

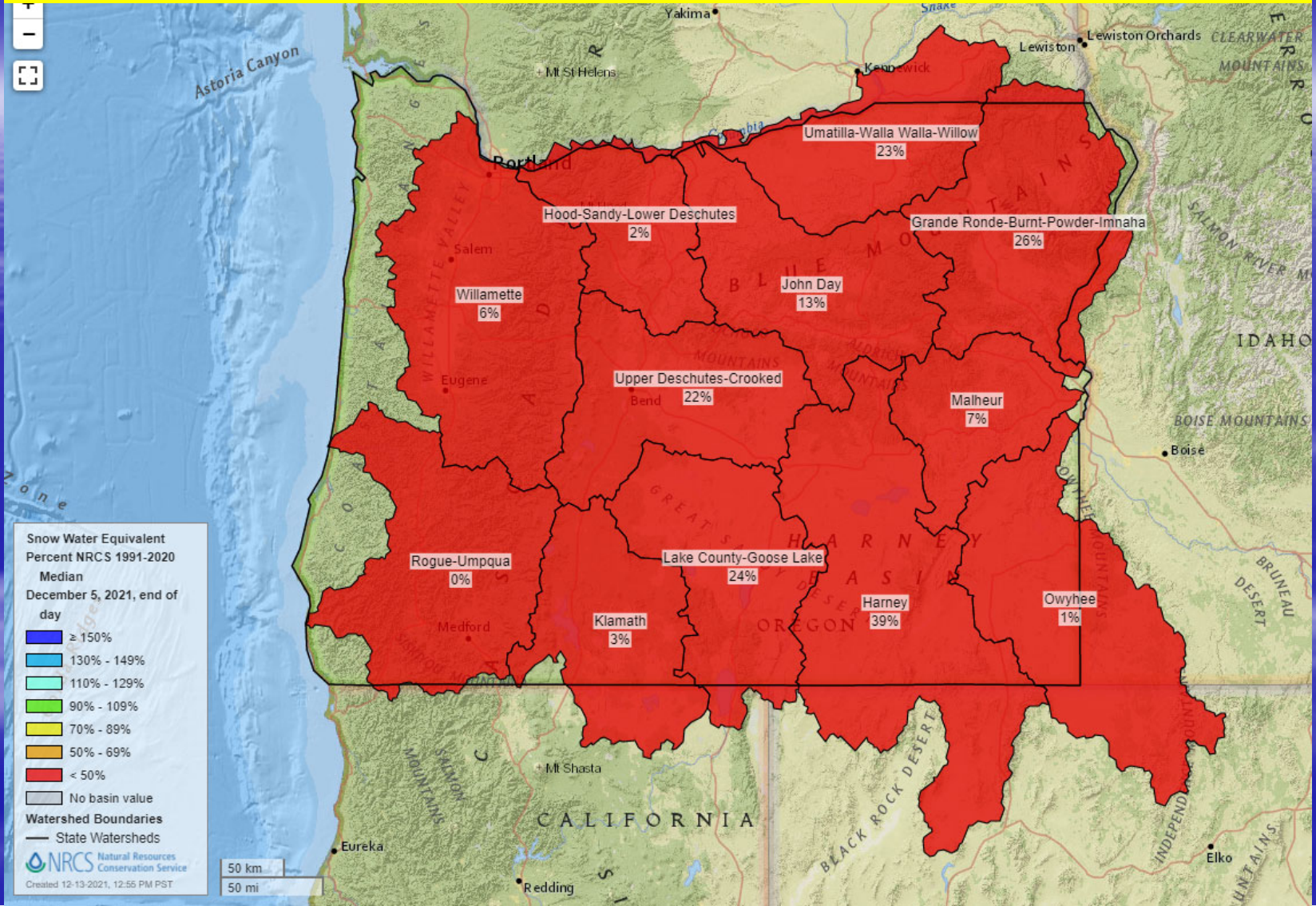
Oregon Water Supply Availability Committee
January 12, 2022



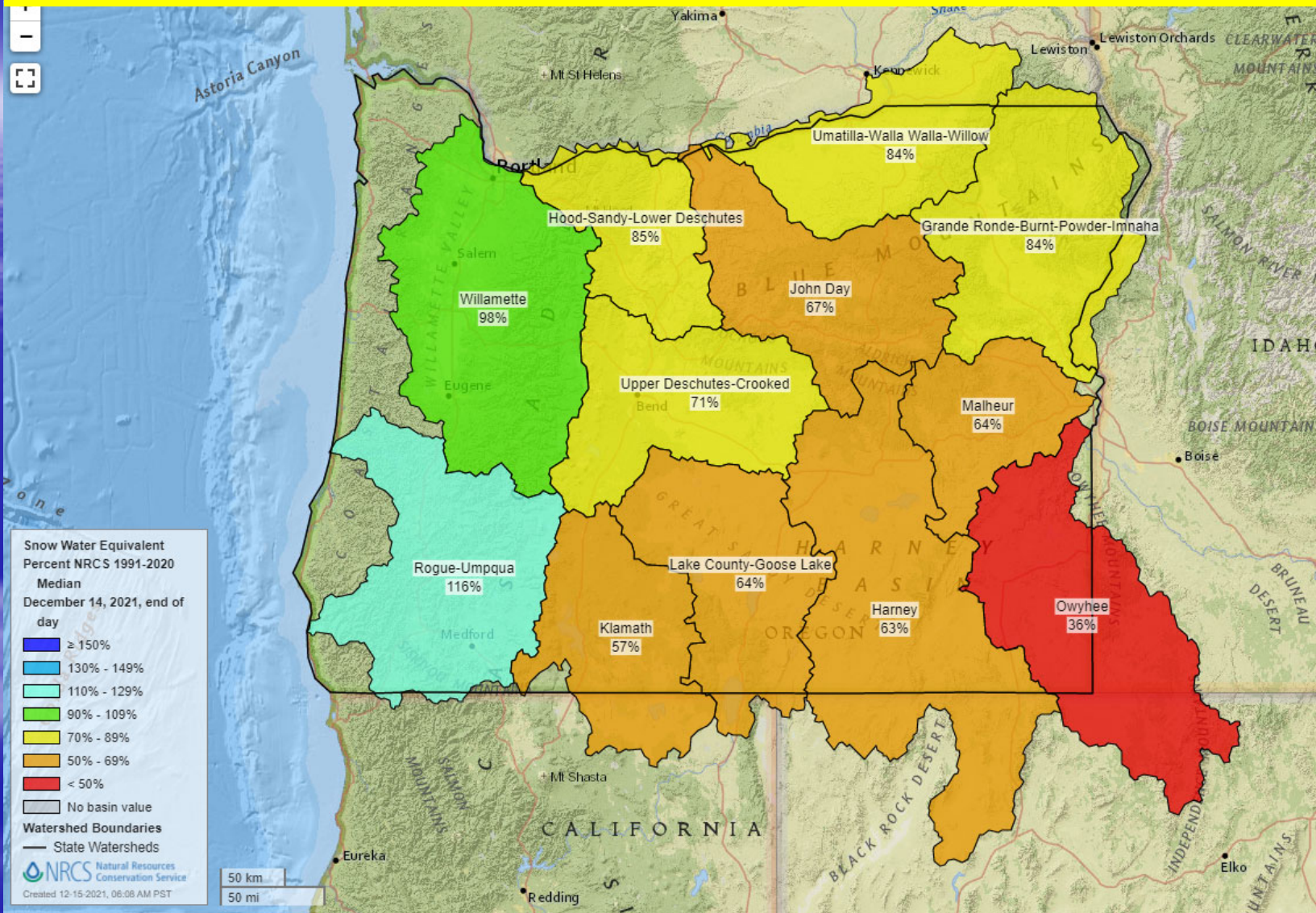
Mt. Hood Test Site SNOTEL
December 15, 2020

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

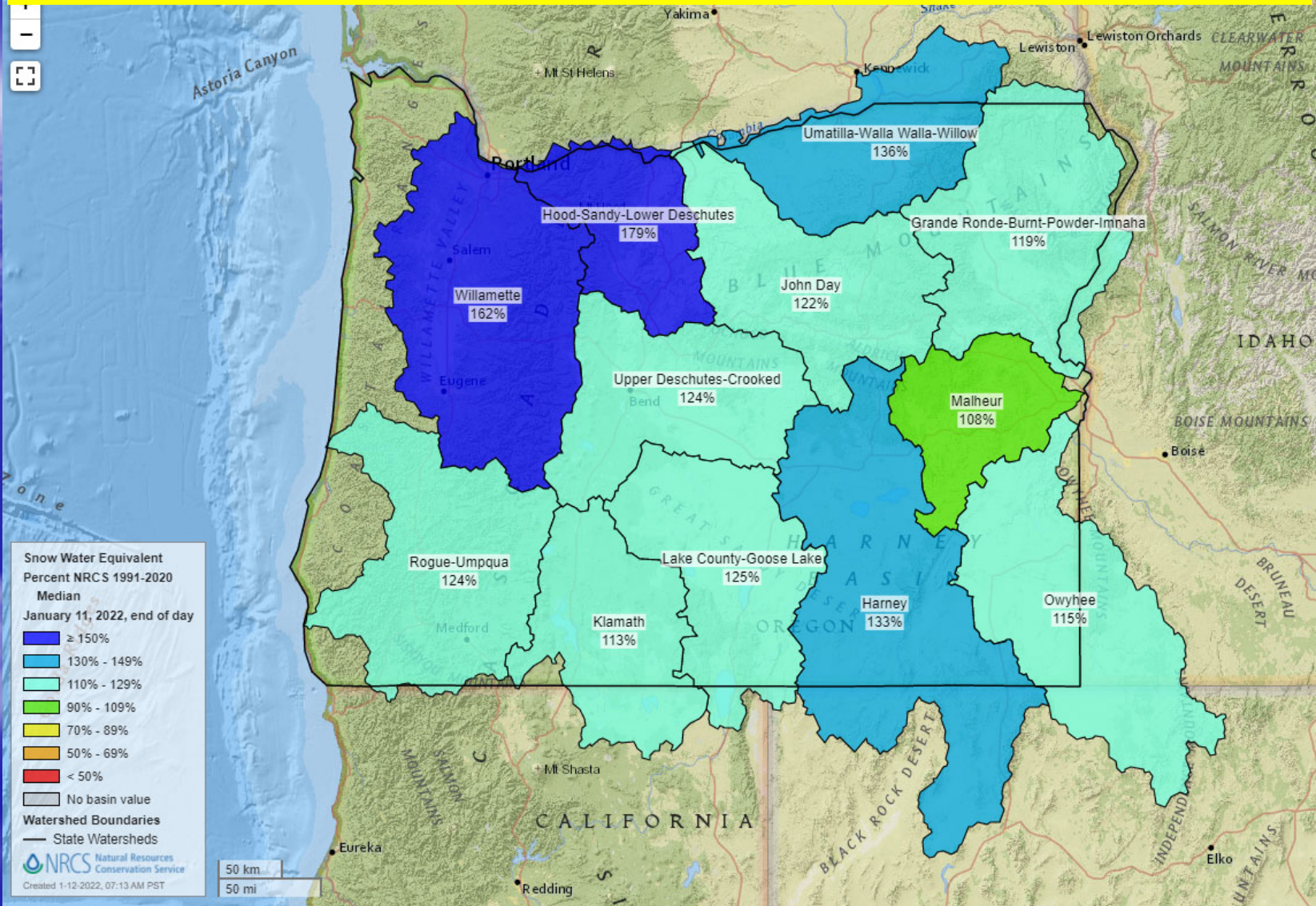
December 5, 2021, Statewide SNOTEL Snow Water Equivalent was 13% of 1991-2020 median



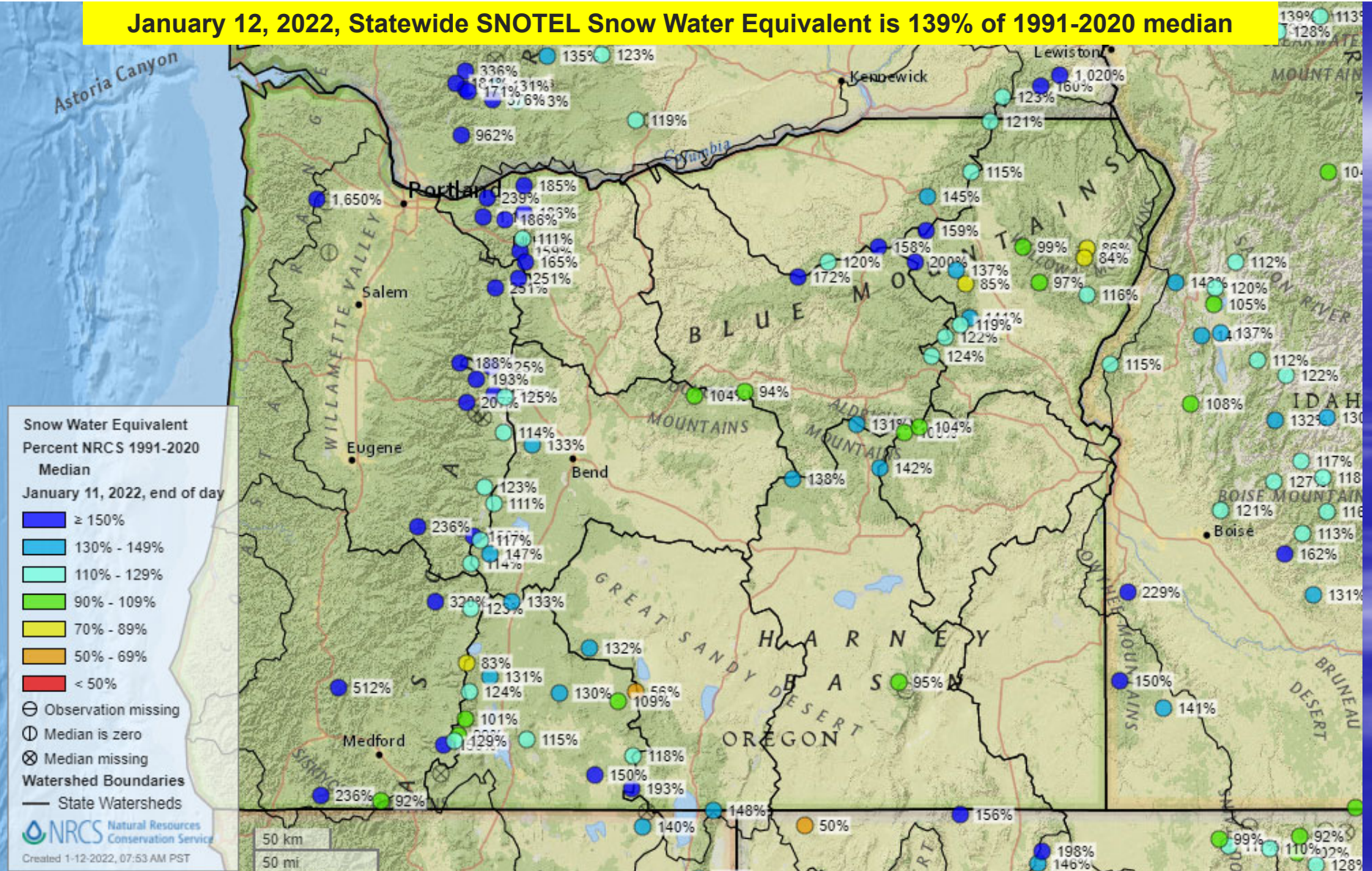
December 14, 2021, Statewide SNOTEL Snow Water Equivalent was 80% of 1991-2020 median



January 12, 2022, Statewide SNOTEL Snow Water Equivalent is 139% of 1991-2020 median

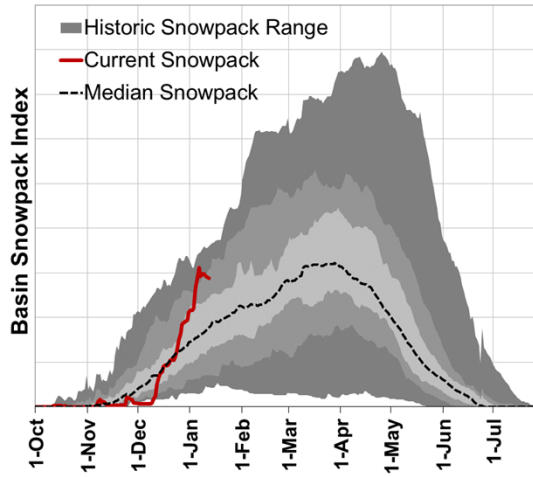


January 12, 2022, Statewide SNOTEL Snow Water Equivalent is 139% of 1991-2020 median

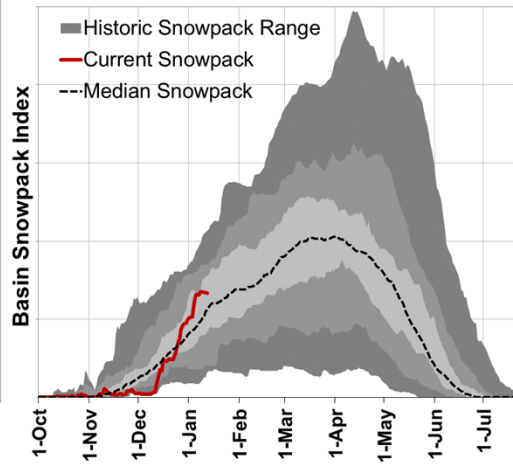


OREGON SNOWPACK GRAPHS – January 12, 2022

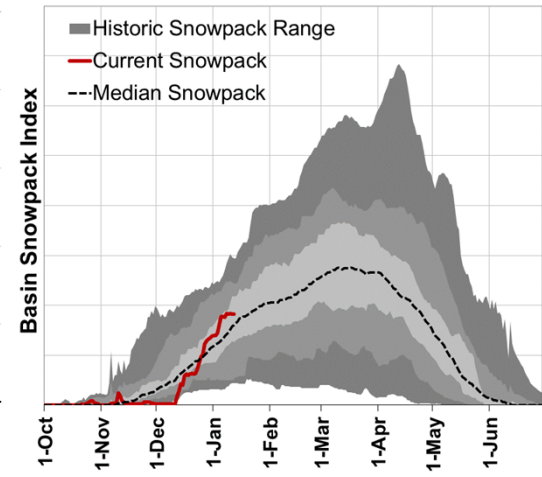
Willamette



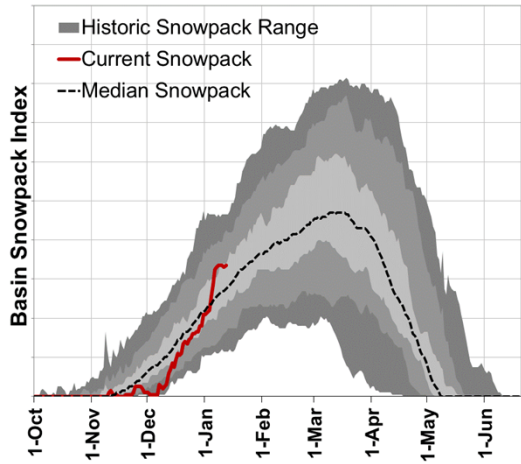
Rogue-Umpqua



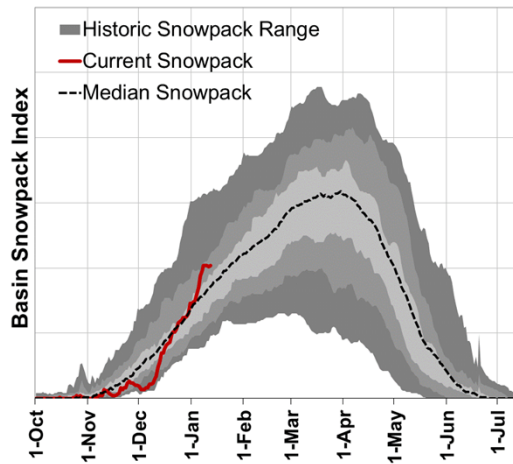
Klamath



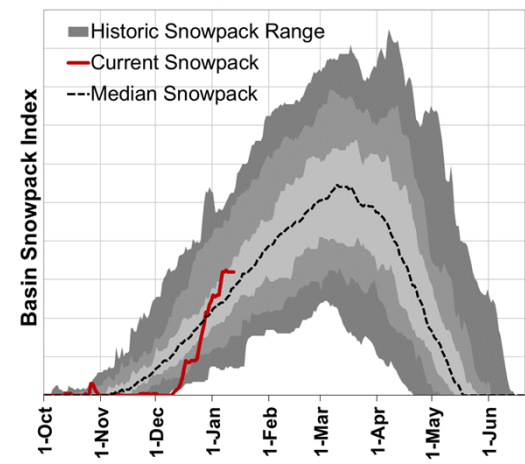
John Day



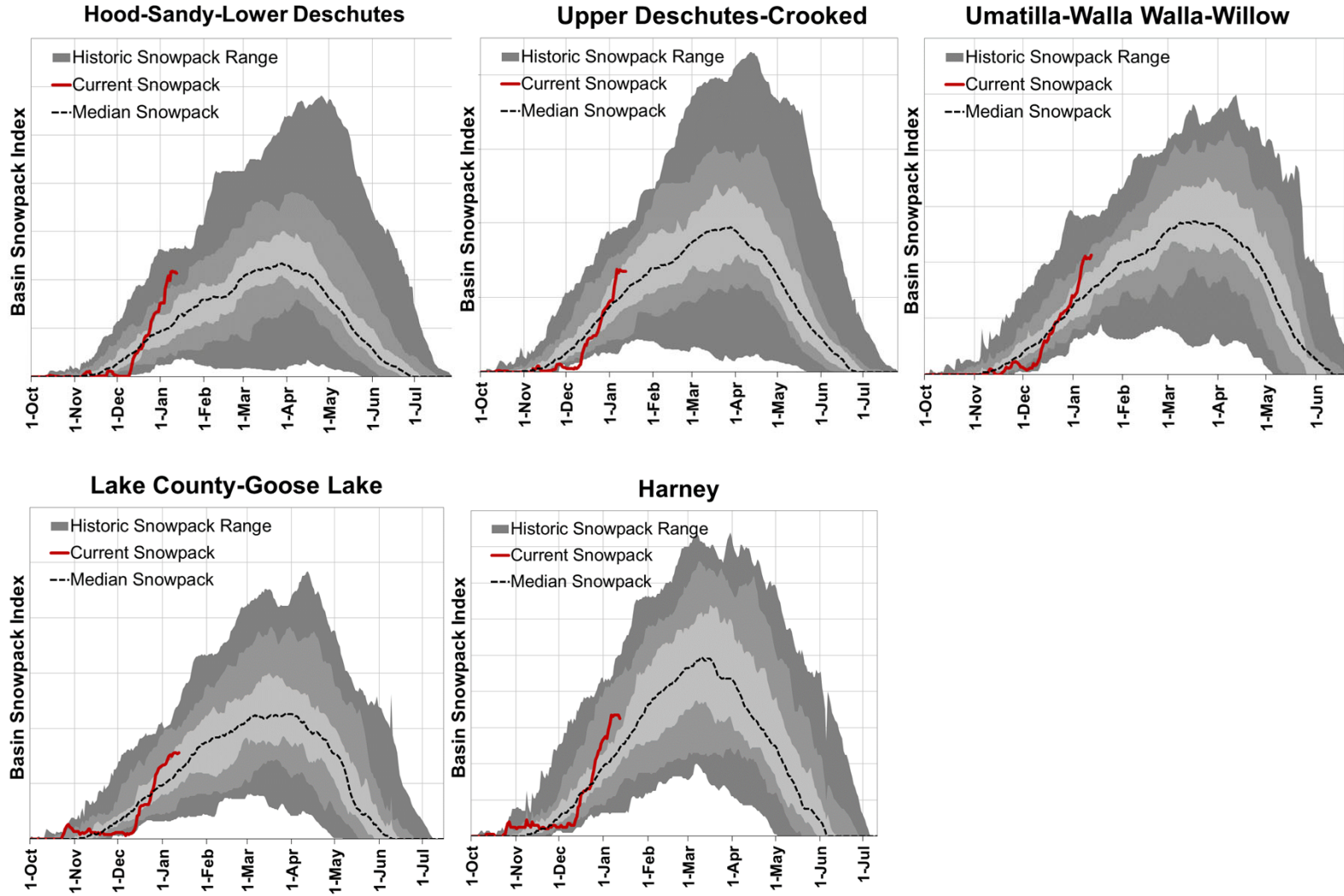
Grande Ronde-Burnt-Powder-Imnaha



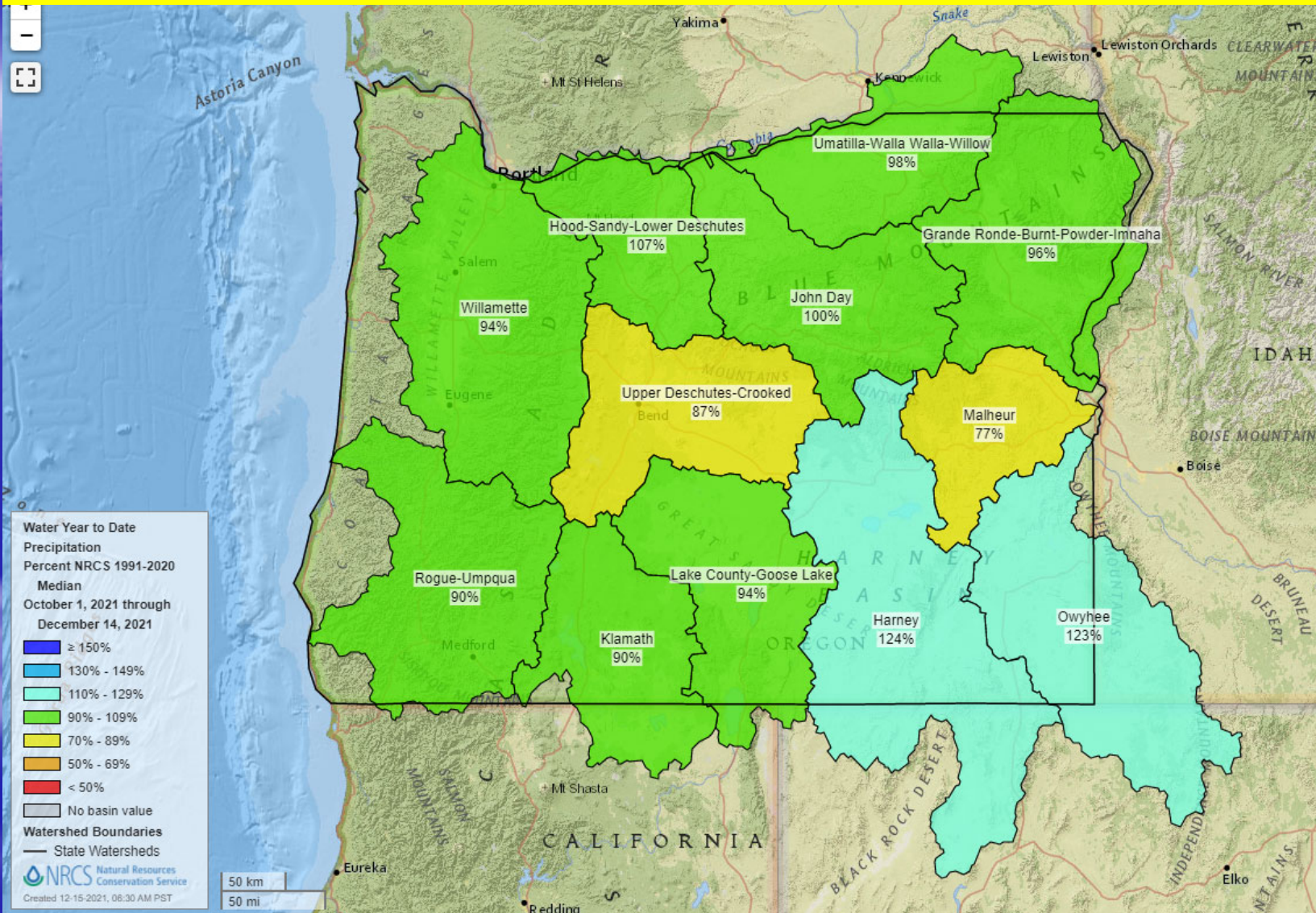
Owyhee-Malheur



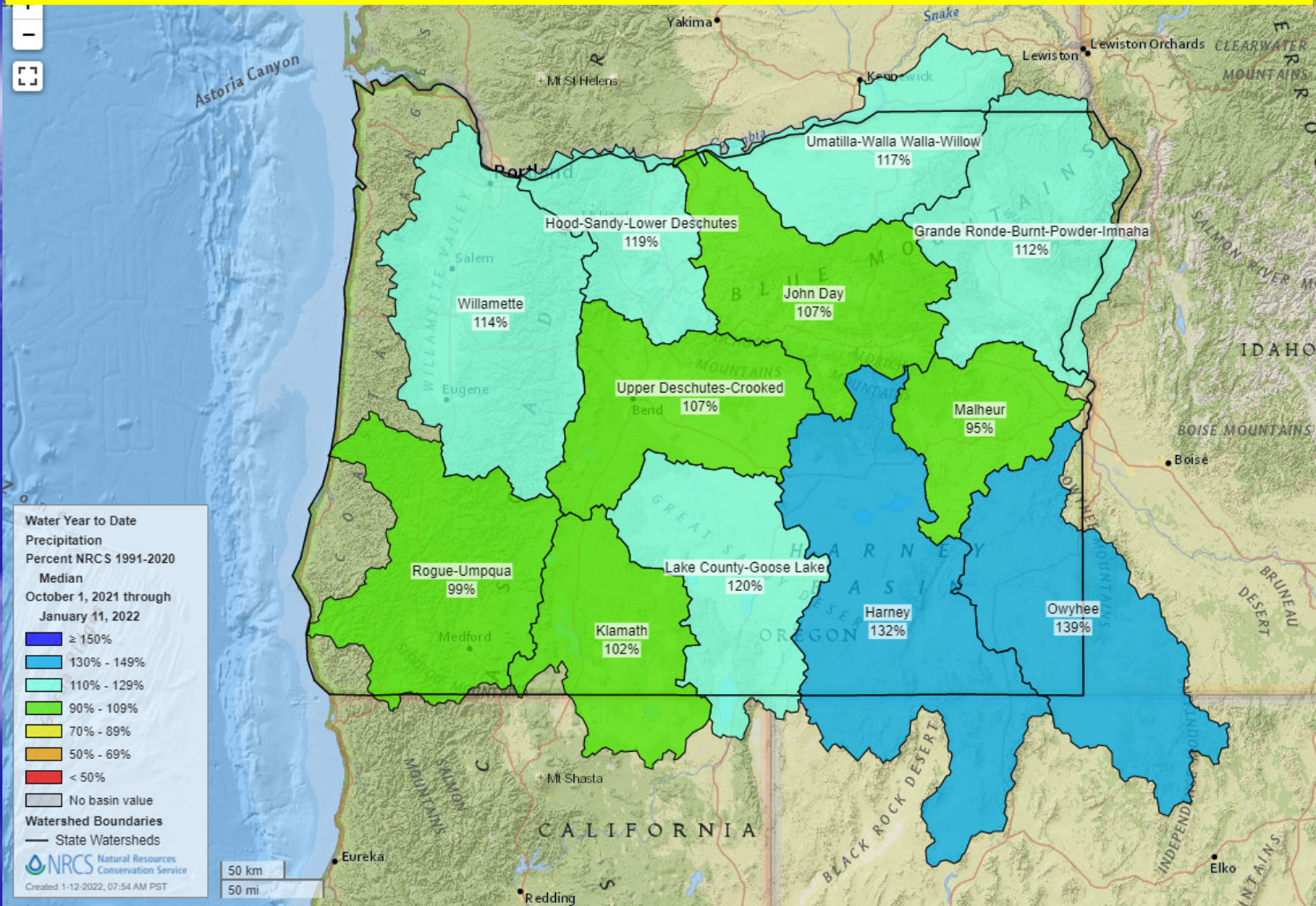
OREGON SNOWPACK GRAPHS – January 12, 2022



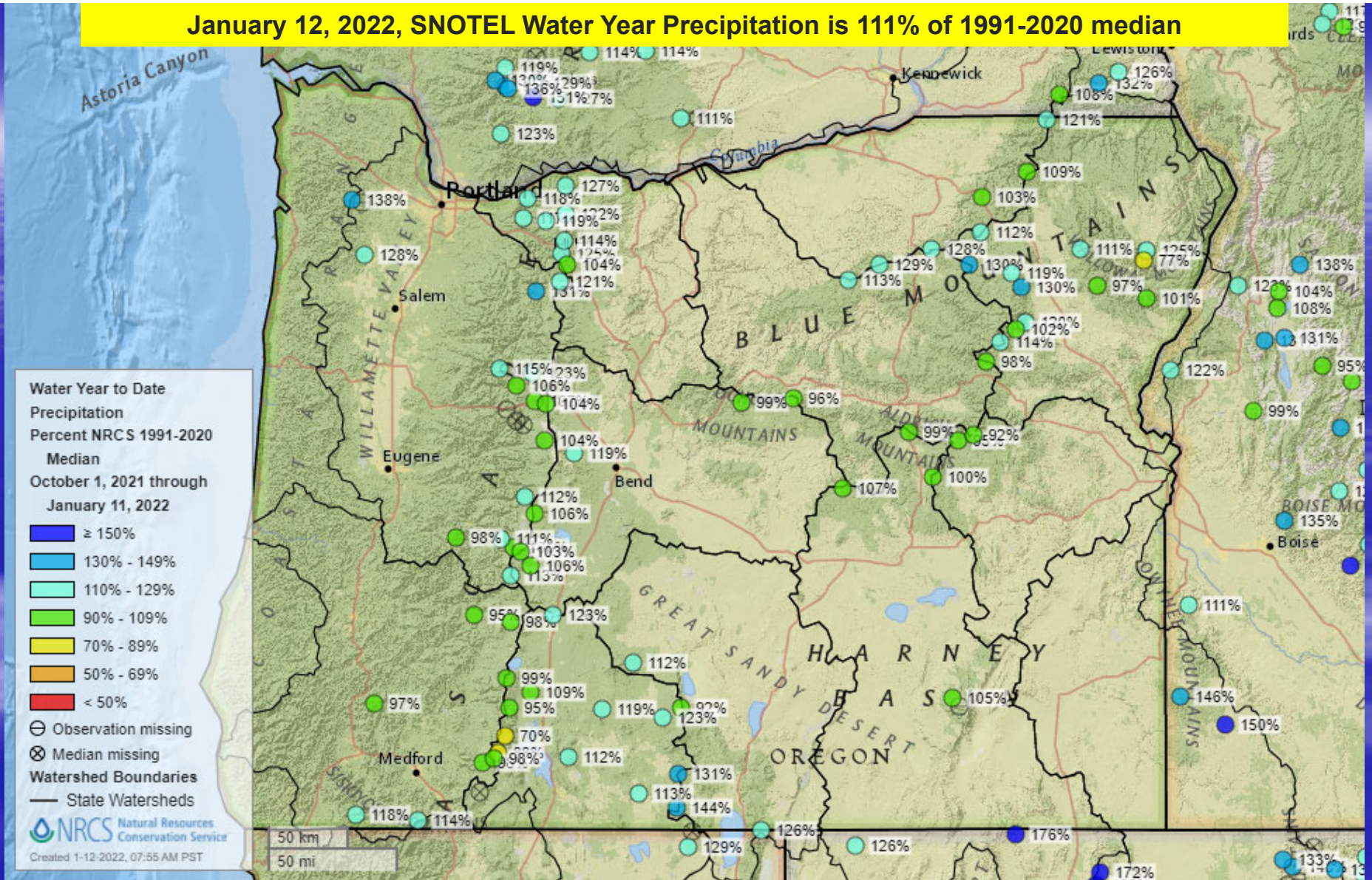
December 14, 2021, SNOTEL Water Year Precipitation was 96% of 1991-2020 median



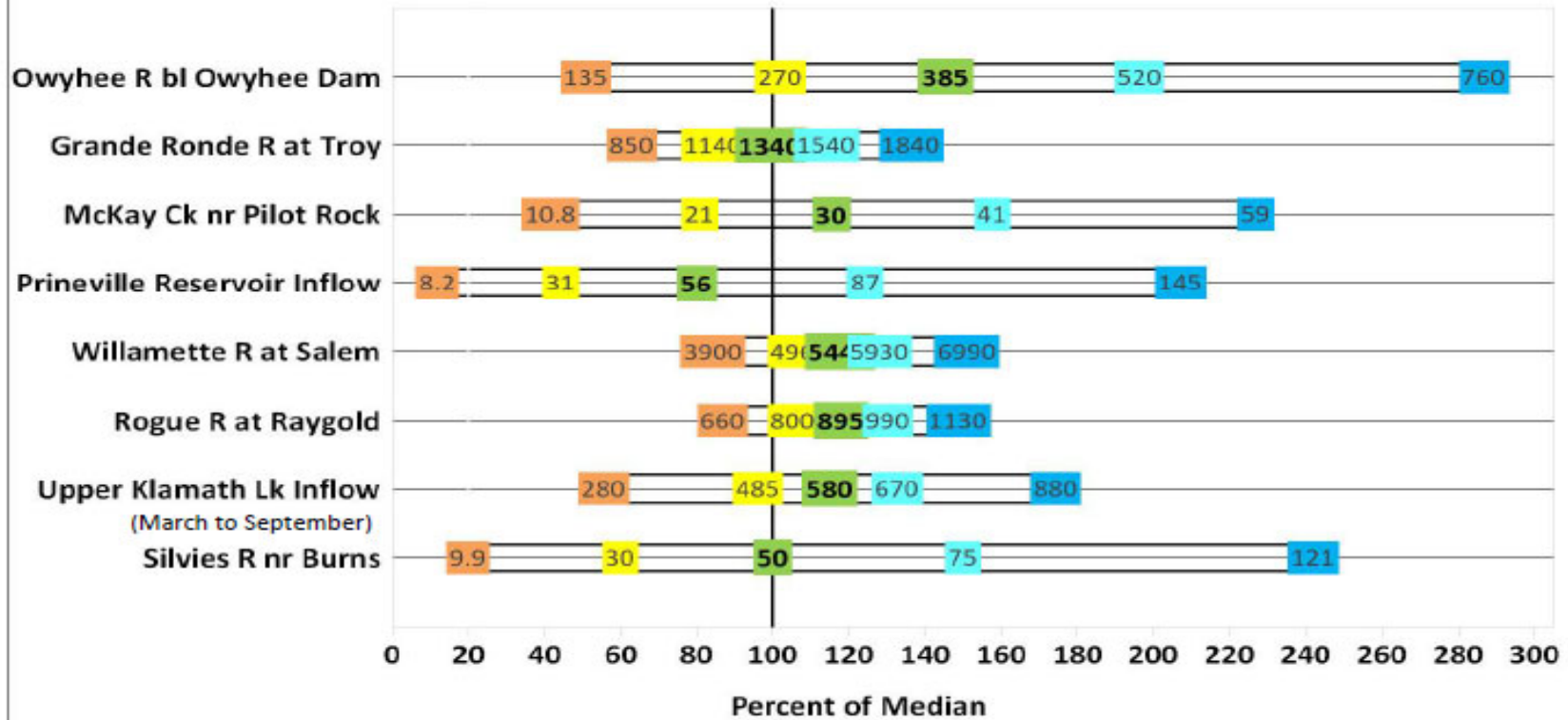
January 12, 2022, SNOTEL Water Year Precipitation is 111% of 1991-2020 median








January 12, 2022, SNOTEL Water Year Precipitation is 111% of 1991-2020 median

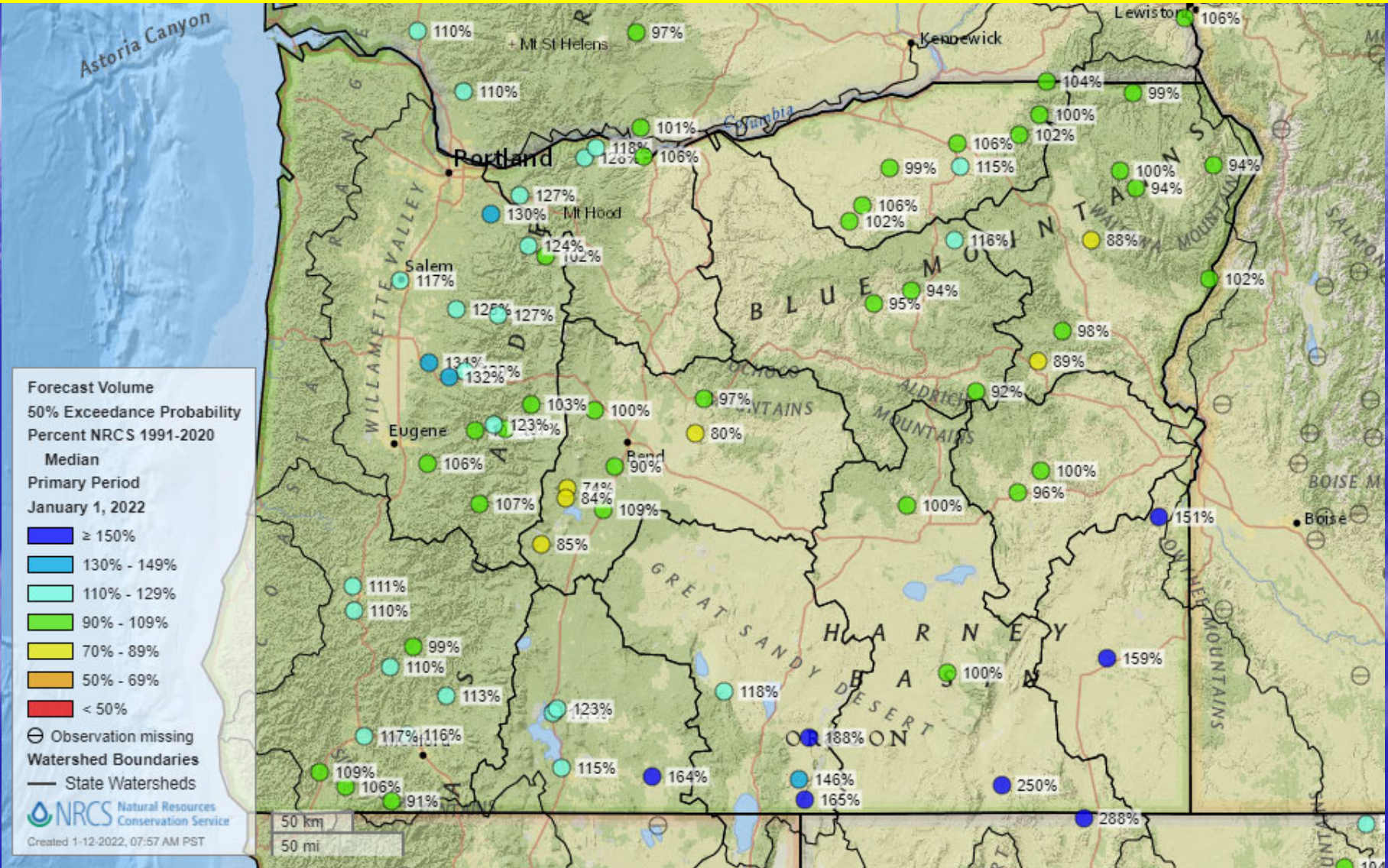


January 2022
Summary of Streamflow Forecasts across Oregon
 April through September Forecast Volumes at a Selection of Streamflow Points
 (Volumes listed in KAF)



Legend: ←-----Drier-----Future Conditions-----Wetter-----→				
 90% Exceedance Forecast (KAF)	 70% Exceedance Forecast (KAF)	 50% Exceedance Forecast (KAF)	 30% Exceedance Forecast (KAF)	 10% Exceedance Forecast (KAF)
There is a 90% chance that flows will exceed this volume.	There is a 70% chance that flows will exceed this volume.	There is a 50% chance that flows will exceed this volume.	There is a 30% chance that flows will exceed this volume.	There is a 10% chance that flows will exceed this volume.

January 1, 2022, Streamflow Volume Forecast April – September % of 1991-2020 Median 50% Exceedance Probability



Thank you

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

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotope, 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
January 12, 2022



Mt. Hood Test Site SNOTEL
December 15, 2020

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



January 2022 Update for Precipitation, Temperatures, and Hydrological Conditions

Andy Bryant
Service Hydrologist
NOAA/NWS Portland
Weather Forecast Office



Precipitation

Past 365 Days
Percent of Average

Switch Basemap

Reset View

Percent

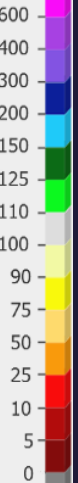


Esri, HERE, Garmin, FAO, NOAA, USGS, EPA, NPS



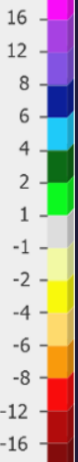
WY 2022 thus far % Normal

Percent



WY2022 thus far Dep from Normal

Inches



Precipitation Data as of Jan 11, 2022

water.weather.gov/precip/index.php

1/12/2022

weather.gov/portland & www.nwrfc.noaa.gov

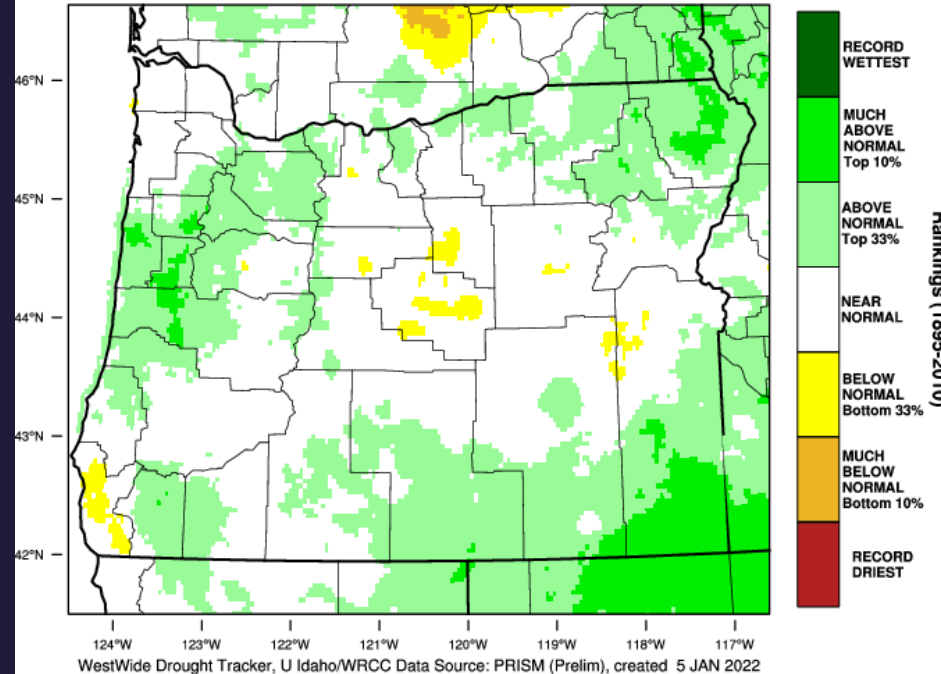
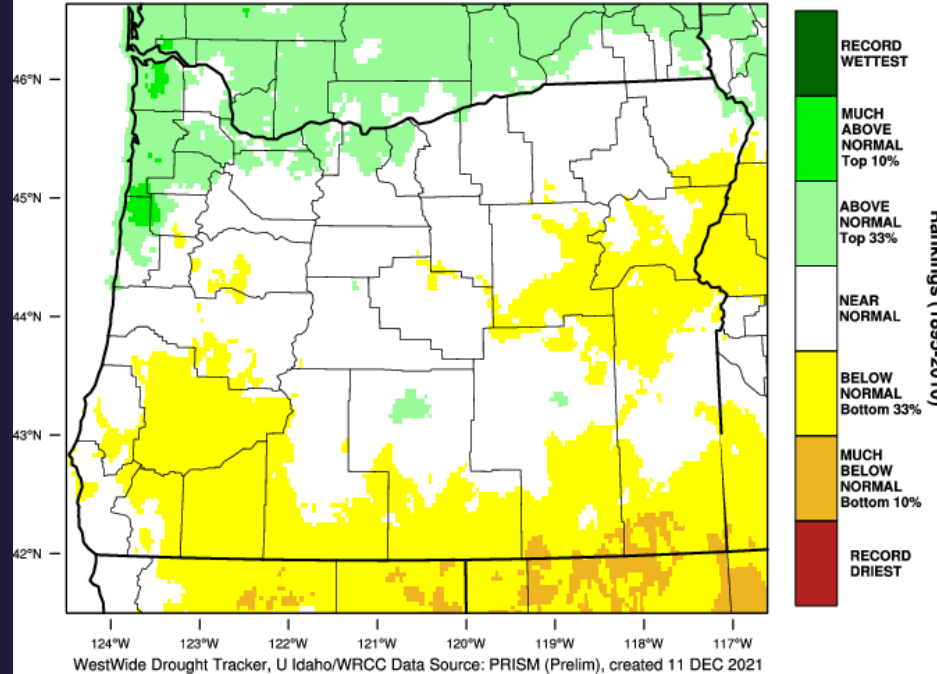
Precipitation - Percentile / Ranking

November

December

Oregon - Precipitation
November 2021 Percentile

Oregon - Precipitation
December 2021 Percentile



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

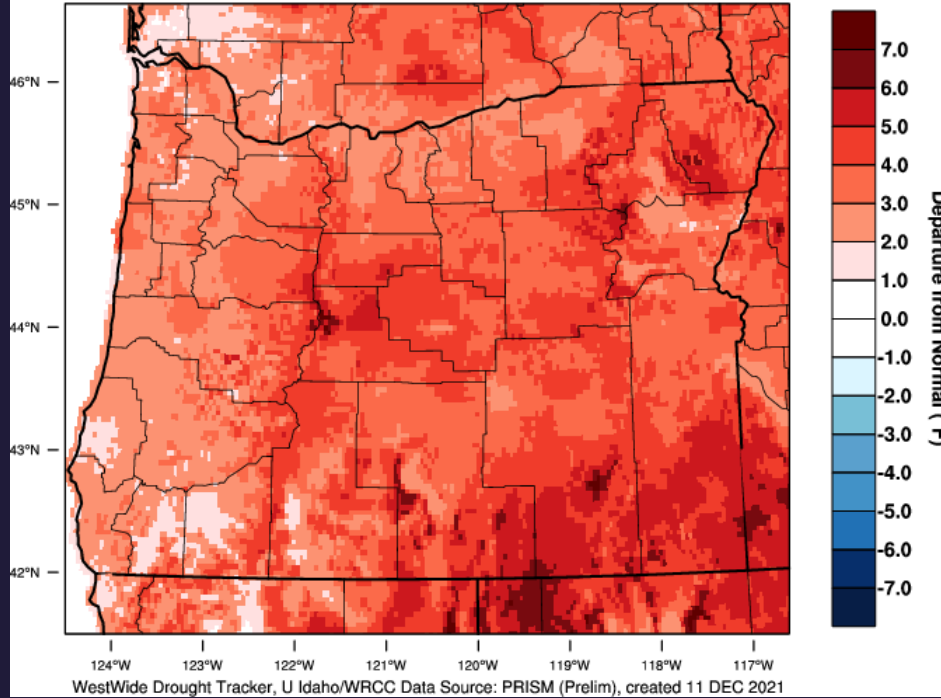
Recent Temperatures

November

December

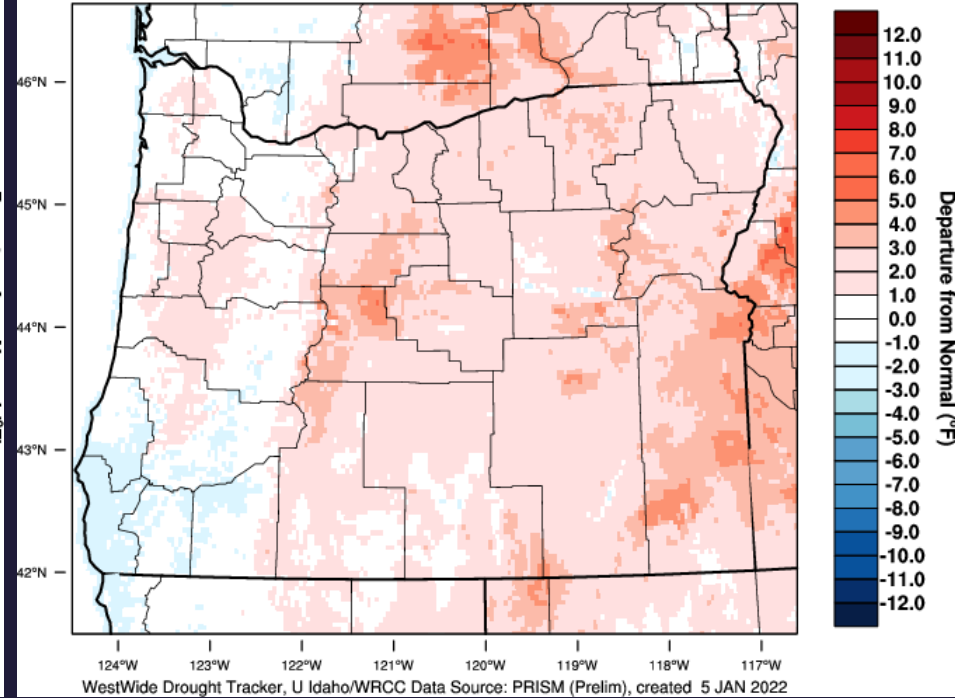
Oregon - Mean Temperature

November 2021 Departure from 1981-2010 Normal



Oregon - Mean Temperature

December 2021 Departure from 1981-2010 Normal

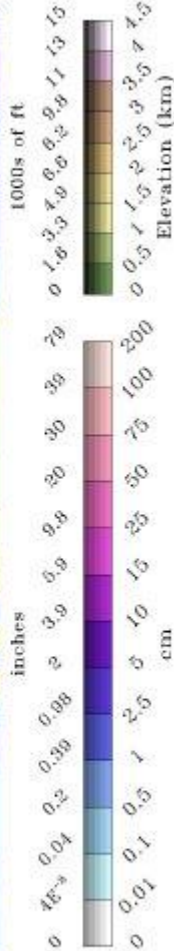
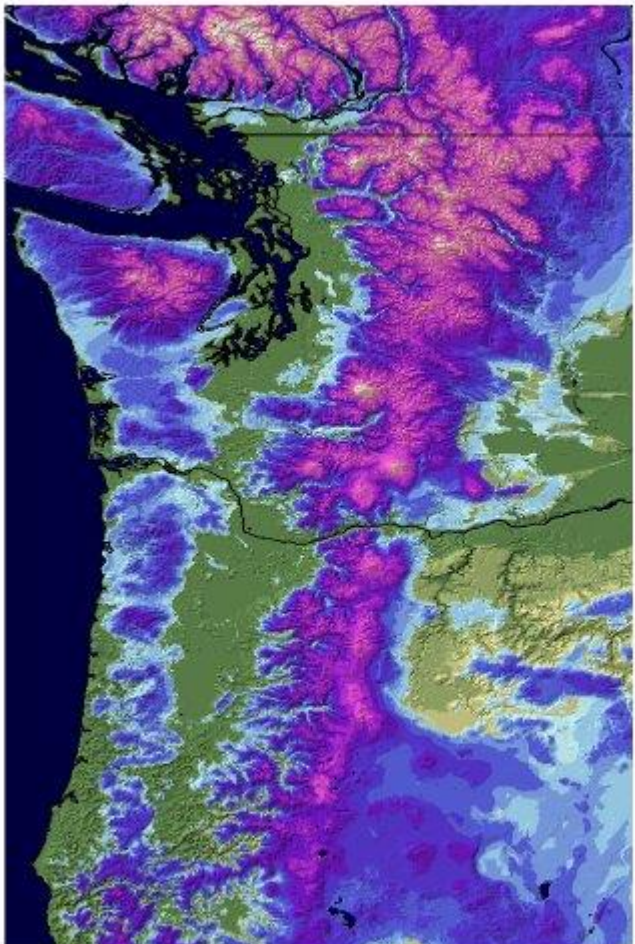




Snow Analysis from NOAA/NWS Remote Sensing Center

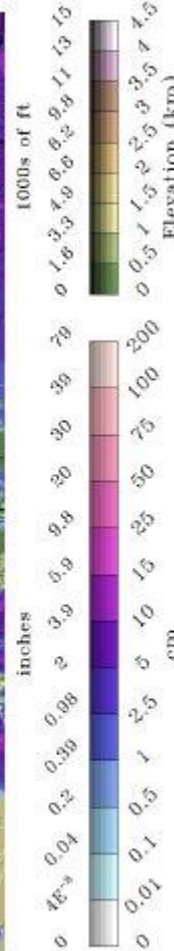
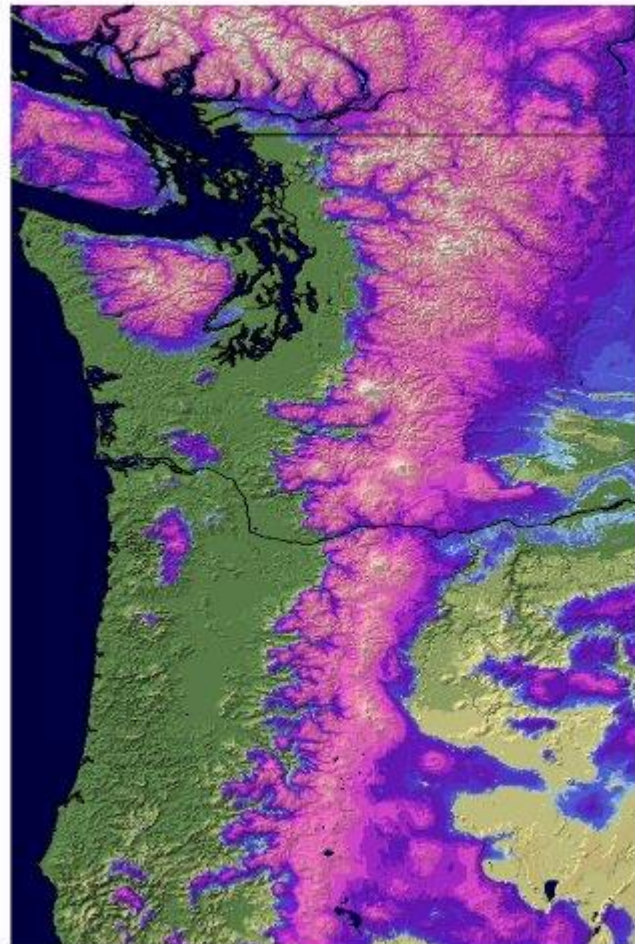
Snow Water Equivalent

2021-12-15 06 UTC



Snow Water Equivalent

2022-01-12 06 UTC



OWP OFFICE OF WATER PREDICTION

National Snow 2020-Analysis 2021

OWP OFFICE OF WATER PREDICTION

National Snow 2020-Analysis 2021

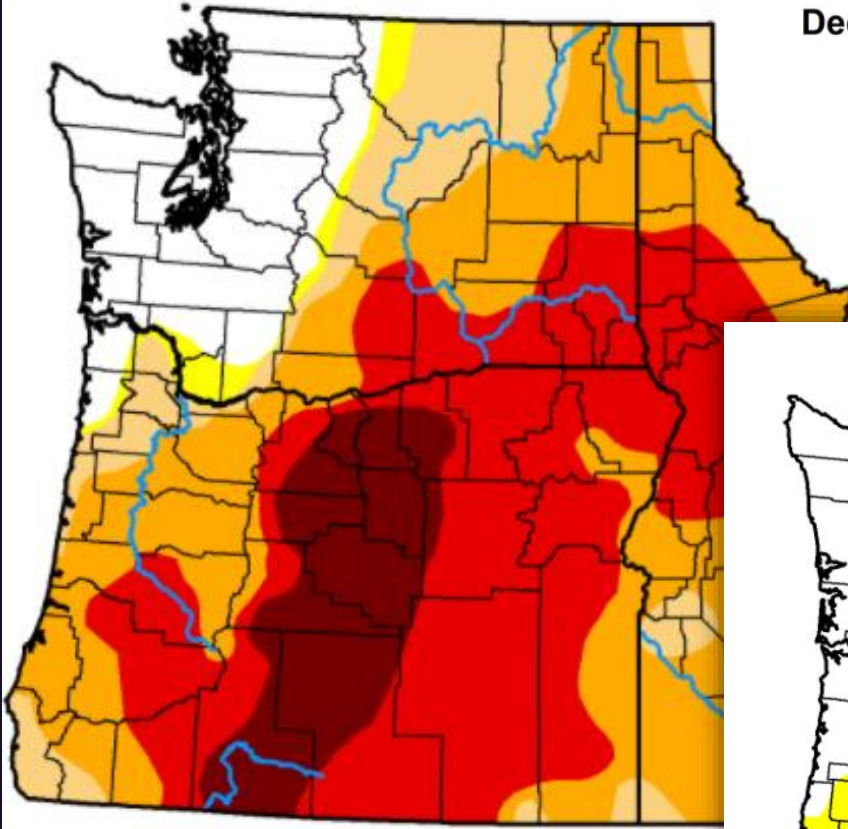
<https://www.nohrsc.noaa.gov/nsa/index.html>

1/12/2022

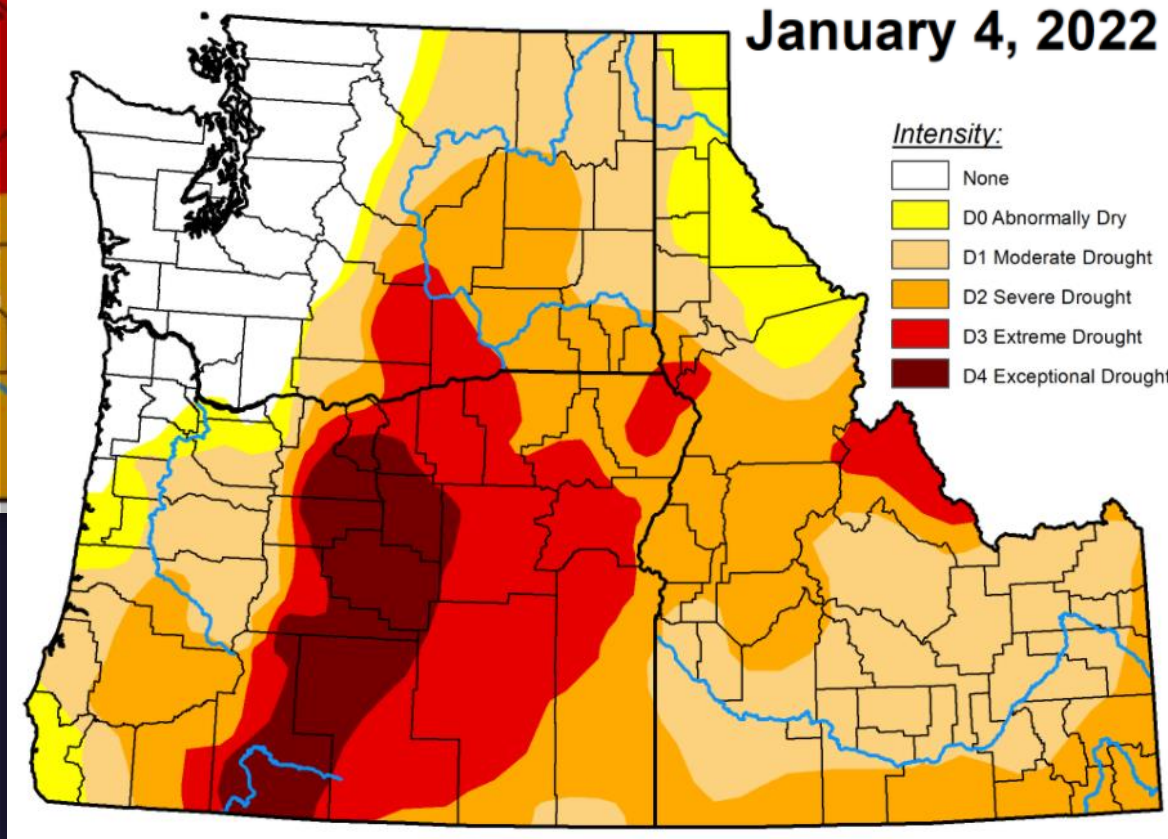
weather.gov/portland & www.nwrfc.noaa.gov

Drought Monitor

December 7, 2021



January 4, 2022



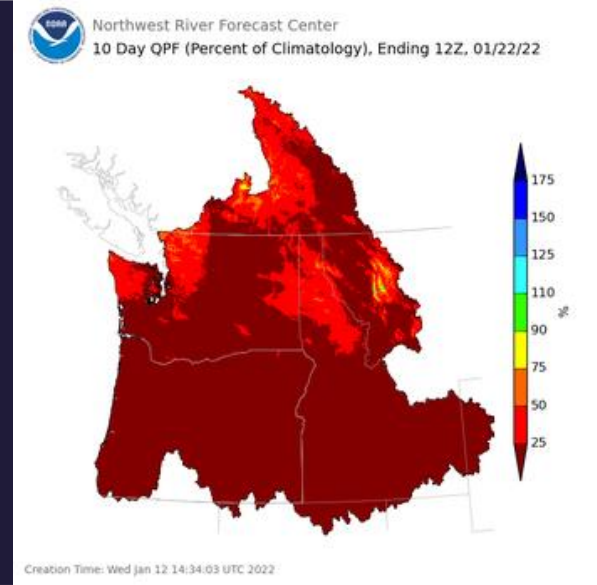
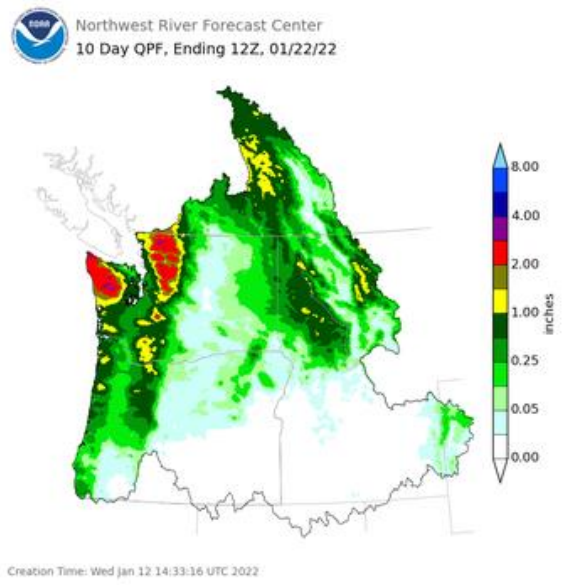
<https://droughtmonitor.unl.edu>



Mid January Outlook

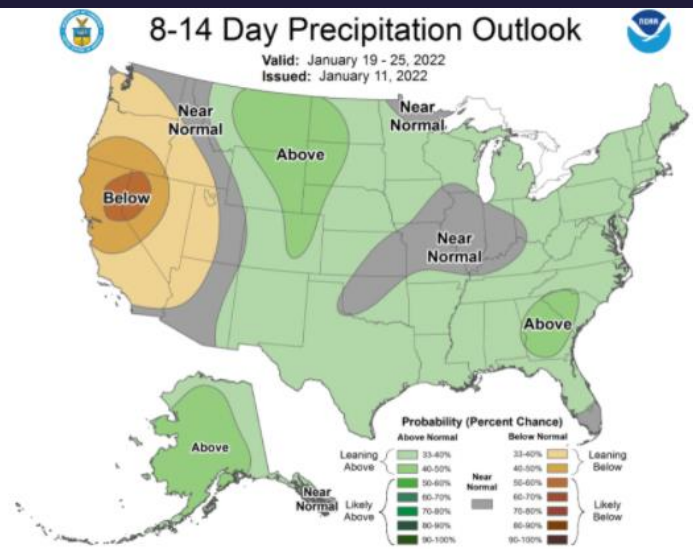
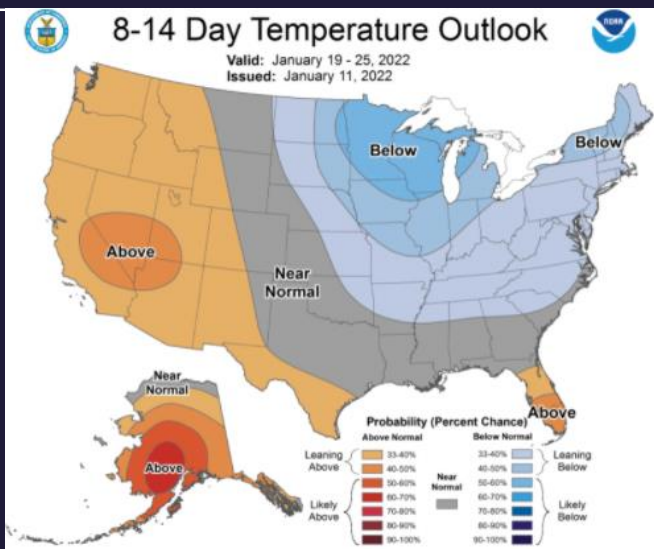
NWRFC 10-DAY PRECIPITATION FORECAST

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



CPC 8 - 14 DAY OUTLOOK

www.cpc.ncep.noaa.gov





Climate Prediction Center Outlook

Feb-Mar-Apr 2022

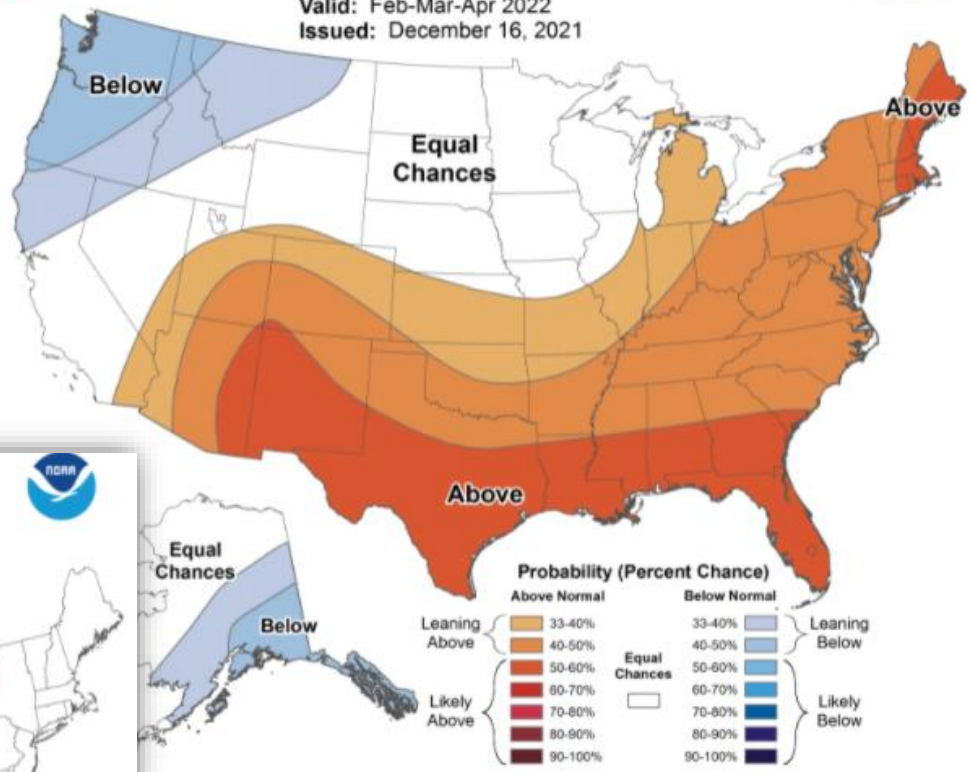
www.cpc.ncep.noaa.gov



Seasonal Temperature Outlook



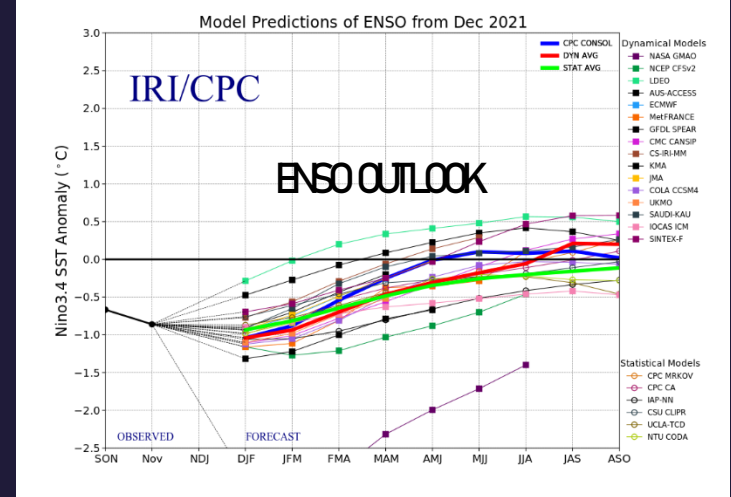
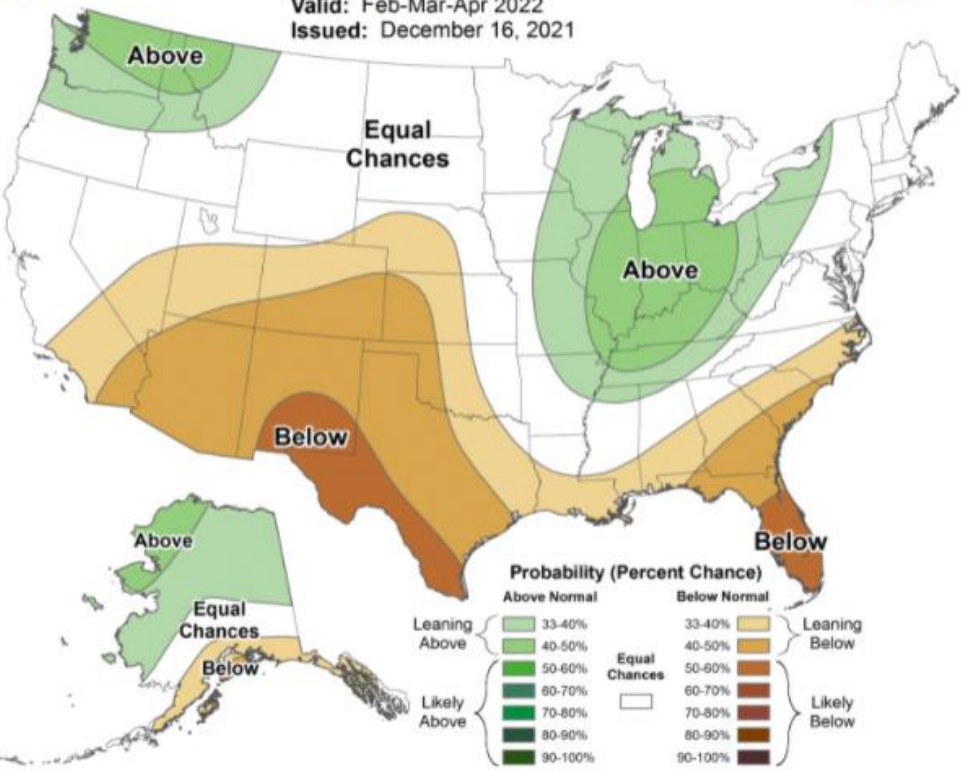
Valid: Feb-Mar-Apr 2022
Issued: December 16, 2021



Seasonal Precipitation Outlook



Valid: Feb-Mar-Apr 2022
Issued: December 16, 2021





Northwest River Forecast Center ESP Natural Forecast



River and Hydrology

Water Supply

Observations

Weather Forecasts

Climate

NWRFC

Home

Zoom Out

--- Quick Zooms ---

ESP Issued: 2022-01-11

Ensemble Date: 2022-01-11

Permalink

Search

Enter NWS ID:

GO

Map Overlays

- NWRFC Boundary
- NWRFC Basins
- NWS HSAs
- Counties

ESP Natural Forecast

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

Natural Runoff

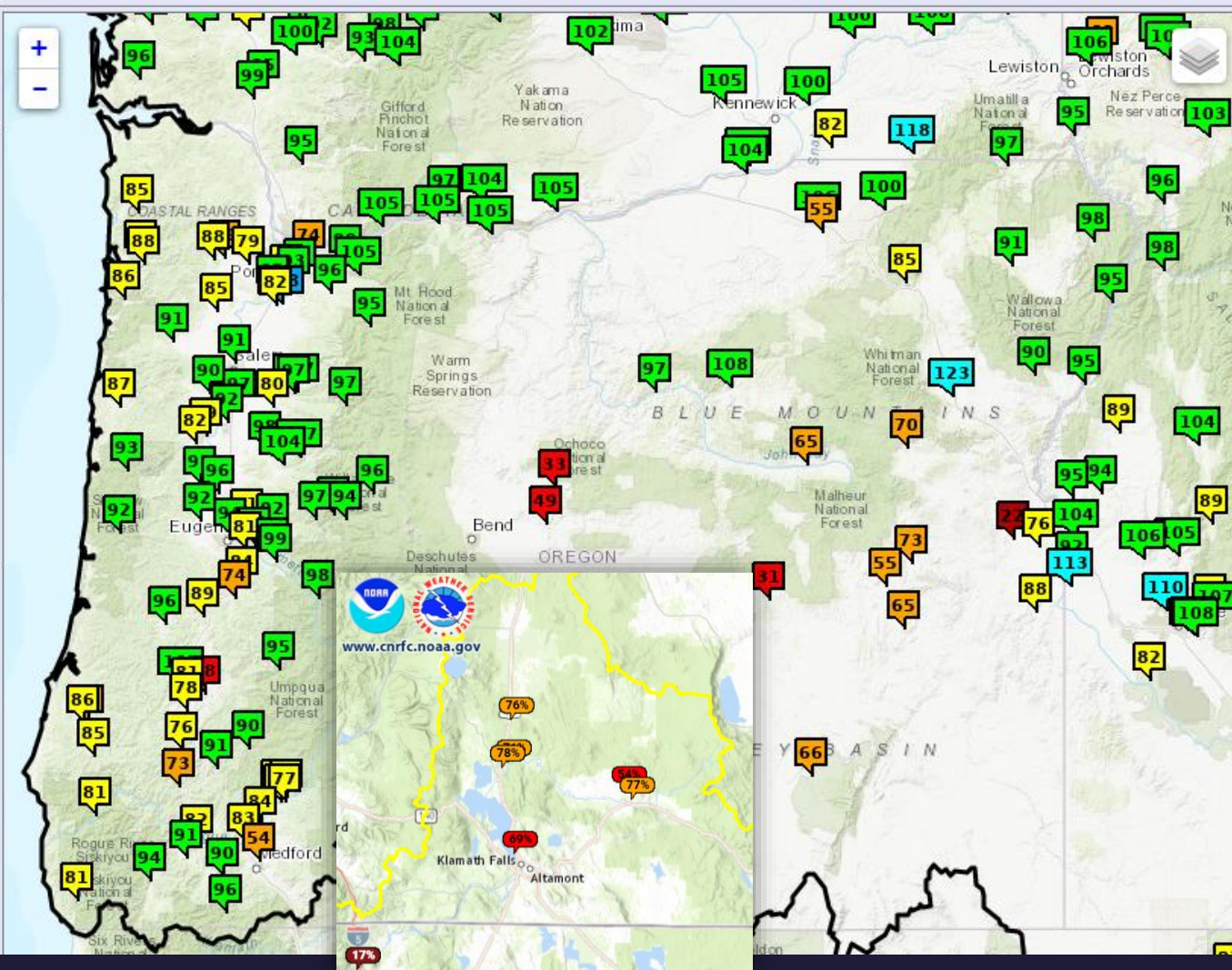
- Runoff Status
- Runoff % of Normal

ESP Natural Forecast

Period: APR-SEP

Forecast (% Normal)

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

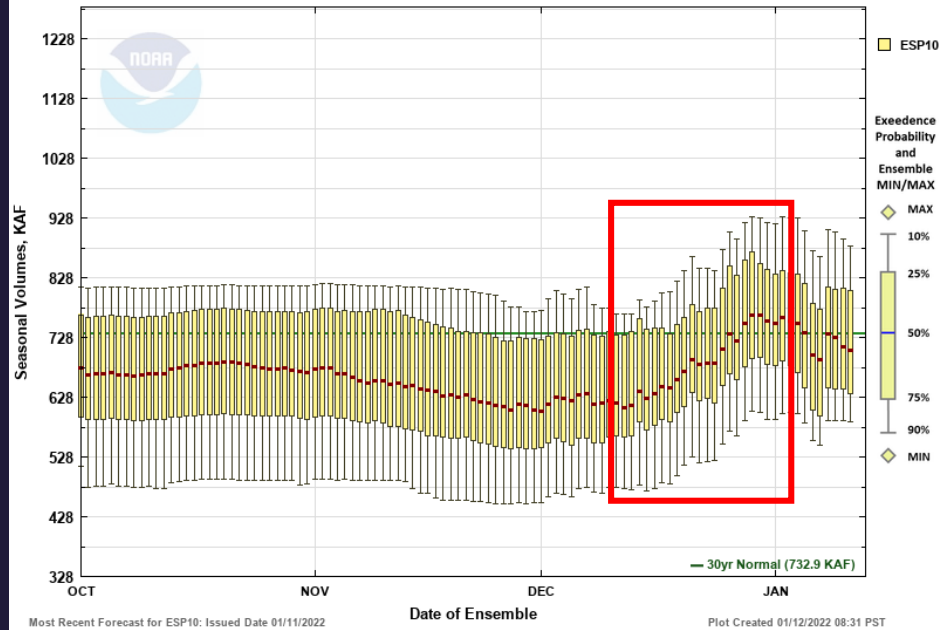


Seasonal Water Supply Forecasts

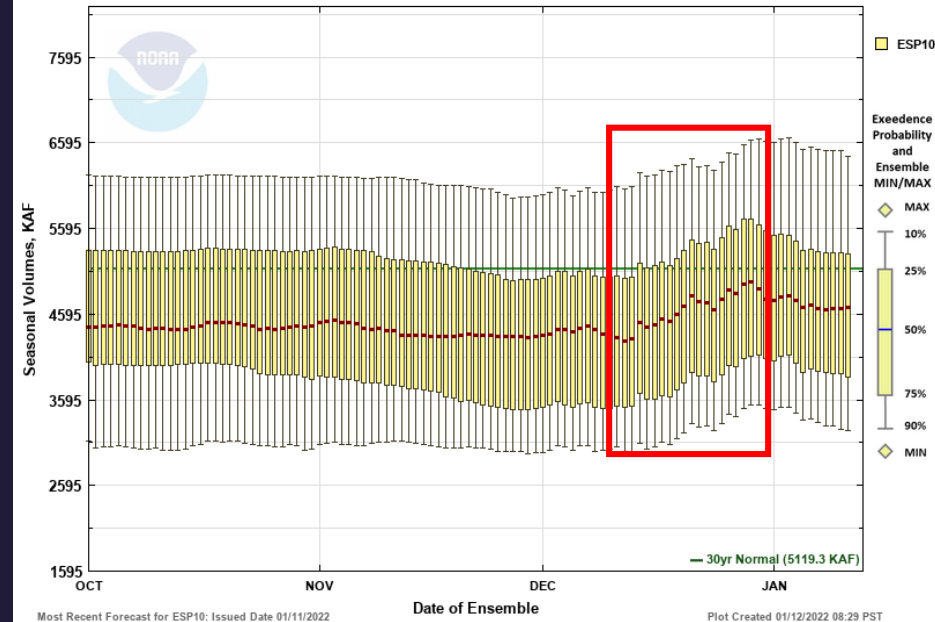


Seasonal Water Supply Forecasts - Western Oregon

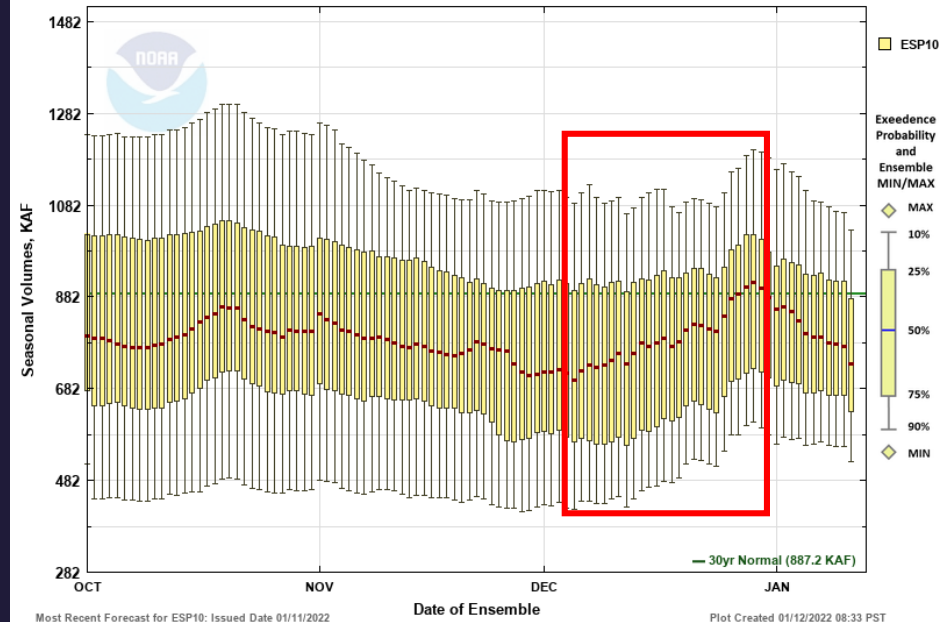
Natural Volume Forecasts
CLACKAMAS - AT ESTACADA
Period APR to SEP -- Water Year 2022



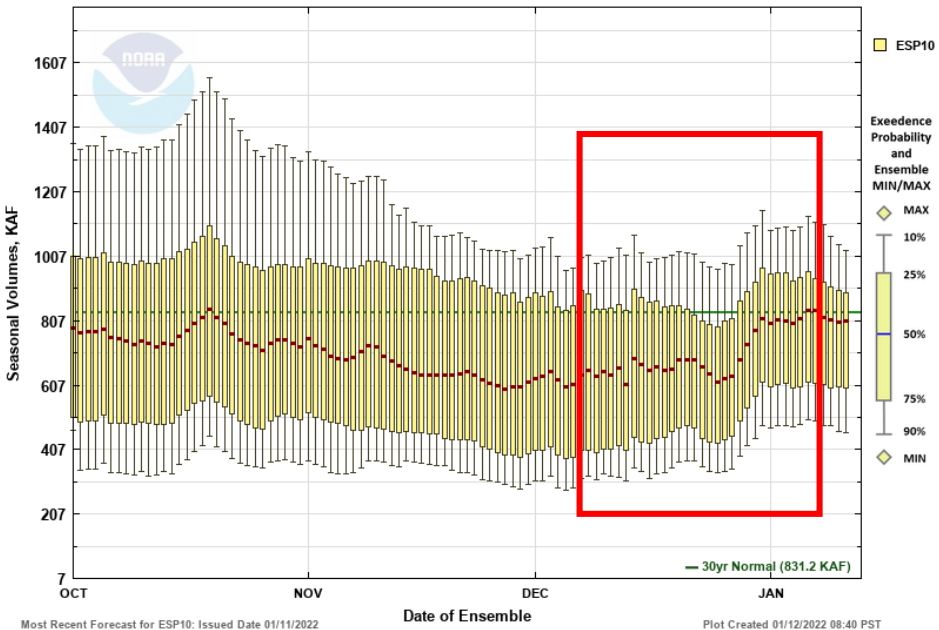
Natural Volume Forecasts
WILLAMETTE - AT SALEM
Period APR to SEP -- Water Year 2022



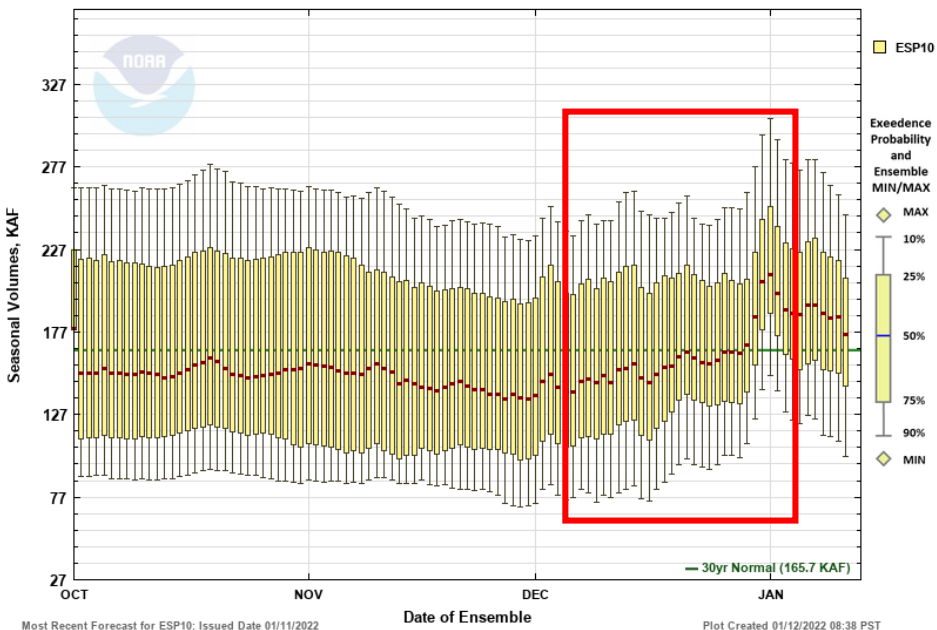
Natural Volume Forecasts
ROGUE - AT RAYGOLD
Period APR to SEP -- Water Year 2022



Natural Volume Forecasts
JOHN DAY - AT SERVICE CK
 Period APR to SEP -- Water Year 2022



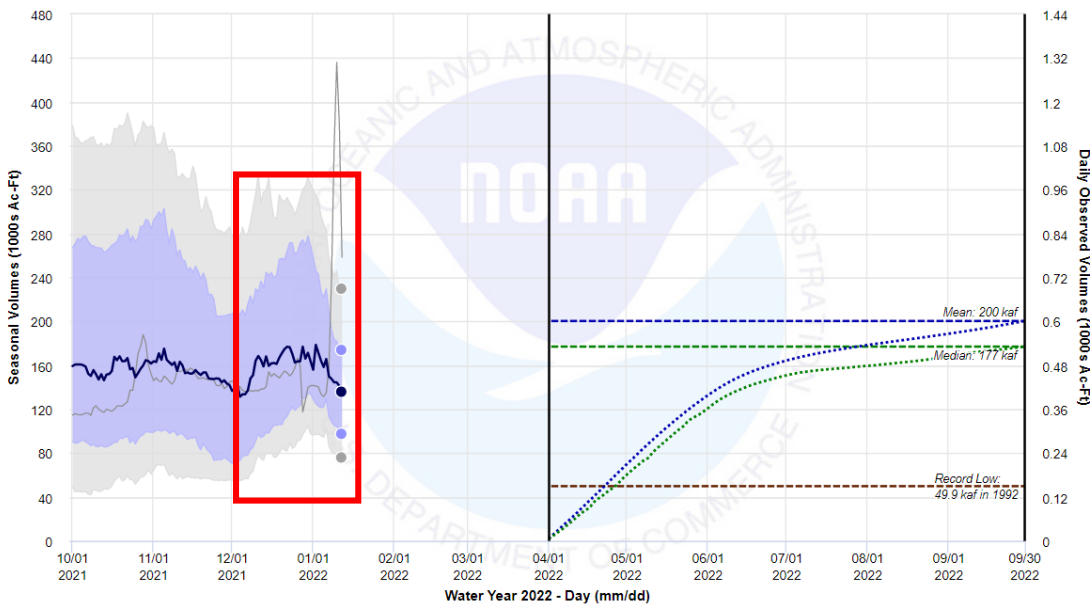
Natural Volume Forecasts
UMATILLA - AT PENDLETON
 Period APR to SEP -- Water Year 2022



Seasonal Water Supply Forecasts – Central/Eastern Oregon

SPRAGUE - CHILOQUIN, NR (CHSO3) 01/12/2022
Median Forecast: 136 kaf | 68% of Mean | 77% of Median

Created: 01/12/2022 at 08:40 AM PST





NWRFC Water Supply Forecast Monthly Briefing Schedule

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

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

Telephone Conference Call Number (same for all briefings):
(562) 247-8422
Pass Code:
146-348-602



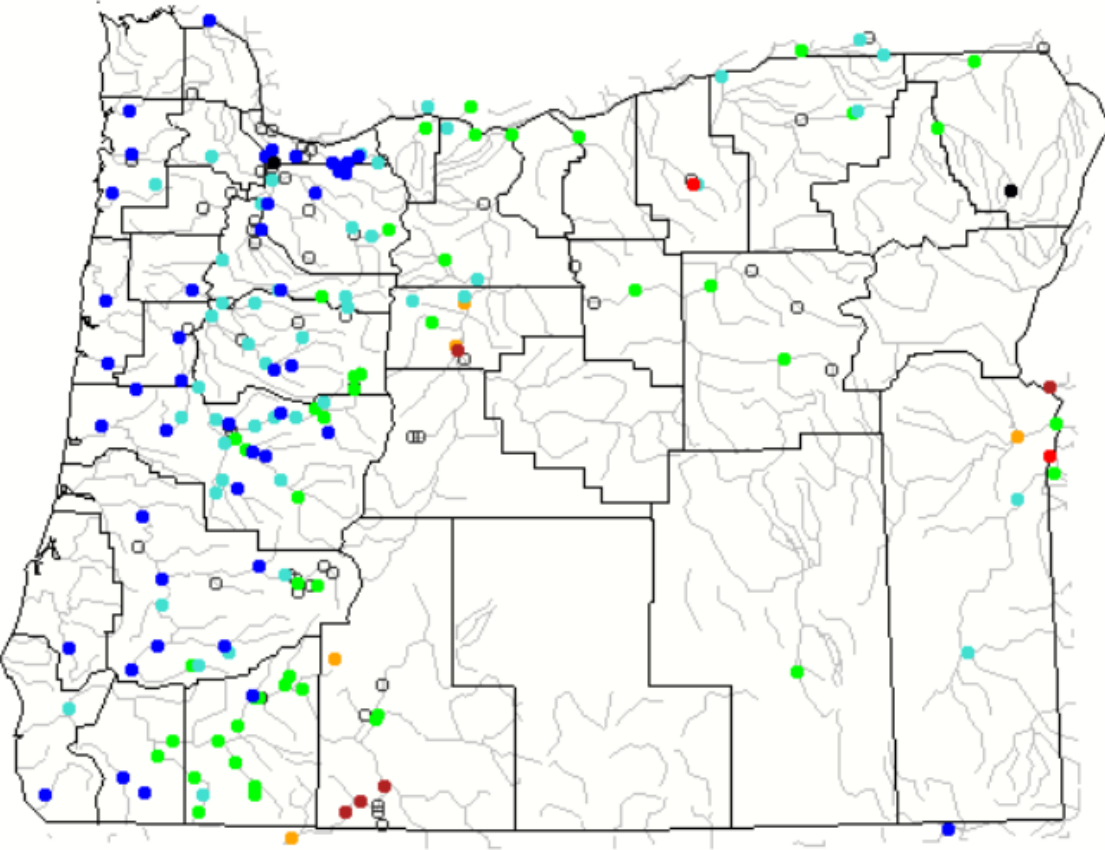
Oregon Water Supply Availability Meeting

January 2022

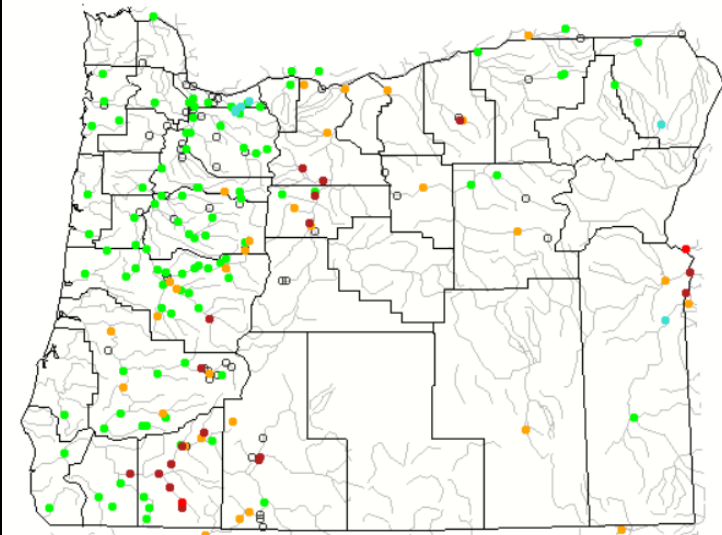
Streamflow Conditions

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

Monday, January 10, 2022



Monday, December 13, 2021



Explanation - Percentile classes

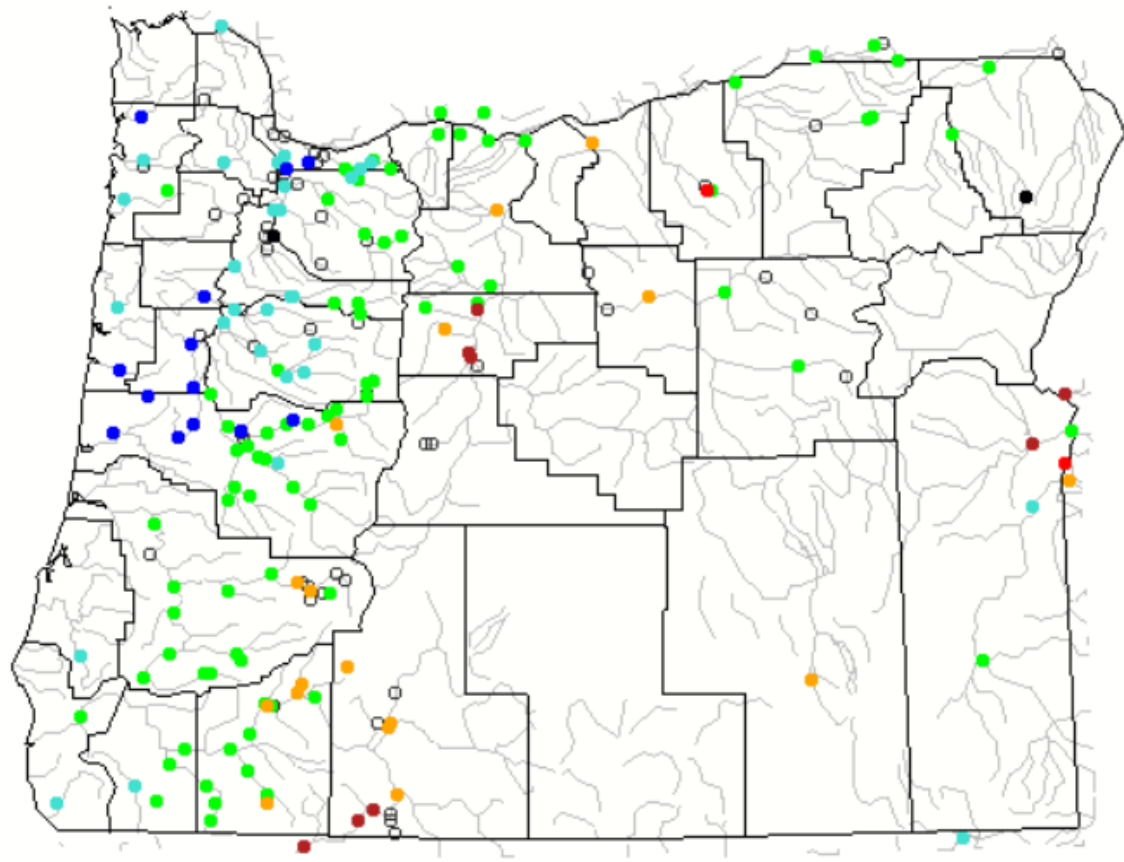
Low	<10 Much below normal	10-24 Below normal	25-75 Normal	76-90 Above normal	>90 Much above normal	High	Not-ranked



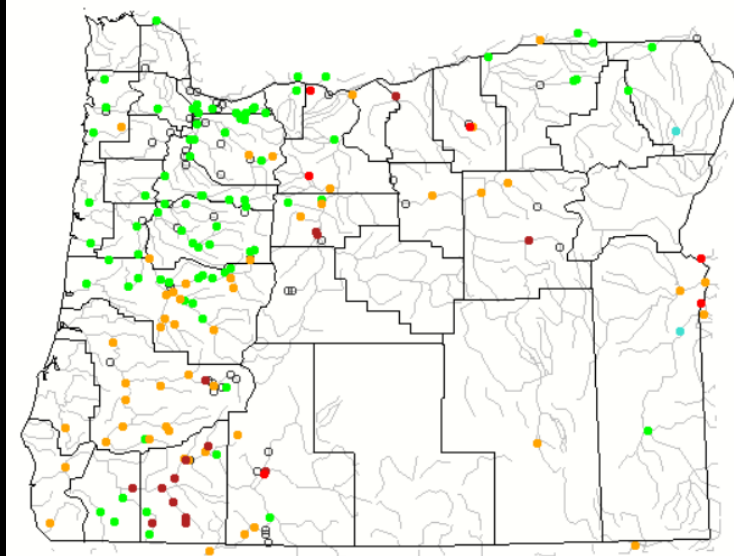
Streamflow Conditions

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

Monday, January 10, 2022



Monday, December 13, 2021



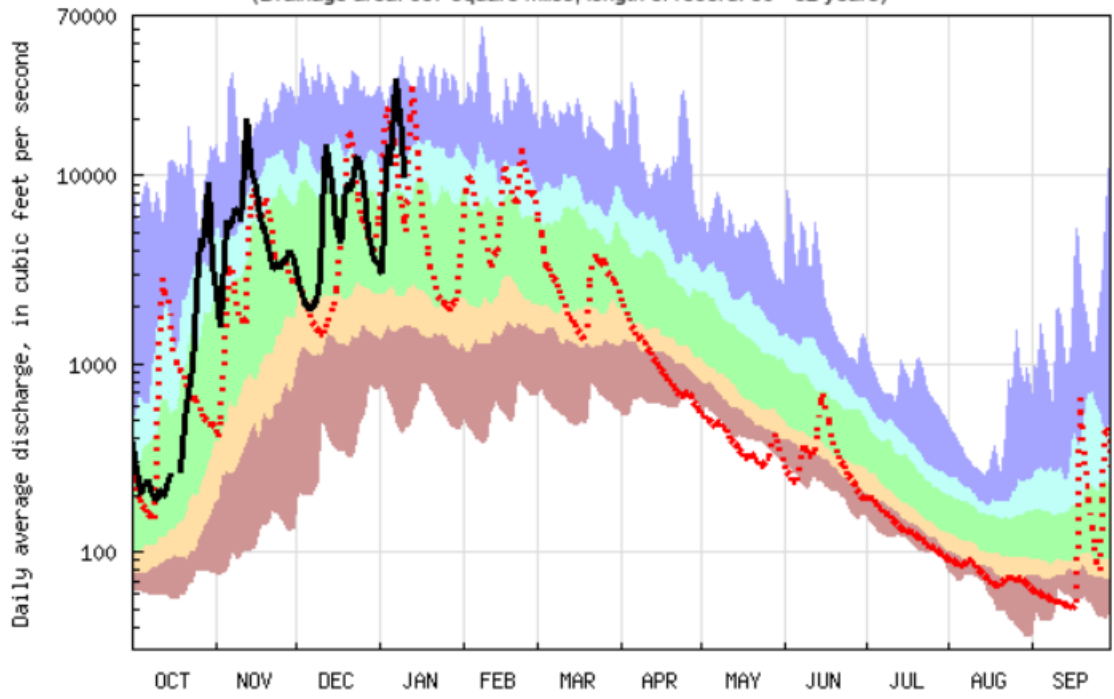
Explanation - Percentile classes

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



Northwestern OR

USGS 14301000 NEHALEM RIVER NEAR FOSS, OR
(Drainage area: 667 square miles, length of record: 80 - 82 years)

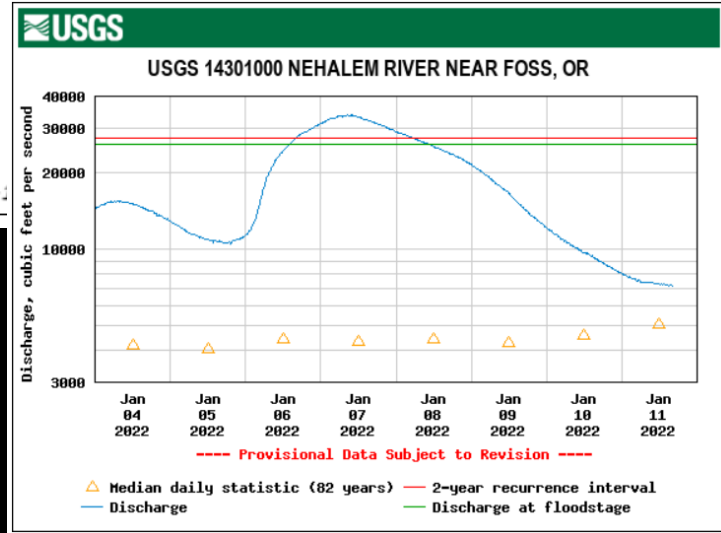


- Much below normal
lowest - 10th percentile
- Below normal
10th - 25th percentile
- Normal
25th - 75th percentile
- Above normal
75th - 90th percentile
- Much above normal
90th percentile to highest
- Discharge (2021)
- Discharge (2022)

USGS WaterWatch

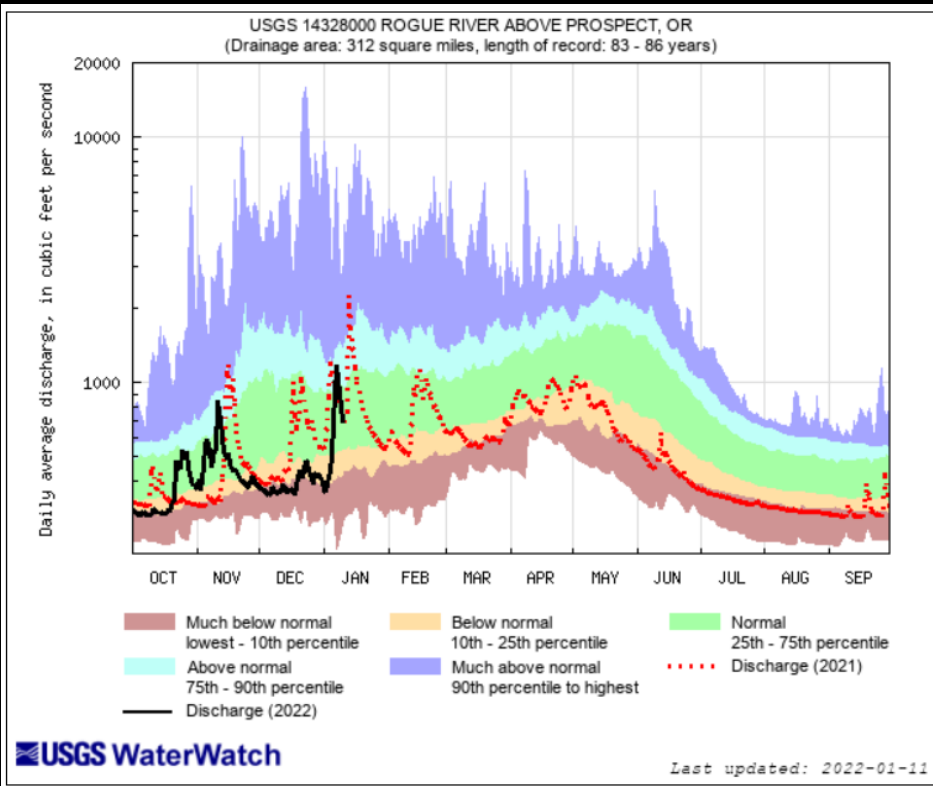
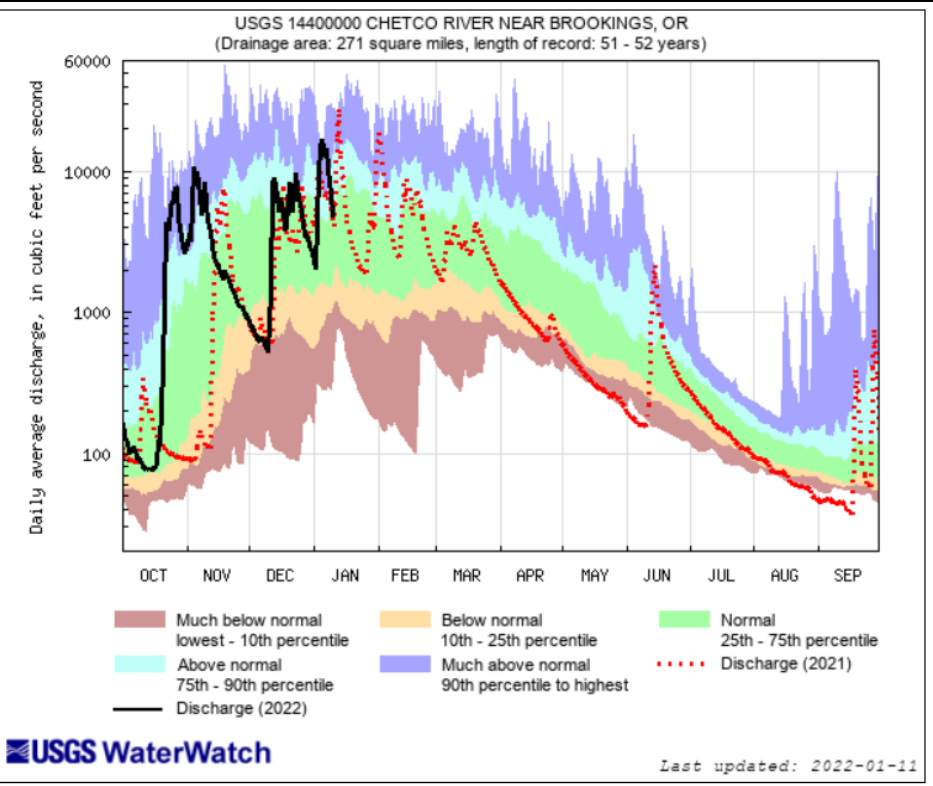
Last updated: 2022-01-11

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



- Median daily statistic (82 years)
- 2-year recurrence interval
- Discharge at floodstage

Southwestern OR

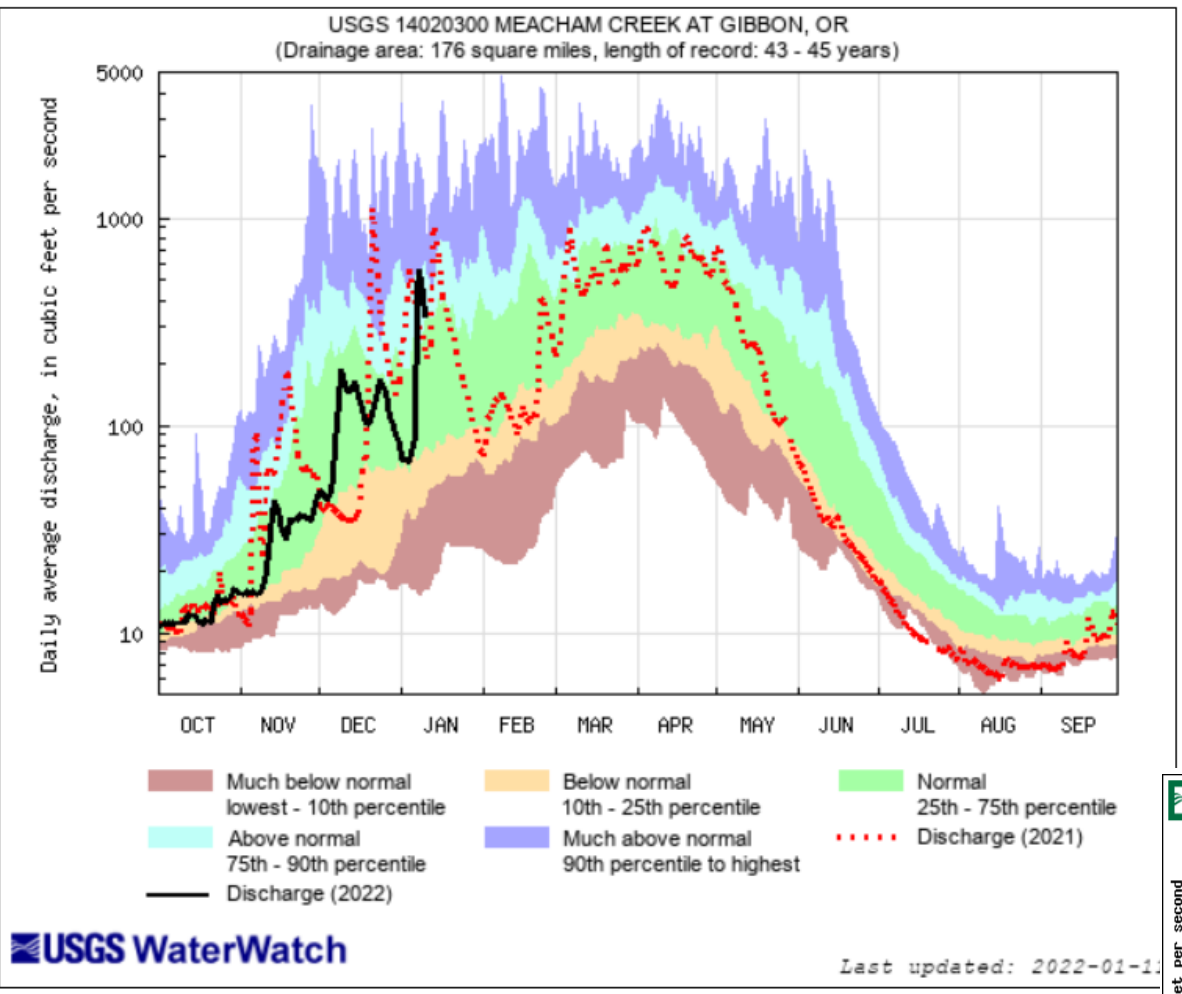


Explanation - Percentile classes

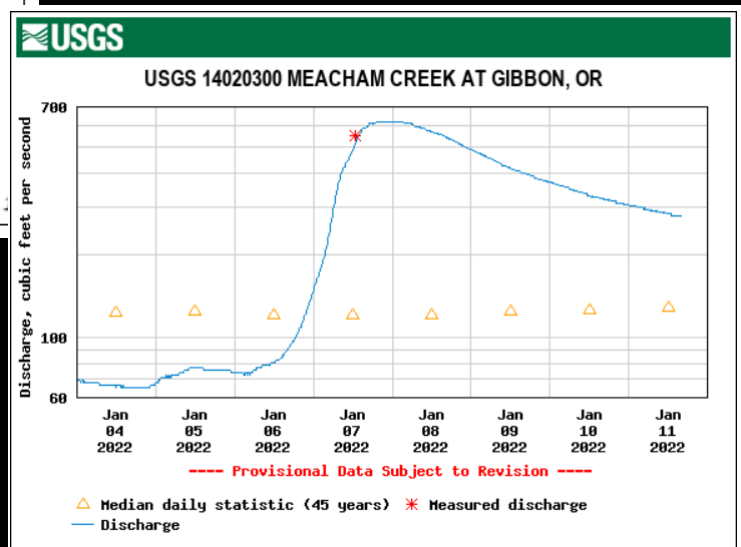
■	■	■	■	■	■
lowest-10th percentile	10-24	25-75	76-90	90th percentile-highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	



Northeastern OR

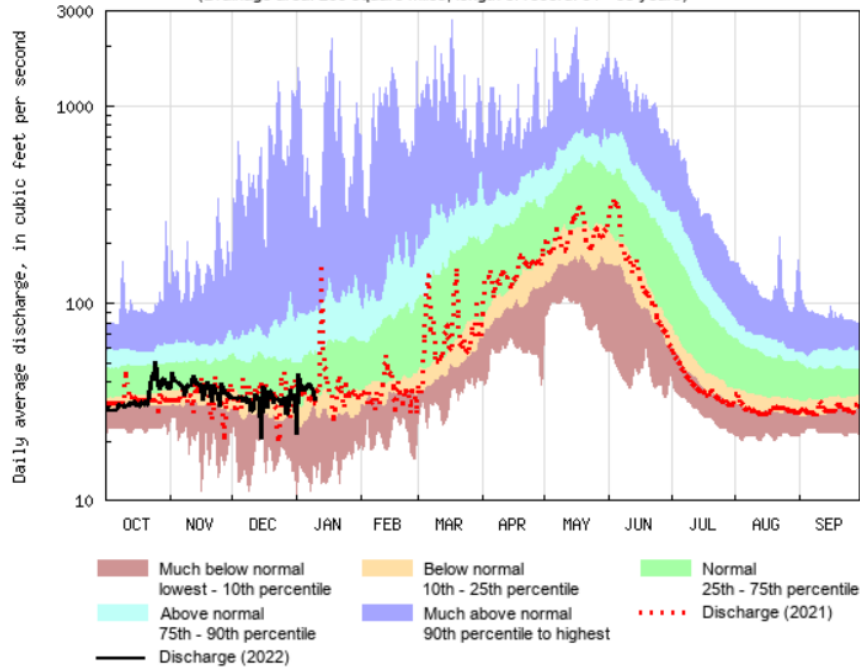


Explanation - Percentile classes					
lowest-10th percentile	10-24	25-75	76-90	90th percentile-highest	Flow
Much below normal	Below normal	Normal	Above normal	Much above normal	



Southeastern OR

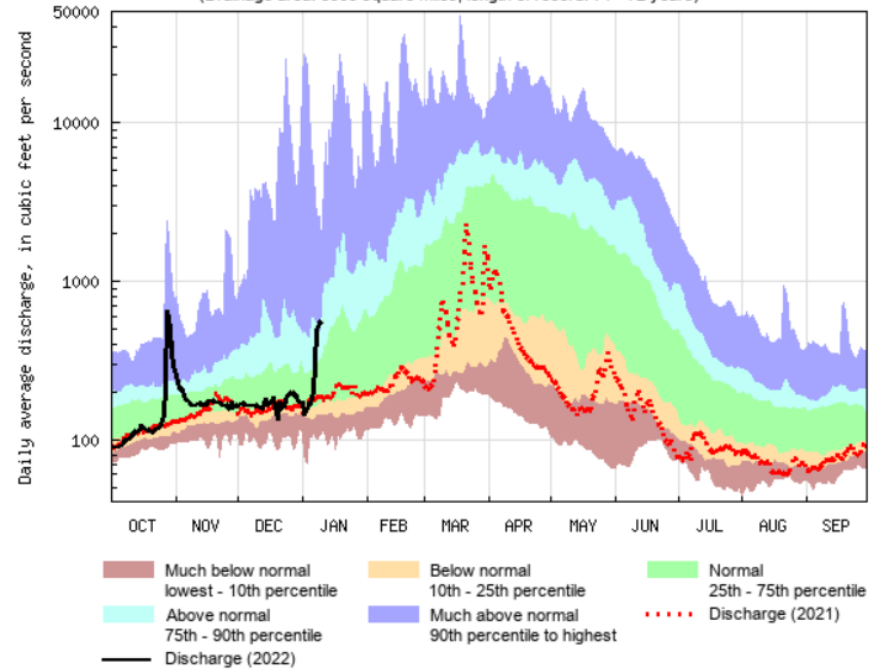
USGS 10396000 DONNER UND BLITZEN RIVER NR FRENCHGLEN OR
(Drainage area: 200 square miles, length of record: 91 - 93 years)



USGS WaterWatch

Last updated: 2022-01-11

USGS 13181000 OWYHEE RIVER NR ROME OR
(Drainage area: 8000 square miles, length of record: 71 - 72 years)



USGS WaterWatch

Last updated: 2022-01-11

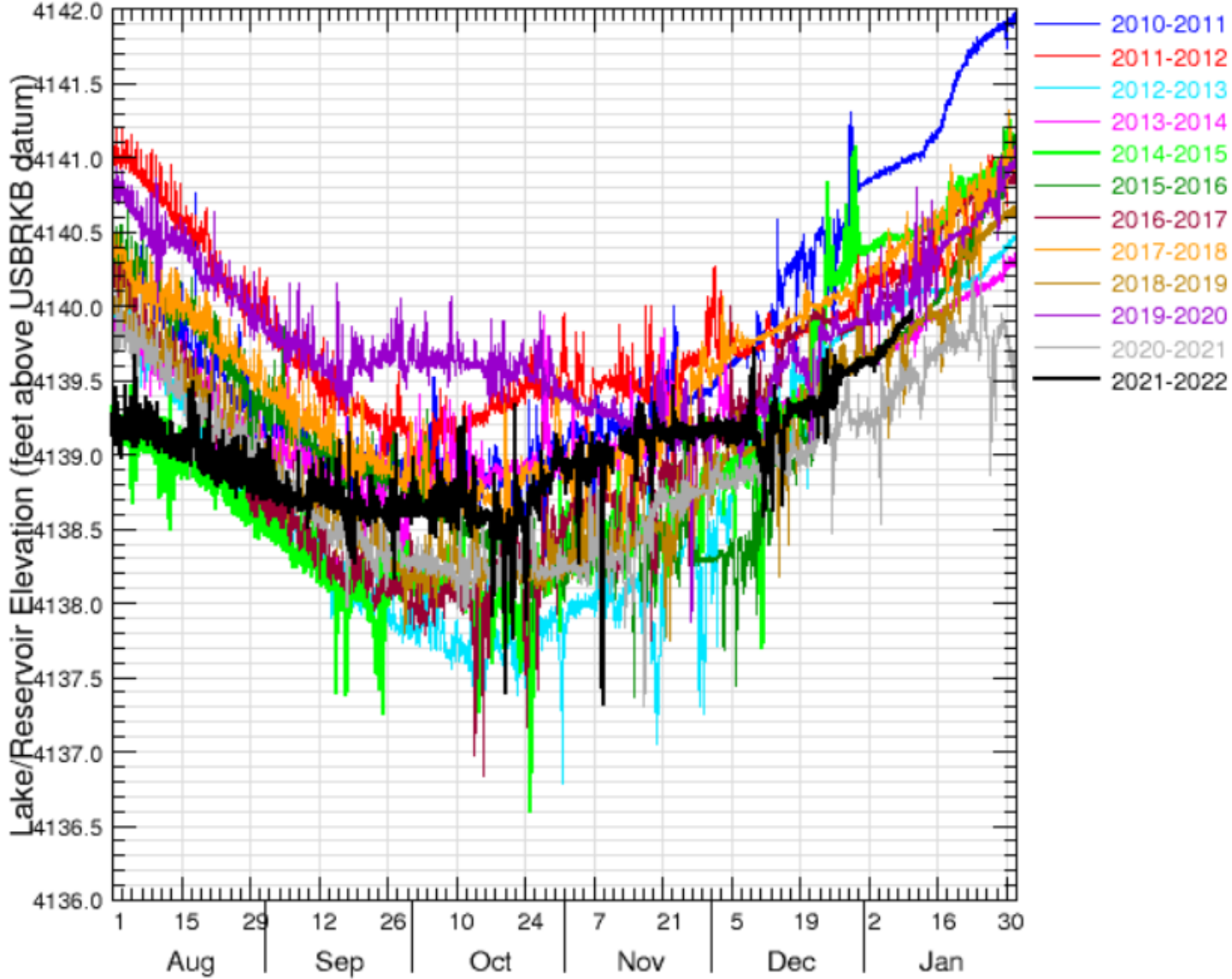
Explanation - Percentile classes

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

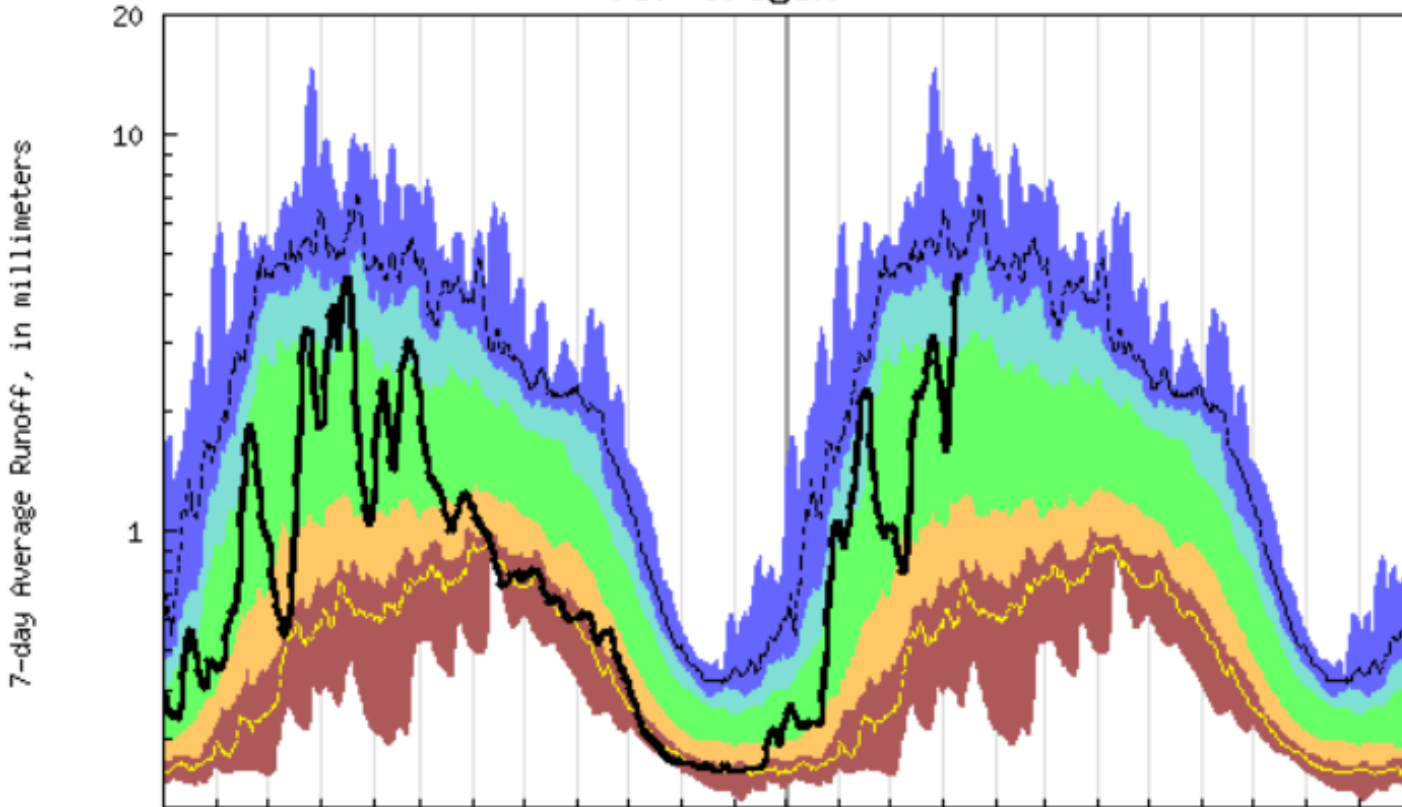
Klamath Lake

Upper Klamath Lake near Klamath Falls, OR (11507000)

Data from U.S. Geological Survey



Duration hydrograph of 7-day average runoff for Oregon



USGS WaterWatch

Last updated: 2022-01-11

Explanation - Percentile classes						
lowest-10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Runoff



Water Supply Availability Committee Oregon Water Resources Department

Ryan Andrews
January 12th, 2022

December % of Average Streamflow - WY 2022

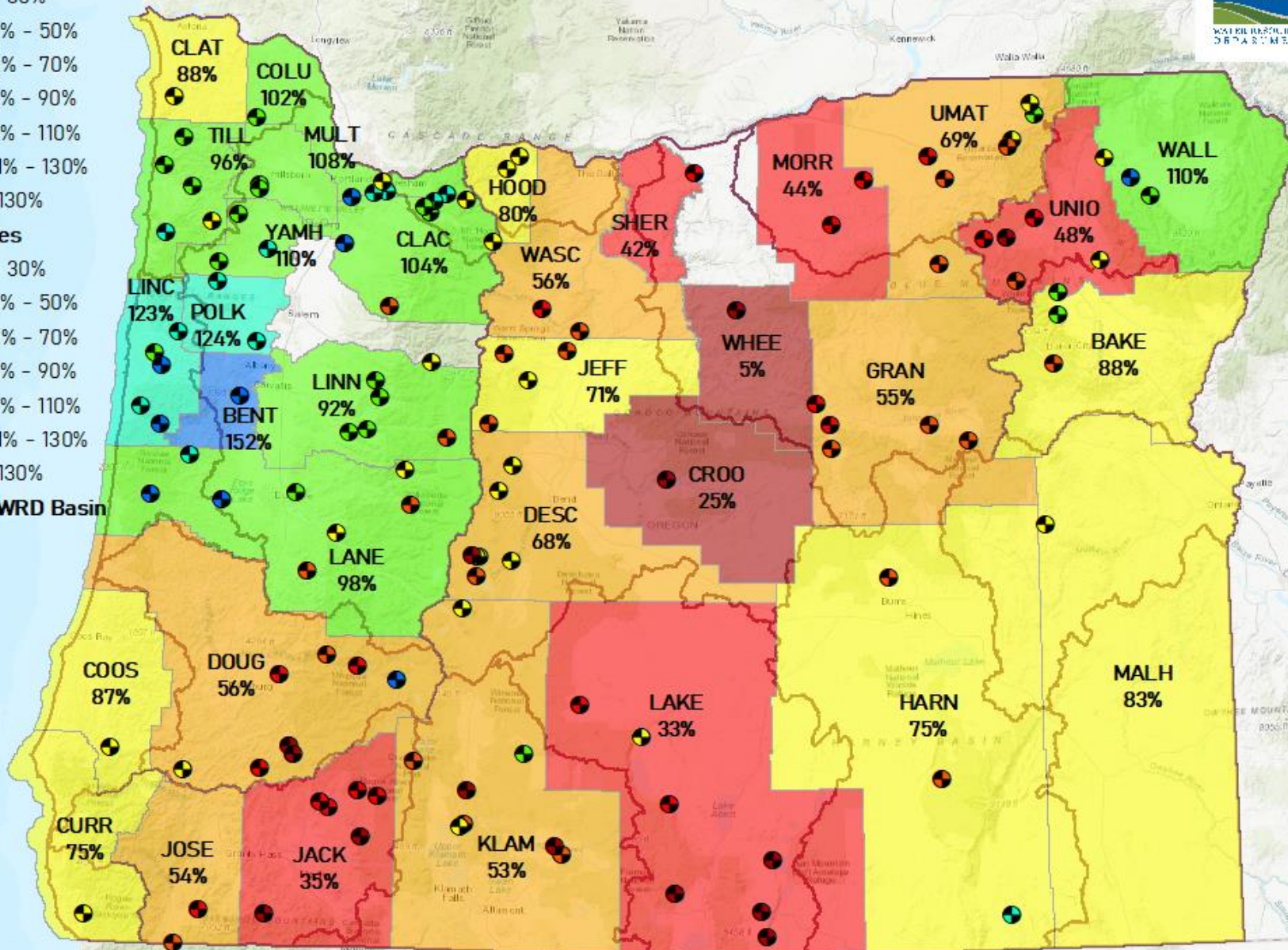


Stream Gage

- ≤ 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



Date: 1/6/2022

Water Year To Date % of Average Streamflow - January 10, 2022



Stream Gage

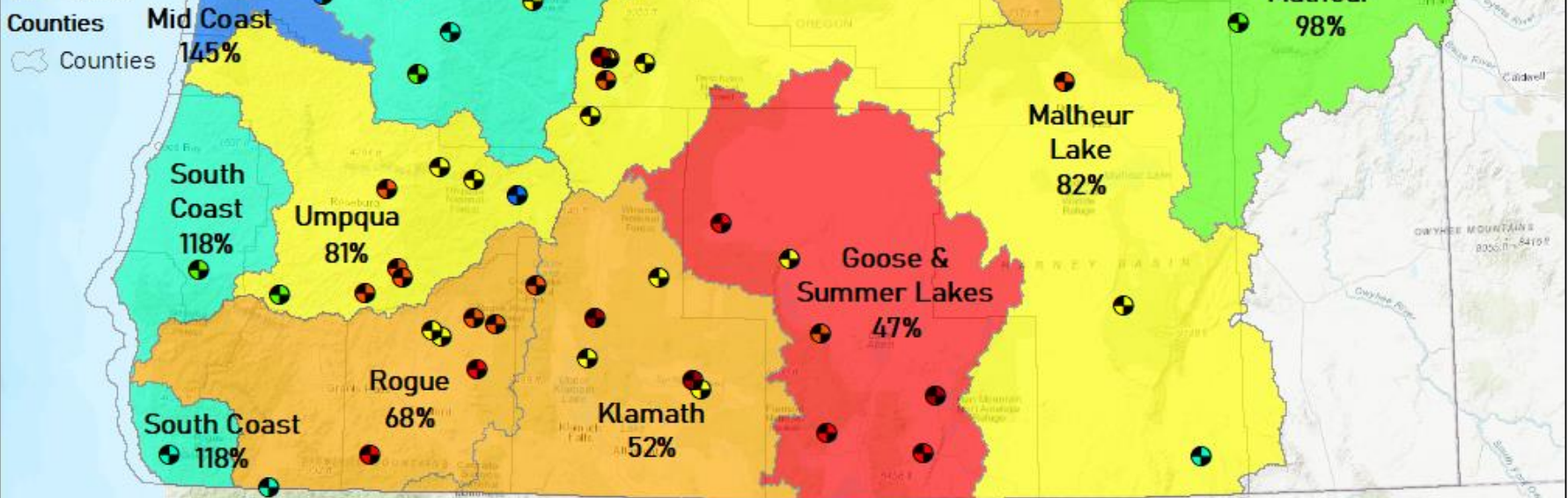
- ≤ 30%
- 31% - 50%
- 51% - 70%
- 71% - 90%
- 91% - 110%
- 111% - 130%
- > 130%

OWRD Basin

- ≤ 30%
- 31% - 50%
- 51% - 70%
- 71% - 90%
- 91% - 110%
- 111% - 130%
- > 130%

Counties

- Counties



Date: 1/11/2022

28-day % of Average Streamflow - thru January 11, 2021

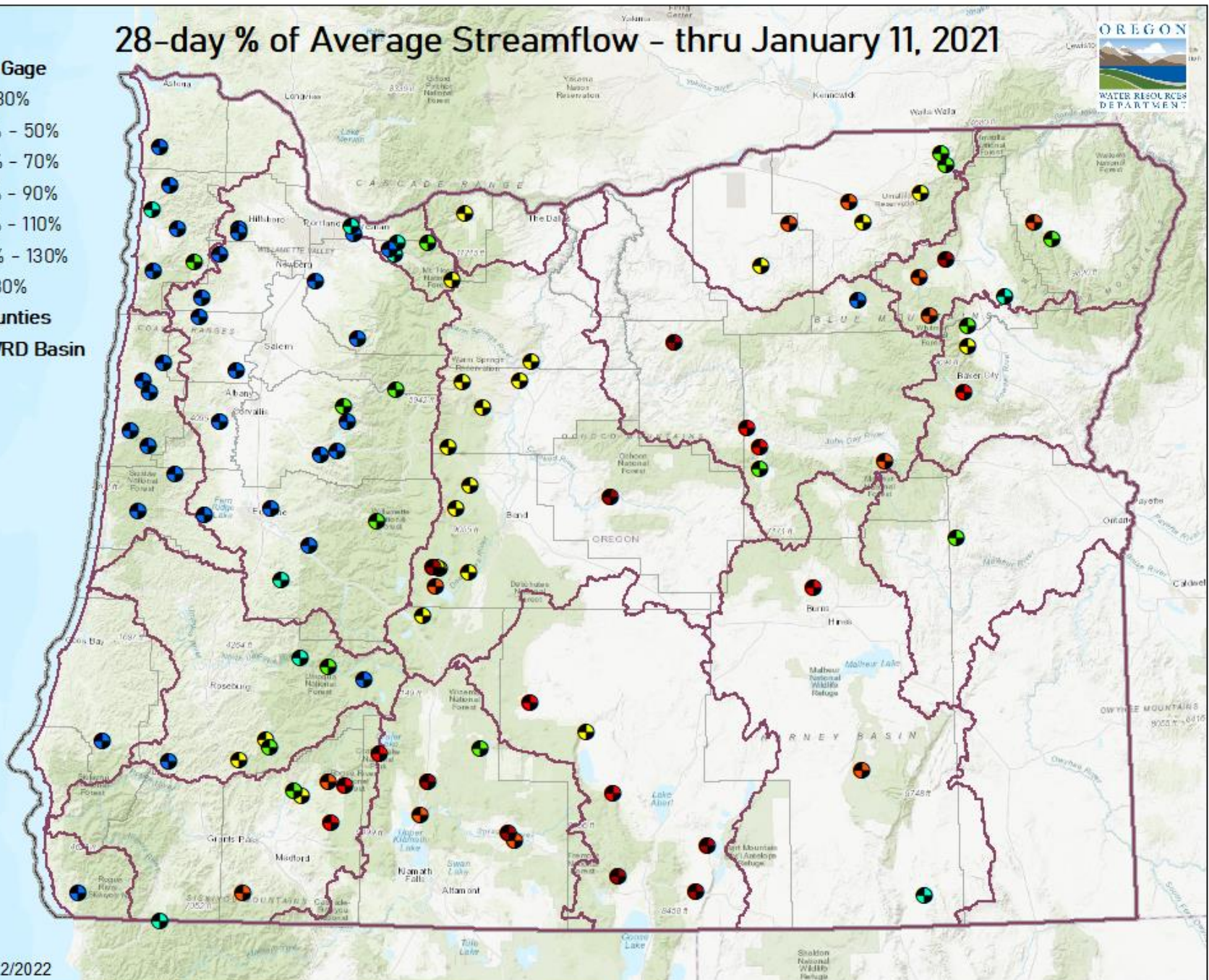


Stream Gage

- ≤ 30%
- 31% - 50%
- 51% - 70%
- 71% - 90%
- 91% - 110%
- 111% - 130%
- > 130%

⬡ Counties

⬢ OWRD Basin



Date: 1/12/2022

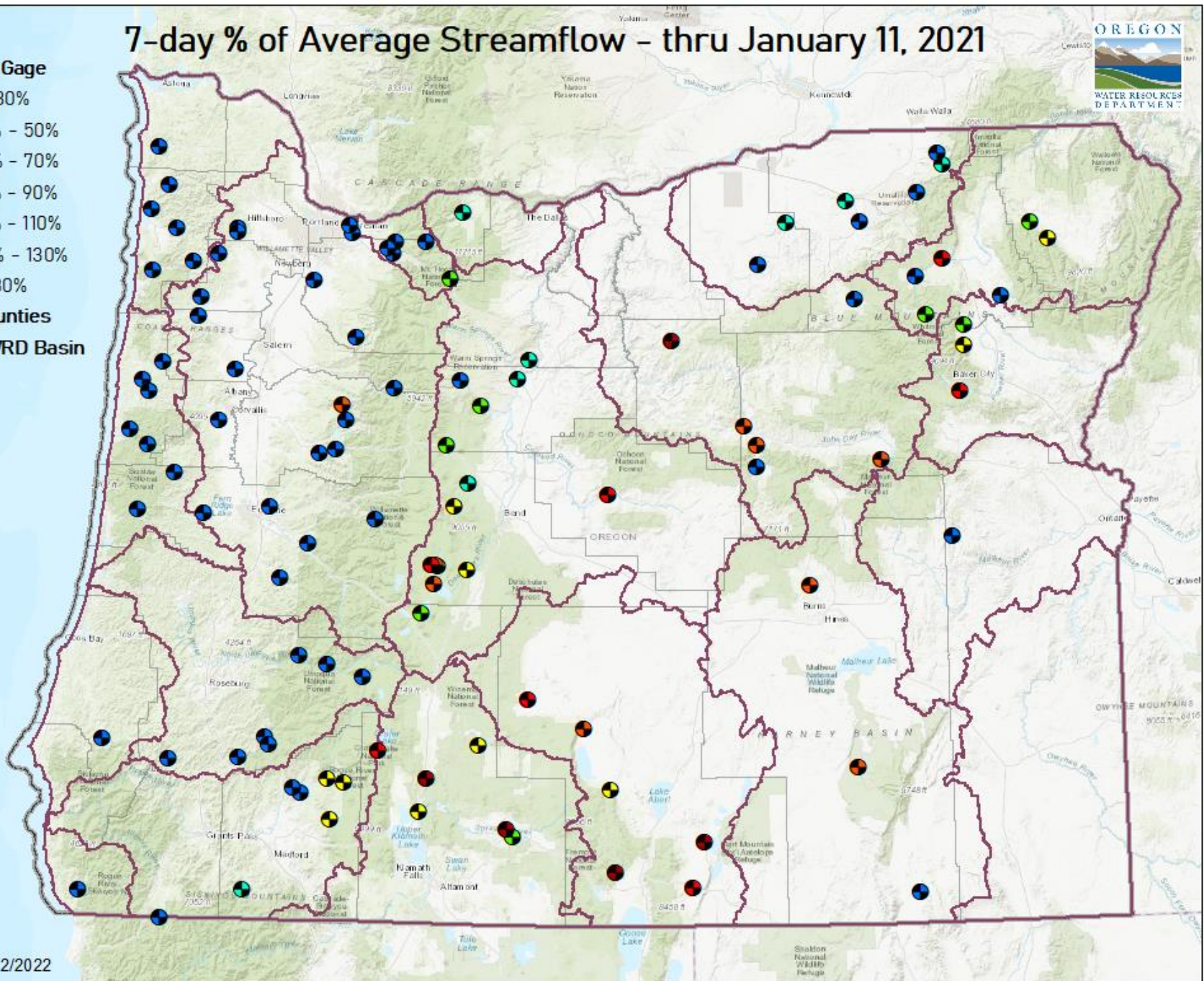
7-day % of Average Streamflow - thru January 11, 2021



Stream Gage

- ≤ 30%
- 31% - 50%
- 51% - 70%
- 71% - 90%
- 91% - 110%
- 111% - 130%
- > 130%

- Counties
- OWRD Basin



Date: 1/12/2022

WESTERN BASINS

% of Average Streamflow - WY 2022



CATEGORY ■ CUMULATIVE ■ MONTHLY

CENTRAL BASINS

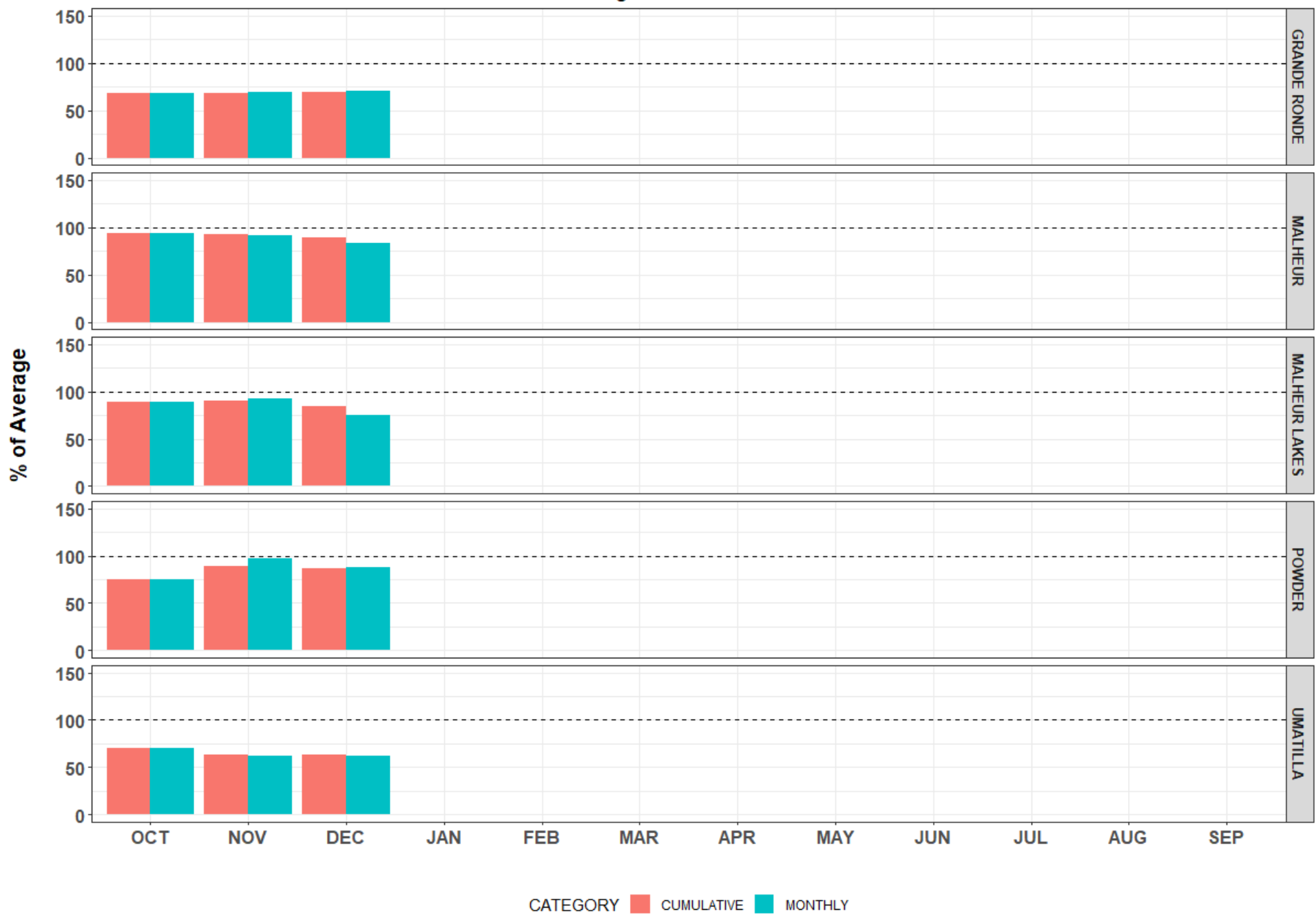
% of Average Streamflow - WY 2022



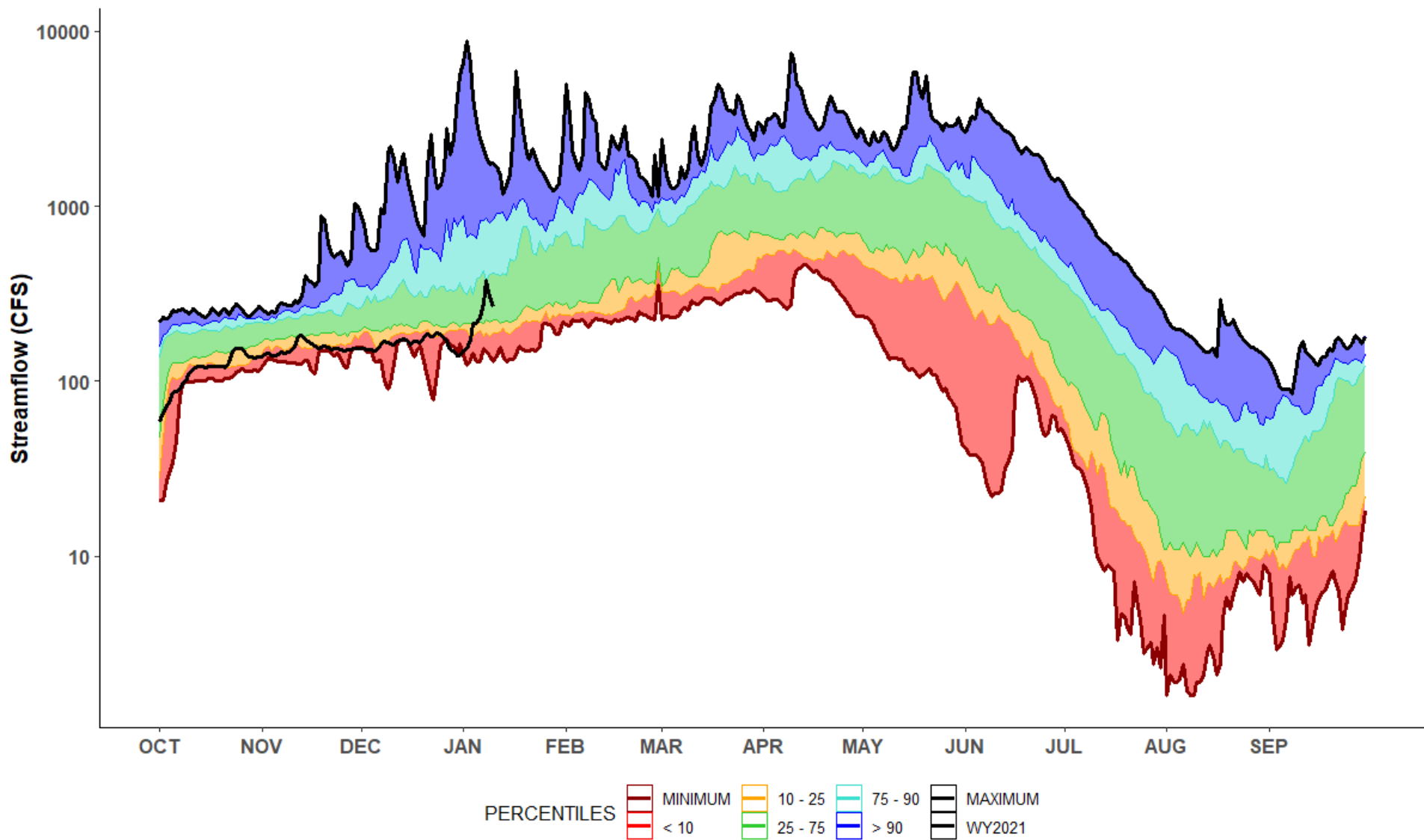
CATEGORY ■ CUMULATIVE ■ MONTHLY

EASTERN BASINS

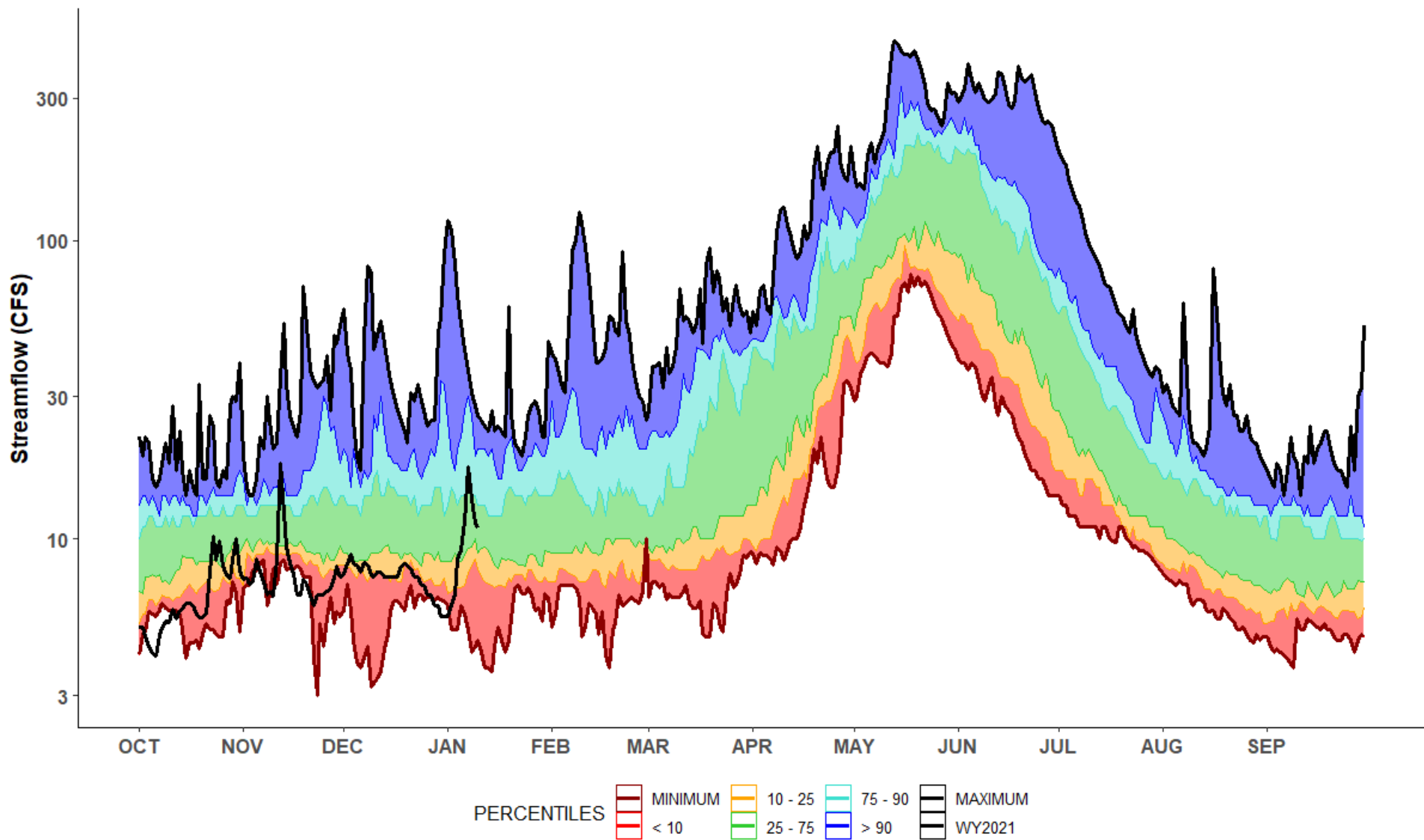
% of Average Streamflow - WY 2022



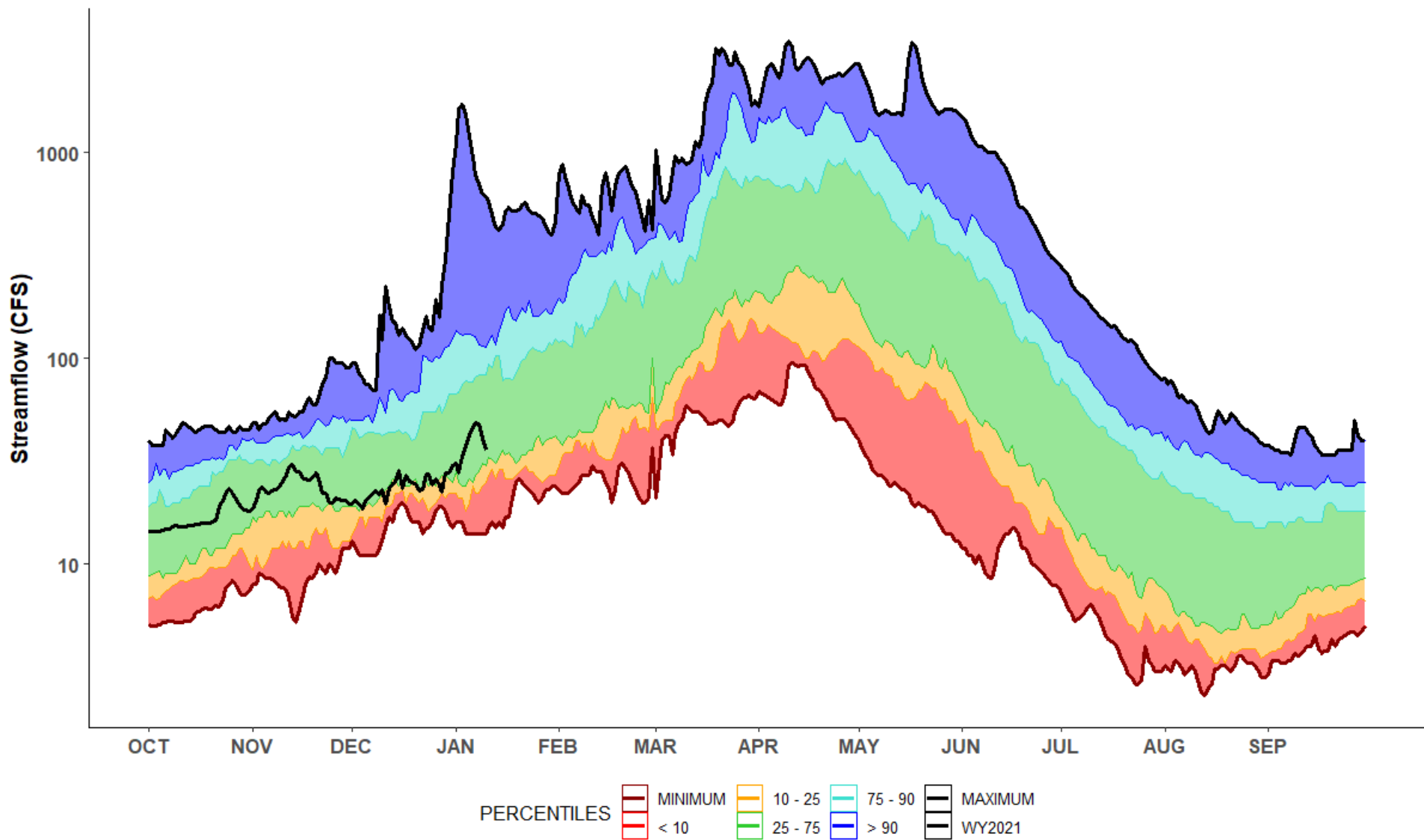
14040500 - JOHN DAY R AT PICTURE GORGE, NR DAYVILLE, OR
JOHN DAY BASIN
POR: 1991-2020



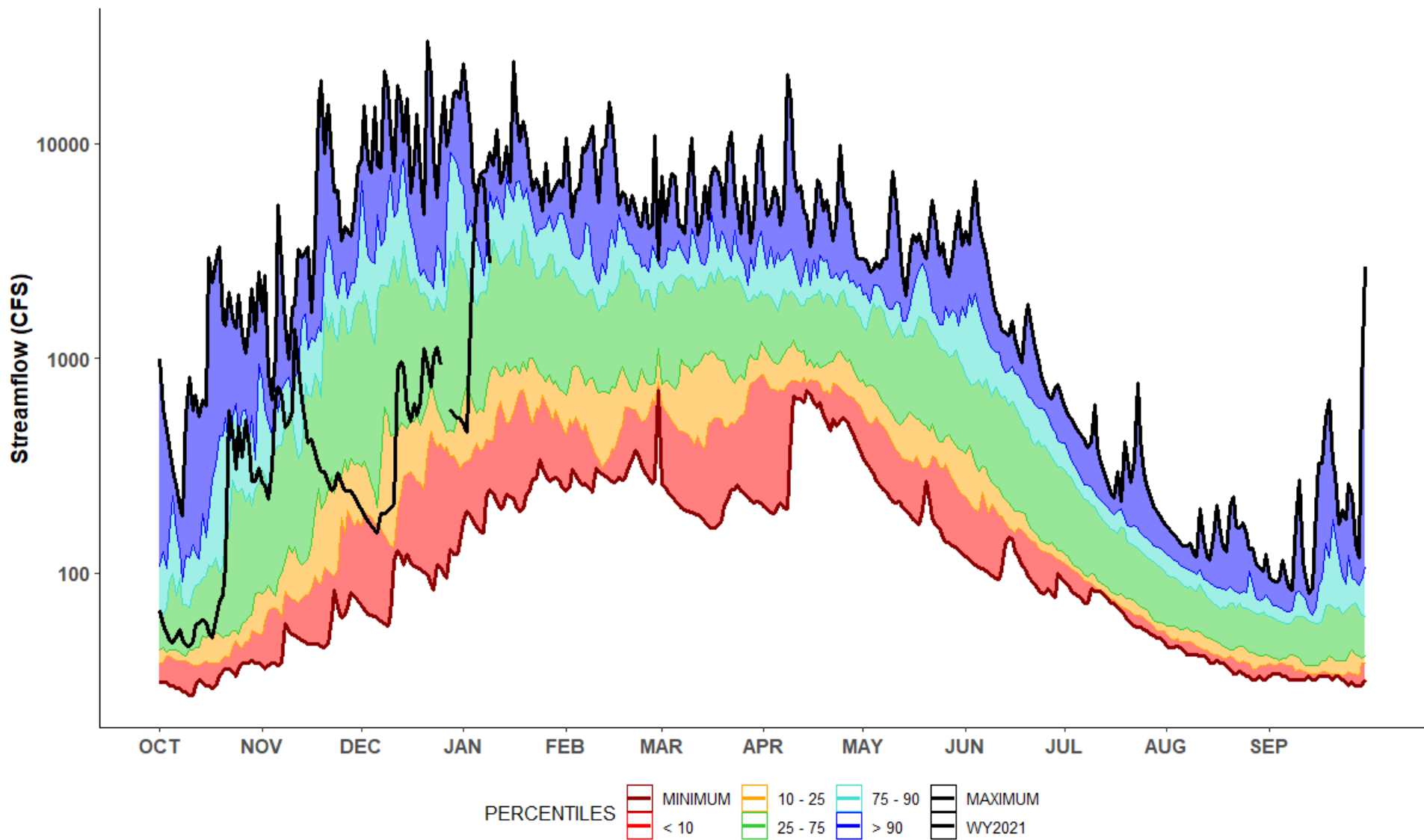
13317850 - GRANDE RONDE R BL CLEAR CR, NR STARKEY, OR
GRANDE RONDE BASIN
POR: 1991-2020



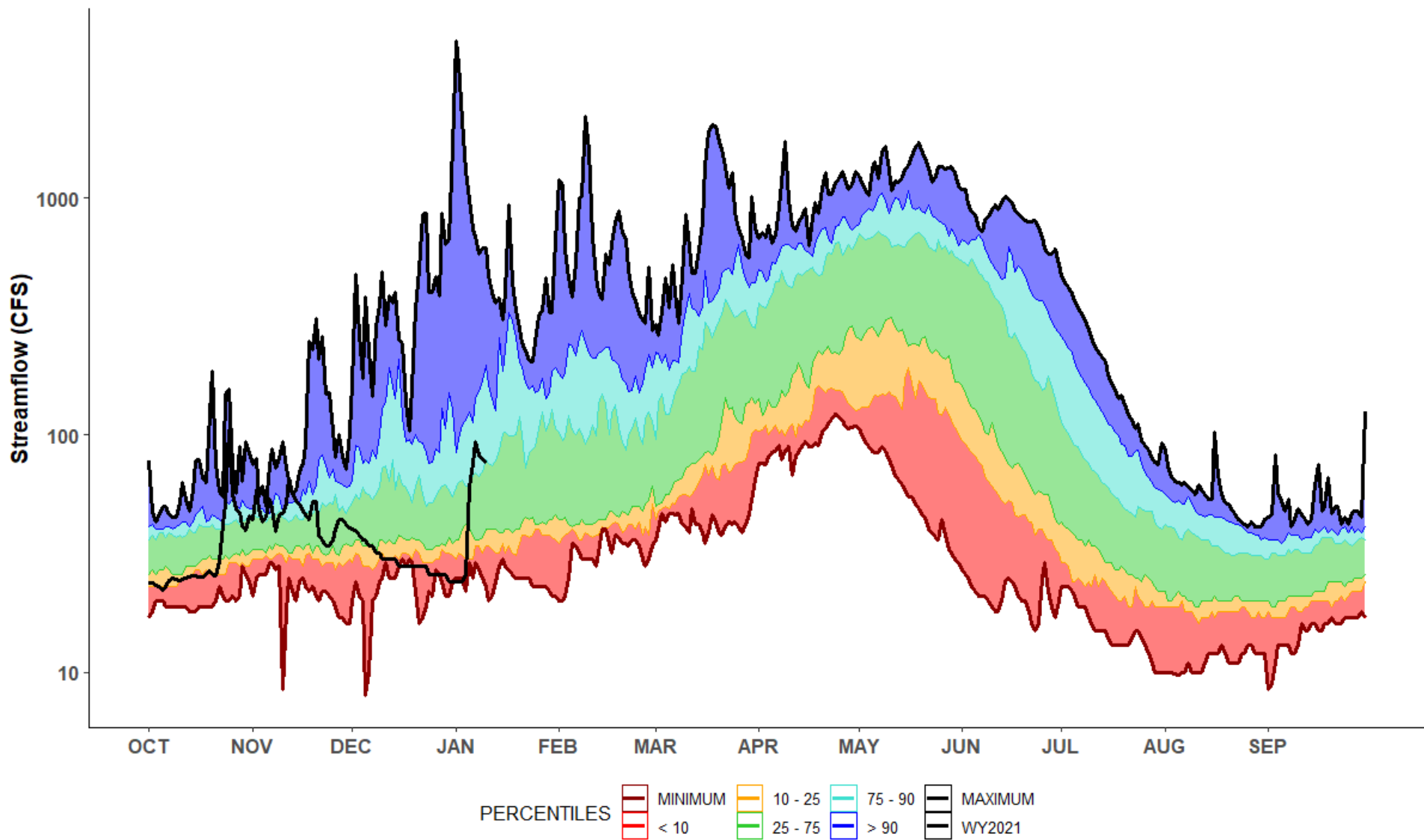
10393500 - SILVIES R NR BURNS, OR
MALHEUR LAKES BASIN
POR: 1991-2020



14308000 - S UMPQUA R AT TILLER, OR
UMPQUA BASIN
POR: 1991-2020



10384000 - CHEWAUCAN R NR PAISLEY, OR
GOOSE AND SUMMER LAKES BASIN
POR: 1991-2020



OREGON



WATER RESOURCES
DEPARTMENT

QUESTIONS?



— BUREAU OF —
RECLAMATION

Reclamation Storage Update

Oregon Water Supply Availability Committee
Meeting

January 12, 2022

Basin Operations Summary

- **Operations Activities:**
 - Reclamation storage reservoirs in Oregon continue with typical winter fill operations
 - Flood Risk Management operations occurring at Scoggins

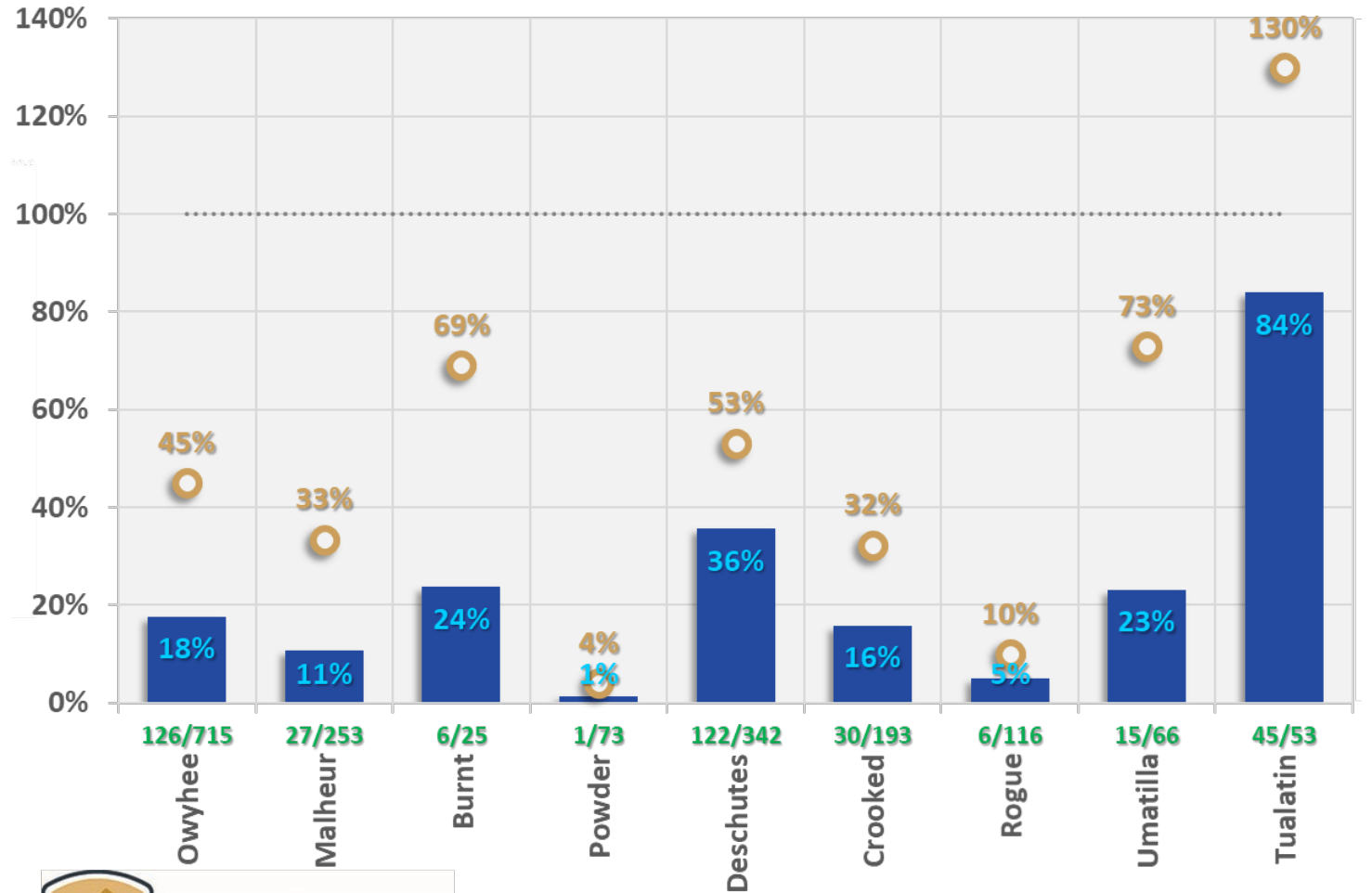
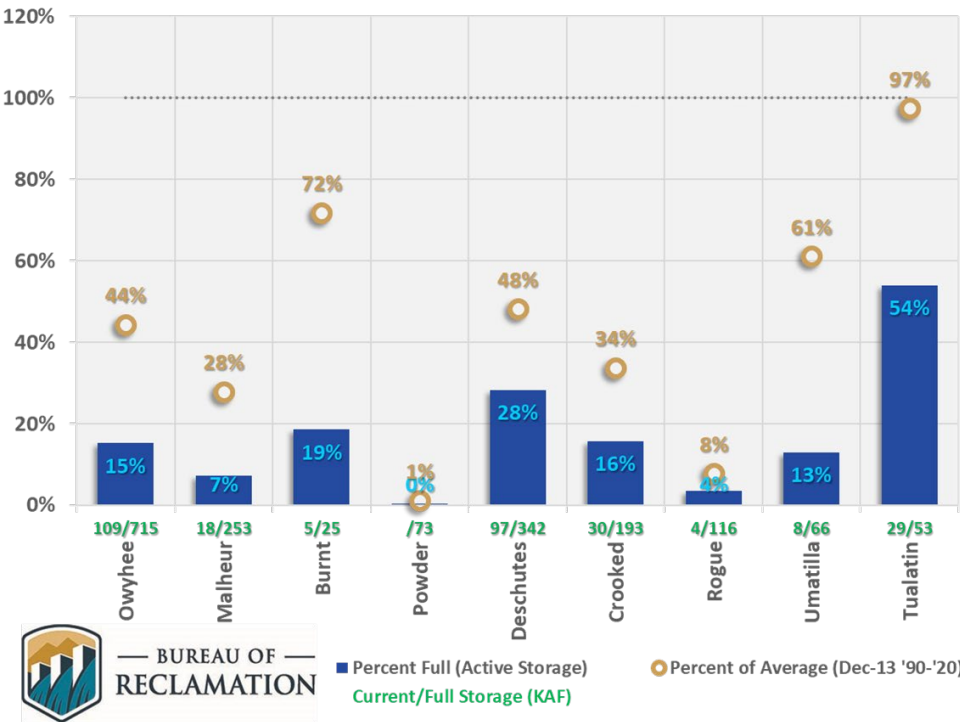
- **Water Supply Notes**
 - Below Average reservoir content continues at Reclamation Oregon reservoirs (except Scoggins)
 - Need wet conditions to continue, particularly in the central/eastern/southern Oregon basins
 - Most river basins will need above to much above normal runoff this WY to refill



Storage Conditions

Oregon Reservoir Storage (Jan 10 2022)

Oregon Reservoir Storage (Dec 13 2021)



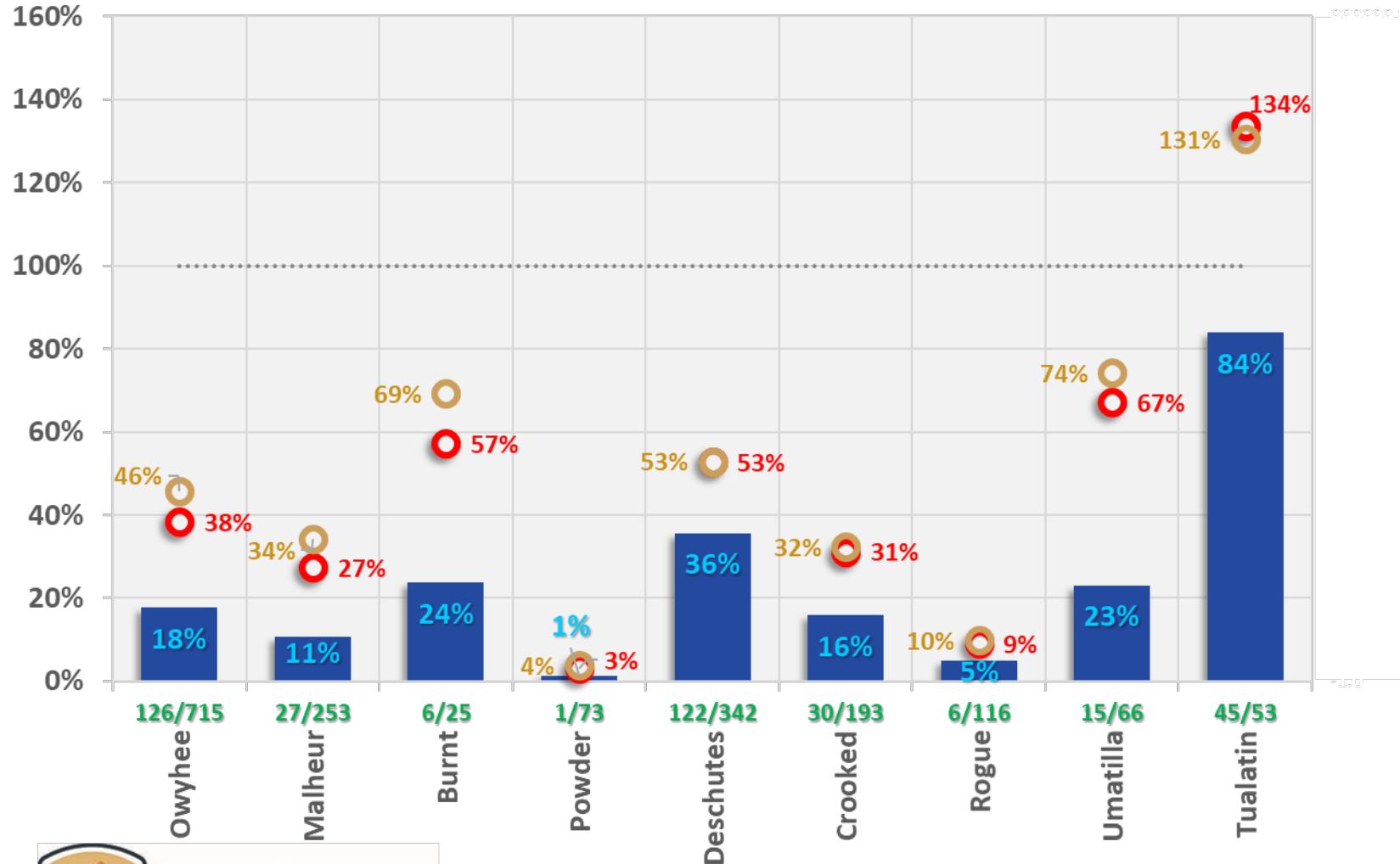
BUREAU OF RECLAMATION

■ Percent Full (Active Storage)
■ Current/Full Storage (KAF)

● Percent of Average (Jan-10 '91-'21)

1981-2010 vs. 1991-2020 Average Comparison

Oregon Reservoir Storage (Jan 10 2022)



■ Percent Full (Active Storage)

● Percent of Average (Jan-10 '91-'20)

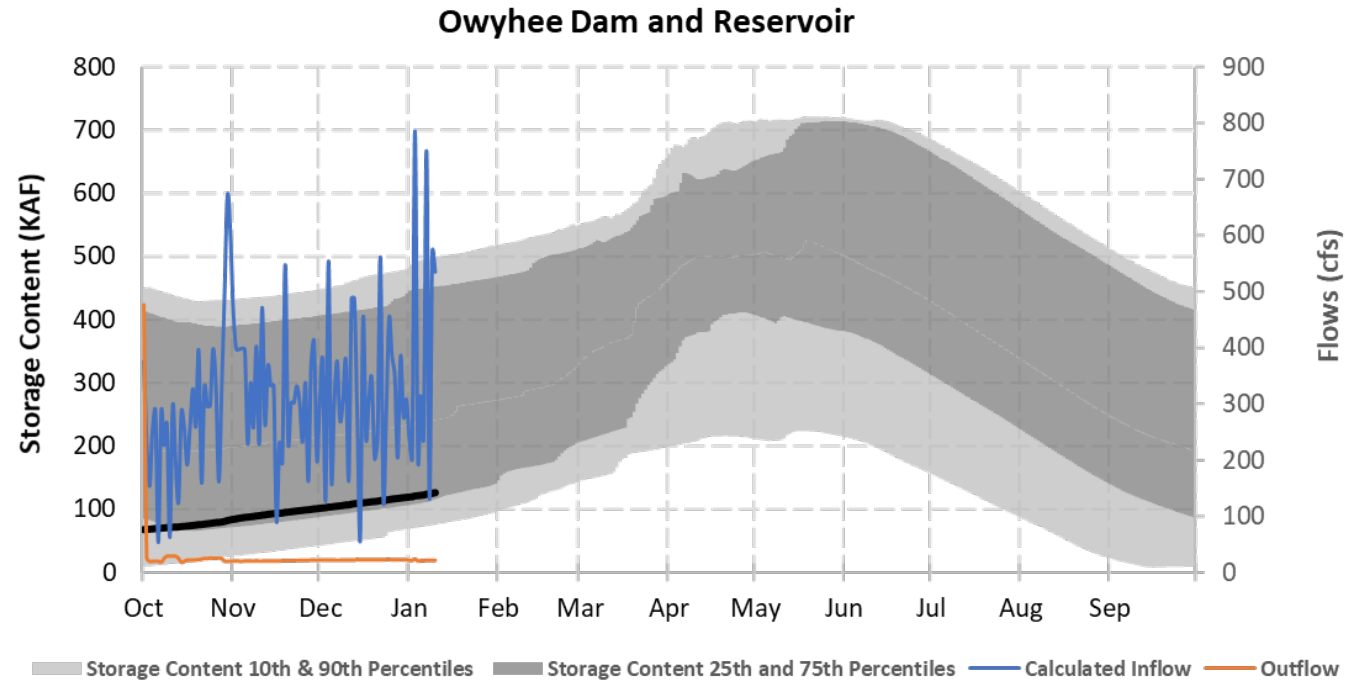
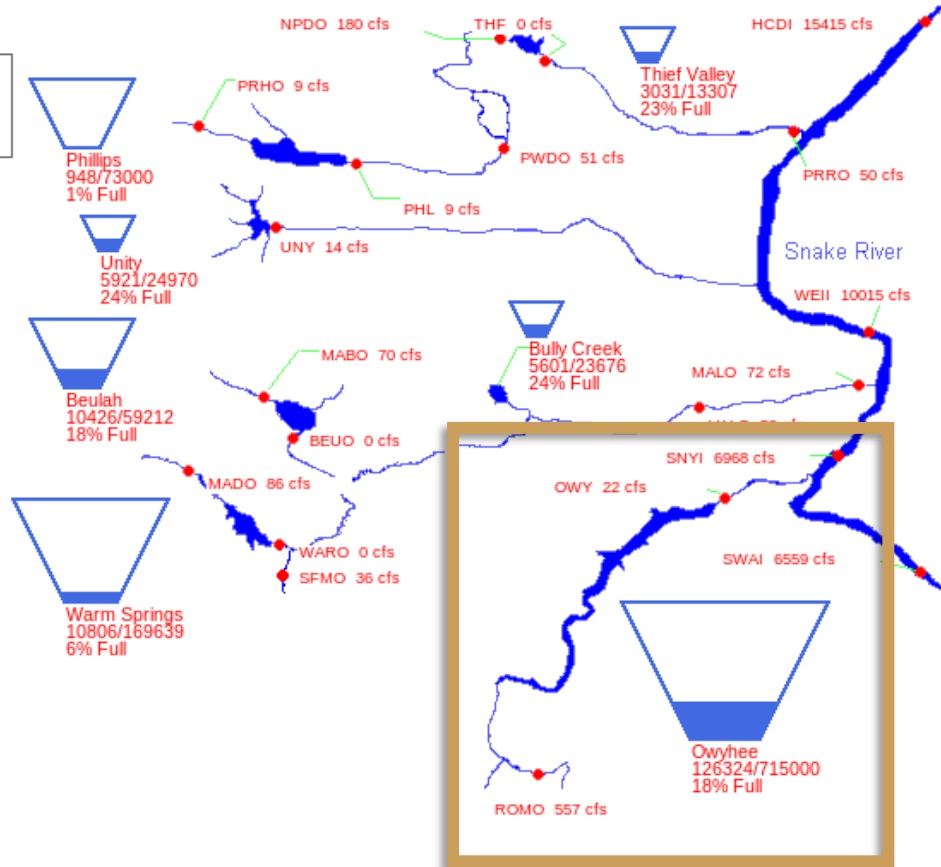
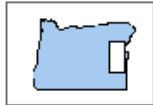
● Percent of Average (Jan-10 '81-'10)

■ Current/Full Storage (KAF)



Owyhee River Basin

01/10/2022



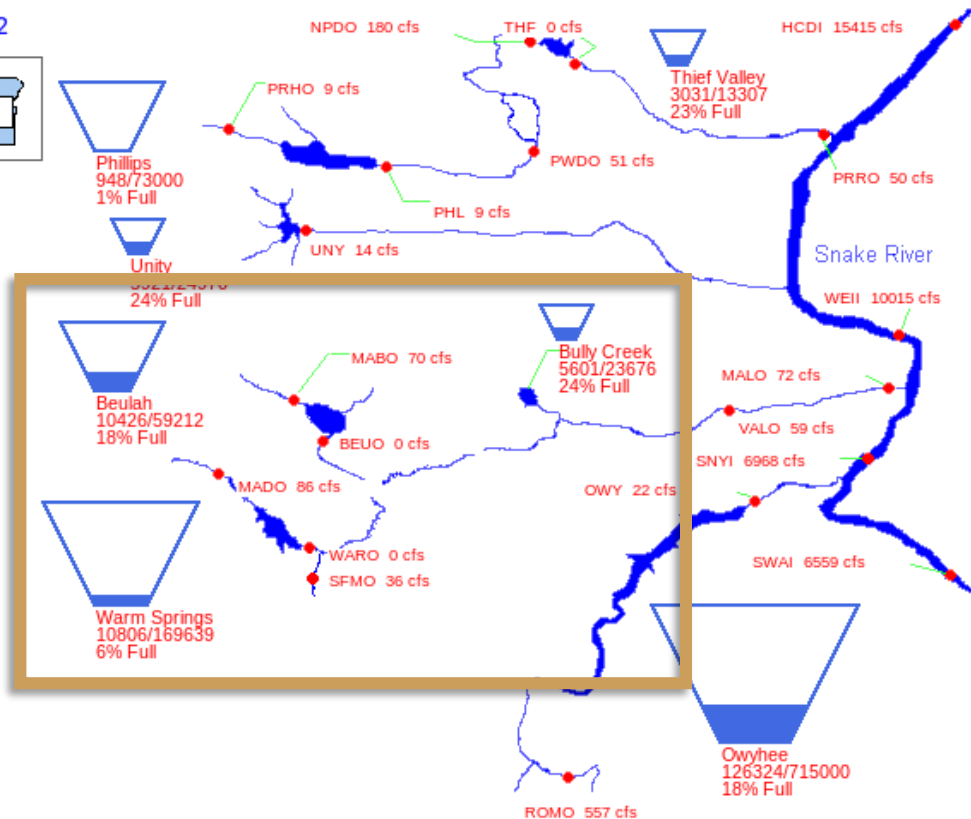
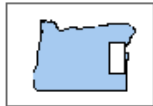
Reclamation January 1 Runoff Forecast
Jan-Jun: 610 kaf (115% 91-20 Ave)



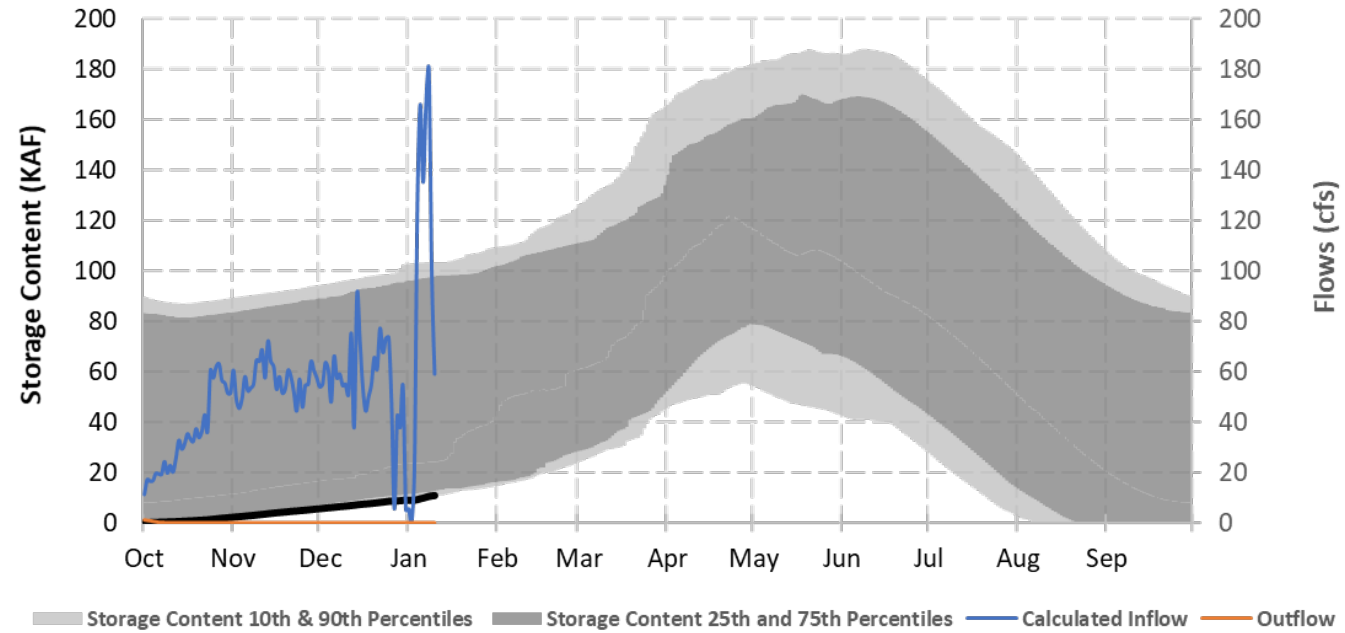
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Malheur River Basin

01/10/2022



Warm Springs Dam and Reservoir

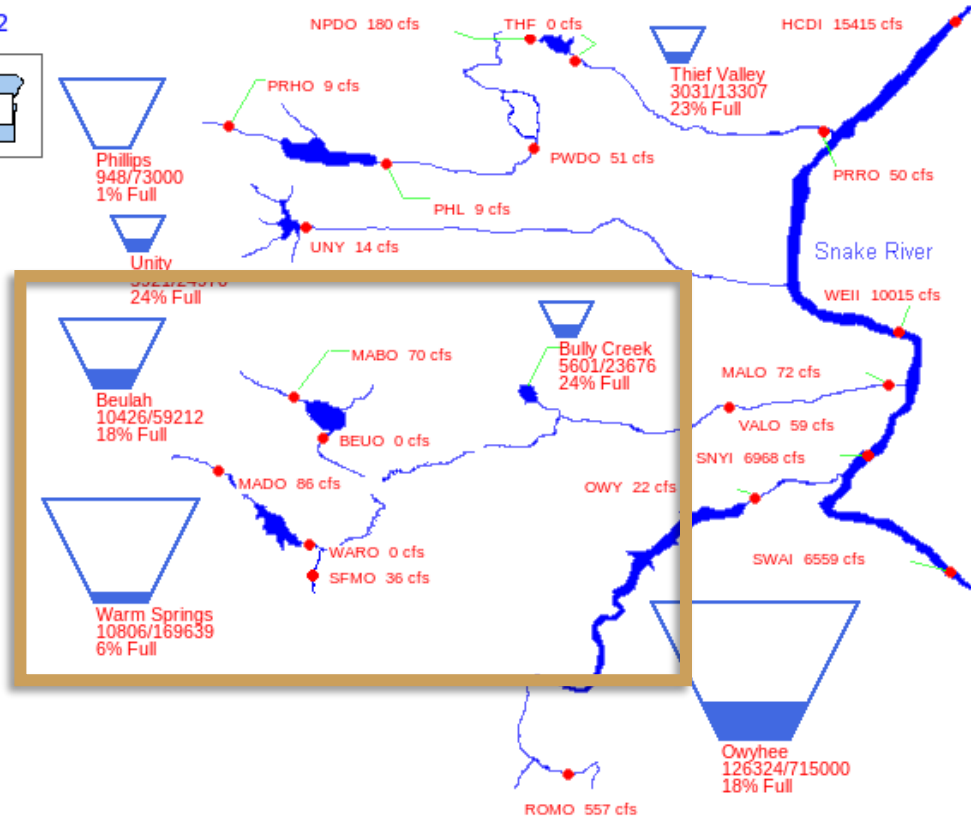
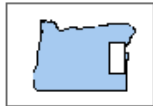


Reclamation January 1 Runoff Forecast
 Jan-Jun: 100 kaf (86% 91-20 Ave)

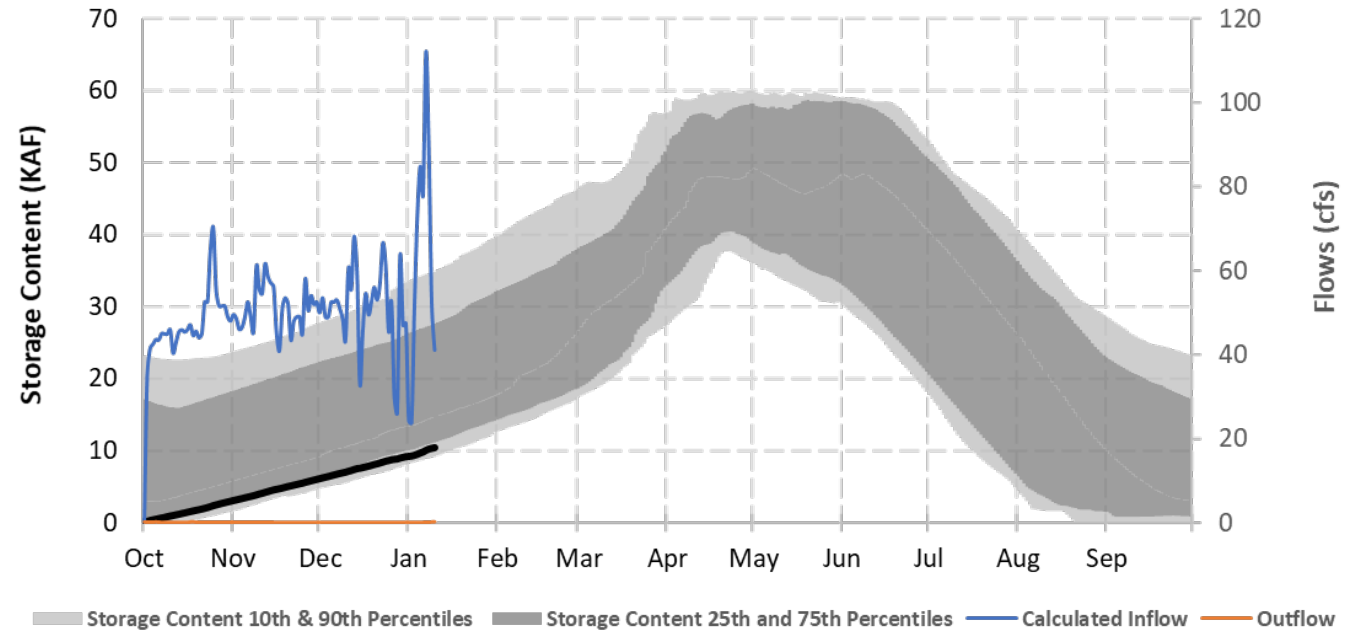
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Malheur River Basin

01/10/2022



Beulah Dam and Reservoir

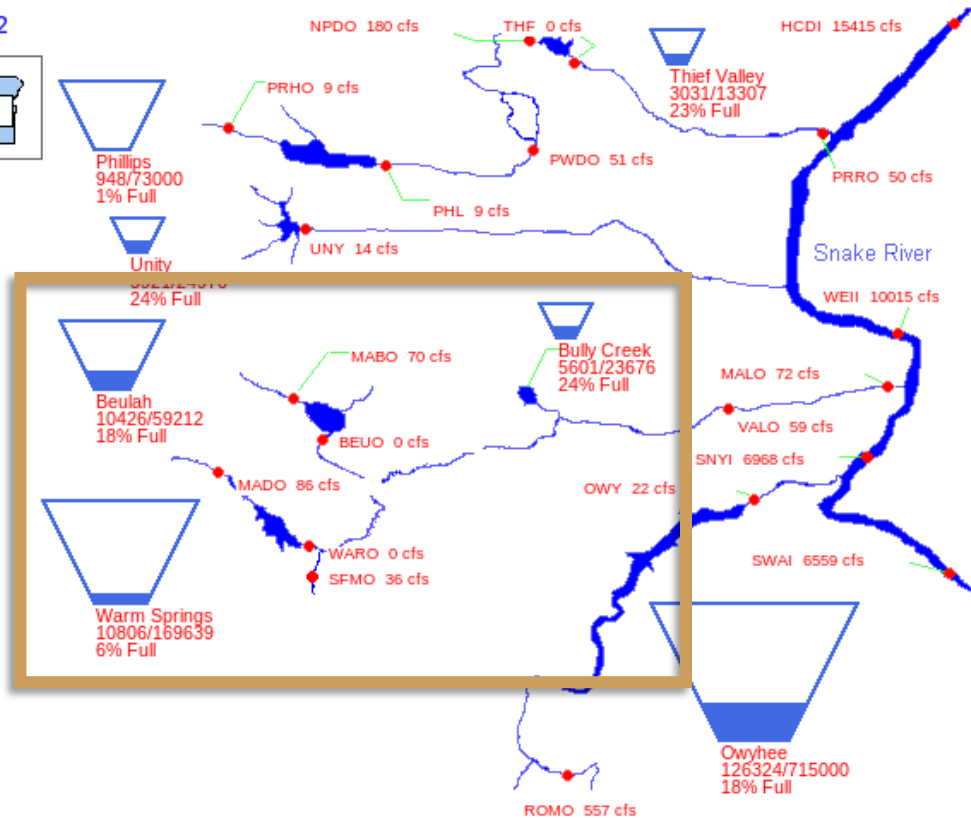
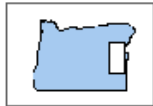


Reclamation January 1 Runoff Forecast
Jan-Jun: 70 kaf (88% 91-20 Ave)

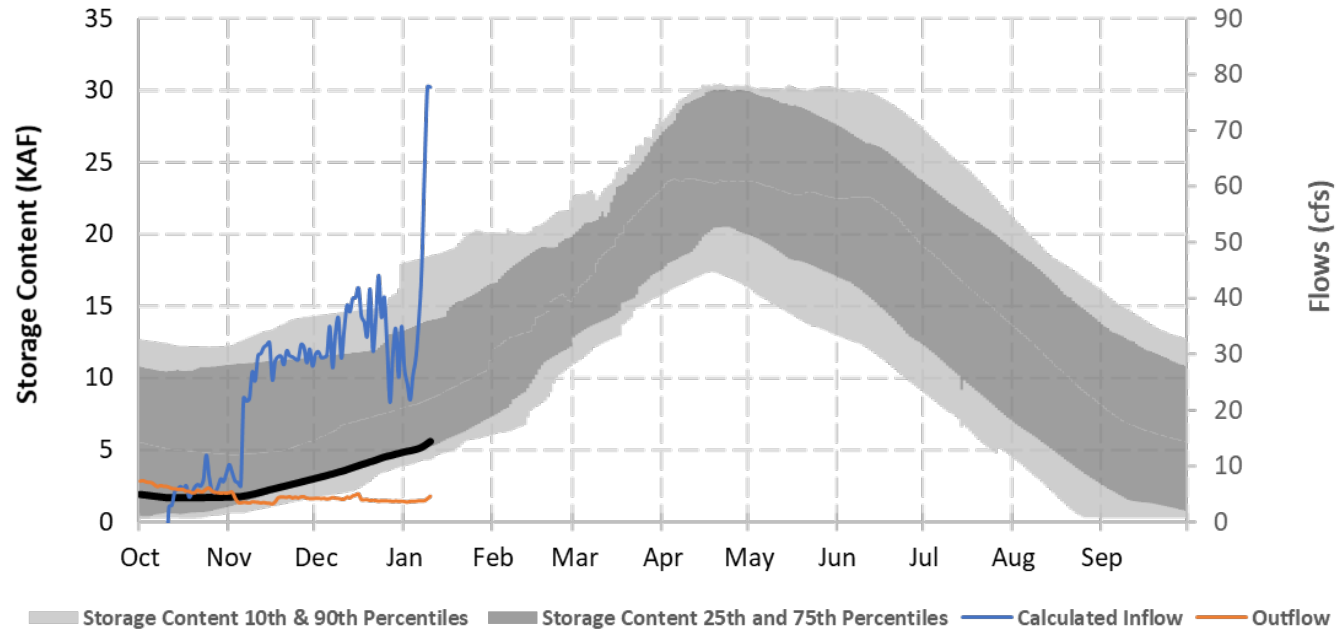
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Malheur River Basin

01/10/2022



Bully Creek Dam and Reservoir



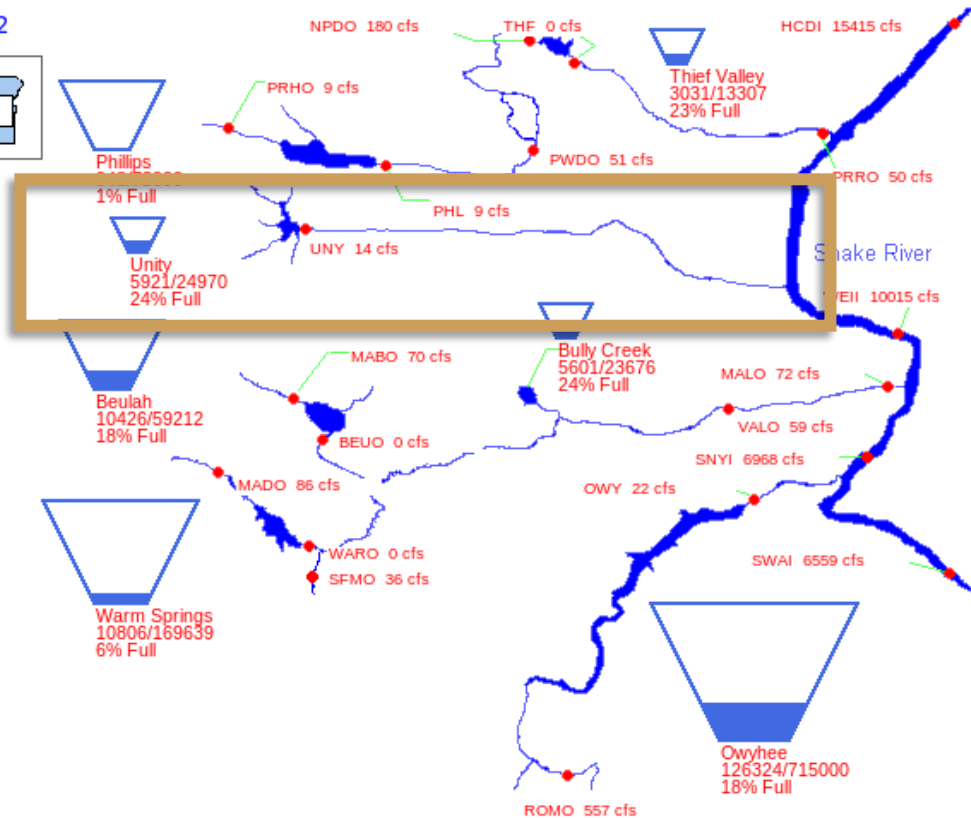
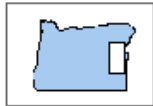
Reclamation January 1 Runoff Forecast
Jan-Jun: 24 kaf (81% 91-20 Ave)



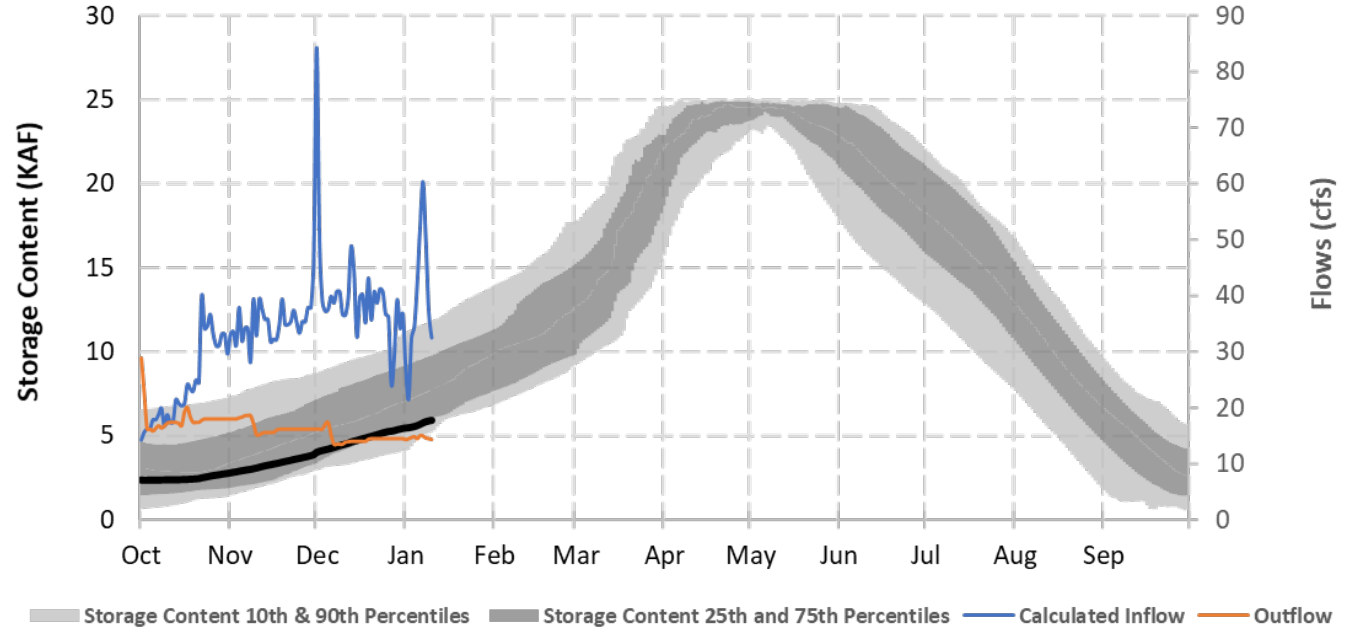
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Burnt River Basin

01/10/2022



Unity Dam and Reservoir



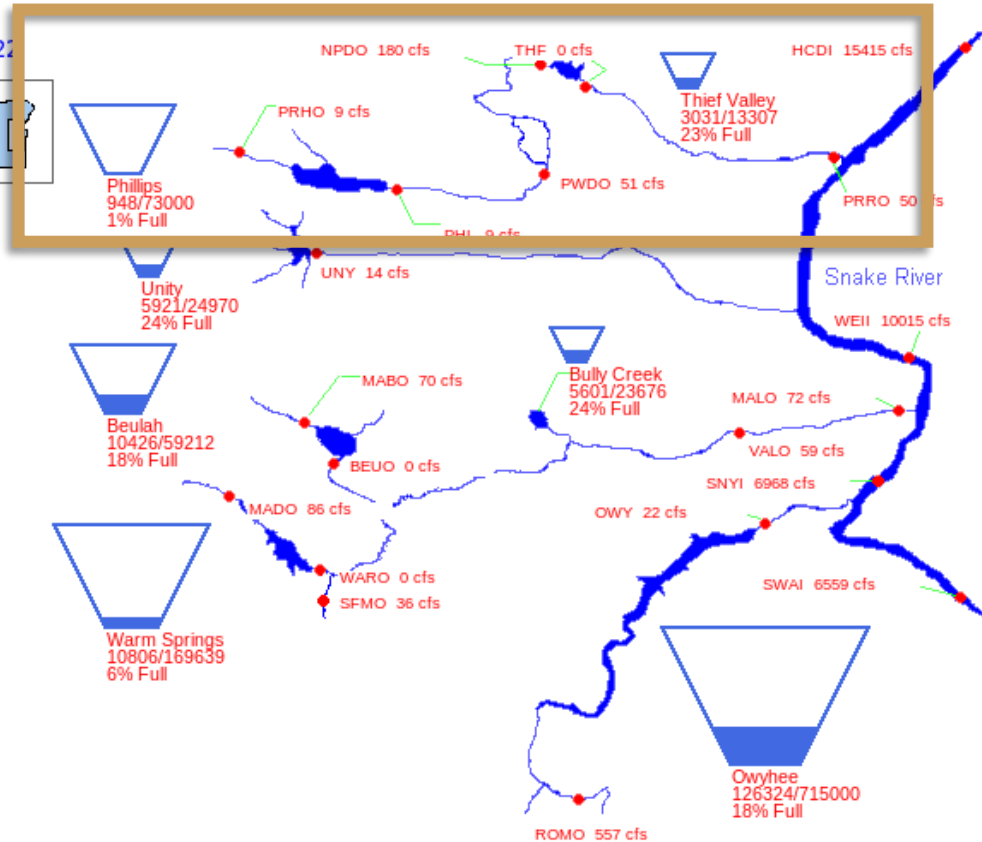
Reclamation January Runoff Forecast
Jan-Jun: 45 kaf (89% 91-20 Ave)



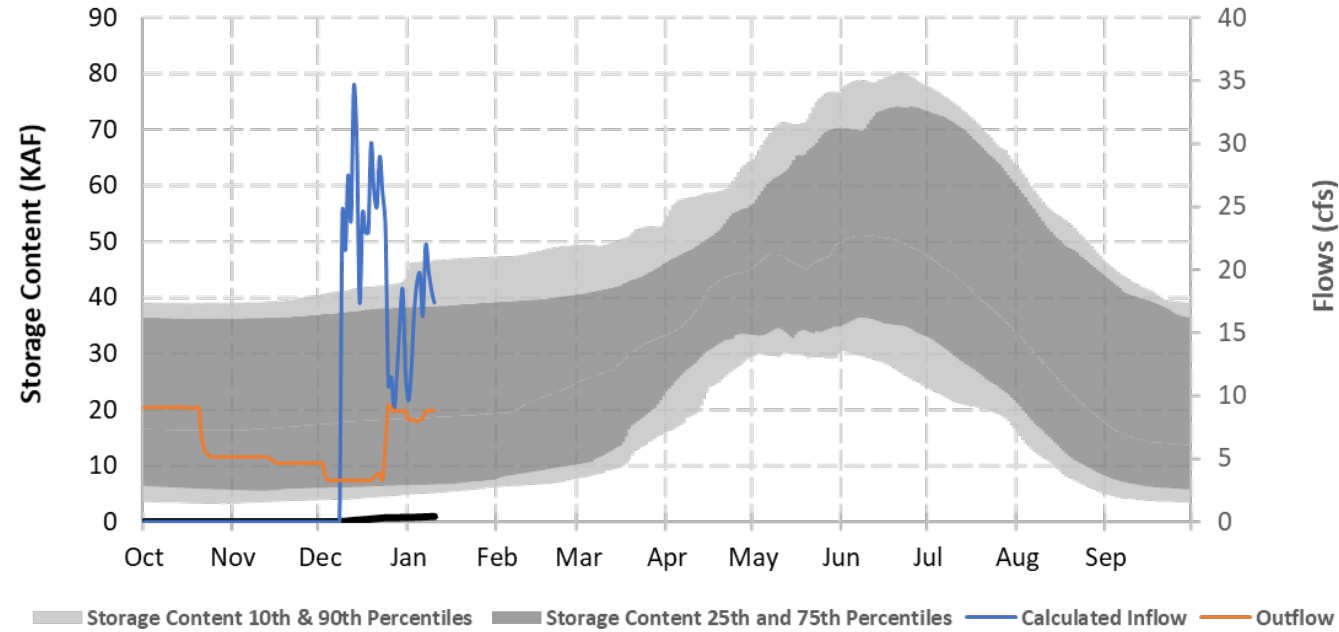
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Powder River Basin

01/10/2022



Mason Dam - Phillips Lake



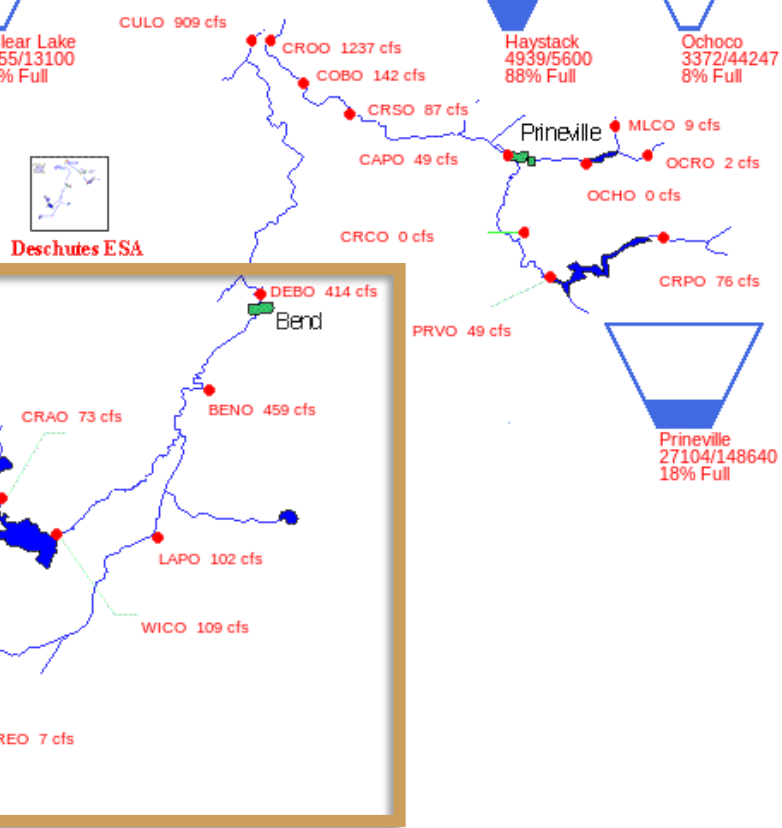
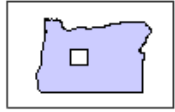
Reclamation January 1 Runoff Forecast
Jan-Jul: 69 kaf (97% 91-20 Ave)



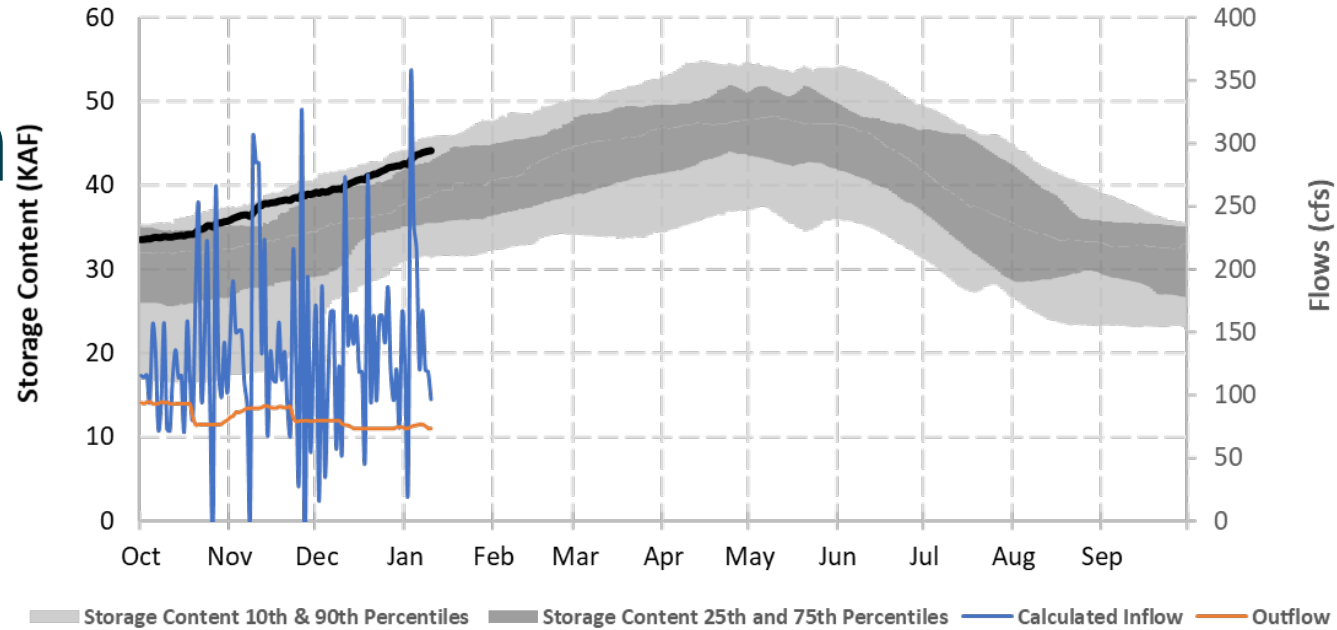
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Deschutes River Basin

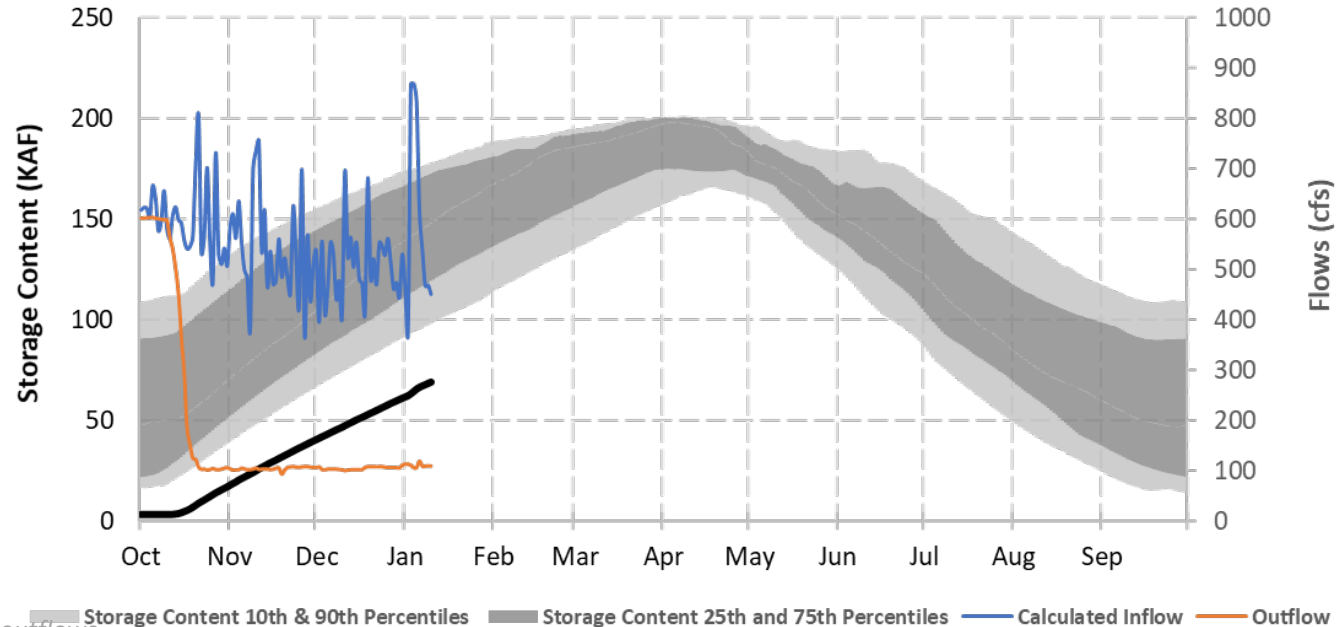
01/10/2022



Crane Prairie Dam and Reservoir



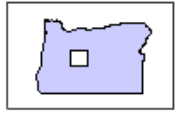
Wickiup Dam and Reservoir



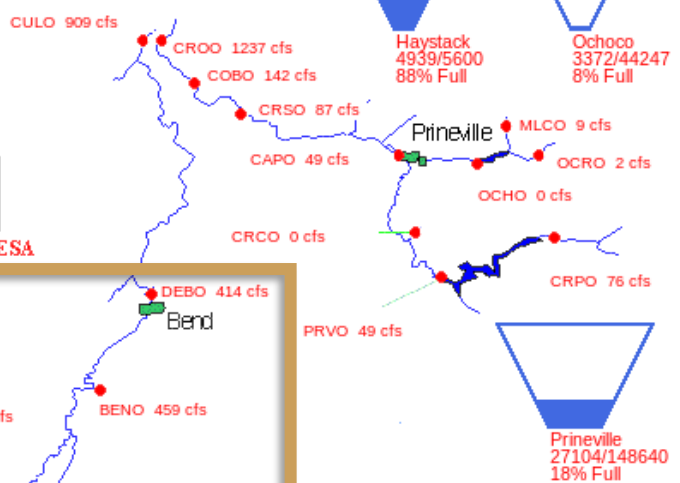
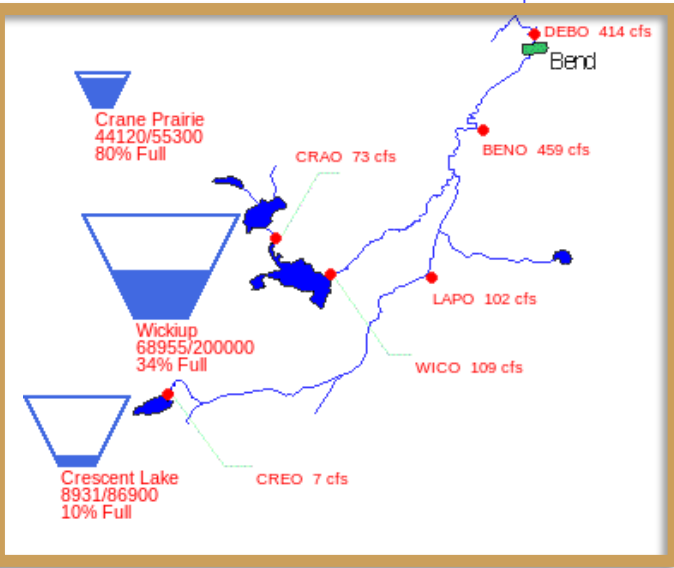
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Deschutes River Basin

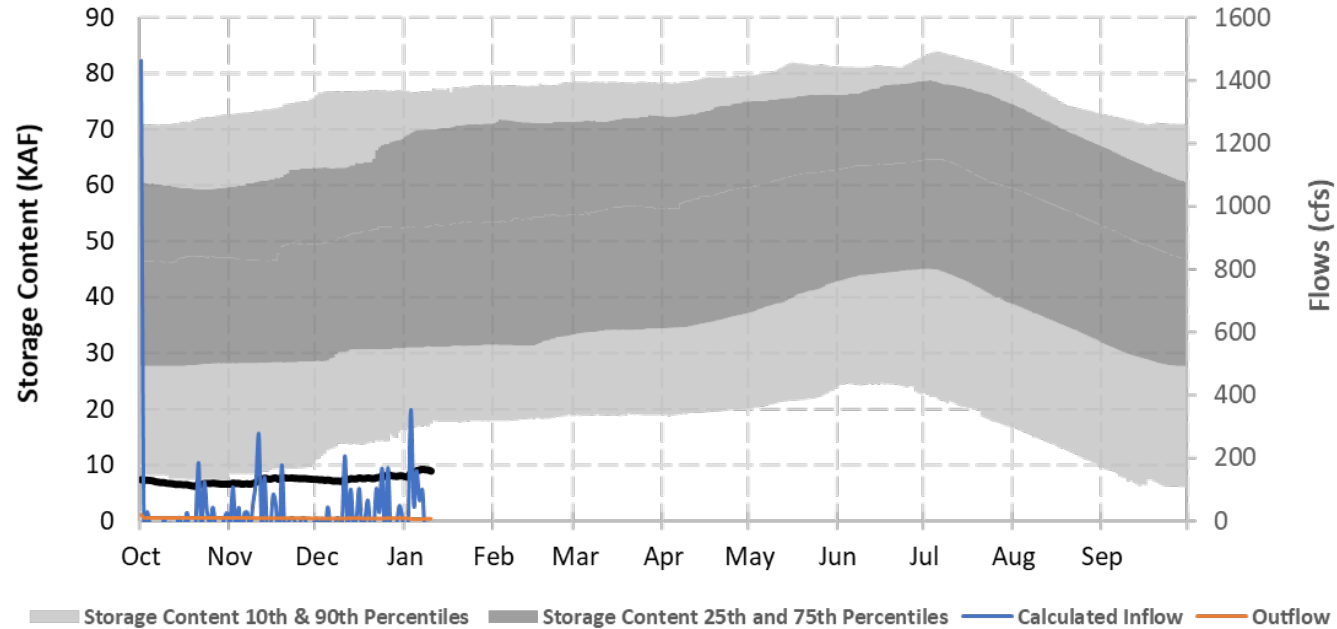
01/10/2022



Deschutes ESA



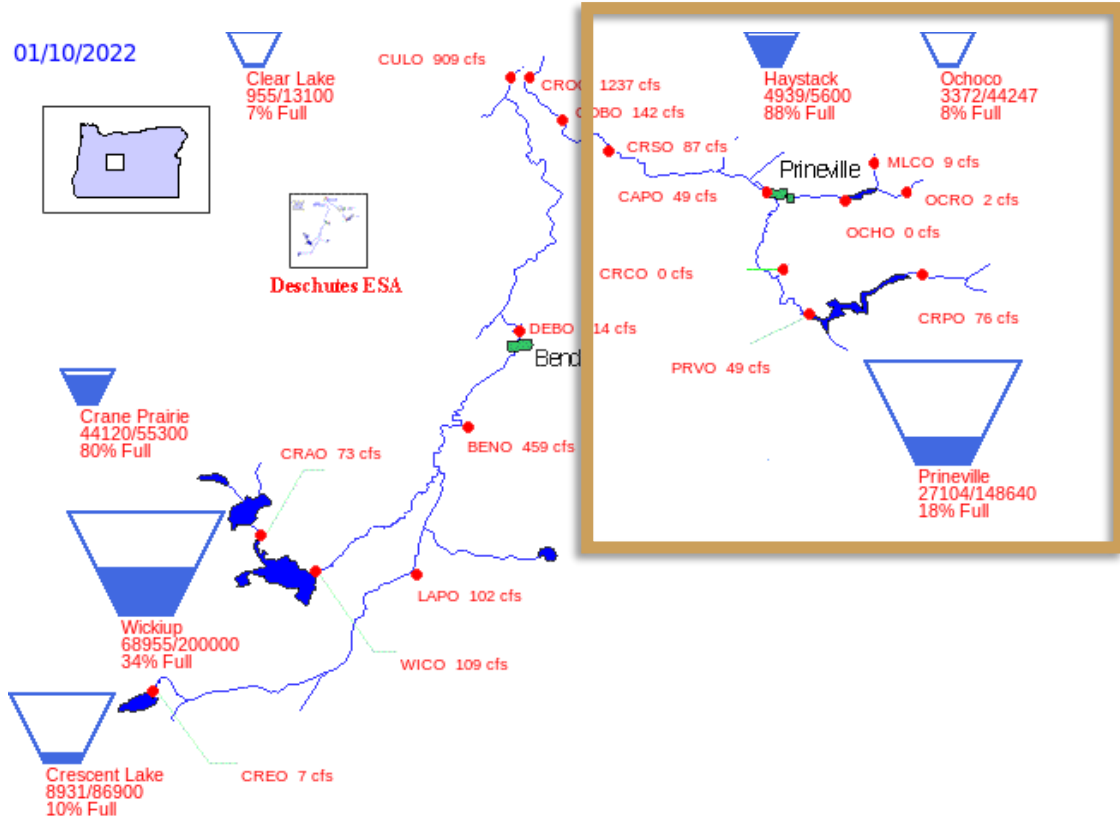
Crescent Lake Dam



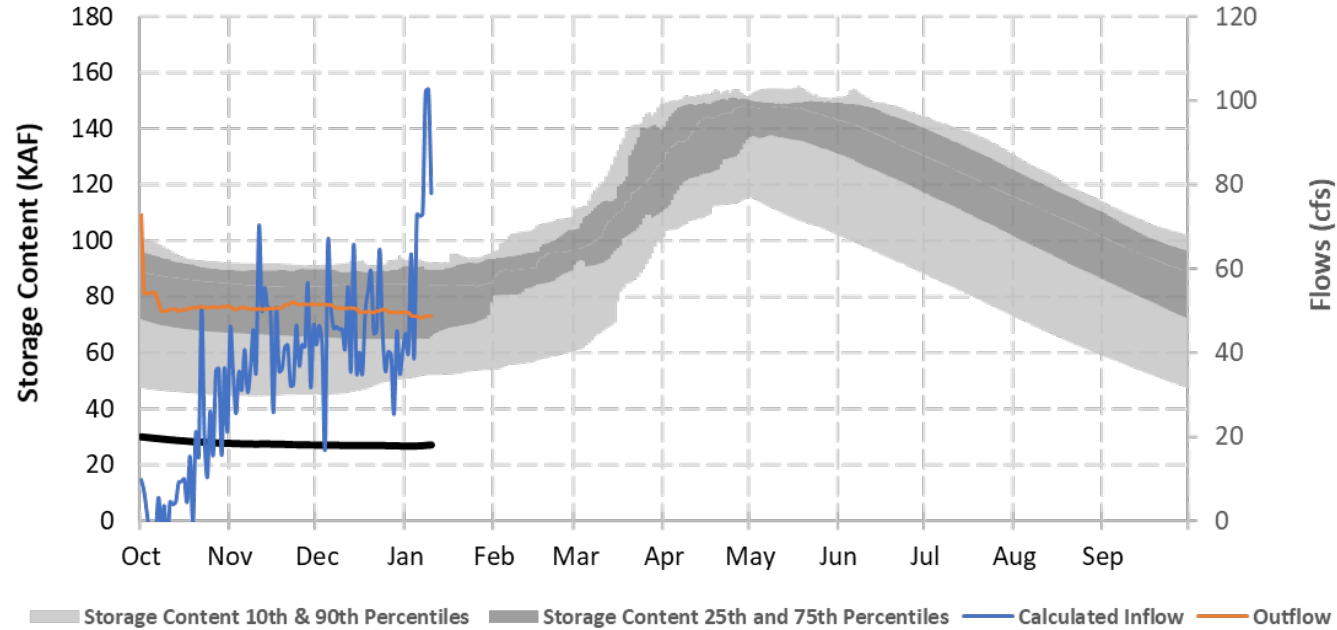
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Crooked River Basin

01/10/2022



Bowman Dam - Prineville Reservoir

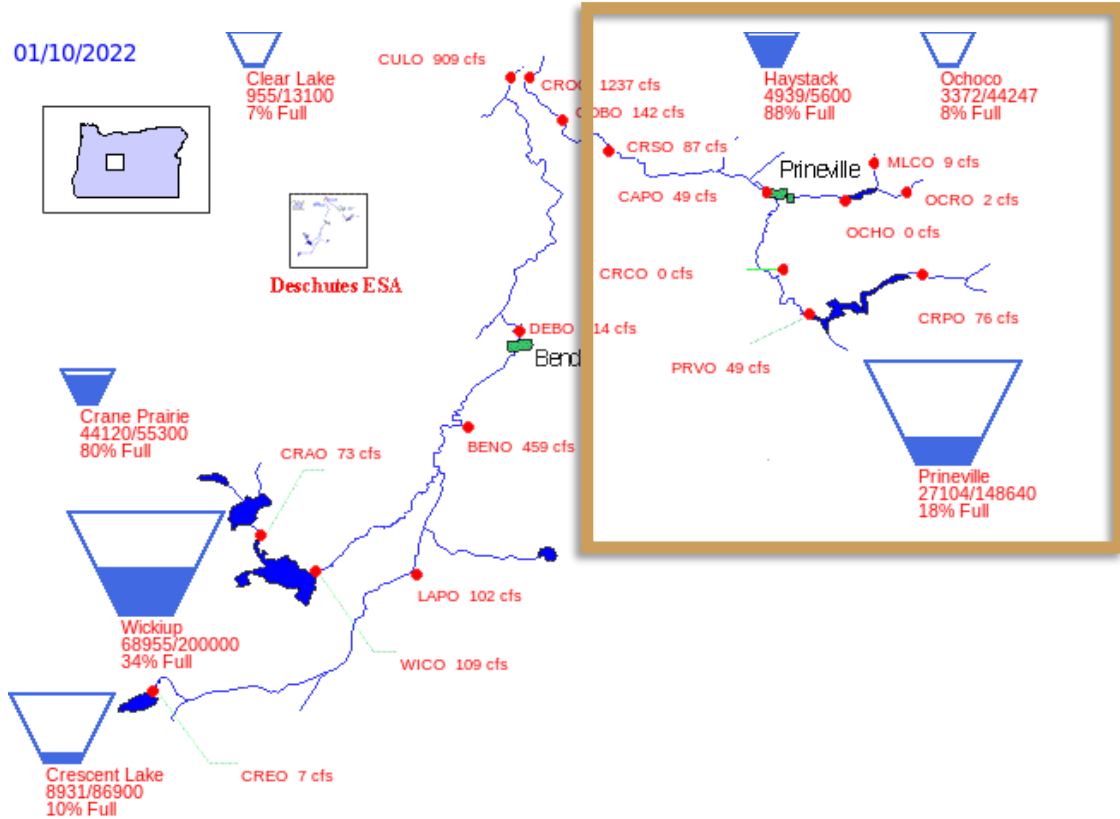


Reclamation January 1 Runoff Forecast
Jan-Aug: 166 kaf (91% 91-20 Ave)

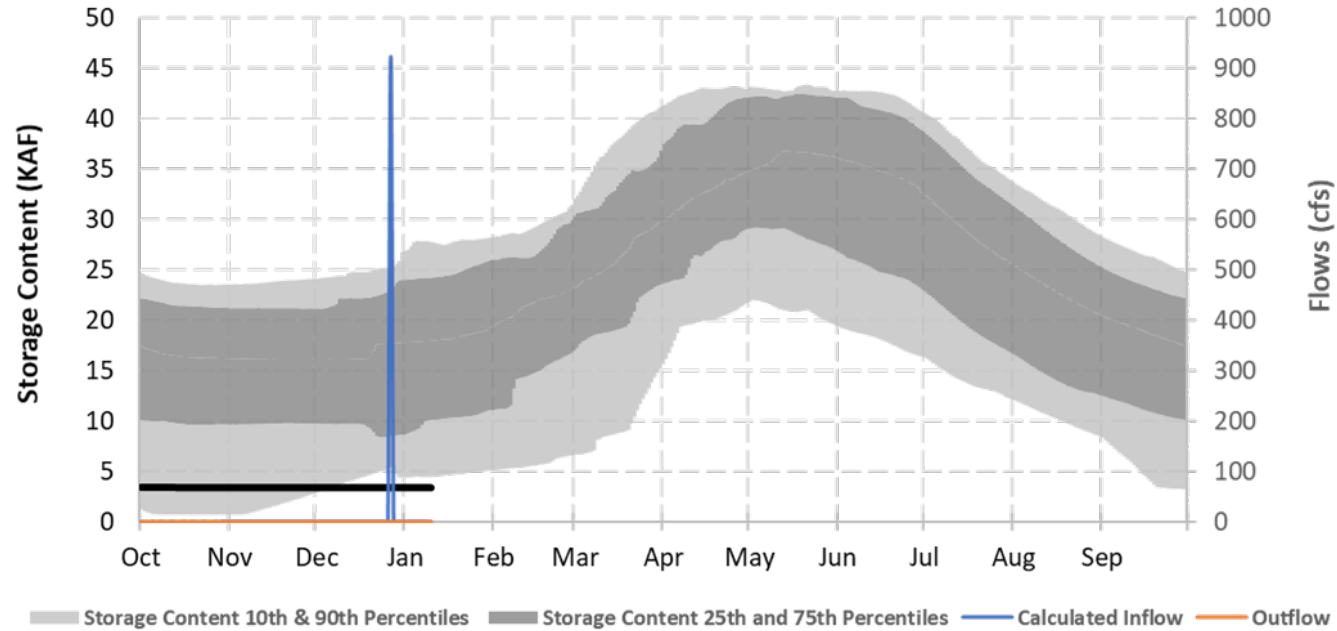
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Crooked River Basin

01/10/2022



Ochocho Dam and Reservoir

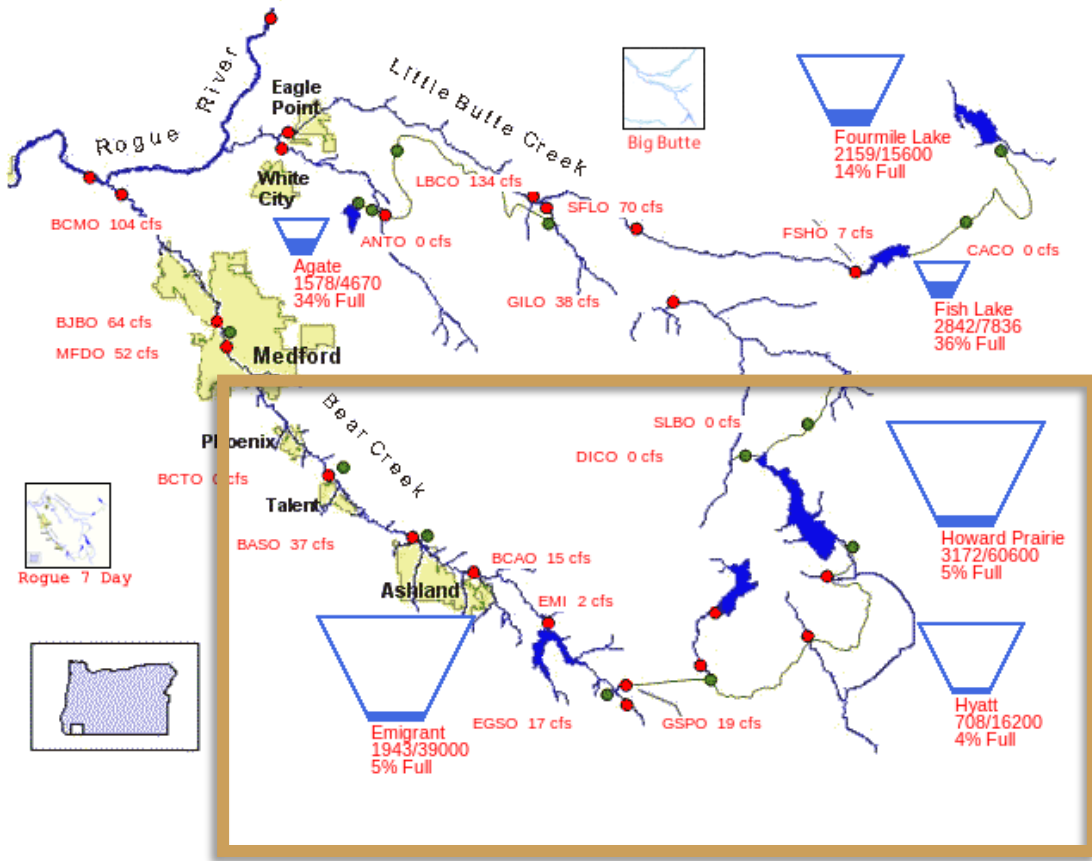


Reclamation January 1 Runoff Forecast
 Jan-Jun: 35 kaf (88% 91-20 Ave)

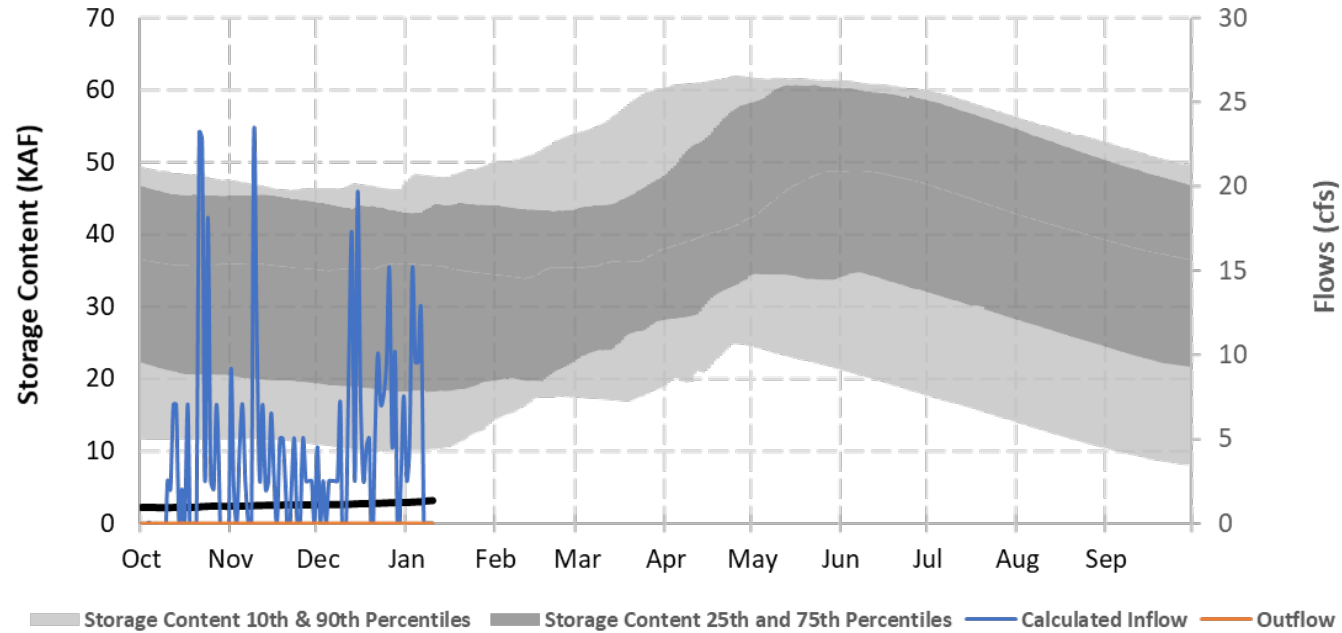
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Rogue River Basin

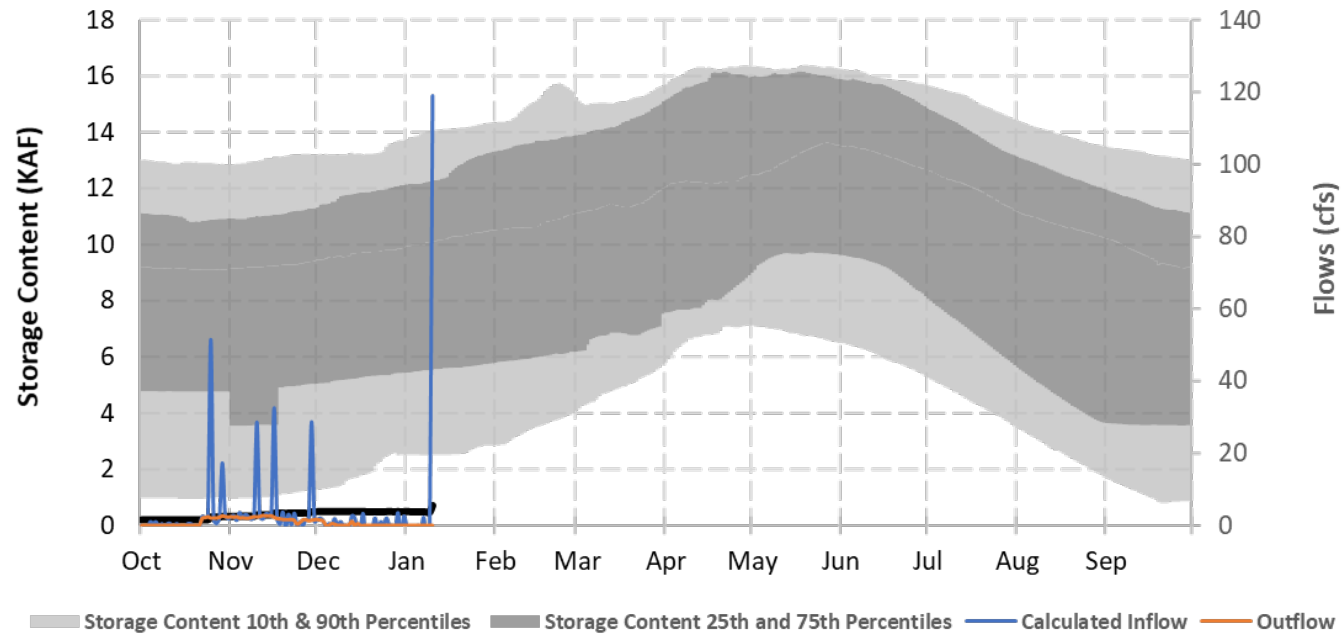
01/10/2022



Howard Prairie Dam and Lake



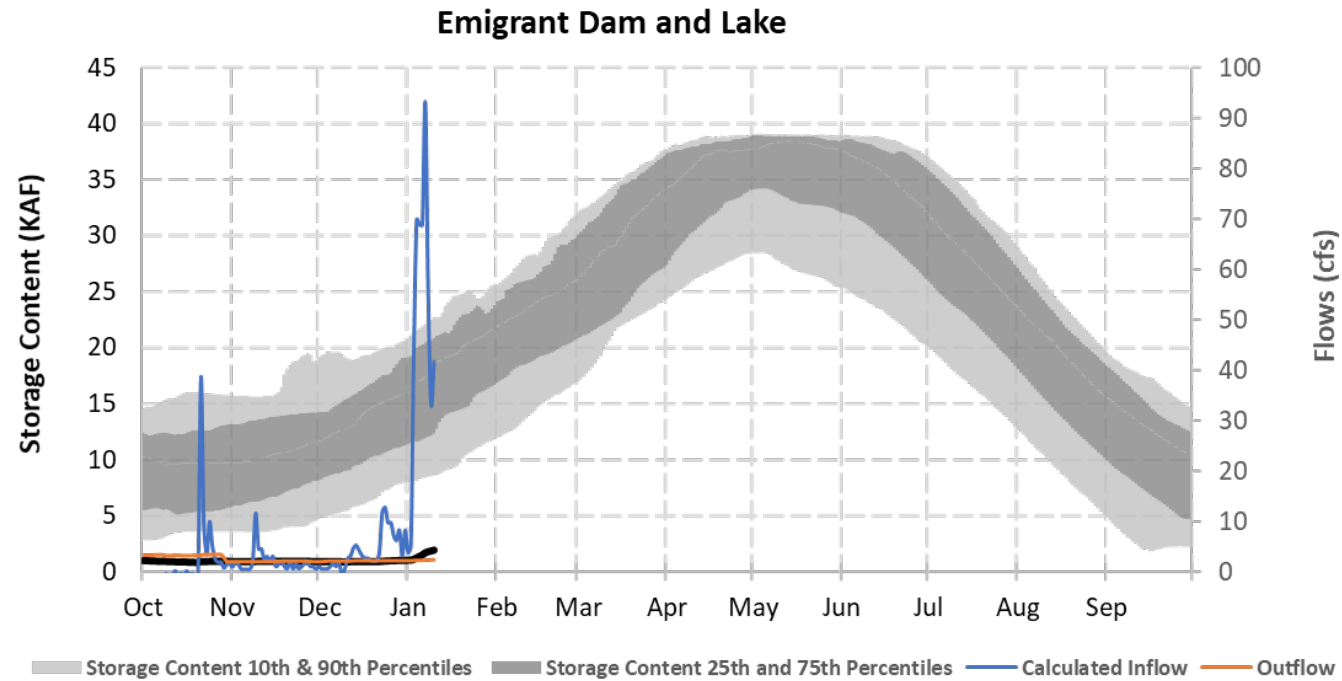
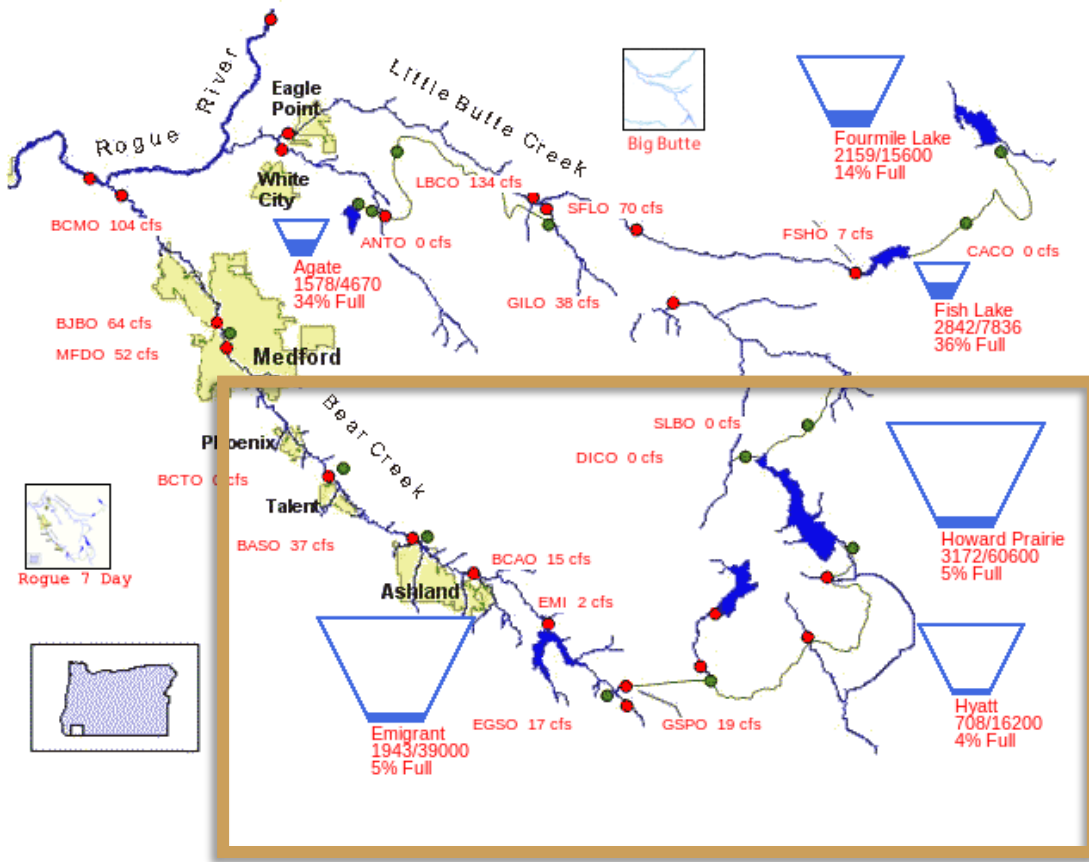
Hyatt Dam and Reservoir



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

Rogue River Basin

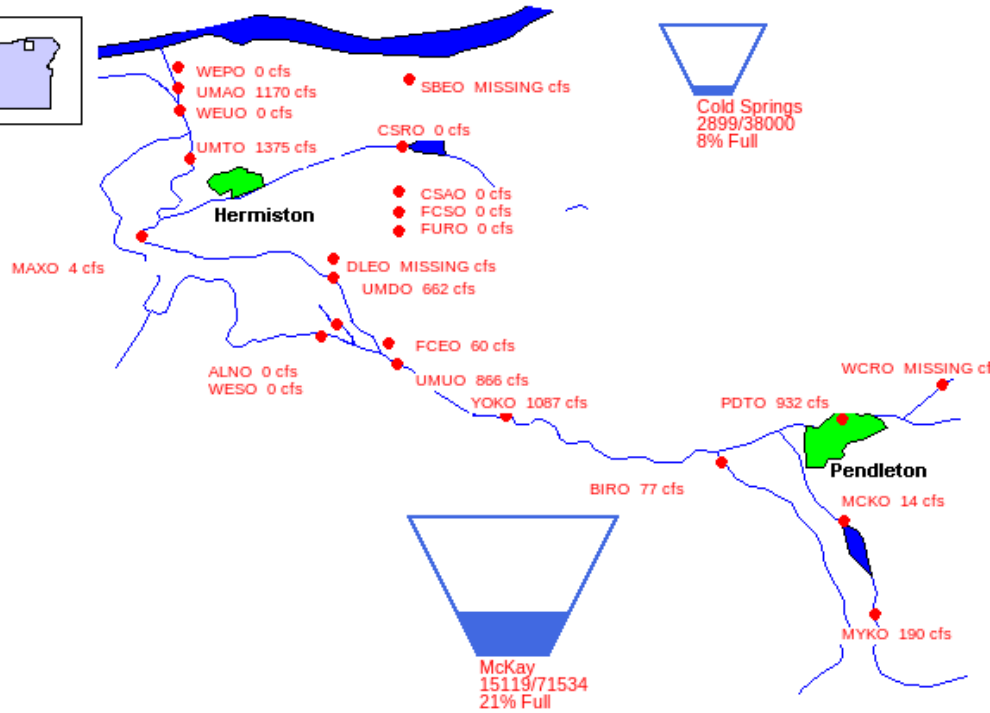
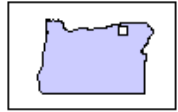
01/10/2022



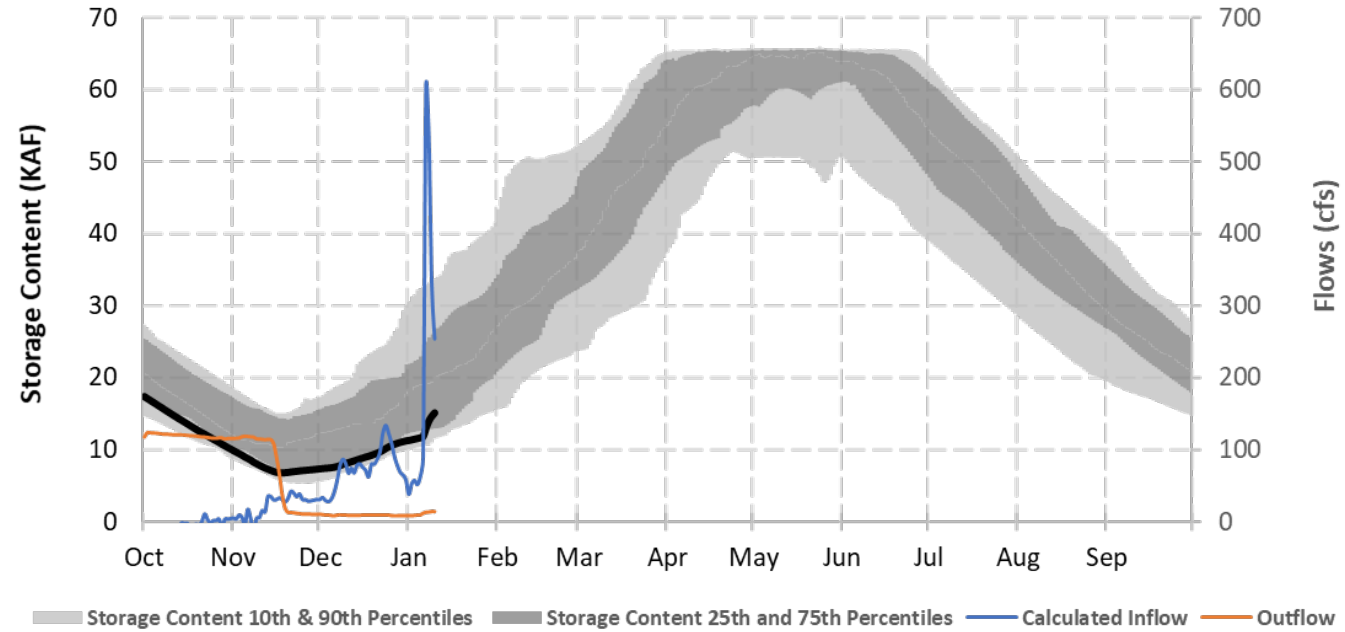
*Graphed projections are the 10th, 50th, and 90th percentile storage values based on historical inflows and outflows

Umatilla River Basin

01/10/2022



McKay Dam and Reservoir



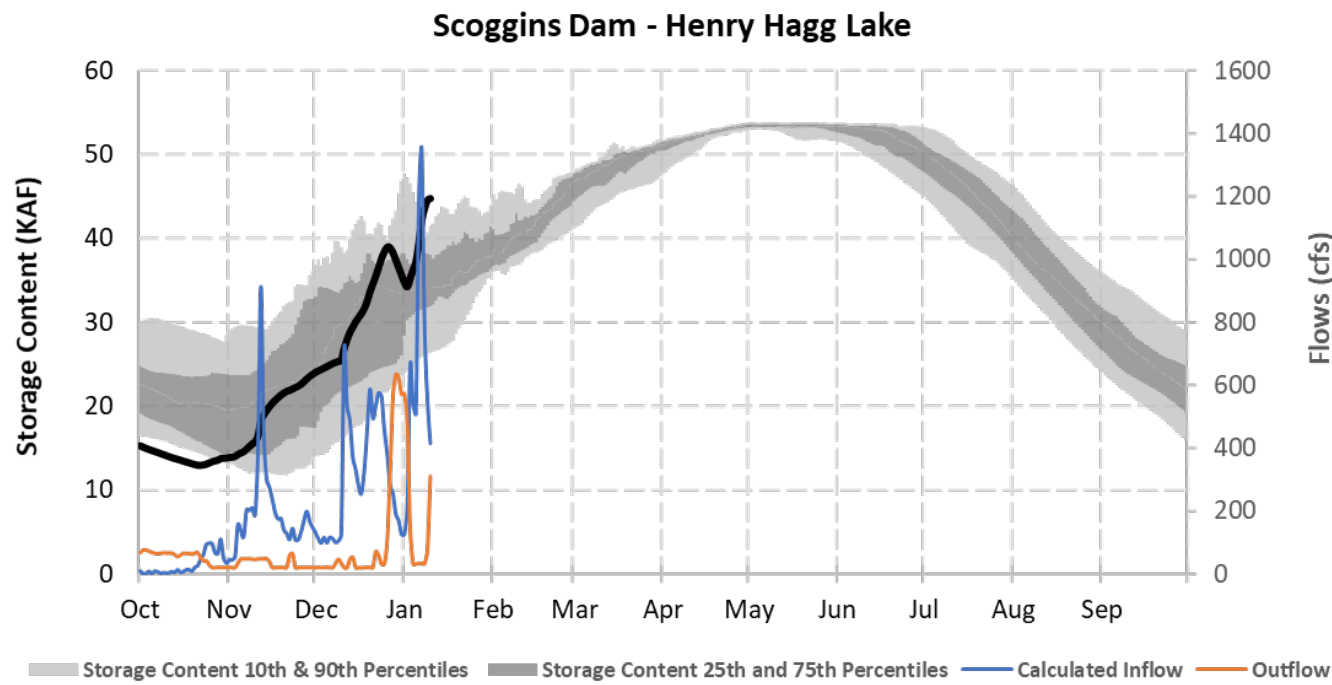
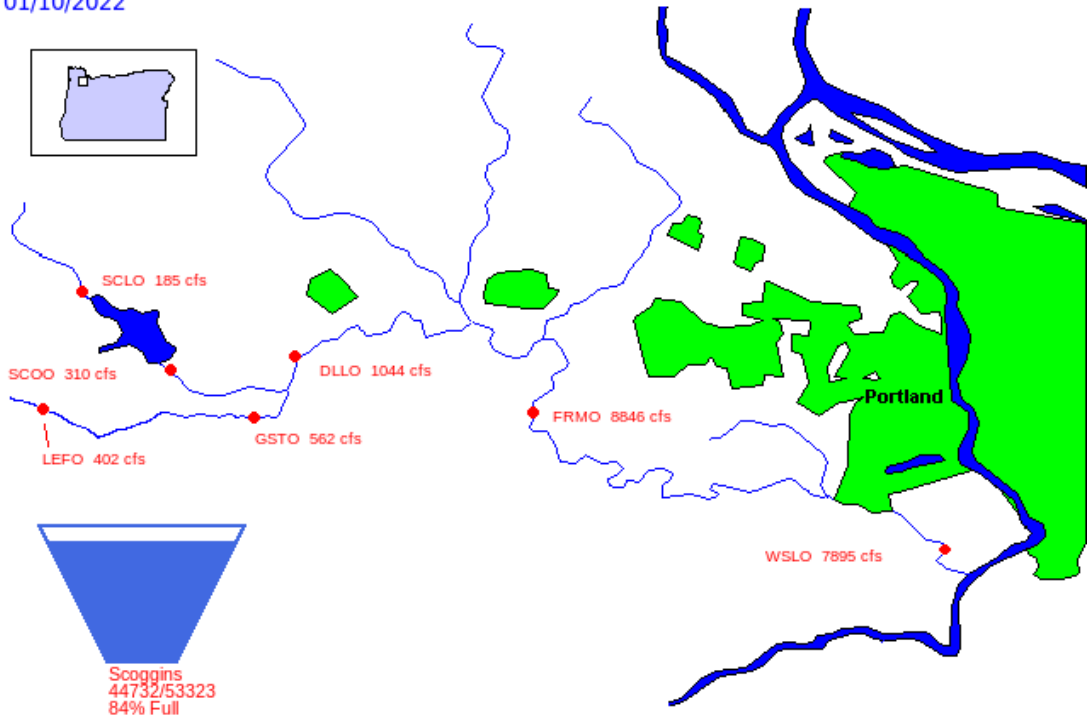
Reclamation January 1 Runoff Forecast
Jan-Jun: 75 kaf (107% 91-20 Ave)



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

Tualatin River Basin

01/10/2022



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

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208.378.5037



— BUREAU OF —
RECLAMATION