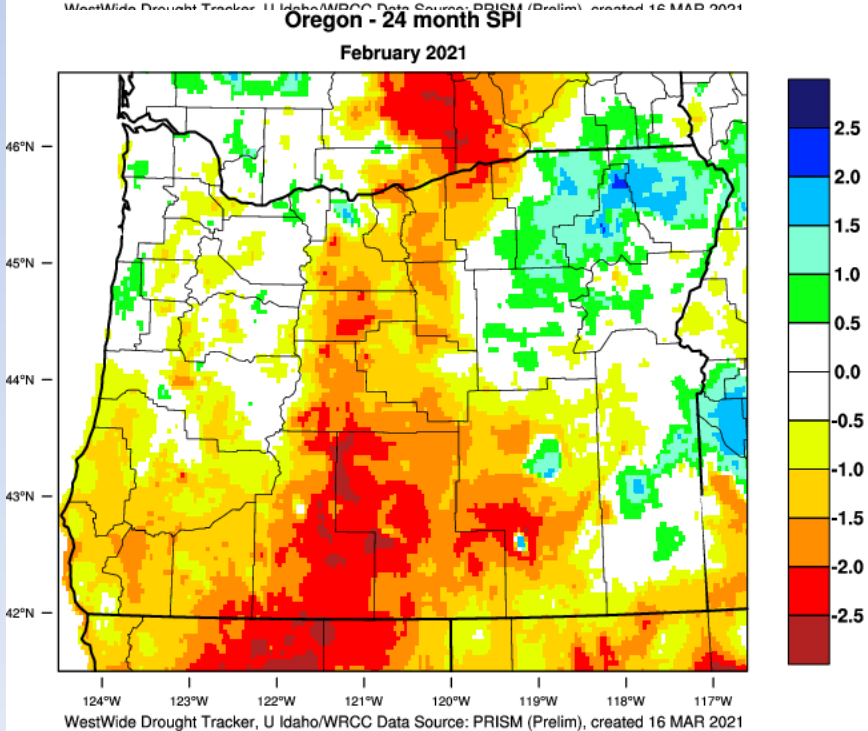

552 day Precipitation
Percentile (POR)
October 1, 2019 - April 4, 2021
Percentile (POR)
100
87.5
75
62.5
50
37.5
25
12.5
0
Observation missing
Sites with less than 20 years of data or low variability excluded
Silver Creek
Summer Rim
Taylor Butte
Quartz Mountain
Gerber Reservoir
Strawberry
USDA
Natural Resources Conservation Service
United States Department of Agriculture
N
Miles
0 10 20 40 60 80 100
Created 4-05-2021

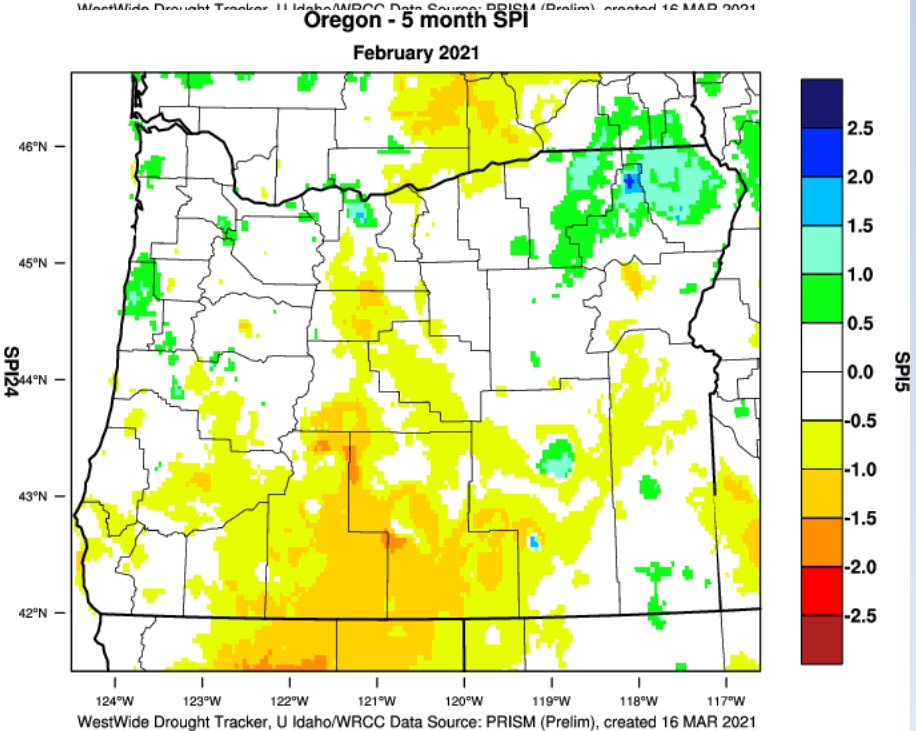

Oregon - Precipitation
April-March 2021 Percentile
46°N
45°N
44°N
43°N
42°N
124°W
123°W
122°W
121°W
120°W
119°W
118°W
117°W
RECORD WETTEST
MUCH ABOVE NORMAL Top 10%
ABOVE NORMAL Top 33%
NEAR NORMAL
BELOW NORMAL Bottom 33%
MUCH BELOW NORMAL Bottom 10%
RECORD DRIEST
Rankings (1895-2010)
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 APR 2021

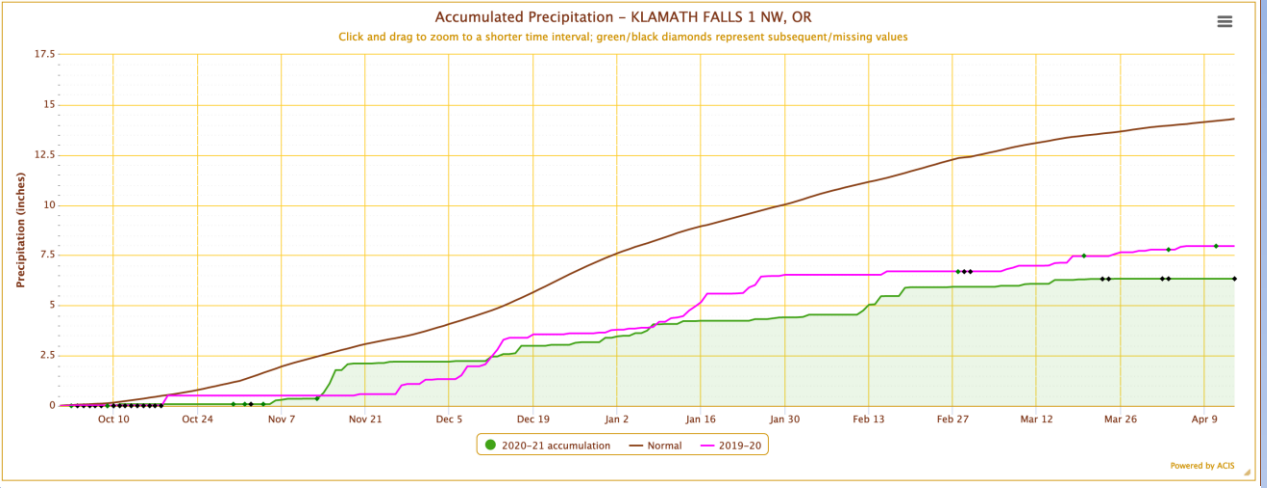

Oregon - Precipitation
October-March 2021 Percentile
46°N
45°N
44°N
43°N
42°N
124°W
123°W
122°W
121°W
120°W
119°W
118°W
117°W
RECORD WETTEST
MUCH ABOVE NORMAL Top 10%
ABOVE NORMAL Top 33%
NEAR NORMAL
BELOW NORMAL Bottom 33%
MUCH BELOW NORMAL Bottom 10%
RECORD DRIEST
Rankings (1895-2010)
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 5 APR 2021

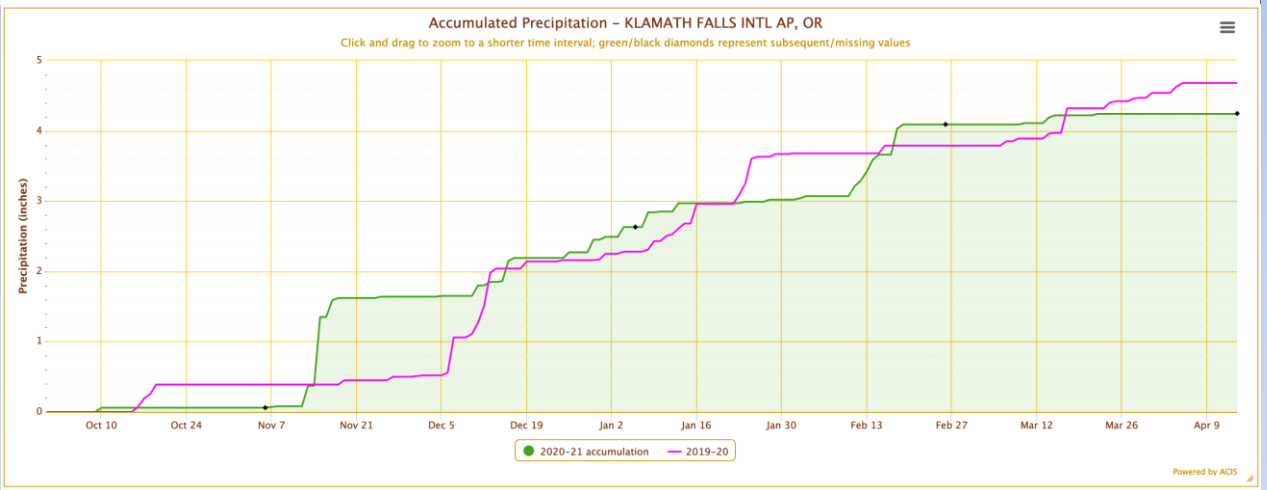

Oregon - 12 month SPI
February 2021
46°N
45°N
44°N
43°N
42°N
124°W
123°W
122°W
121°W
120°W
119°W
118°W
117°W
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
SPI12

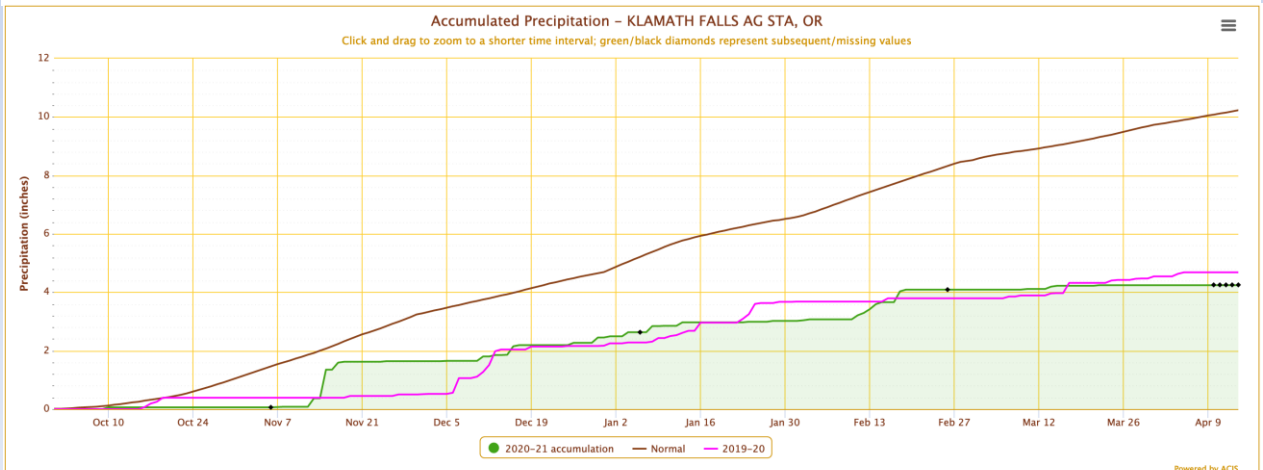

Oregon - 18 month SPI
February 2021
46°N
45°N
44°N
43°N
42°N
124°W
123°W
122°W
121°W
120°W
119°W
118°W
117°W
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
SPI18


Oregon - 24 month SPI
February 2021
46°N
45°N
44°N
43°N
42°N
124°W
123°W
122°W
121°W
120°W
119°W
118°W
117°W
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
SPI24
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 MAR 2021


Oregon - 5 month SPI
February 2021
46°N
45°N
44°N
43°N
42°N
124°W
123°W
122°W
121°W
120°W
119°W
118°W
117°W
2.5
2.0
1.5
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
SPI5
WestWide Drought Tracker, U Idaho/WRCC Data Source: PRISM (Prelim), created 16 MAR 2021



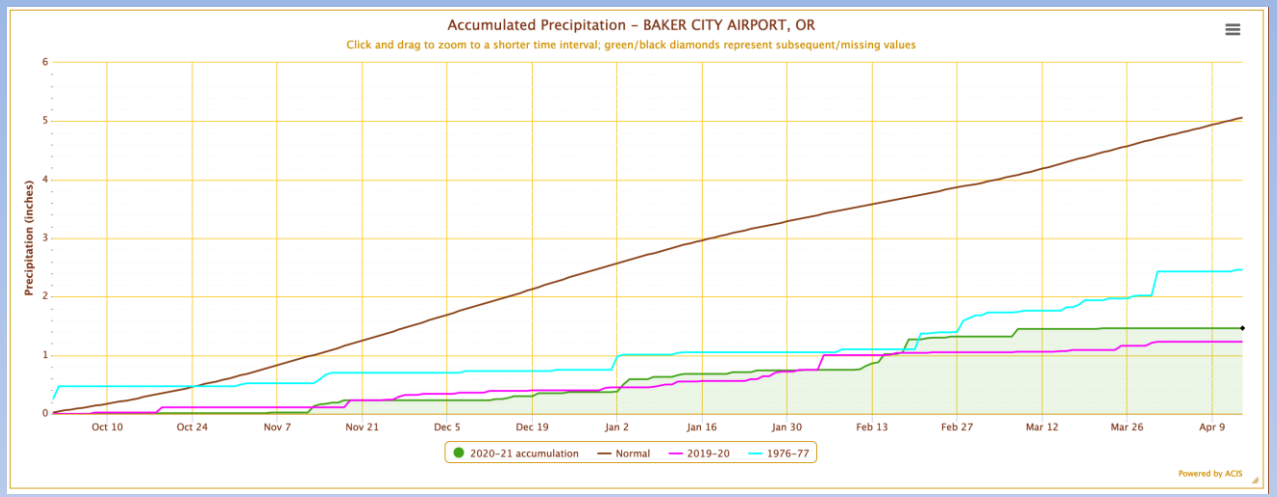


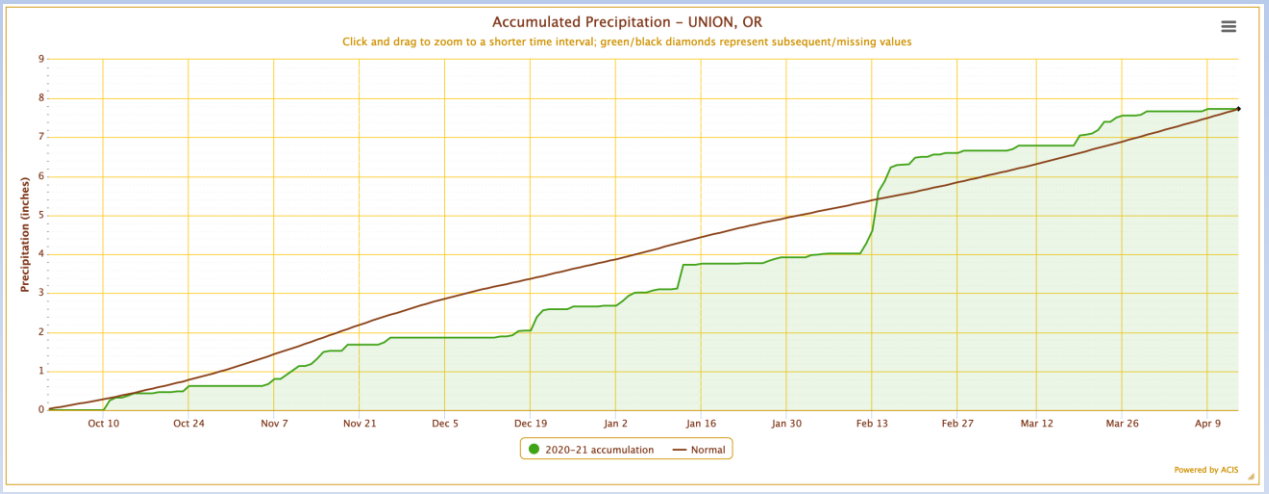


WYTD2021 precipitation in Klamath Falls (green curves)

WYTD2020 precipitation (magenta curves)

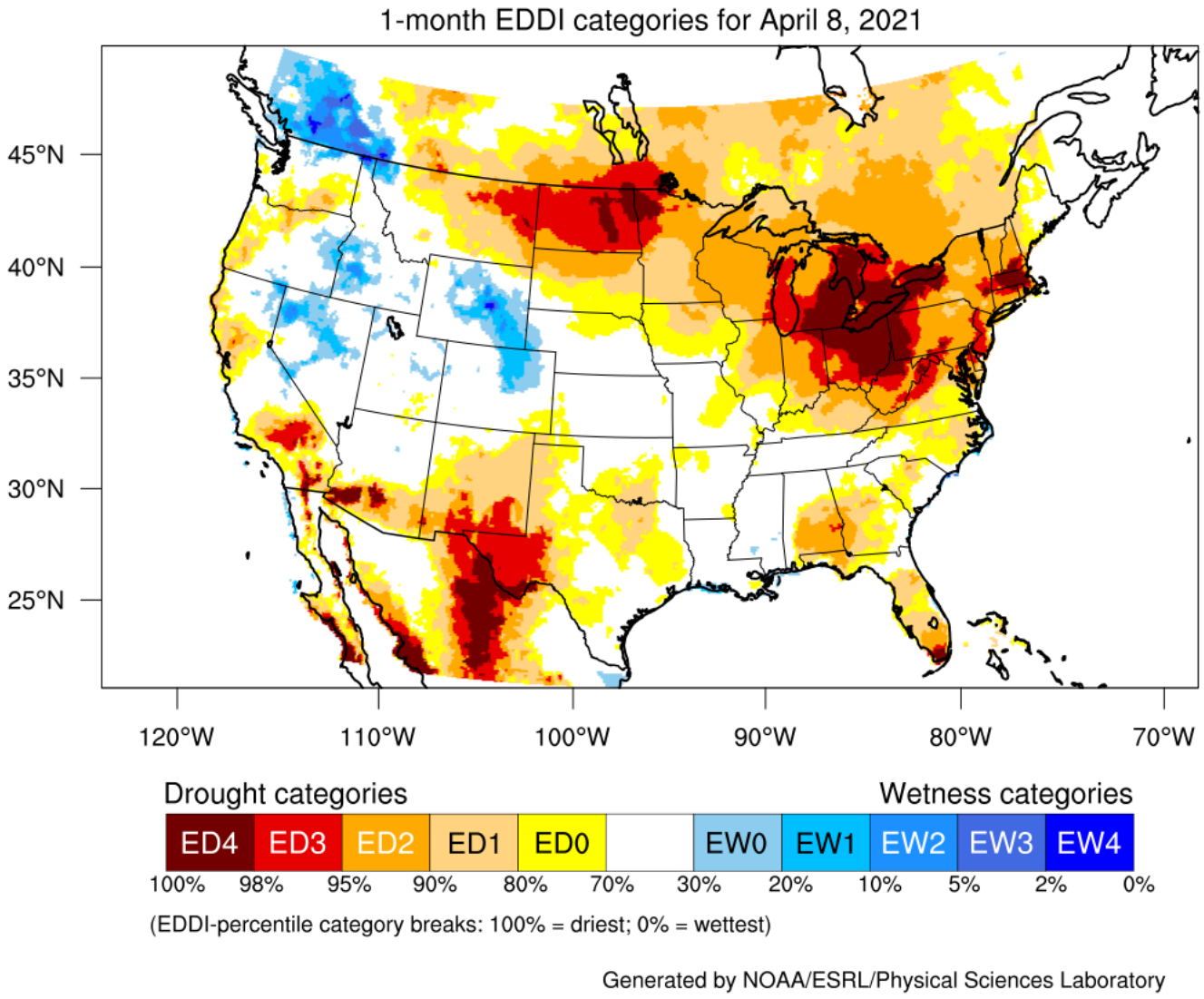
Several stations at <50% of average for WYTD2021 and running slightly behind last year





NWS has serviced this station a few times in the last year but there are still questions whether it is capturing all the precipitation.

Not many nearby stations with regular observations


1-month EDDI categories for April 8, 2021
45°N
40°N
35°N
30°N
25°N
120°W
110°W
100°W
90°W
80°W
70°W
Drought categories
Wetness categories
ED4
ED3
ED2
ED1
ED0
EW0
EW1
EW2
EW3
EW4
100%
98%
95%
90%
80%
70%
30%
20%
10%
5%
2%
0%
(EDDI-percentile category breaks: 100% = driest; 0% = wettest)
Generated by NOAA/ESRL/Physical Sciences Laboratory

USGS
science for a changing world

Oregon Water Supply Availability Meeting

April 2021

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

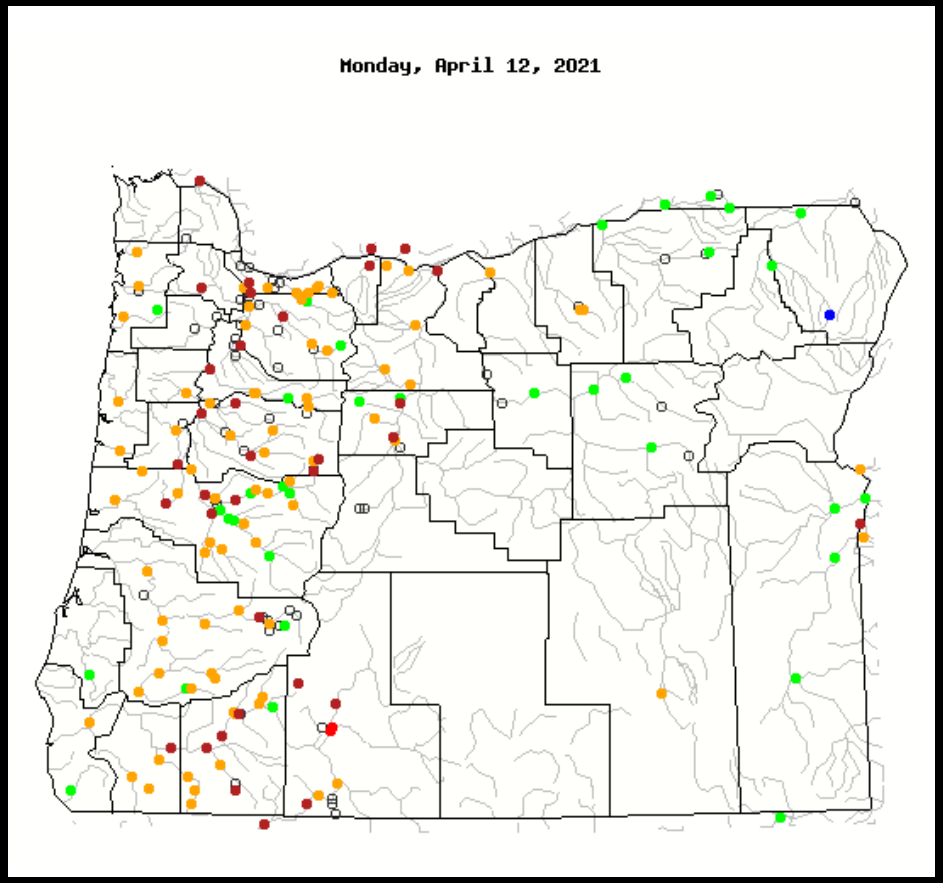
USGS Update on Surface Water Conditions

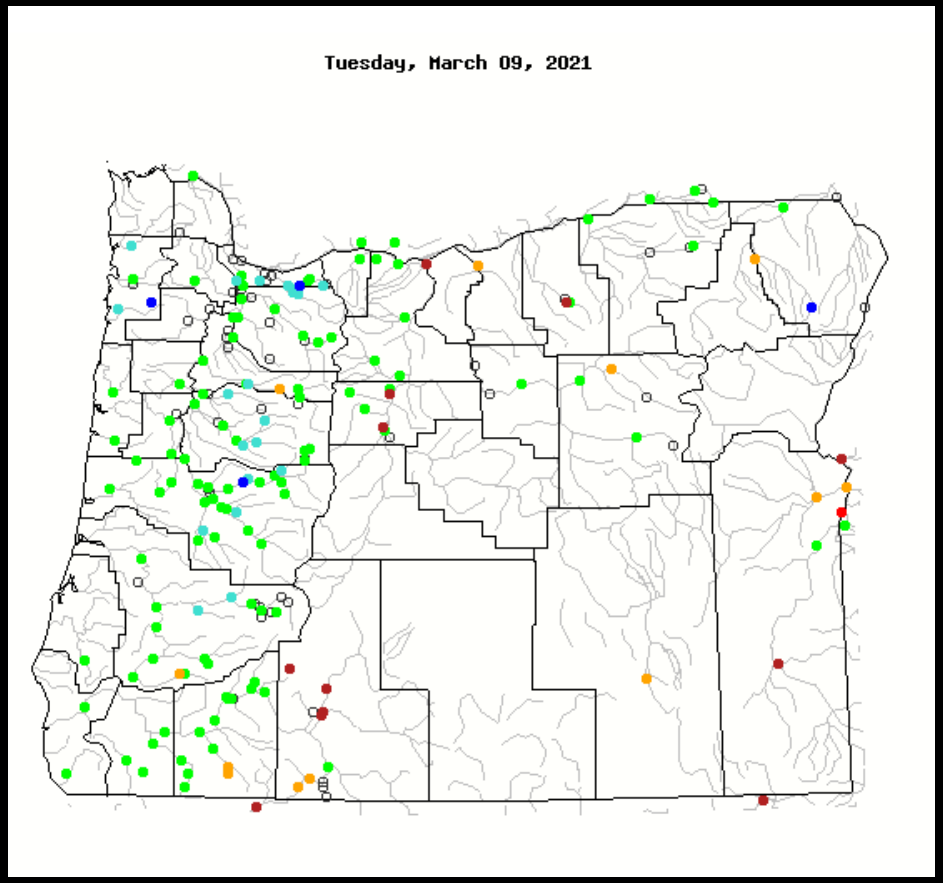
Carrie Boudreau & Marc Stewart
Oregon Water Science Center

Photo by Lisa Hoaks: Fall Creek 14151000

Streamflow Conditions

28-day Average Streamflow (as compared to Historical Record)

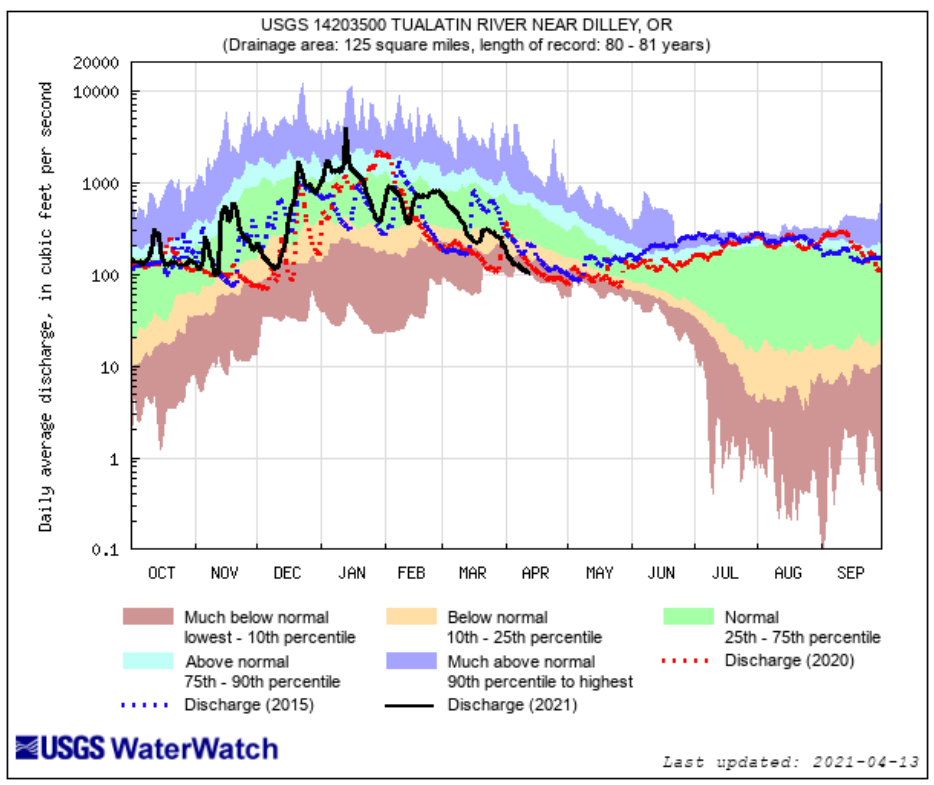




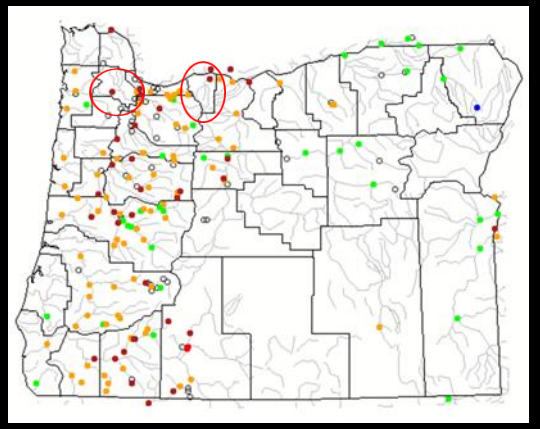
Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

USGS

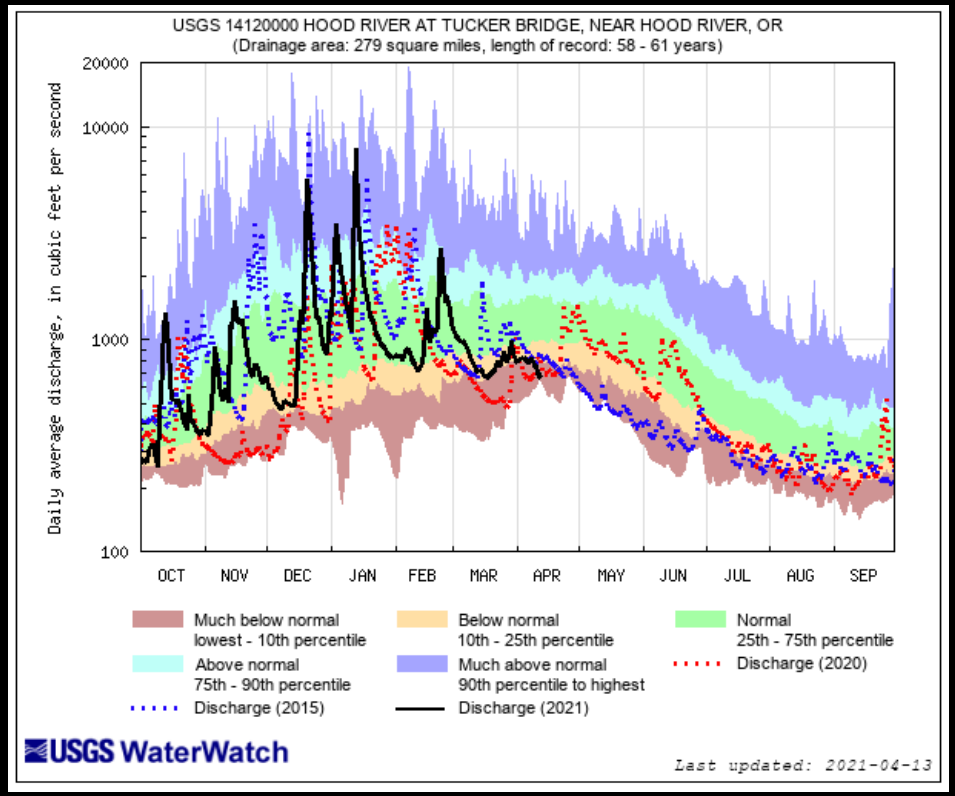
Northern Oregon



Washington County

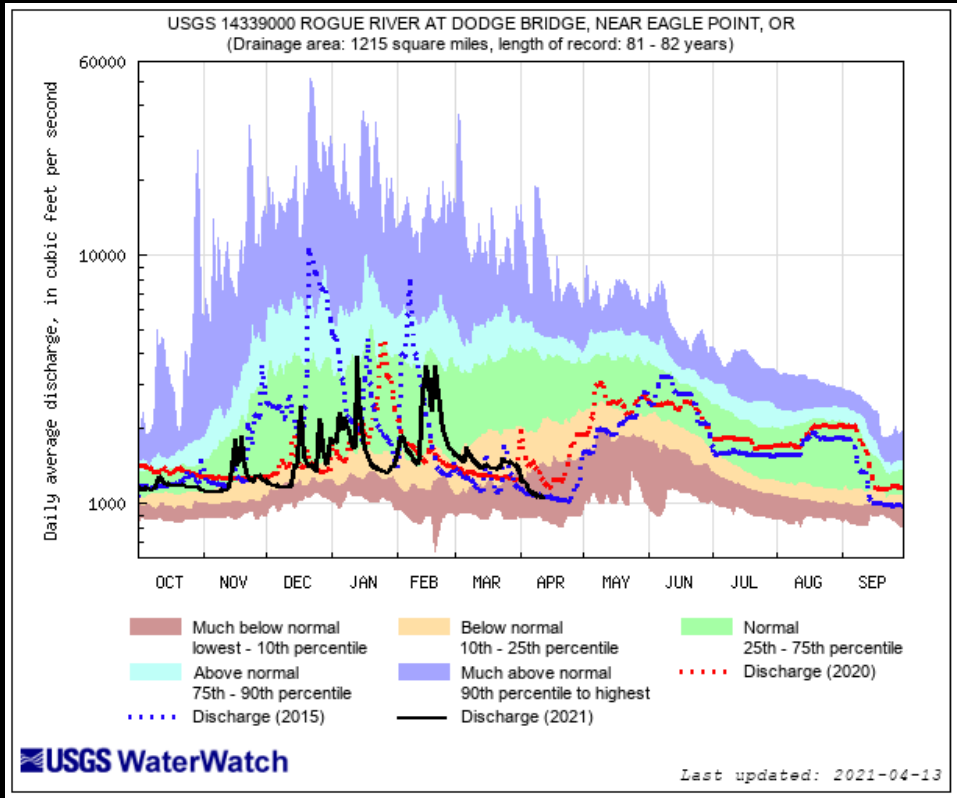


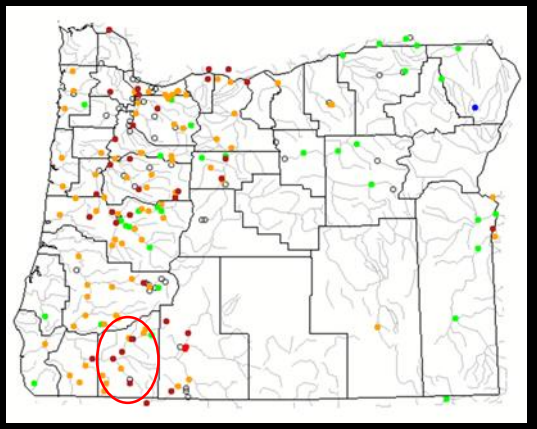
Hood River County



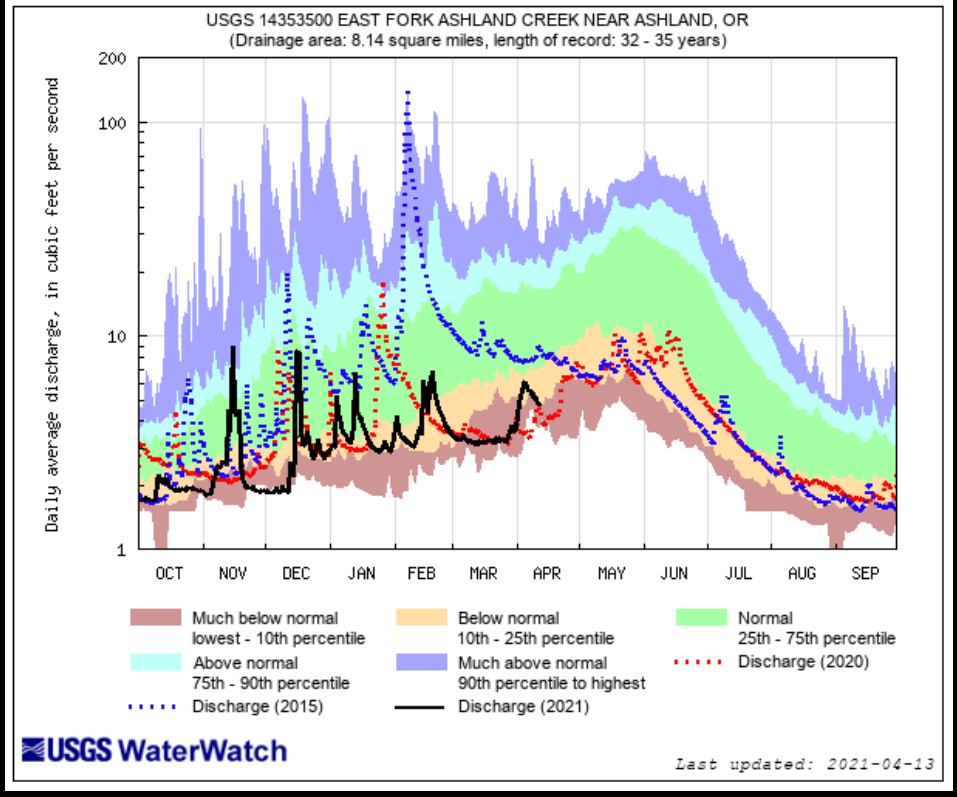
USGS

Southern Oregon



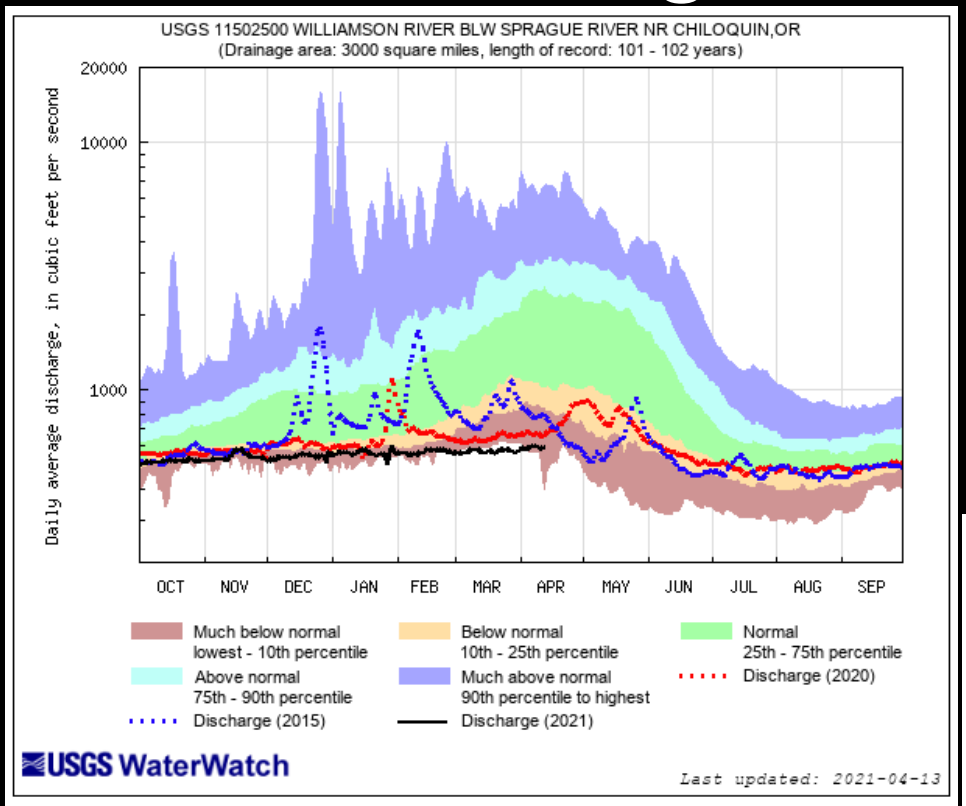


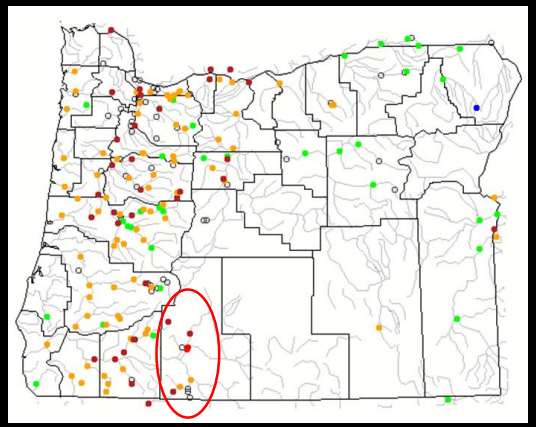
Jackson County



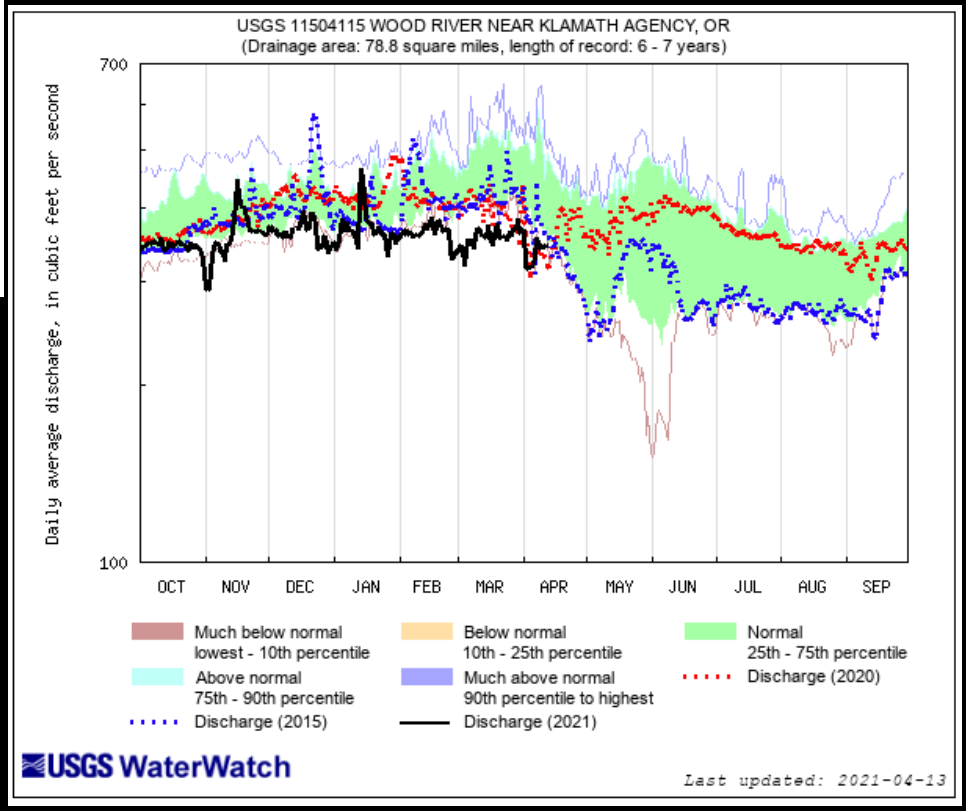
USGS

Southern Oregon

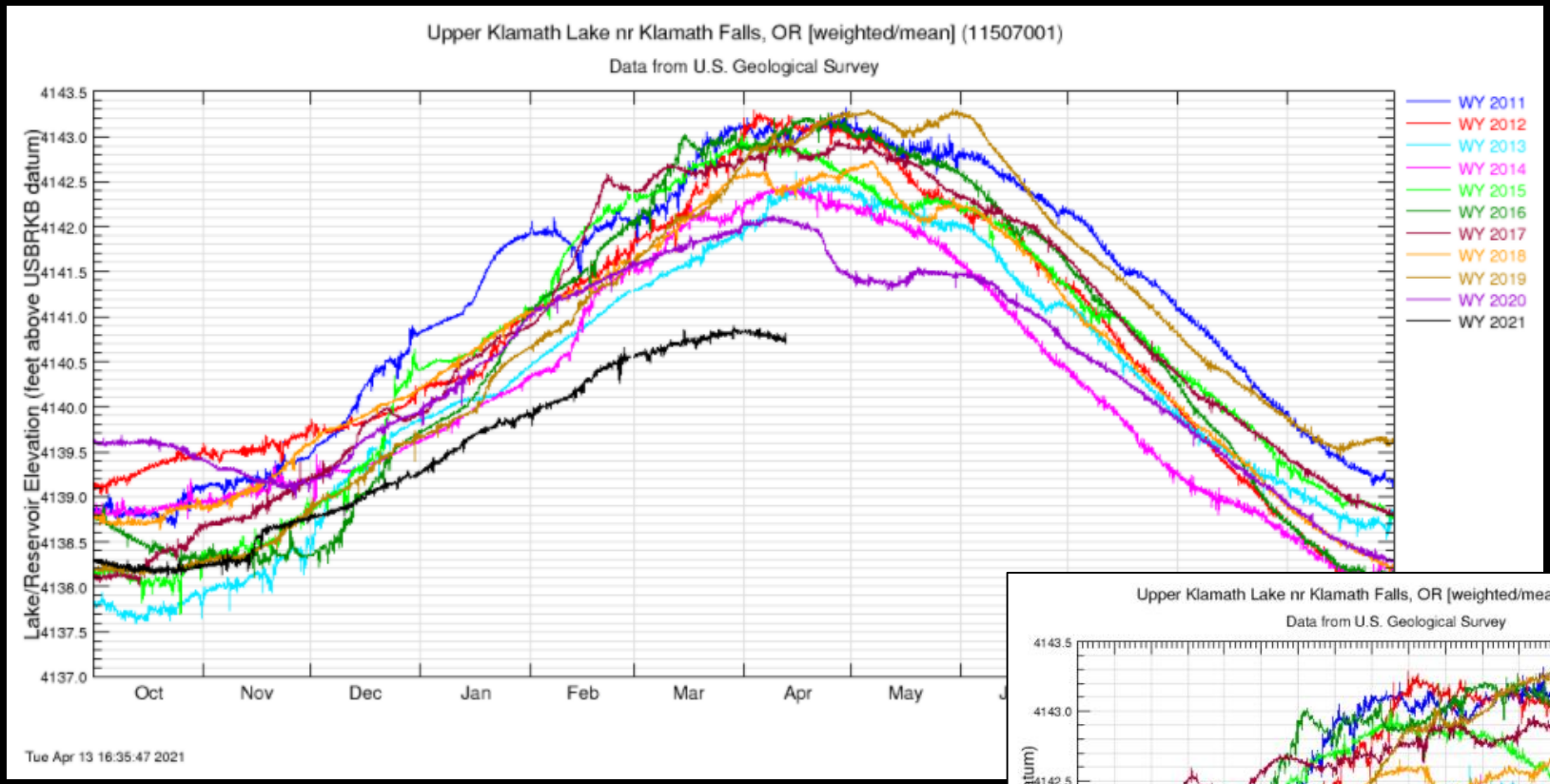


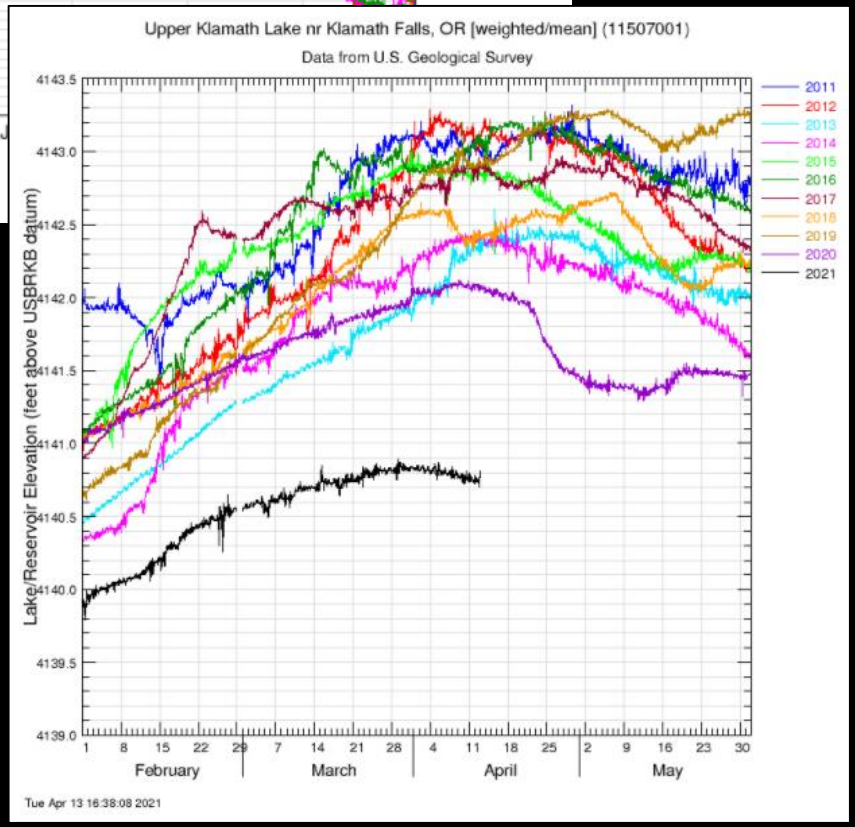


Klamath County



USGS

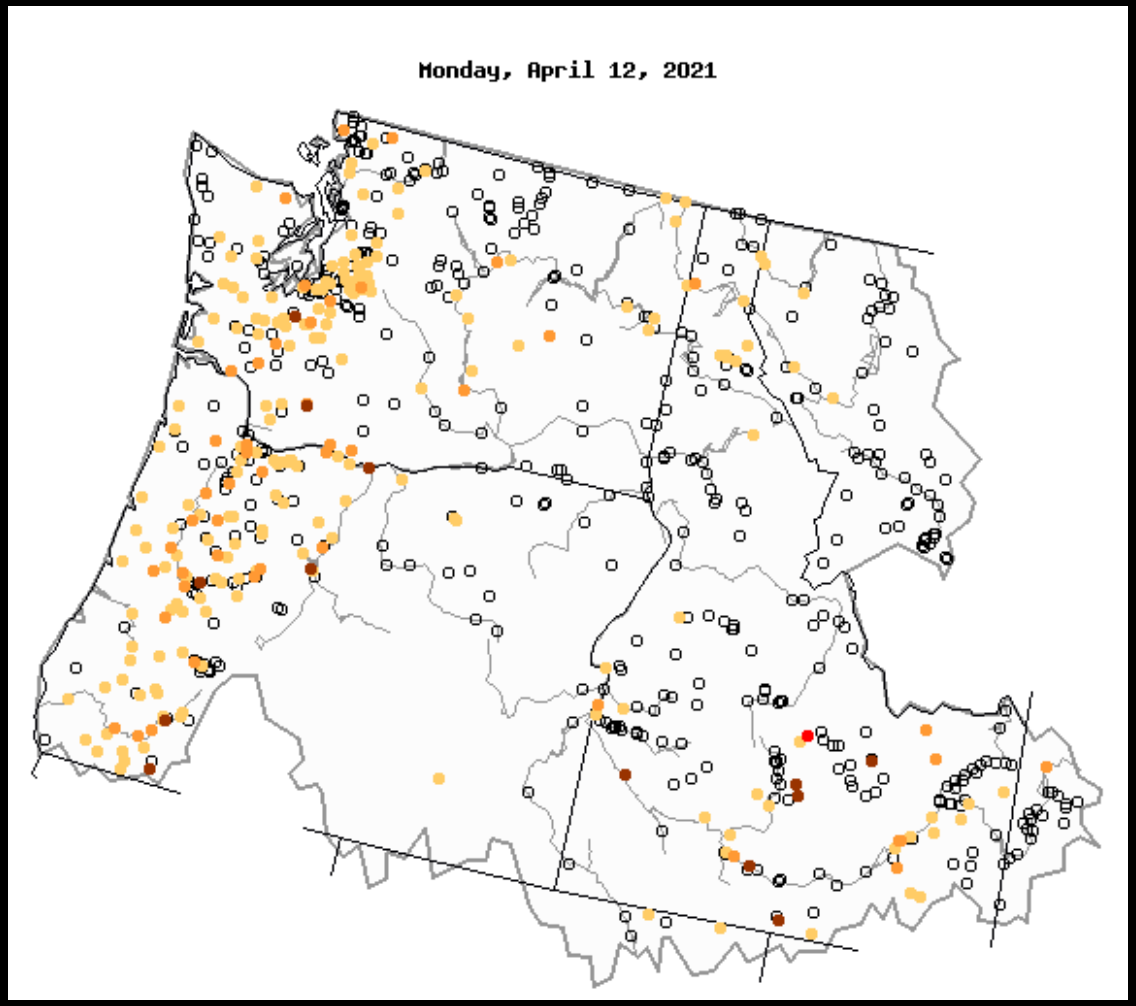


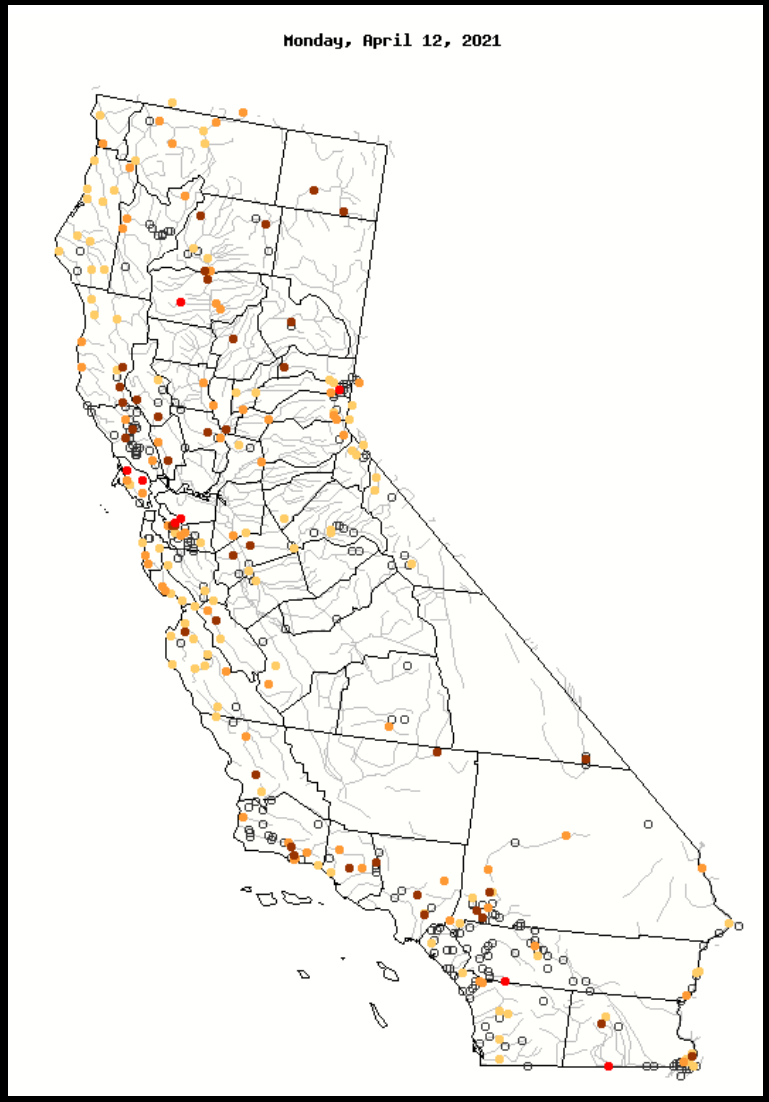


11507000 Upper Klamath Lake

USGS

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





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

USGS

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 Mar.: Percent of average
Donner Und Blitzen nr Frenchglen	Harney	73	43	103	52
(*)Deep Creek above Adel	Lake County	41	16	95	21
(*)Chewaucan River near Paisley	Lake County	48	23	26	37
Williamson River near Chiloquin	Klamath	568	33	3	52
Owyhee River near Rome	Owyhee	762	28	230	32
(*)NF Malheur River near Beulah	Malheur	122	46	149	58
Grande Ronde R at Troy	Grande Ronde Powder/Burnt	4,080	87	134	83
Umatilla River nr Gibbon	Umatilla Lower John Day	495	115	180	101
John Day River at Service Crk	Upper John Day	2,560	58	165	51
(*)Little Deschutes River nr LaPine	Upper Deschutes	73	35	4	52
Hood River nr Hood River	Lower Deschutes Mt.Hood	827	65	-27	92
Willamette River at Salem	Willamette	17,800	66	-52	92
Wilson River near Tillamook	North Coast	1,120	69	-62	116
Umpqua River near Elkton	Rogue/Umpqua	7,200	66	-54	75
Rogue River near Agness	Rogue/Umpqua	4,690	59	-52	64
SF Coquille River at Powers	South Coast	1,300	101	-45	96
Chetco River near Brookings	South Coast	2,860	79	-52	88

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

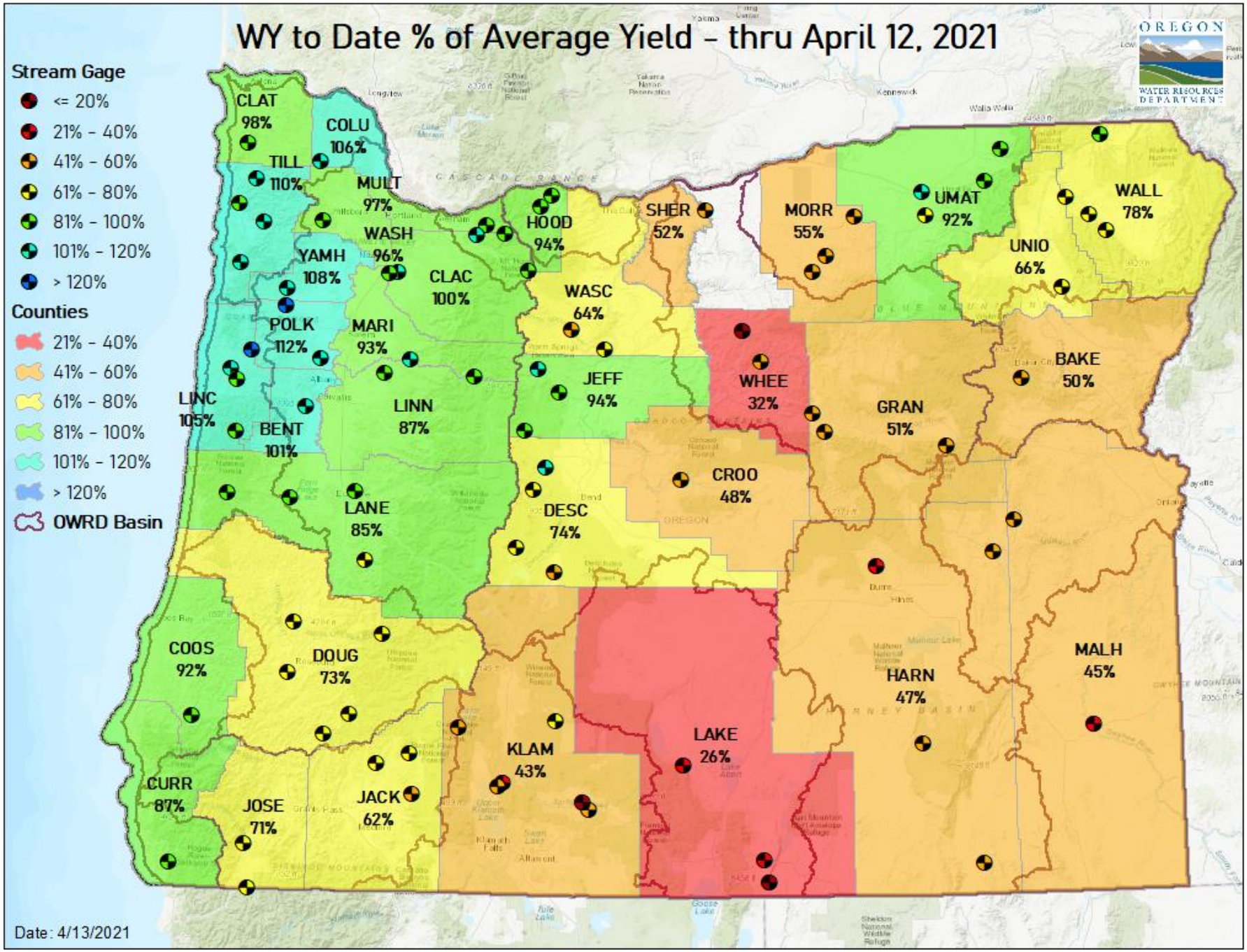
4/1/2021

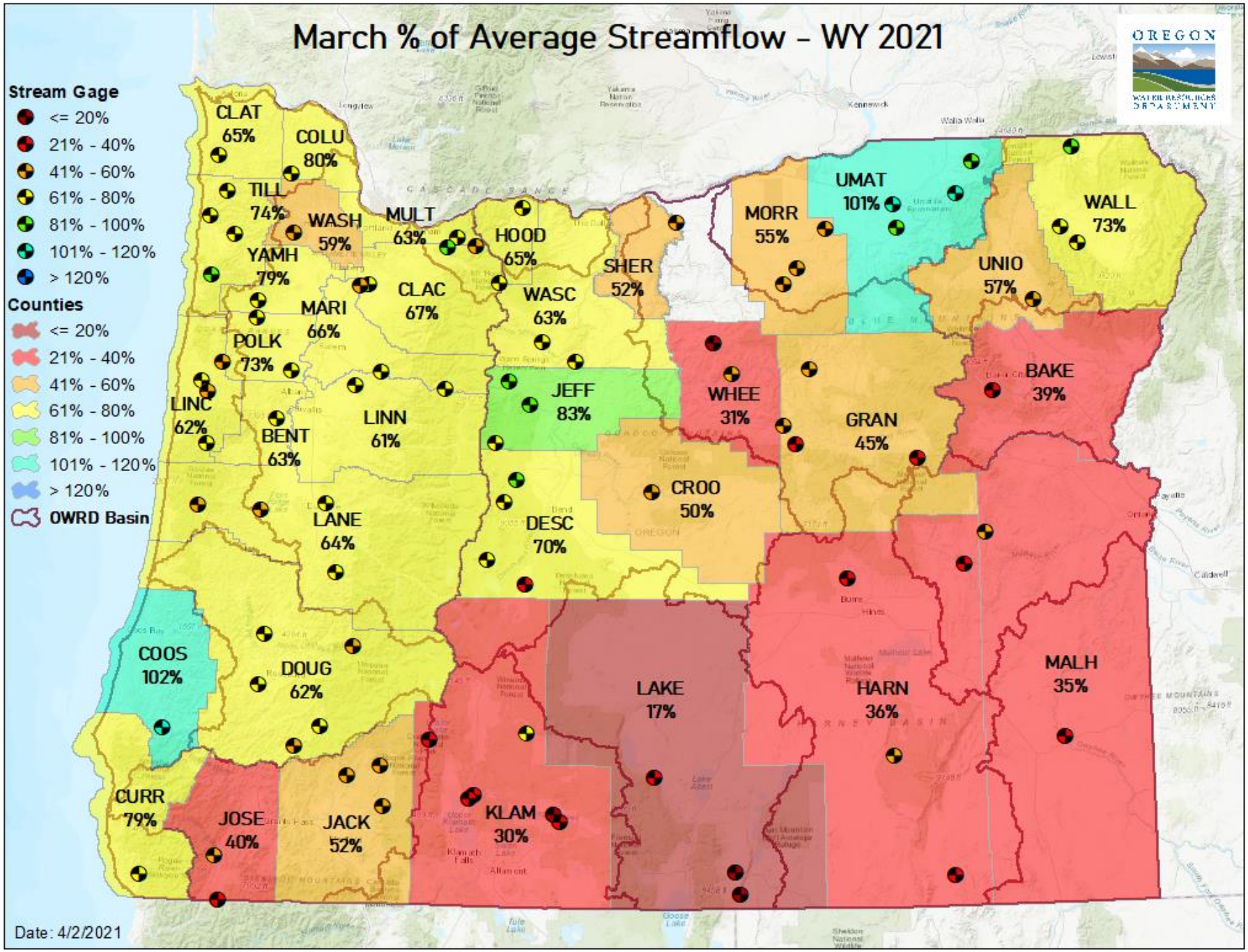
USGS

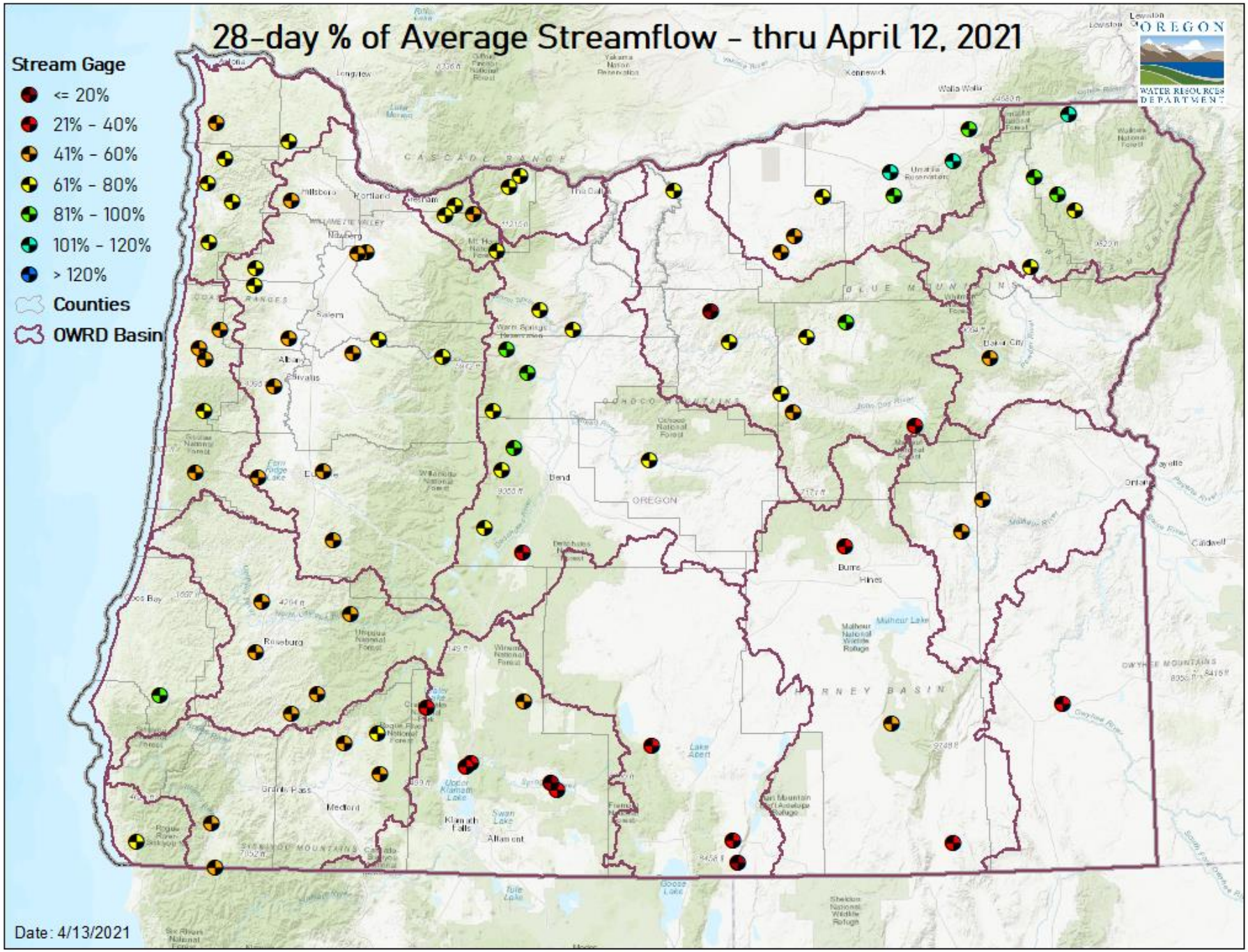
Water Supply Availability Committee

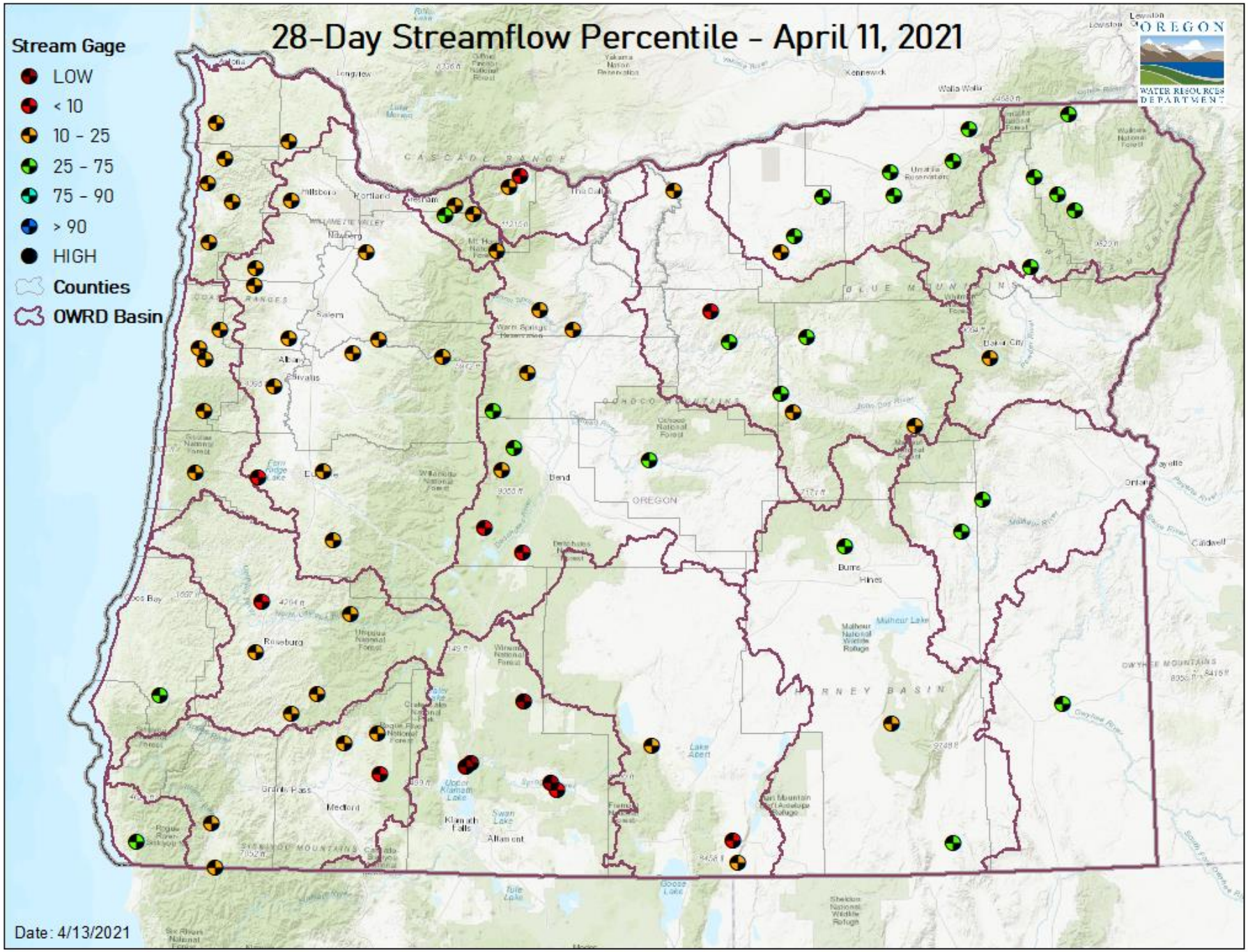
Ryan Andrews
Oregon Water Resources Department
April 14th, 2021

Applegate Reservoir – March 2021

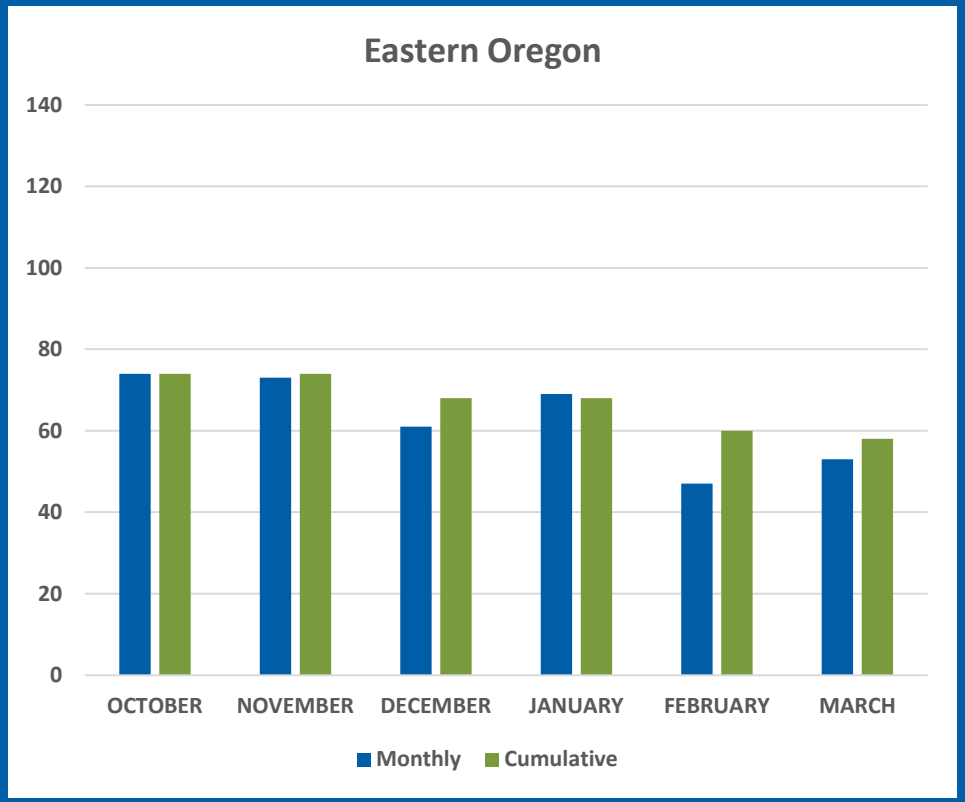

WY to Date % of Average Yield - thru April 12, 2021
OREGON
WATER RESOURCES DEPARTMENT
Stream Gage
<= 20%
21% - 40%
41% - 60%
61% - 80%
81% - 100%
101% - 120%
> 120%
Counties
21% - 40%
41% - 60%
61% - 80%
81% - 100%
101% - 120%
> 120%
OWRD Basin
CLAT 98%
COLU 106%
TILL 110%
MULT 97%
WASH 96%
YAMH 108%
CLAC 100%
HOOD 94%
SHER 52%
MORR 55%
UMAT 92%
WALL 78%
UNIO 66%
WASC 64%
POLK 112%
MARI 93%
LINC 105%
BENT 101%
LINN 87%
JEFF 94%
WHEE 32%
BAKE 50%
GRAN 51%
CROO 48%
LANE 85%
DESC 74%
COOS 92%
DOUG 73%
MALH 45%
HARN 47%
KLAM 43%
LAKE 26%
CURR 87%
JOSE 71%
JACK 62%
Date: 4/13/2021

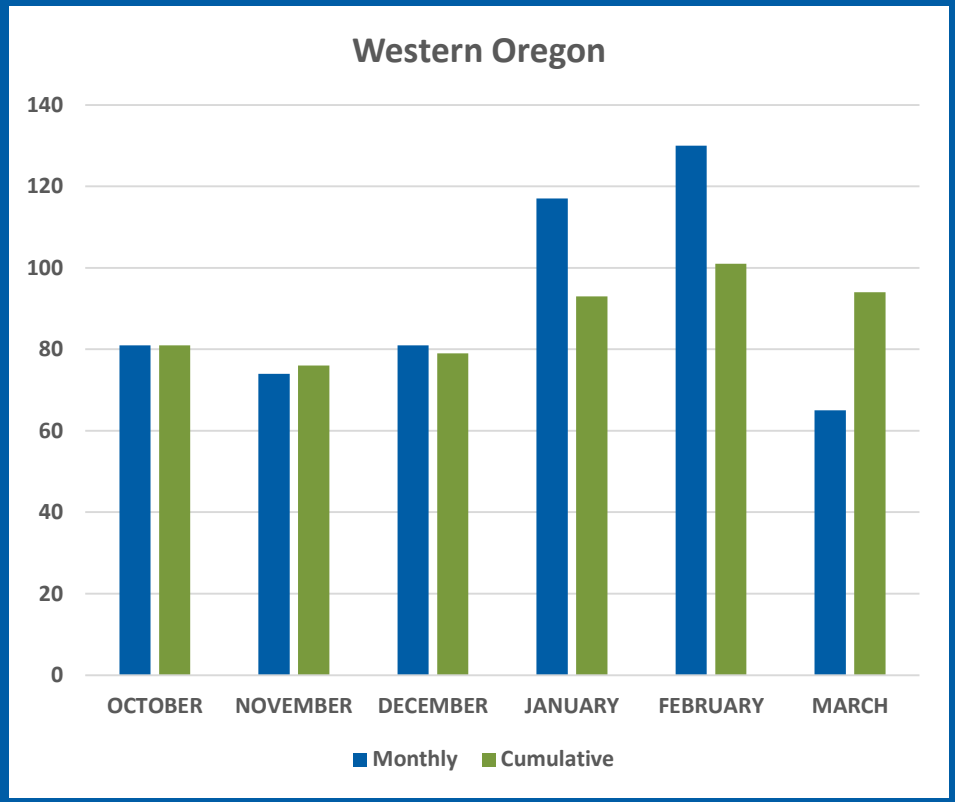

March % of Average Streamflow - WY 2021
OREGON
WATER RESOURCES DEPARTMENT
Stream Gage
<= 20%
21% - 40%
41% - 60%
61% - 80%
81% - 100%
101% - 120%
> 120%
Counties
<= 20%
21% - 40%
41% - 60%
61% - 80%
81% - 100%
101% - 120%
> 120%
OWRD Basin
CLAT 65%
COLU 80%
TILL 74%
WASH 59%
MULT 63%
HOOD 65%
YAMH 79%
CLAC 67%
WASC 63%
SHER 52%
MARI 66%
POLK 73%
LINC 62%
BENT 63%
LINN 61%
JEFF 83%
WHEE 31%
MORR 55%
UMAT 101%
UNIO 57%
WALL 73%
BAKE 39%
GRAN 45%
CROO 50%
DESC 70%
LANE 64%
COOS 102%
DOUG 62%
LAKE 17%
HARN 36%
MALH 35%
CURR 79%
JOSE 40%
JACK 52%
KLAM 30%
Date: 4/2/2021

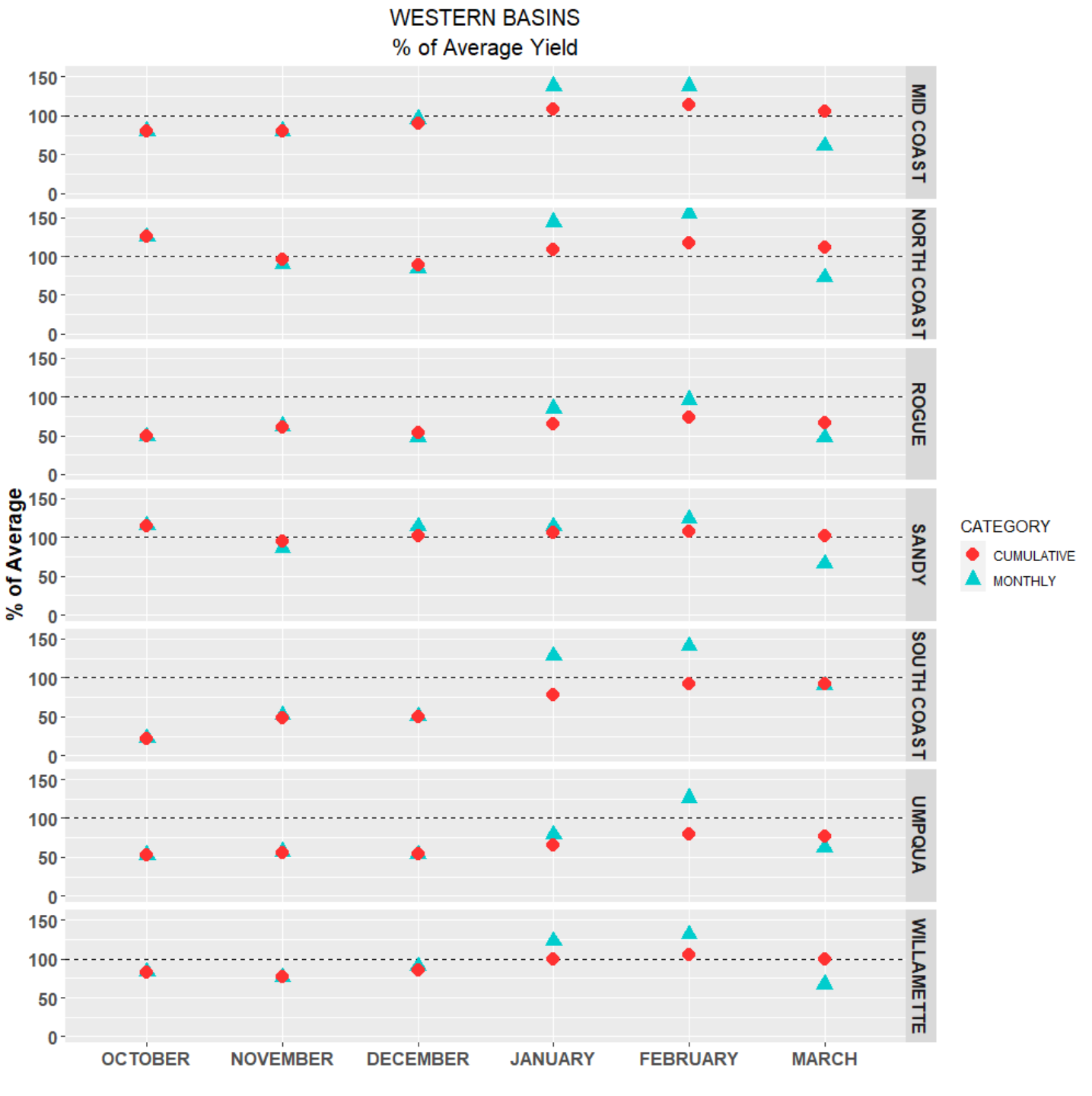

28-day % of Average Streamflow - thru April 12, 2021
OREGON
WATER RESOURCES DEPARTMENT
Stream Gage
<= 20%
21% - 40%
41% - 60%
61% - 80%
81% - 100%
101% - 120%
> 120%
Counties
OWRD Basin
Date: 4/13/2021

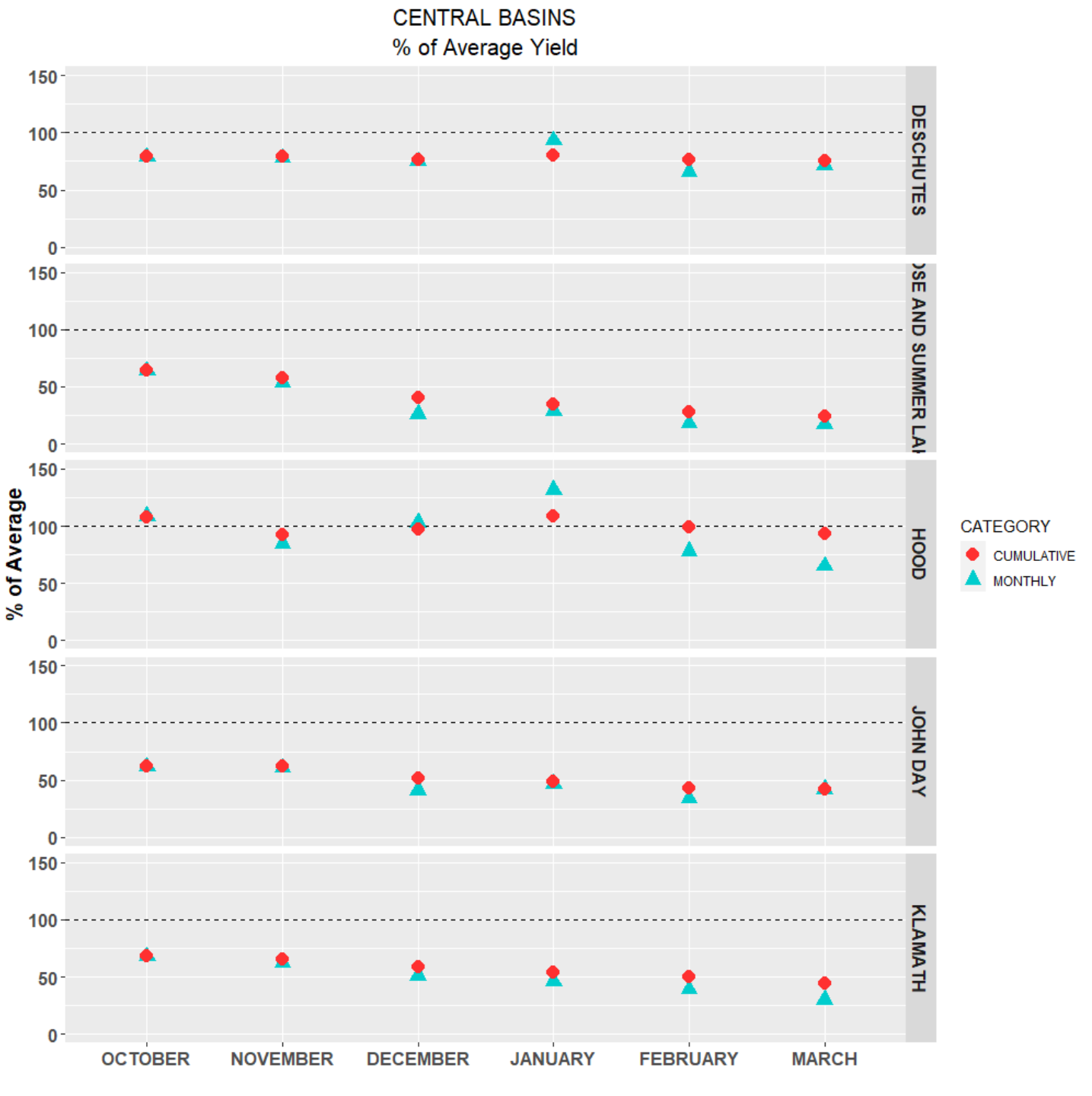

28-Day Streamflow Percentile - April 11, 2021
Stream Gage
LOW
< 10
10 - 25
25 - 75
75 - 90
> 90
HIGH
Counties
OWRD Basin
OREGON
WATER RESOURCES DEPARTMENT
Date: 4/13/2021

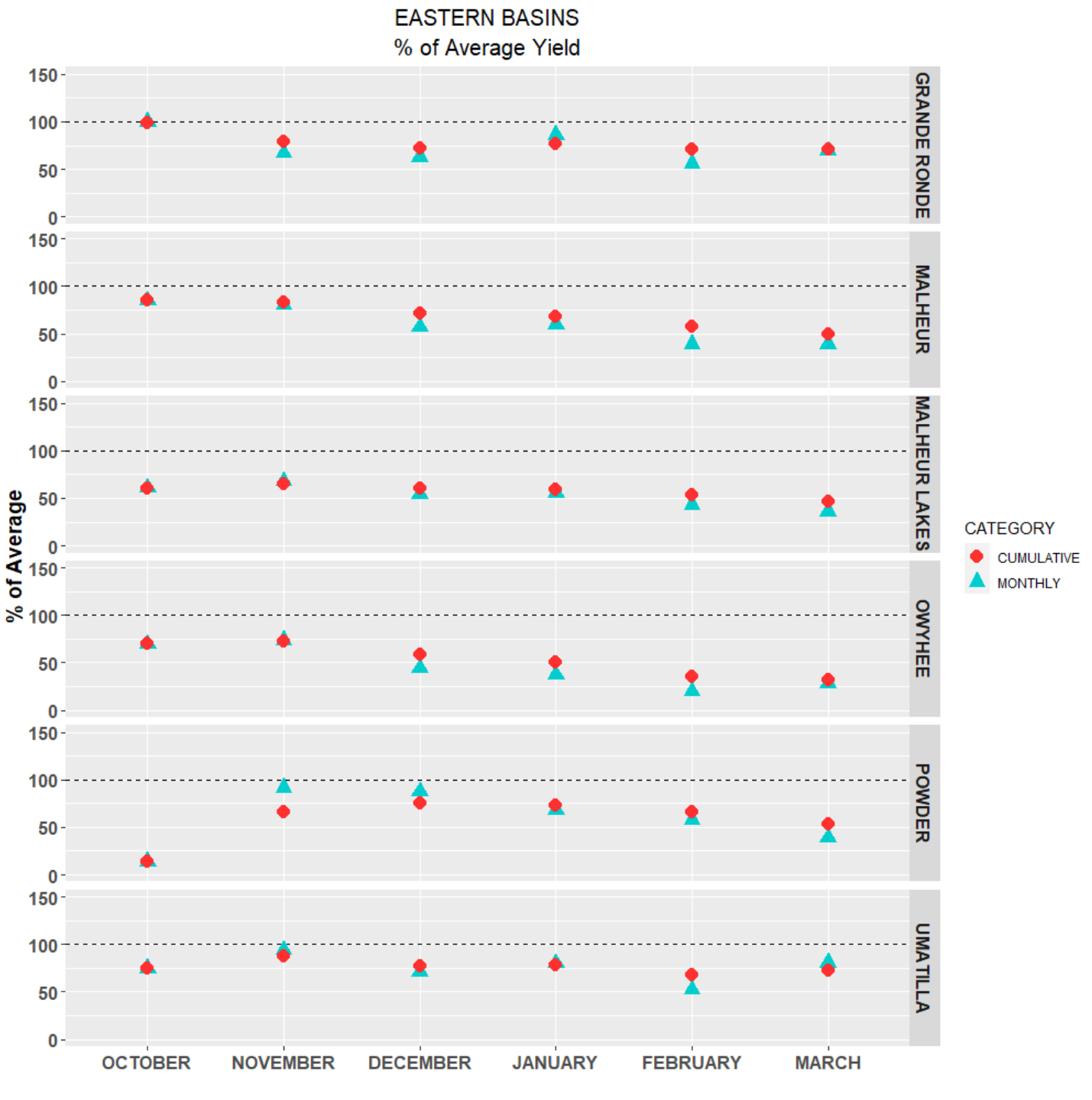
% of Average
Monthly & Water Year thru March

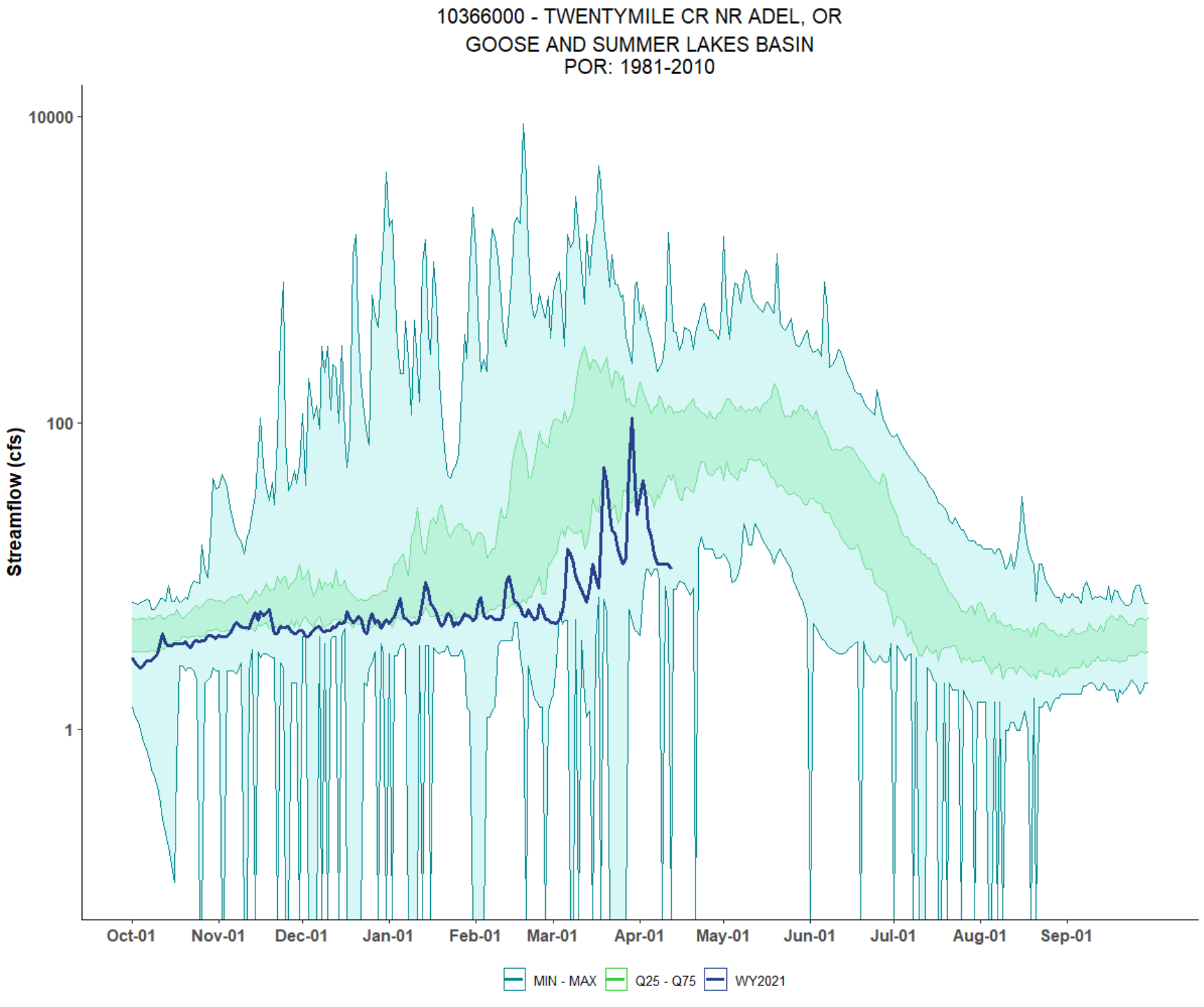


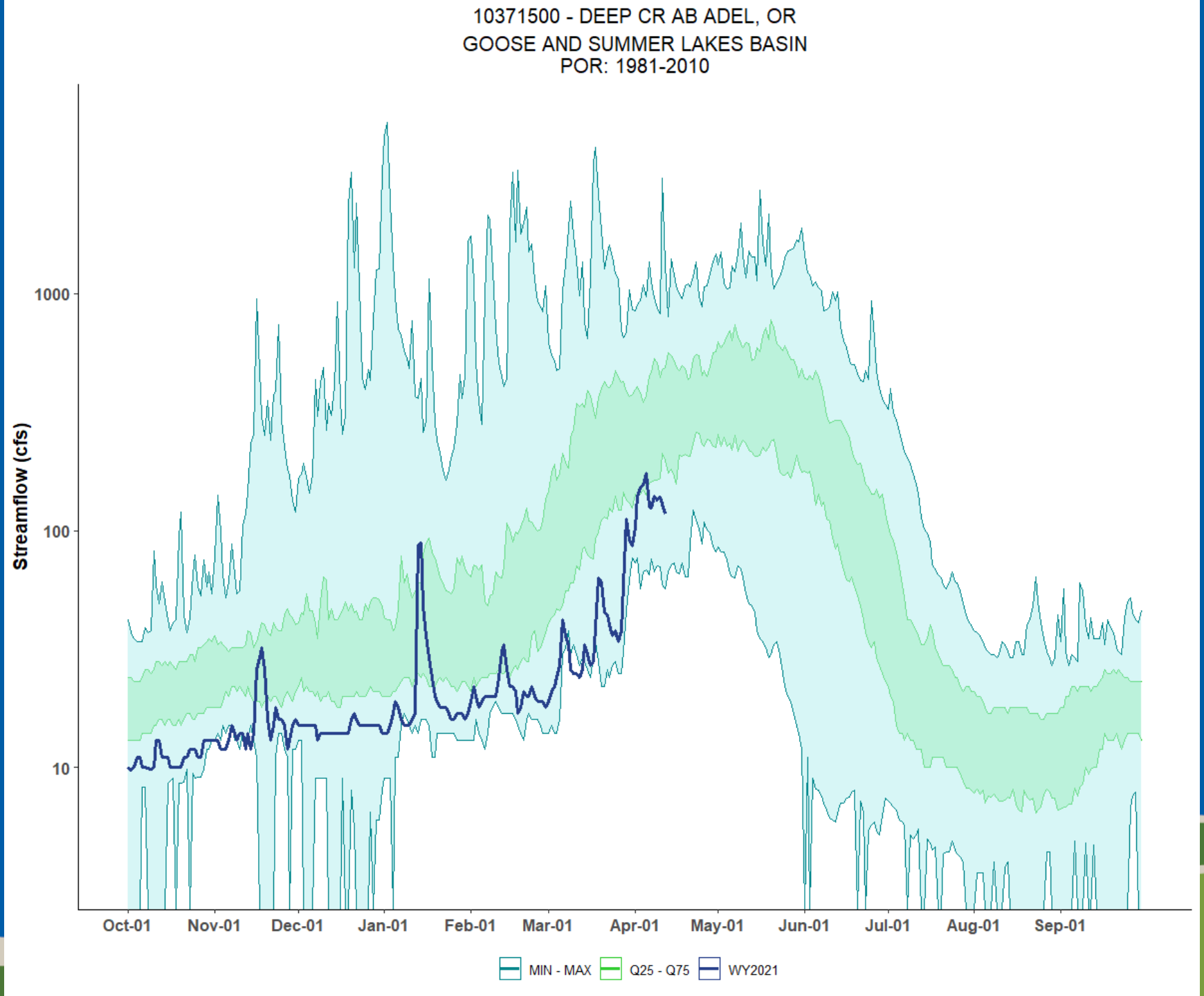


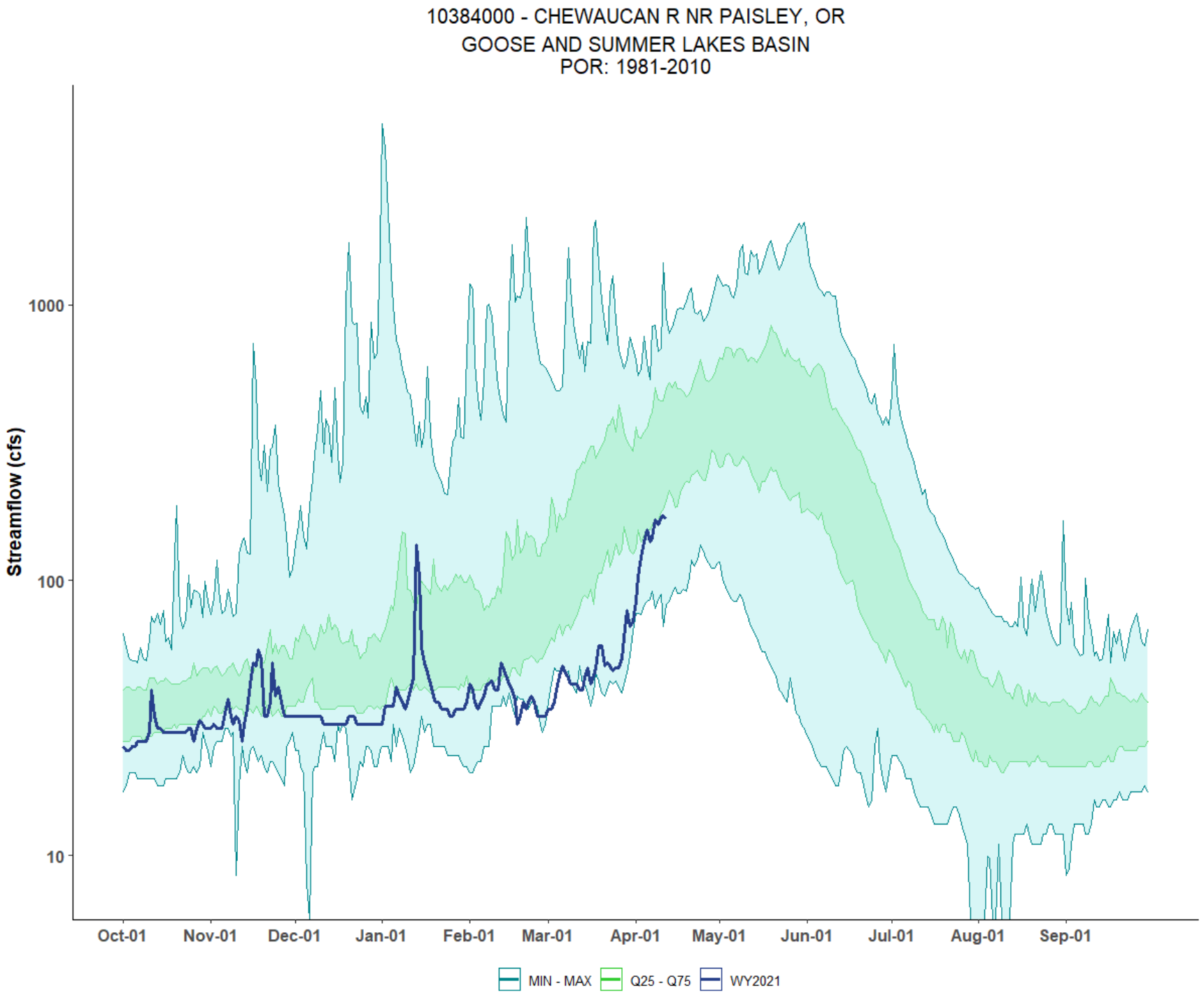

WESTERN BASINS
% of Average Yield
% of Average
150
100
50
0
MID COAST
NORTH COAST
ROGUE
SANDY
SOUTH COAST
UMPQUA
WILLAMETTE
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
CATEGORY
CUMULATIVE
MONTHLY

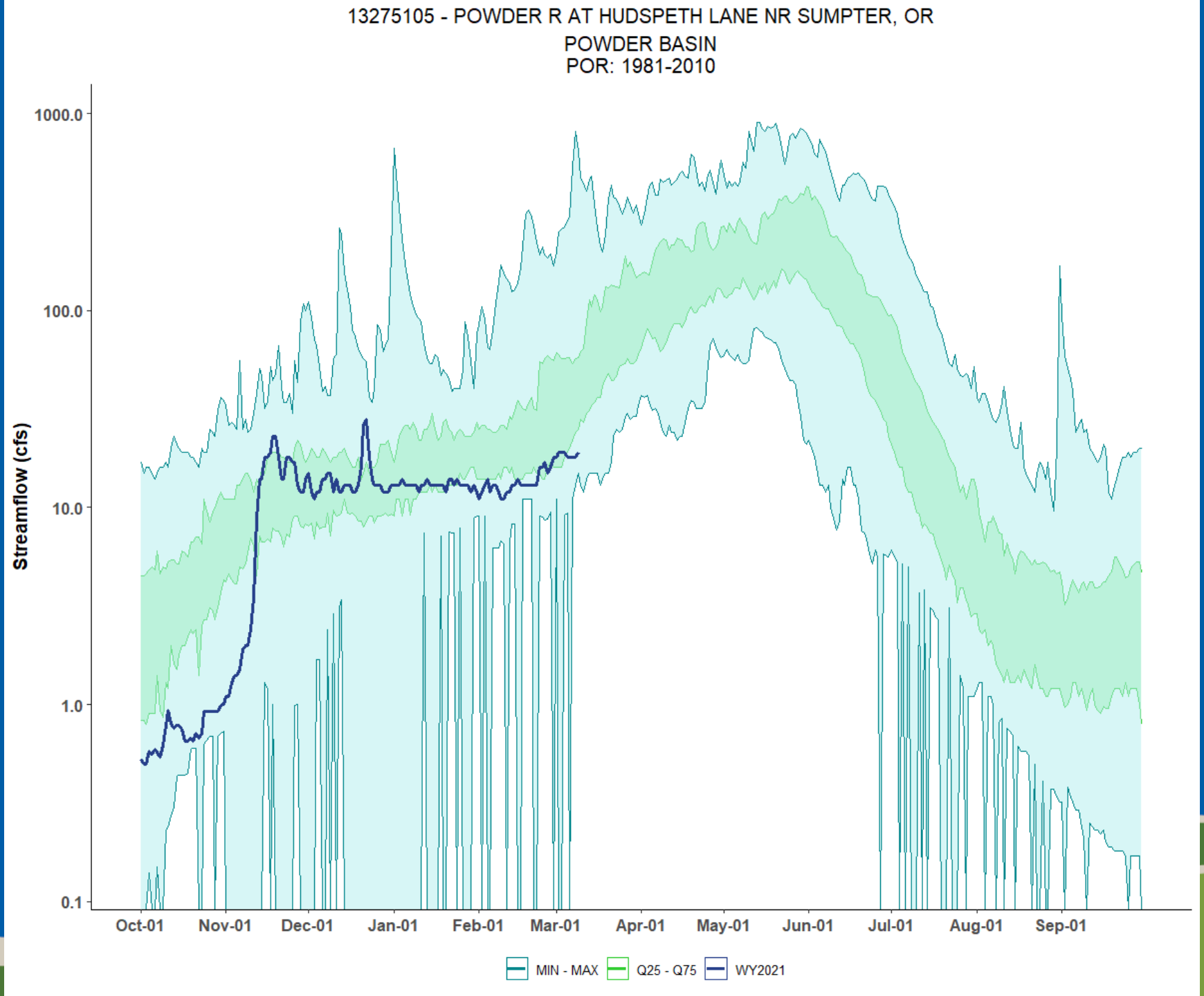

CENTRAL BASINS
% of Average Yield
% of Average
150
100
50
0
DESCHUTES
SE AND SUMMER LA
HOOD
JOHN DAY
KLAMATH
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
CATEGORY
CUMULATIVE
MONTHLY


EASTERN BASINS
% of Average Yield
% of Average
150
100
50
0
GRANDE RONDE
MALHEUR
MALHEUR LAKES
OWYHEE
POWDER
UMATILLA
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
CATEGORY
CUMULATIVE
MONTHLY


10366000 - TWENTYMILE CR NR ADEL, OR
GOOSE AND SUMMER LAKES BASIN
POR: 1981-2010
Streamflow (cfs)
10000
100
1
Oct-01
Nov-01
Dec-01
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
MIN - MAX
Q25 - Q75
WY2021


10371500 - DEEP CR AB ADEL, OR
GOOSE AND SUMMER LAKES BASIN
POR: 1981-2010
Streamflow (cfs)
1000
100
10
Oct-01
Nov-01
Dec-01
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
MIN - MAX
Q25 - Q75
WY2021


10384000 - CHEWAUCAN R NR PAISLEY, OR
GOOSE AND SUMMER LAKES BASIN
POR: 1981-2010
Streamflow (cfs)
1000
100
10
Oct-01
Nov-01
Dec-01
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
MIN - MAX
Q25 - Q75
WY2021


13275105 - POWDER R AT HUDSPETH LANE NR SUMPTER, OR
POWDER BASIN
POR: 1981-2010
Streamflow (cfs)
1000.0
100.0
10.0
1.0
0.1
Oct-01
Nov-01
Dec-01
Jan-01
Feb-01
Mar-01
Apr-01
May-01
Jun-01
Jul-01
Aug-01
Sep-01
MIN - MAX
Q25 - Q75
WY2021

OREGON
WATER RESOURCES DEPARTMENT

QUESTIONS?

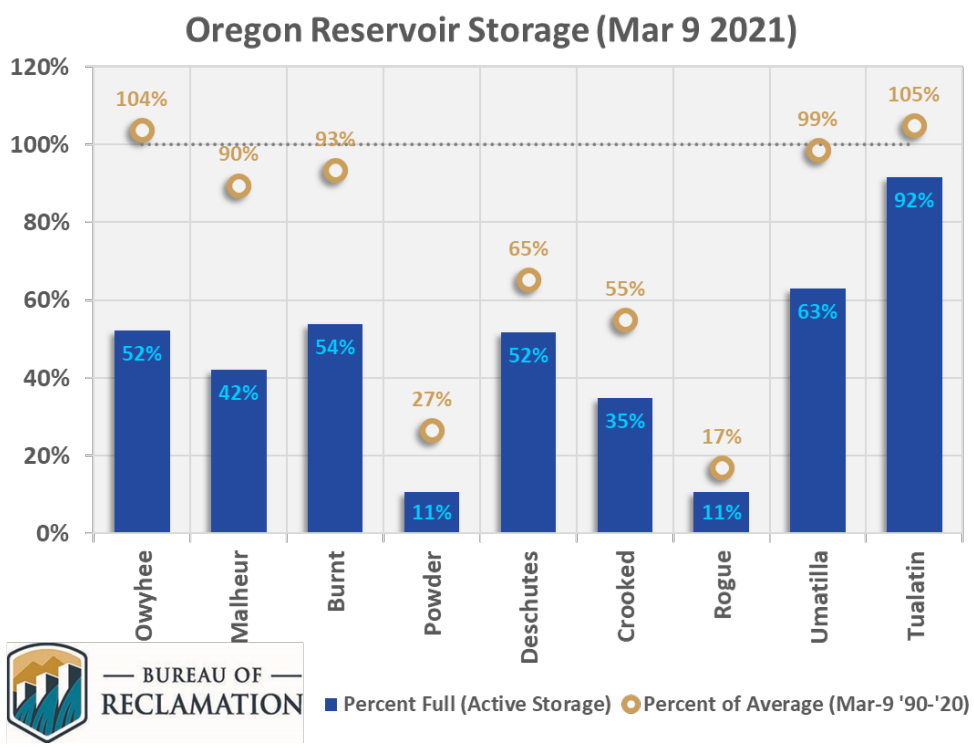
BUREAU OF RECLAMATION

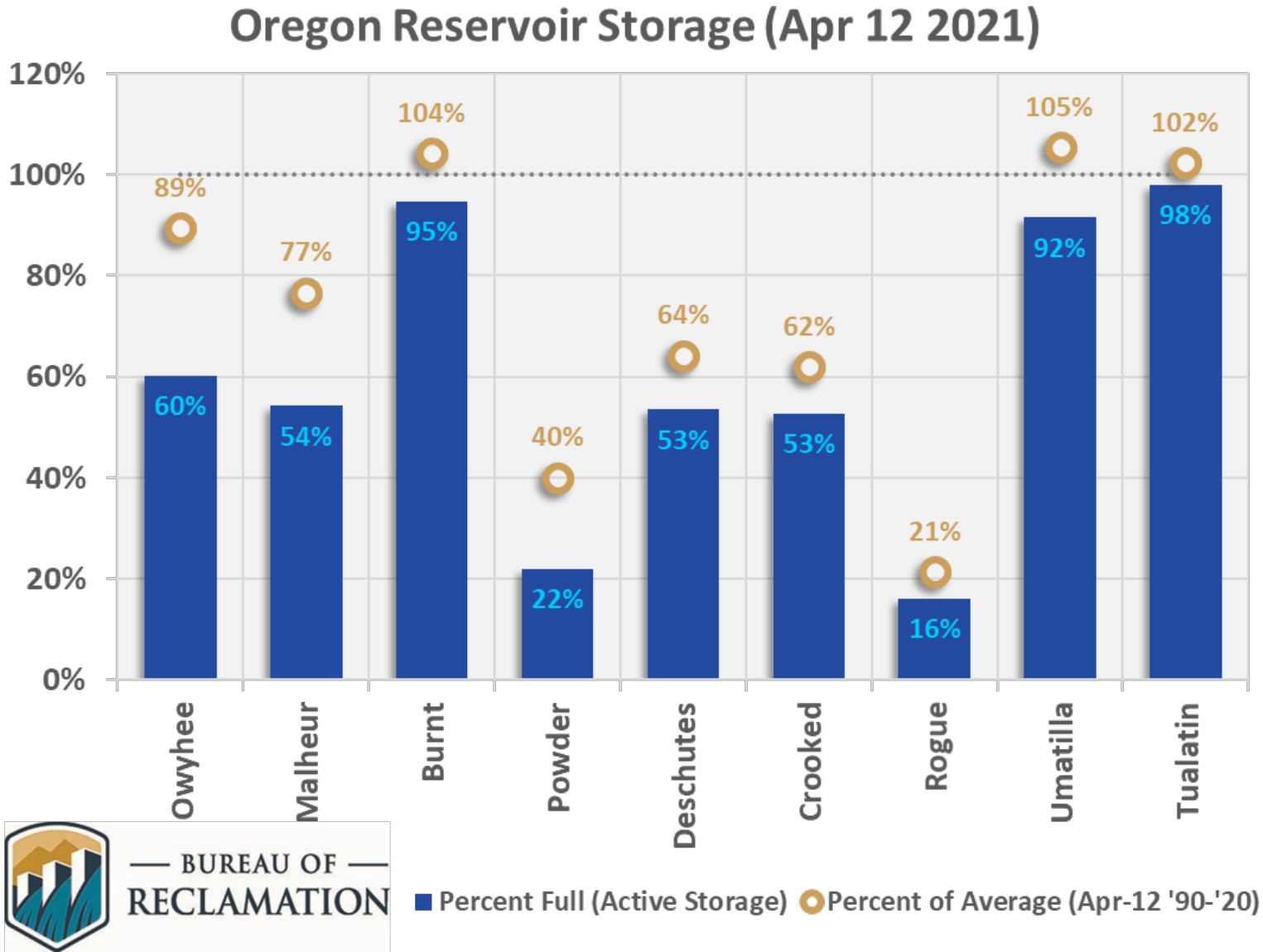
Reclamation Storage Update

Oregon Water Supply Availability Committee Meeting

April 14, 2021

Reservoir Storage Conditions



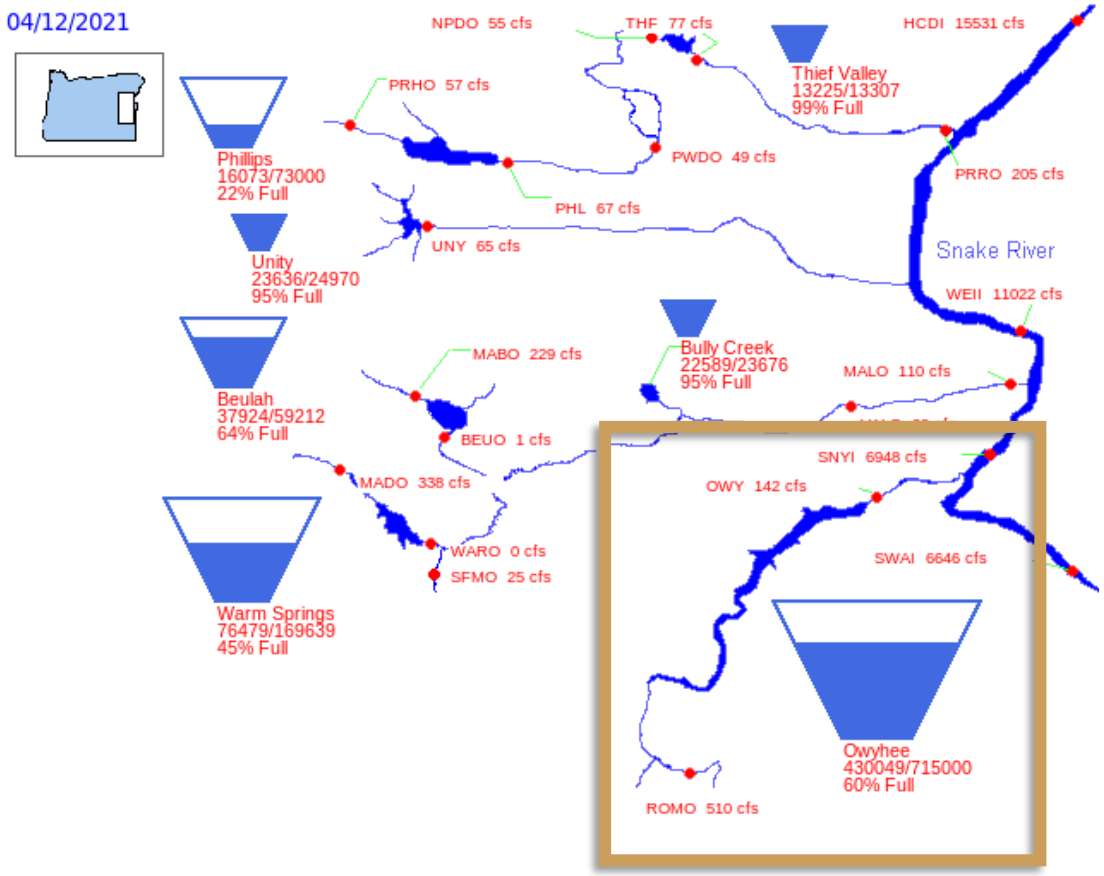


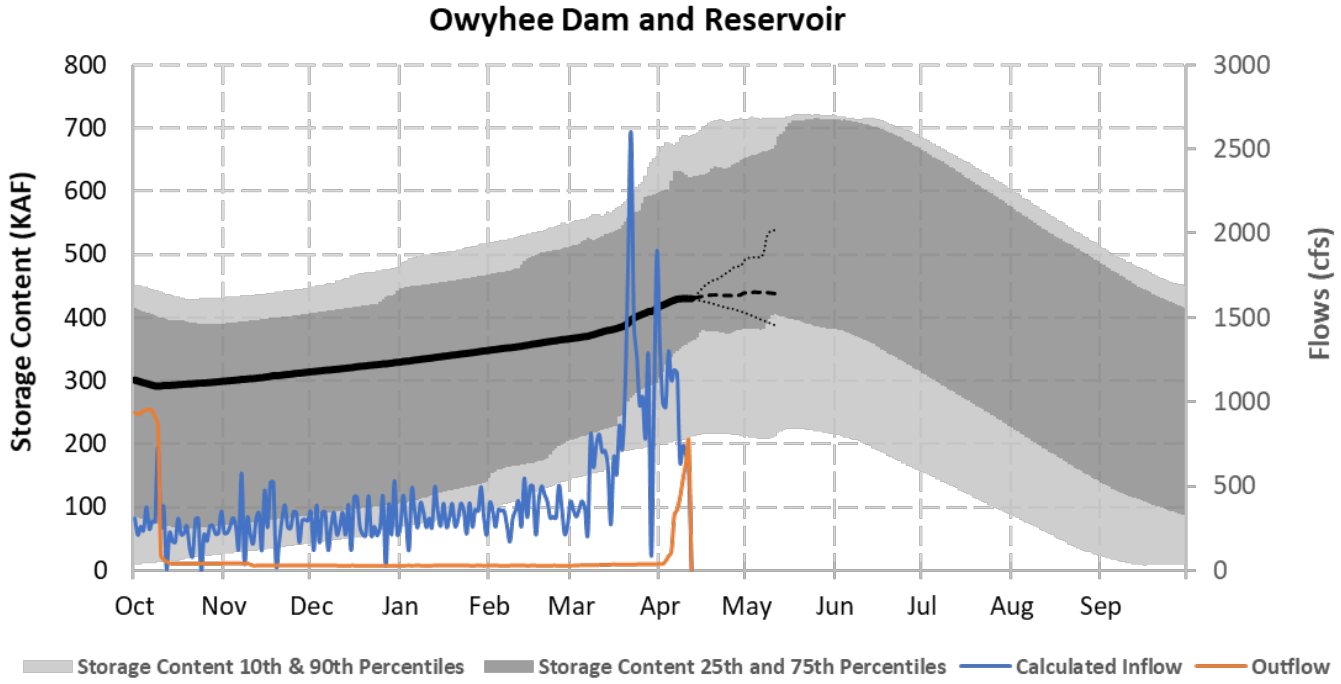
Basin Operations Summary

- Operations Activities:
  - Refill: Powder, Rogue, Umatilla, Tualatin, Burnt
  - Irrigation Start-Up: Owyhee, Malheur, Deschutes, Crooked

- Water Supply Challenges
  - Extremely dry March; if conditions persist, carry-over for next year could be a problem
  - Owyhee: District is operating with 25% reductions in allotment
  - Rogue: District is exploring a late start and early end to the irrigation season
  - Crooked: Exploring potential minimum flow targets to benefit carry-over

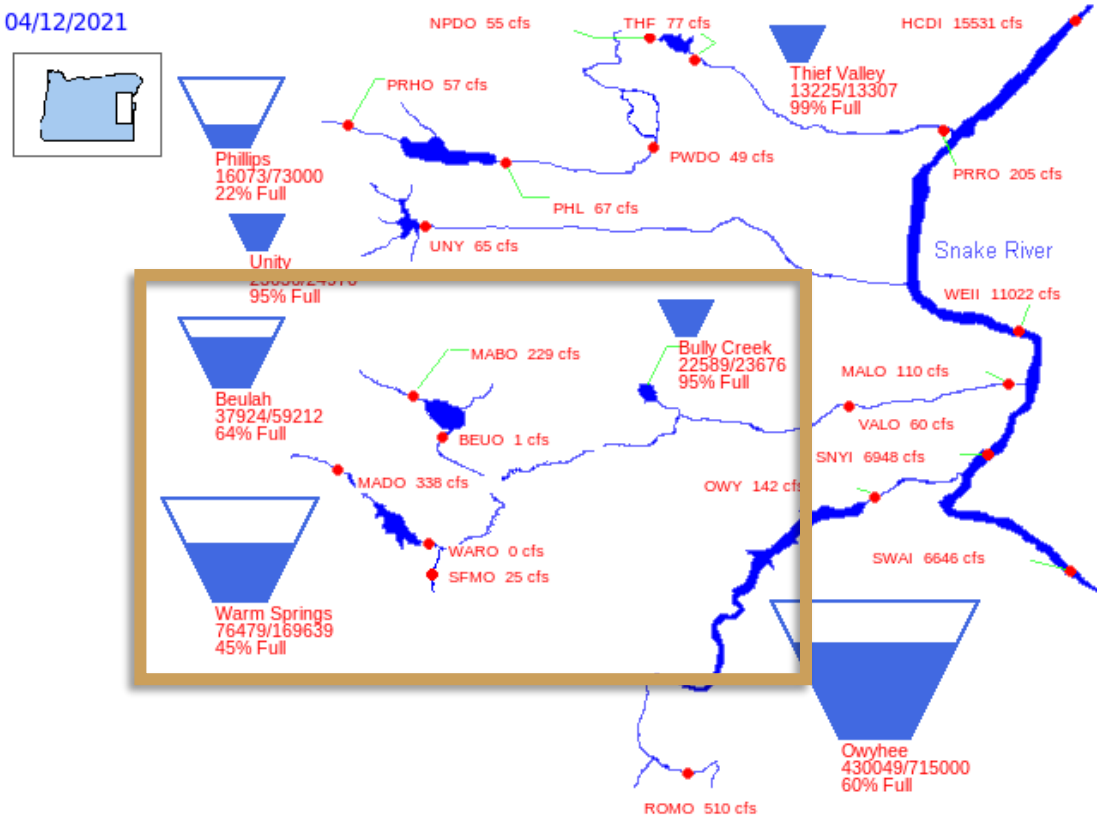
Owyhee River Basin

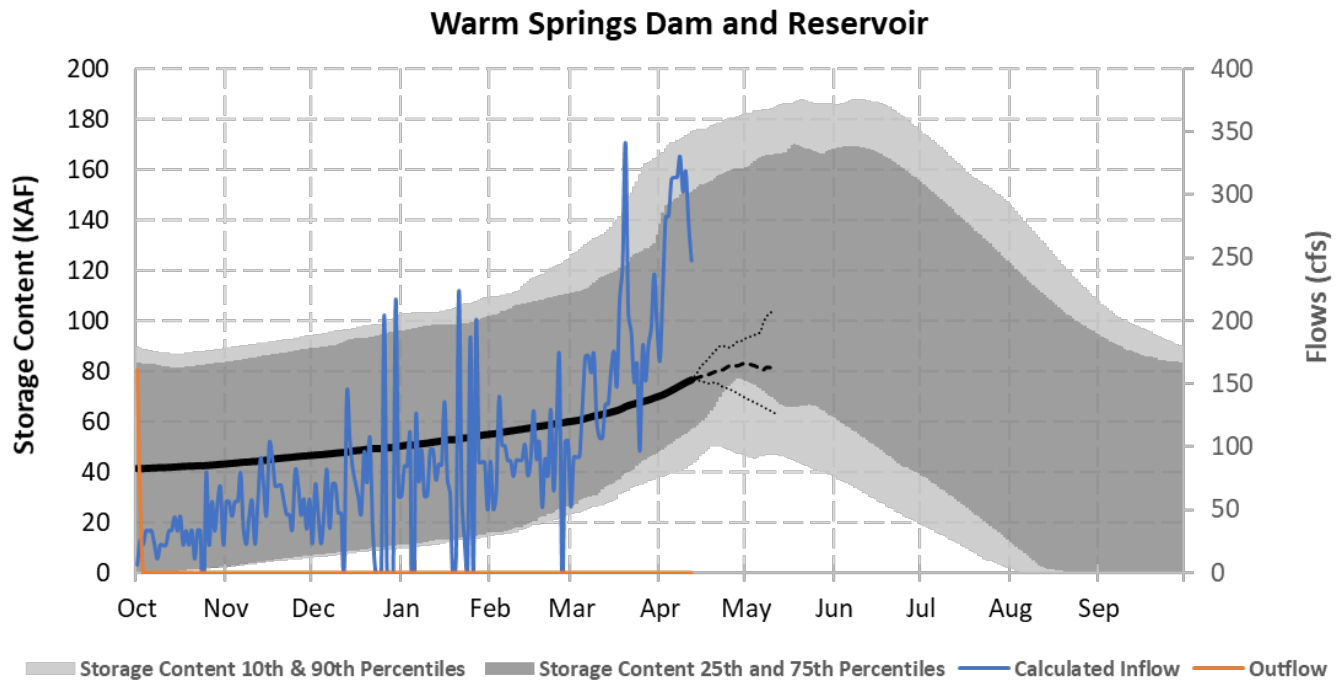


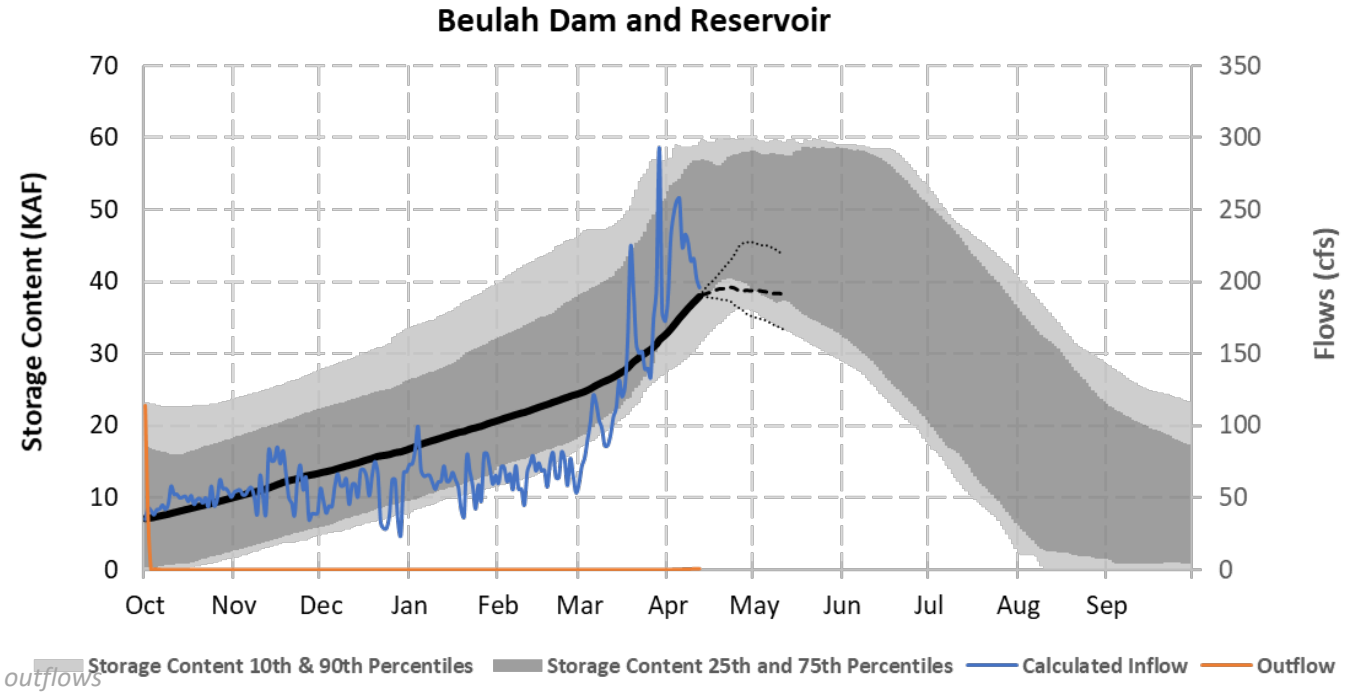


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Malheur River Basin

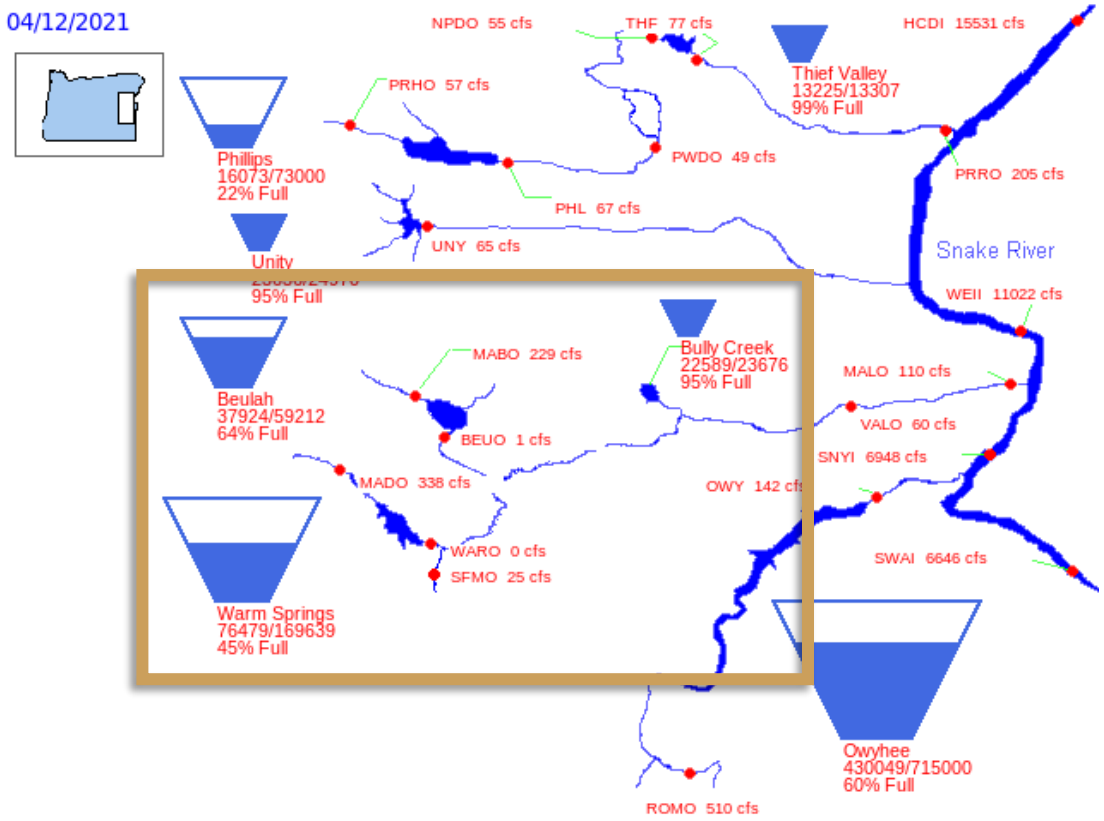


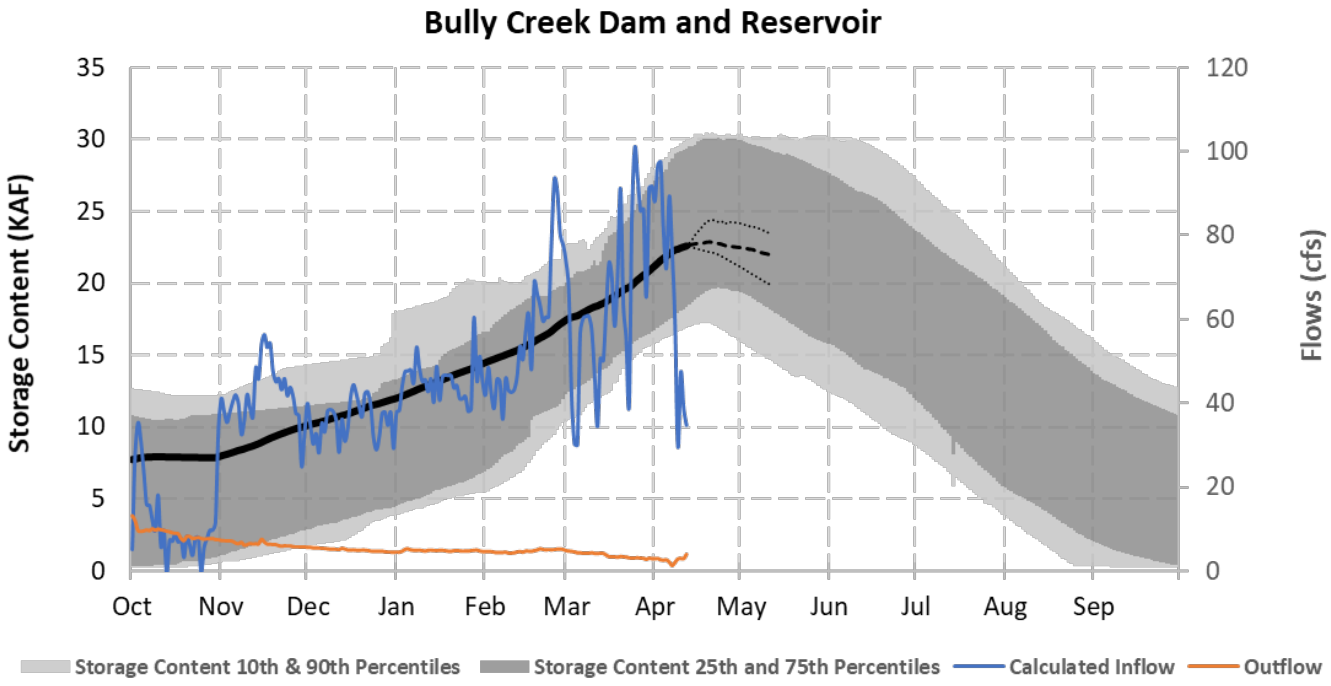




Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

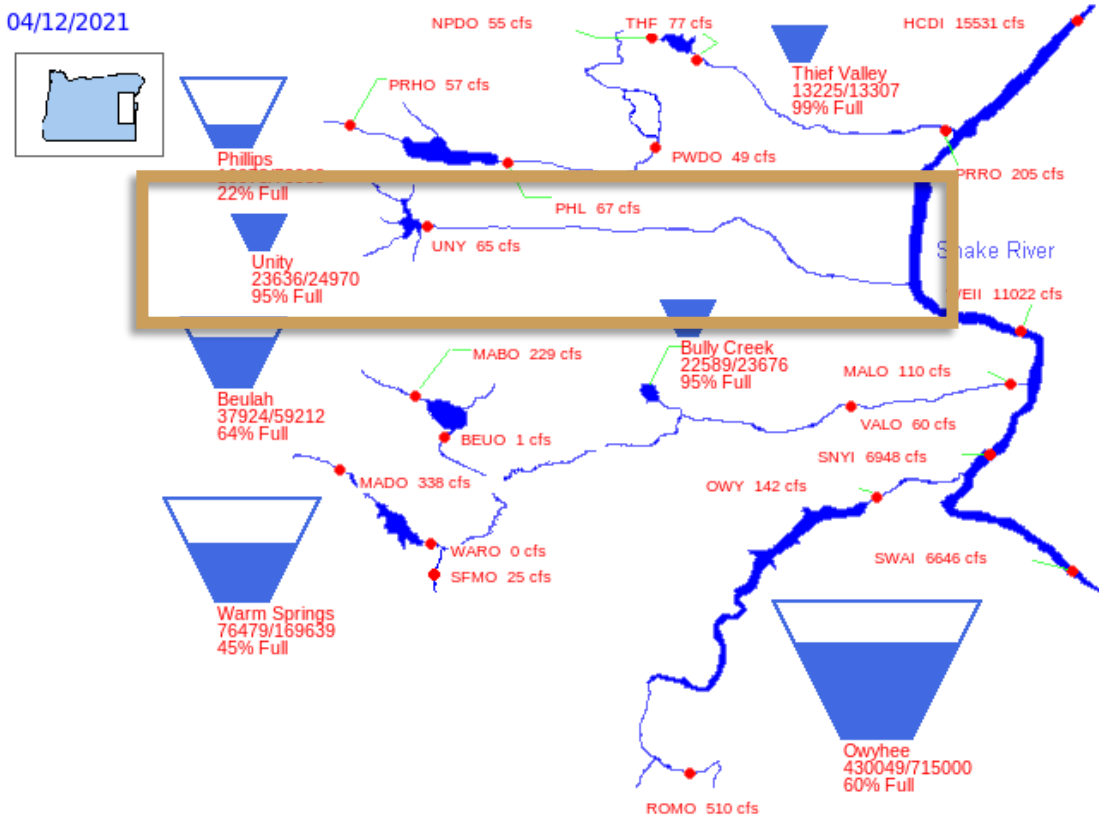
Malheur River Basin

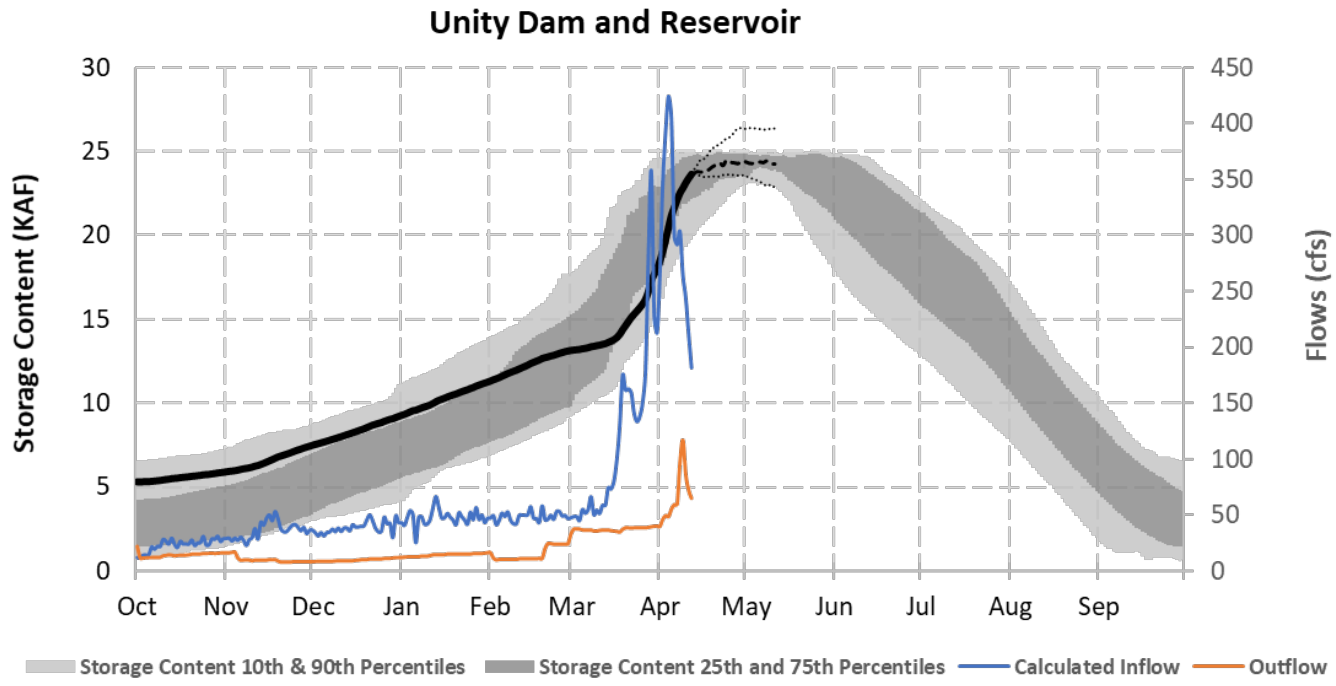




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

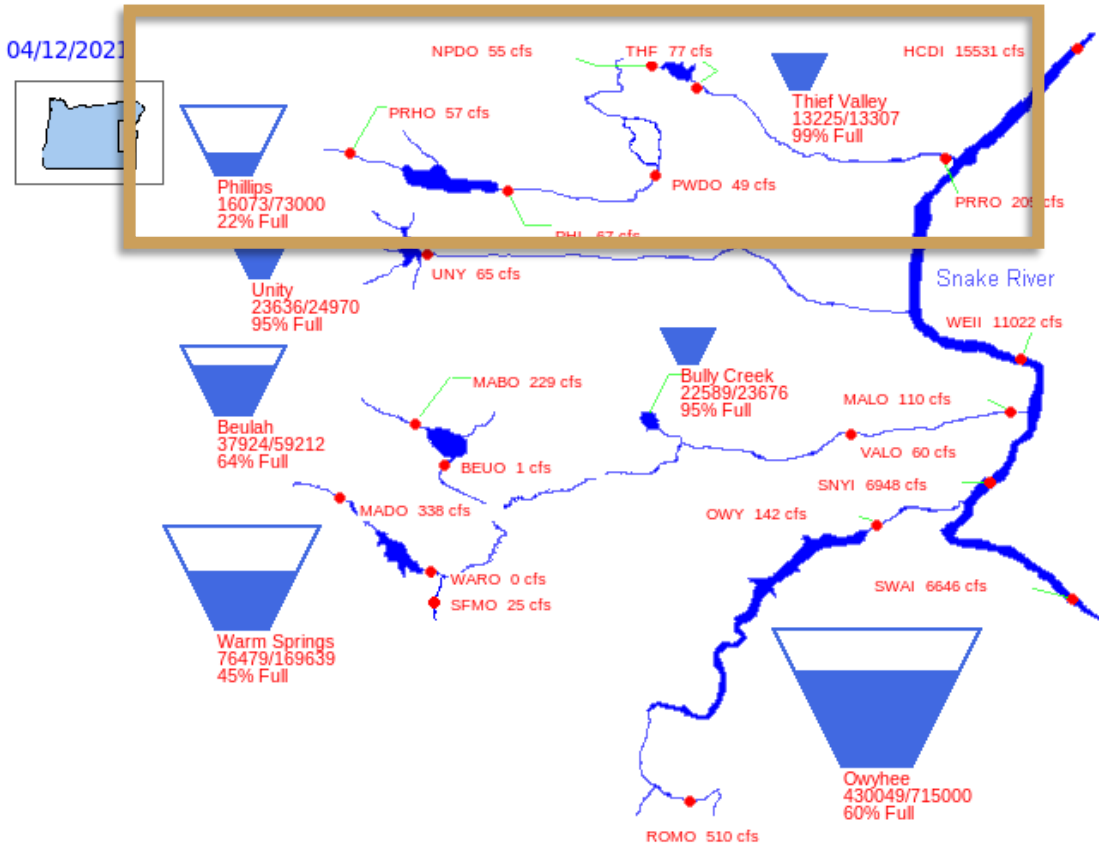
Burnt River Basin

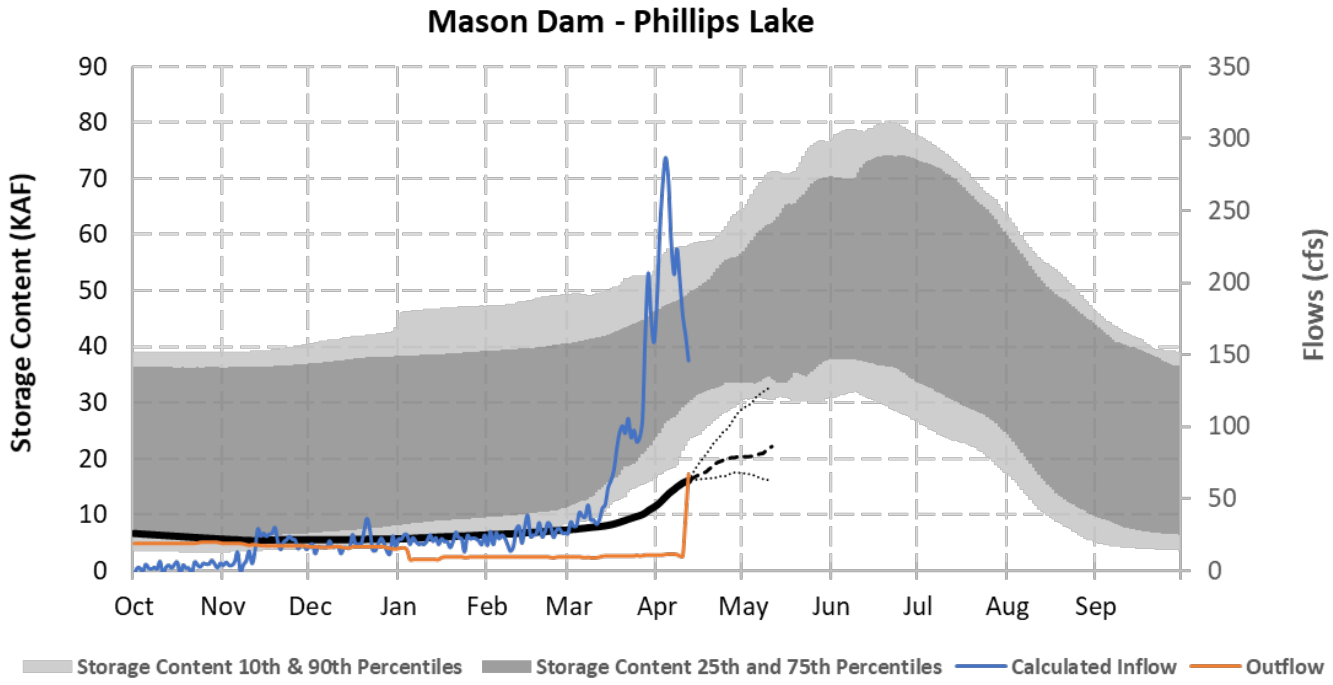




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

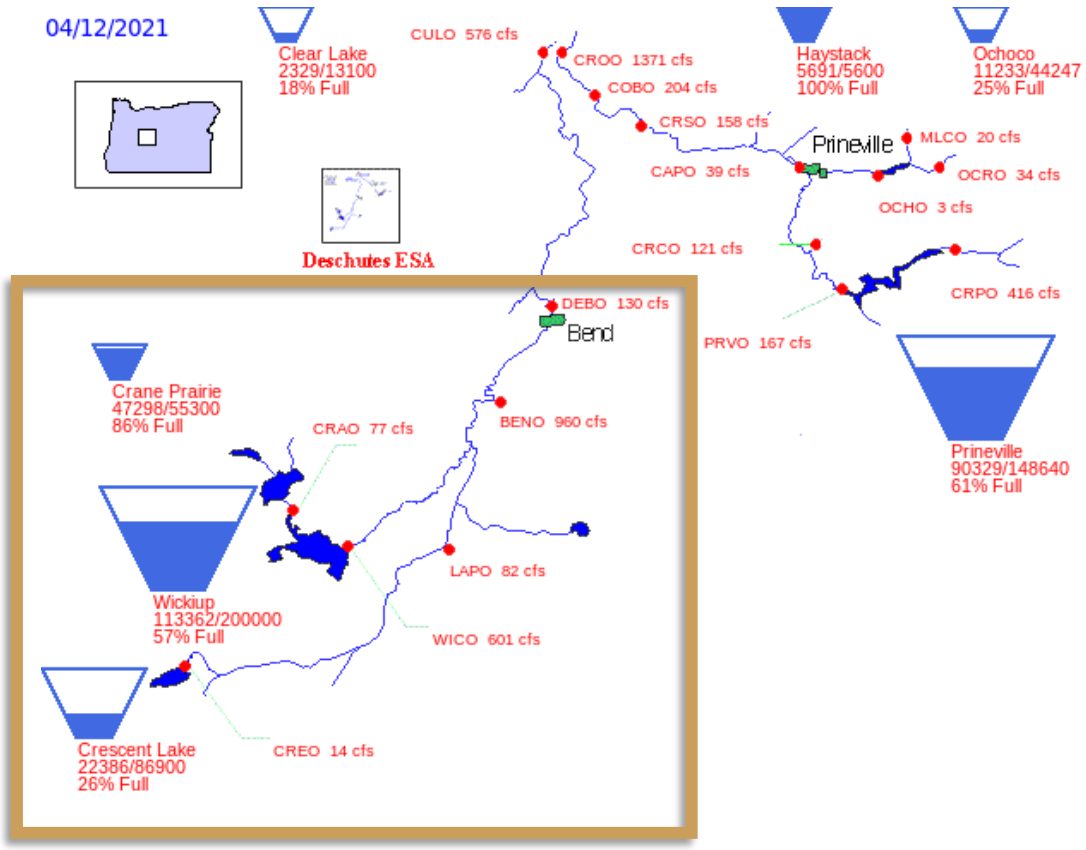
Powder River Basin

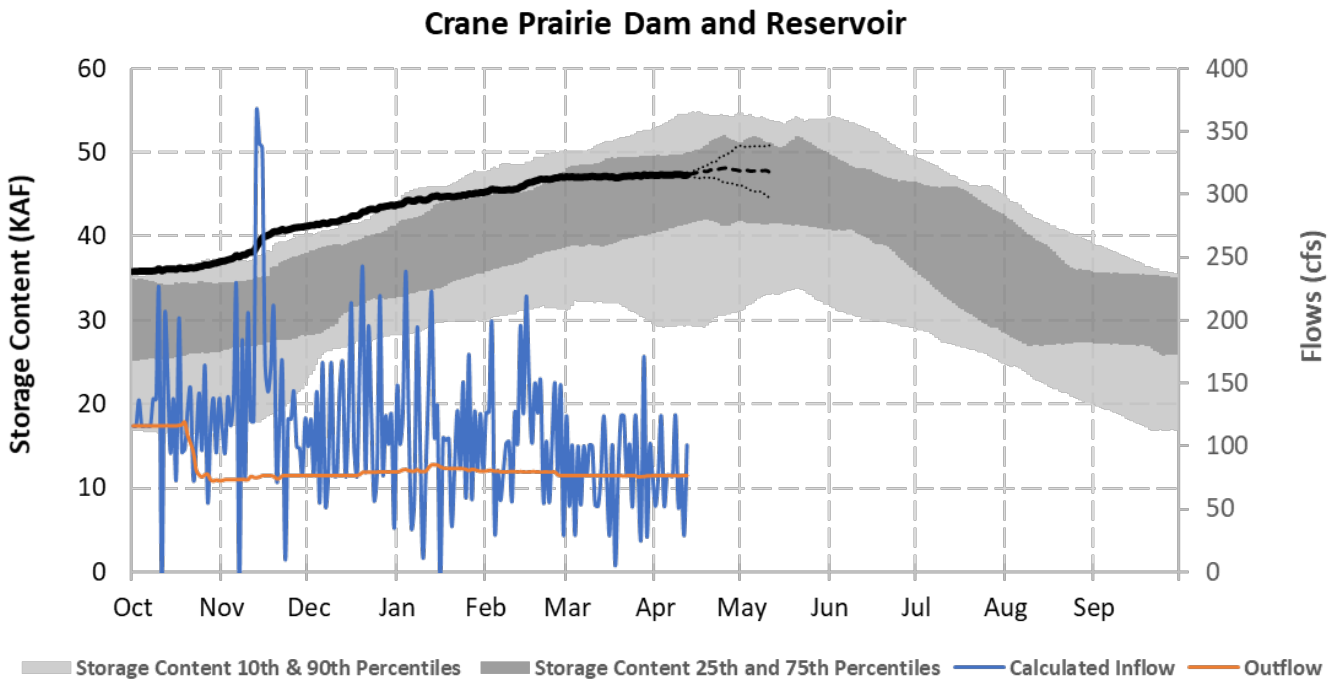


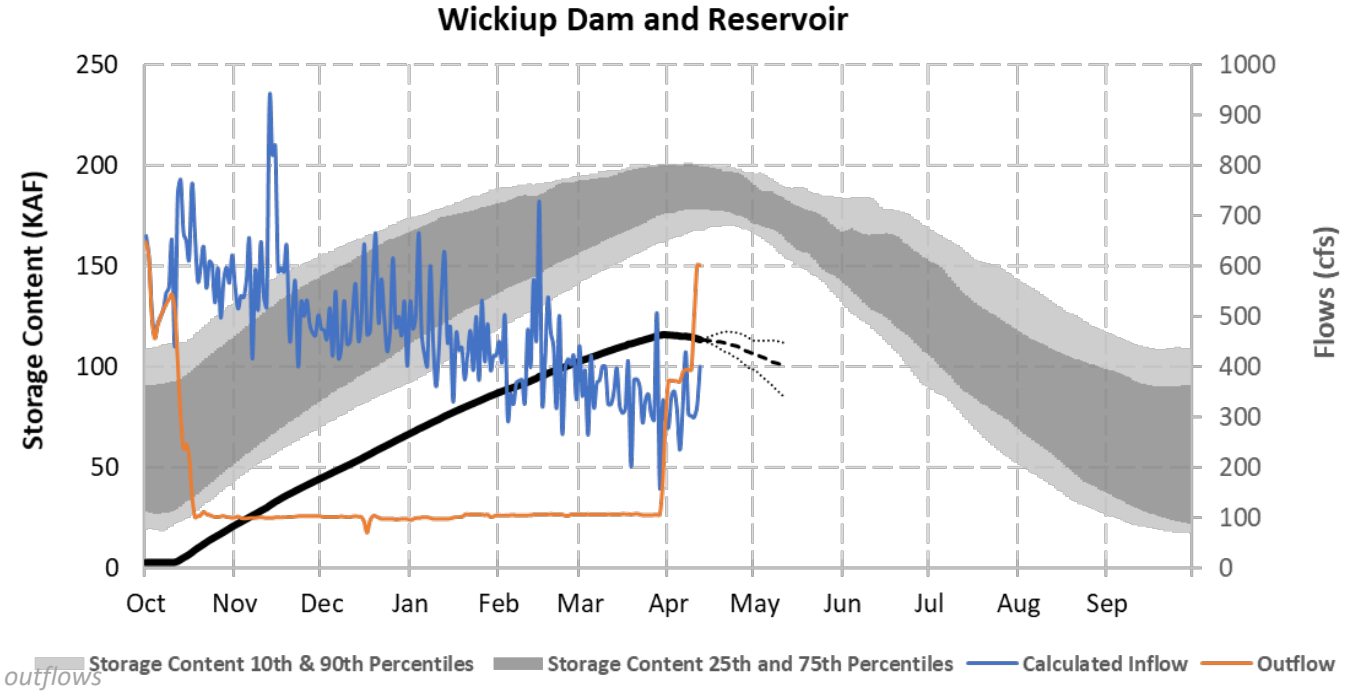


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Deschutes River Basin

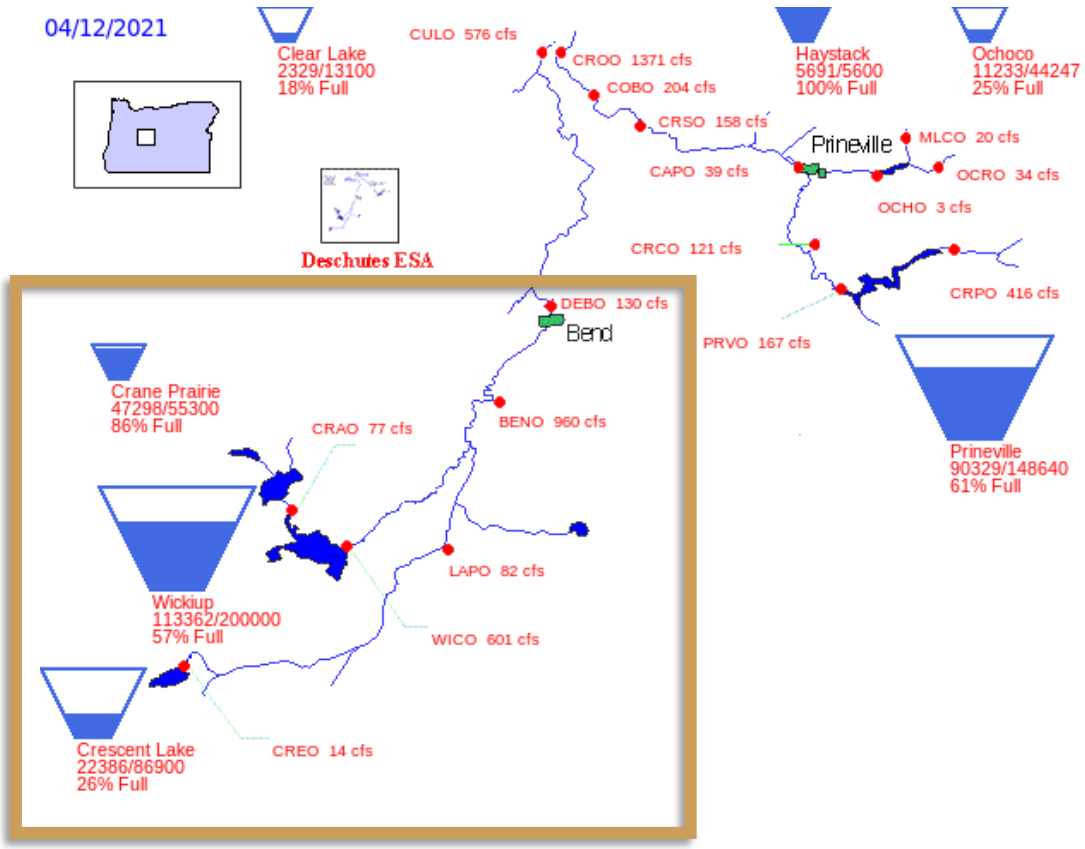


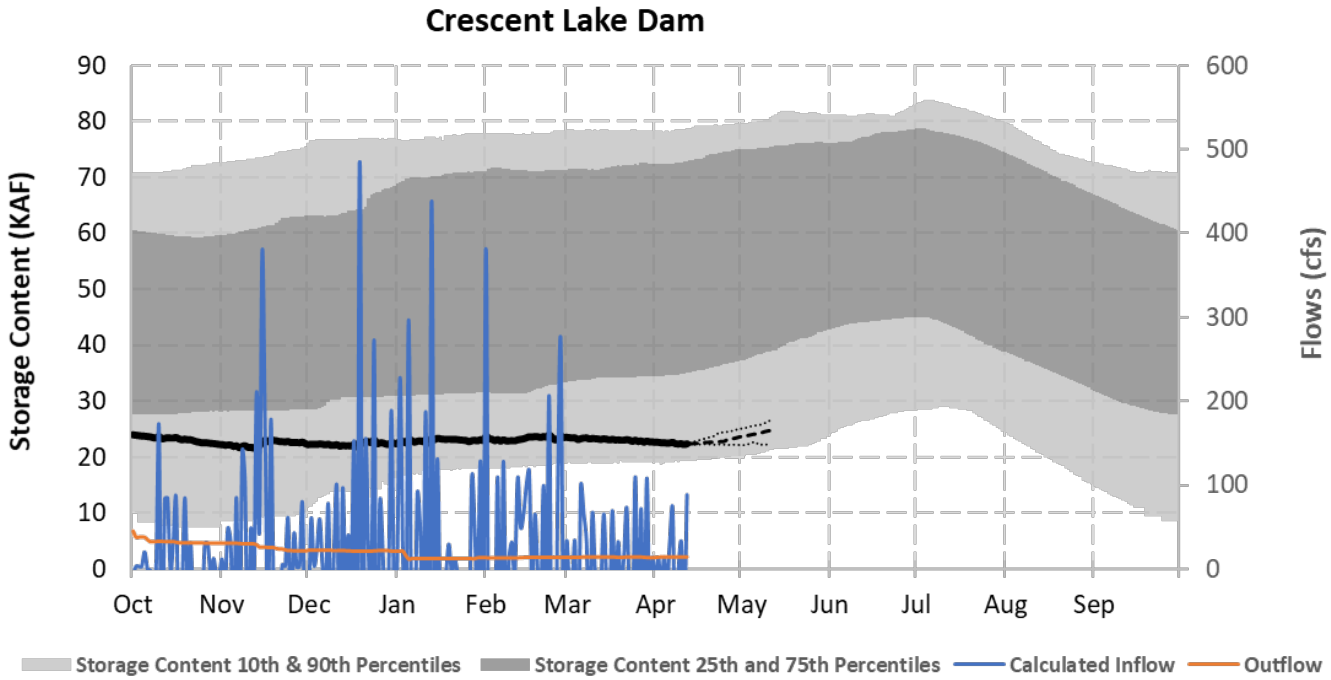




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

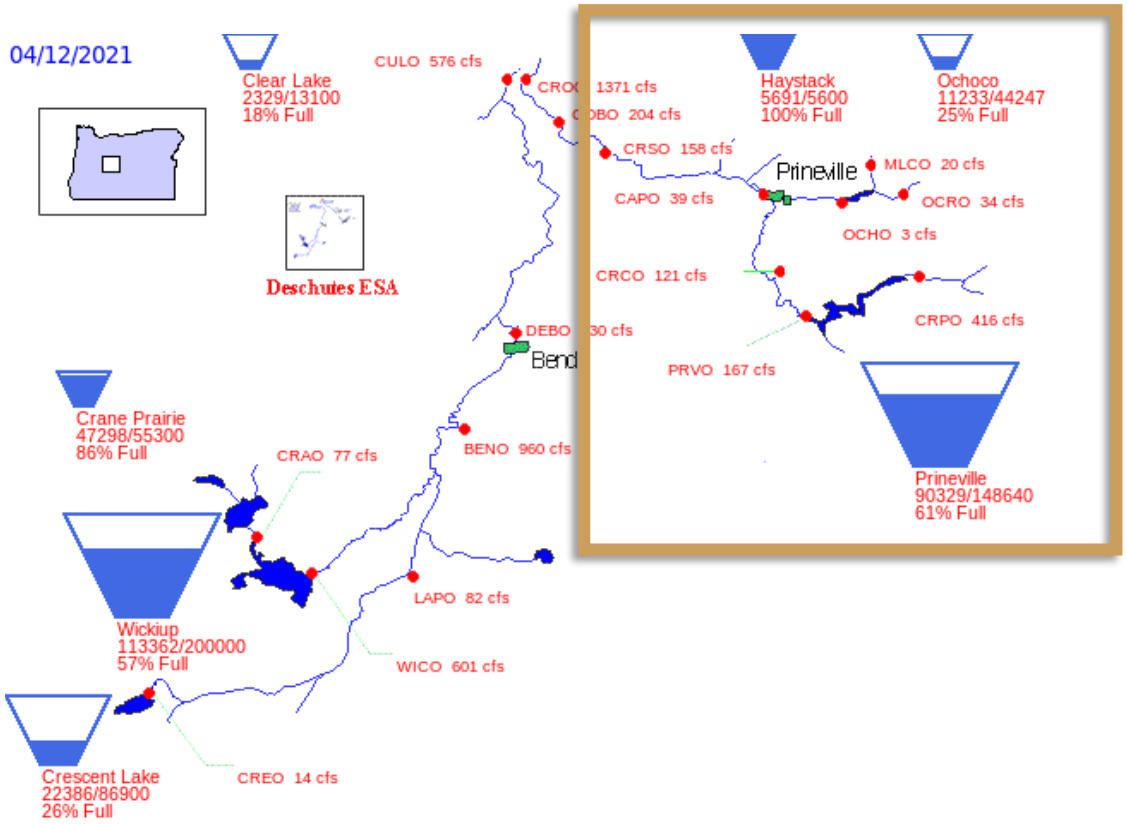
Deschutes River Basin

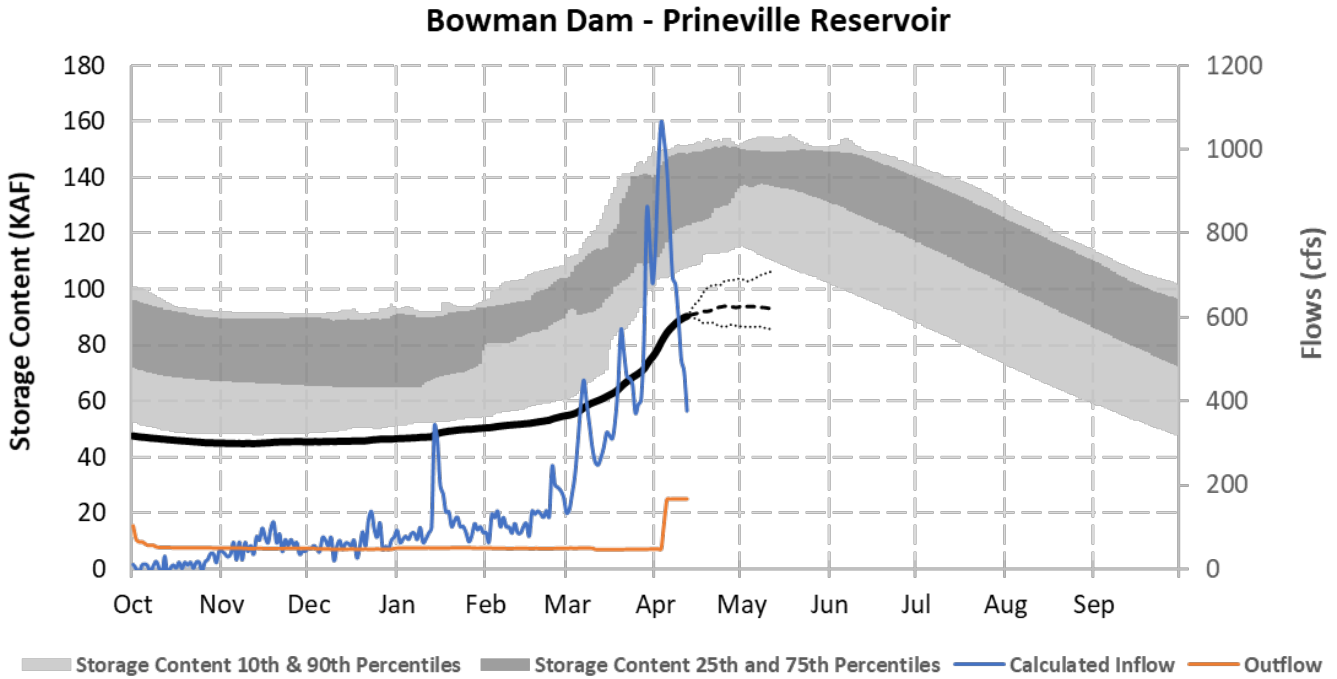


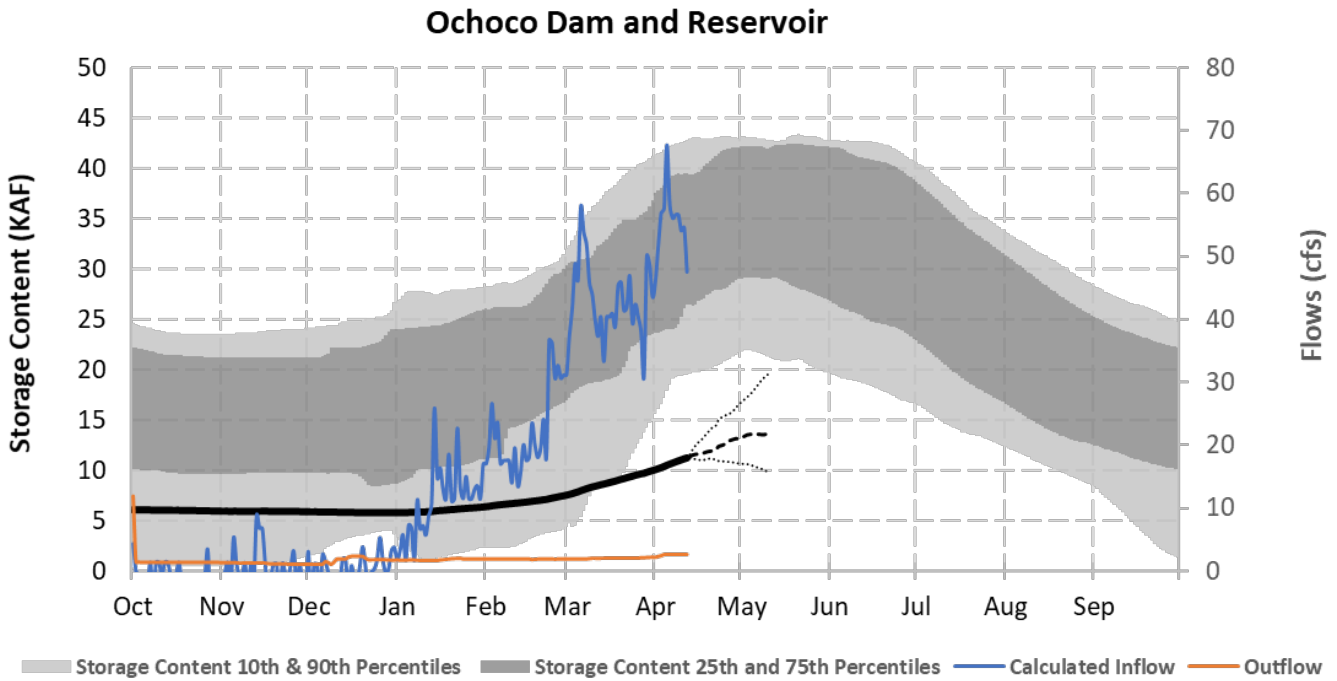


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Crooked River Basin

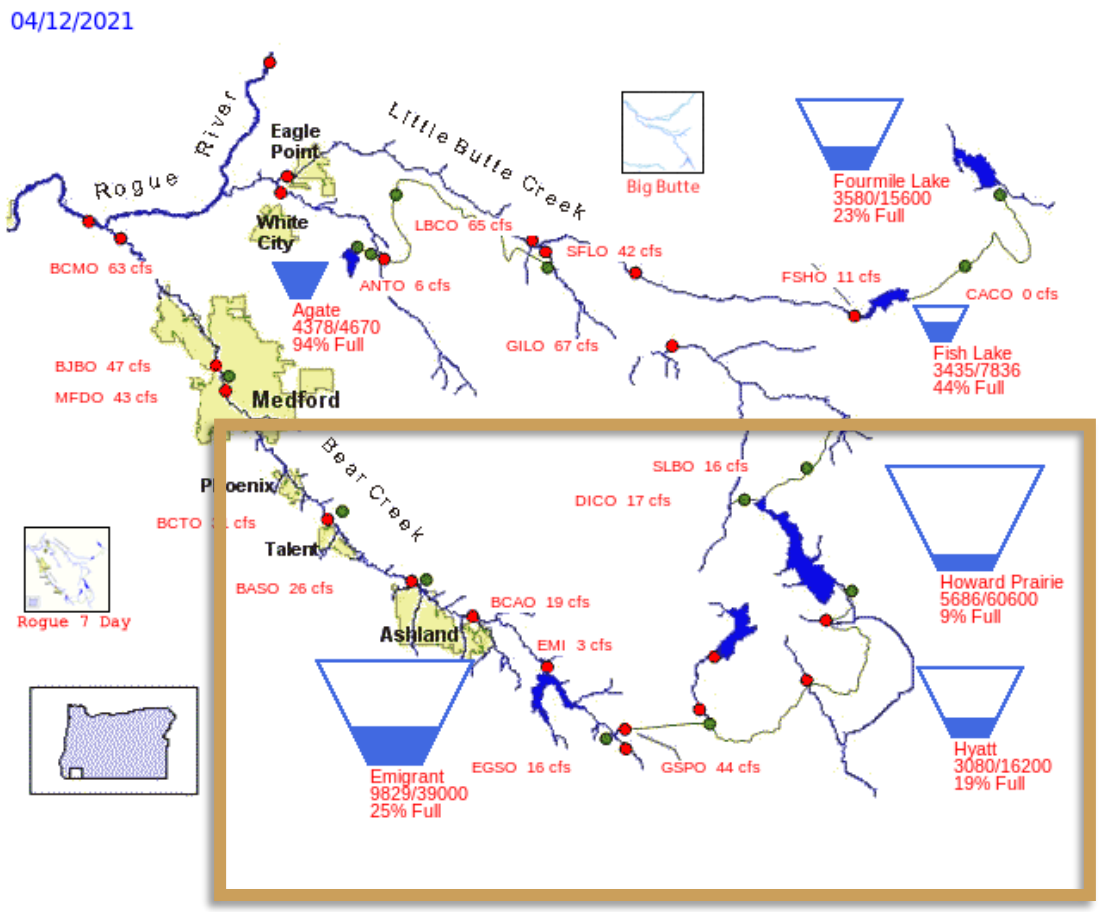


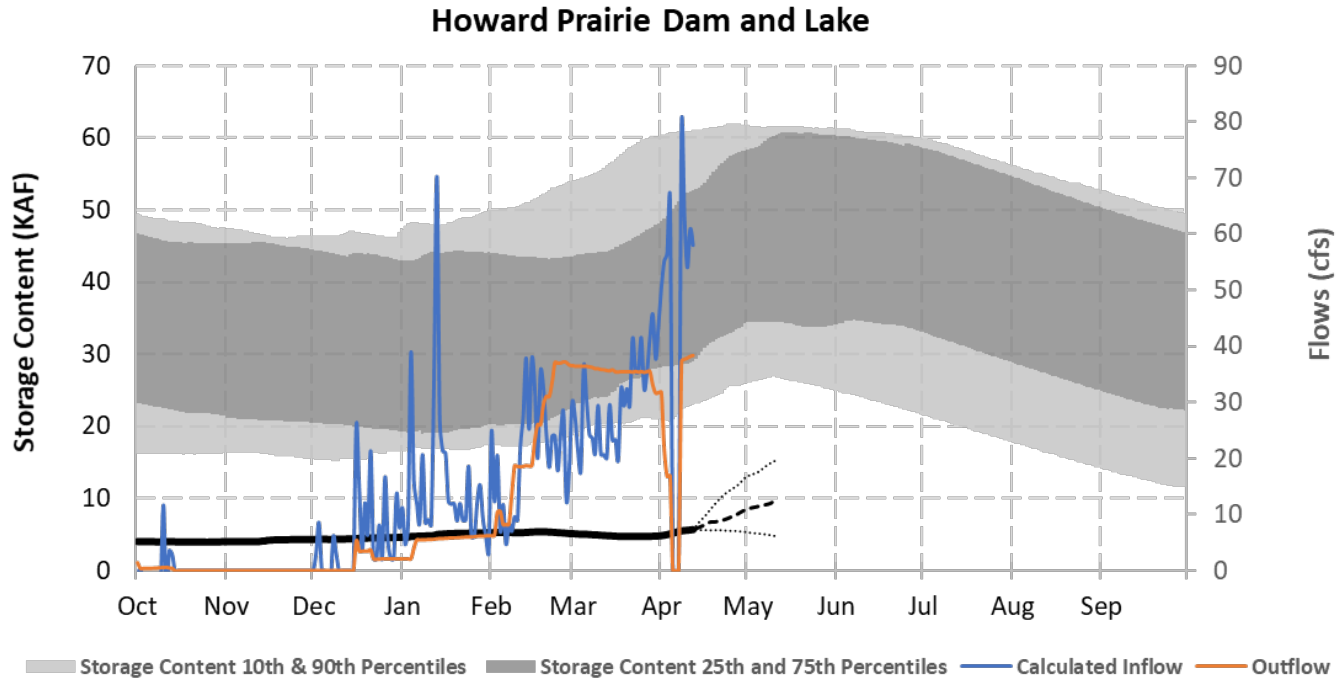


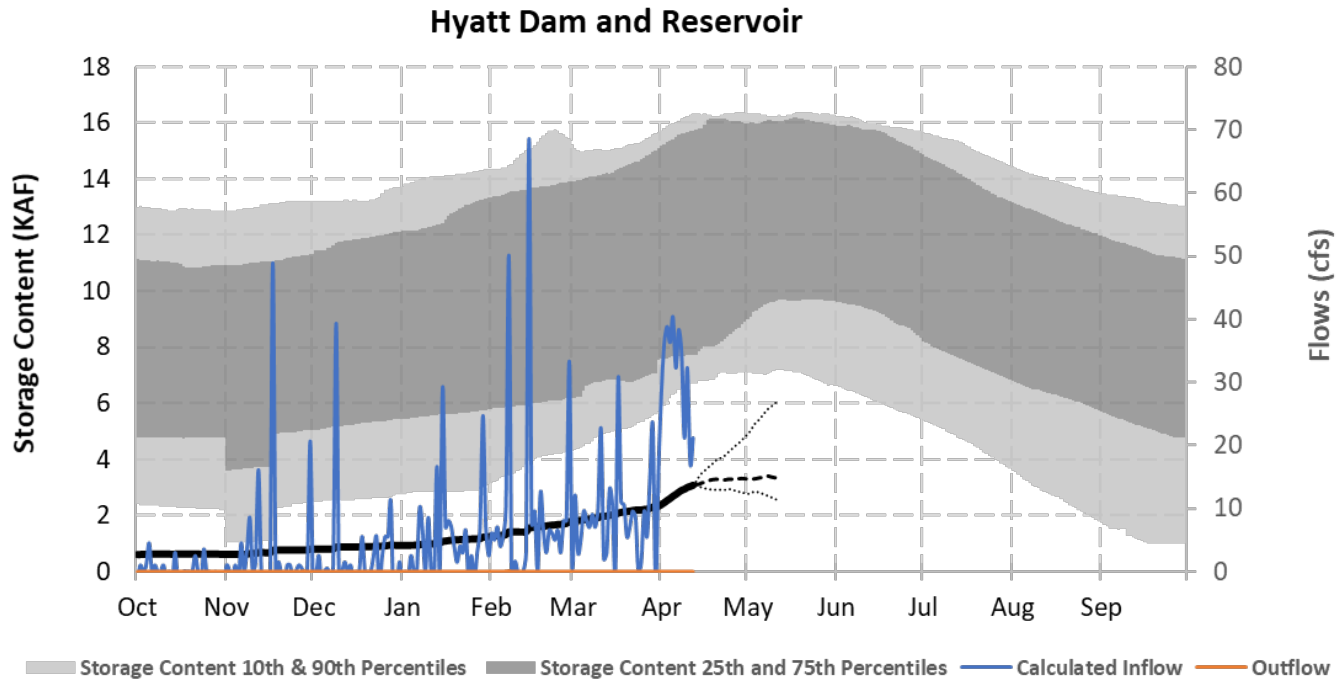


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Rogue River Basin



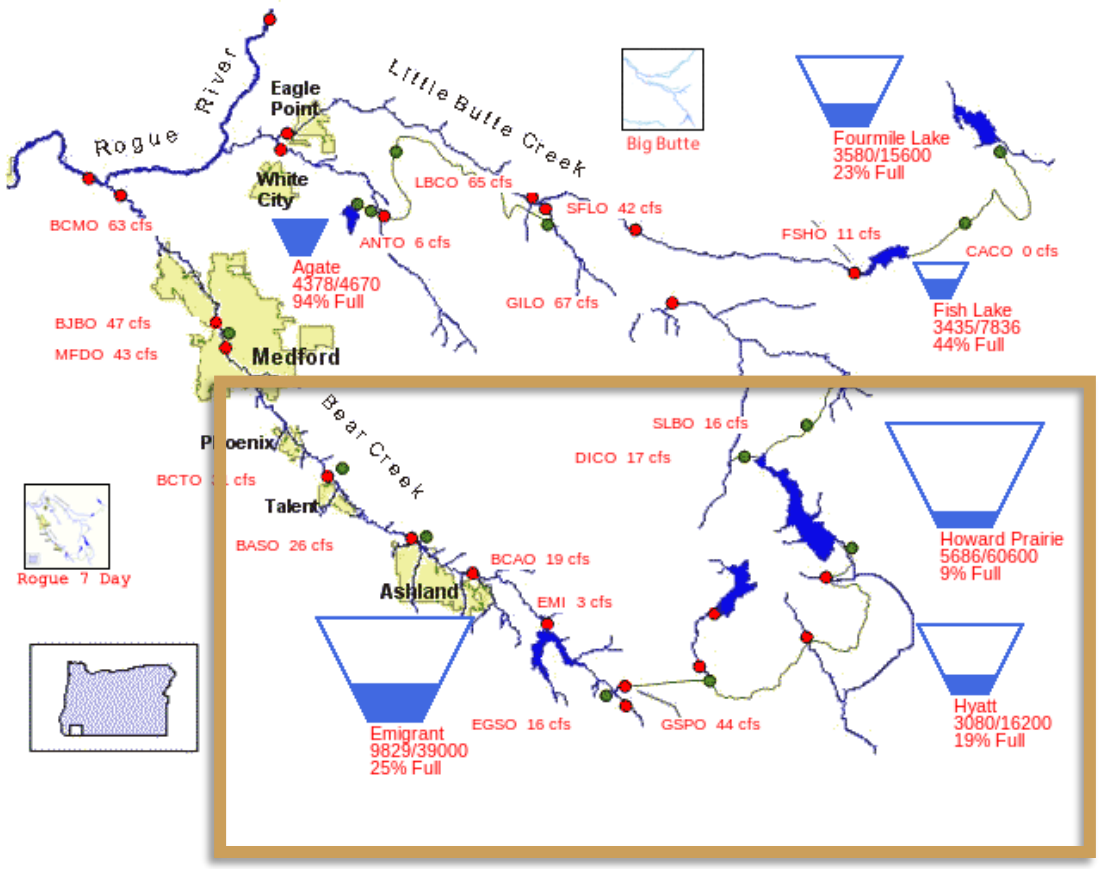


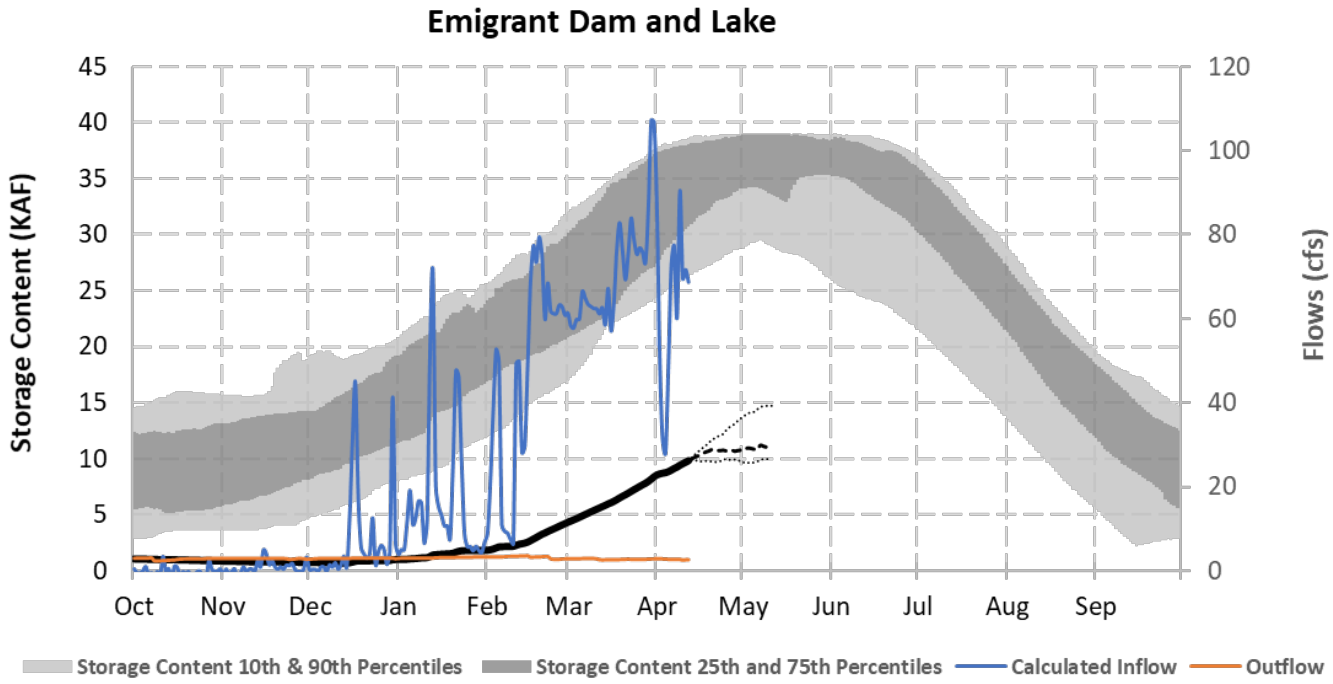


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Rogue River Basin

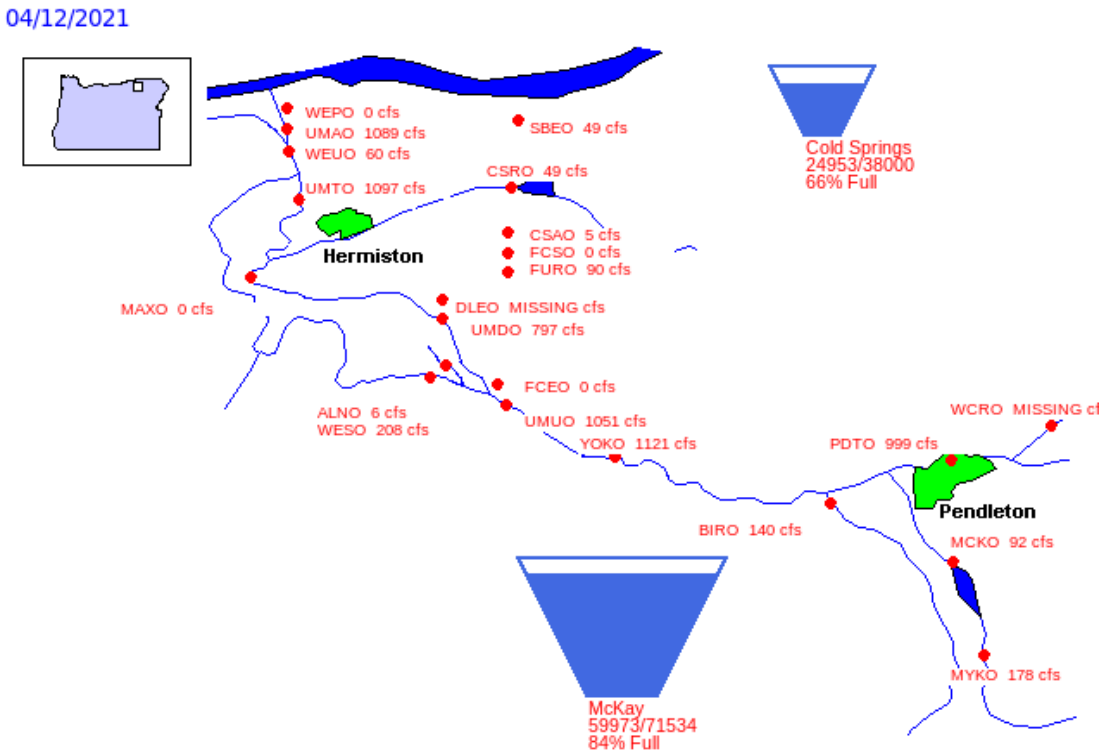
04/12/2021

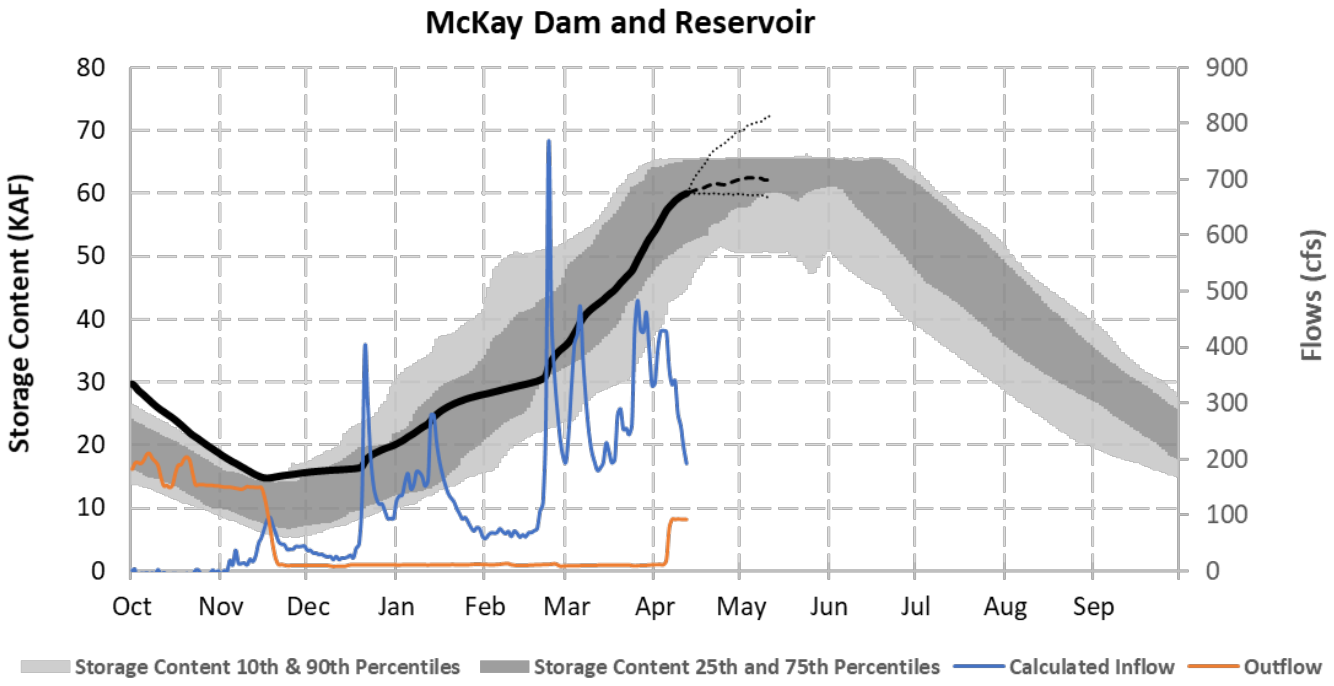




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

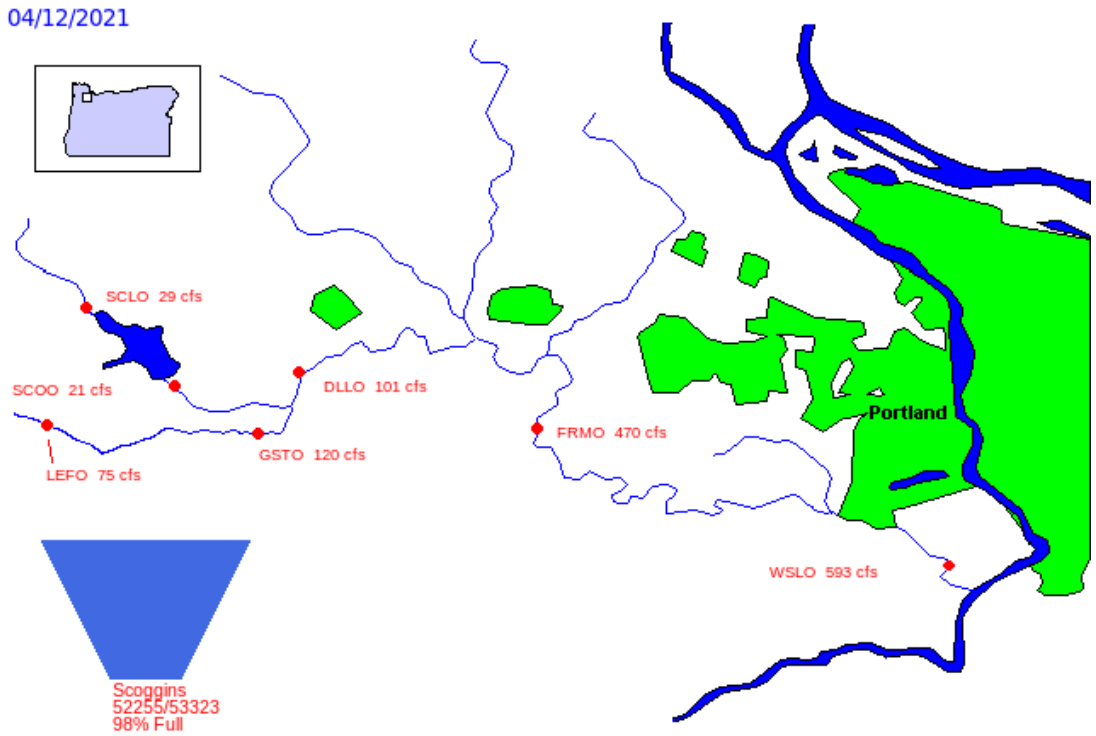
Umatilla River Basin

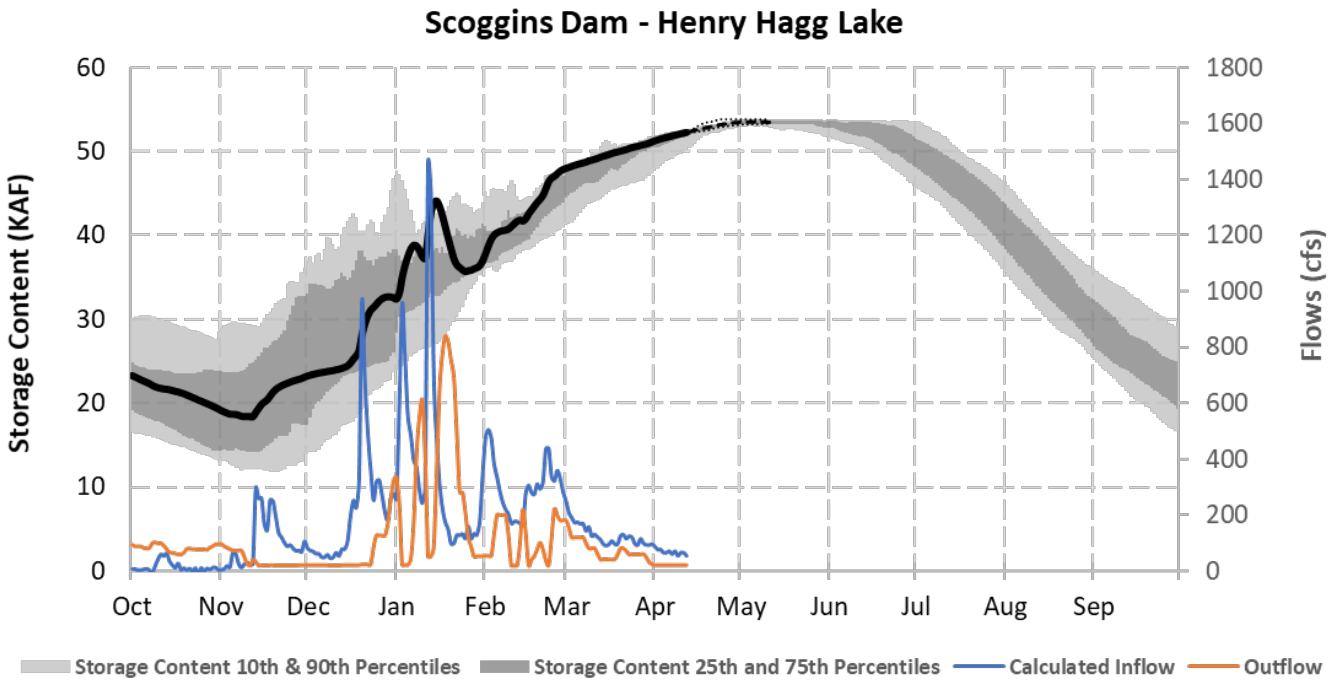




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Tualatin River Basin





*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Jon Rocha – Columbia Pacific Northwest Regional Office

jrocha@usbr.gov

208.378.6213

BUREAU OF RECLAMATION