AGENDA

IDAHO WATER RESOURCE BOARD

Upper Snake River Advisory Committee Meeting No. 8-24
Thursday, November 14, 2024
10:00 a.m. (MST)

Meeting Location(s):

BOISE
Water Center
Conf. Room 602C & D
322 E. Front St.

IDAHO FALLS
Eastern Regional Office
Main Conference Room
900 N. Skyline Dr.

or

VIDEO conference via Zoom is available upon registration, contact cooper.fritz@idwr.idaho.gov for registration information

1. Introductions and Attendance
2. Weather Forecast (NOAA)
3. Snow Pack / Streamflow Forecasts (NRCS)
4. Water Supply / Operations Update (USBR)
5. Idaho Power Company
    a. Operations Update
    b. Cloud Seeding Update
6. Water District 01 Briefing
7. IWRB Managed Recharge Operations
8. New Business
9. Adjourn

Committee Member: Brian Olmstead

Americans with Disabilities
The meeting will be held in person and online. If you require special accommodations to attend, participate in, or understand the meeting, please make advance arrangements by contacting Department staff by email jennifer.strange@idwr.idaho.gov or by phone at (208) 287-4800.

Weather Outlook

Seasonably Warm & Dry Weather Continues

Presenter: Sherrie Hebert

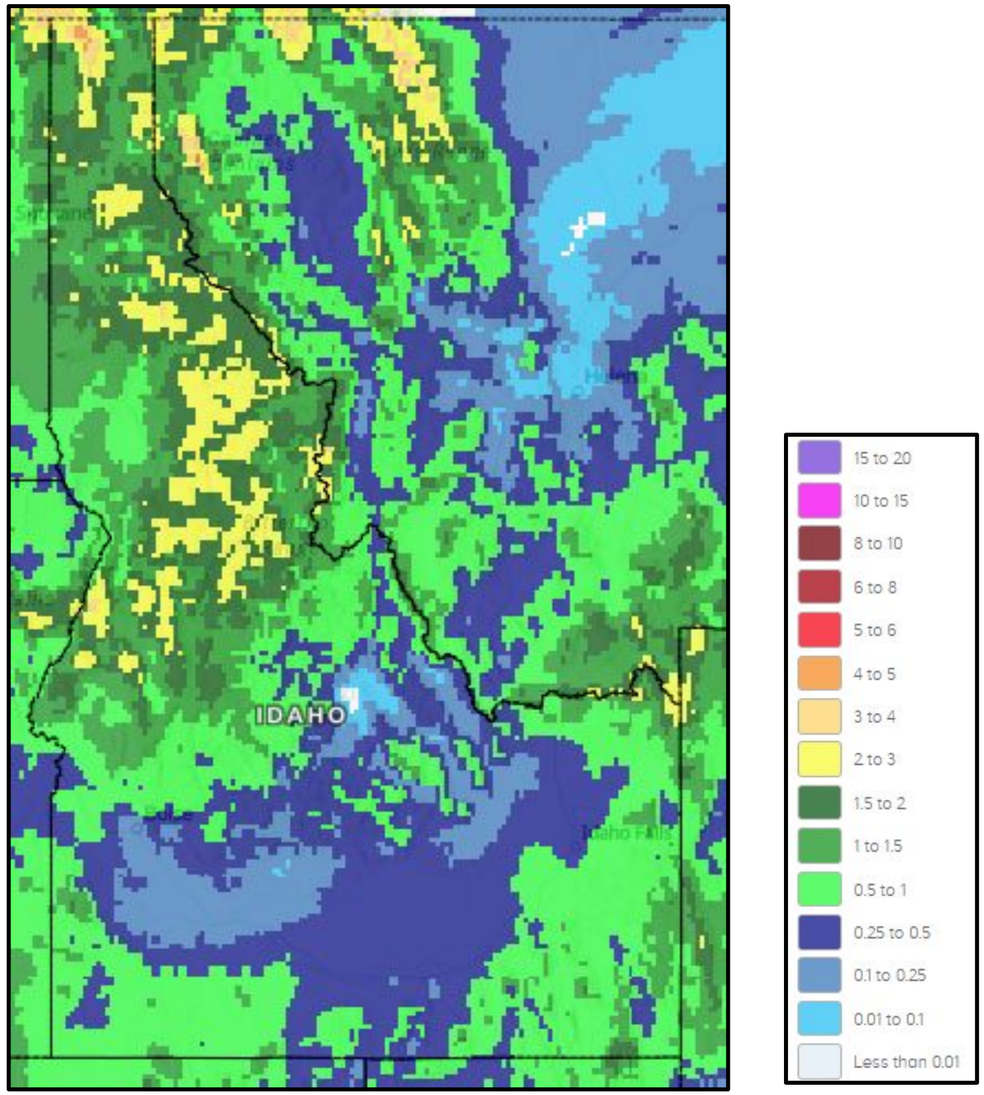
Weather Forecast Office

Pocatello, ID

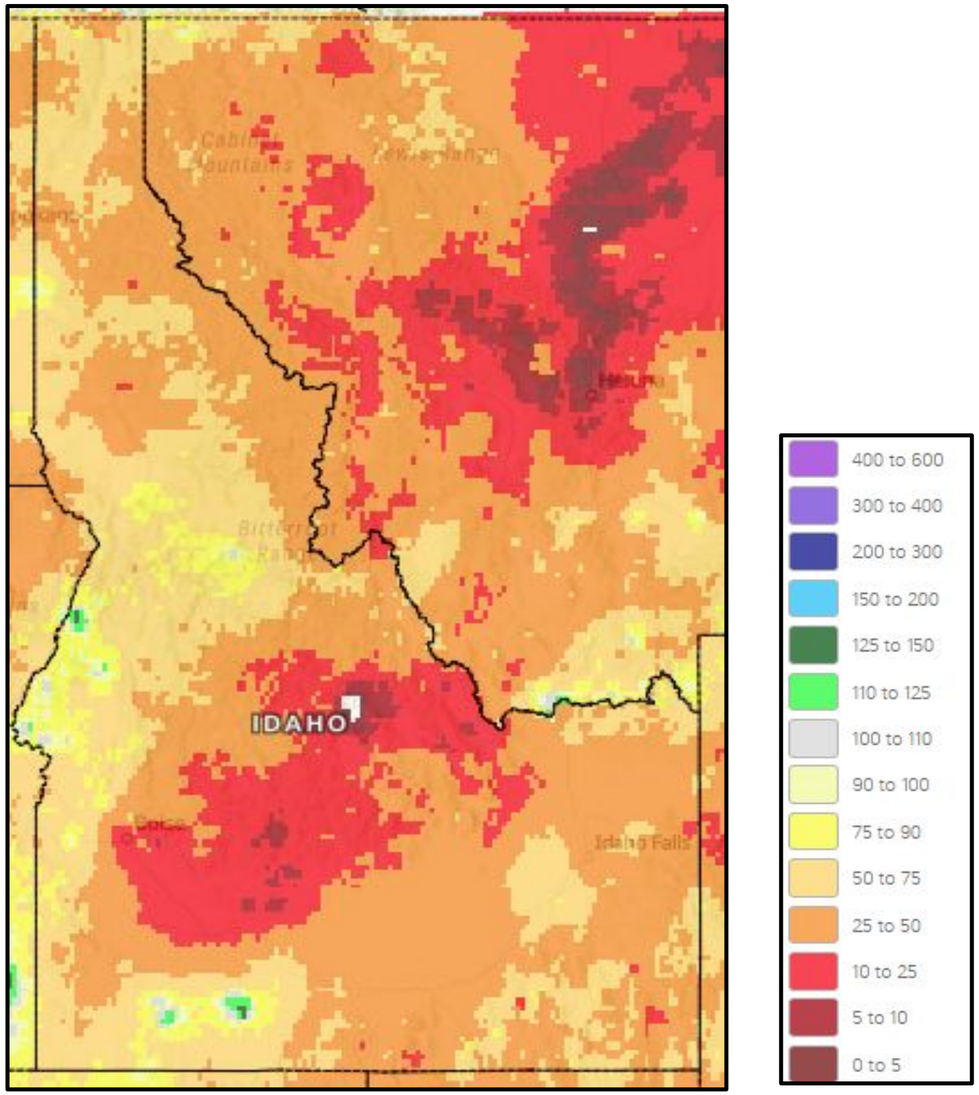
Thursday, November 14

Precipitation Last 30 Days

Weather Forecast Office
Pocatello, ID
Thursday, October 10



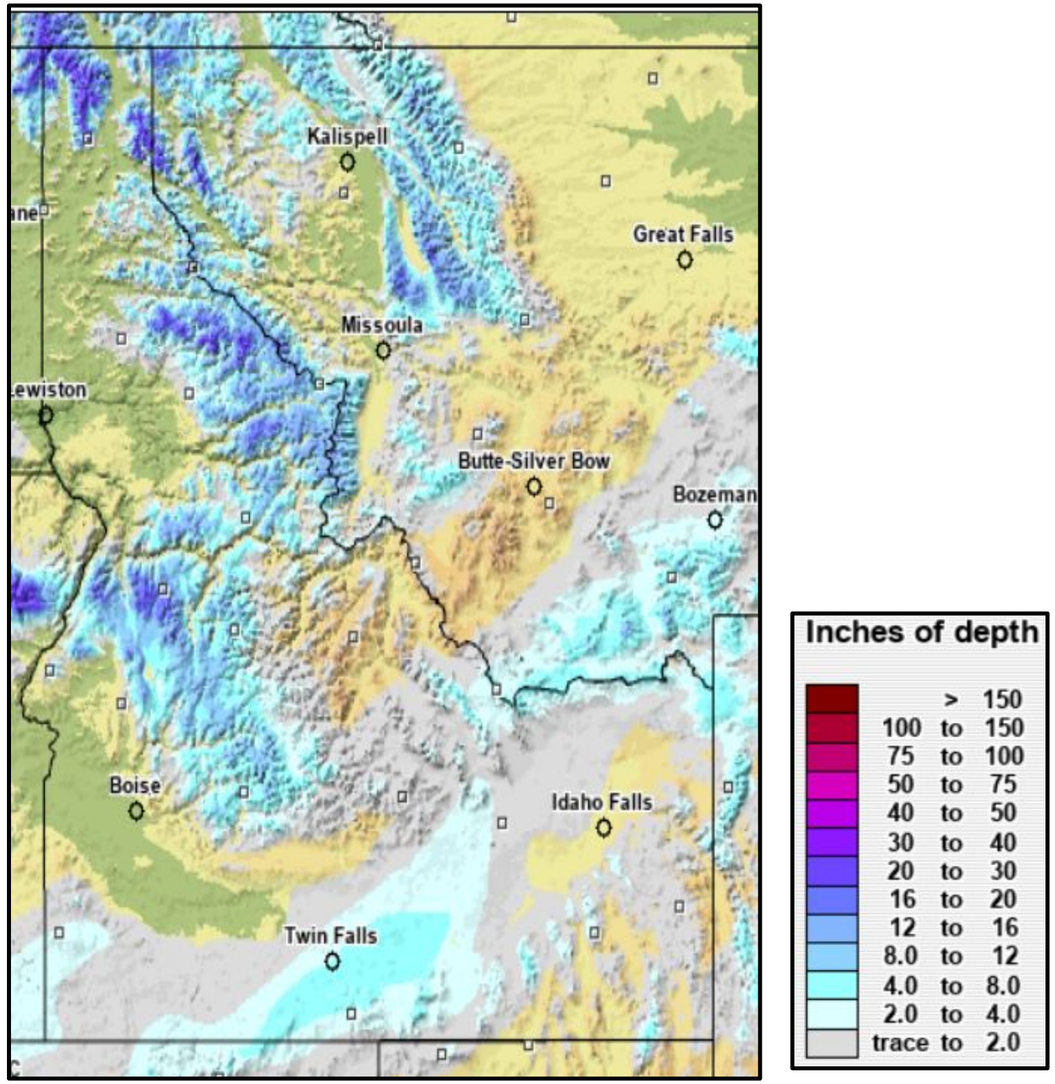
Last 30 Days - Observed Precipitation



Last 30 Days - Percent of Normal

Modeled Snow Forecasts for November 16, 2024

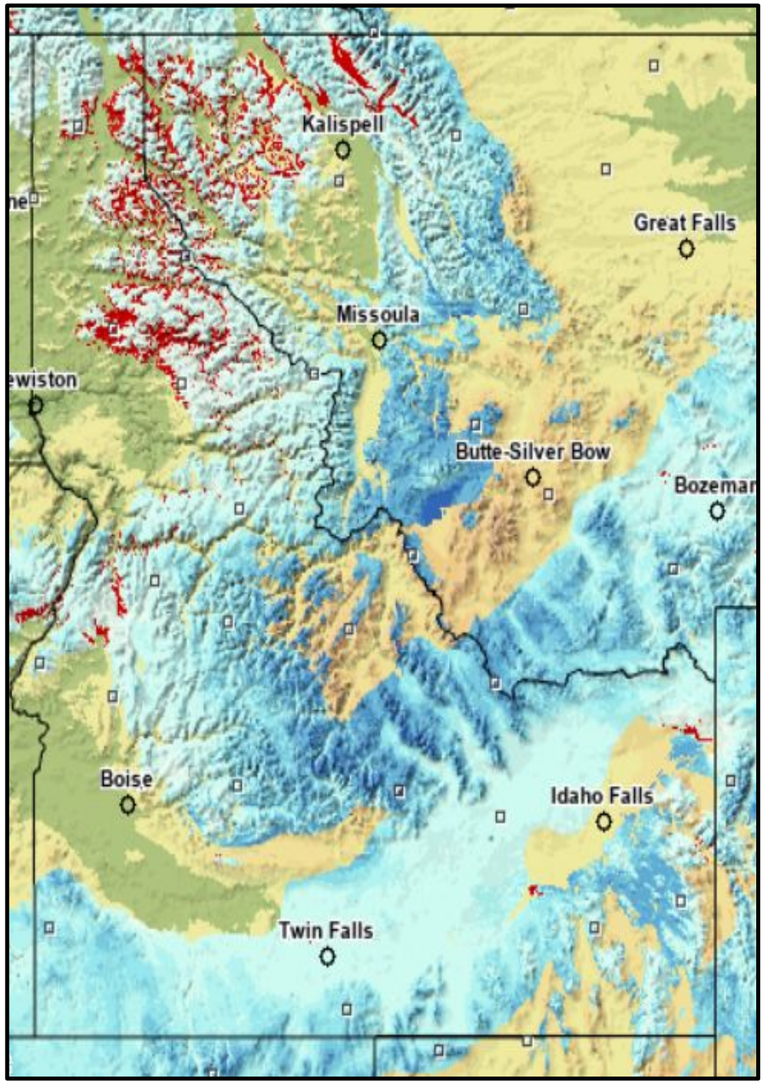
Weather Forecast Office
Pocatello, ID
Thursday, October 10



Inches of depth

	>	150	
100	to	150	
75	to	100	
50	to	75	
40	to	50	
30	to	40	
20	to	30	
16	to	20	
12	to	16	
8.0	to	12	
4.0	to	8.0	
2.0	to	4.0	
trace	to	2.0	

Snow Depth



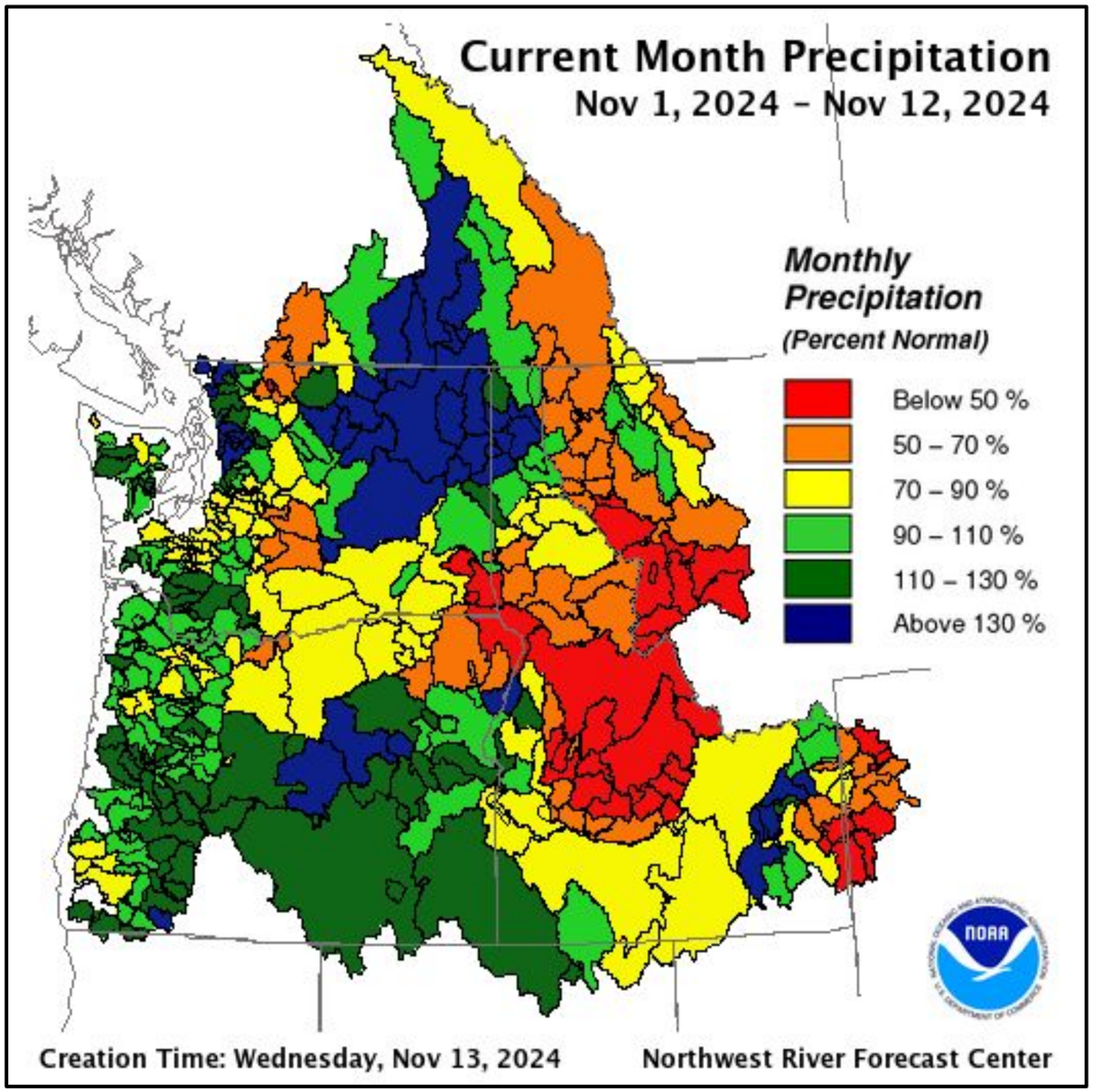
Degrees Fahrenheit

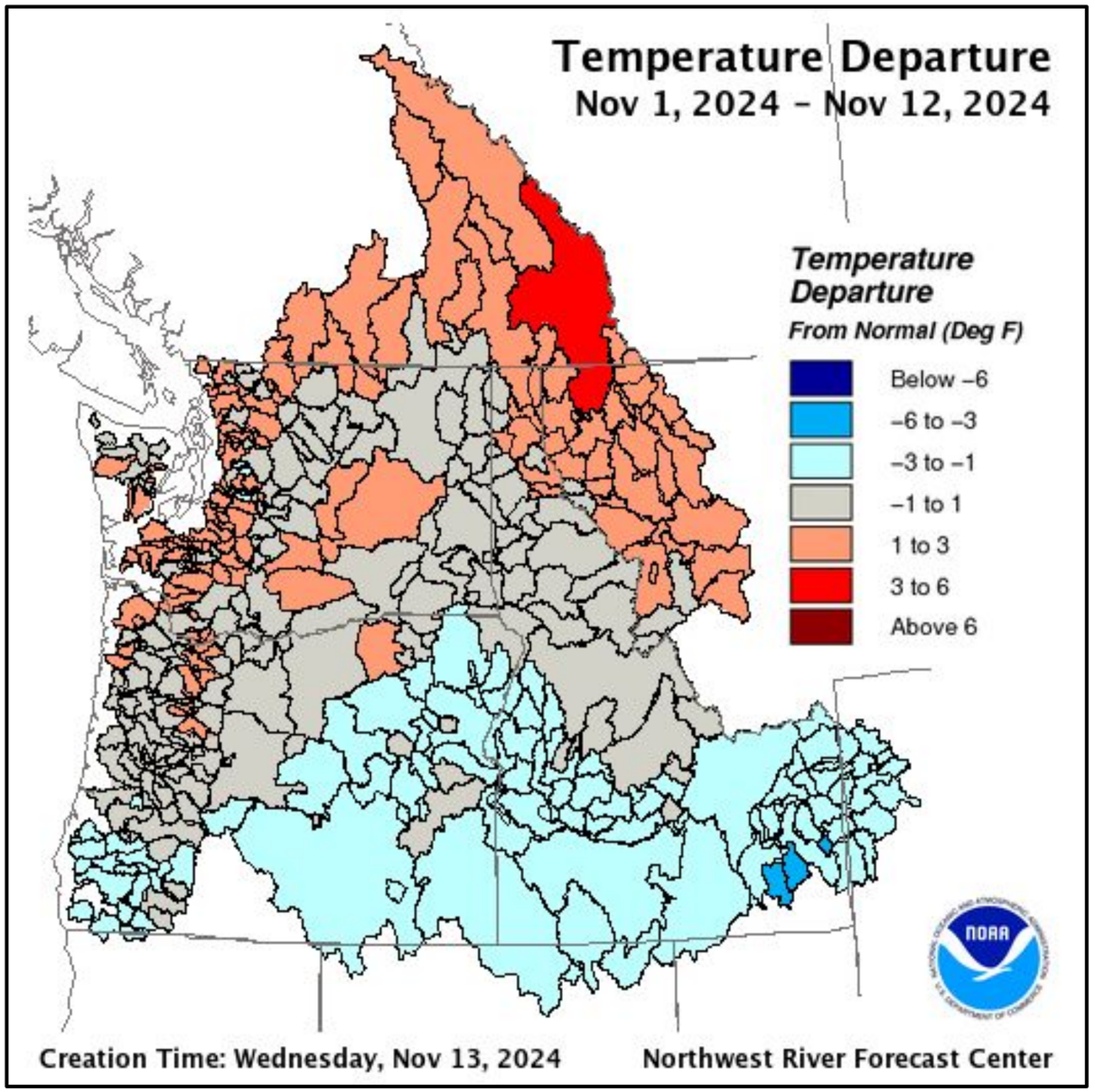
31.9	to	32.0	
31.8	to	31.9	
31.1	to	31.8	
30.2	to	31.1	
26.6	to	30.2	
24.8	to	26.6	
23.0	to	24.8	
21.2	to	23.0	
17.6	to	21.2	
14.0	to	17.6	
5.0	to	14.0	
-4.0	to	5.0	
-22.0	to	-4.0	
	<	-22.0	

Snow Temperature

October - Hot and Dry So Far…

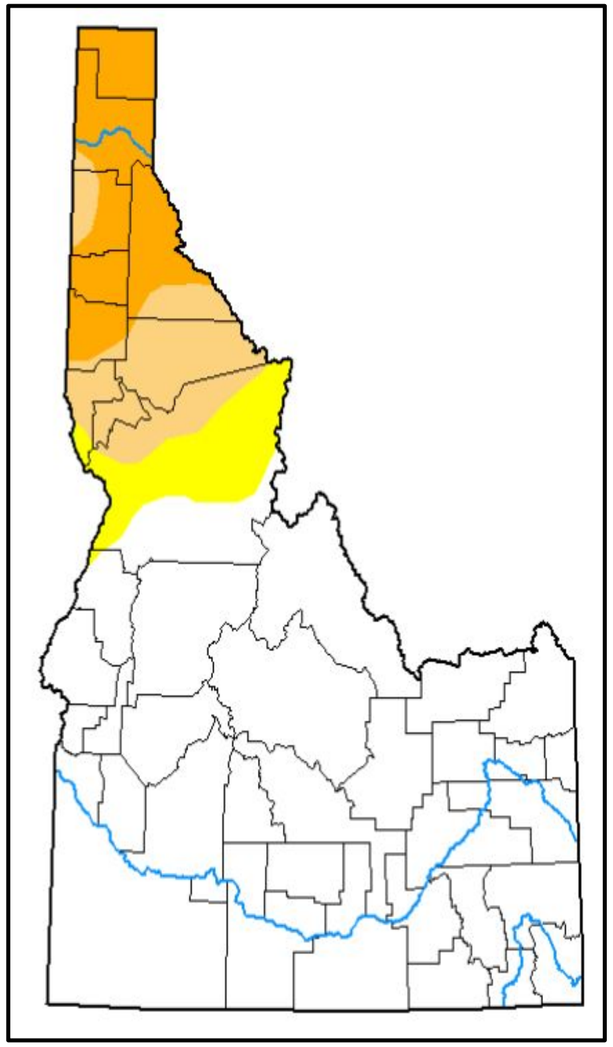
Weather Forecast Office
Pocatello, ID
Thursday, October 10



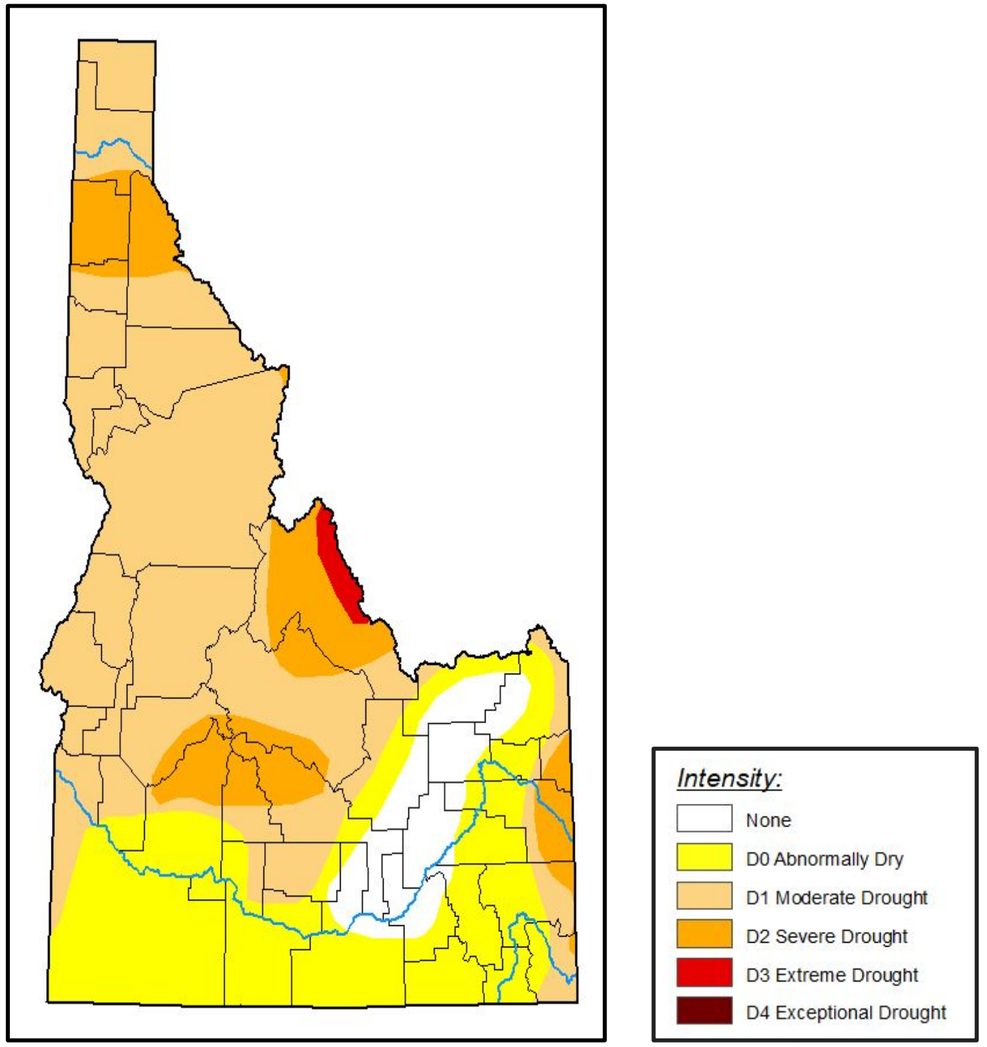


Drought Status: Idaho

Weather Forecast Office
Pocatello, ID
Thursday, October 10



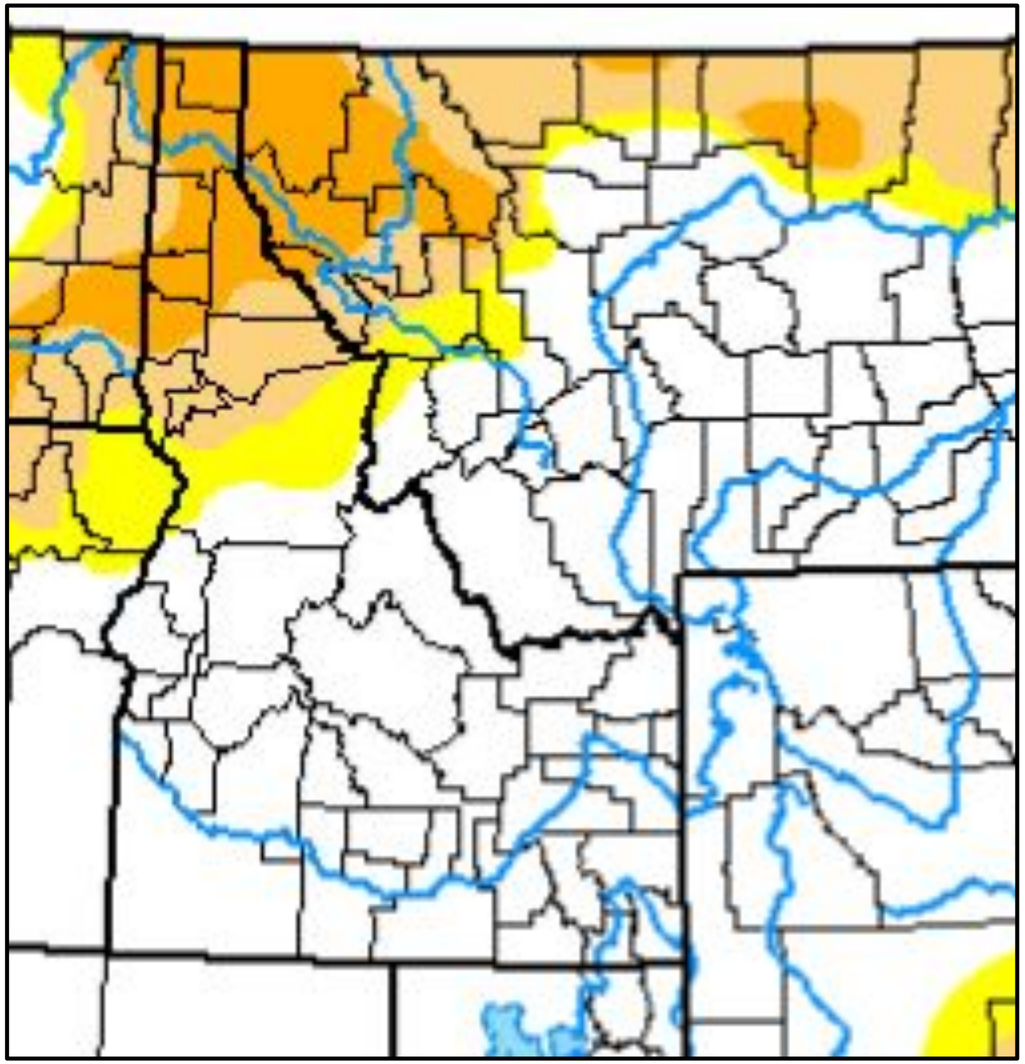
November 14, 2023



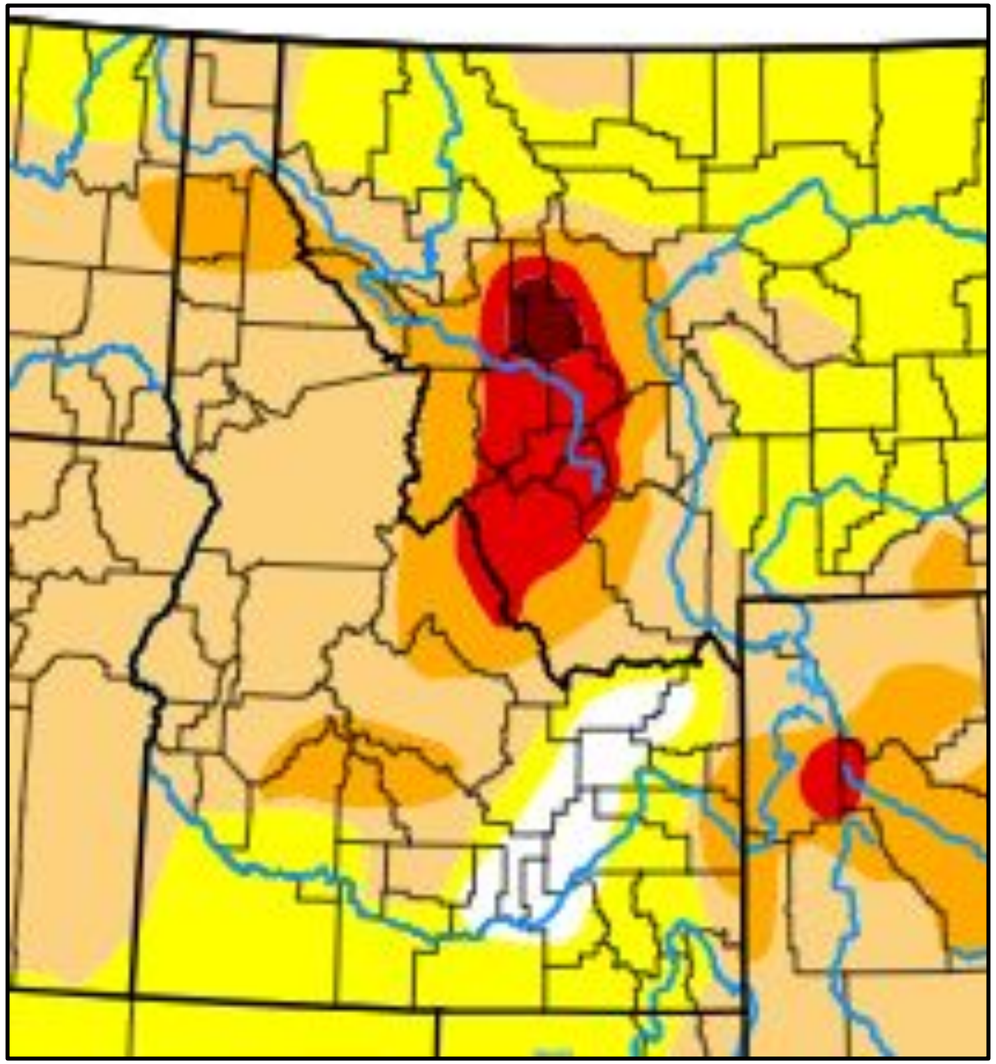
November 5, 2024

Drought Status: Idaho

Weather Forecast Office
Pocatello, ID
Thursday, October 10



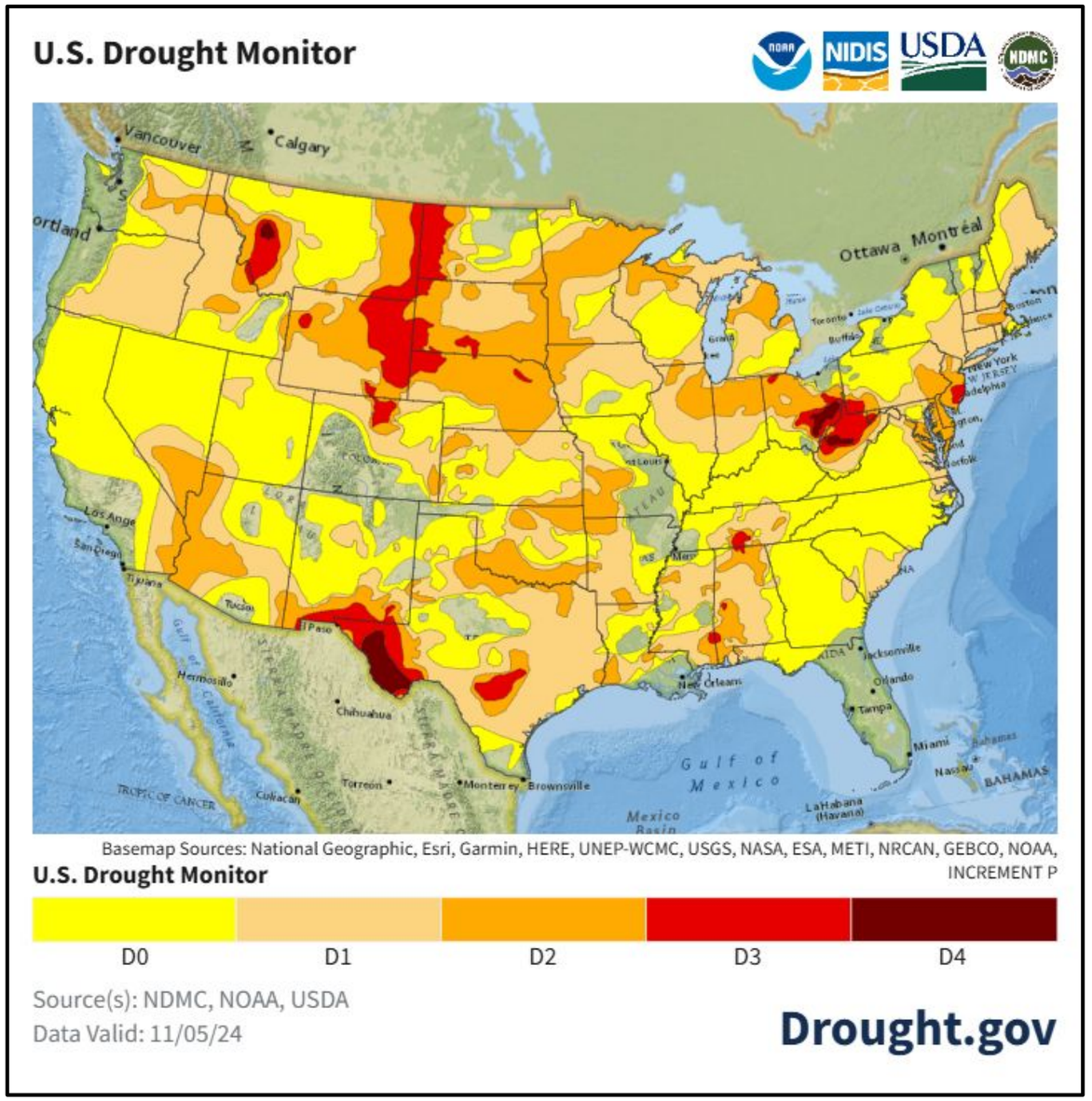
November 14, 2023



November 5, 2024

Drought Status: National

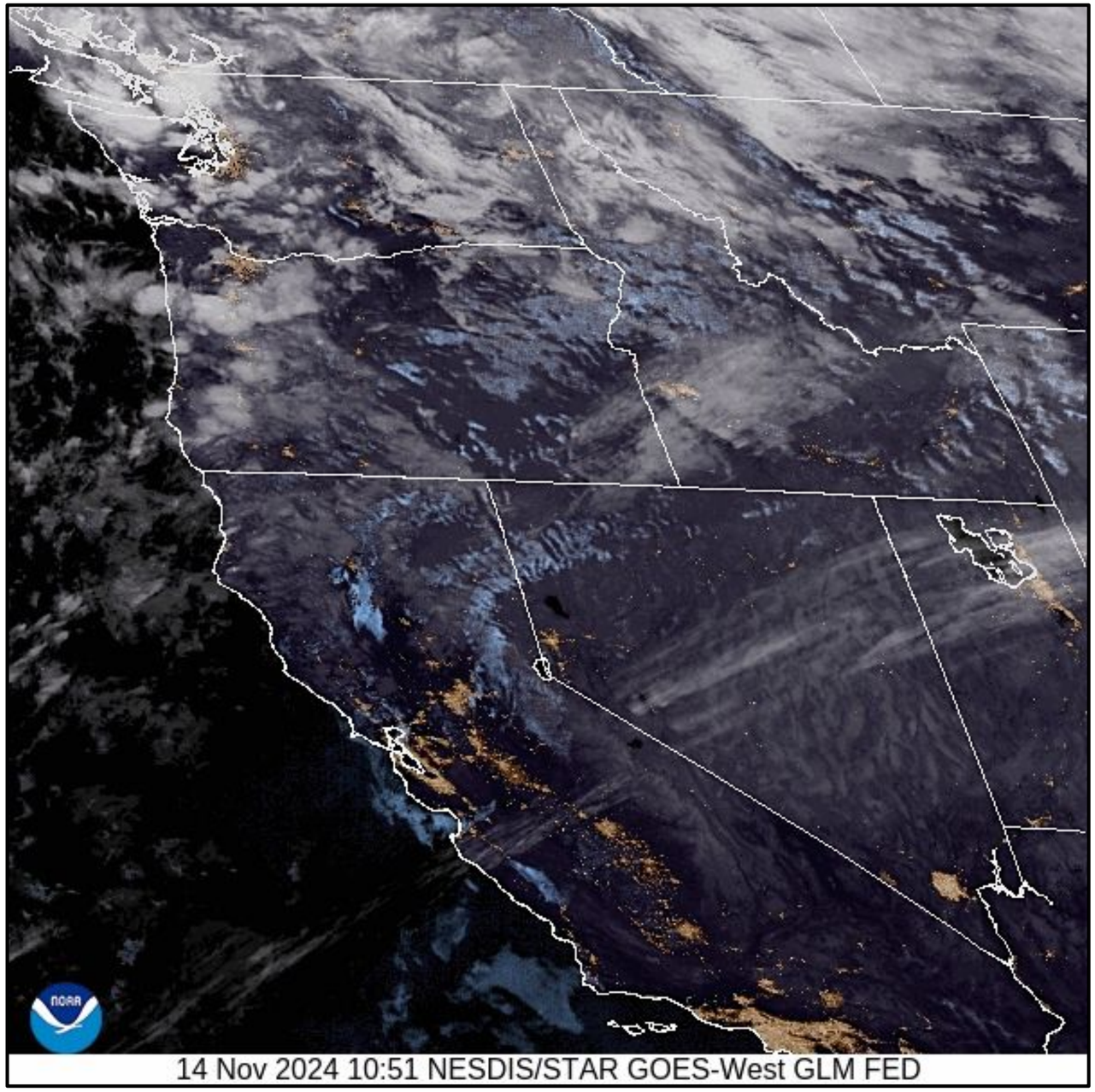
Weather Forecast Office
Pocatello, ID
Thursday, October 10



Looking Ahead:
Short & Long Term Forecast

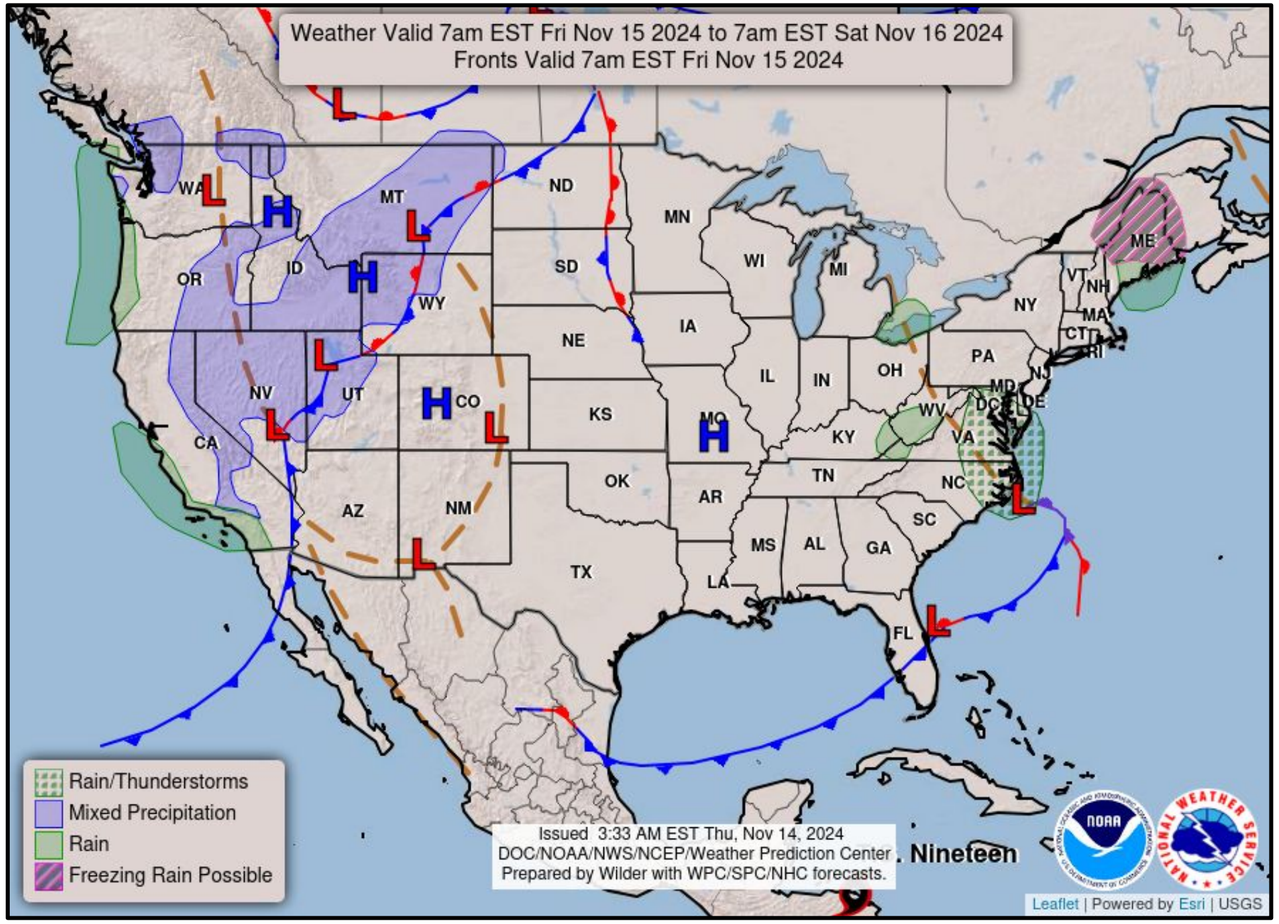
GeoColor Satellite - Pacific Northwest

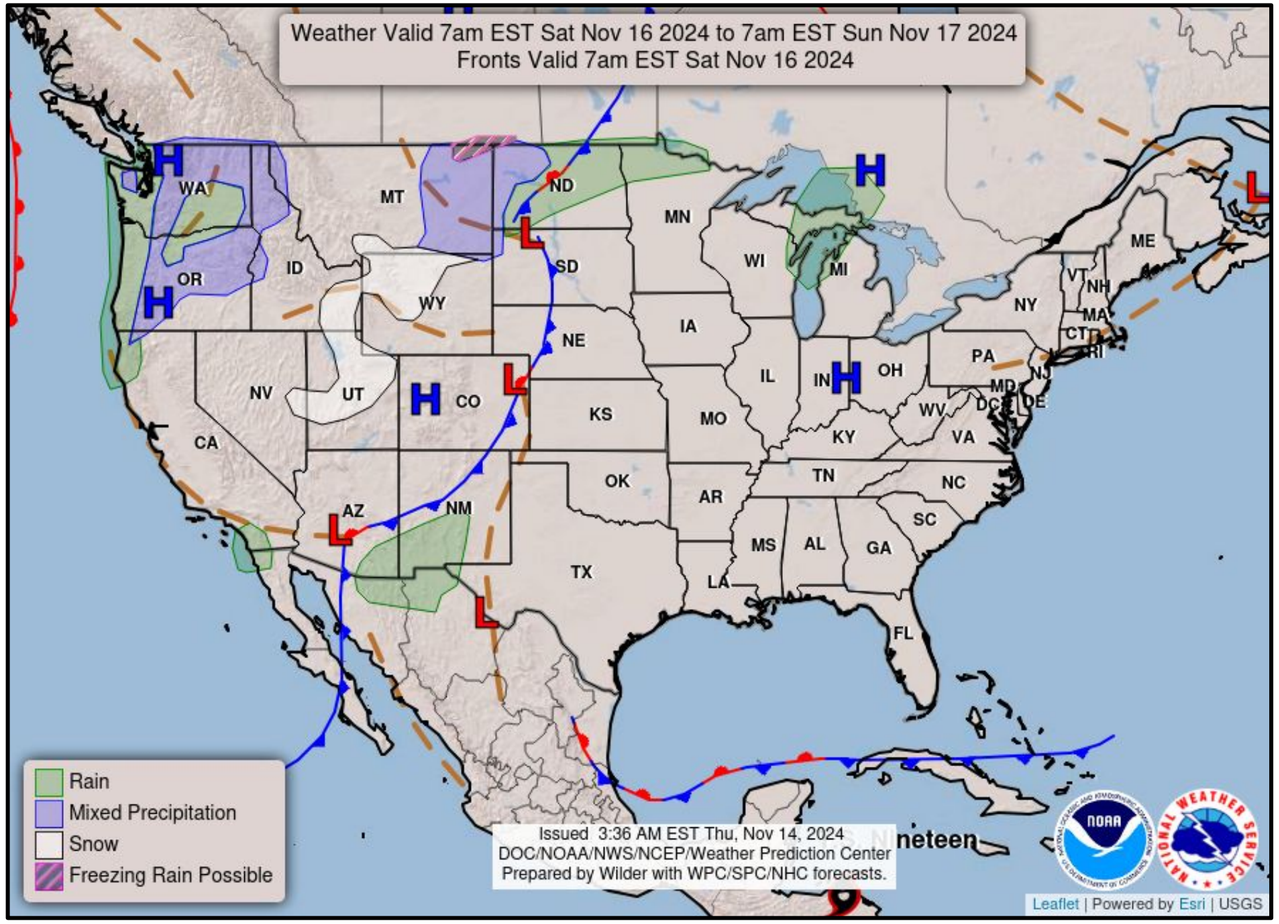
Weather Forecast Office
Pocatello, ID
Thursday, October 10



Forecast Charts

Weather Forecast Office
Pocatello, ID
Thursday, October 10

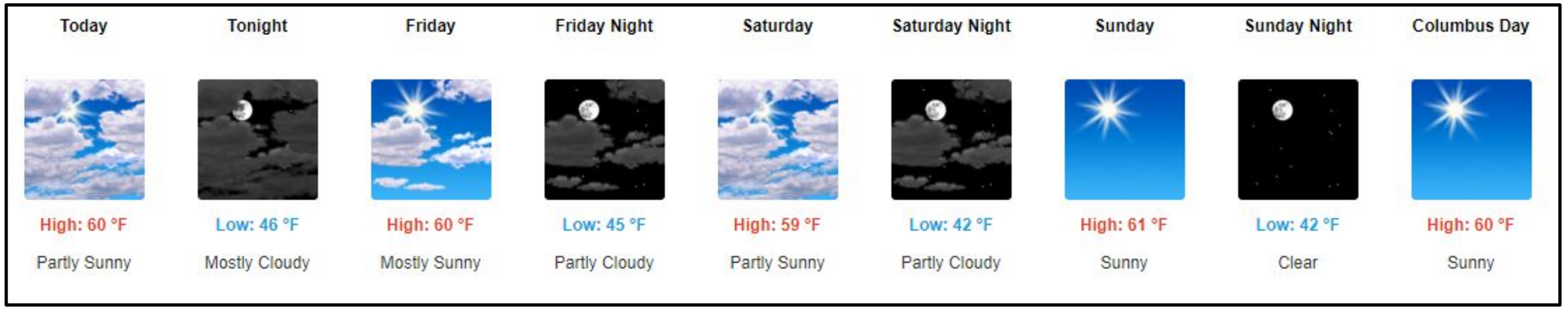




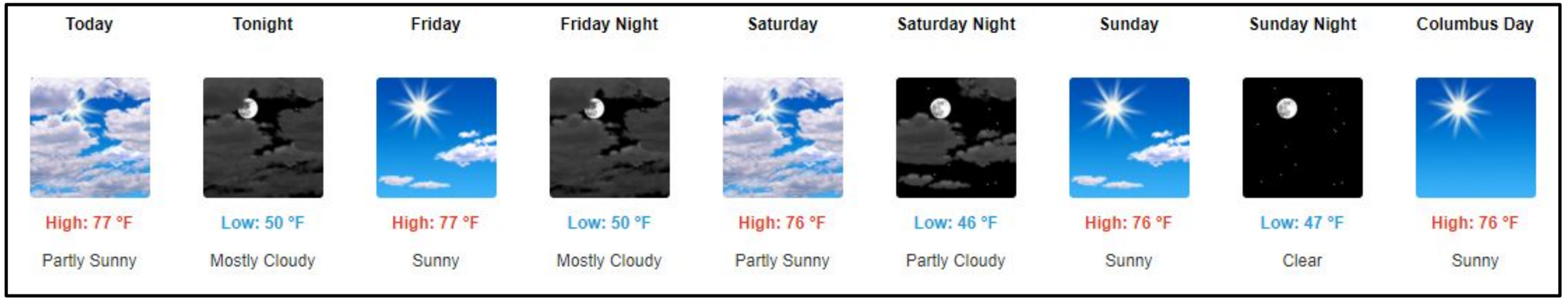
Short Term Forecast

Weather Forecast Office
Pocatello, ID
Thursday, October 10

High Elevation Forecast (Teton Pass)

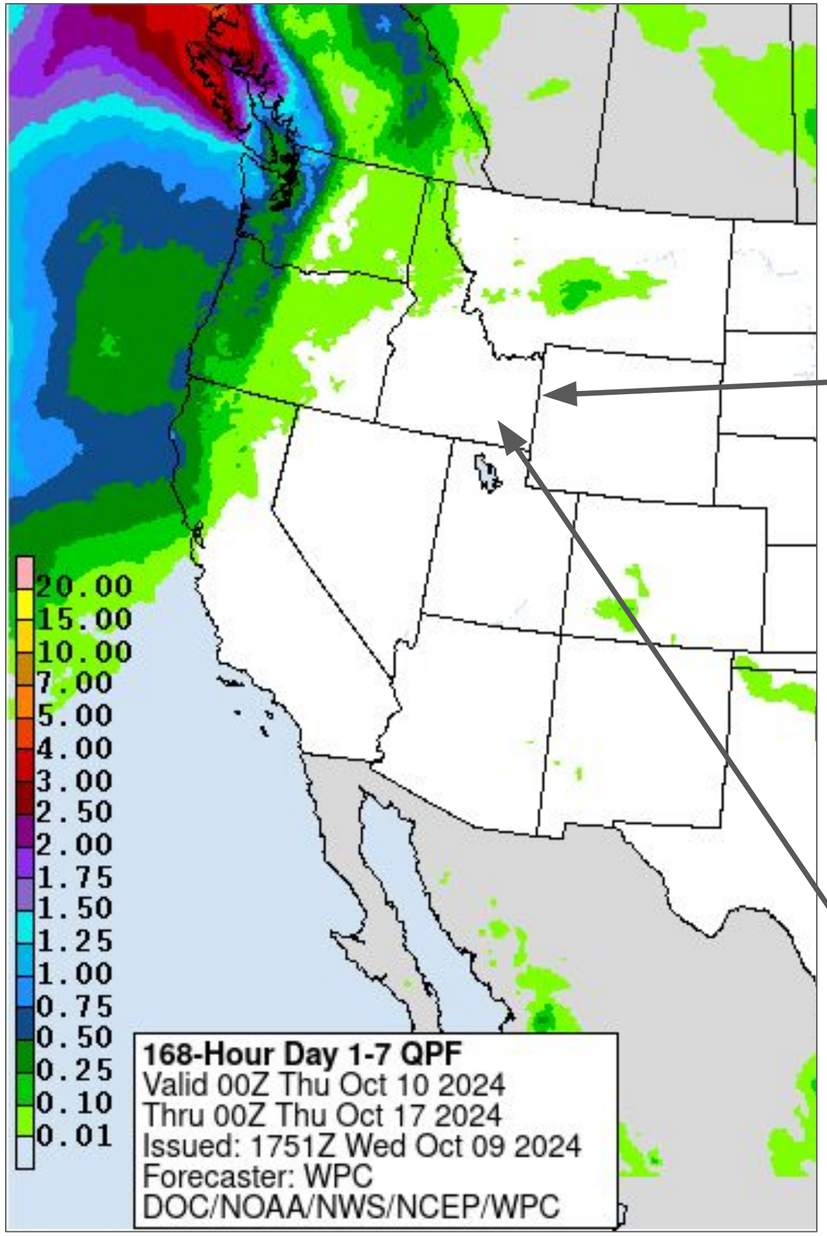


Low Elevation Forecast (Pocatello)

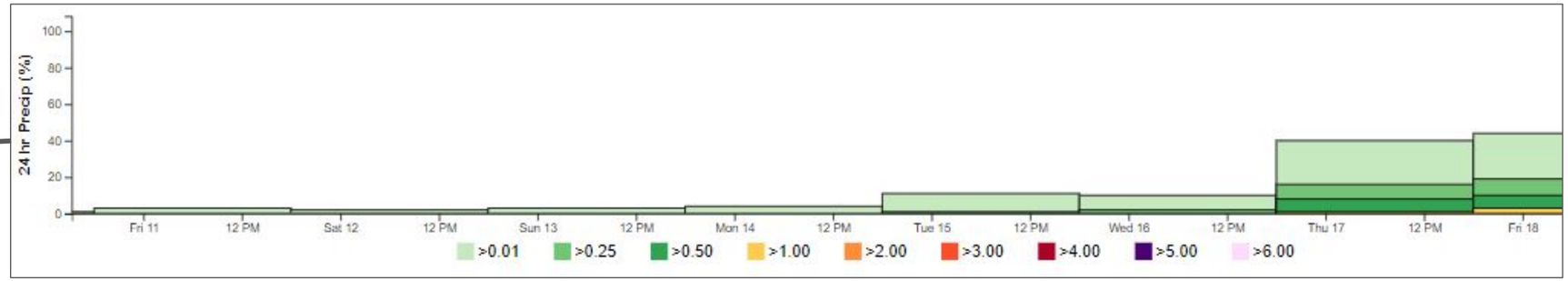


Precipitation - Next 7 Days

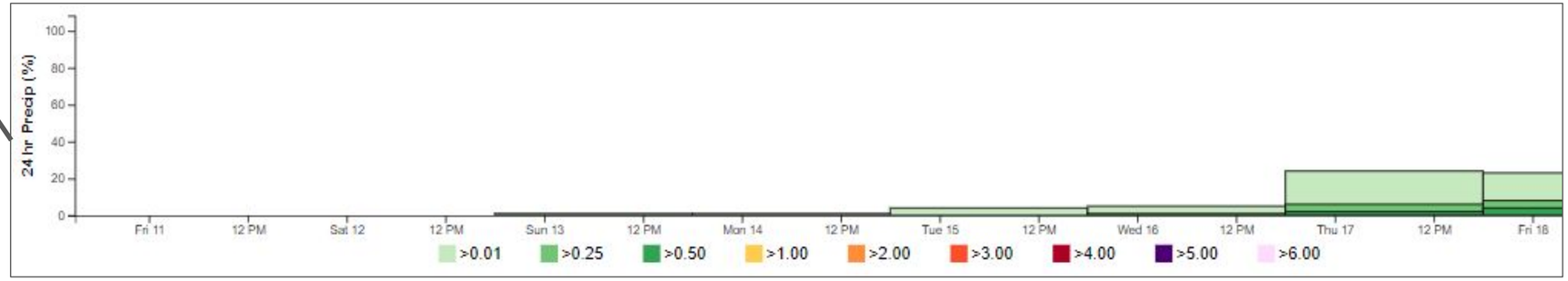
Weather Forecast Office
Pocatello, ID
Thursday, October 10



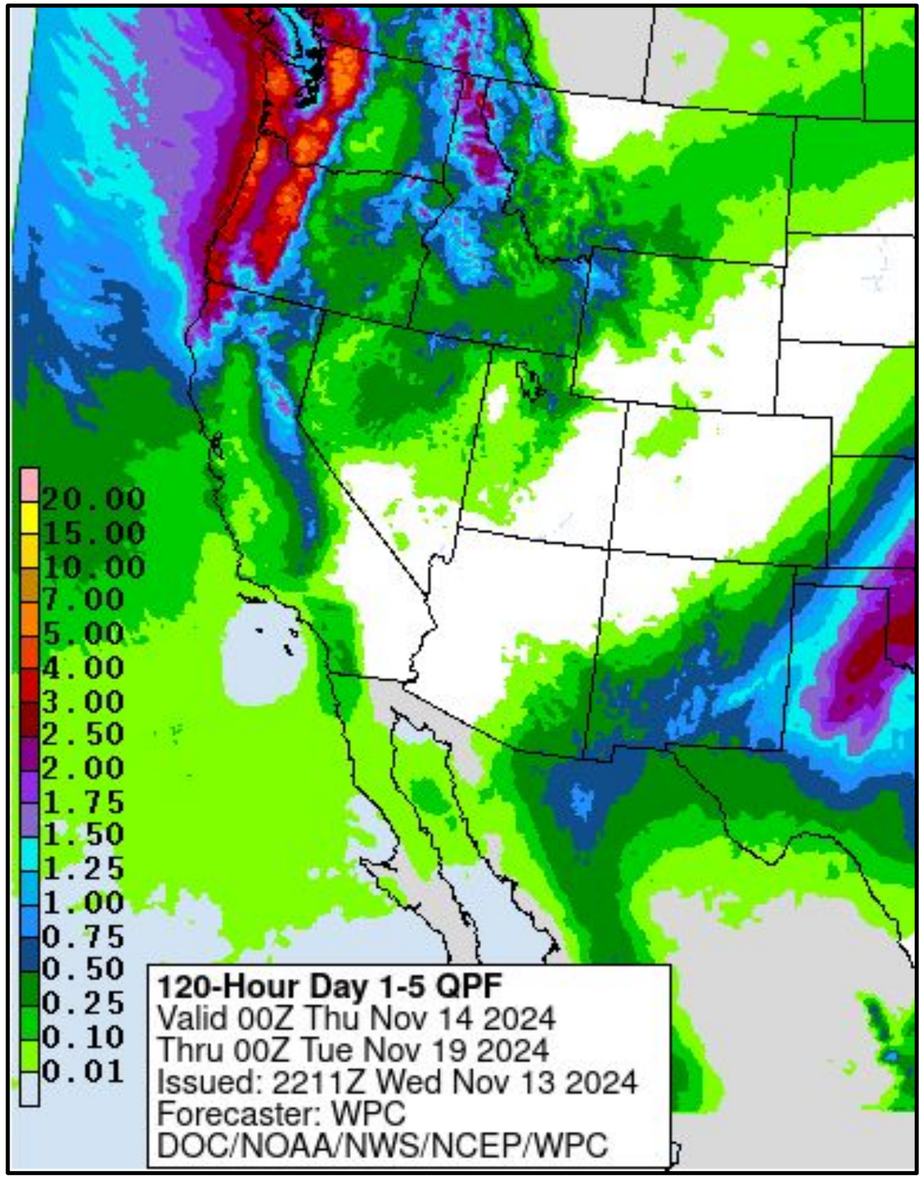
Teton Pass

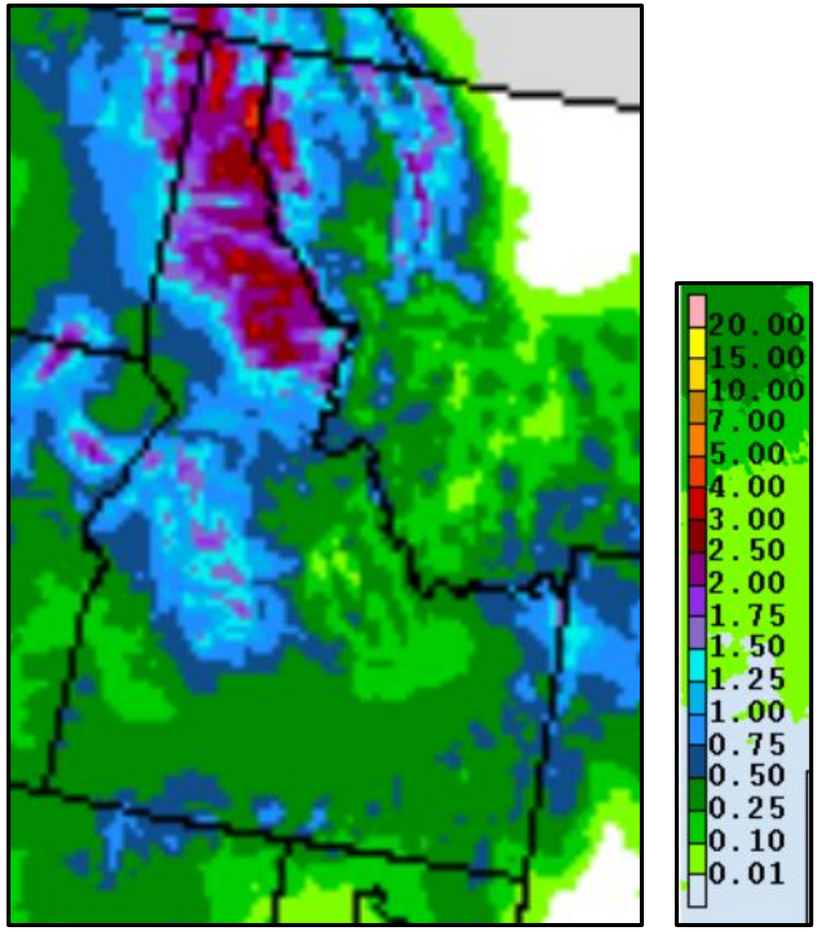


Pocatello



Precipitation - Next 7 Days

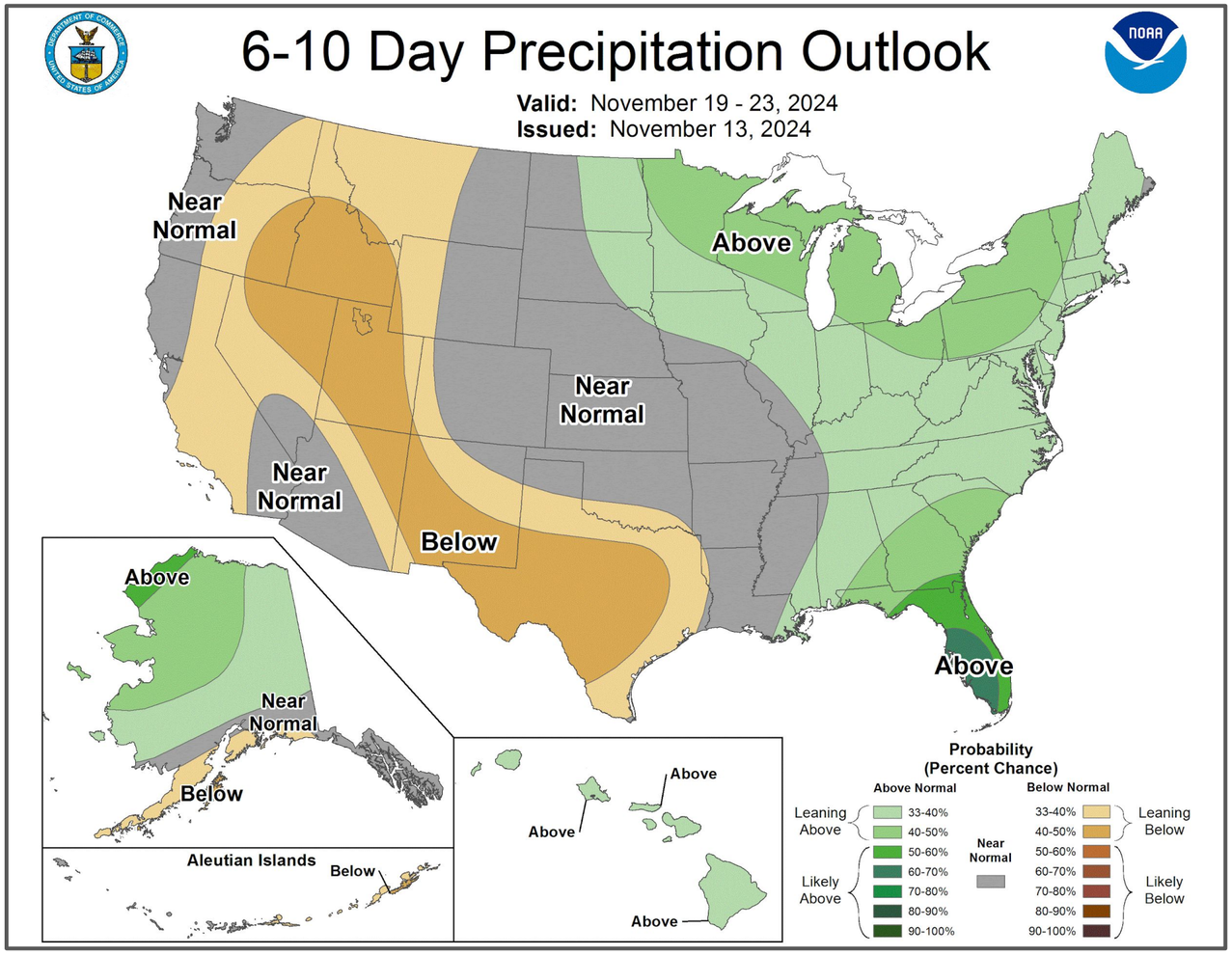


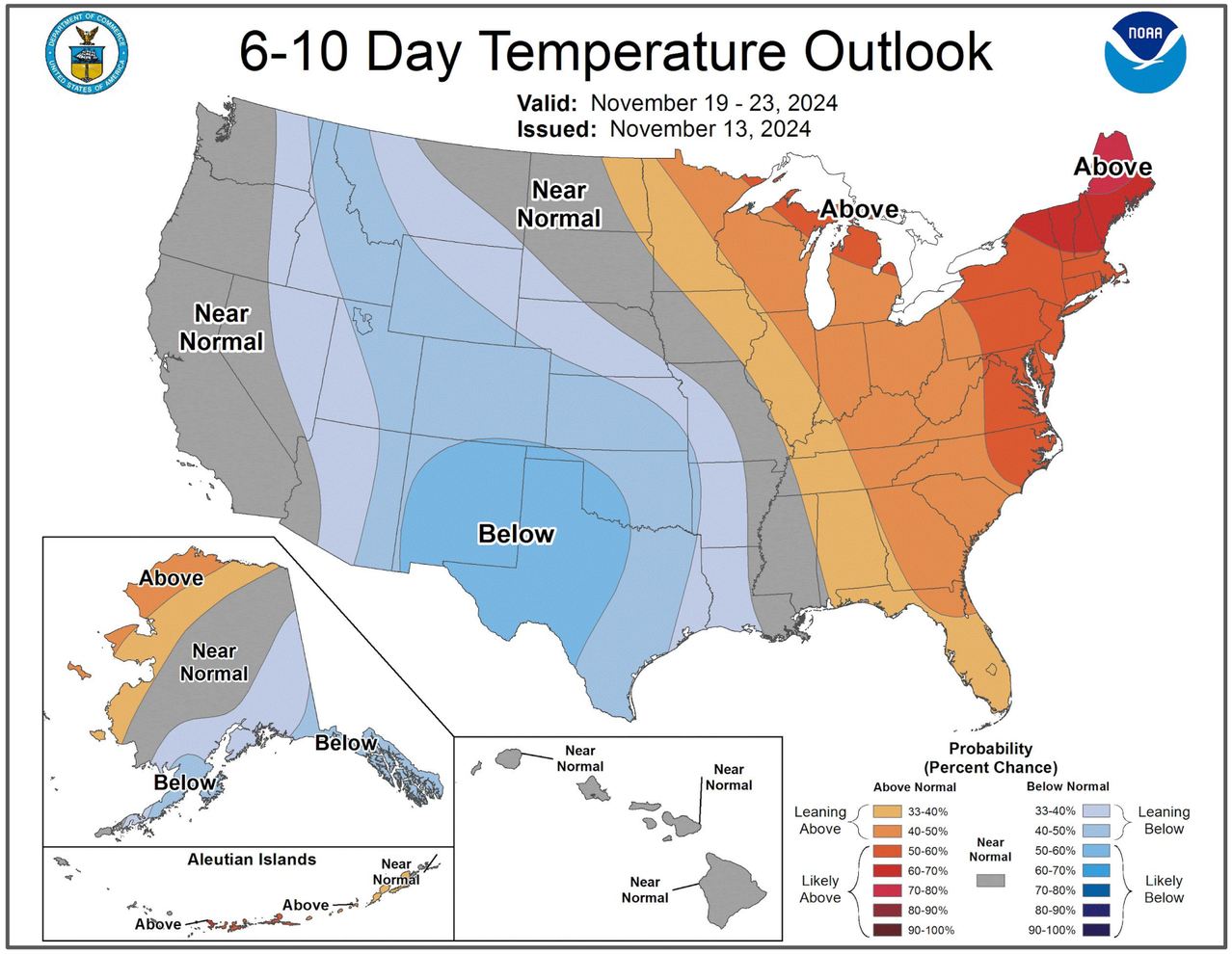


0.25” to 1.25”

Next Week

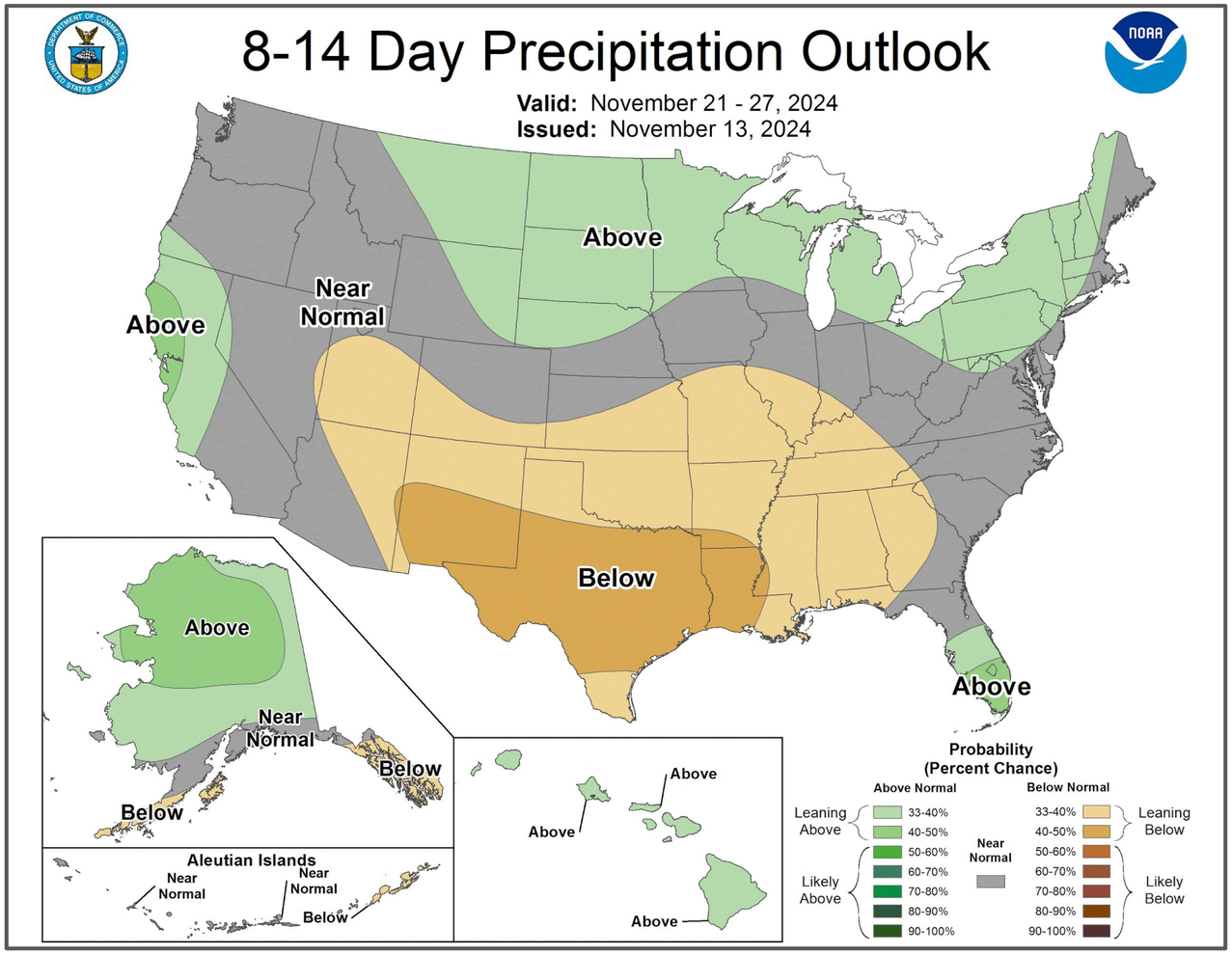
Weather Forecast Office
Pocatello, ID
Thursday, October 10

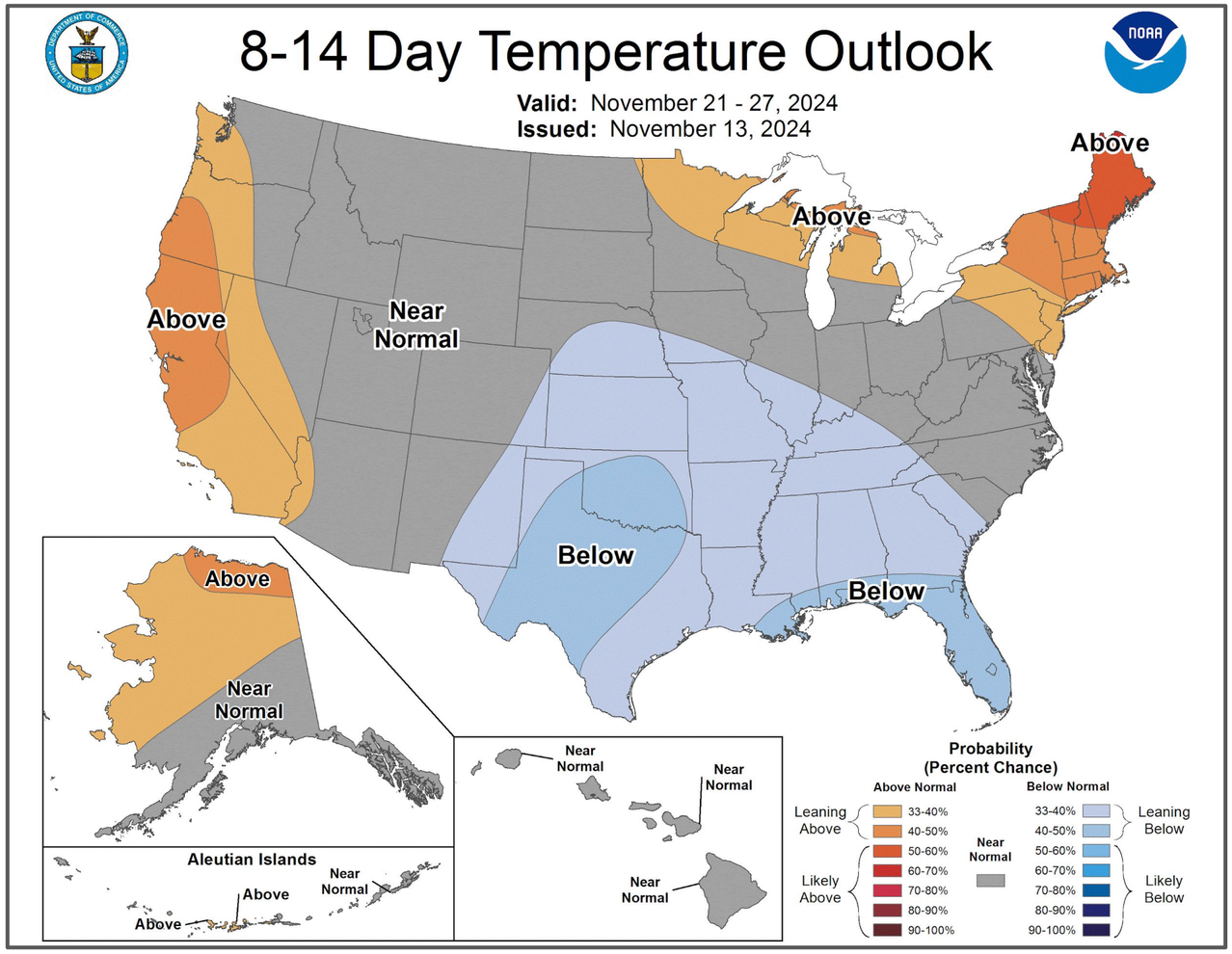




Next Weekend

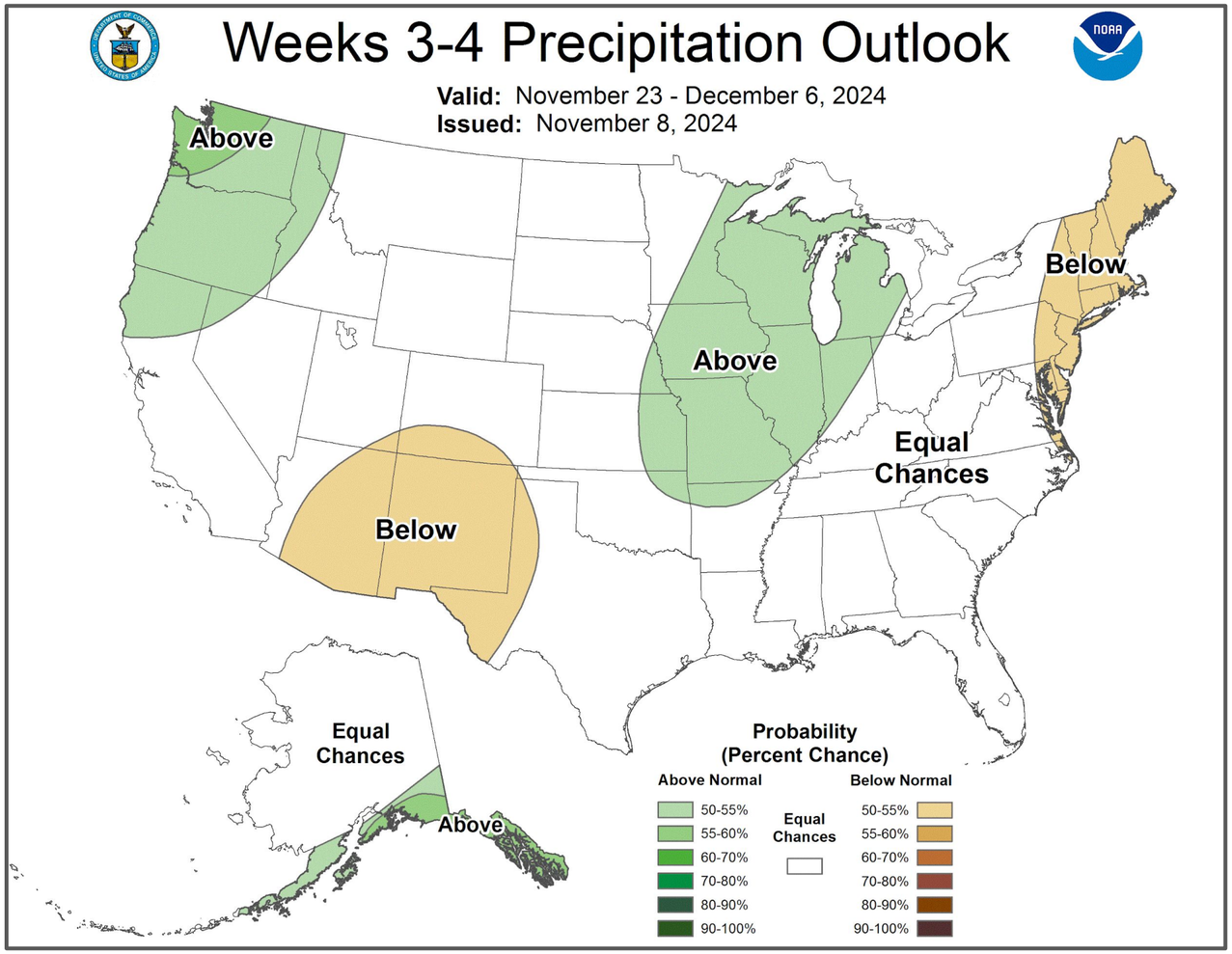
Weather Forecast Office
Pocatello, ID
Thursday, October 10

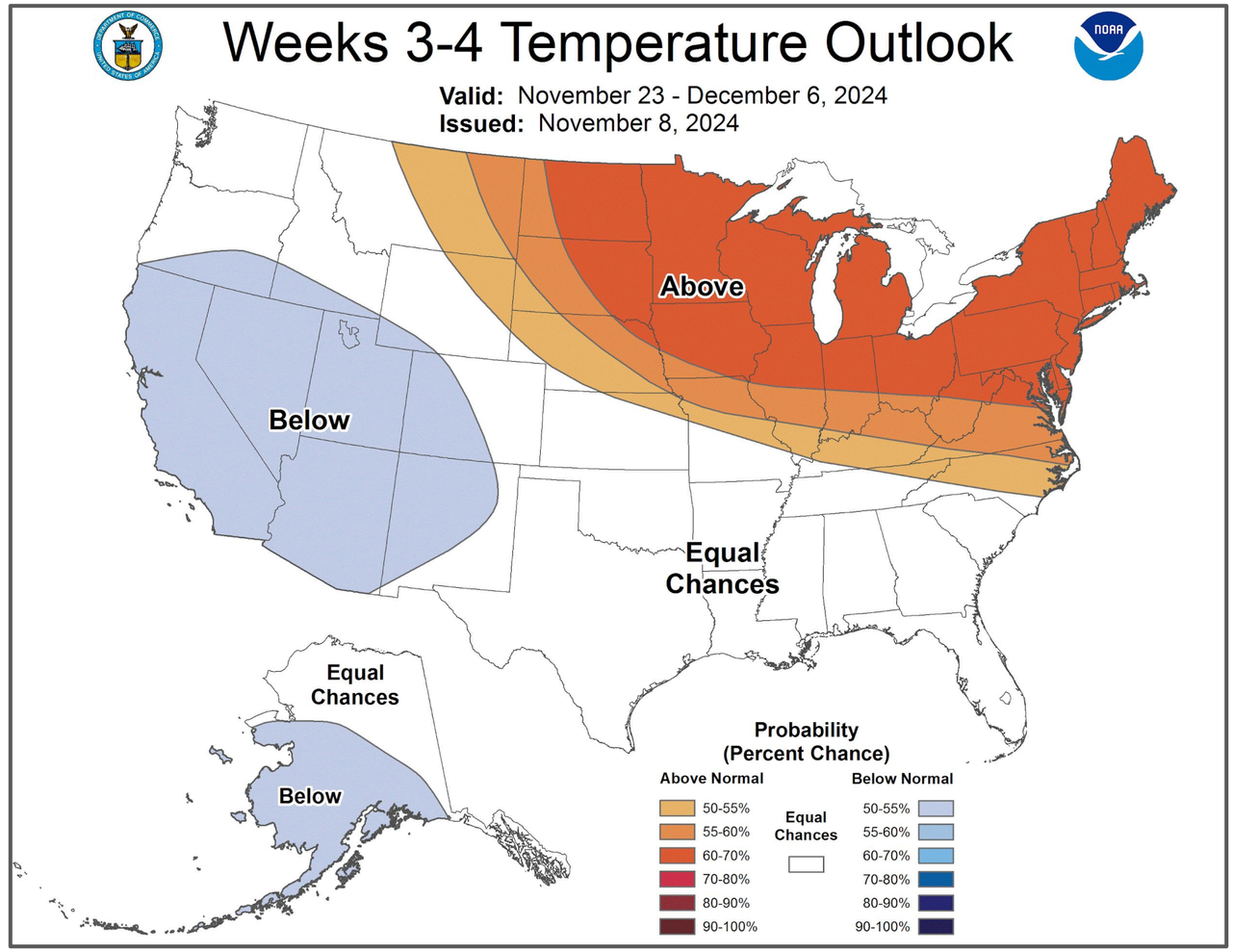




Through the End of the Month

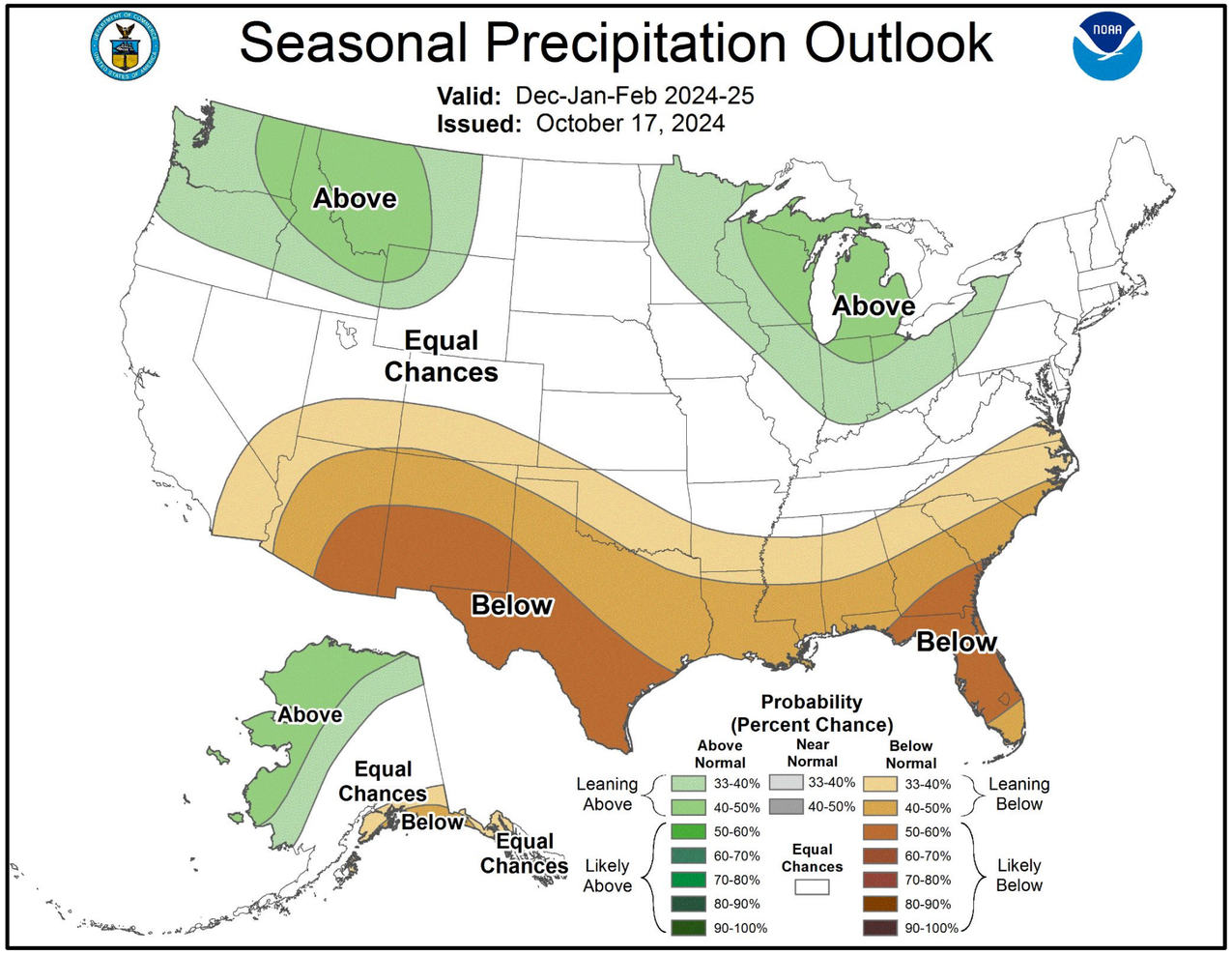
Weather Forecast Office
Pocatello, ID
Thursday, October 10

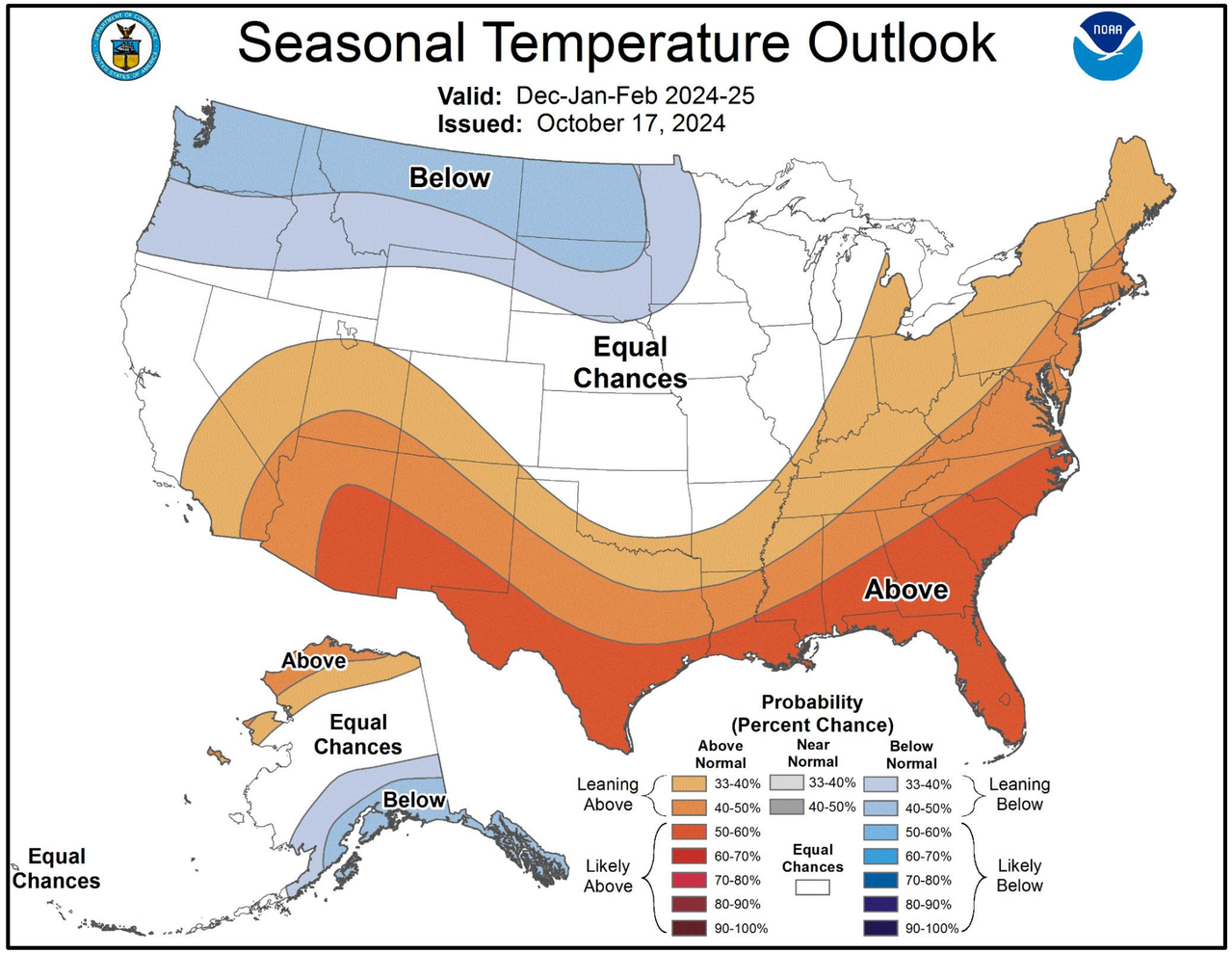




Three-Month Seasonal Outlook

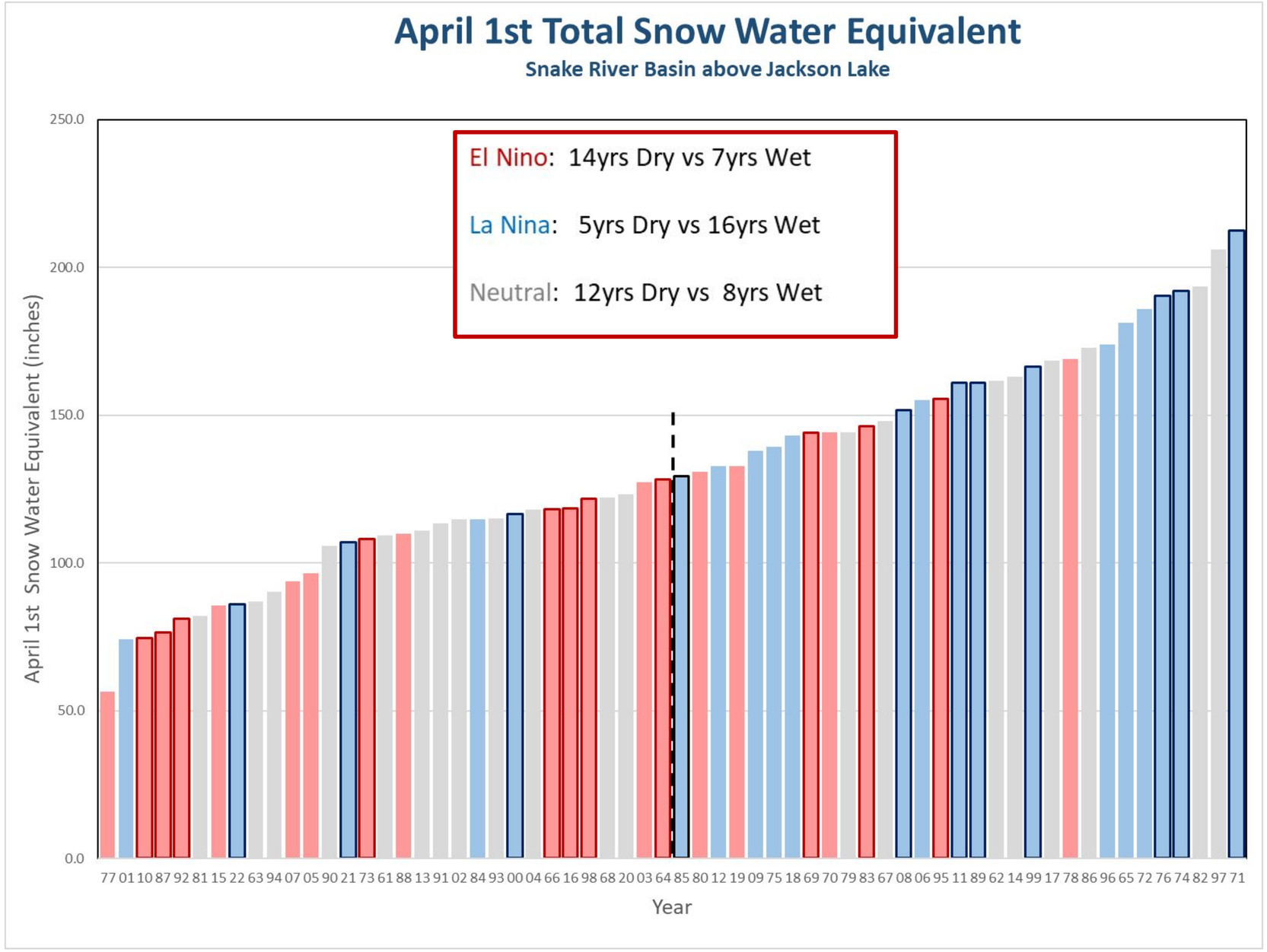
Weather Forecast Office
Pocatello, ID
Thursday, October 10





Thank You
Any Questions?

Sherrie Hebert
Observation Program Lead
sherrie.hebert@noaa.gov



Each bar represents snow amount for a given winter
Red = El Nino Winters
Blue = La Nina Winters
Grey = Neutral Winters
The dashed black line is the average snowfall

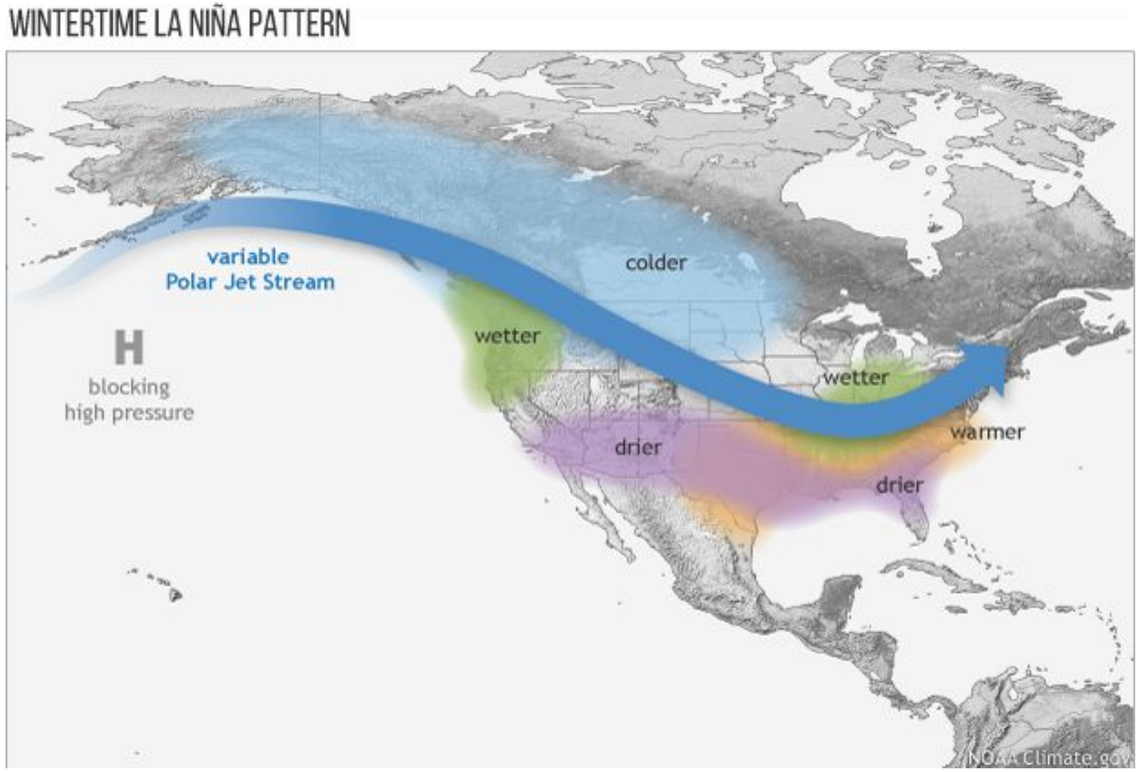
El Nino tends to be warmer and drier

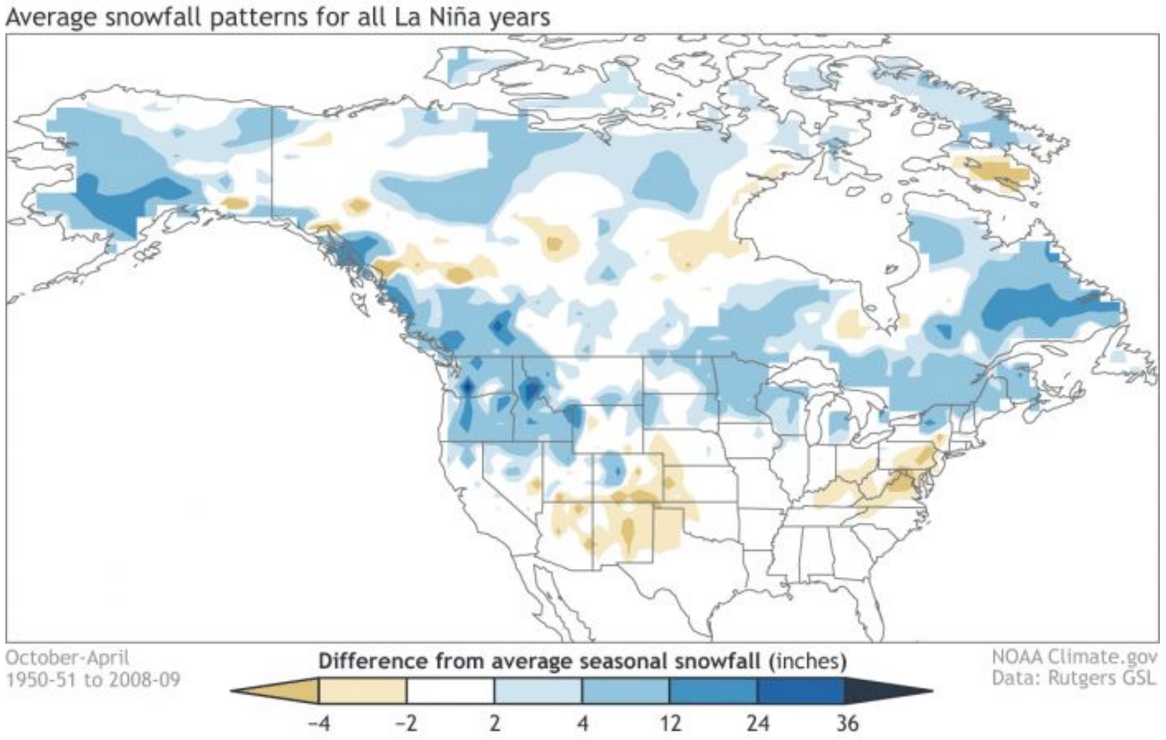
La Nina tends to be cooler and wetter

*This is not always the case, however

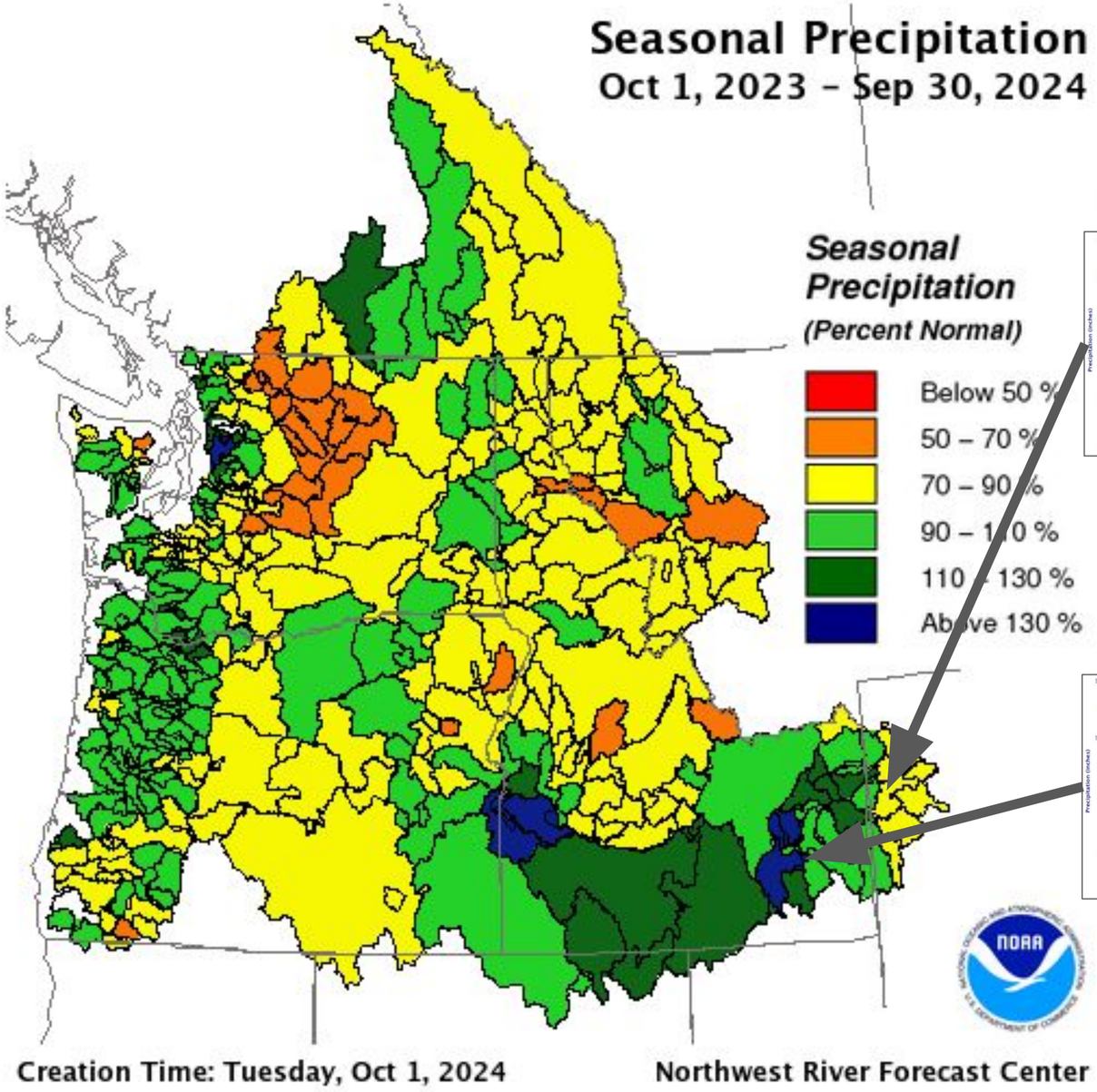
Seasonal Outlook

La Nina
Conditions Expected

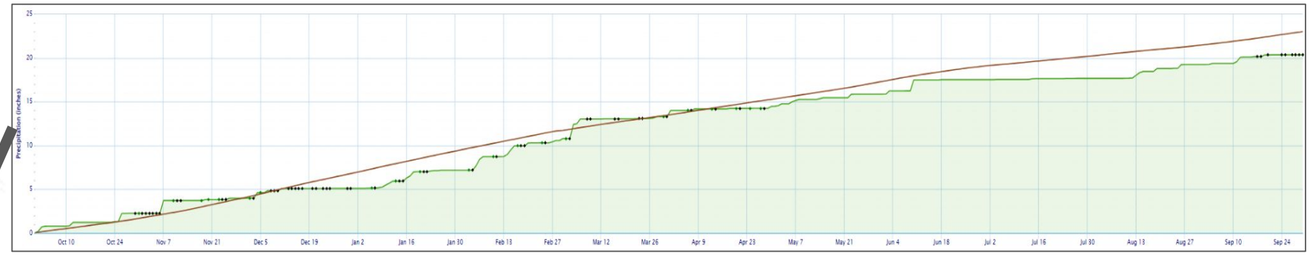




Last Water Year

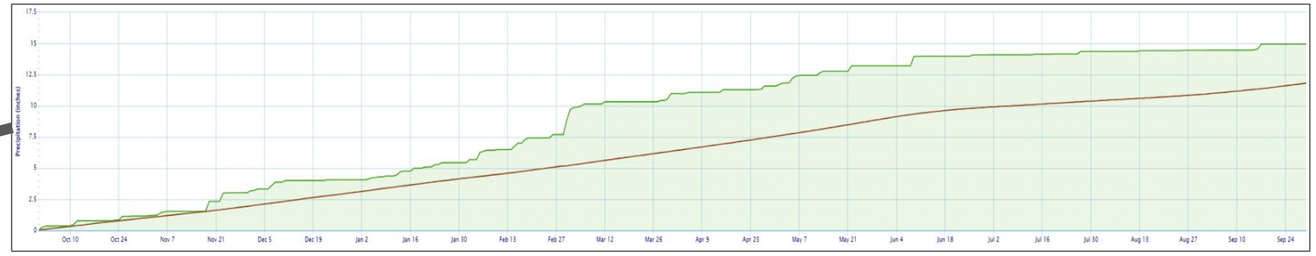


Moose, WY



2023-24: 20.36” Avg: 23.01”

Pocatello, ID



2023-24: 14.95” Avg: 11.82”

BUREAU OF RECLAMATION

Upper Snake Advisory Committee Meeting

Upper Snake Operations Update

November 14, 2024

Presenter: Brian Stevens

Reservoir System Conditions

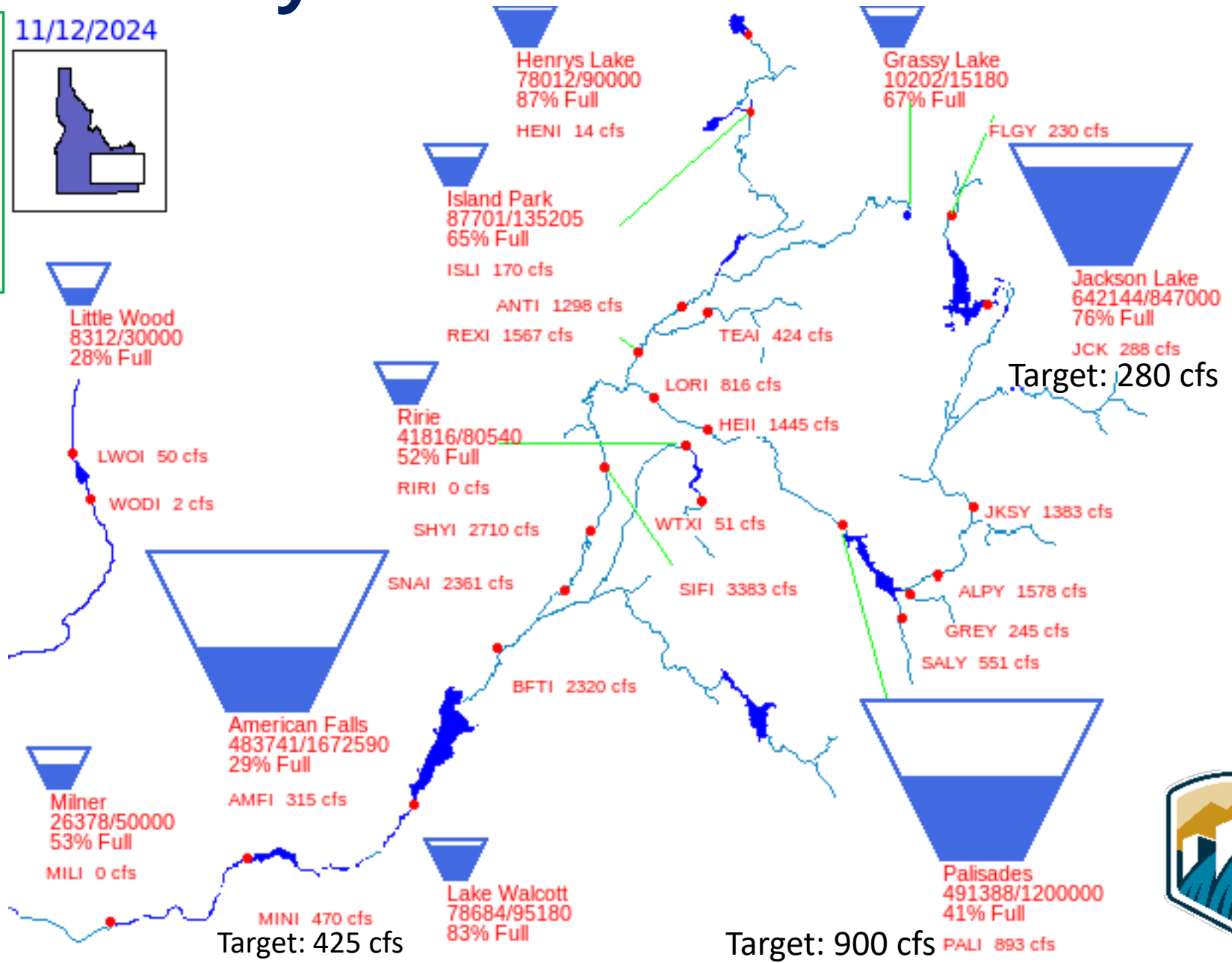
Summary

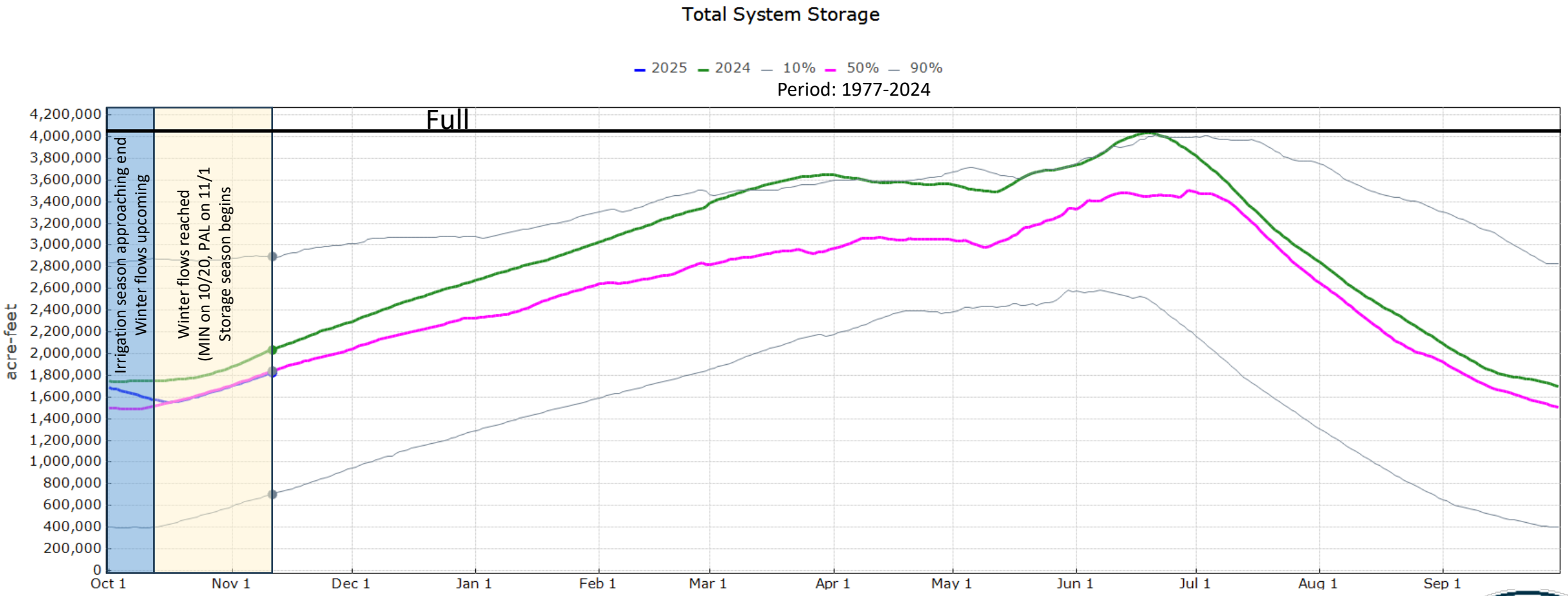
1.84 MAF Currently in Storage

45% Full

213 KAF less than 2024

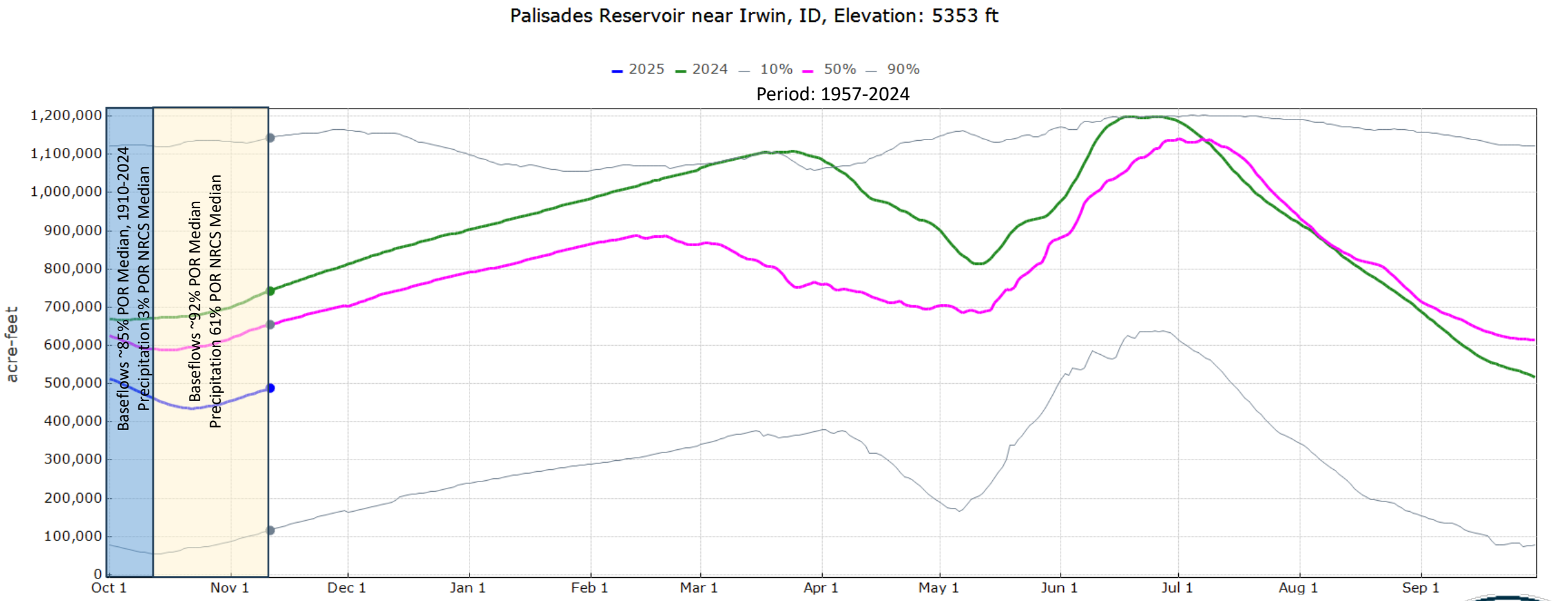
99% POR Median, 77’-24’

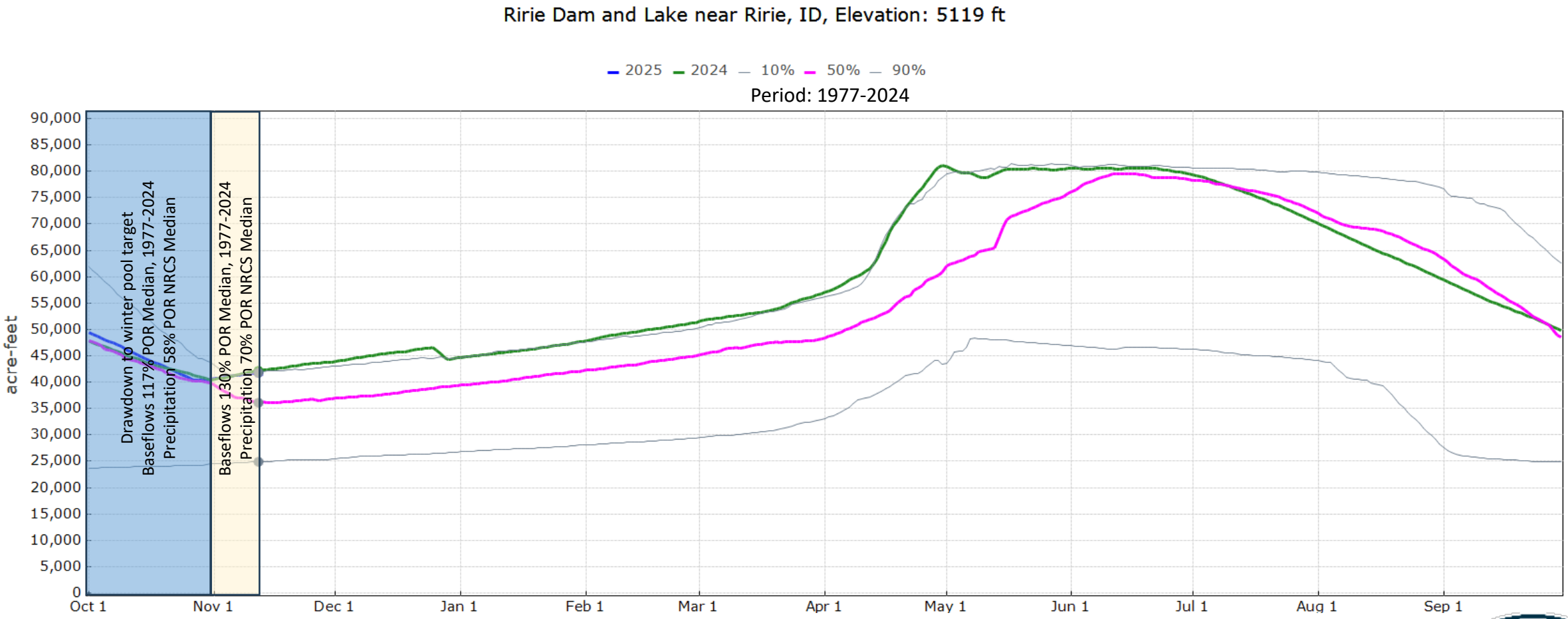




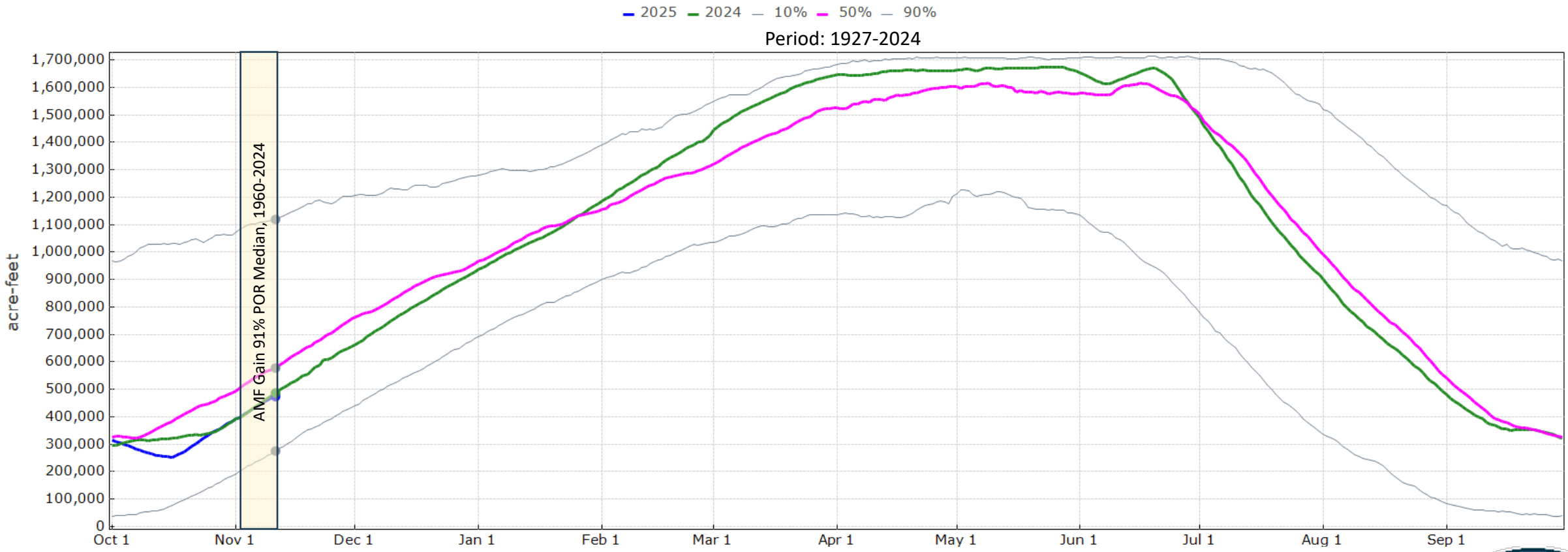
*2025 – current RFC forecast is 2343 KAF, 87% median POR 1910-2024 Apr 1 to Jul 1 HEII QU Runoff

*2024 – 2728 KAF, 101% median POR Apr 1 to Jul 1 HEII QU Runoff


Palisades Reservoir near Irwin, ID, Elevation: 5353 ft
2025
2024
10%
50%
90%
Period: 1957-2024
acre-feet
1,200,000
1,100,000
1,000,000
900,000
800,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000
0
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1
Baseflows ~85% POR Median, 1910-2024
Precipitation 3% POR NRCS Median
Baseflows ~92% POR Median
Precipitation 61% POR NRCS Median


Ririe Dam and Lake near Ririe, ID, Elevation: 5119 ft
2025
2024
10%
50%
90%
Period: 1977-2024
acre-feet
90,000
85,000
80,000
75,000
70,000
65,000
60,000
55,000
50,000
45,000
40,000
35,000
30,000
25,000
20,000
15,000
10,000
5,000
0
Drawdown to winter pool target
Baseflows 117% POR Median, 1977-2024
Precipitation 58% POR NRCS Median
Baseflows 130% POR Median, 1977-2024
Precipitation 70% POR NRCS Median
Oct 1
Nov 1
Dec 1
Jan 1
Feb 1
Mar 1
Apr 1
May 1
Jun 1
Jul 1
Aug 1
Sep 1

American Falls Reservoir at American Falls, ID, Elevation: 4370 ft



Winter Operations Outlook

- Winter Outflows, re-evaluate as needed throughout the winter
  - Jackson Lake 280 cfs
  - Palisades 900 cfs
  - Ririe 0 cfs
  - Island Park 180-200 cfs
  - Grassy Lake 0 cfs
  - American Falls 300 cfs
  - Minidoka 425 cfs
  - Potential range of natural flow available downstream of Minidoka Dam: 425-550 cfs

For More Information

Snake River Area Office

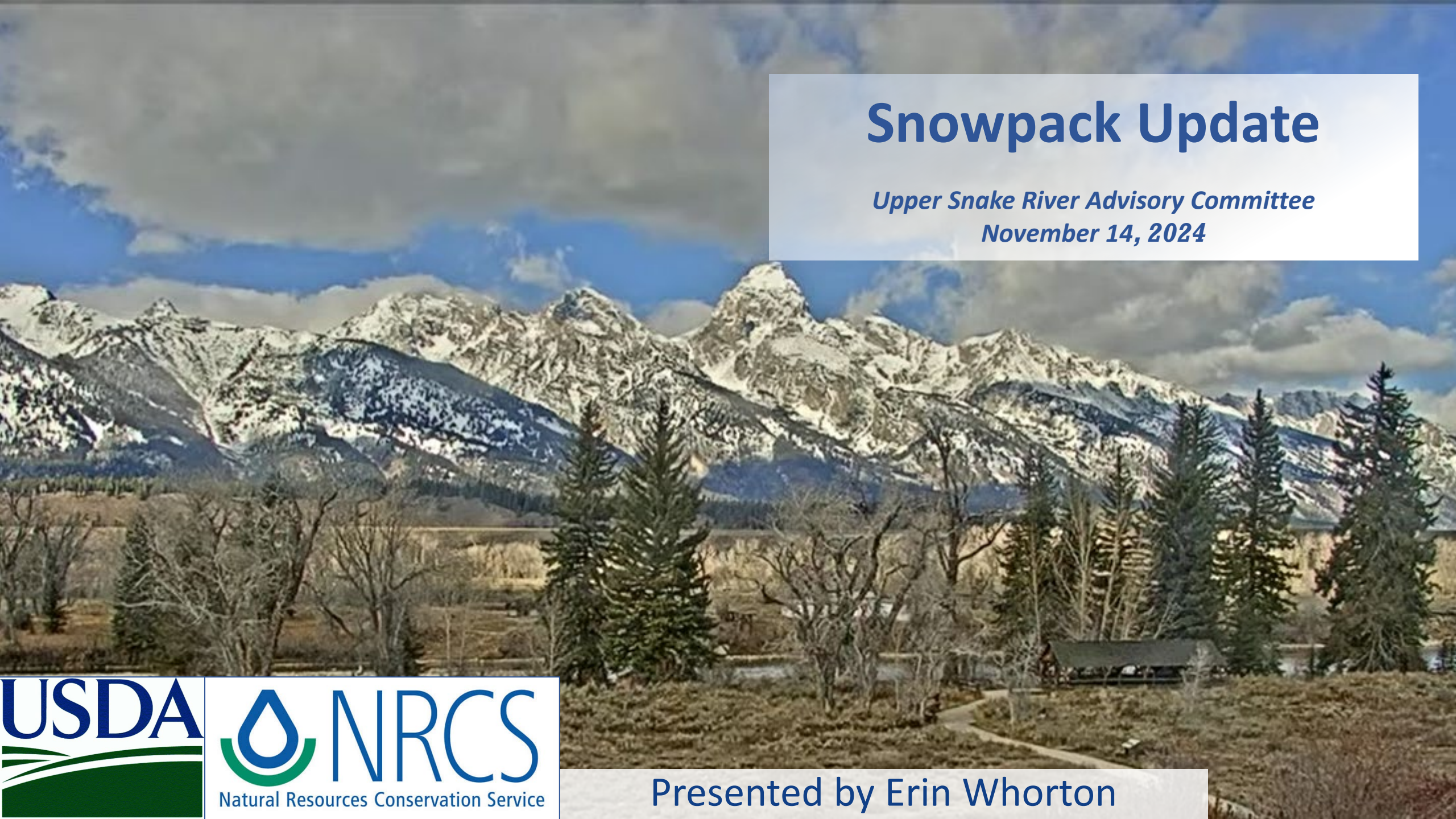
Bryan Horsburgh - Area Manager
208-383-2246
bhorsburgh@usbr.gov

Upper Snake Field Office

Mike Hilliard – Assistant Area Manager
208-678-0461
mhilliard@usbr.gov
Brian Stevens – Water Operations Supervisory Civil Engineer (x24)
bstevens@usbr.gov
Jeremy Dalling - Water Operations Civil Engineer (x25)
jdalling@usbr.gov
Darrin Fredrickson - Staff Assistant (x17)
dfredrickson@usbr.gov

Snake River Operations Web Sites

http://www.usbr.gov/pn/snakeriver/water/jacksonlake/index.html
http://www.usbr.gov/pn/hydromet/uppersnake/index.html
USBR HydroMet - http://www.usbr.gov/pn/hydromet/
Northwest River Forecast Center - http://www.nwrfc.noaa.gov/rfc/
NRCS SNOTEL Data - http://www.id.nrcs.usda.gov/snow/

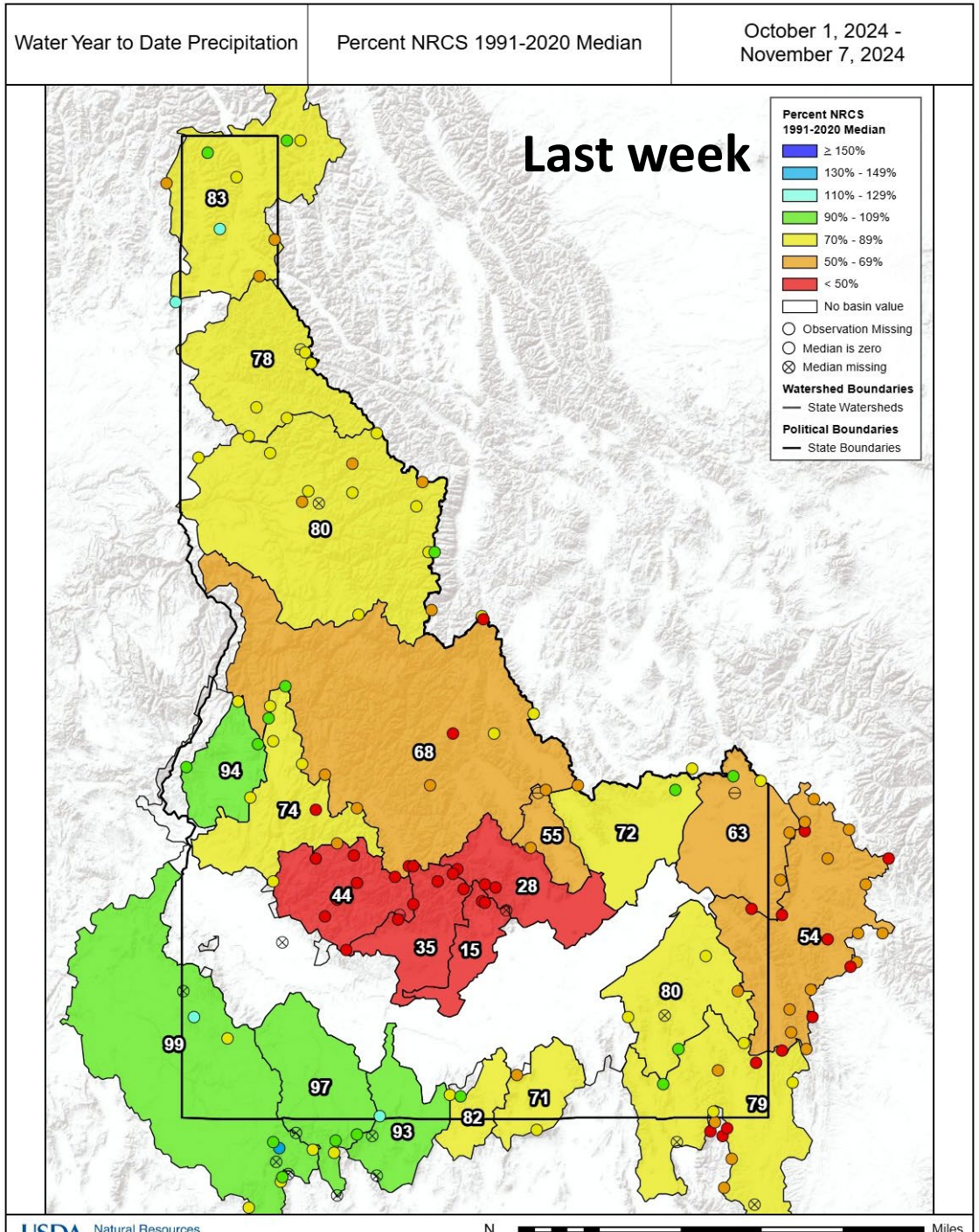


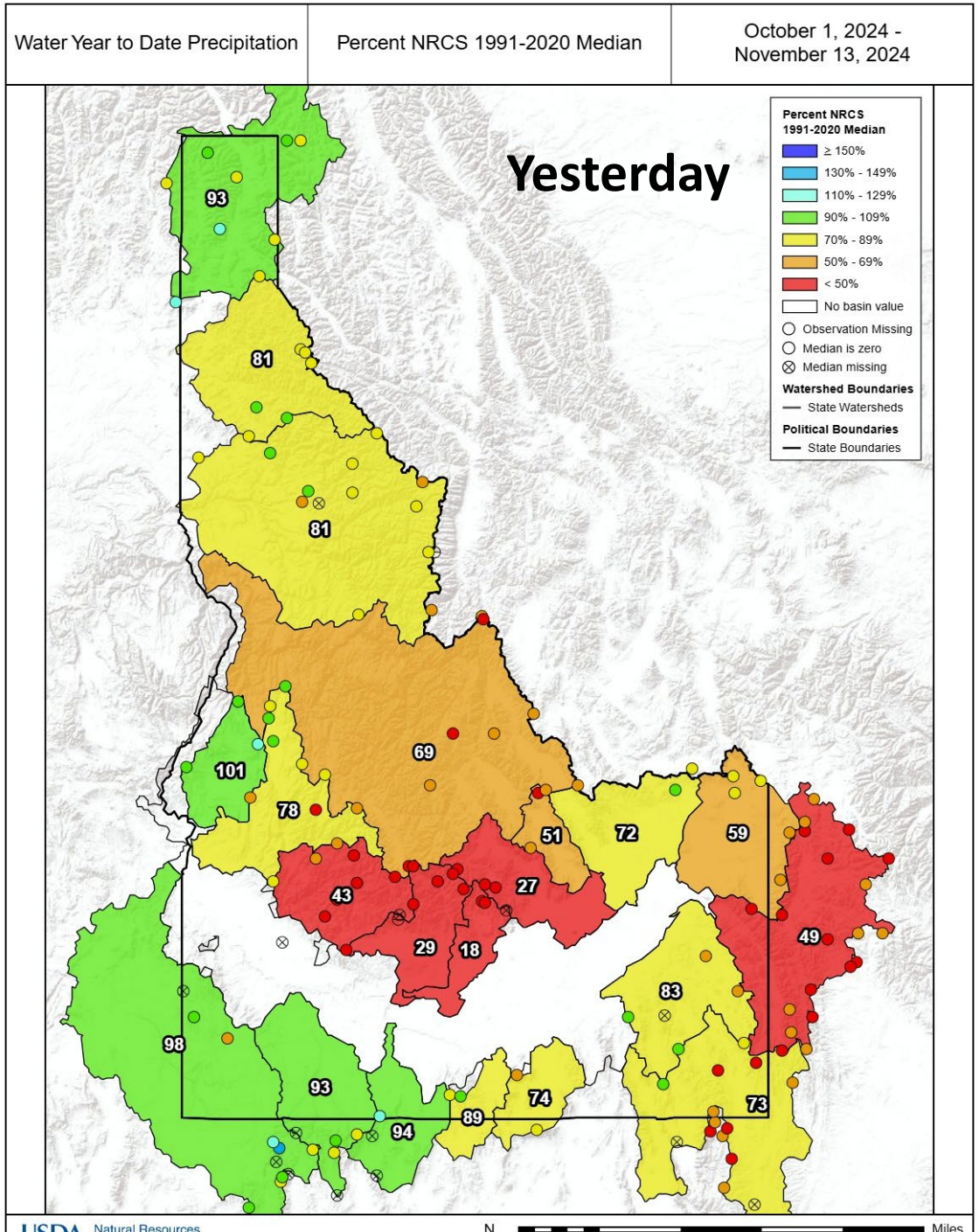
Snowpack Update

Upper Snake River Advisory Committee
November 14, 2024

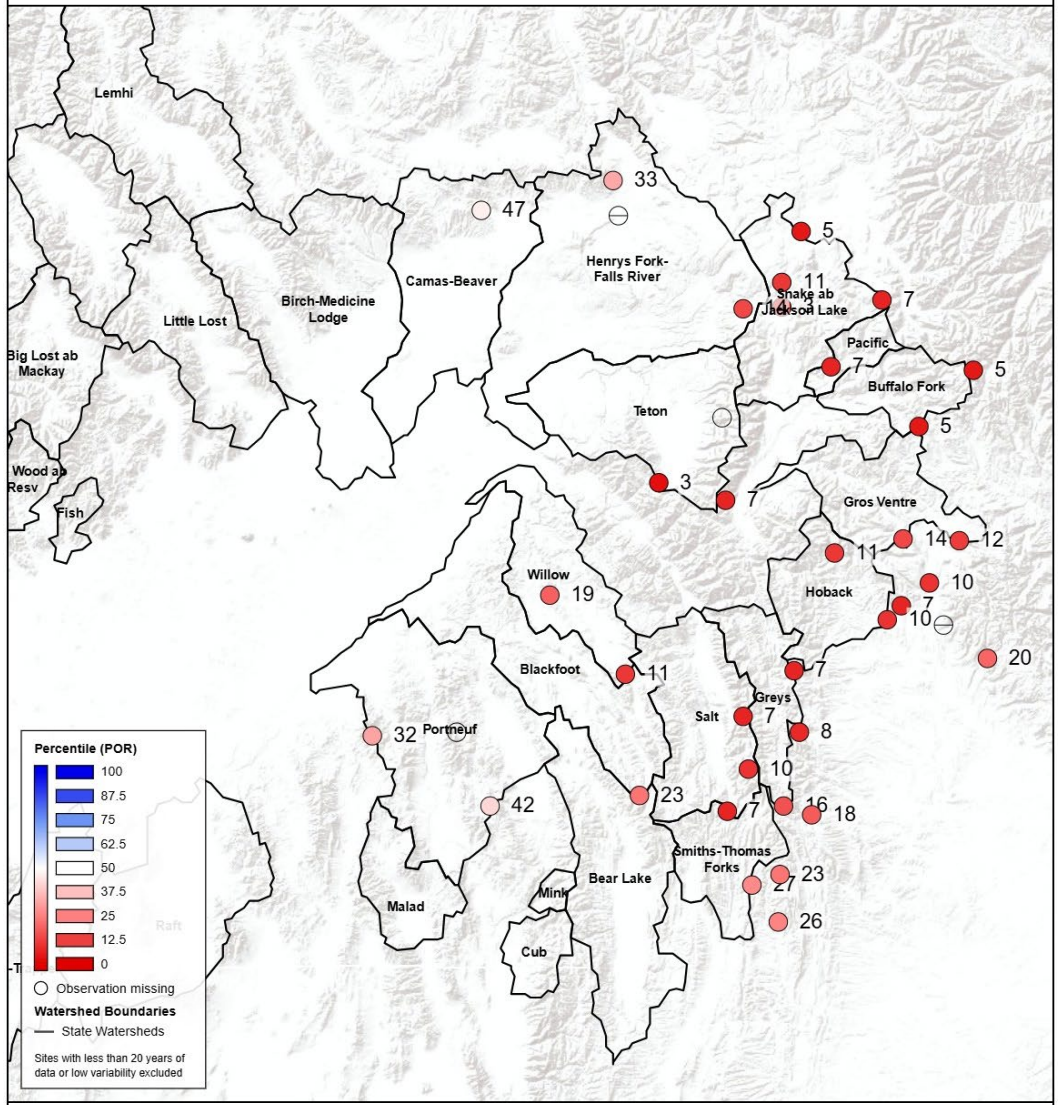
USDA NRCS Natural Resources Conservation Service

Presented by Erin Whorton


Water Year to Date Precipitation
Percent NRCS 1991-2020 Median
October 1, 2024 - November 7, 2024
Last week
Percent NRCS 1991-2020 Median
≥ 150%
130% - 149%
110% - 129%
90% - 109%
70% - 89%
50% - 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
83
78
80
68
94
74
55
72
63
44
28
54
35
15
80
99
97
71
79
82
93


Water Year to Date Precipitation
Percent NRCS 1991-2020 Median
October 1, 2024 - November 13, 2024
Yesterday
Percent NRCS 1991-2020 Median
≥ 150%
130% - 149%
110% - 129%
90% - 109%
70% - 89%
50% - 69%
< 50%
No basin value
Observation Missing
Median is zero
Median missing
Watershed Boundaries
State Watersheds
Political Boundaries
State Boundaries
93
81
81
69
101
78
51
72
59
43
27
49
29
18
83
98
93
74
89
73
94

Water Year to Date Precipitation	Percentile (POR)	October 1, 2024 - November 11, 2024

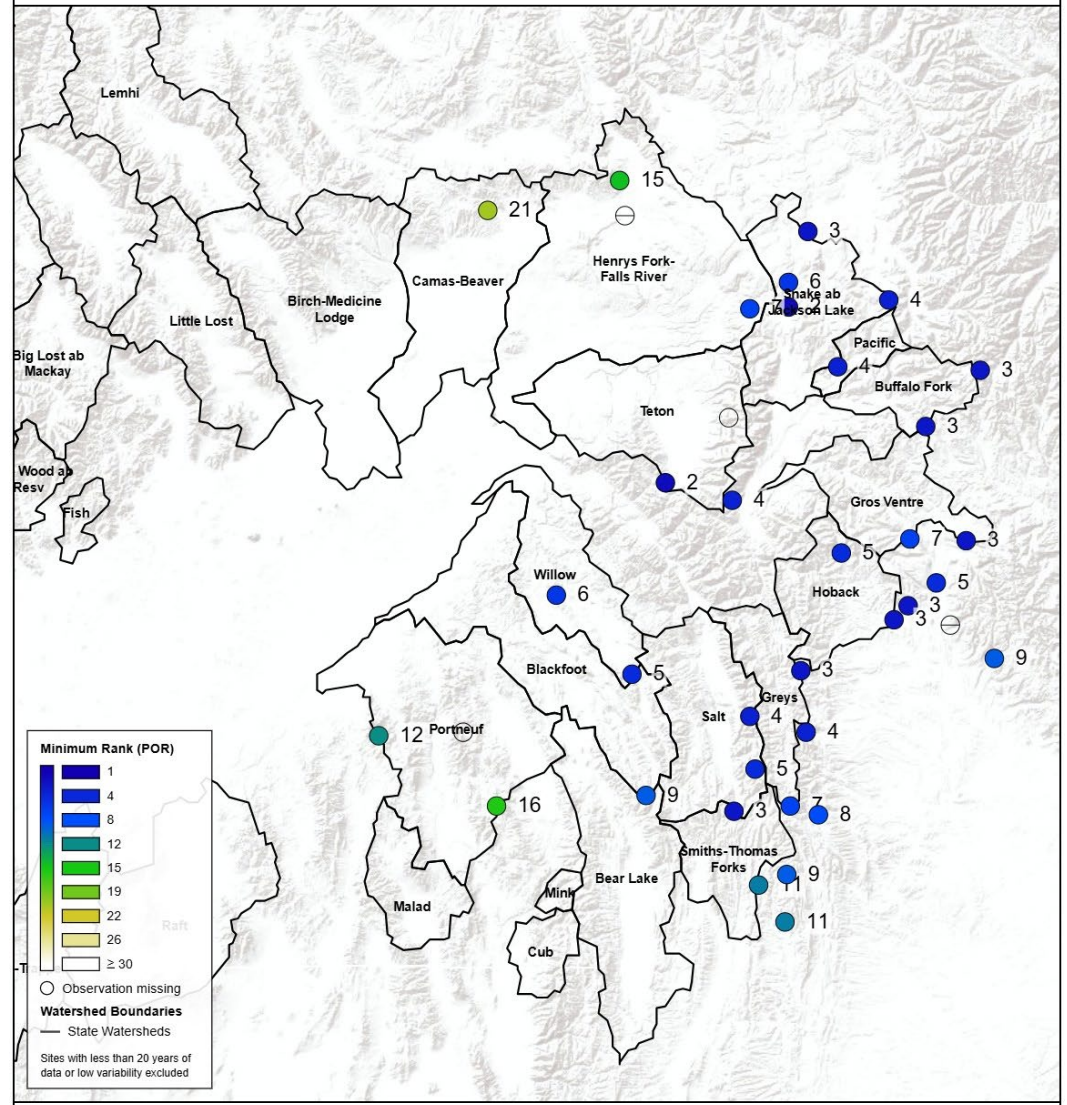


USDA Natural Resources Conservation Service
United States Department of Agriculture

N 0 10 20 40 60 80 100 Miles

Created 11-13-2024

Water Year to Date Precipitation	Minimum Rank (POR)	October 1, 2024 - November 11, 2024

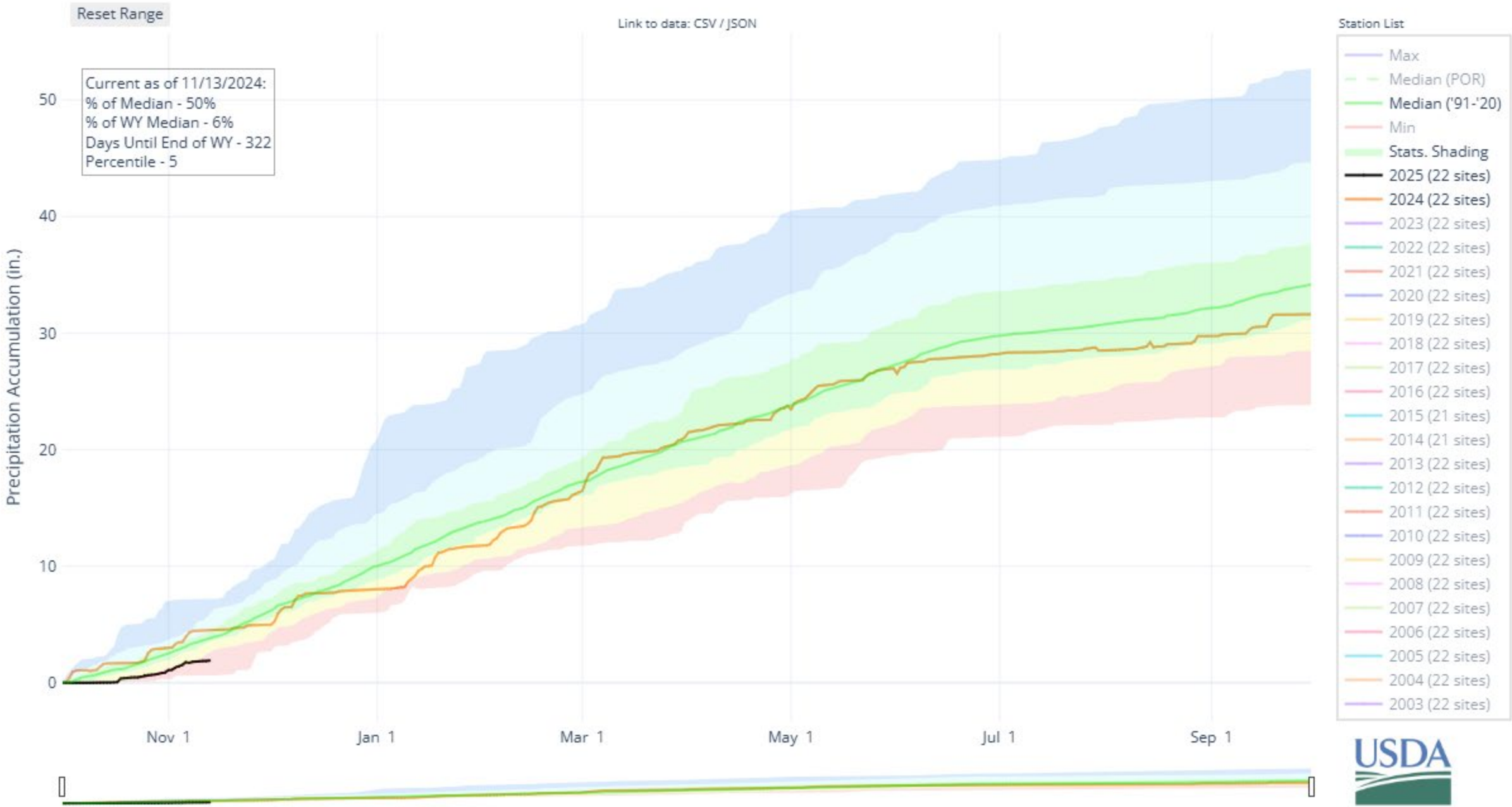


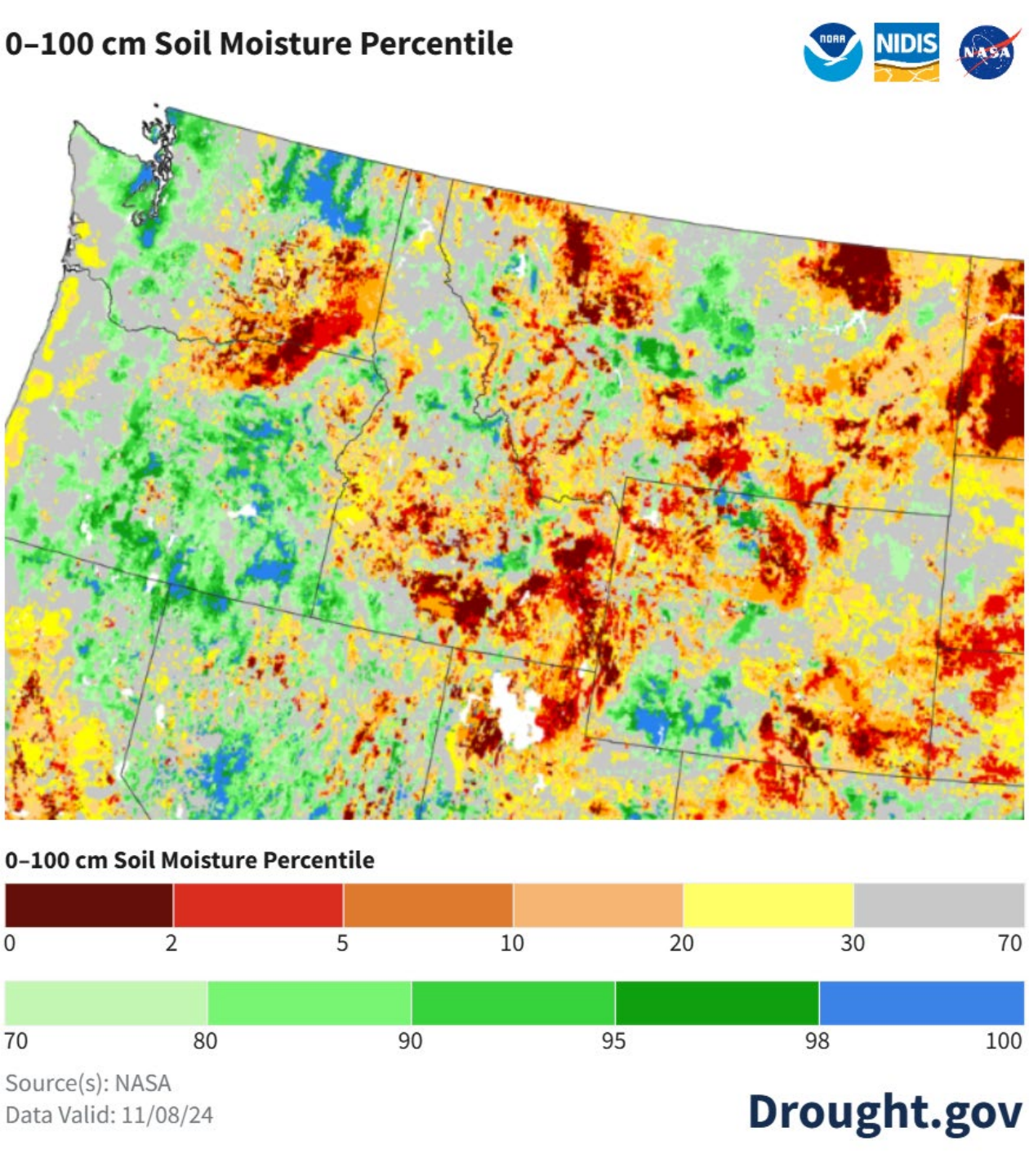
USDA Natural Resources Conservation Service
United States Department of Agriculture

N 0 10 20 40 60 80 100 Miles

Created 11-13-2024

PRECIPITATION ACCUMULATION IN SNAKE RIVER ABOVE HEISE

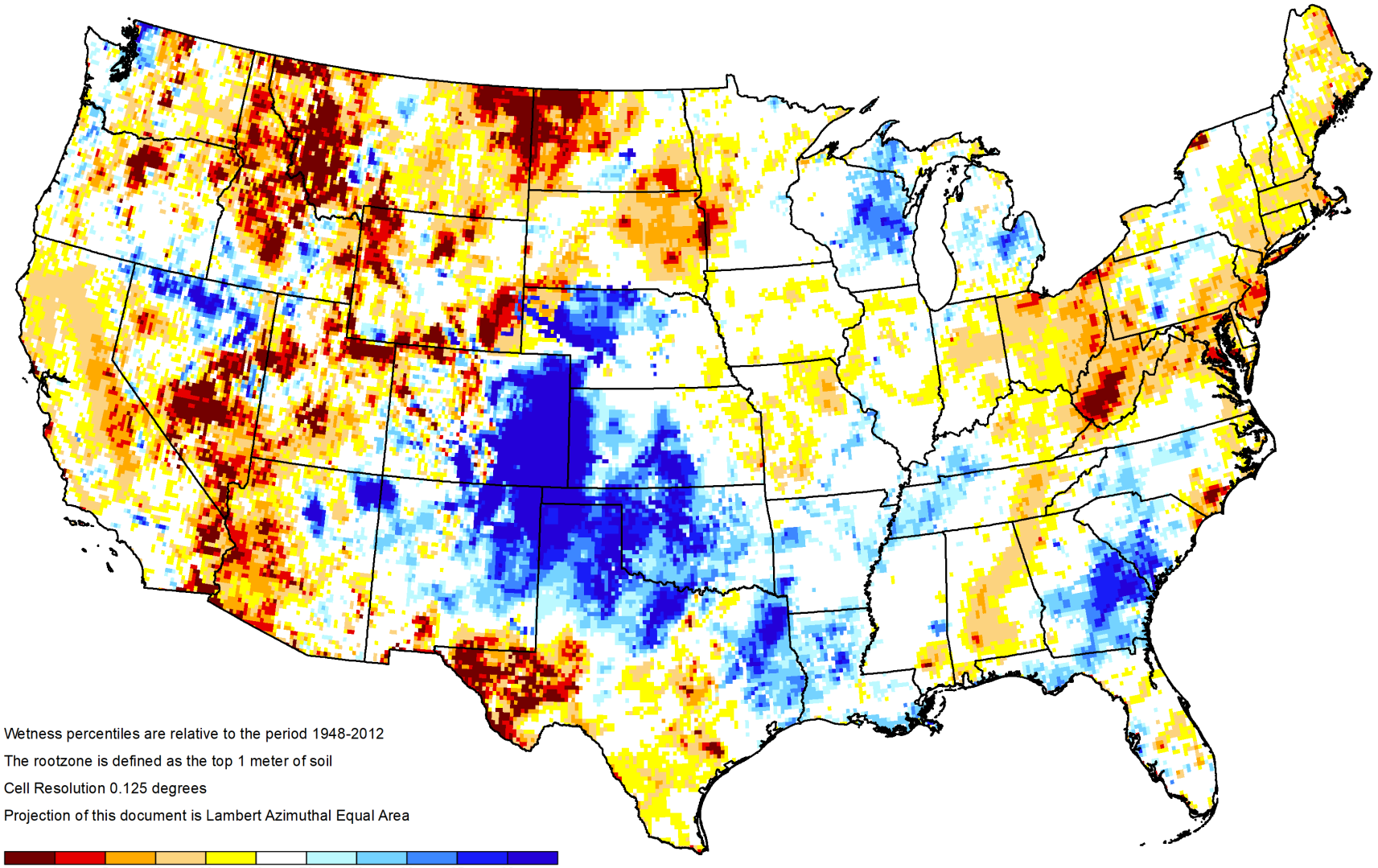




https://www.drought.gov/topics/soil-moisture#data-maps-tools

GRACE-Based Root Zone Soil Moisture Drought Indicator

November 11, 2024



Wetness percentiles are relative to the period 1948-2012

The rootzone is defined as the top 1 meter of soil

Cell Resolution 0.125 degrees

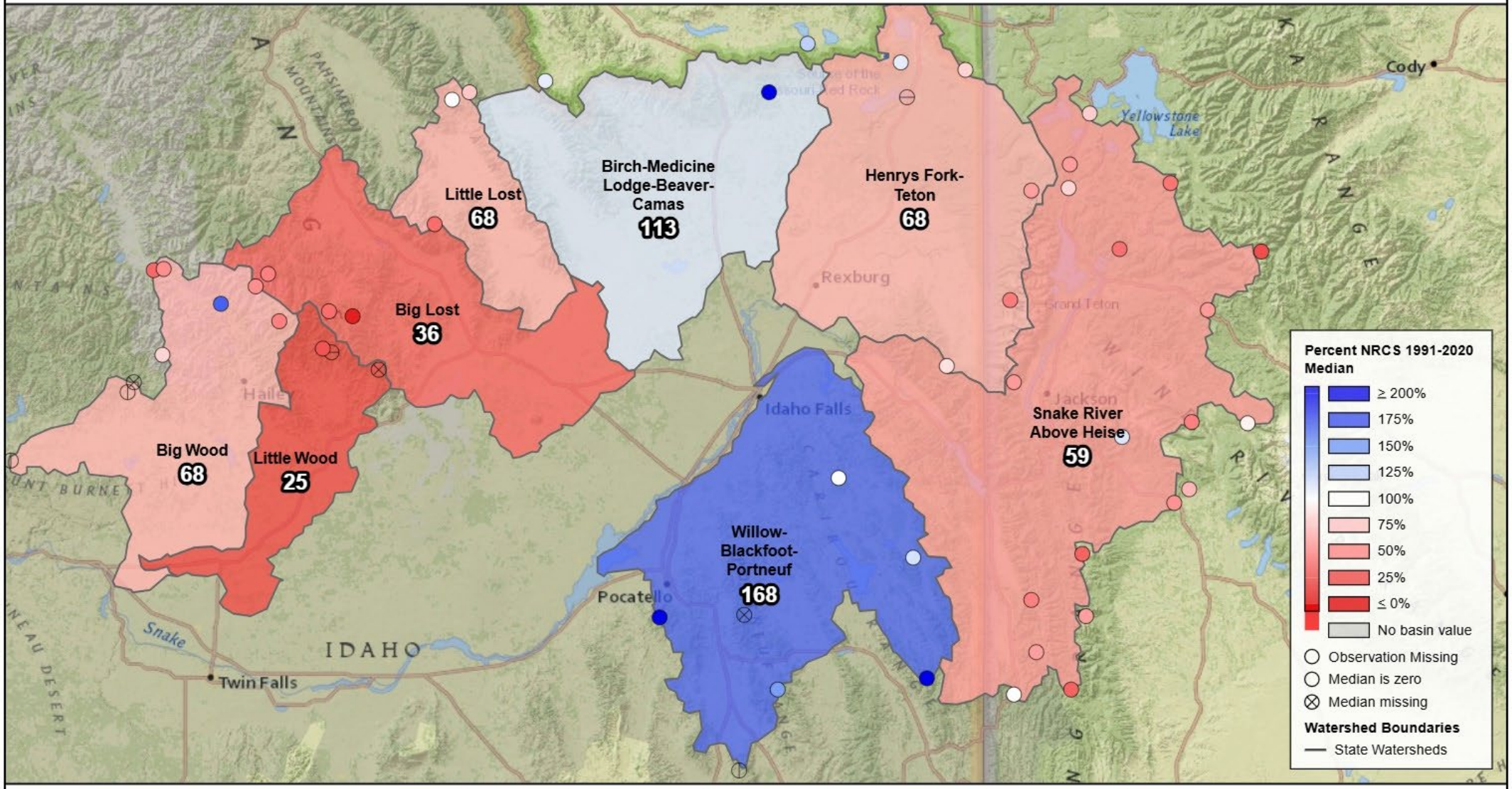
Projection of this document is Lambert Azimuthal Equal Area

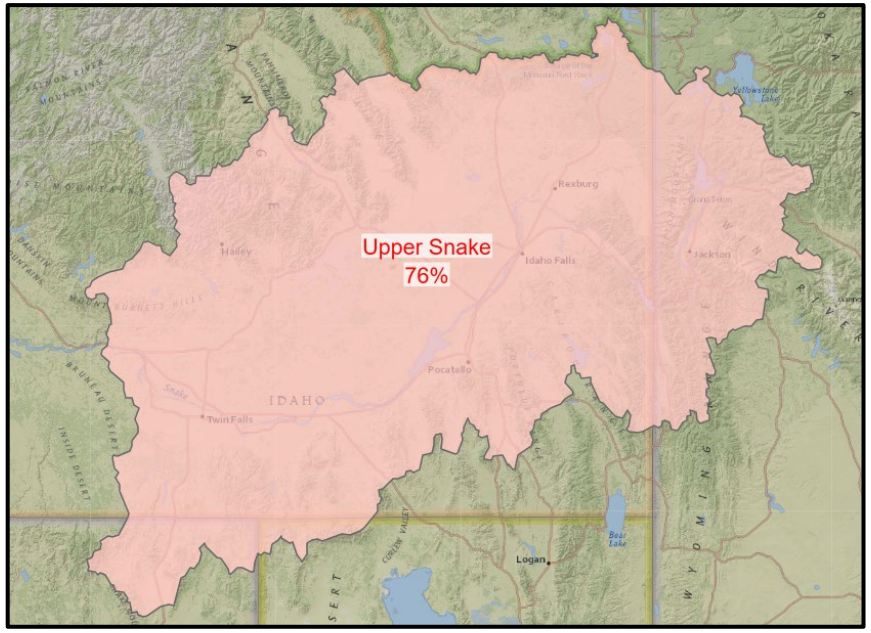
2 5 10 20 30 70 80 90 95 98

Wetness Percentile

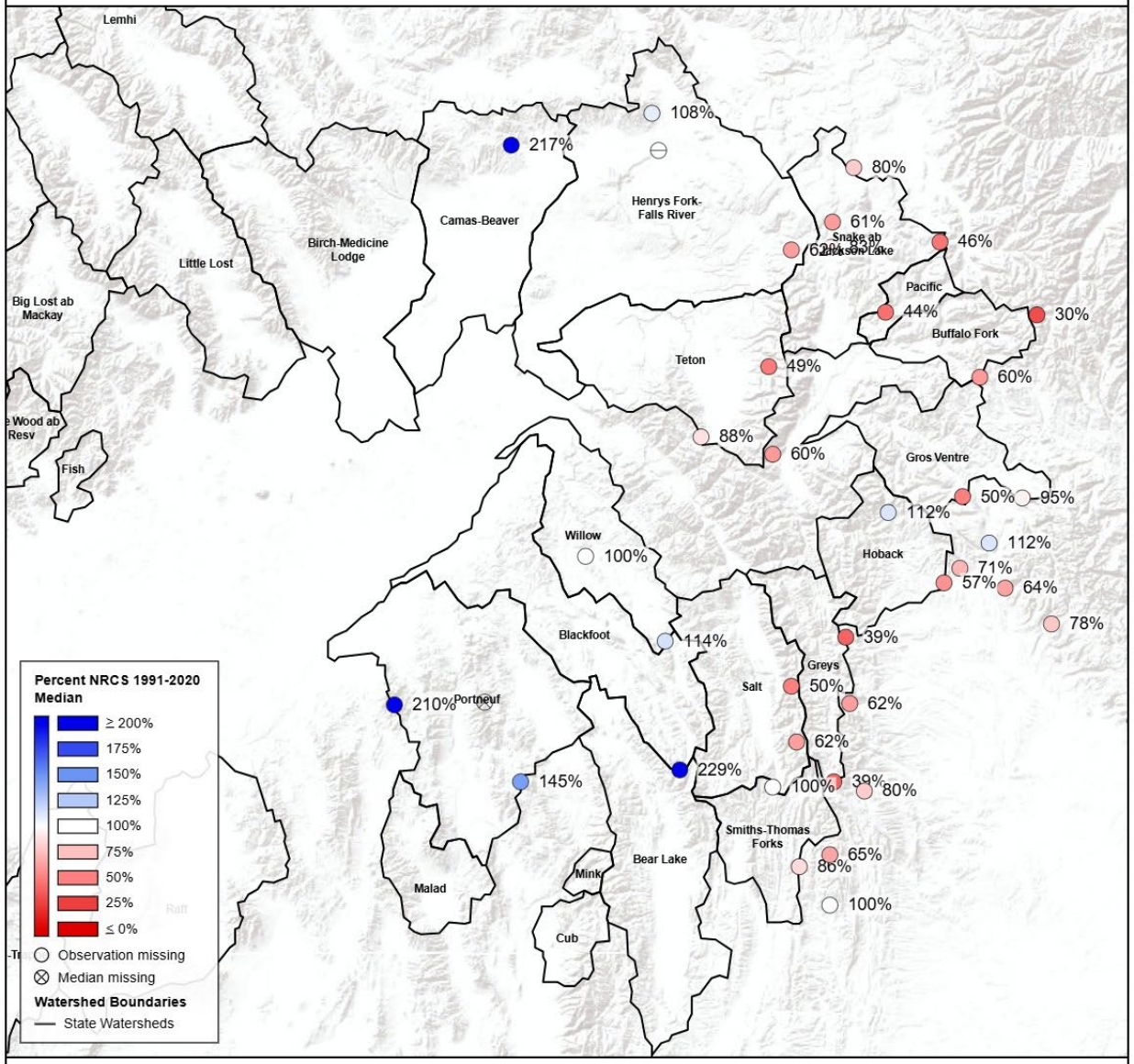
https://nasagrace.unl.edu

Snow Water Equivalent	Percent NRCS 1991-2020 Median	November 13, 2024, first of day





Snow Water Equivalent	Percent NRCS 1991-2020 Median	November 13, 2024, first of day



SNOW WATER EQUIVALENT IN HENRYS FORK-TETON

Reset Range

Link to data: CSV / JSON

Current as of 11/13/2024:
% of Median - 75%
% Median Peak - 8%
Days Until Median Peak - 151
Percentile - 23

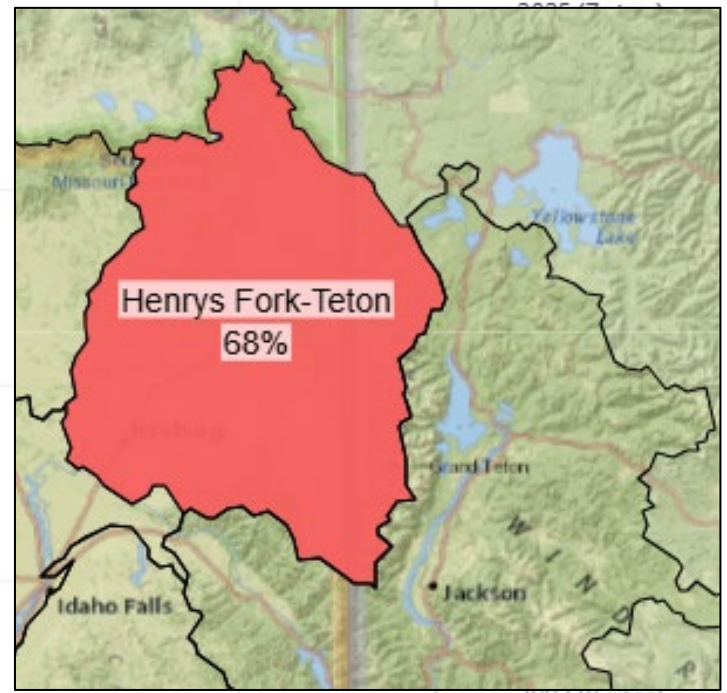
Snow Water Equivalent (in.)

50
40
30
20
10
0

Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1

Station List

- Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2007 (8 sites)
- 2006 (7 sites)
- 2005 (7 sites)
- 2004 (7 sites)



USDA

SNOW WATER EQUIVALENT IN SNAKE RIVER ABOVE HEISE

Reset Range

Link to data: CSV / JSON

Current as of 11/13/2024:
% of Median - 59%
% Median Peak - 6%
Days Until Median Peak - 150
Percentile - 11

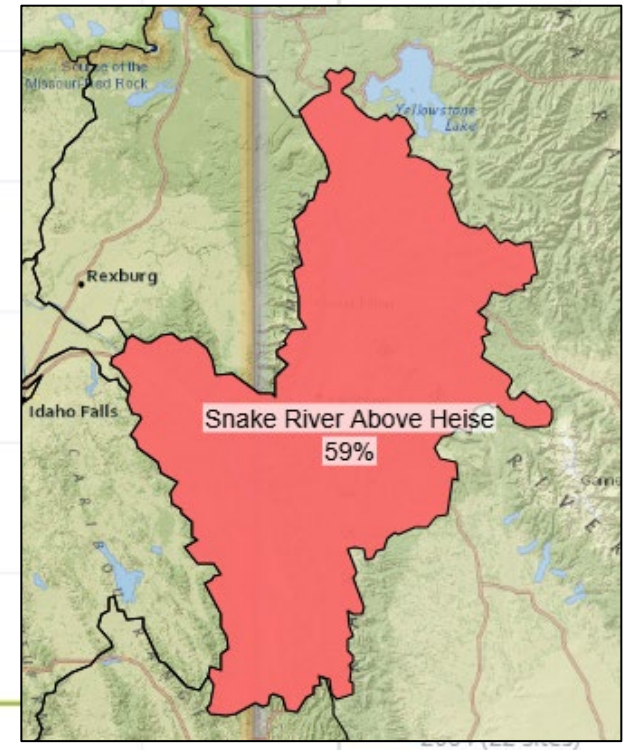
Station List

- Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2025 (22 sites)
- 2024 (22 sites)

Snow Water Equivalent (in.)

0
5
10
15
20
25
30
35

Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1



USDA

SNOW WATER EQUIVALENT IN WILLOW-BLACKFOOT-PORTNEUF

Reset Range

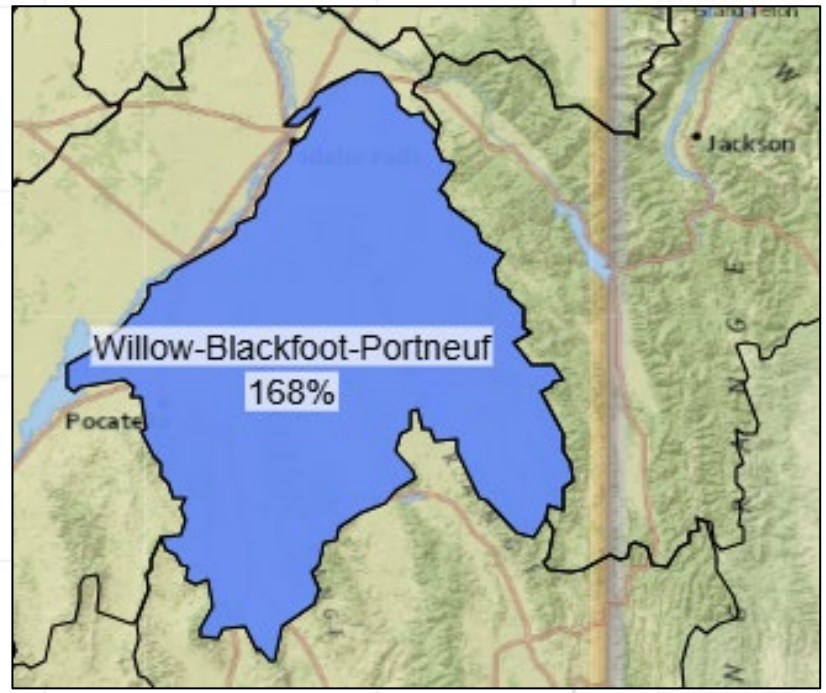
Link to data: CSV / JSON

Current as of 11/13/2024:
% of Median - 168%
% Median Peak - 7%
Days Until Median Peak - 137
Percentile - 76

Snow Water Equivalent (in.)

25
20
15
10
5
0

Nov 1
Jan 1
Mar 1
May 1
Jul 1
Sep 1



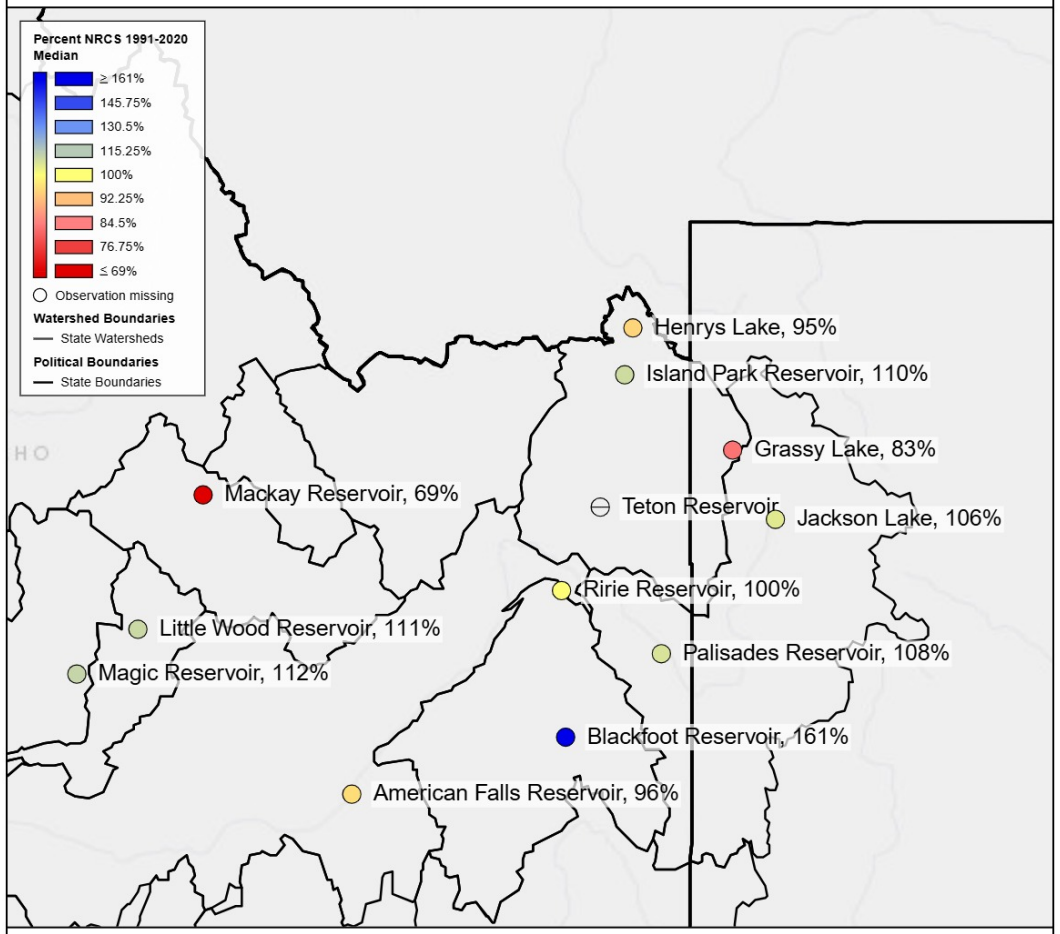
Station List

- Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2025 (6 sites)
- 2006 (6 sites)
- 2005 (6 sites)
- 2004 (6 sites)

USDA

Reservoir Storage

Reservoir Storage	Percent NRCS 1991-2020 Median	November 1st, 2024



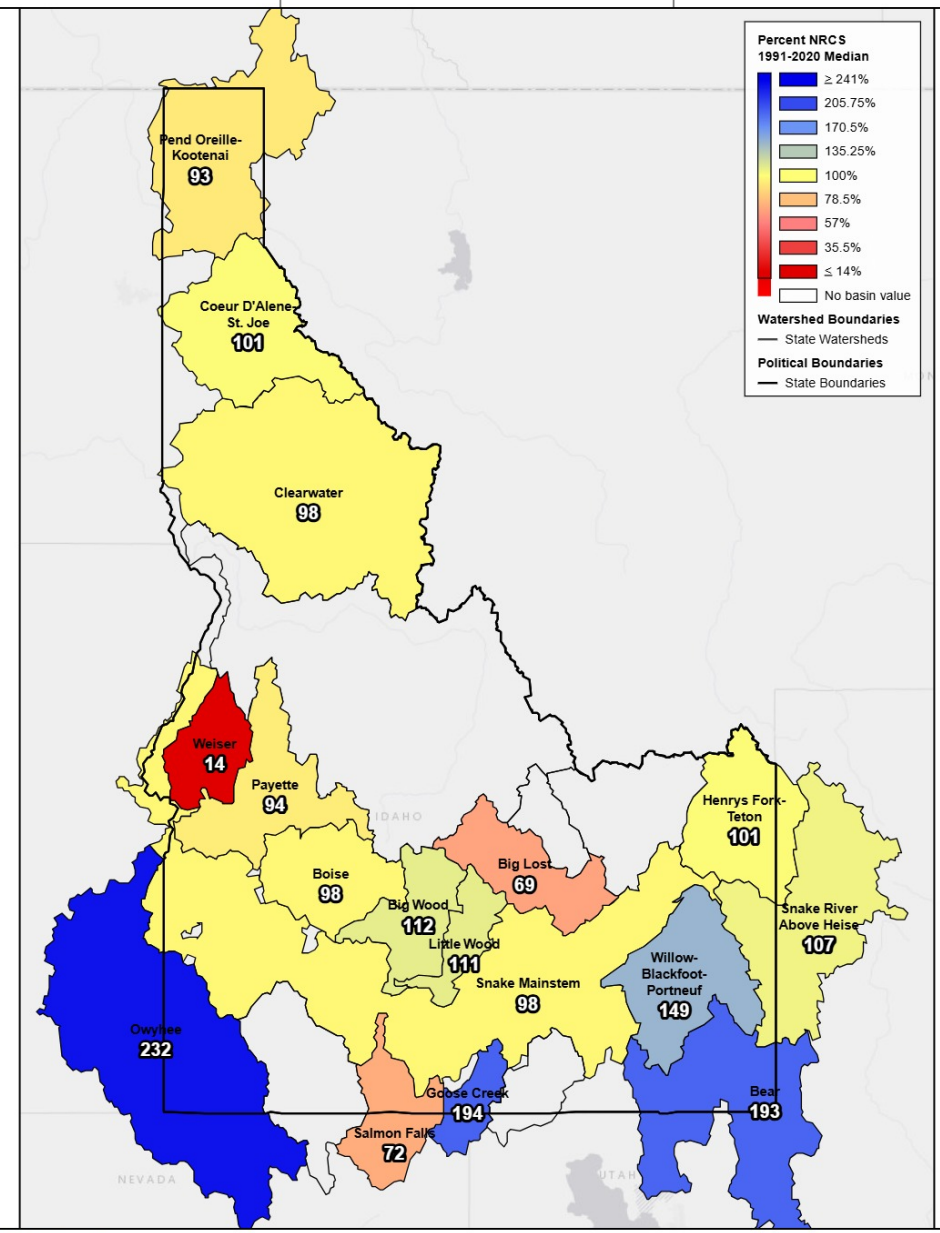
USDA Natural Resources Conservation Service
United States Department of Agriculture

N

0 10 20 40 60 80 100 Miles

Created 11-08-2024

Reservoir Storage	Percent NRCS 1991-2020 Median	November 1st, 2024



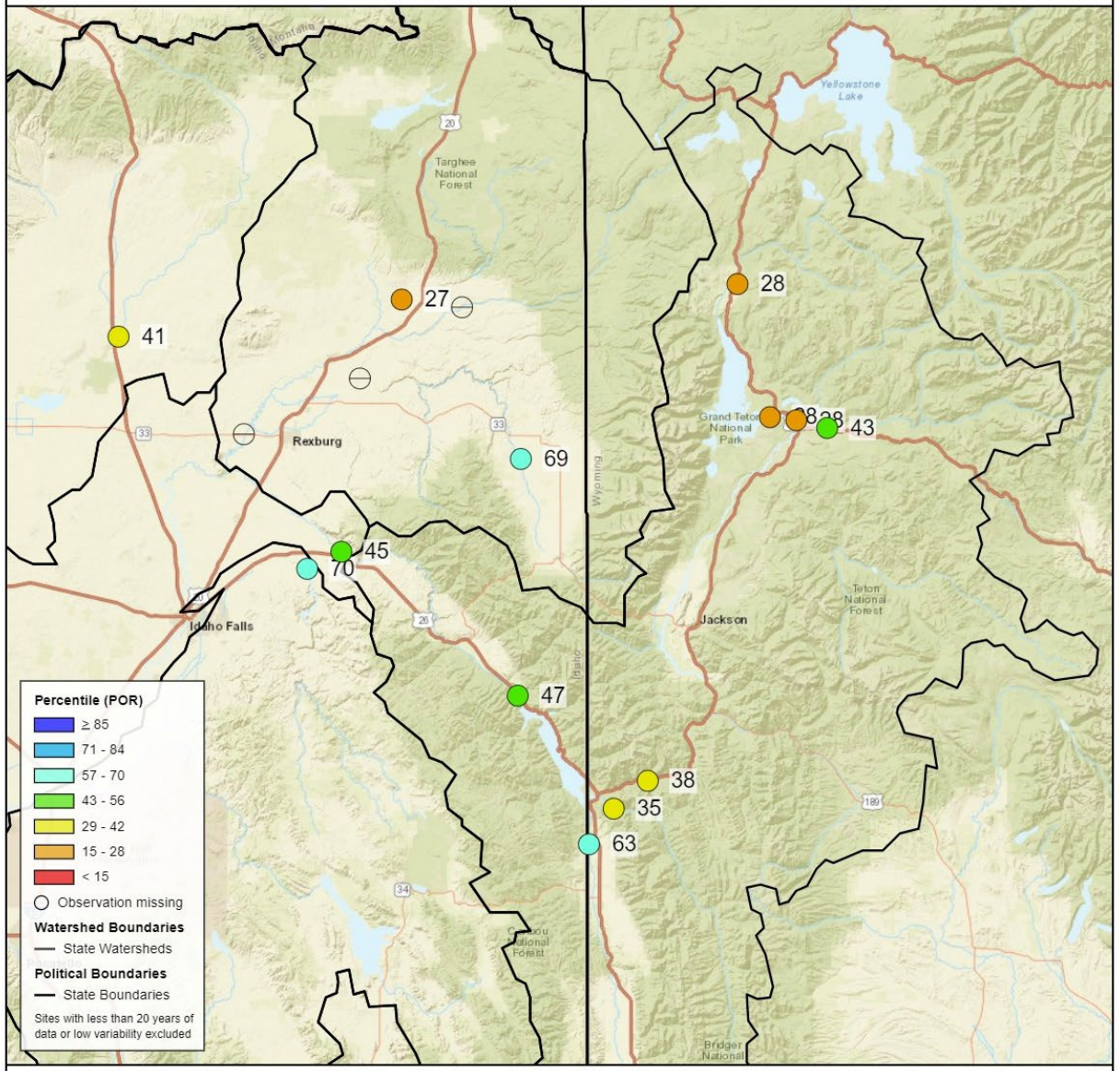
USDA Natural Resources Conservation Service
United States Department of Agriculture

N

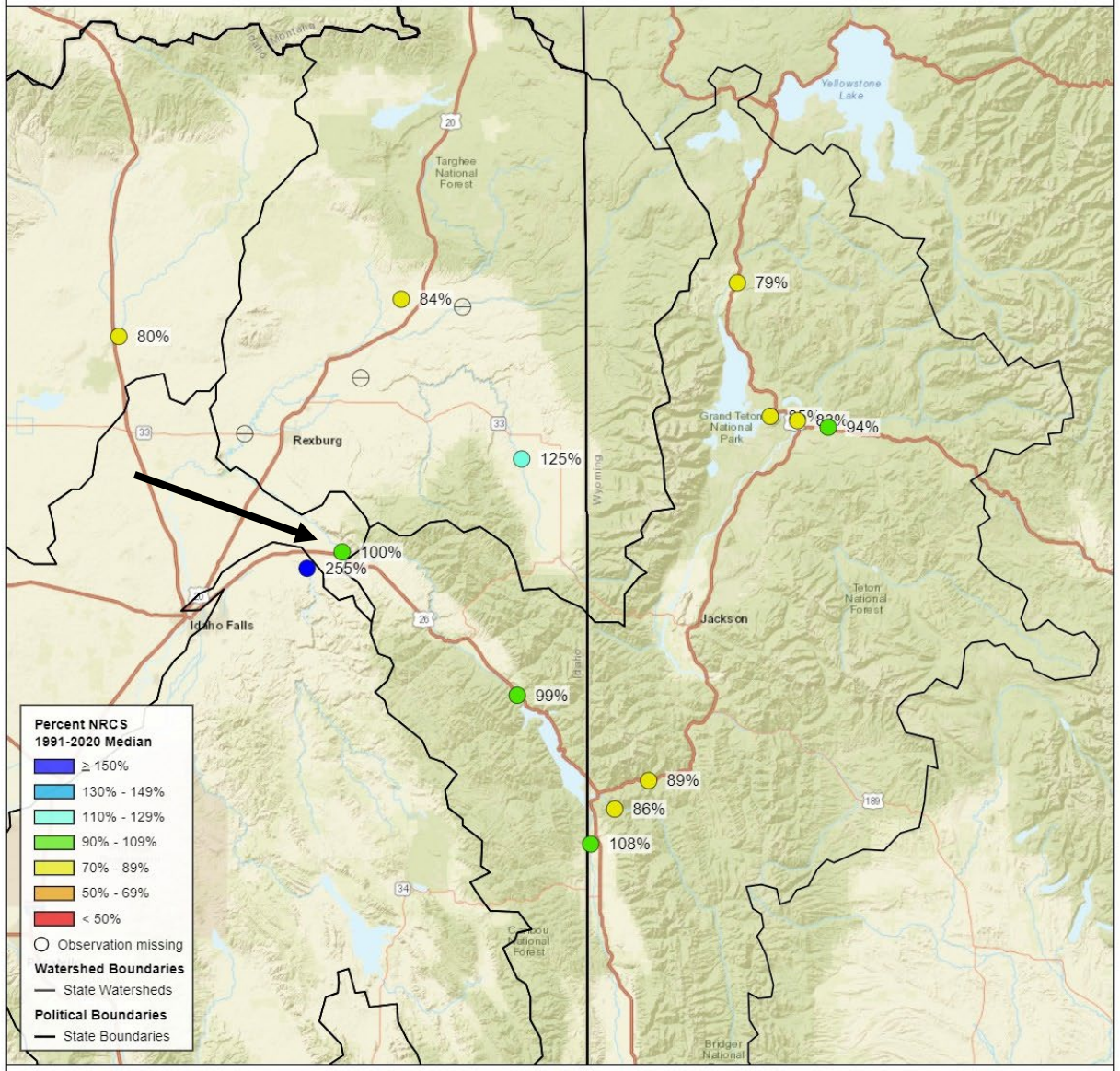
0 20 40 80 120 160 200 Miles

Created 11-08-2024

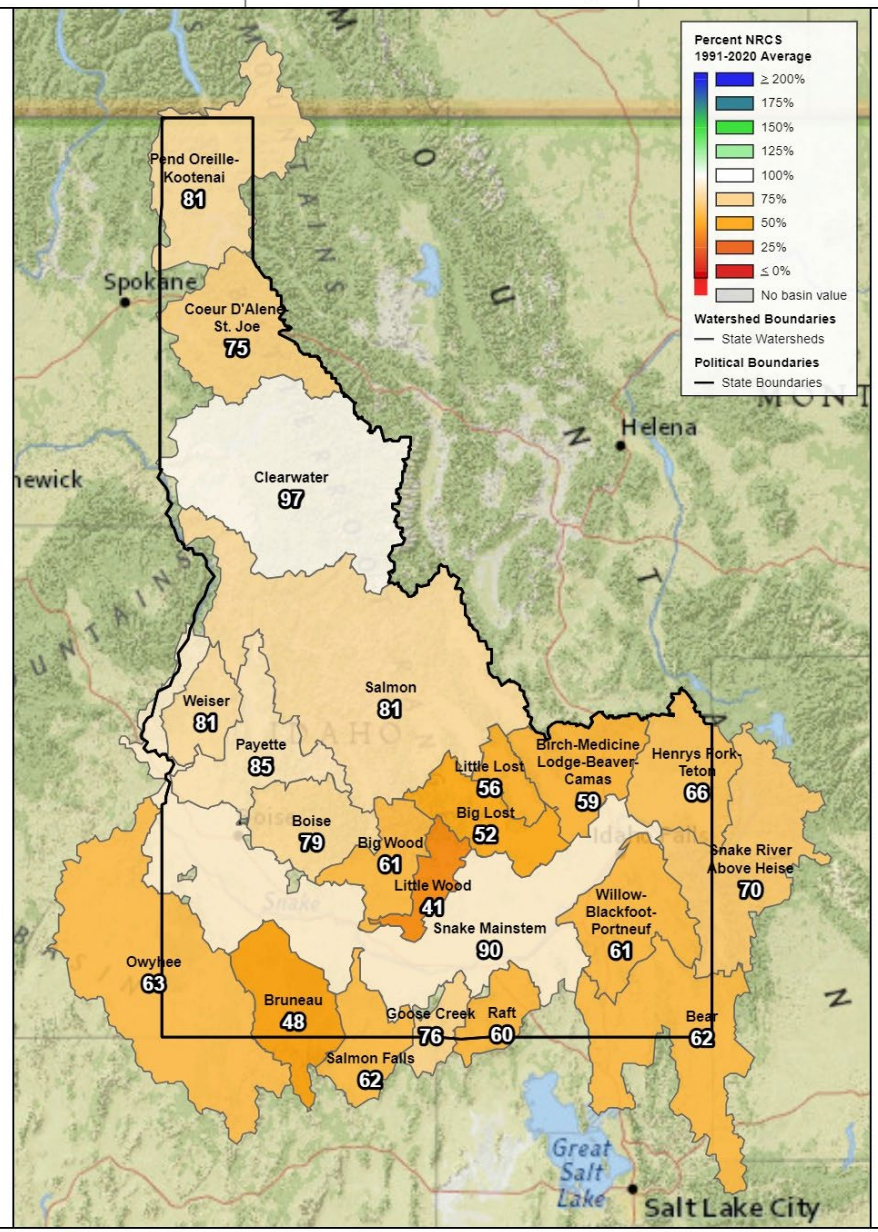
4 month Adjusted Volume, Observed	Percentile (POR)	April 1, 2024 - July 31, 2024



4 month Adjusted Volume, Observed	Percent NRCS 1991-2020 Median	April 1, 2024 - July 31, 2024



3 month Precipitation	Total water year precipitation Percent NRCS 1991-2020 Average	April 1, 2024 - June 30, 2024



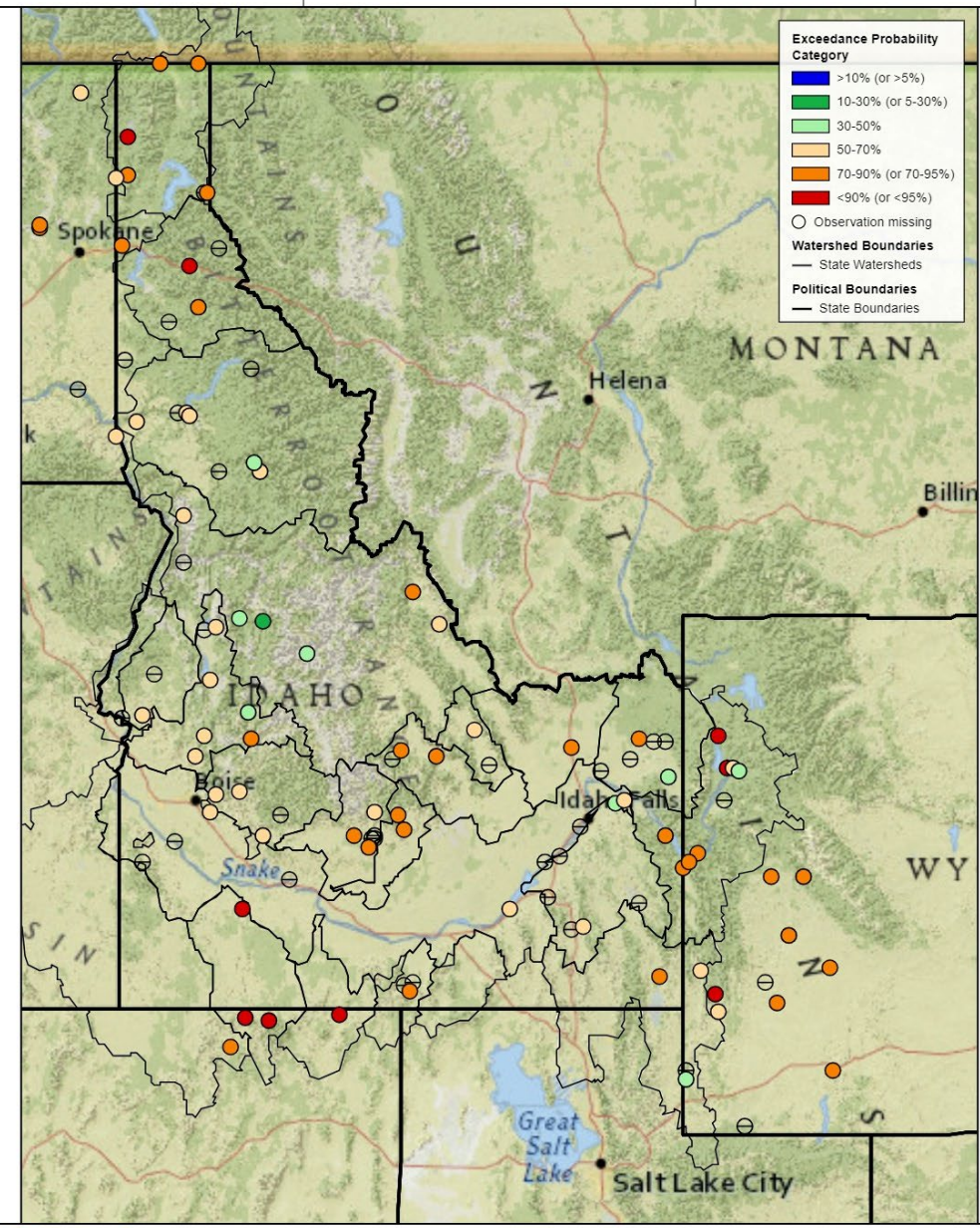
USDA Natural Resources Conservation Service
United States Department of Agriculture

N

0 20 40 80 120 160 200 Miles

Created 10-08-2024

Streamflow Forecast Volume	Exceedance Probability Category	April - July, April 1, 2024



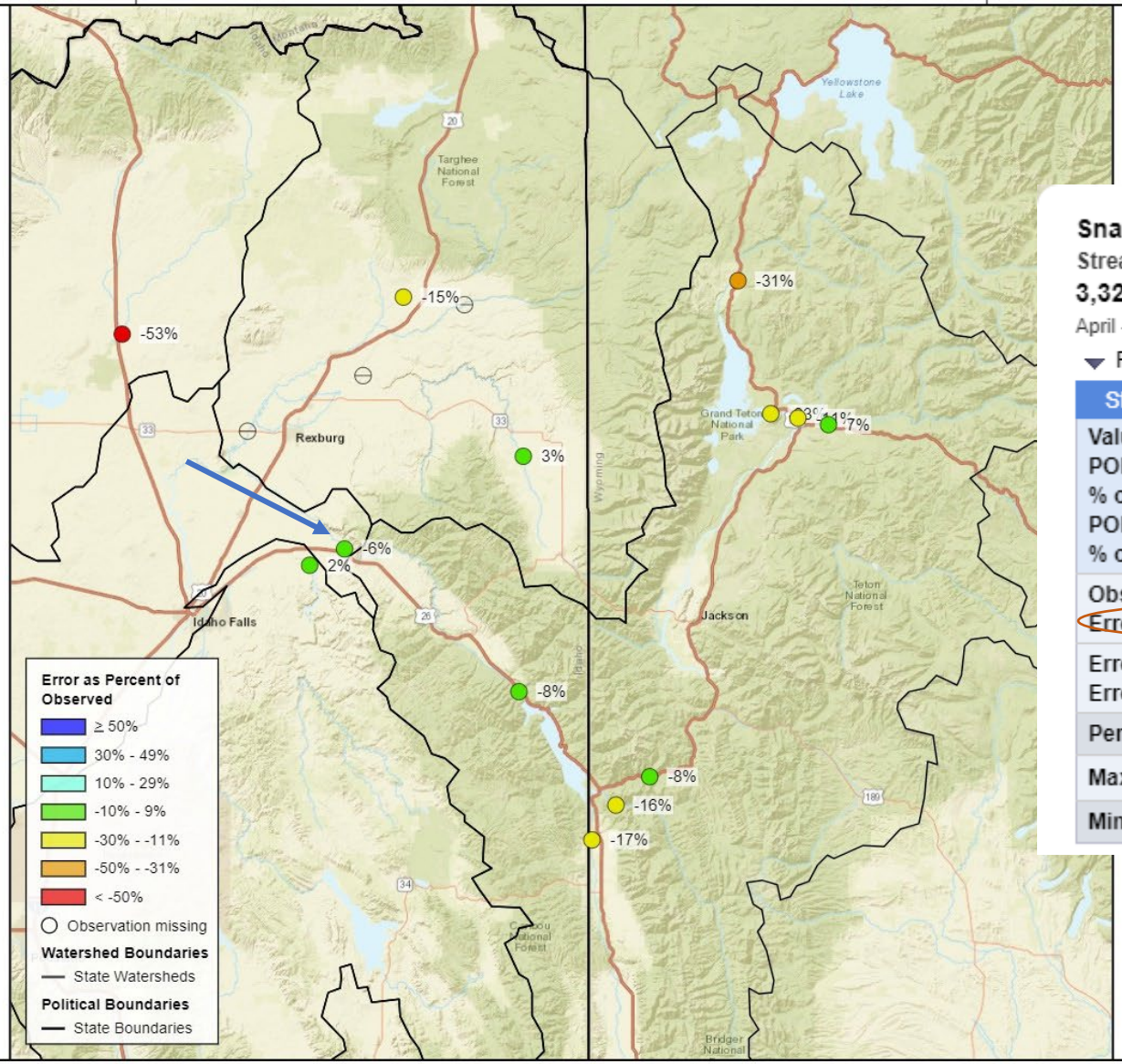
USDA Natural Resources Conservation Service
United States Department of Agriculture

N

0 20 40 80 120 160 200 Miles

Created 10-02-2024

Streamflow Forecast Volume, 50% Exceedance Probability	Error as Percent of Observed	April - July, April 1, 2024



Snake R nr Heise Streamflow 5,015 ft.

Streamflow Forecast Volume, 50% Exceedance Probability

3,320 kac-ft.

April - July, April 1, 2024

Parameters

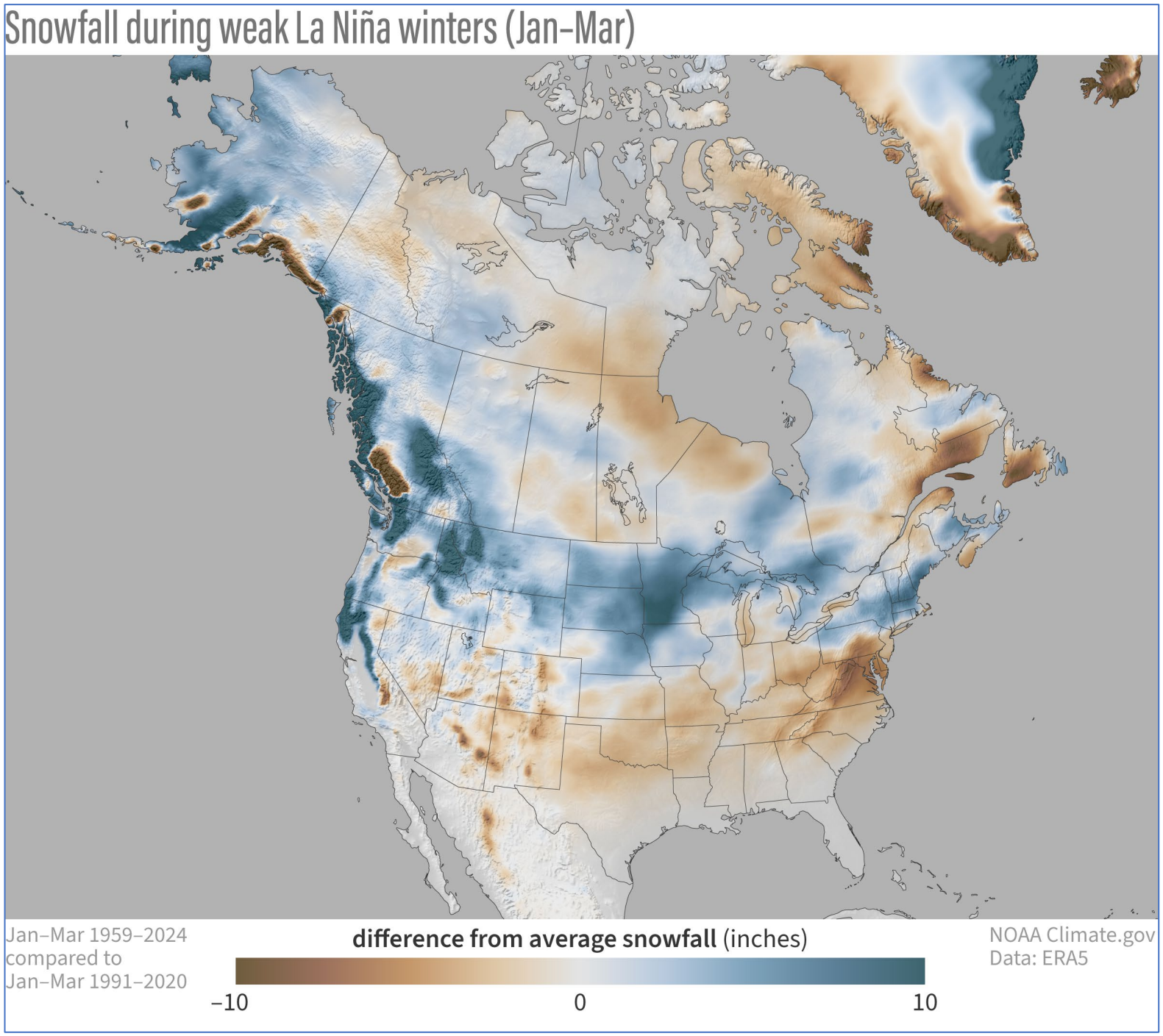
Streamflow Forecast Volume (50% Exceedance Probability, kac-ft.), April - July, April 1, 2024			
Value:	3,320	Anomaly (POR):	8.29
POR Median:	3,311.71	NRCS 1991-2020 Median:	3,130
% of POR Median:	100%	% of NRCS 1991-2020 Median:	106%
POR Average:	3,290.092	NRCS 1991-2020 Average:	3,300
% of POR Average:	101%	% of NRCS 1991-2020 Average:	101%
Observed:	3,138.763	Error Value (Obs - Forecast):	-181.237
Error as % of Observed:	-6%	Exceedance Probability Category:	50-70%
Error as % NRCS Average:	-5%	Error as % POR Average:	-6%
Error as % NRCS Median:	-6%	Error as % POR Median:	-5%
Percentile (POR):	50	# of Observations (POR):	114
Maximum (POR) (year):	6,096.454 (1997)	Maximum Rank (POR):	58
Minimum (POR) (year):	1,171.077 (1977)	Minimum Rank (POR):	58

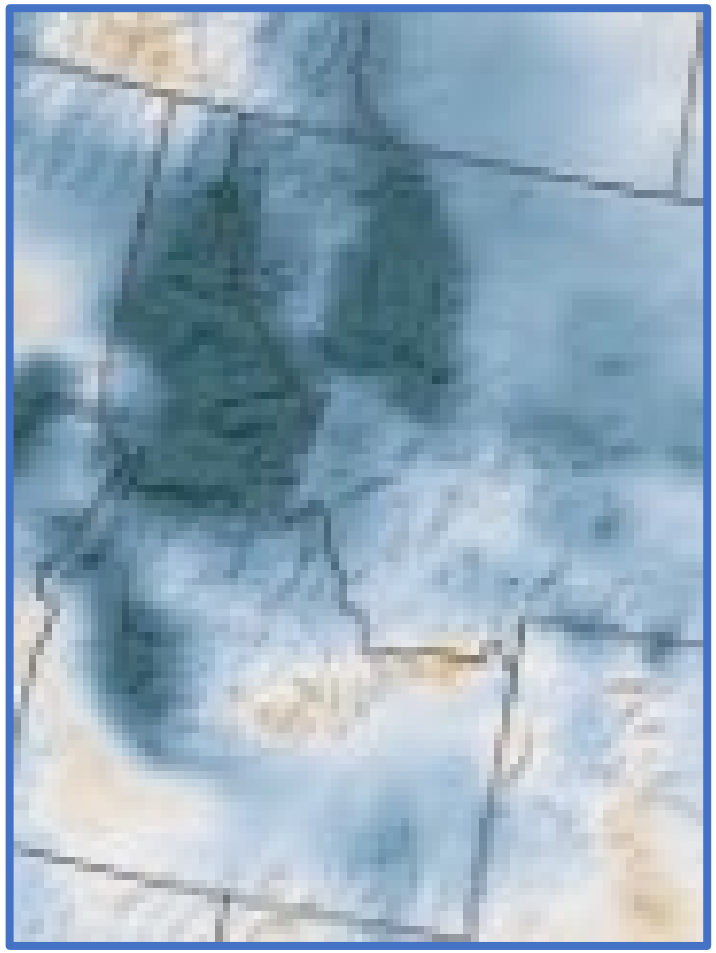
USDA Natural Resources Conservation Service
United States Department of Agriculture

N

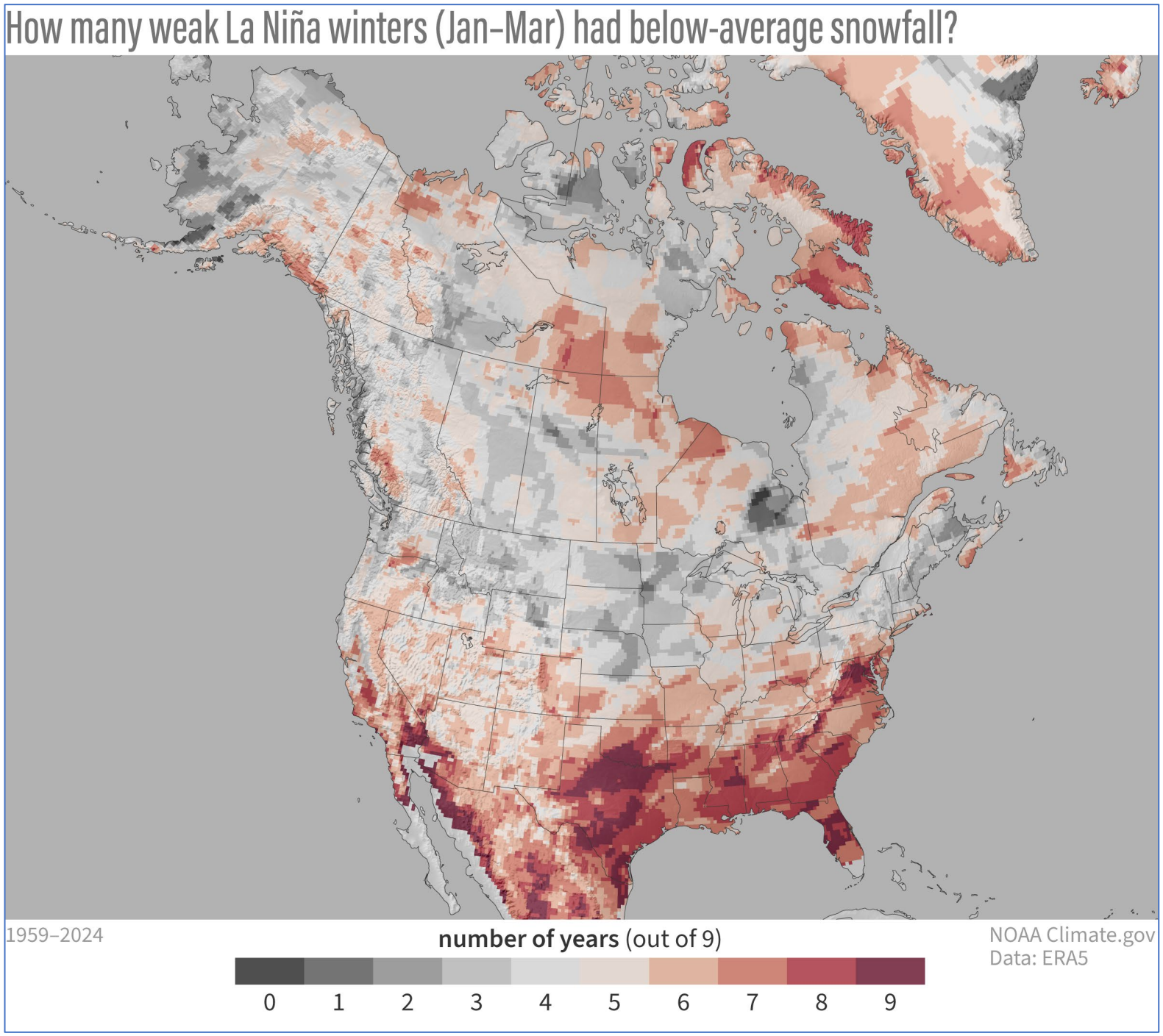
0 5 10 20 30 40 50 Miles

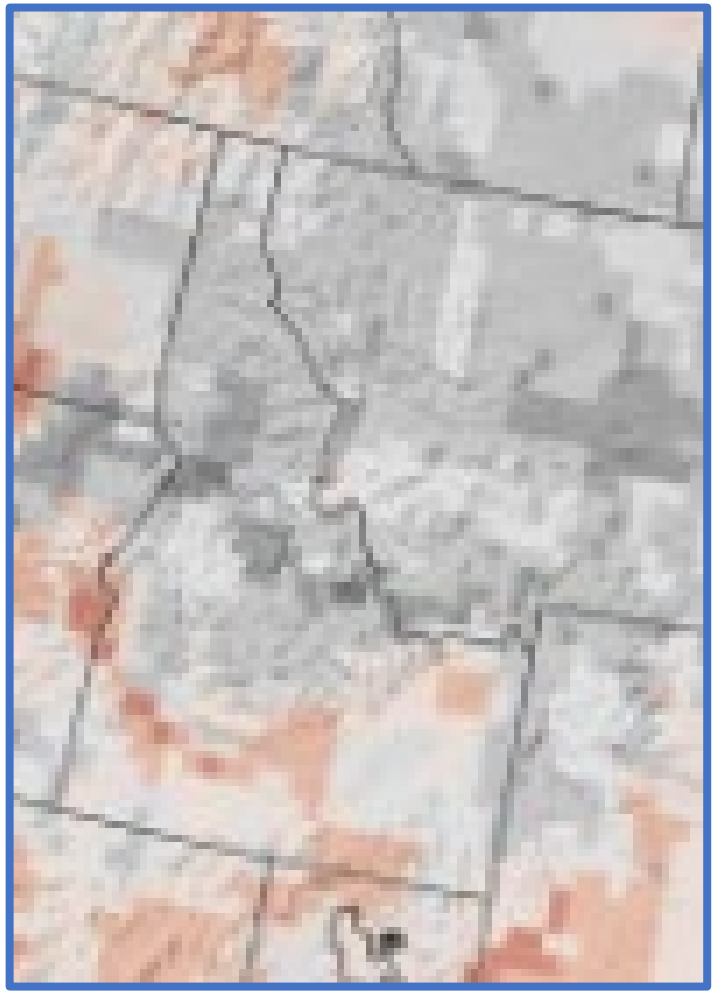
Created 10-23-2024





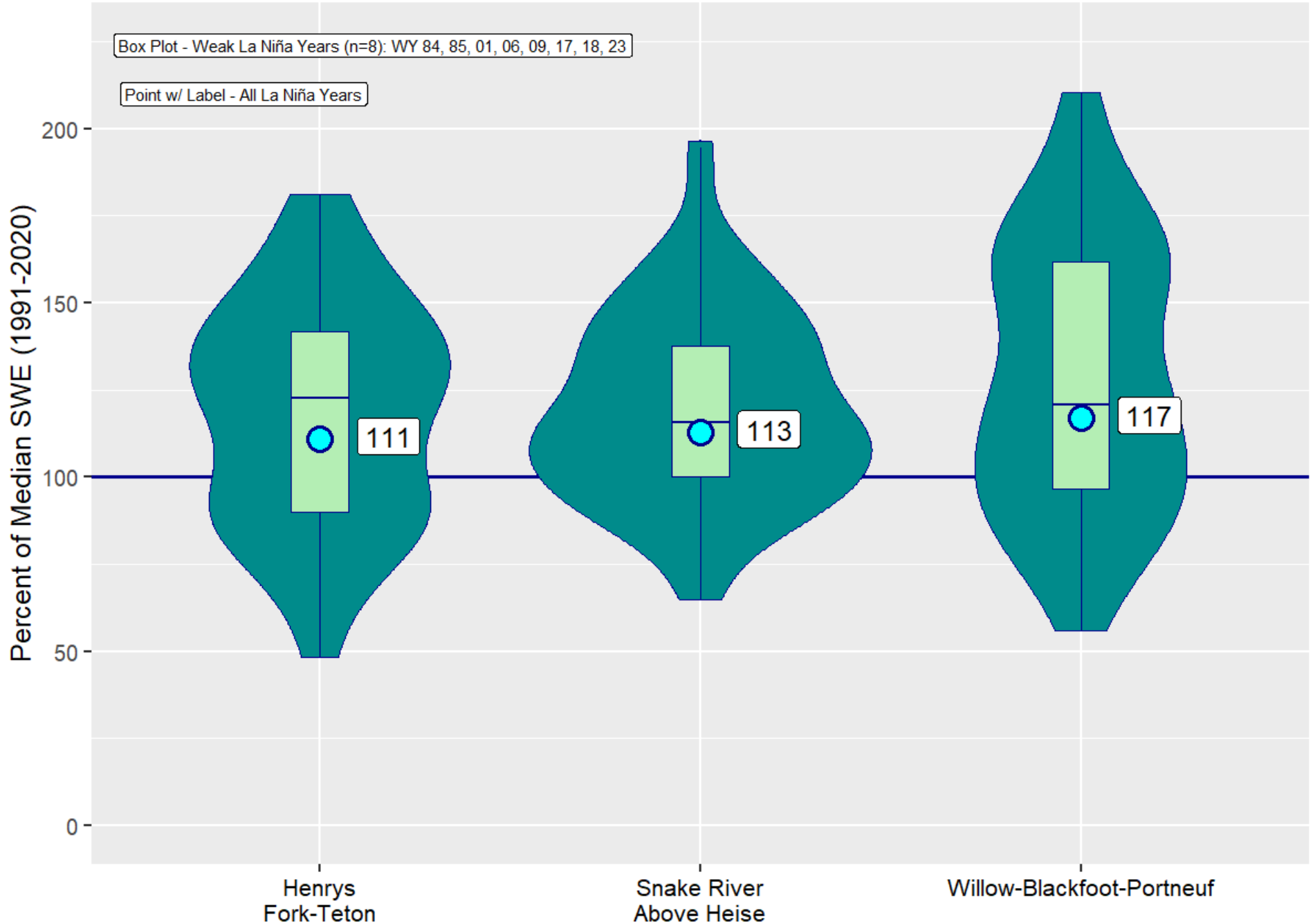
Credit: Michelle L'heureux @ NOAA Climate.gov

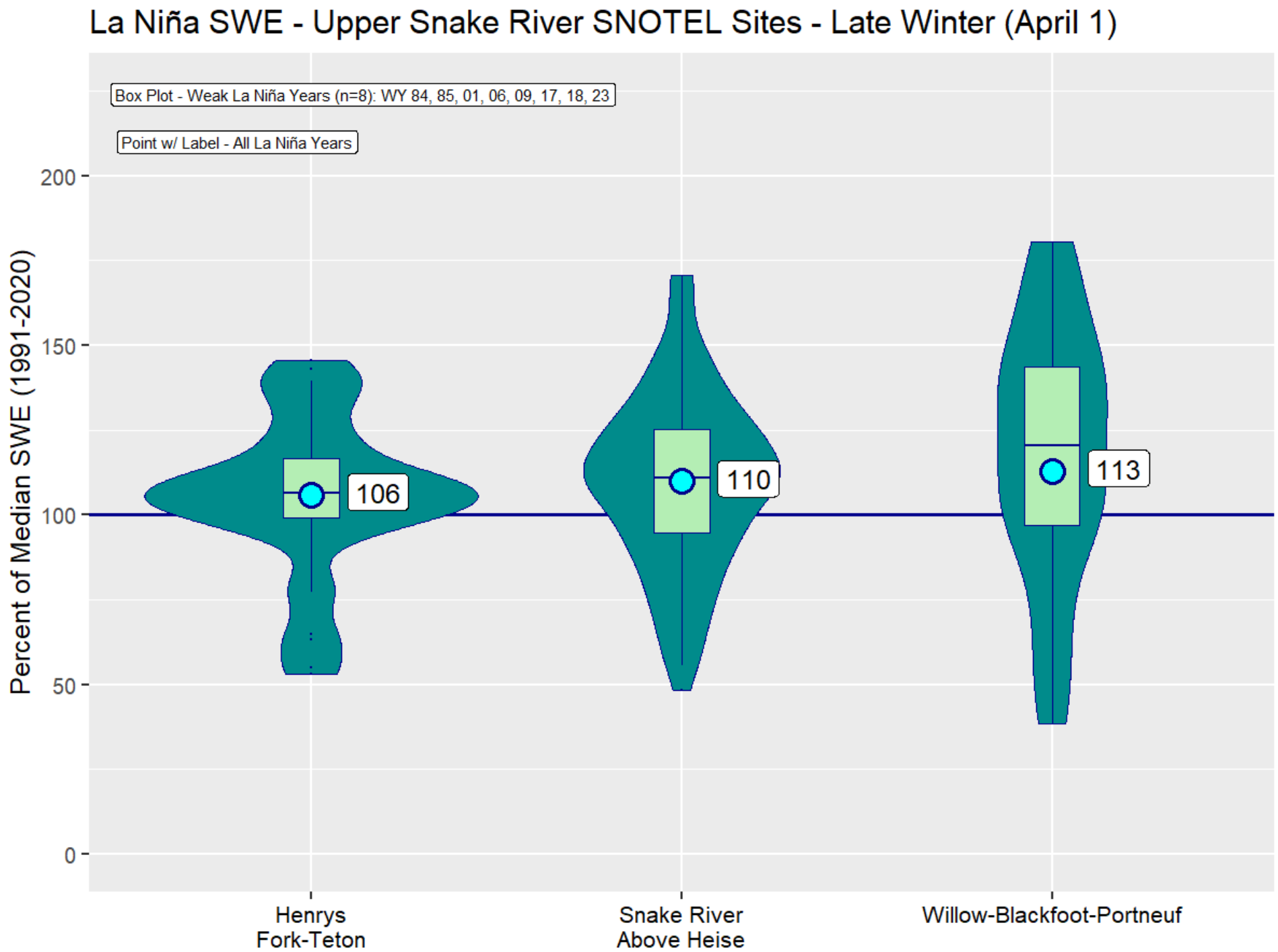




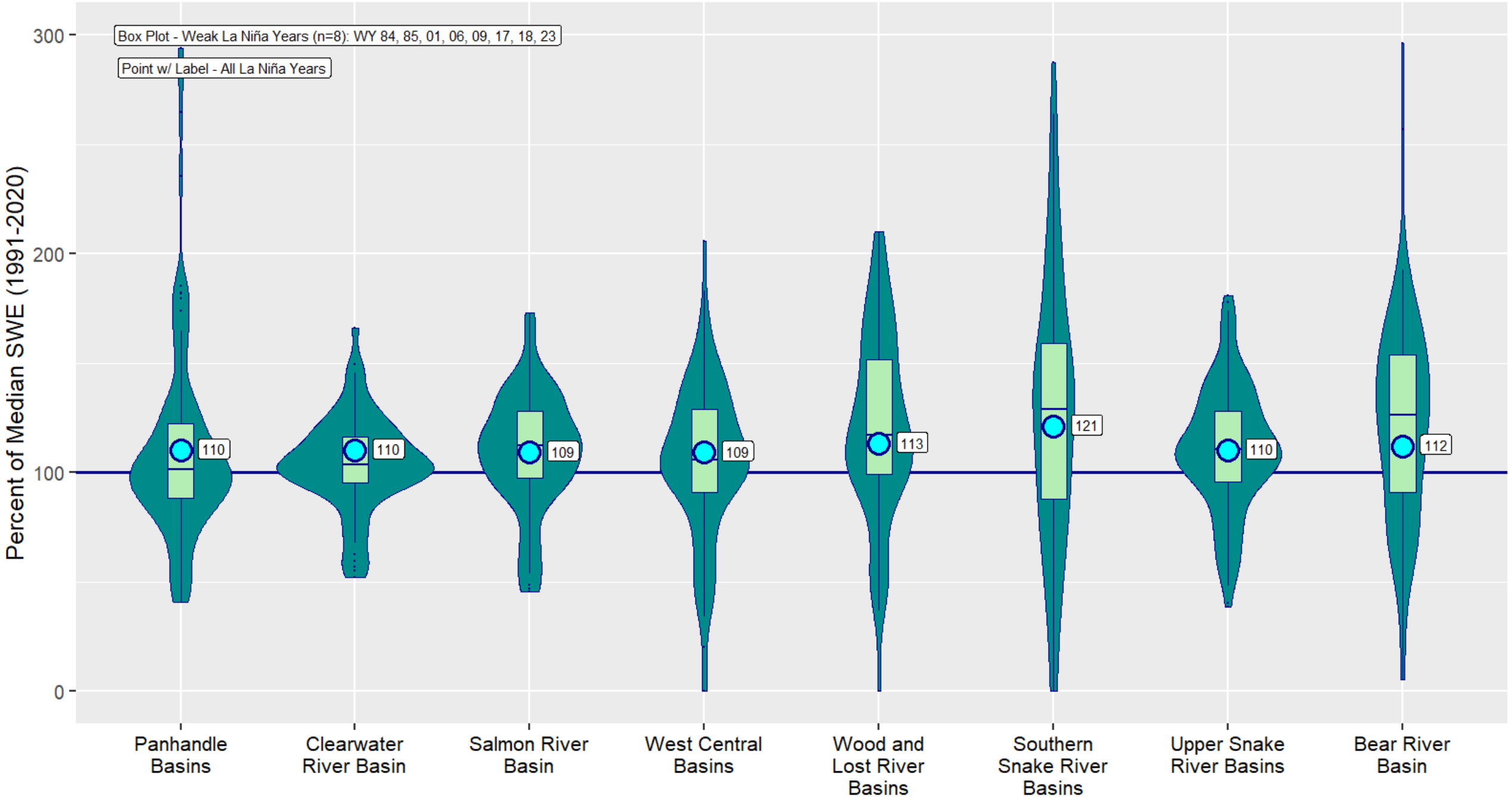
Credit: Michelle L'heureux @ NOAA Climate.gov

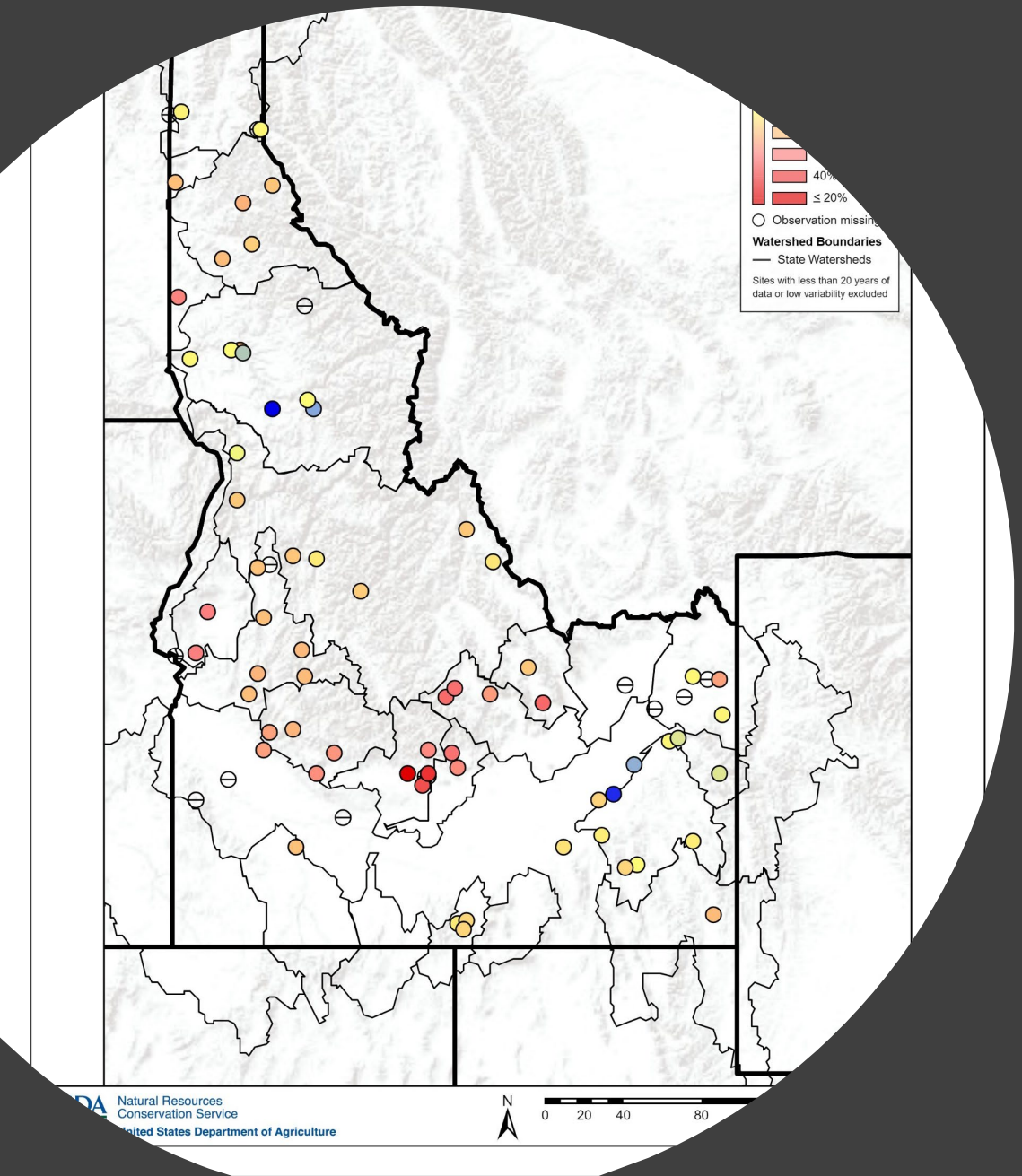
La Niña SWE - Upper Snake River SNOTEL Sites - Early Winter (January 1)




La Niña SWE - Upper Snake River SNOTEL Sites - Late Winter (April 1)
Box Plot - Weak La Niña Years (n=8): WY 84, 85, 01, 06, 09, 17, 18, 23
Point w/ Label - All La Niña Years
Percent of Median SWE (1991-2020)
200
150
100
50
0
106
110
113
Henrys Fork-Teton
Snake River Above Heise
Willow-Blackfoot-Portneuf

La Niña SWE - Idaho SNOTEL Sites - Late Winter (April 1)





Thank you!

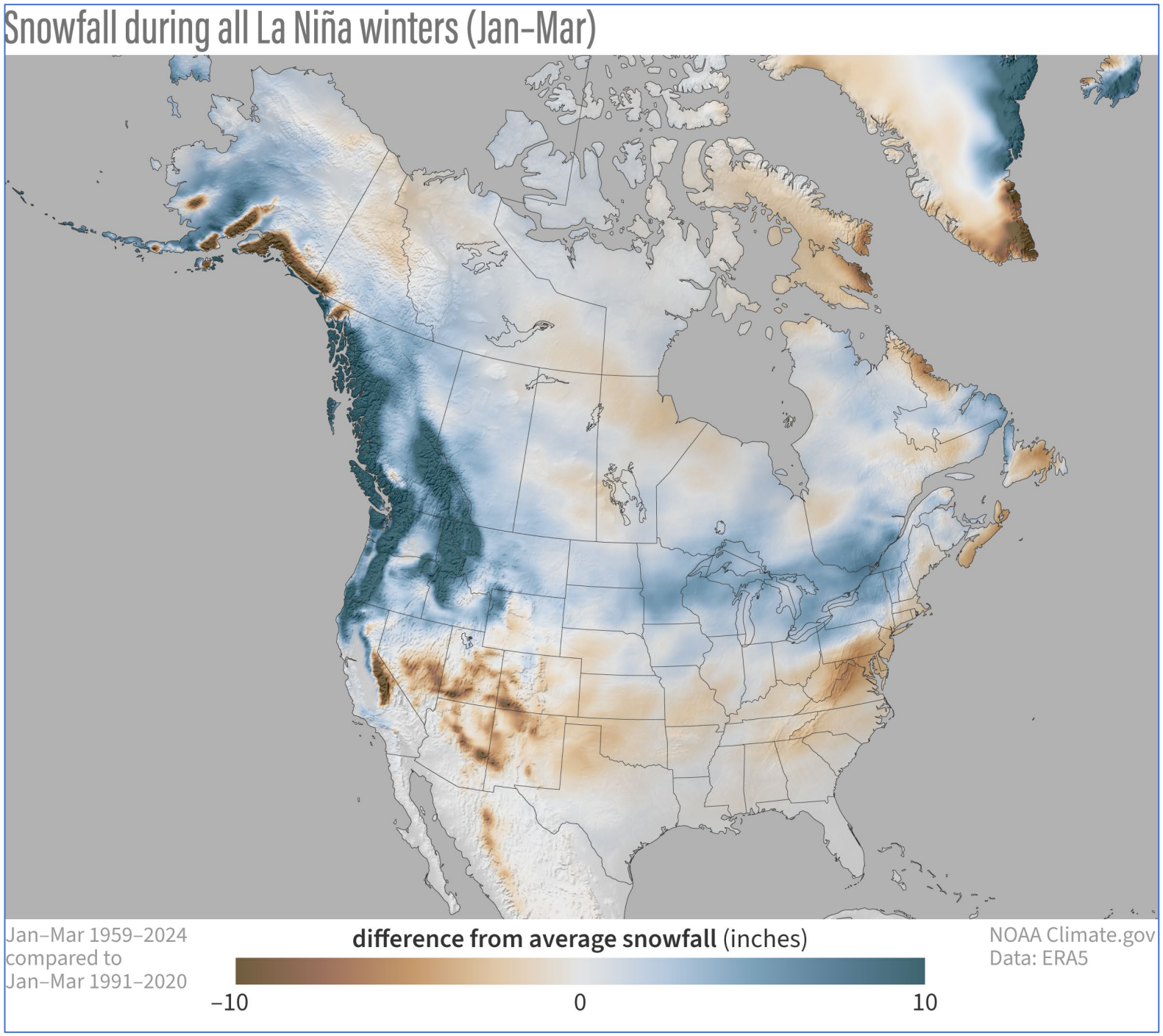
Idaho Snow Survey - NRCS

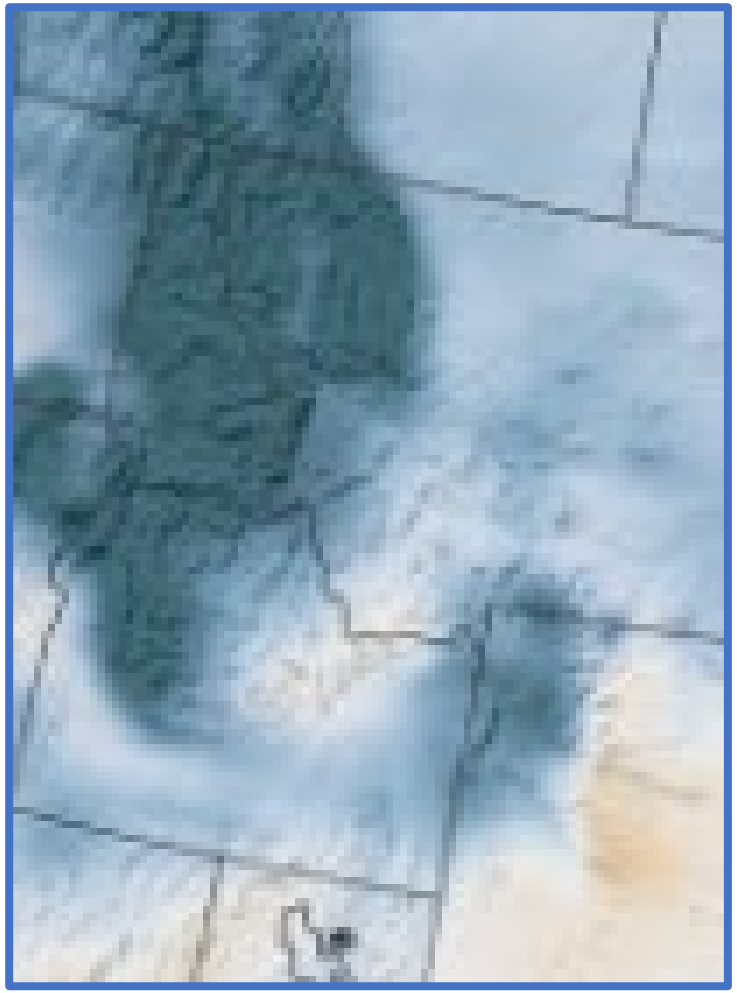
Erin Whorton

erin.whorton@usda.gov

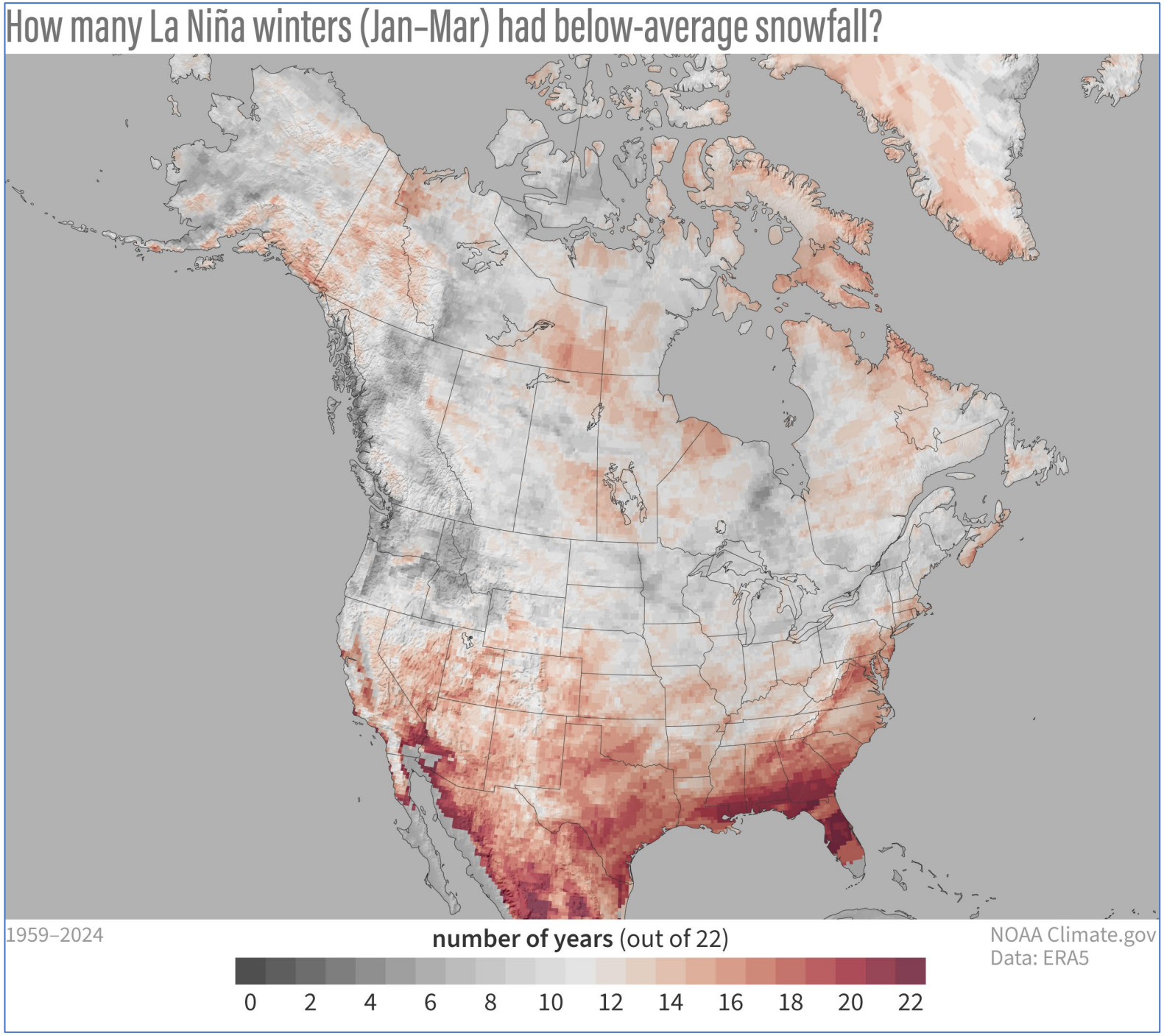
208-685-6983

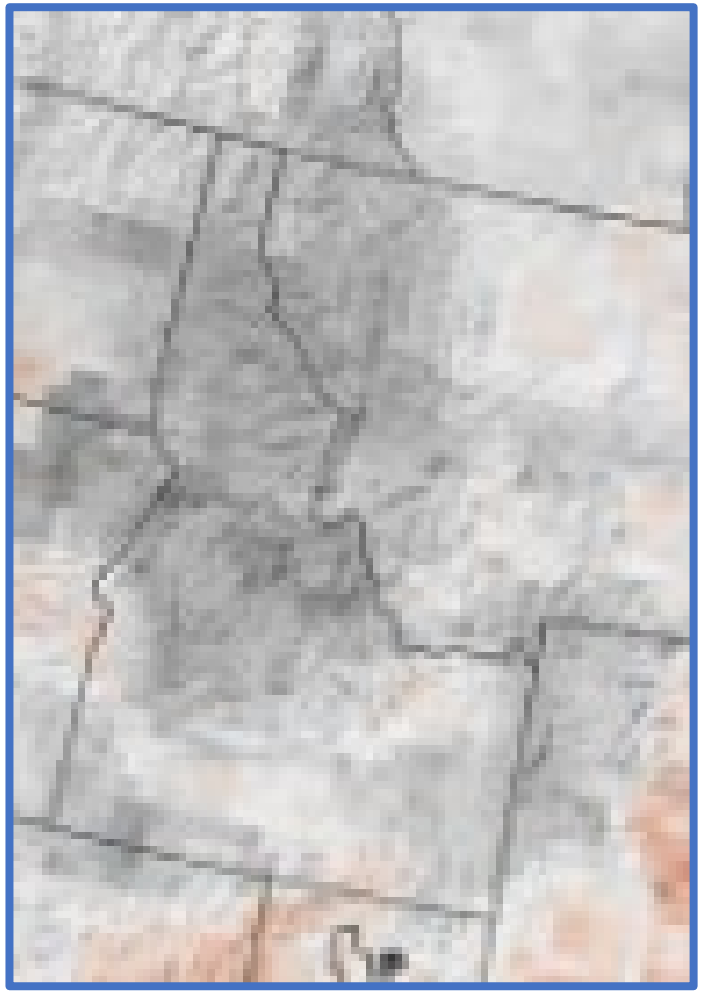
NRCS





Credit: Michelle L'heureux @ NOAA Climate.gov



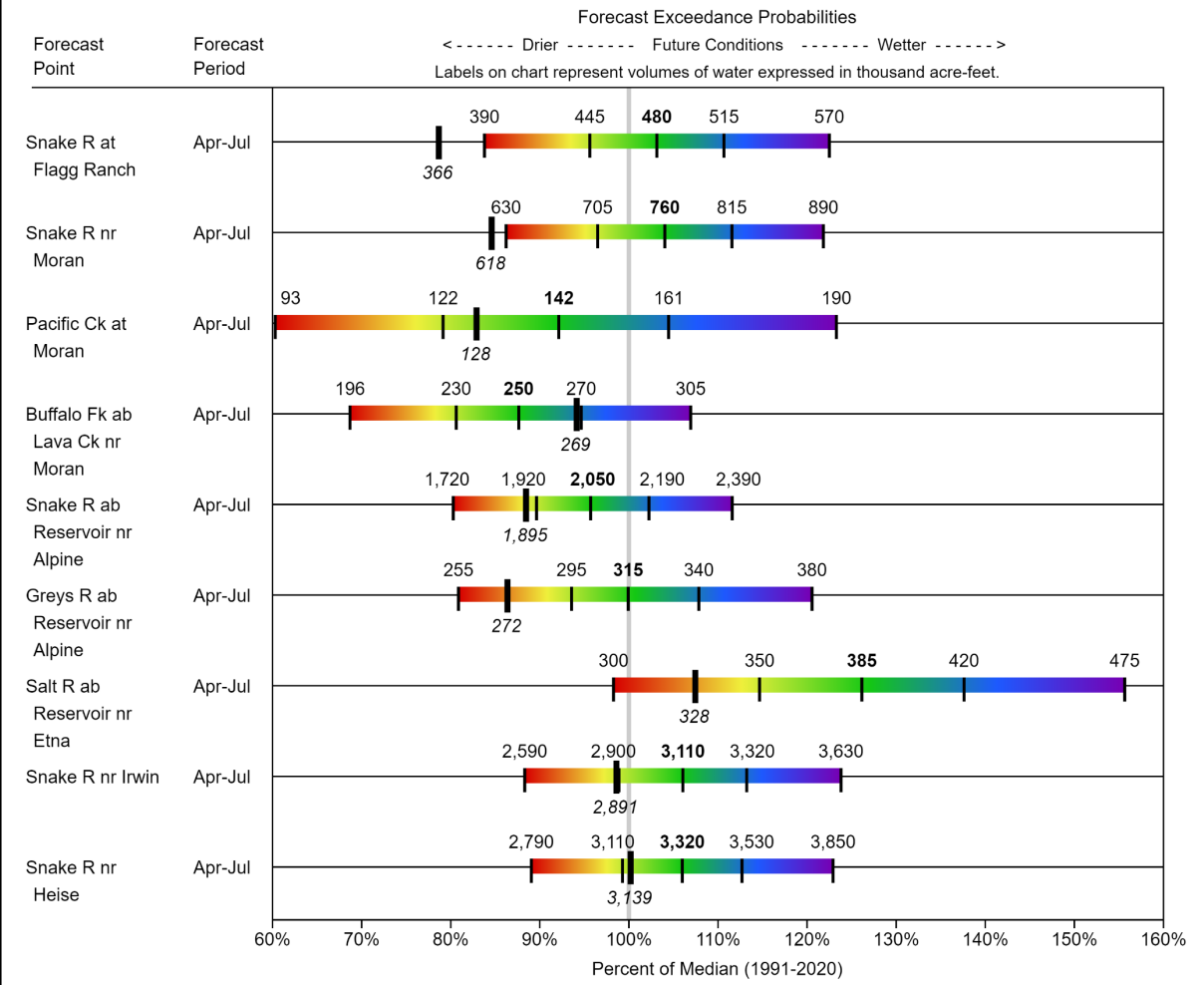


Credit: Michelle L'heureux @ NOAA Climate.gov

SNAKE RIVER ABOVE HEISE

Water Supply Forecasts

April 1, 2024



Legend

95% or 90% Exceedance	70% Exceedance	**50% Exceedance**	30% Exceedance	10% or 5% Exceedance
There is a 95%/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%/5% chance that flows will exceed this volume

When selected, the following historic streamflow values and statistics will be shown.

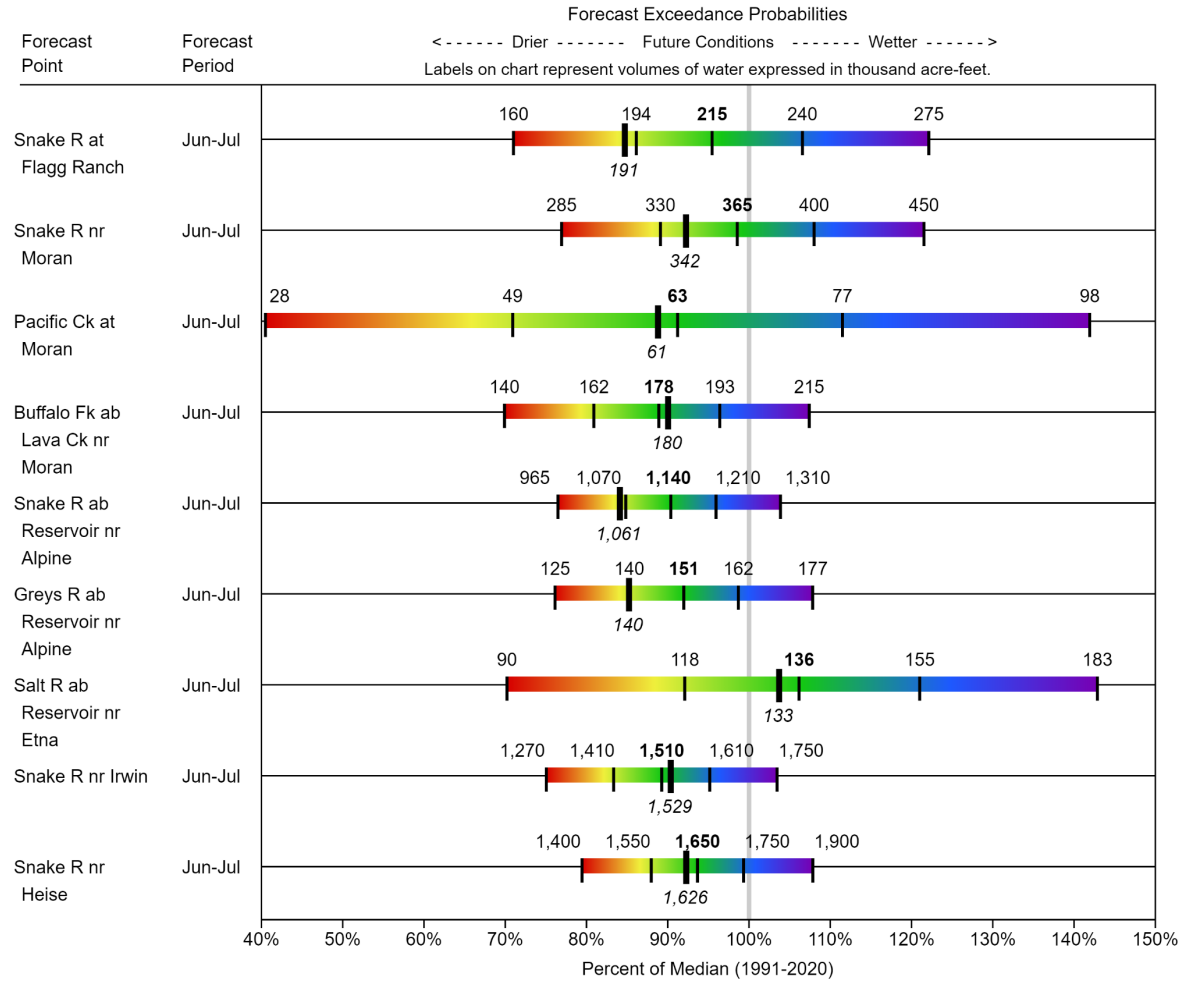
Period of Record Minimum Streamflow KAF (Year)	*1991-2020 Normal Streamflow KAF*	*Observed Streamflow KAF*	*Period of Record Maximum Streamflow KAF (Year)*

Some forecasts may be for volumes that are regulated or influenced by diversions and water management.

SNAKE RIVER ABOVE HEISE

Water Supply Forecasts

June 1, 2024



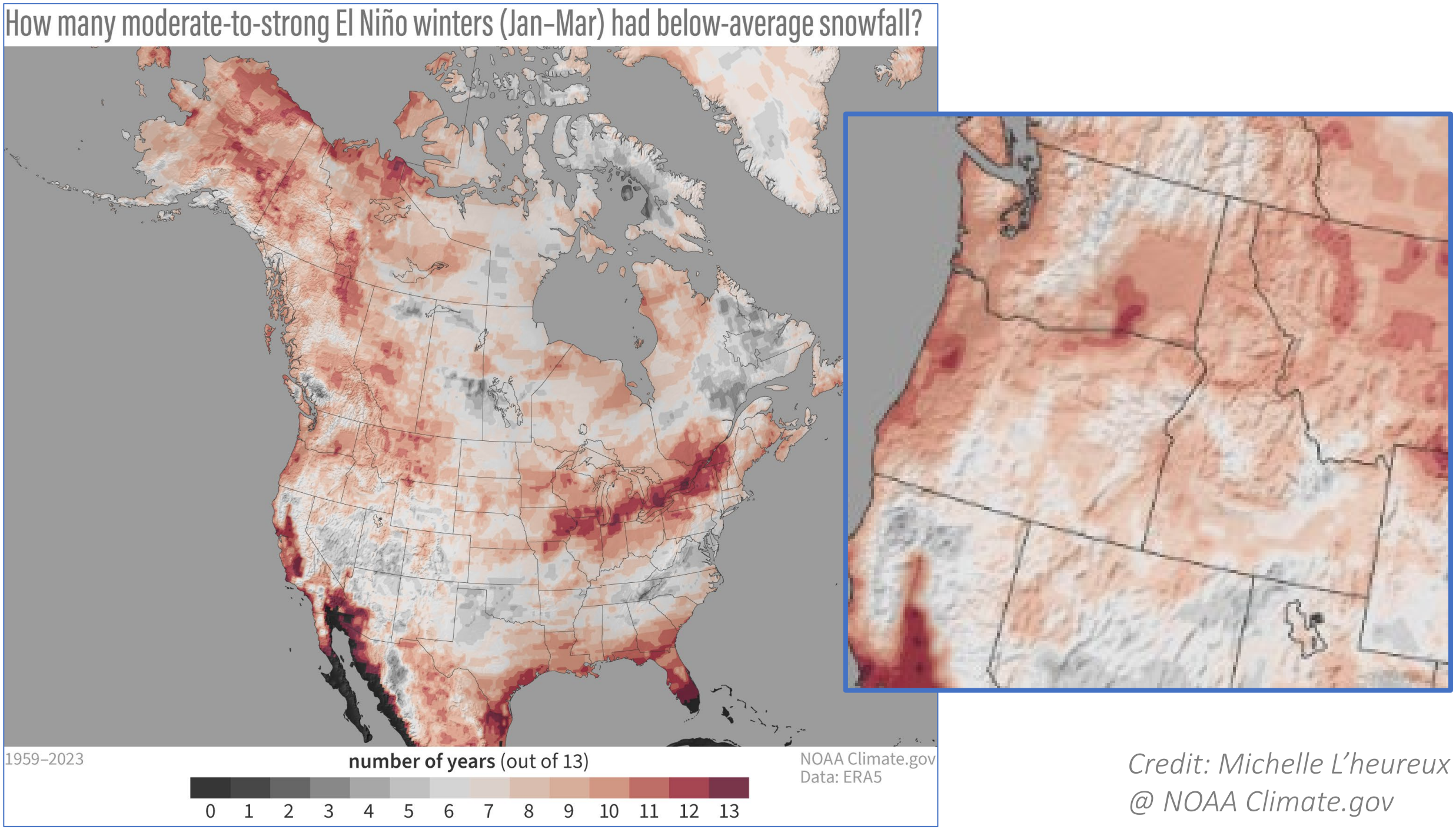
Legend

95% or 90% Exceedance	70% Exceedance	**50% Exceedance**	30% Exceedance	10% or 5% Exceedance
There is a 95%/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%/5% chance that flows will exceed this volume

When selected, the following historic streamflow values and statistics will be shown.

Period of Record Minimum Streamflow KAF (Year)	*1991-2020 Normal Streamflow KAF*	*Observed Streamflow KAF*	*Period of Record Maximum Streamflow KAF (Year)*

Some forecasts may be for volumes that are regulated or influenced by diversions and water management.



Credit: Michelle L'heureux @ NOAA Climate.gov