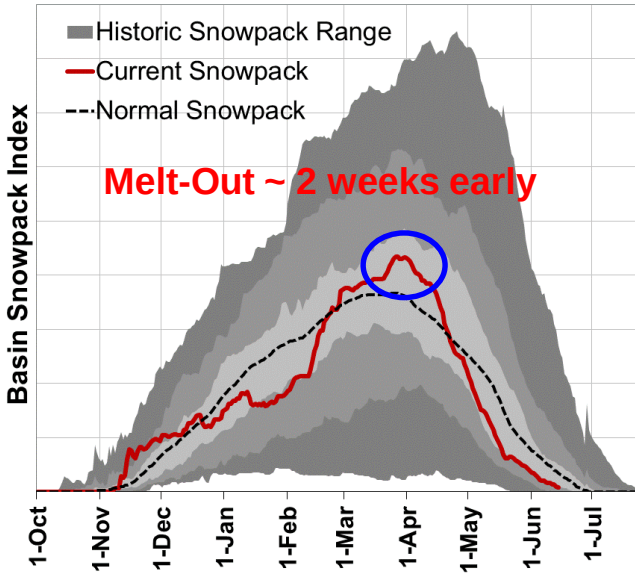
Oregon Water Supply Availability Committee – June 16, 2021

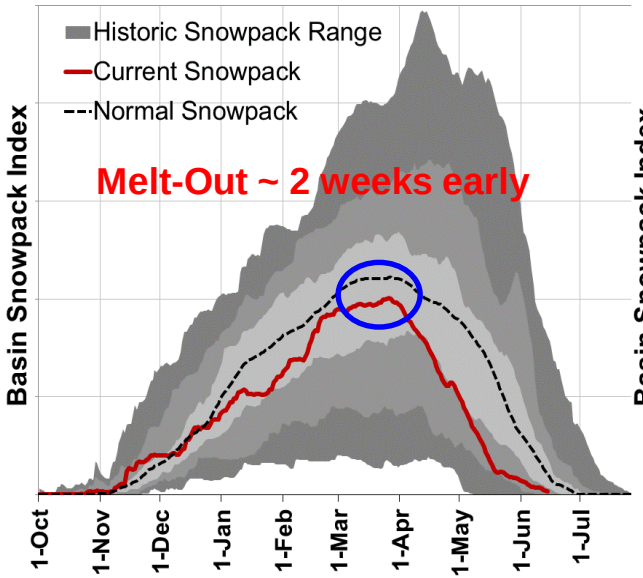
H. Scott Oviatt
USDA – Natural Resources Conservation Service
scott.oviatt@usda.gov
503-414-3271

OREGON SNOWPACK GRAPHS – June 16, 2021

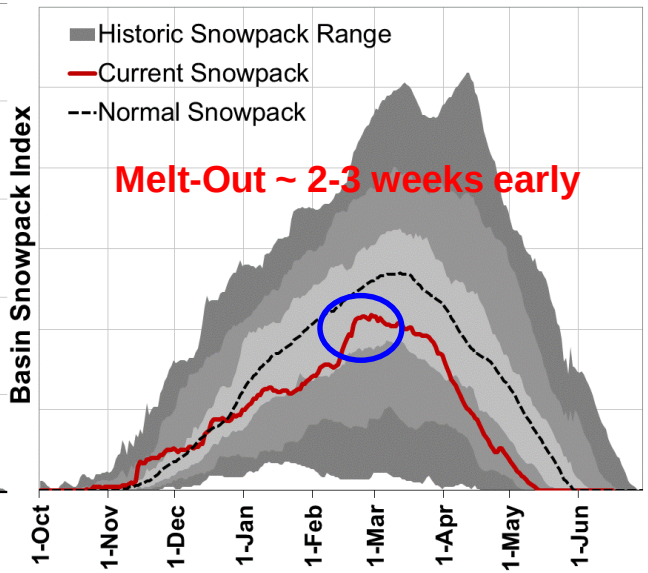
Willamette



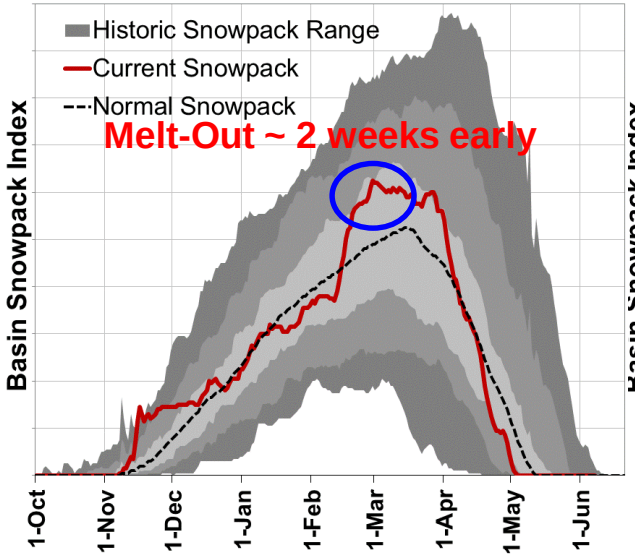
Rogue-Umpqua



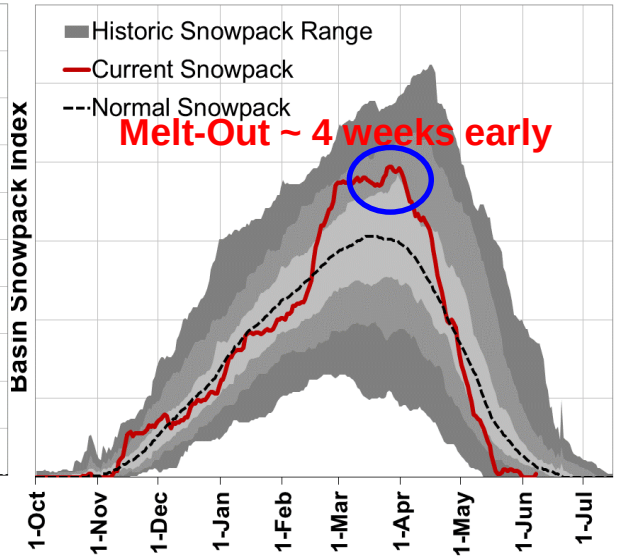
Klamath



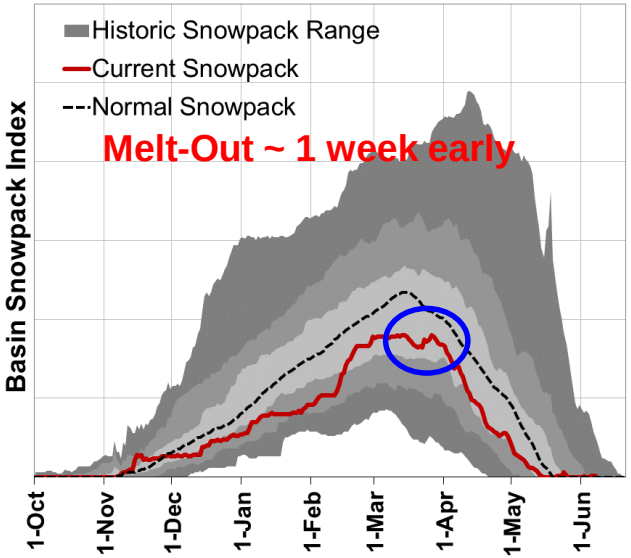
John Day



Grande Ronde-Burnt-Powder-Imnaha

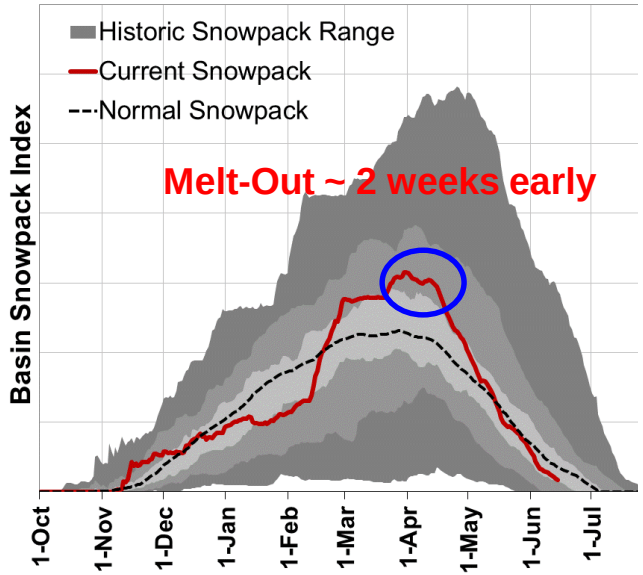


Owyhee

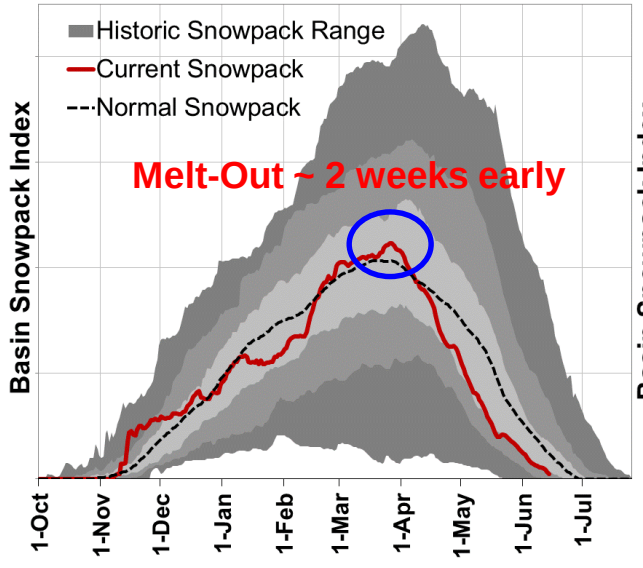


OREGON SNOWPACK GRAPHS – June 16, 2021

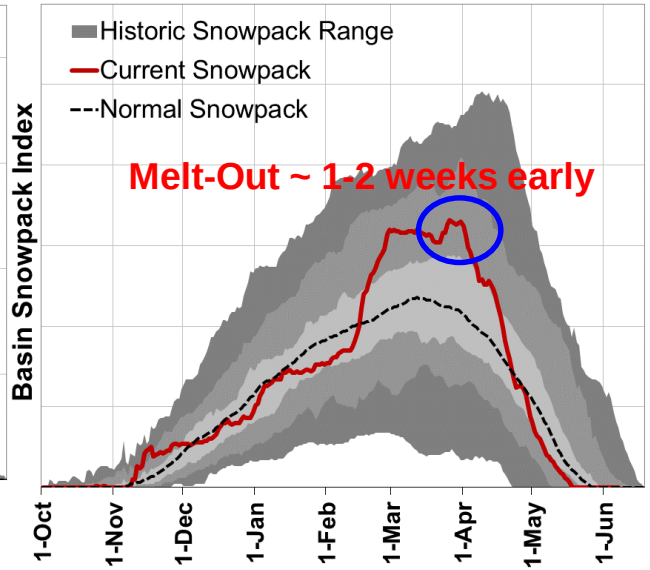
Hood-Sandy-Lower Deschutes



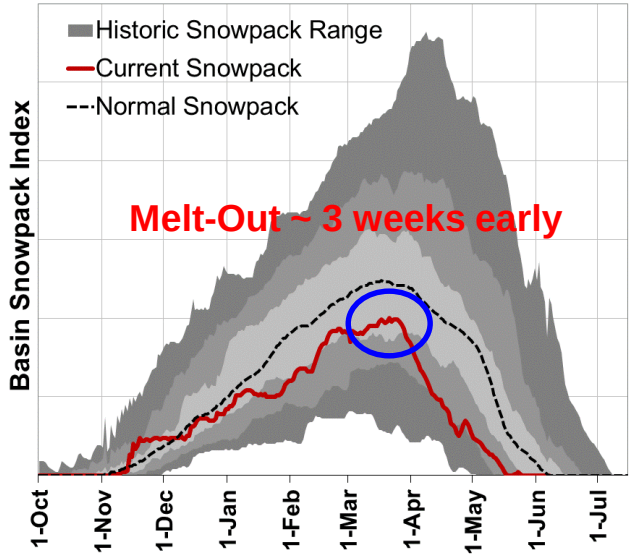
Upper Deschutes-Crooked



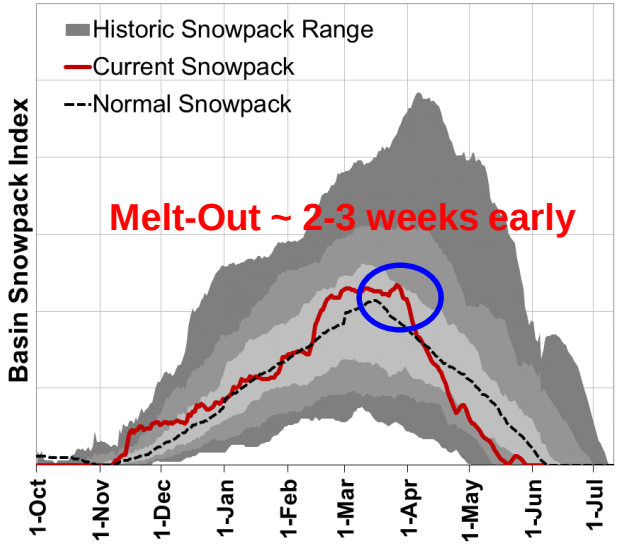
Umatilla-Walla Walla-Willow



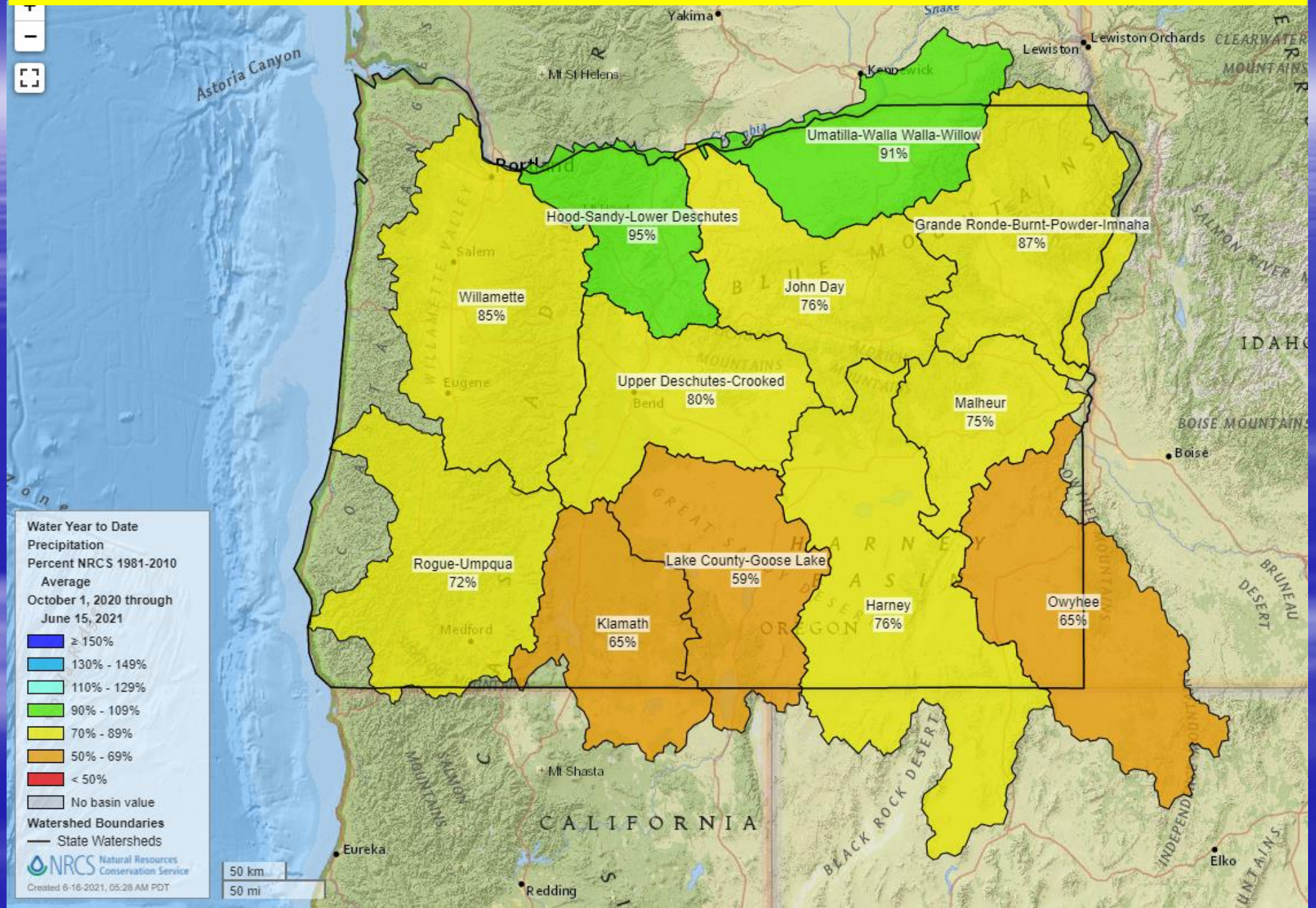
Lake County-Goose Lake



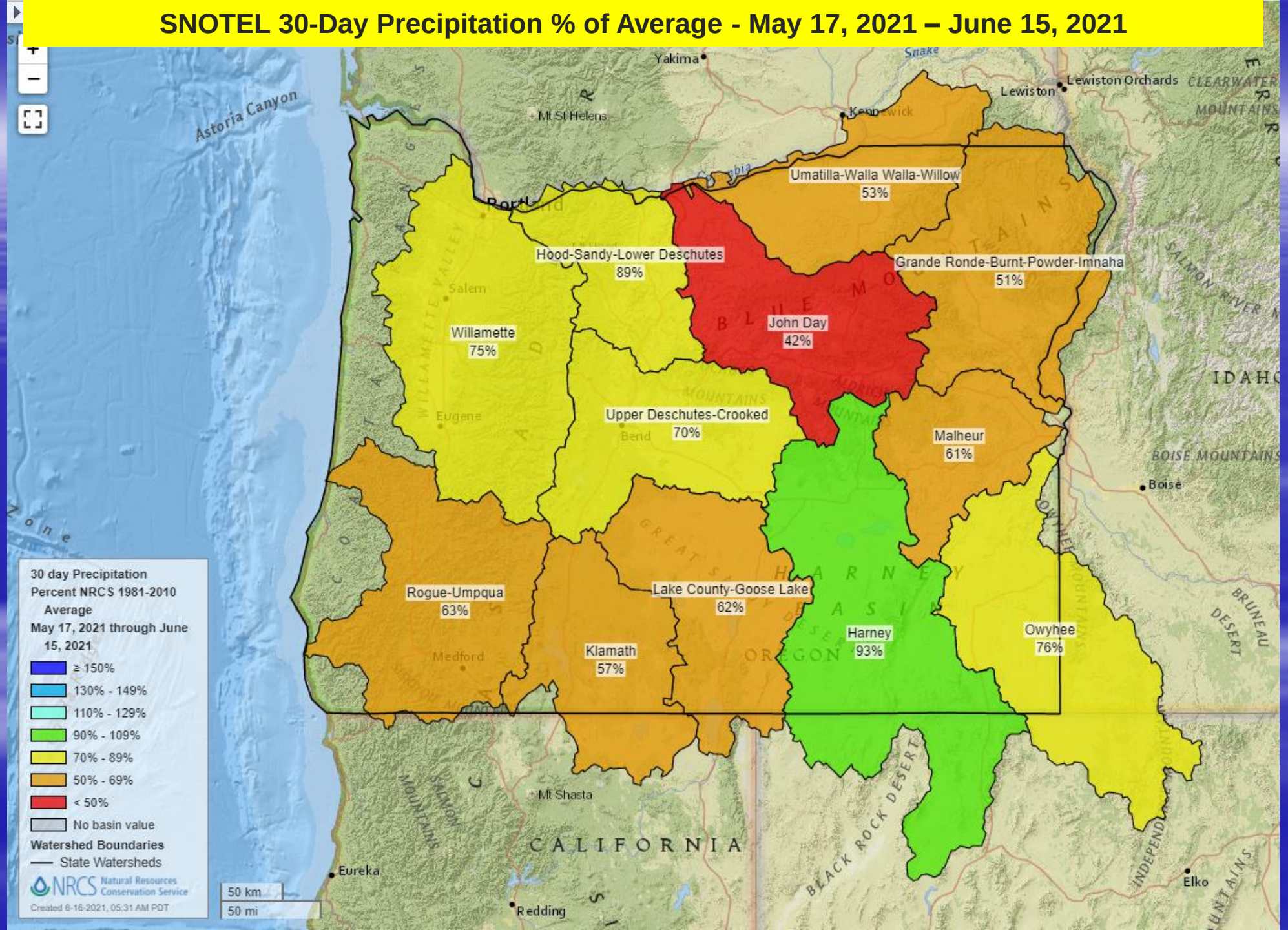
Harney



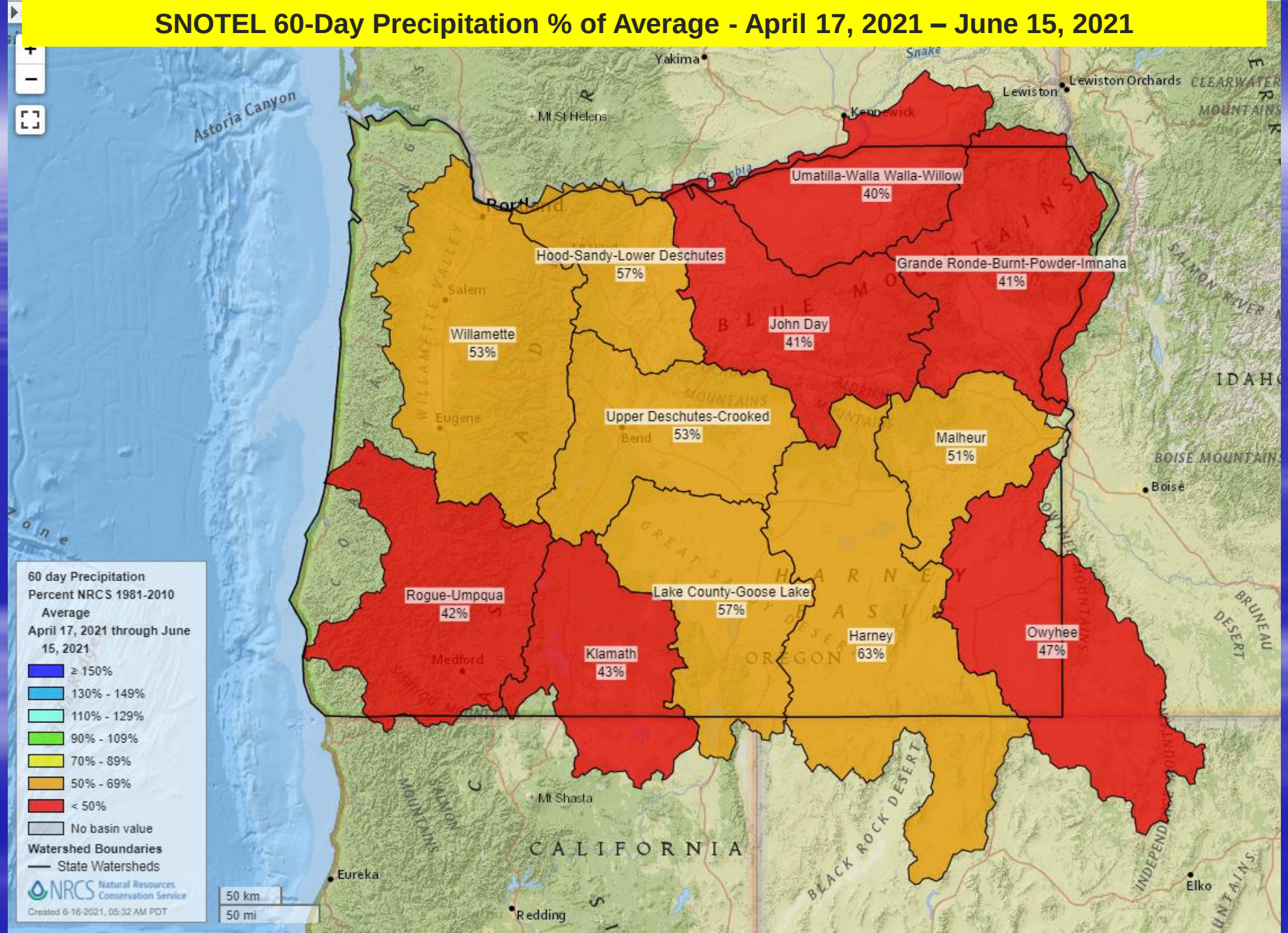
June 15th Statewide SNOTEL Water Year Precipitation is 83% of average



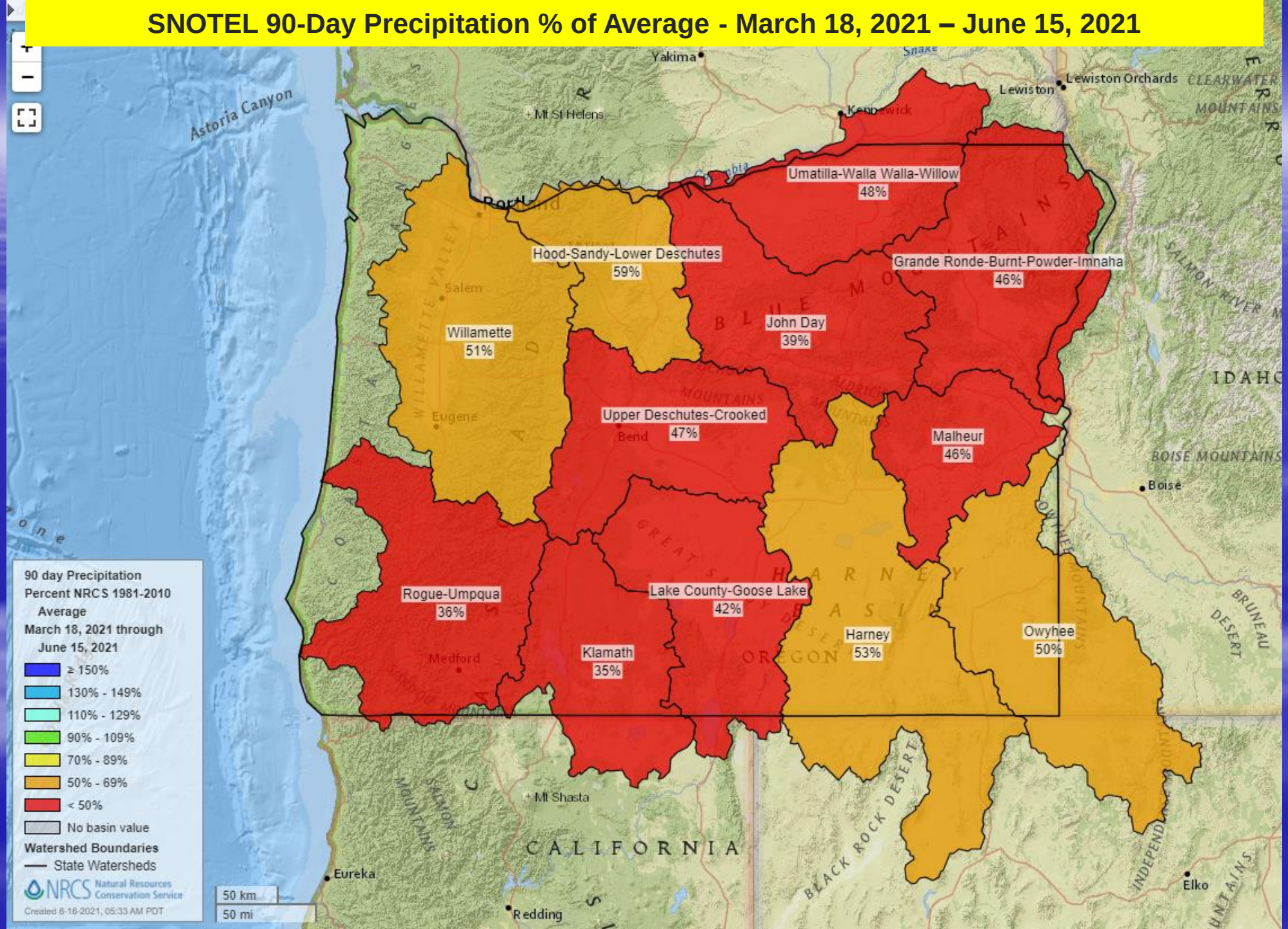
SNOTEL 30-Day Precipitation % of Average - May 17, 2021 – June 15, 2021



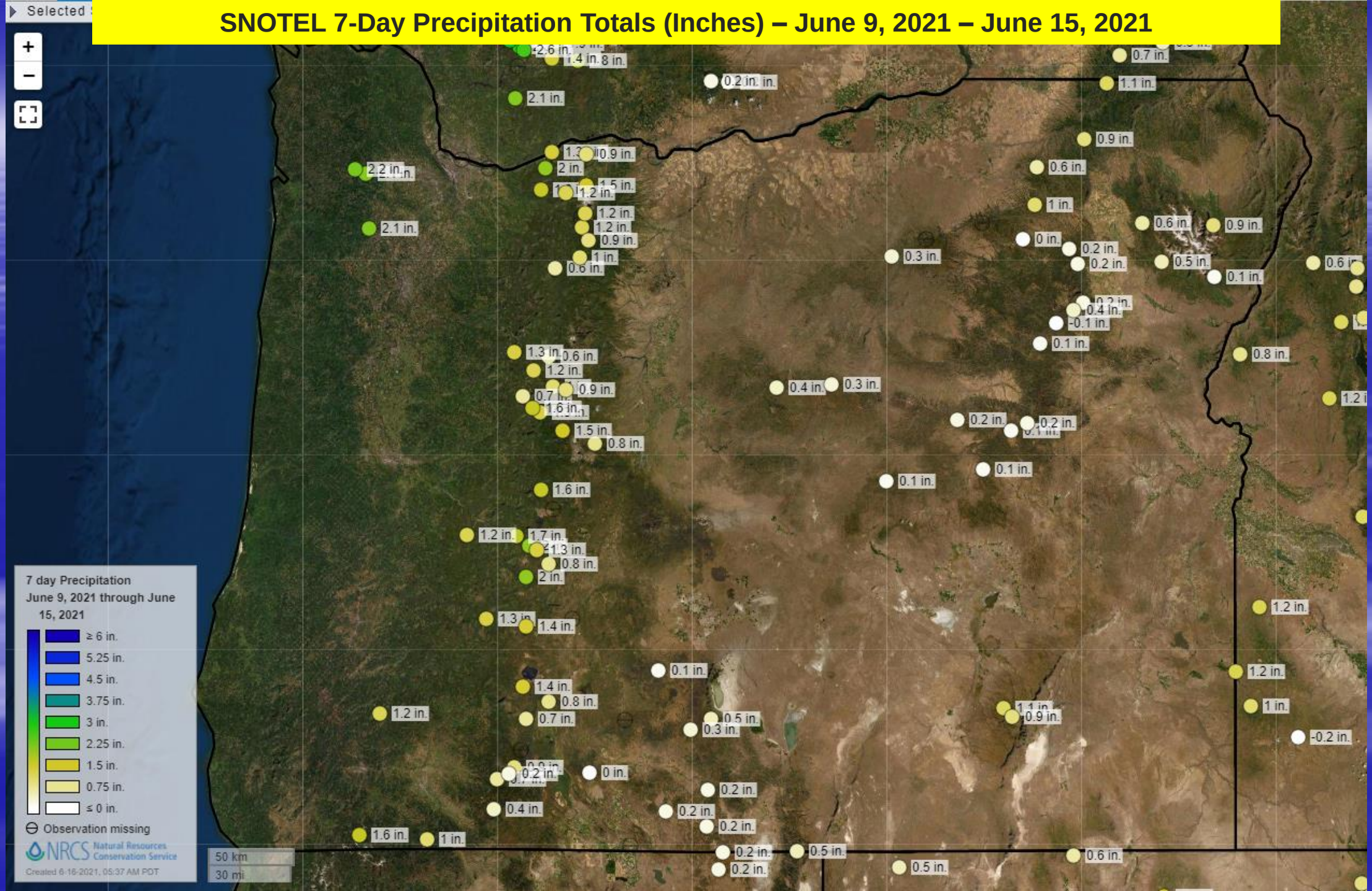
SNOTEL 60-Day Precipitation % of Average - April 17, 2021 – June 15, 2021

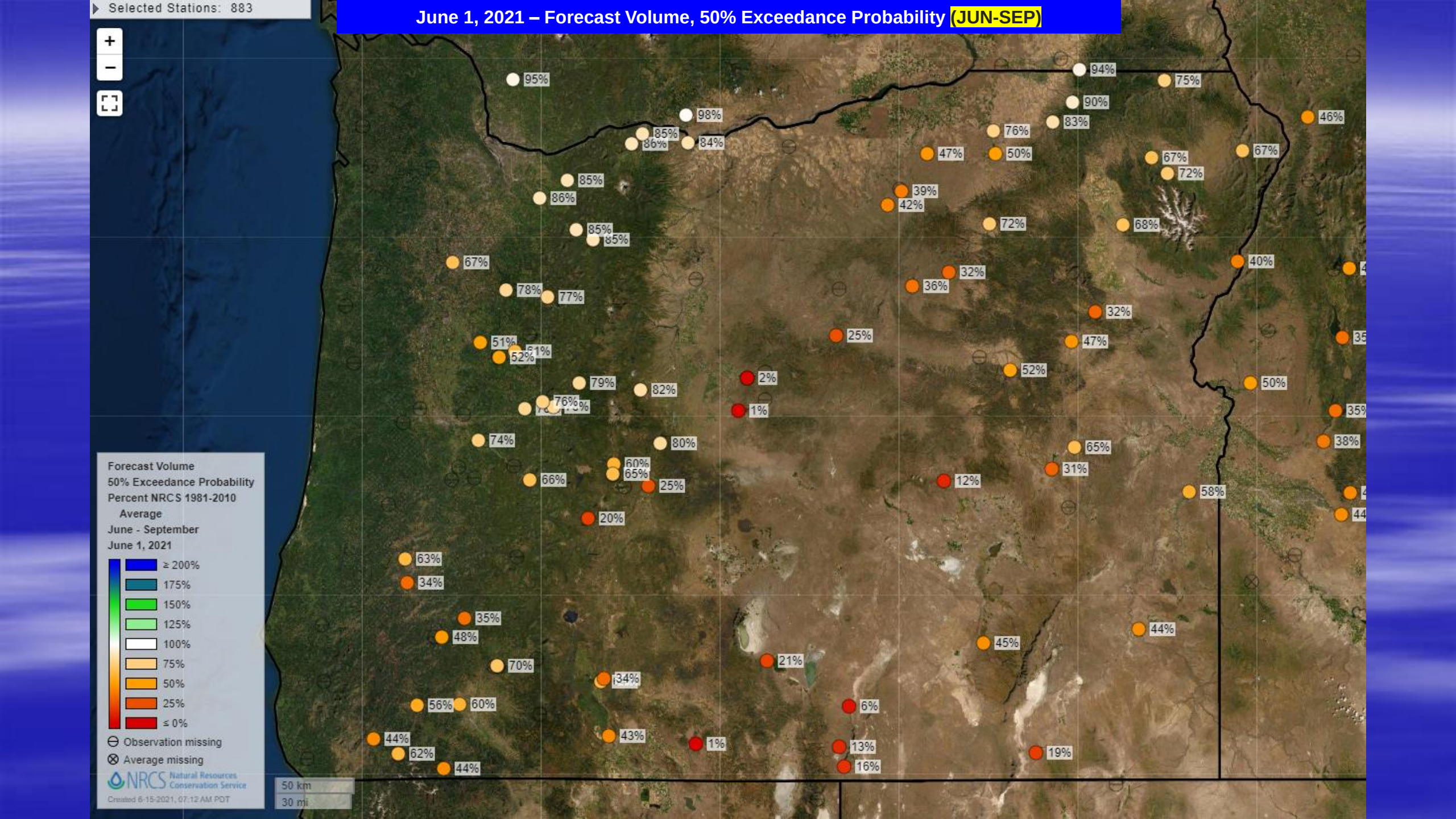


SNOTEL 90-Day Precipitation % of Average - March 18, 2021 – June 15, 2021

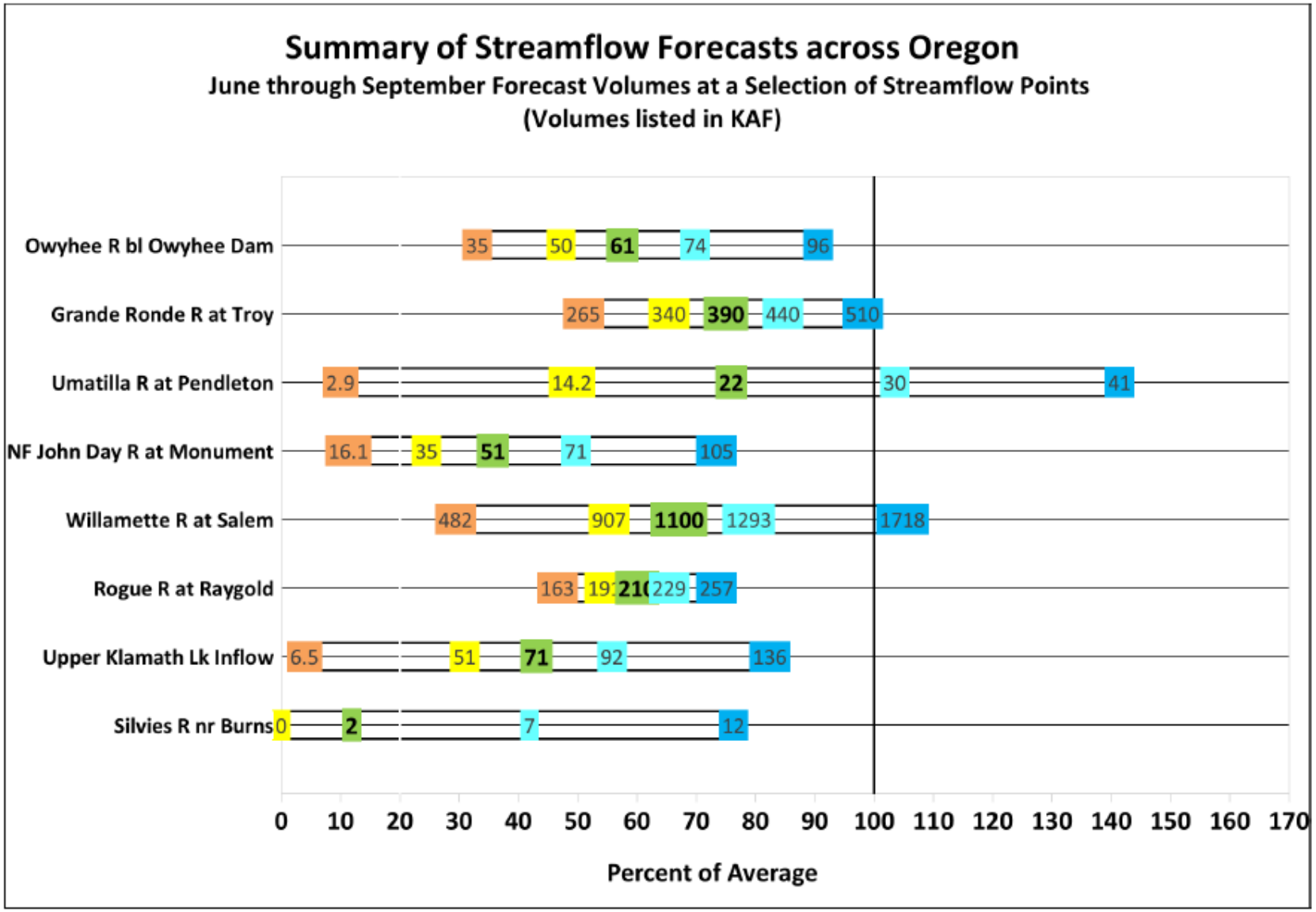


SNOTEL 7-Day Precipitation Totals (Inches) – June 9, 2021 – June 15, 2021




June 1, 2021 – Forecast Volume, 50% Exceedance Probability (JUN-SEP)
Selected Stations: 883
Forecast Volume
50% Exceedance Probability
Percent NRCS 1981-2010
Average
June - September
June 1, 2021
≥ 200%
175%
150%
125%
100%
75%
50%
25%
≤ 0%
Observation missing
Average missing
NRCS Natural Resources Conservation Service
Created 6-15-2021, 07:12 AM PDT
50 km
30 mi

JUNE 1, 2021



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

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

Thank you

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Oregon Water Supply Availability Committee – June 16, 2021

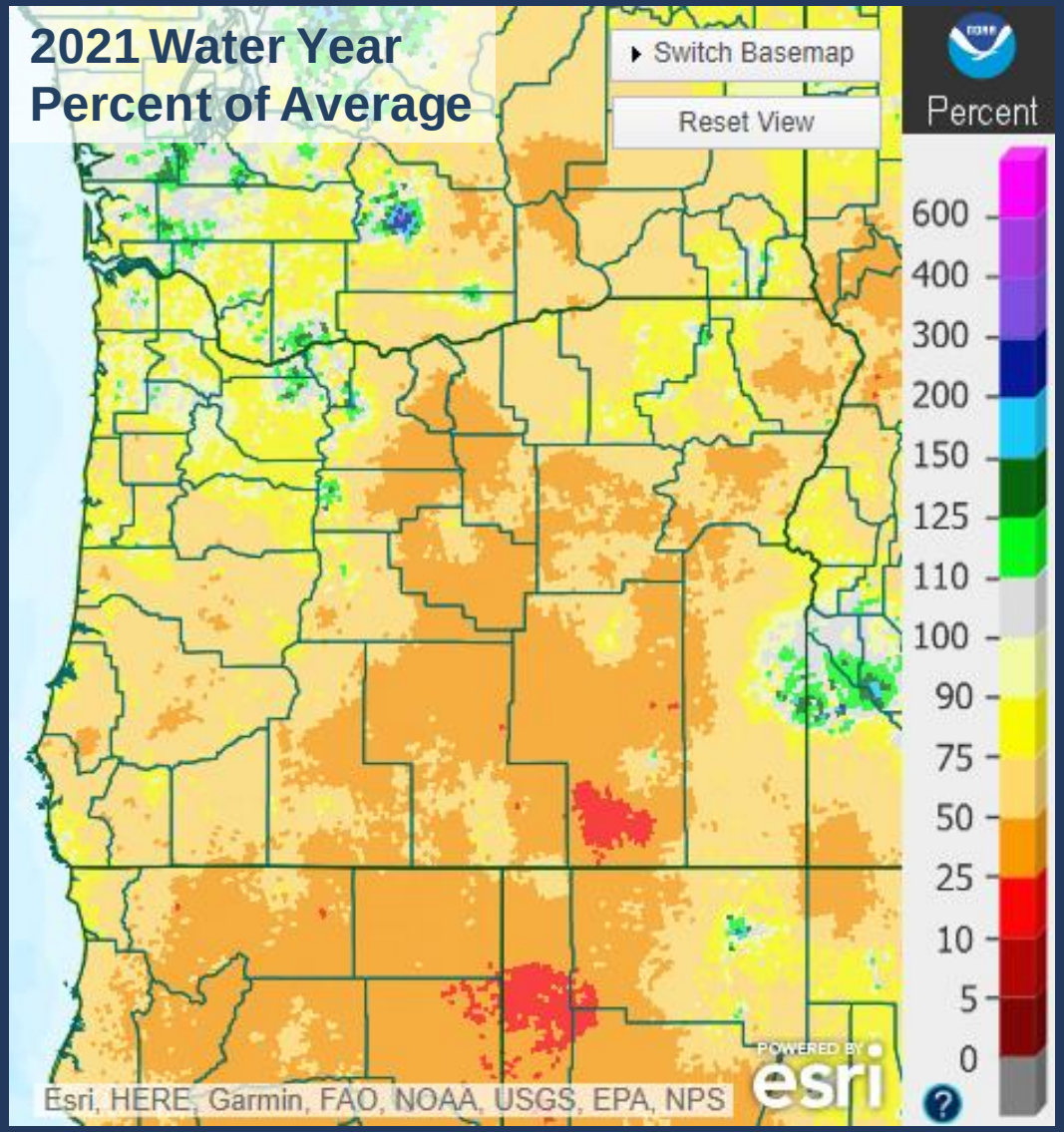
H. Scott Oviatt
USDA – Natural Resources Conservation Service
scott.oviatt@usda.gov
503-414-3271

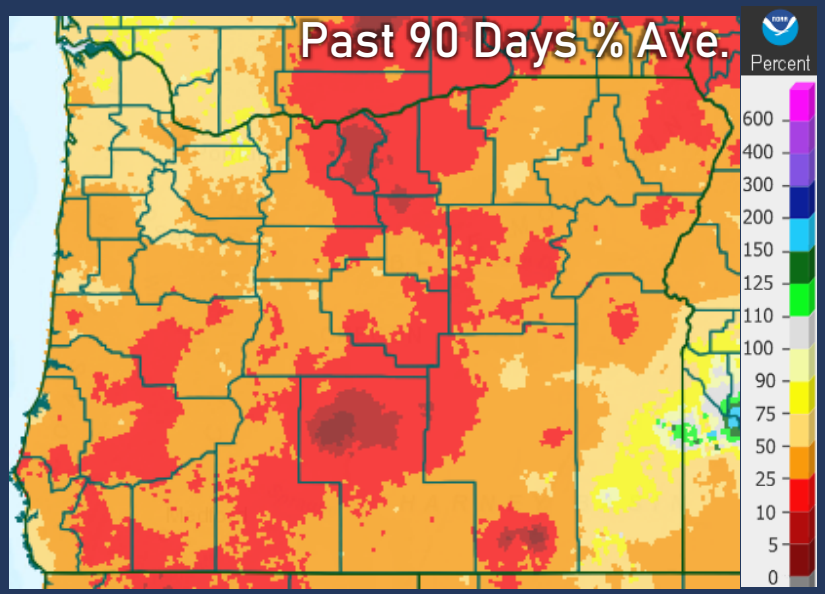
NWS Portland

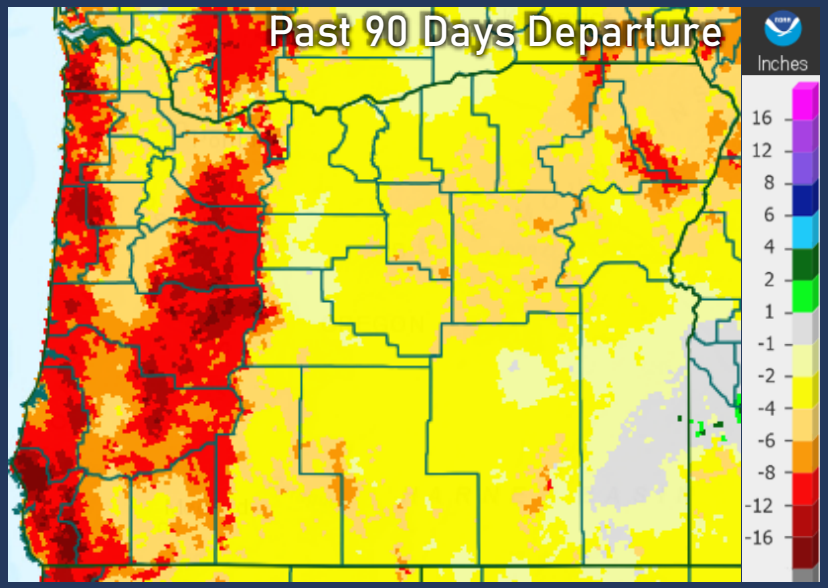
June 16, 2021
NWS Update on Precipitation & Temperatures

Henry Pai
NOAA/NWS Portland
Northwest River Forecast Center

Precipitation



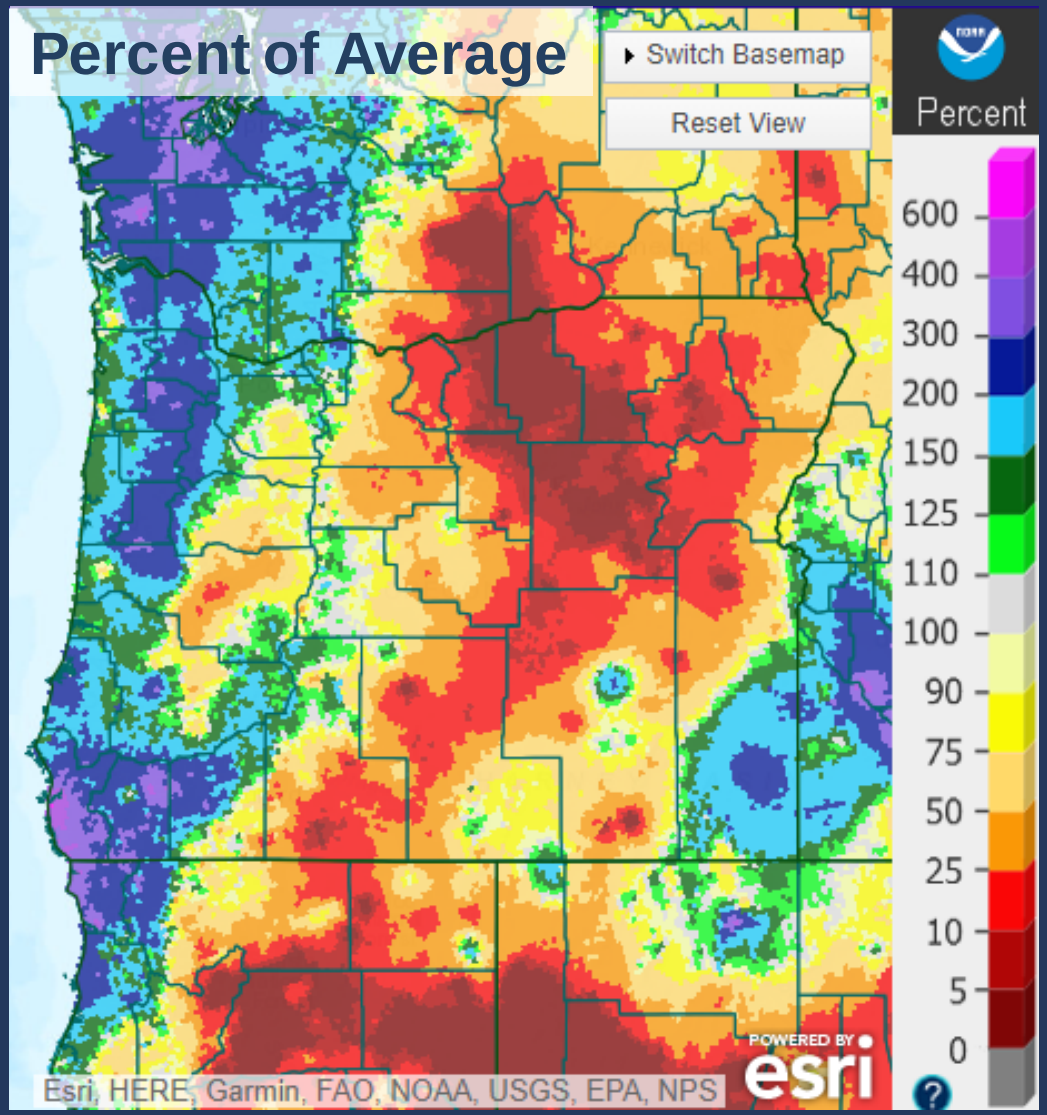


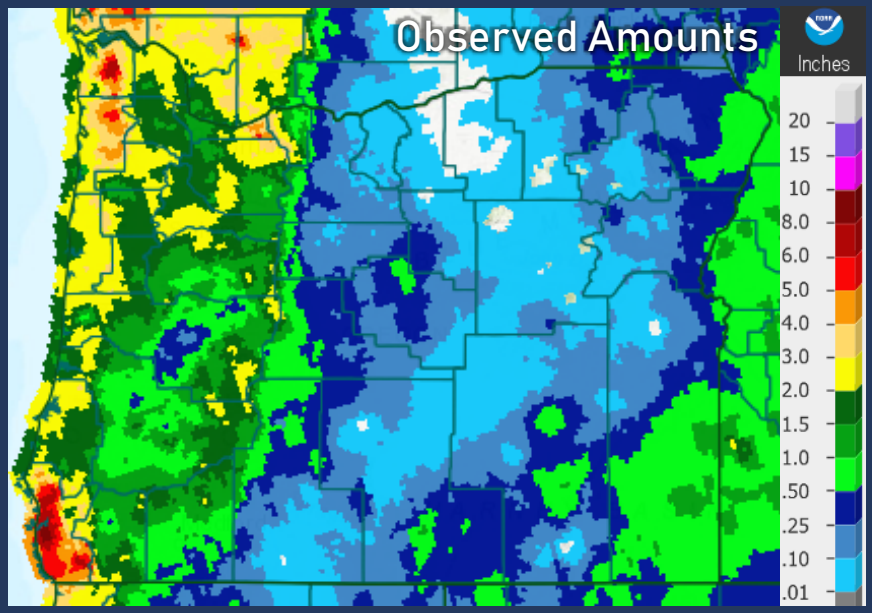


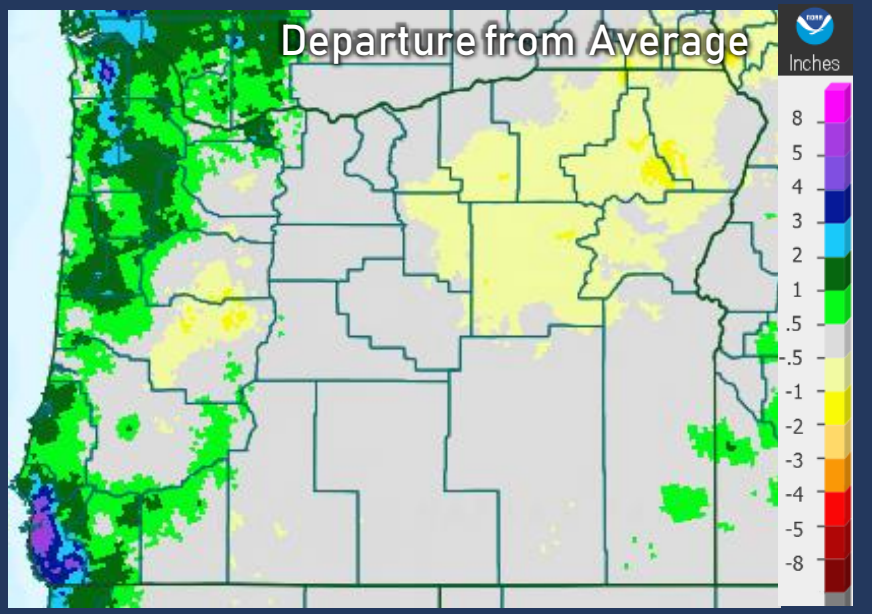
Precipitation Data as of June 15, 2021

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

Precipitation – Past 14 Days





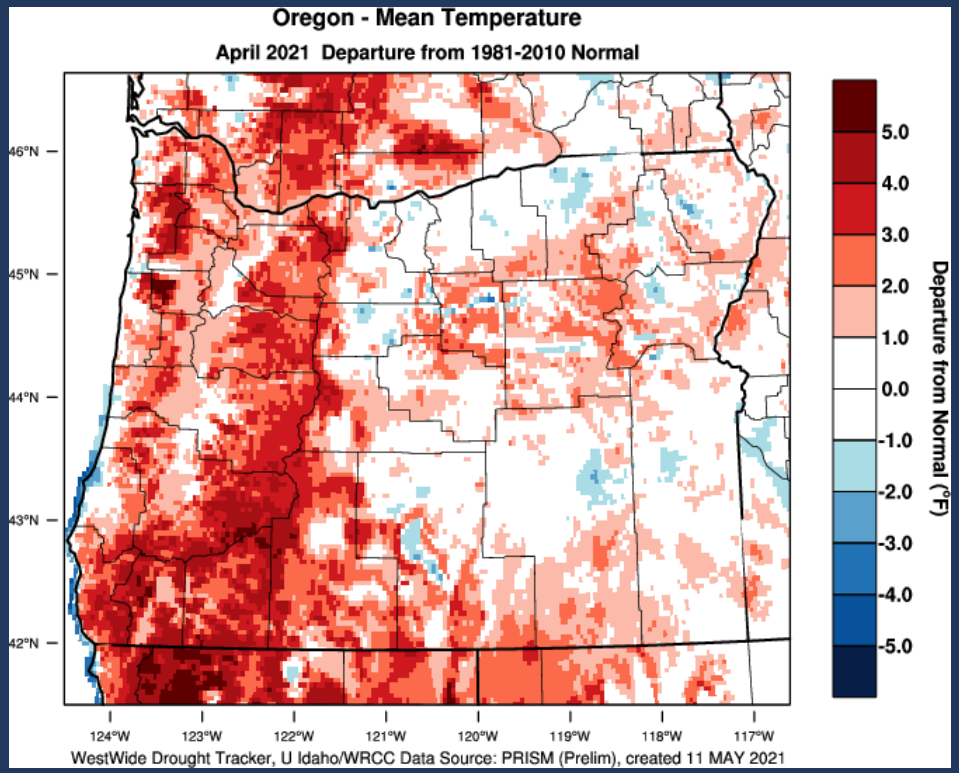


Precipitation Data as of June 15, 2021

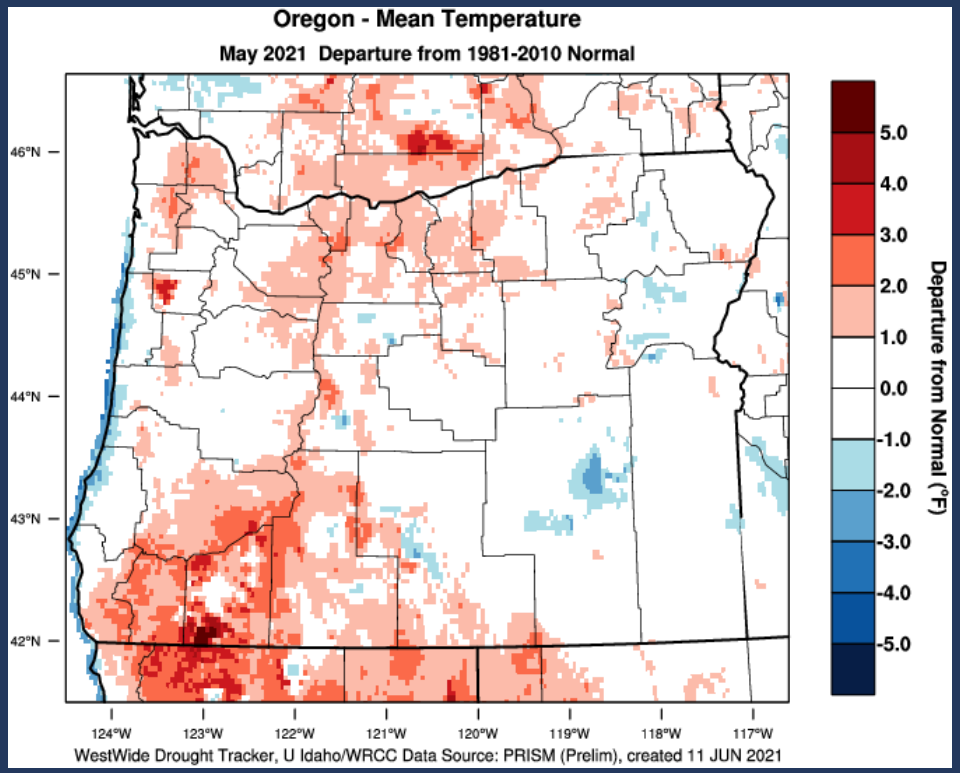
Source: water.weather.gov/precip/index.php?location_type=wfo&location_name=pqr

Recent Temperatures

April 2021

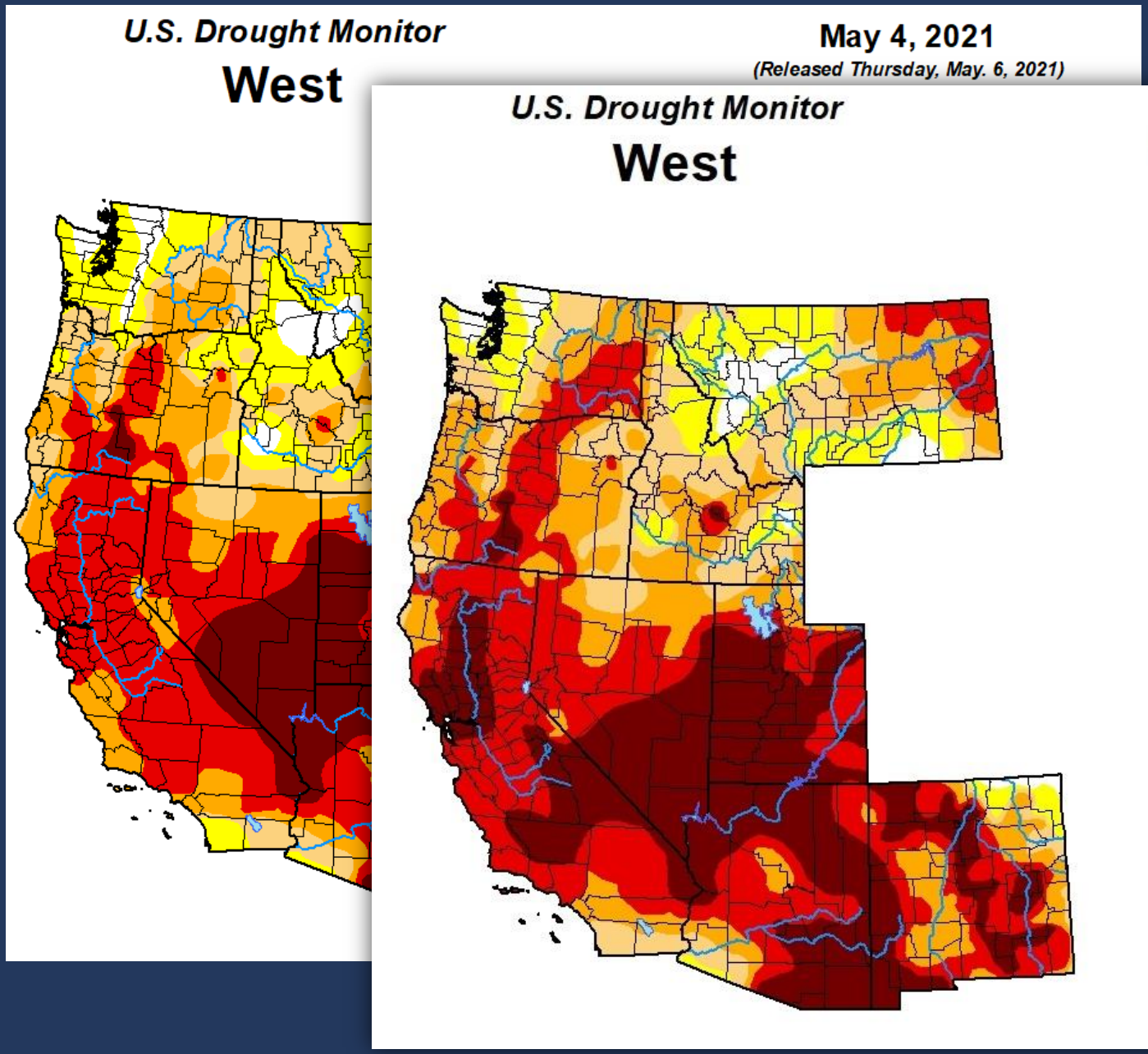


May 2021



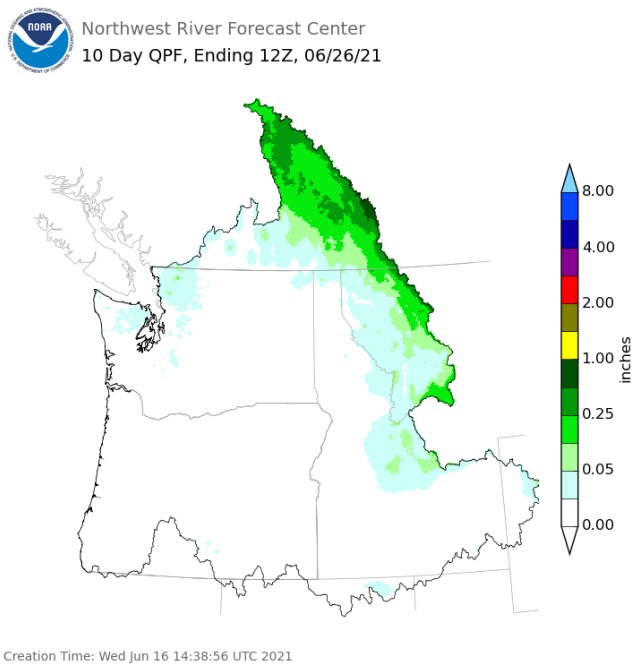
https://wrcc.dri.edu/wwdt/index.php?folder=mdn1

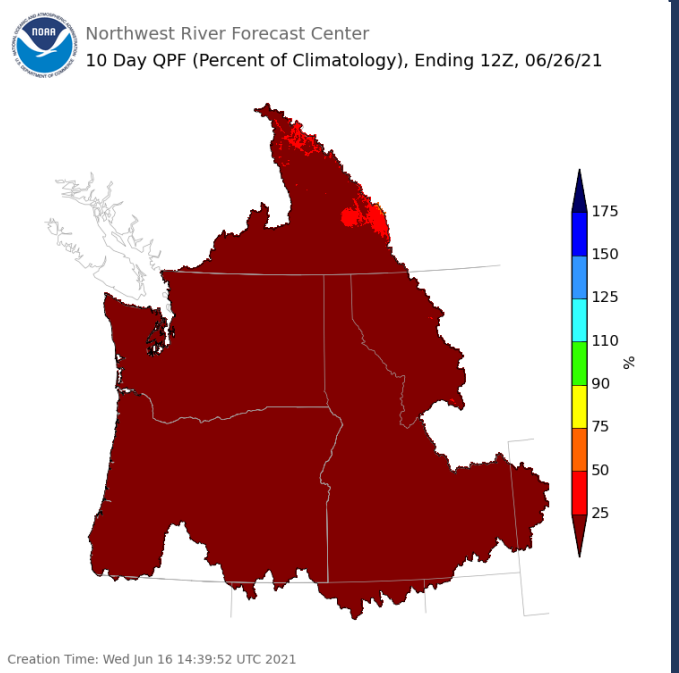
Drought Monitor



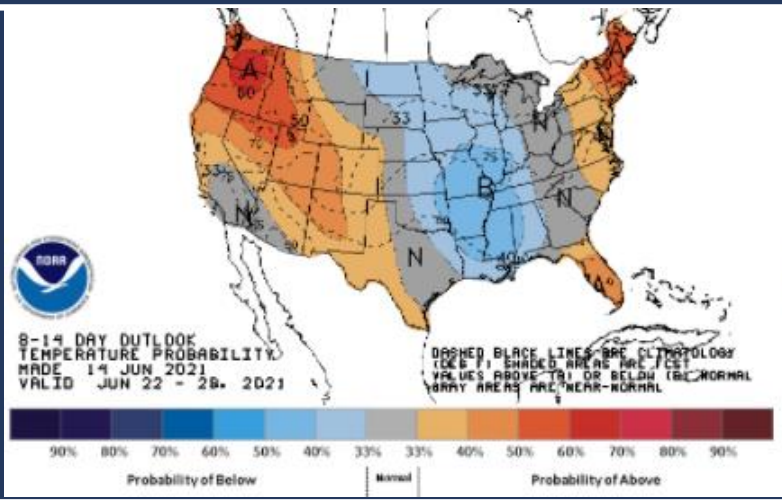
Mid/Late June Outlook

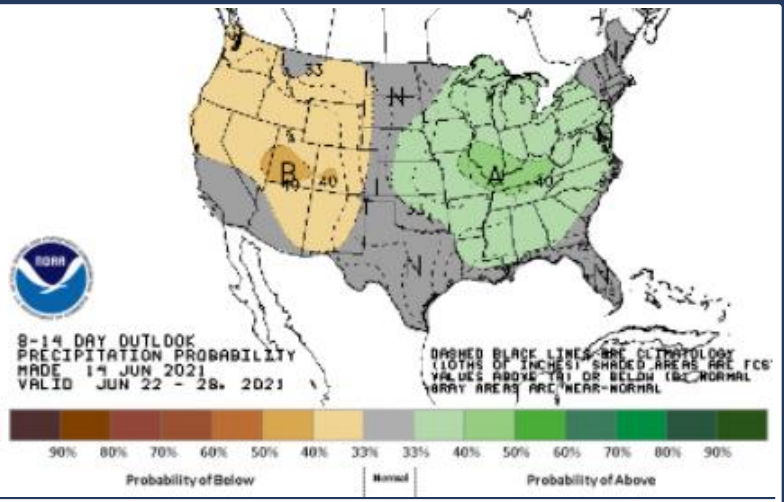
NWRFC
10-DAY
PRECIPITATION





CPC
8 – 14 DAY
OUTLOOK





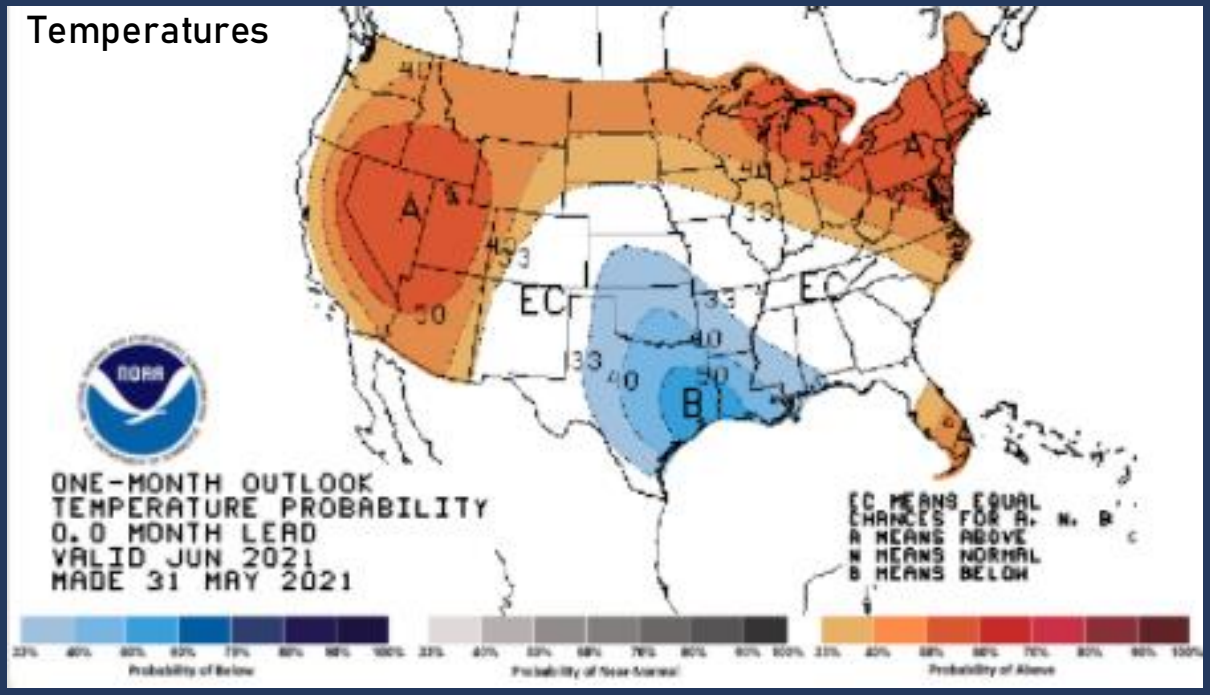
https://www.nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php?tab=3

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

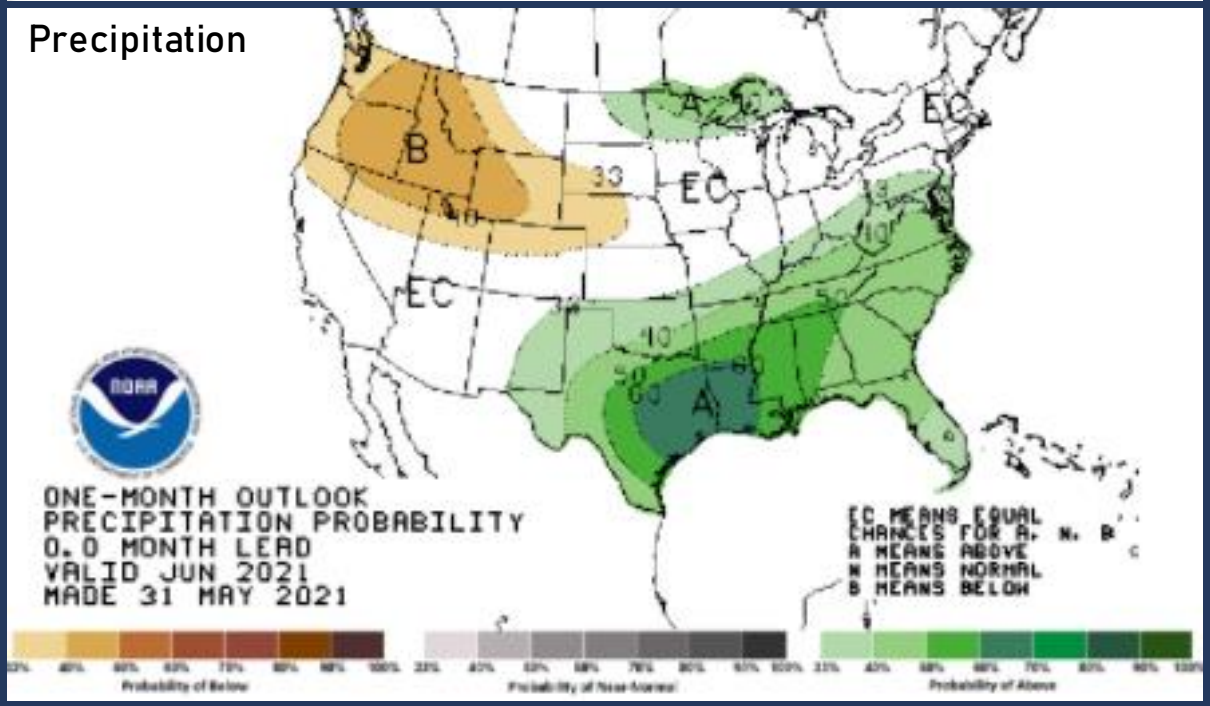
Climate Prediction Center Outlook

June 2021

Temperatures



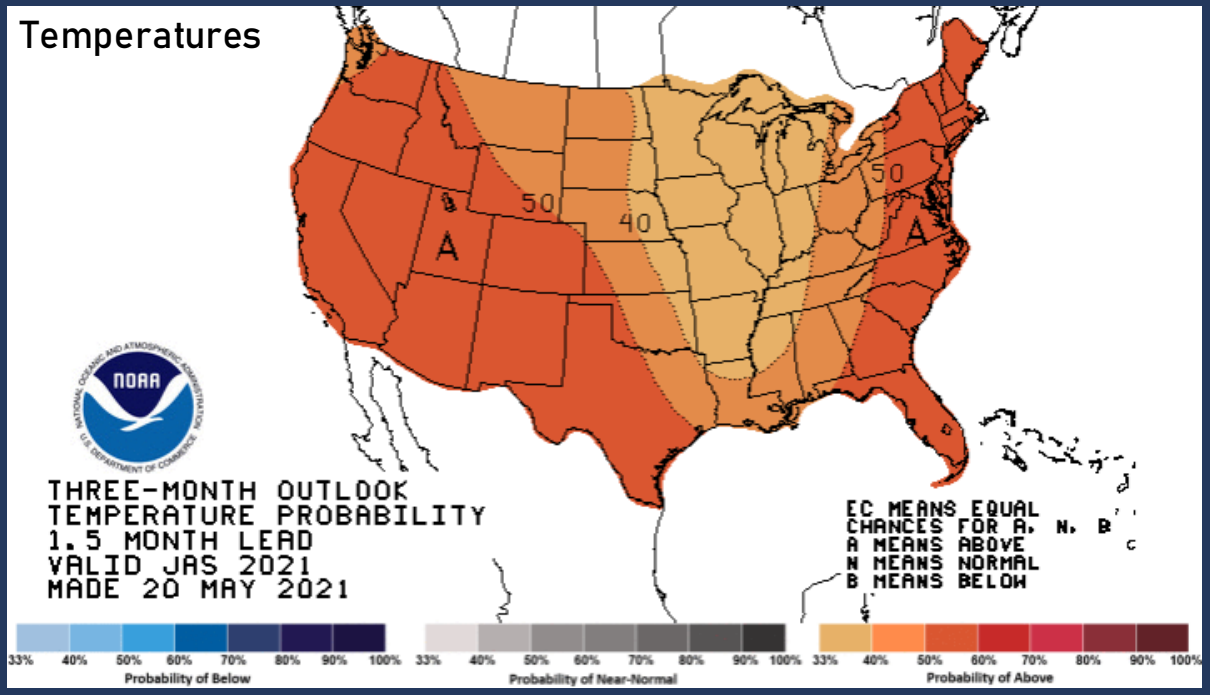
Precipitation

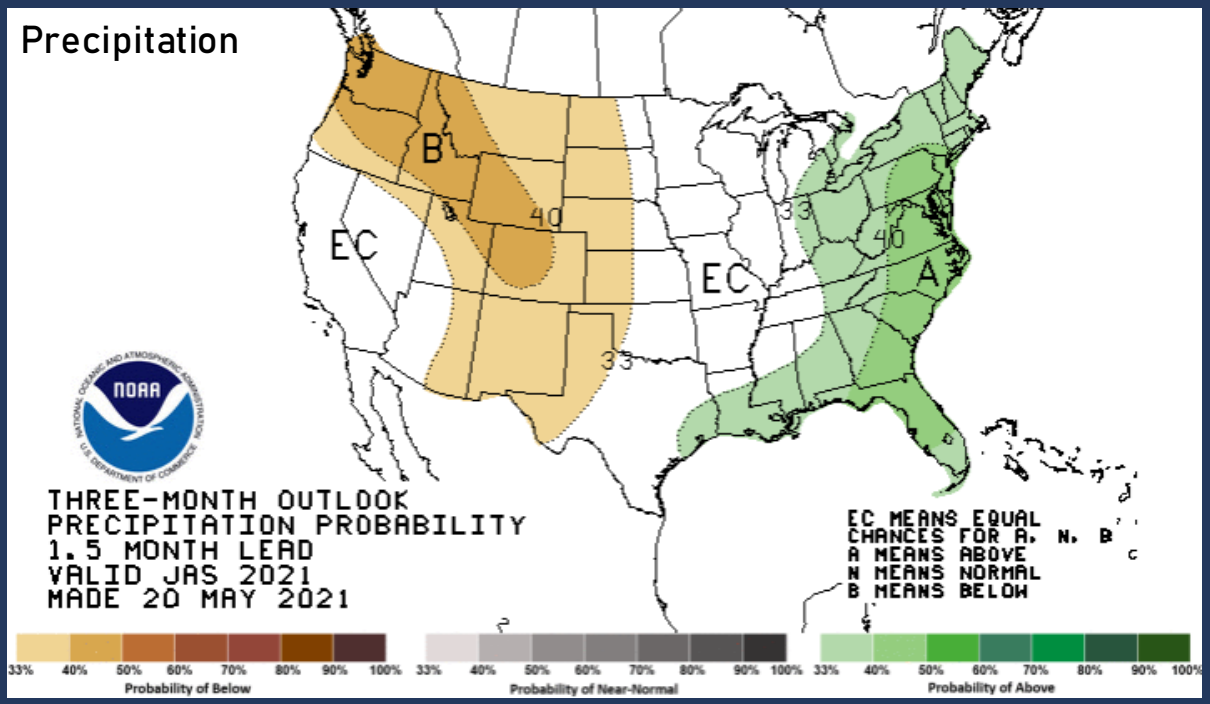


https://www.cpc.ncep.noaa.gov/products/predictions/long_range/lead14/

Climate Prediction Center Outlook

July-Aug-Sep 2021

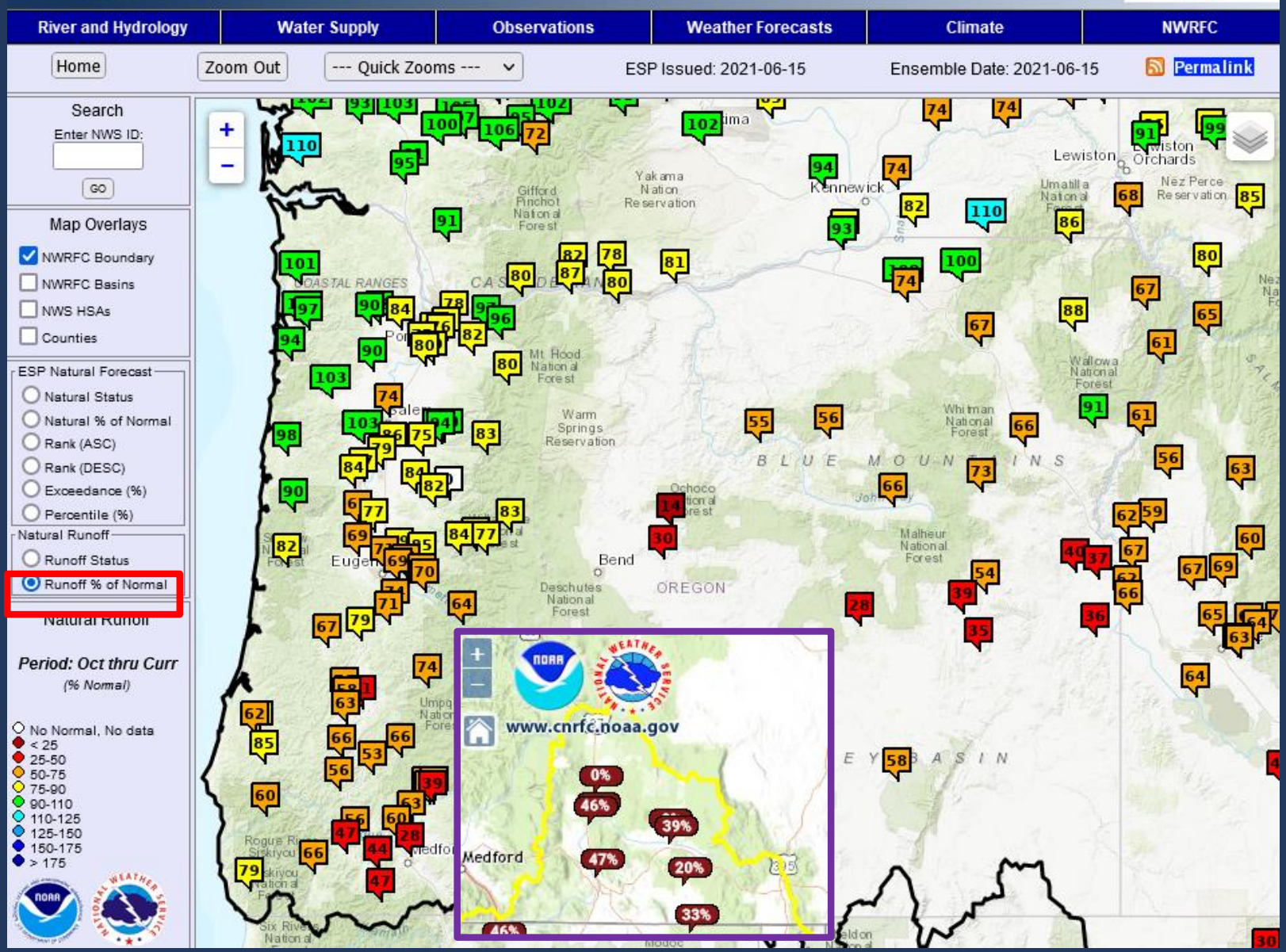




https://www.cpc.ncep.noaa.gov/products/predictions/long_range/seasonal.php?lead=2

Northwest River Forecast Center

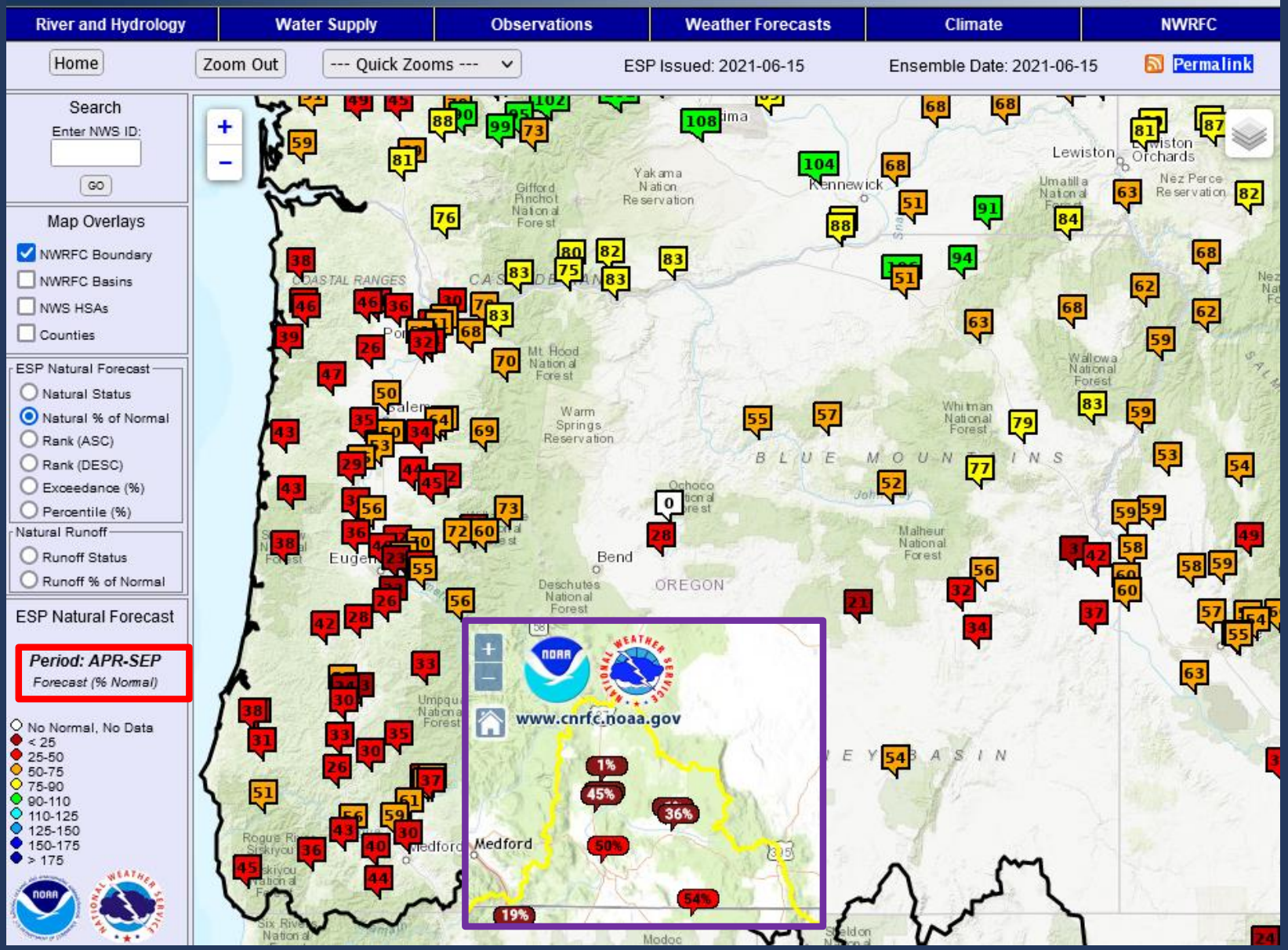
Observed Water Year Natural Runoff



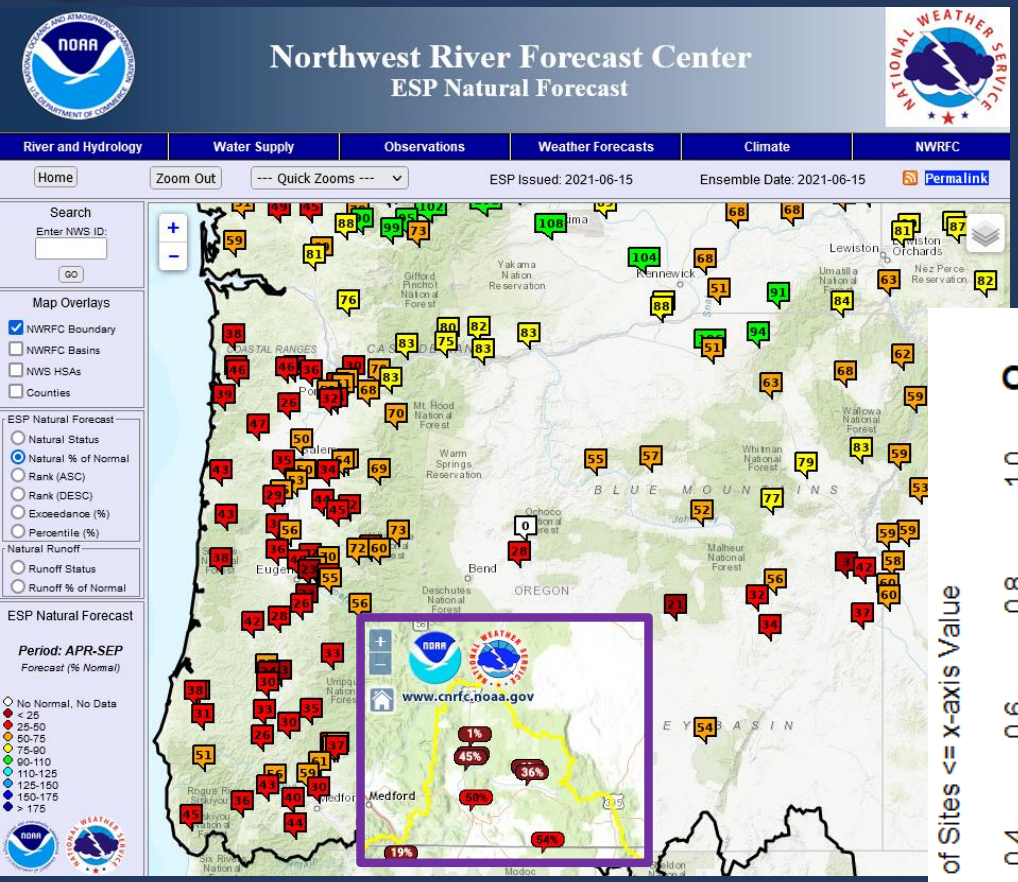
https://www.nwrfc.noaa.gov/natural/index.html

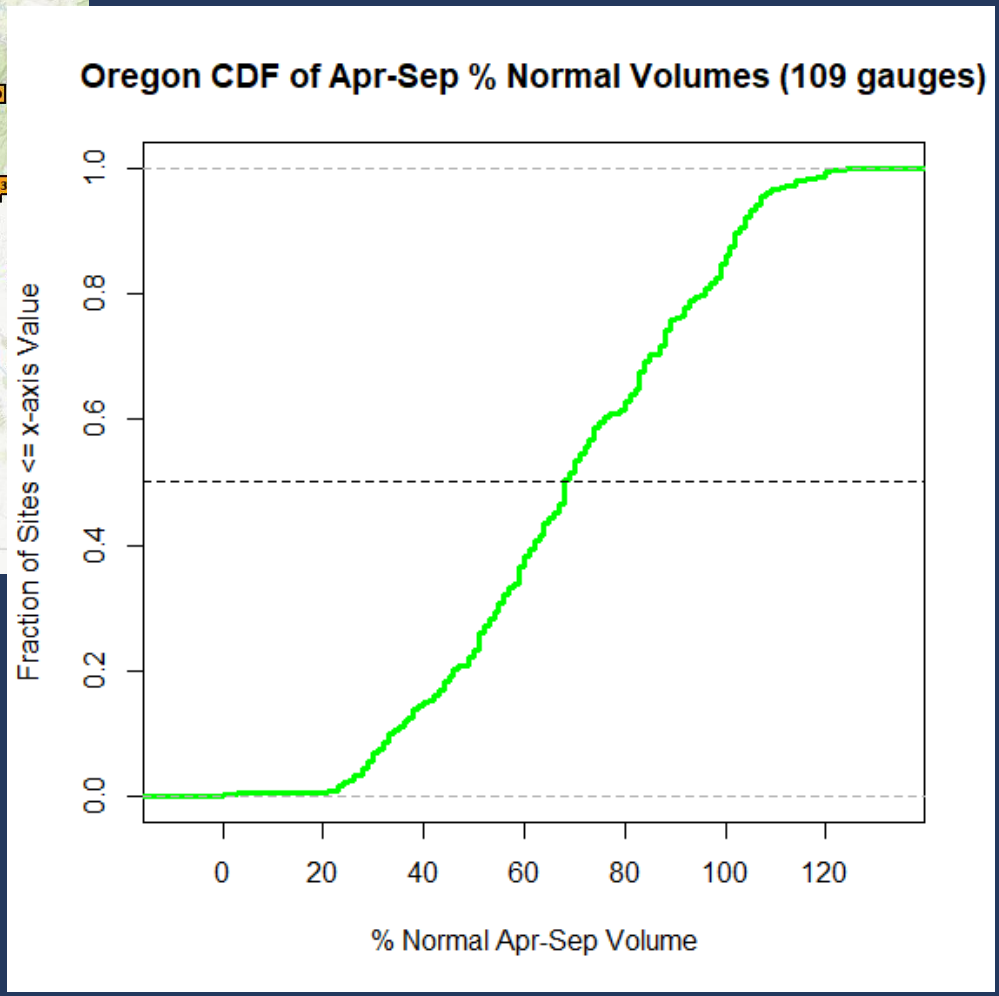
Northwest River Forecast Center

ESP Natural Forecast



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





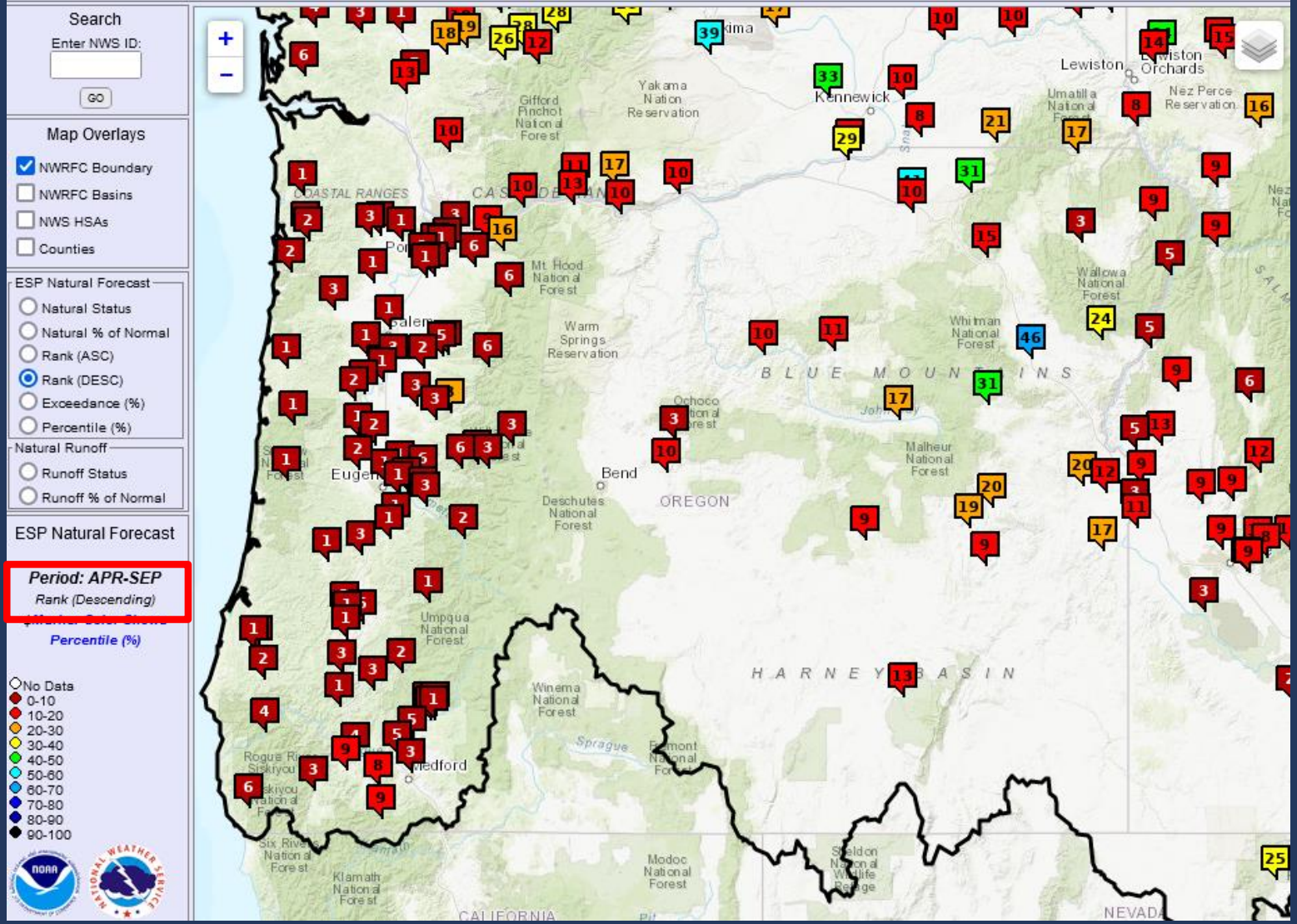
https://www.nwrfc.noaa.gov/natural/index.html

Northwest River Forecast Center

ESP Natural Forecast

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

Home | Zoom Out | --- Quick Zooms --- | ESP Issued: 2021-06-15 | Ensemble Date: 2021-06-15 | Permalink



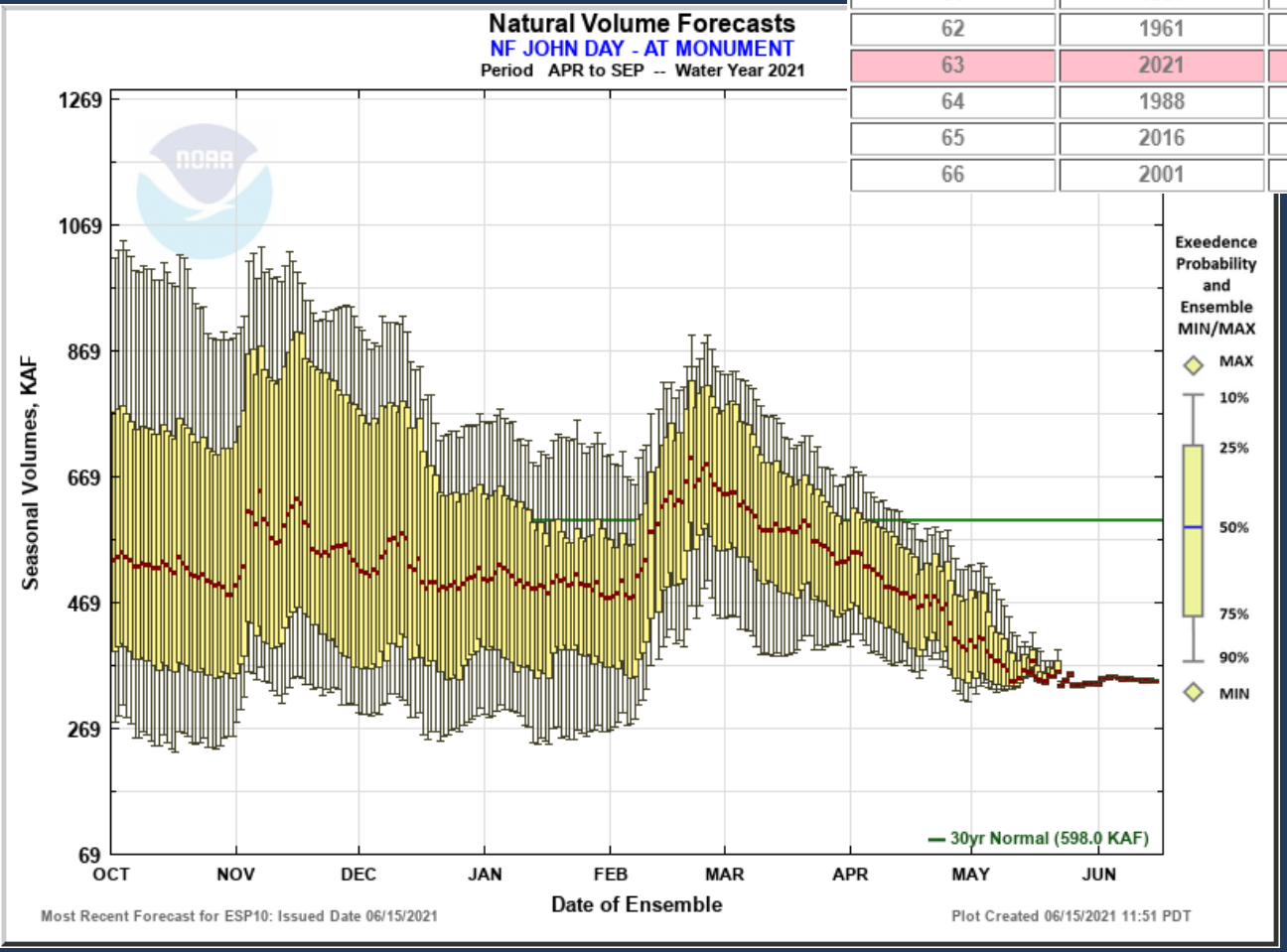
https://www.nwrfc.noaa.gov/natural/index.html

Streamflow Volume Forecast

NF John Day at Monument (Grant County)

NF JOHN DAY - AT MONUMENT (MONO3)
Period Rankings - 1948 to 2021
APR-SEP Normal -- 598 (KAF)

Rank	Year	Period Volume (KAF)	Percent of Normal	Exceedance Probability*
60	2013	361.60	60	81.081 %
61	1987	361.30	60	82.432 %
62	1961	345.50	58	83.784 %
63	2021	342.93	57	85.135 %
64	1988	332.50	56	86.486 %
65	2016	315.06	53	87.838 %
66	2001	302.00	51	89.189 %



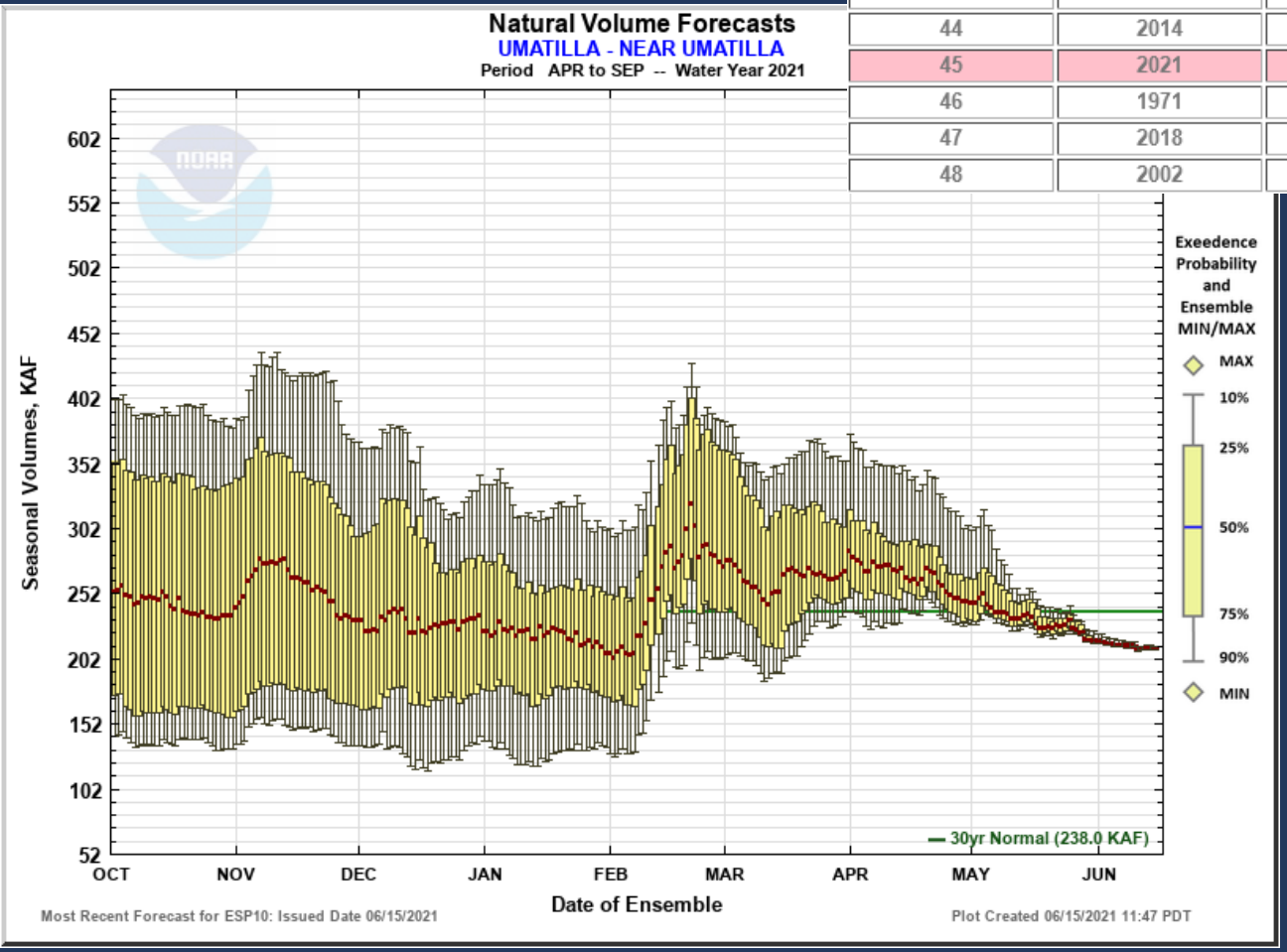
https://www.nwrfc.noaa.gov/natural/plot/nat_forecasts.php?id=MONO3

Streamflow Volume Forecast

Umatilla Near Umatilla

UMATILLA - NEAR UMATILLA (UMAO3)
Period Rankings - 1948 to 2021
APR-SEP Normal -- 238 (KAF)

Rank	Year	Period Volume (KAF)	Percent of Normal	Exceedance Probability*
42	2013	213.30	90	56.757 %
43	1980	211.80	89	58.108 %
44	2014	211.20	89	59.459 %
45	2021	209.63	88	60.811 %
46	1971	204.90	86	62.162 %
47	2018	204.86	86	63.514 %
48	2002	204.40	86	64.865 %



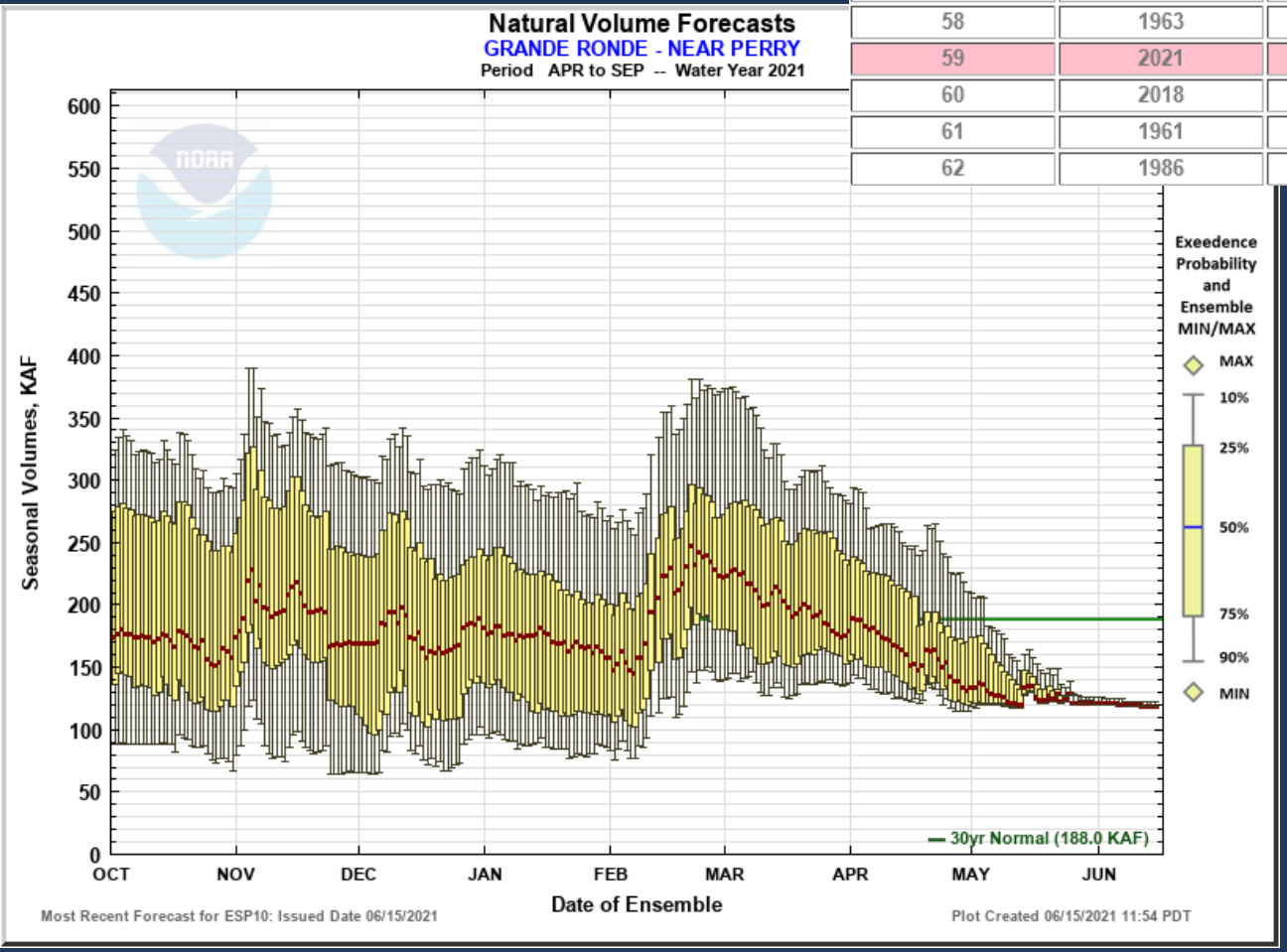
https://www.nwrfc.noaa.gov/natural/plot/nat_forecasts.php?id=UMAO3

Streamflow Volume Forecast

Grand Ronde near Perry (Union County)

GRANDE RONDE - NEAR PERRY (LGNO3)
Period Rankings - 1948 to 2021
APR-SEP Normal -- 188 (KAF)

Rank	Year	Period Volume (KAF)	Percent of Normal	Exceedance Probability*
56	2005	124.20	66	75.676 %
57	1954	122.30	65	77.027 %
58	1963	119.80	64	78.378 %
59	2021	118.89	63	79.730 %
60	2018	117.81	63	81.081 %
61	1961	108.00	57	82.432 %
62	1986	107.60	57	83.784 %



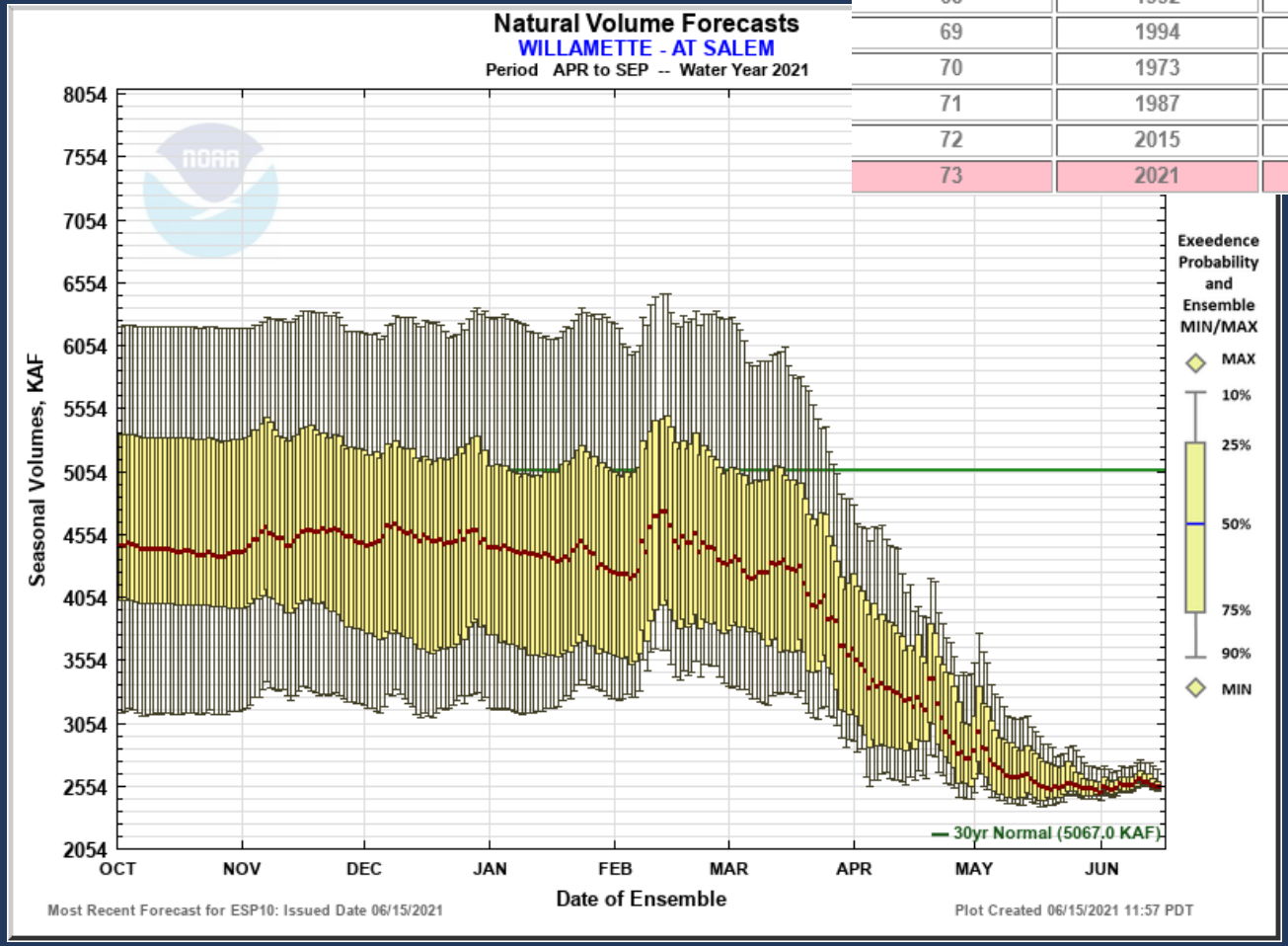
https://www.nwrfc.noaa.gov/natural/plot/nat_forecasts.php?id=LGNO3

Streamflow Volume Forecast

Willamette River at Salem

WILLAMETTE - AT SALEM (SLMO3)
Period Rankings - 1948 to 2021
APR-SEP Normal -- 5067 (KAF)

Rank	Year	Period Volume (KAF)	Percent of Normal	Exceedance Probability*
67	2016	3418.67	67	90.541 %
68	1992	3321.20	66	91.892 %
69	1994	3319.00	66	93.243 %
70	1973	3242.80	64	94.595 %
71	1987	2995.00	59	95.946 %
72	2015	2726.70	54	97.297 %
73	2021	2548.03	50	98.649 %



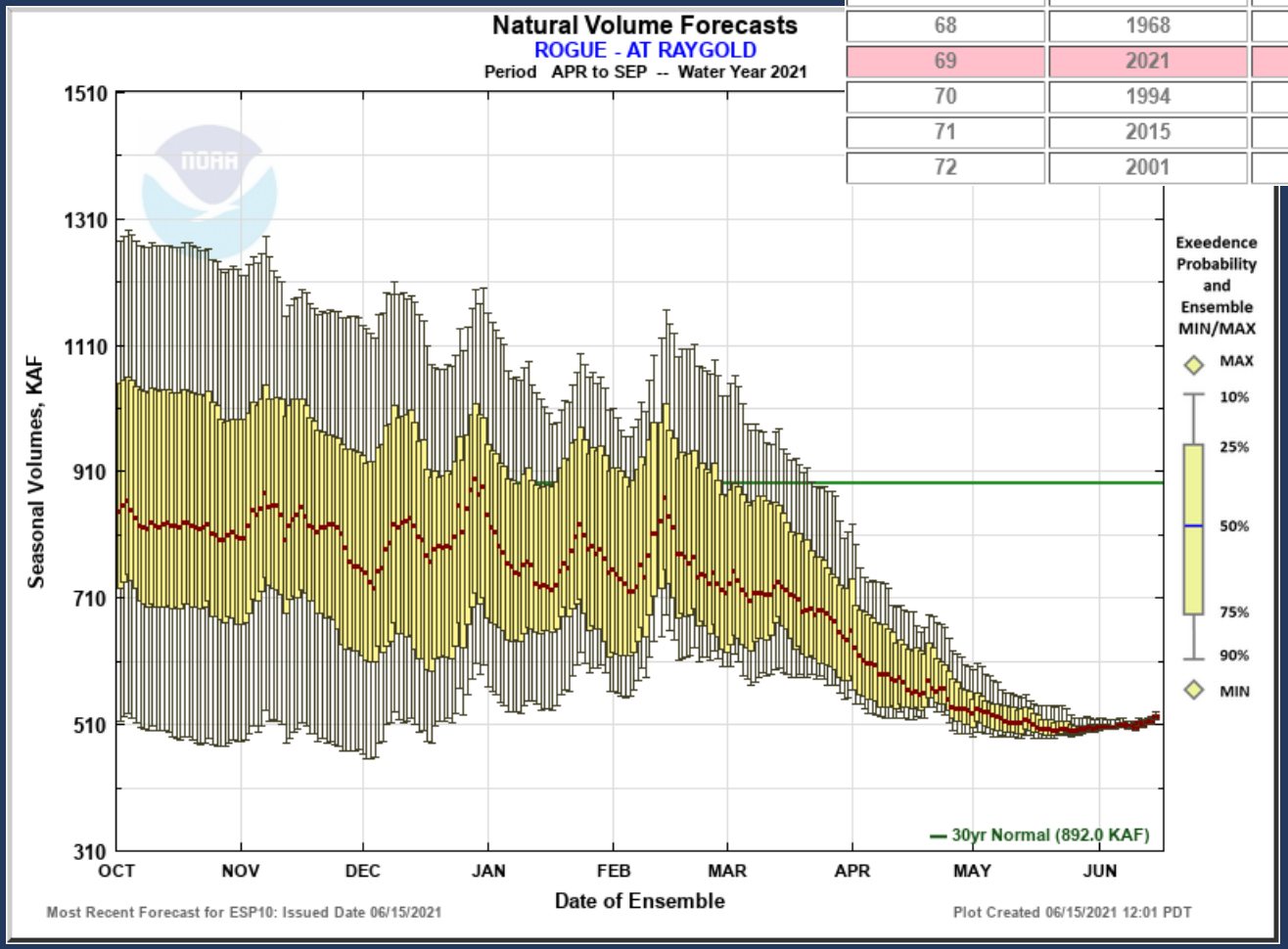
https://www.nwrfc.noaa.gov/natural/plot/nat_forecasts.php?id=SLM03

Streamflow Volume Forecast

Rogue River at Raygold

ROGUE - AT RAYGOLD (RYGO3)
Period Rankings - 1948 to 2021
APR-SEP Normal -- 892 (KAF)

Rank	Year	Period Volume (KAF)	Percent of Normal	Exceedance Probability*
66	1981	616.20	69	89.189 %
67	1977	577.90	65	90.541 %
68	1968	569.70	64	91.892 %
69	2021	522.23	59	93.243 %
70	1994	517.00	58	94.595 %
71	2015	511.10	57	95.946 %
72	2001	484.60	54	97.297 %



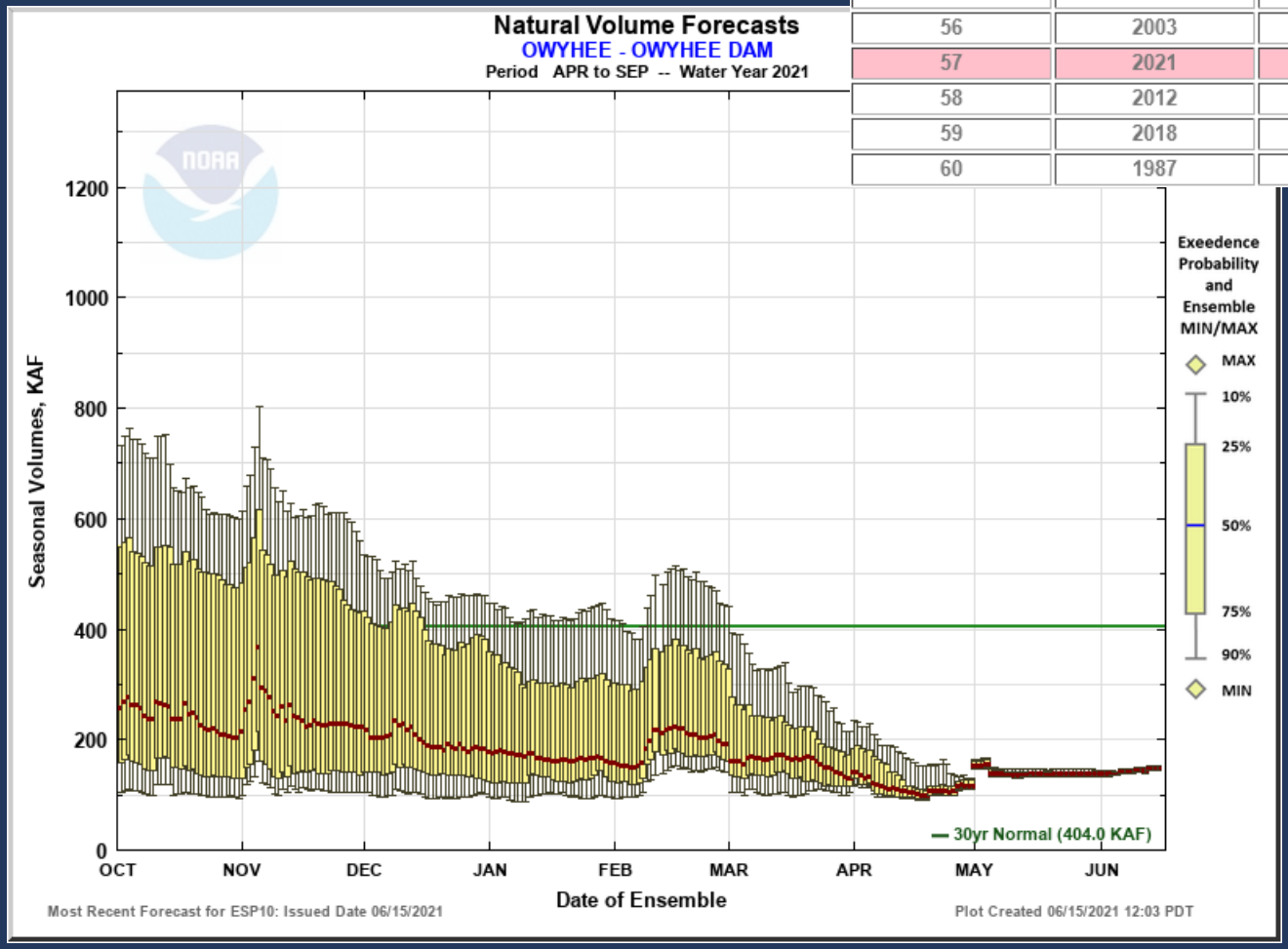
https://www.nwrfc.noaa.gov/natural/plot/nat_forecasts.php?id=RYGO3

Streamflow Volume Forecast

Owyhee River at Owyhee Dam

OWYHEE - OWYHEE DAM (OWYO3)
Period Rankings - 1948 to 2021
APR-SEP Normal -- 404 (KAF)

Rank	Year	Period Volume (KAF)	Percent of Normal	Exceedance Probability*
54	1990	161.80	40	72.973 %
55	1981	161.50	40	74.324 %
56	2003	157.60	39	75.676 %
57	2021	147.74	37	77.027 %
58	2012	143.80	36	78.378 %
59	2018	134.20	33	79.730 %
60	1987	117.10	29	81.081 %



https://www.nwrfc.noaa.gov/natural/plot/nat_forecasts.php?id=OWYO3

Oregon WSAC/DRC
Drought Status and Climate Updates
May 2021

Larry O'Neill
CEOAS Oregon State University
Oregon Climate Services
AASC State Climatologist of Oregon

Wednesday, June 16, 2021

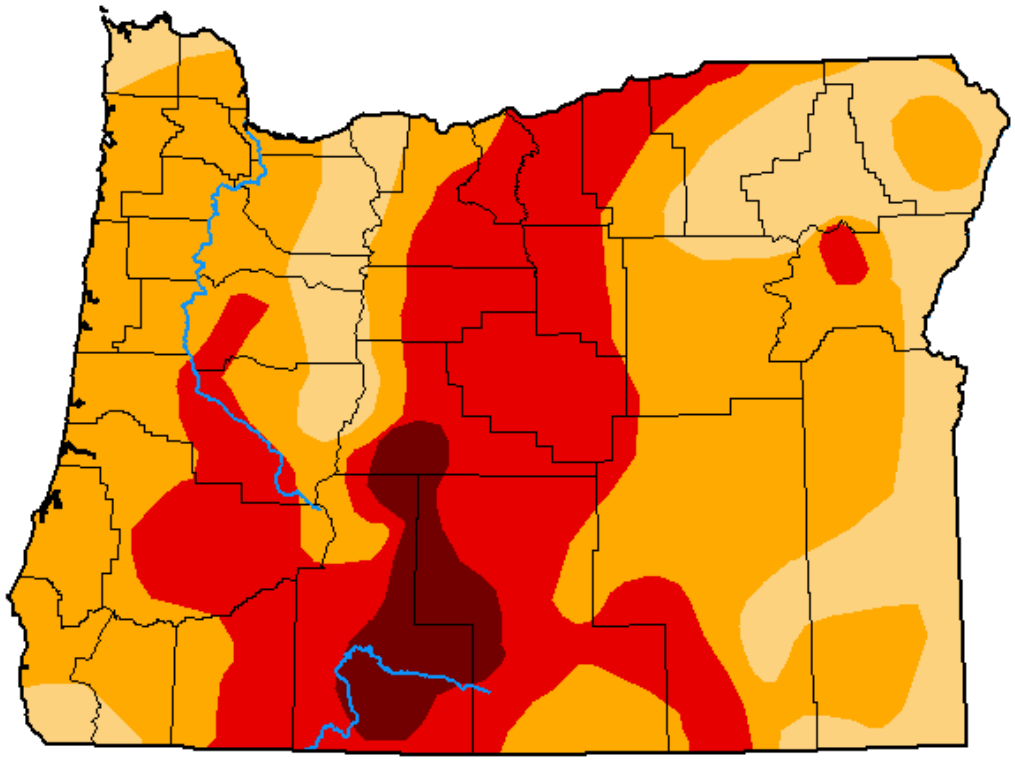
Oregon State University
College of Earth, Ocean, and Atmospheric Sciences

CCCRI

OCS Oregon Climate Service

U.S. Drought Monitor

Oregon



June 8, 2021

(Released Thursday, Jun. 10, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	80.37	34.37	4.78
Last Week *06-01-2021*	0.00	100.00	97.08	72.03	27.36	3.57
3 Months Ago *03-09-2021*	19.33	80.67	67.28	43.99	12.53	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 *06-09-2020*	4.88	95.12	81.33	38.77	4.79	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:

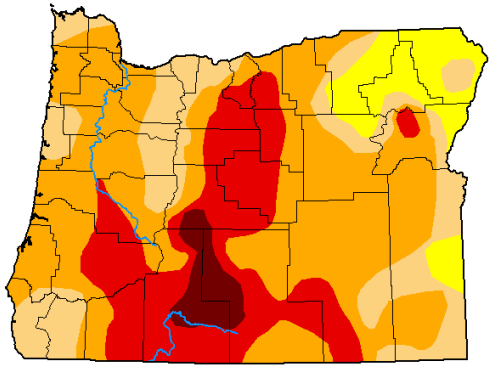
Brian Fuchs

National Drought Mitigation Center

droughtmonitor.unl.edu

U.S. Drought Monitor

Oregon



May 11, 2021

(Released Thursday, May. 13, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	91.49	71.73	26.09	3.57
Last Week 05-04-2021	0.00	100.00	88.85	64.54	26.09	3.57
3 Months Ago 02-09-2021	11.55	88.45	75.70	55.26	22.23	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 05-12-2020	2.63	97.37	82.11	37.67	8.69	0.00

Intensity:

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

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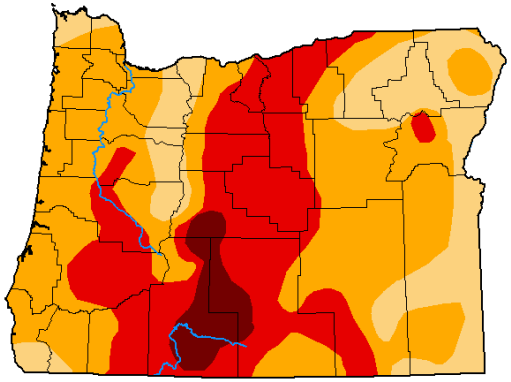
Author:
David Simeral
Western Regional Climate Center

U.S. Drought Monitor

Oregon



June 8, 2021

(Released Thursday, Jun. 10, 2021)

Valid 8 a.m. EDT

Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	0.00	100.00	100.00	80.37	34.37	4.78
Last Week 06-01-2021	0.00	100.00	97.08	72.03	27.36	3.57
3 Months Ago 03-09-2021	19.33	80.67	67.28	43.99	12.53	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 06-09-2020	4.88	95.12	81.33	38.77	4.79	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

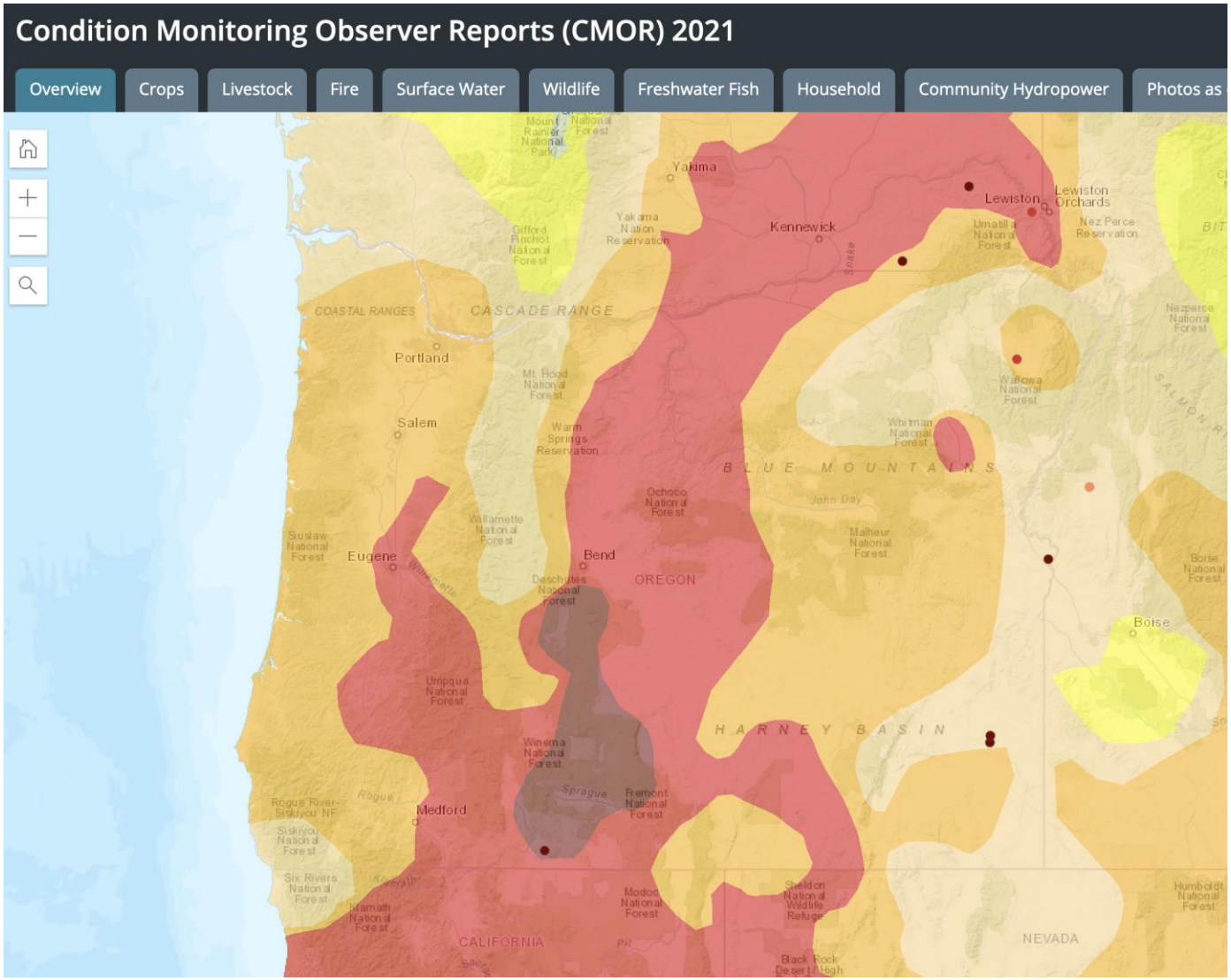
Author:
Brian Fuchs
National Drought Mitigation Center

droughtmonitor.unl.edu

Change over the month:

	May 11, 2021	June 8, 2021
D1-D4	91.5%	100%
D2-D4	71.7%	80.4%
D3-D4	26.1%	34.4%
D4	3.6%	4.9%

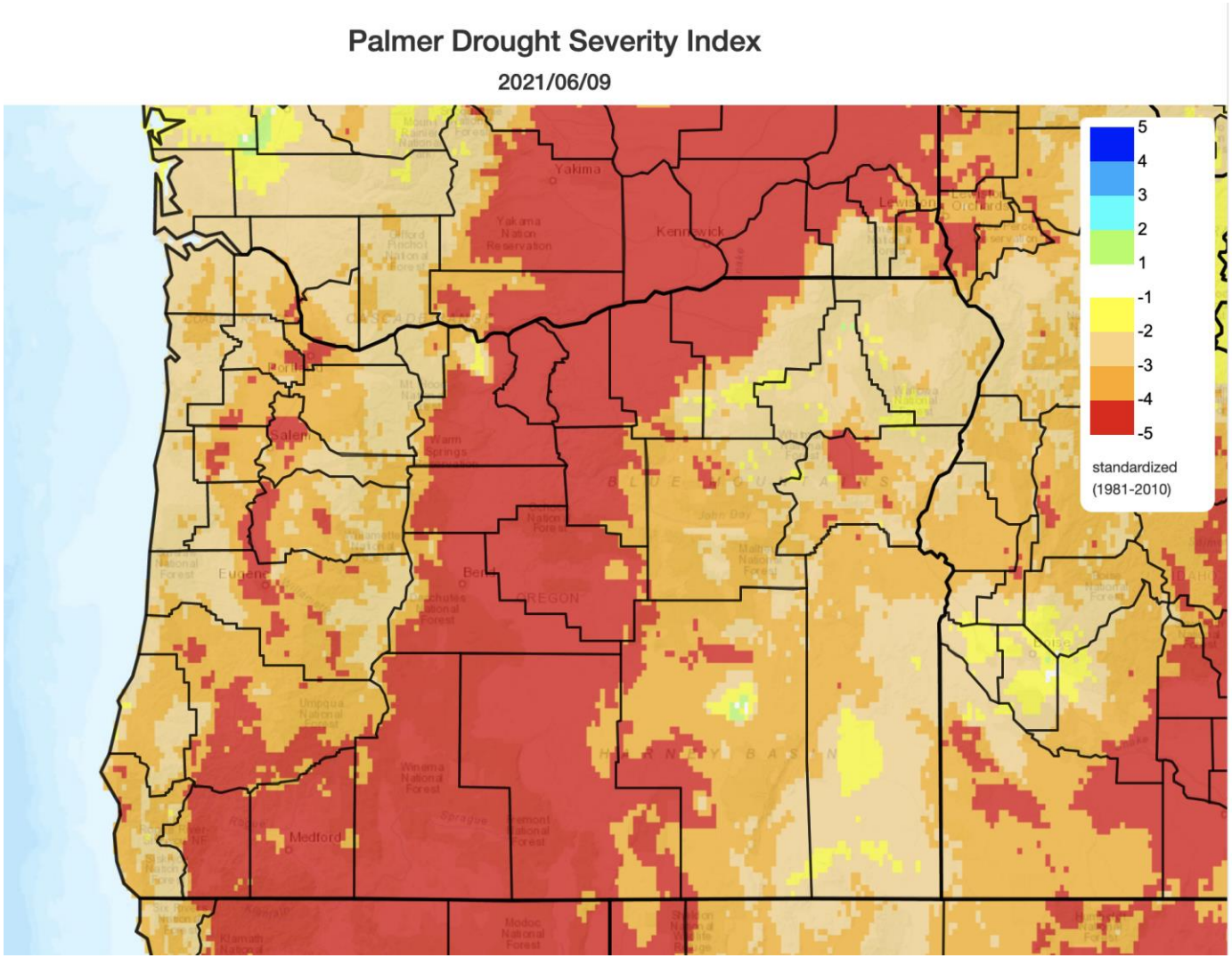
CMOR reports over the last month



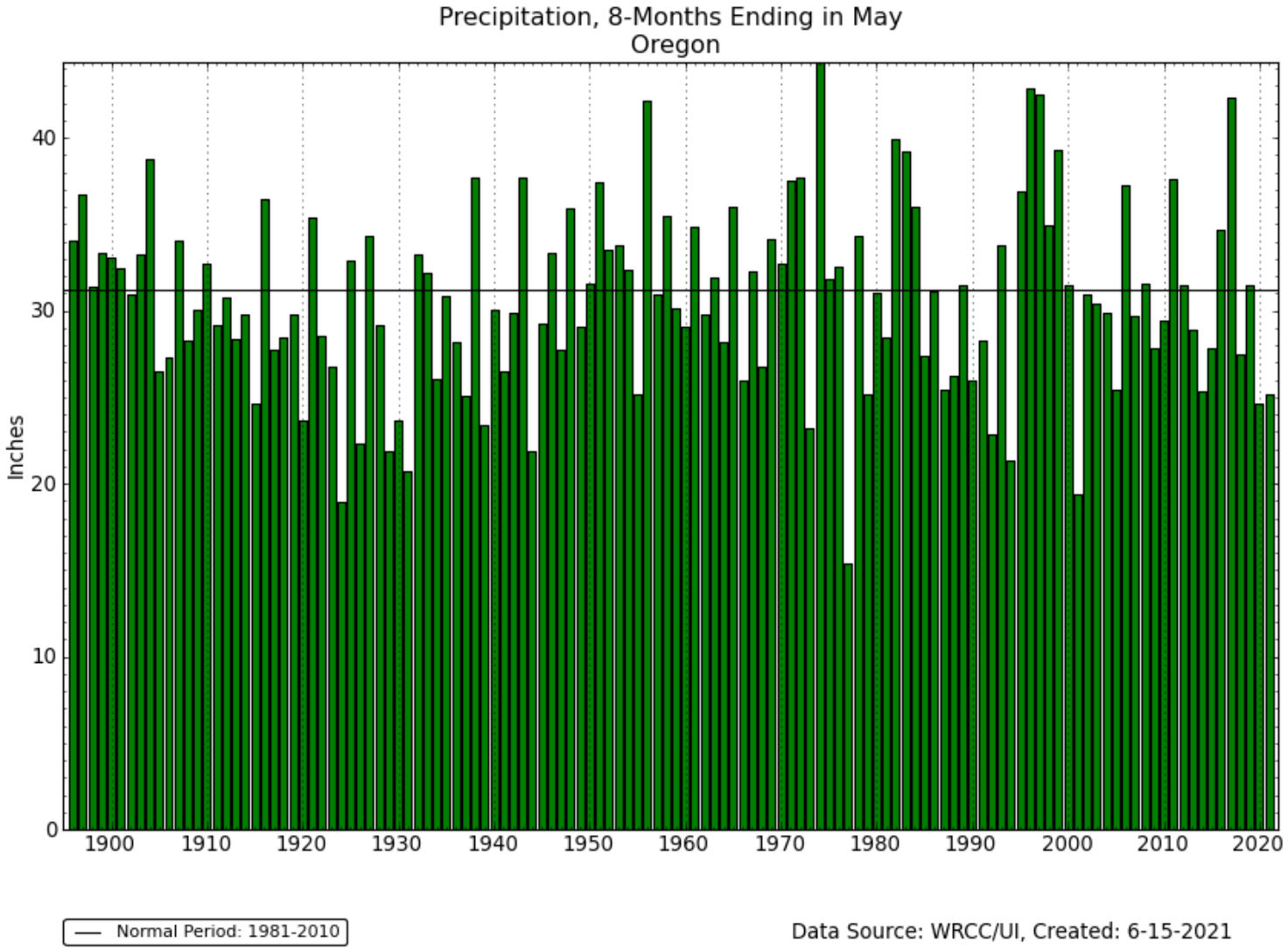
Over the last months, adverse impacts reported on the CMOR:

- Dryland agriculture, grasshopper infestations, dust storms, dry creeks/wells/ponds

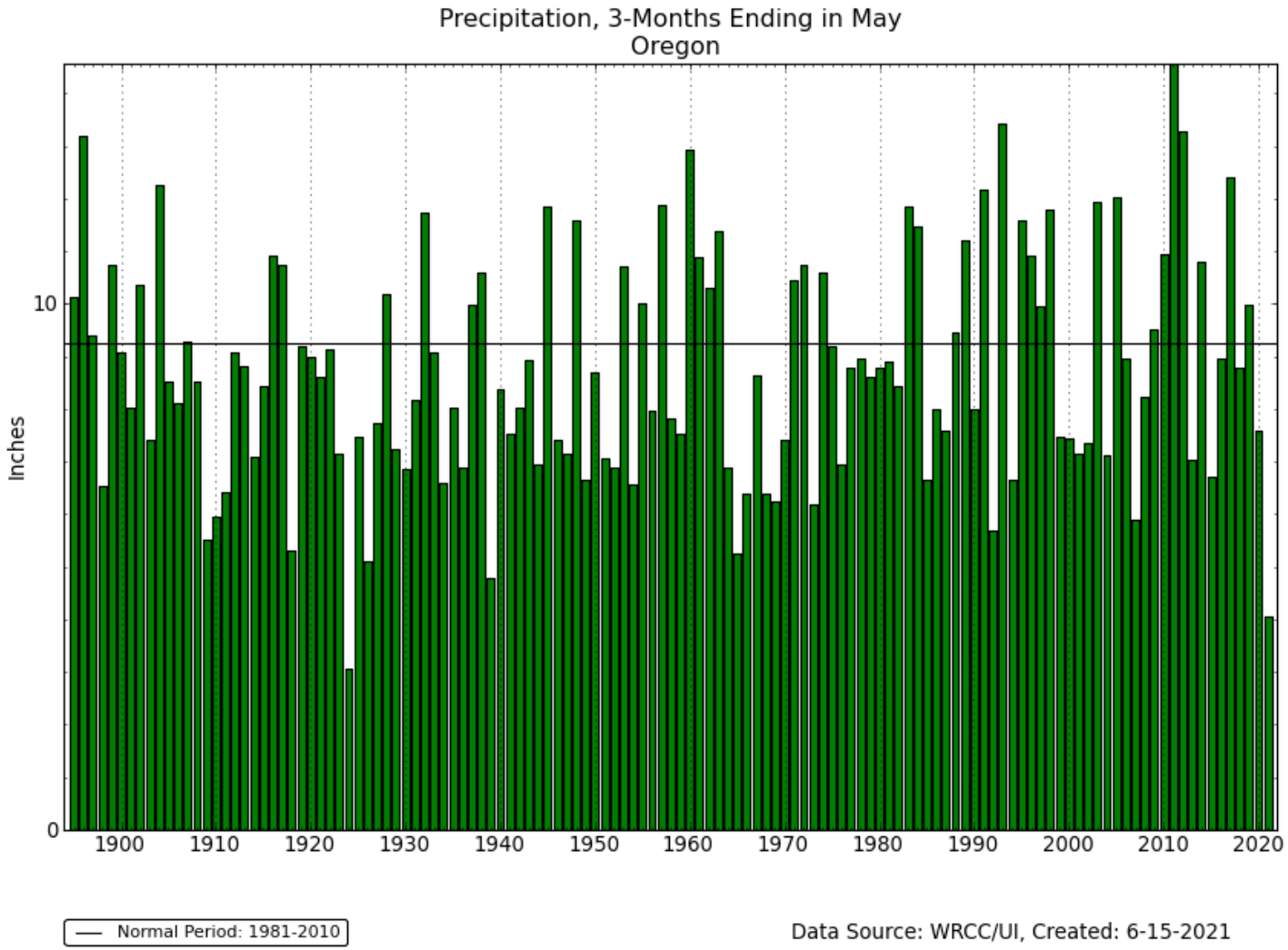
PDSI


Palmer Drought Severity Index
2021/06/09
5
4
3
2
1
-1
-2
-3
-4
-5
standardized
(1981-2010)
Yakima
Salem
Medford
OREGON

Water Year 2021 to date statewide precipitation time series



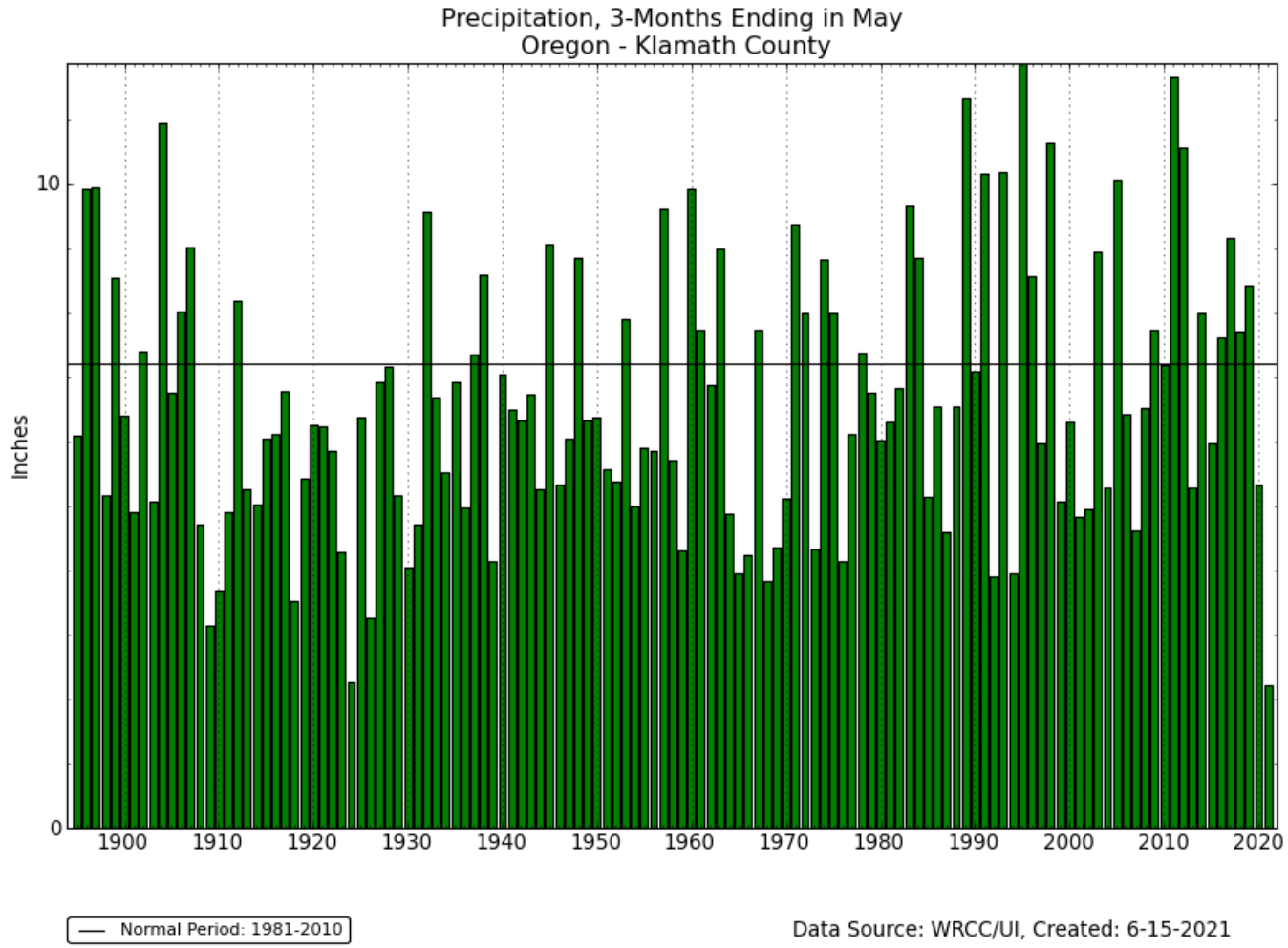
Oregon MAM precipitation



Statewide, the spring (MAM) period recorded the second lowest precipitation accumulation on record

MAM 1924 is the record lowest!

Klamath County MAM precipitation

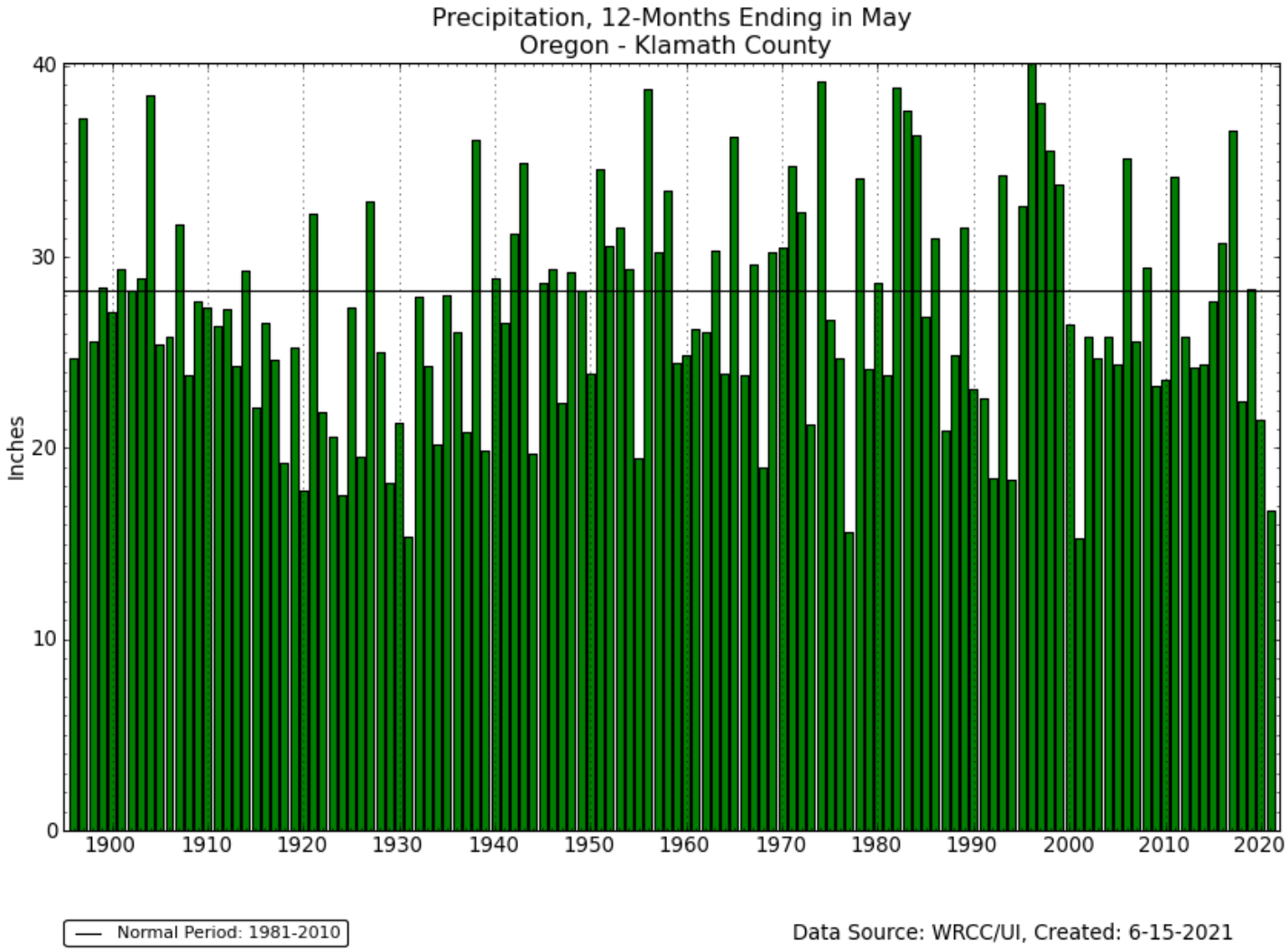


Klamath County tied its driest MAM on record

MAM 2021: 2.26”
MAM 1924: 2.26”

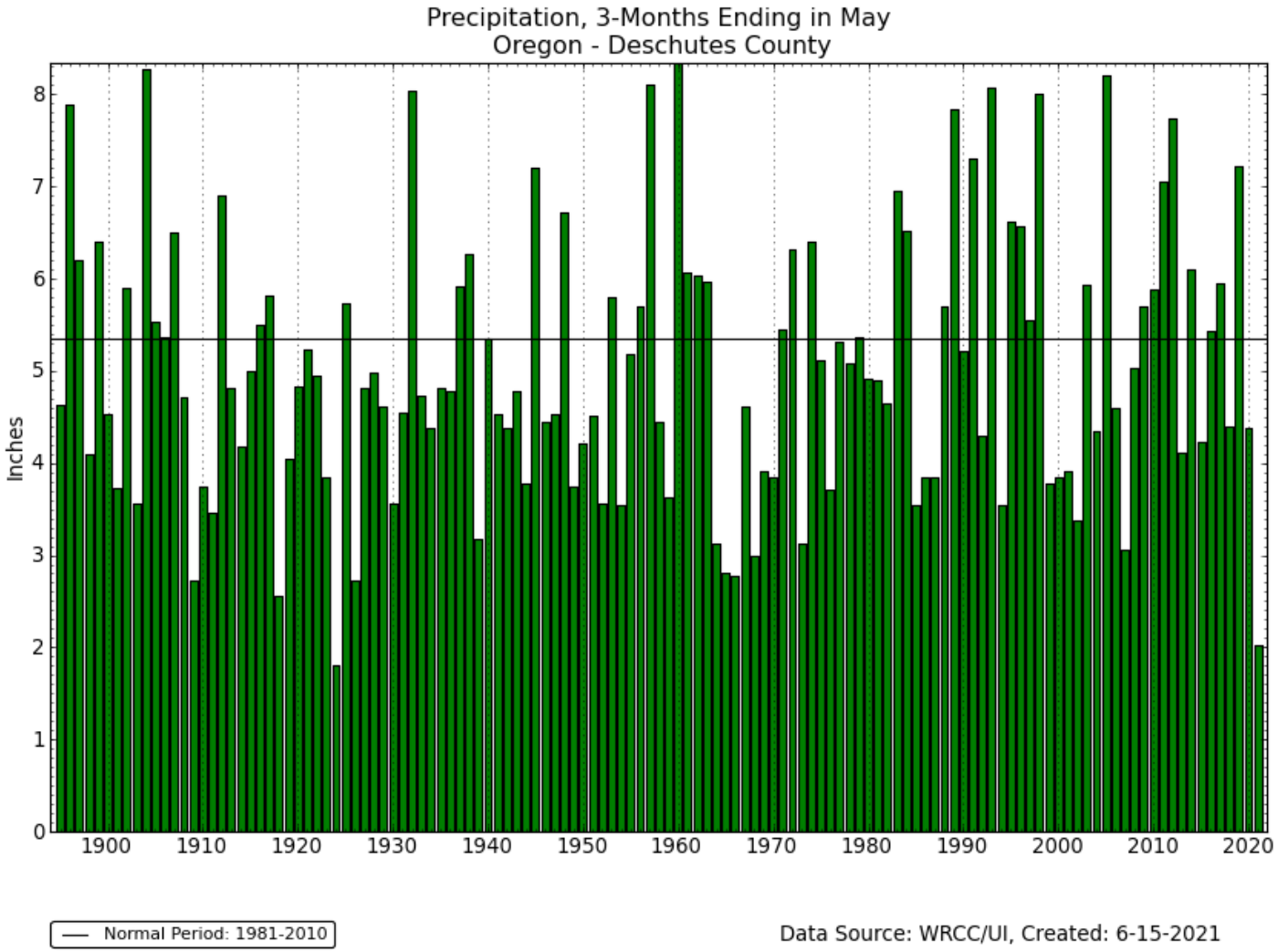
These are based on preliminary data, so this ranking may change in the coming months

Klamath County WYTD Precipitation



Fourth driest WYTD on record

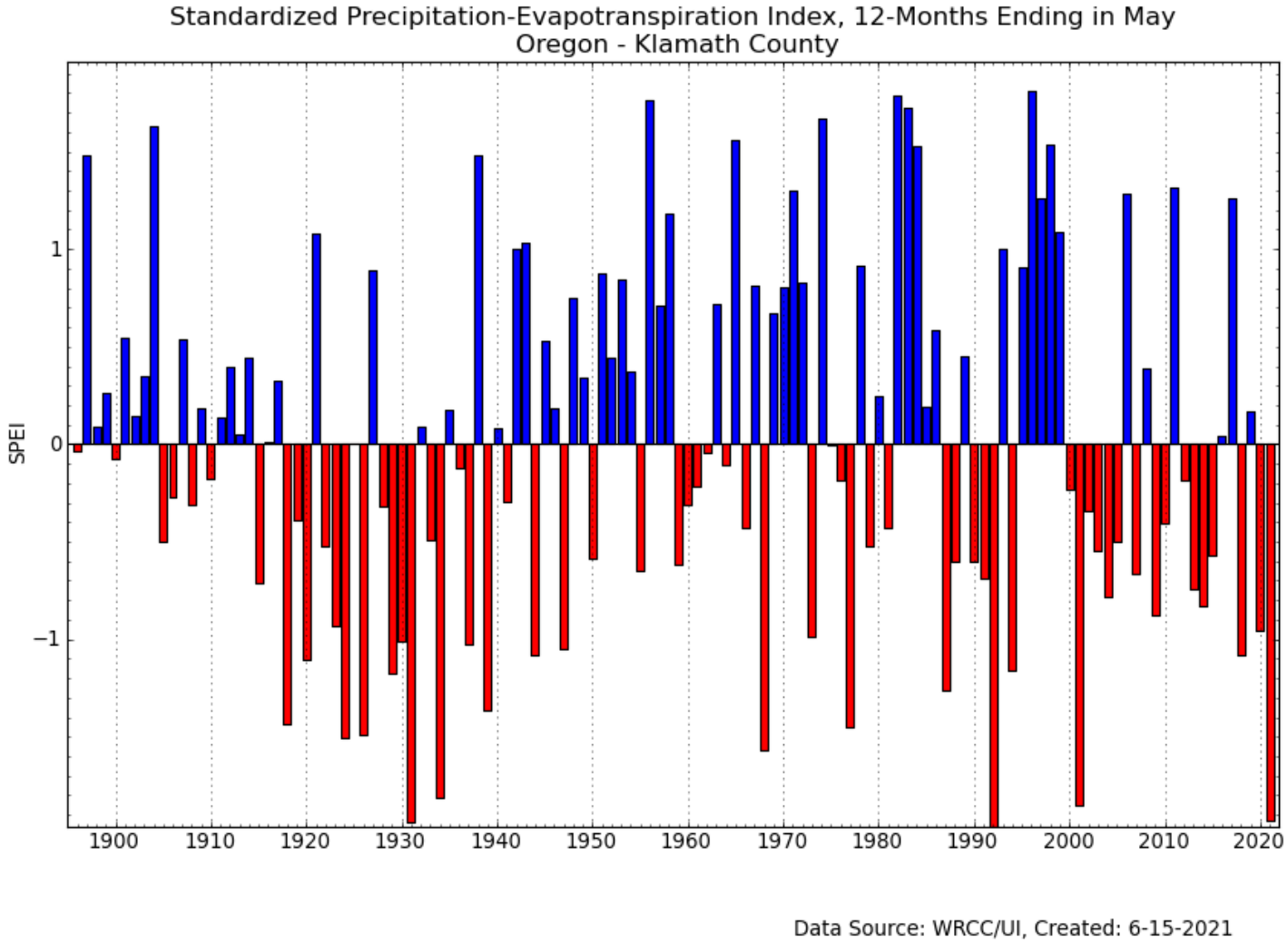
Deschutes County MAM Precipitation



Second driest MAM on record

MAM 2021: 2.05”
MAM 1924: 1.81”

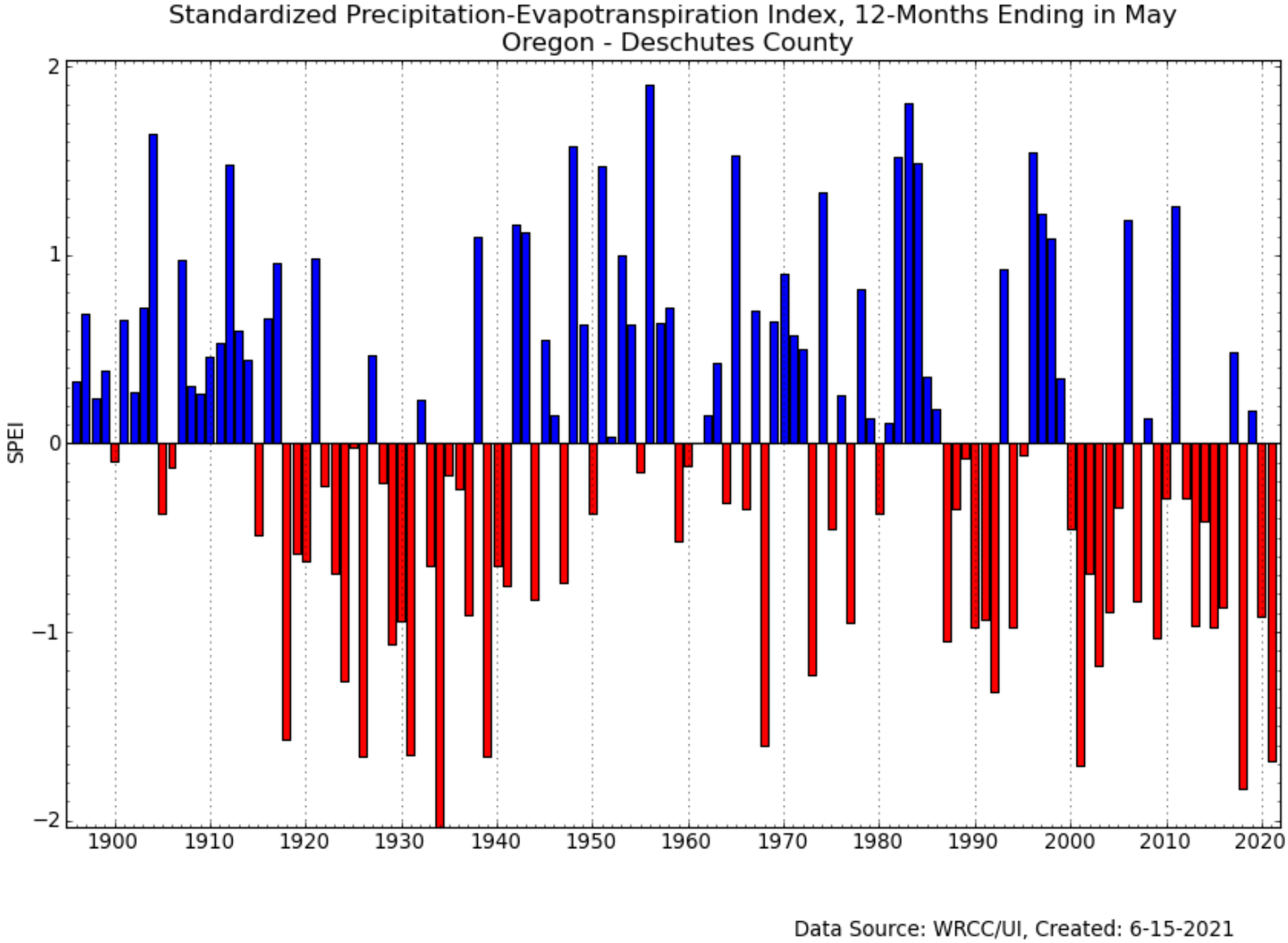
Klamath County 12-month SPEI

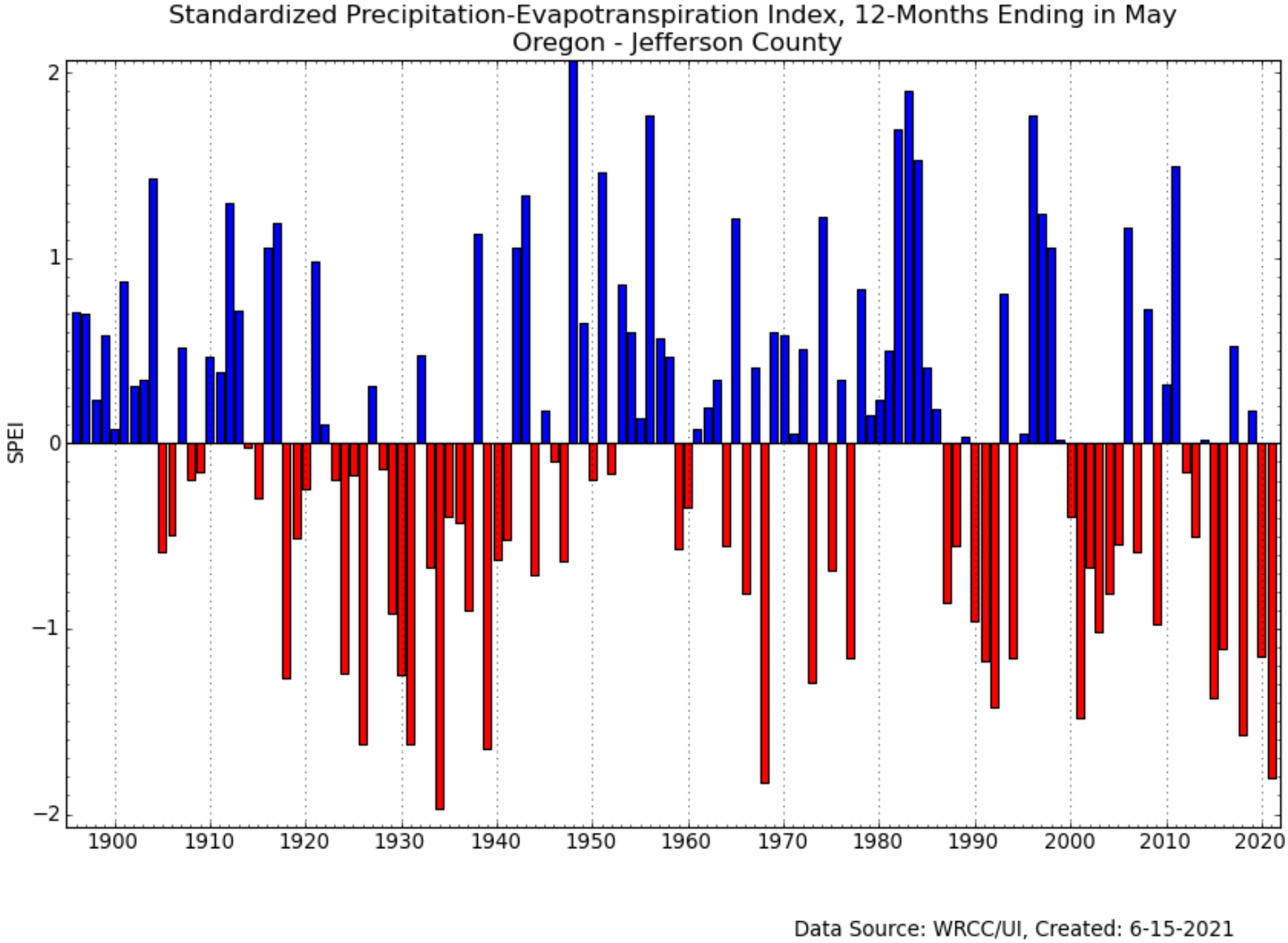


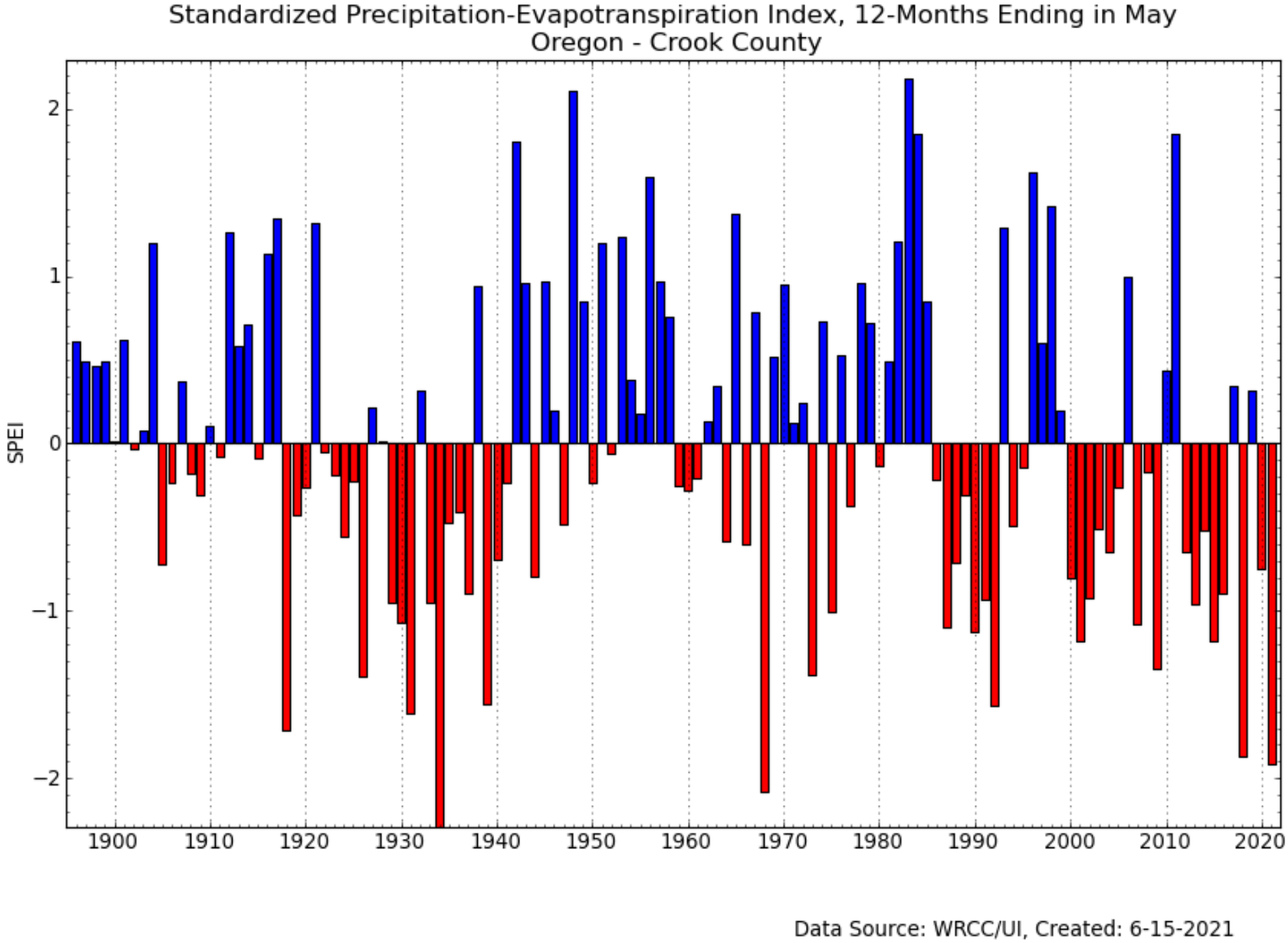
Third lowest 12-month SPEI on record

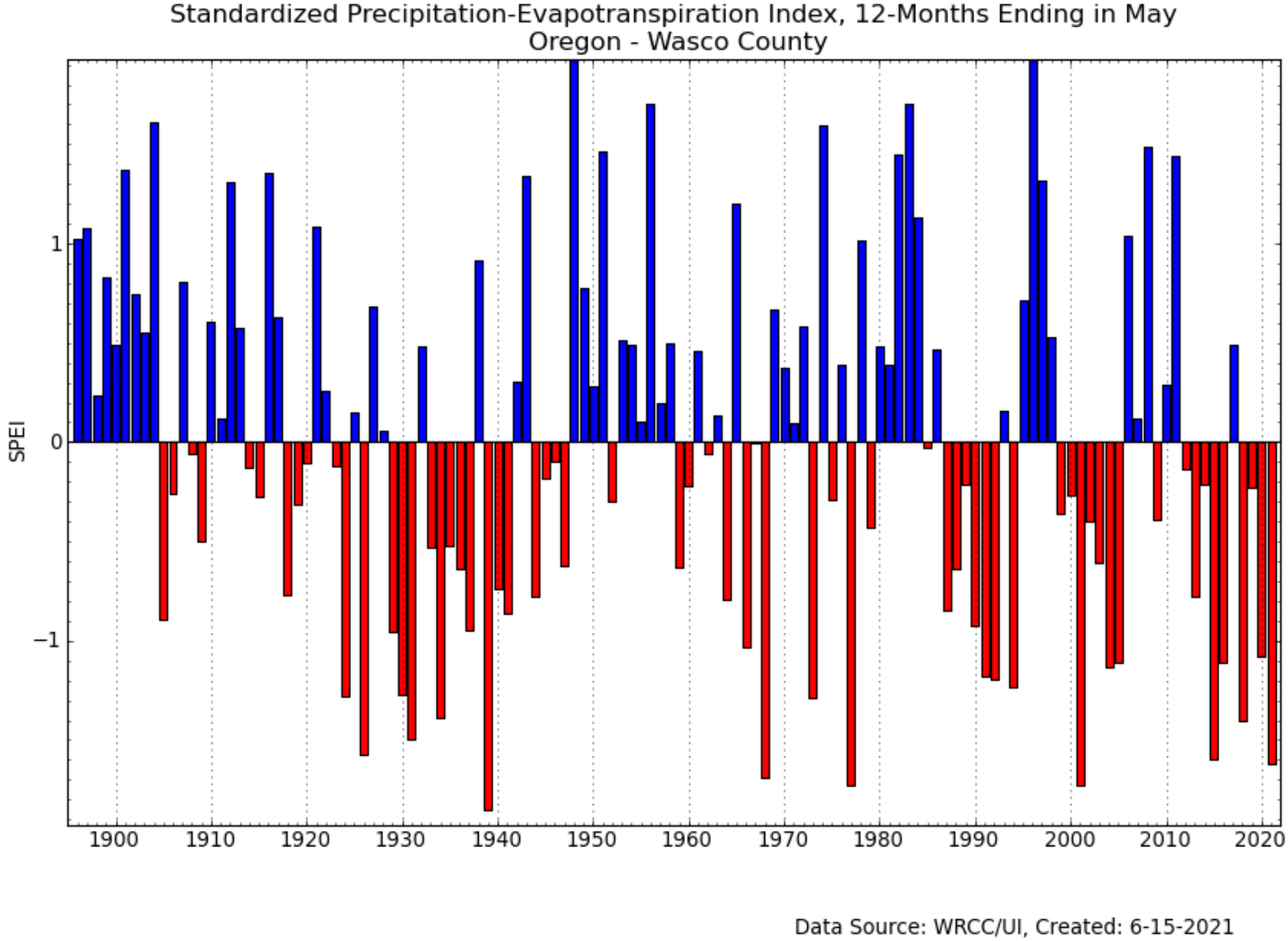
Current SPEI is -1.95

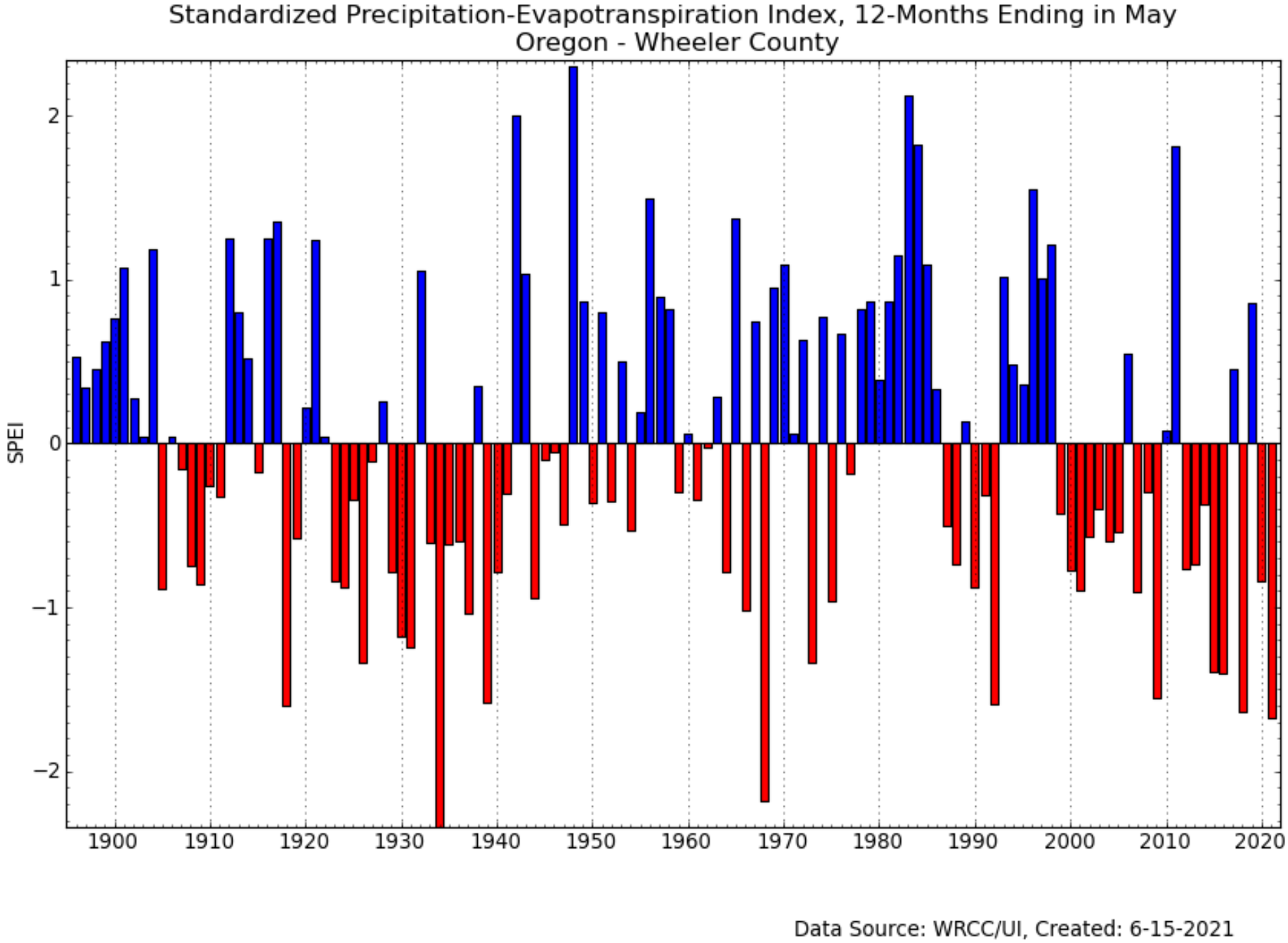
This is consistent with borderline D4 (exceptional drought)

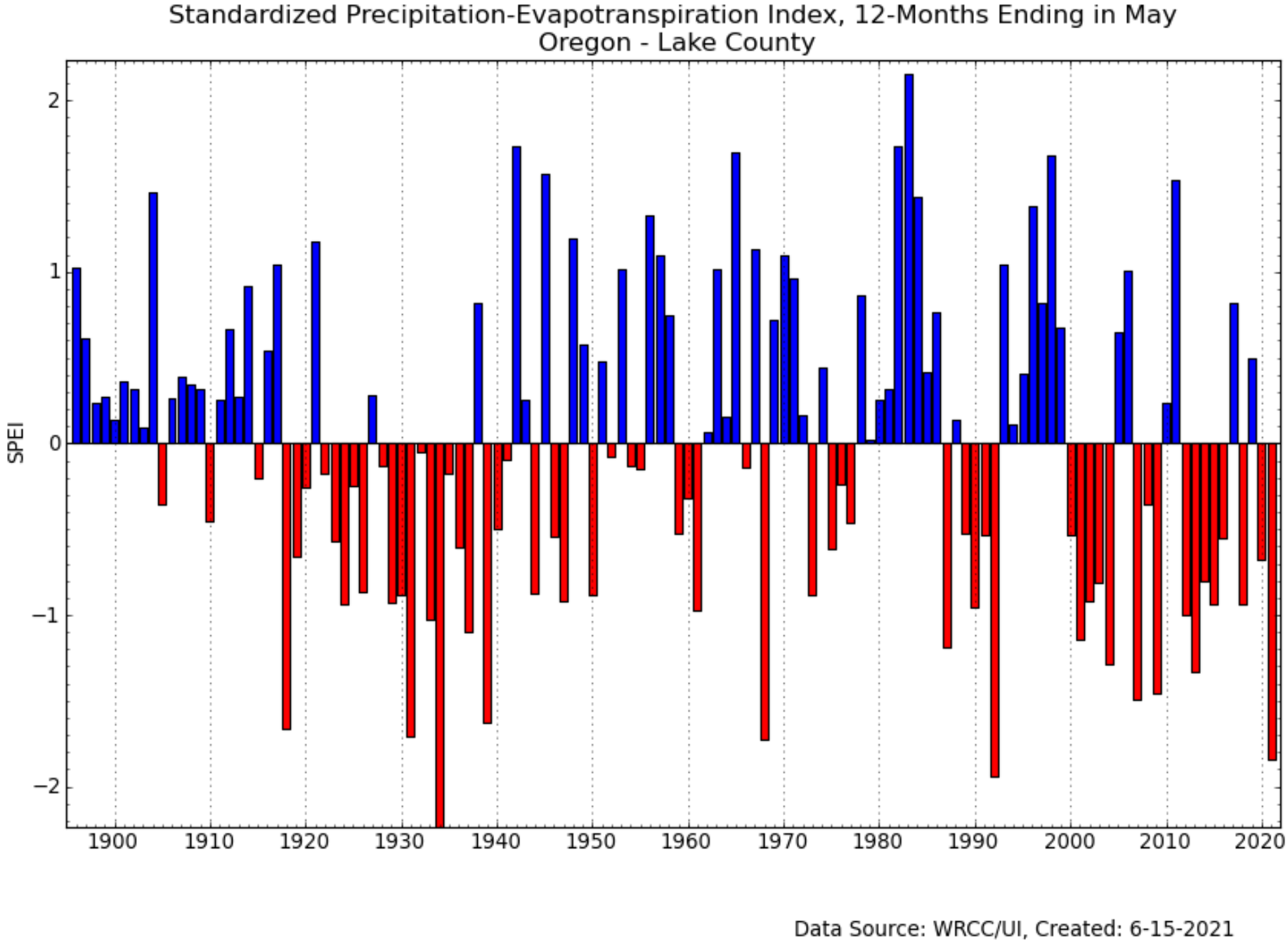

Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in May
Oregon - Deschutes County
SPEI
2
1
0
−1
−2
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Data Source: WRCC/UI, Created: 6-15-2021


Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in May
Oregon - Jefferson 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: 6-15-2021


Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in May
Oregon - Crook 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: 6-15-2021


Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in May
Oregon - Wasco County
SPEI
1
0
−1
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
Data Source: WRCC/UI, Created: 6-15-2021


Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in May
Oregon - Wheeler 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: 6-15-2021


Standardized Precipitation-Evapotranspiration Index, 12-Months Ending in May
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: 6-15-2021

Oregon Water Supply Availability Meeting

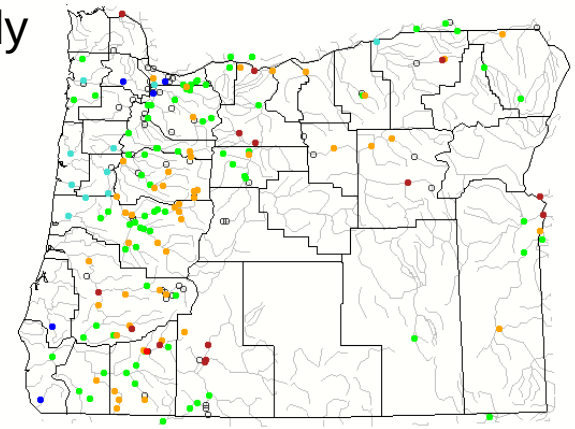
May 2021

Photo 14087380 Crooked River below Osborne Canyon, near Opal City, OR
StreamFlow about 120 cfs blw 25th percentile

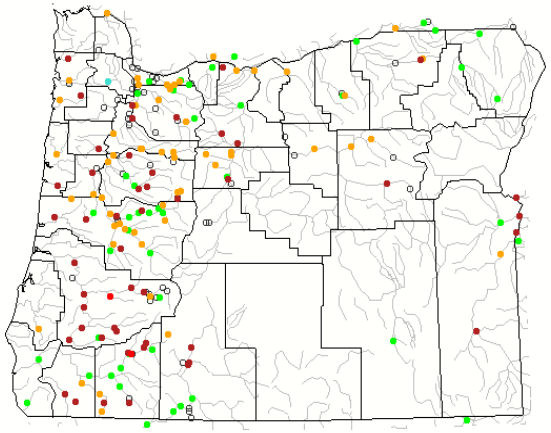
USGS Update on Surface Water Conditions
Carrie Boudreau & Marc Stewart
Photos Amarys Acosta
Oregon Water Science Center

Streamflow Conditions

Daily

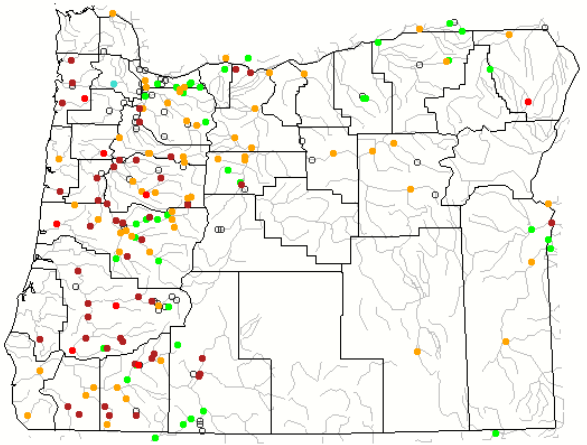


7 day avg



Oregon Streamflow Maps (as compared to Historical Record)

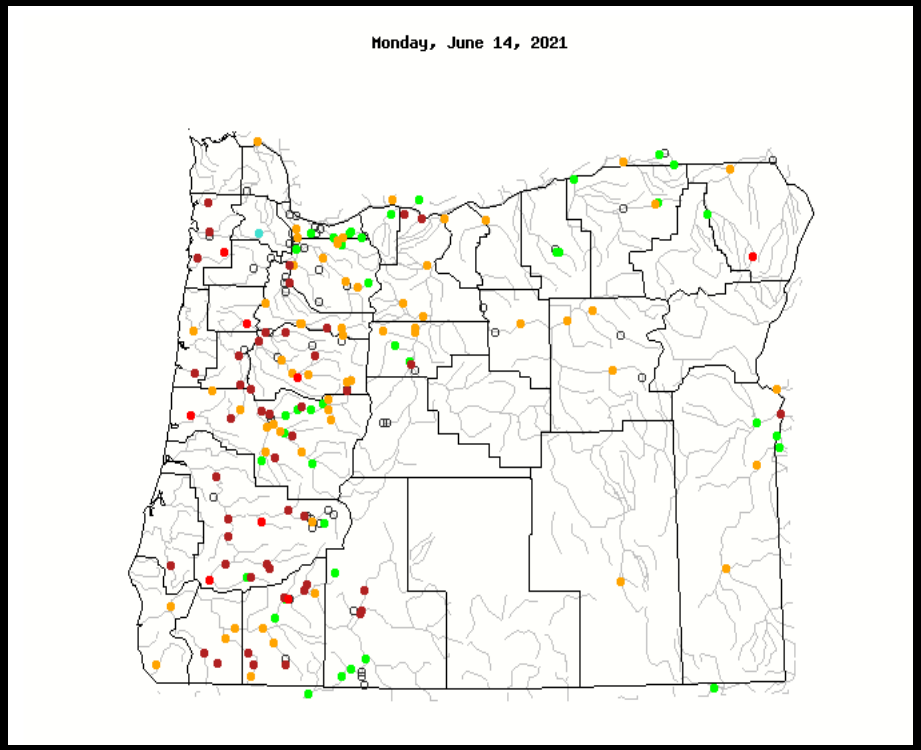
28 day avg

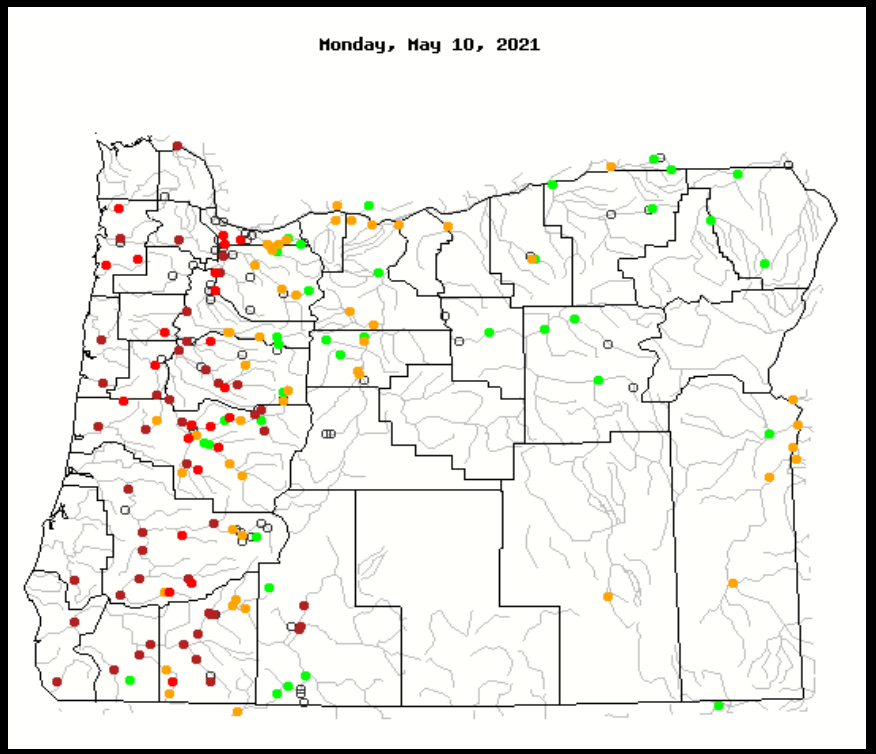


USGS

Streamflow Conditions

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

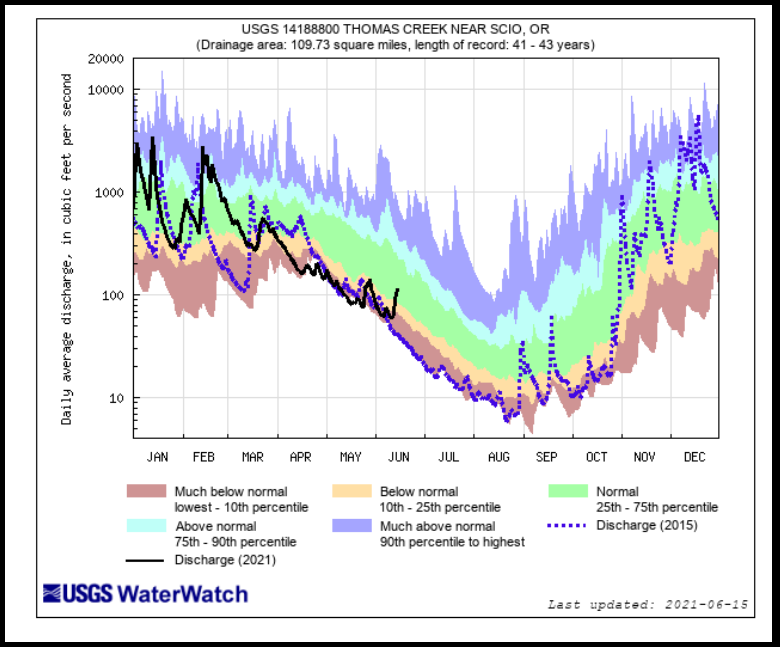


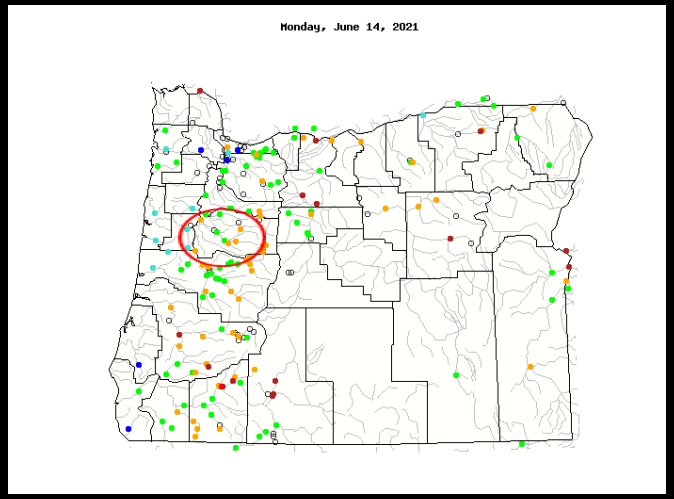


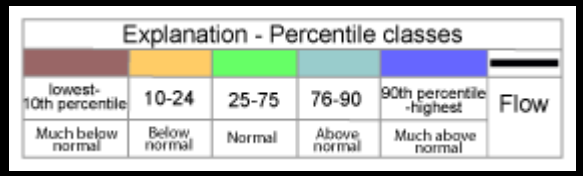
Explanation - Percentile classes							
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked

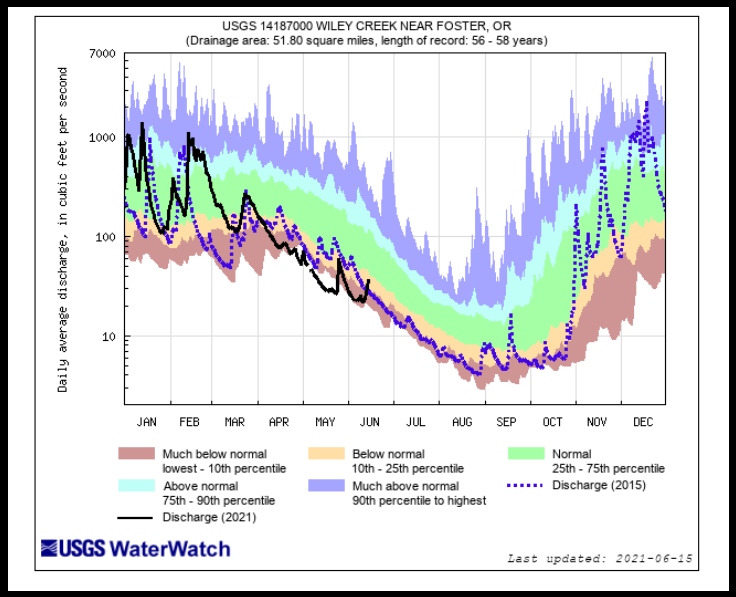
USGS

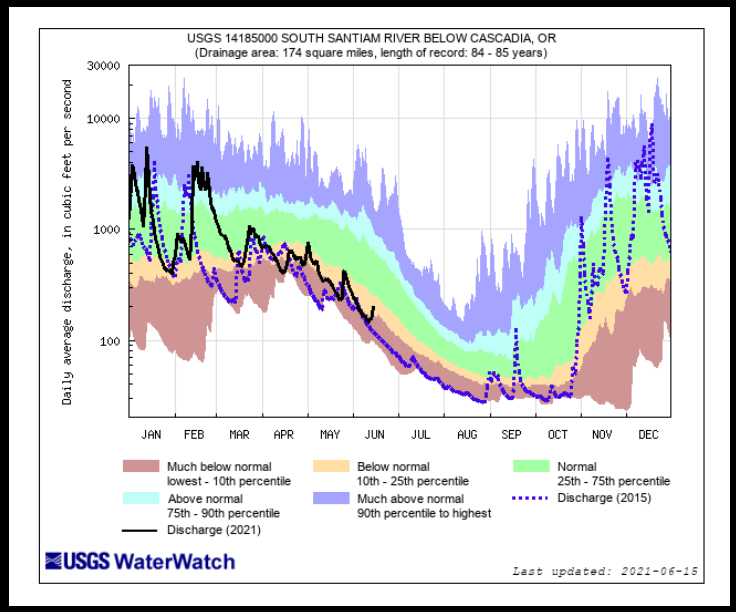
Linn County





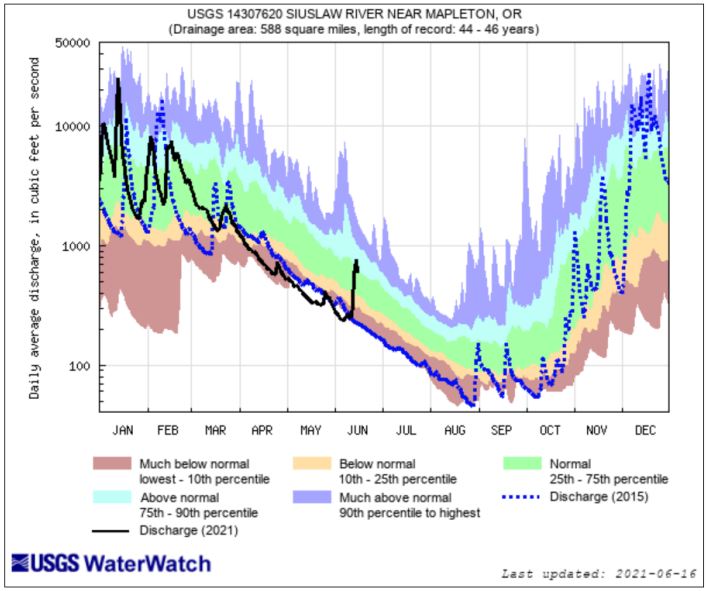


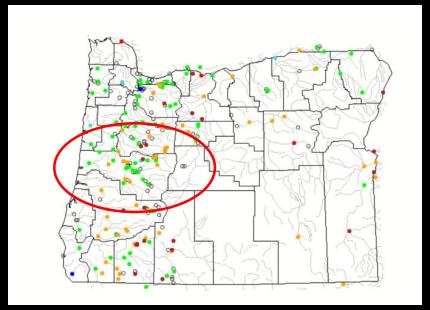


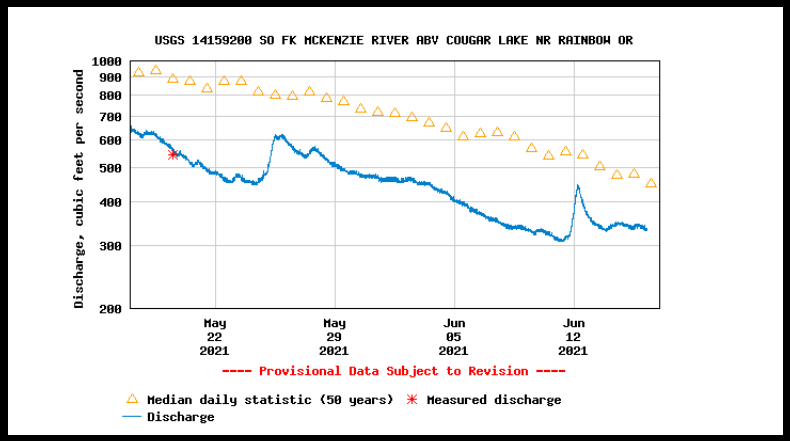


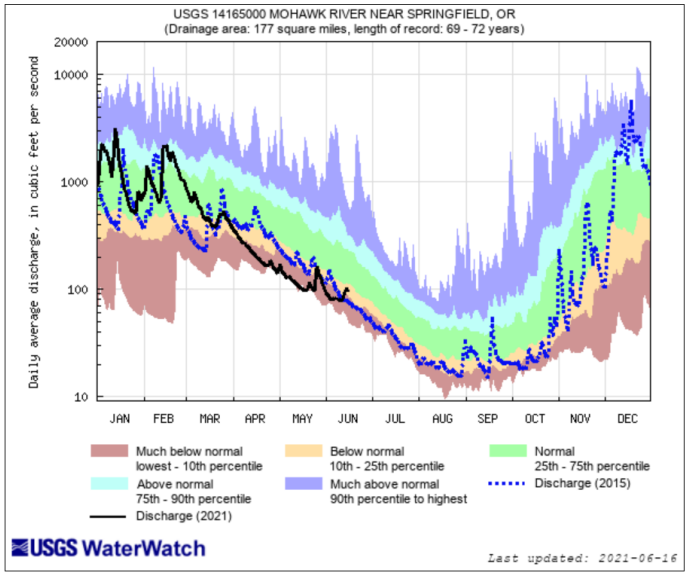
USGS

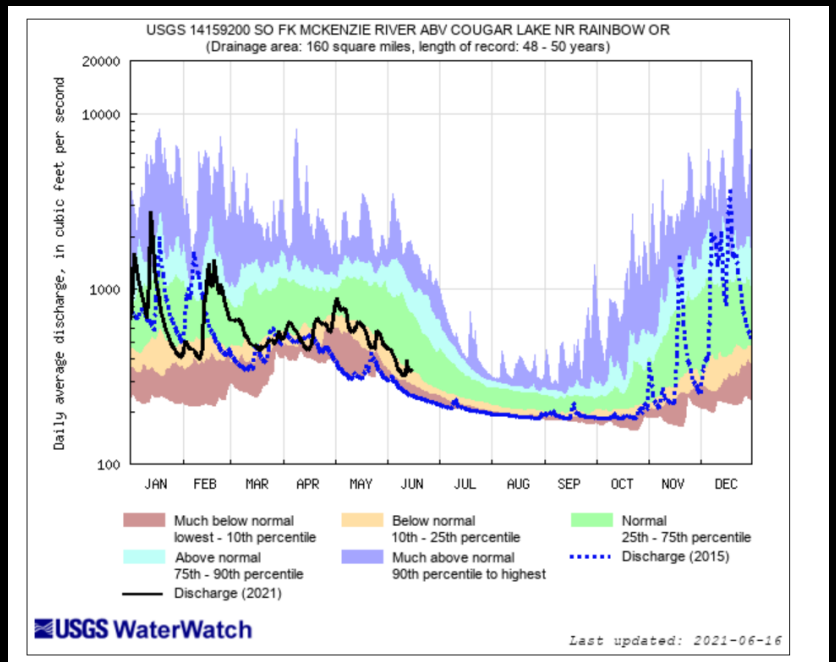
Lane County


USGS 14307620 SIUSLAW RIVER NEAR MAPLETON, OR
(Drainage area: 588 square miles, length of record: 44 - 46 years)
Daily average discharge, in cubic feet per second
50000
10000
1000
100
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Much below normal
lowest - 10th percentile
Below normal
10th - 25th percentile
Normal
25th - 75th percentile
Above normal
75th - 90th percentile
Much above normal
90th percentile to highest
Discharge (2015)
Discharge (2021)
USGS WaterWatch
Last updated: 2021-06-16

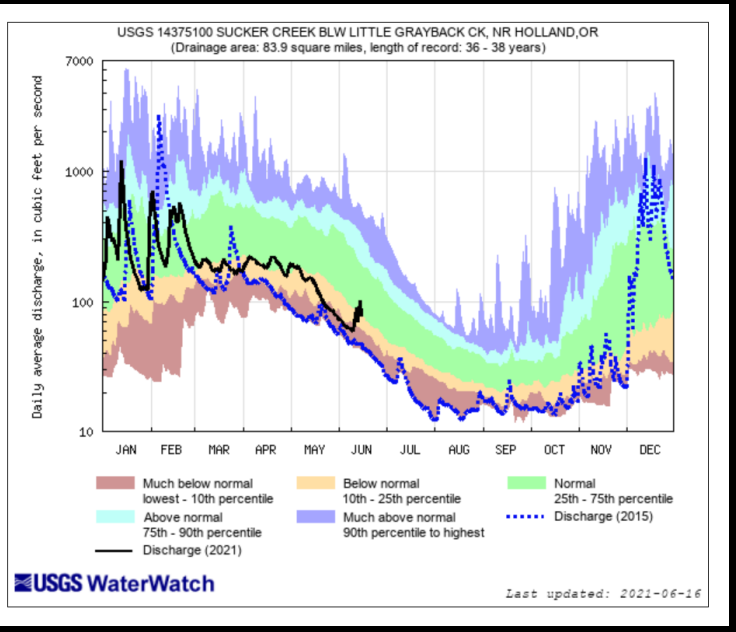


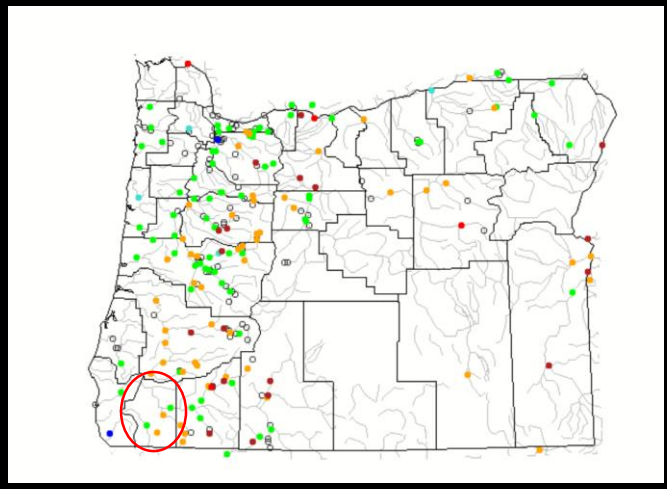

USGS 14159200 SO FK MCKENZIE RIVER ABV COUGAR LAKE NR RAINBOW OR
Discharge, cubic feet per second
1000
900
800
700
600
500
400
300
200
May 22 2021
May 29 2021
Jun 05 2021
Jun 12 2021
---- Provisional Data Subject to Revision ----
Median daily statistic (50 years)
Measured discharge
Discharge

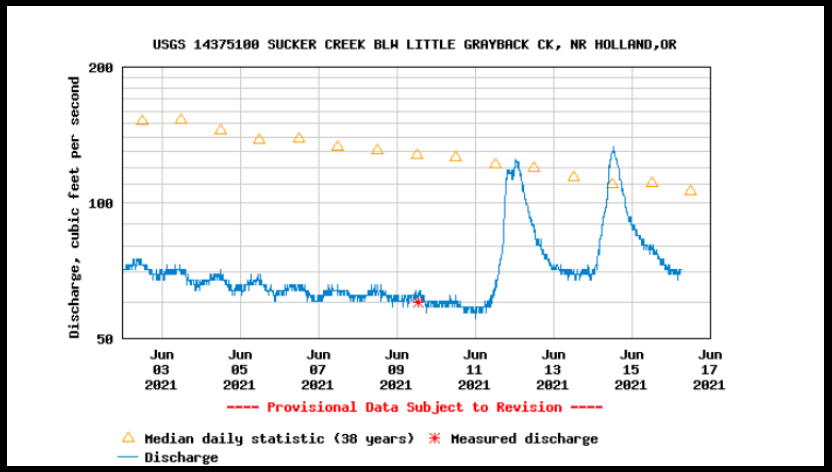

USGS 14165000 MOHAWK RIVER NEAR SPRINGFIELD, OR
(Drainage area: 177 square miles, length of record: 69 - 72 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
10
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Much below normal
lowest - 10th percentile
Below normal
10th - 25th percentile
Normal
25th - 75th percentile
Above normal
75th - 90th percentile
Much above normal
90th percentile to highest
Discharge (2015)
Discharge (2021)
USGS WaterWatch
Last updated: 2021-06-16

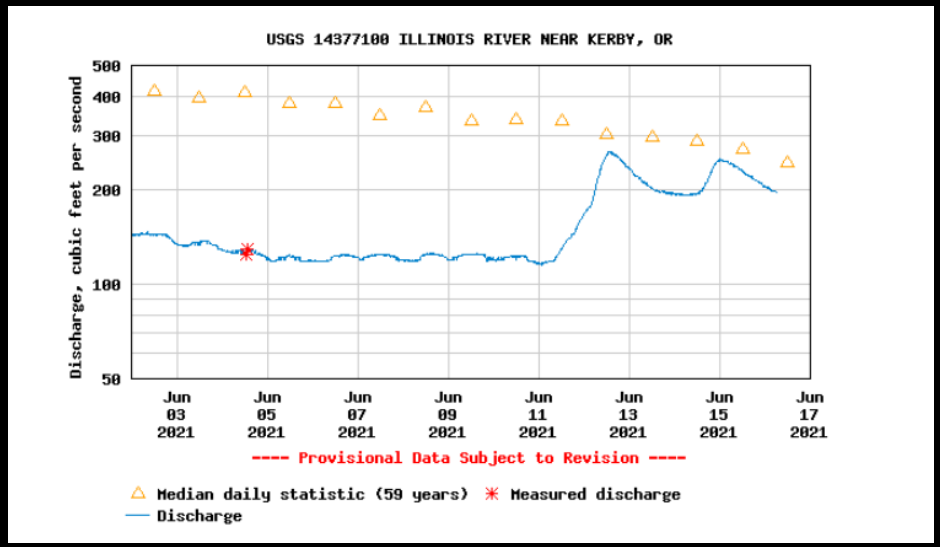

USGS 14159200 SO FK MCKENZIE RIVER ABV COUGAR LAKE NR RAINBOW OR
(Drainage area: 160 square miles, length of record: 48 - 50 years)
Daily average discharge, in cubic feet per second
20000
10000
1000
100
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Much below normal
lowest - 10th percentile
Below normal
10th - 25th percentile
Normal
25th - 75th percentile
Above normal
75th - 90th percentile
Much above normal
90th percentile to highest
Discharge (2015)
Discharge (2021)
USGS WaterWatch
Last updated: 2021-06-16

Josephine County



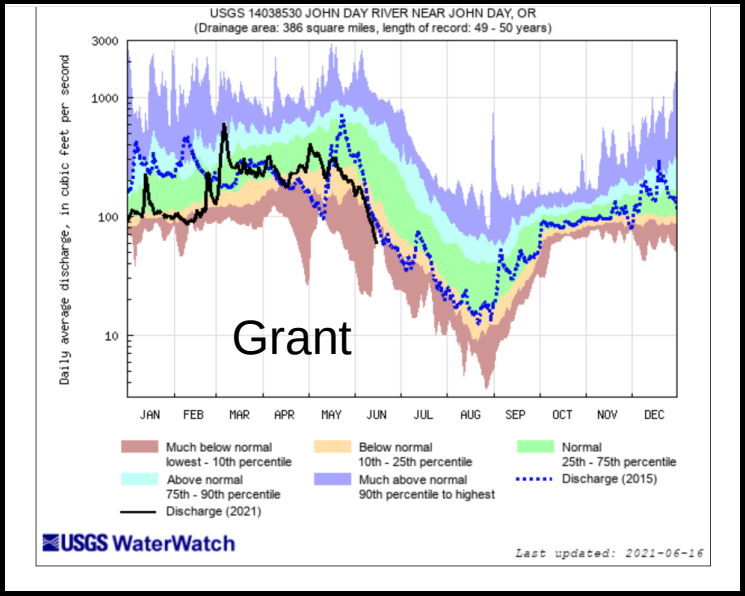


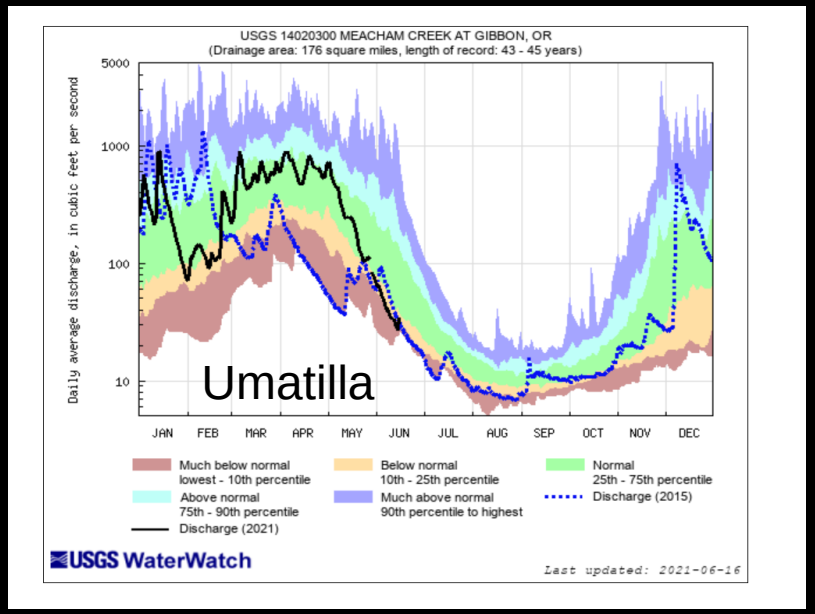


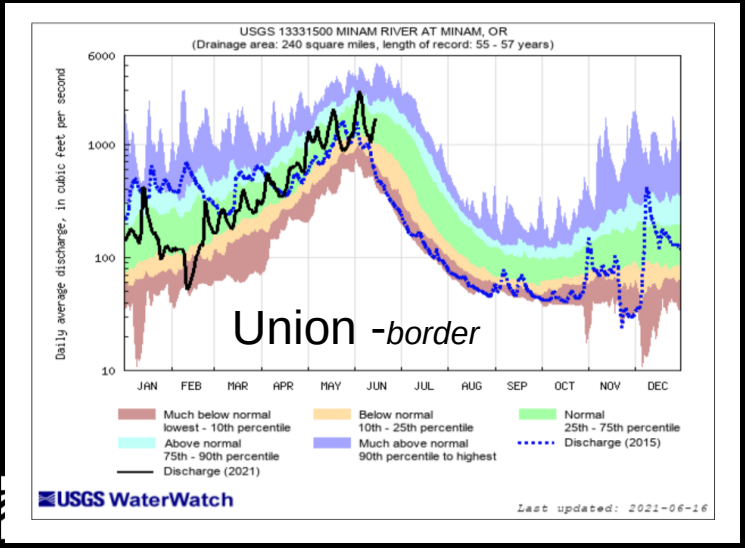


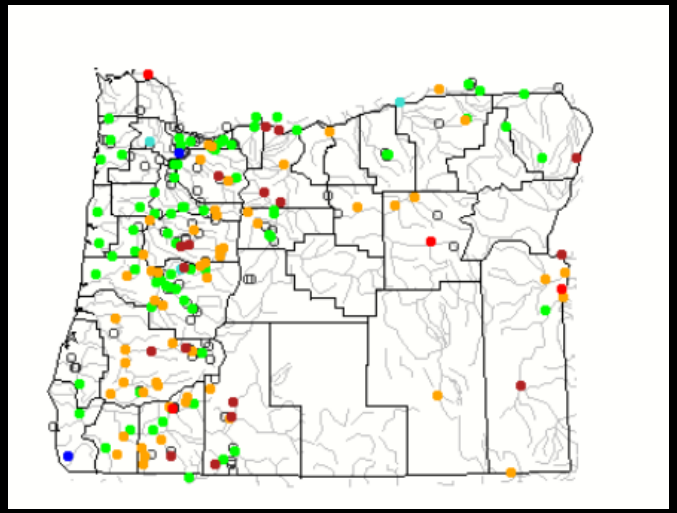
USGS

Eastern OR

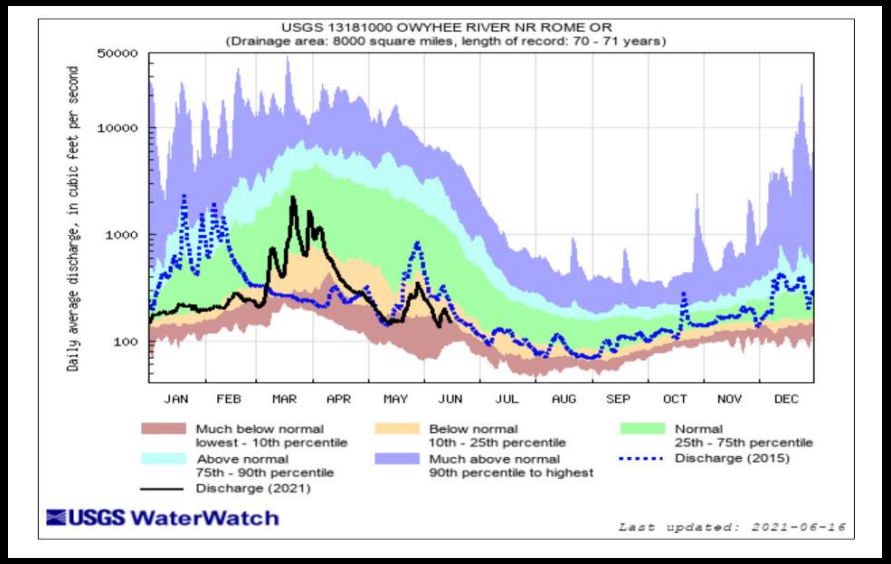

USGS 14038530 JOHN DAY RIVER NEAR JOHN DAY, OR
(Drainage area: 386 square miles, length of record: 49 - 50 years)
Daily average discharge, in cubic feet per second
3000
1000
100
10
Grant
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Much below normal lowest - 10th percentile
Below normal 10th - 25th percentile
Normal 25th - 75th percentile
Above normal 75th - 90th percentile
Much above normal 90th percentile to highest
Discharge (2015)
Discharge (2021)
USGS WaterWatch
Last updated: 2021-06-16

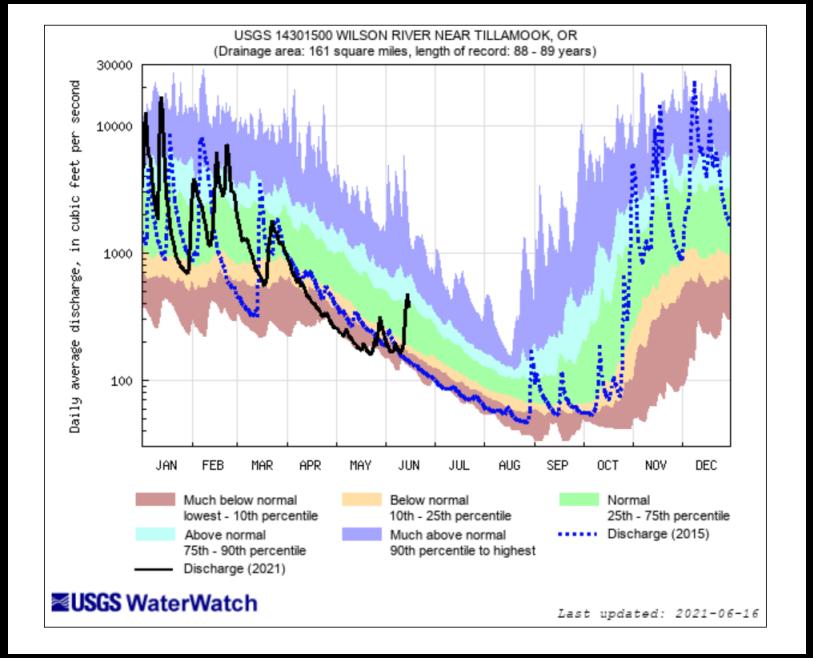

USGS 14020300 MEACHAM CREEK AT GIBBON, OR
(Drainage area: 176 square miles, length of record: 43 - 45 years)
Daily average discharge, in cubic feet per second
5000
1000
100
10
Umatilla
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Much below normal lowest - 10th percentile
Below normal 10th - 25th percentile
Normal 25th - 75th percentile
Above normal 75th - 90th percentile
Much above normal 90th percentile to highest
Discharge (2015)
Discharge (2021)
USGS WaterWatch
Last updated: 2021-06-16

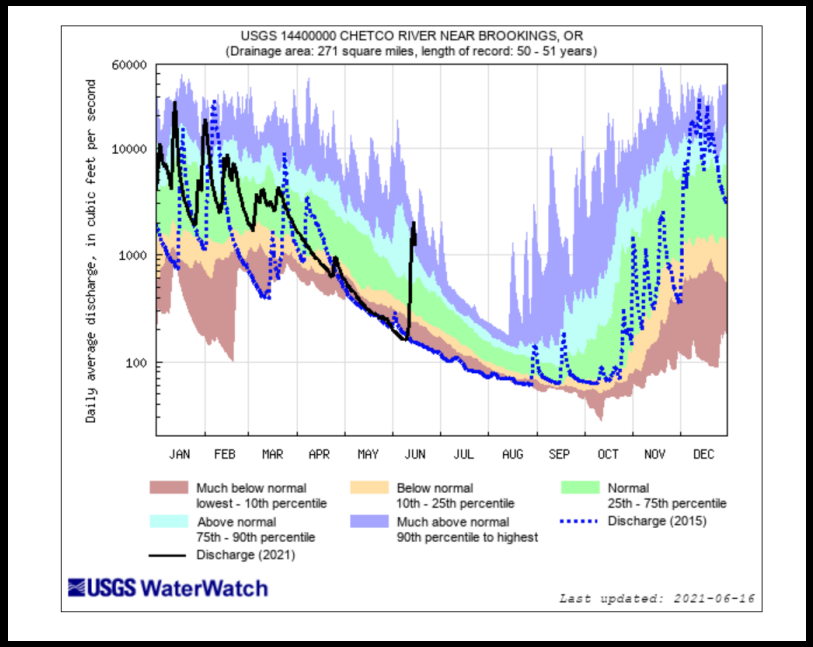

USGS 13331500 MINAM RIVER AT MINAM, OR
(Drainage area: 240 square miles, length of record: 55 - 57 years)
Daily average discharge, in cubic feet per second
6000
1000
100
10
Union -border
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Much below normal lowest - 10th percentile
Below normal 10th - 25th percentile
Normal 25th - 75th percentile
Above normal 75th - 90th percentile
Much above normal 90th percentile to highest
Discharge (2015)
Discharge (2021)
USGS WaterWatch
Last updated: 2021-06-16



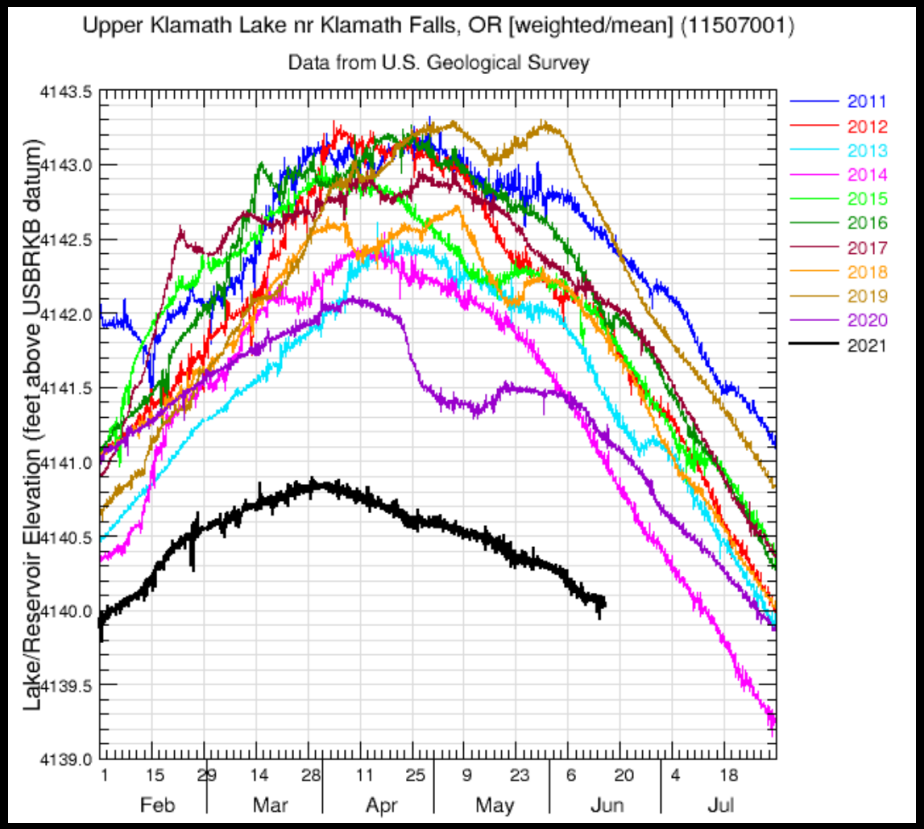
Coastal and Eastern OR



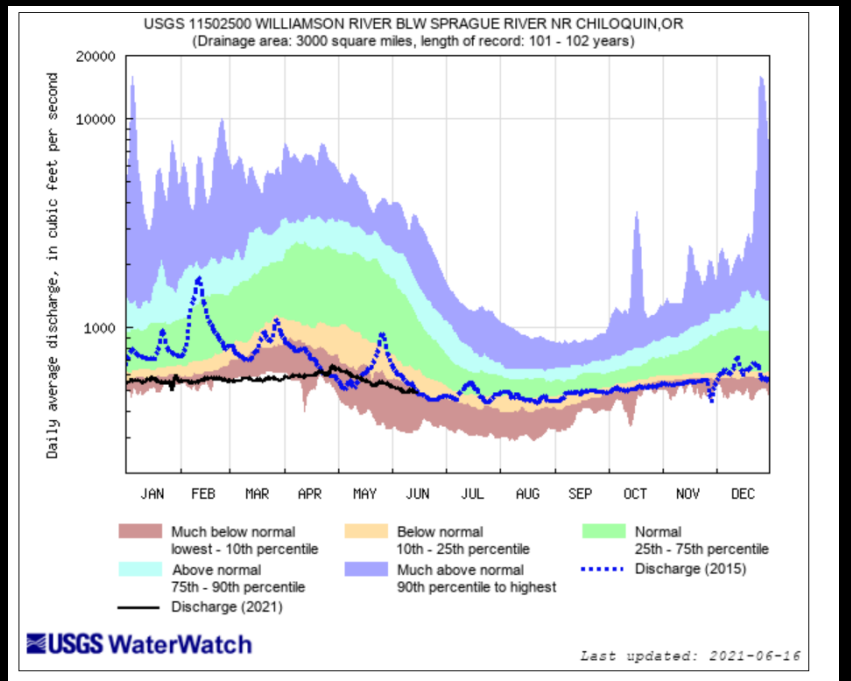




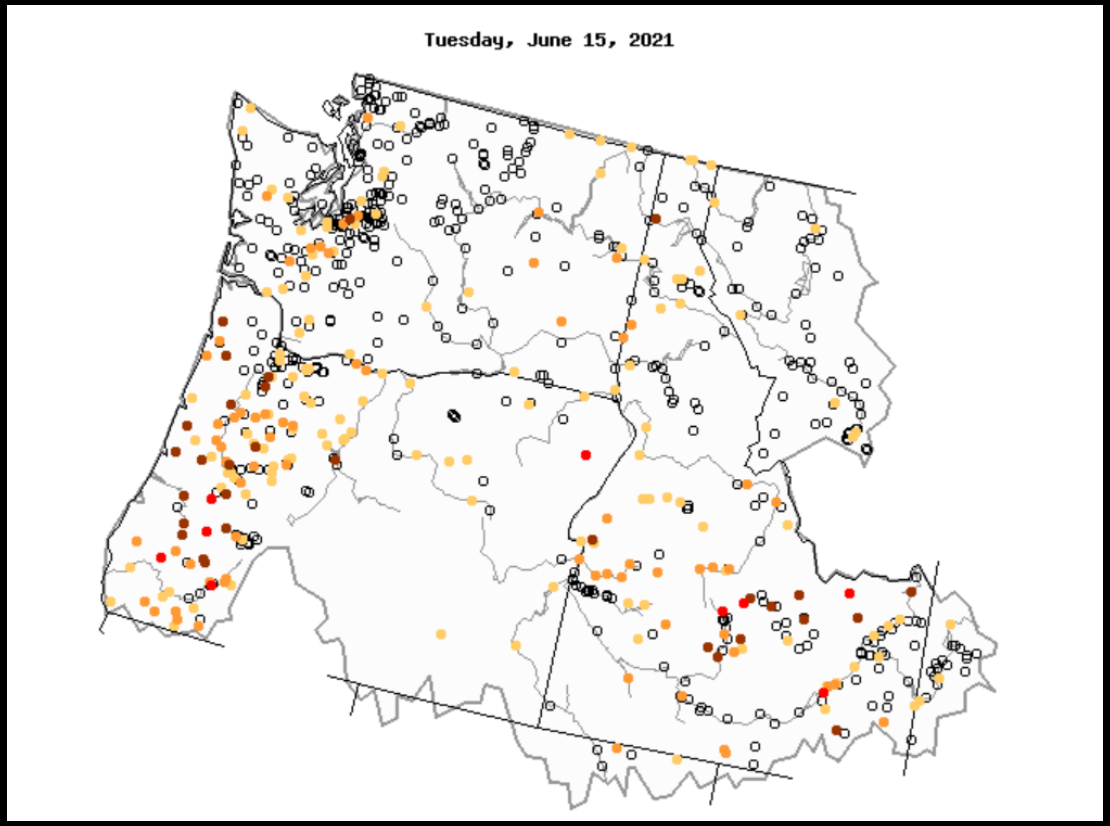
USGS



Klamath Lake



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



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

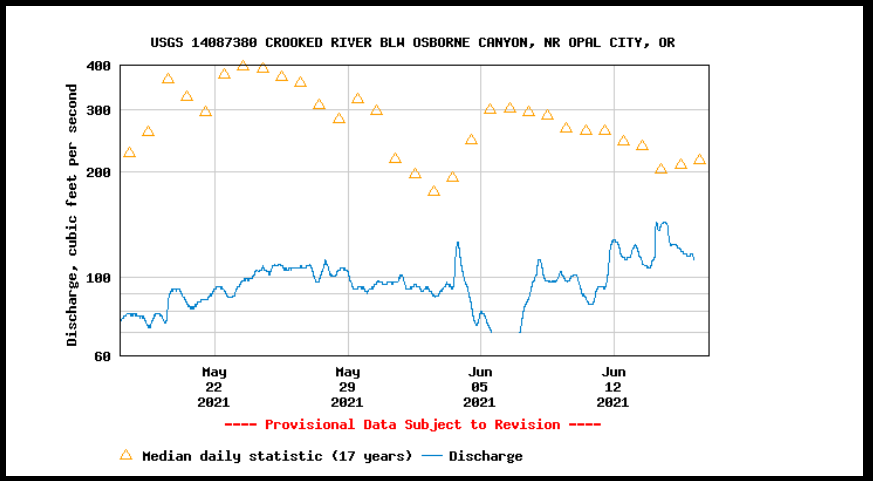
USGS

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 May: Percent of average
Donner Und Blitzen nr Frenchglen	Harney	225	55	56	56
(*)Deep Creek above Adel	Lake County	105	24	-9	25
(*)Chewaucan River near Paisley	Lake County	122	24	-27	35
Williamson River near Chiloquin	Klamath	572	36	-5	46
Owyhee River near Rome	Owyhee	207	10	-61	24
(*)NF Malheur River near Beulah	Malheur	191	57	-17	59
Grande Ronde R at Troy	Grande Ronde Powder/Burnt	5,550	80	-8	86
Umatilla River nr Gibbon	Umatilla Lower John Day	468	102	-20	103
John Day River at Service Crk	Upper John Day	2,740	53	-23	56
(*)Little Deschutes River nr LaPine	Upper Deschutes	127	40	40	46
Hood River nr Hood River	Lower Deschutes Mt.Hood	869	76	6	87
Willamette River at Salem	Willamette	9,690	49	-21	84
Wilson River near Tillamook	North Coast	223	37	-53	105
Umpqua River near Elkton	Rogue/Umpqua	2,200	34	-39	67
Rogue River near Agness	Rogue/Umpqua	2,430	45	2	59
SF Coquille River at Powers	South Coast	89	20	-72	85
Chetco River near Brookings	South Coast	440	31	-62	81

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

6/1/2021

USGS

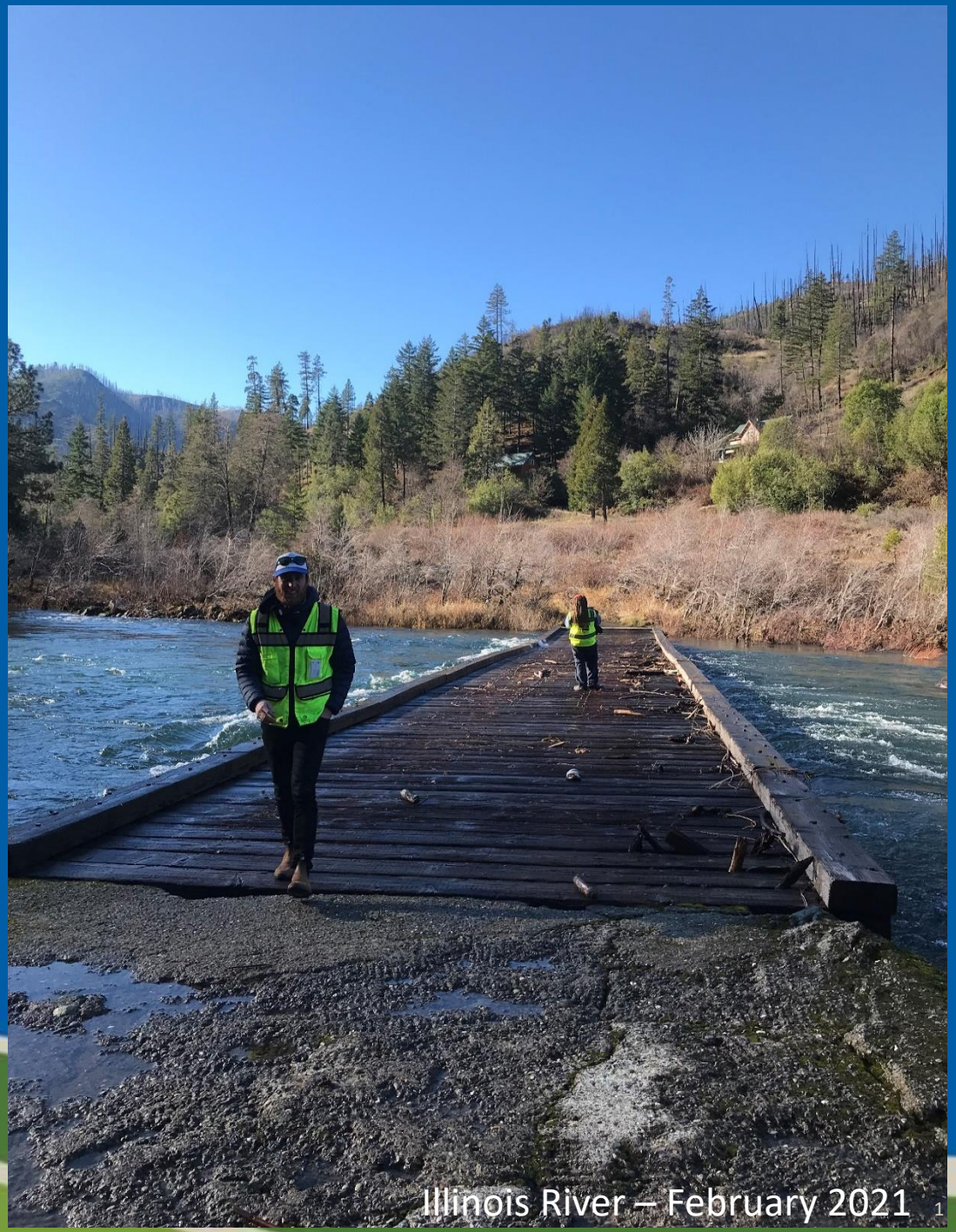

USGS 14087380 CROOKED RIVER BLW OSBORNE CANYON, NR OPAL CITY, OR
Discharge, cubic feet per second
400
300
200
100
60
May 22 2021
May 29 2021
Jun 05 2021
Jun 12 2021
---- Provisional Data Subject to Revision ----
Median daily statistic (17 years)
Discharge

USGS

Water Supply Availability Committee

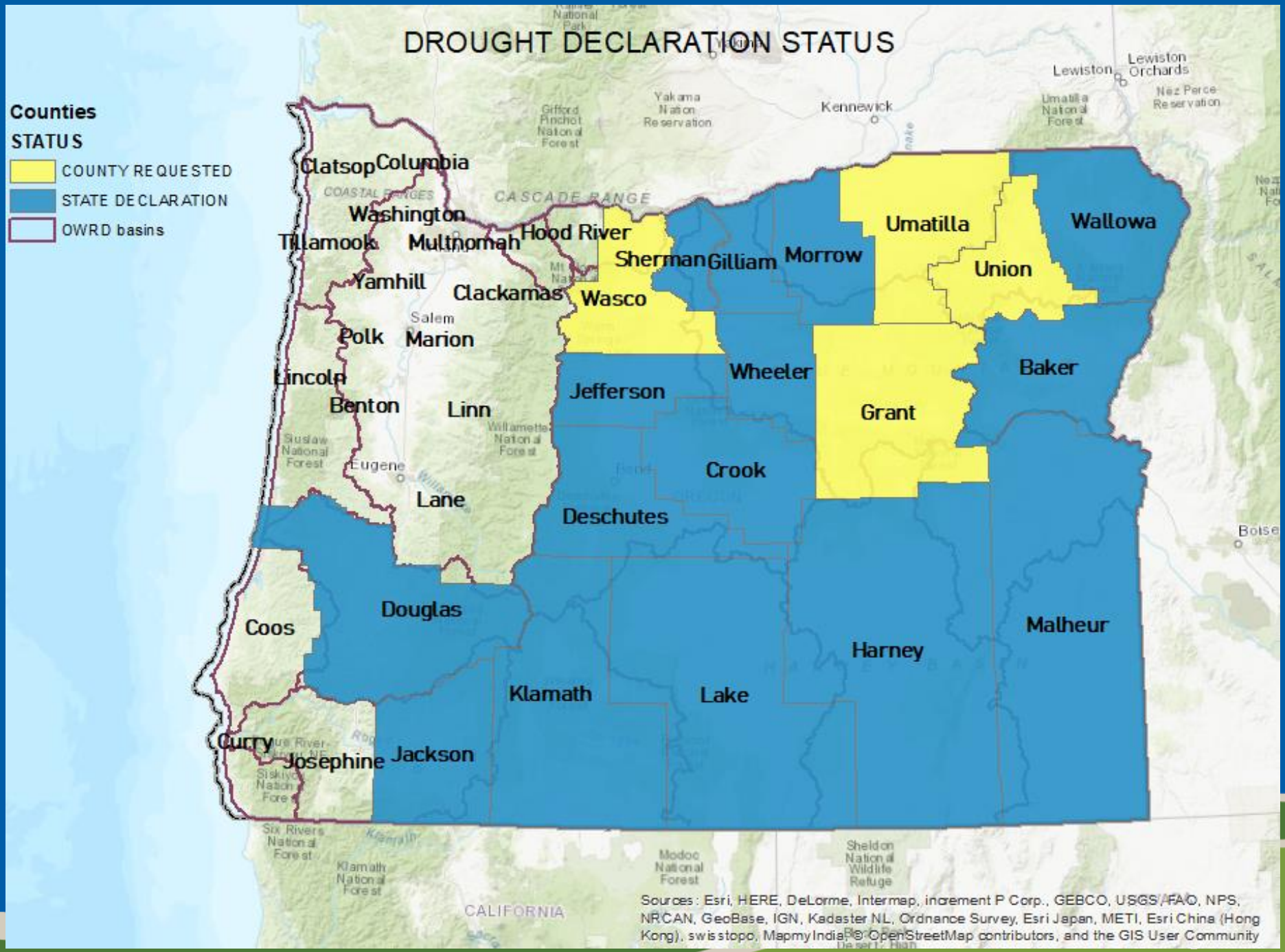
OREGON
WATER RESOURCES DEPARTMENT

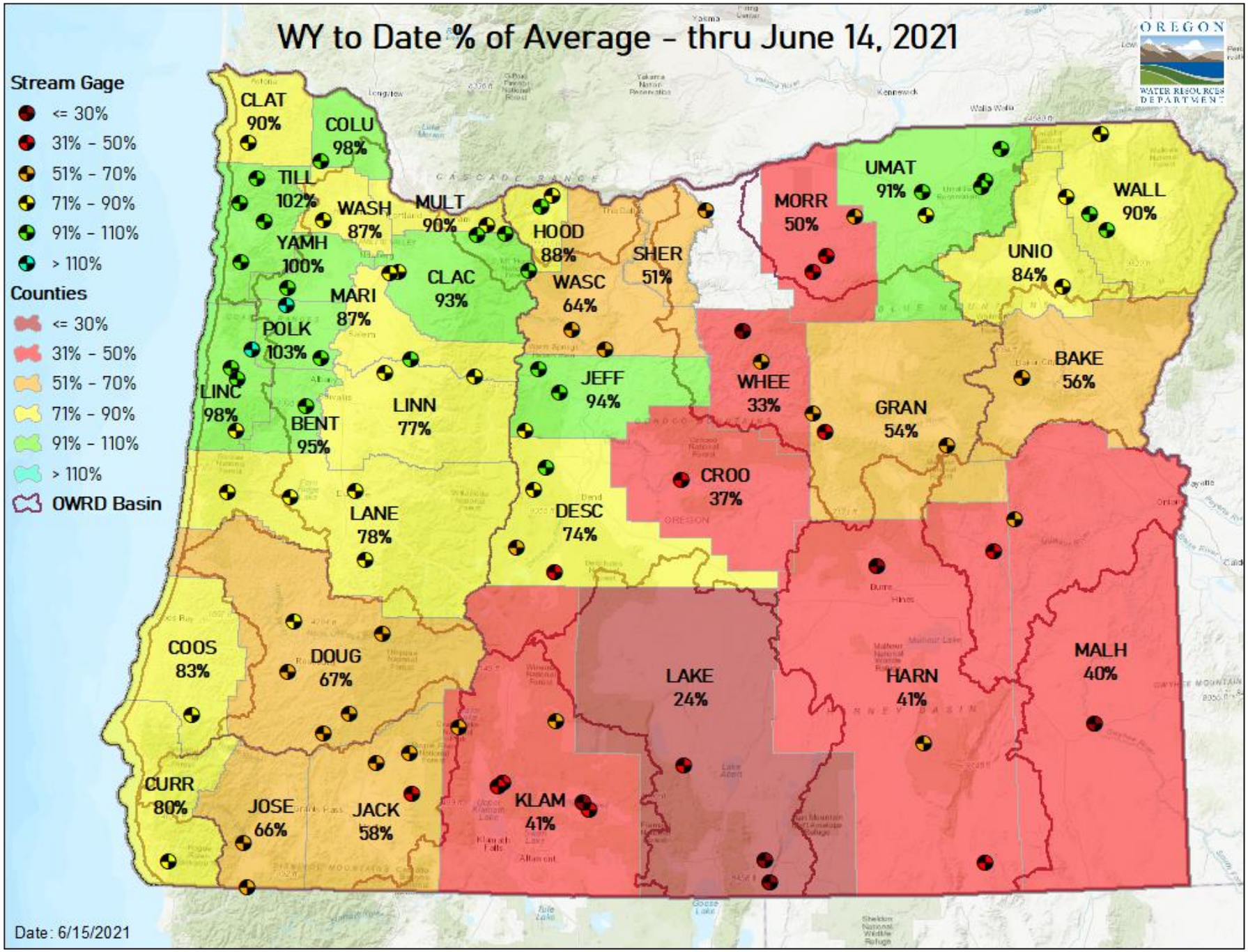
Ryan Andrews
Oregon Water Resources Department
June 16th, 2021

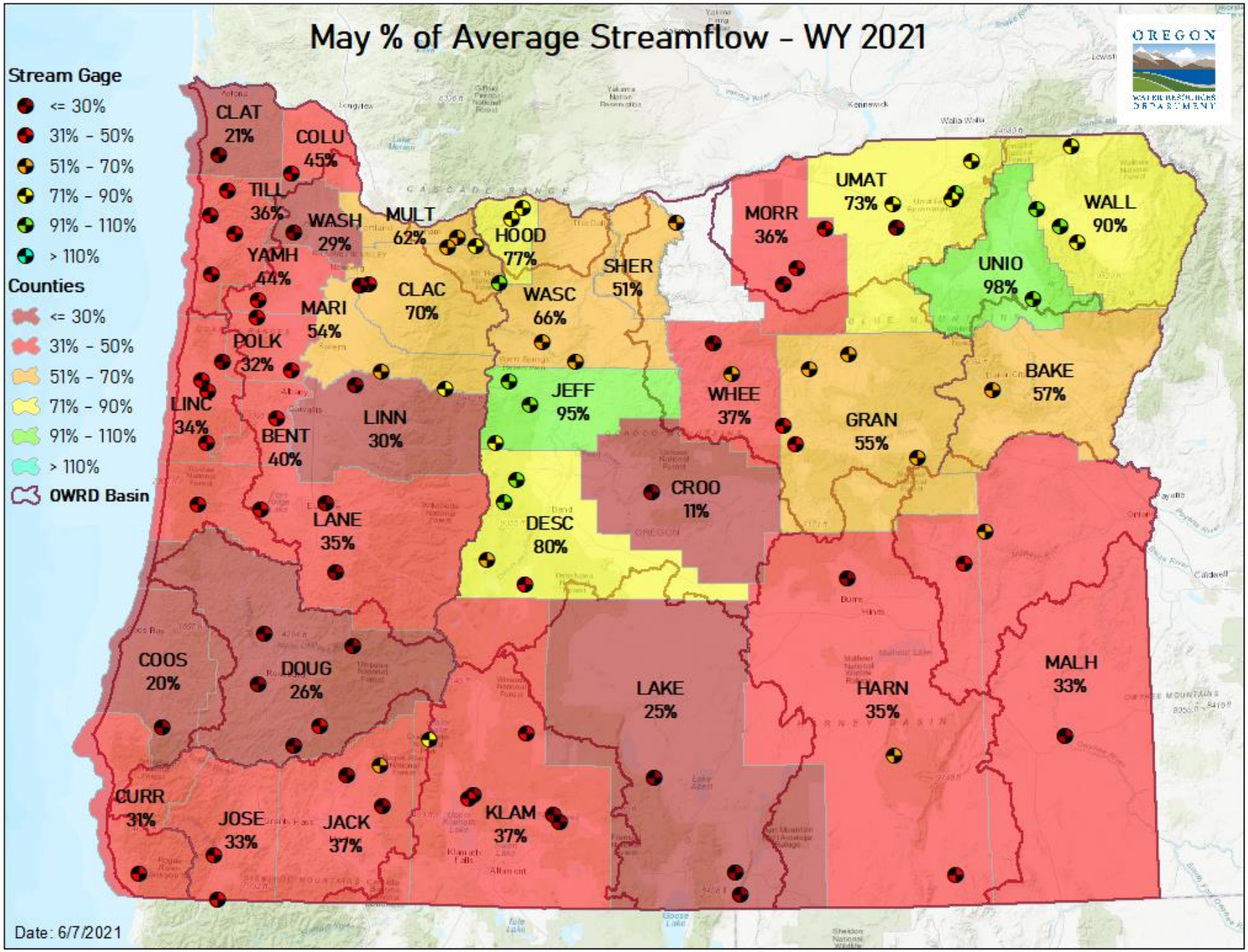


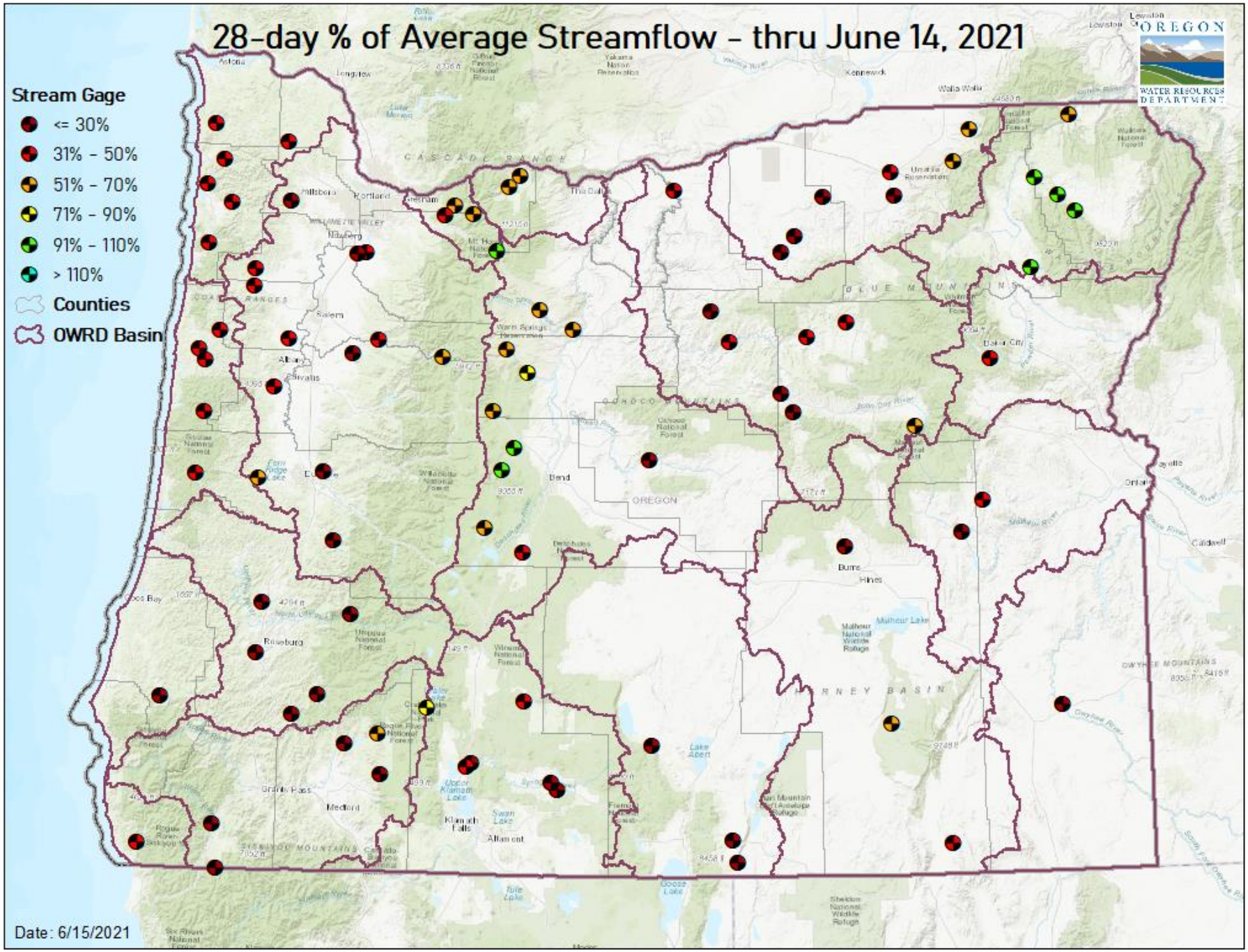
Illinois River – February 2021

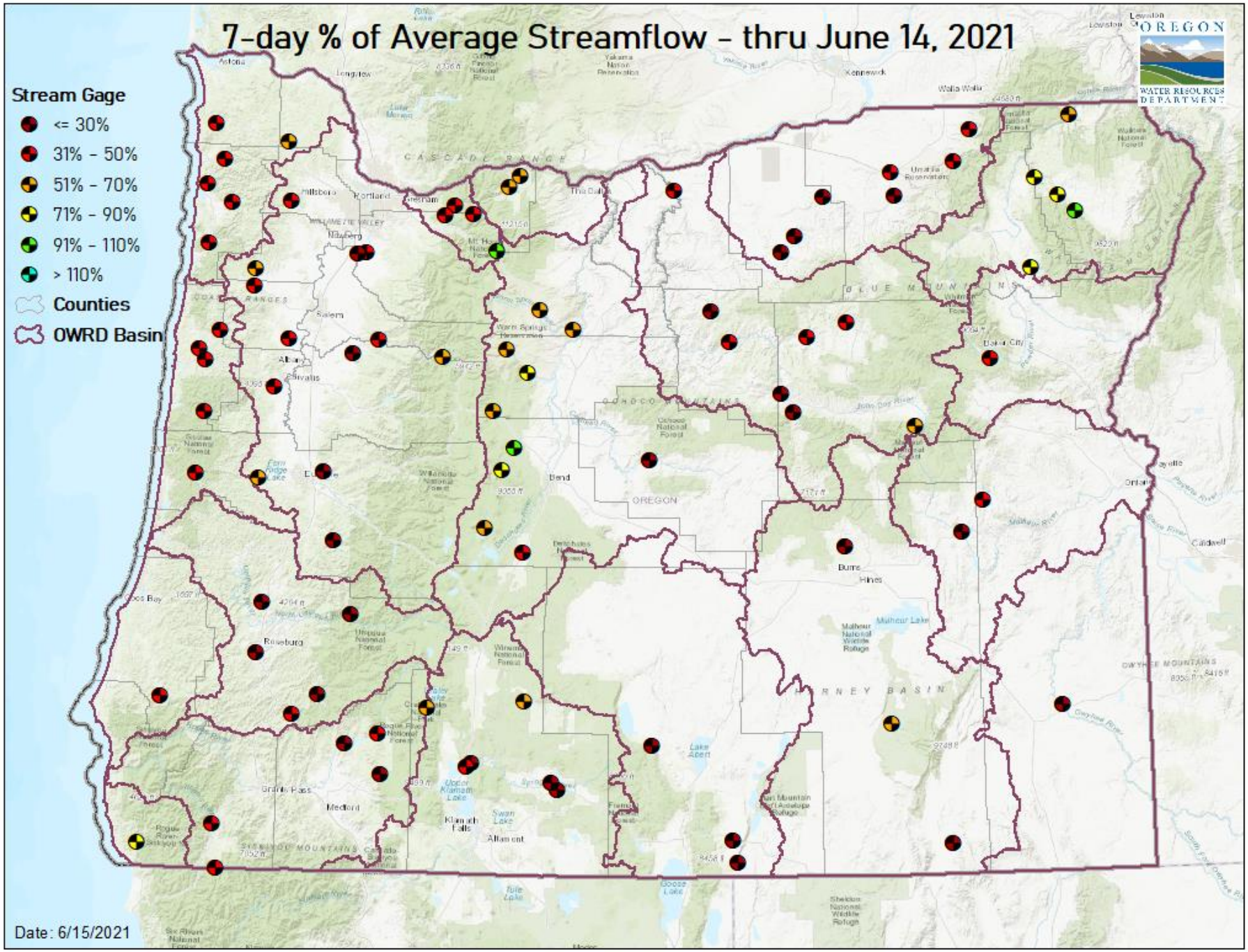
DROUGHT DECLARATION STATUS



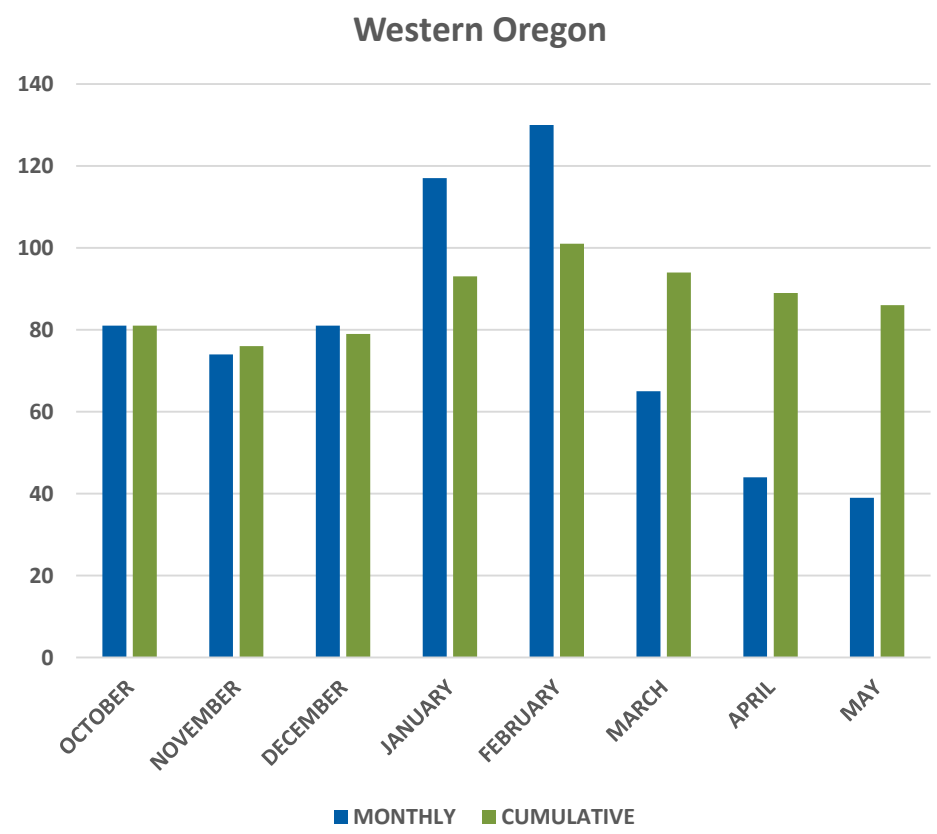

WY to Date % of Average – thru June 14, 2021
OREGON WATER RESOURCES DEPARTMENT
Stream Gage
<= 30%
31% – 50%
51% – 70%
71% – 90%
91% – 110%
> 110%
Counties
<= 30%
31% – 50%
51% – 70%
71% – 90%
91% – 110%
> 110%
OWRD Basin
CLAT 90%
COLU 98%
TILL 102%
WASH 87%
MULT 90%
YAMH 100%
CLAC 93%
HOOD 88%
WASC 64%
SHER 51%
MARI 87%
POLK 103%
LINC 98%
BENT 95%
LINN 77%
JEFF 94%
LANE 78%
DESC 74%
CROO 37%
MORR 50%
UMAT 91%
UNIO 84%
WALL 90%
WHEE 33%
GRAN 54%
BAKE 56%
COOS 83%
DOUG 67%
CURR 80%
JOSE 66%
JACK 58%
KLAM 41%
LAKE 24%
HARN 41%
MALH 40%
Date: 6/15/2021

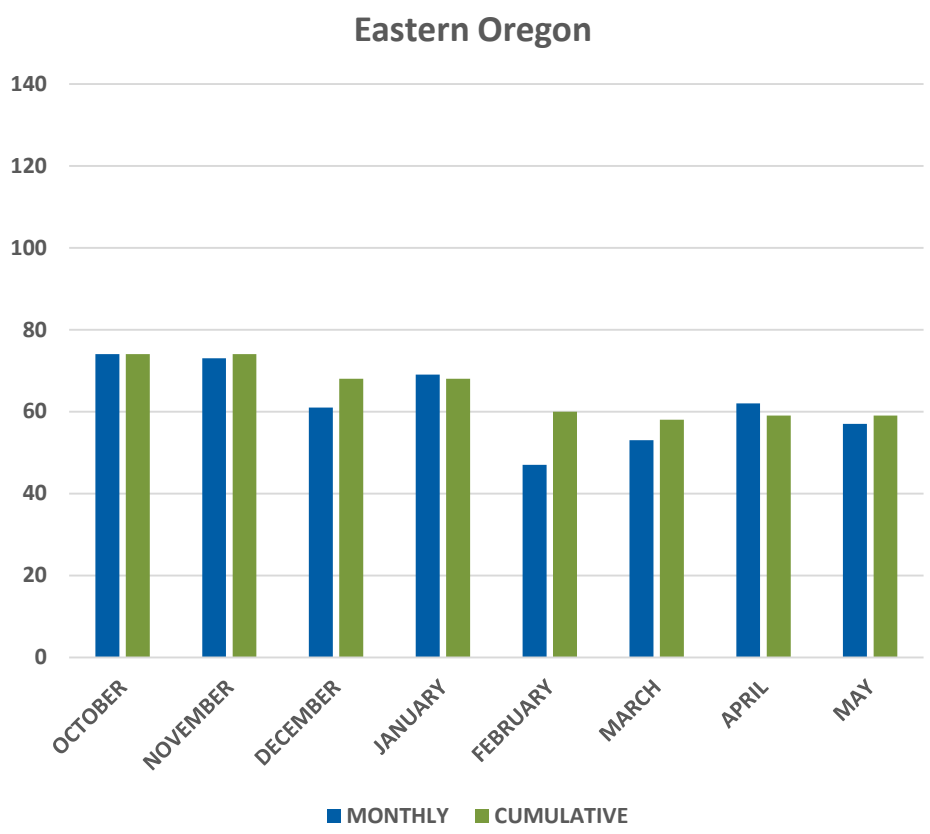

May % of Average Streamflow - WY 2021
Stream Gage
<= 30%
31% - 50%
51% - 70%
71% - 90%
91% - 110%
> 110%
Counties
<= 30%
31% - 50%
51% - 70%
71% - 90%
91% - 110%
> 110%
OWRD Basin
CLAT 21%
COLU 45%
TILL 36%
WASH 29%
MULT 62%
HOOD 77%
SHER 51%
MORR 36%
UMAT 73%
WALL 90%
UNIO 98%
YAMH 44%
CLAC 70%
WASC 66%
MARI 54%
POLK 32%
JEFF 95%
WHEE 37%
BAKE 57%
GRAN 55%
LINC 34%
BENT 40%
LINN 30%
CROO 11%
DESC 80%
LANE 35%
COOS 20%
DOUG 26%
LAKE 25%
HARN 35%
MALH 33%
CURR 31%
JOSE 33%
JACK 37%
KLAM 37%
Date: 6/7/2021

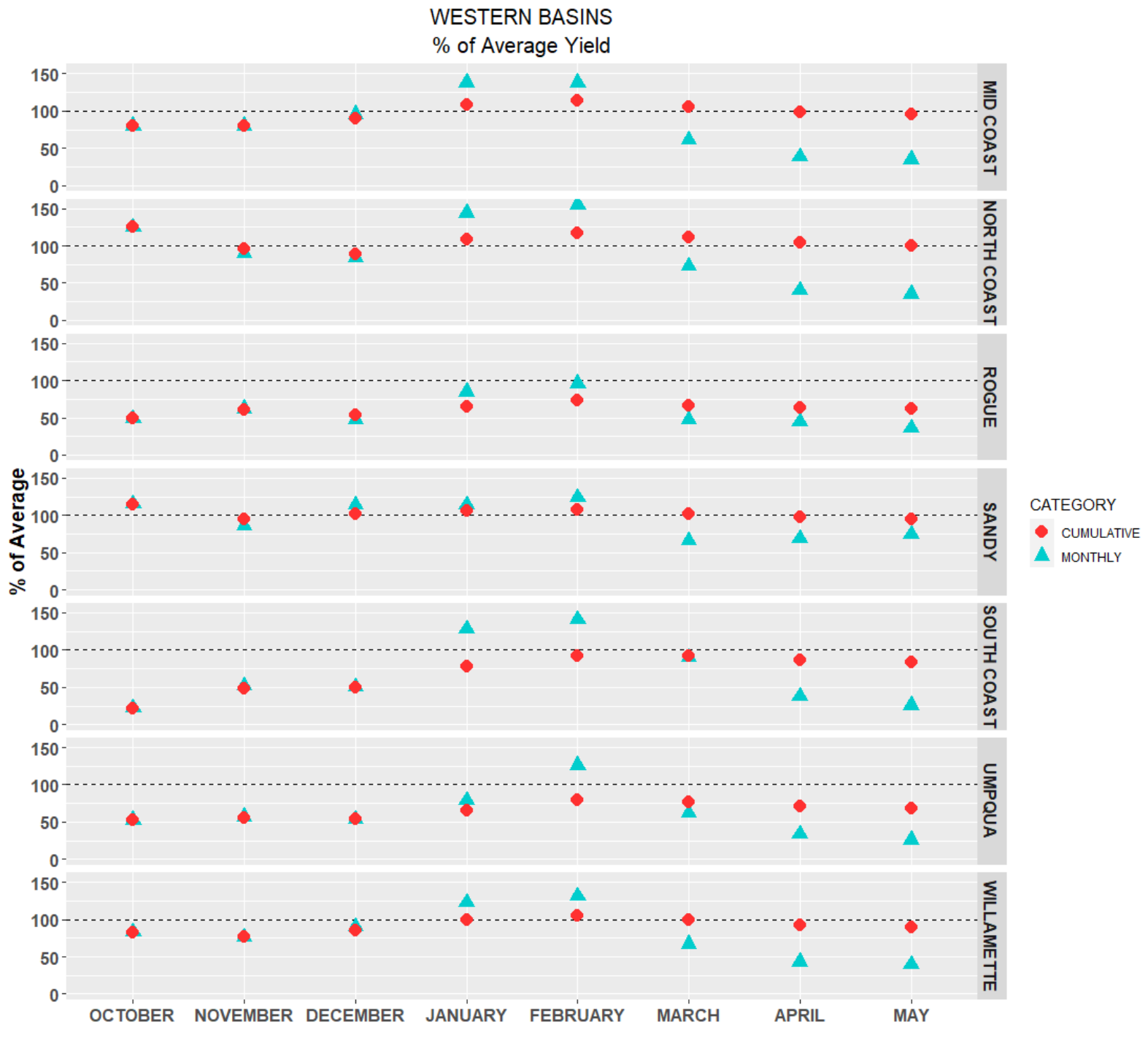

28-day % of Average Streamflow - thru June 14, 2021
OREGON
WATER RESOURCES DEPARTMENT
Stream Gage
<= 30%
31% - 50%
51% - 70%
71% - 90%
91% - 110%
> 110%
Counties
OWRD Basin
Date: 6/15/2021

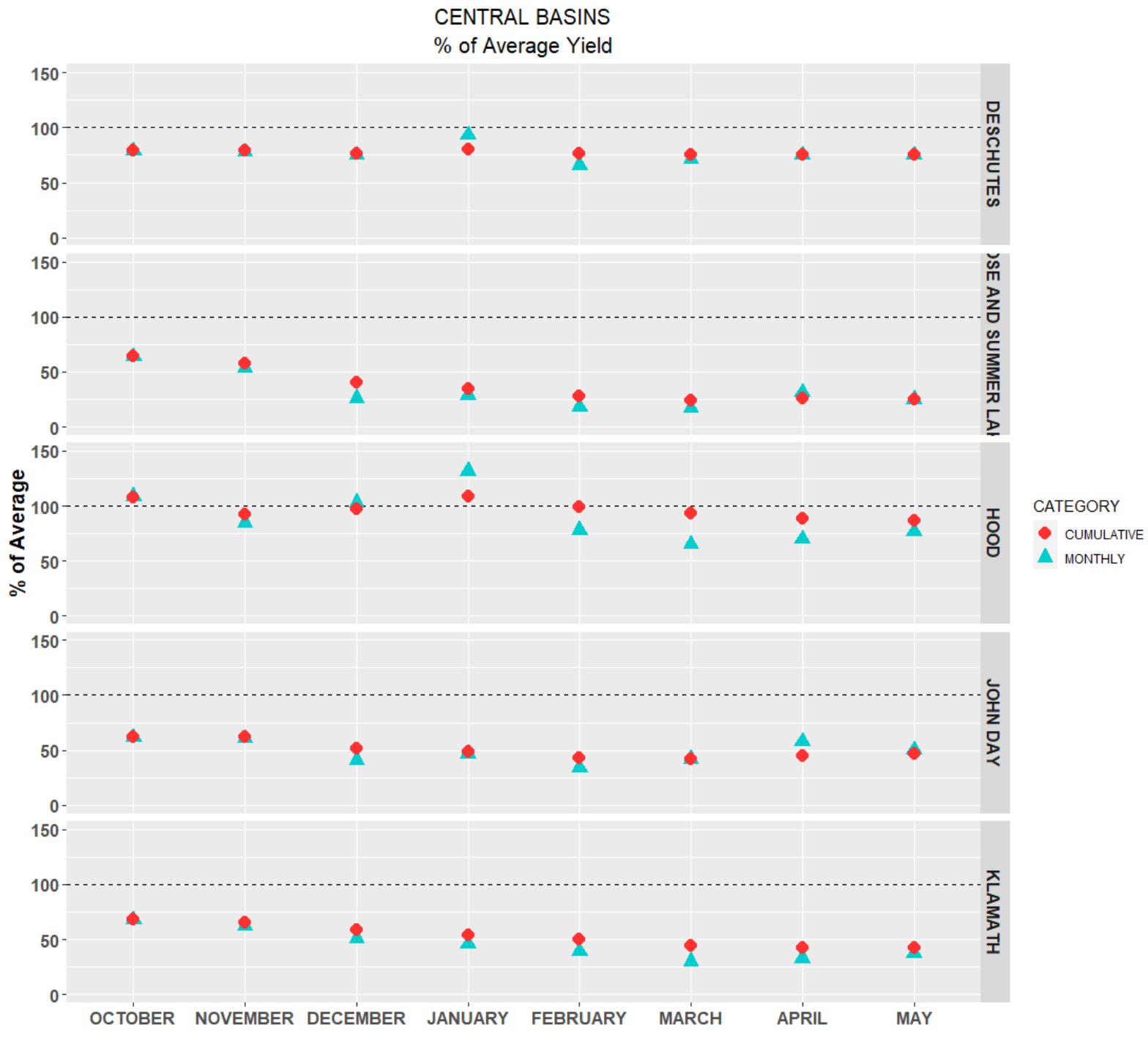

7-day % of Average Streamflow - thru June 14, 2021
OREGON
WATER RESOURCES DEPARTMENT
Stream Gage
<= 30%
31% - 50%
51% - 70%
71% - 90%
91% - 110%
> 110%
Counties
OWRD Basin
Date: 6/15/2021

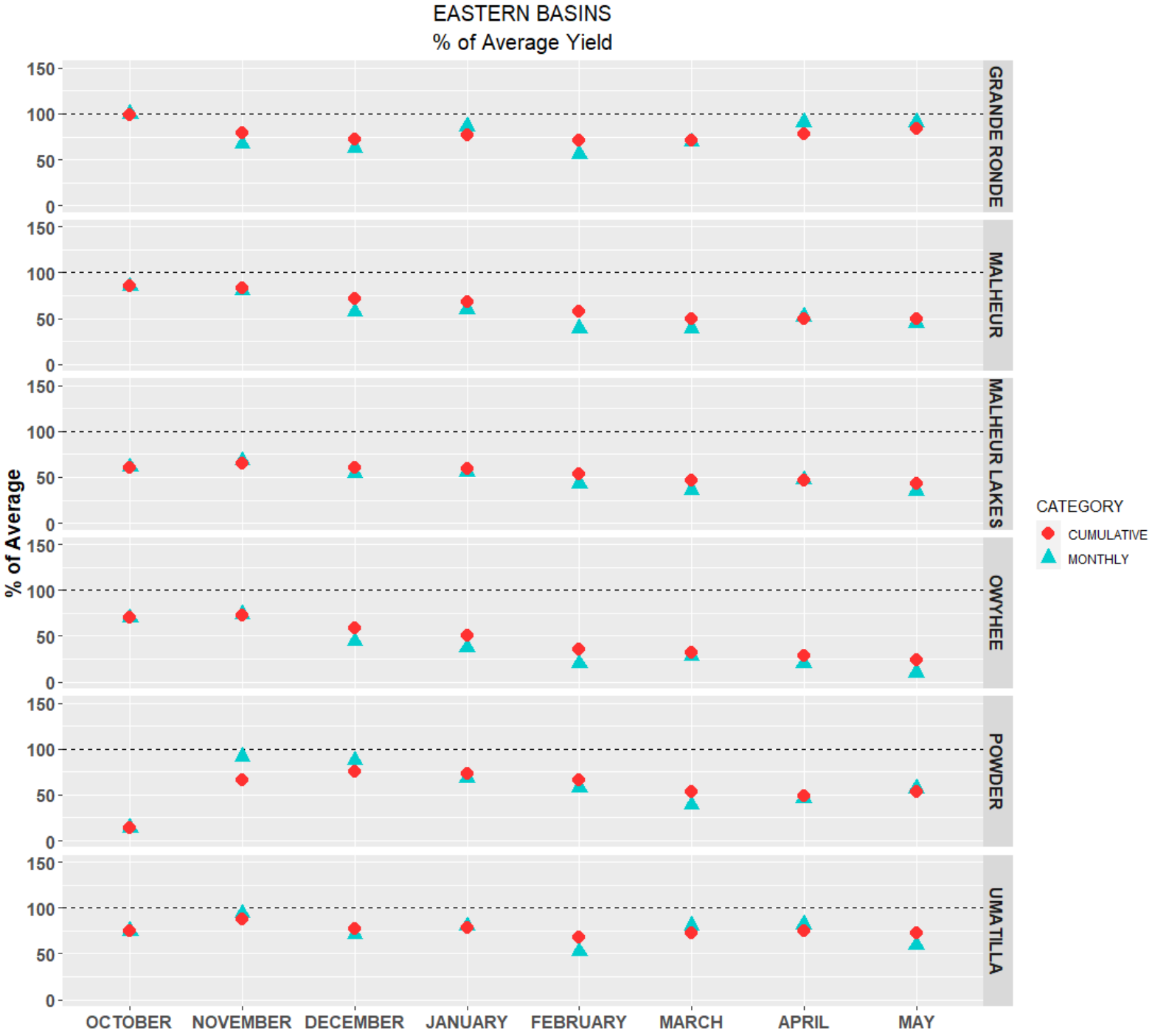
% of Average Streamflow thru May
Base period: 1981 – 2010

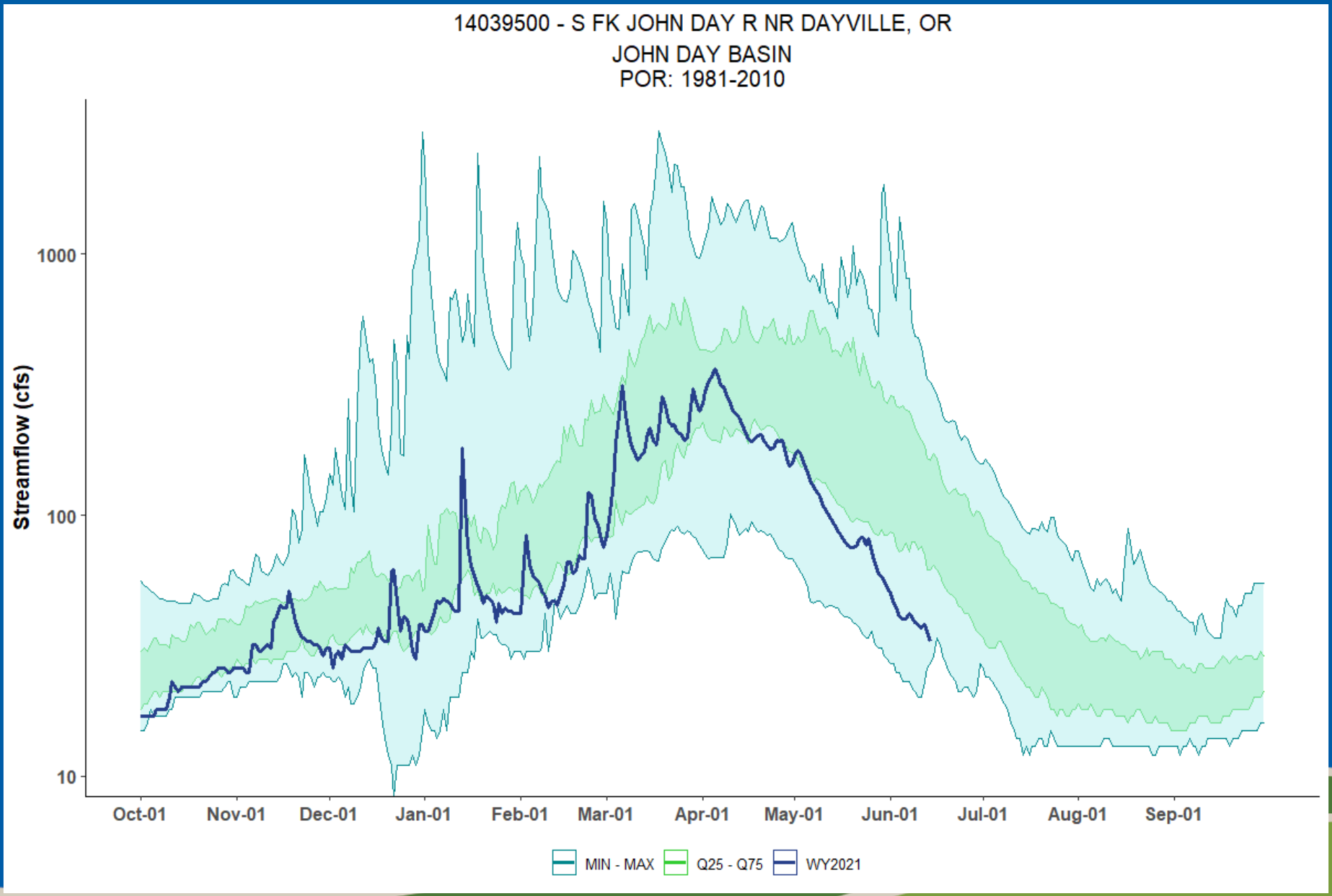


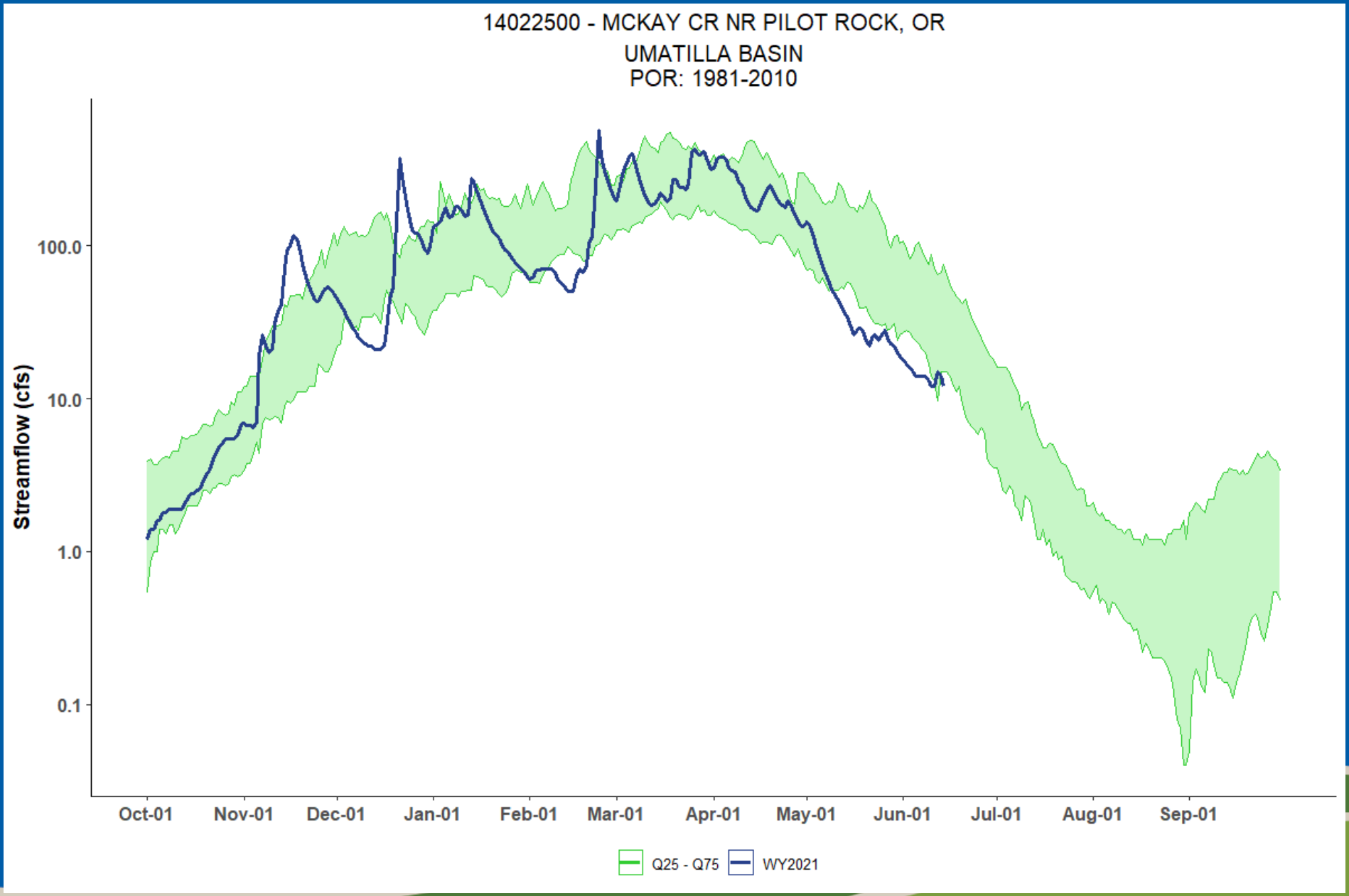


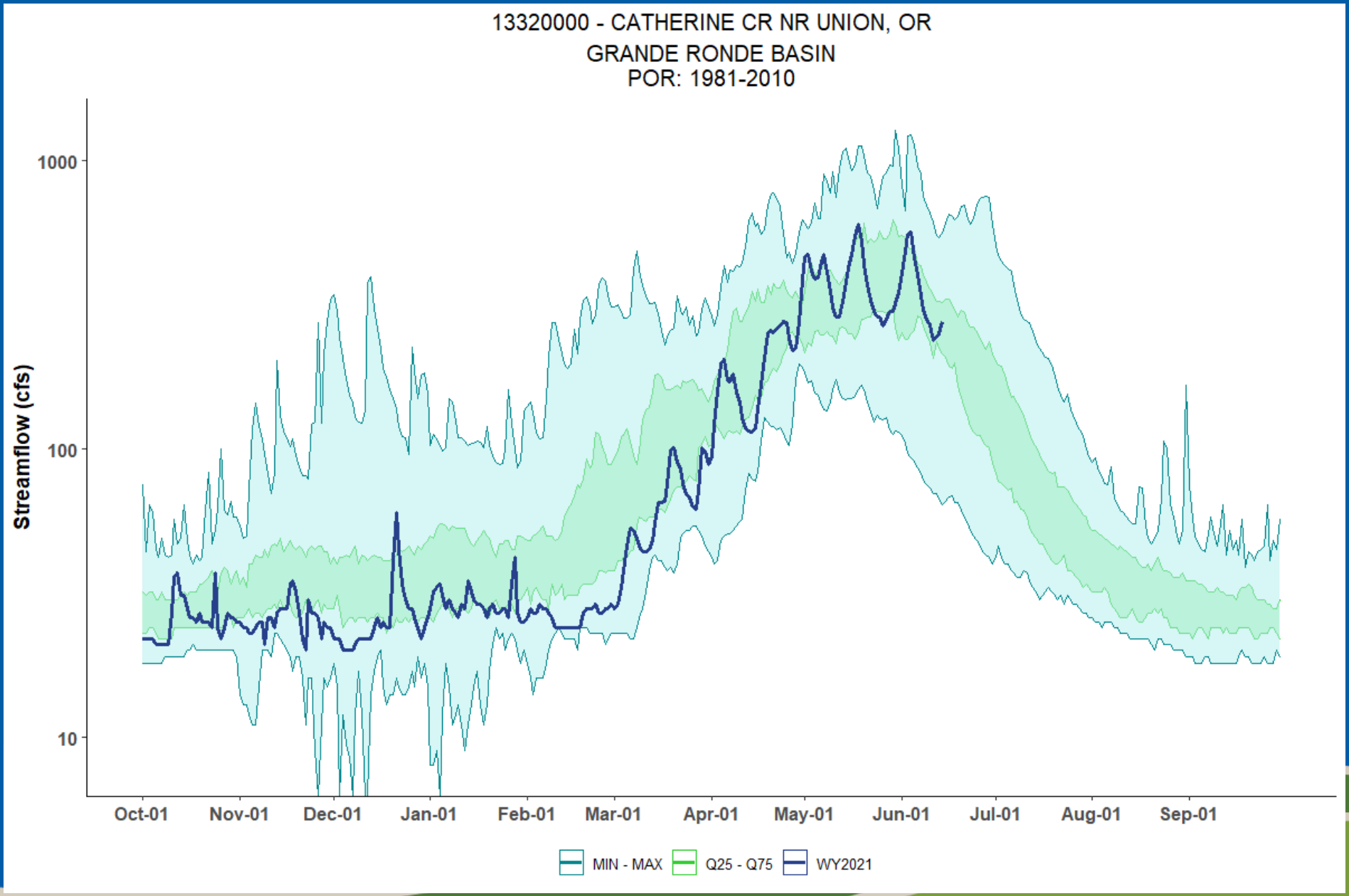

WESTERN BASINS
% of Average Yield
% of Average
150
100
50
0
MID COAST
NORTH COAST
ROGUE
SANDY
SOUTH COAST
UMPQUA
WILLAMETTE
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
CATEGORY
CUMULATIVE
MONTHLY

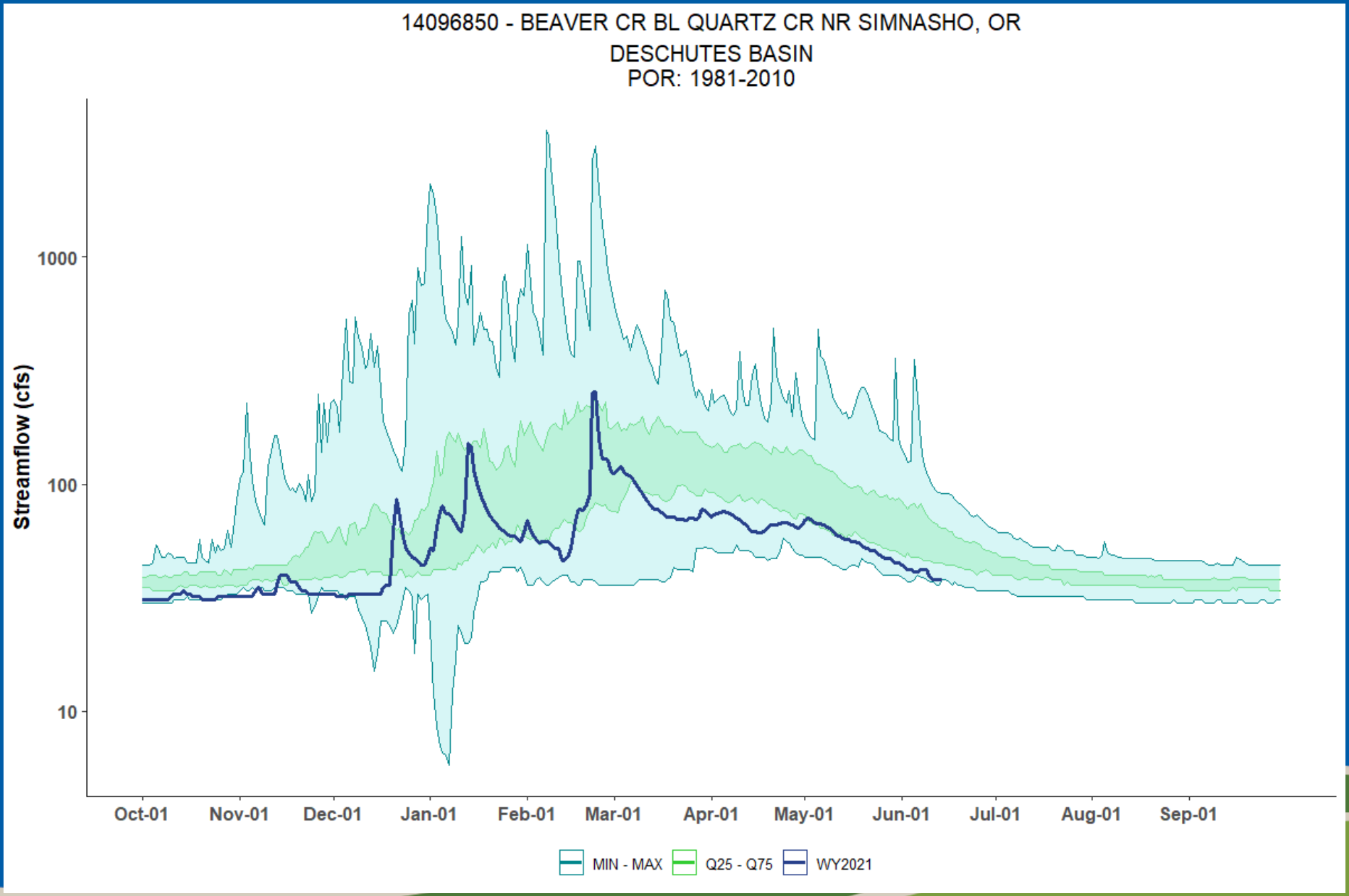

CENTRAL BASINS
% of Average Yield
% of Average
150
100
50
0
DESCHUTES
SE AND SUMMER LA
HOOD
JOHN DAY
KLAMATH
OCTOBER
NOVEMBER
DECEMBER
JANUARY
FEBRUARY
MARCH
APRIL
MAY
CATEGORY
CUMULATIVE
MONTHLY


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
APRIL
MAY
CATEGORY
CUMULATIVE
MONTHLY


14039500 - S FK JOHN DAY R NR DAYVILLE, OR
JOHN DAY 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


14022500 - MCKAY CR NR PILOT ROCK, OR
UMATILLA BASIN
POR: 1981-2010
Streamflow (cfs)
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
Q25 - Q75
WY2021


13320000 - CATHERINE CR NR UNION, OR
GRANDE RONDE 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


14096850 - BEAVER CR BL QUARTZ CR NR SIMNASHO, OR
DESCHUTES 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

QUESTIONS?

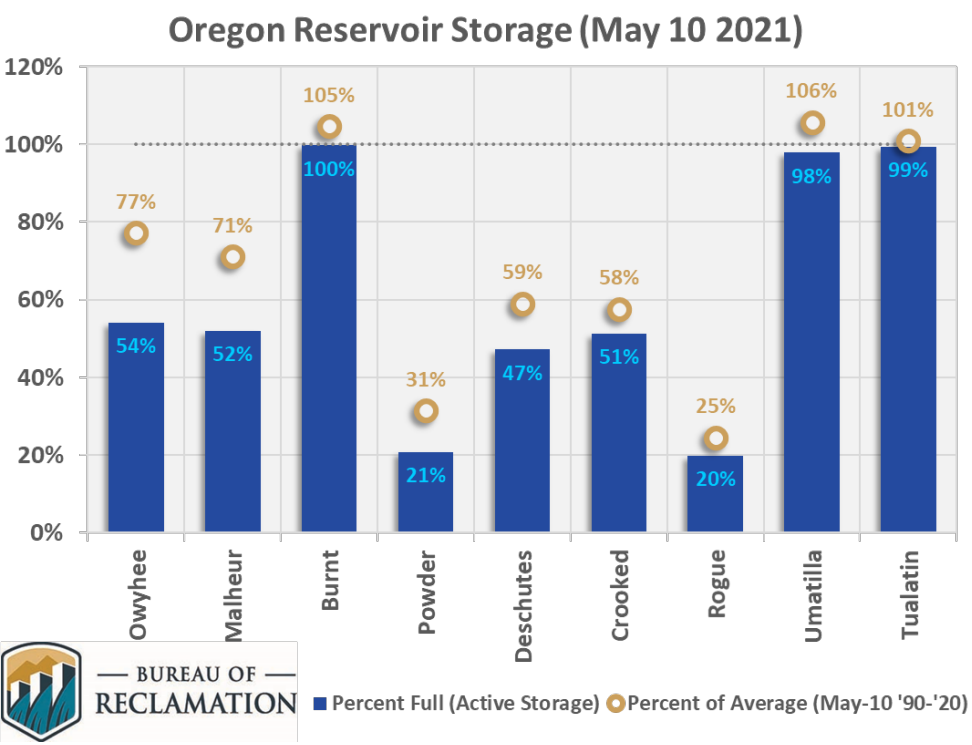
BUREAU OF RECLAMATION

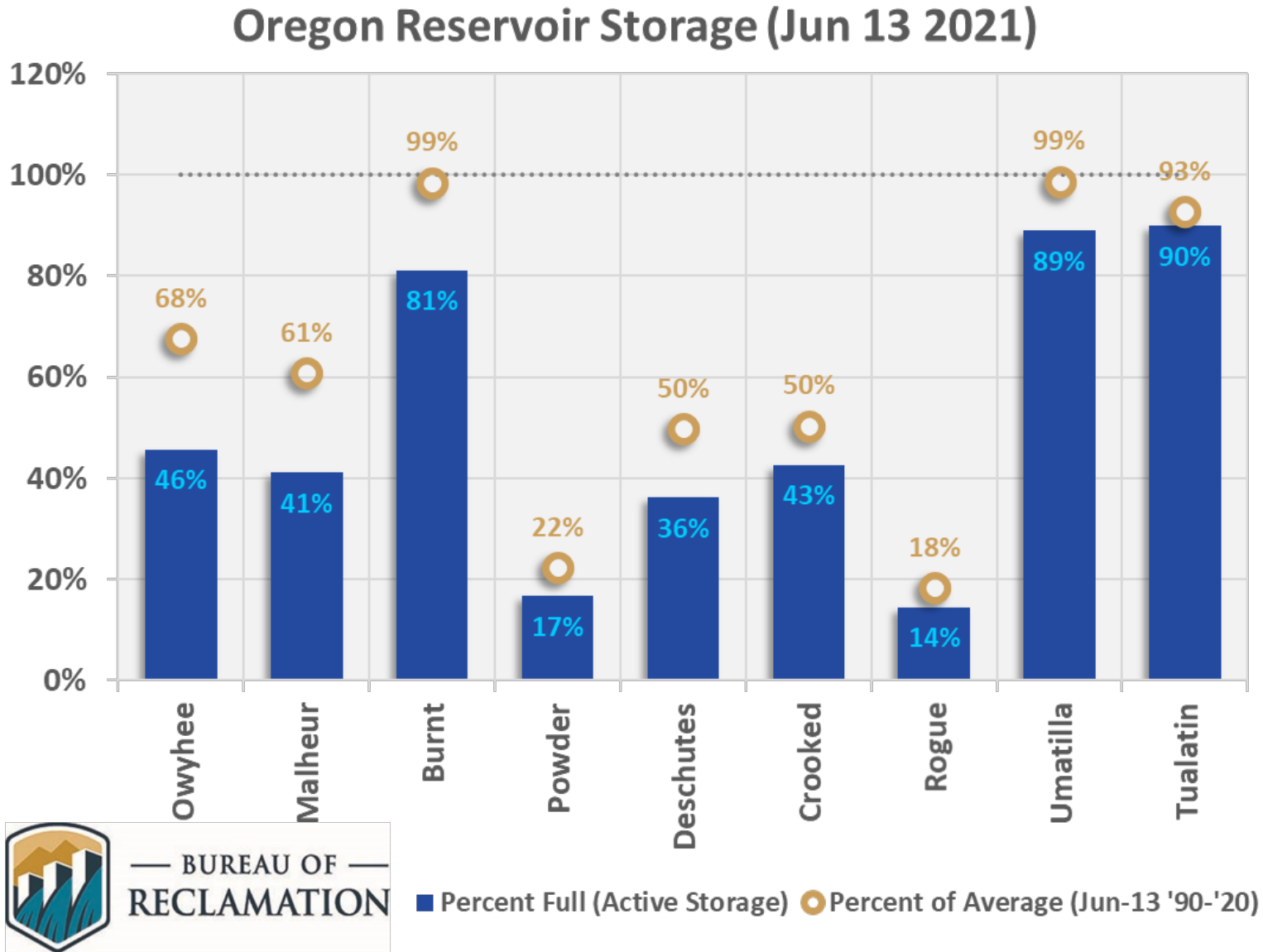
Reclamation Storage Update

Oregon Water Supply Availability Committee Meeting

May 16, 2021

Reservoir Storage Conditions



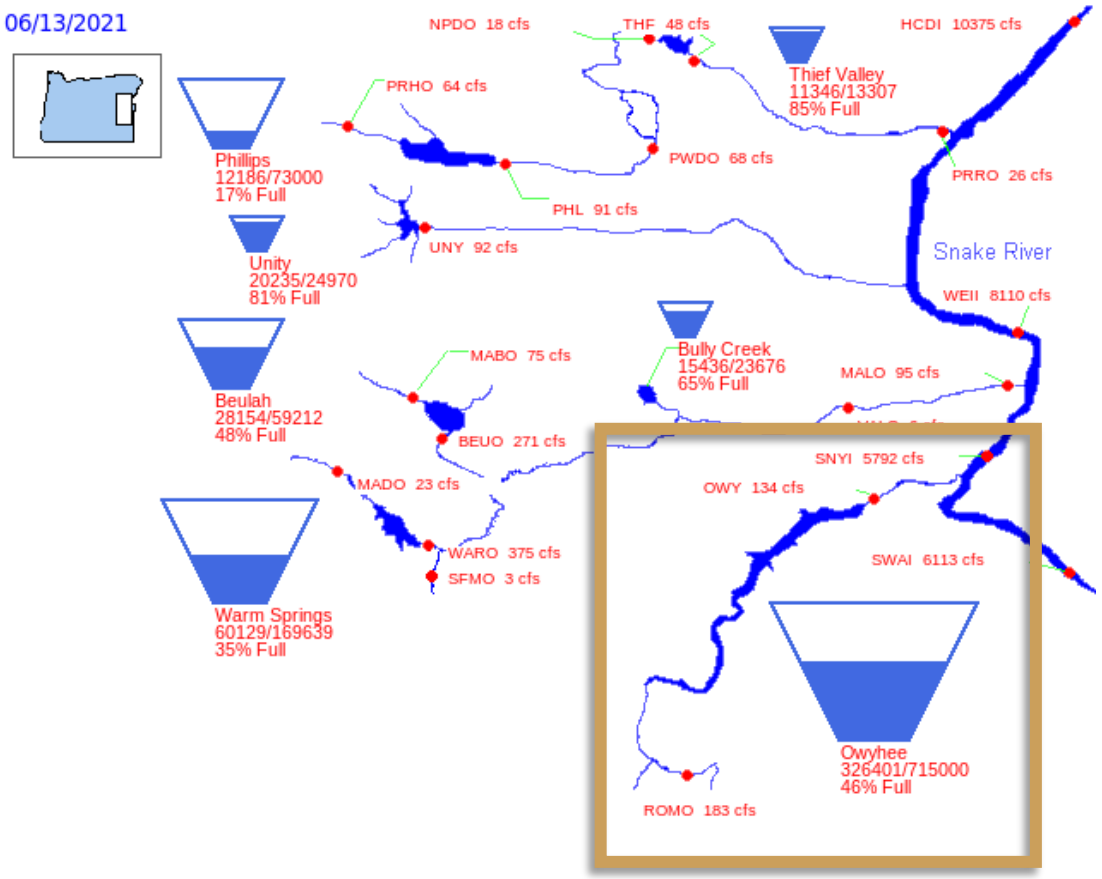


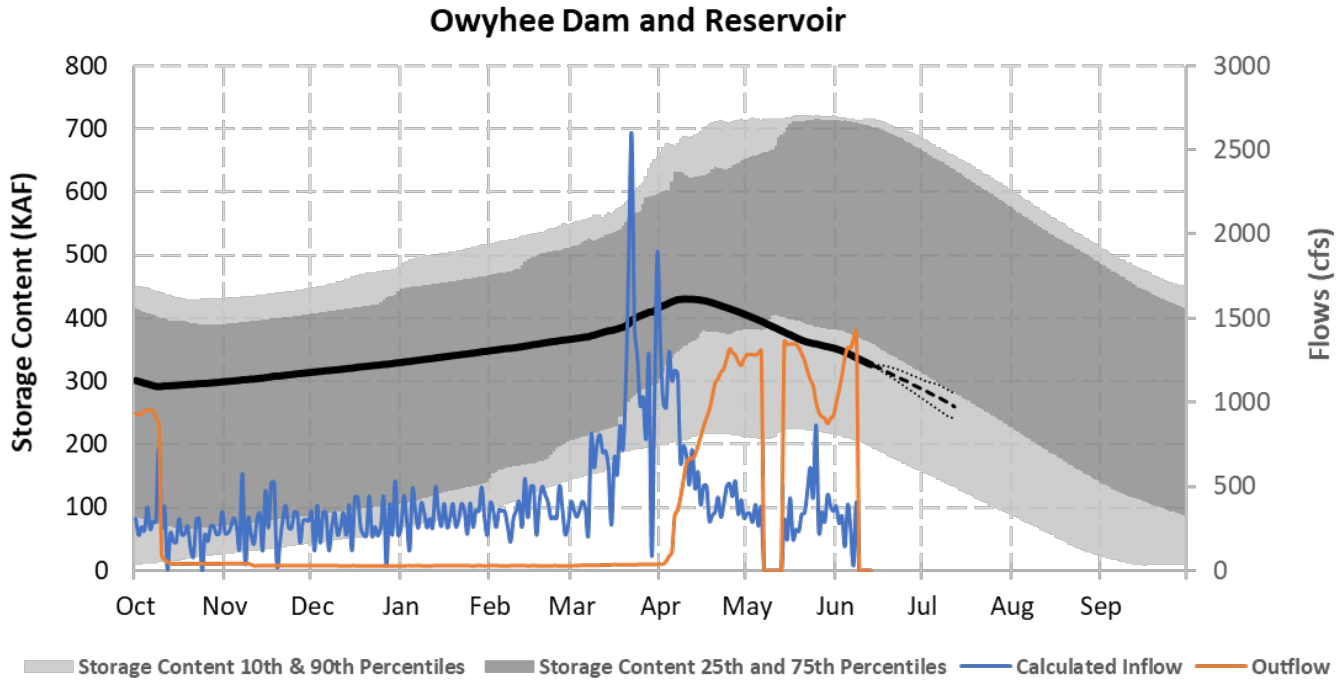
Basin Operations Summary

- Operations Activities:
  - All Reclamation river basins delivering irrigation water

- Water Supply Challenges
  - Extremely dry conditions persist -- high irrigation demands persist
  - Rogue: Deliveries started late May, likely out of water in late July or early August
  - Crooked: Enacting a conservation measure on the newly established Habitat Conservation Plan to save water for minimum winter flow targets
  - Highly likely carry-over problems to start the next WY for Owyhee, Malheur, Powder, Deschutes, Crooked, & Rogue

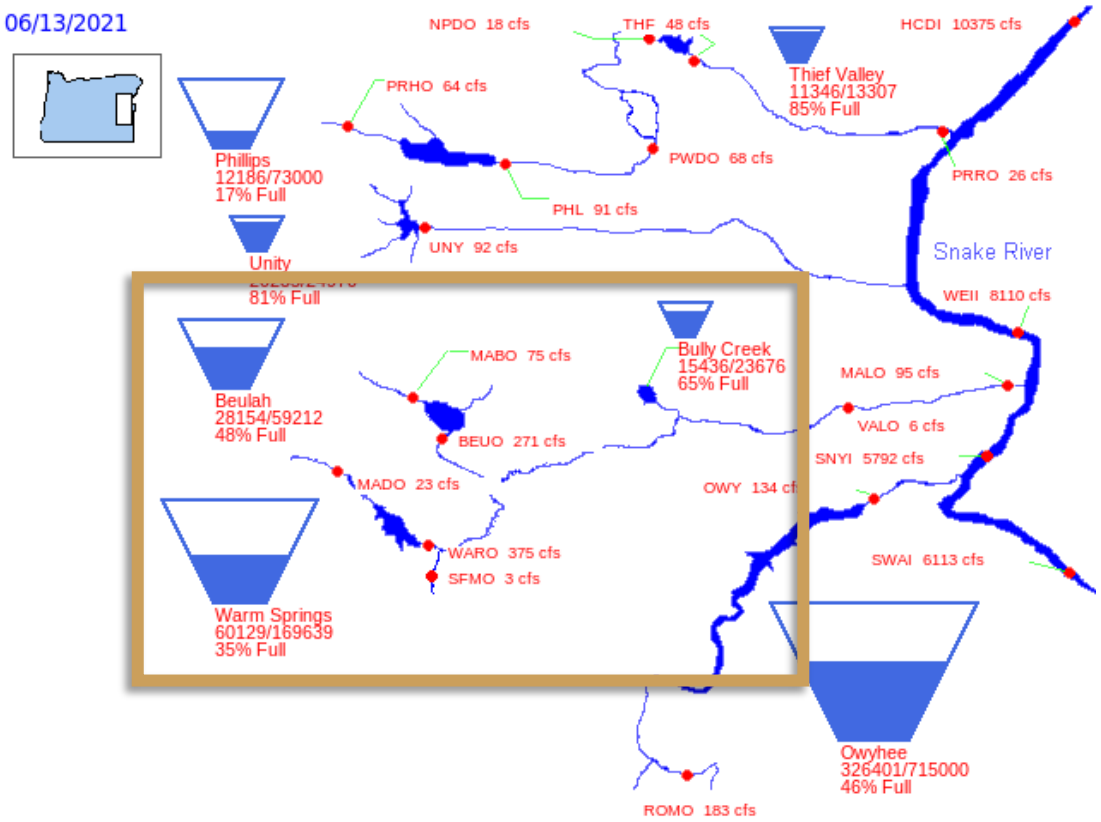
Owyhee River Basin

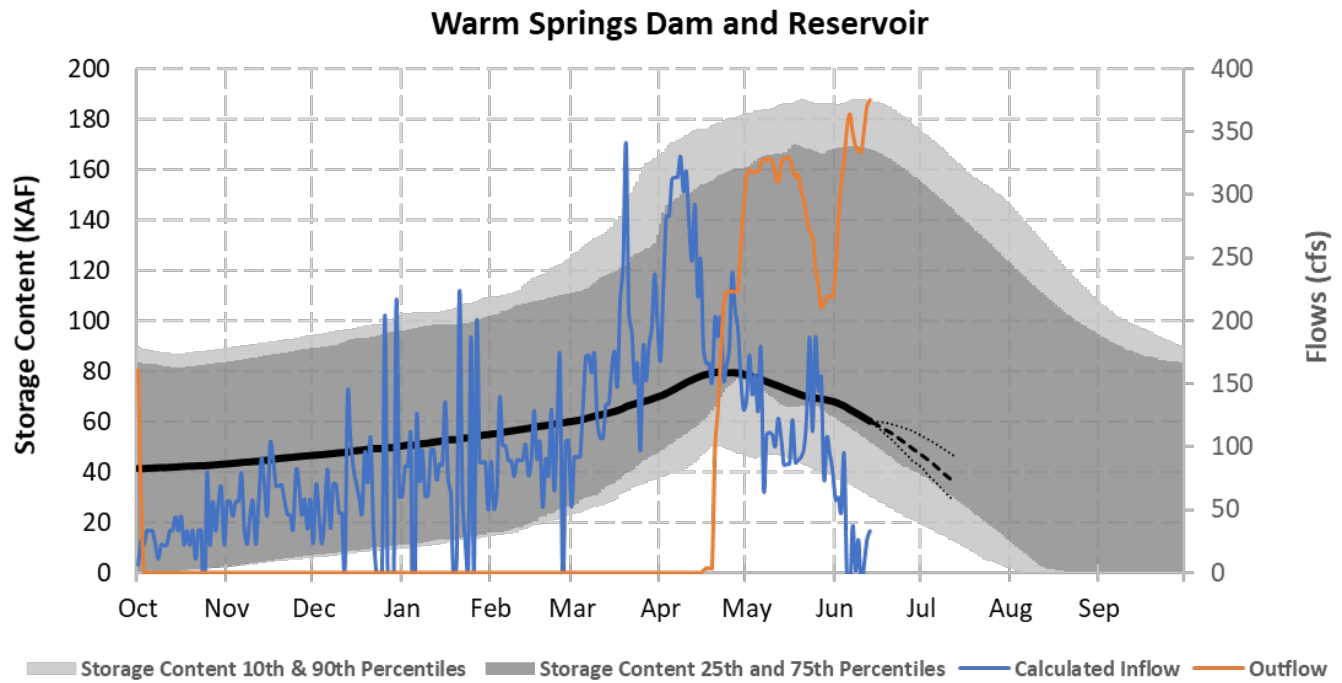


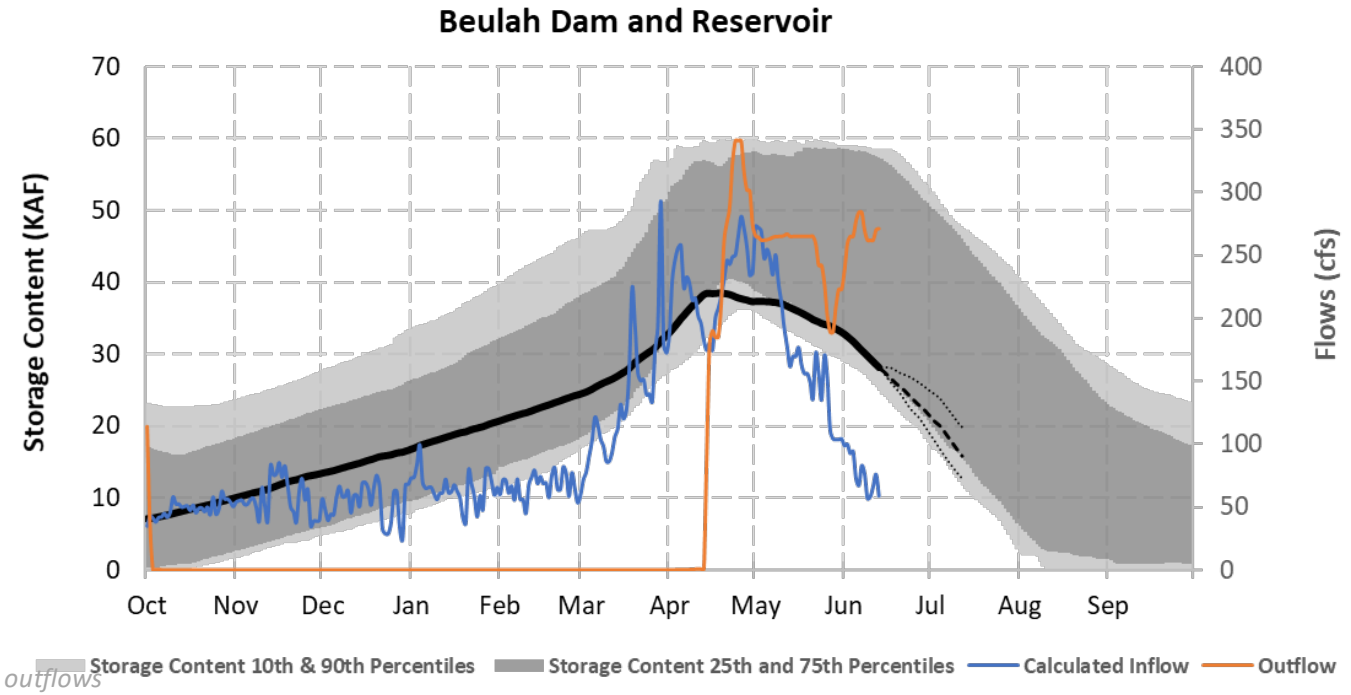


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Malheur River Basin

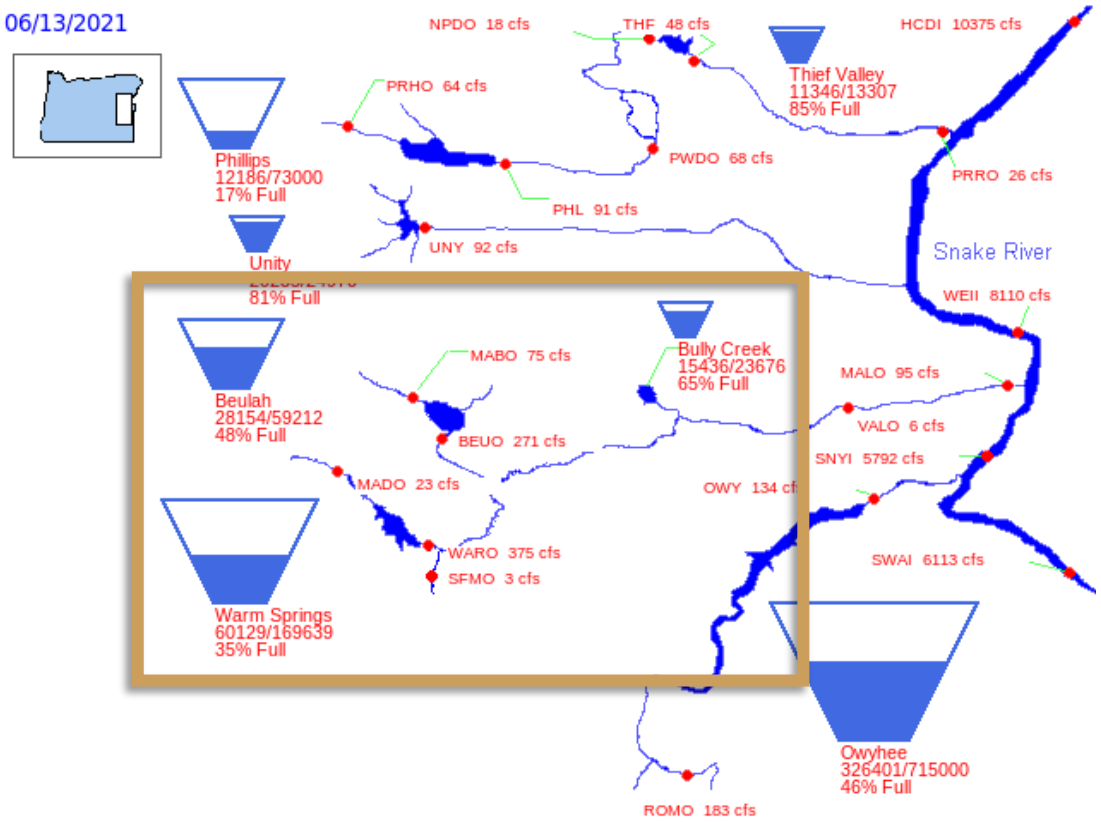


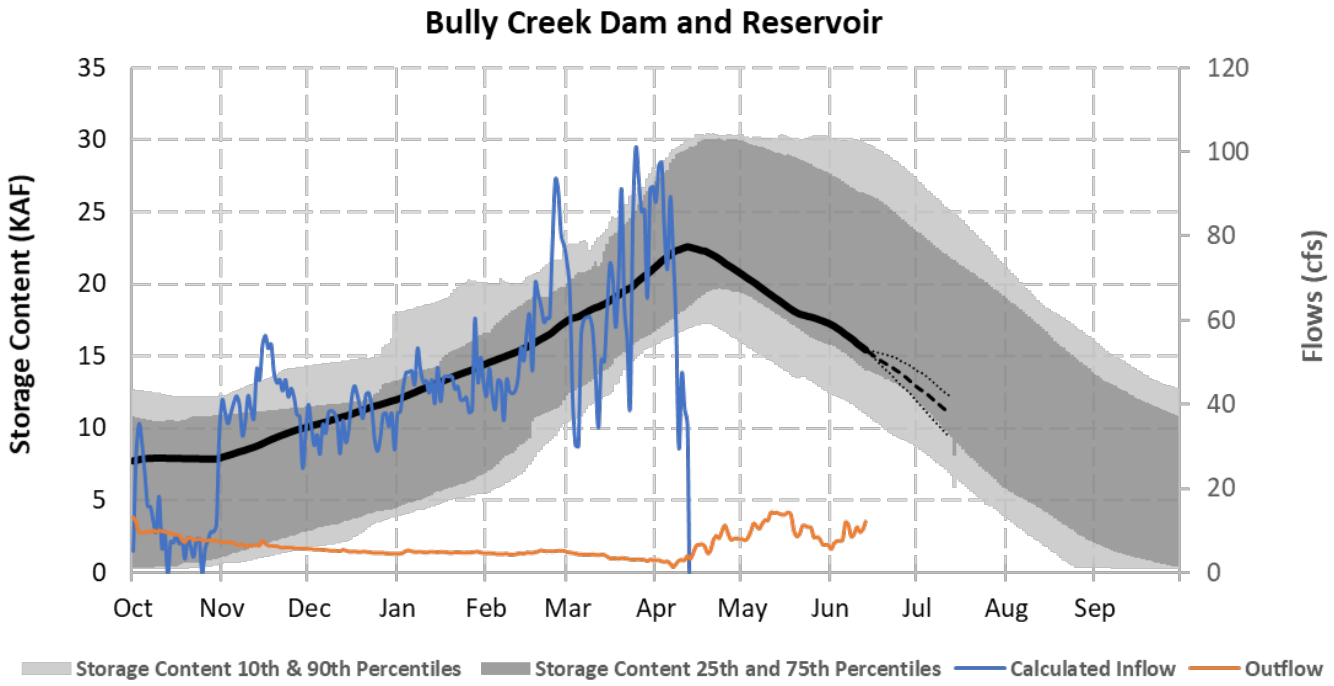




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

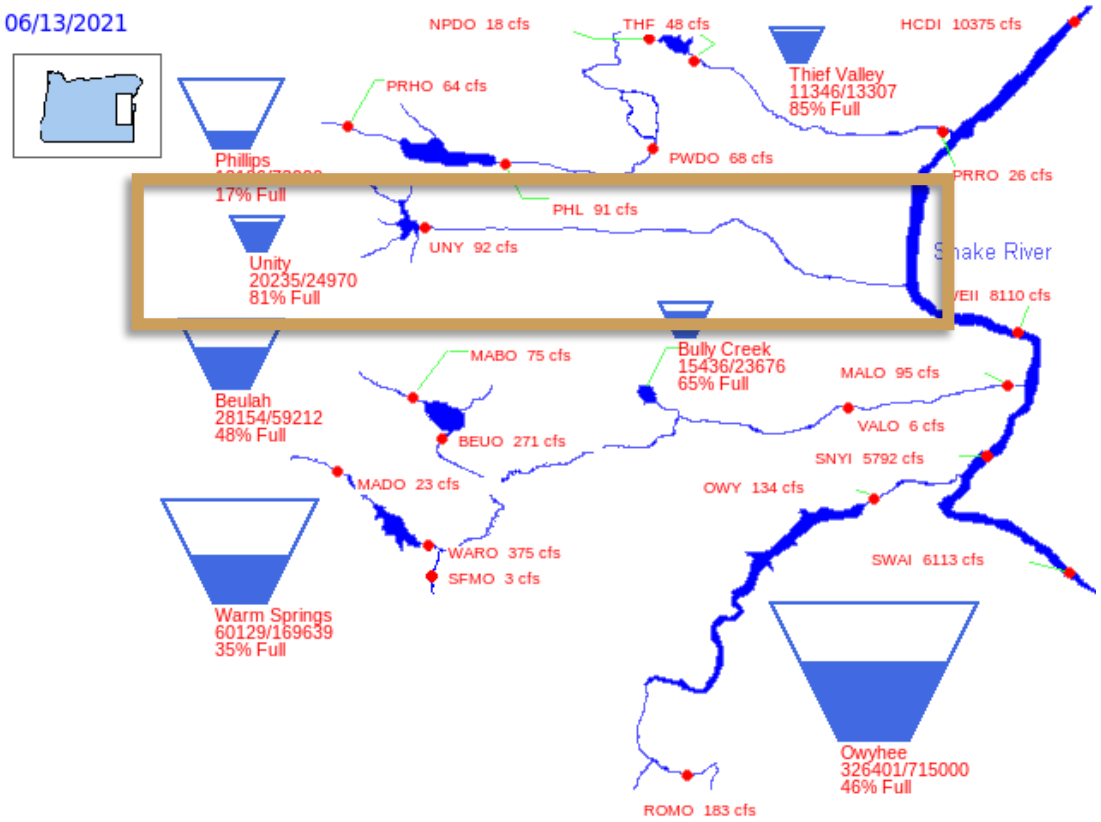
Malheur River Basin

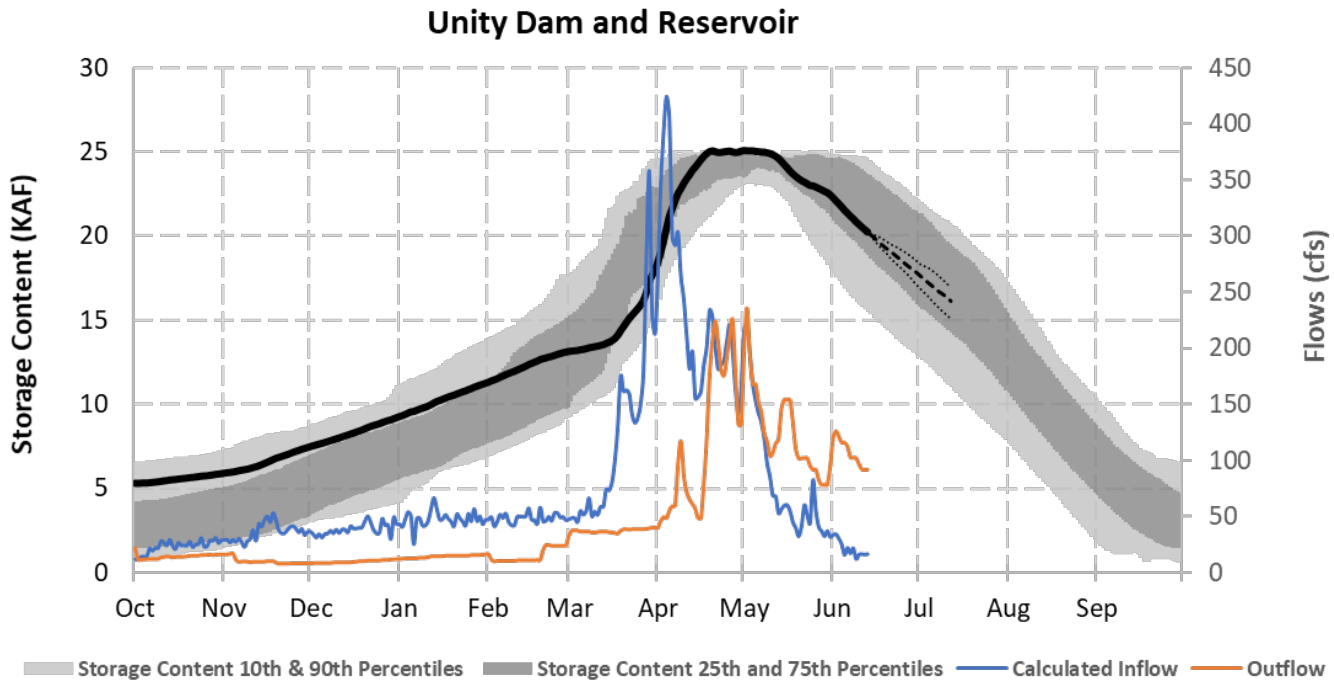




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

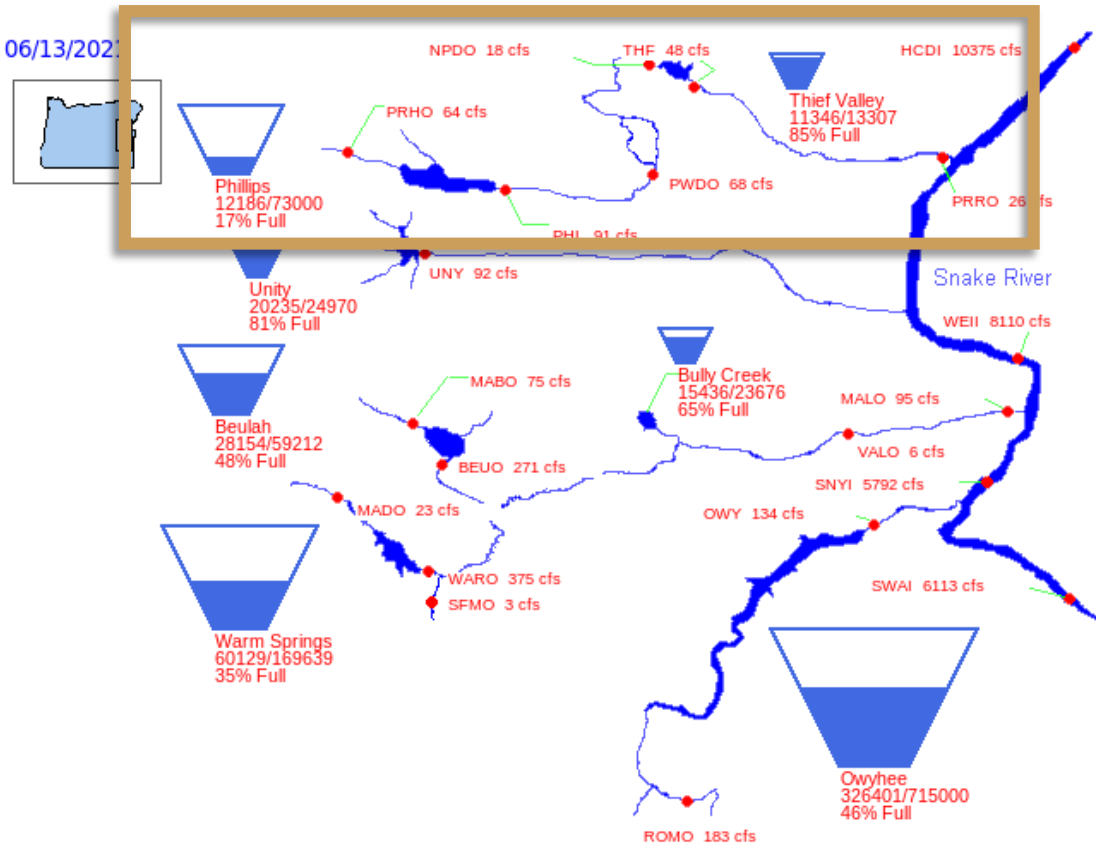
Burnt River Basin

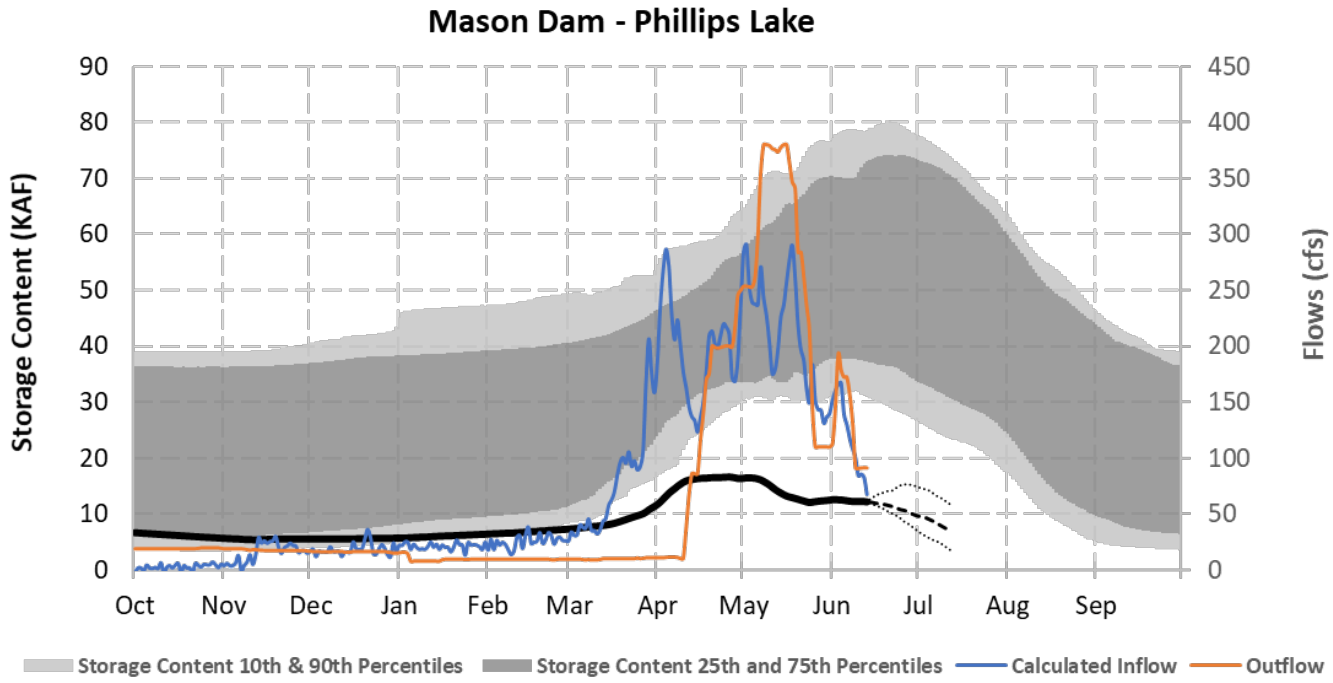




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

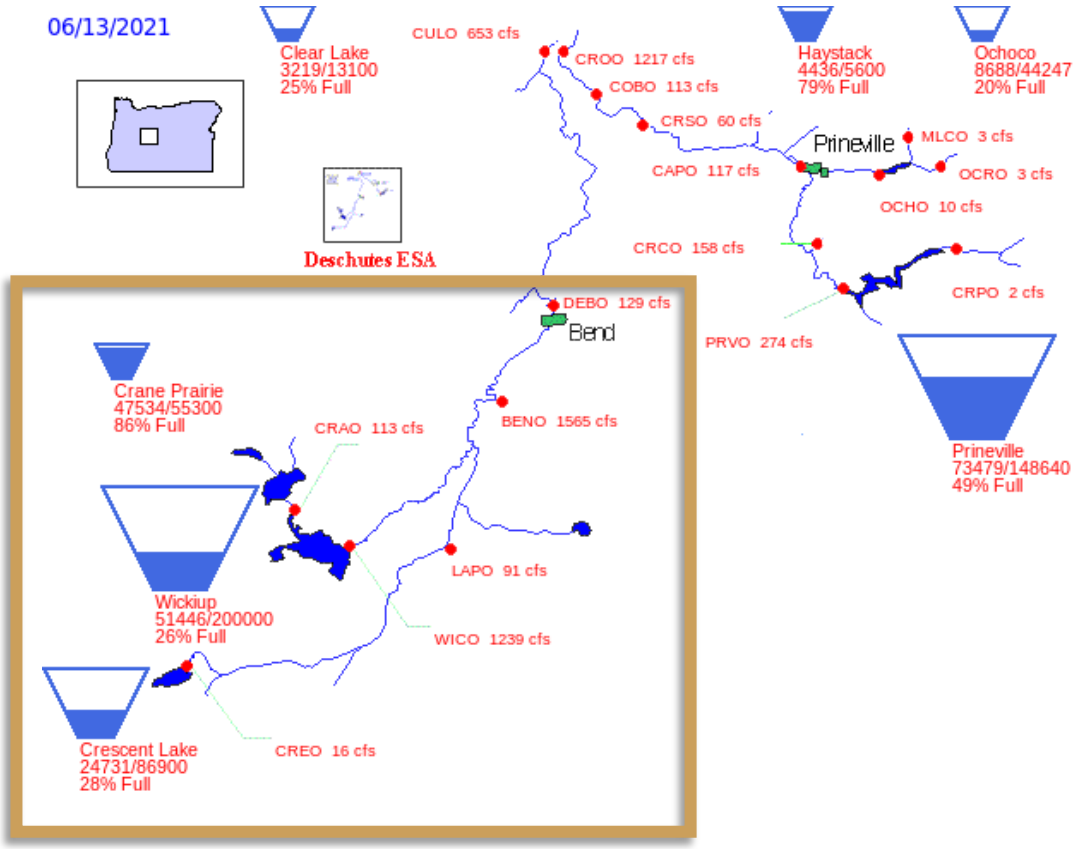
Powder River Basin

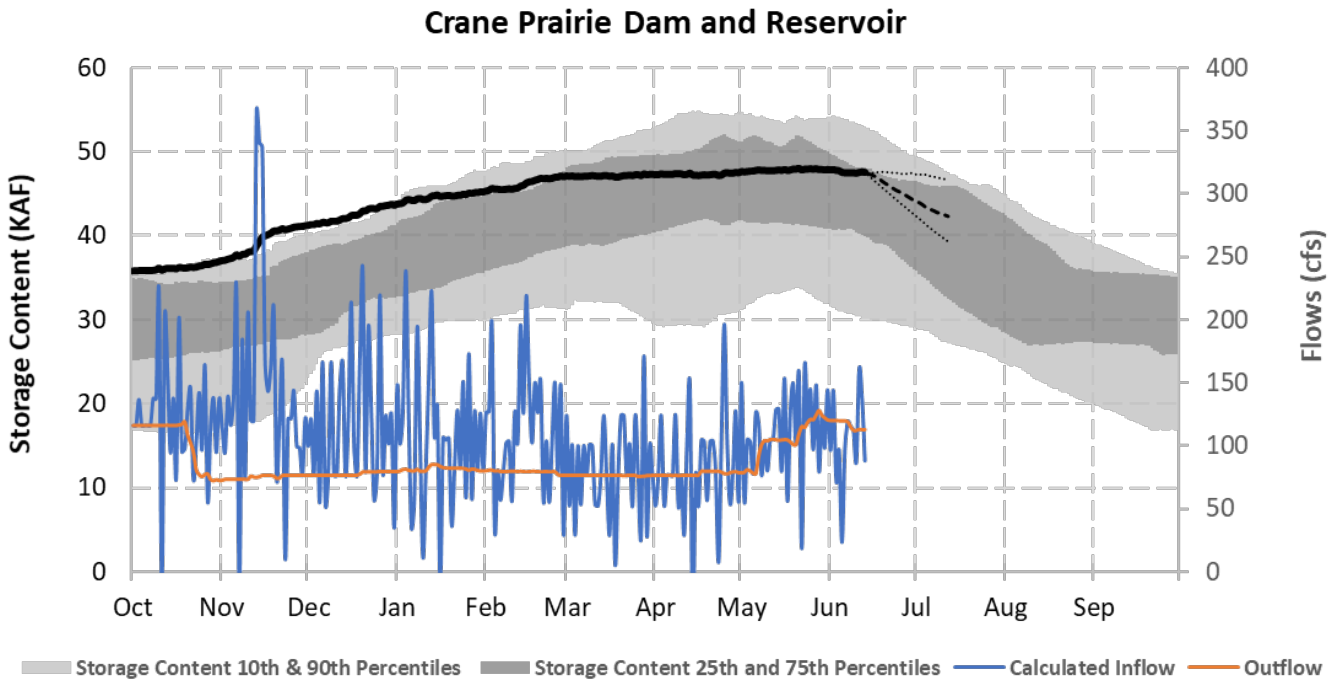


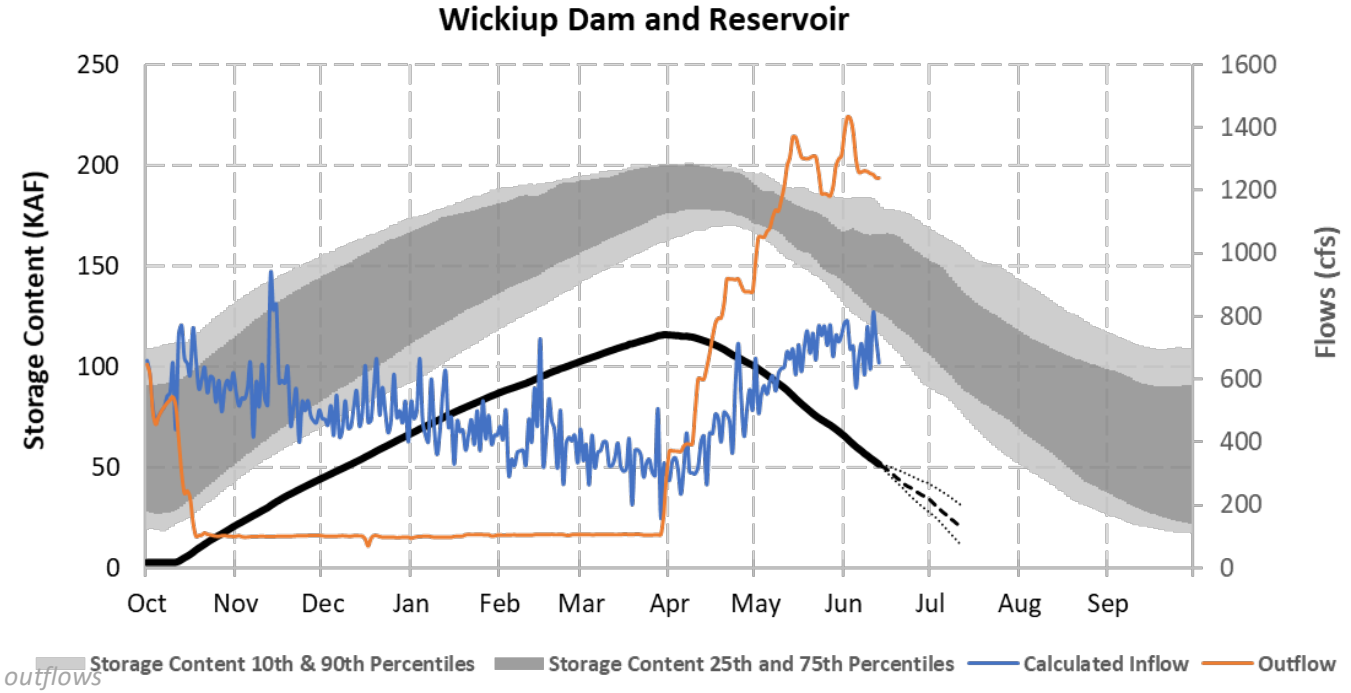


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Deschutes River Basin

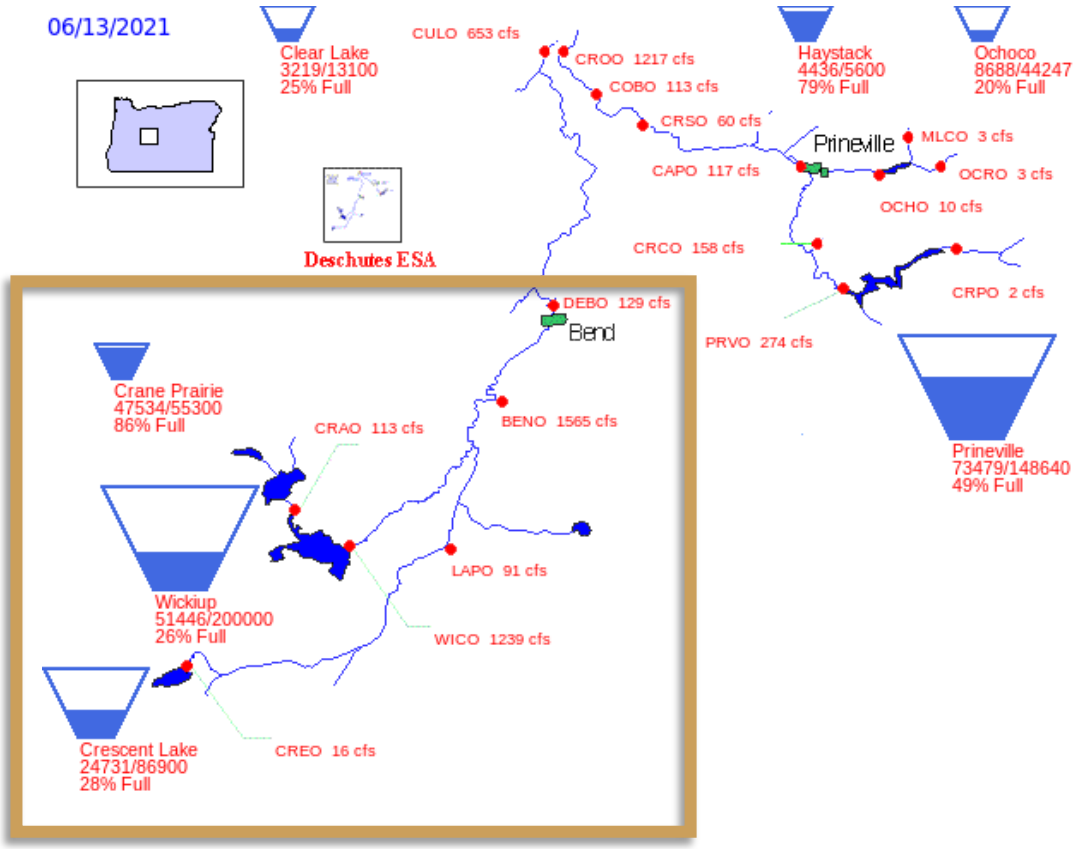


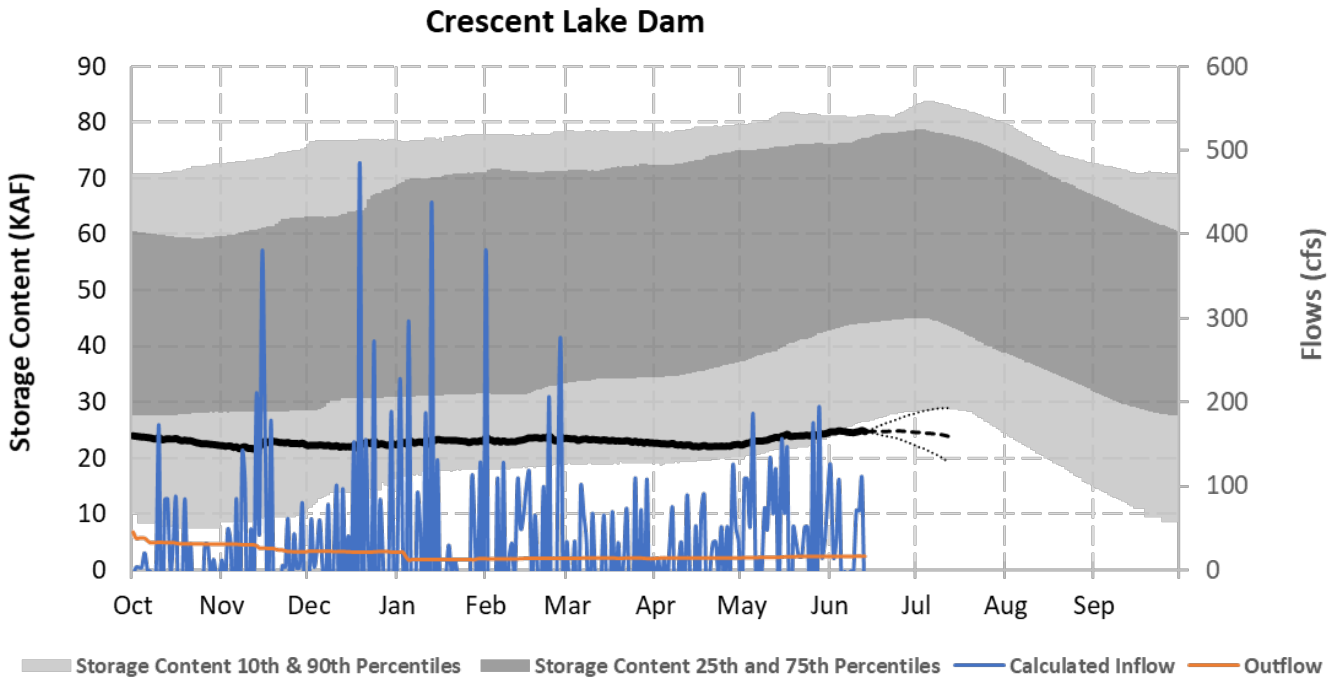




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

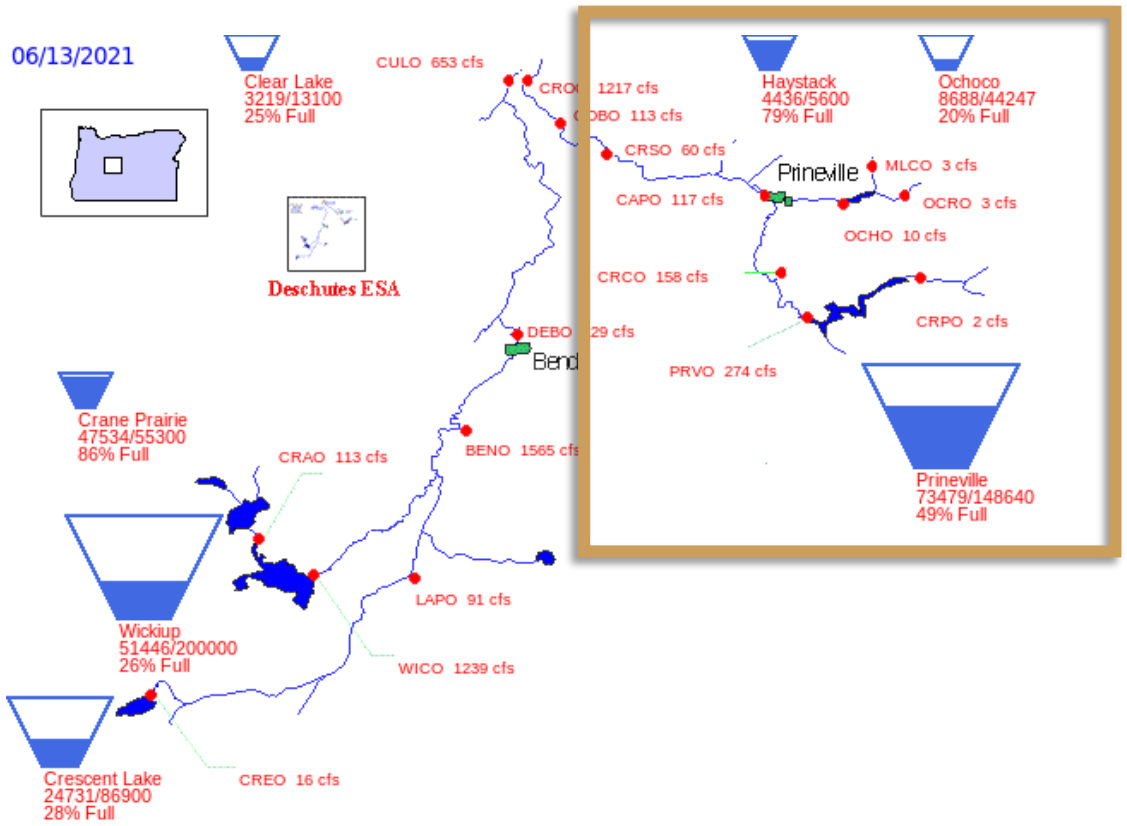
Deschutes River Basin

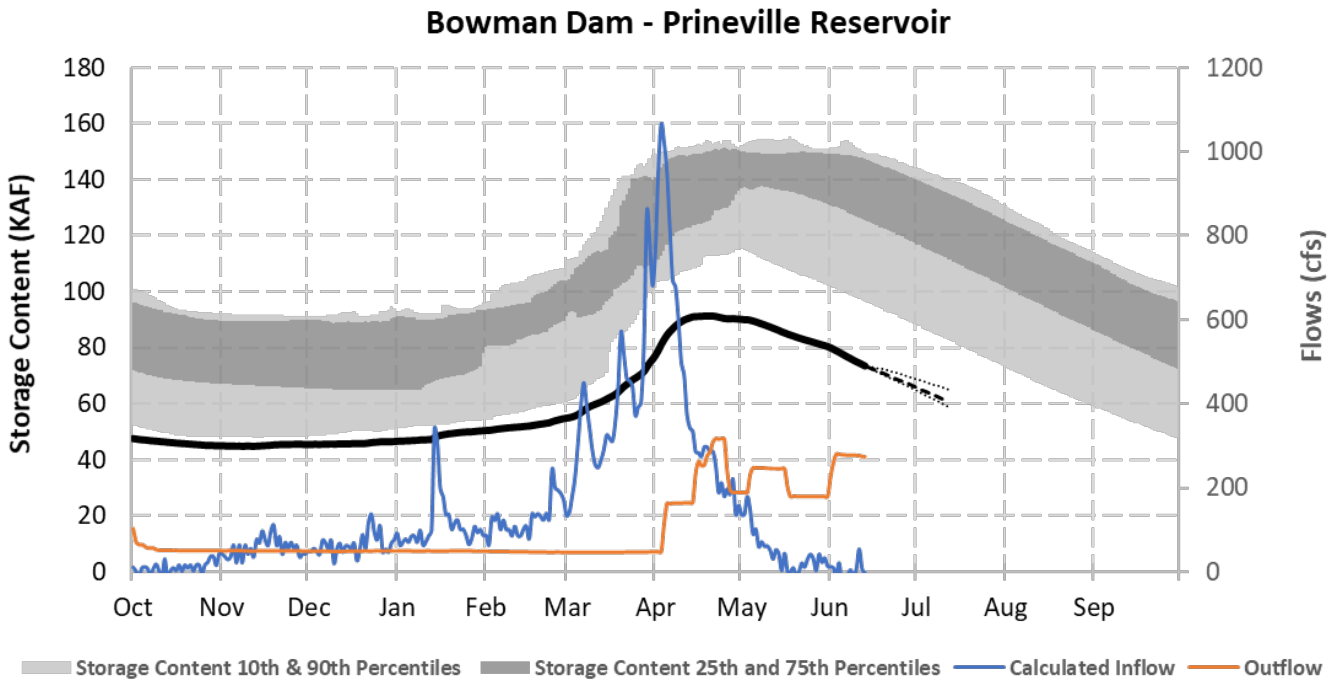


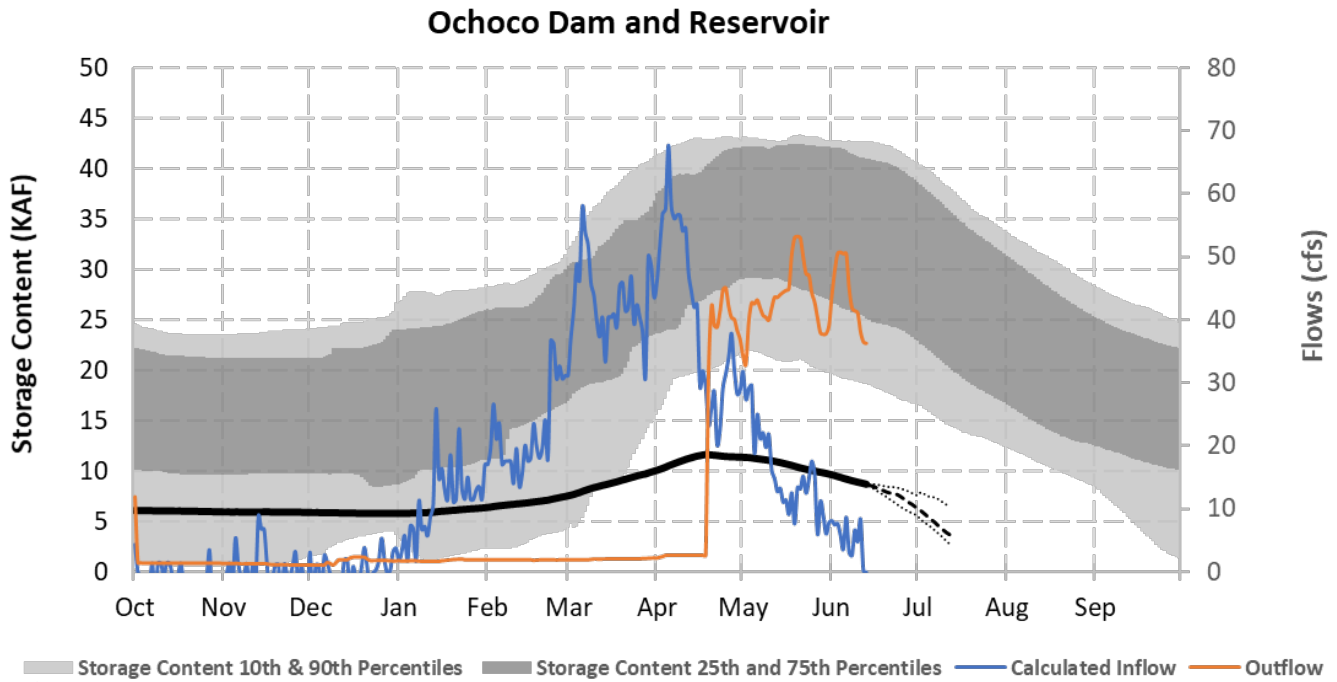


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Crooked River Basin

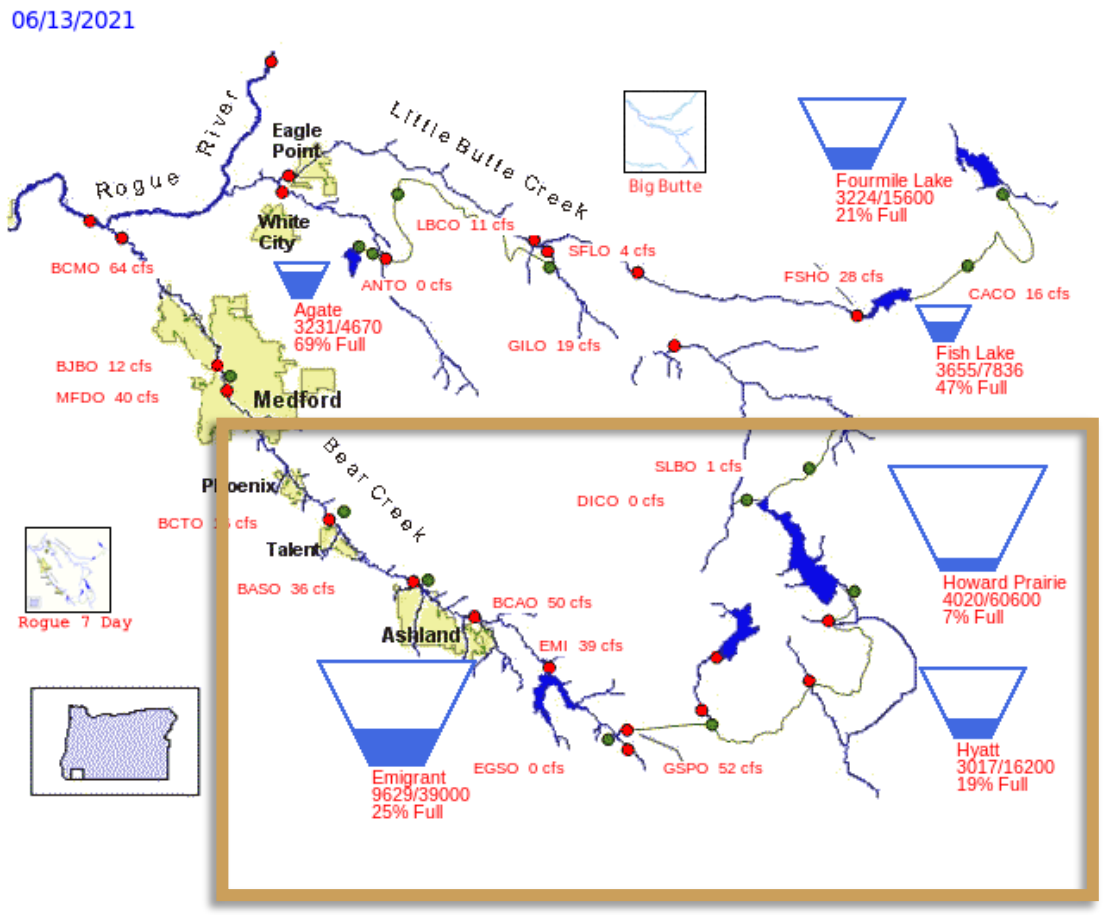


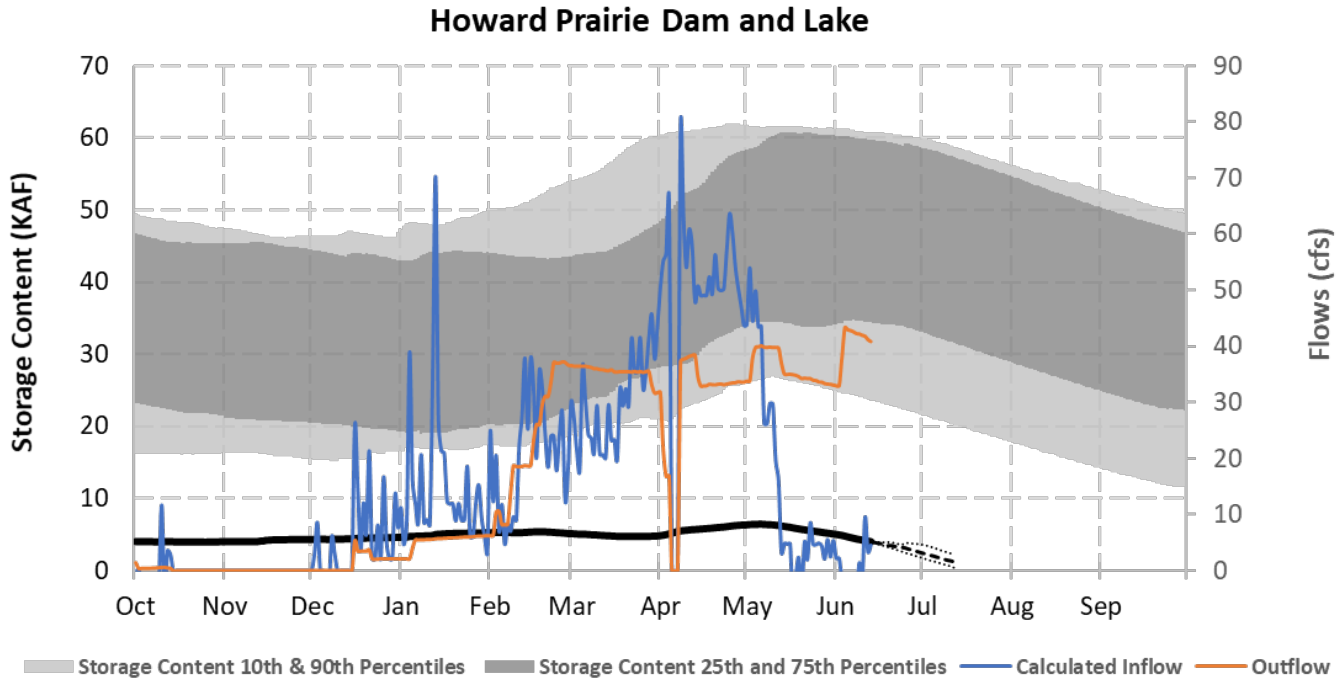


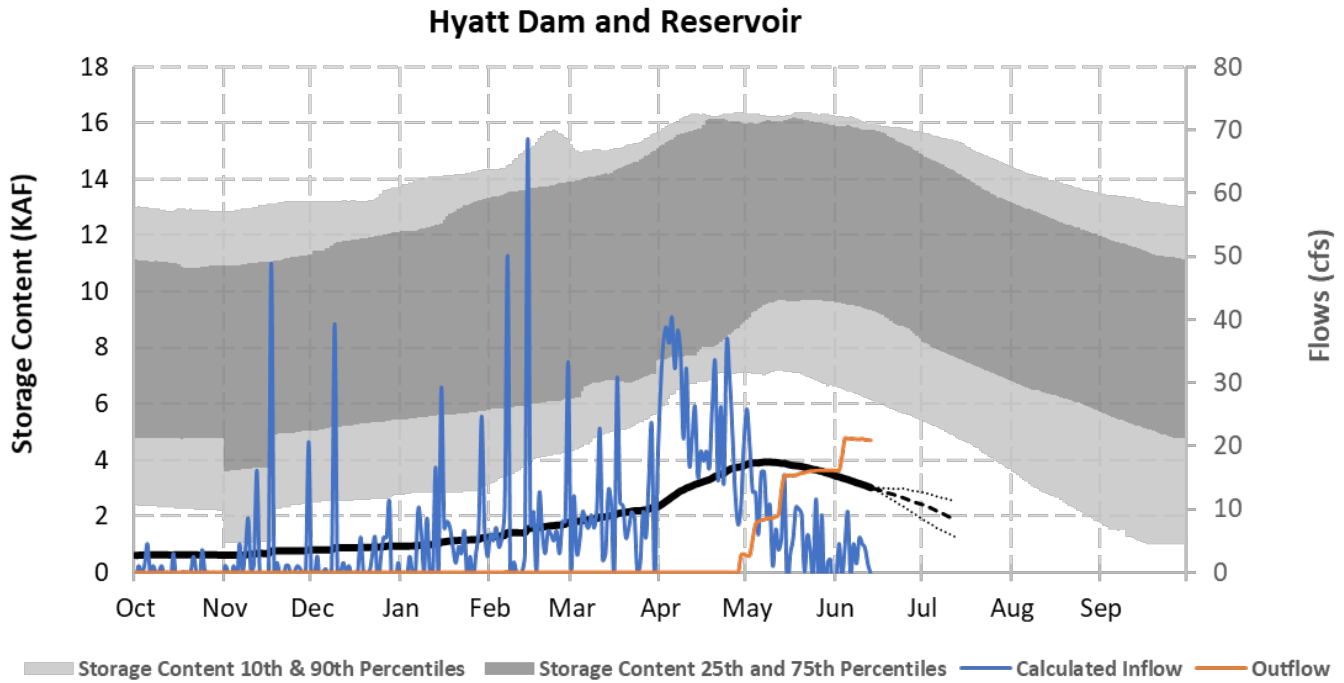


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Rogue River Basin



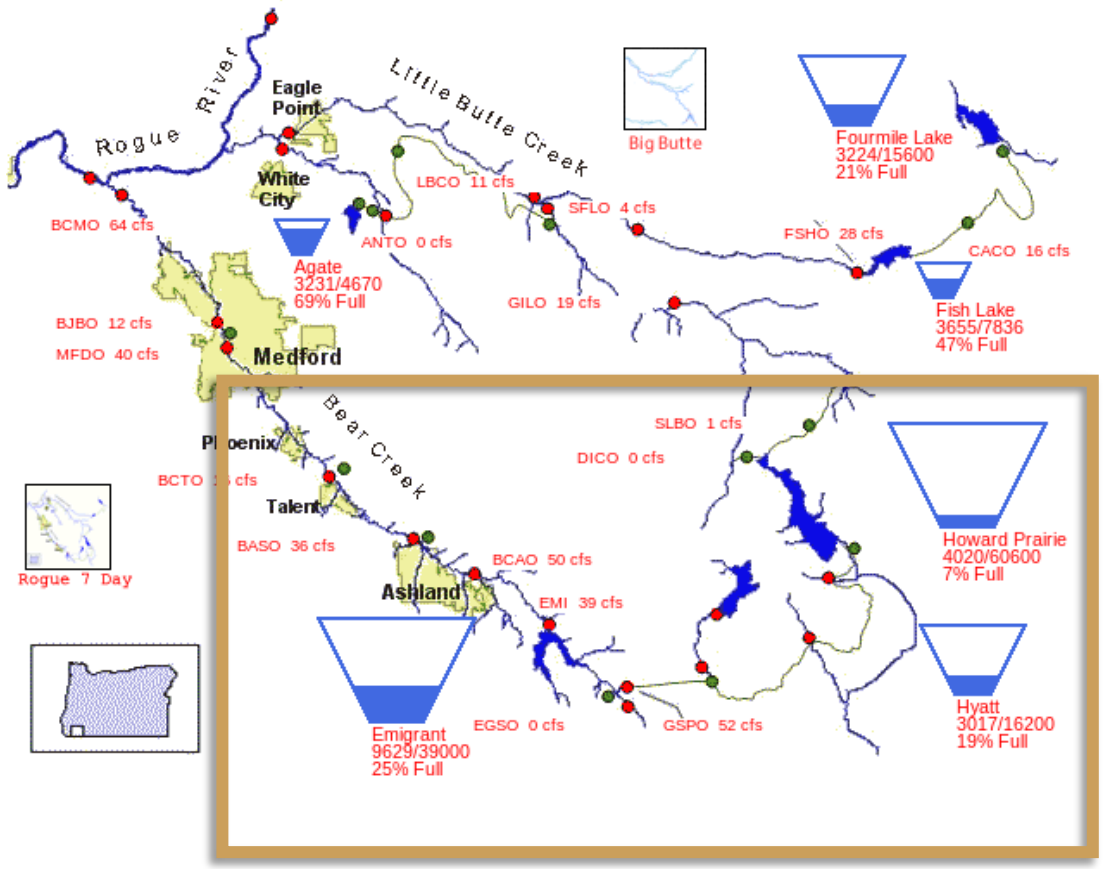


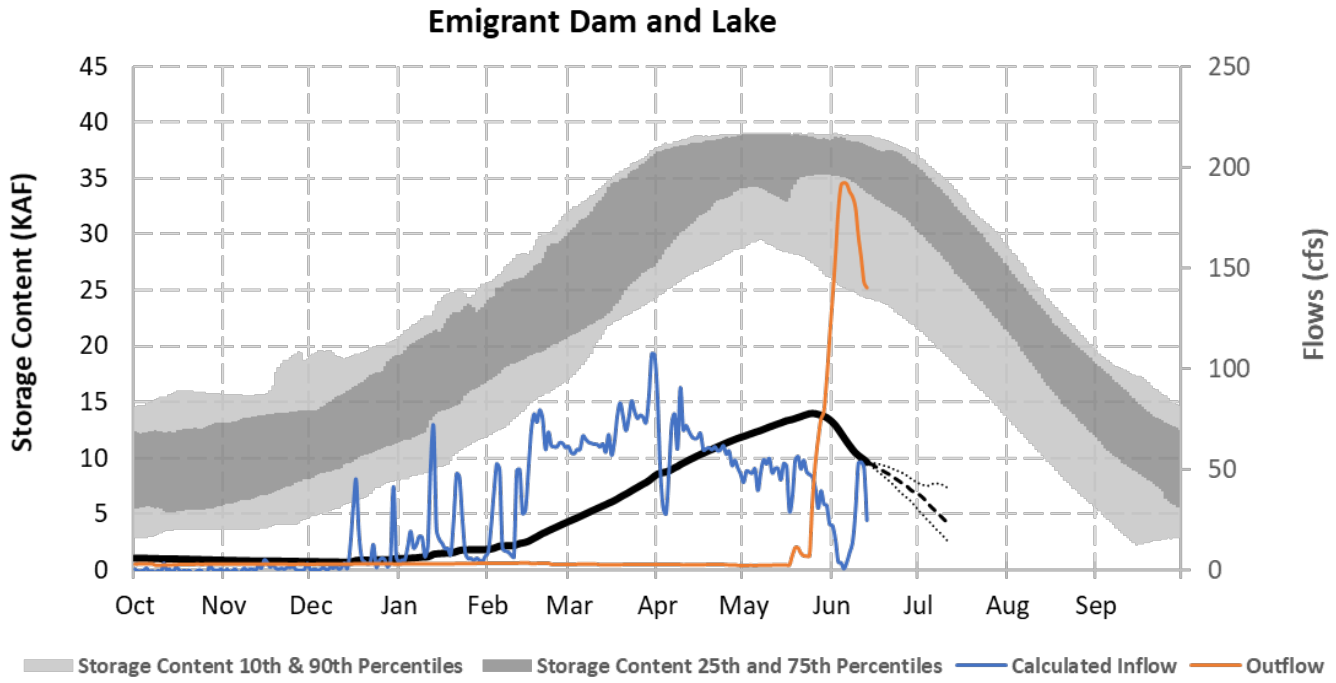


*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Rogue River Basin

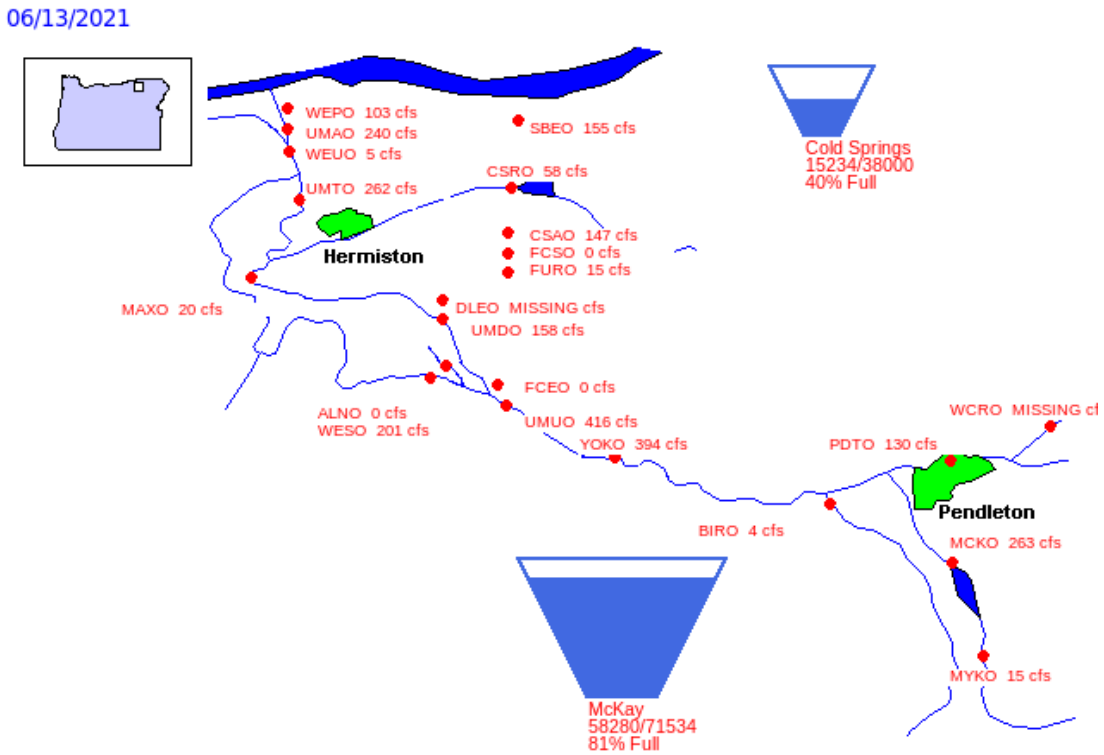
06/13/2021

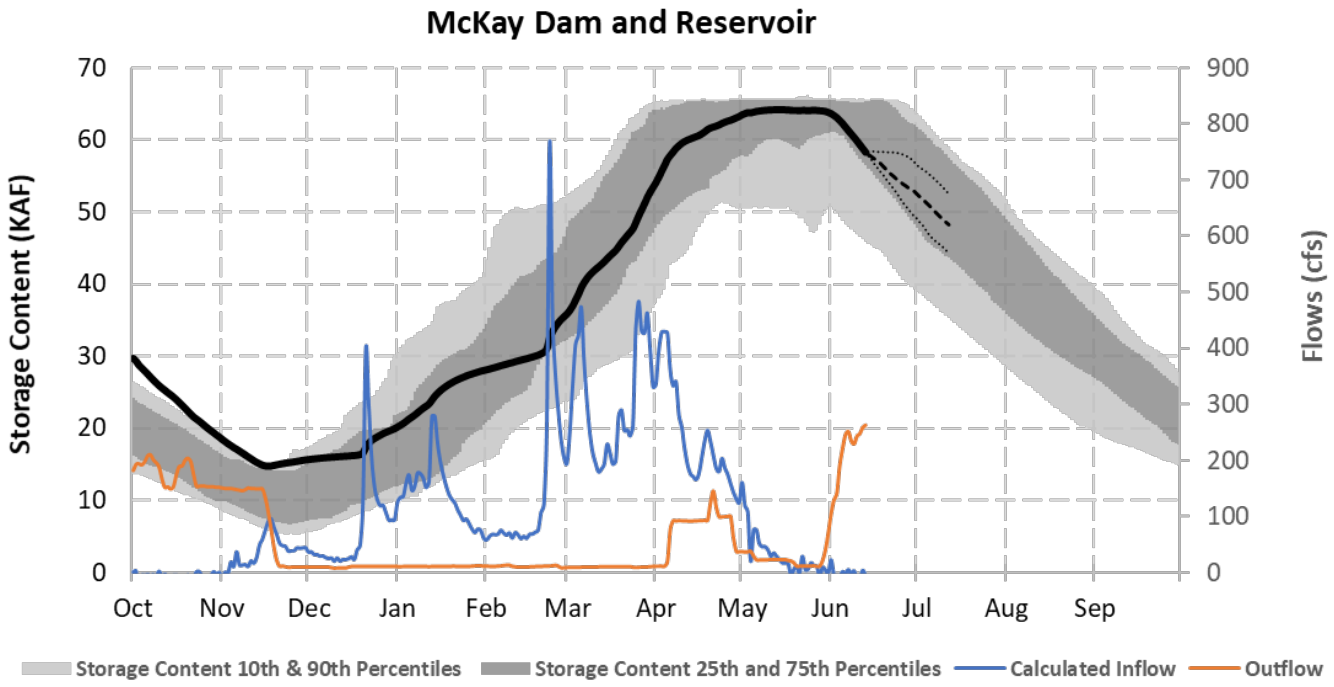




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

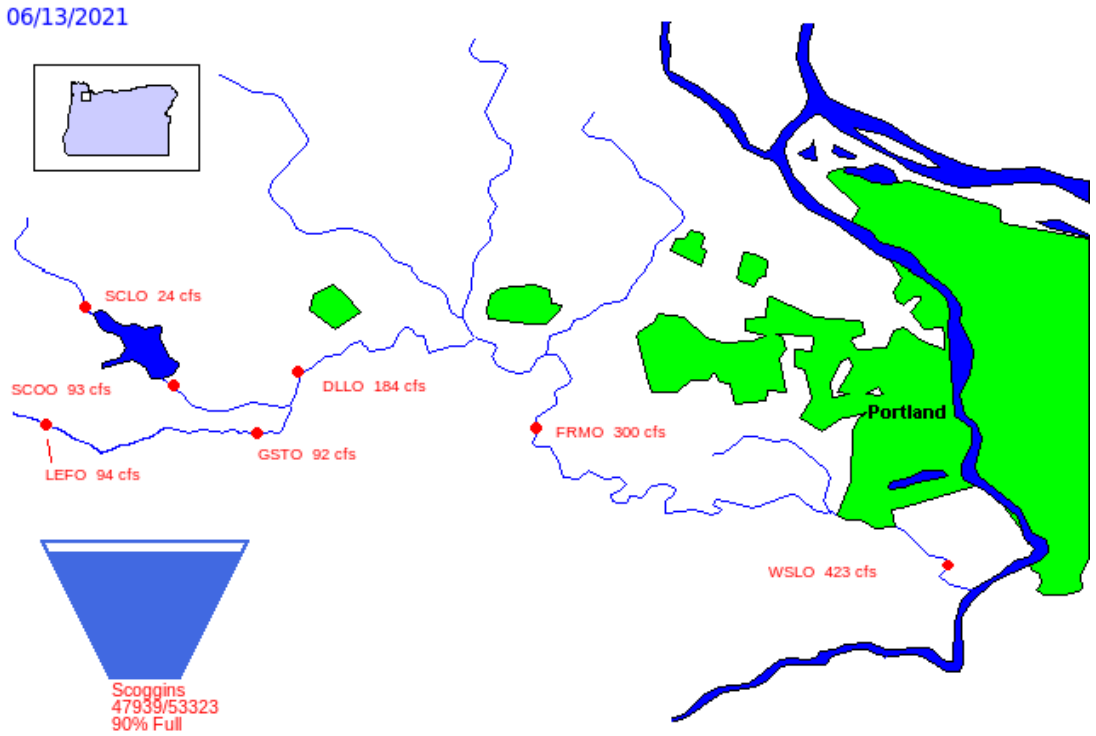
Umatilla River Basin

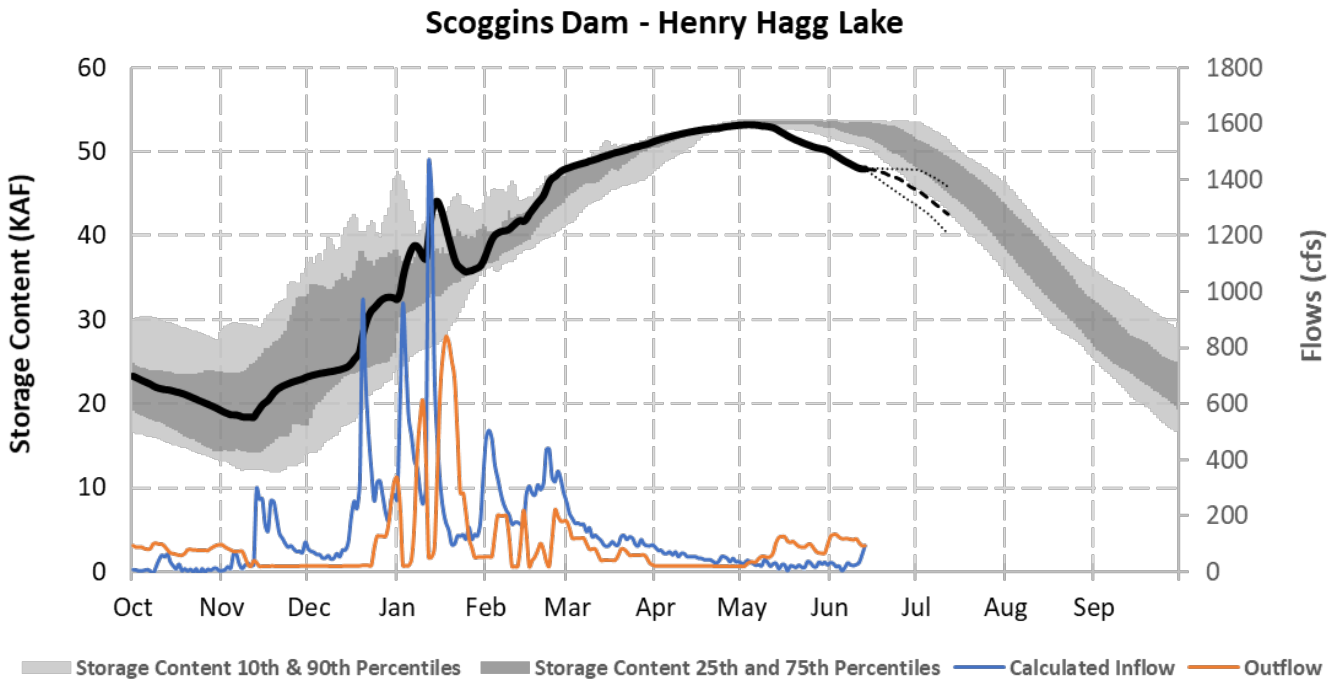




*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Tualatin River Basin





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

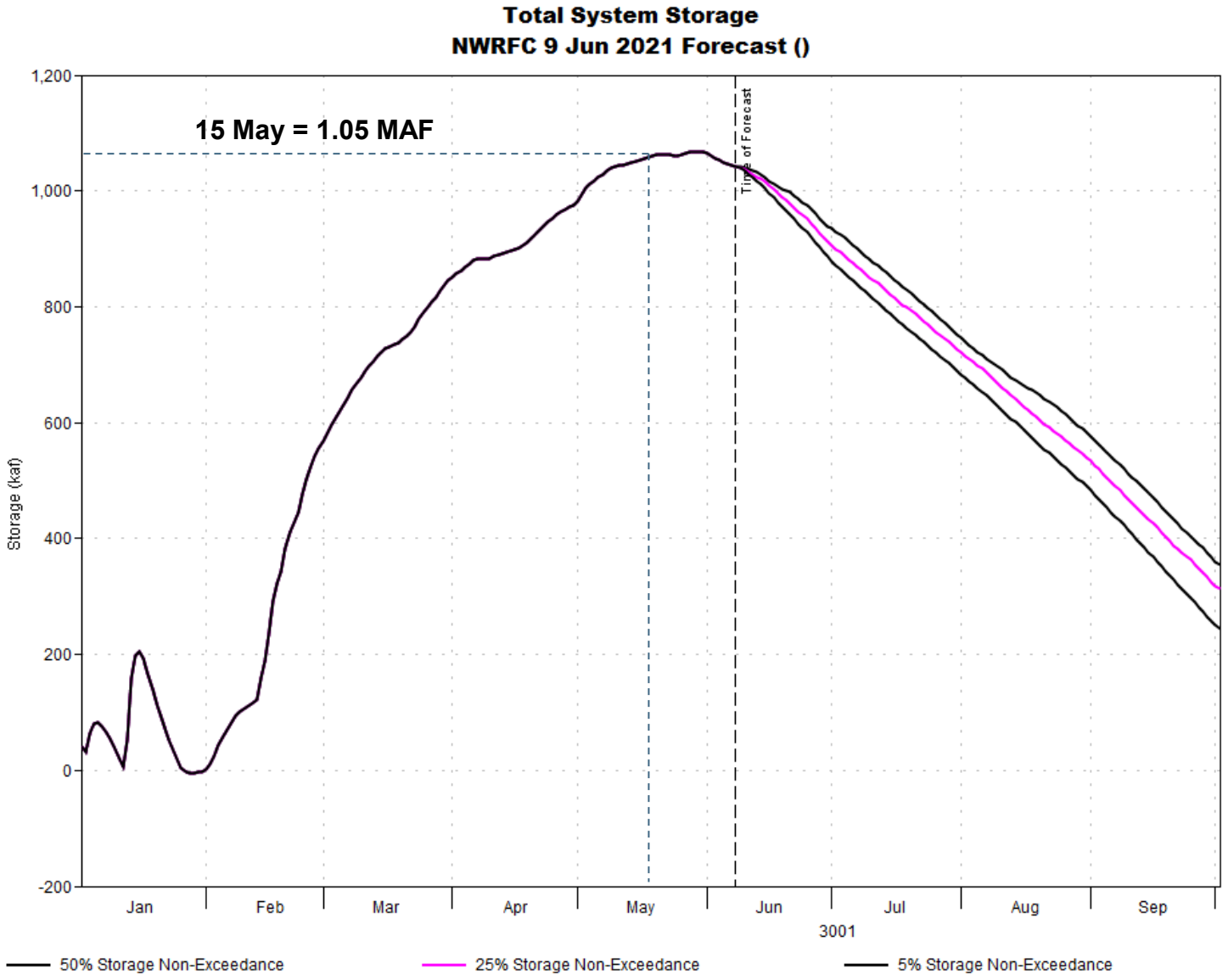
Jon Rocha – Columbia Pacific Northwest Regional Office

jrocha@usbr.gov

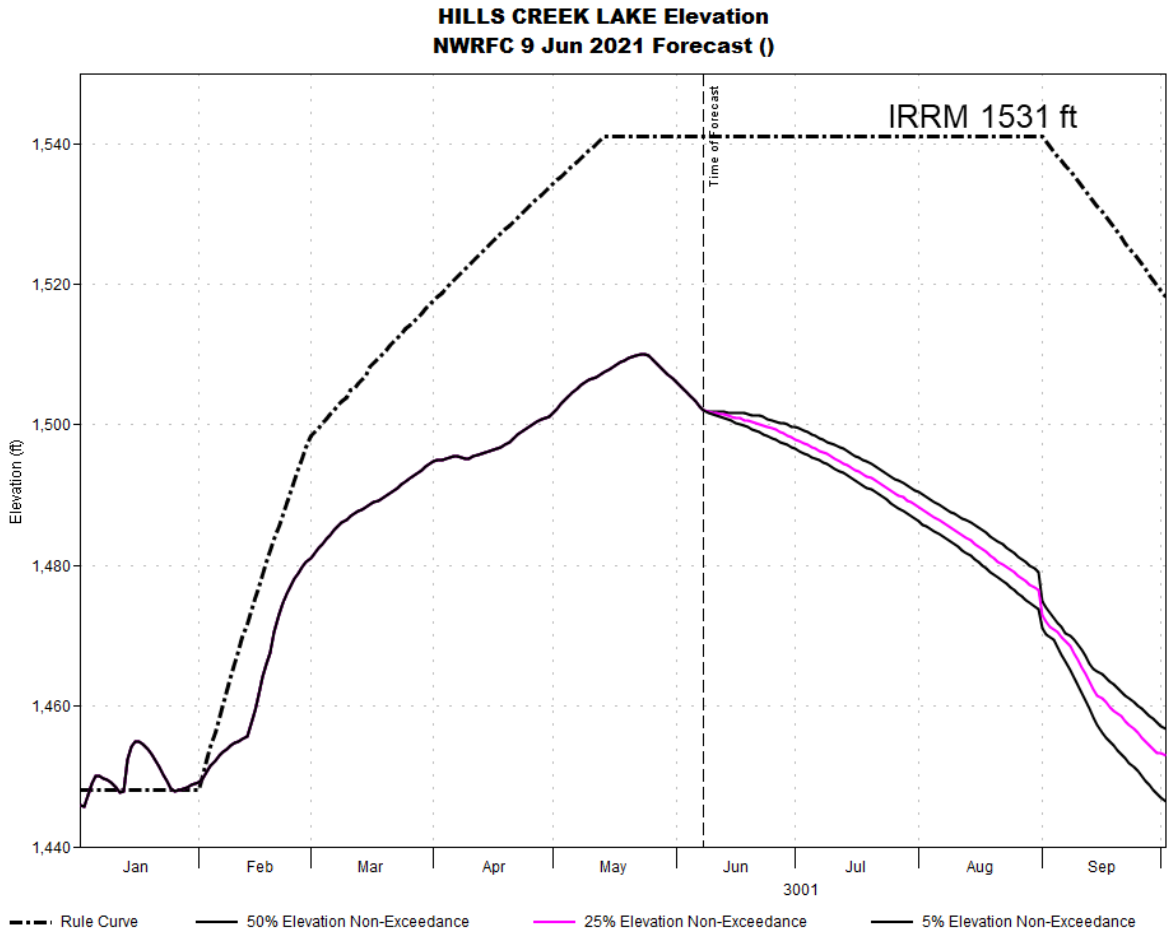
208.378.6213

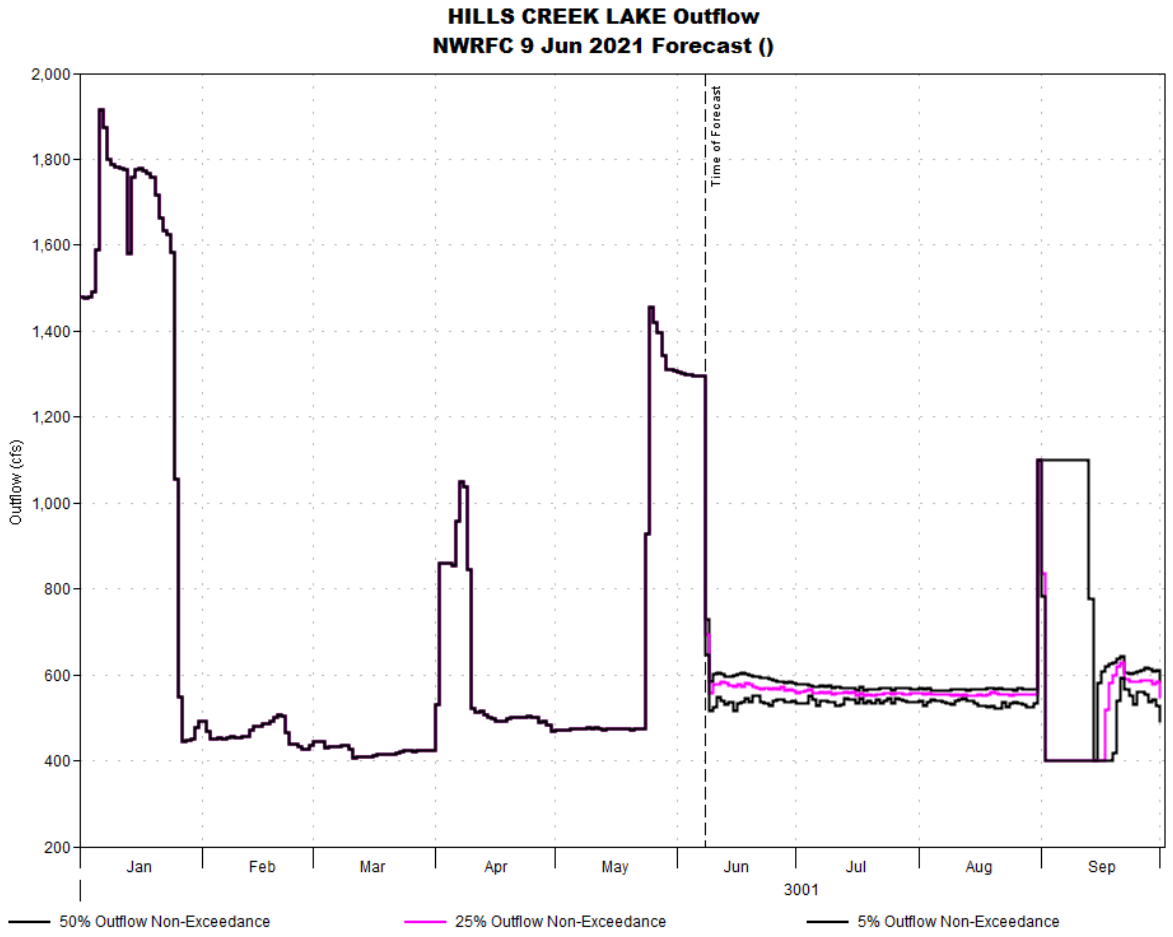
BUREAU OF RECLAMATION

SYSTEM STORAGE

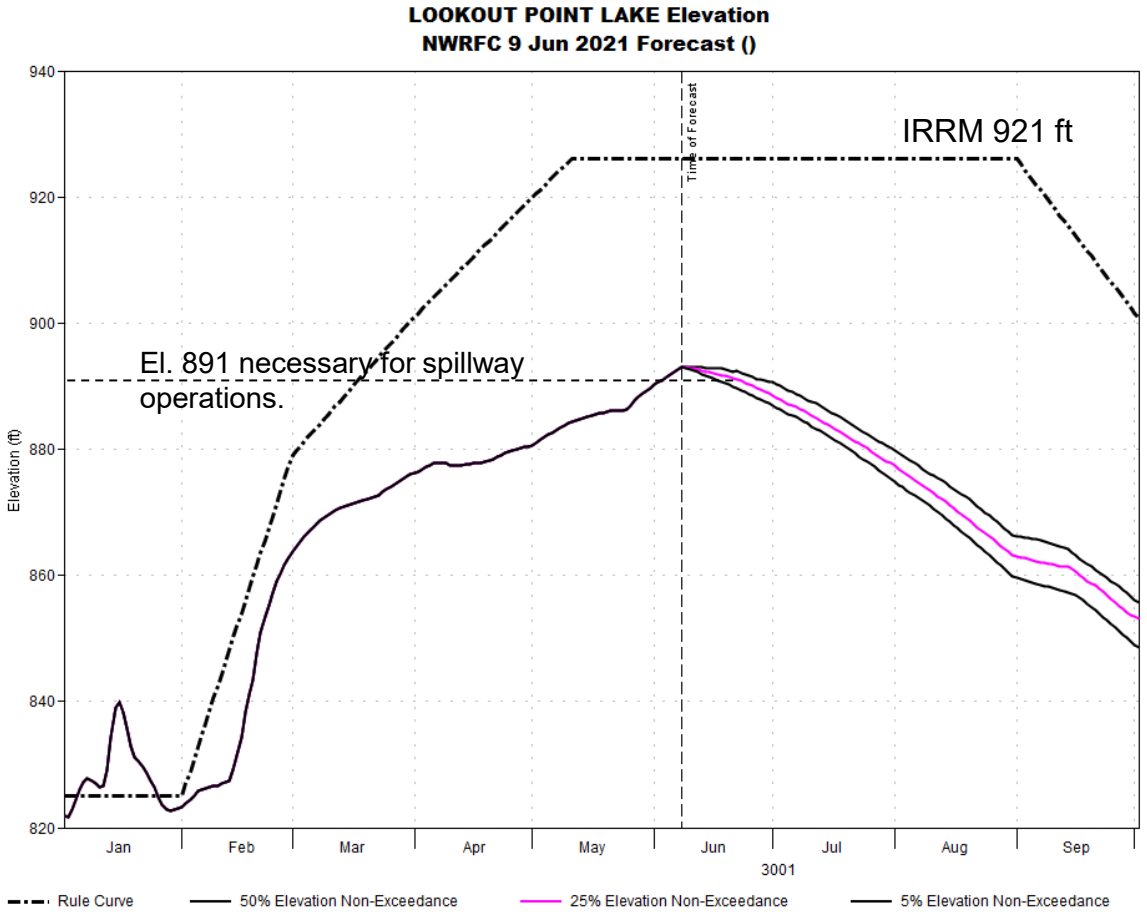


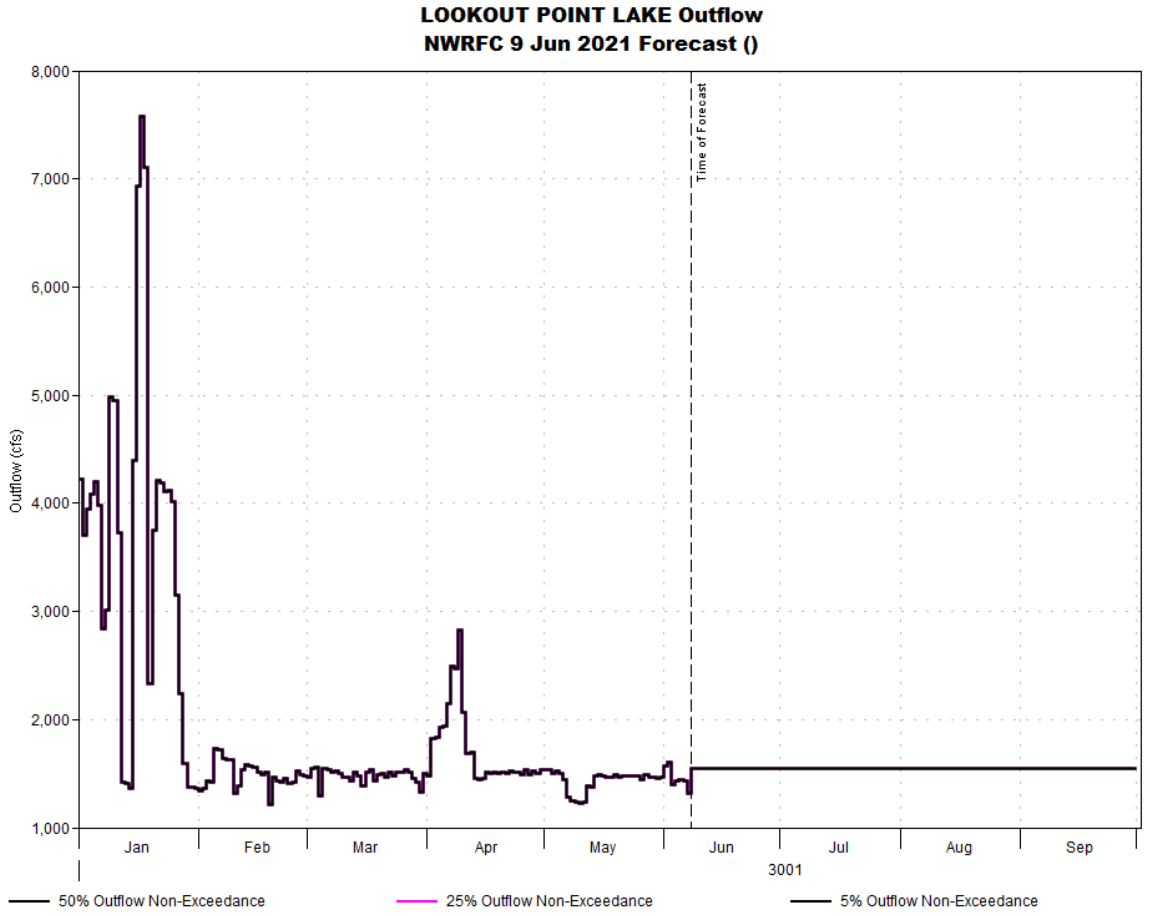
HILLS CREEK


HILLS CREEK LAKE Elevation
NWRFC 9 Jun 2021 Forecast ()
IRRM 1531 ft
Time of Forecast
Elevation (ft)
1,540
1,520
1,500
1,480
1,460
1,440
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
3001
Rule Curve
50% Elevation Non-Exceedance
25% Elevation Non-Exceedance
5% Elevation Non-Exceedance

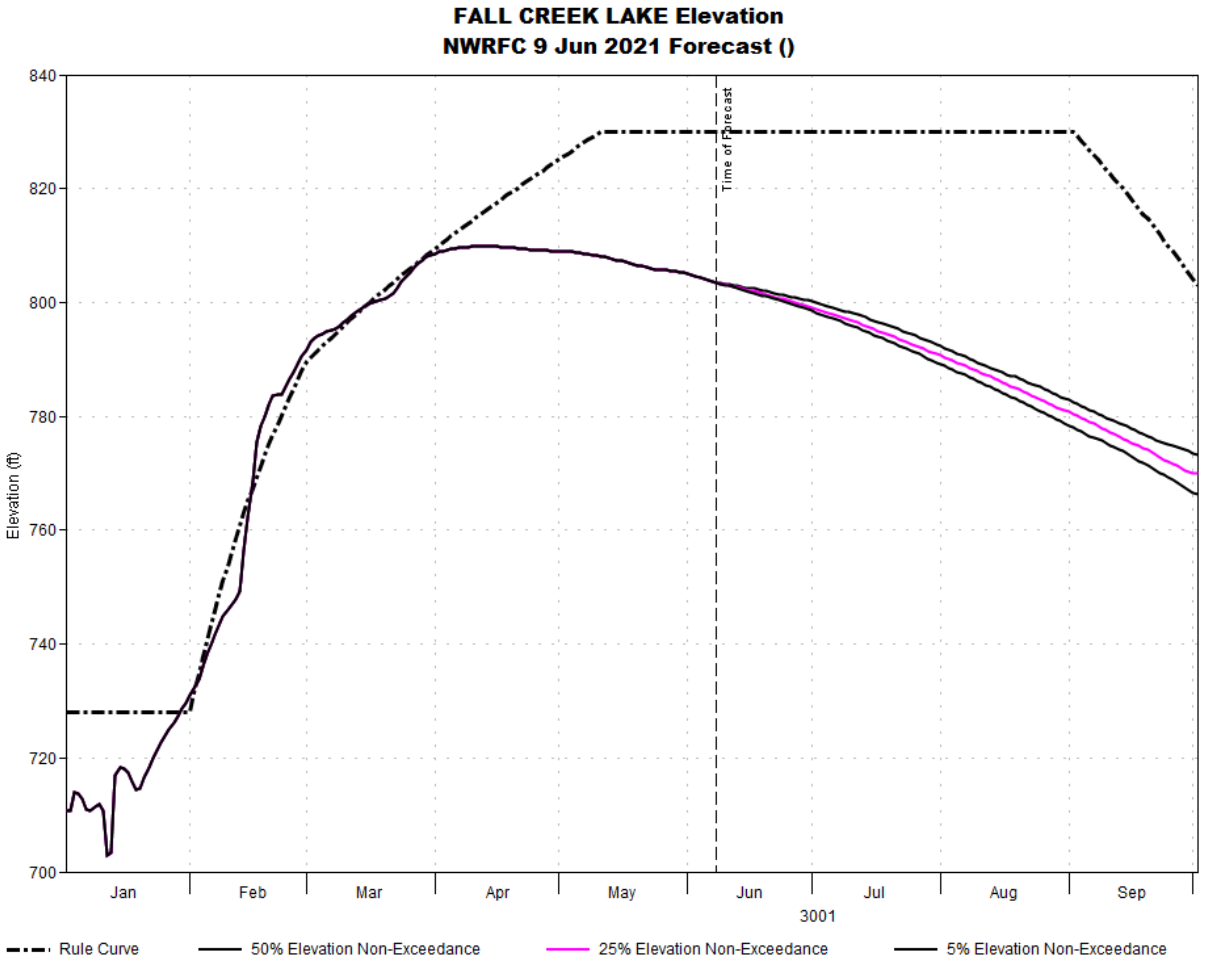

HILLS CREEK LAKE Outflow
NWRFC 9 Jun 2021 Forecast ()
Time of Forecast
Outflow (cfs)
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
3001
50% Outflow Non-Exceedance
25% Outflow Non-Exceedance
5% Outflow Non-Exceedance

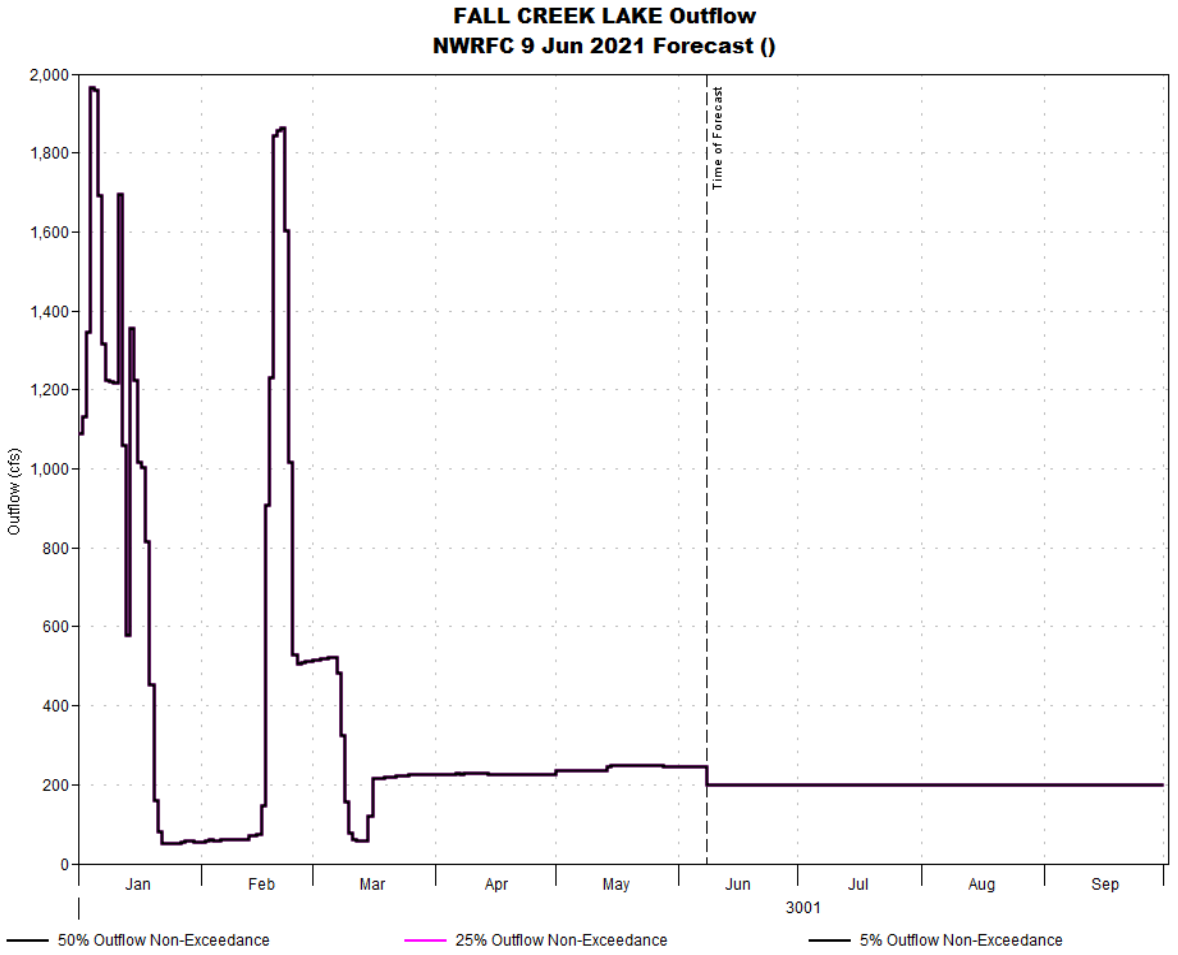
LOOKOUT POINT



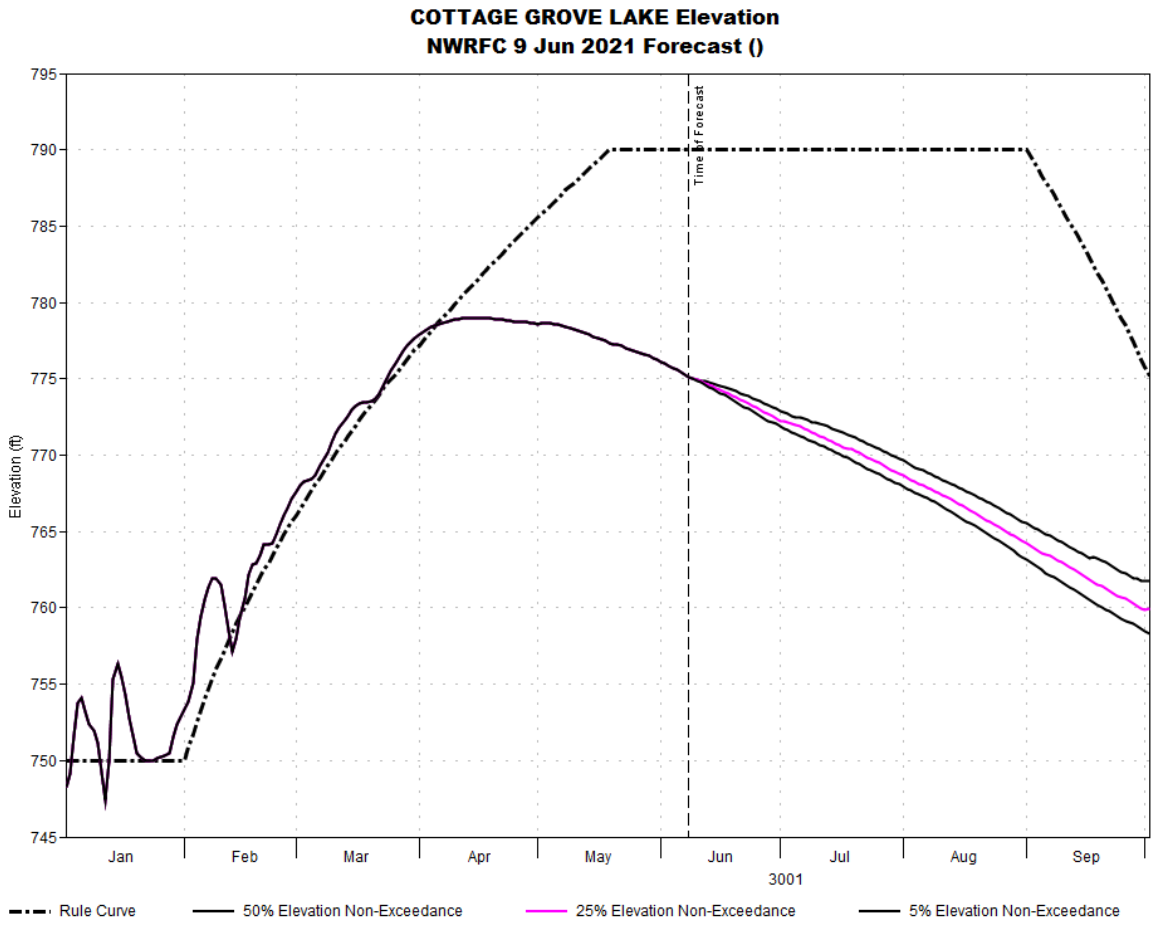


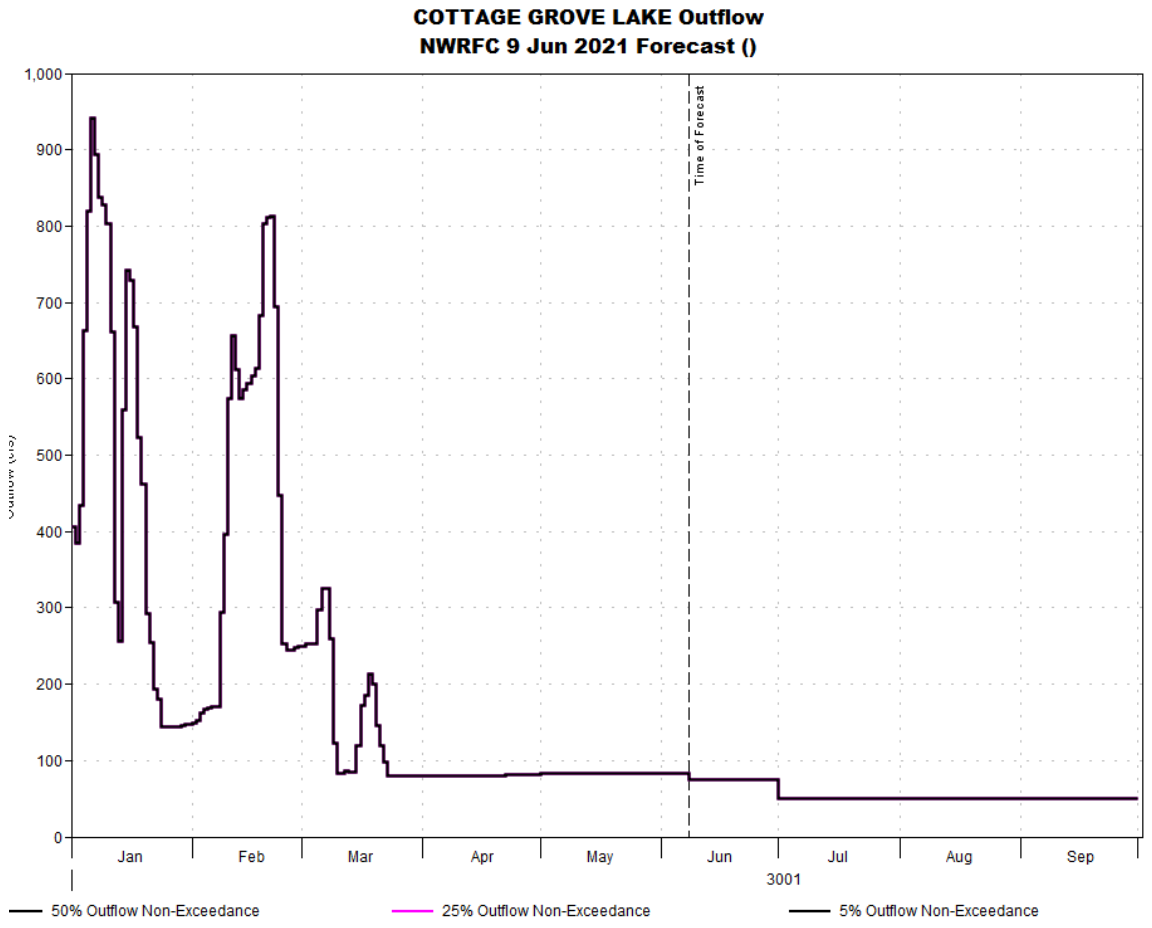
FALL CREEK


FALL CREEK LAKE Elevation
NWRFC 9 Jun 2021 Forecast ()
Elevation (ft)
840
820
800
780
760
740
720
700
Time of Forecast
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
3001
Rule Curve
50% Elevation Non-Exceedance
25% Elevation Non-Exceedance
5% Elevation Non-Exceedance

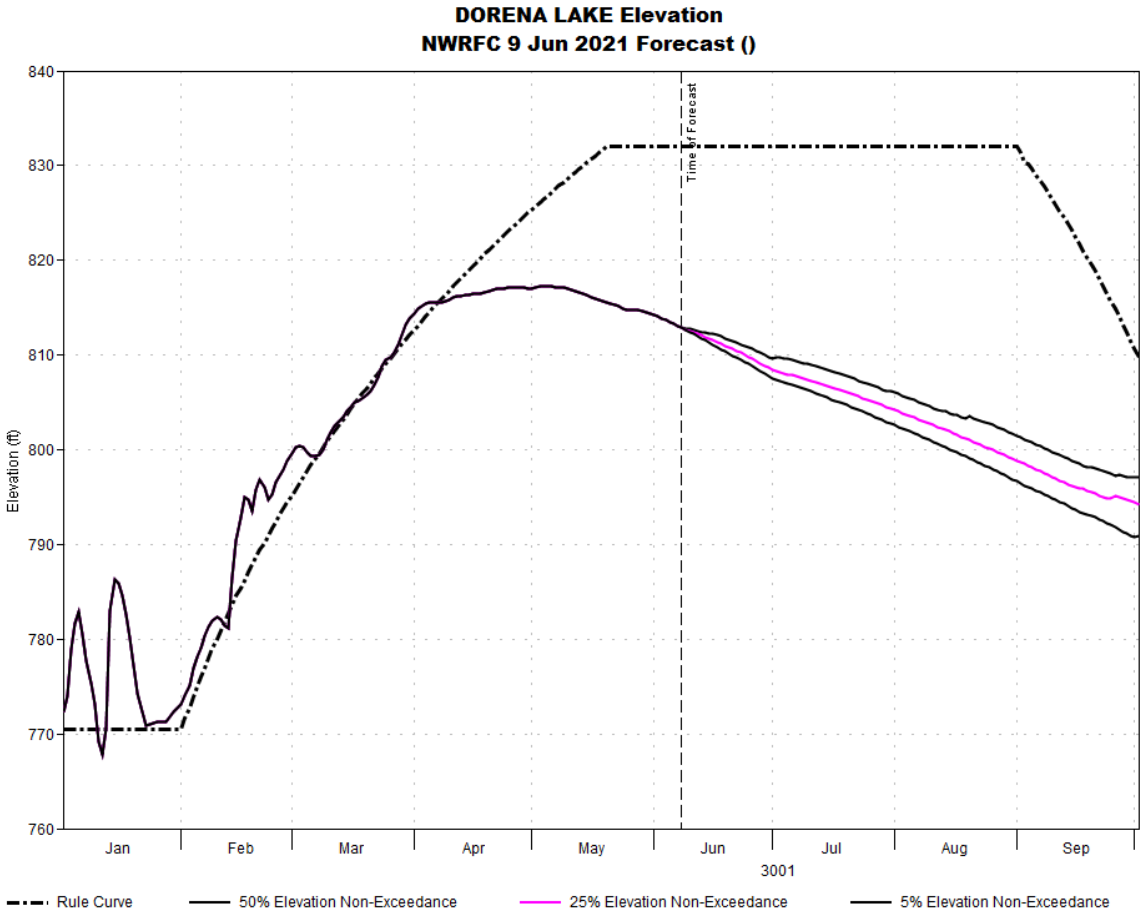

FALL CREEK LAKE Outflow
NWRFC 9 Jun 2021 Forecast ()
Outflow (cfs)
2,000
1,800
1,600
1,400
1,200
1,000
800
600
400
200
0
Time of Forecast
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
3001
50% Outflow Non-Exceedance
25% Outflow Non-Exceedance
5% Outflow Non-Exceedance

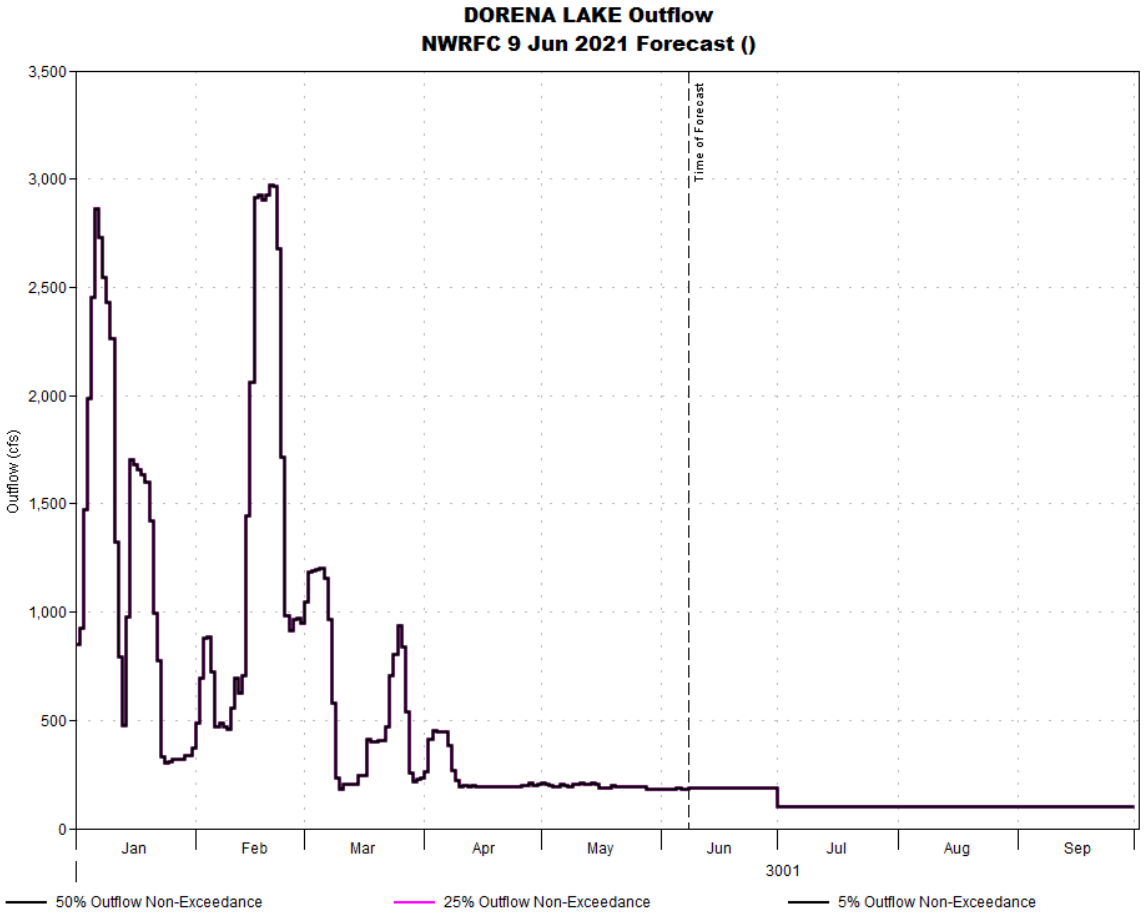
COTTAGE GROVE



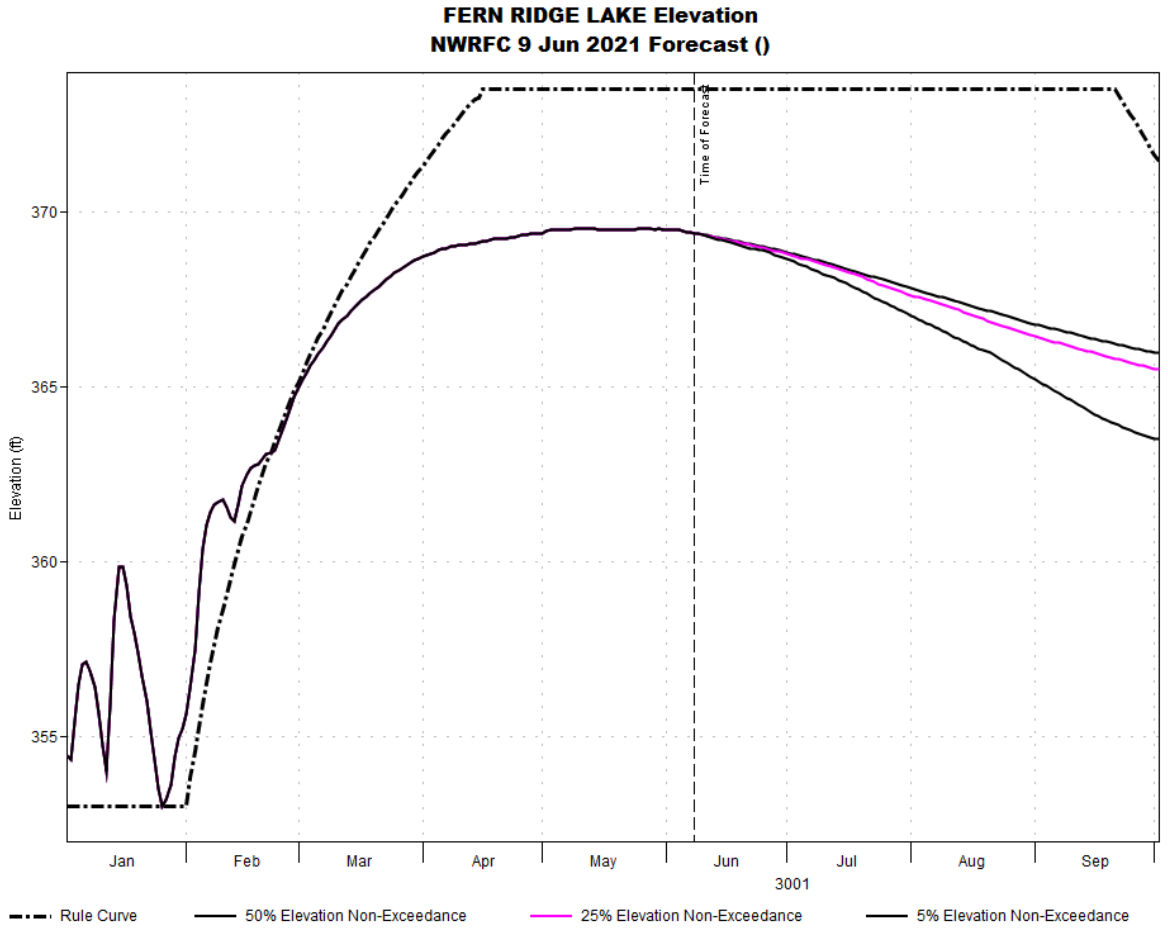


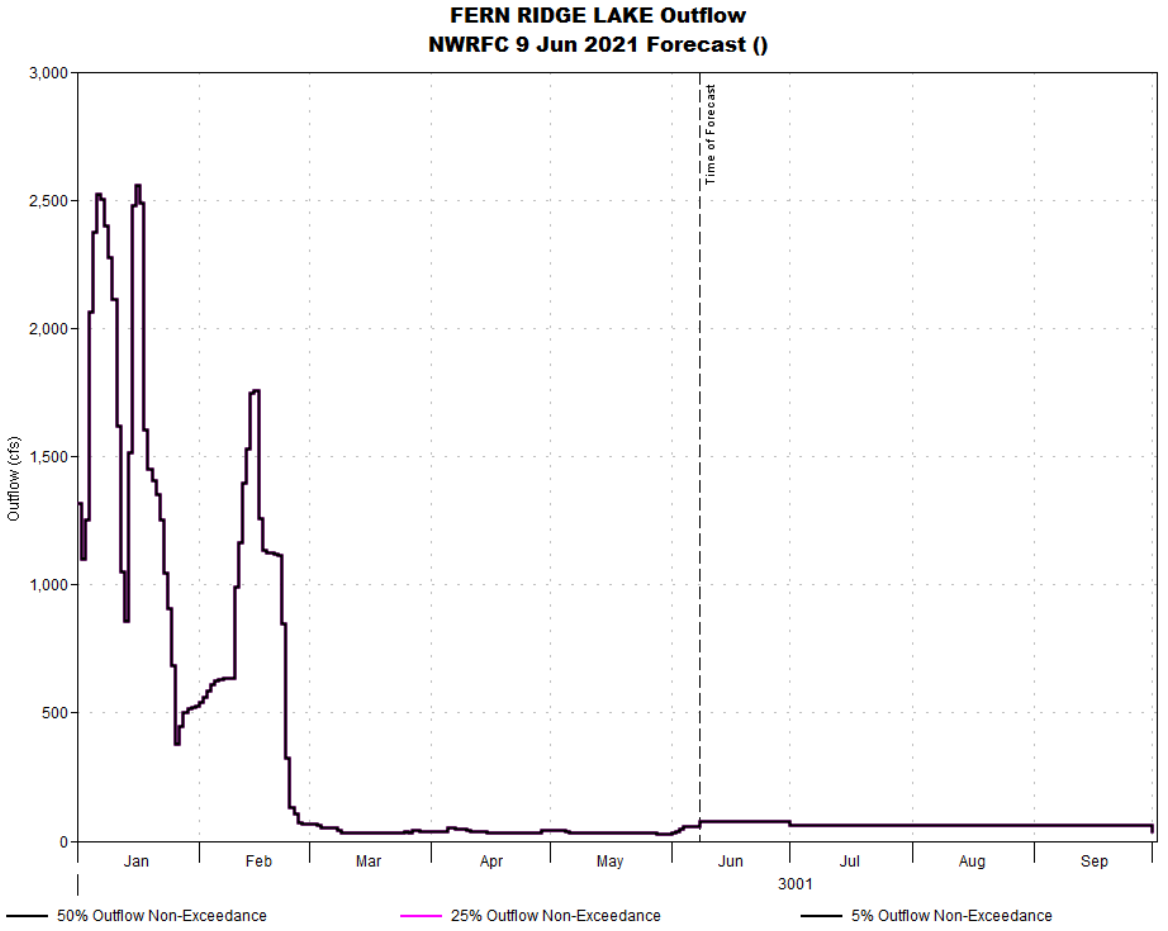
DORENA


DORENA LAKE Elevation
NWRFC 9 Jun 2021 Forecast ()
Elevation (ft)
840
830
820
810
800
790
780
770
760
Time of Forecast
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
3001
Rule Curve
50% Elevation Non-Exceedance
25% Elevation Non-Exceedance
5% Elevation Non-Exceedance

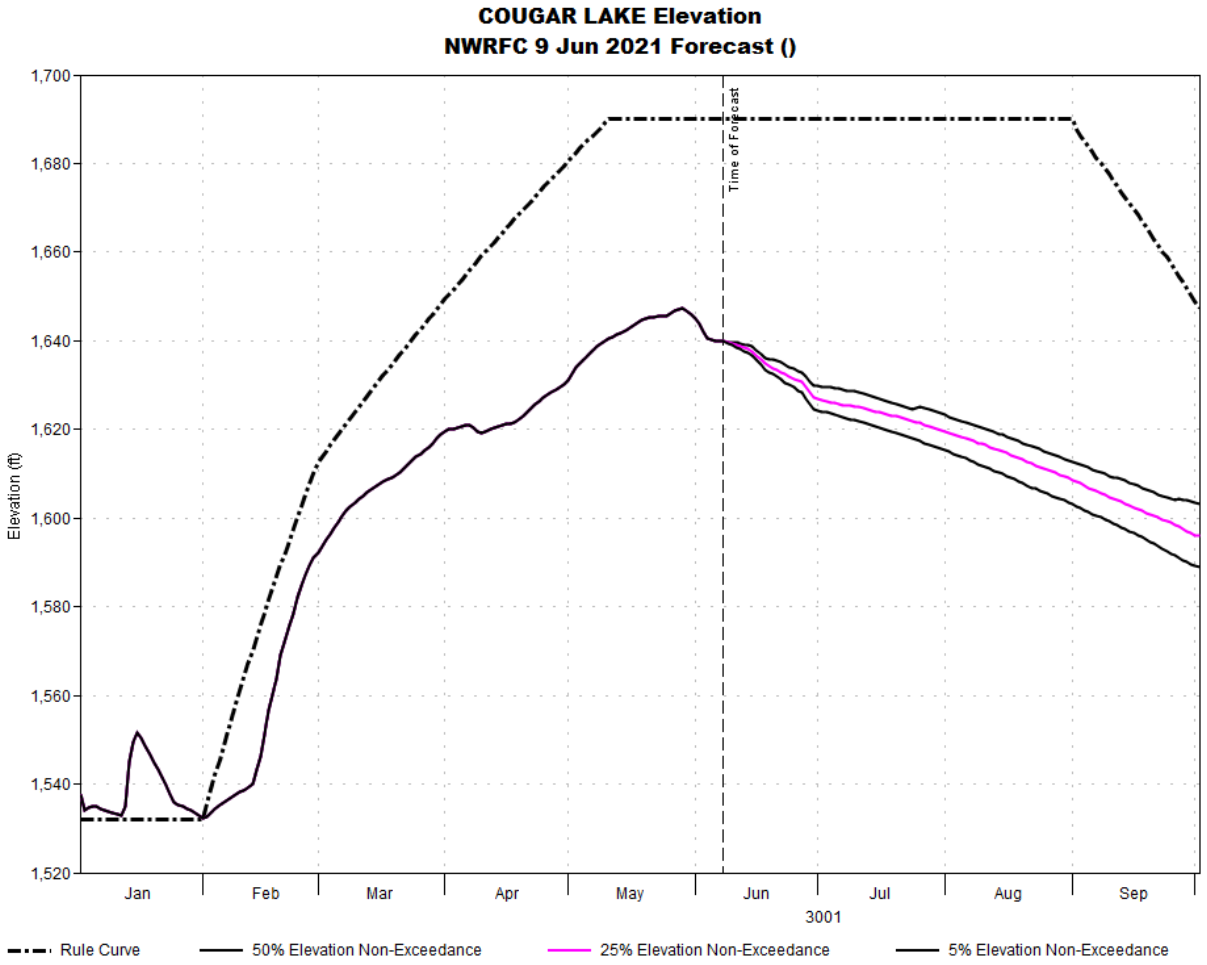

DORENA LAKE Outflow
NWRFC 9 Jun 2021 Forecast ()
Outflow (cfs)
3,500
3,000
2,500
2,000
1,500
1,000
500
0
Time of Forecast
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
3001
50% Outflow Non-Exceedance
25% Outflow Non-Exceedance
5% Outflow Non-Exceedance

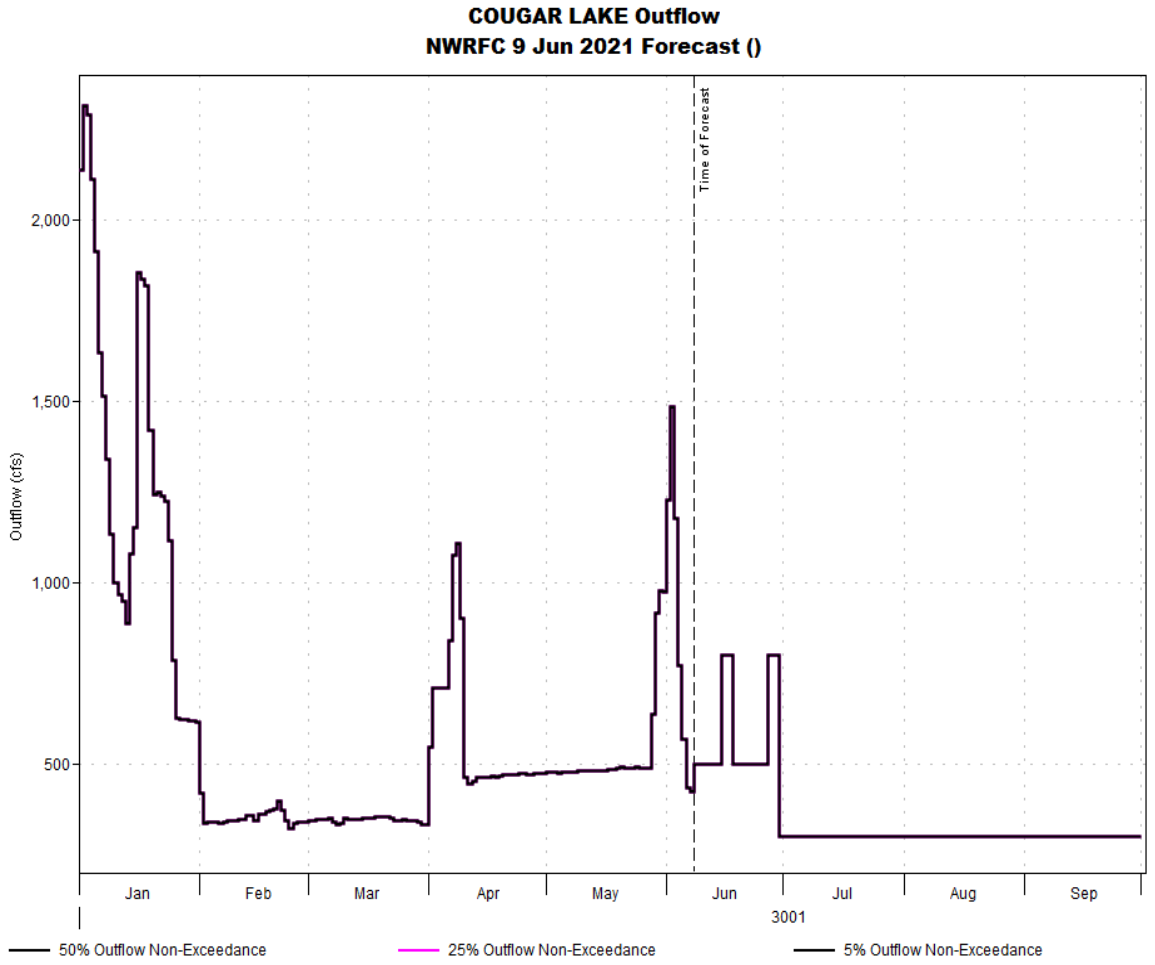
FERN RIDGE


FERN RIDGE LAKE Elevation
NWRFC 9 Jun 2021 Forecast ()
Time of Forecast
370
365
360
355
Elevation (ft)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
3001
Rule Curve
50% Elevation Non-Exceedance
25% Elevation Non-Exceedance
5% Elevation Non-Exceedance


FERN RIDGE LAKE Outflow
NWRFC 9 Jun 2021 Forecast ()
Time of Forecast
3,000
2,500
2,000
1,500
1,000
500
0
Outflow (cfs)
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
3001
50% Outflow Non-Exceedance
25% Outflow Non-Exceedance
5% Outflow Non-Exceedance

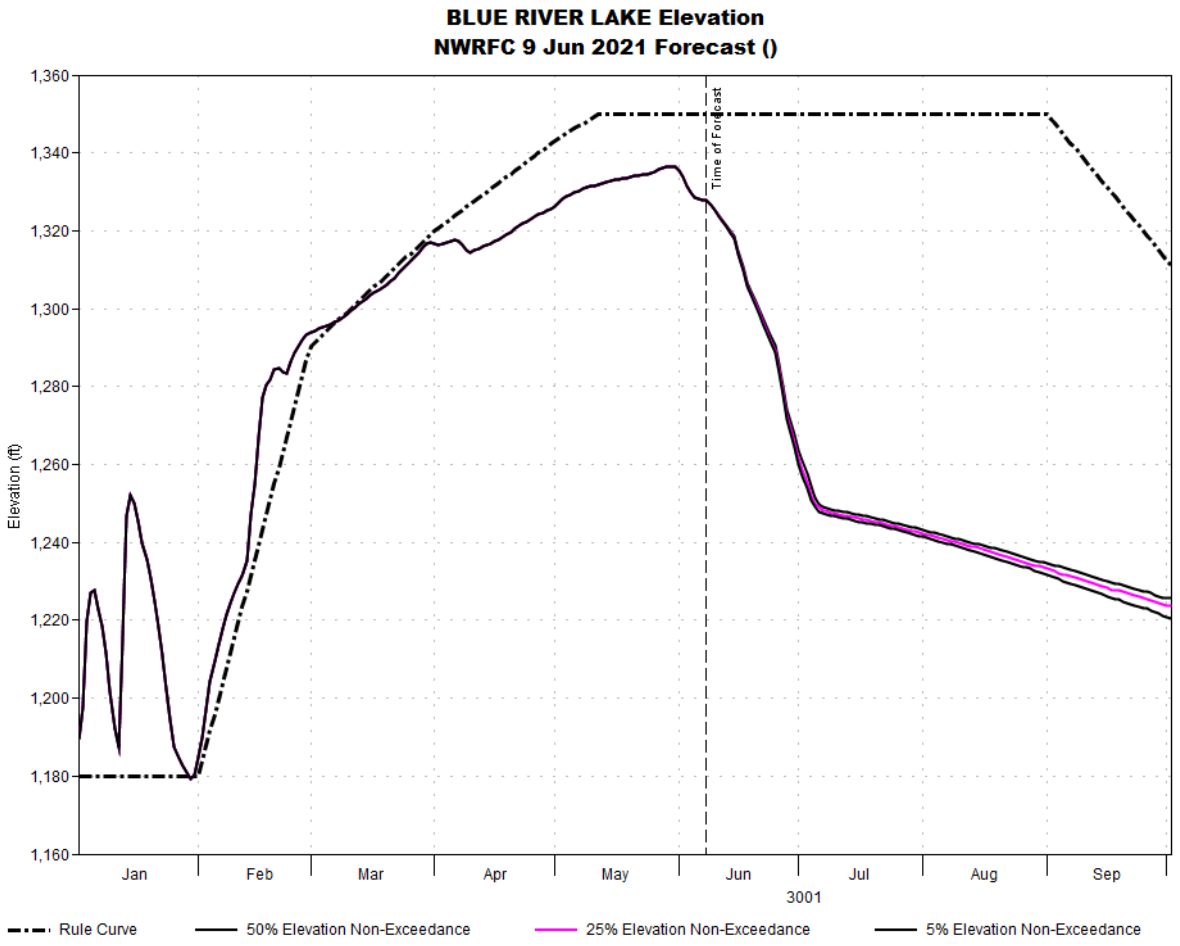
COUGAR

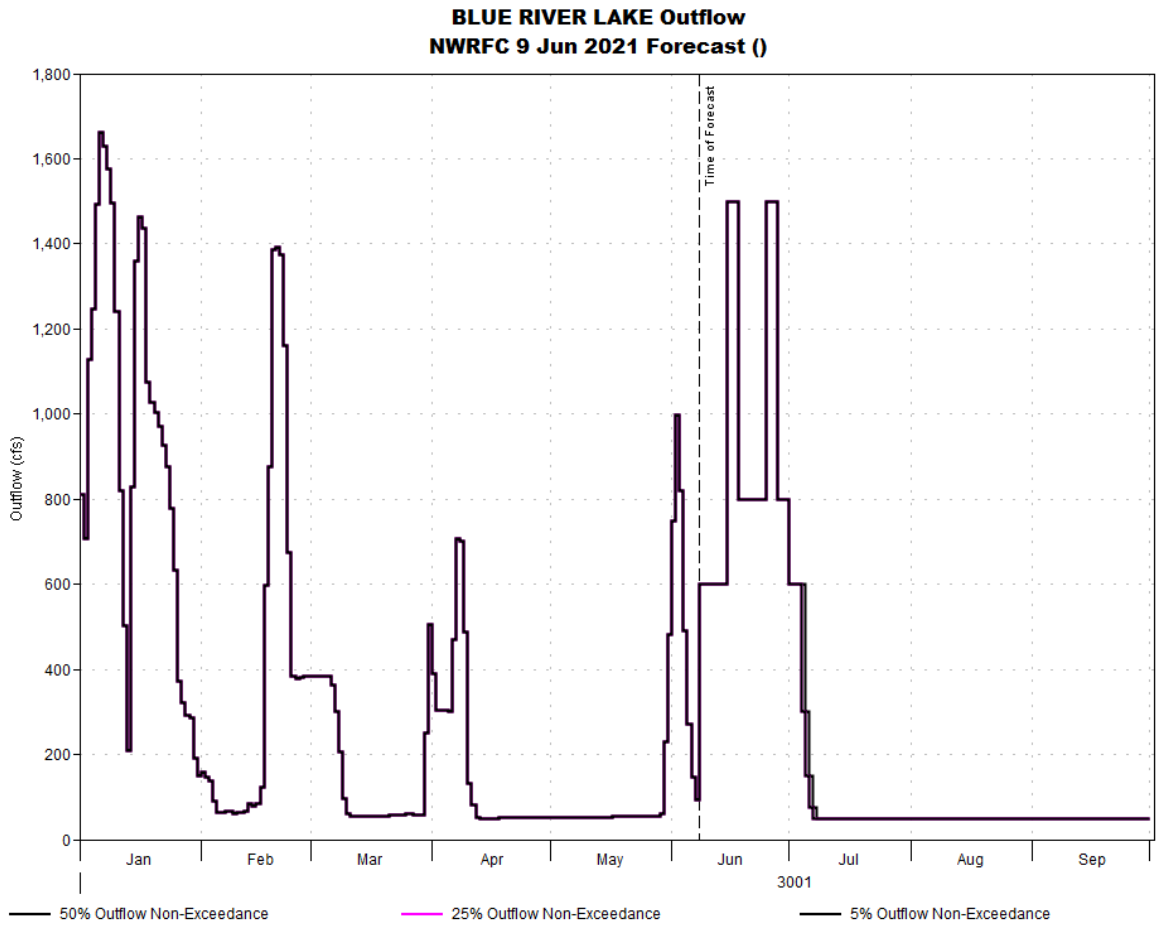




Short duration pulses in June. Maintain BiOp minimum flows after.

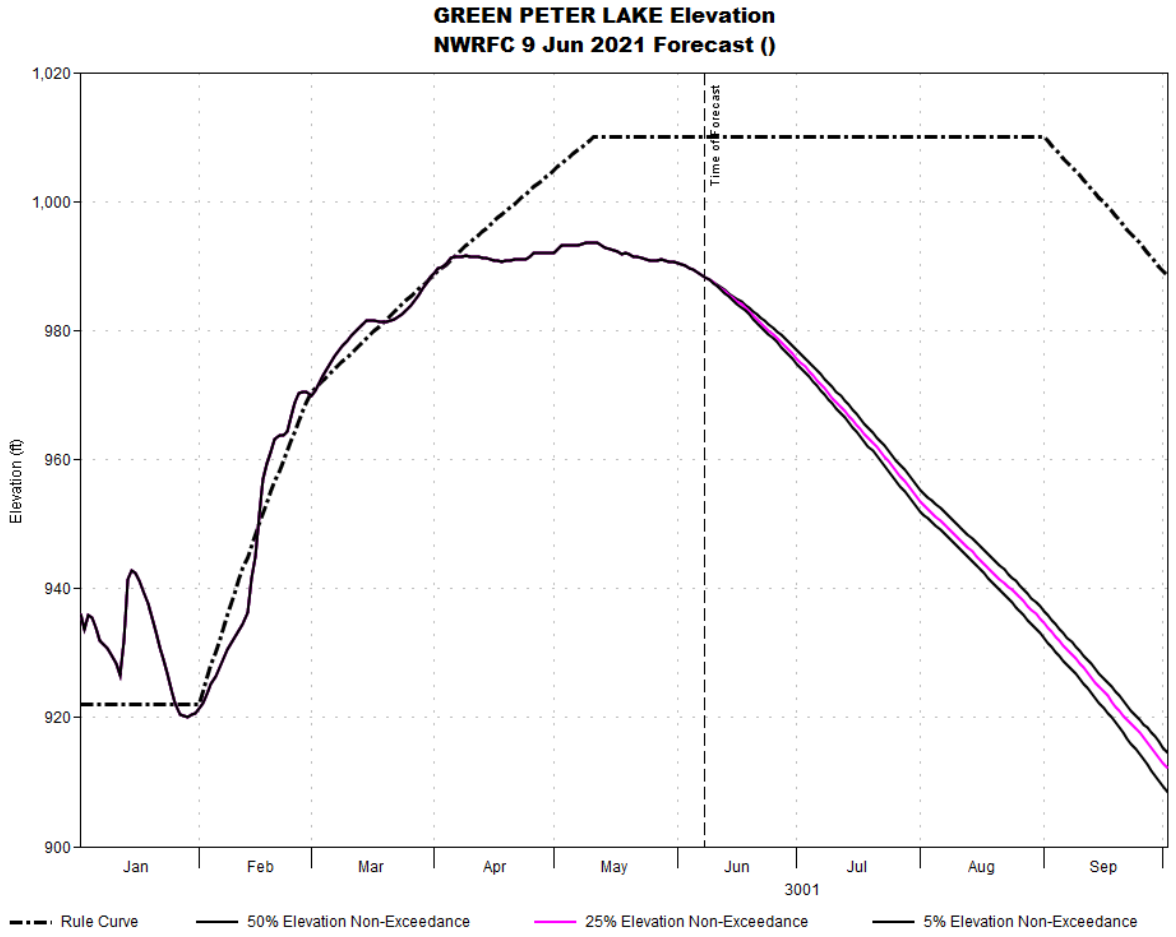
BLUE RIVER

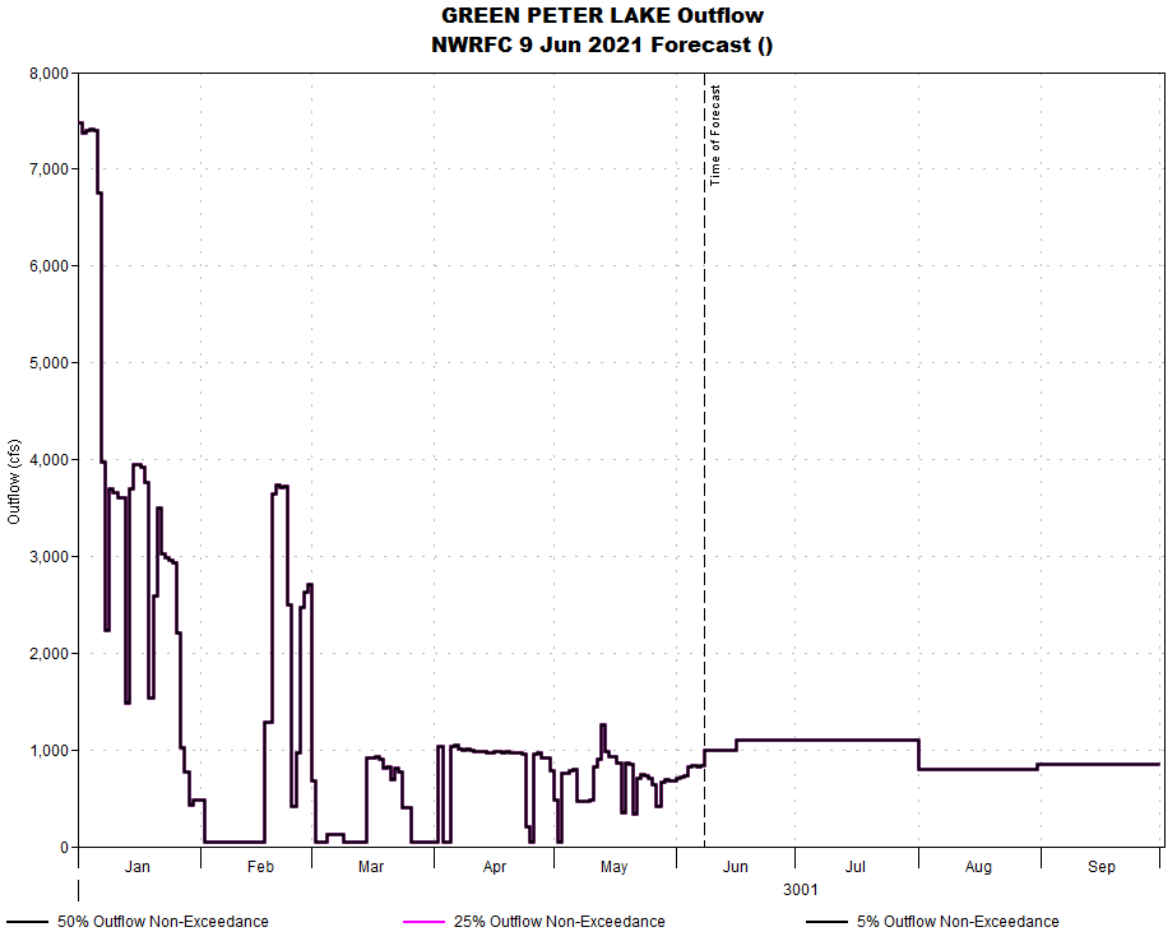




Short duration pulses in June. Maintain BiOp minimum flows after.

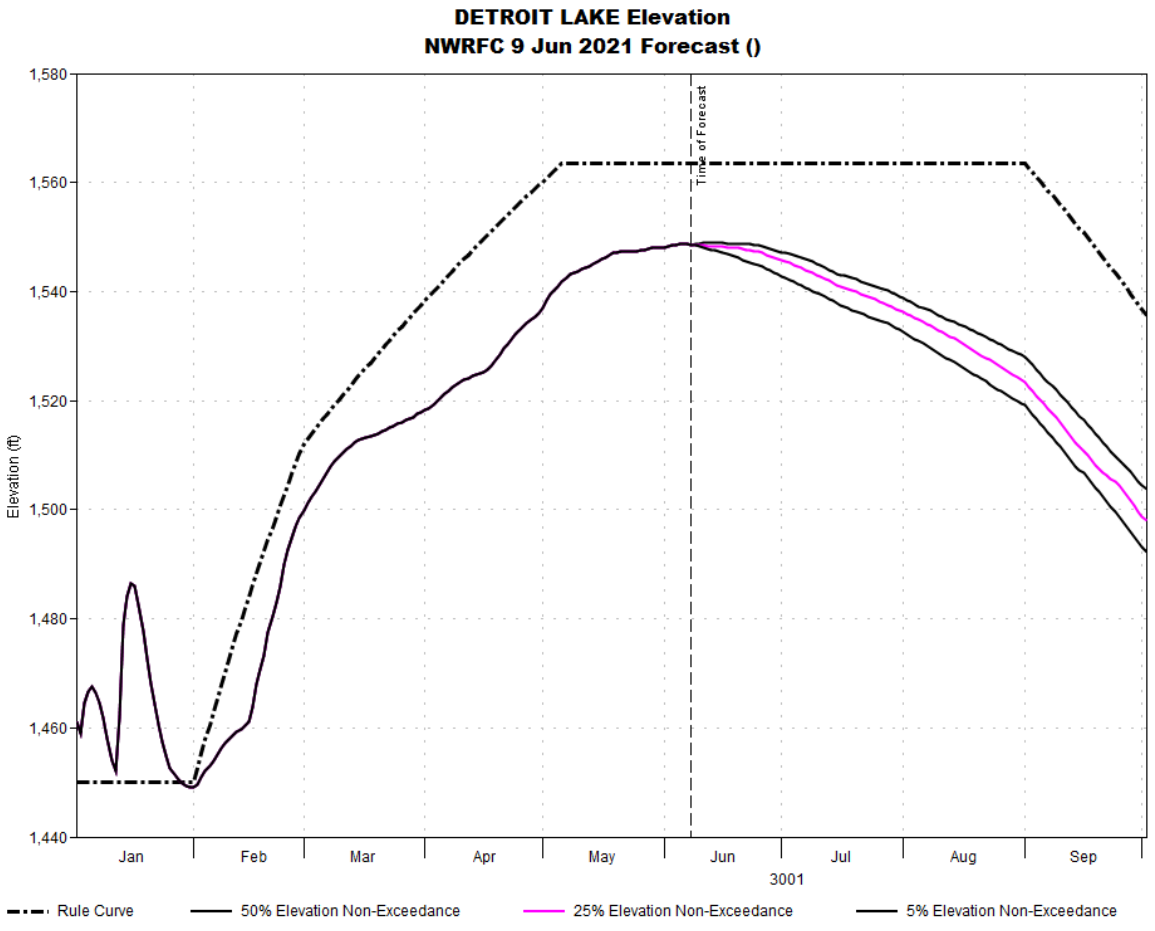
GREEN PETER & FOSTER

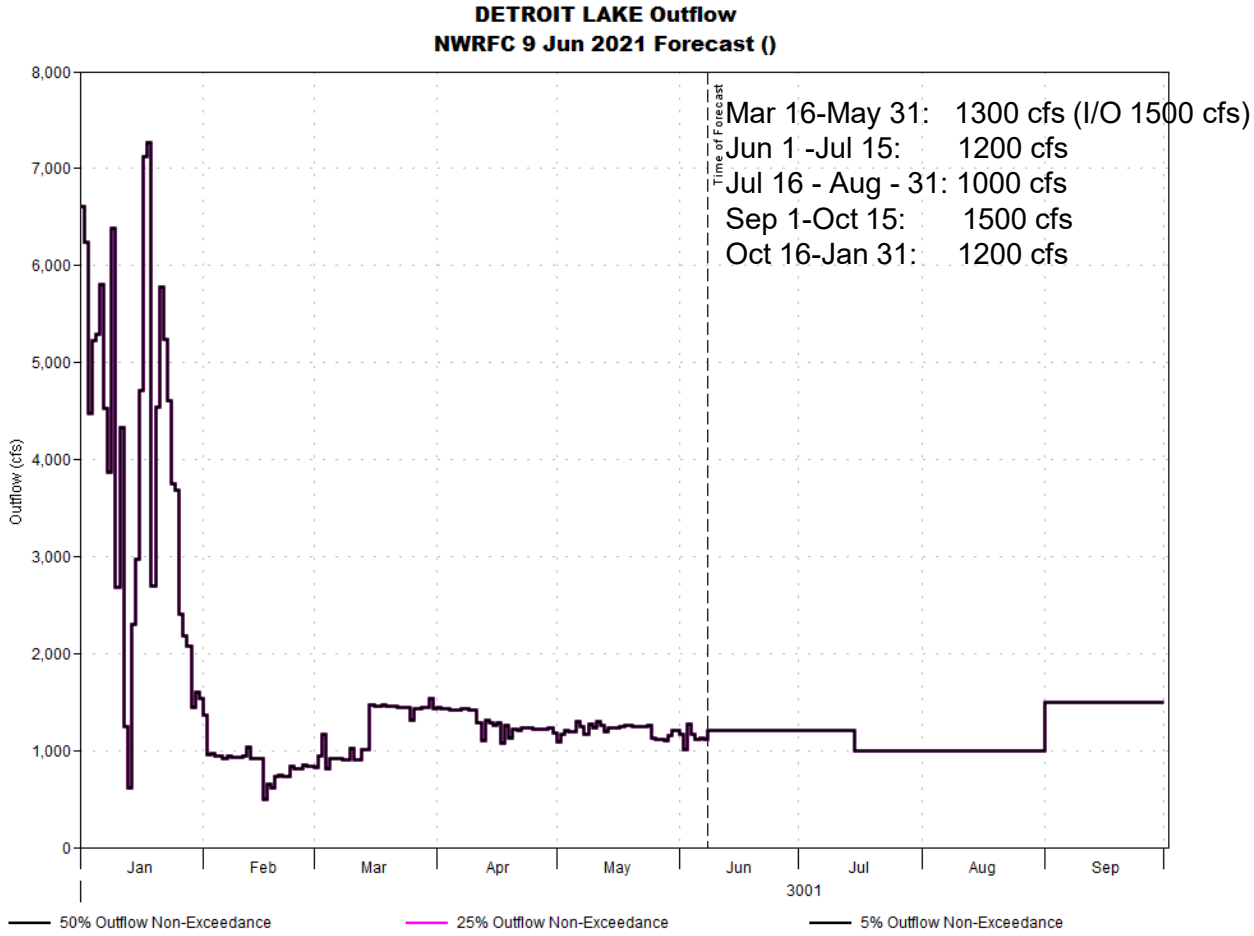




1,000 cfs 16 May – 15 June (I/O BiOp 1,100 cfs).
1,100 cfs 16 June – 31 July (fish weir in operation for warm surface water spill, 300 cfs > BiOp).
800 cfs 1 Aug – 31 Aug (BiOp).
1,100 cfs 1 Sept – 15 Oct (I/O BiOp 1,500 cfs).

DETROIT





Mar 16-May 31: 1300 cfs (I/O 1500 cfs)
Jun 1 -Jul 15: 1200 cfs
Jul 16 - Aug - 31: 1000 cfs
Sep 1-Oct 15: 1500 cfs
Oct 16-Jan 31: 1200 cfs

Water Supply Availability & Drought Readiness

June 16, 2021

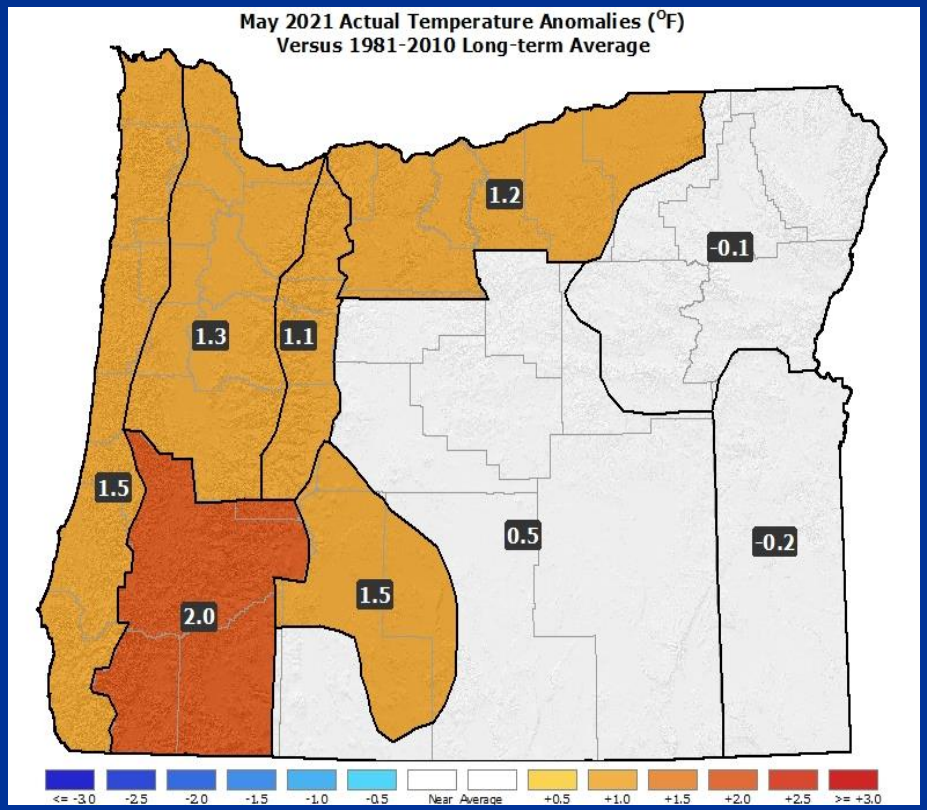
Contact: Pete Parsons, Lead ODF Meteorologist
503-945-7448 or peter.g.j.parsons@oregon.gov

P. Parsons

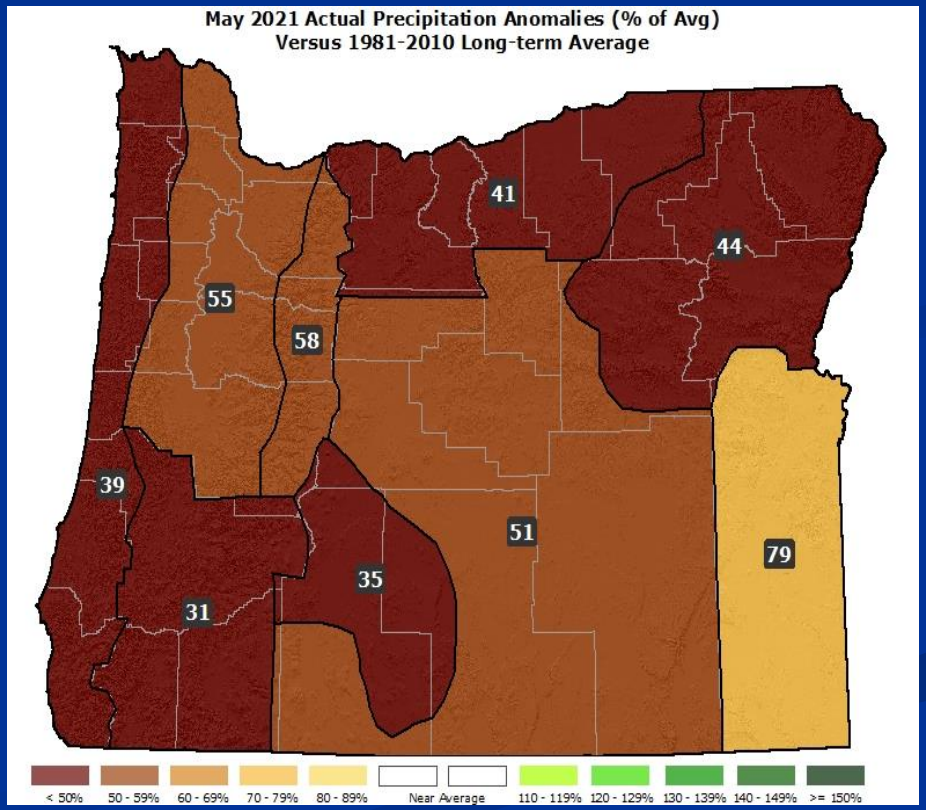
May 2021

Actual Departures From Average

Temperatures



Precipitation

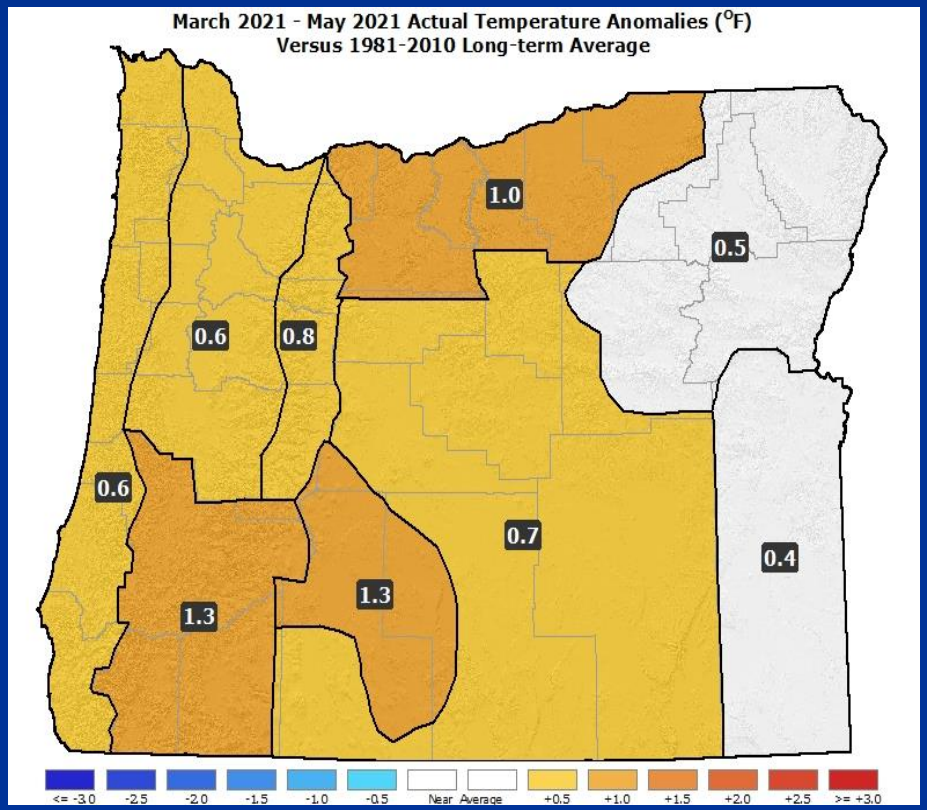


Data courtesy of the National Centers for Environmental Information (NCEI)

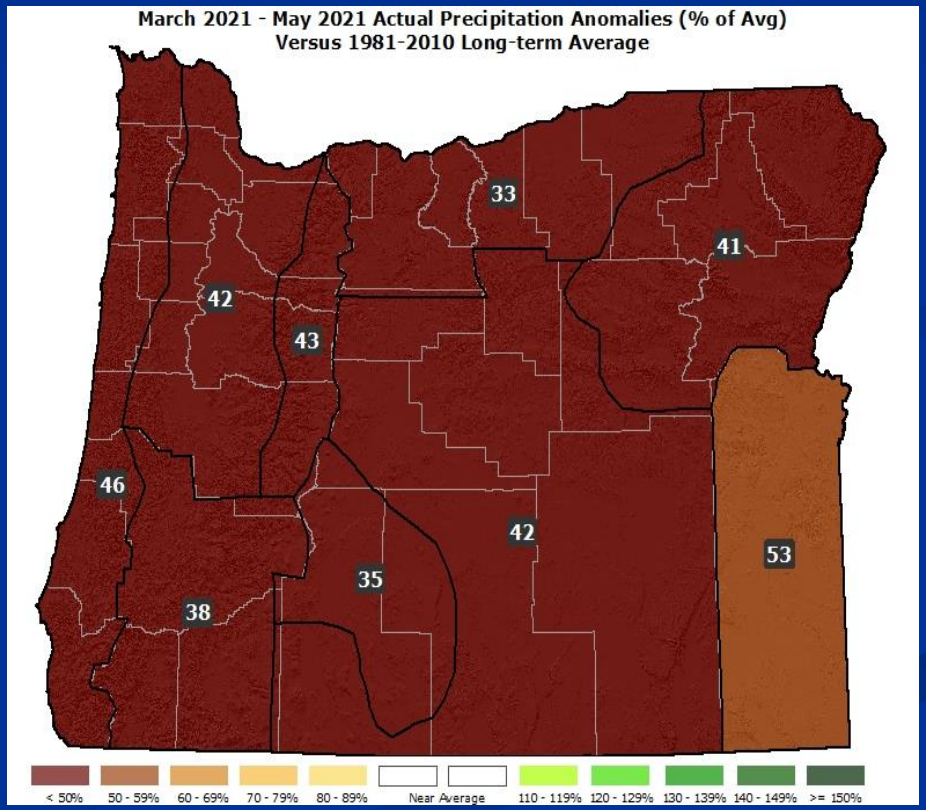
March – May 2021

Actual Departures From Average

Temperatures



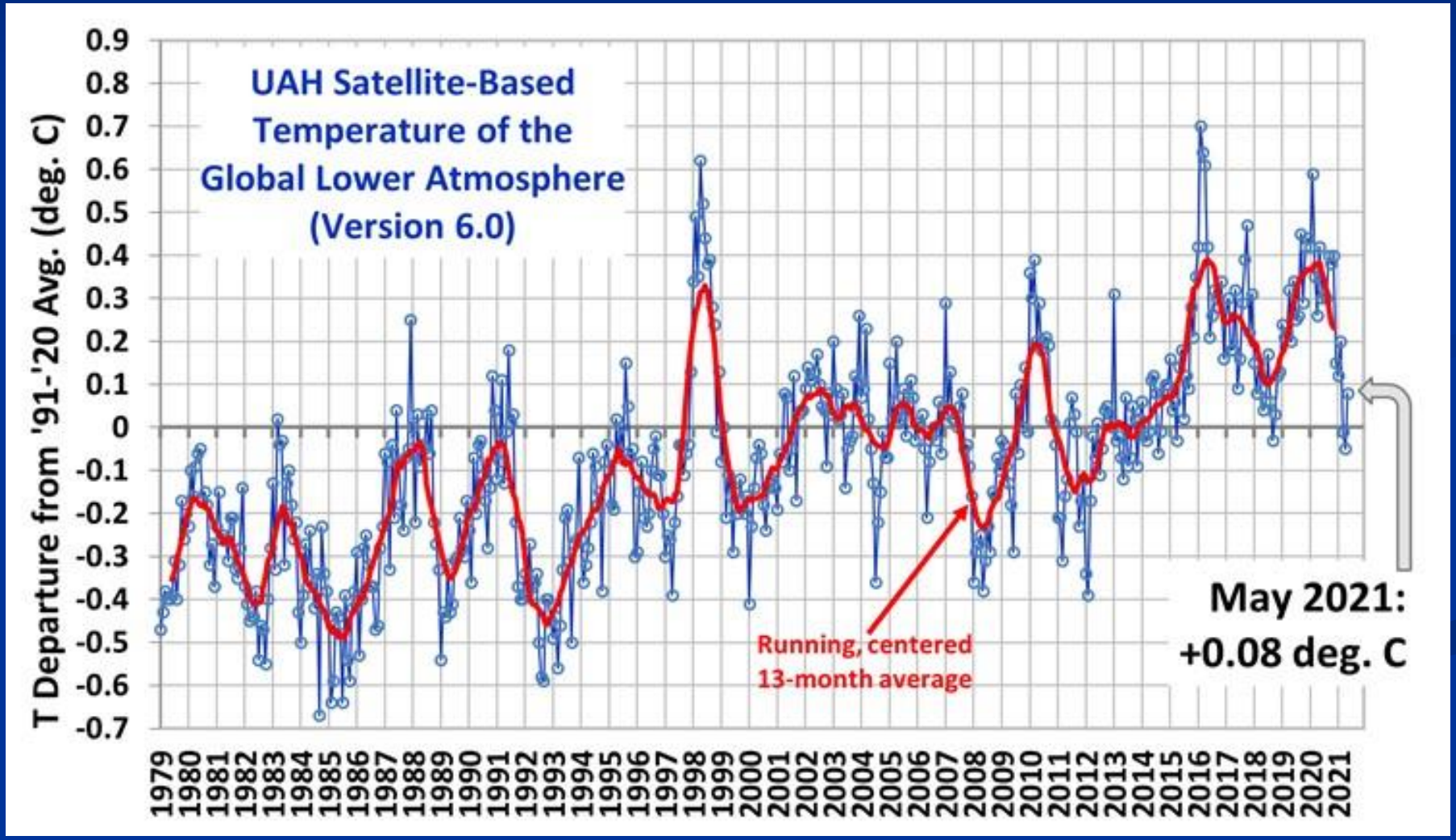
Precipitation



Data courtesy of the National Centers for Environmental Information (NCEI)

May 2021

La Niña Drops Global Temperature (short-term drop…warming trend still intact)



Recent Atmospheric River Event

Drops Significant Fire Potential (short-term event)

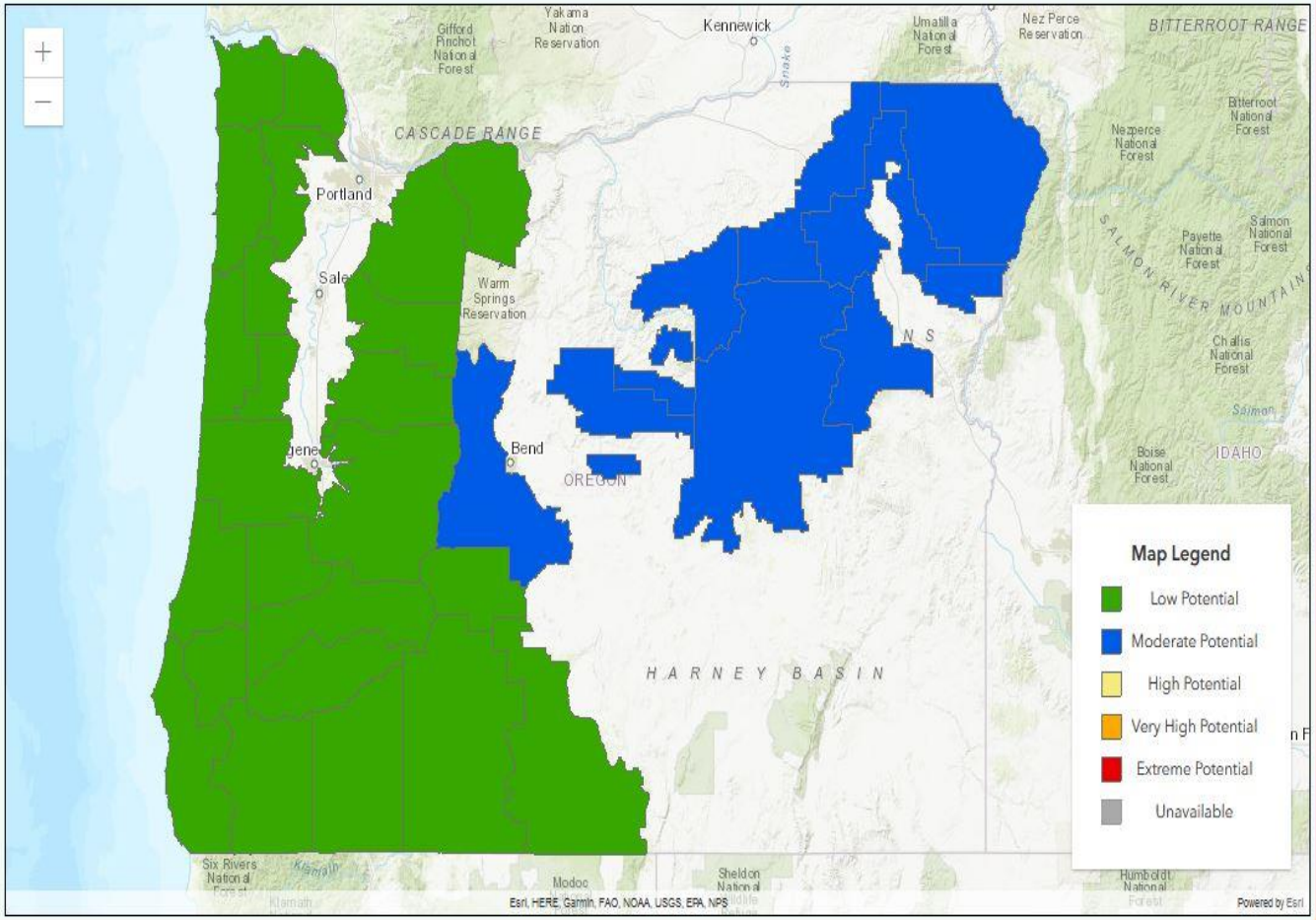
ODF Significant Fire Potential

Monday, June 14, 2021
Indices for 2100 UTC (1300 PST, 1400 PDT)

The ODF Significant Fire Potential Map displays ODF fire business thresholds indicating the potential for significant fires costing more than $25K to occur. The map is not an adjective class rating or Fire Danger map, or a Regulated Use map. For Fire Danger maps try USFS WFAS Observed and Forecasted Fire Danger map products. For ODF Regulated Use and Industrial Fire Precaution Levels, please see the ODF Statewide Regulated Use Map.

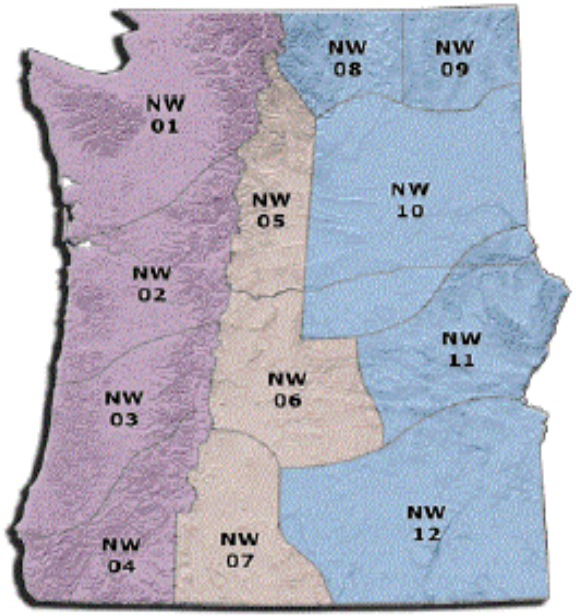
- FDRA - Fuel Moisture & NFDRS Indices
- FDRA - Fuel Moisture & NFDRS Graphs
- Ref SIGS & Stns - Fuel Moisture & NFDRS Indices
- Oregon NFDRS Indices -Selected RAWS
- Regional NFDRS Indices Forecast Graphs
- NFDRS Indices Forecasts -Selected RAWS
- NFDRS Daily Archive Listing
- Map Archive
- 100 Hr Fuel Moisture Map
- 1000 Hr Fuel Moisture Map
- Build Weighted Average URL

Map Explanation | Map Calculation | Weather Links | ODF Website



Pacific Northwest
7 Day Significant Fire Potential

Tuesday, 6/15/2021



Predictive Service Areas	ytd	Today	Wed	Thu	Fri	Sat	Sun	Mon
NW01								
NW02								
NW03								
NW04								
NW05								
NW06								
NW07								
NW08								
NW09								
NW10								
NW11								
NW12								↯

Fire Weather: The upper low that has been over the eastern Pacific the last few days will move onshore today, bringing its final round of showers and thunderstorms along with increasing winds through Cascade gaps and to the east. Wednesday high pressure will build over the region starting a warm, dry, but calm period which will last at least into the weekend. A weak system could result in a bit of cooling and a maybe a chance of showers along the Canadian border over the weekend, but the warm weather should resume next week. Some weather models show thunderstorm chances returning early next week, but still a lot of uncertainty in that part of the forecast.

Fire Potential: Significant fire potential remains reduced due to the lower fire danger recorded over the last week. Breezy winds could spread fire in fine fuels in the east side basins this afternoon, although recent moisture should temper that risk. Recent lightning and potential for more this afternoon elevates the risk of ignitions and holdovers that may not become apparent until warmer and drier conditions set up in the latter half of the week. If thunderstorms occur early next week, significant fire potential will become elevated.

Preparedness Level:

Northwest: 1
National: 3

- Eric Wise

Legend

Fire Environment (FEN) 4 levels

Minimal - The Overall Fire Environment suggests a very low risk for Large fires (**less than 1% chance**)

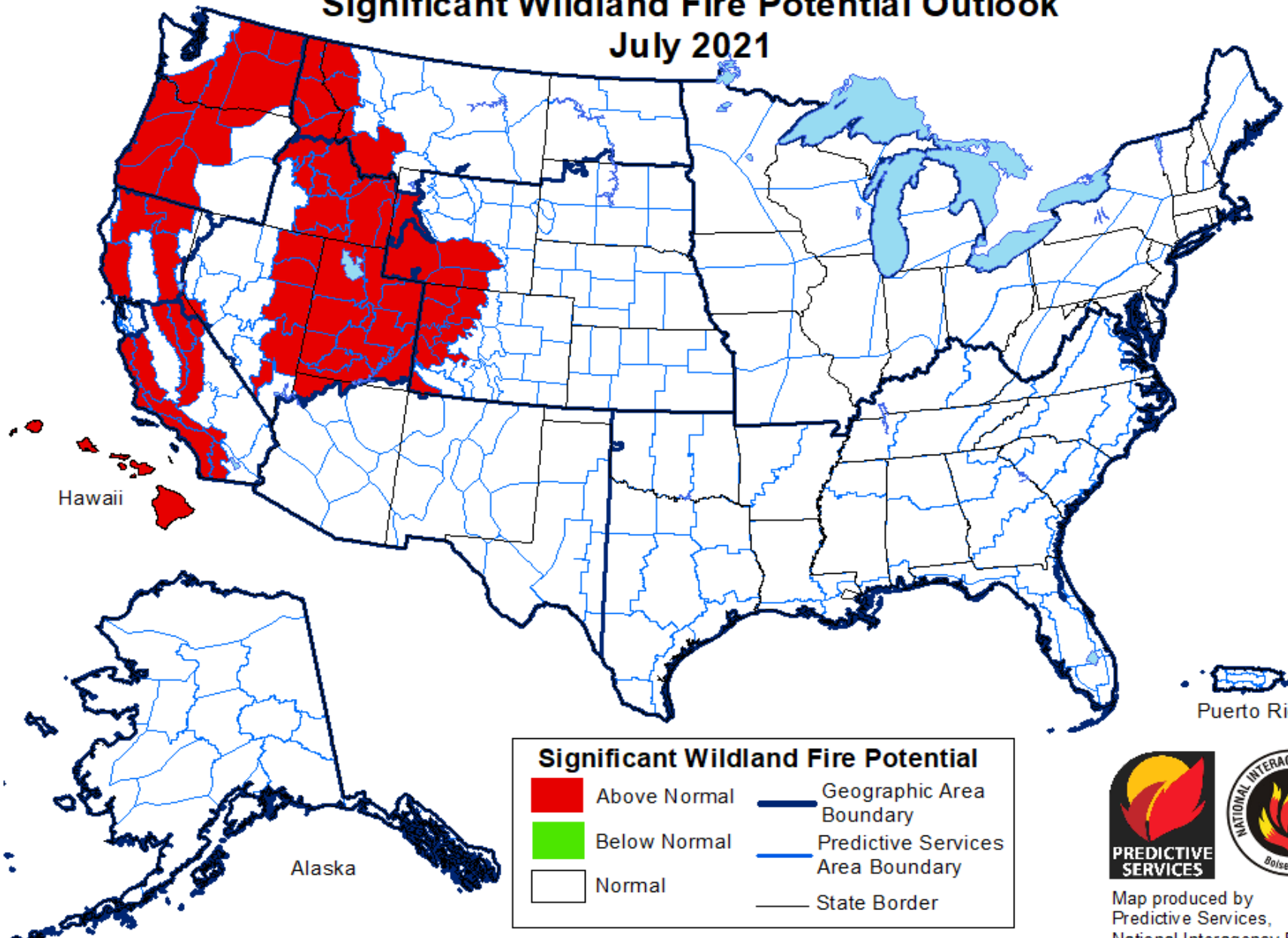
Normal - The Overall Fire Environment suggests a normal risk for large fires (**1 - 4% chance**)

Elevated - The Overall Fire Environment suggests a moderately high risk for large fires (**5 - 19% chance**)

High Risk **The risk for large fire(s) is very high (≥ 20%)**
Triggers: 1. ↯ (Significant Lightning)
2. BEN (Critical Burn Environment)

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

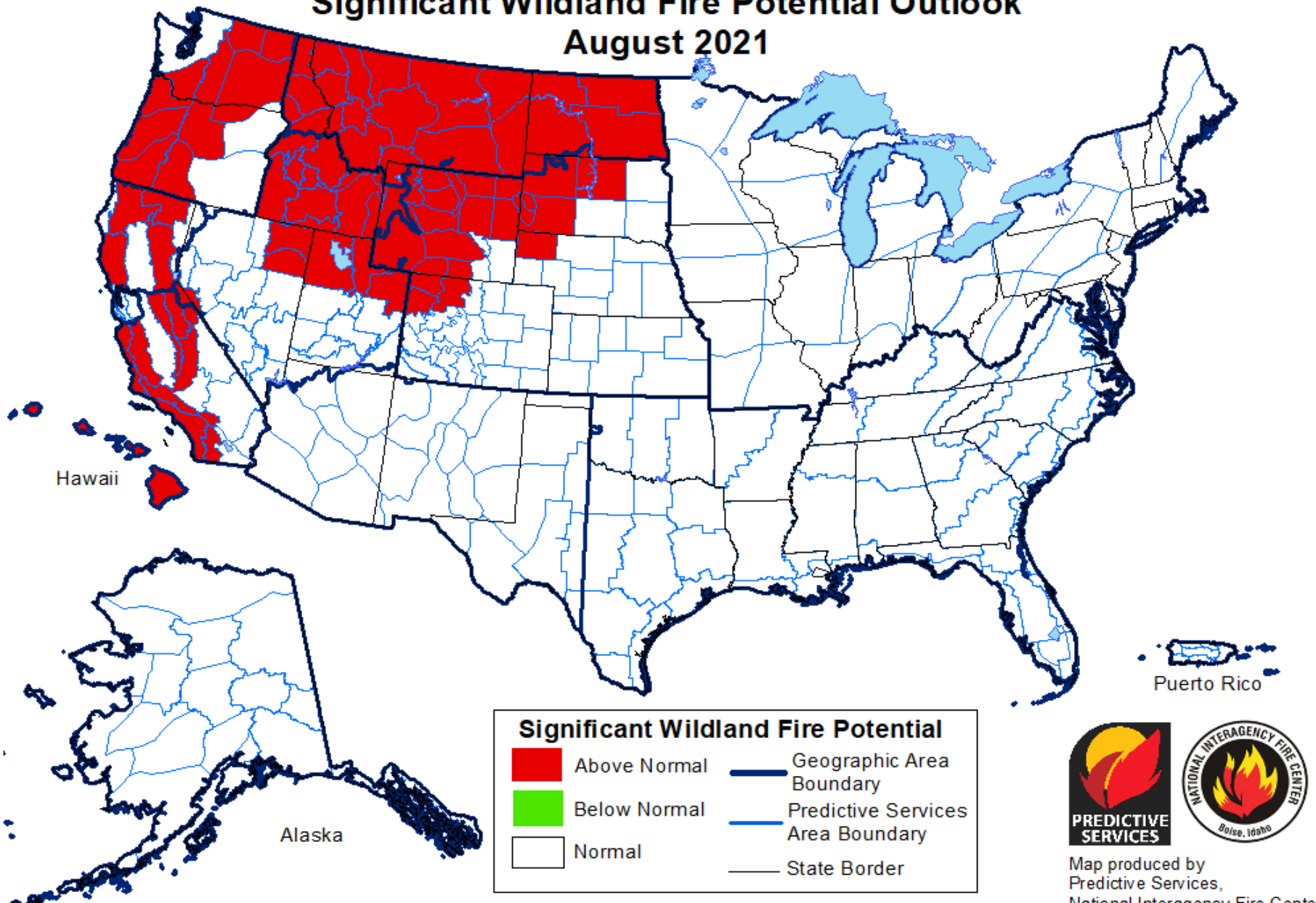
Significant Wildland Fire Potential Outlook
July 2021



Above normal significant wildland fire potential indicates a greater than usual likelihood that significant wildland fires will occur.
Significant wildland fires should be expected at typical times and intervals during normal significant wildland fire potential conditions.
Significant wildland fires are still possible but less likely than usual during forecasted below normal periods.

Map produced by
Predictive Services,
National Interagency Fire Center
Boise, Idaho
Issued June 1, 2021
Next issuance July 1, 2021

Significant Wildland Fire Potential Outlook
August 2021



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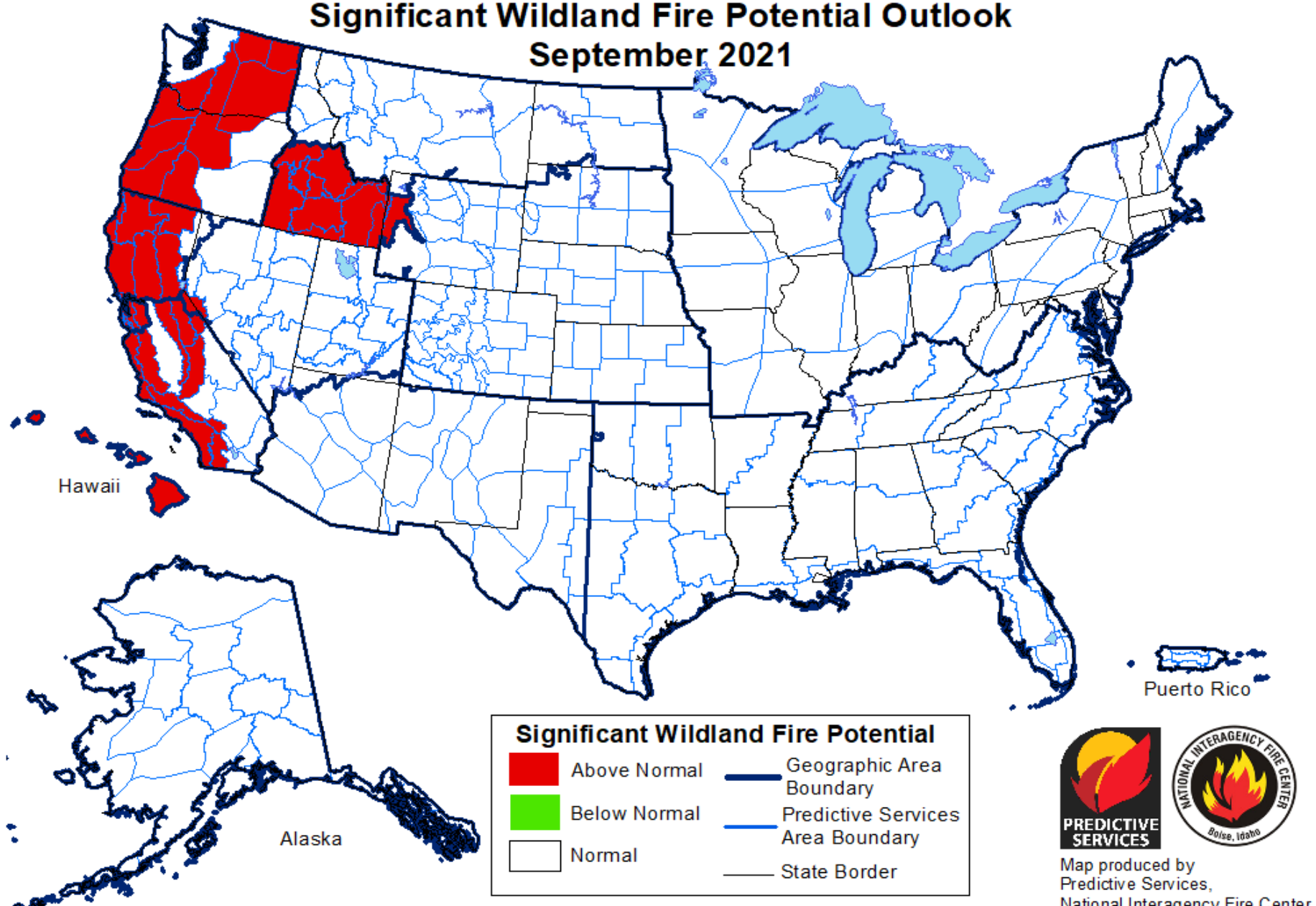
Significant Wildland Fire Potential Outlook
September 2021



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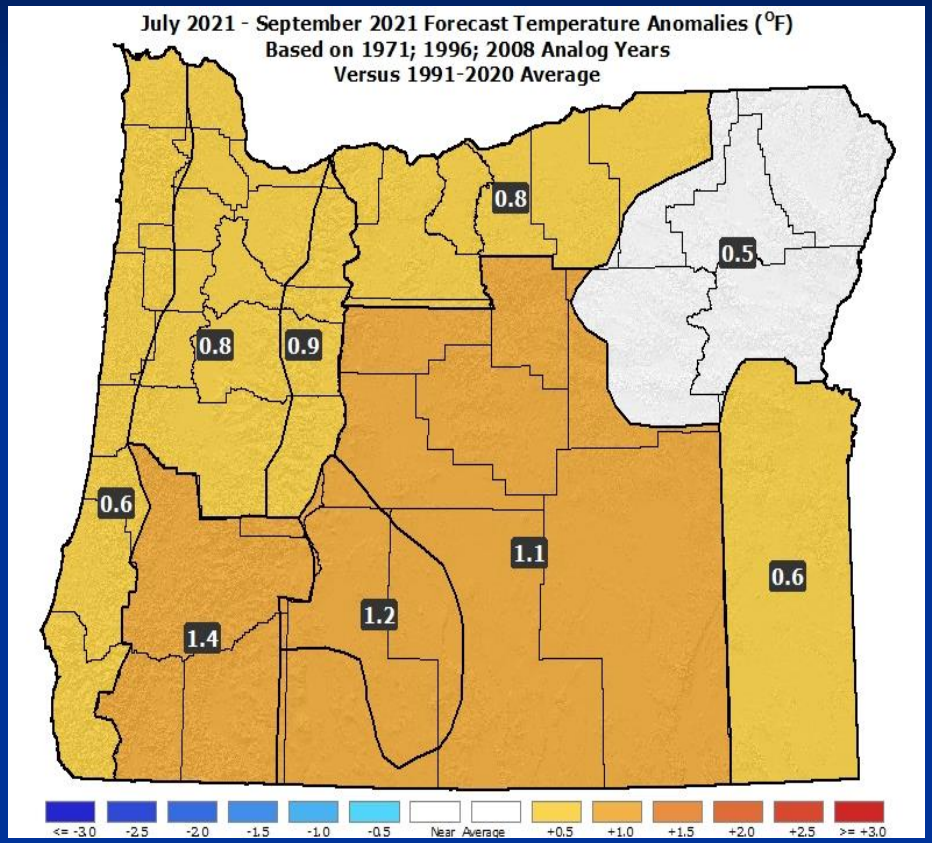
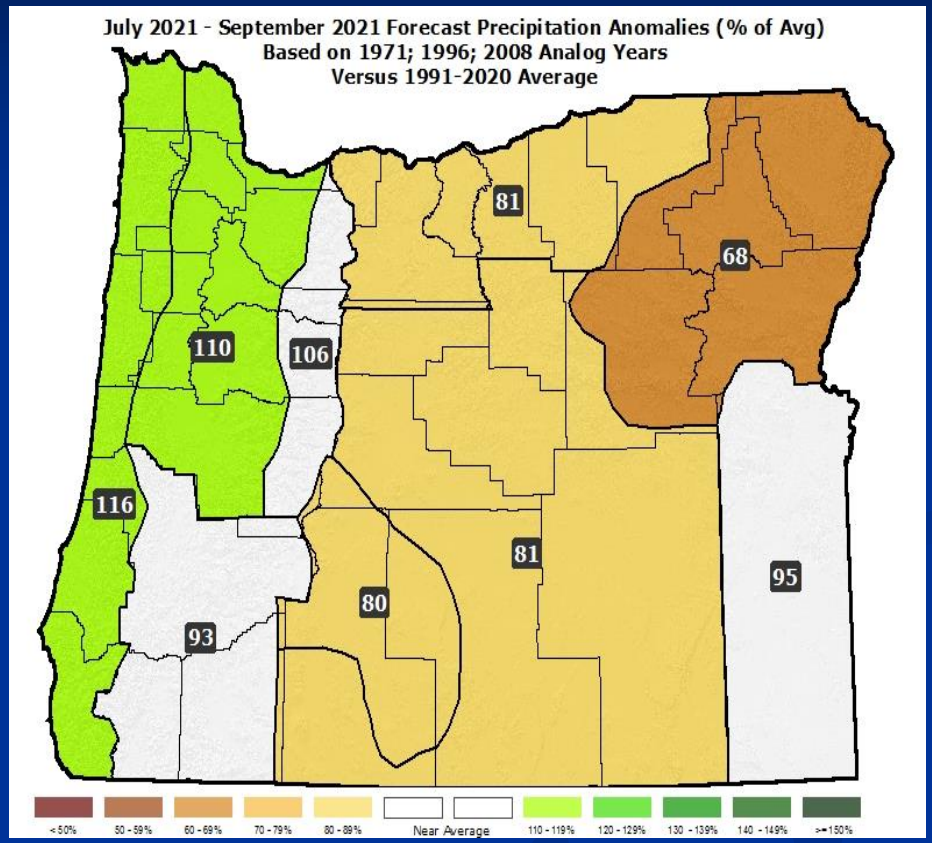
Pete's July – September 2021 Forecast

Temperatures



Precipitation



- Above-average temperatures in July and August, with some cooling, relative to average, in September.
- Oregon's drought and wildfire potential likely to worsen, before autumn rains can begin to bring relief late in the period.

Water Supply Availability & Drought Readiness

June 16, 2021

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503-945-7448 or peter.gj.parsons@oregon.gov

Oregon Department of Agriculture (ODA) - Oregon Department of Forestry (ODF).
Production support: Diana Walker, Jacob Cruser; Andy Zimmerman; Julie Waters

P. Parsons