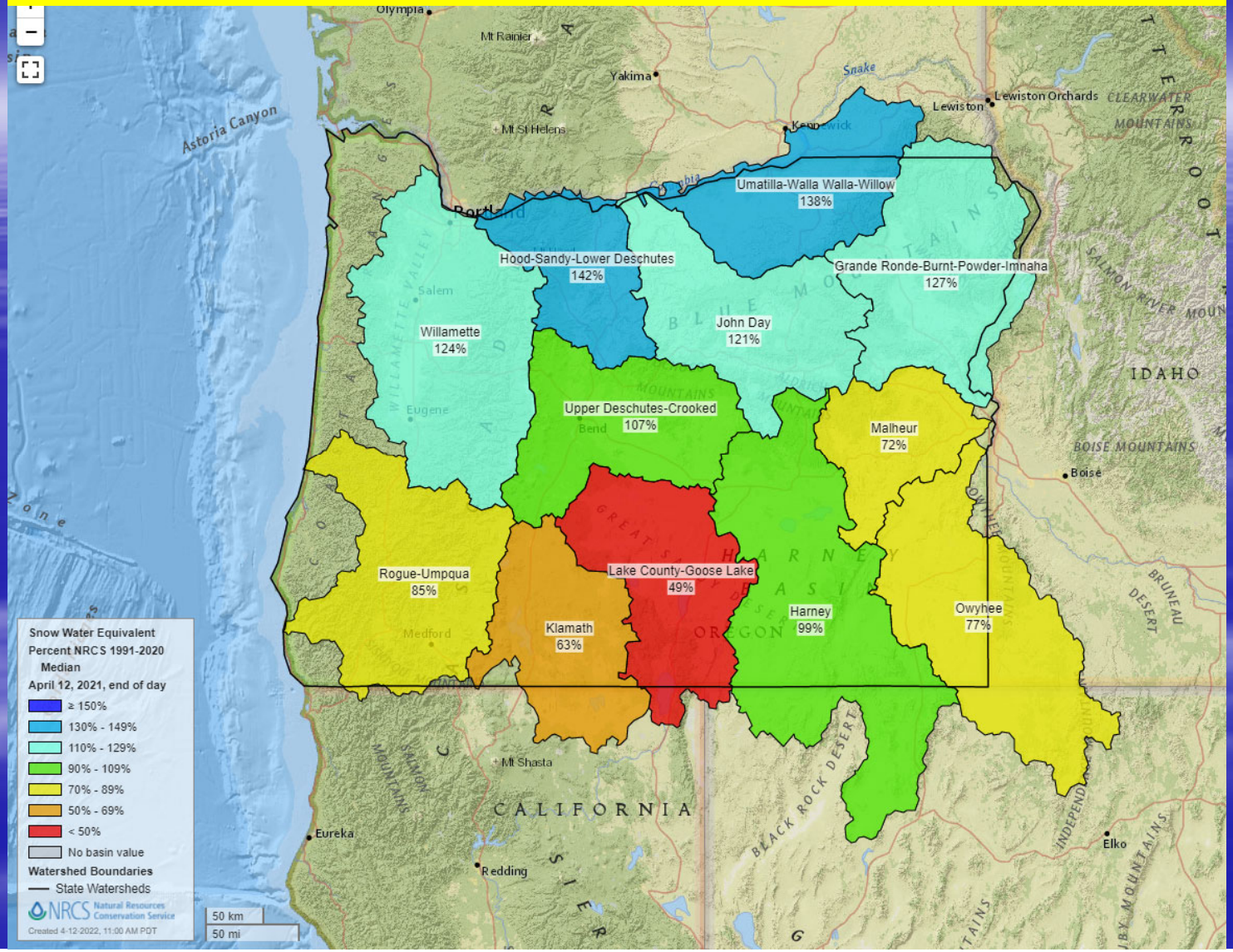
Oregon Water Supply Availability Committee April 13, 2022

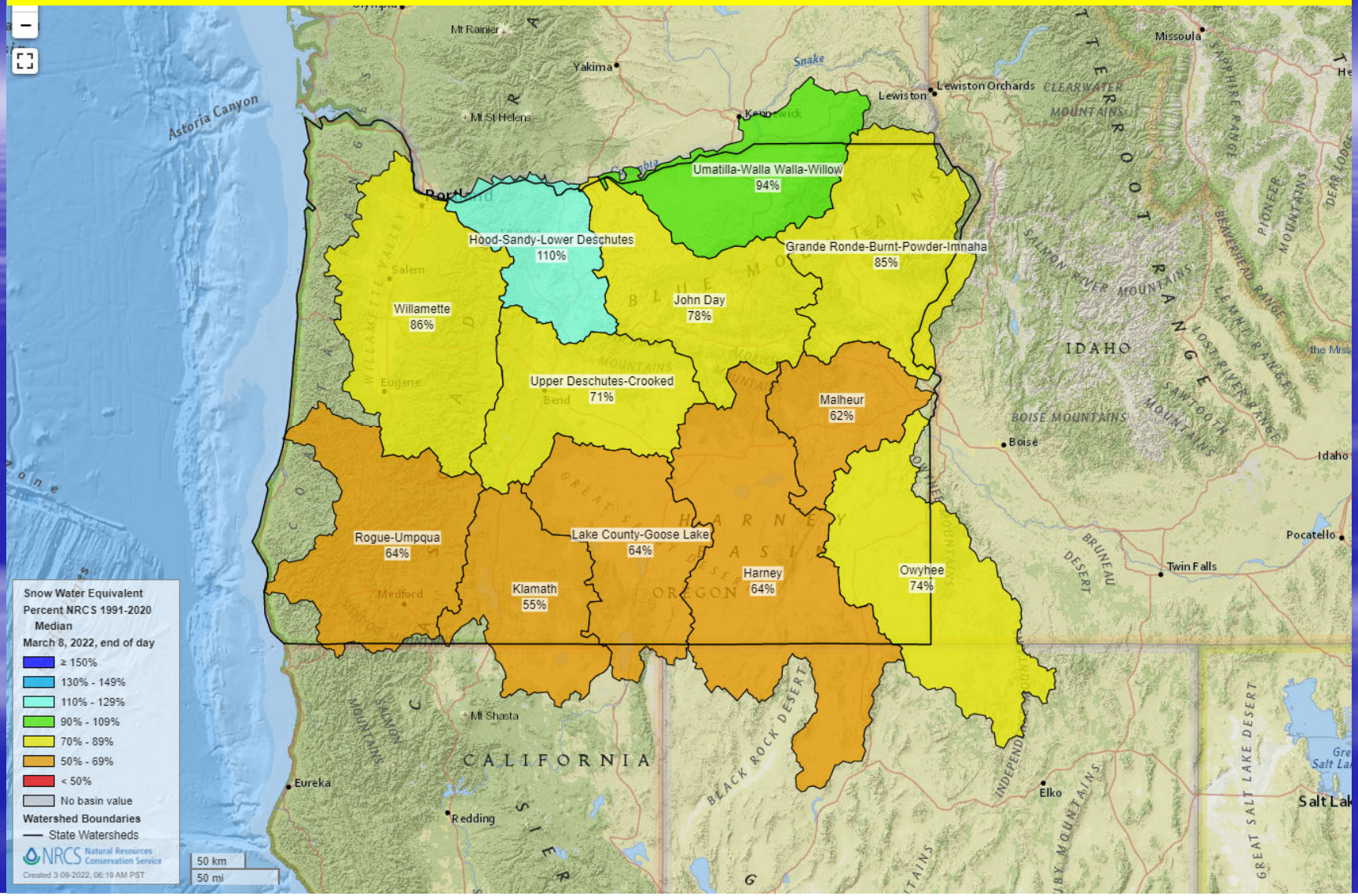
Tangent Snow Course
March 30, 2022
Deschutes County
Elevation 5,470’
SWE = 4.6” 27% median

H. Scott Oviatt
USDA – Natural Resources Conservation Service
scott.oviatt@usda.gov
541-429-2359

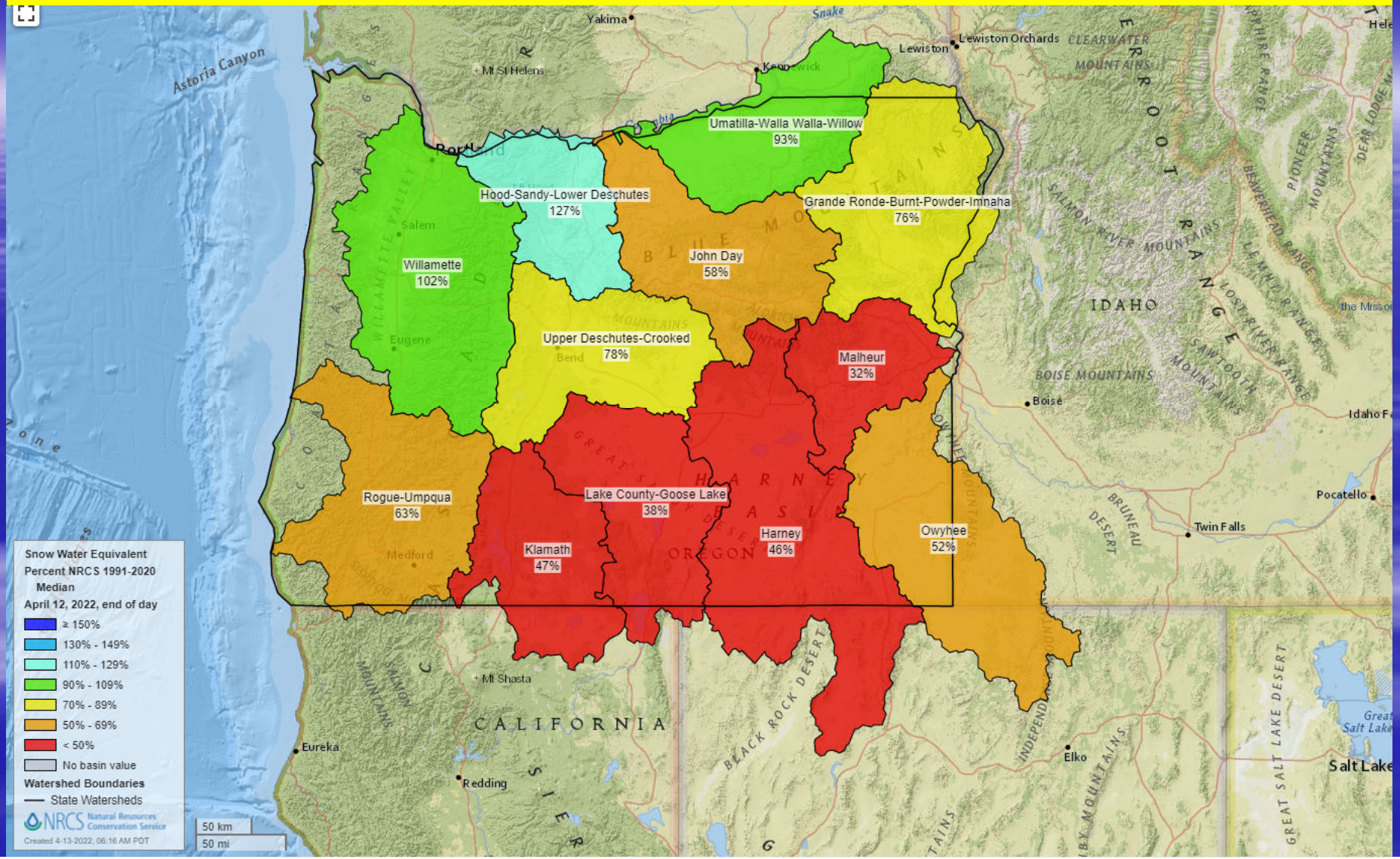
April 13, 2021, Statewide SNOTEL Snow Water Equivalent was 111% of 1991-2020 median



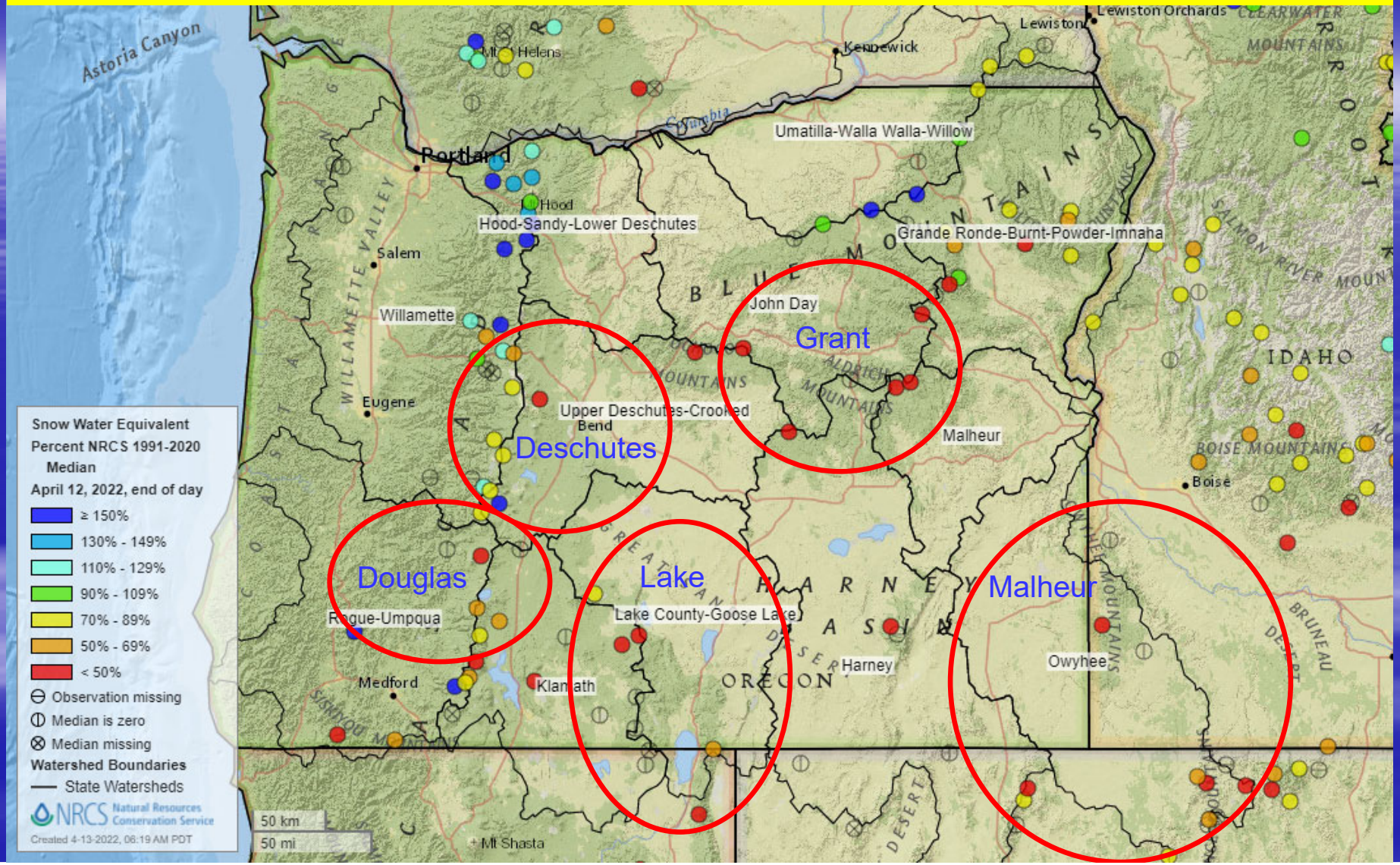
March 9, 2022, Statewide SNOTEL Snow Water Equivalent was 81% of 1991-2020 median



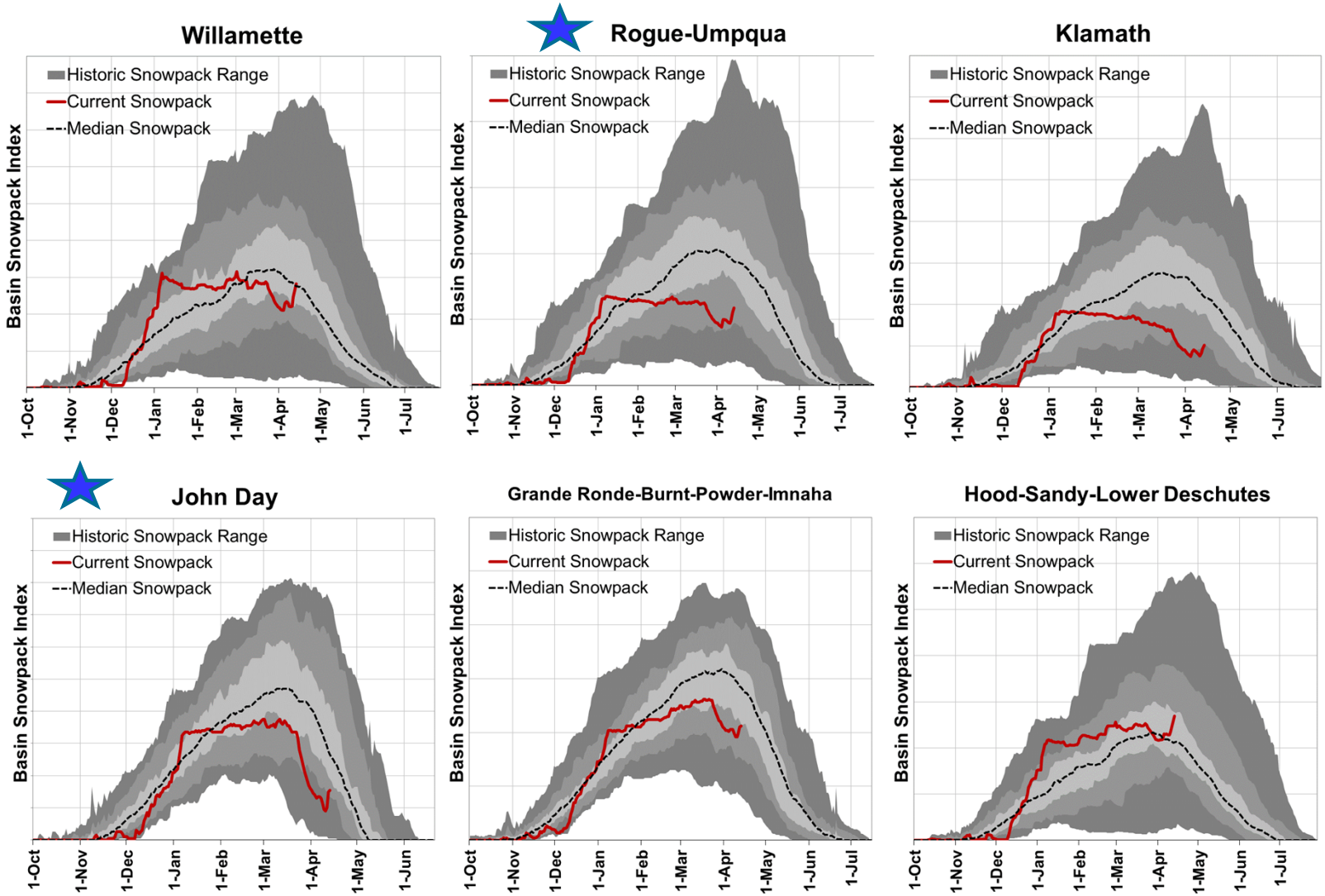
April 13, 2022, Statewide SNOTEL Snow Water Equivalent is 83% of 1991-2020 median (57% on April 4th)



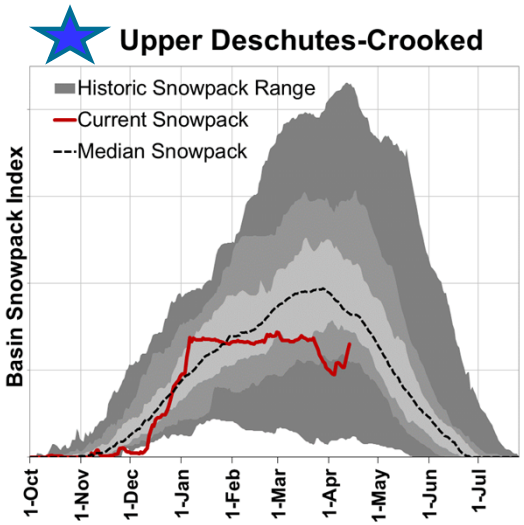
SNOTEL Snow Water Equivalent % Median – Deschutes, Lake, Grant, Malheur, Douglas Counties

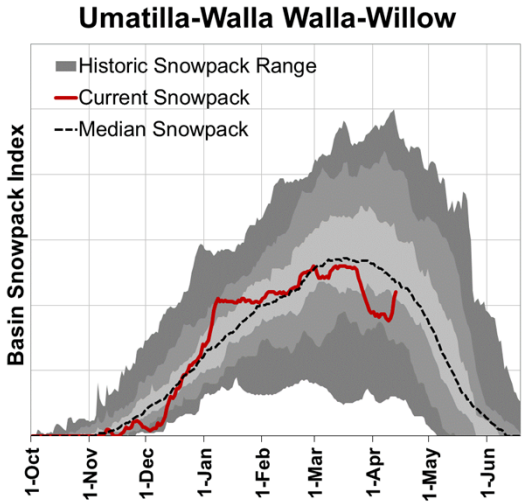


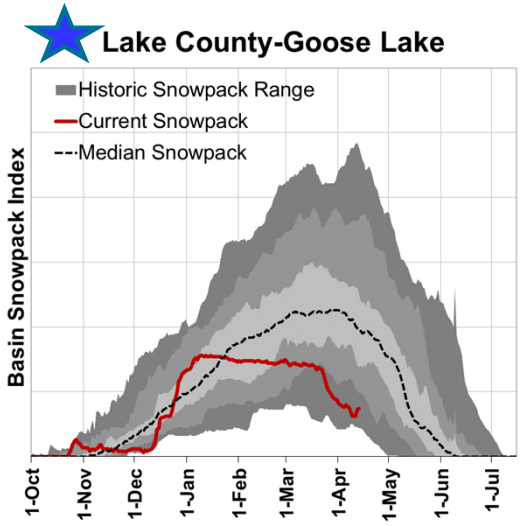
OREGON SNOWPACK GRAPHS – April 13, 2022

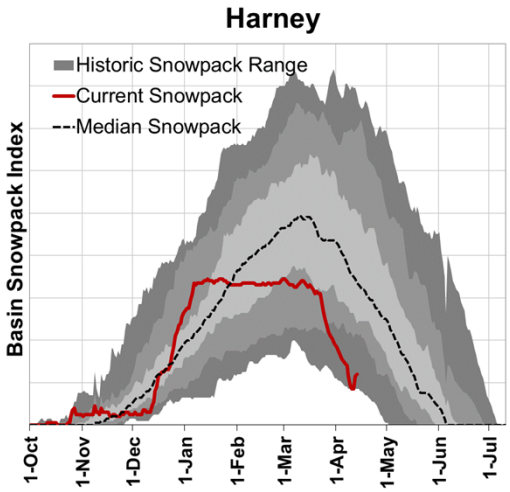


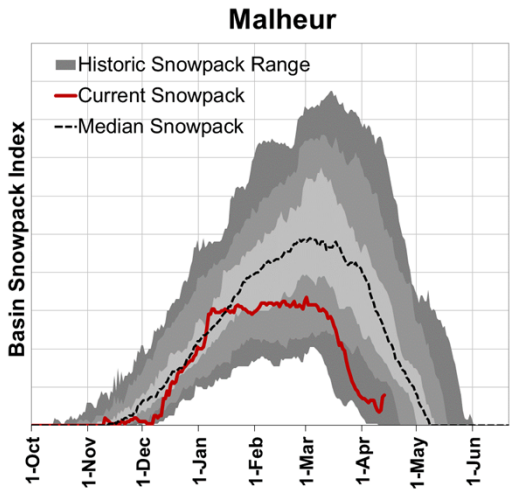
OREGON SNOWPACK GRAPHS – April 13, 2022

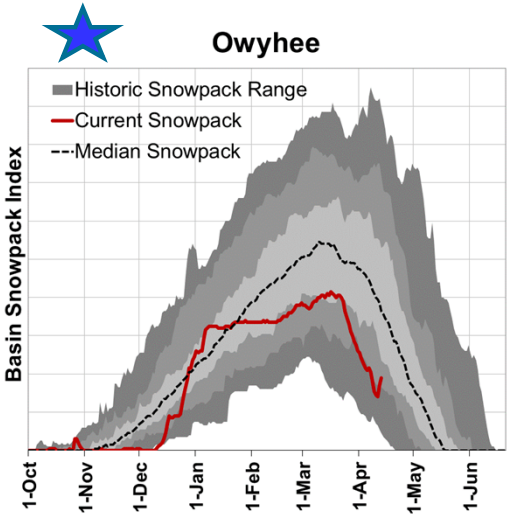




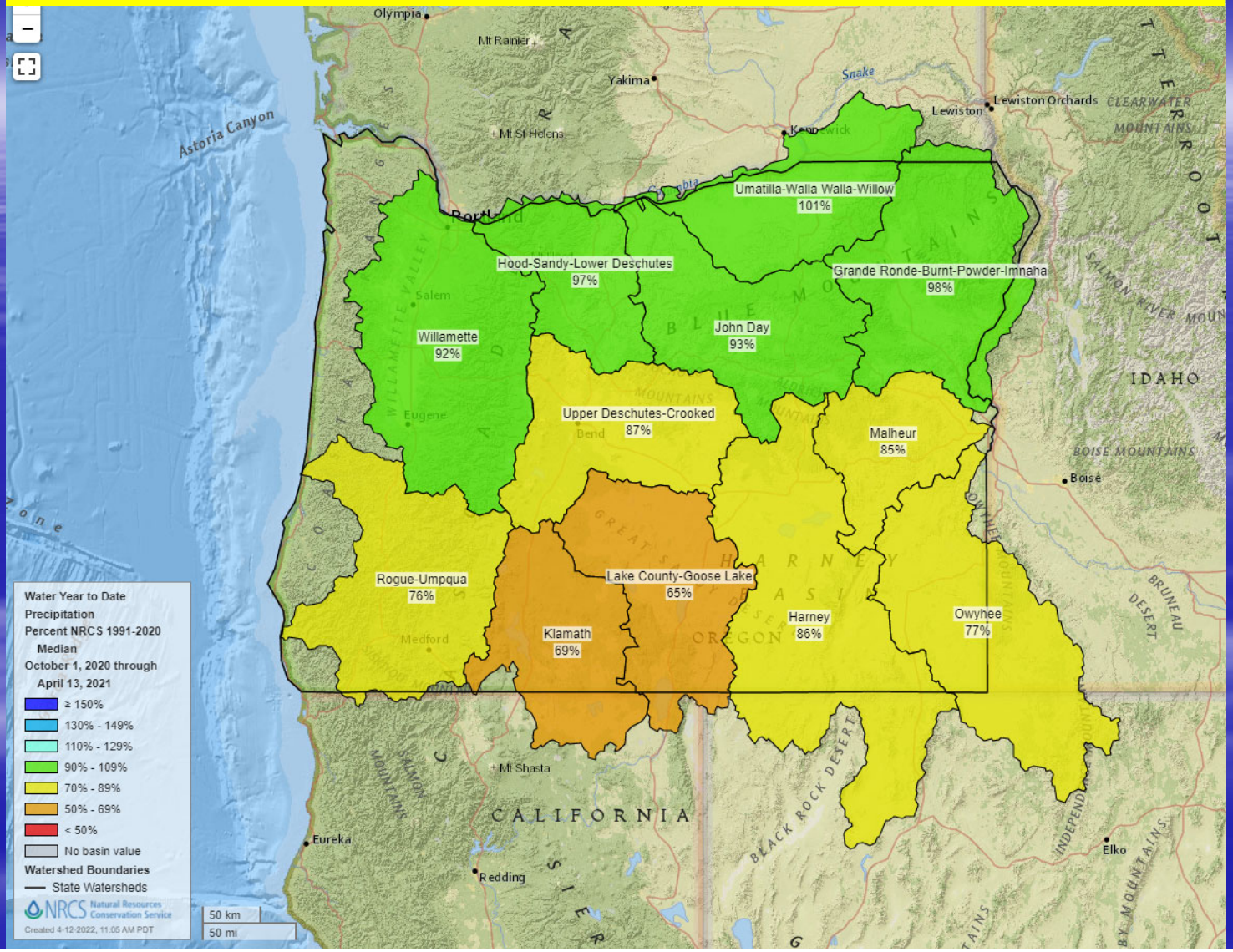








April 13, 2021, SNOTEL Water Year Precipitation was 89% of 1991-2020 median



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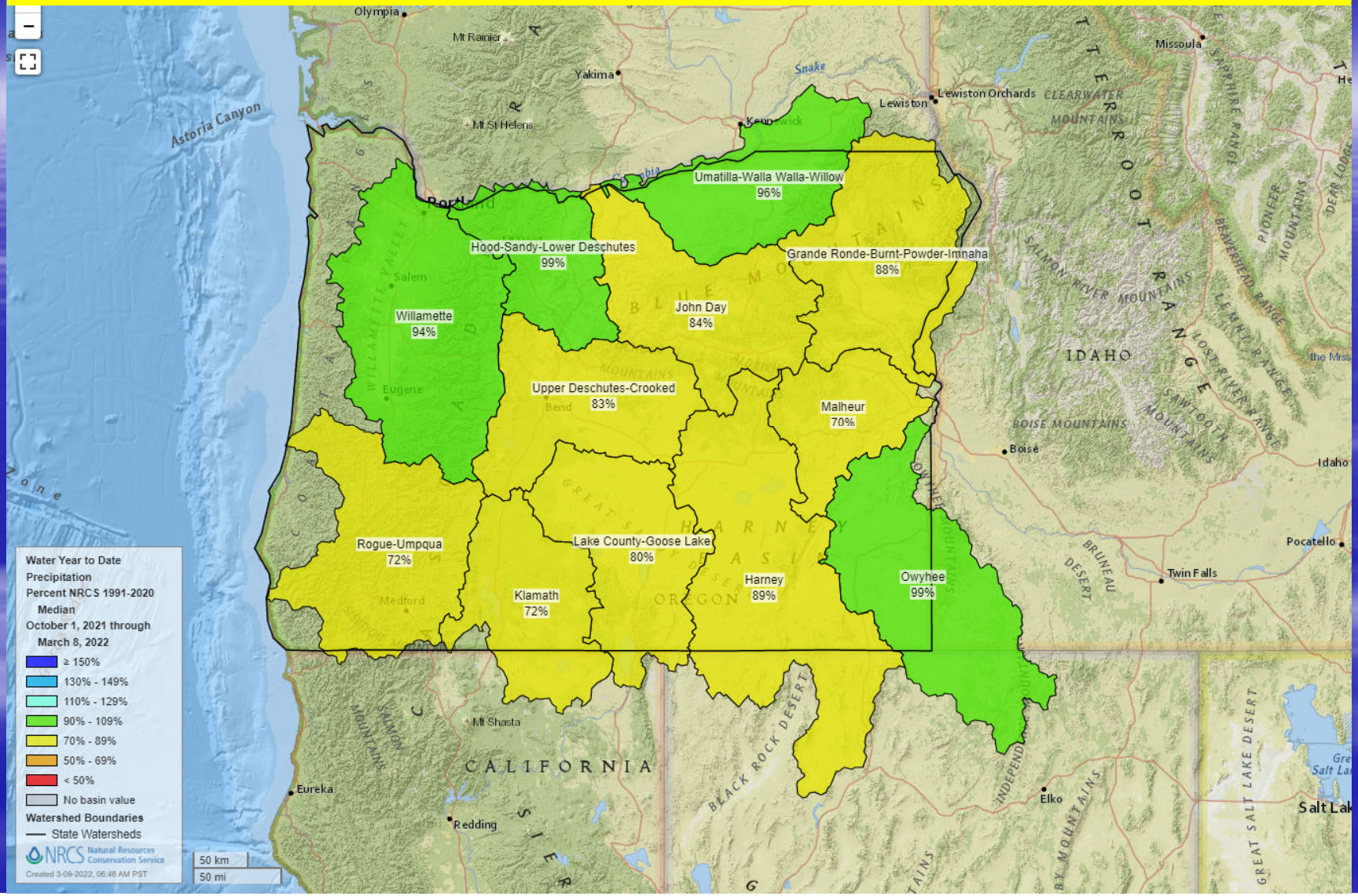

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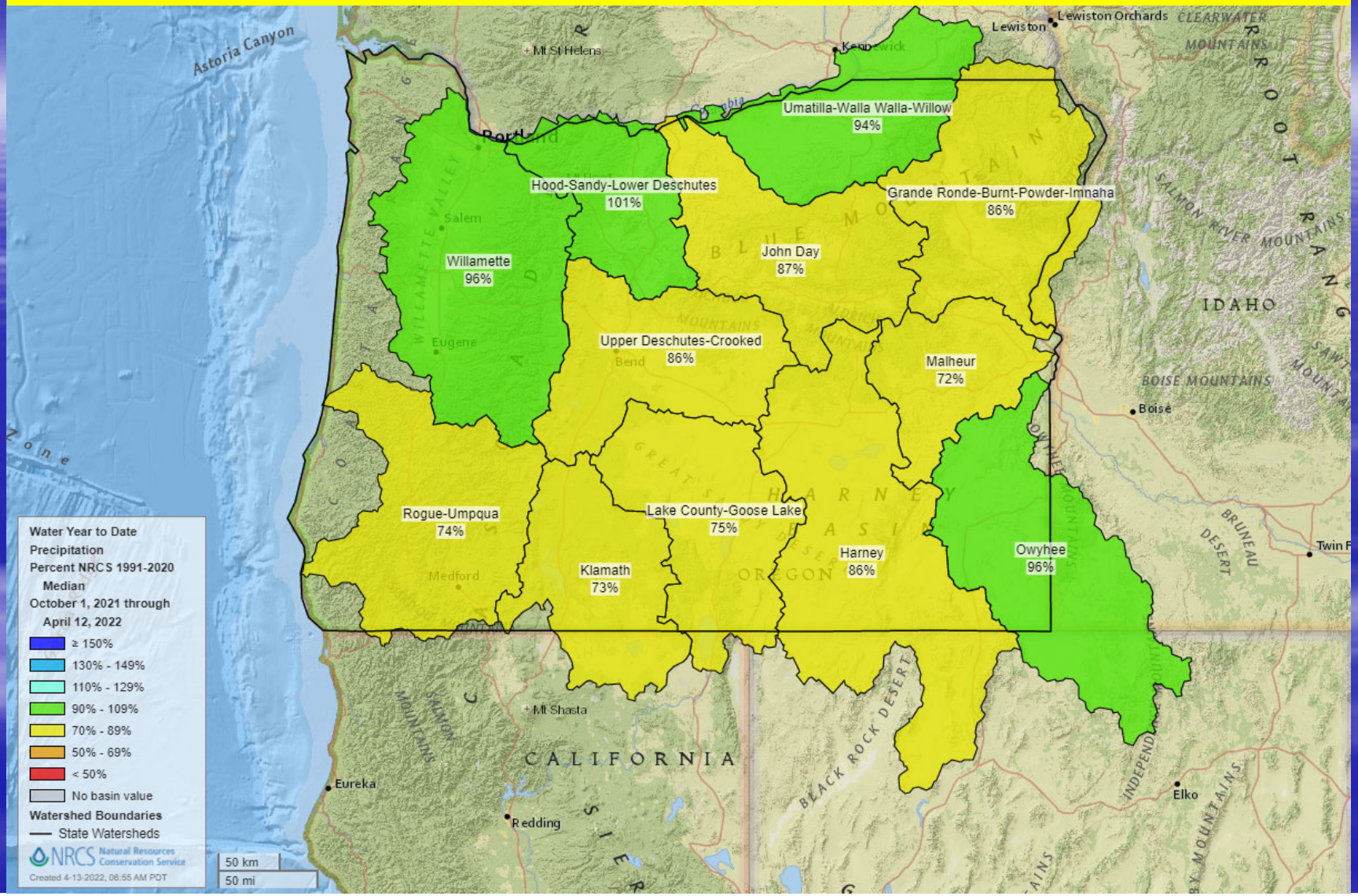
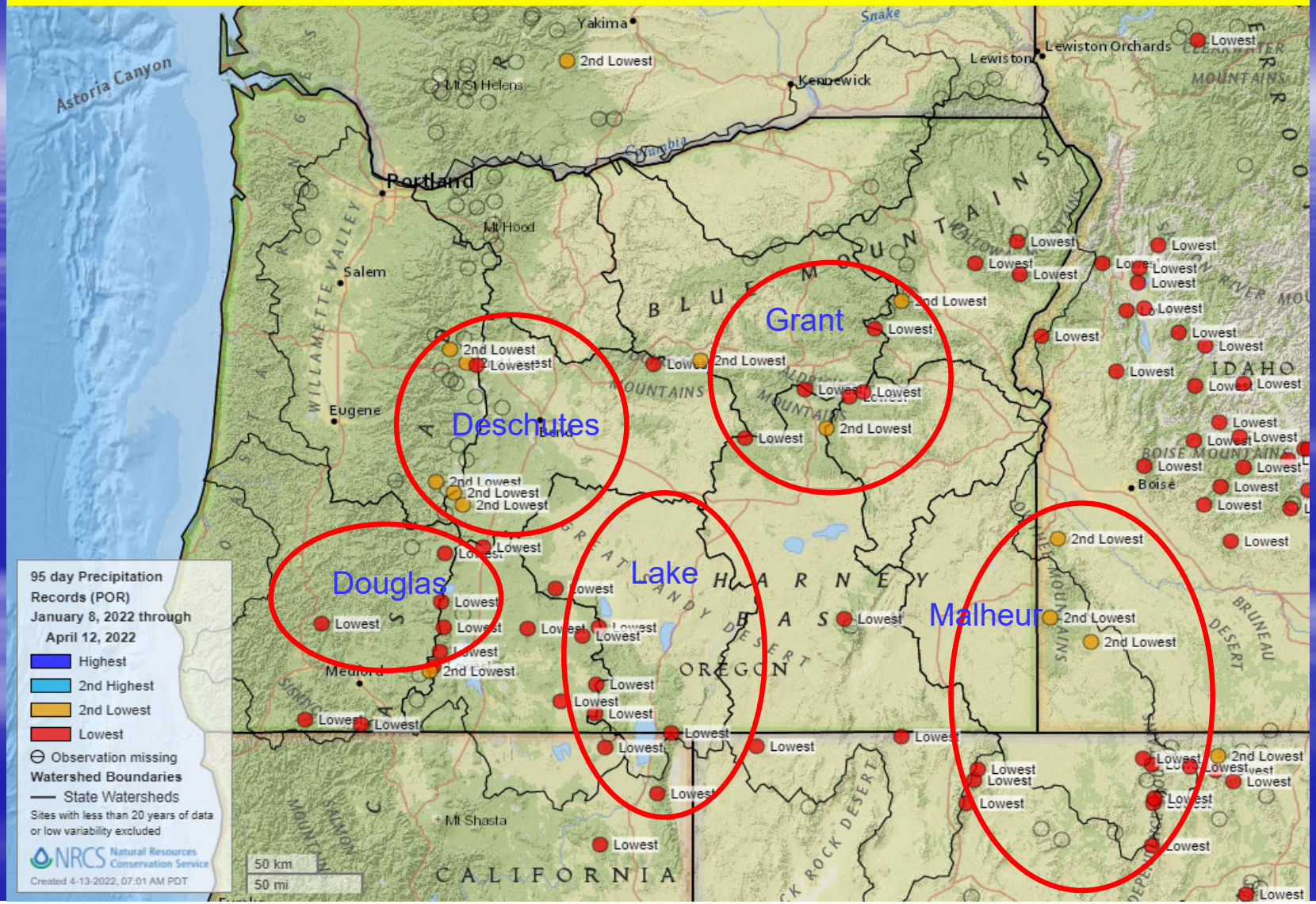
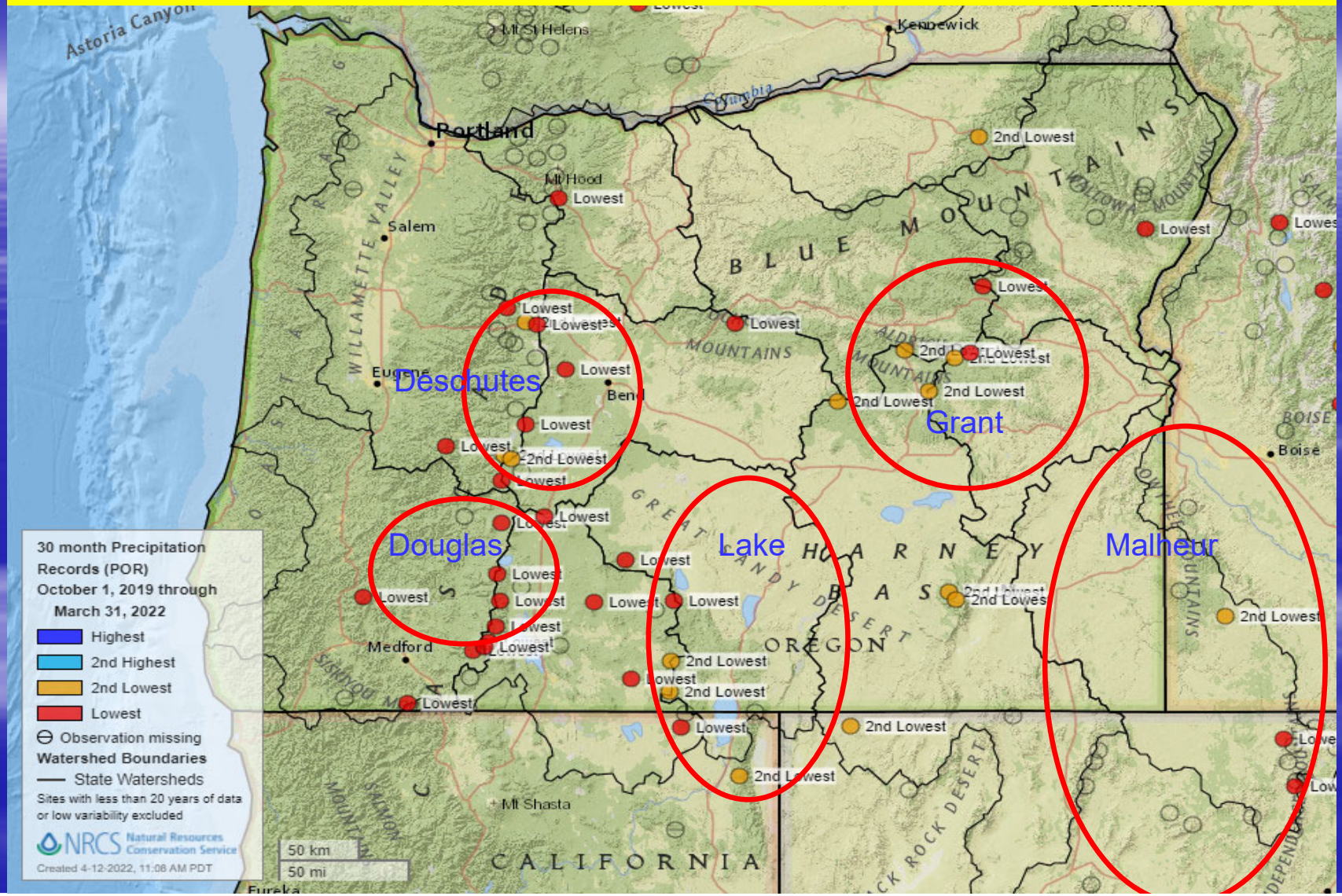


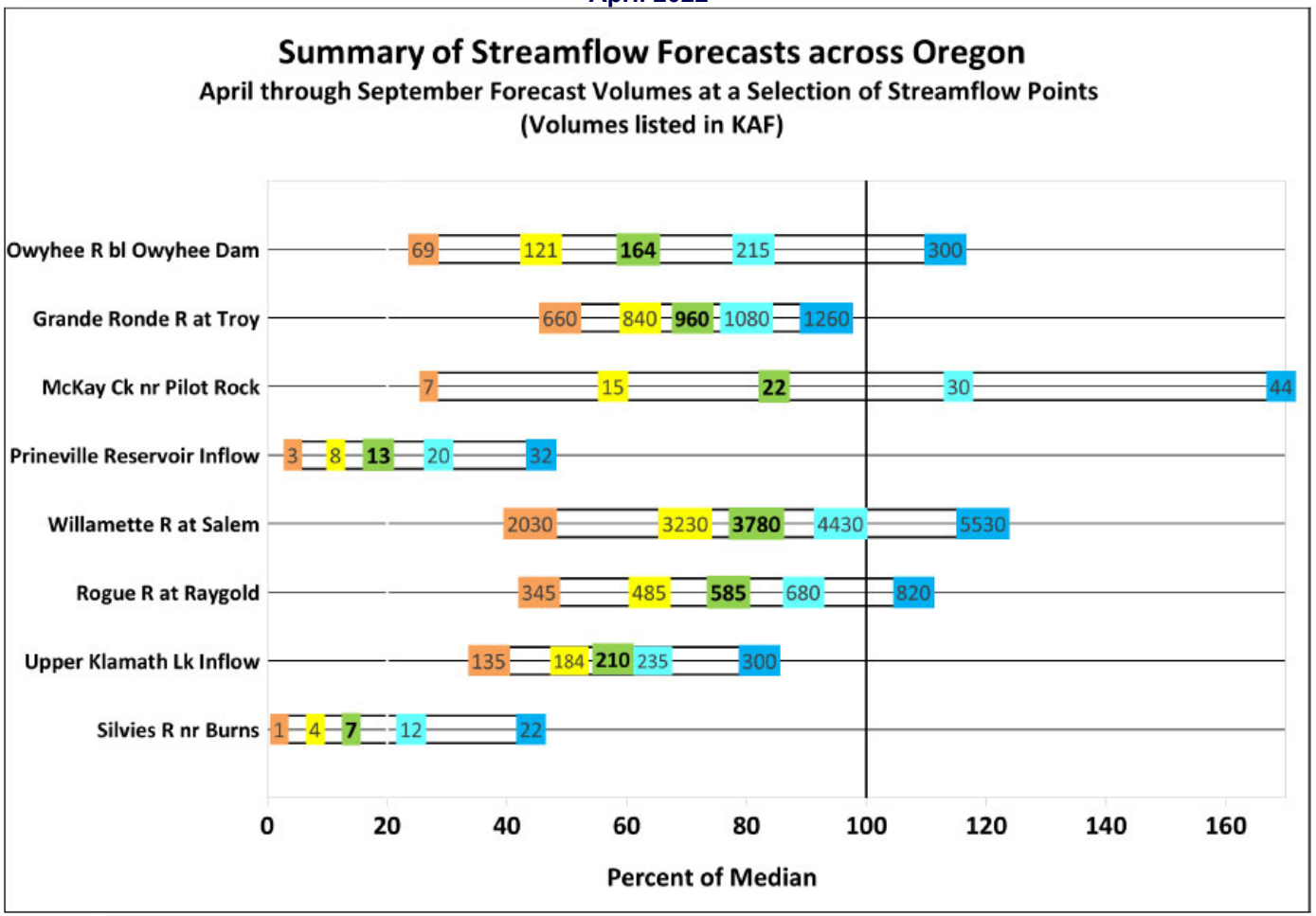
SNOTEL 96-Day Precipitation Records – January 8, 2022, through April 13, 2022



SNOTEL 30-Month Precipitation Records – October 1, 2019, through March 31, 2022

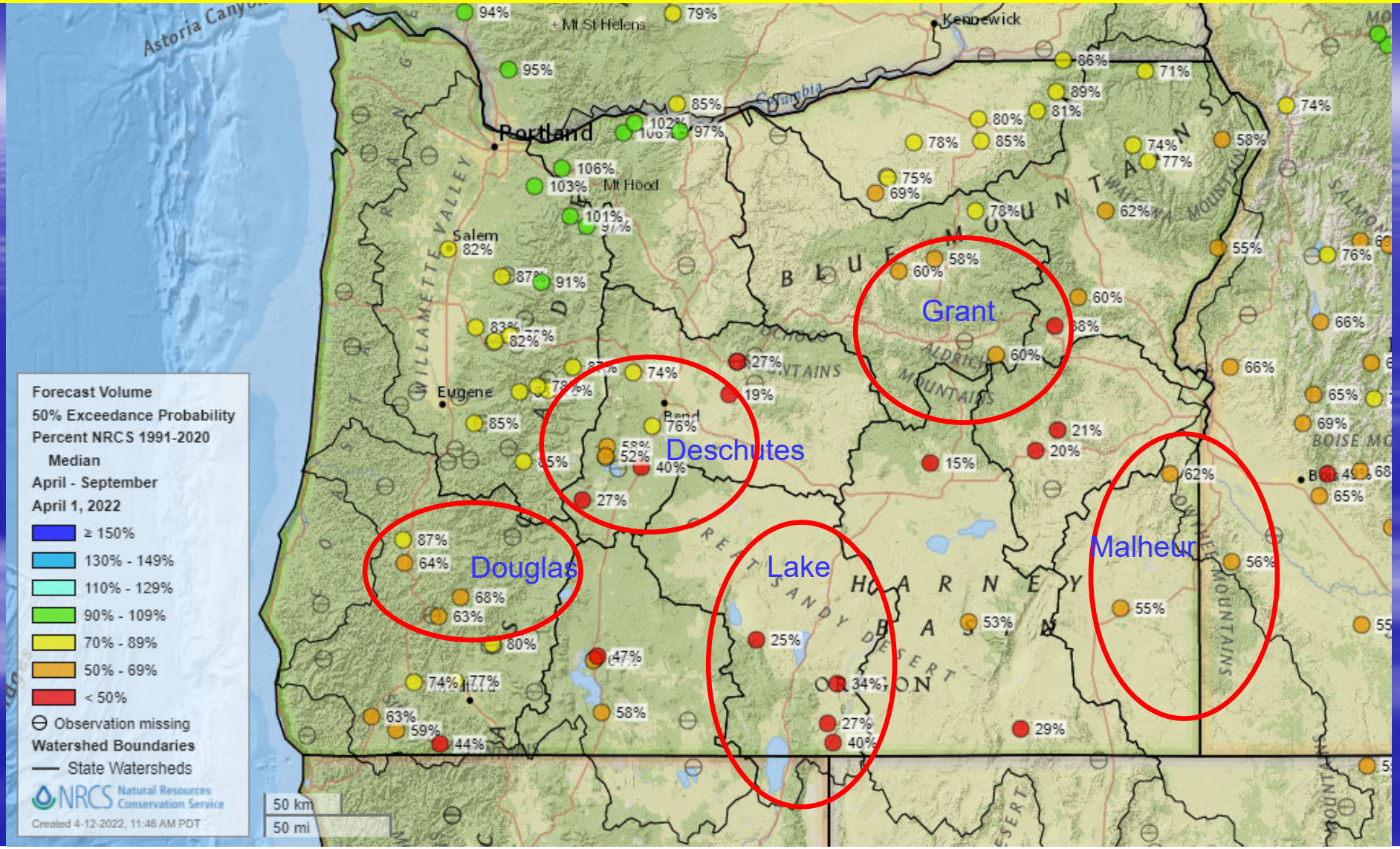


April 2022



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.

April 1, 2022, Streamflow Volume Forecast (Primary Period or April – September) % of 1991-2020 Median 50% Exceedance Probability



Thank you

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

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

Oregon Water Supply Availability Committee April 13, 2022

Tangent Snow Course
March 30, 2022
Deschutes County
Elevation 5,470’
SWE = 4.6” 27% median

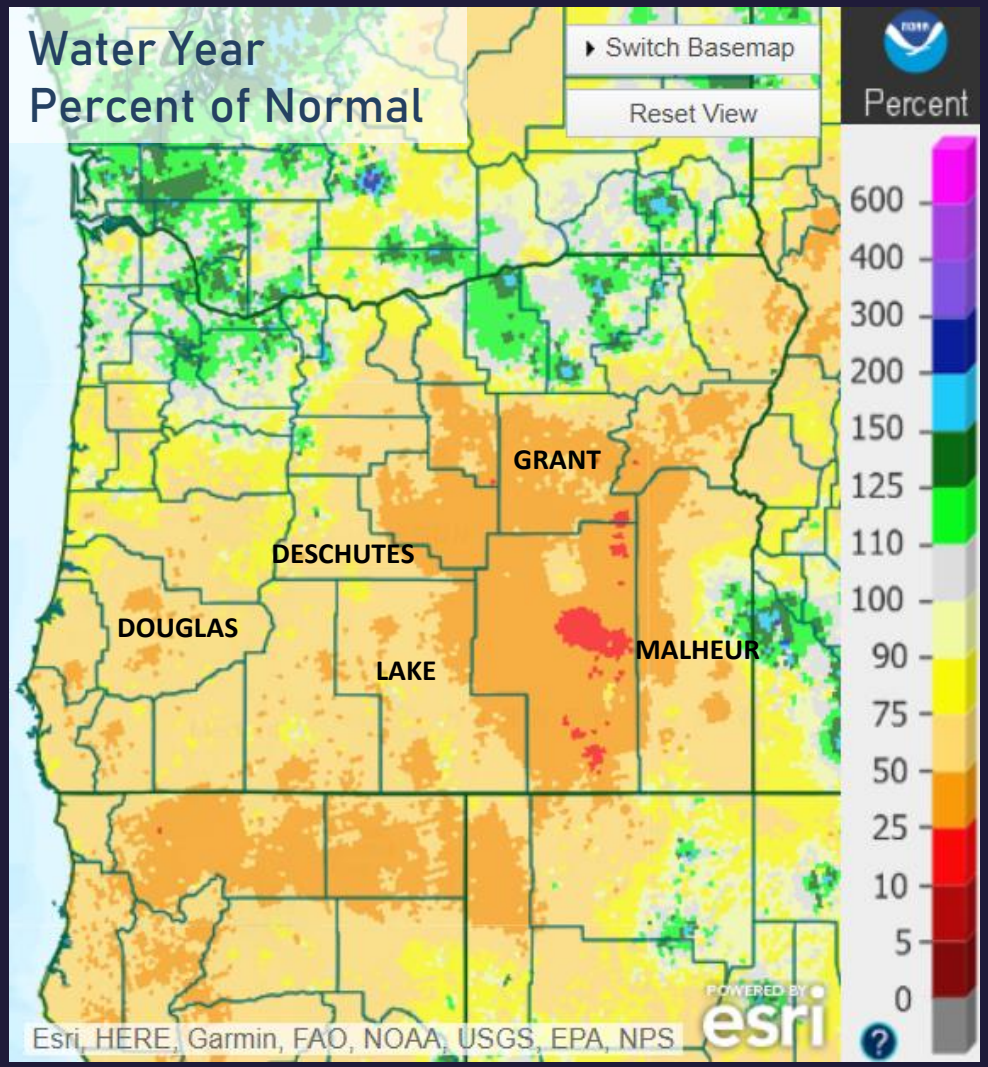
H. Scott Oviatt
USDA – Natural Resources Conservation Service
scott.oviatt@usda.gov
541-429-2359

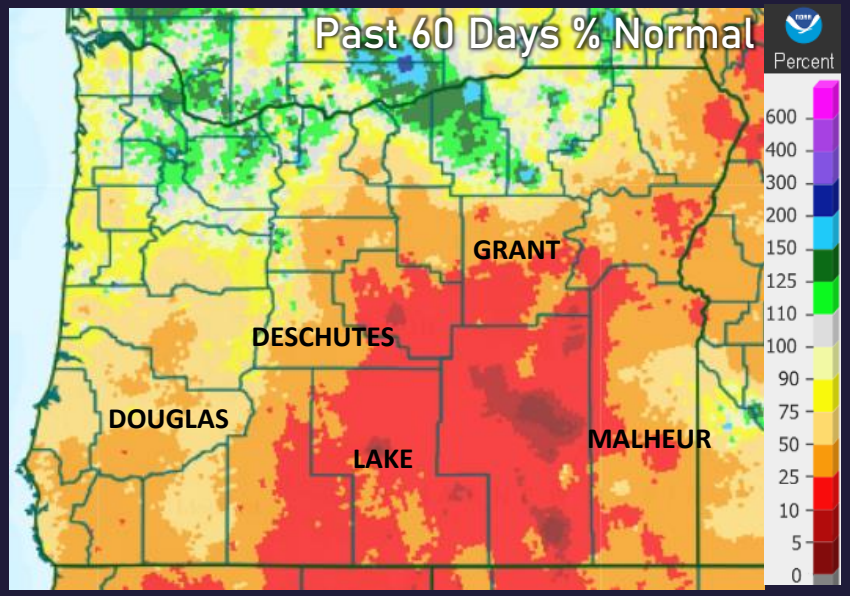
April 2022 Update for Precipitation & Temperatures

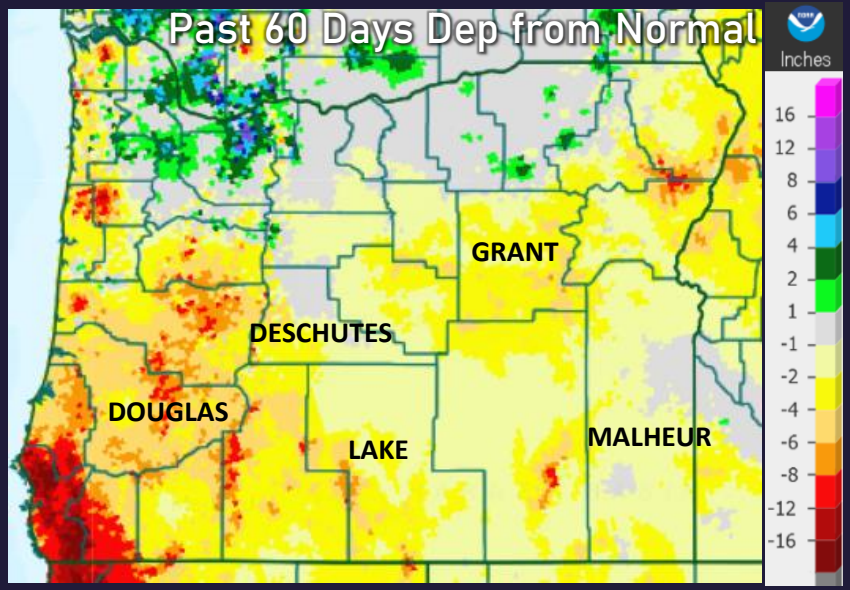
Andy Bryant
Service Hydrologist
NOAA/NWS Portland
Weather Forecast Office

April 11, 2022 Snowstorm
Forest Grove, Oregon

Precipitation





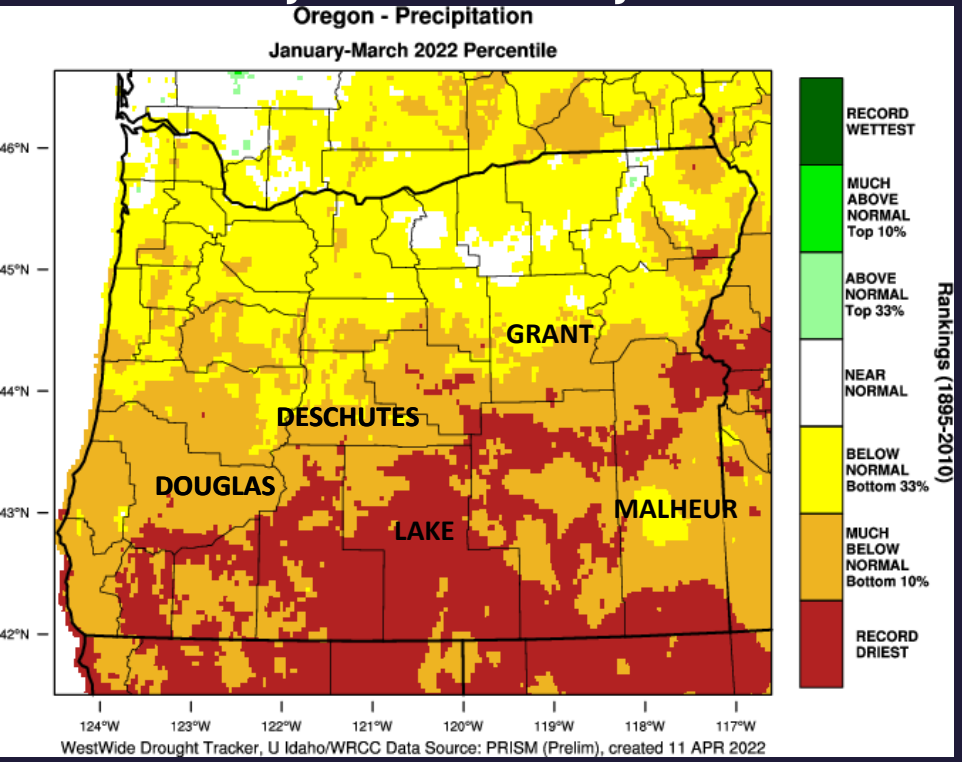


Precipitation Data as of April 12, 2022

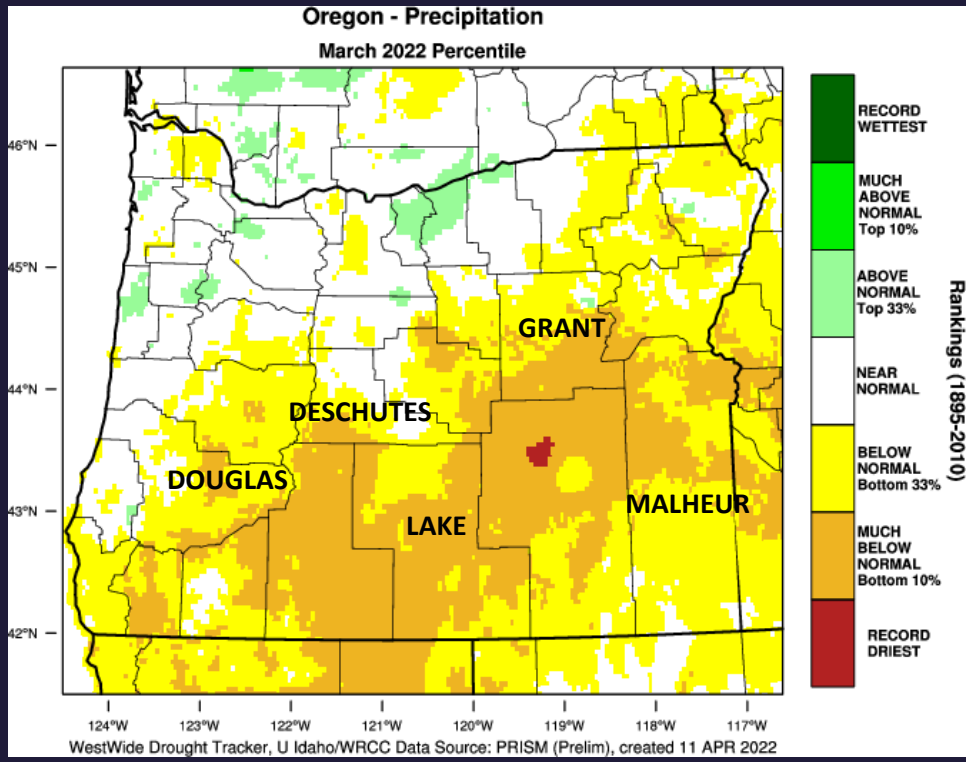
water.weather.gov/precip/index.php

Precipitation – Percentile / Ranking

January + February + March



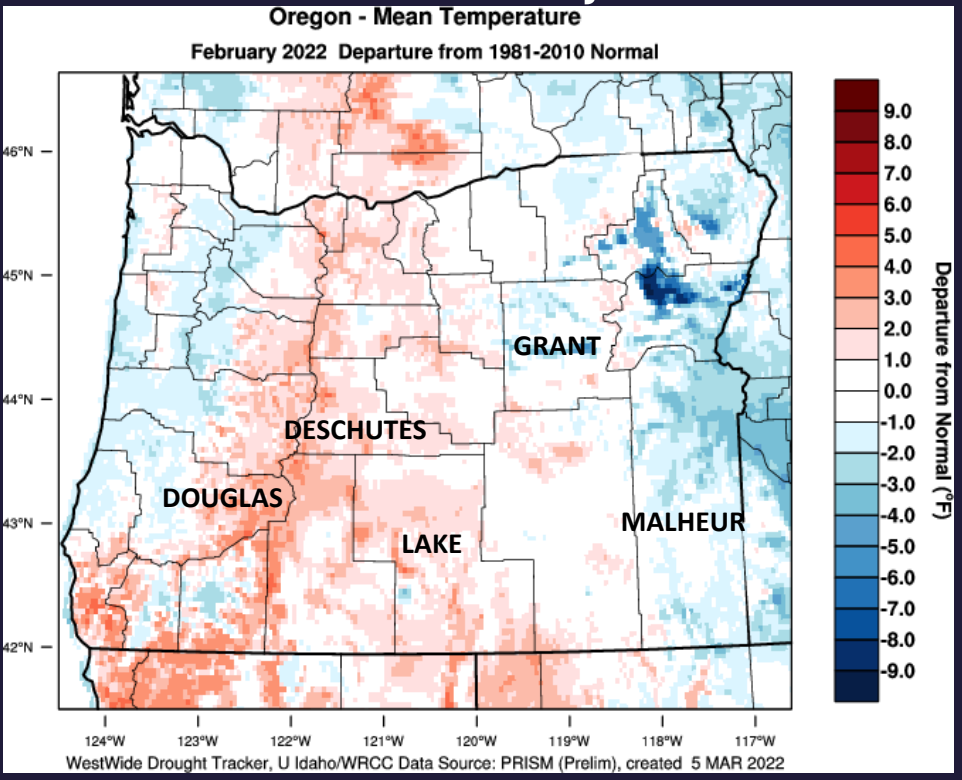
March



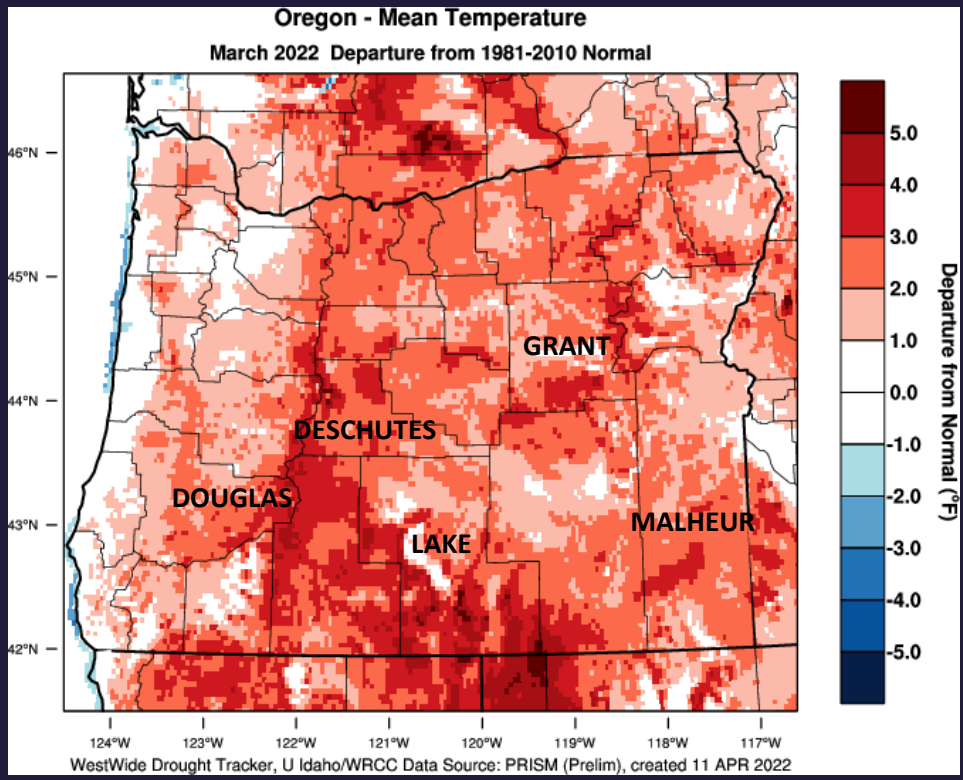
https://wrcc.dri.edu/wwdt/index.php?region=pnw

Recent Temperatures

February

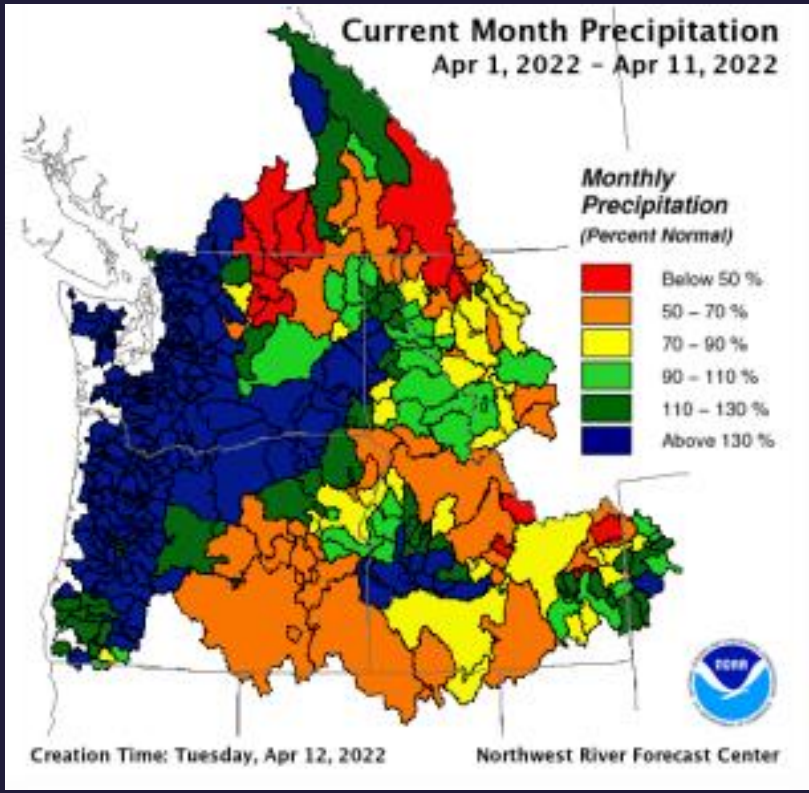


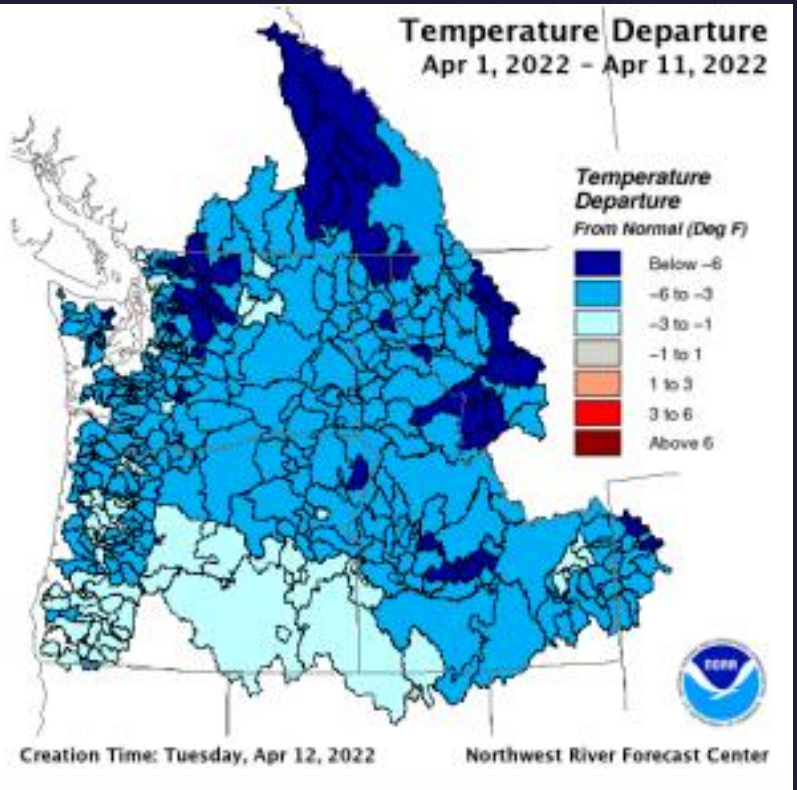
March



https://wrcc.dri.edu/wwdt/index.php?region=pnw

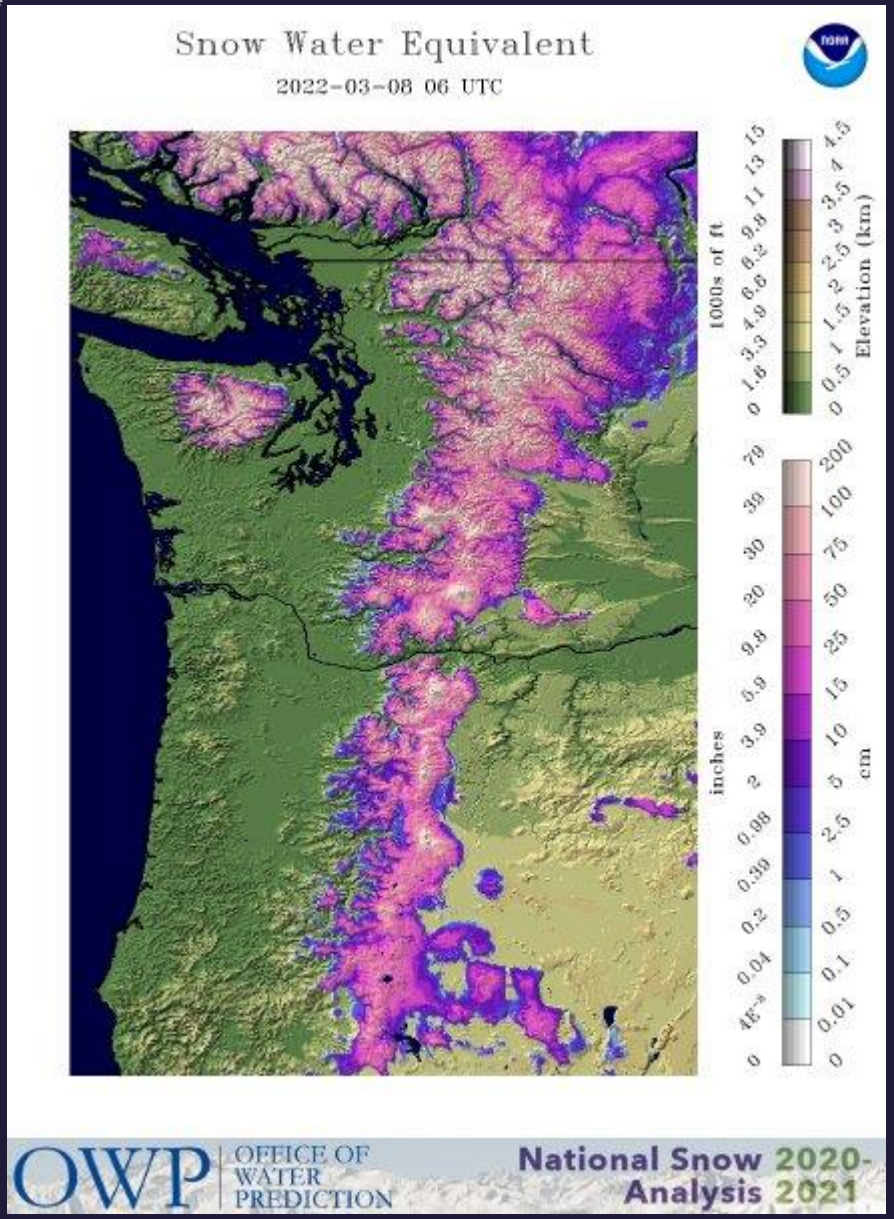
April thus far

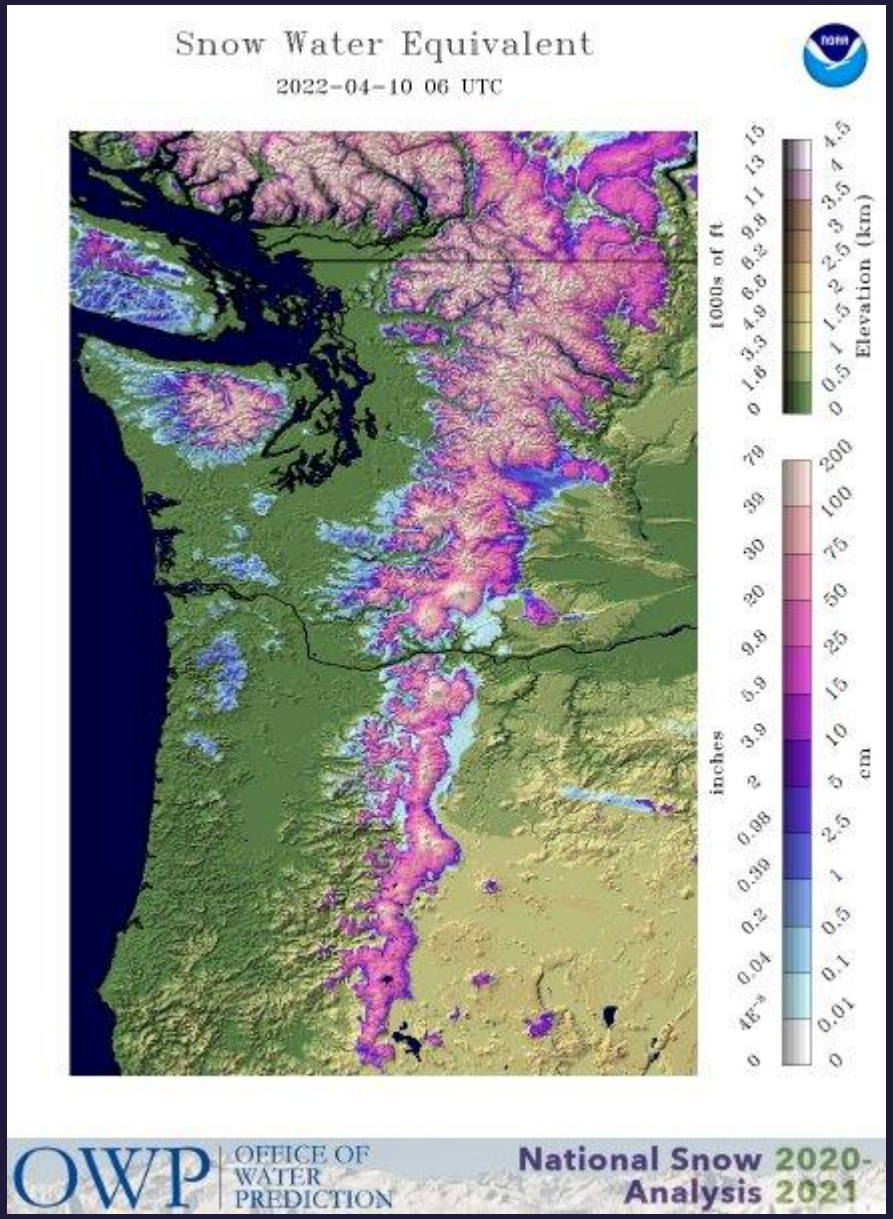




https://www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php?tab=2

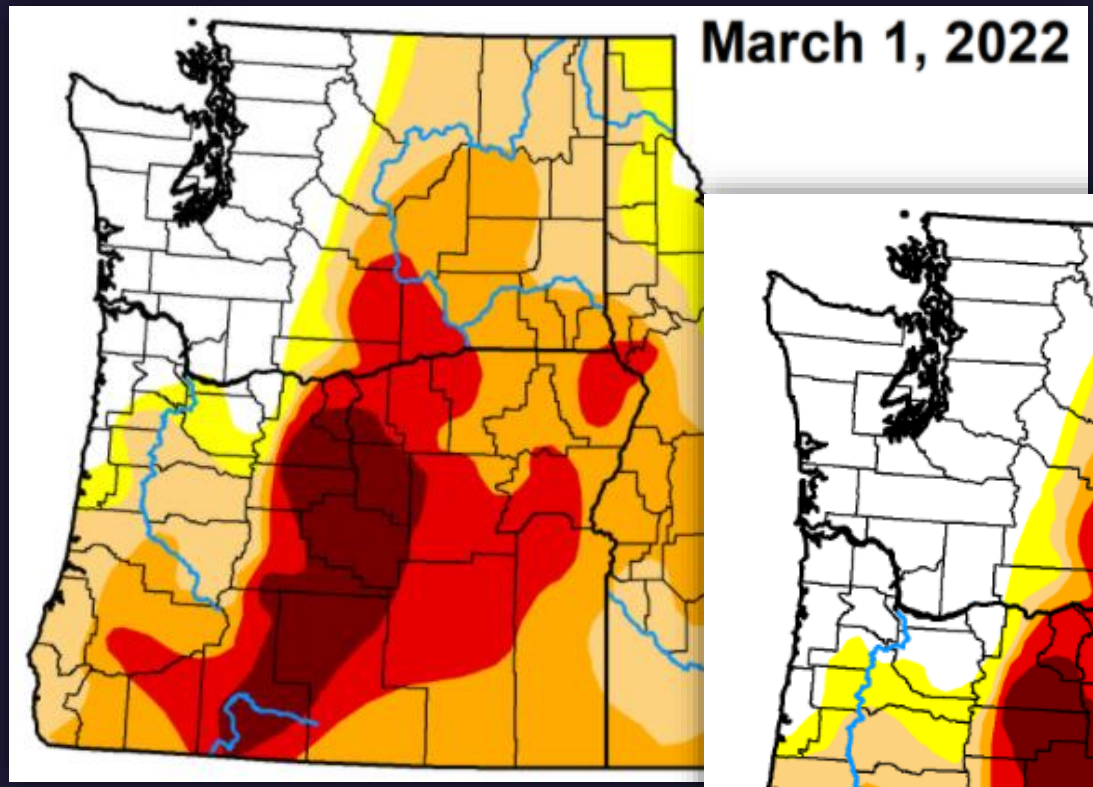
Snow Analysis from NOAA/NWS Remote Sensing Center



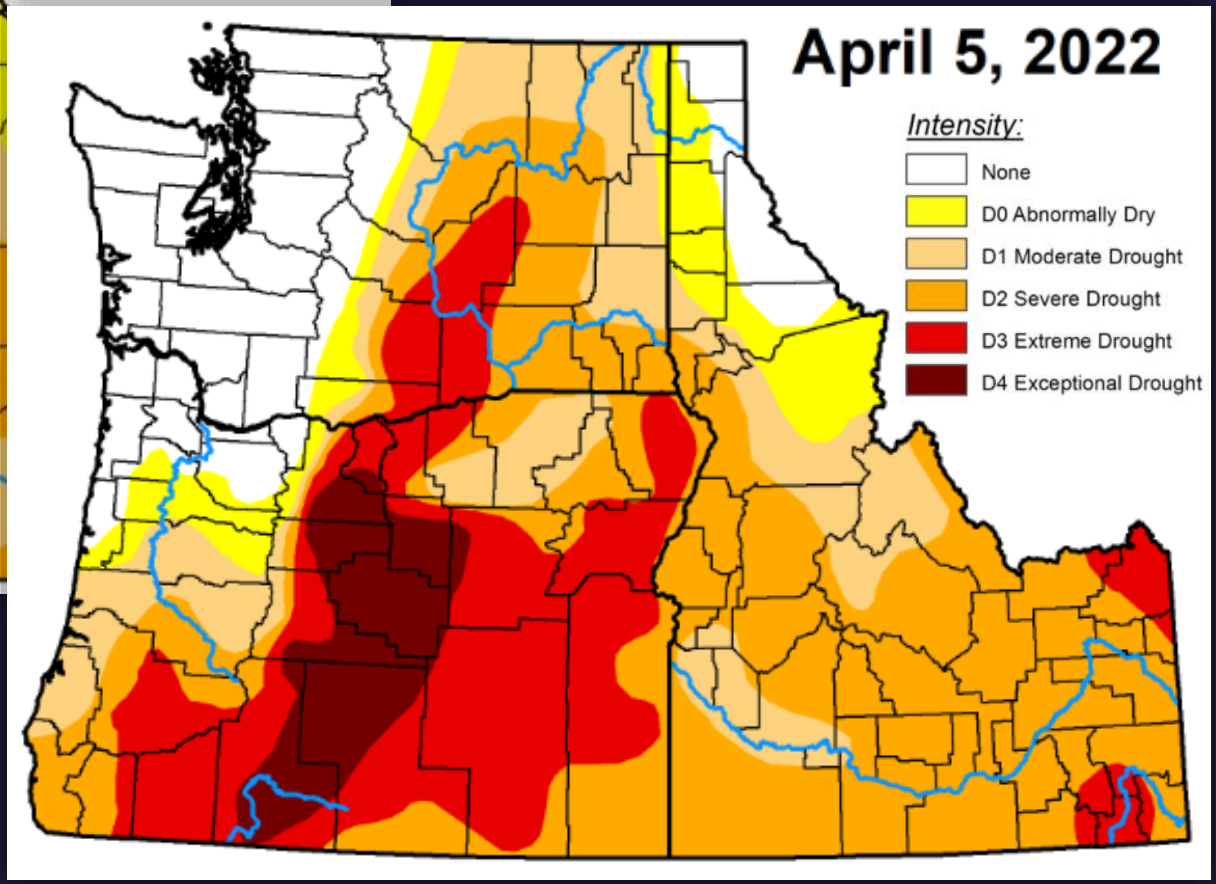


https://www.nohrsc.noaa.gov/nsa/index.html

Drought Monitor



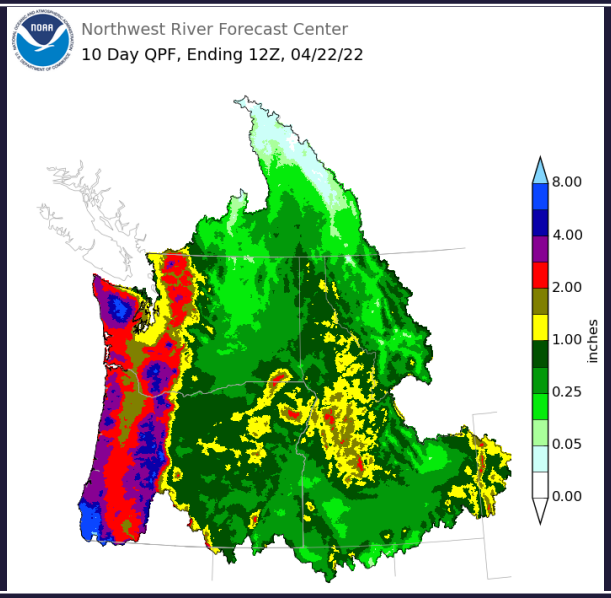
https://droughtmonitor.unl.edu

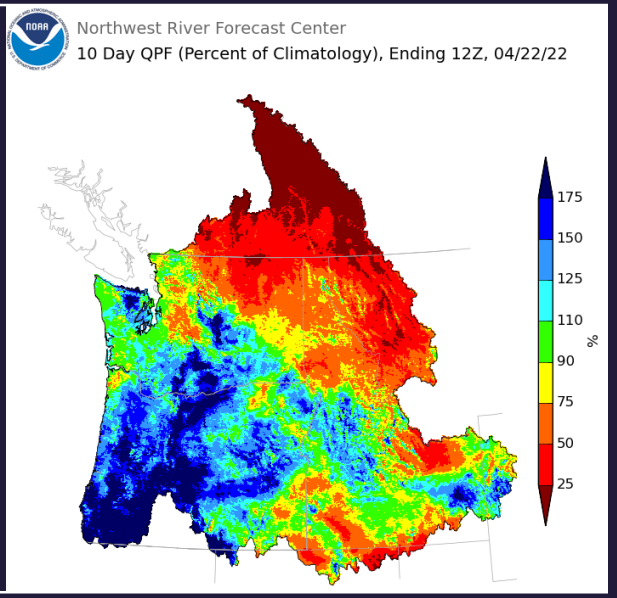


Mid April Outlook

NWRFC
10-DAY
PRECIPITATION
FORECAST

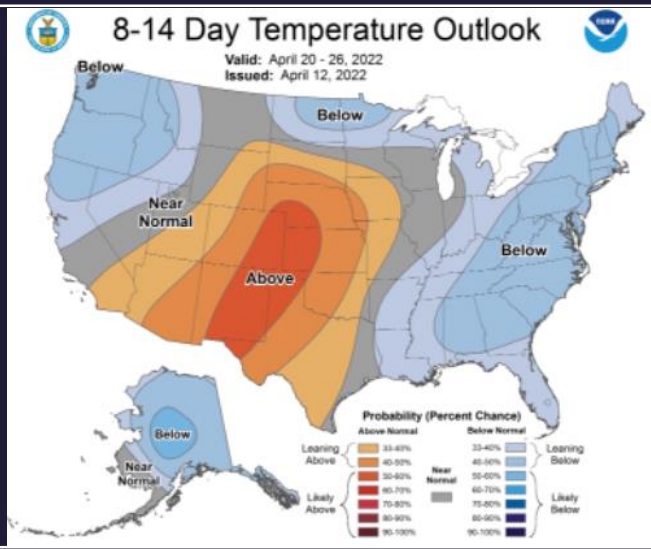
www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php

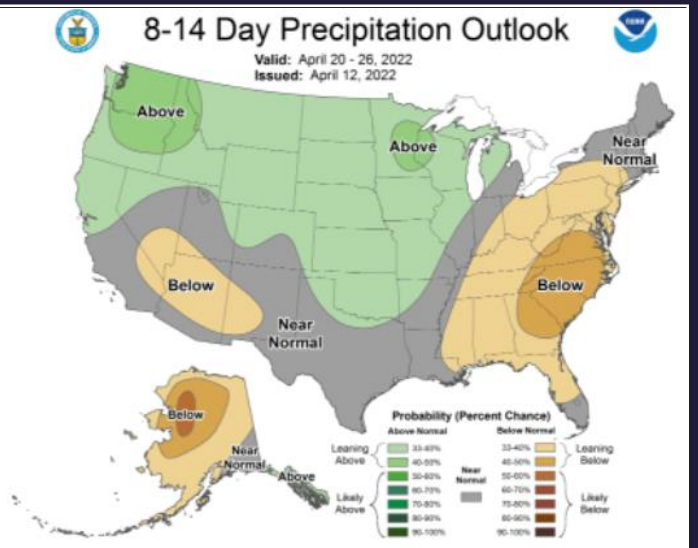




CPC
8 – 14 DAY
OUTLOOK

www.cpc.ncep.noaa.gov





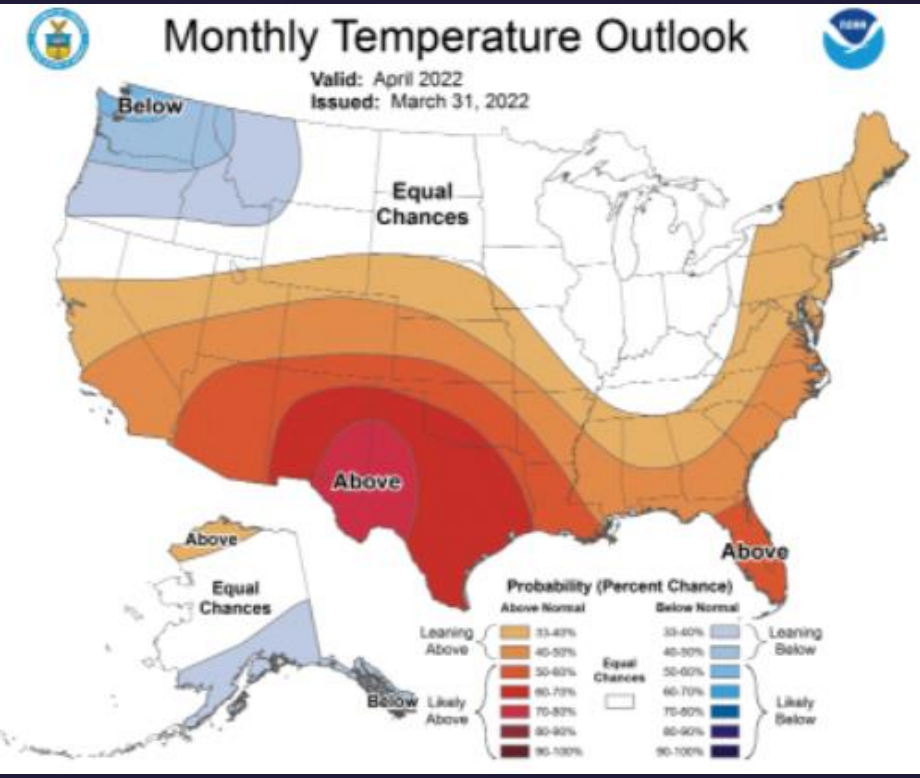
Monthly Precipitation Normals

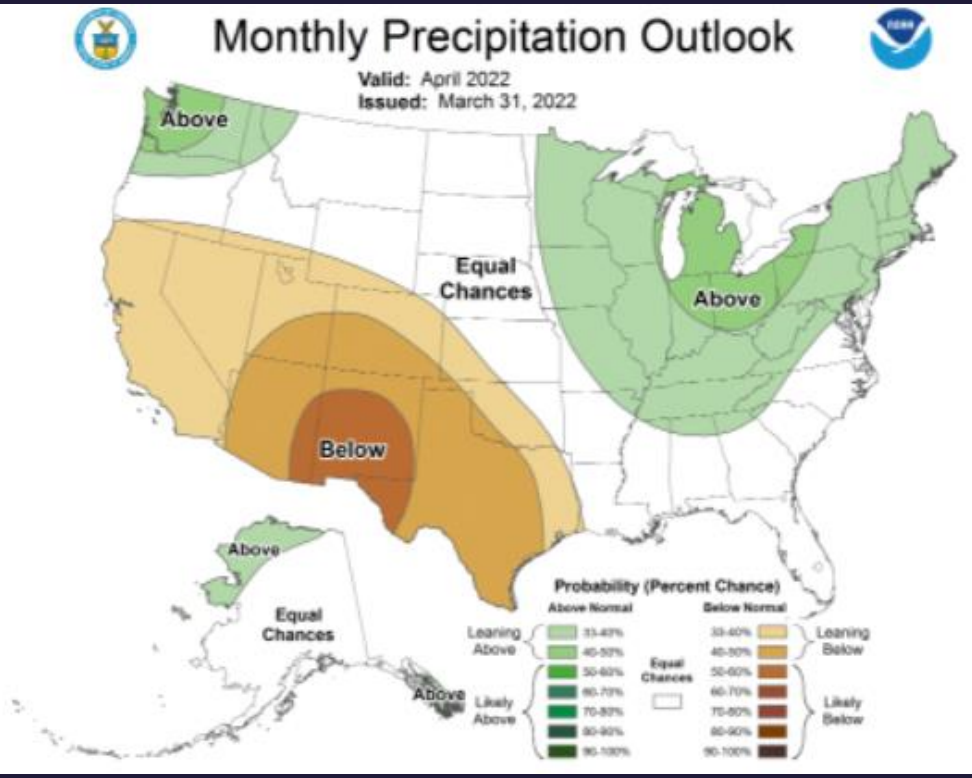
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	ANNUAL
Seattle	3.9	6.3	5.7	5.8	3.8	4.2	3.2	1.9	1.5	0.6	1.0	1.6	39.3
% Annual Normal	*10%*	*16%*	*15%*	*15%*	*10%*	*11%*	*8%*	*5%*	*4%*	*2%*	*3%*	*4%*	
Portland	3.4	5.5	5.8	5.0	3.7	4.0	2.9	2.5	1.6	0.5	0.5	1.5	36.9
% Annual Normal	*9%*	*15%*	*16%*	*14%*	*10%*	*11%*	*8%*	*7%*	*4%*	*1%*	*1%*	*4%*	
Medford	1.2	2.6	3.5	2.7	2.0	1.8	1.5	1.3	0.7	0.2	0.3	0.5	18.4
% Annual Normal	*7%*	*14%*	*19%*	*15%*	*11%*	*10%*	*8%*	*7%*	*4%*	*1%*	*2%*	*3%*	
Spokane	1.4	2.1	2.3	2	1.4	1.8	1.3	1.6	1.2	0.4	0.5	0.6	16.5
% Annual Normal	*8%*	*13%*	*14%*	*12%*	*8%*	*11%*	*8%*	*10%*	*7%*	*2%*	*3%*	*4%*	
Pendleton	1.1	1.4	1.5	1.5	1.2	1.3	1.2	1.5	1.1	0.3	0.3	0.5	12.8
% Annual Normal	*9%*	*11%*	*12%*	*12%*	*9%*	*10%*	*9%*	*12%*	*9%*	*2%*	*2%*	*4%*	
Boise	0.8	1.2	1.5	1.4	1	1.3	1.2	1.5	0.8	0.2	0.2	0.4	11.5
% Annual Normal	*7%*	*10%*	*13%*	*12%*	*9%*	*11%*	*10%*	*13%*	*7%*	*2%*	*2%*	*3%*	

www.weather.gov/wrh/climate

Climate Prediction Center Outlook

April 2022

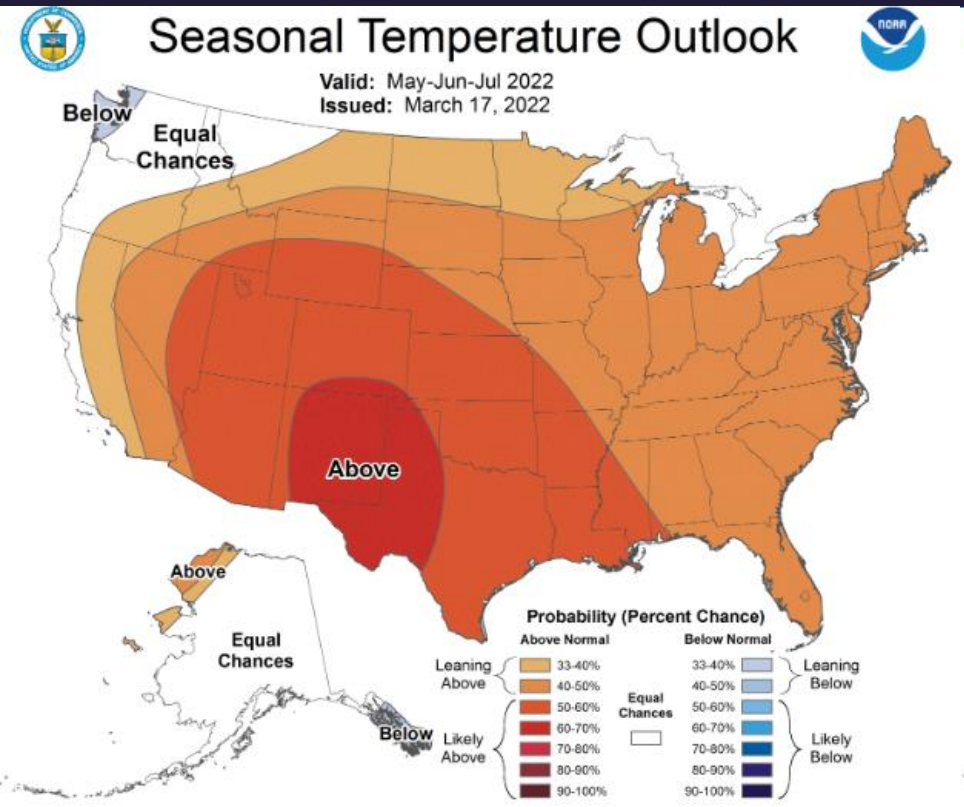


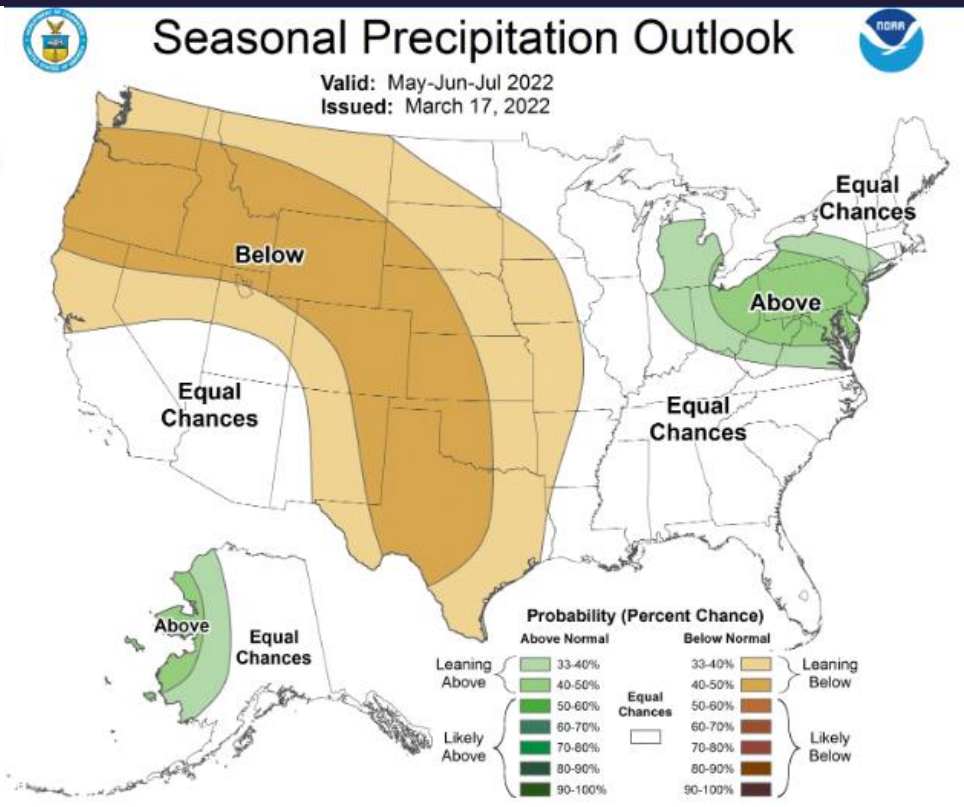


www.cpc.ncep.noaa.gov

Climate Prediction Center Outlook

May-June-July 2022

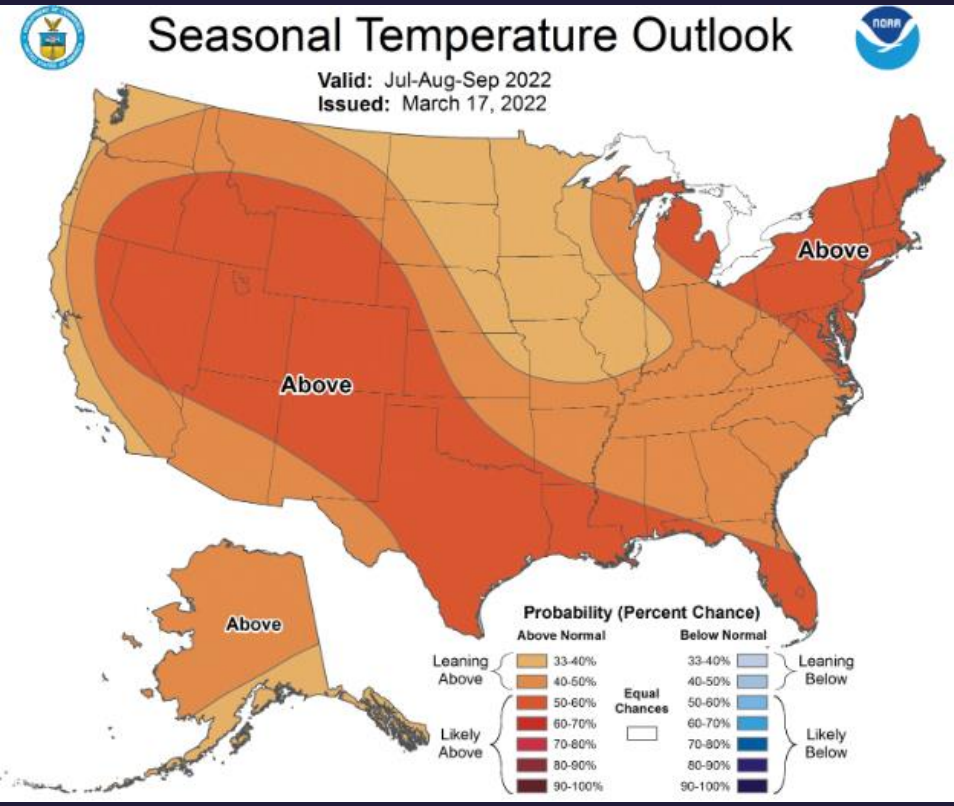


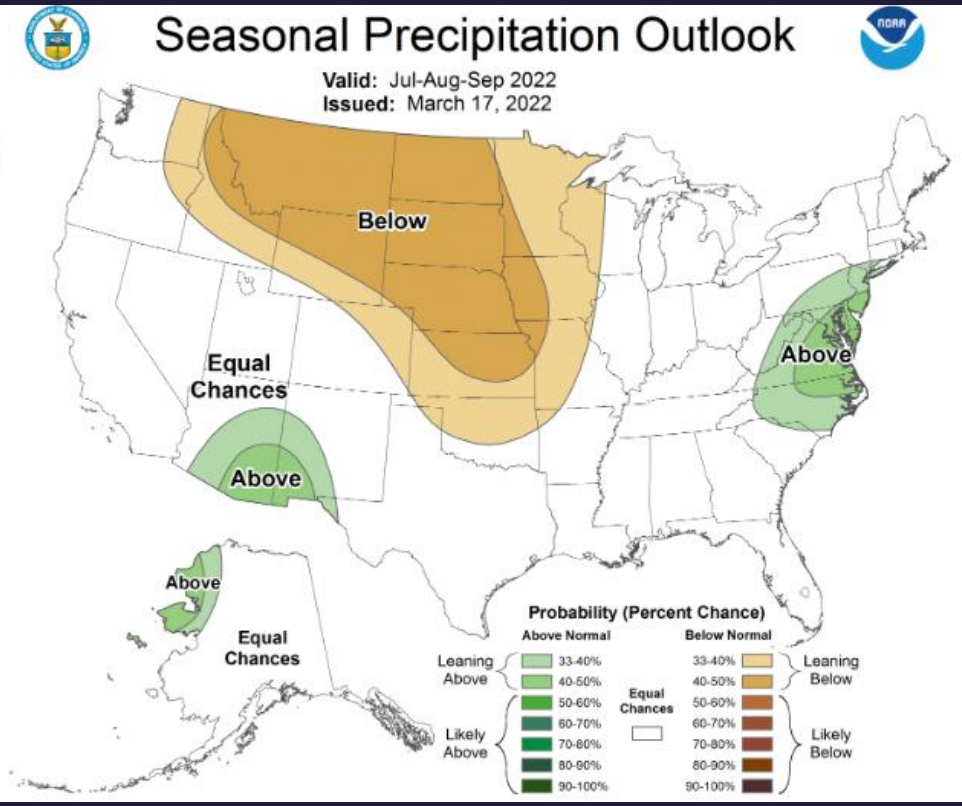


www.cpc.ncep.noaa.gov

Climate Prediction Center Outlook

July-August-September 2022

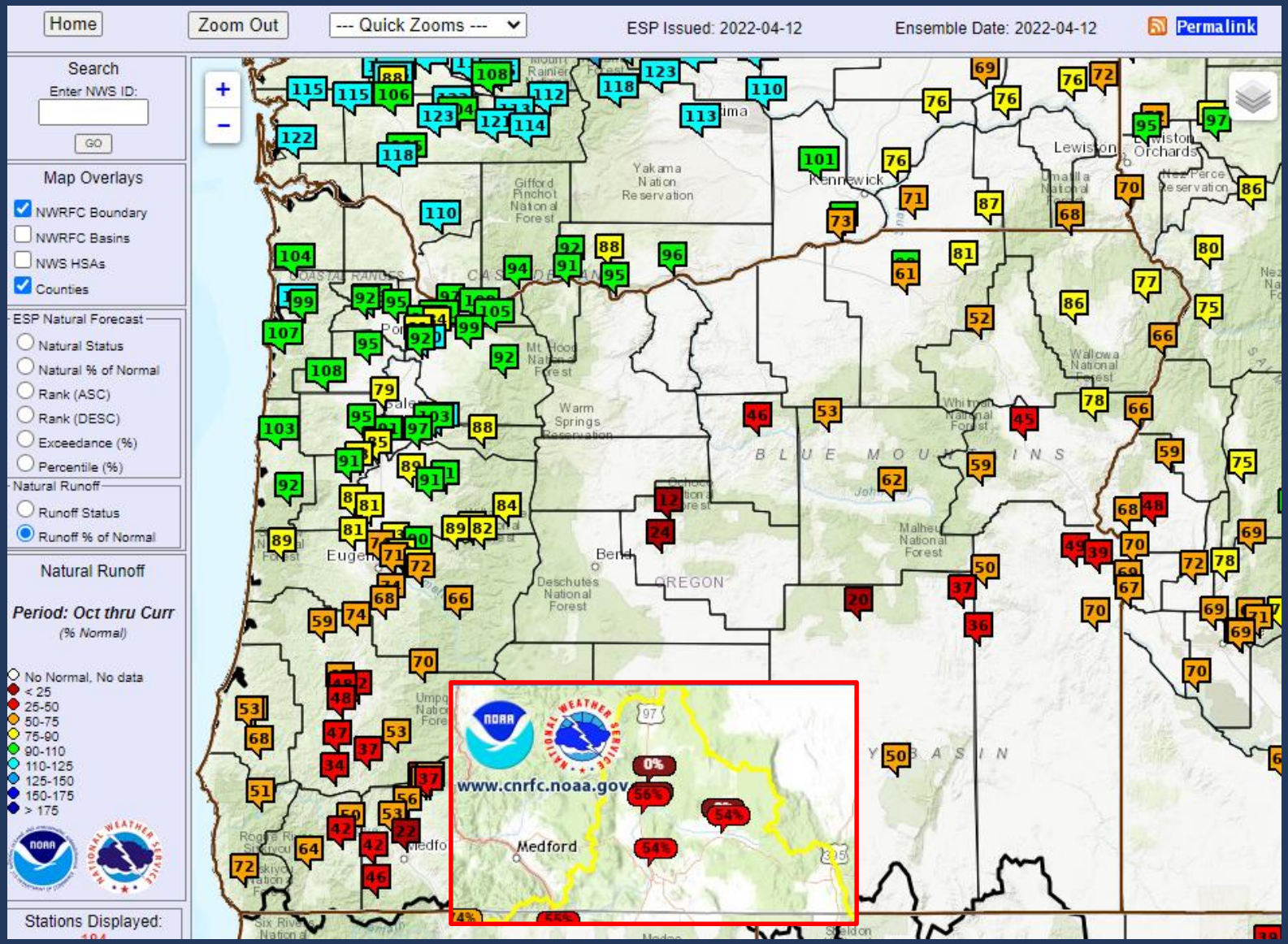




www.cpc.ncep.noaa.gov

Current WY Runoff

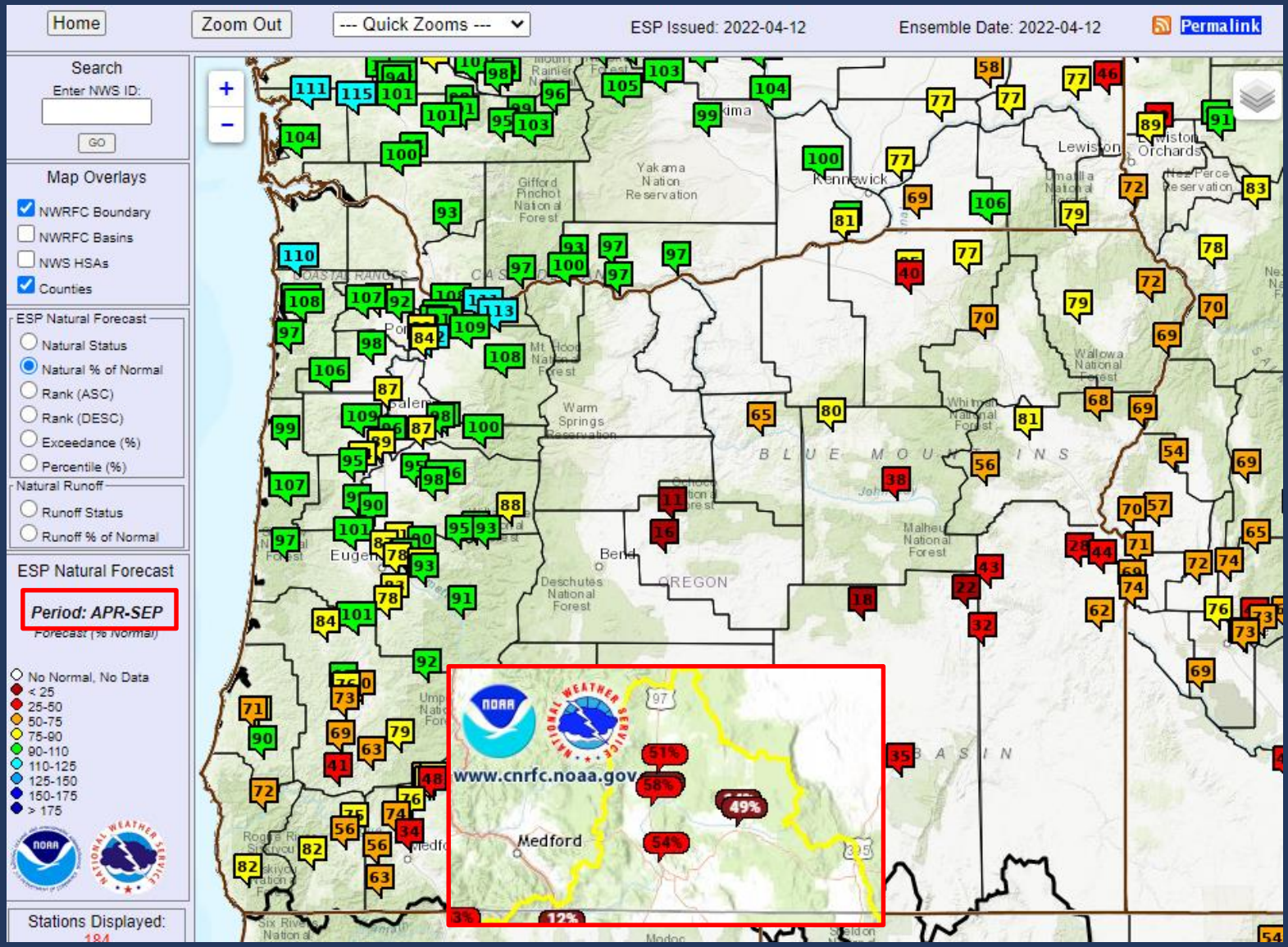
% of Average from Oct 1 – Apr 12



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

Seasonal Volume Forecast

April – September ESP Natural - % of Average



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

Streamflow WY Volume Forecast

Willamette at Salem

WILLAMETTE - AT SALEM (SLMO3)
Forecasts for Water Year 2022

Official Water Supply

ESP with 10 Days QPF ***Ensemble:*** 2022-04-12 ***Issued:*** 2022-04-12

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	3542	4447	87	5718	5119
APR-JUL	3135	4014	88	5232	4554
JAN-SEP	8777	9682	79	10953	12224
JAN-JUL	8370	9249	79	10467	11659
OCT-SEP	12761	13665	82	14936	16605

Experimental Water Supply

HEFS with 15 days EQPF ***Ensemble:*** 2022-04-12 ***Issued:*** 2022-04-12

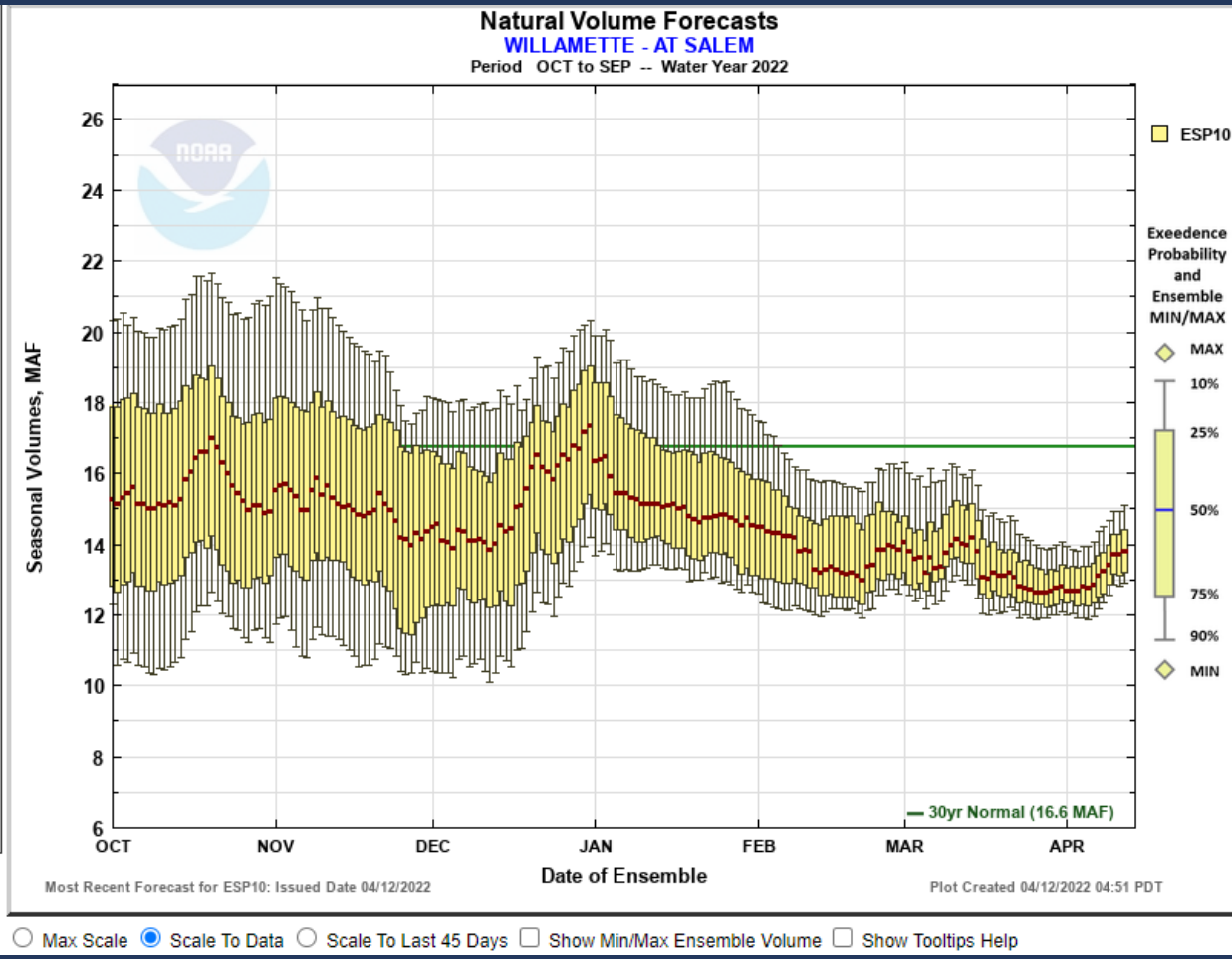
APR-SEP	3509	4366	85	5567	5119
APR-JUL	3140	3873	85	5062	4554
JAN-SEP	8744	9601	79	10802	12224
JAN-JUL	8375	9108	78	10297	11659
OCT-SEP	12728	13584	82	14785	16605

Reference

ESP with 0 Days QPF ***Ensemble:*** 2022-04-12 ***Issued:*** 2022-04-12

APR-SEP	3134	3863	75	5031	5119
APR-JUL	2775	3475	76	4550	4554
JAN-SEP	8369	9098	74	10266	12224
JAN-JUL	8010	8710	75	9785	11659
OCT-SEP	12352	13081	79	14250	16605

Move the mouse over the desired "Forecast Period" to display a graph.



https://www.nwrfc.noaa.gov/natural/plot/nat_forecasts.php?id=SLMO3

Streamflow WY Volume Forecast

ESP 10-day vs last month vs last year (4/12/2021)

Site	Last month's 10-day forecast % normal	This month's 10-day forecast % normal	Last year's 10-day forecast % normal
Willamette R at Salem	80	82	77
Rogue R at Raygold	57	62	65
Umatilla R nr Umatilla	79	78	103
Owyhee Dam	52	69	38
Umpqua nr Elkton	65	67	73
John Day nr John Day	53	50	76

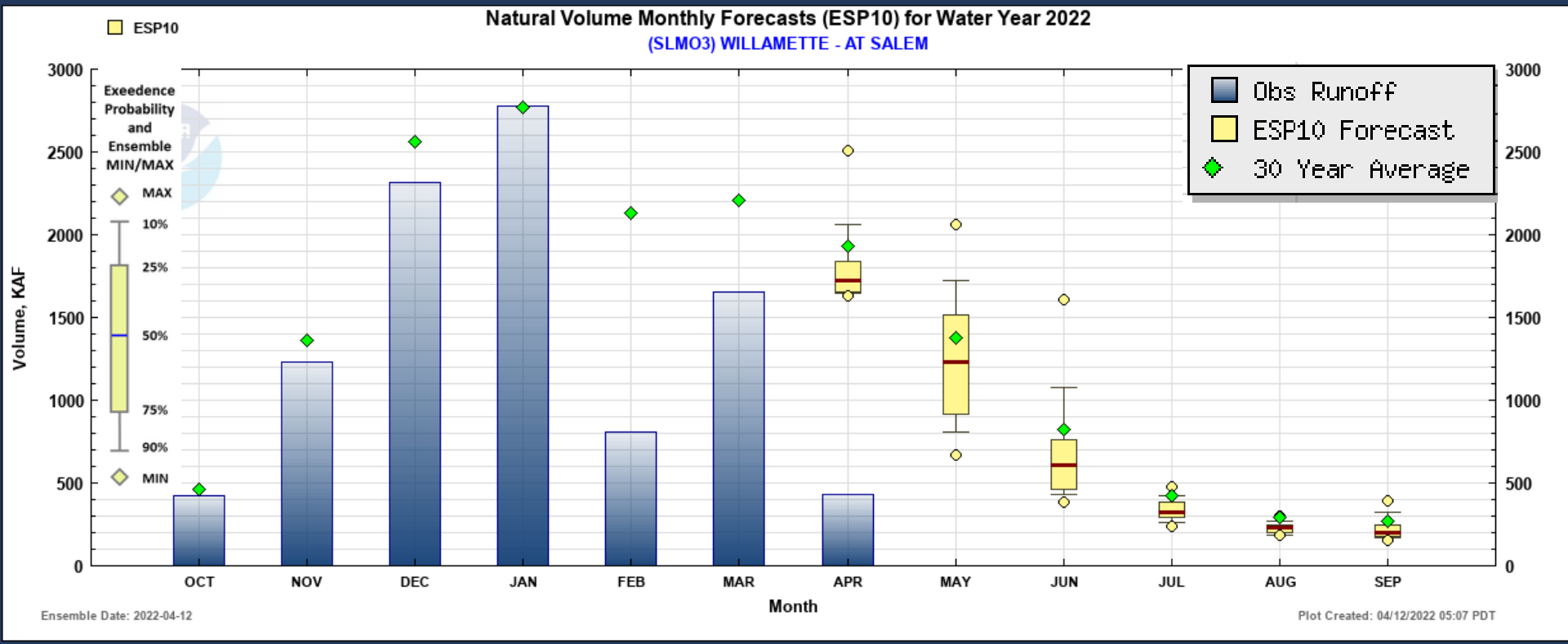
Changes in water supply forecasts since last month are small.

No forecast locations in Lake and Deschutes counties.

Owyhee Dam, Umpqua R, and John Day R are in Malheur, Douglas, and Grant counties respectively.

Streamflow WY Monthly Volume Forecast

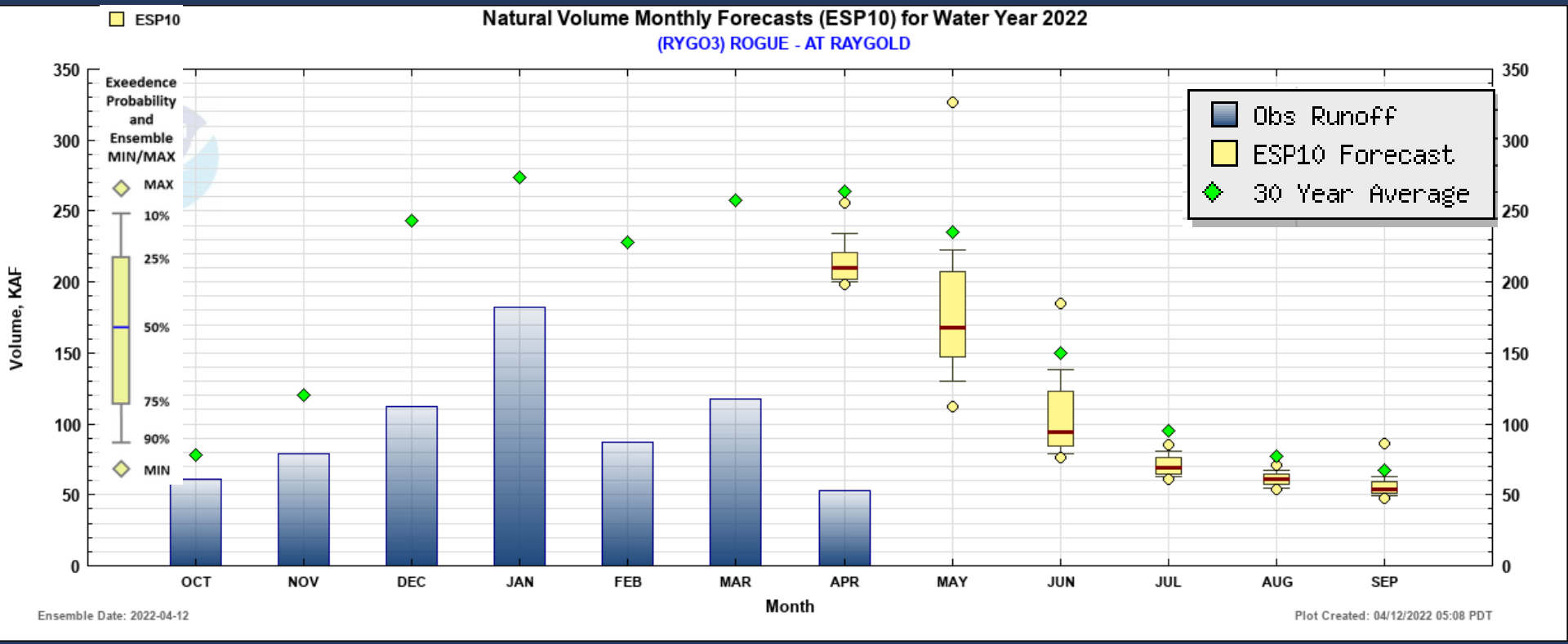
Willamette at Salem



https://www.nwrfc.noaa.gov/natural/plot/monthly/monthly_natural_forecasts.php?id=SLMO3

Streamflow WY Monthly Volume Forecast

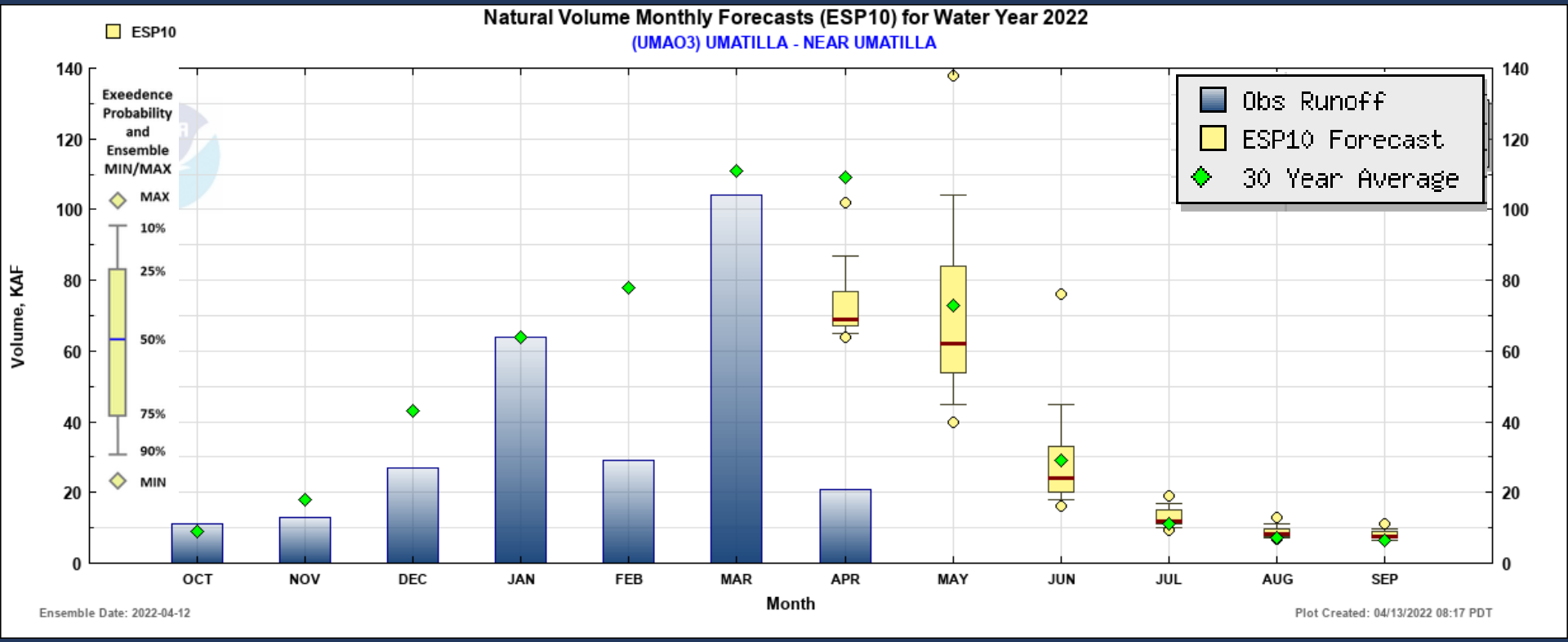
Rogue near Raygold



https://www.nwrfc.noaa.gov/natural/plot/monthly/monthly_natural_forecasts.php?id=RYGO3

Streamflow WY Monthly Volume Forecast

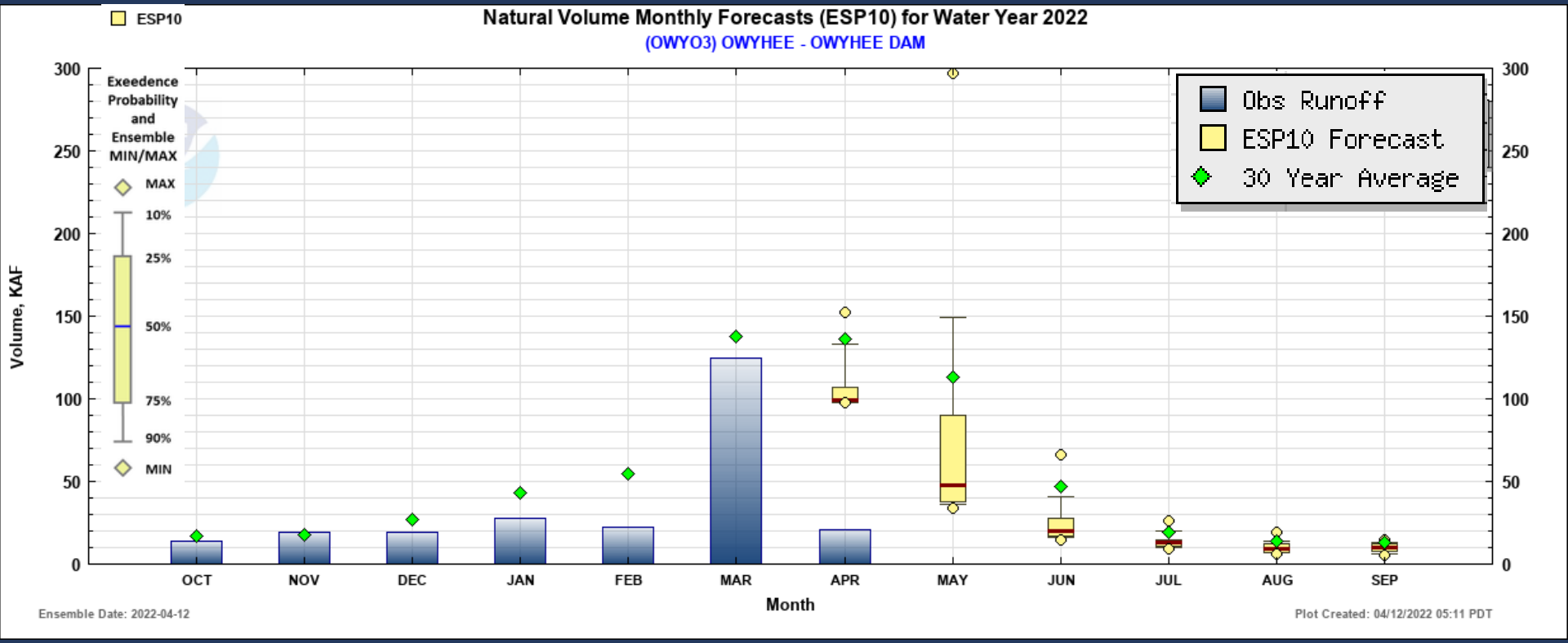
Umatilla R nr Umatilla



https://www.nwrfc.noaa.gov/natural/plot/monthly/monthly_natural_forecasts.php?id=UMAO3

Streamflow WY Monthly Volume Forecast

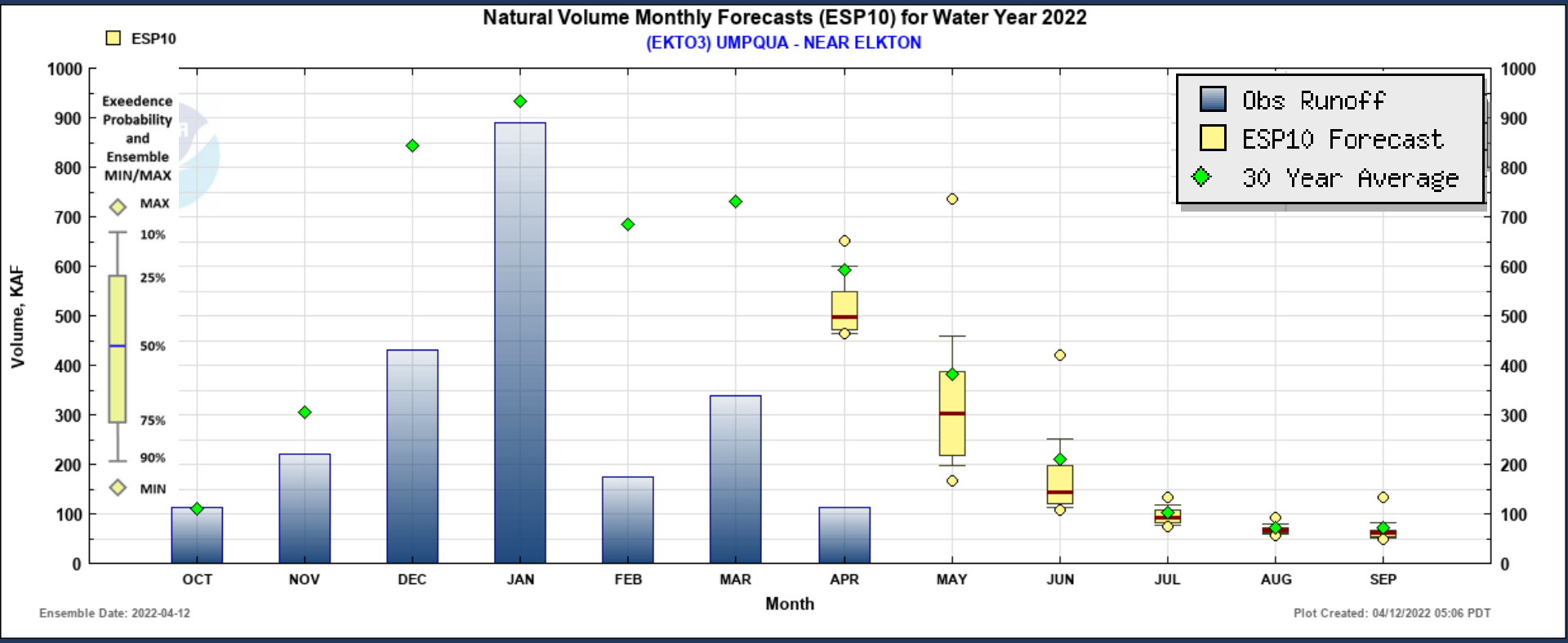
Owyhee Dam (Malheur County)



https://www.nwrfc.noaa.gov/natural/plot/monthly/monthly_natural_forecasts.php?id=SLM03

Streamflow WY Monthly Volume Forecast

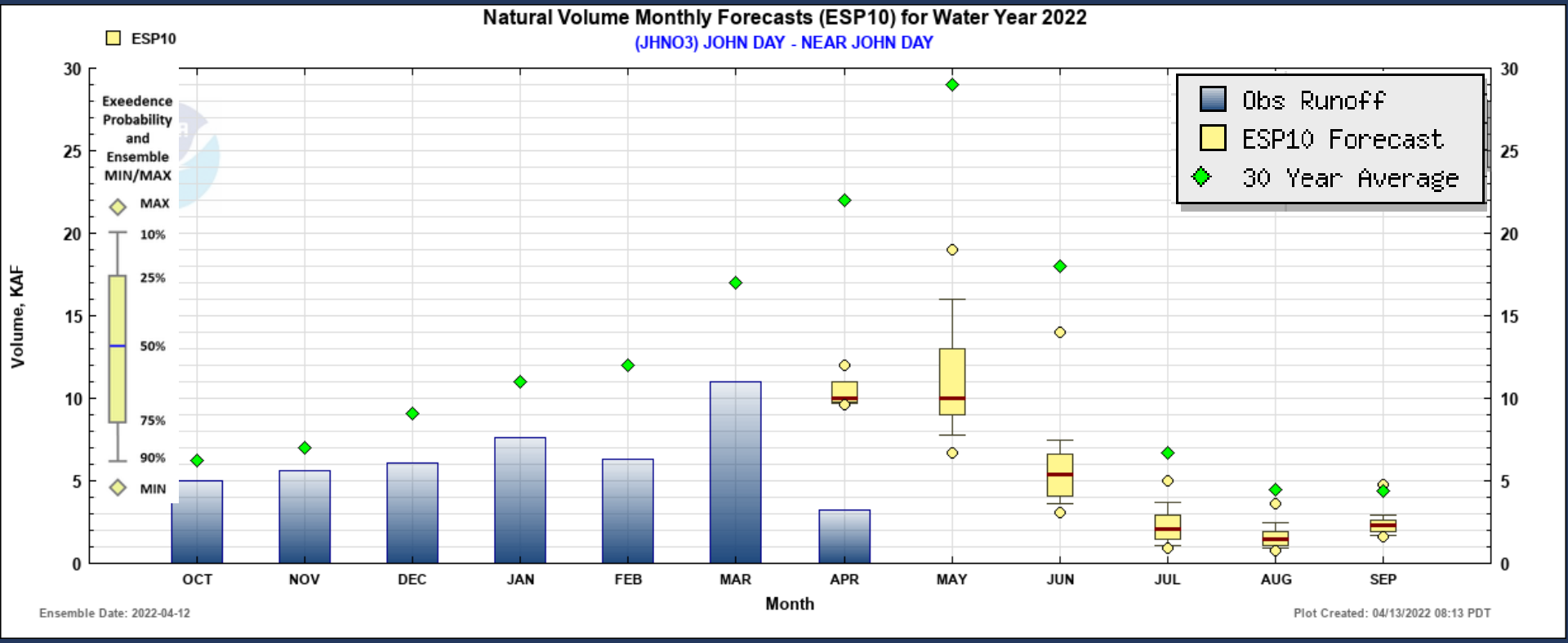
Umpqua R nr Elkton (Douglas County)



https://www.nwrfc.noaa.gov/natural/plot/monthly/monthly_natural_forecasts.php?id=EKTO3

Streamflow WY Monthly Volume Forecast

John Day R nr John Day (Grant County)



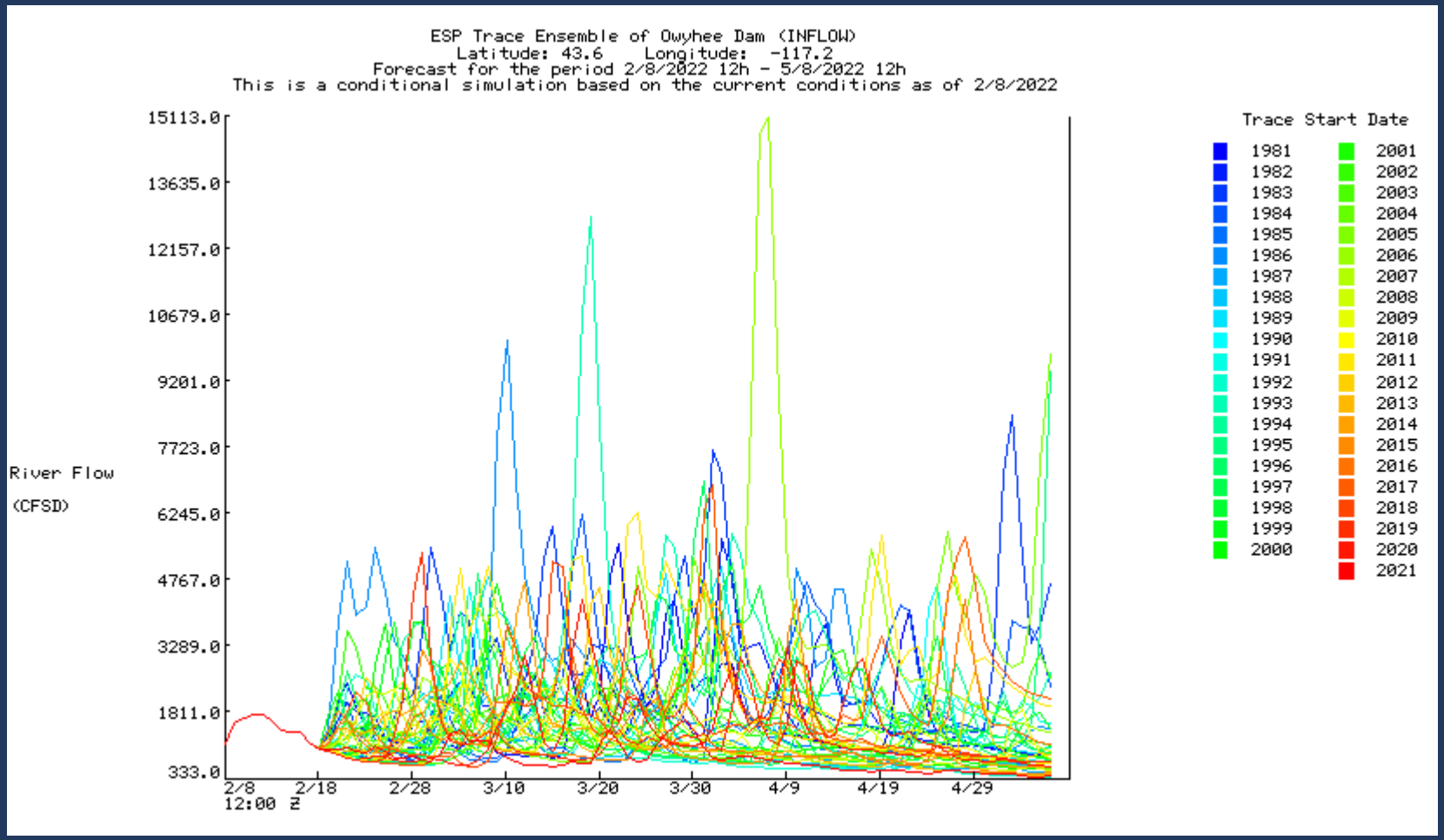
https://www.nwrfc.noaa.gov/natural/plot/monthly/monthly_natural_forecasts.php?id=JHNO3

NWRFC Water Supply Briefings Schedule

2022 Schedule for *Live* Water Supply Briefings					
Jan	Feb	Mar	Apr	May	June
6	*3*	*3*	*7*	*5*	*TBD*
All presentations held at 10:00am PDT/PST, unless noted otherwise					
Click here for Registration Information					

https://www.nwrfc.noaa.gov/water_supply/ws_schd.cgi?version=20190204v1

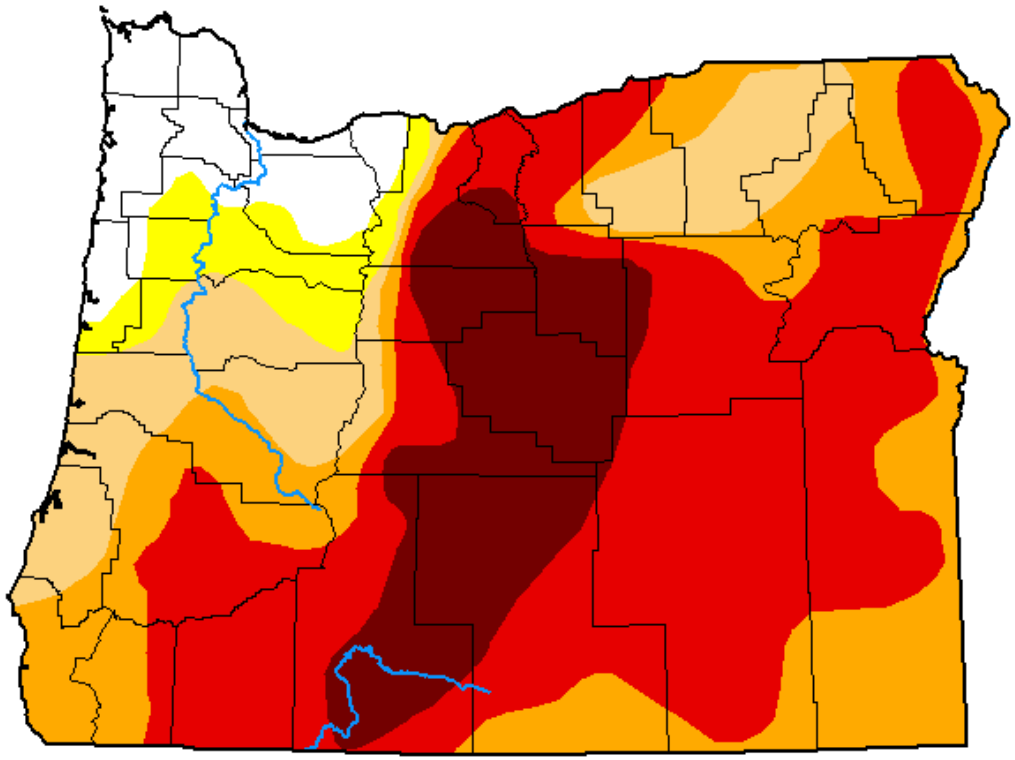
Extra slide- NWRFC ESP Traces
Owyhee Dam



https://www.nwrfc.noaa.gov/espadp/espadp.cgi

U.S. Drought Monitor

Oregon



April 5, 2022

(Released Thursday, Apr. 7, 2022)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	7.16	92.84	88.10	75.88	54.05	15.01
Last Week *03-29-2022*	7.16	92.84	88.44	74.25	50.28	15.01
3 Months Ago *01-04-2022*	4.16	95.84	89.75	75.37	50.84	17.27
Start of Calendar Year *01-04-2022*	4.16	95.84	89.75	75.37	50.84	17.27
Start of Water Year *09-28-2021*	0.00	100.00	100.00	96.47	72.10	26.59
One Year Ago *04-06-2021*	17.73	82.27	65.94	41.68	13.22	1.48

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

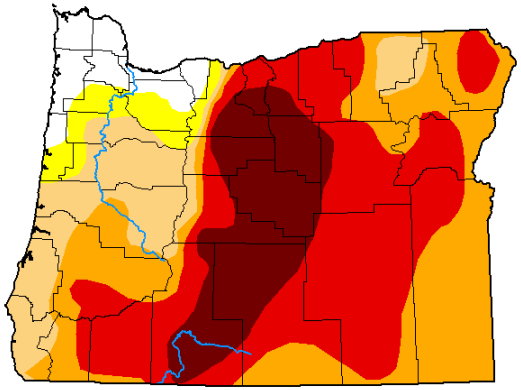
Author:

Deborah Bathke
National Drought Mitigation Center

droughtmonitor.unl.edu

1-month ago…

U.S. Drought Monitor
Oregon



March 8, 2022
(Released Thursday, Mar. 10, 2022)
Valid 7 a.m. EST

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	5.66	94.34	90.01	76.16	50.07	16.22
Last Week 03-01-2022	4.97	95.03	90.65	77.27	45.61	16.22
3 Months Ago 12-07-2021	1.39	98.61	98.06	91.97	67.56	20.86
Start of Calendar Year 01-04-2022	4.16	95.84	89.75	75.37	50.84	17.27
Start of Water Year 09-28-2021	0.00	100.00	100.00	96.47	72.10	26.59
One Year Ago 03-09-2021	19.33	80.67	67.28	43.99	12.53	0.00

Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

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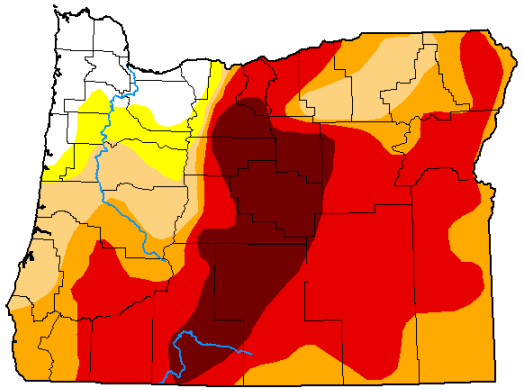
Author:
Brian Fuchs
National Drought Mitigation Center

droughtmonitor.unl.edu

Current…

U.S. Drought Monitor
Oregon



April 5, 2022
(Released Thursday, Apr. 7, 2022)
Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	7.16	92.84	88.10	75.88	54.05	15.01
Last Week 03-29-2022	7.16	92.84	88.44	74.25	50.28	15.01
3 Months Ago 01-04-2022	4.16	95.84	89.75	75.37	50.84	17.27
Start of Calendar Year 01-04-2022	4.16	95.84	89.75	75.37	50.84	17.27
Start of Water Year 09-28-2021	0.00	100.00	100.00	96.47	72.10	26.59
One Year Ago 04-06-2021	17.73	82.27	65.94	41.68	13.22	1.48

Intensity:
None
D0 Abnormally Dry
D1 Moderate Drought
D2 Severe Drought
D3 Extreme Drought
D4 Exceptional Drought

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Author:
Deborah Bathke
National Drought Mitigation Center

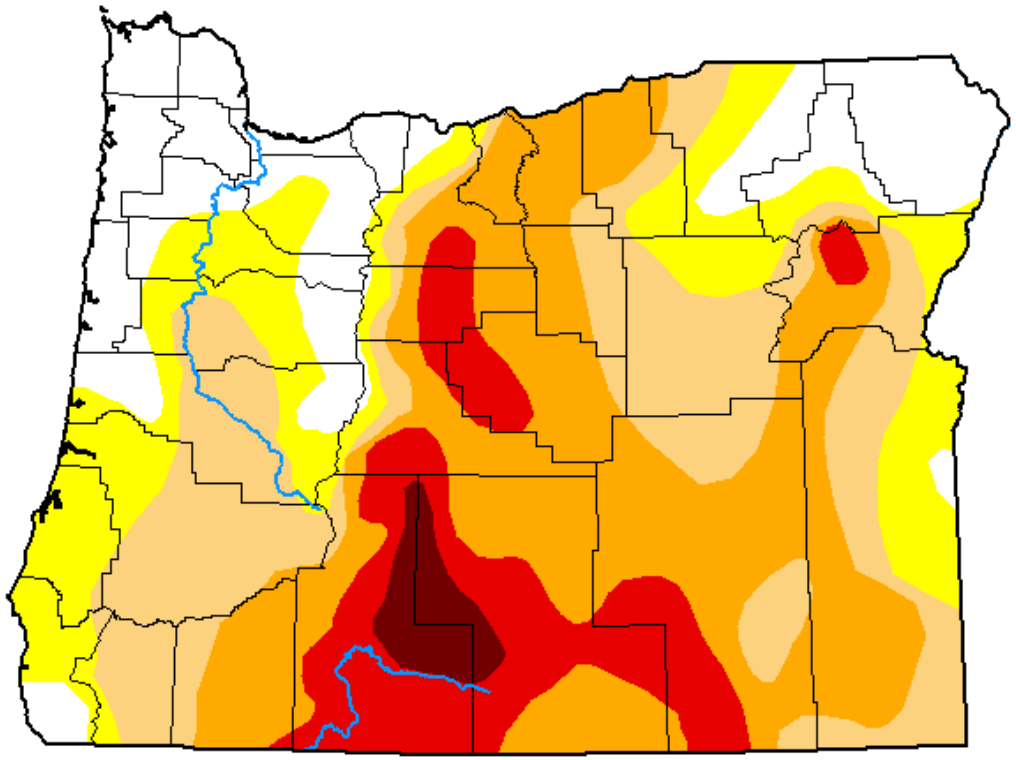
droughtmonitor.unl.edu

Some improvements in and around Umatilla and Morrow Counties and the north Oregon Cascades and NW Oregon

Some degradations throughout southern Oregon and Wallowa and Baker Counties

U.S. Drought Monitor

Oregon



April 13, 2021

(Released Thursday, Apr. 15, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	16.95	83.05	65.95	42.60	14.12	2.22
Last Week *04-06-2021*	17.73	82.27	65.94	41.68	13.22	1.48
3 Months Ago *01-12-2021*	8.91	91.09	75.17	60.94	25.97	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 *04-14-2020*	10.53	89.47	60.46	26.20	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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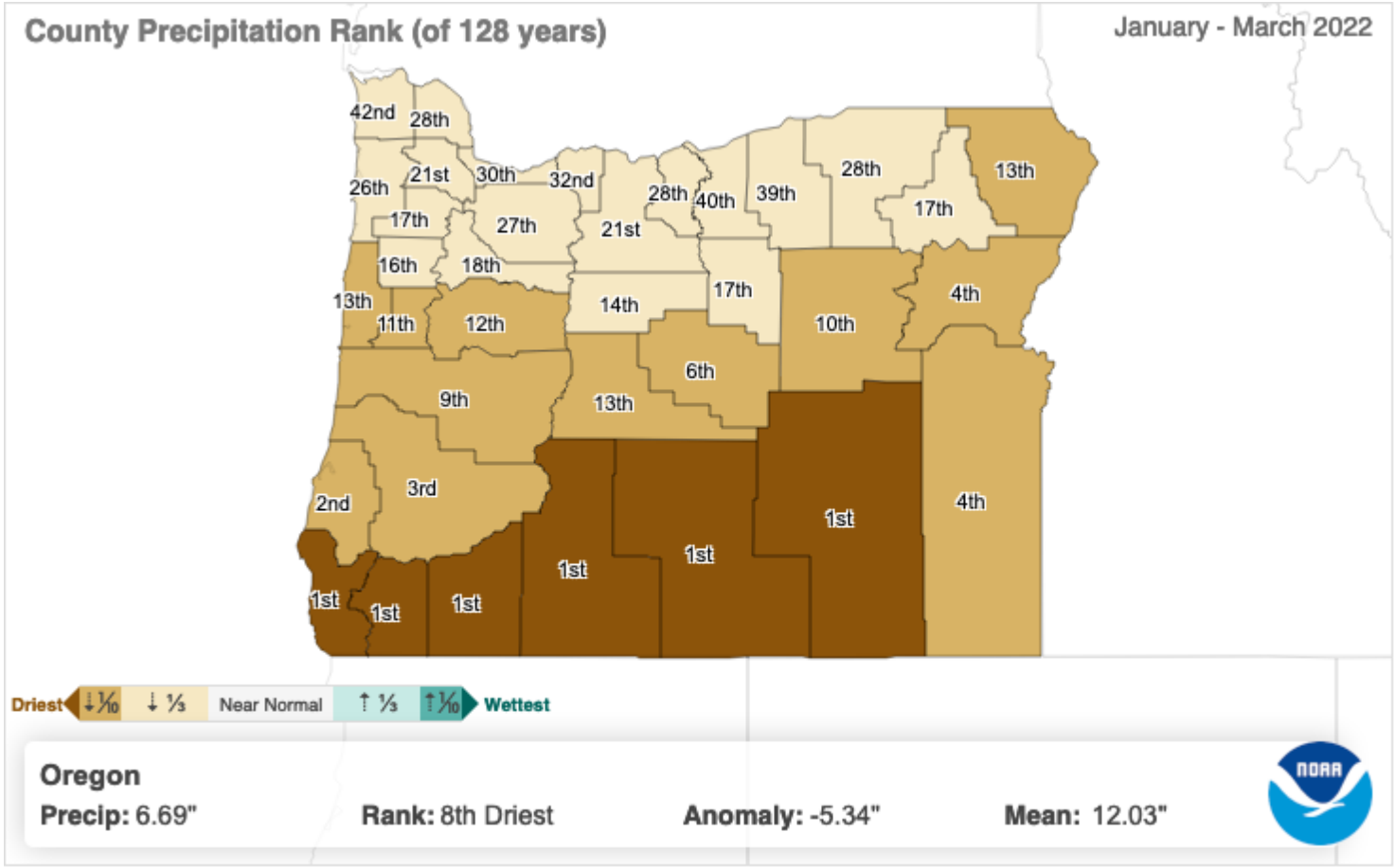
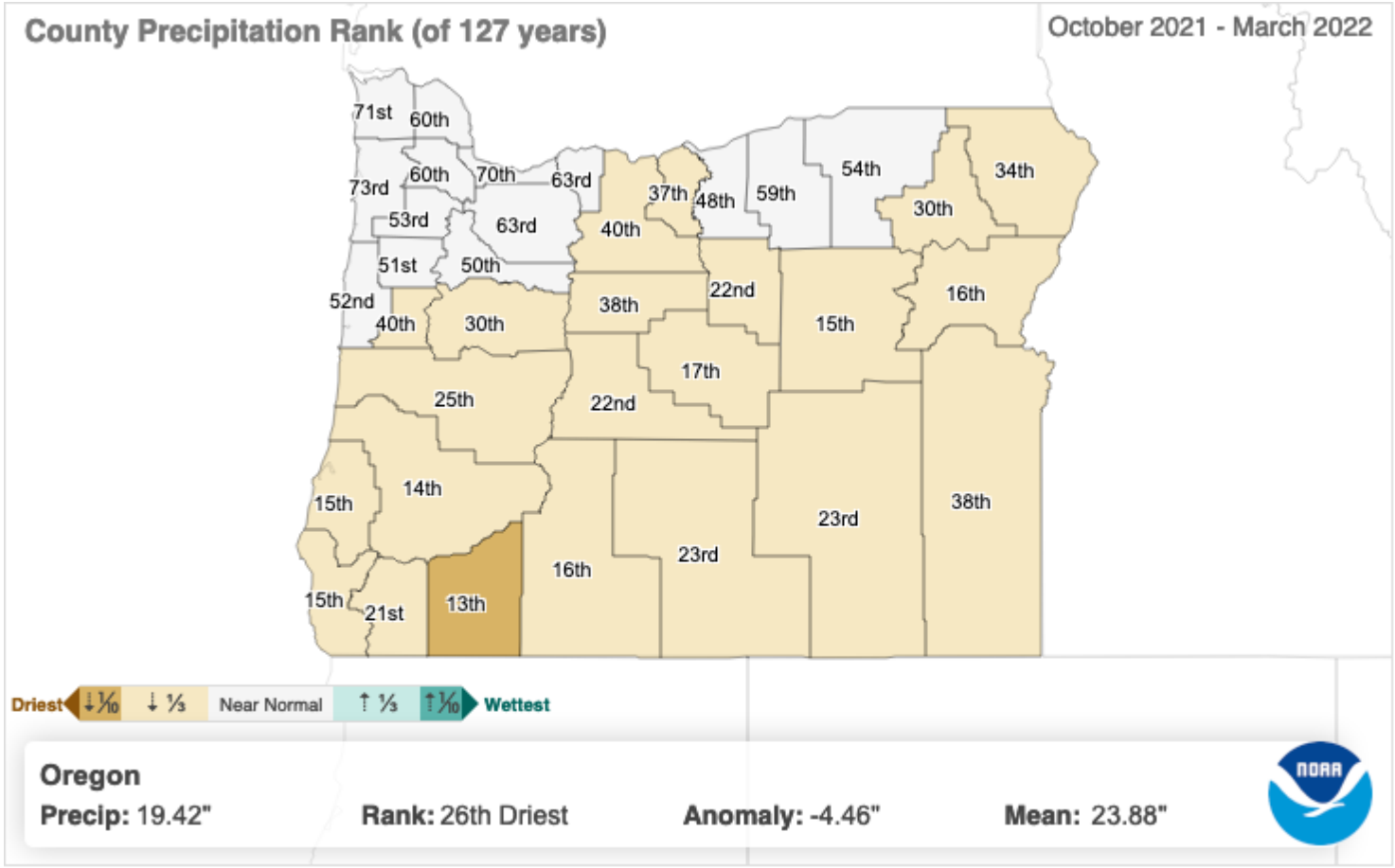
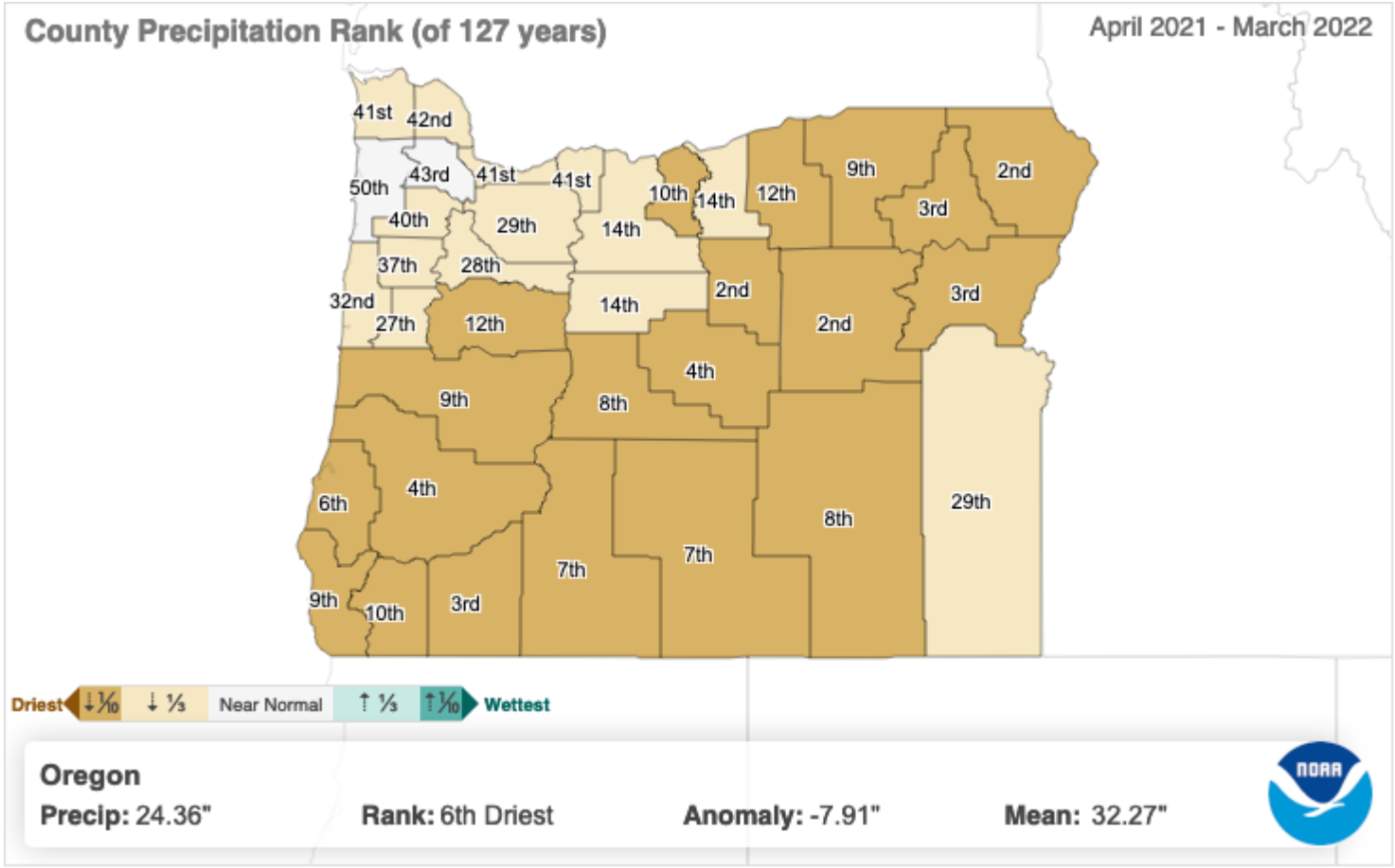
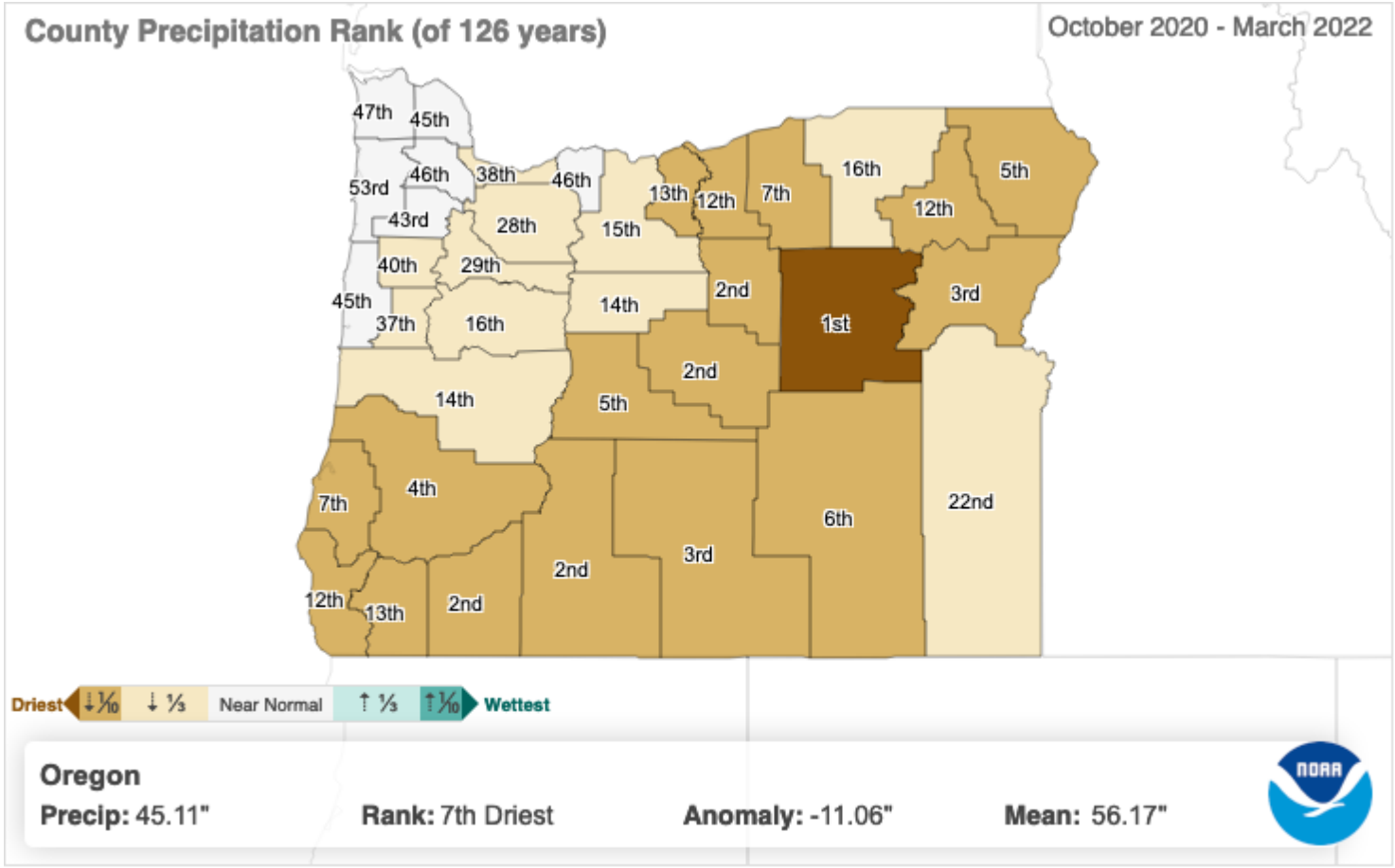
National Drought Mitigation Center

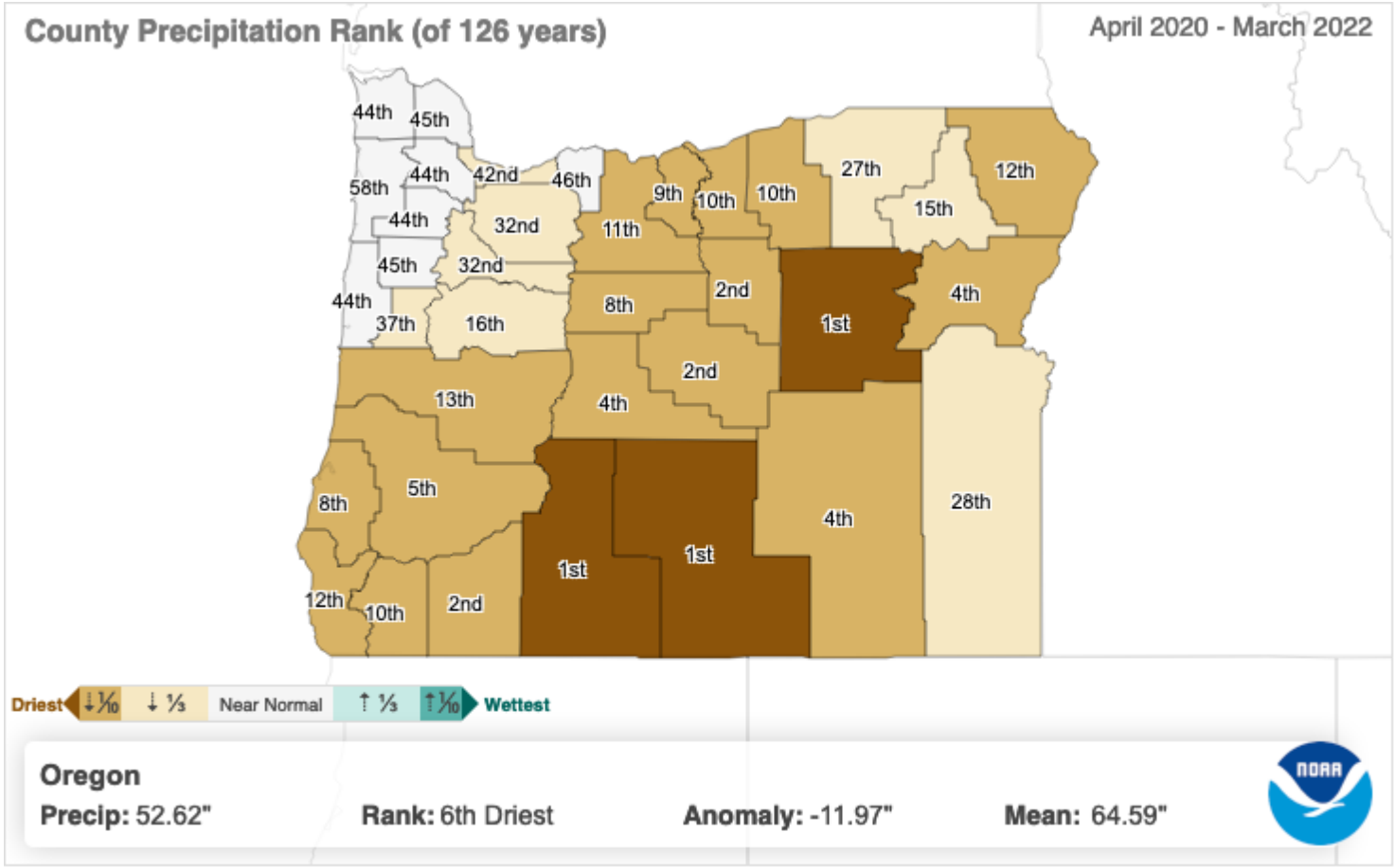
droughtmonitor.unl.edu

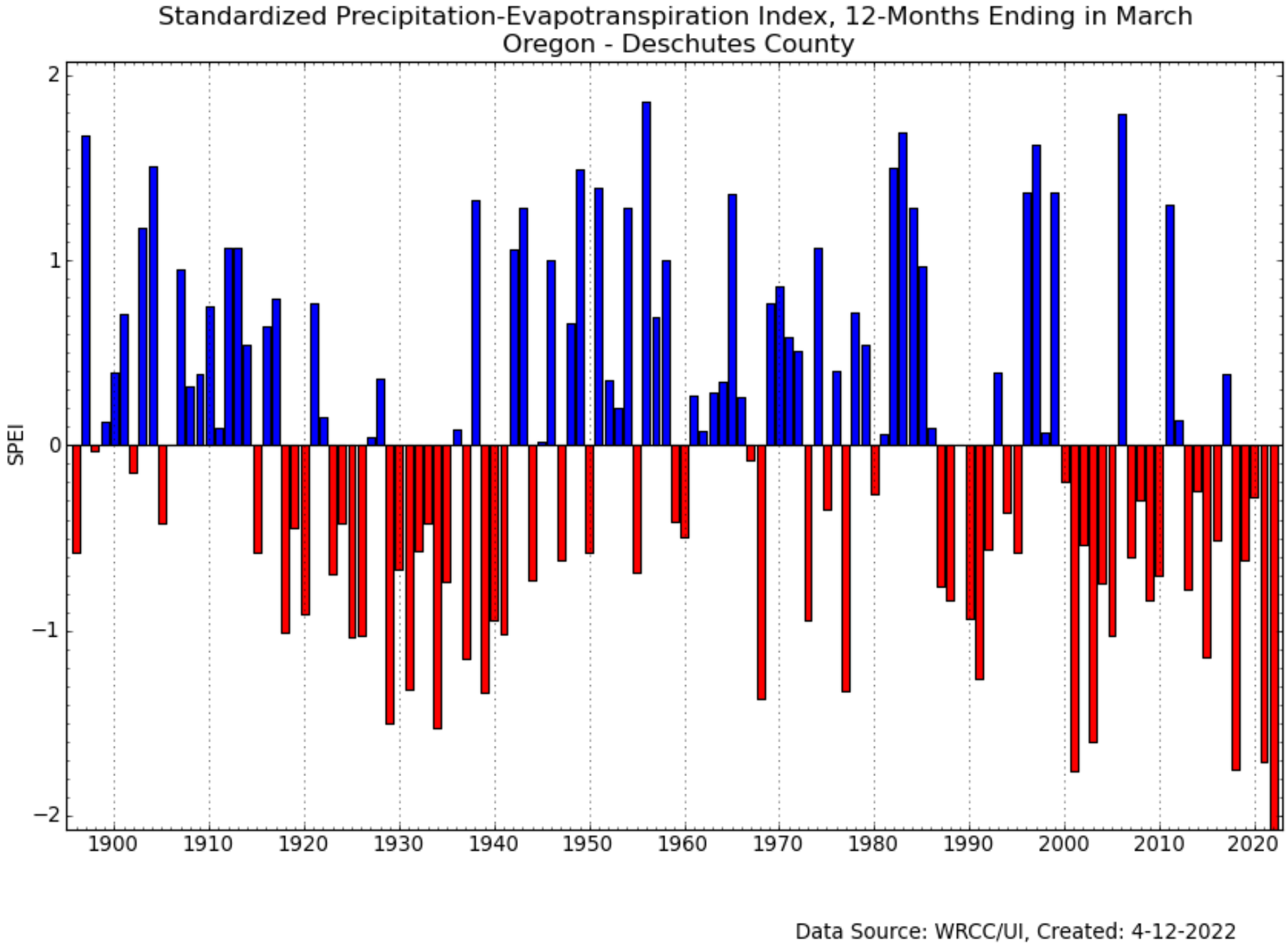

County Precipitation Rank (of 128 years)
January - March 2022
42nd
28th
26th
21st
30th
32nd
28th
40th
39th
28th
13th
17th
17th
27th
21st
16th
18th
13th
11th
12th
14th
17th
10th
4th
6th
9th
13th
3rd
2nd
1st
4th
1st
1st
1st
1st
1st
1st
Driest
↓1/10
↓ 1/3
Near Normal
↑ 1/3
↑1/10
Wettest
Oregon
Precip: 6.69"
Rank: 8th Driest
Anomaly: -5.34"
Mean: 12.03"
NOAA

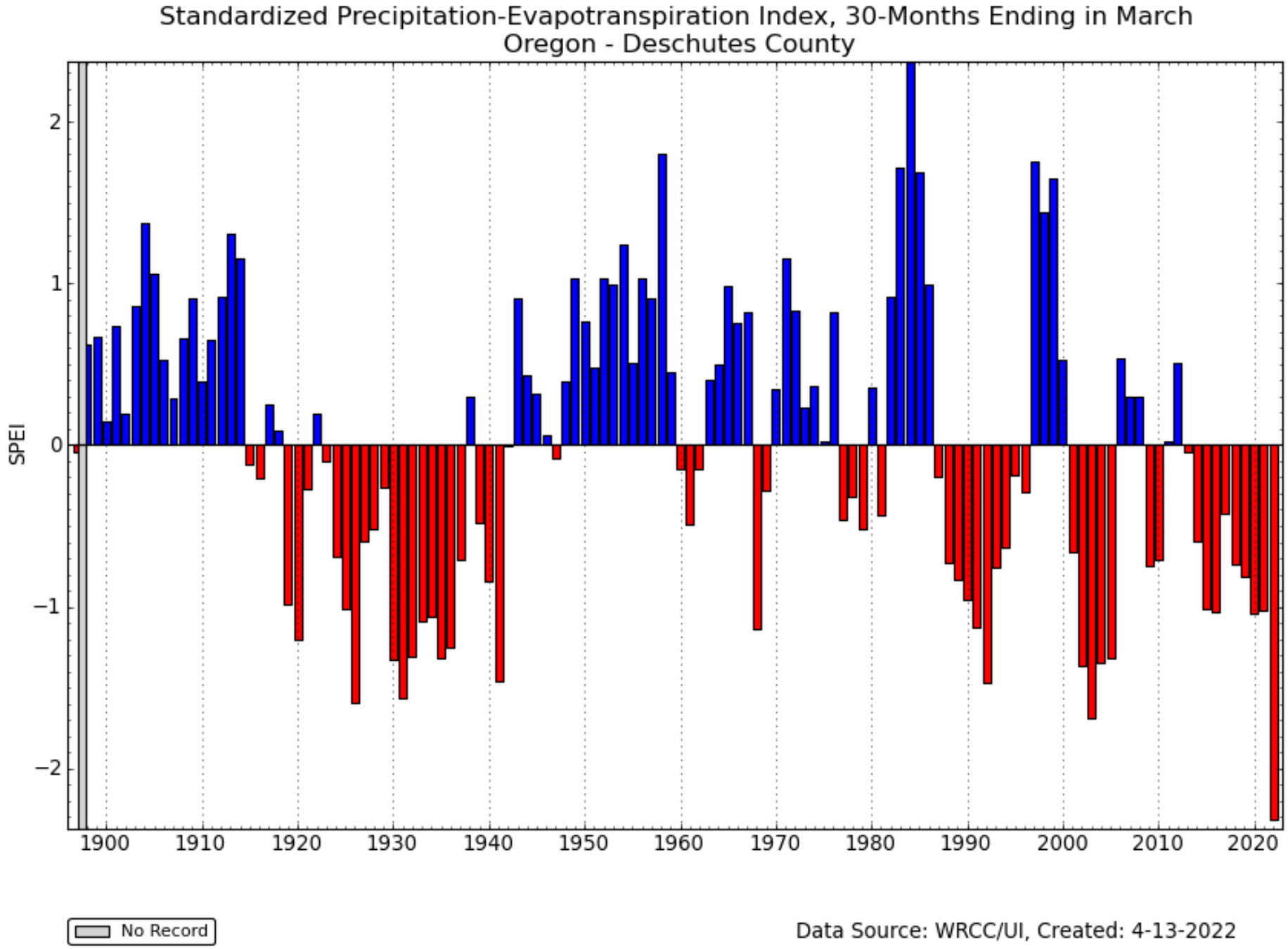

County Precipitation Rank (of 127 years)
October 2021 - March 2022
71st
60th
60th
70th
63rd
73rd
53rd
63rd
51st
50th
52nd
40th
30th
37th
48th
59th
54th
34th
30th
40th
38th
22nd
16th
15th
17th
25th
22nd
15th
14th
23rd
38th
16th
23rd
15th
21st
13th
Driest
Near Normal
Wettest
Oregon
Precip: 19.42"
Rank: 26th Driest
Anomaly: -4.46"
Mean: 23.88"
NOAA

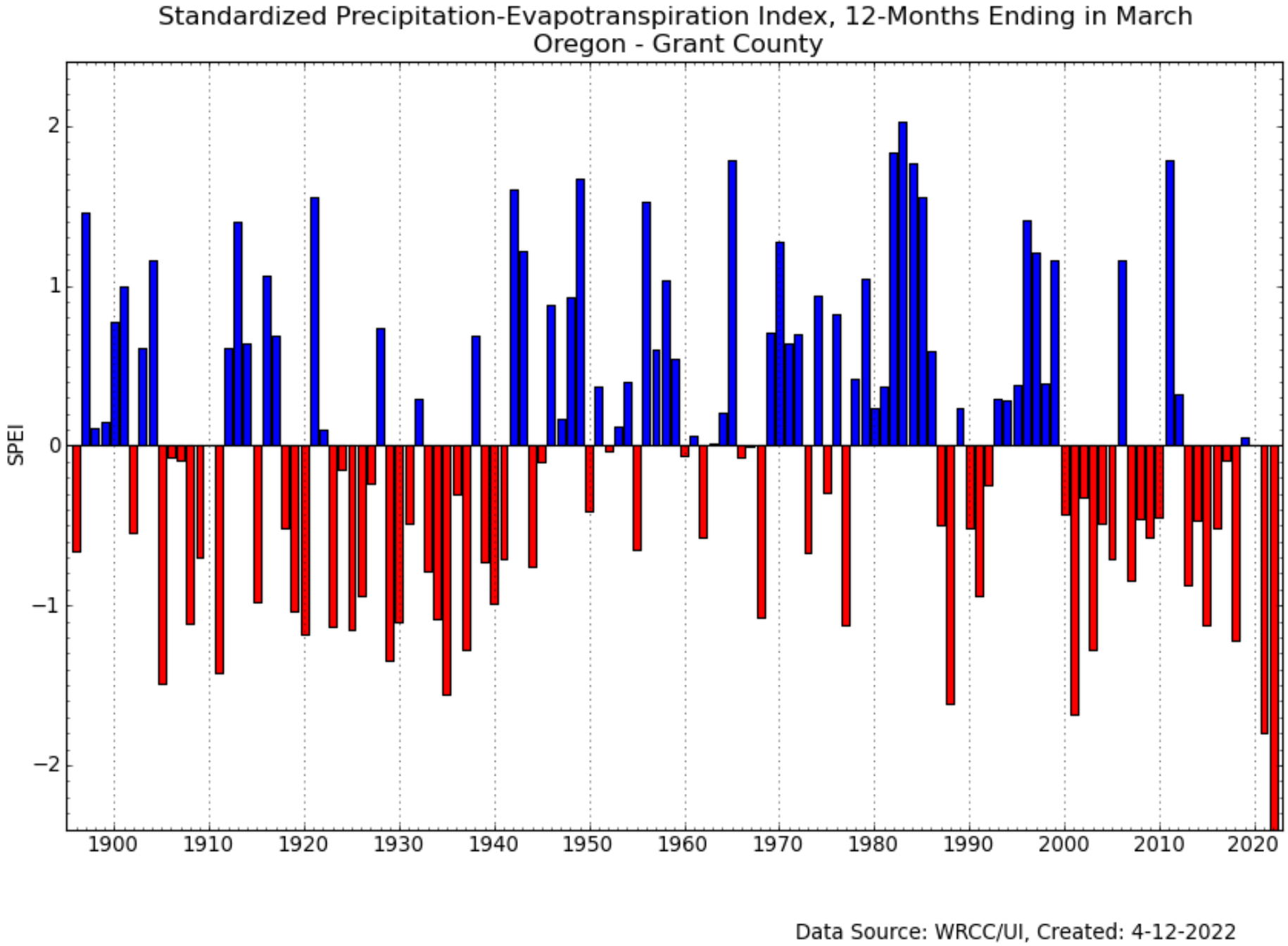

County Precipitation Rank (of 127 years)
April 2021 - March 2022
41st
42nd
43rd
41st
41st
50th
40th
29th
14th
10th
14th
12th
9th
2nd
3rd
37th
28th
32nd
27th
12th
14th
2nd
2nd
3rd
4th
9th
8th
6th
4th
8th
29th
7th
7th
9th
10th
3rd
Driest
Near Normal
Wettest
Oregon
Precip: 24.36"
Rank: 6th Driest
Anomaly: -7.91"
Mean: 32.27"
NOAA

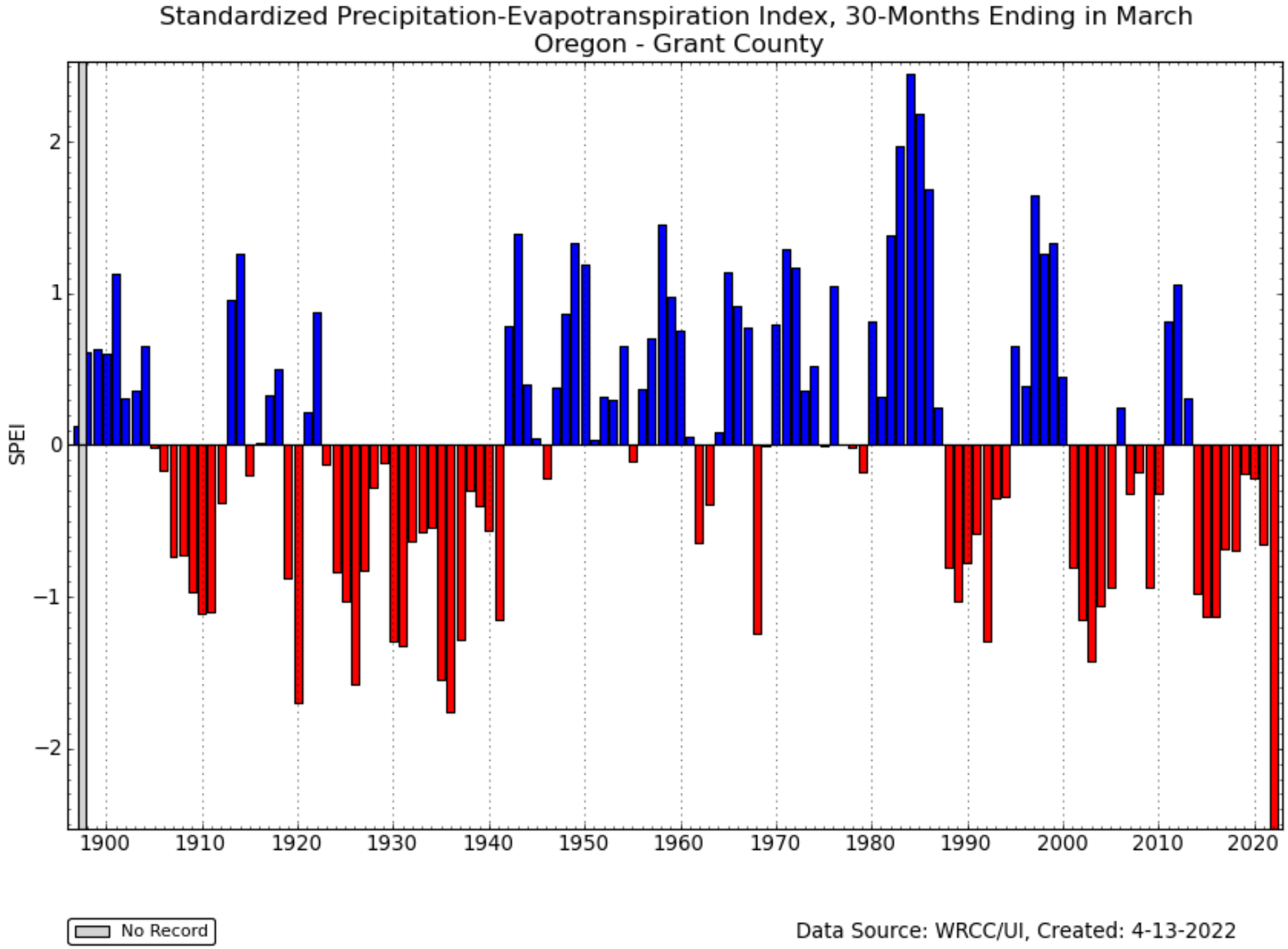

County Precipitation Rank (of 126 years)
October 2020 - March 2022
47th
45th
53rd
46th
38th
46th
43rd
28th
15th
13th
12th
7th
16th
12th
5th
40th
29th
45th
37th
16th
14th
2nd
1st
3rd
2nd
14th
5th
7th
4th
6th
22nd
3rd
2nd
12th
13th
2nd
Driest
Near Normal
Wettest
Oregon
Precip: 45.11"
Rank: 7th Driest
Anomaly: -11.06"
Mean: 56.17"
NOAA

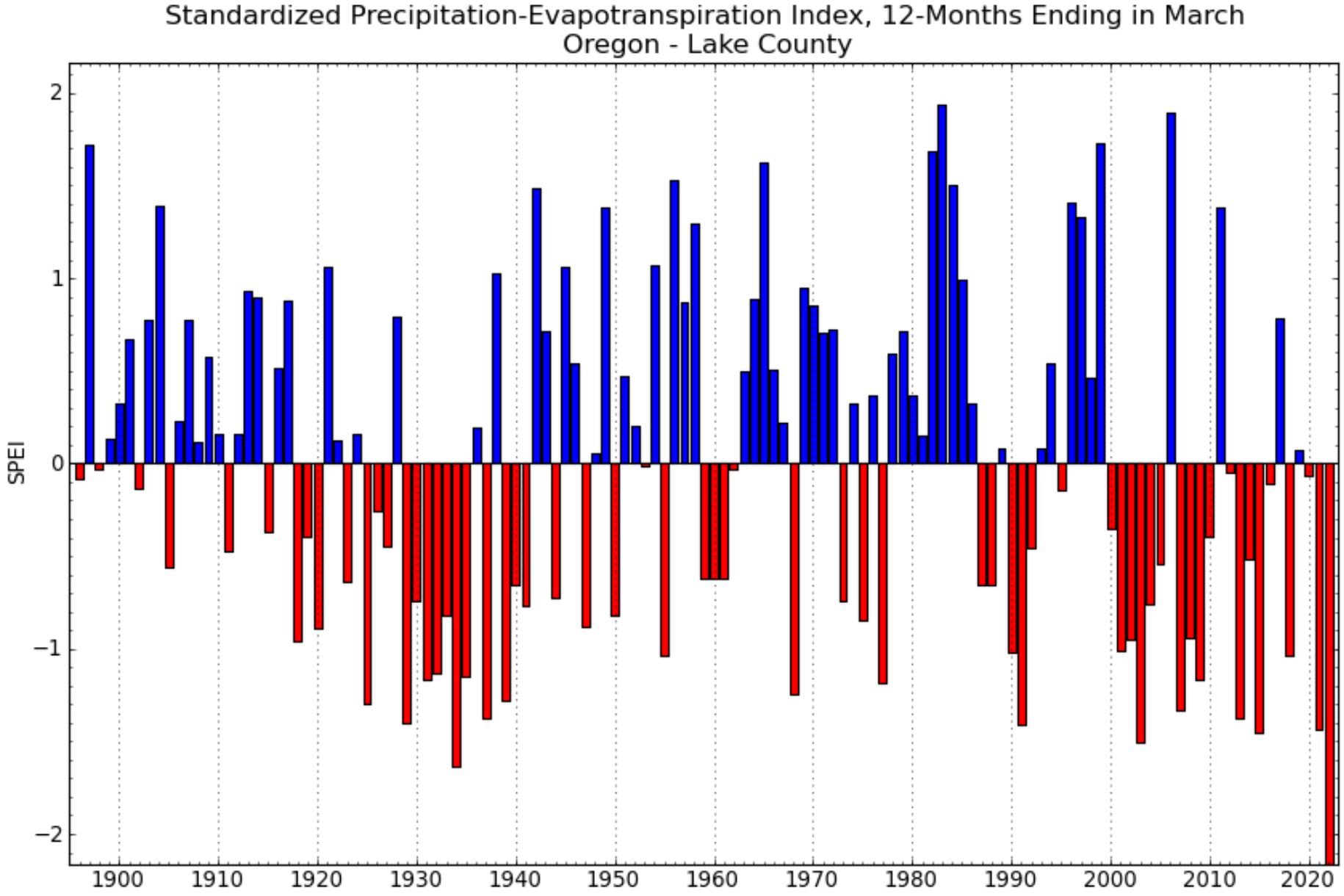

County Precipitation Rank (of 126 years)
April 2020 - March 2022
44th
45th
58th
44th
42nd
46th
44th
32nd
45th
32nd
44th
37th
16th
9th
10th
10th
27th
12th
15th
11th
2nd
8th
1st
4th
2nd
13th
4th
8th
5th
1st
1st
4th
28th
12th
10th
2nd
Driest
Near Normal
Wettest
Oregon
Precip: 52.62"
Rank: 6th Driest
Anomaly: -11.97"
Mean: 64.59"
NOAA

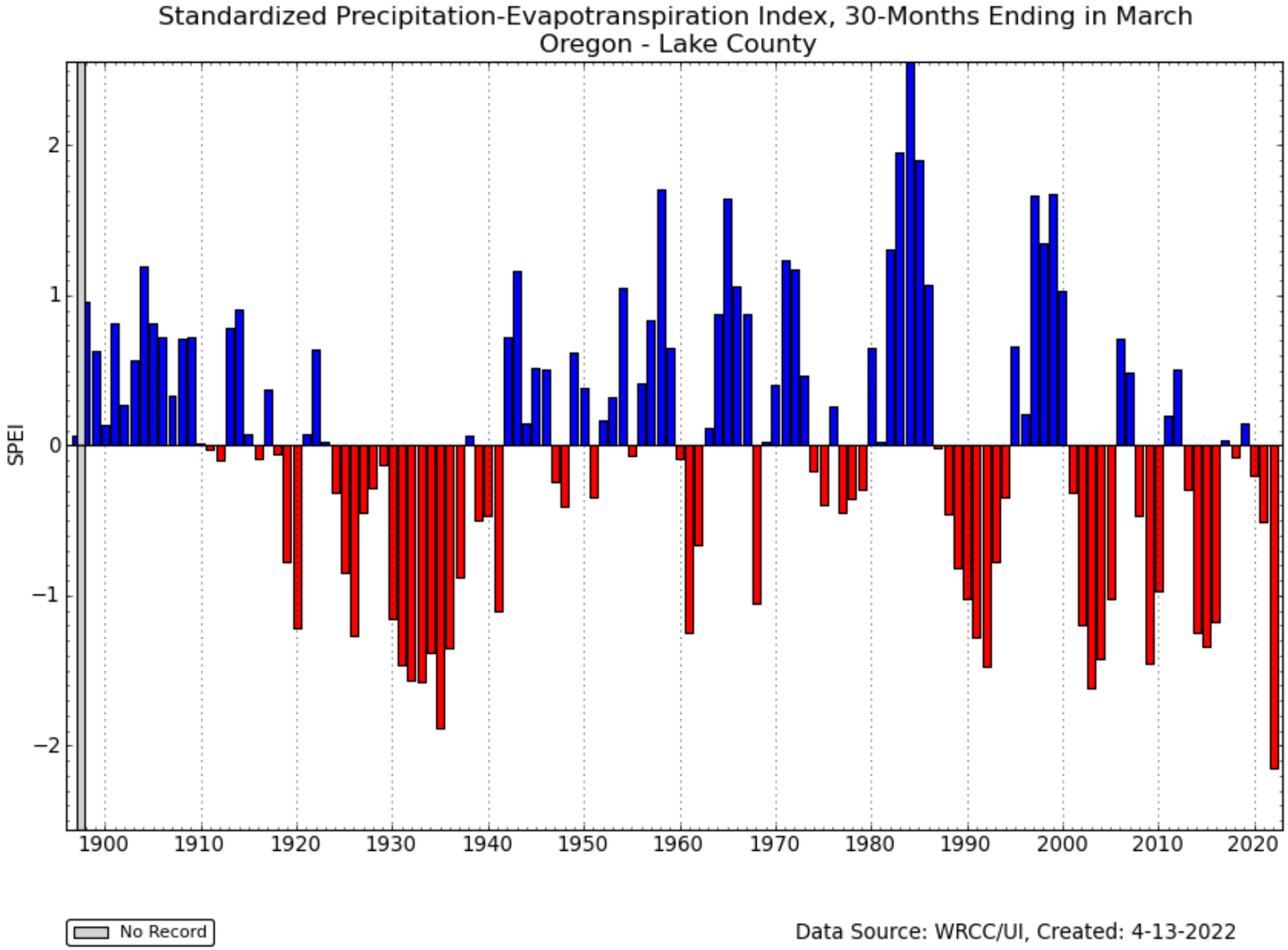

Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in March
Oregon - Deschutes County
SPEI
2
1
0
−1
−2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Data Source: WRCC/UI, Created: 4-12-2022

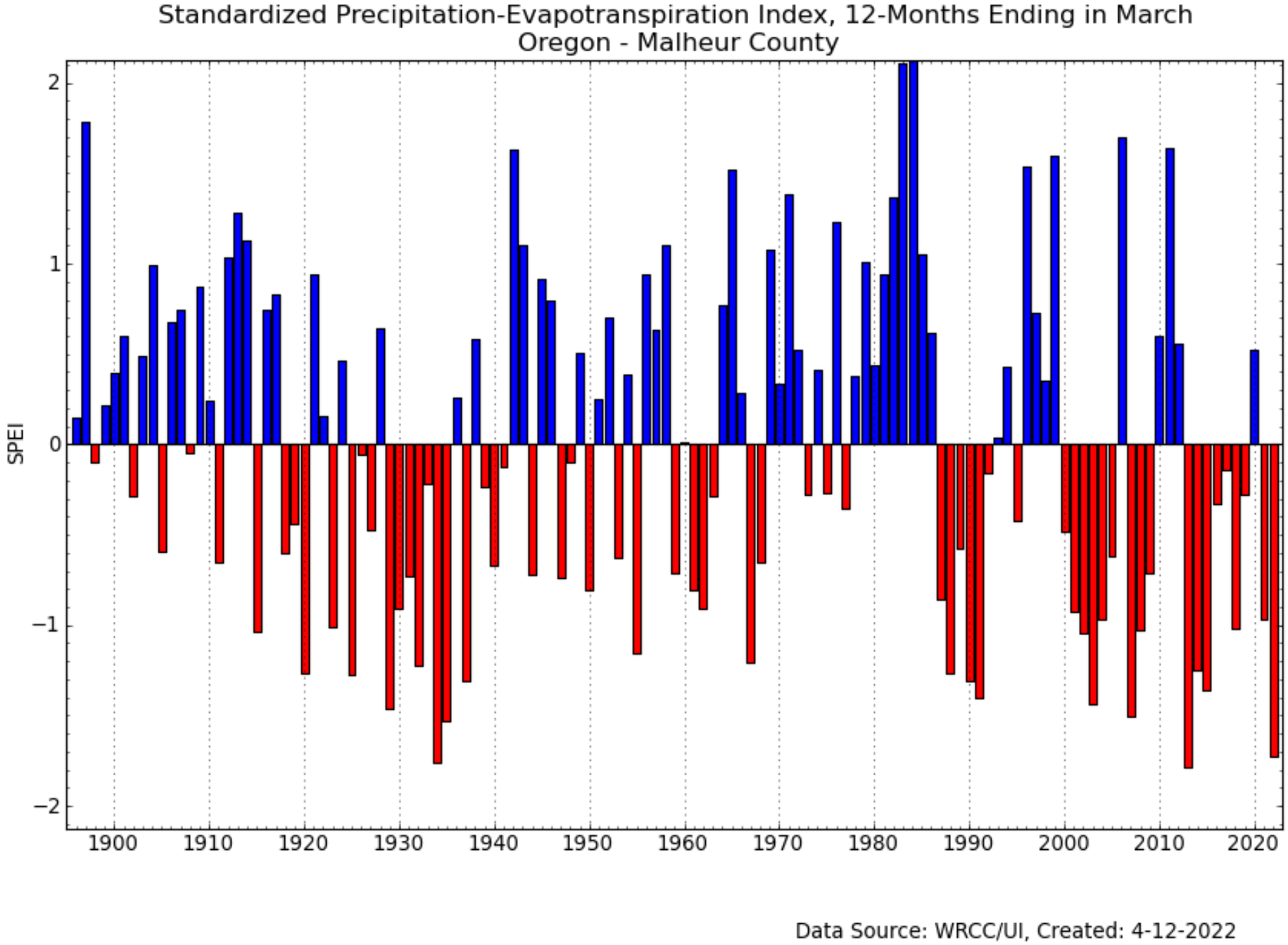

Standardized Precipitation-Evapotranspiration Index, 30-Months Ending in March
Oregon - Deschutes County
SPEI
2
1
0
−1
−2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
No Record
Data Source: WRCC/UI, Created: 4-13-2022

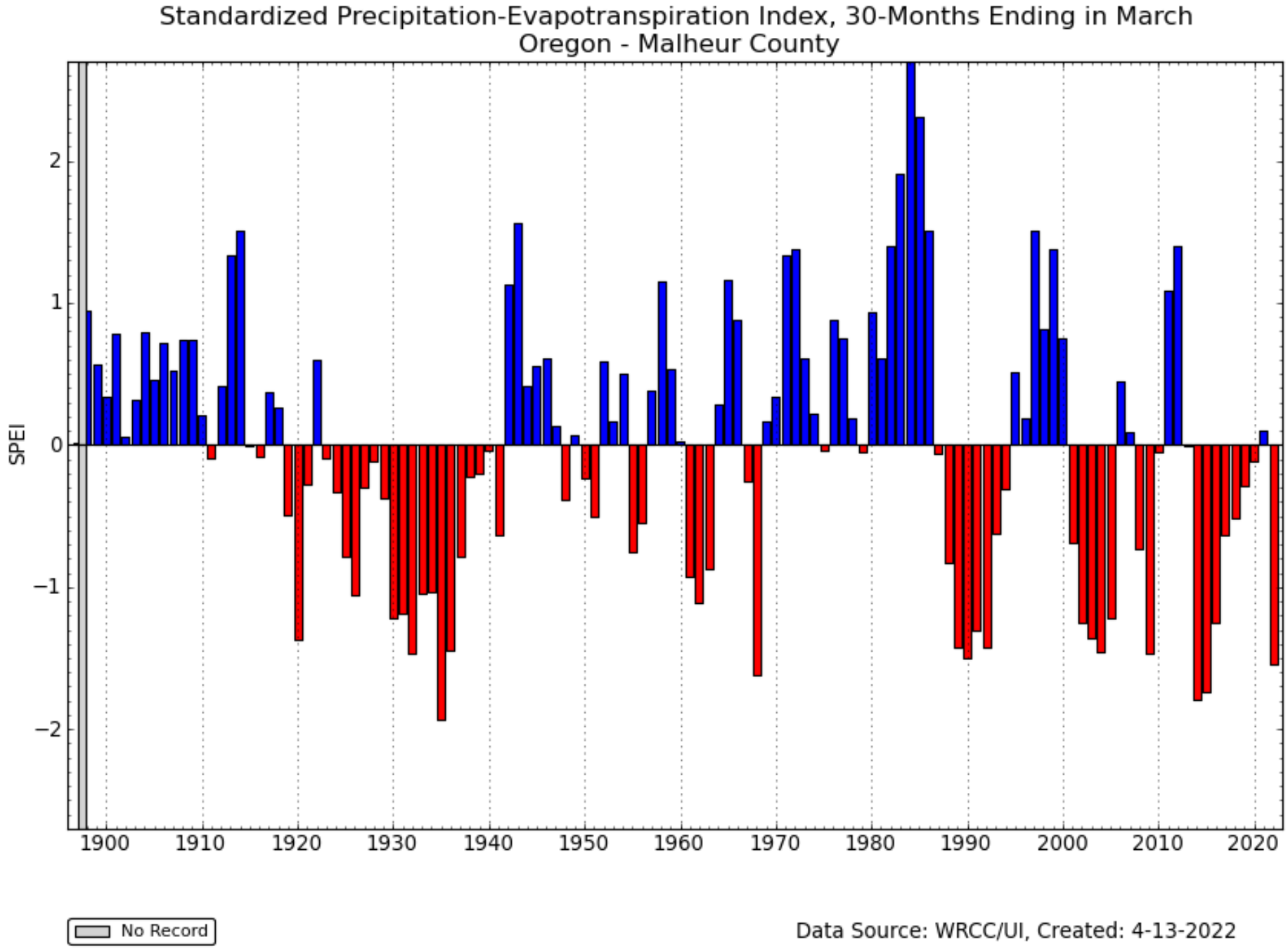

Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in March
Oregon - Grant County
SPEI
2
1
0
−1
−2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Data Source: WRCC/UI, Created: 4-12-2022


Standardized Precipitation-Evapotranspiration Index, 30-Months Ending in March
Oregon - Grant County
SPEI
2
1
0
−1
−2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
No Record
Data Source: WRCC/UI, Created: 4-13-2022


Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in March
Oregon - Lake County
SPEI
2
1
0
−1
−2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Data Source: WRCC/UI, Created: 4-12-2022


Standardized Precipitation-Evapotranspiration Index, 30-Months Ending in March
Oregon - Lake County
SPEI
2
1
0
−1
−2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
No Record
Data Source: WRCC/UI, Created: 4-13-2022


Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in March
Oregon - Malheur County
SPEI
2
1
0
−1
−2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Data Source: WRCC/UI, Created: 4-12-2022

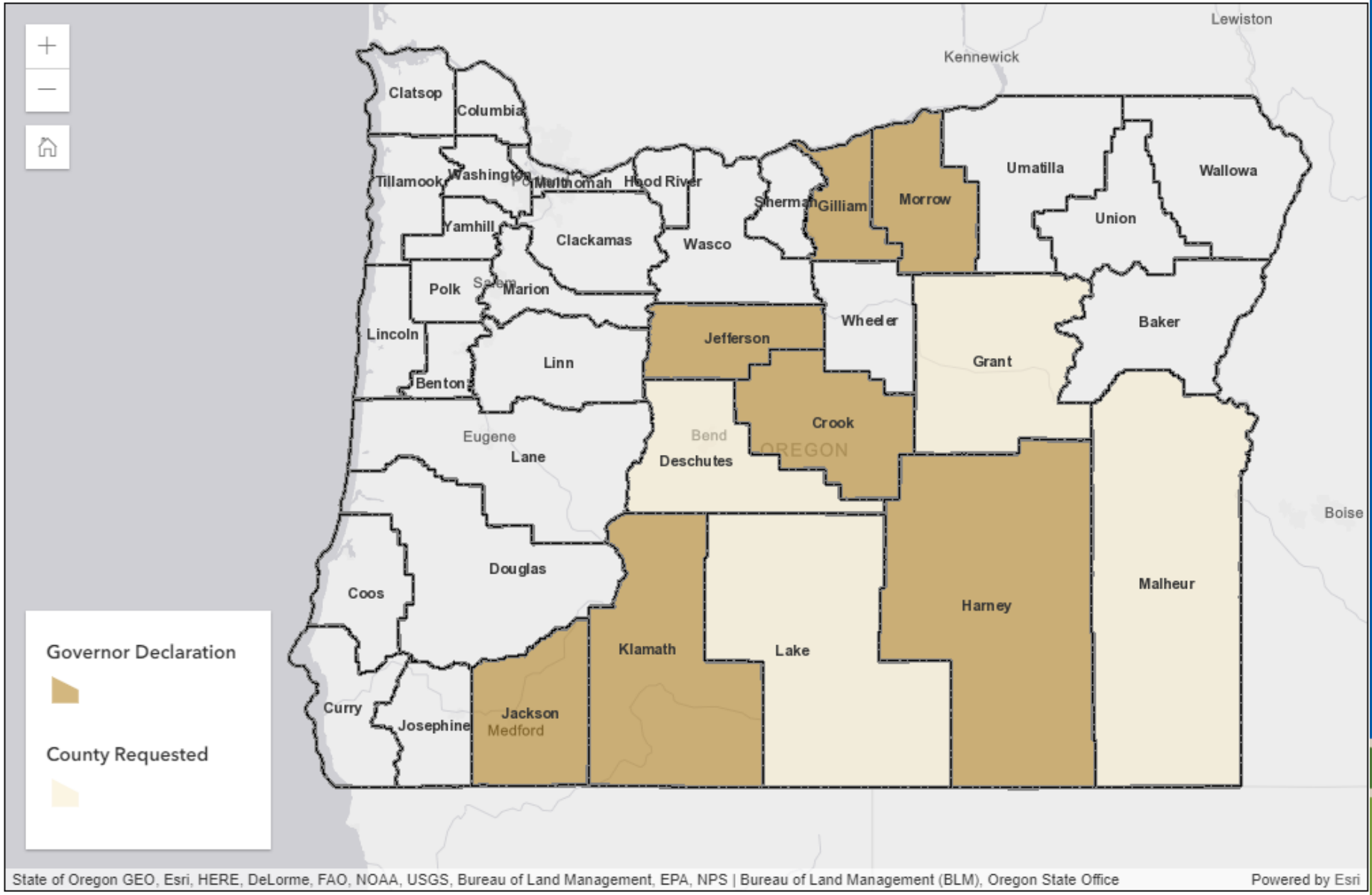

Standardized Precipitation-Evapotranspiration Index, 30-Months Ending in March
Oregon - Malheur County
SPEI
2
1
0
−1
−2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
No Record
Data Source: WRCC/UI, Created: 4-13-2022

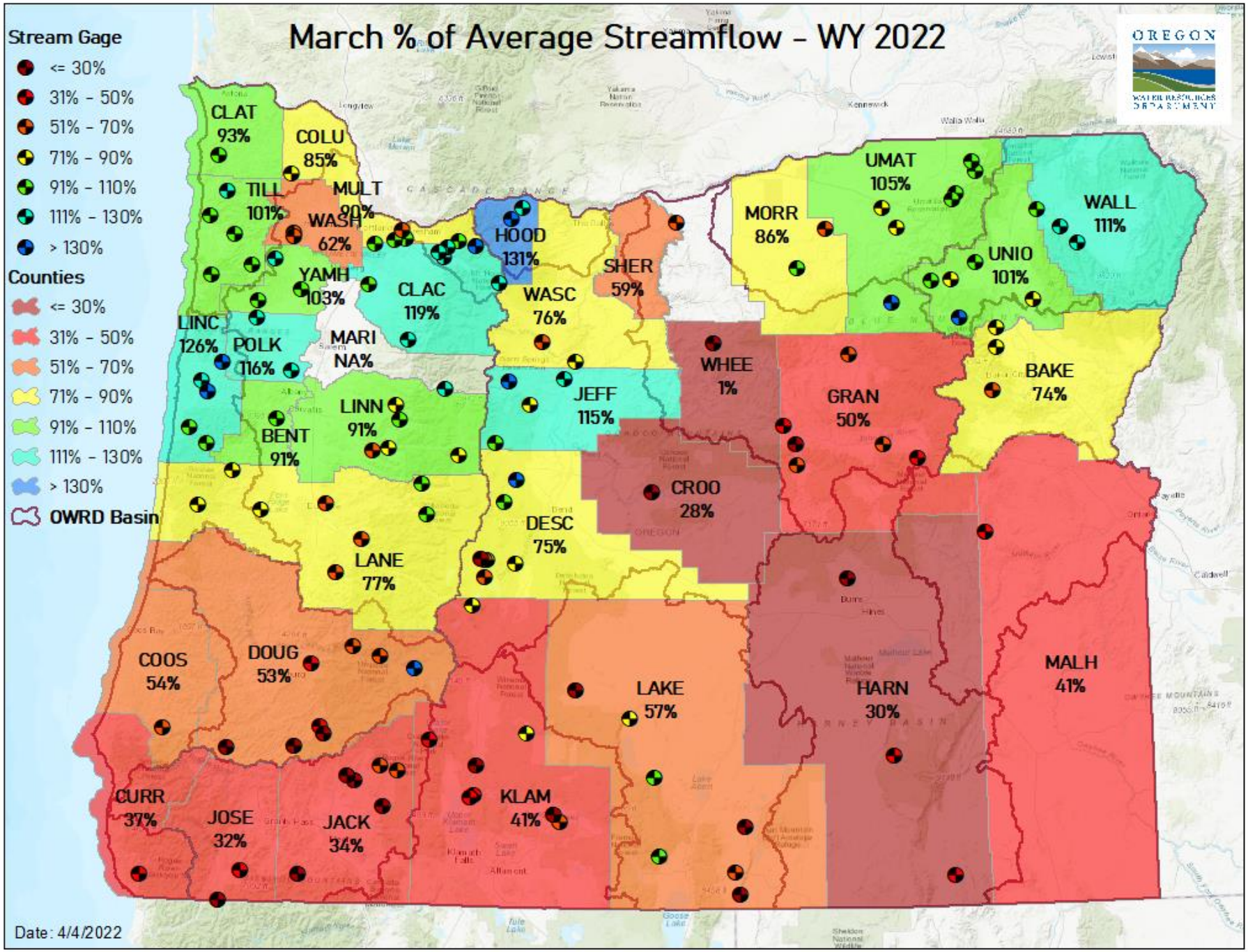
Water Supply Availability Committee
Oregon Water Resources Department
Ryan Andrews
April 13th, 2022

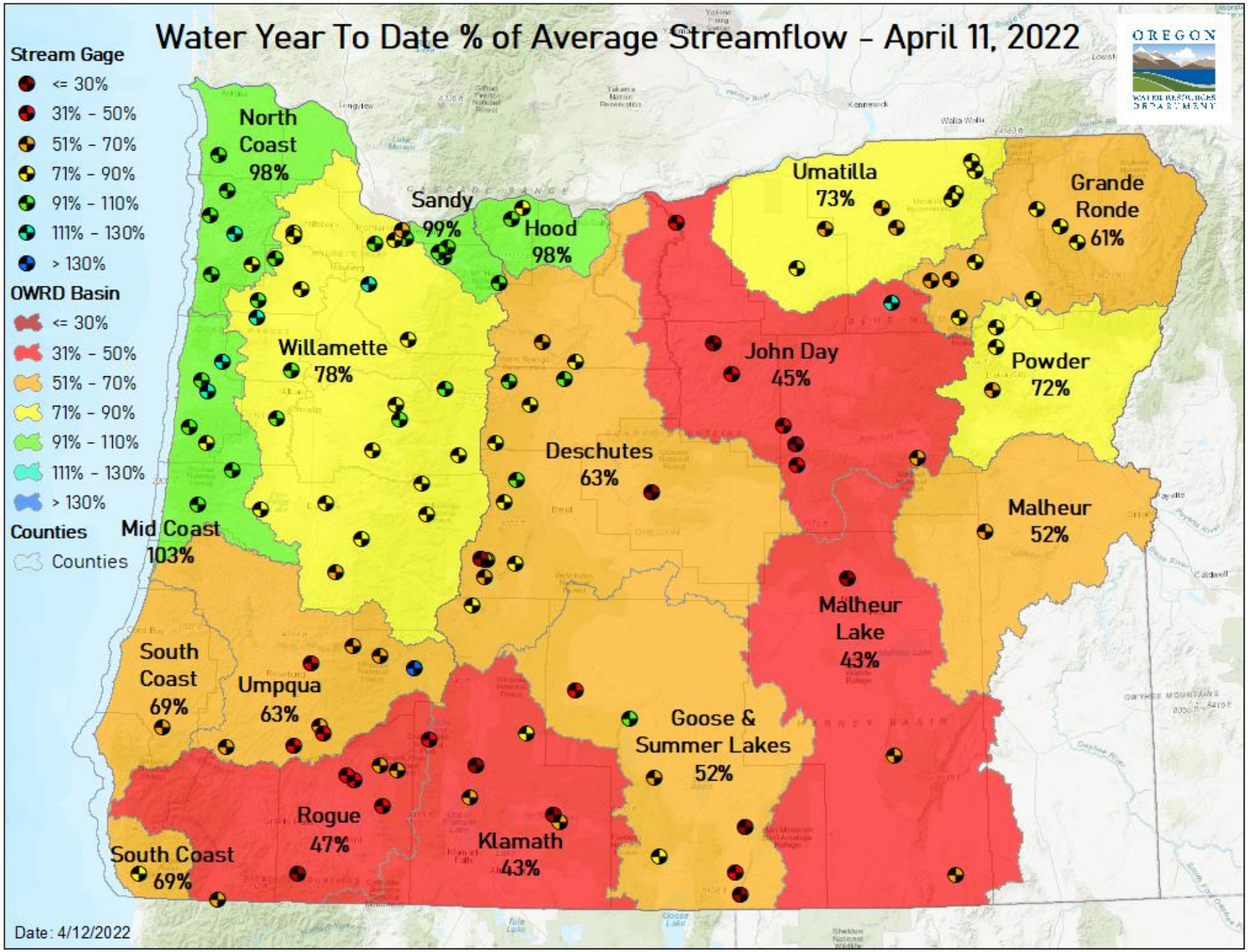
Walla Walla River ab Couse Creek

Drought Declaration Status Map

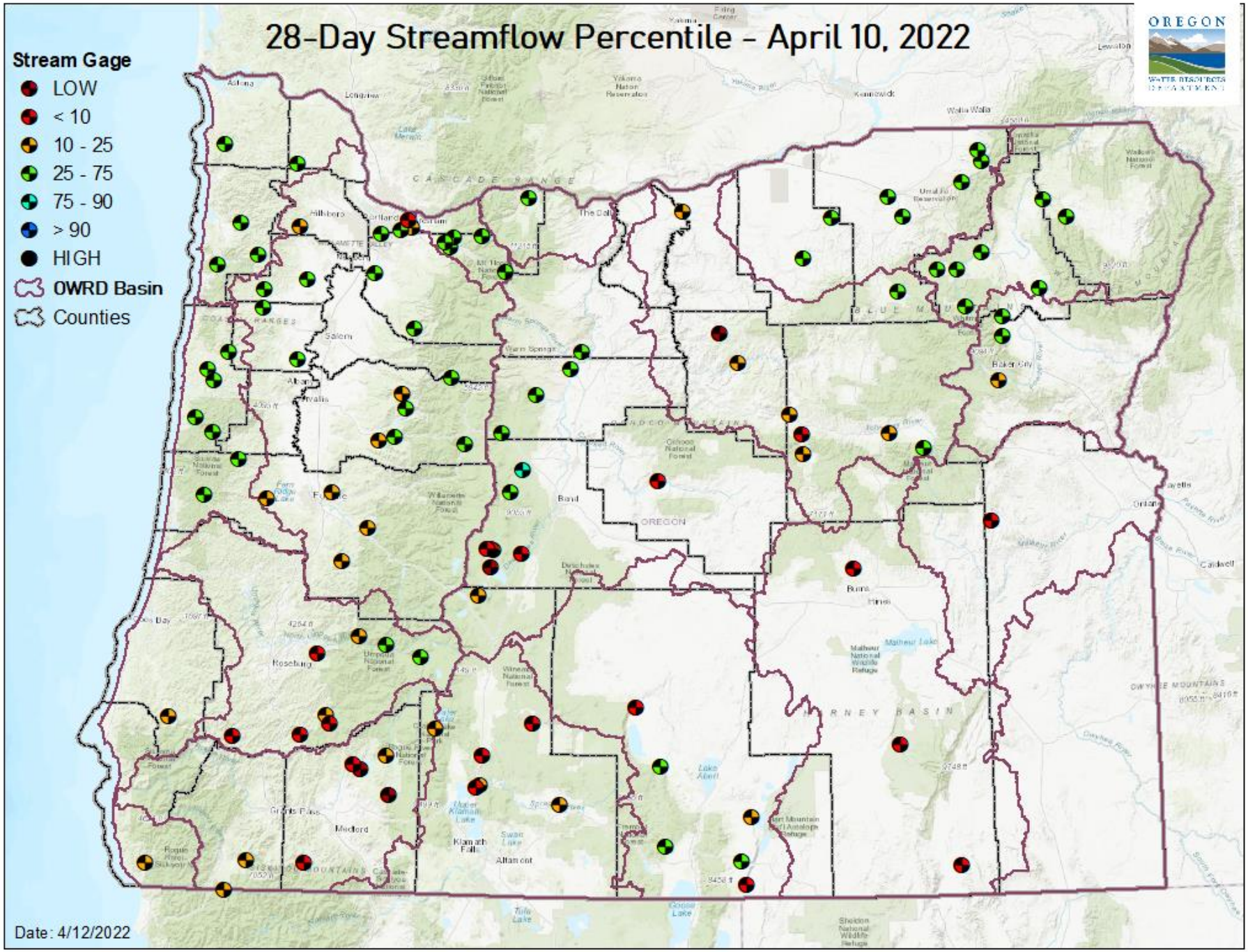
Select Year: 2022 Search Clear

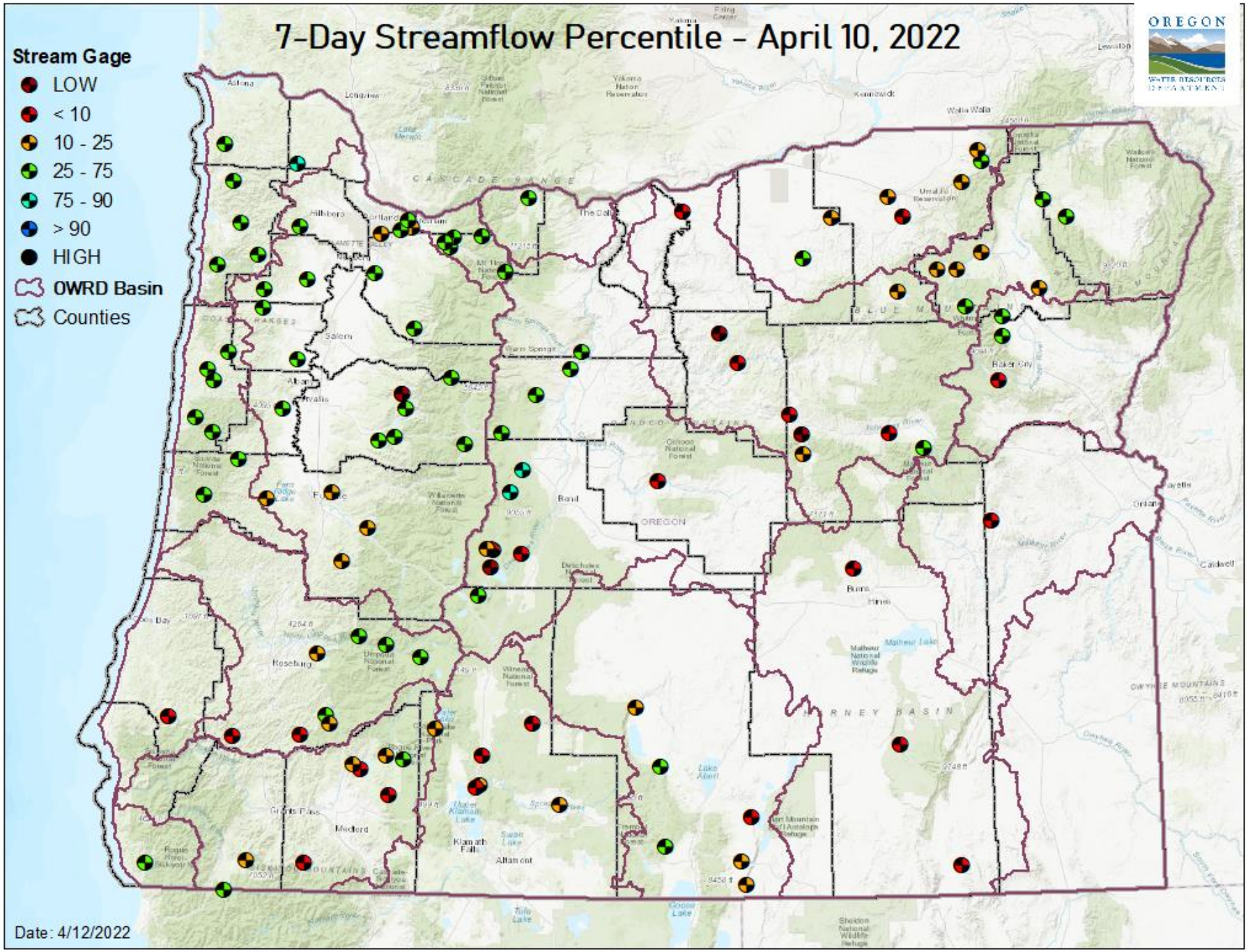


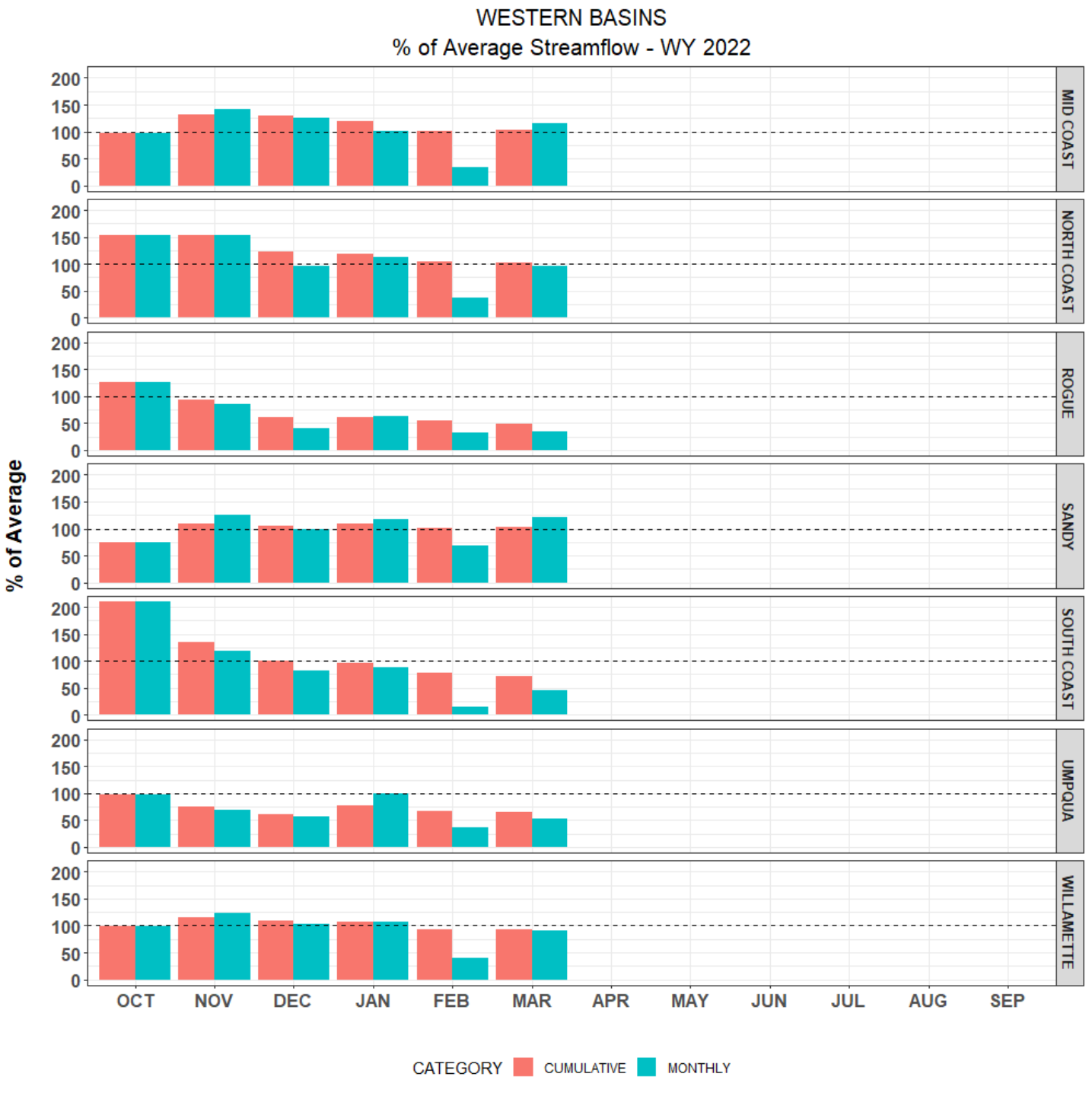

March % of Average Streamflow - WY 2022
Stream Gage
<= 30%
31% - 50%
51% - 70%
71% - 90%
91% - 110%
111% - 130%
> 130%
Counties
<= 30%
31% - 50%
51% - 70%
71% - 90%
91% - 110%
111% - 130%
> 130%
OWRD Basin
OREGON
WATER RESOURCES DEPARTMENT
CLAT 93%
COLU 85%
TILL 101%
MULT 90%
WASH 62%
HOOD 131%
SHER 59%
MORR 86%
UMAT 105%
WALL 111%
UNIO 101%
YAMH 103%
CLAC 119%
WASC 76%
LINC 126%
POLK 116%
MARI NA%
WHEE 1%
BAKE 74%
GRAN 50%
JEFF 115%
LINN 91%
BENT 91%
CROO 28%
DESC 75%
LANE 77%
COOS 54%
DOUG 53%
LAKE 57%
HARN 30%
MALH 41%
CURR 37%
JOSE 32%
JACK 34%
KLAM 41%
Date: 4/4/2022

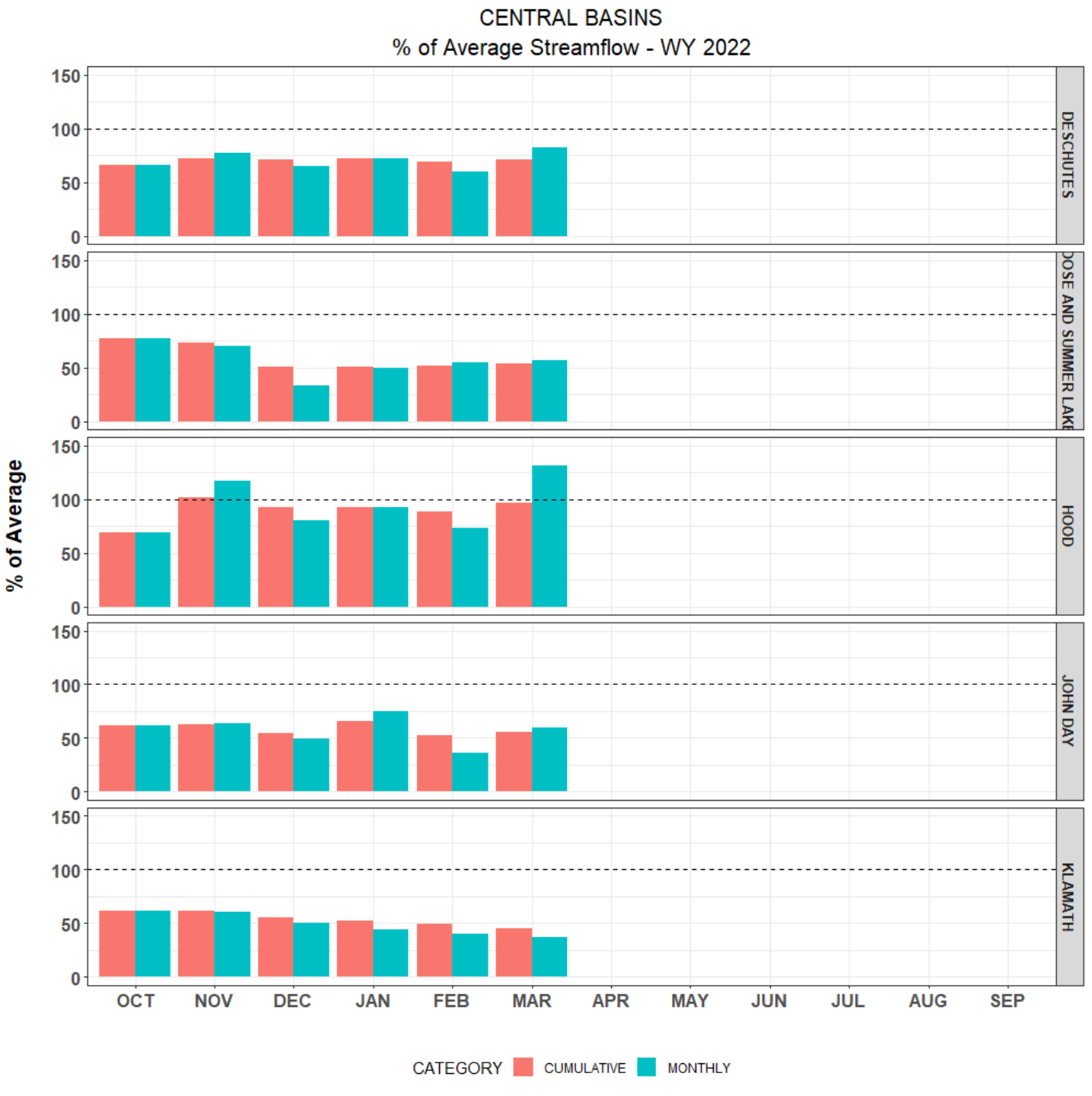

Water Year To Date % of Average Streamflow - April 11, 2022
Stream Gage
<= 30%
31% - 50%
51% - 70%
71% - 90%
91% - 110%
111% - 130%
> 130%
OWRD Basin
<= 30%
31% - 50%
51% - 70%
71% - 90%
91% - 110%
111% - 130%
> 130%
Counties
Counties
OREGON
WATER RESOURCES DEPARTMENT
North Coast 98%
Sandy 99%
Hood 98%
Umatilla 73%
Grande Ronde 61%
Willamette 78%
John Day 45%
Powder 72%
Deschutes 63%
Malheur 52%
Mid Coast 103%
Malheur Lake 43%
South Coast 69%
Umpqua 63%
Goose & Summer Lakes 52%
Rogue 47%
Klamath 43%
South Coast 69%
Date: 4/12/2022

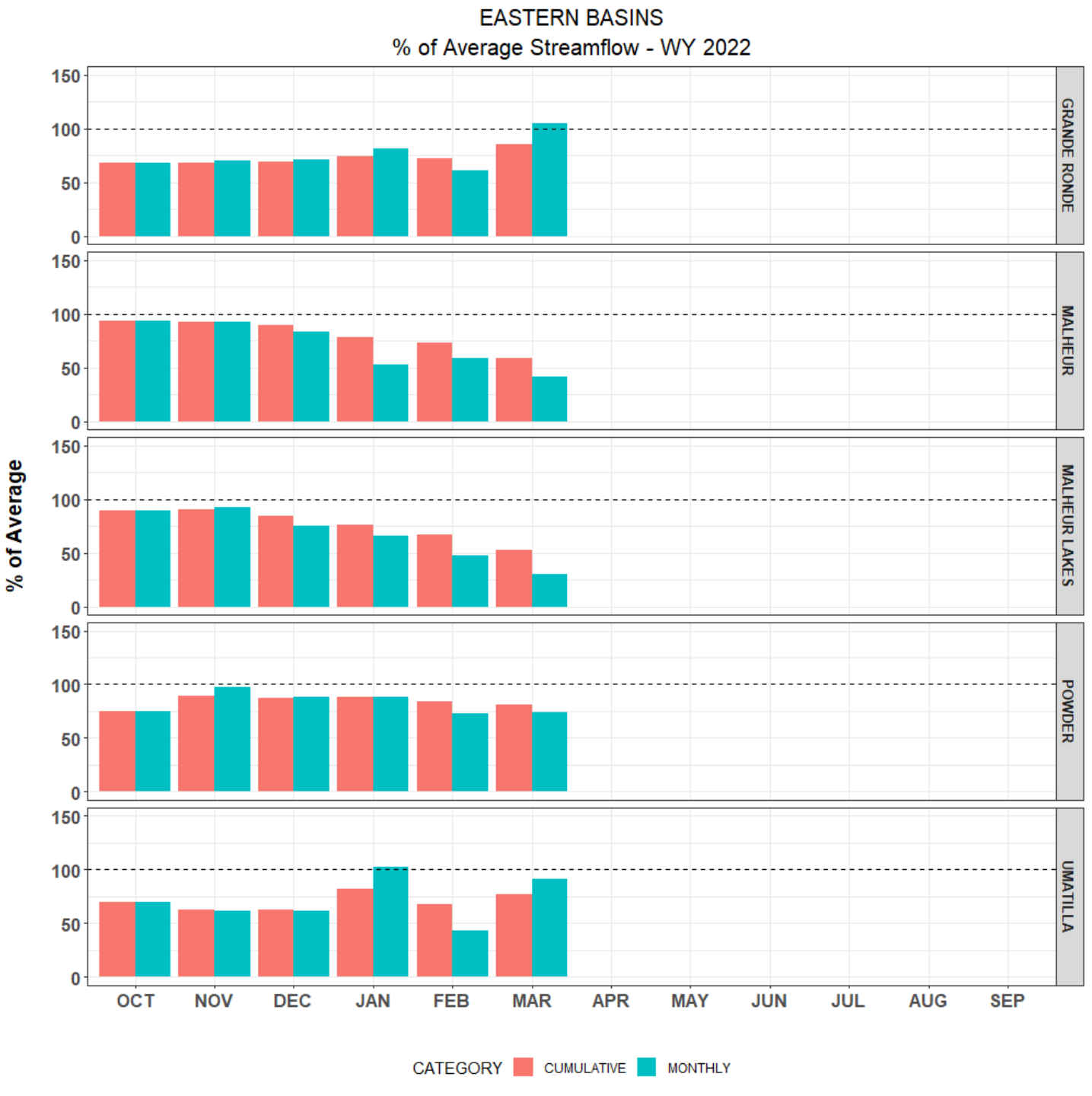
28-Day Streamflow Percentile - April 10, 2022

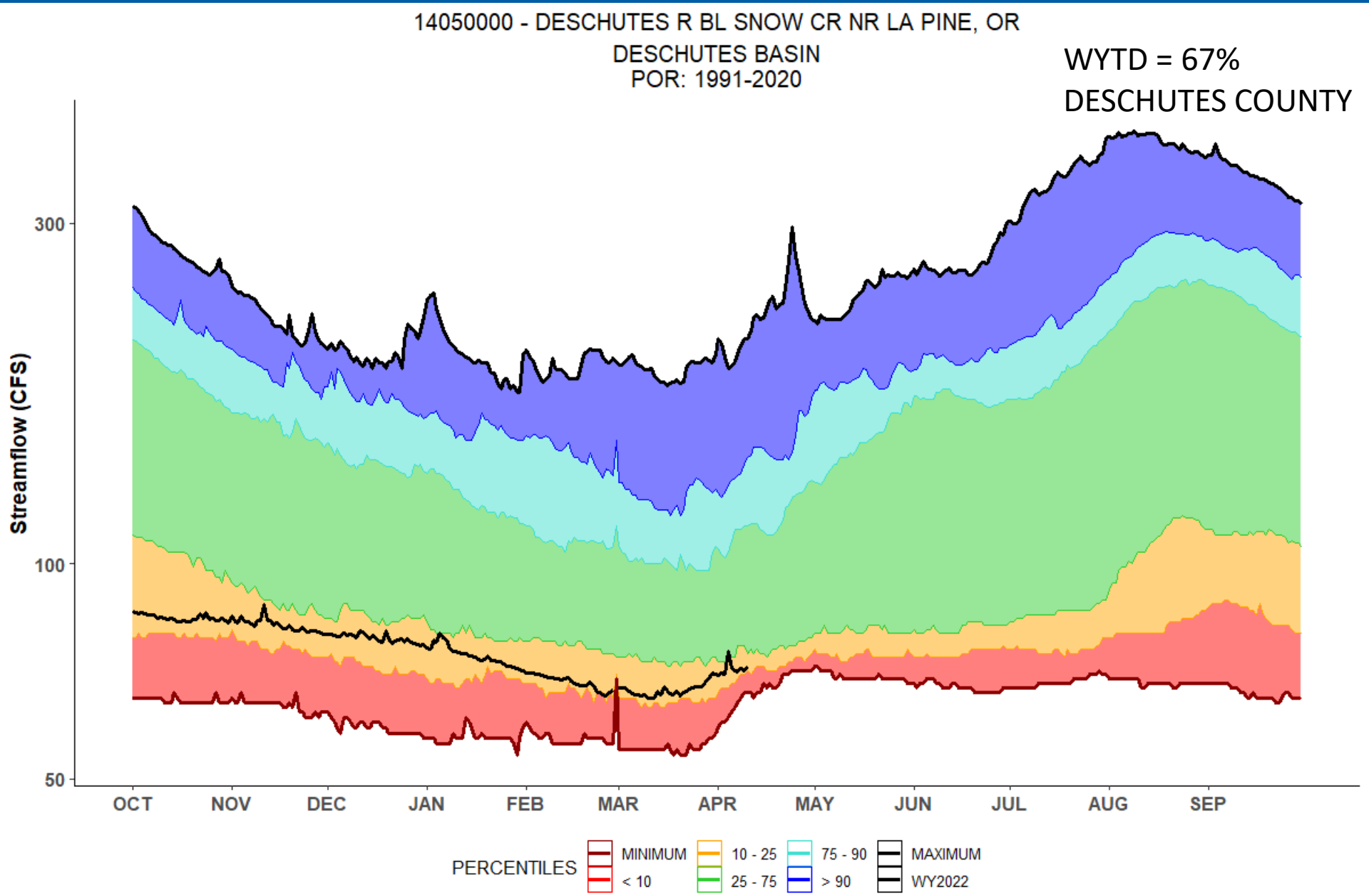


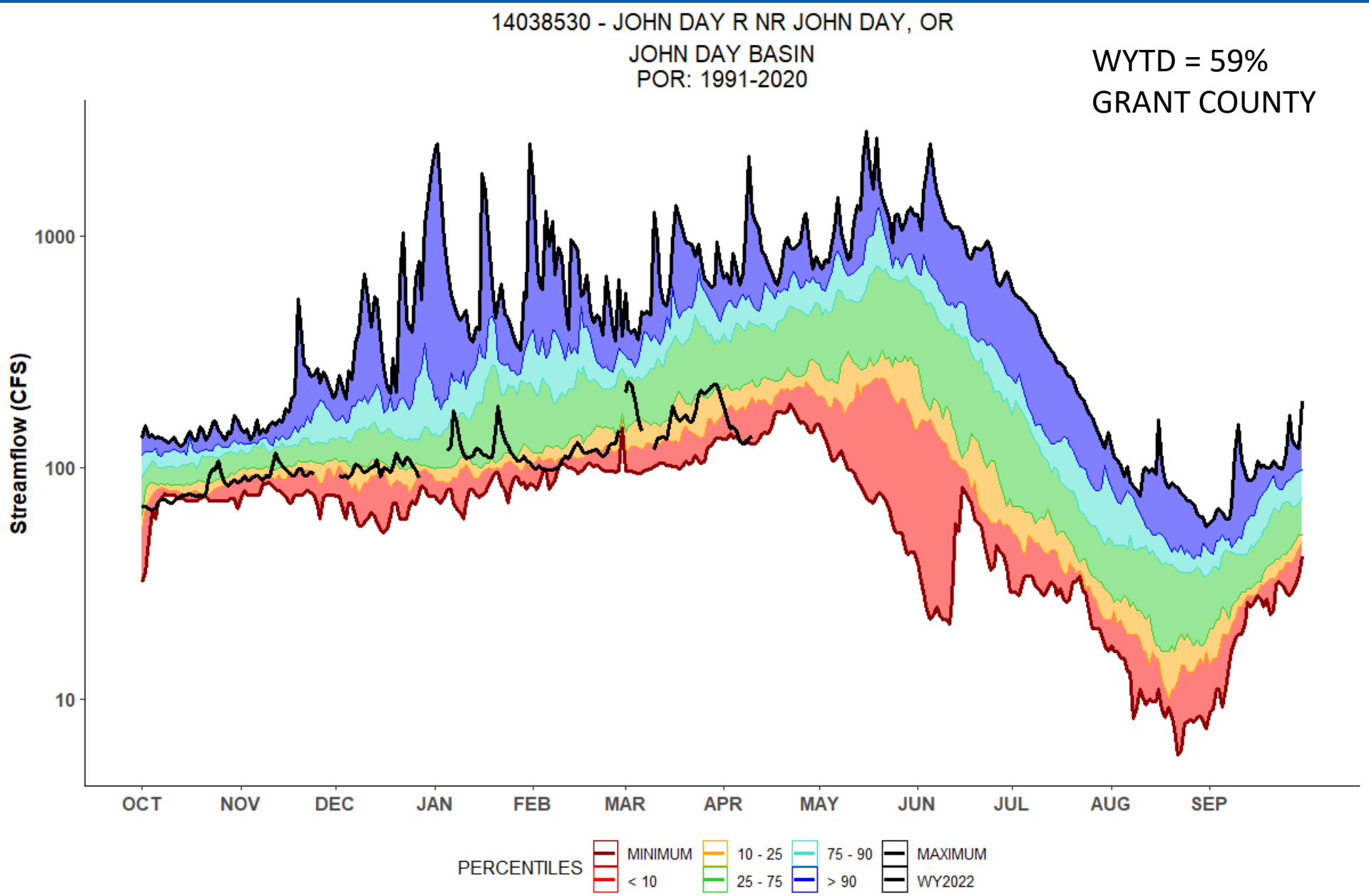

7-Day Streamflow Percentile - April 10, 2022
Stream Gage
LOW
< 10
10 - 25
25 - 75
75 - 90
> 90
HIGH
OWRD Basin
Counties
OREGON
WATER RESOURCES DEPARTMENT
Date: 4/12/2022

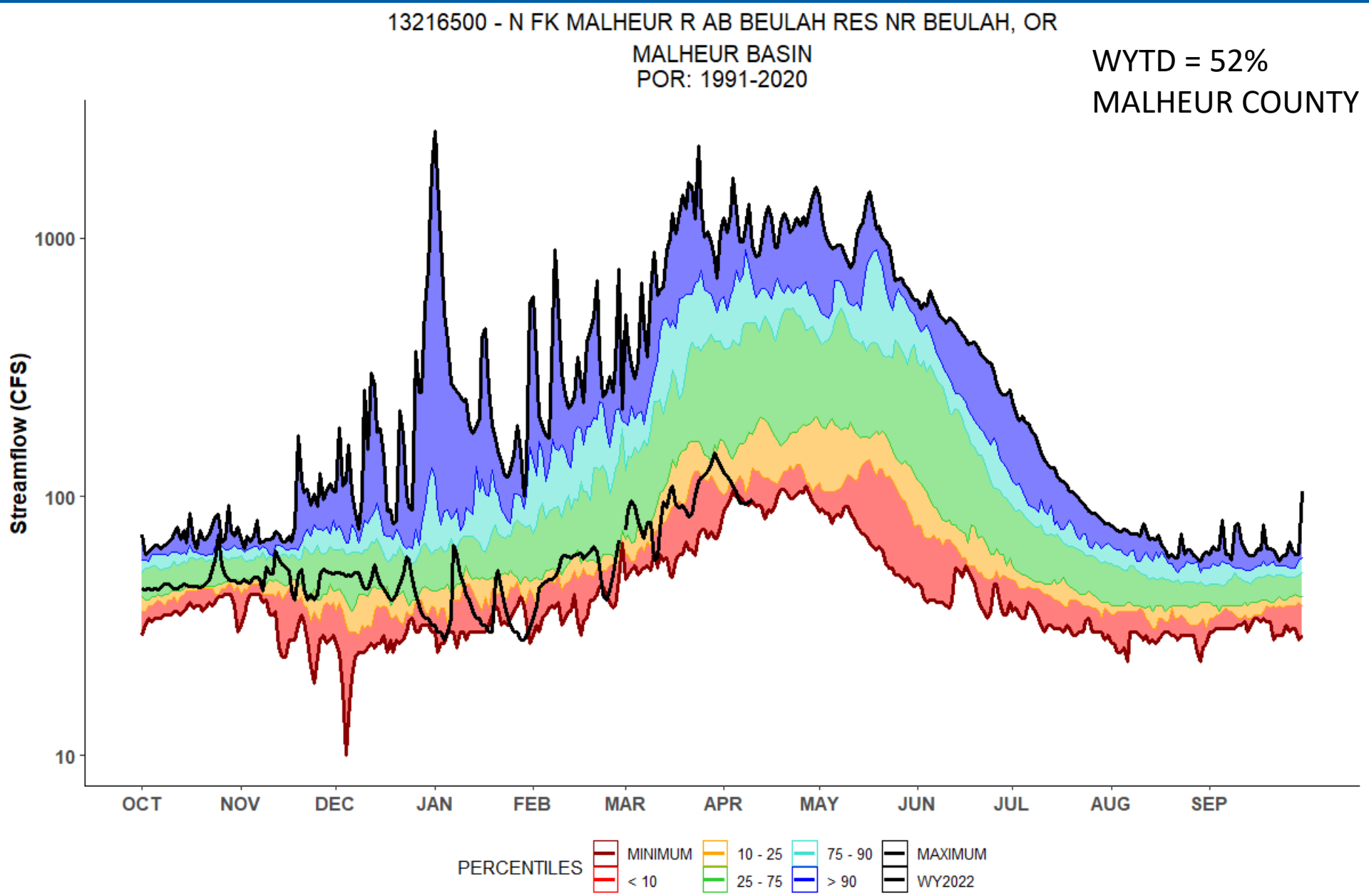

WESTERN BASINS
% of Average Streamflow - WY 2022
% of Average
MID COAST
NORTH COAST
ROGUE
SANDY
SOUTH COAST
UMPQUA
WILLAMETTE
200
150
100
50
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
CATEGORY
CUMULATIVE
MONTHLY

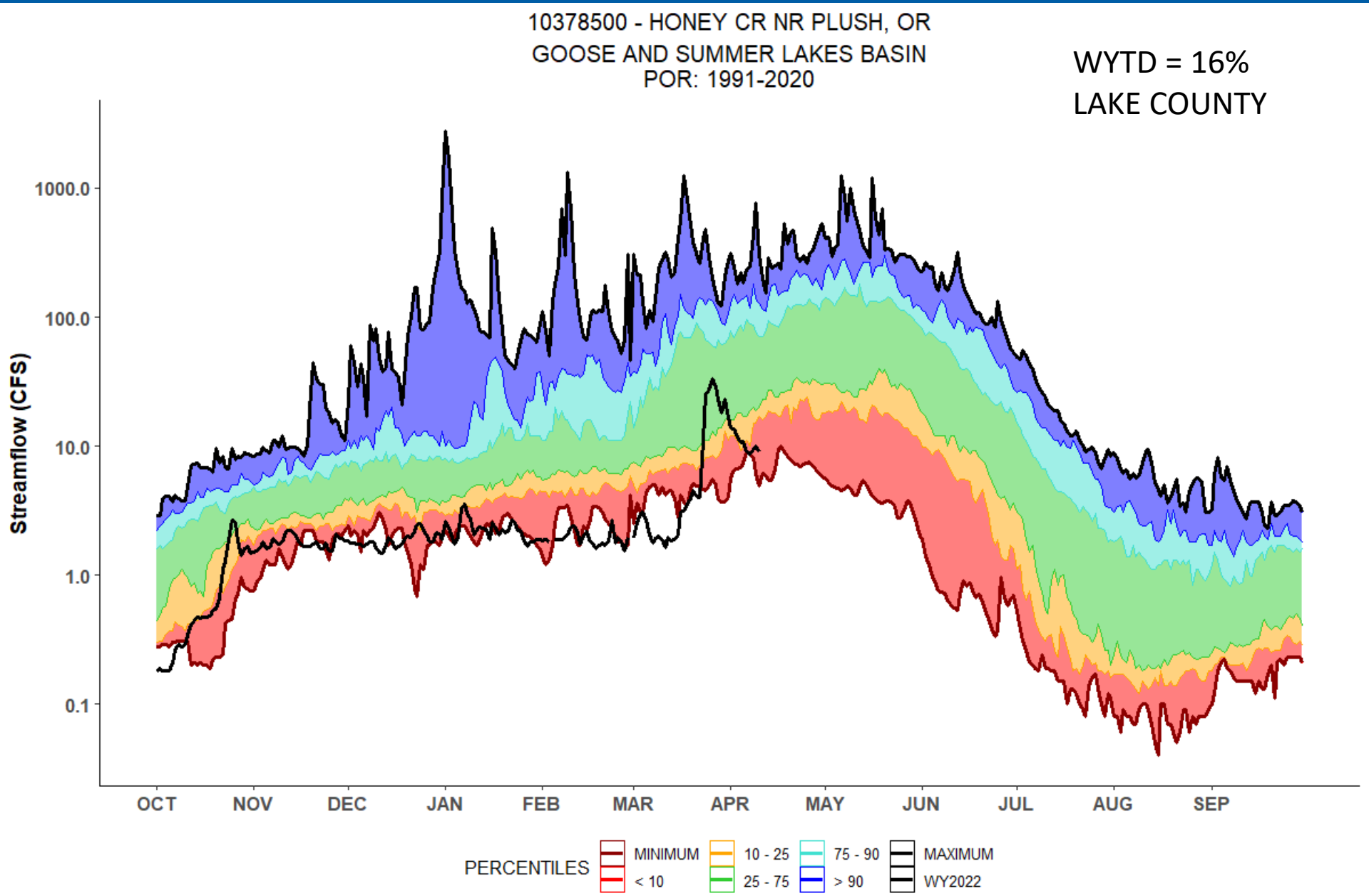

CENTRAL BASINS
% of Average Streamflow - WY 2022
% of Average
150
100
50
0
DESCHUTES
DOSE AND SUMMER LAKE
HOOD
JOHN DAY
KLAMATH
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
CATEGORY
CUMULATIVE
MONTHLY

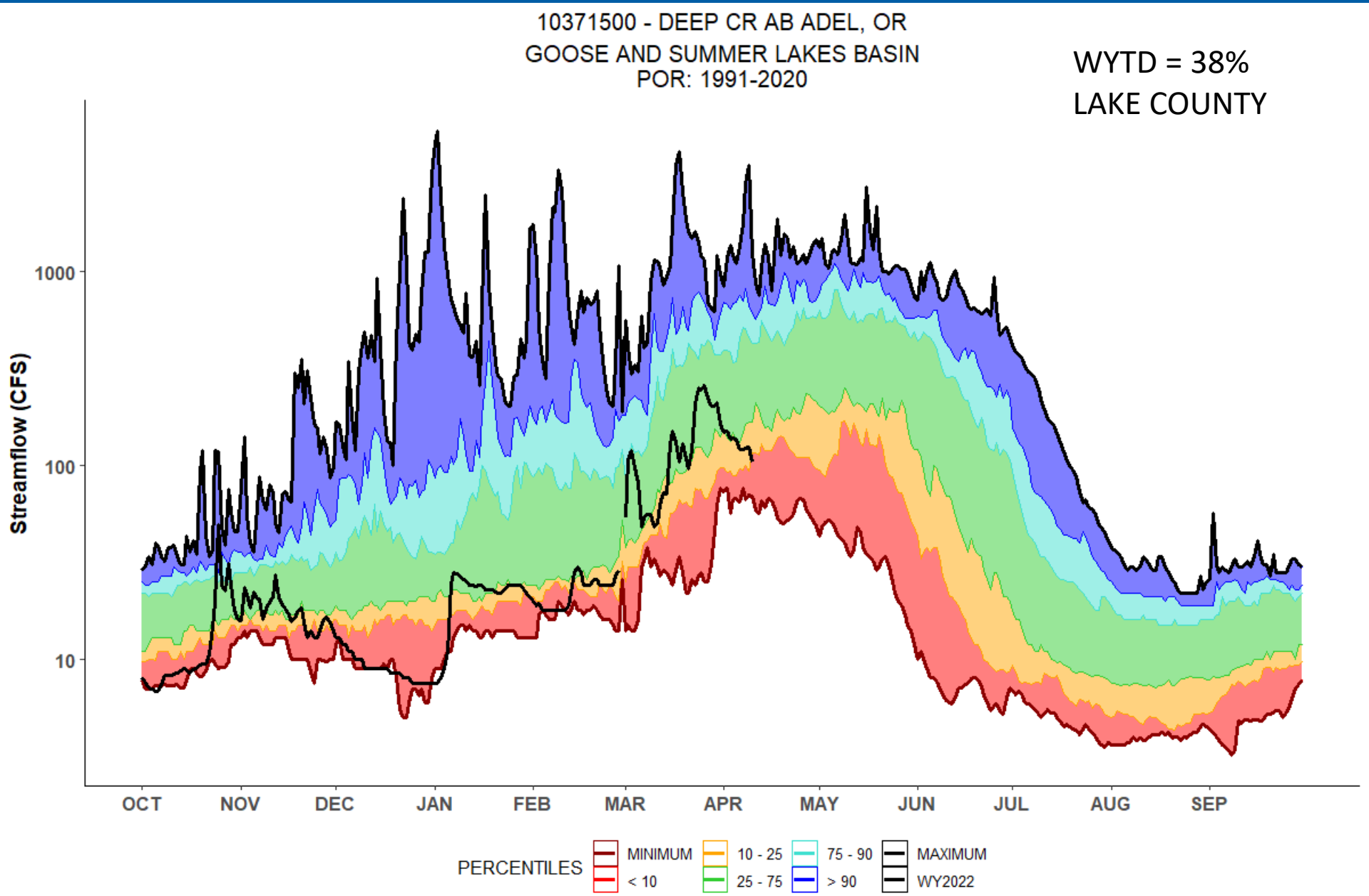

EASTERN BASINS
% of Average Streamflow - WY 2022
% of Average
150
100
50
0
GRANDE RONDE
MALHEUR
MALHEUR LAKES
POWDER
UMATILLA
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
CATEGORY
CUMULATIVE
MONTHLY

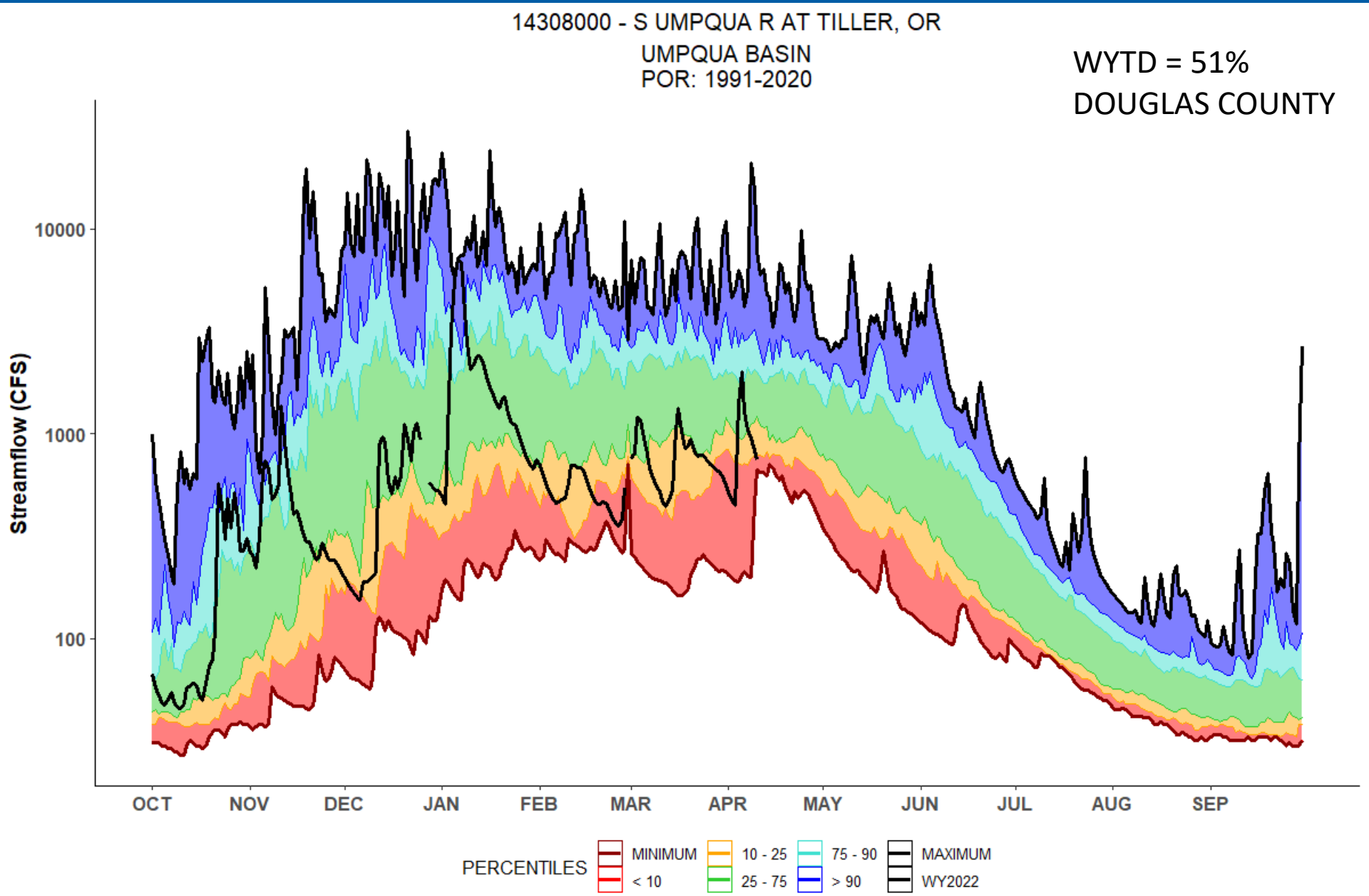

14050000 - DESCHUTES R BL SNOW CR NR LA PINE, OR
DESCHUTES BASIN
POR: 1991-2020
WYTD = 67%
DESCHUTES COUNTY
Streamflow (CFS)
300
100
50
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
PERCENTILES
MINIMUM
< 10
10 - 25
25 - 75
75 - 90
> 90
MAXIMUM
WY2022

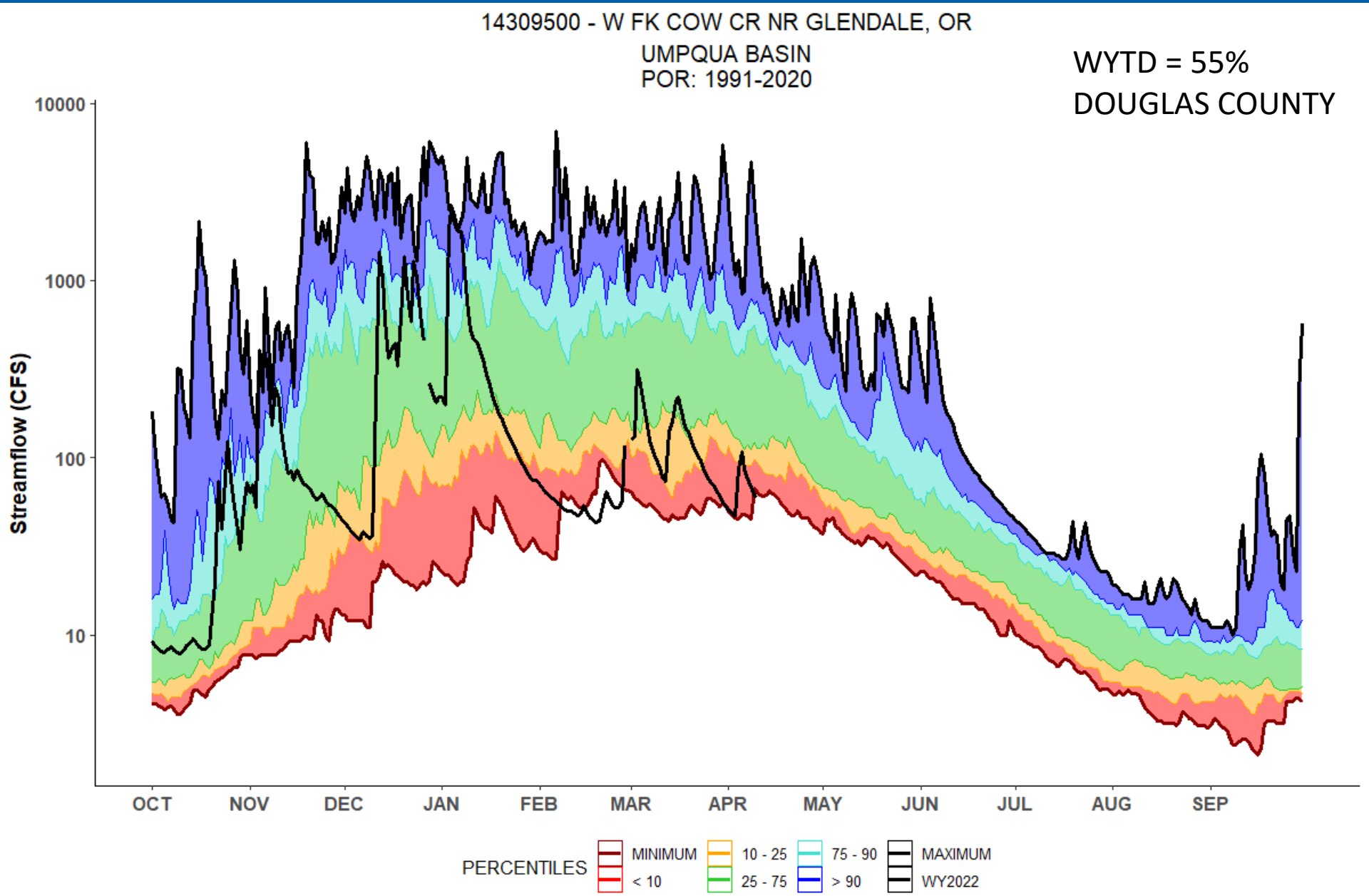

14038530 - JOHN DAY R NR JOHN DAY, OR
JOHN DAY BASIN
POR: 1991-2020
WYTD = 59%
GRANT COUNTY
Streamflow (CFS)
1000
100
10
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
PERCENTILES
MINIMUM
< 10
10 - 25
25 - 75
75 - 90
> 90
MAXIMUM
WY2022


13216500 - N FK MALHEUR R AB BEULAH RES NR BEULAH, OR
MALHEUR BASIN
POR: 1991-2020
WYTD = 52%
MALHEUR COUNTY
Streamflow (CFS)
1000
100
10
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
PERCENTILES
MINIMUM
< 10
10 - 25
25 - 75
75 - 90
> 90
MAXIMUM
WY2022


10378500 - HONEY CR NR PLUSH, OR
GOOSE AND SUMMER LAKES BASIN
POR: 1991-2020
WYTD = 16%
LAKE COUNTY
Streamflow (CFS)
1000.0
100.0
10.0
1.0
0.1
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
PERCENTILES
MINIMUM
< 10
10 - 25
25 - 75
75 - 90
> 90
MAXIMUM
WY2022


10371500 - DEEP CR AB ADEL, OR
GOOSE AND SUMMER LAKES BASIN
POR: 1991-2020
WYTD = 38%
LAKE COUNTY
Streamflow (CFS)
1000
100
10
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
PERCENTILES
MINIMUM
< 10
10 - 25
25 - 75
75 - 90
> 90
MAXIMUM
WY2022


14308000 - S UMPQUA R AT TILLER, OR
UMPQUA BASIN
POR: 1991-2020
WYTD = 51%
DOUGLAS COUNTY
Streamflow (CFS)
10000
1000
100
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
PERCENTILES
MINIMUM
< 10
10 - 25
25 - 75
75 - 90
> 90
MAXIMUM
WY2022


14309500 - W FK COW CR NR GLENDALE, OR
UMPQUA BASIN
POR: 1991-2020
WYTD = 55%
DOUGLAS COUNTY
Streamflow (CFS)
10000
1000
100
10
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
PERCENTILES
MINIMUM
< 10
10 - 25
25 - 75
75 - 90
> 90
MAXIMUM
WY2022

Summary

- Seven counties with Executive Orders, four requesting
- Little rebound in streamflow even with early snowmelt
- Likely early onset of low summer streamflows and earlier regulation due to early snowmelt

QUESTIONS?

BUREAU OF RECLAMATION

Reclamation Storage Update

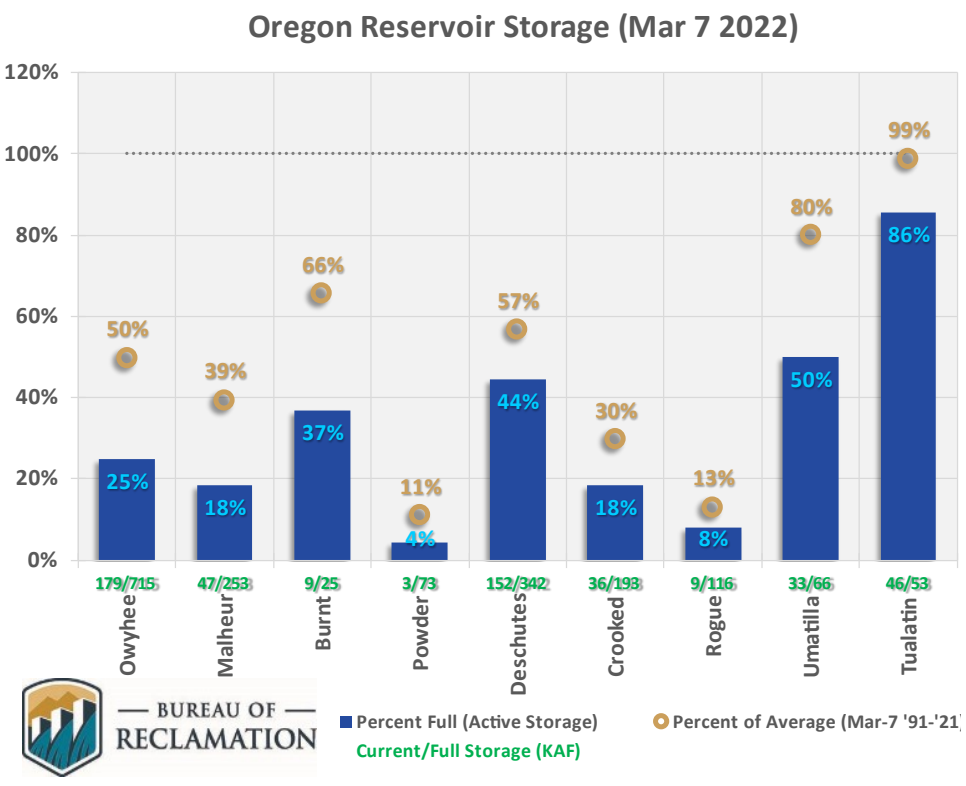
Oregon Water Supply Availability Committee Meeting

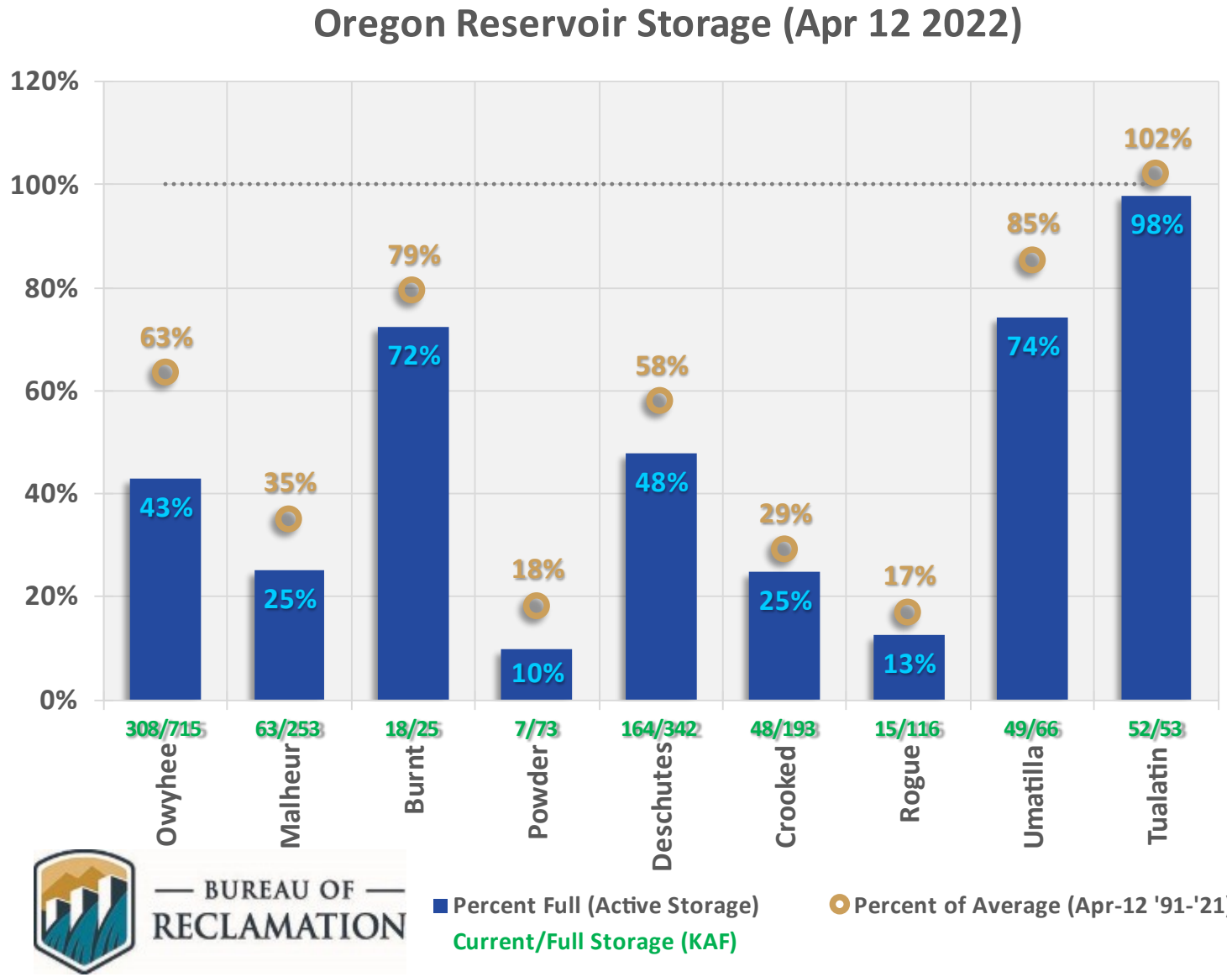
April 13, 2022

Basin Operations Summary

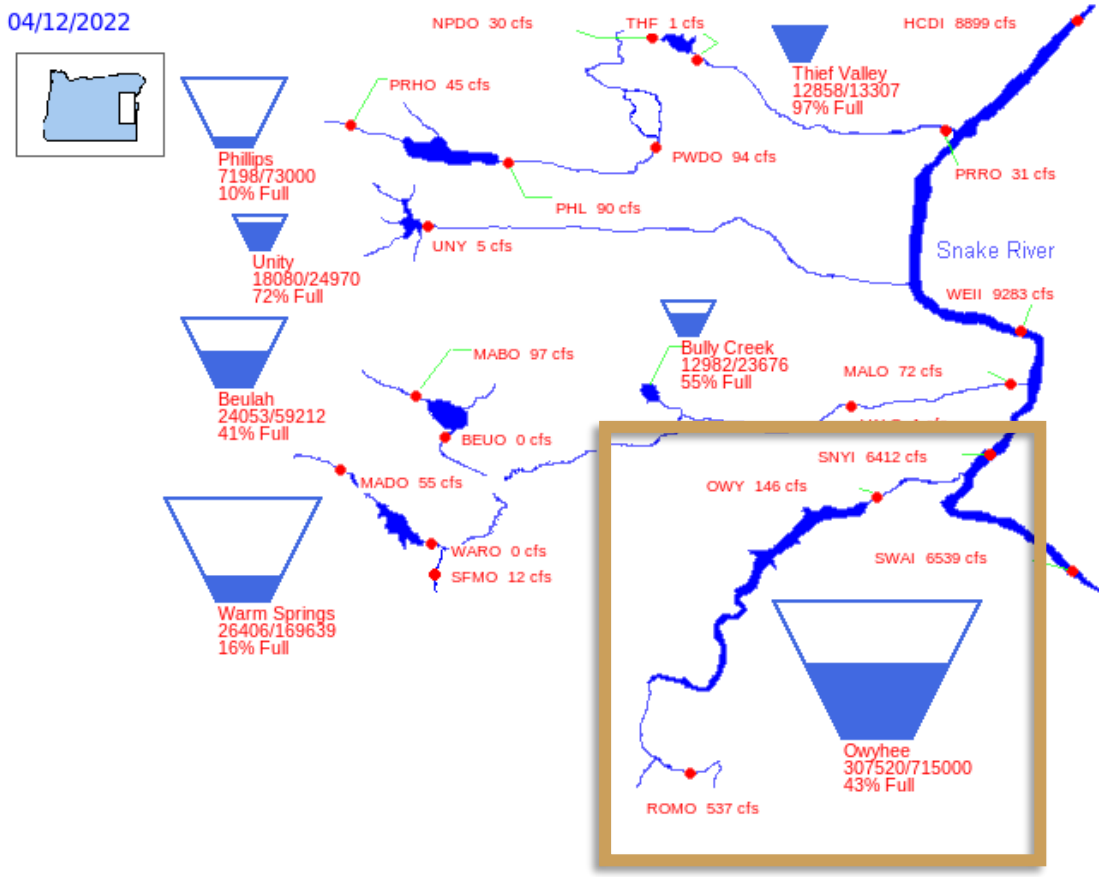
- Operations Activities:
  - Irrigation activities are beginning
  - Some Reclamation storage reservoirs in Oregon are already starting to draft
  - Minor Flood Risk Management is occurring at Scoggins
  - Water supply shortages will occur this season
- Water Supply Notes
  - Below Average reservoir content continues at Reclamation Oregon reservoirs (except Scoggins)
  - Most reservoirs have much lower content than at this same time in WY2021
  - Reclamation's April 1 runoff forecasts decreased by around 25-50% as compared to March 1 forecasts due to dry conditions – snowpack essentially depleted
  - Snowpack essentially depleted, peak runoff likely has passed – inefficient runoff
  - Most reservoirs will not refill fully this season (exception Scoggins) and will reach lower peak content than in WY2021
  - Irrigation supply reductions are anticipated
  - Reservoir conditions and runoff forecasts support to-date drought declarations:
    - Crook, Jefferson, Klamath, Harney, Jackson, Malheur, Deschutes Counties
  - Historical conditions

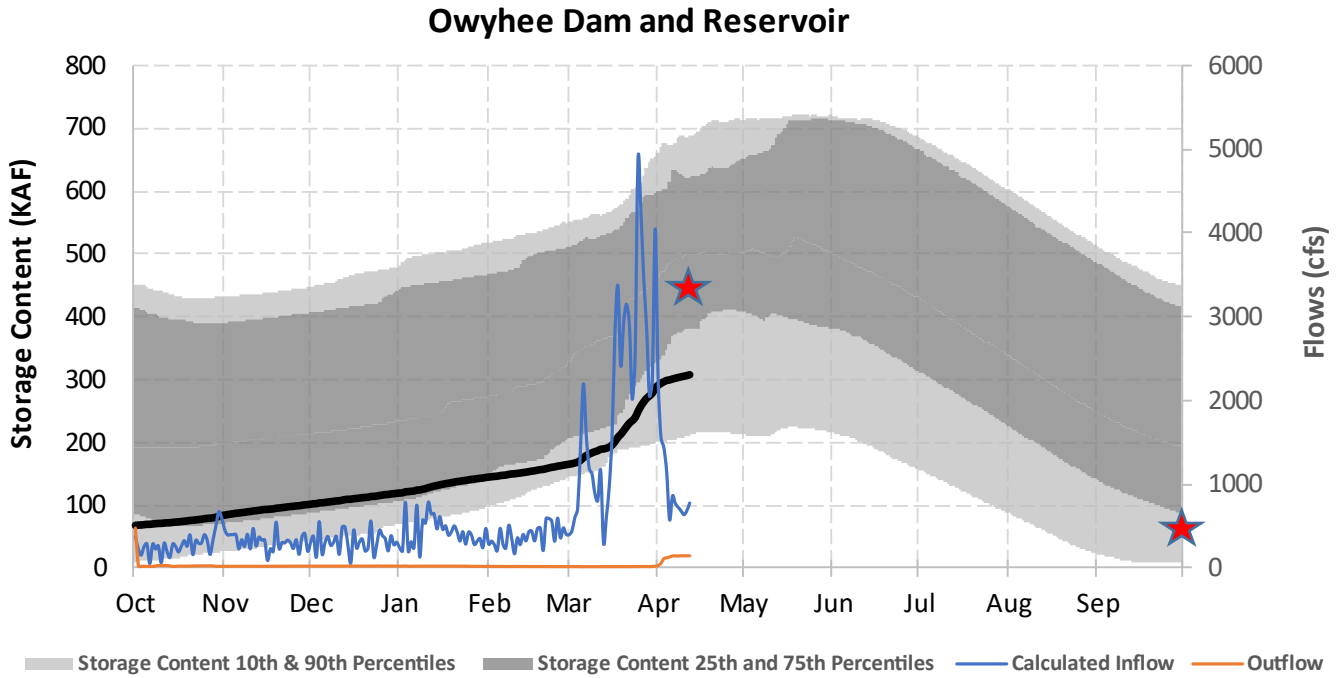
Storage Conditions





Owyhee River Basin





Supports Malheur County Drought Declaration

Reclamation January 1 Runoff Forecast
Jan-Jun: 610 kaf (115% 91-20 Ave)

Reclamation February 1 Runoff Forecast
Feb-Jun: 458 kaf (94% 91-20 Ave)

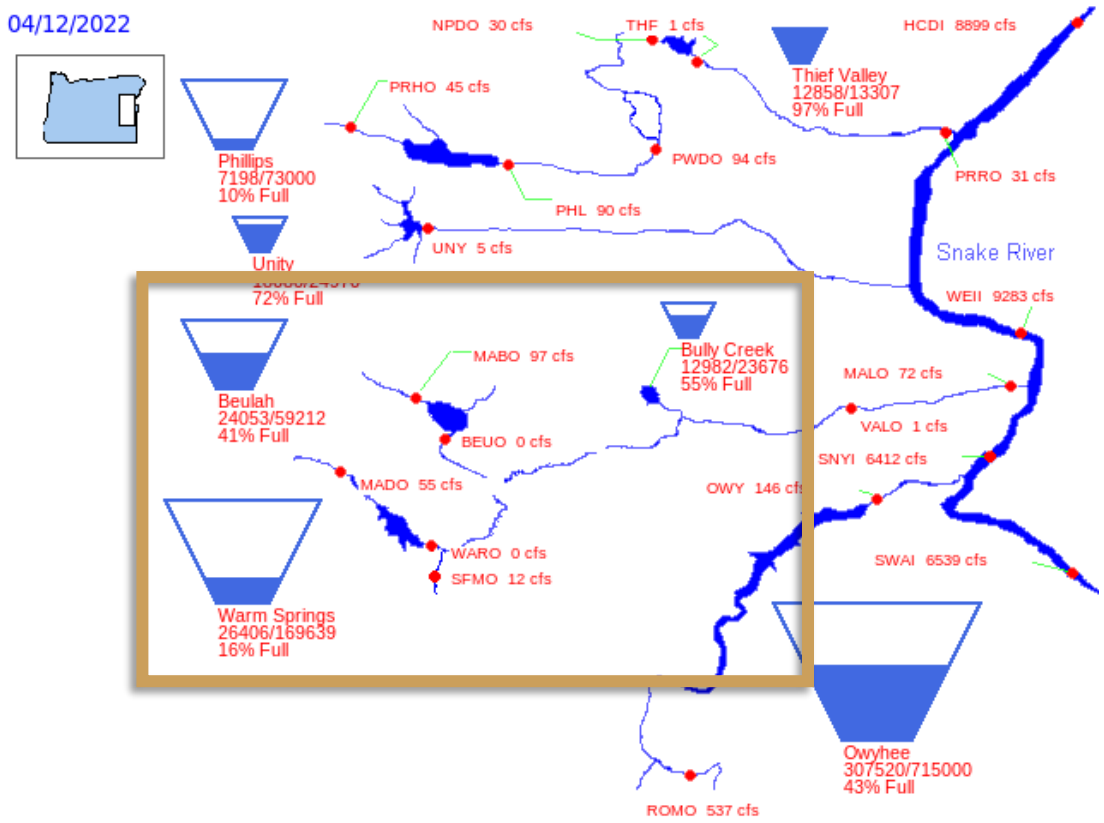
Reclamation March 1 Runoff Forecast
Mar-Jun: 348 kaf (81% 91-20 Ave)

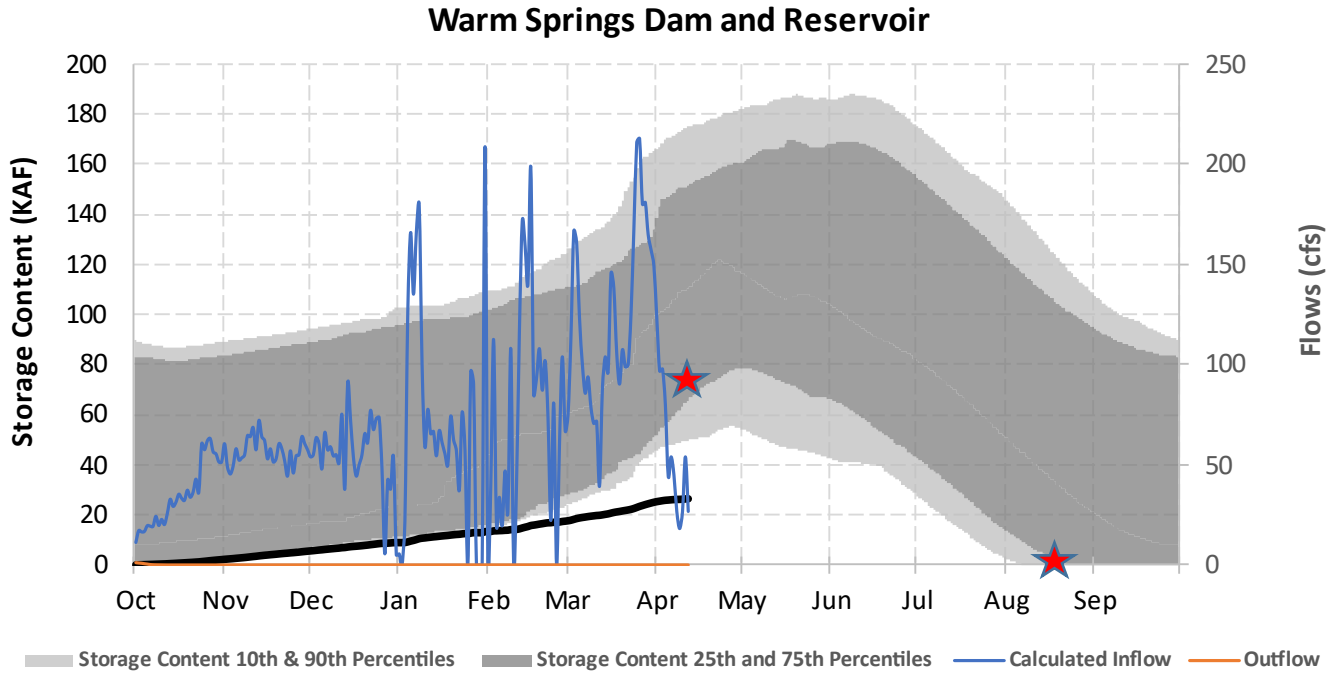
Reclamation April 1 Runoff Forecast
Apr-Jun: 140 kaf (48% 91-20 Ave)

★ WY2021 Storage Content

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

Malheur River Basin





Reclamation January 1 Runoff Forecast
Jan-Jun: 100 kaf (86% 91-20 Ave)

Reclamation February 1 Runoff Forecast
Feb-Jun: 79 kaf (74% 91-20 Ave)

Reclamation March 1 Runoff Forecast
Mar-Jun: 60 kaf (64% 91-20 Ave)

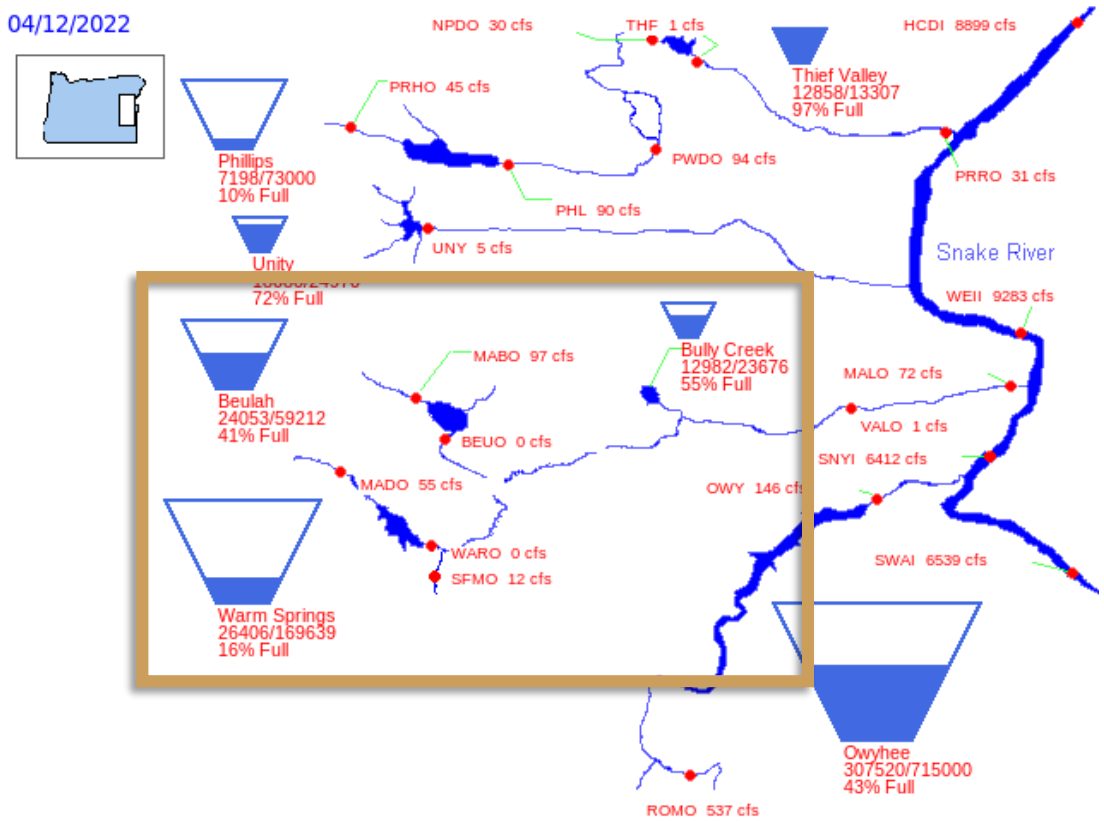
Reclamation April 1 Runoff Forecast
Apr-Jun: 24 kaf (40% 91-20 Ave)

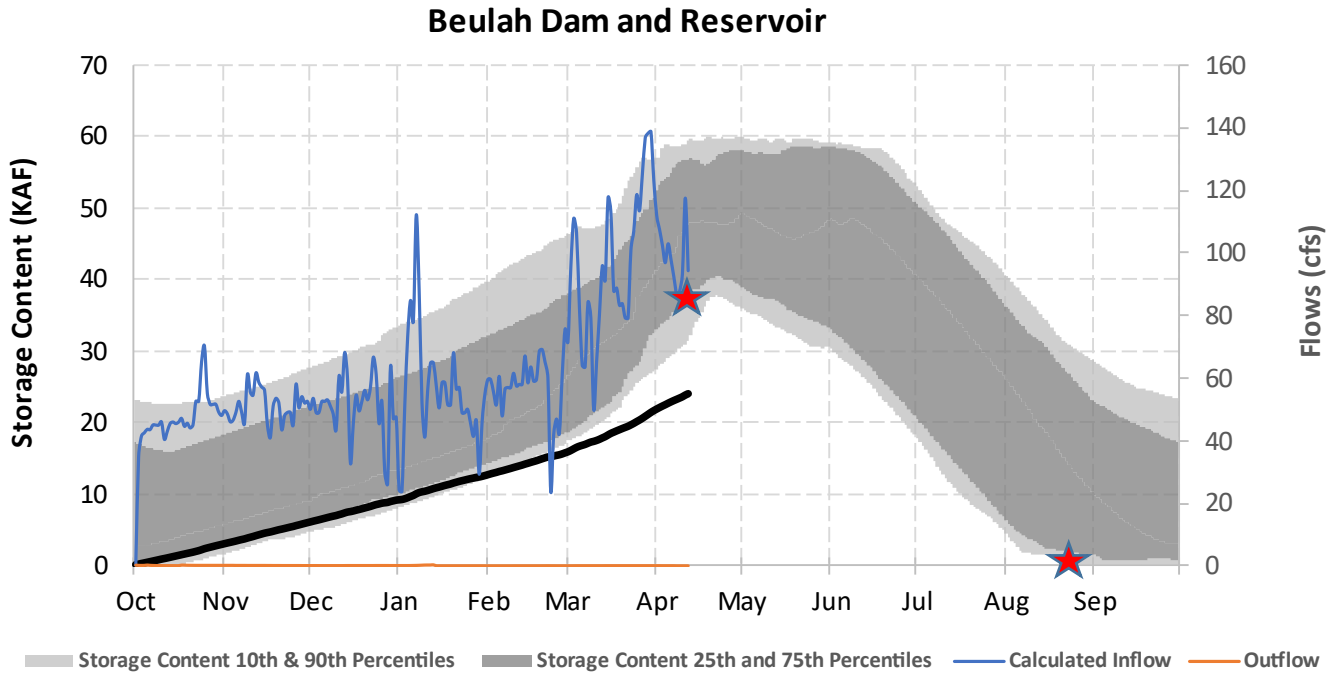
Supports Harney and Malheur County Drought Declaration

★ WY2021 Storage Content

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

Malheur River Basin





Supports Malheur County Drought Declaration

Reclamation January 1 Runoff Forecast
Jan-Jun: 70 kaf (88% 91-20 Ave)

Reclamation February 1 Runoff Forecast
Feb-Jun: 53 kaf (71% 91-20 Ave)

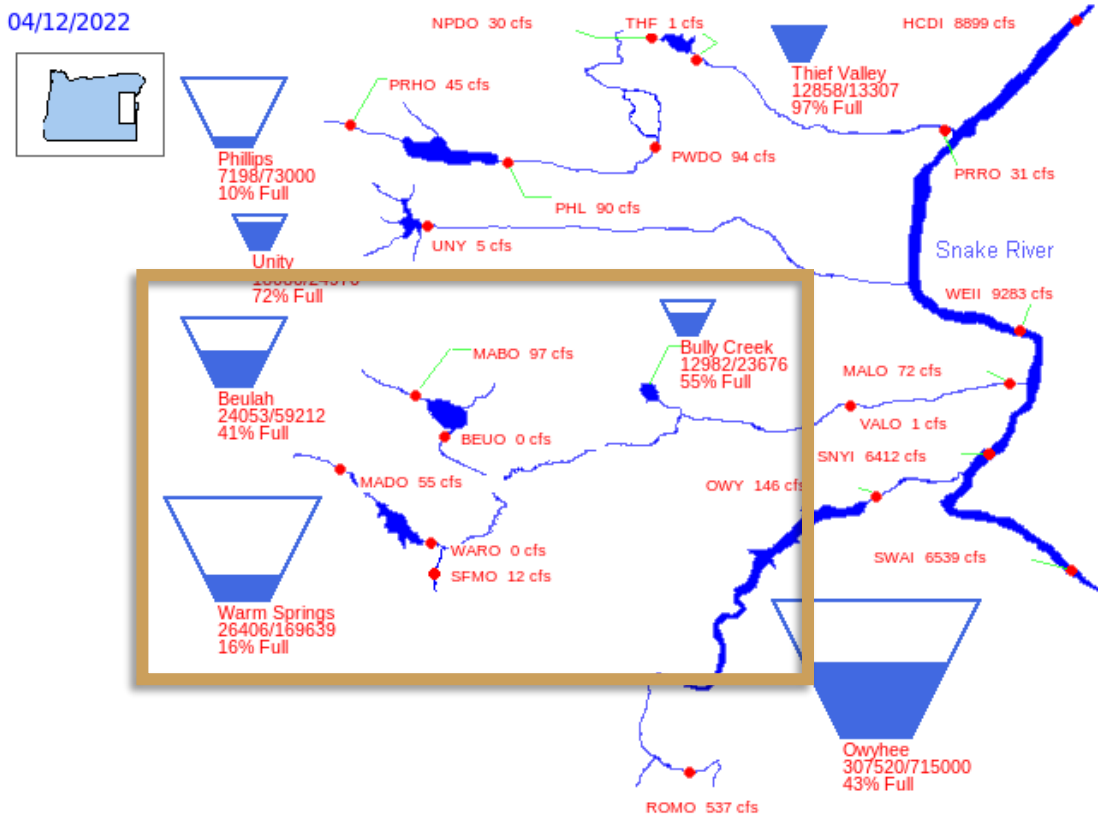
Reclamation March 1 Runoff Forecast
Mar-Jun: 45 kaf (67% 91-20 Ave)

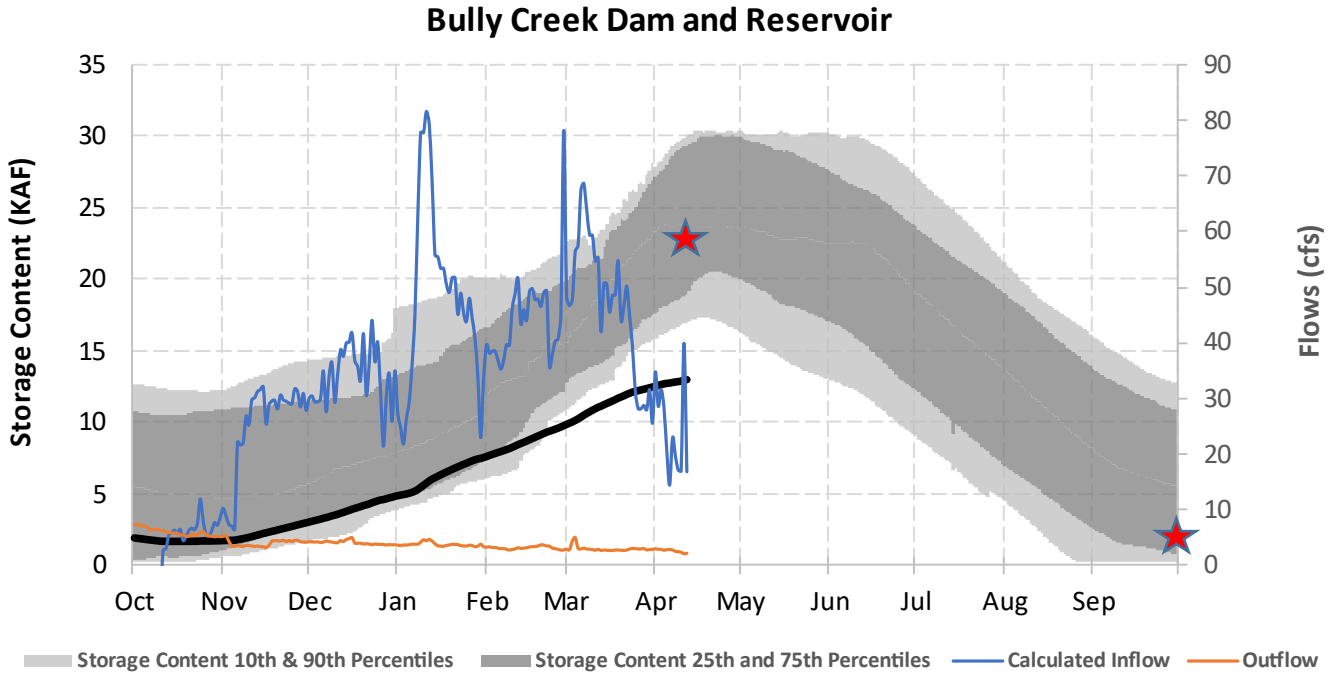
Reclamation April 1 Runoff Forecast
Apr-Jun: 17 kaf (34% 91-20 Ave)

★ WY2021 Storage Content

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

Malheur River Basin





Reclamation January 1 Runoff Forecast
Jan-Jun: 24 kaf (81% 91-20 Ave)

Reclamation February 1 Runoff Forecast
Feb-Jun: 19 kaf (73% 91-20 Ave)

Reclamation March 1 Runoff Forecast
Mar-Jun: 10 kaf (47% 91-20 Ave)

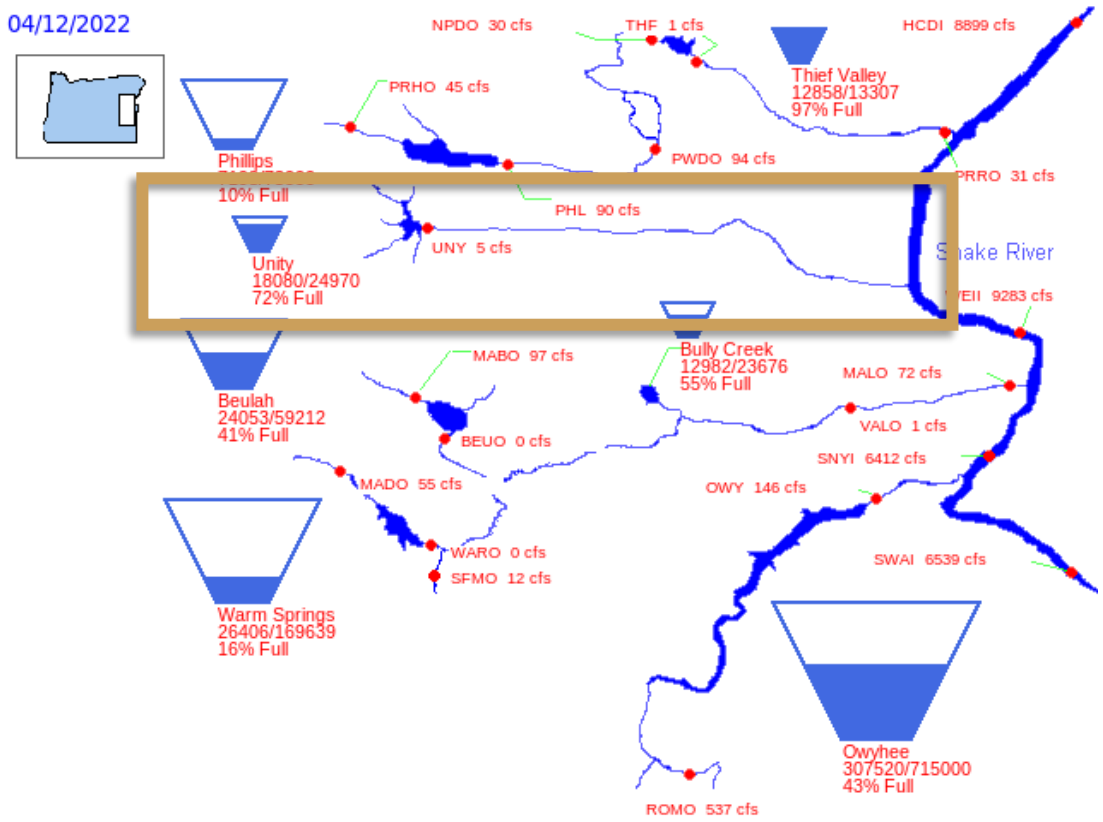
Reclamation April 1 Runoff Forecast
Apr-Jun: 1 kaf (11% 91-20 Ave)

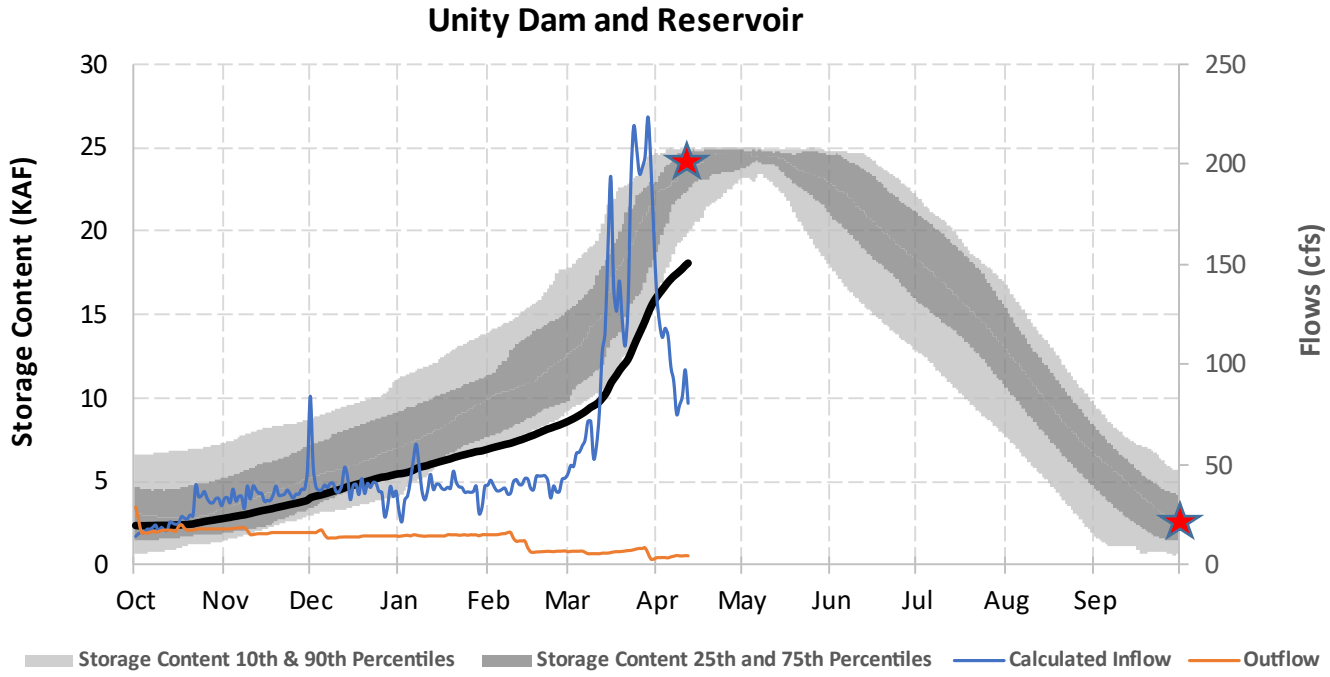
Supports Malheur County Drought Declaration

★ WY2021 Storage Content

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

Burnt River Basin





Reclamation January 1 Runoff Forecast
Jan-Jun: 45 kaf (89% 91-20 Ave)

Reclamation February 1 Runoff Forecast
Feb-Jun: 41 kaf (87% 91-20 Ave)

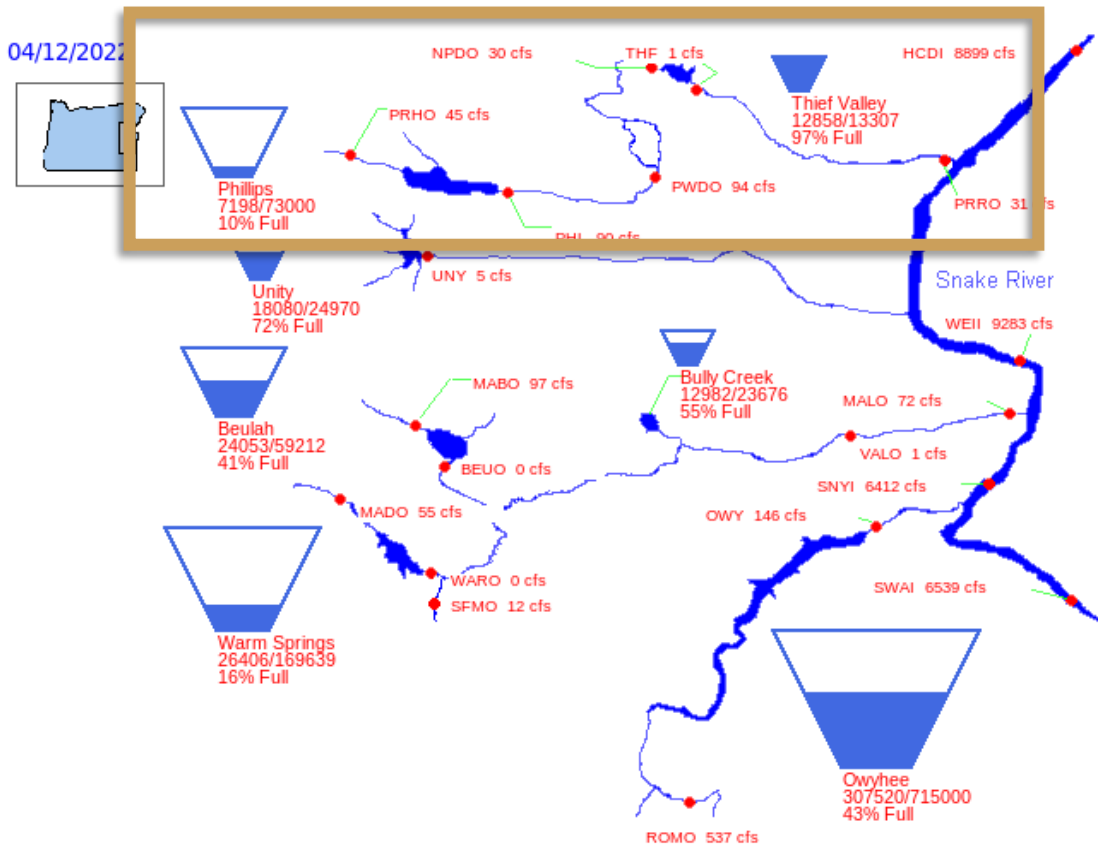
Reclamation March 1 Runoff Forecast
Mar-Jun: 29 kaf (68% 91-20 Ave)

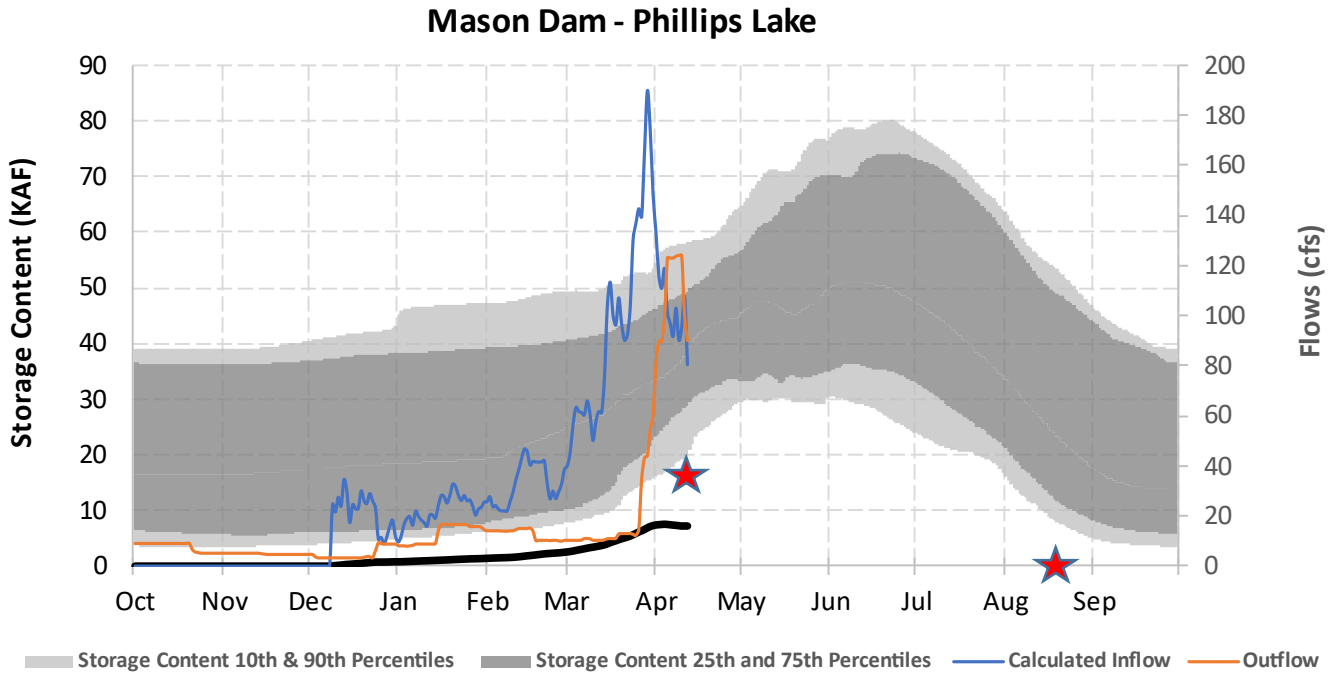
Reclamation April 1 Runoff Forecast
Apr-Jun: 5 kaf (17% 91-20 Ave)

★ WY2021 Storage Content

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

Powder River Basin





Reclamation January 1 Runoff Forecast
Jan-Jul: 69 kaf (97% 91-20 Ave)

Reclamation February 1 Runoff Forecast
Feb-Jul: 55 kaf (80% 91-20 Ave)

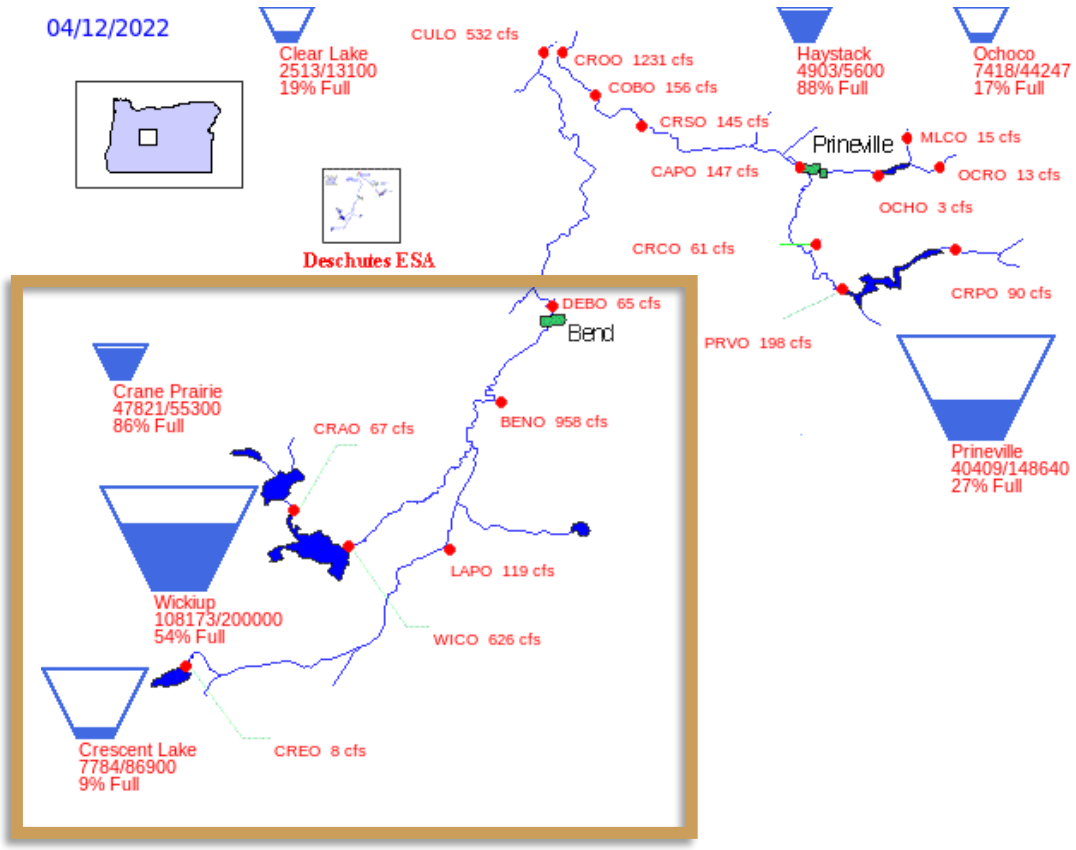
Reclamation March 1 Runoff Forecast
Mar-Jul: 41 kaf (64% 91-20 Ave)

Reclamation April 1 Runoff Forecast
Apr-Jul: 18 kaf (33% 91-20 Ave)

★ WY2021 Storage Content

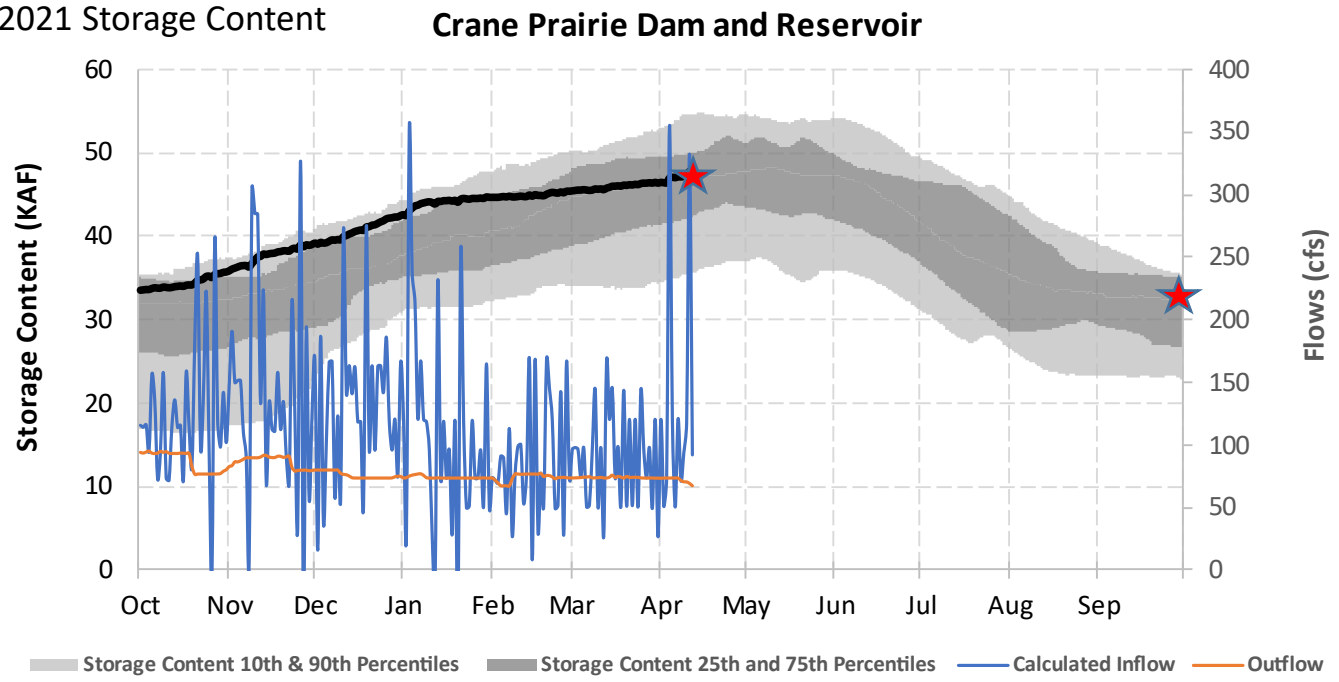
**Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows*

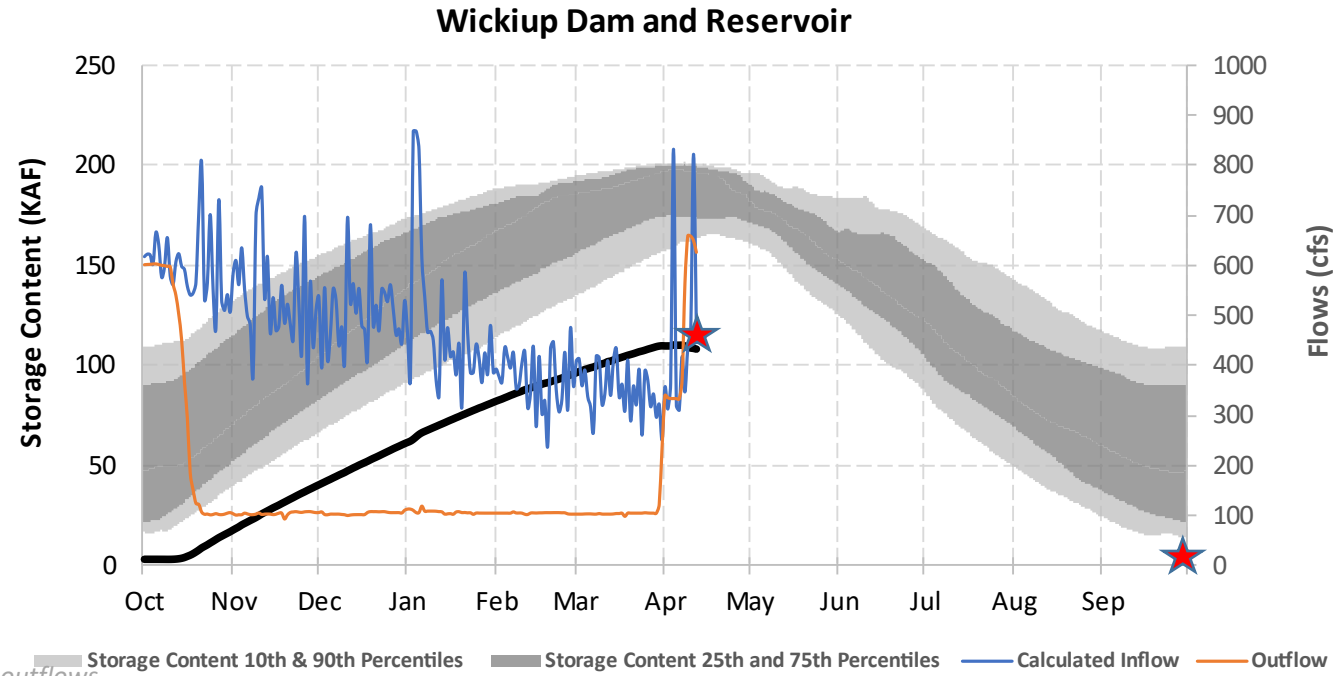
Deschutes River Basin



Supports Crook, Jefferson and Deschutes County Drought Declarations

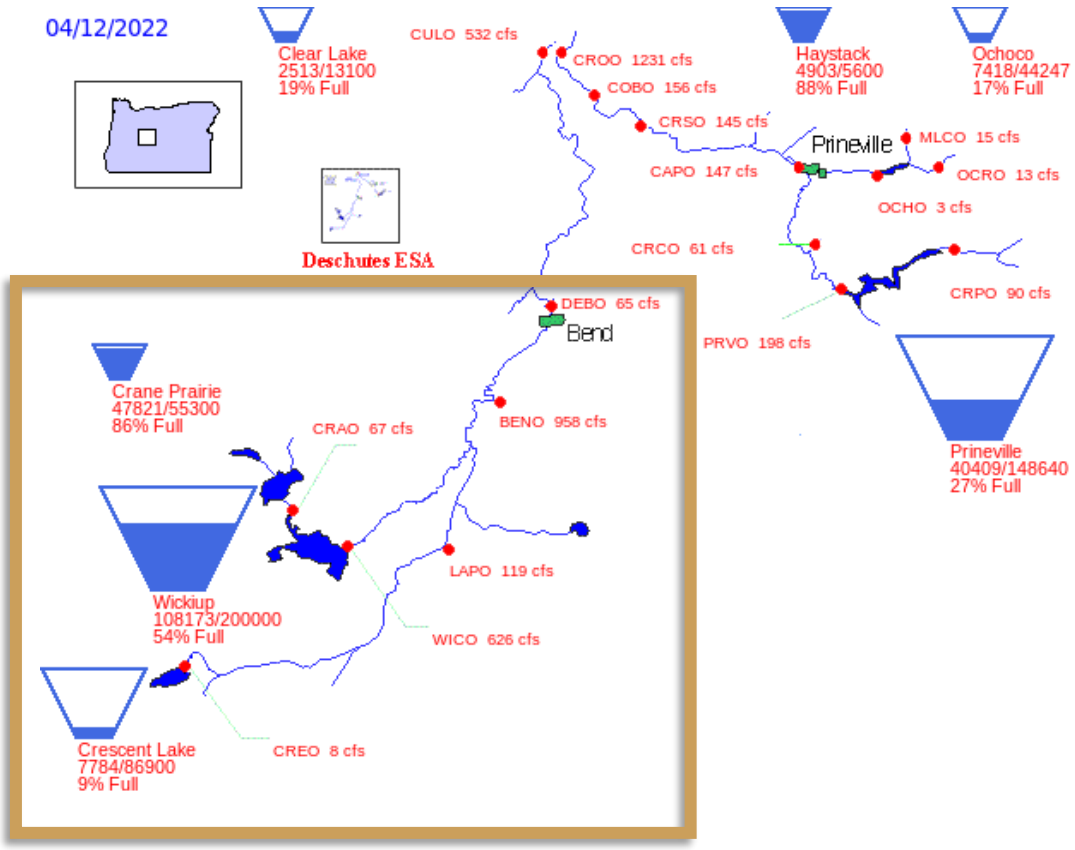
WY2021 Storage Content

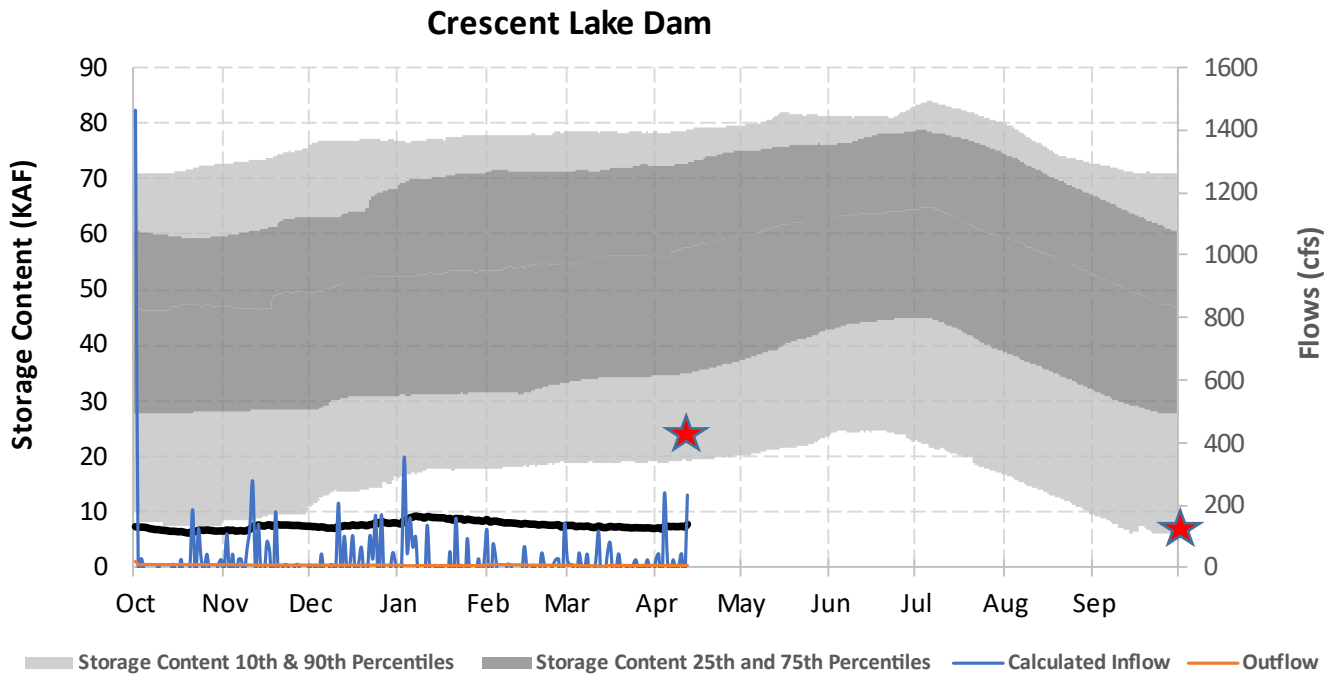




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Deschutes River Basin



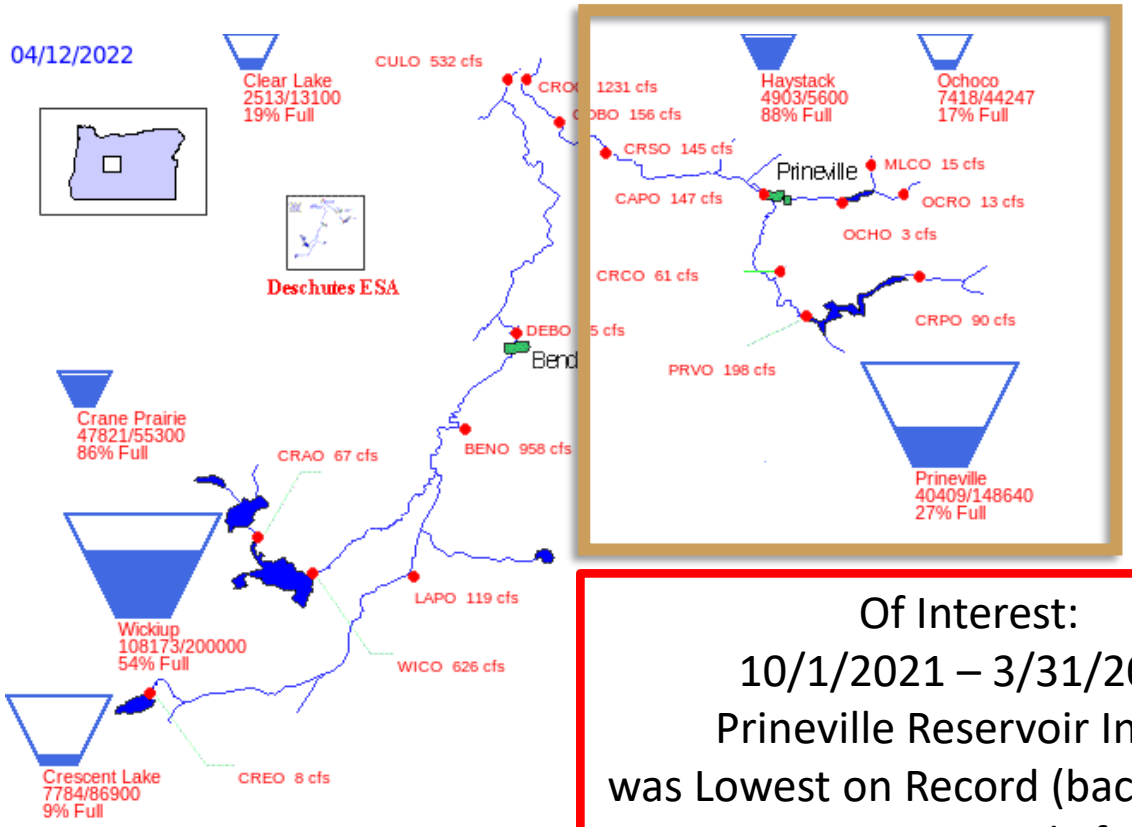


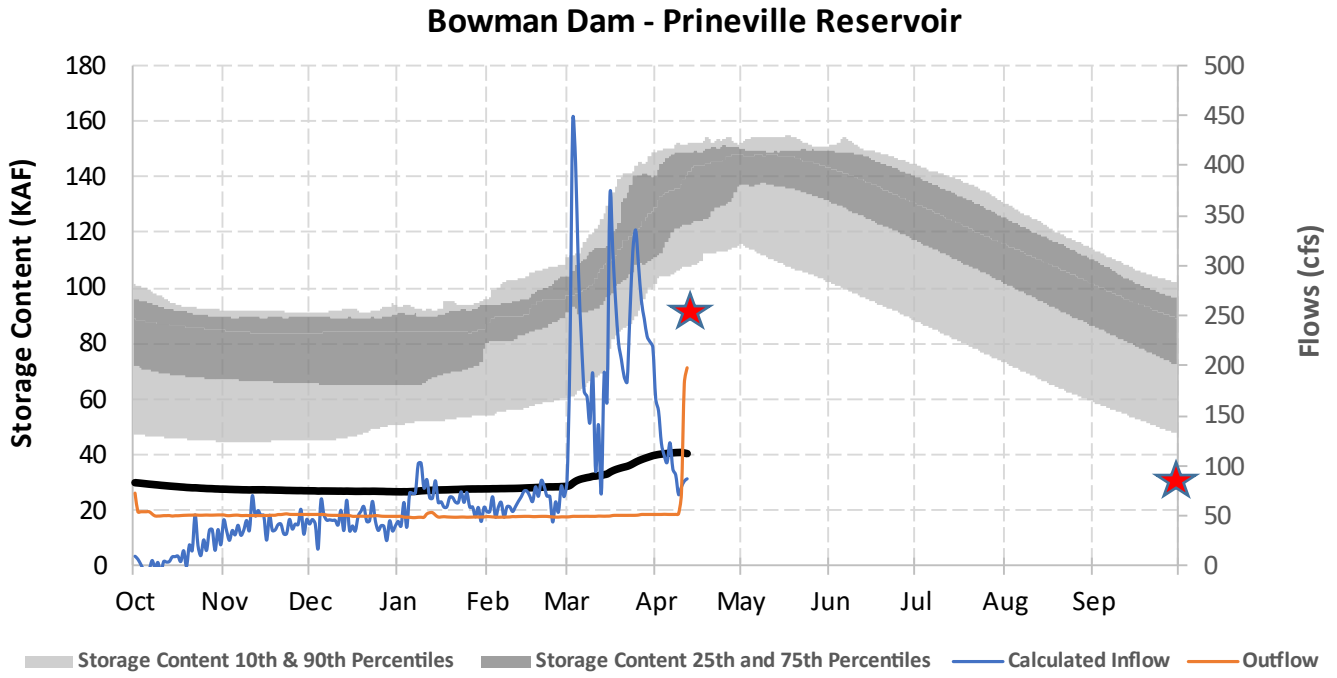
Supports Crook, Jefferson and Deschutes County Drought Declarations

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

★ WY2021 Storage Content

Crooked River Basin





Of Interest:
10/1/2021 – 3/31/2022
Prineville Reservoir Inflow
was Lowest on Record (back to 1974)
2022: 27.7 kaf
1977: 28.3 kaf

Reclamation January 1 Runoff Forecast
Jan-Aug: 166 kaf (91% 91-20 Ave)

Reclamation February 1 Runoff Forecast
Feb-Aug: 99 kaf (60% 91-20 Ave)

Reclamation March 1 Runoff Forecast
Mar-Aug: 67 kaf (48% 91-20 Ave)

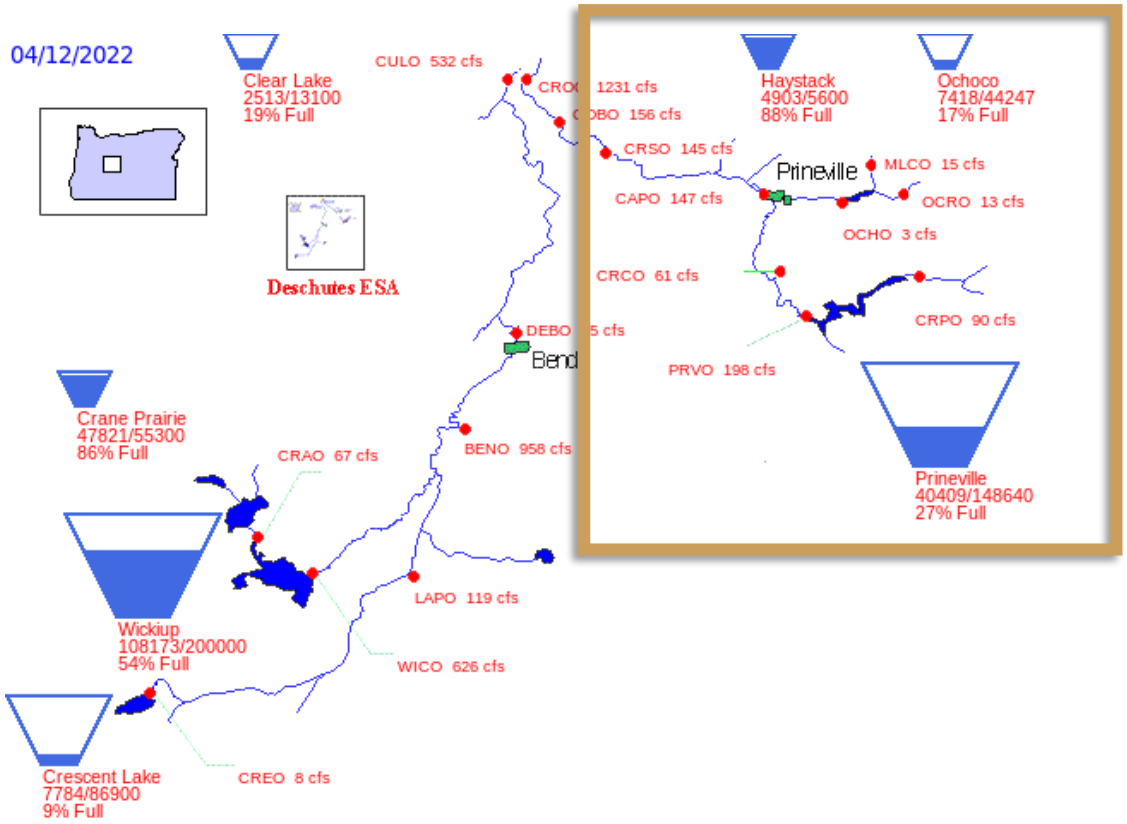
Reclamation April 1 Runoff Forecast
Apr-Aug: 6 kaf (7% 91-20 Ave)

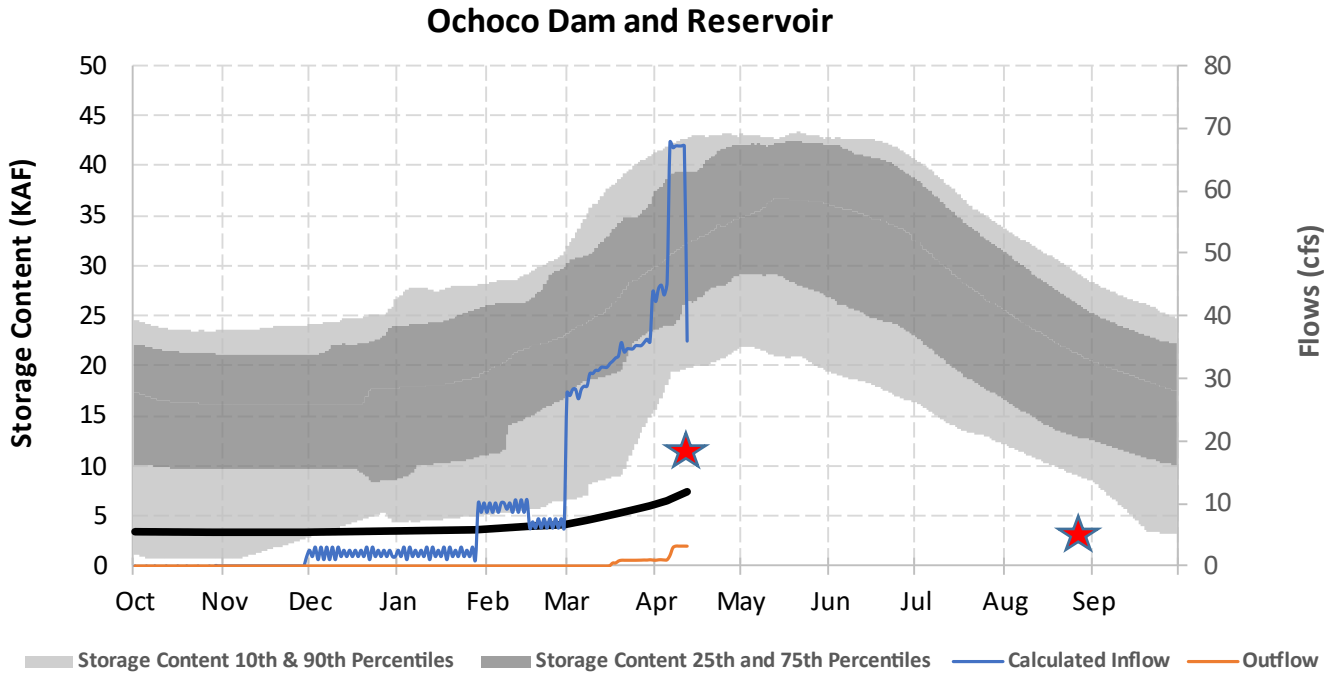
Supports Crook, Jefferson and Deschutes County Drought Declarations

★ WY2021 Storage Content

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

Crooked River Basin





Reclamation January 1 Runoff Forecast
Jan-Jun: 35 kaf (88% 91-20 Ave)

Reclamation February 1 Runoff Forecast
Feb-Jun: 20 kaf (57% 91-20 Ave)

Reclamation March 1 Runoff Forecast
Mar-Jun: 16 kaf (53% 91-20 Ave)

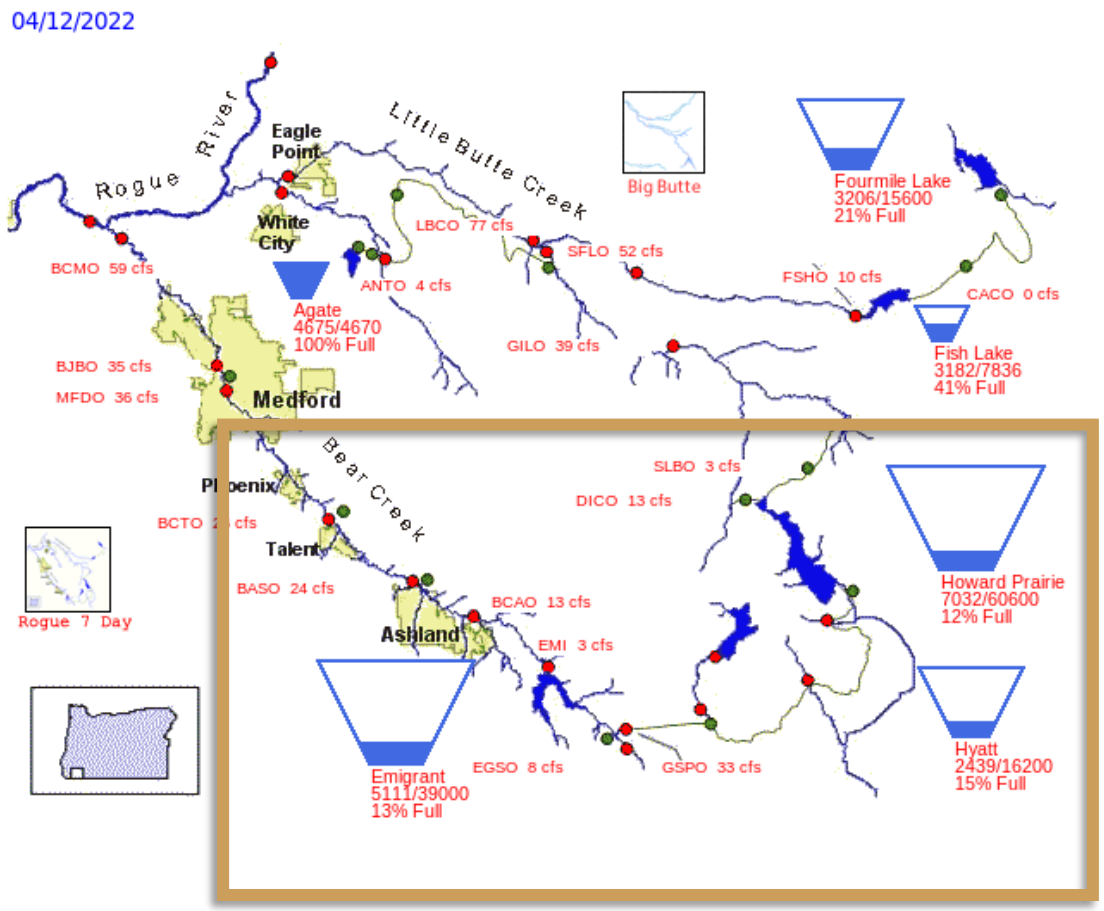
Reclamation April 1 Runoff Forecast
Apr-Jun: 1 kaf (5% 91-20 Ave)

Supports Crook, Jefferson and Deschutes County Drought Declarations

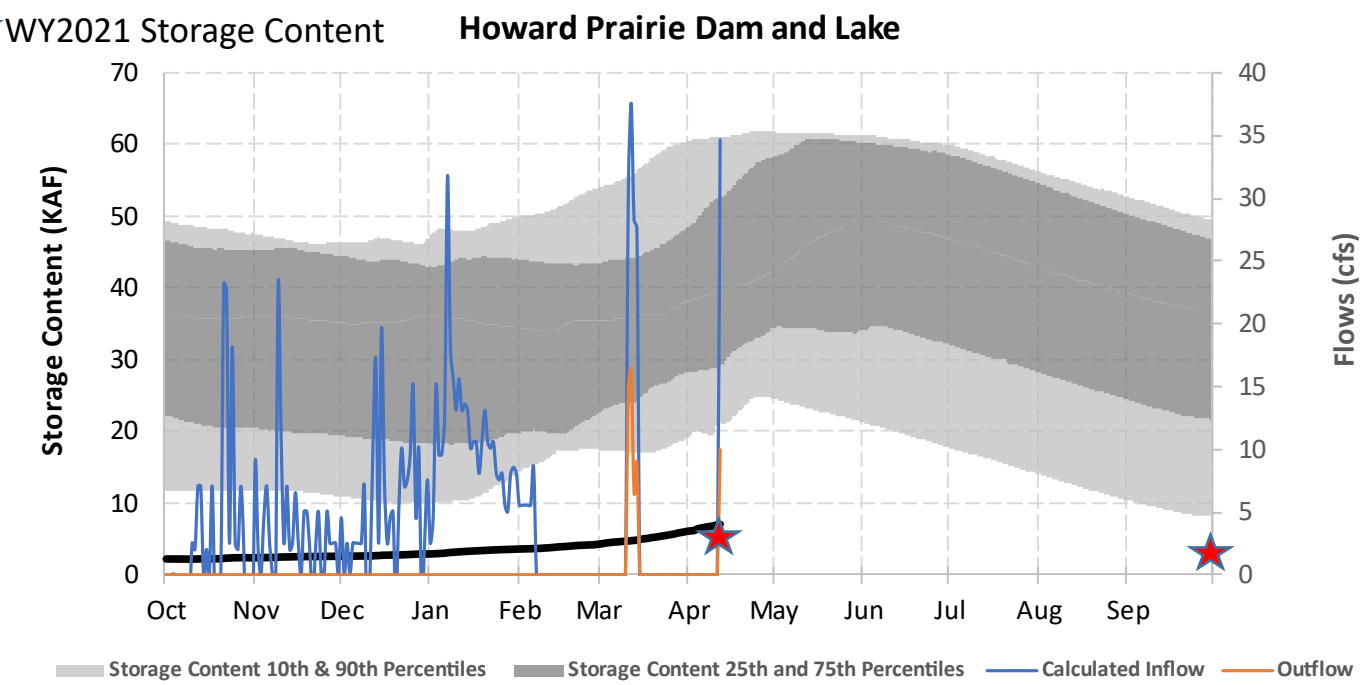
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

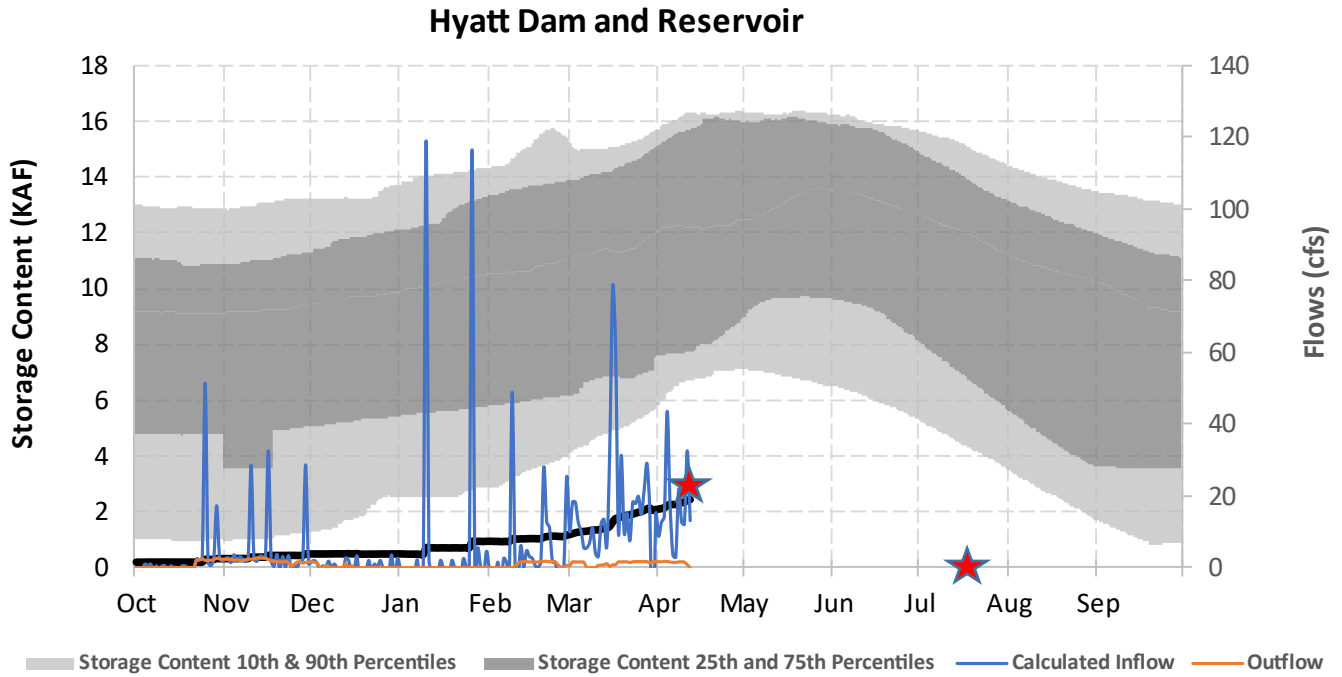
★ WY2021 Storage Content

Rogue River Basin



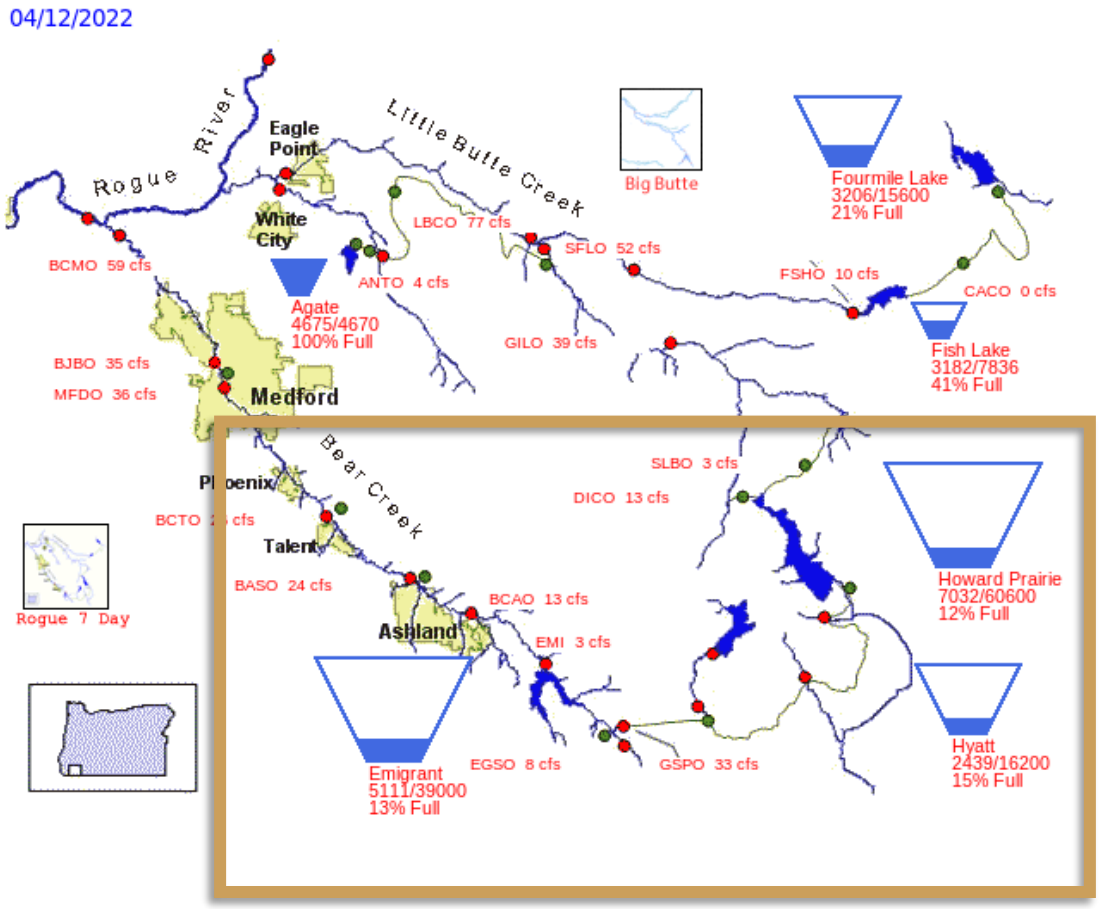
Supports Klamath and Jackson County Drought Declaration

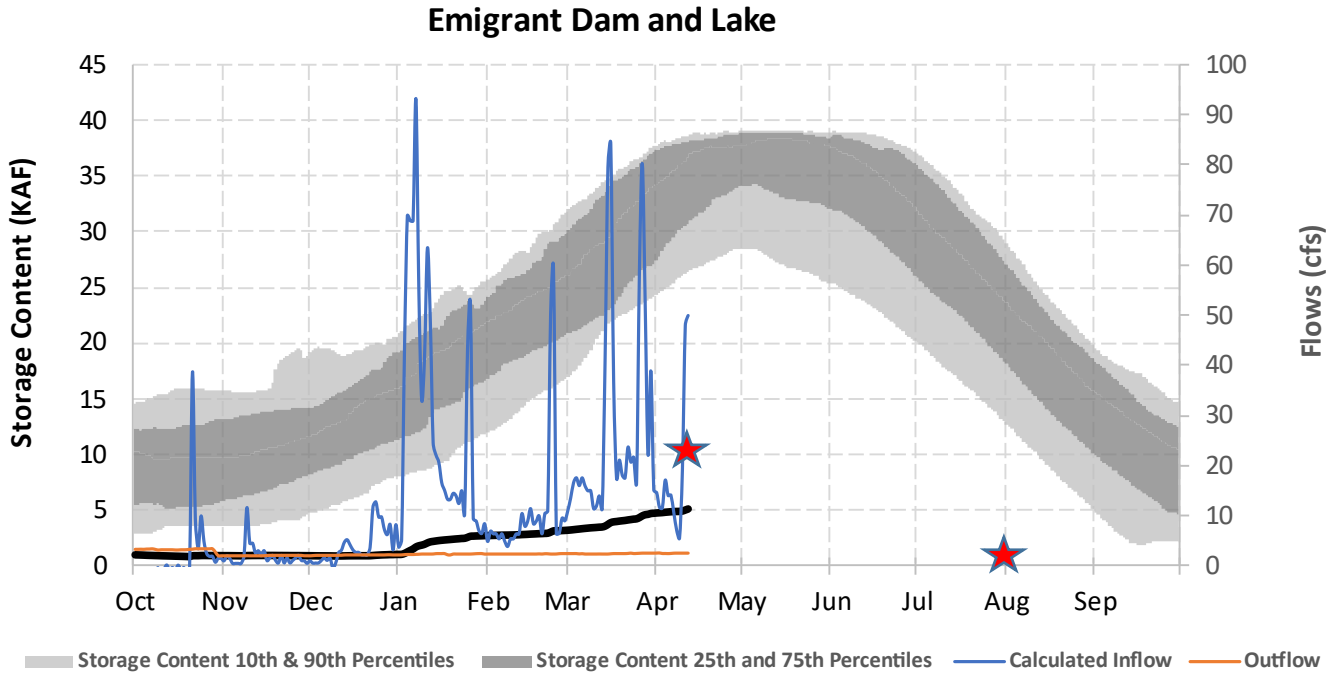




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Rogue River Basin



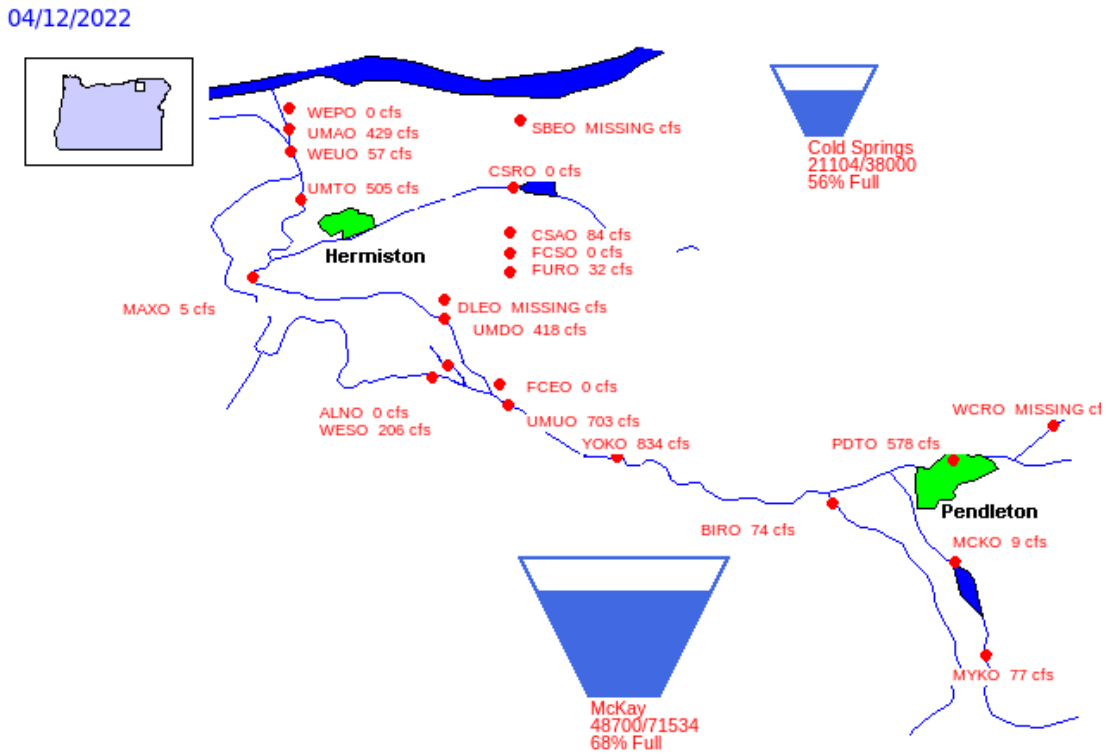


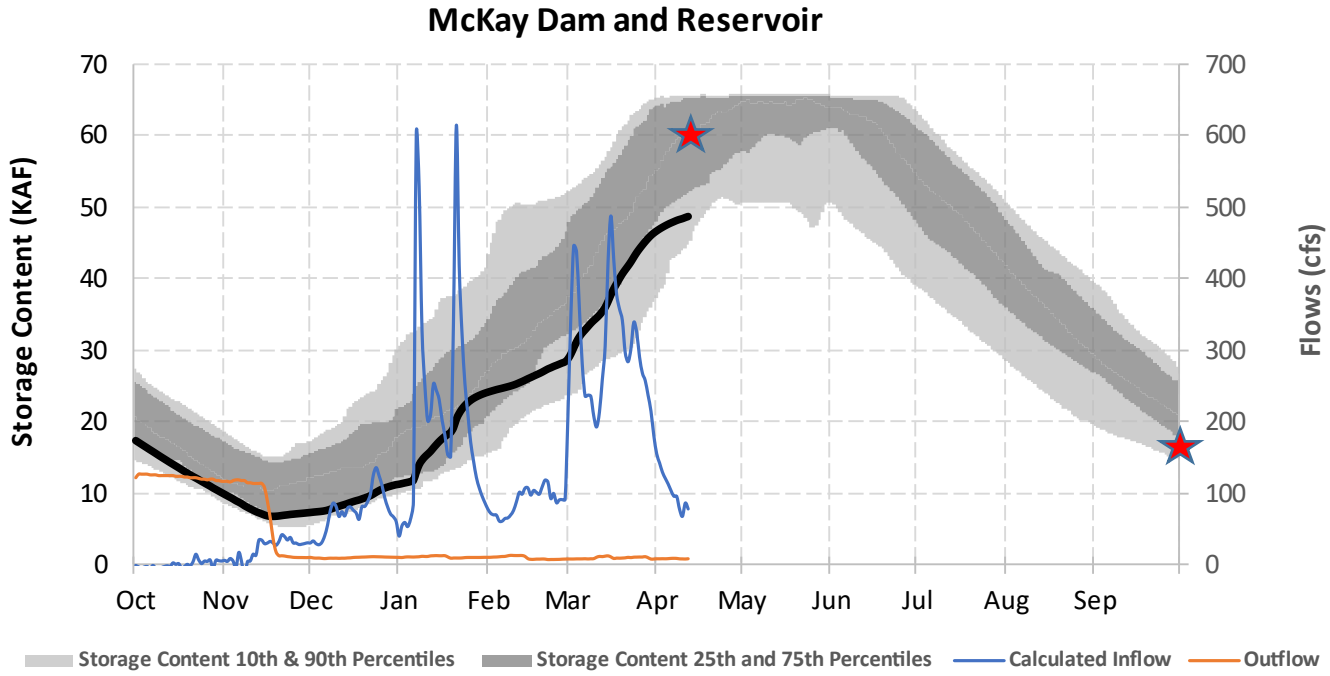
Supports Klamath and Jackson County Drought Declaration

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

★ WY2021 Storage Content

Umatilla River Basin





Neighboring Morrow County Drought Declaration

Reclamation January 1 Runoff Forecast
Jan-Jun: 75 kaf (107% 91-20 Ave)

Reclamation February 1 Runoff Forecast
Feb-Jun: 61 kaf (103% 91-20 Ave)

Reclamation March 1 Runoff Forecast
Mar-Jun: 46 kaf (98% 91-20 Ave)

Reclamation April 1 Runoff Forecast
Apr-Jun: 13 kaf (45% 91-20 Ave)

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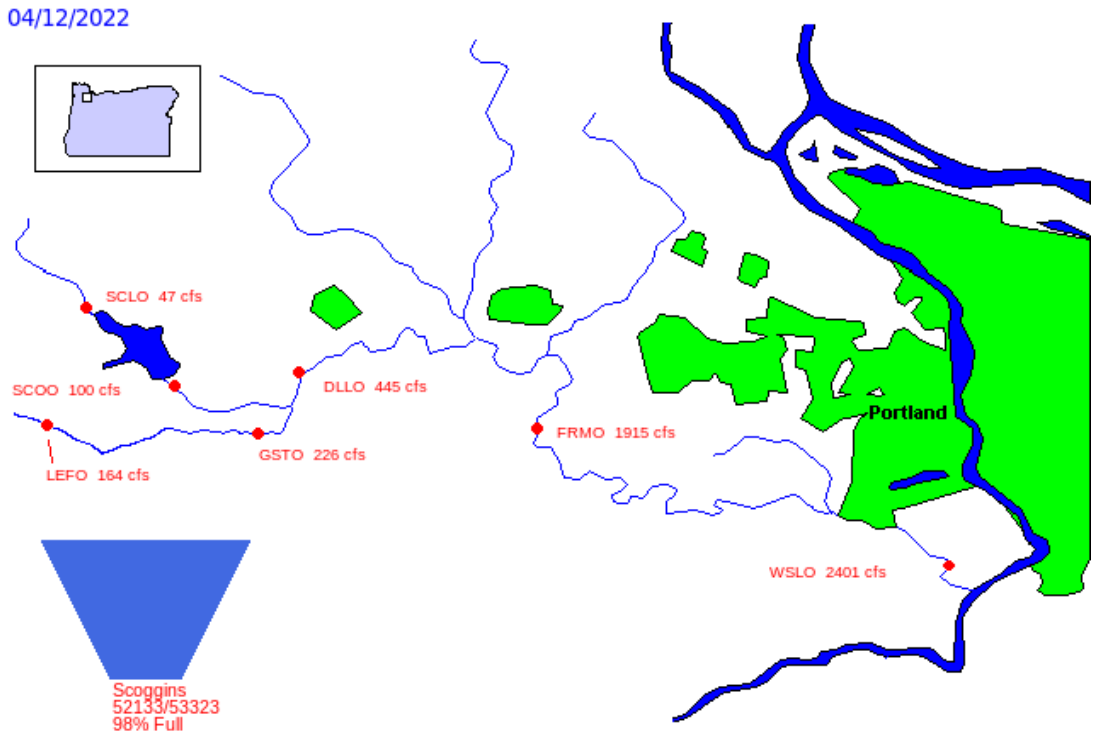
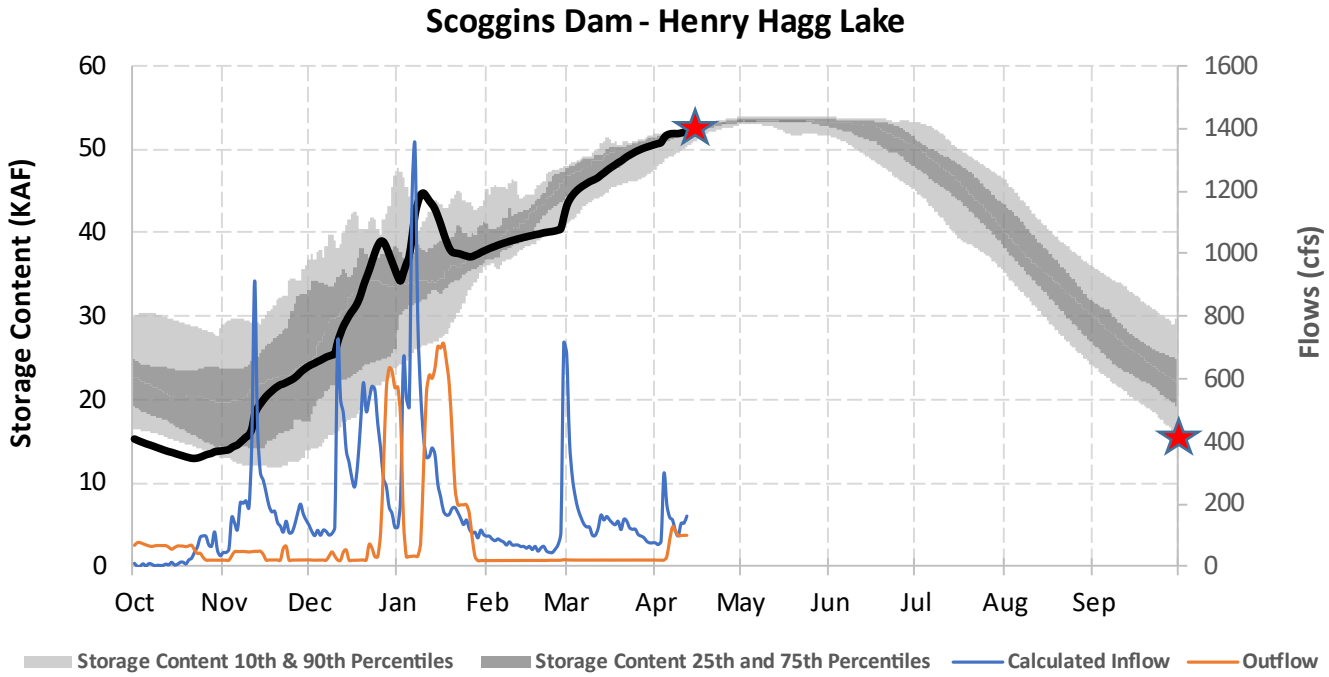
Tualatin River Basin





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

★ WY2021 Storage Content

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BUREAU OF RECLAMATION