STATE OF WASHINGTON

DEPARTMENT OF ECOLOGY

PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

Water Supply Availability Committee (WSAC)

Thursday, March 13, 2024, 10 a.m. – 12:00 p.m.

Zoom: Click to join. (Call-in: 253.205.0468; Meeting ID: 816 5686 6078; Passcode: 038972)

Meeting Objectives – March:

- Share pertinent info and assess water supply conditions in Washington for winter.
- Discuss if drought conditions warrant WSAC recommending to Ecology to convene the next steps in the state's drought declaration process to potentially extend the drought declaration for a portion of the state.

Agenda

Time	Agenda item	Responsible
10:00 a.m.	Welcome and agenda review • Drought Declaration process and implications	Caroline Mellor, Ecology
10:10 a.m.	Regional Climate Setting/ ENSO	Karin Bumbaco, OWSC
10:25 a.m.	Mountain Conditions	Matt Warbritton, NRCS
10:40 a.m.	Streamflow and Groundwater	Nick Sutfin, USGS
10:55 a.m.	Yakima Project	Mik Lewicki, BOR
11:10 a.m.	Water Supply Forecasts	Amy Burke, NWS
11:25 a.m.	Hydrologic threshold discussion: • Do the Yakima Basins continue to meet the hydrologic threshold for drought conditions? • Do potential drought conditions support an advisory status for any additional areas?	Committee members Ecology facilities
11:45 a.m.	Discussion: What concerns do folks have for drought recovery and Water Year 2025?	All participants Ecology facilitates
11:55 a.m.	Wrap-up and next steps	Caroline Mellor, Ecology

Committee Purpose

WSAC provides an important consultative and advisory role to Ecology related to current and forecasted water supply conditions and whether the hydrologic drought threshold has been met or is forecasted to be met: seventy-five percent of normal water supply within a geographic area (RCW 43.83B.405 and WAC 173-166-050).

Resources

WSAC Website: Water Supply Availability Committee - WA State Department of Ecology
Ecology Drought homepage: Drought response - WA State Department of Ecology

Contact

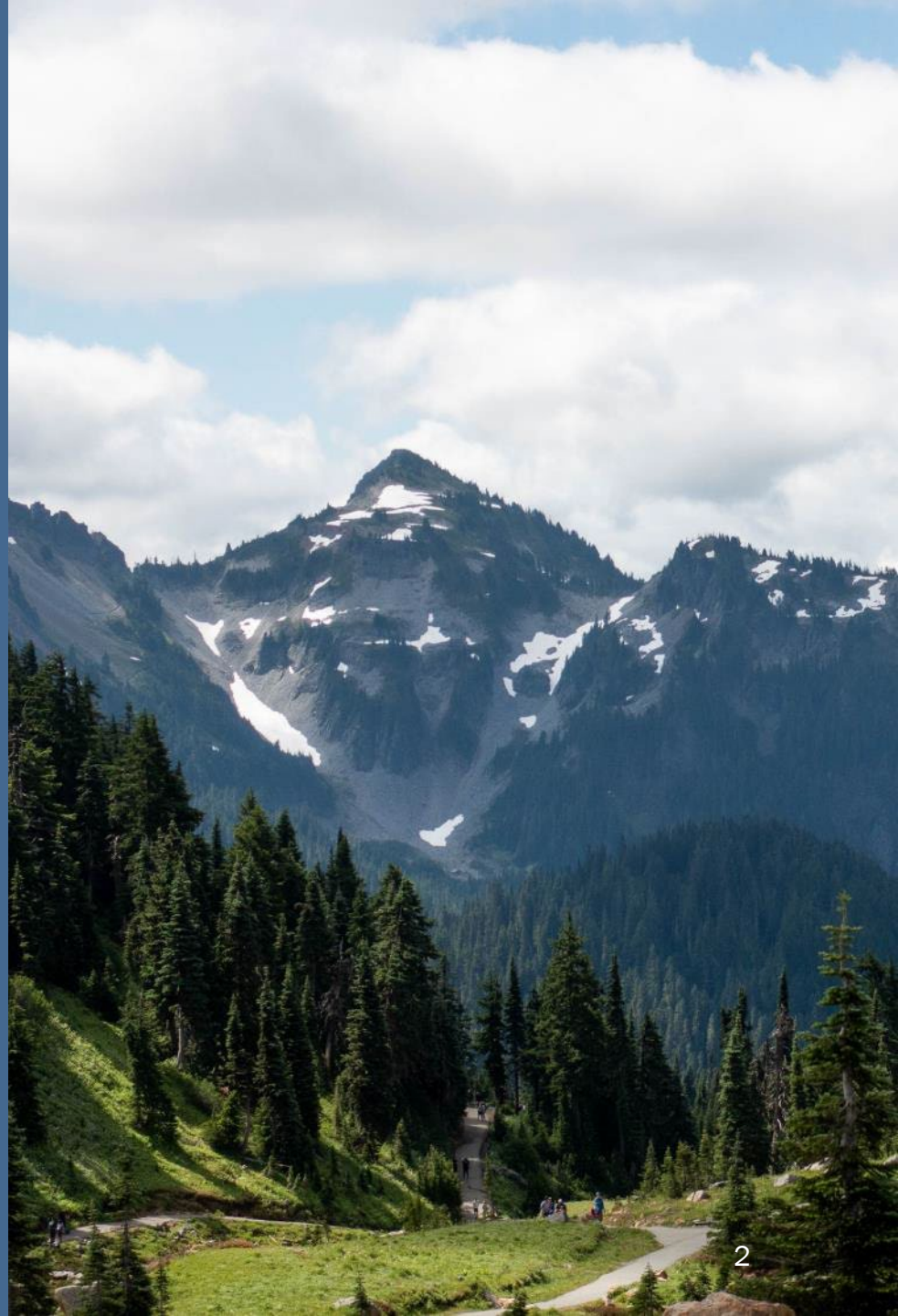
Committee Chair: Caroline Mellor, Statewide Drought Lead, WA Department of Ecology
Caroline.Mellor@ecy.wa.gov | (c) 360.628.4666

Water Supply Availability Committee

March 13, 2025

Water Resources Program

Recording!



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11:25 a.m.	Wrap-up and next steps	Ecology

Committee Role

WSAC provides an important consultative and advisory role to Ecology related to:

- Current and forecasted water supply conditions;
- Whether the hydrologic drought threshold has been met or is likely to be met.

Meeting Objectives

- Share pertinent info and assess water supply conditions in Washington as we enter Water Year 2025

- Discuss if drought conditions warrant WSAC recommending to Ecology to convene the next steps in the state's drought declaration process to potentially extend the drought declaration for a portion of the state.

Drought Emergency Declaration

On April 16, 2024, Ecology declared a Statewide drought due to low snowpack and warm and dry forecast.

Limited exceptions for Puget Sound metro areas with healthy water storage.

See: https://ecology.wa.gov/water-shorelines/water-supply/water-availability/statewide-conditions/drought-response

Drought Conditions

Drought conditions - two requirements:

1. **Hydrologic threshold** – An area is receiving, or is projected to receive, less than seventy-five percent of normal water supply.
2. **Hardship threshold** – Water users and the environment are or are expected to experience undue hardship.

This Committee advises on the hydrologic threshold.

See: RCW 43.83B.405 and WAC 173-166-050.

Water Supply Factors

Water year to date

- Snowpack
- Precipitation
- Temperature
- Soil moisture

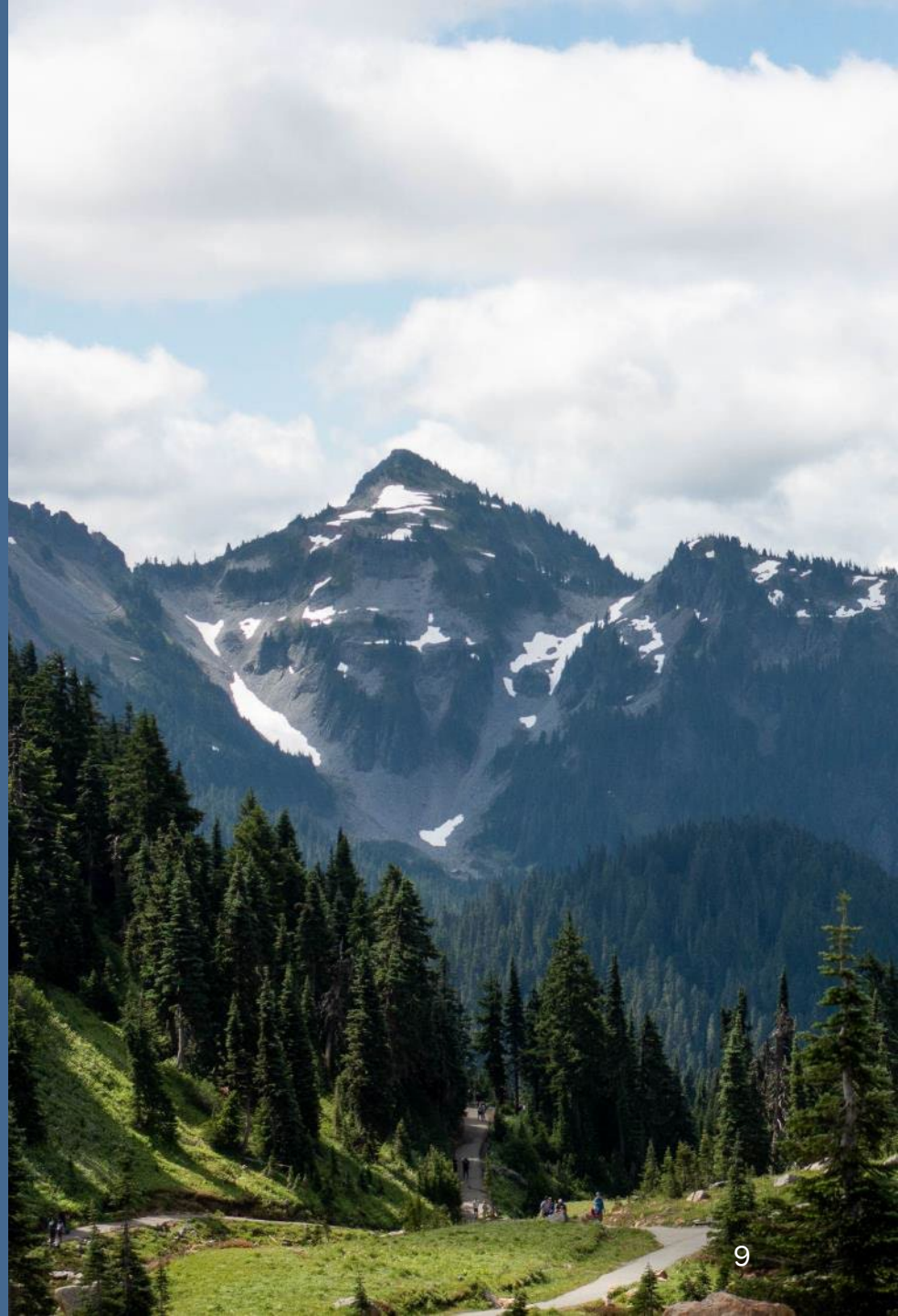
Forecasts

- Streamflow
- Precipitation
- Temperature
- Soil moisture

Hydrologic threshold for drought was met in 2024

Hurricane Ridge Webcam, National Park Service
Olympic National Park

Implications of a Drought Declaration



What Does a Declaration Do?

Provides Ecology with the authority to:

1. Expedite emergency water transfer applications.

2. Establish a grant program to mitigate hardships to water users and the environment.

Drought Response Funding

Grants to governmental entities:

- Federally recognized Tribes
- Counties, cities, and towns
- Water and sewer districts
- Public utility districts
- Port districts Conservation districts Irrigation districts
- Watershed management partnerships

Drought response grants - Washington State Department of Ecology

Additional Implications

State agencies – Ecology can enter into interagency agreements to fund drought response efforts

- Examples: DOH, DFW, SCC, AGR

Eligibility for federal drought funding

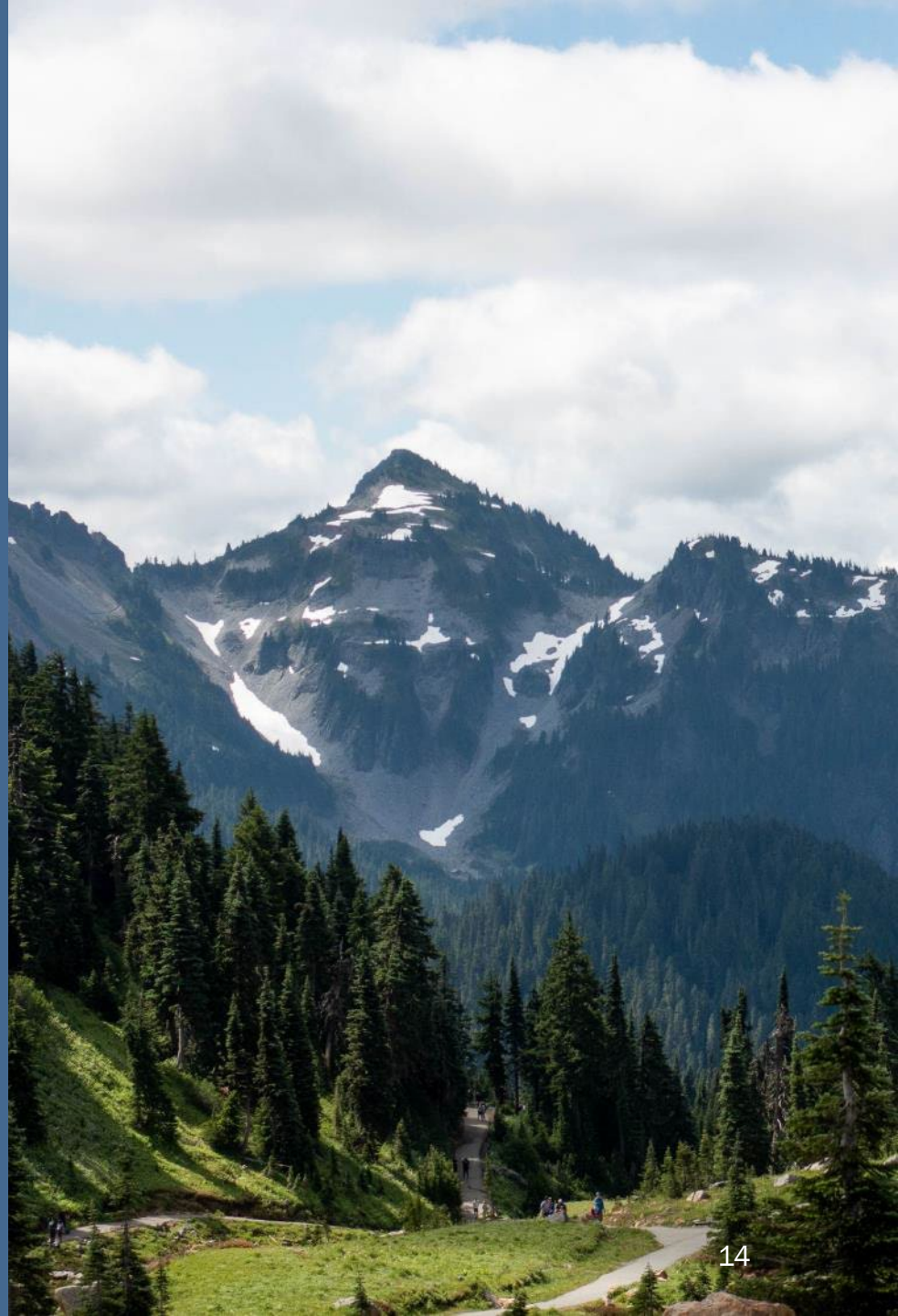
Important communications tool

Example Drought Response Grant Projects

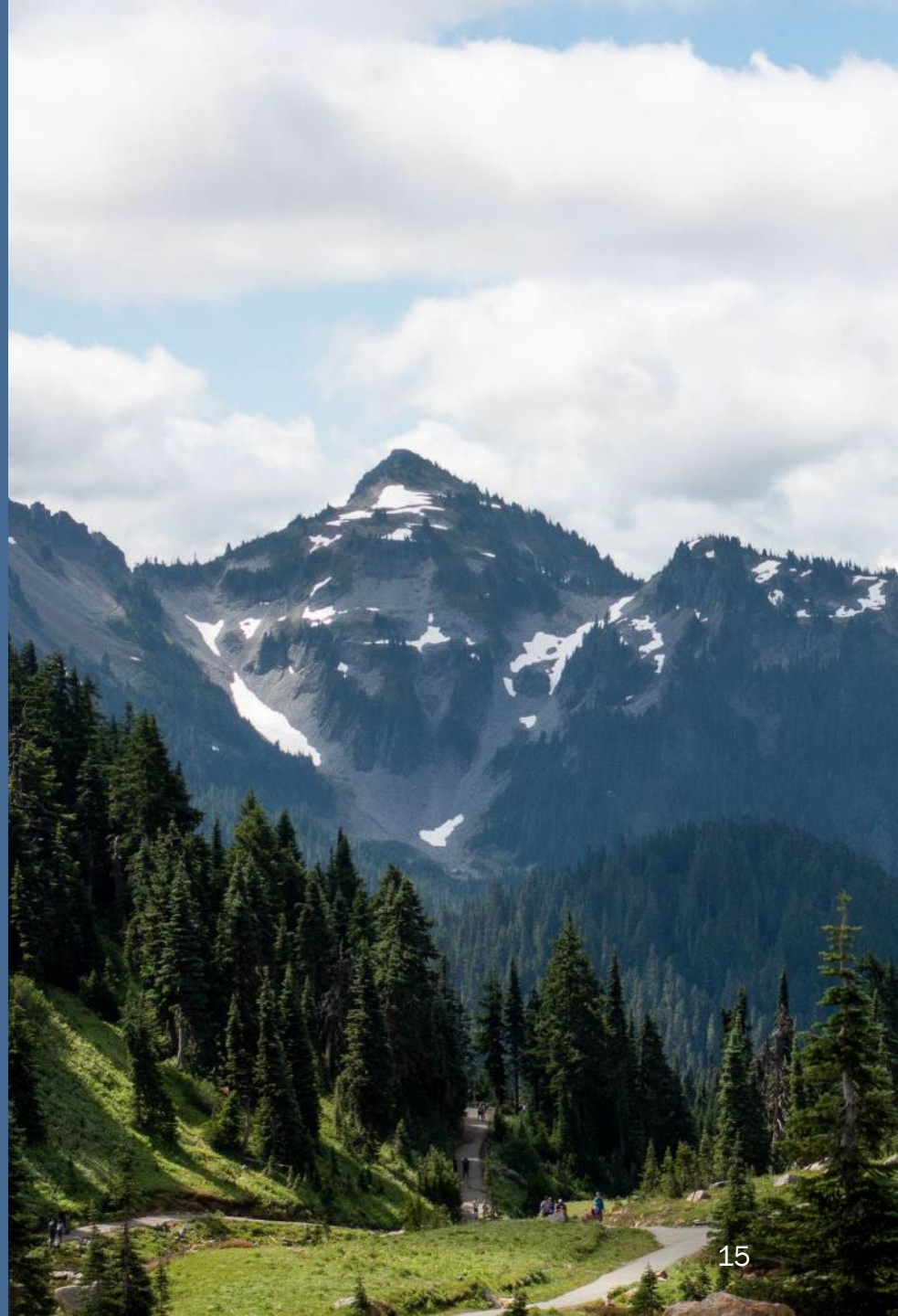
Agriculture or livestock	• Purchasing or leasing water or water rights • Replacing intakes, pumps, and related accessories
Public water supply	• Transporting emergency water supplies • Implementing water conservation strategies
Fisheries and wildlife	• Eliminating migration barriers • Modifying stream channels adjacent to a hatchery

See: 2024 Drought Response Grant Funding Guidance (wa.gov)

Presenters



Hydrologic threshold discussion



Drought declaration process: Hydrologic threshold

Two discussions –

- Geographic areas for a potential extended drought declaration.
- Geographic areas for a potential advisory status.

Hydrologic Threshold Discussion

Do the Yakima Basins, or any other areas, continue to meet the hydrologic threshold for drought conditions (less than 75% of normal water supply)?

Yakima Basins =

- Upper and Lower Yakima and Naches
- Yakima, Kittitas and Benton Counties

Rimrock Reservoir, November 6, 2024

Potential Advisory Discussion

Do potential drought conditions support an advisory status for any areas?

Possible counties:

- Whatcom, Skagit, Snohomish, King, Pierce
- Okanagan, Methow, Chelan,
- Clallam, Jefferson, Grays Harbor, Mason

Advisory =

- Drought conditions may develop
- Communications & awareness tool
- No requirements or relief

Discussion Question

For all meeting attendees:

What concerns do folks have for drought recovery and Water Year 2025?

Declaration Process Next Steps

- With a WSAC recommendation to Ecology to convene EWEC (Executive Water Emergency Committee), Ecology works with the Director to convene in coming weeks.
- EWEC advises on the hardship threshold and provides a recommendation to the Governor.
- Ecology coordinates with Governor's office to issue a drought declaration.

Drought Info

- Updated drought website: Drought Response - Washington State Department of Ecology
  - Declaration - Order of Determination by the Director
- Water Supply Availability Committee (WSAC) website

Thank you

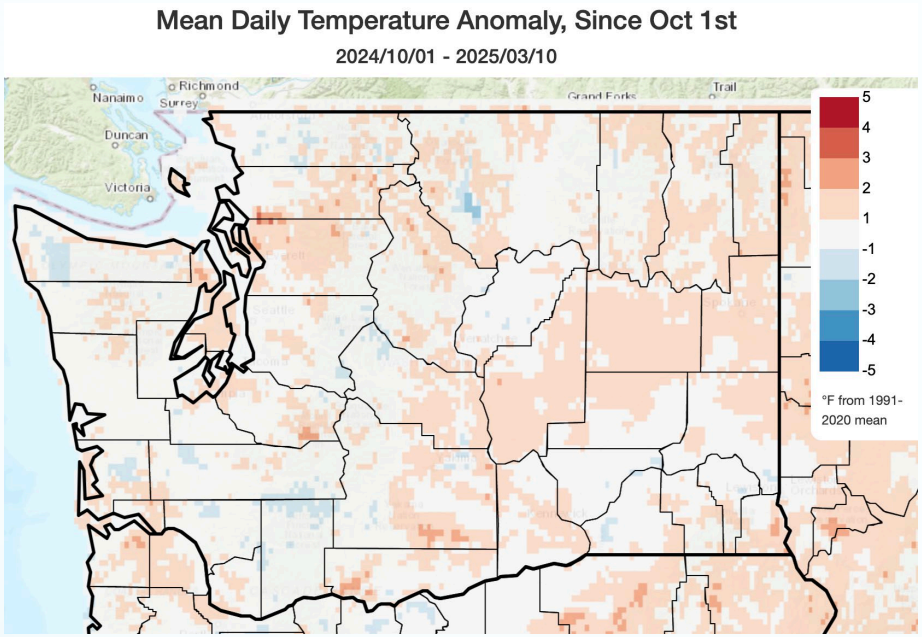
Contact: WSAC Committee Chair
Caroline Mellor
Statewide Drought Lead
Caroline.Mellor@ecy.wa.gov

Current Conditions and Seasonal Outlook

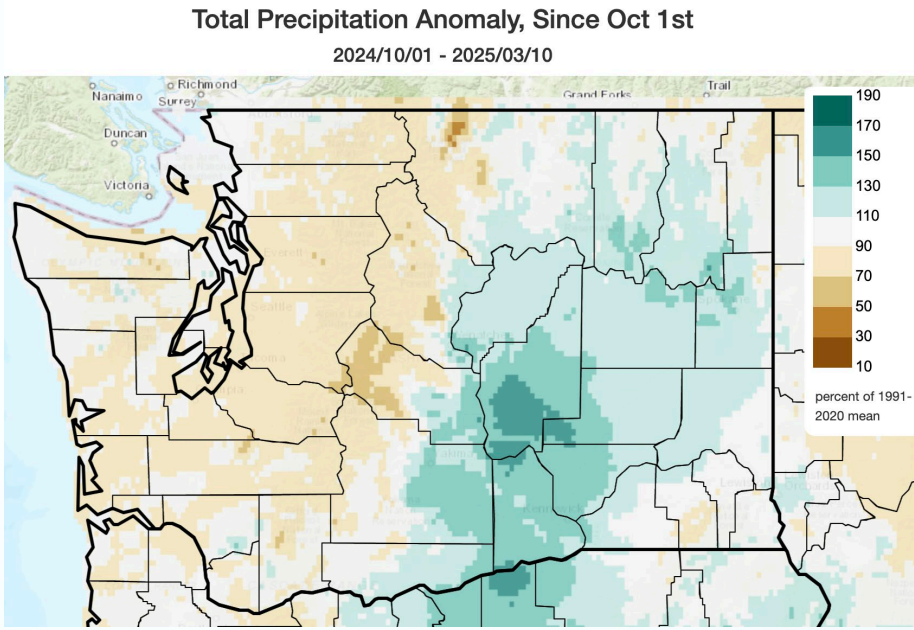
Karin Bumbaco
Washington State Climate Office
Climate Impacts Group
University of Washington
March 13, 2025

Water Year 2025

Temperature



Precipitation



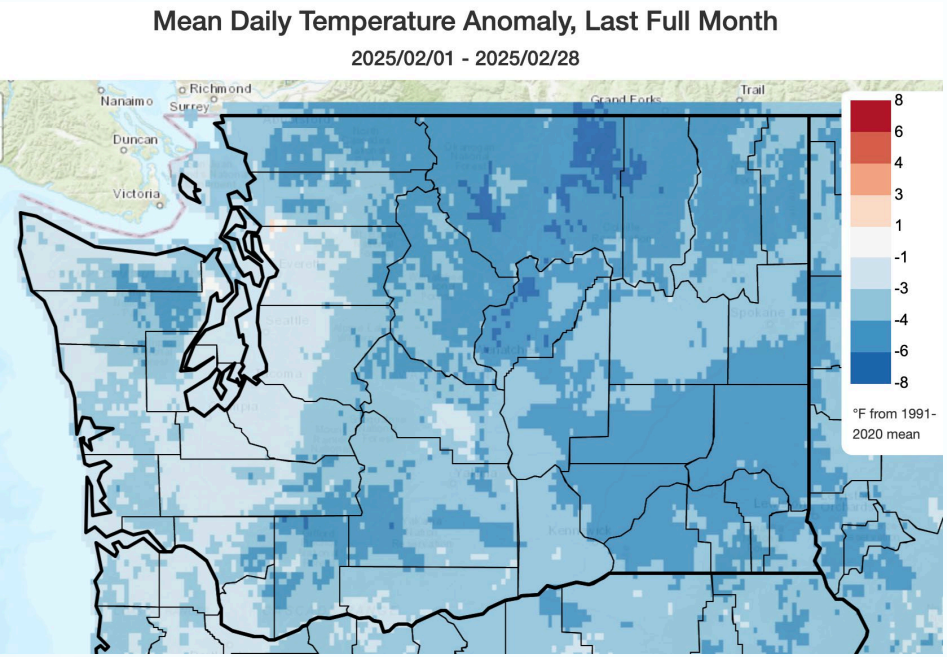
Climate Toolbox

- Averaged statewide, Oct-Feb temperatures were above normal (+0.4°F)*
- Averaged statewide, Oct-Feb precipitation was below normal (93% of normal), ranking as the 49th driest

*Records since 1895; Normal is 1991-2020

February 2025

Temperature



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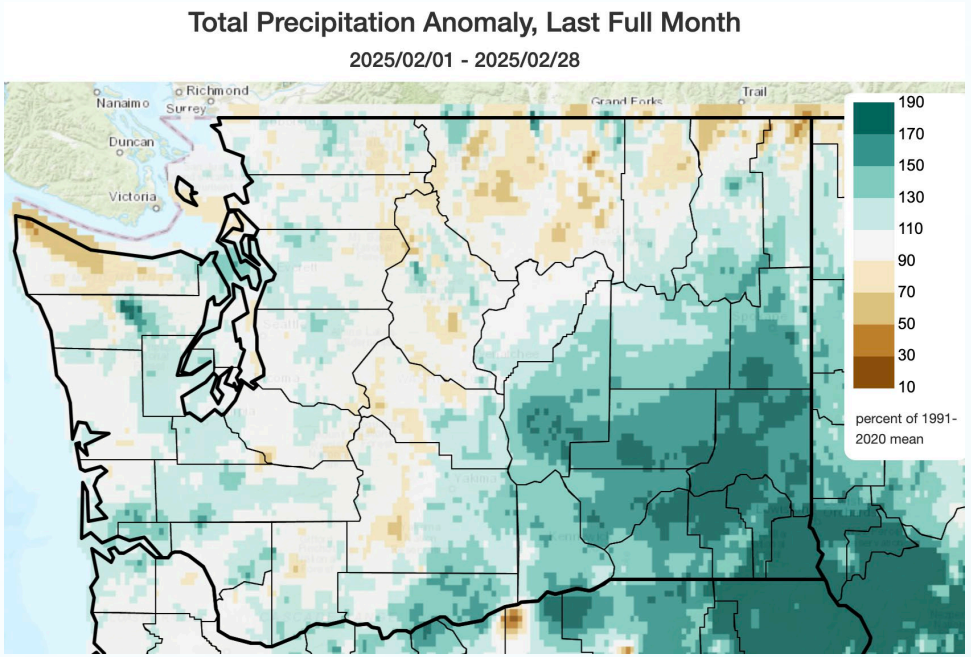
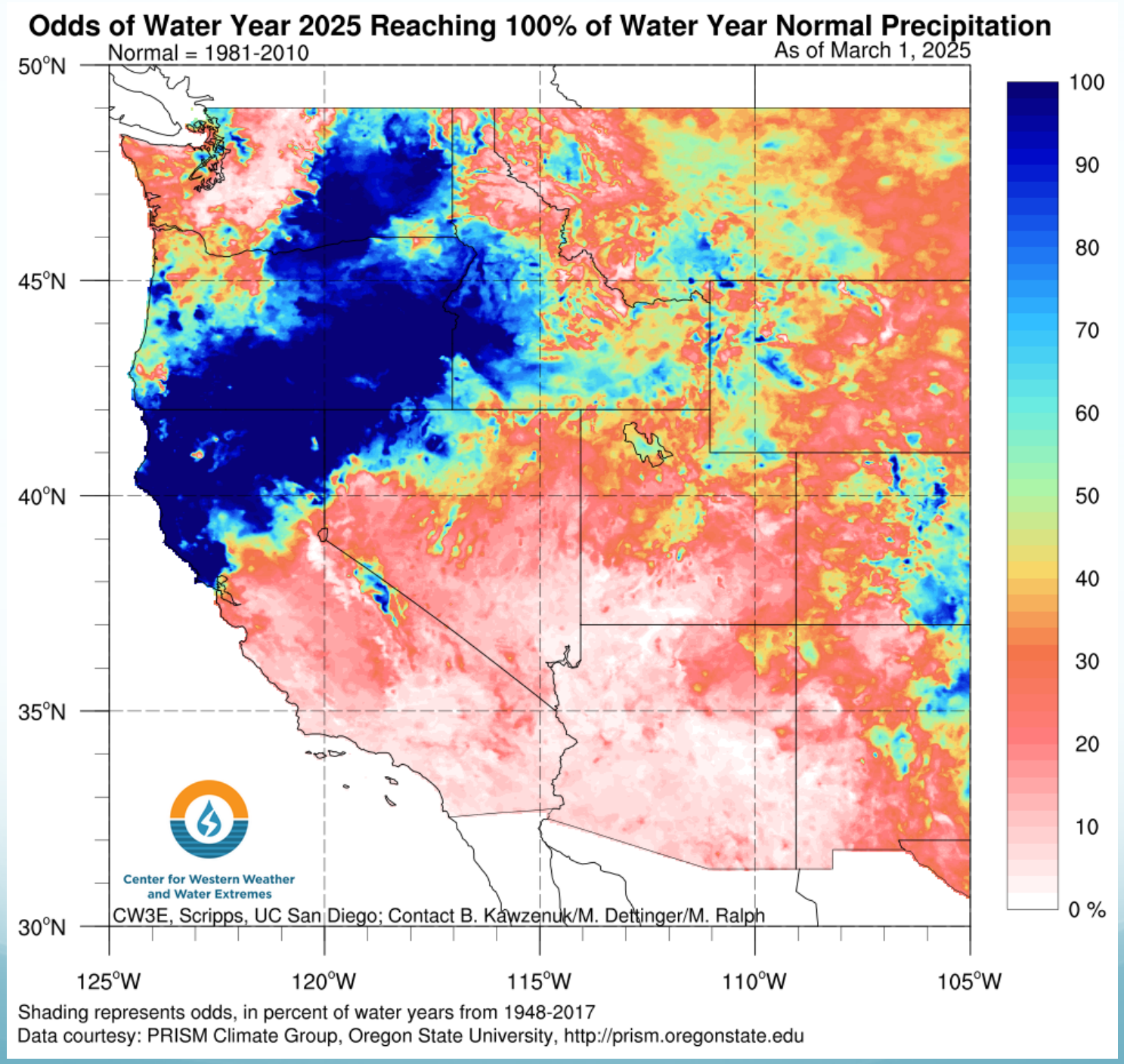


Climate Toolbox

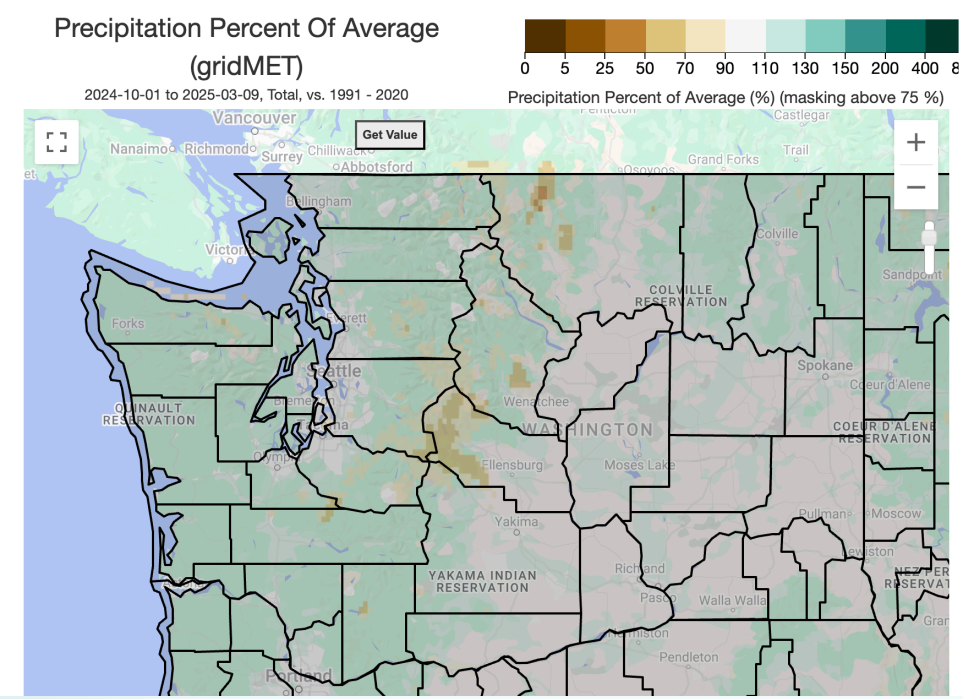
- Averaged statewide, February temperatures were below normal (-3.9°F), tying as the 28th coldest on record*
- Averaged statewide, February precipitation was above normal (112% of normal)

*Records since 1895; Normal is 1991-2020

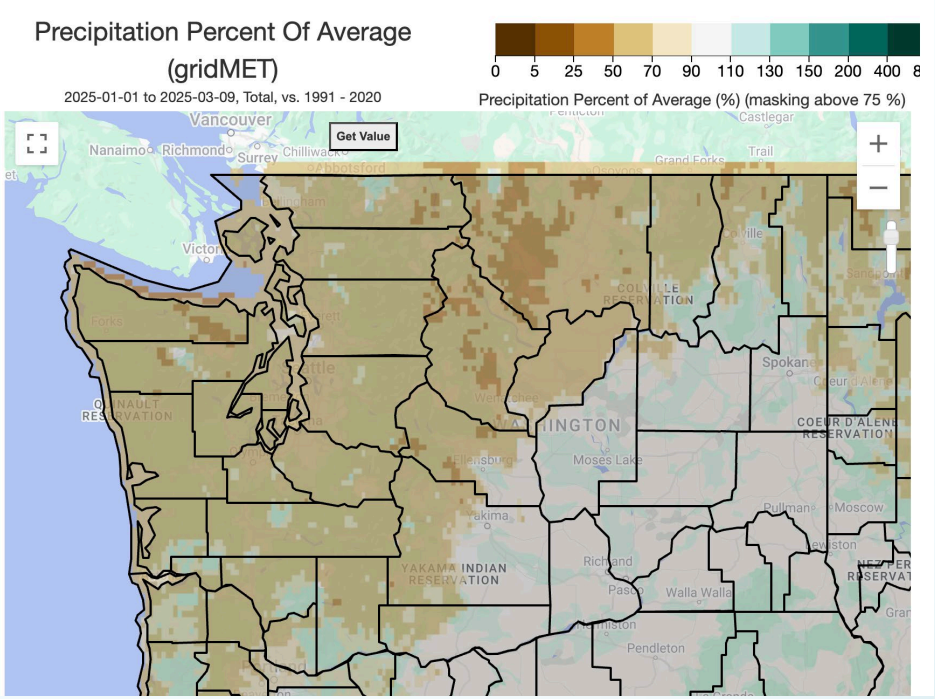

Odds of Water Year 2025 Reaching 100% of Water Year Normal Precipitation
Normal = 1981-2010
As of March 1, 2025
50°N
45°N
40°N
35°N
30°N
125°W
120°W
115°W
110°W
105°W
100
90
80
70
60
50
40
30
20
10
0 %
Center for Western Weather and Water Extremes
CW3E, Scripps, UC San Diego; Contact B. Kawzenuk/M. Dettinger/M. Ralph
Shading represents odds, in percent of water years from 1948-2017
Data courtesy: PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu

Areas with precipitation <75% of normal

October 1, 2024 to date

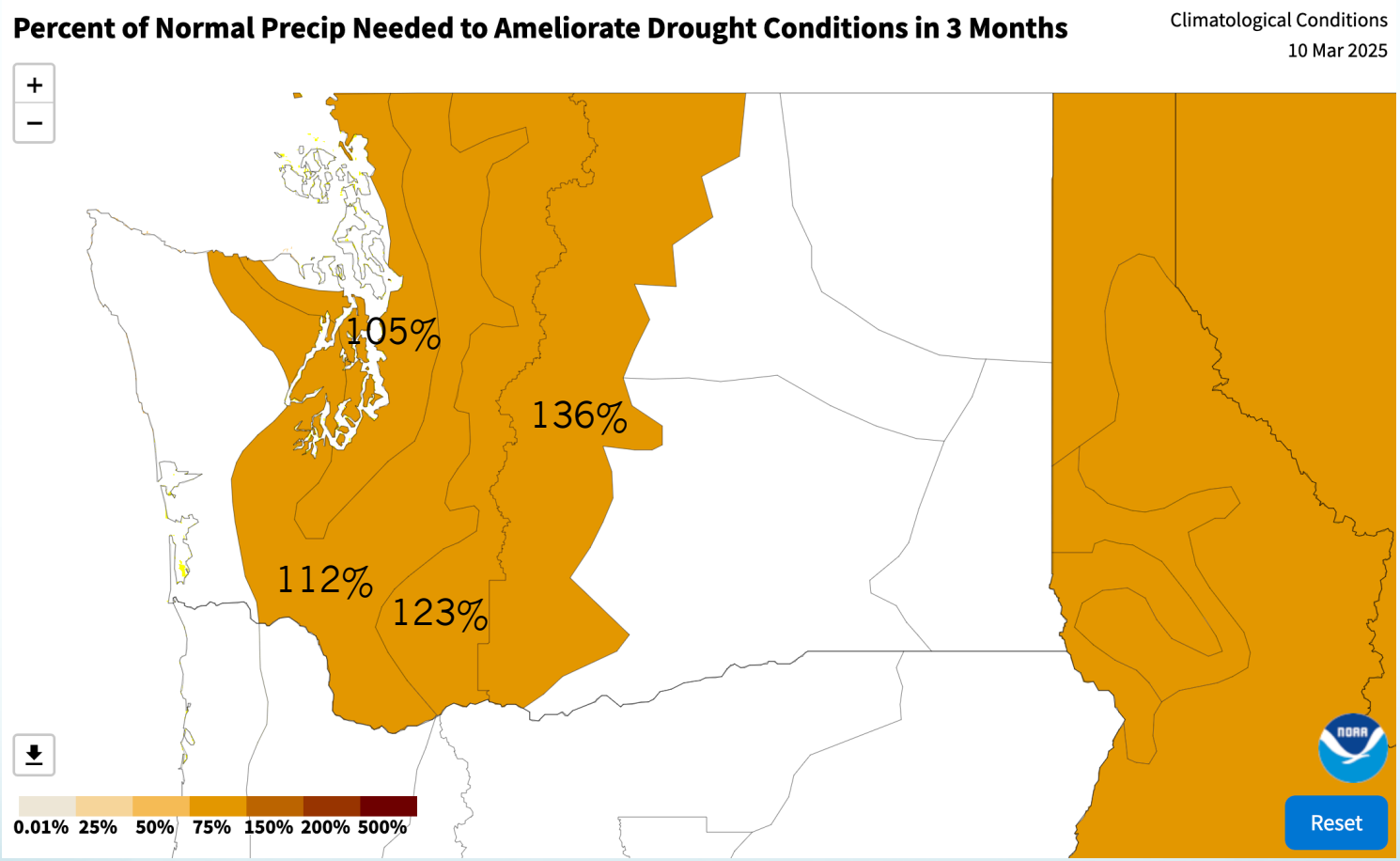


January 1, 2025 to date



[Climate Engine]

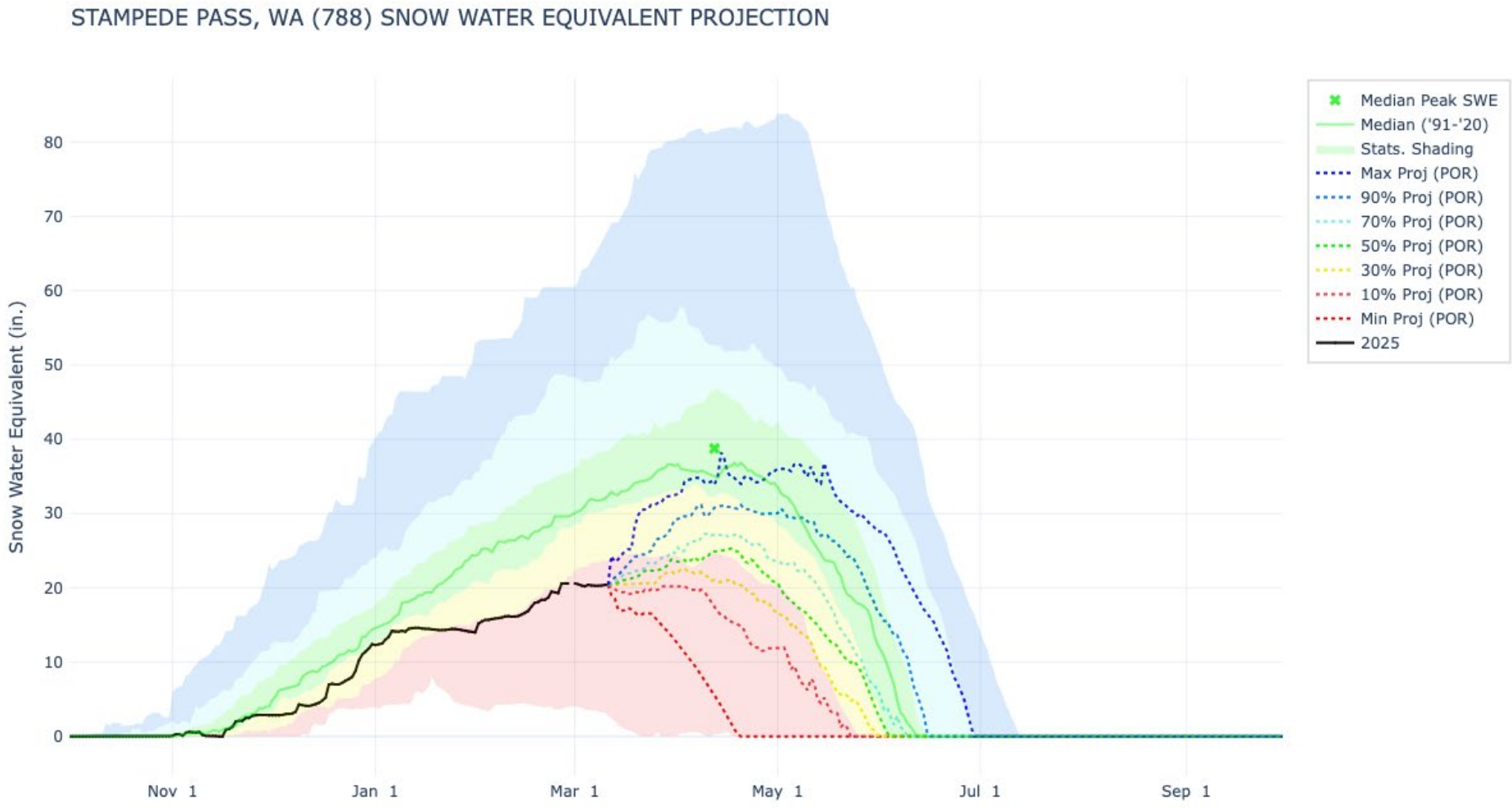
Drought as defined by PHDI



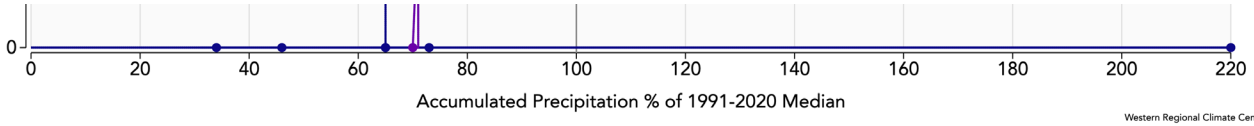
NOAA NCEI

Amount of precipitation needed to improve Palmer Hydrological Drought Index to -2.0

Snow Drought Tracker

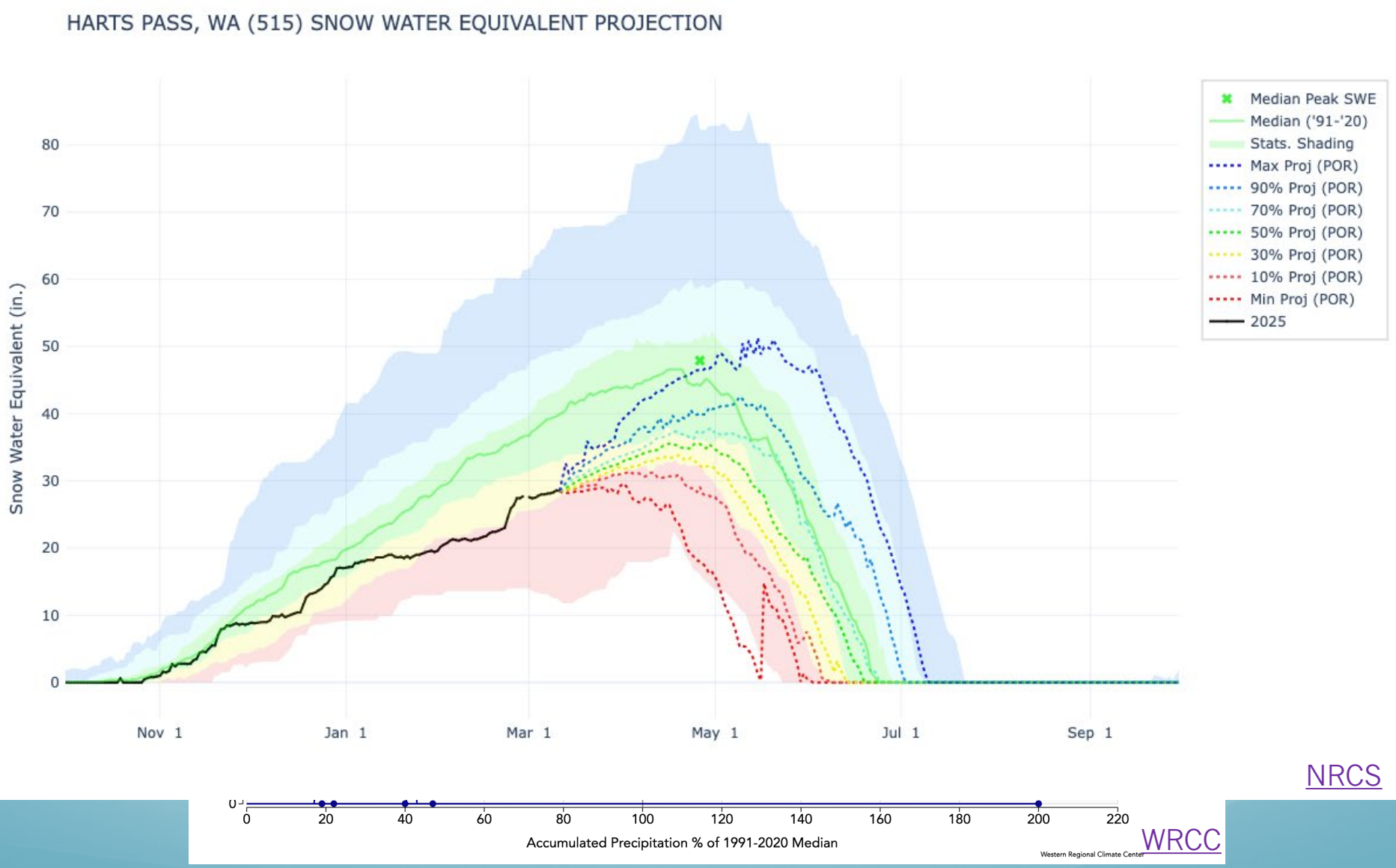


NRCS



WRCC
Western Regional Climate Center

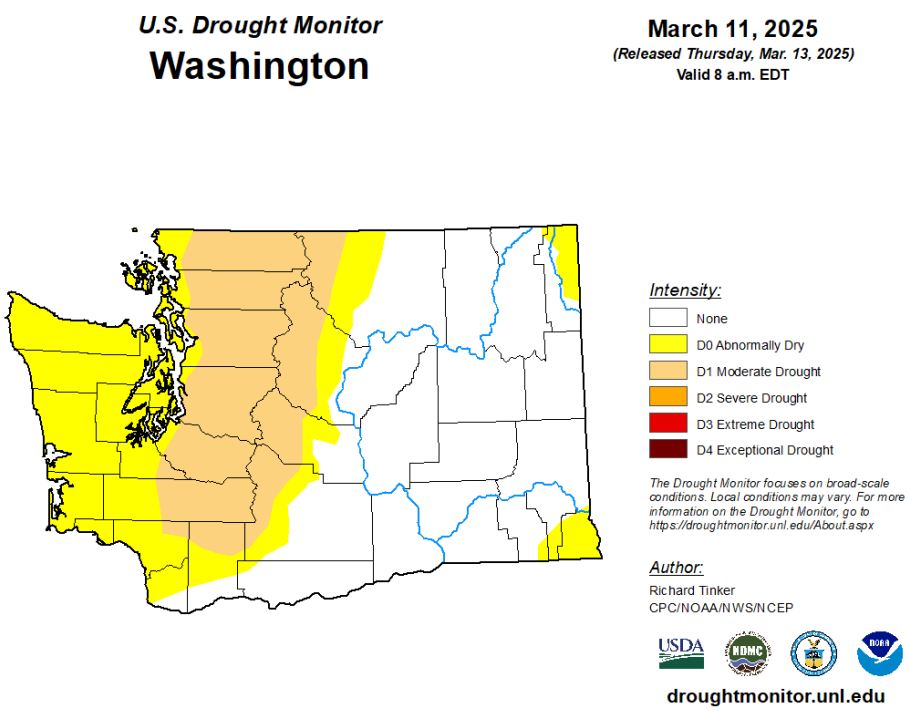
Snow Drought Tracker

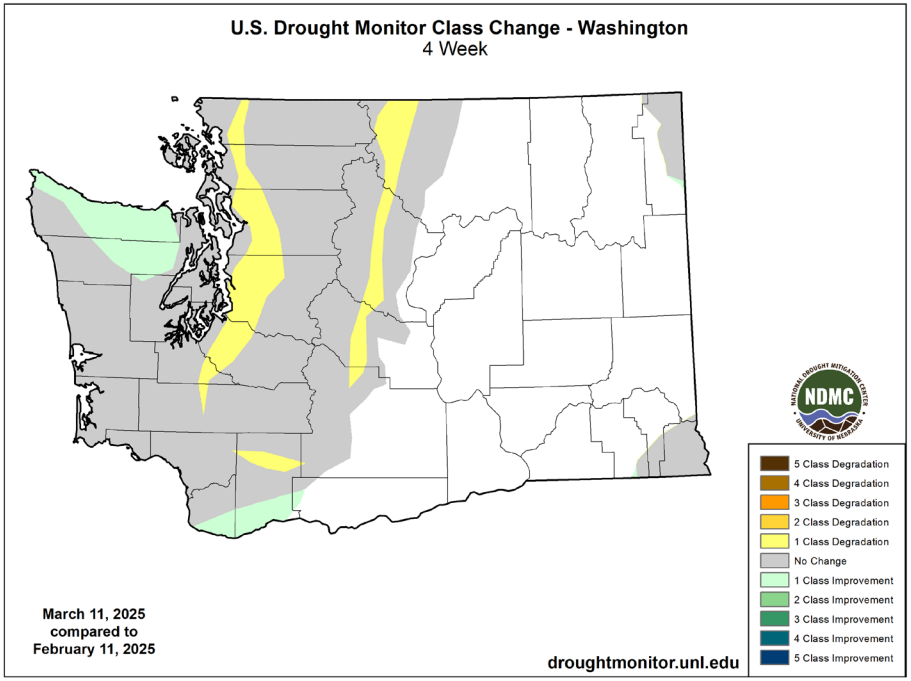


NRCS

WRCC
Western Regional Climate Center

U.S. Drought Monitor





Current Status: La Niña

La Niña Advisory

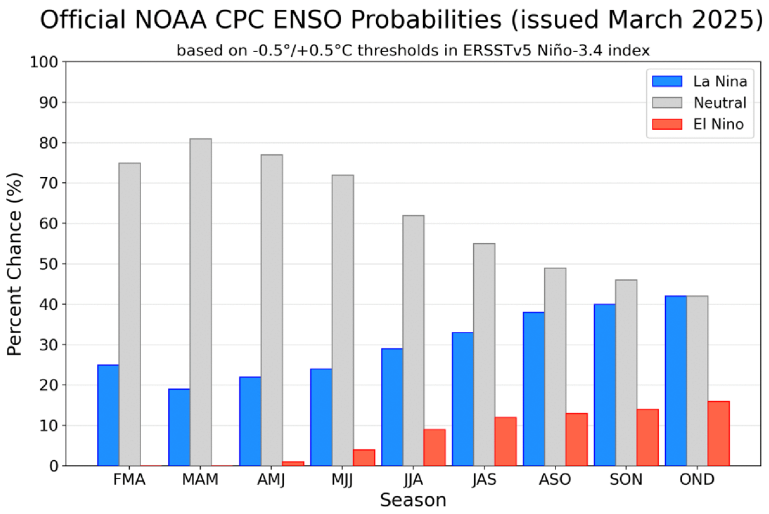
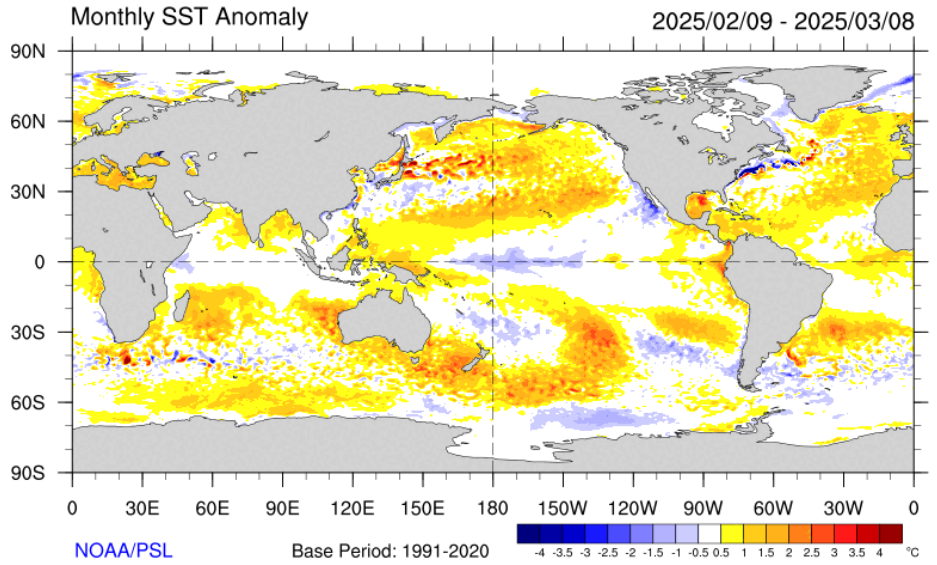
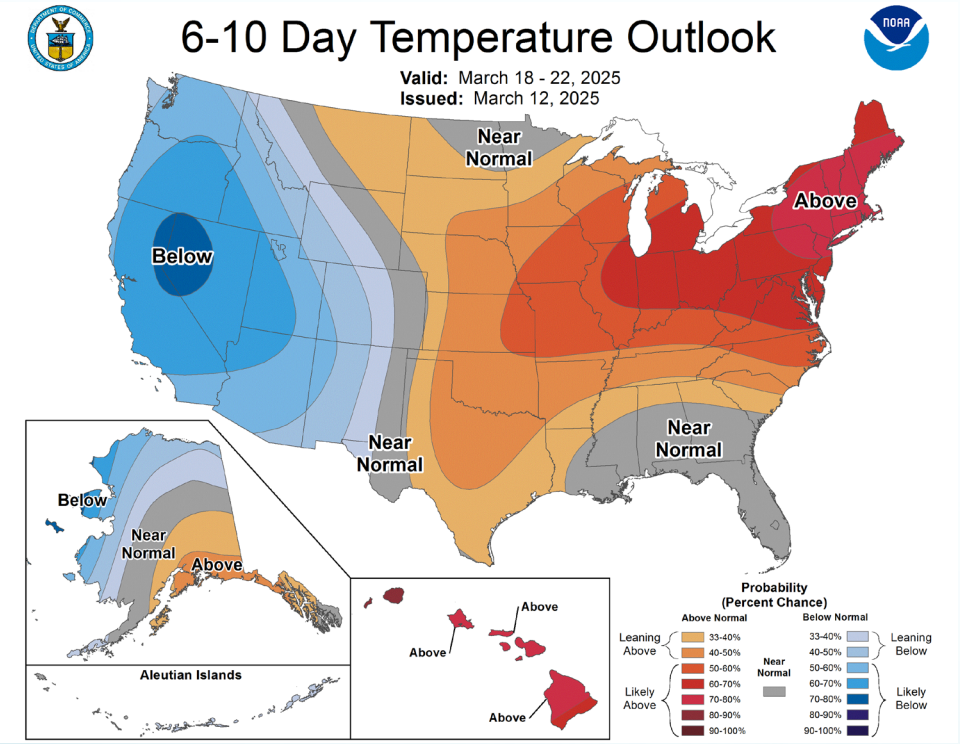


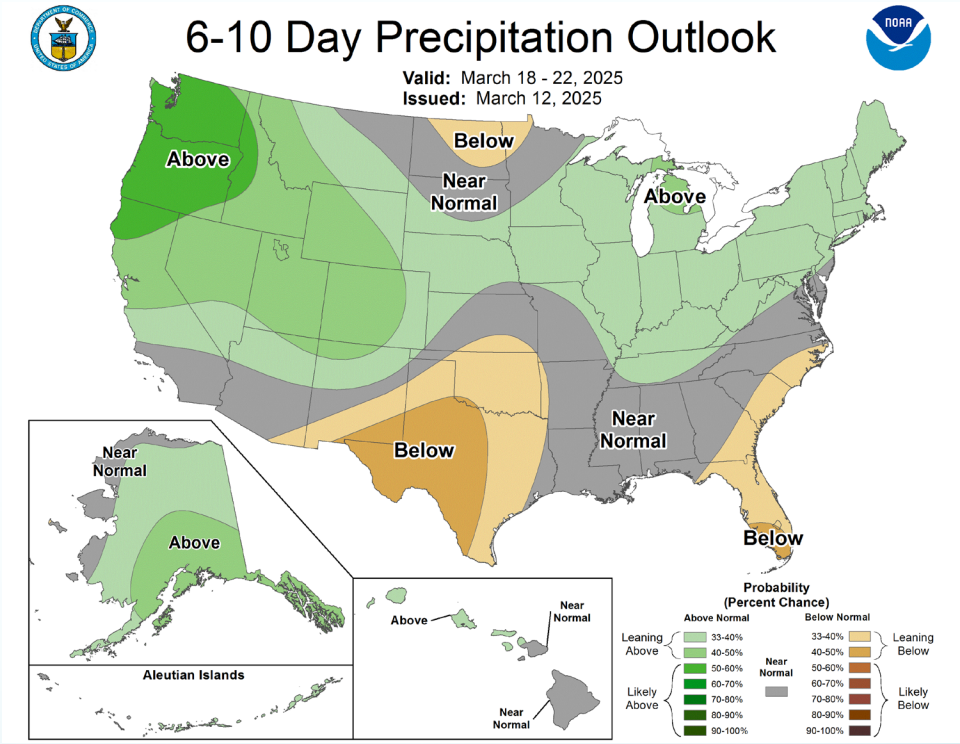
Figure 7. Official ENSO probabilities for the Niño 3.4 sea surface temperature index (5°N-5°S, 120°W-170°W). Figure updated 13 March 2025.



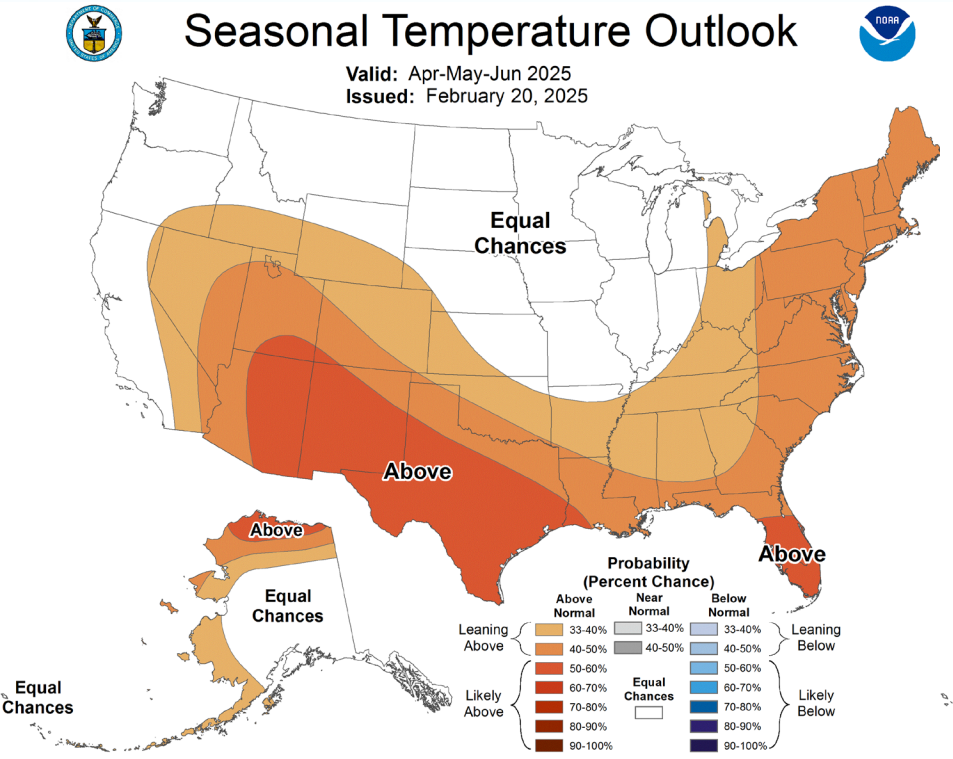
- La Niña is weakening and is expected to shift to neutral conditions

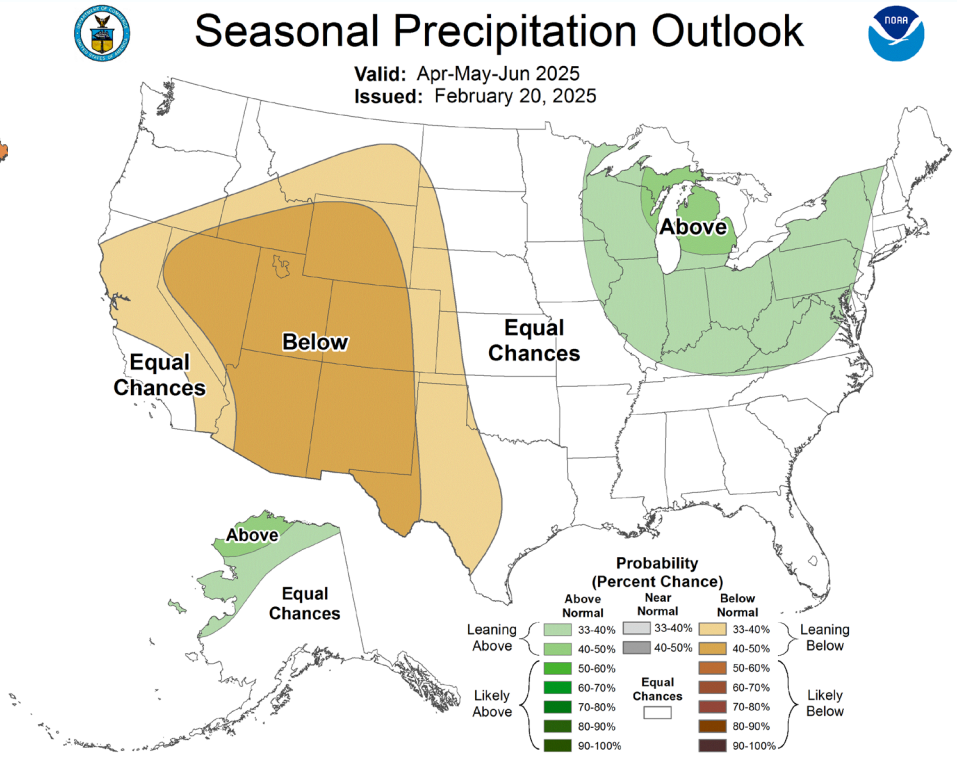
Climate Prediction Center 6-10 Day Outlook





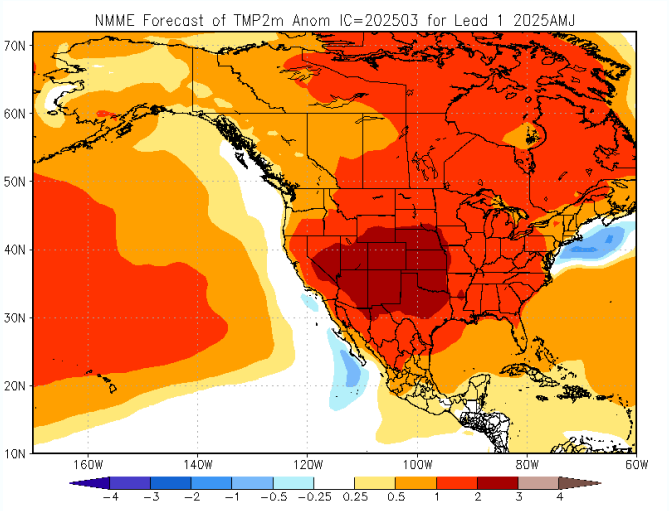
Climate Prediction Center Outlook: **Apr-Jun**



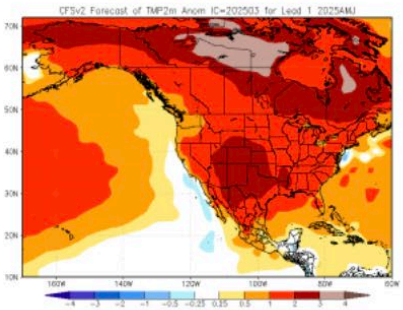


Summer periods: Higher odds of above normal temps and below normal precip

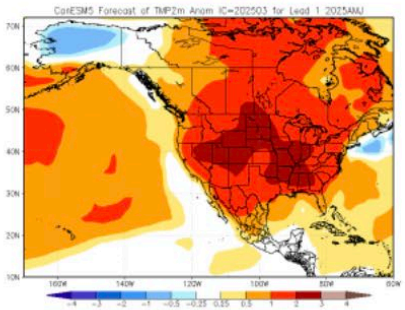
NMME: **Apr-Jun** Temperatures



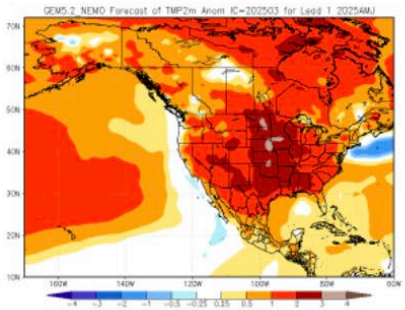
NCEP_CFSv2



CanESM5



GEM5.2_NEMO



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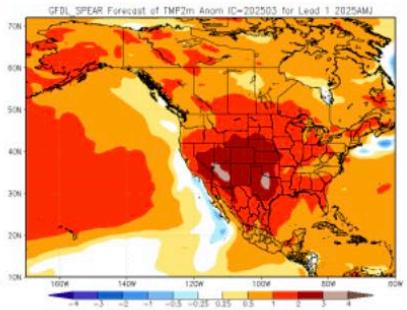
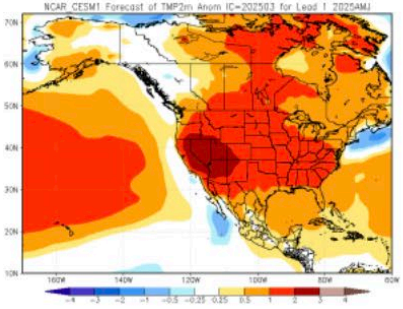
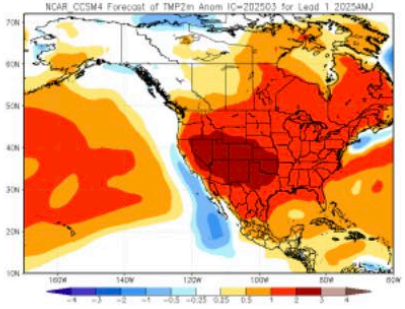


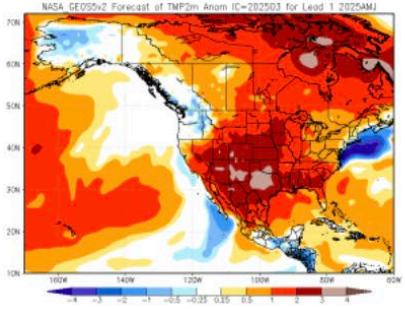
NCAR_CESM1



NCAR_CCSM4



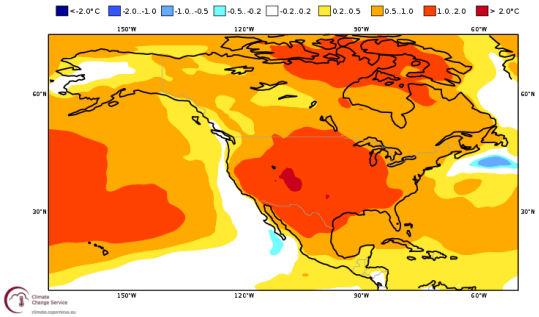
NASA_GEOS5v2



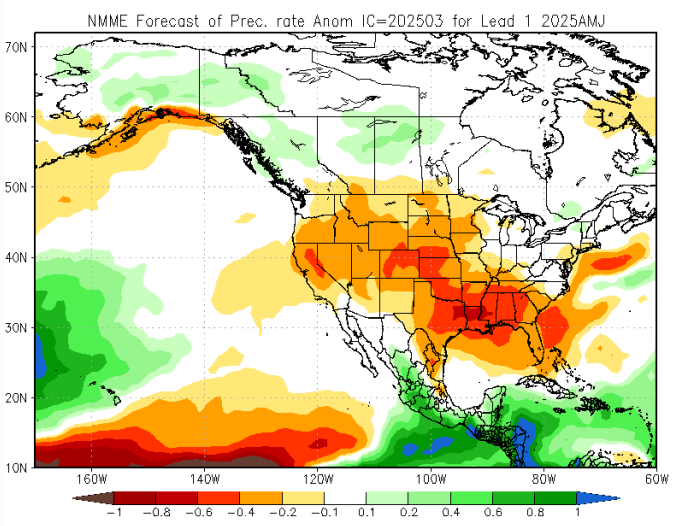
C3S multi-system seasonal forecast
Mean 2m temperature anomaly
Nominal forecast start: 01/03/25
Variance-standardized mean

ECMWF/Met Office/Météo-France/CMCC/DWD/NCEP/JMA/ECCC
AMJ 2025

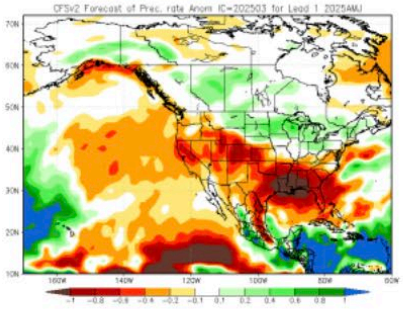
IMME



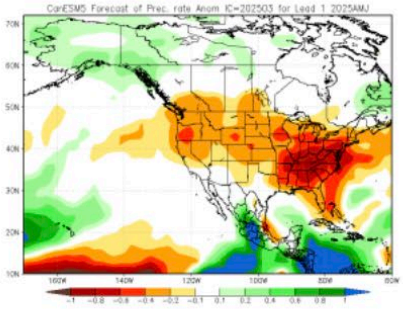
NMME: **Apr-Jun** Precipitation



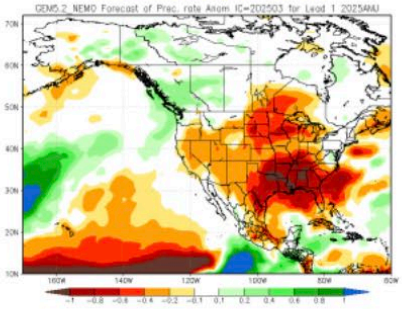
NCEP_CFSv2



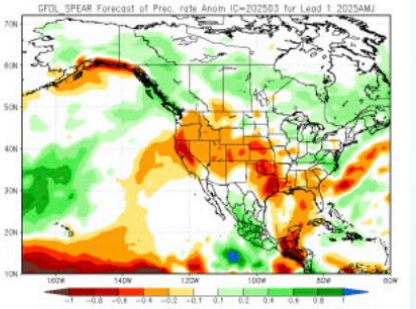
CanESM5



GEM5.2_NEMO



GFDL_SPEAR



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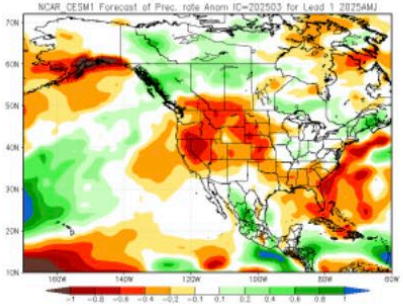
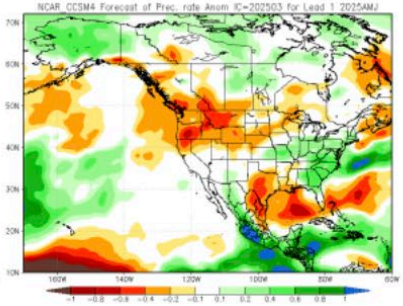


NCAR_CCSM4



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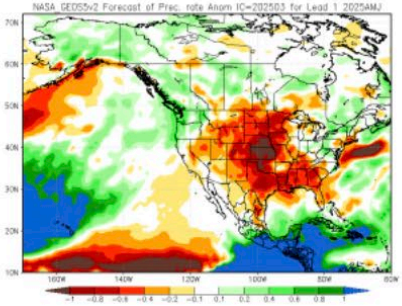

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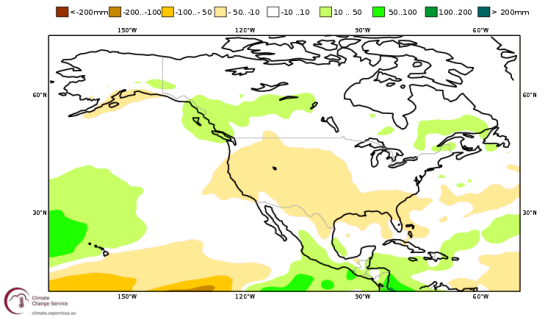
ECMWF/Met Office/Météo-France/CMCC/DWD/NCEP/JMA/ECCC
AMJ 2025

IMME



Summary

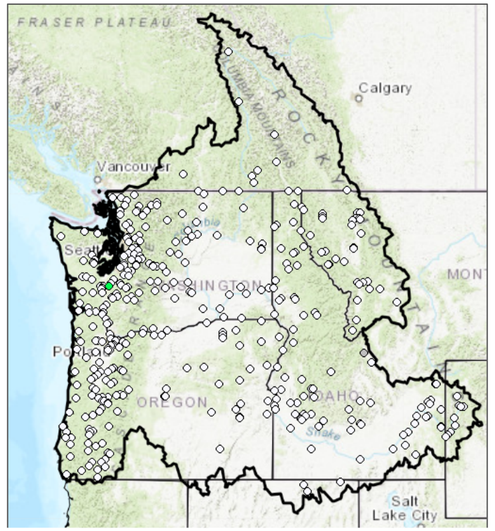
- Water year 2025 temperatures have been near-normal. Water year precipitation has been below normal for western WA, including the Cascade Mountains, and above normal across eastern WA
  - January was extremely dry statewide (tied for 5th driest)
  - February tied as the 28th coldest with above normal precipitation
- La Niña is weakening
- The next week and a half should be cool and wet
- There is little indication that we'll see a late spring bail out in terms of snow

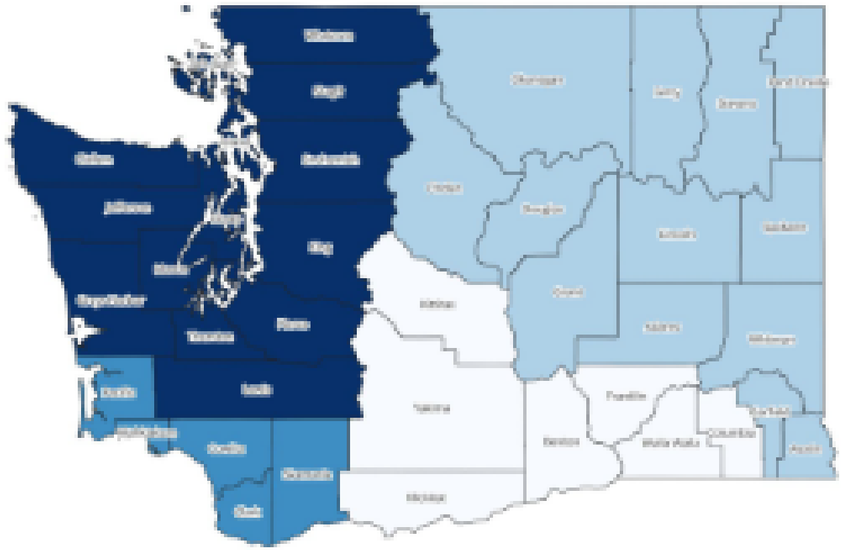
NWS

March 2025 Washington Water Supply

Amy Burke, Sr Hydrologist - Northwest River Forecast Center
NWRFC.watersupply@noaa.gov

Brent Bower, Sr Service Hydrologist - Seattle
Robin Fox, Service Hydrologist - Spokane
George Perry, Service Hydrologist - Pendleton

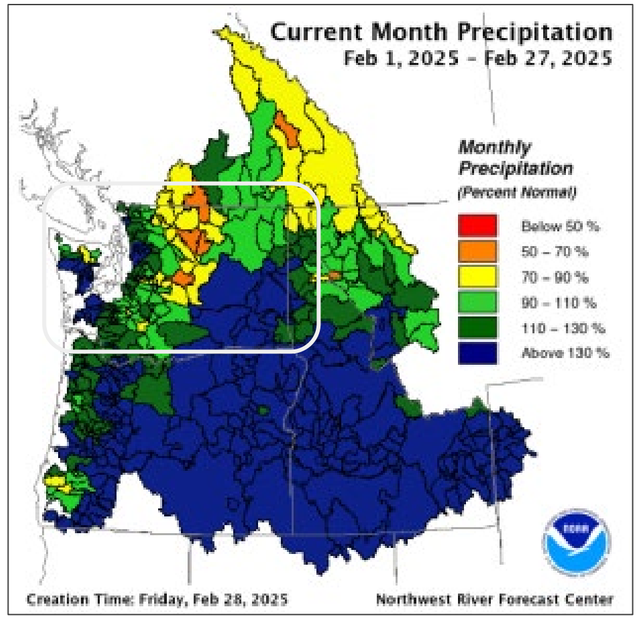


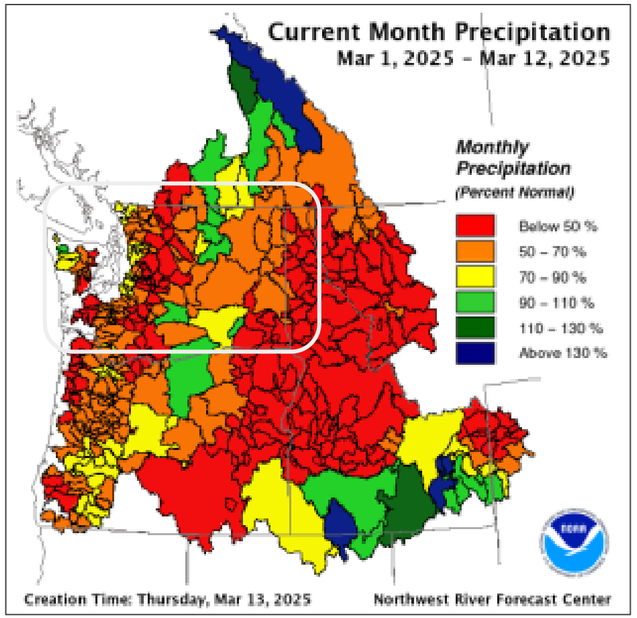


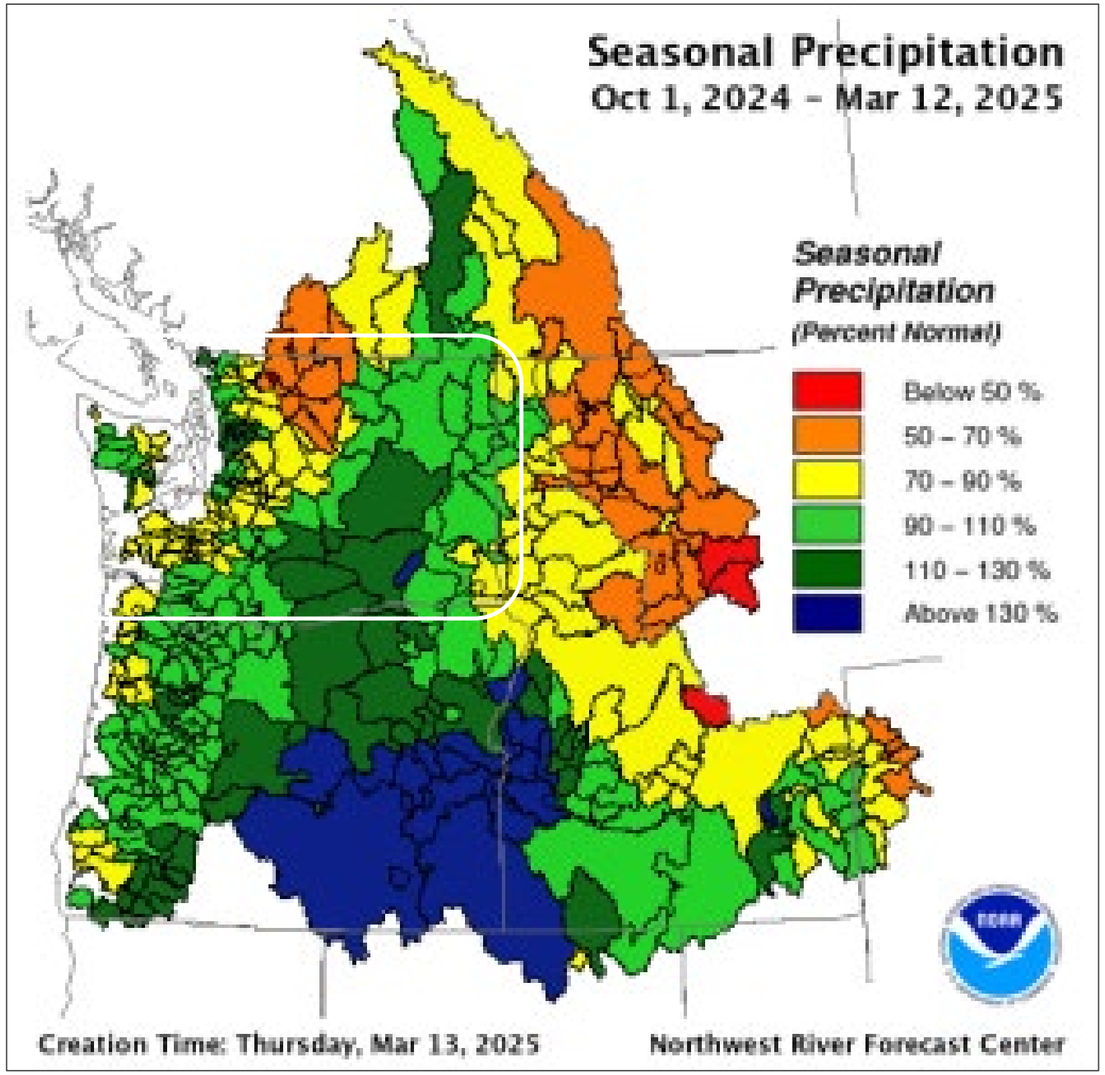
Washington State - Areas of Responsibility

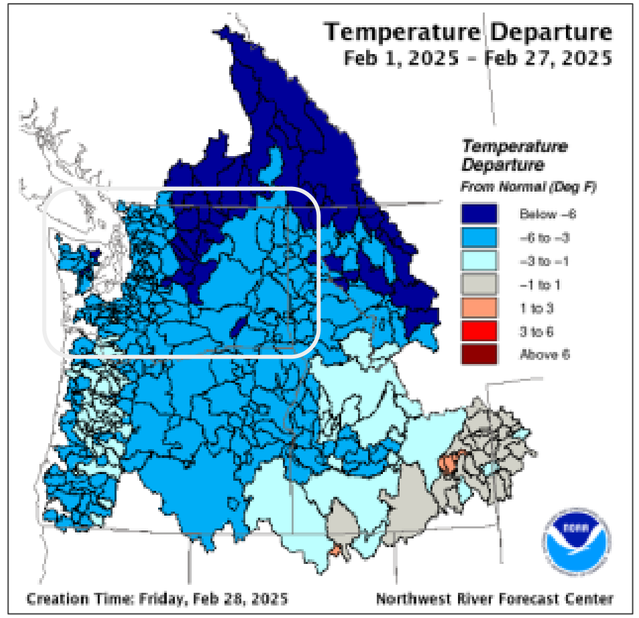
- Northwest Washington - NWS Seattle - nws.seattle@noaa.gov
- Southwest Washington - NWS Portland - nws.portland@noaa.gov
- Northeast Washington - NWS Spokane - nws.spokane@noaa.gov
- Southeast Washington - NWS Pendleton - pdt.operations@noaa.gov

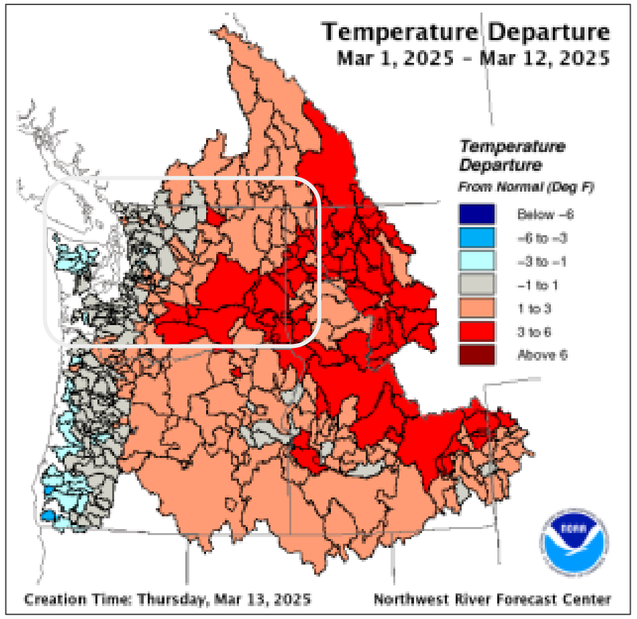
Precipitation and Temperature



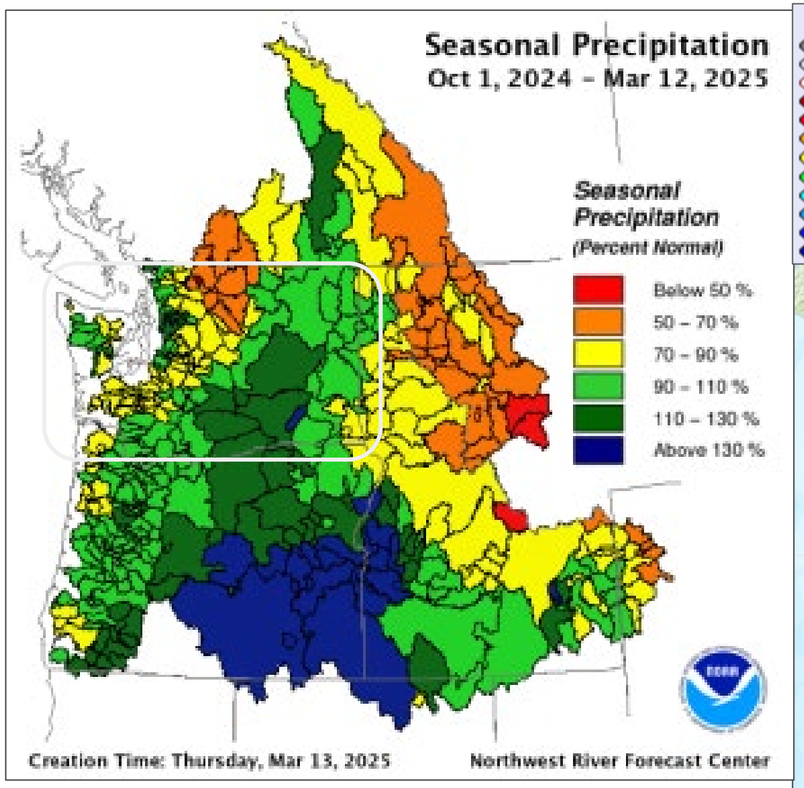


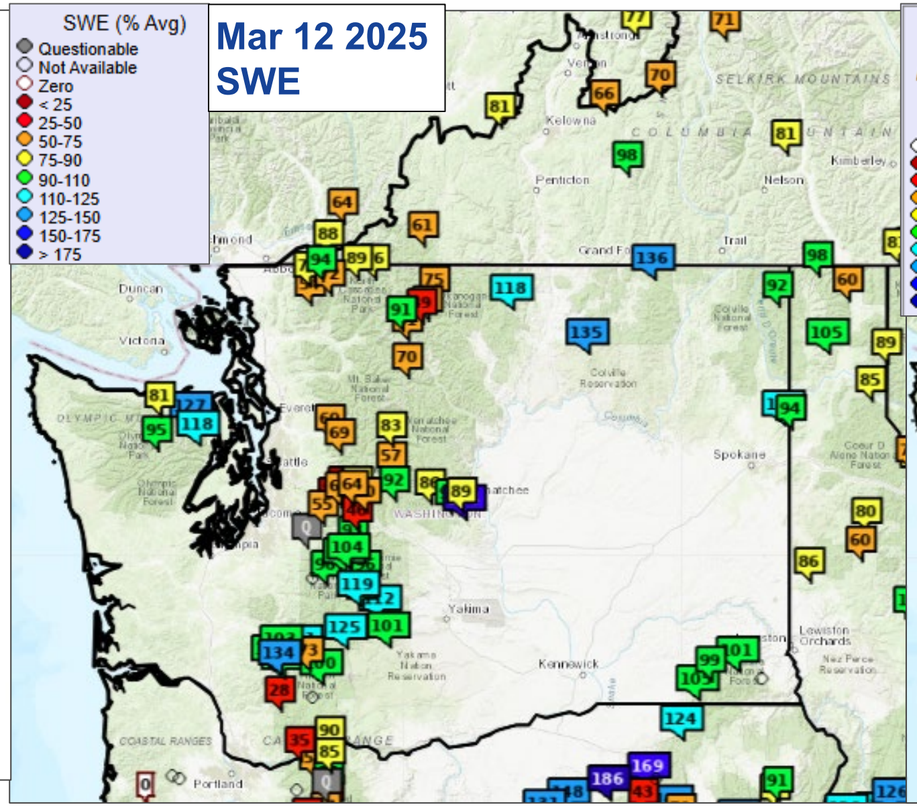


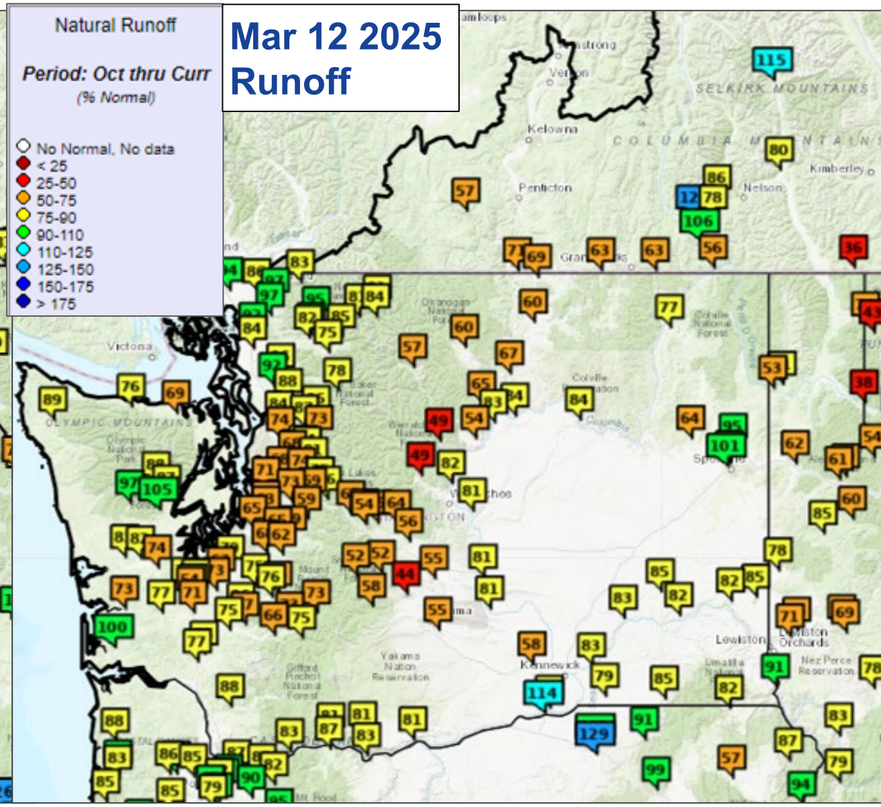




Precipitation, Snowpack and Runoff



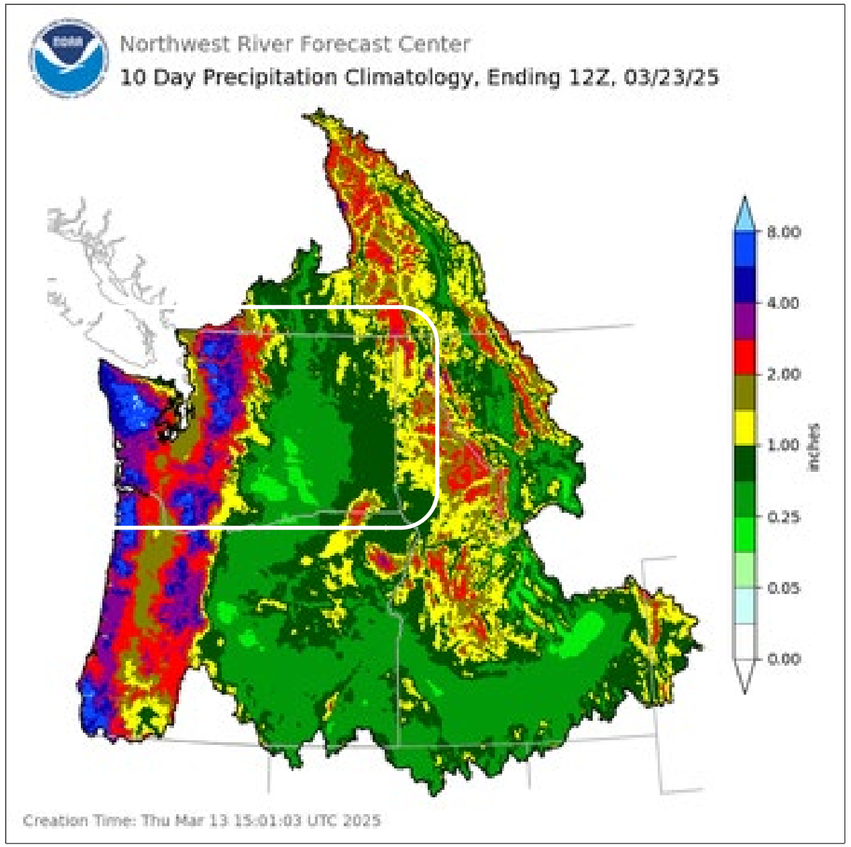


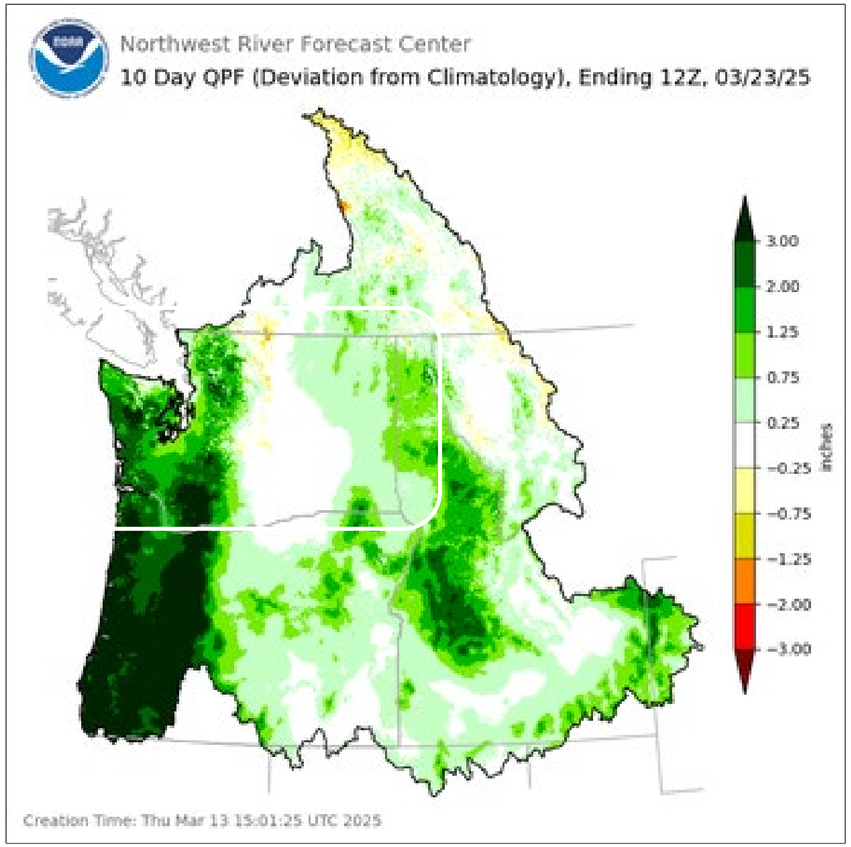


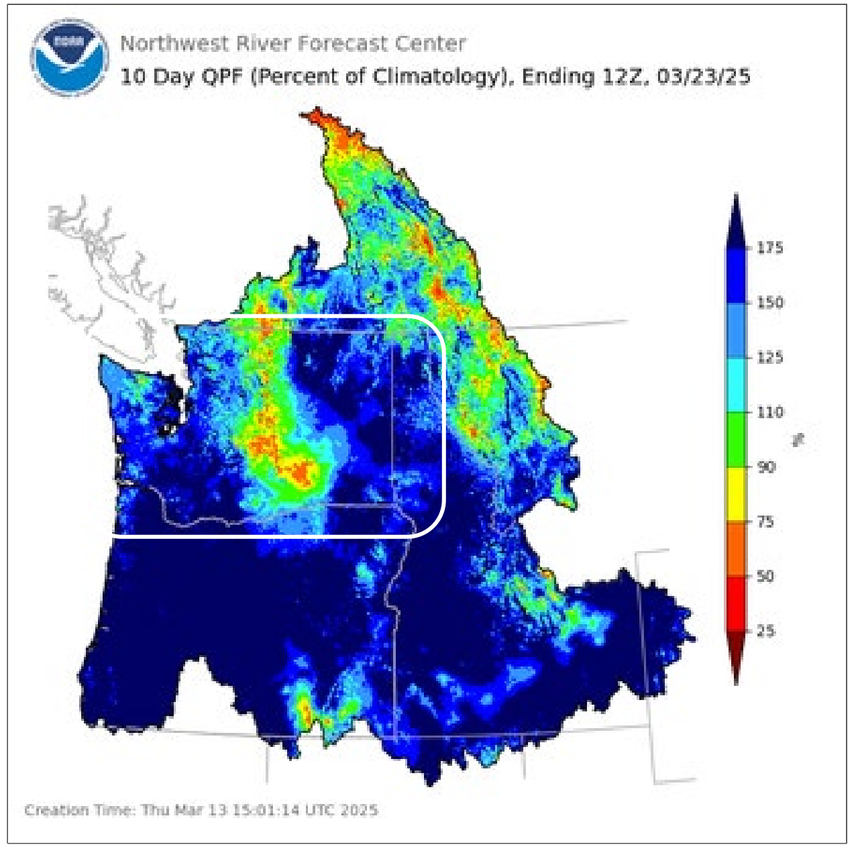
- Similar for the Cascades and Blue mountains especially for higher elevations
- Slight decrease for mid slopes most areas
- Slight increase for Okanogan Highlands

- Increase across extreme eastern WA
- Little change for central and western WA

10 Day Precipitation Forecast used in ESP10 Forecasts





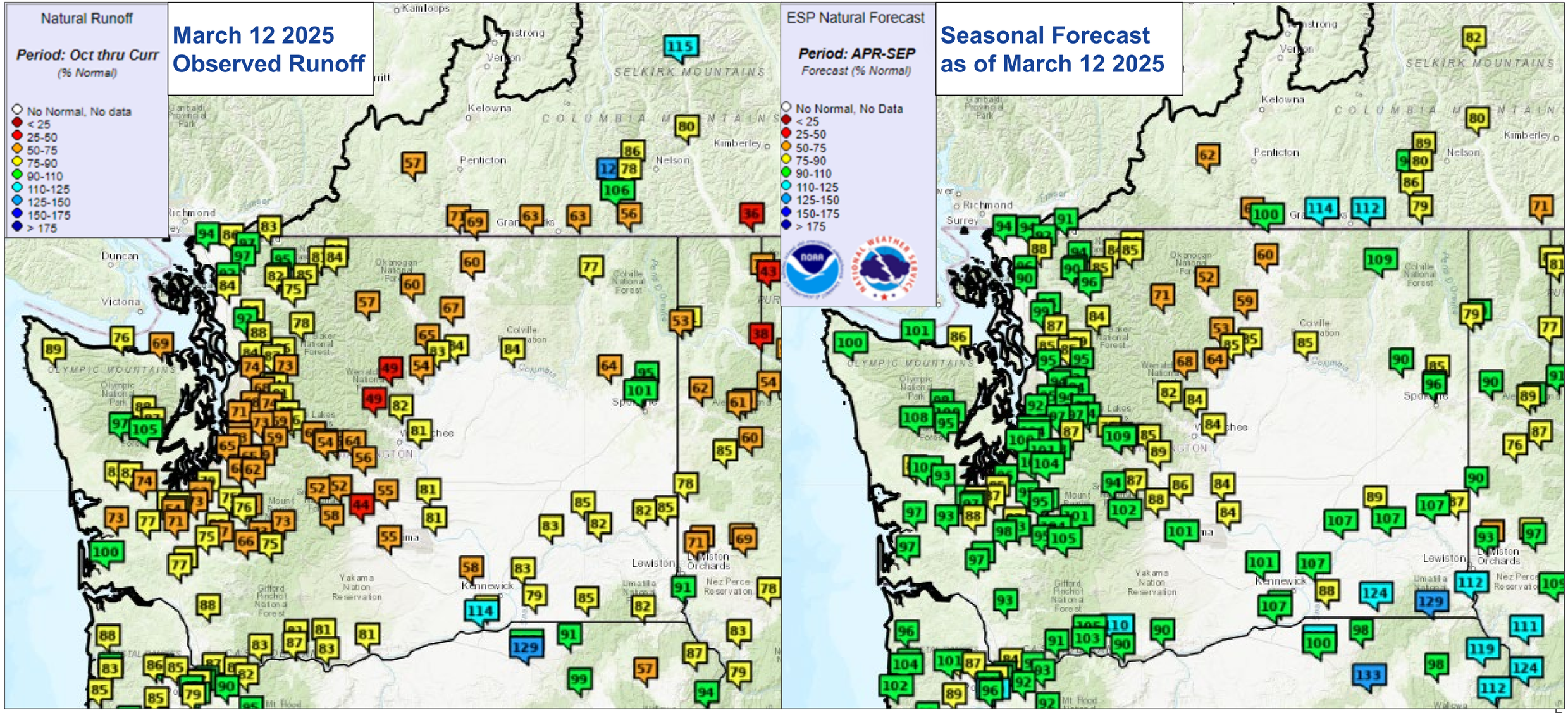


Quantitative Precipitation Forecast (QPF) Sources
Days 1 - 2 NWS Weather Forecast Offices (WFO) in the US, WPC in BC
Days 3 - 7 NWS Weather Prediction Center (WPC)
Days 8 - 10 NWS National Blend of Models (NBM)

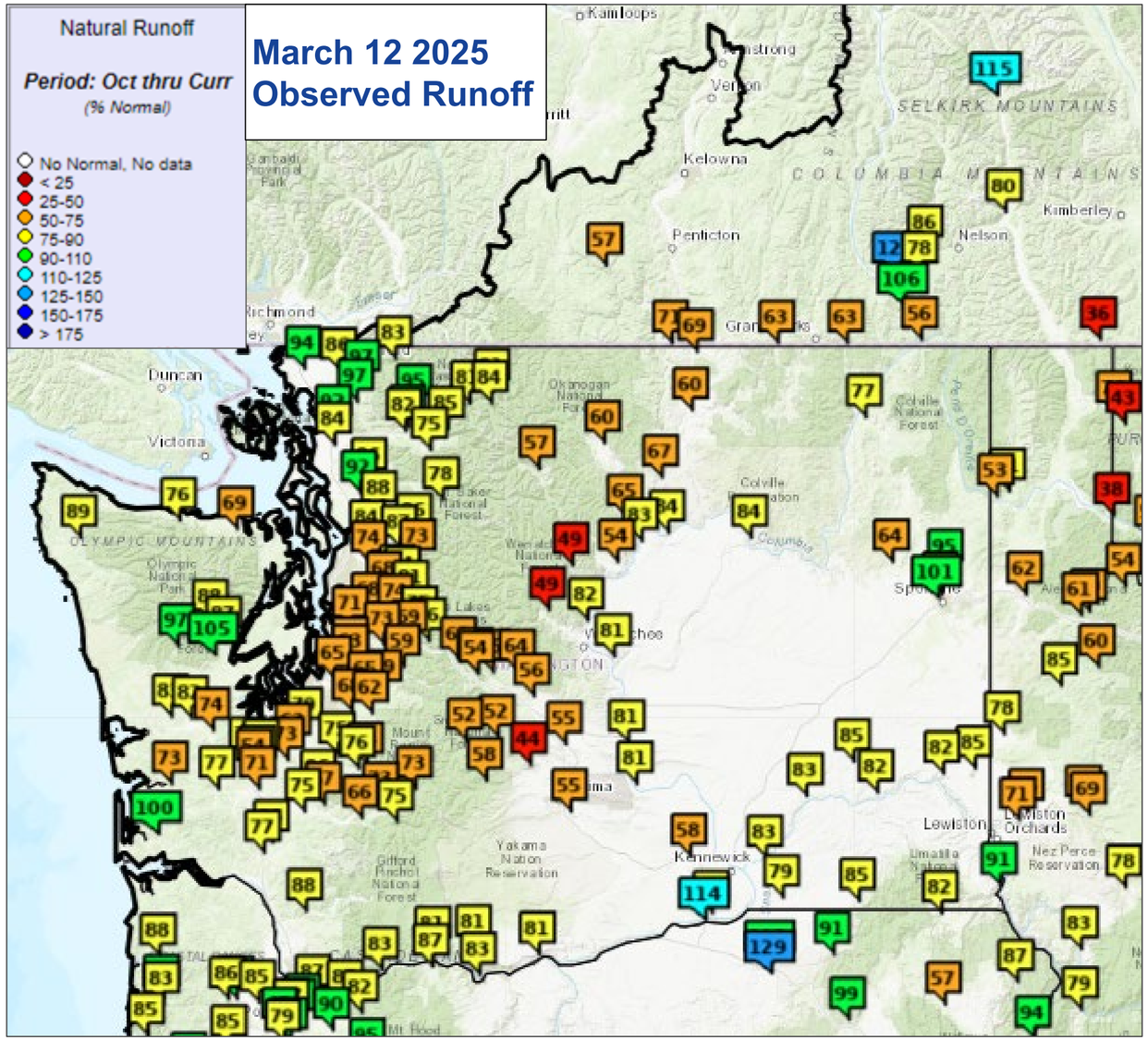
Upcoming 10 days will be a wet period for WA especially through the weekend and early next week.

Climate Prediction Center is trending for above normal precipitation and below normal temperatures through the next 2 weeks (last week of March).

WY Runoff and Apr - Sep Forecasts



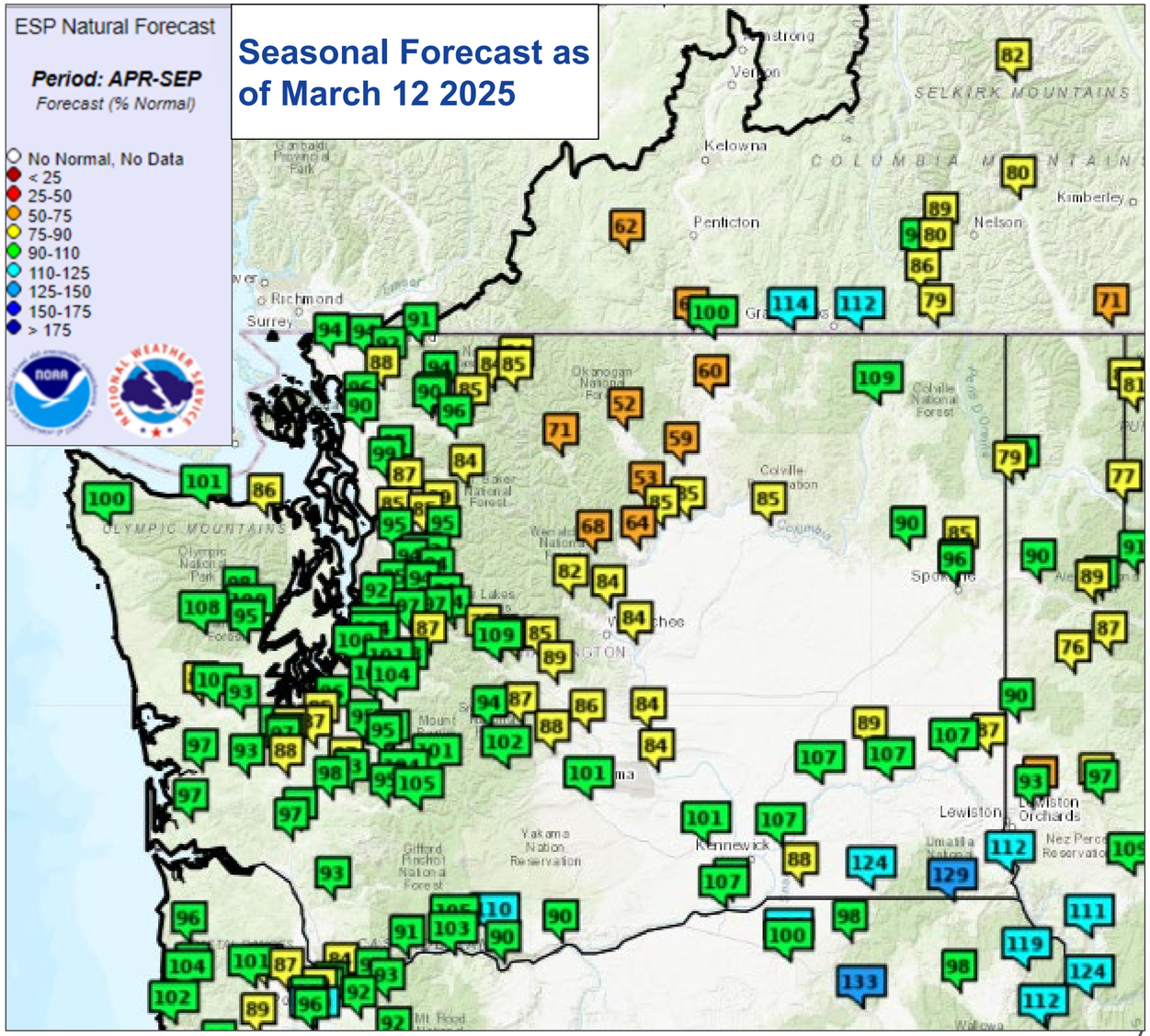
WY Runoff Monthly Comparisons



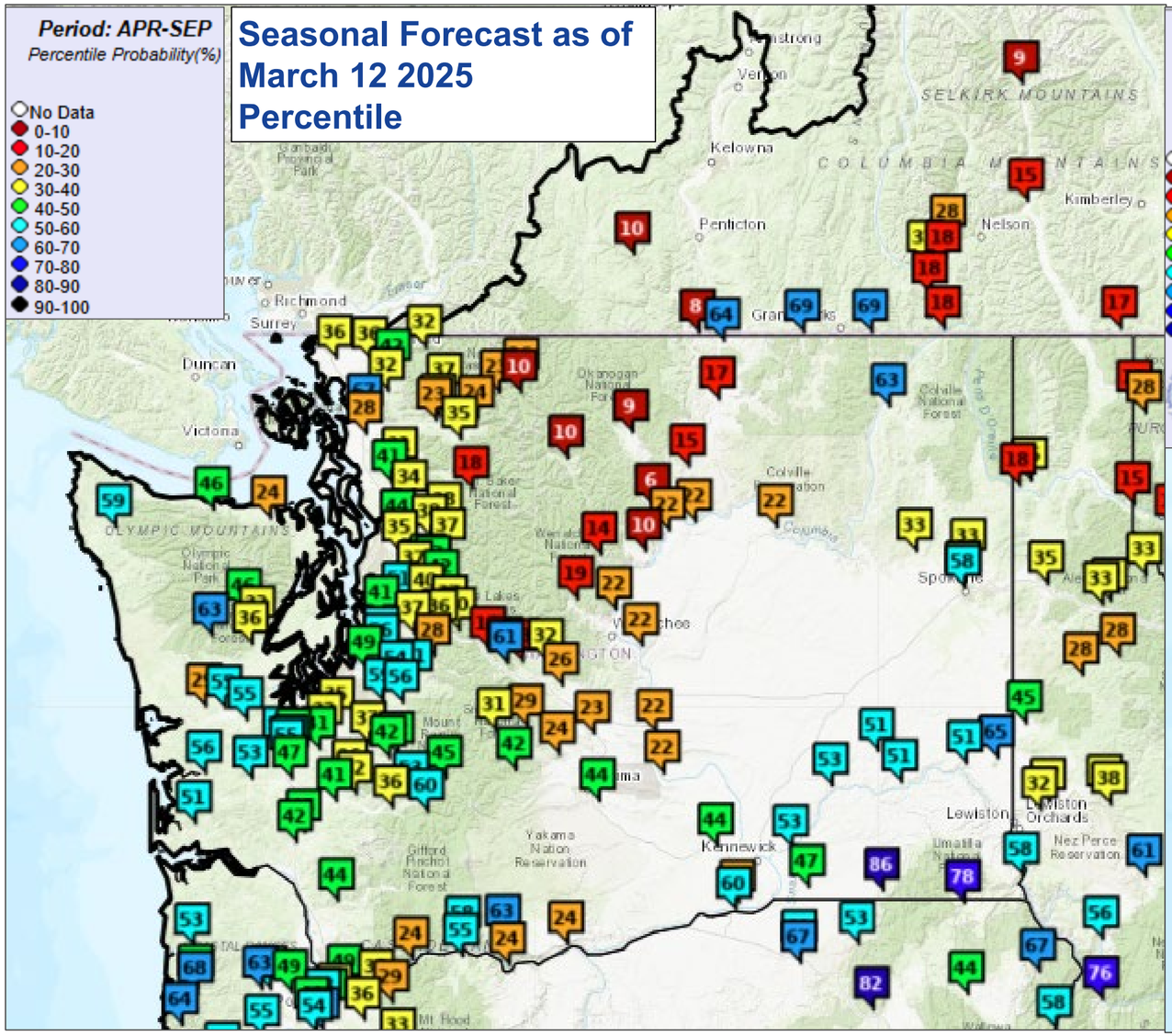
Forecast Point	% Normal Runoff Oct 1 - Current	Change Since Feb 12, 2025
Skagit nr Mt Vernon	84	-1
Dungeness nr Sequim	69	0
Chehalis at Porter	74	+4
Okanogan at Malott	67	-1
Methow near Pateros	65	0
Yakima at Parker	55	+5
Walla Walla near Touchet	79	+18

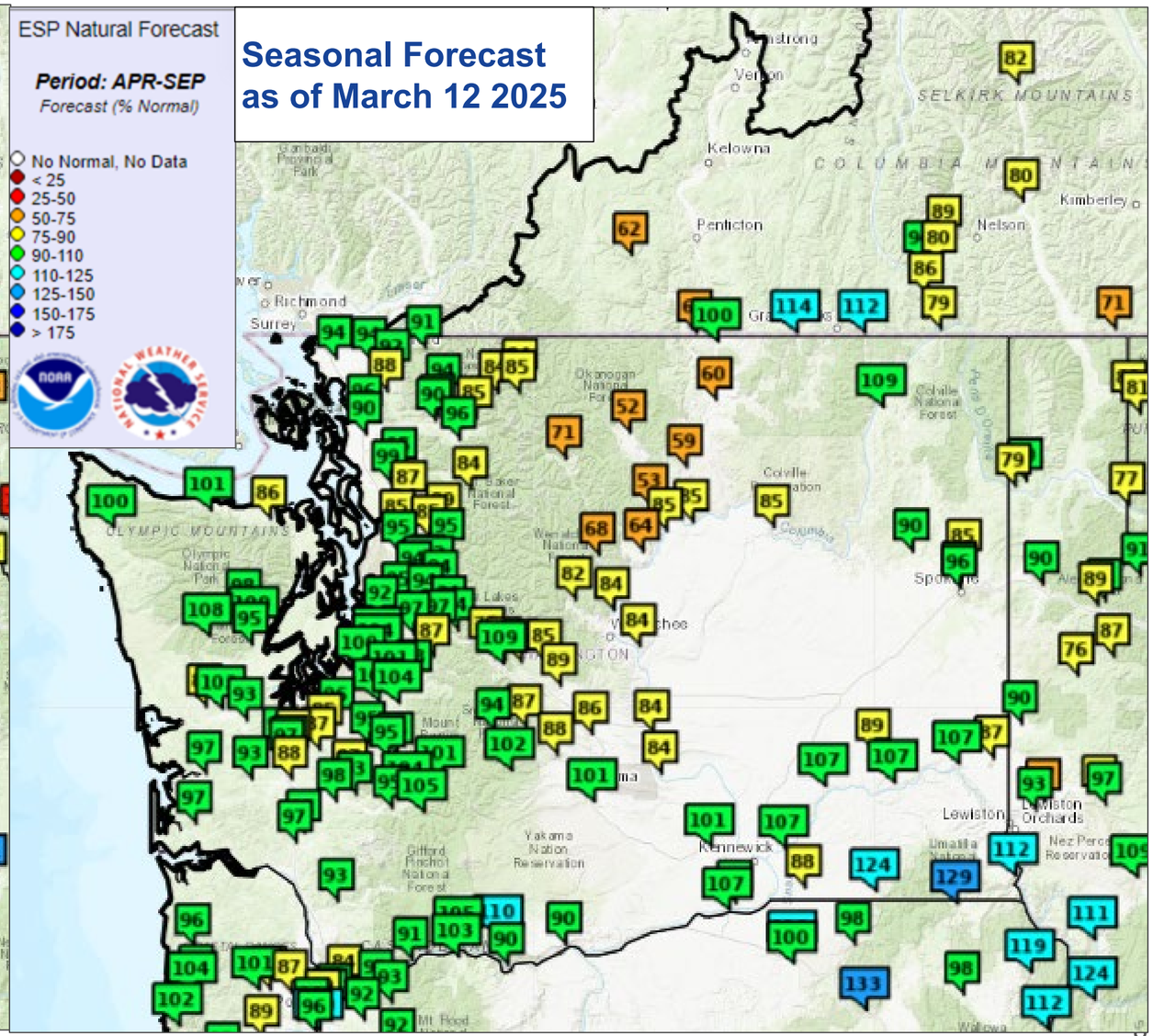
Apr - Sep Forecasts Monthly Comparisons

Forecast Point	% Normal April-Sept Vol	Change Since Feb 12, 2025
Skagit nr Mt Vernon	90	+8
Dungeness nr Sequim	86	-2
Chehalis at Porter	93	+2
Okanogan at Malott	59	+9
Methow near Pateros	53	+6
Yakima at Parker	101	+3
Walla Walla near Touchet	88	+4



Apr - Sep Forecasts in Percentiles

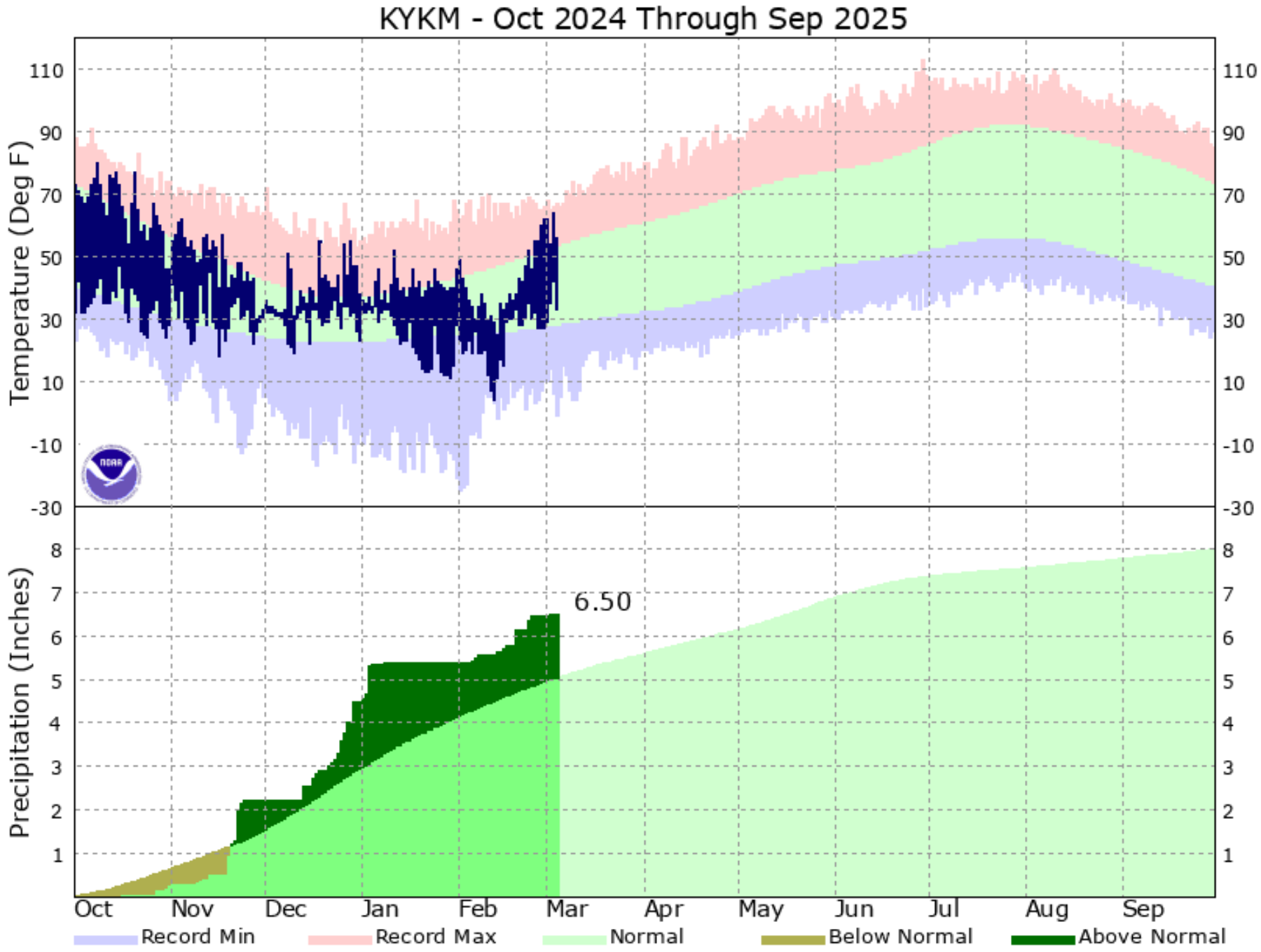


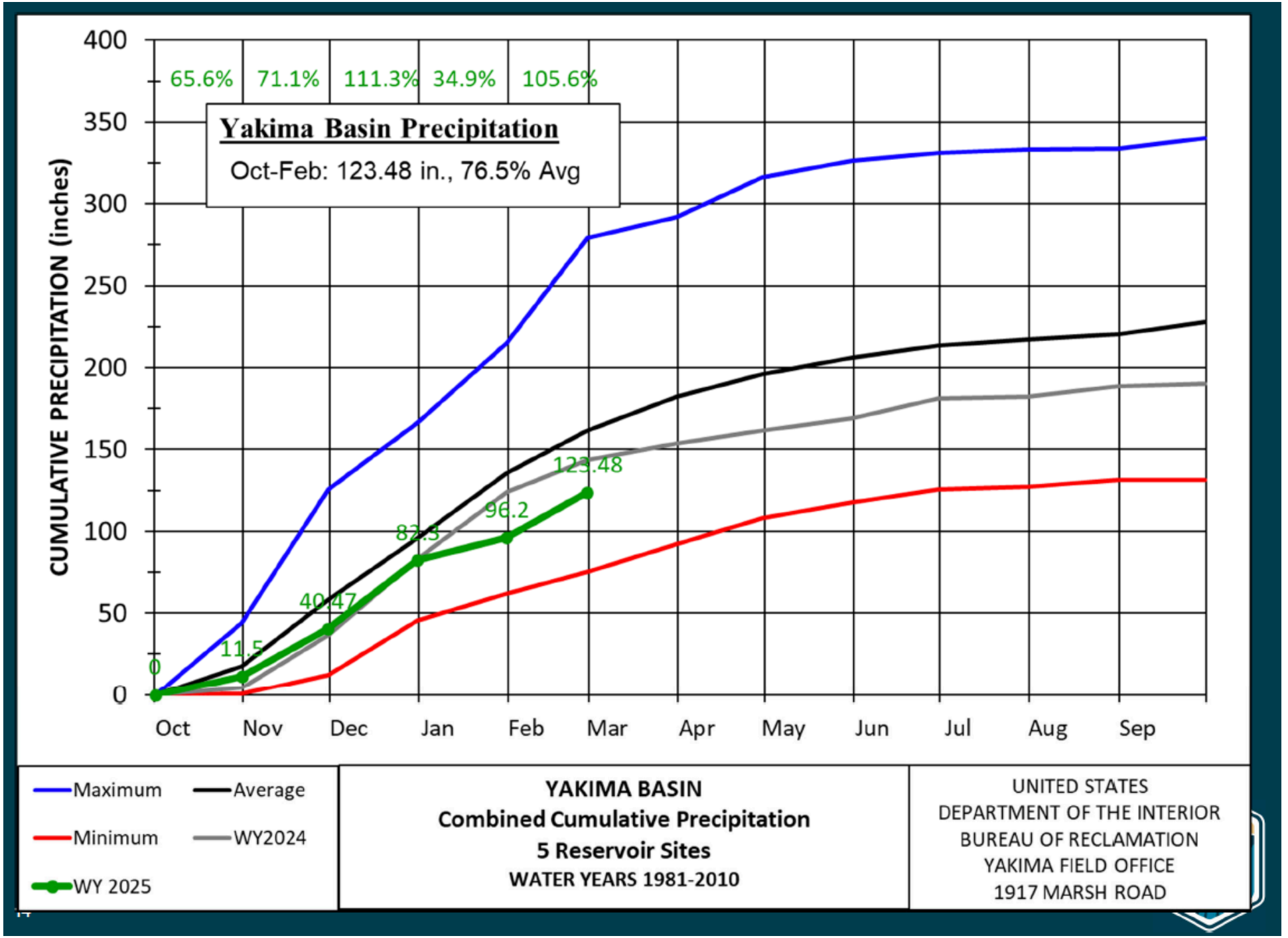


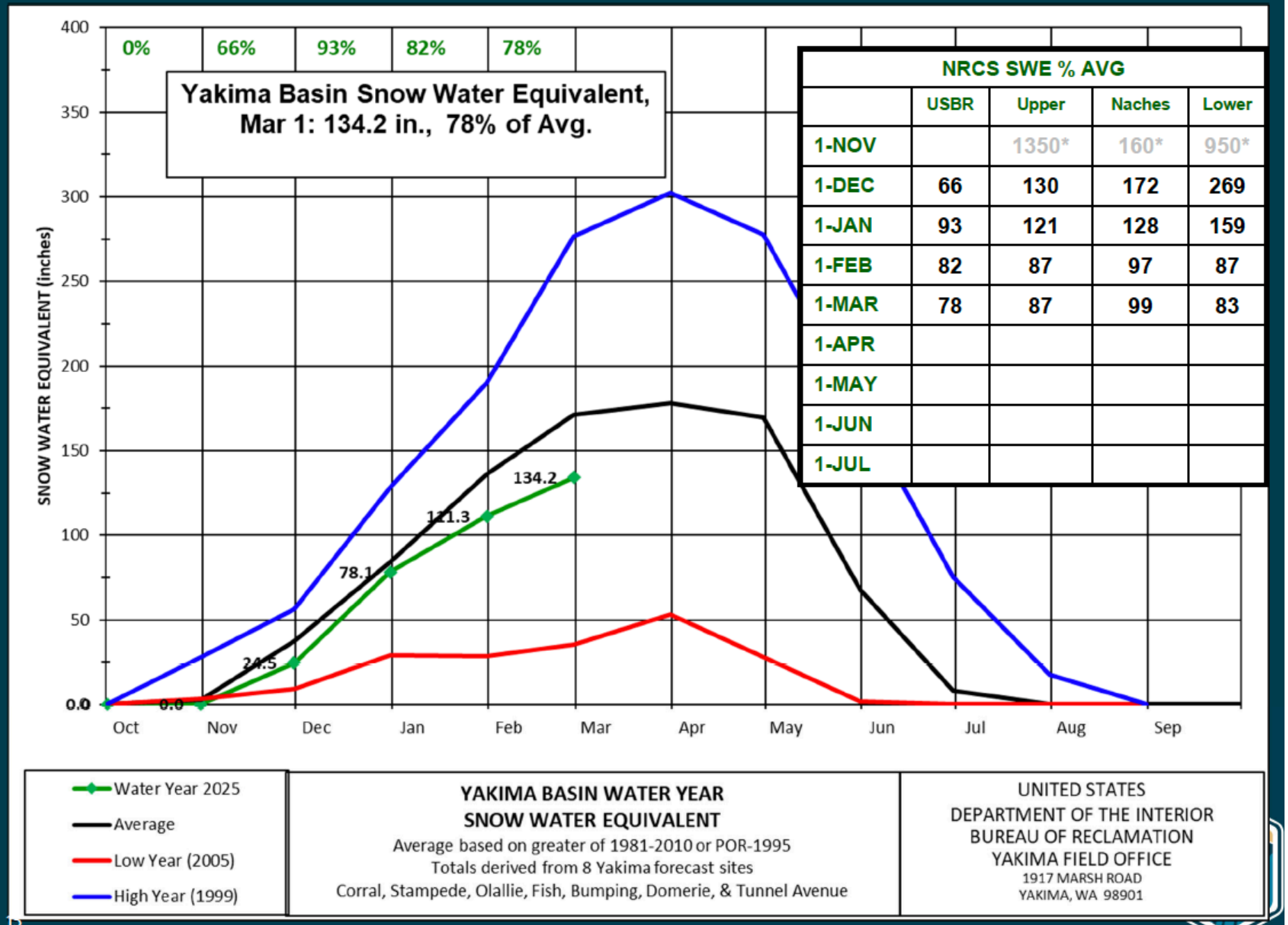
Takeaways

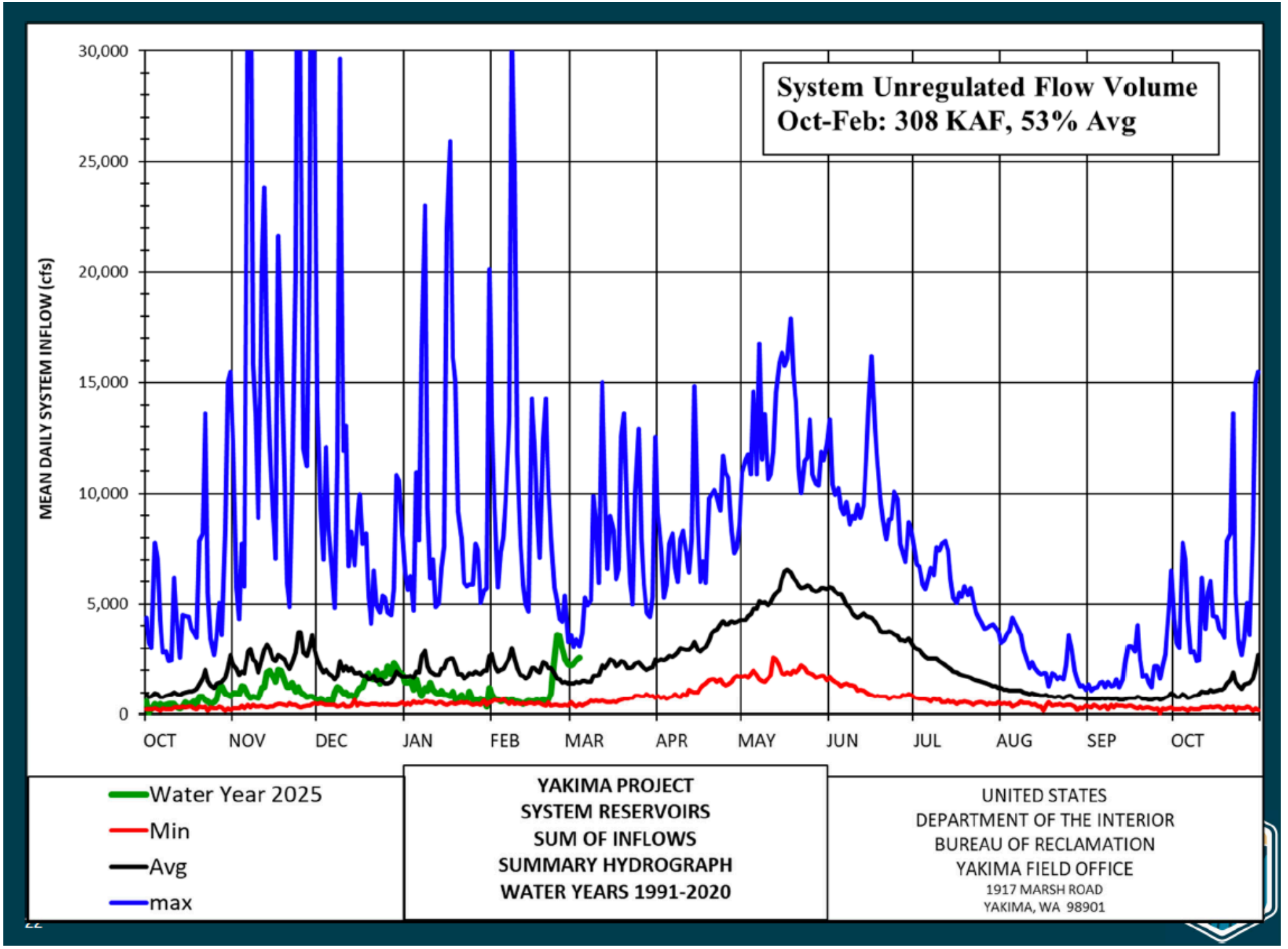
- February was cold & wet, early March has been mild & drier
- Runoff since October 1 has largely been below normal with pockets of near normal
- Precipitations forecasts for the next 10 days (and beyond) looks significantly wetter for most areas.
- Apr-Sep river forecasts have bumped up in many areas, yet still remain below normal especially for north-central, areas near the Cascade crest and Olympics

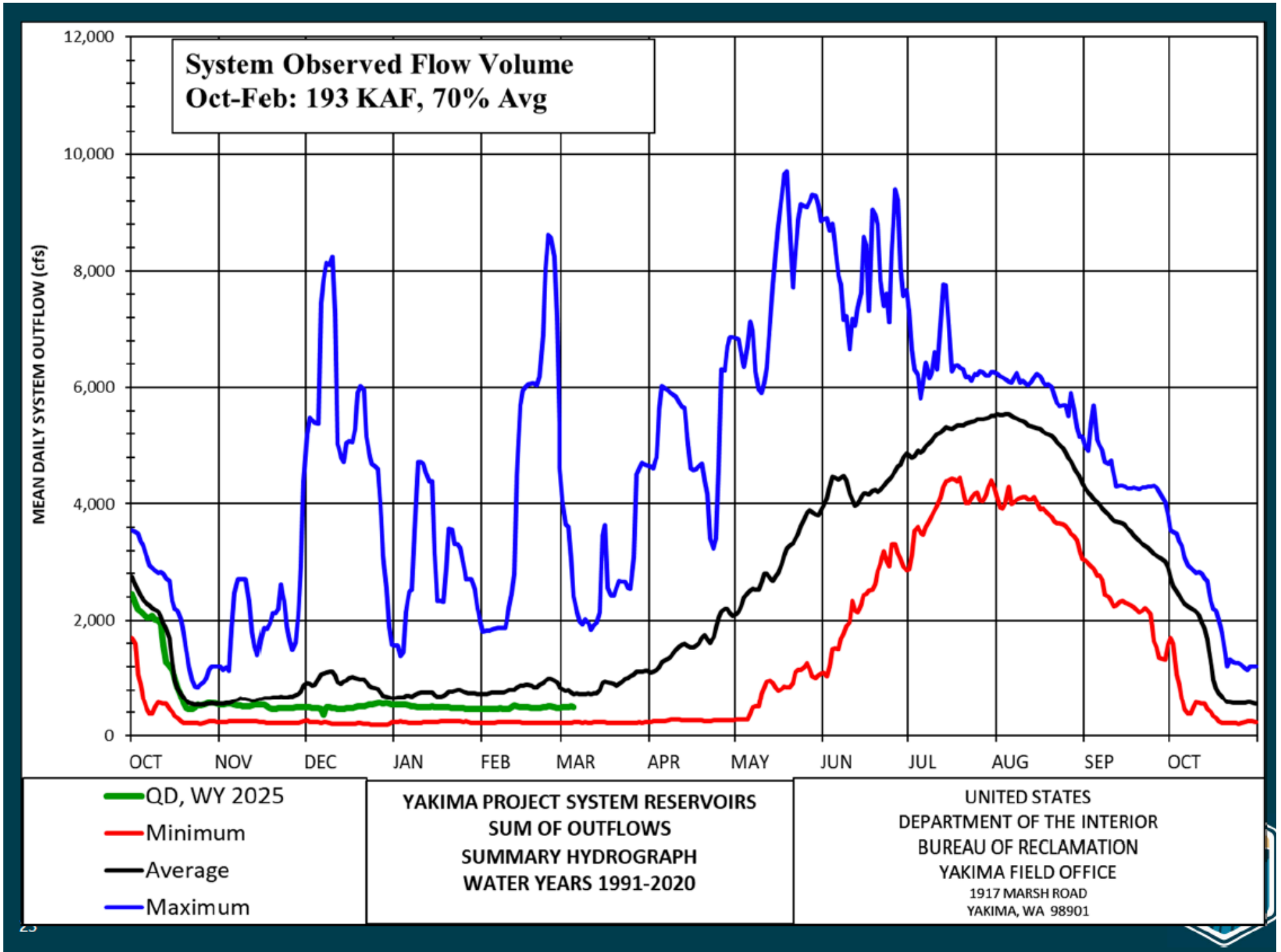
Yakima Water Supply

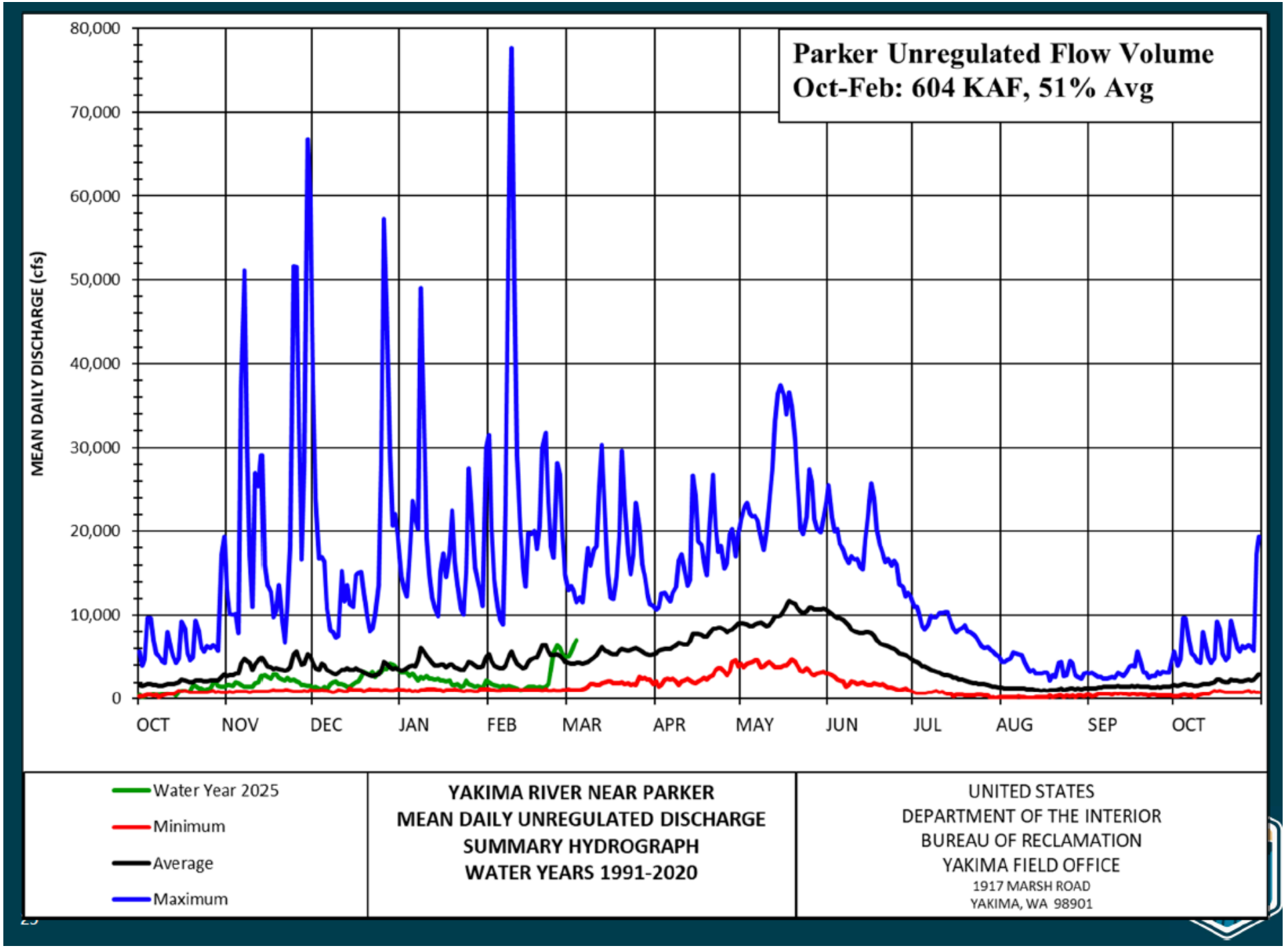

KYKM - Oct 2024 Through Sep 2025
Temperature (Deg F)
110
90
70
50
30
10
-10
-30
Precipitation (Inches)
8
7
6
5
4
3
2
1
6.50
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
Record Min
Record Max
Normal
Below Normal
Above Normal

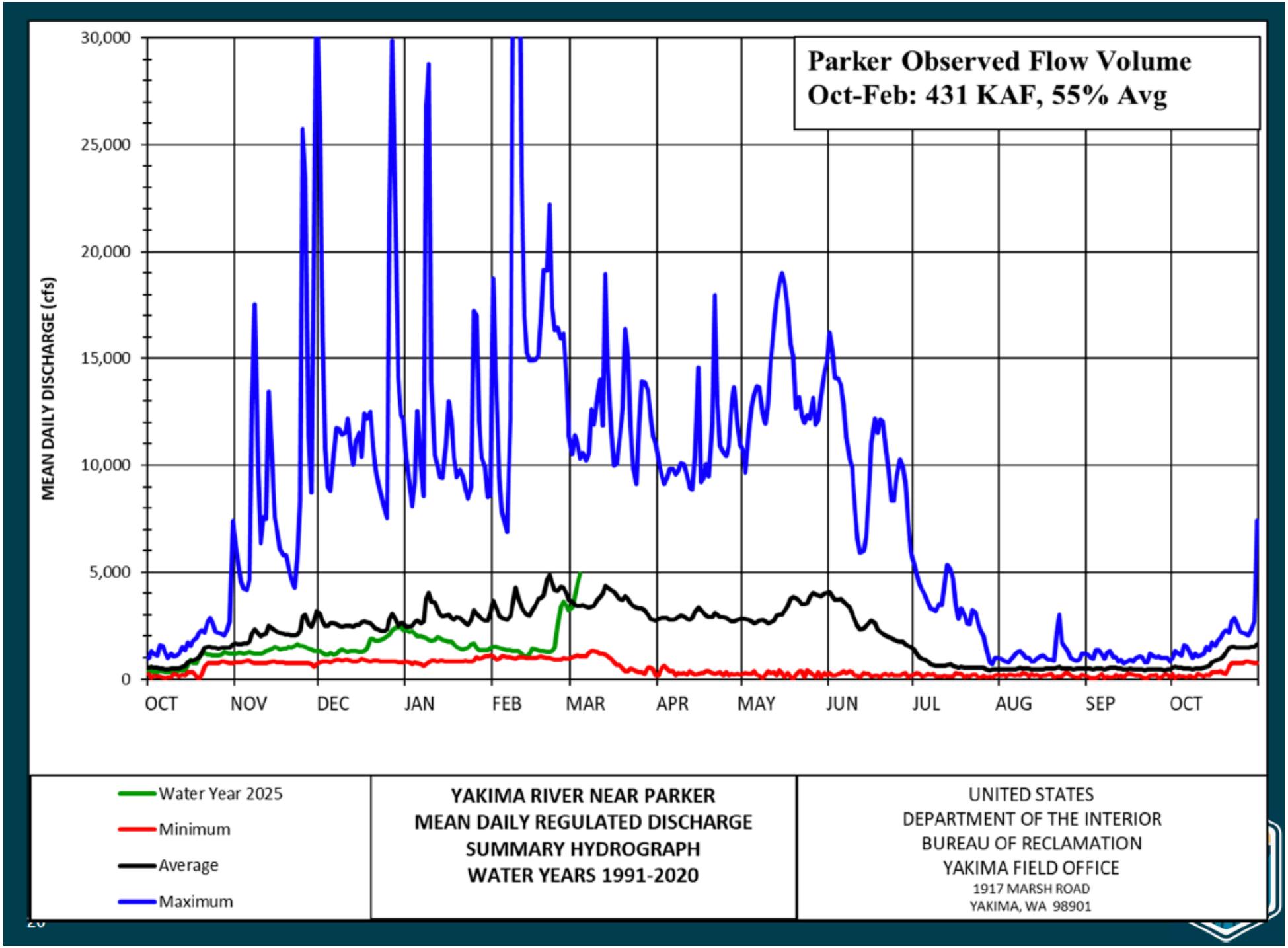

65.6%
71.1%
111.3%
34.9%
105.6%
Yakima Basin Precipitation
Oct-Feb: 123.48 in., 76.5% Avg
CUMULATIVE PRECIPITATION (inches)
400
350
300
250
200
150
100
50
0
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
0
11.5
40.47
82.3
96.2
123.48
Maximum
Average
Minimum
WY2024
WY 2025
YAKIMA BASIN
Combined Cumulative Precipitation
5 Reservoir Sites
WATER YEARS 1981-2010
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD

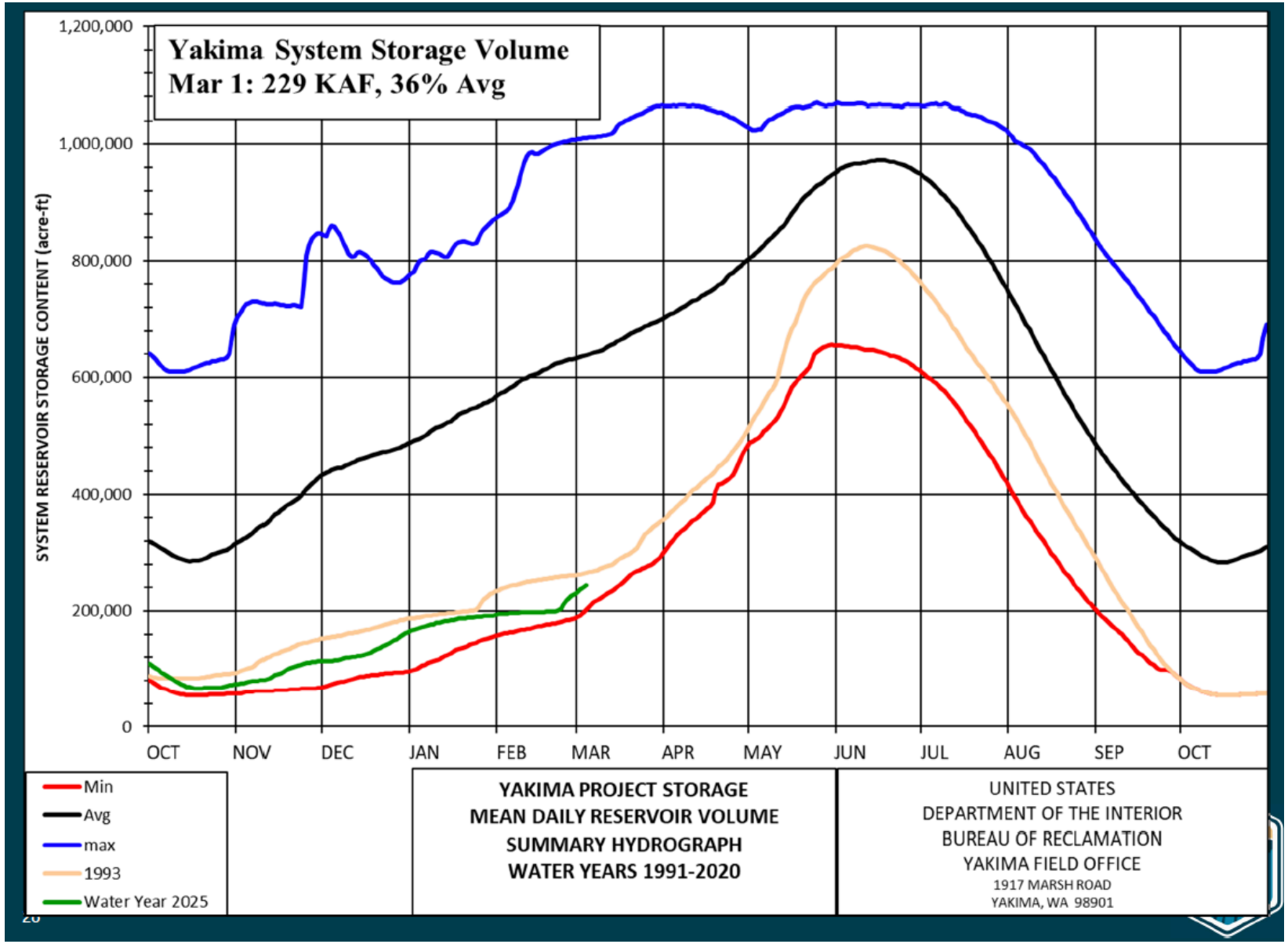

0%
66%
93%
82%
78%
Yakima Basin Snow Water Equivalent,
Mar 1: 134.2 in., 78% of Avg.
SNOW WATER EQUIVALENT (inches)
400
350
300
250
200
150
100
50
0.0
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep
134.2
111.3
78.1
24.5
0.0
NRCS SWE % AVG
USBR
Upper
Naches
Lower
1-NOV
1350*
160*
950*
1-DEC
66
130
172
269
1-JAN
93
121
128
159
1-FEB
82
87
97
87
1-MAR
78
87
99
83
1-APR
1-MAY
1-JUN
1-JUL
Water Year 2025
Average
Low Year (2005)
High Year (1999)
YAKIMA BASIN WATER YEAR
SNOW WATER EQUIVALENT
Average based on greater of 1981-2010 or POR-1995
Totals derived from 8 Yakima forecast sites
Corral, Stampede, Olallie, Fish, Bumping, Domerie, & Tunnel Avenue
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901

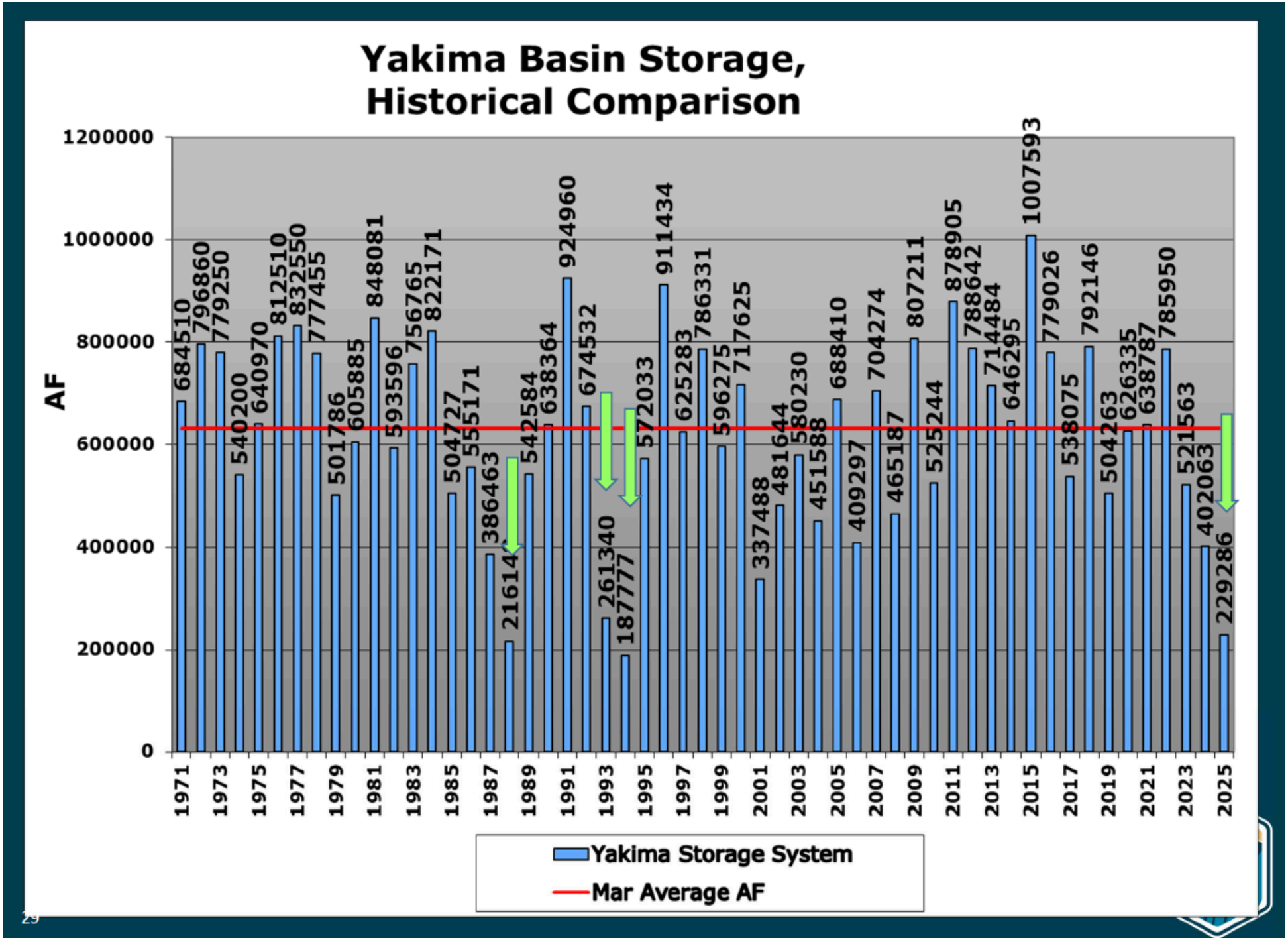

System Unregulated Flow Volume
Oct-Feb: 308 KAF, 53% Avg
MEAN DAILY SYSTEM INFLOW (cfs)
30,000
25,000
20,000
15,000
10,000
5,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
Water Year 2025
Min
Avg
max
YAKIMA PROJECT
SYSTEM RESERVOIRS
SUM OF INFLOWS
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901


System Observed Flow Volume
Oct-Feb: 193 KAF, 70% Avg
MEAN DAILY SYSTEM OUTFLOW (cfs)
12,000
10,000
8,000
6,000
4,000
2,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
QD, WY 2025
Minimum
Average
Maximum
YAKIMA PROJECT SYSTEM RESERVOIRS
SUM OF OUTFLOWS
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901


Parker Unregulated Flow Volume
Oct-Feb: 604 KAF, 51% Avg
MEAN DAILY DISCHARGE (cfs)
80,000
70,000
60,000
50,000
40,000
30,000
20,000
10,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
Water Year 2025
Minimum
Average
Maximum
YAKIMA RIVER NEAR PARKER
MEAN DAILY UNREGULATED DISCHARGE
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901


Parker Observed Flow Volume
Oct-Feb: 431 KAF, 55% Avg
MEAN DAILY DISCHARGE (cfs)
30,000
25,000
20,000
15,000
10,000
5,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
Water Year 2025
Minimum
Average
Maximum
YAKIMA RIVER NEAR PARKER
MEAN DAILY REGULATED DISCHARGE
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901


Yakima System Storage Volume
Mar 1: 229 KAF, 36% Avg
SYSTEM RESERVOIR STORAGE CONTENT (acre-ft)
1,200,000
1,000,000
800,000
600,000
400,000
200,000
0
OCT
NOV
DEC
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
Min
Avg
max
1993
Water Year 2025
YAKIMA PROJECT STORAGE
MEAN DAILY RESERVOIR VOLUME
SUMMARY HYDROGRAPH
WATER YEARS 1991-2020
UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
YAKIMA FIELD OFFICE
1917 MARSH ROAD
YAKIMA, WA 98901


Yakima Basin Storage,
Historical Comparison
AF
1200000
1000000
800000
600000
400000
200000
0
684510
796860
779250
540200
640970
812510
832550
777455
501786
605885
848081
593596
756765
822171
504727
555171
386463
216140
542584
638364
924960
674532
261340
187777
572033
911434
625283
786331
596275
717625
337488
481644
580230
451588
688410
409297
704274
465187
807211
525244
878905
788642
714484
646295
1007593
779026
538075
792146
504263
626335
638787
785950
521563
402063
229286
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021
2023
2025
Yakima Storage System
Mar Average AF

Yakima Subbasin forecasts, WY25

Yakima Basin Forecast Mar-Jul 2025 (KAF) (% of 30-year Ave)						
3/1/2025	Low	Composite	High	Low	Composite	High
PARW	1,381	1,734	2,119	68%	85%	104%
KEE	95	117	152	69%	84%	110%
KAC	86	105	136	70%	86%	111%
CLE	309	369	474	72%	86%	110%
BUM	95	125	171	74%	97%	132%
RIM	172	207	257	79%	95%	118%
NACW	631	762	963	75%	90%	114%

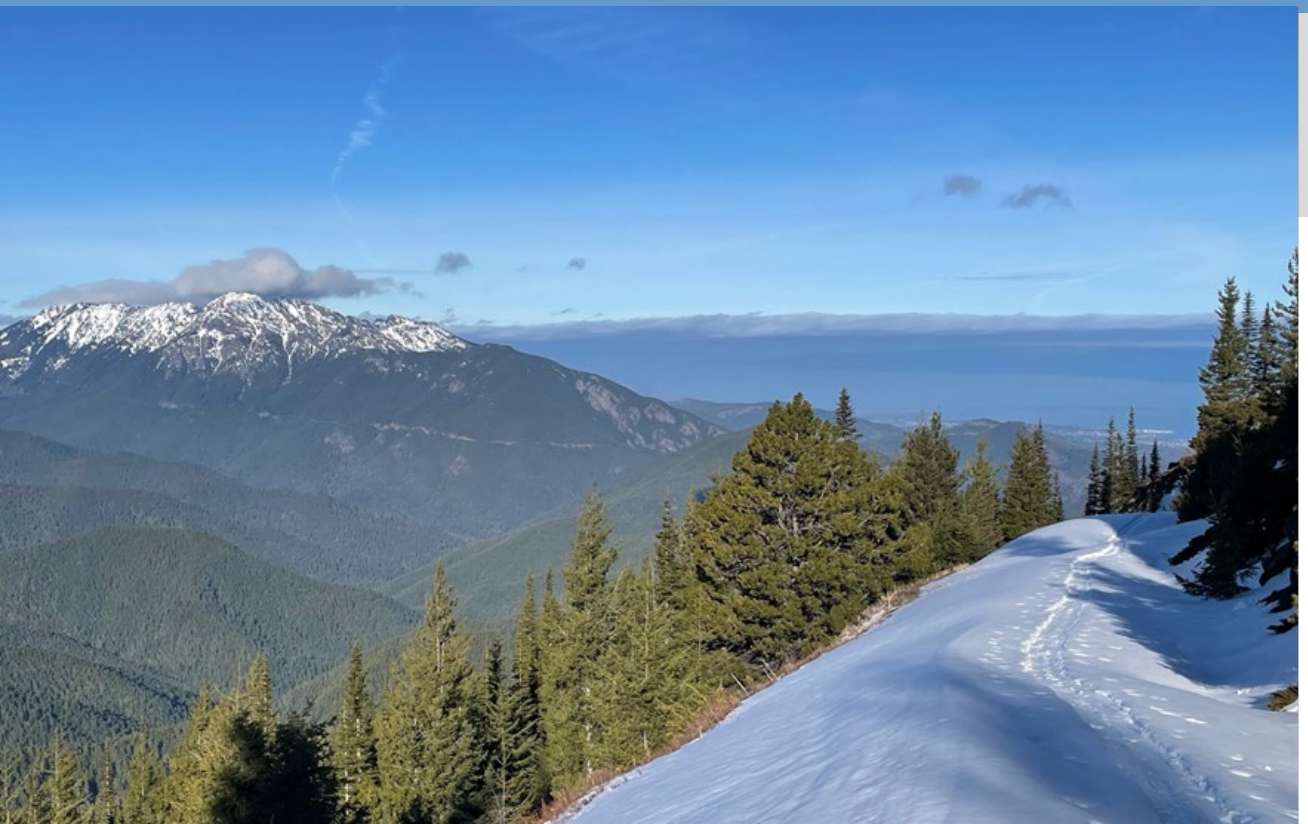
March's April 1, 2025 TWSA ESTIMATE April 1 - September 30				
Parameter*	**+/-/=**	**Low**	**Adopted**	**High**
Apr 1-Sep 30 Natural Flow at Parker est.	+	1168	1450	1832
Return Flow Estimate, est	+	225	270	300
April 1, Reservoir Content, est	+	265	304	381
TWSA	=	**1658**	**2025**	**2513**
SEP 30 EST RESERVOIR CONTENT	-	76	76	76
FLOW OVER SUNNYSIDE DAM	-	250	274	390
TWSA FOR IRRIGATION	=	1332	1674	2047
NONPRORATABLE ENTITLEMENT	-	1070	1070	1070
YRPW-KID release		11	9	5
REMAINING TWSA	=	251	595	972
PRORATABLE ENTITLEMENT		1239	1239	1239
% RATIO= REMAINING TWSA/PRORATABLE ENTITLEMENT		**20%**	**48%**	**78%**
TITLE XII FLOW TARGET, cfs	**April**	**300**	**300**	**300**
Added flow available, cfs *#*		116	125	145
Non-storeable Portion of added flow, cfs		11	11	11
Storable portion of added flow, cfs		105	114	134
*Values are in 1,000 ac-ft unless otherwise specified.				
# State & YRBWEP Trust, Acquisition, & Conservation additions to Title XII flow range from 116 to 145 cfs.				

USDA United States Department of Agriculture

Natural Resources Conservation Service

USDA Natural Resources Conservation Service

Snow Survey and Water Supply Forecasting Program



Washington
WSAC

Mar. 13, 2025

Matt Warbritton
Supervisory Hydrologist
USDA NRCS SSWSF
Portland Data Collection Office
matt.warbritton@usda.gov
503-307-2829

USDA United States Department of Agriculture

Natural Resources Conservation Service

Snowpack Conditions

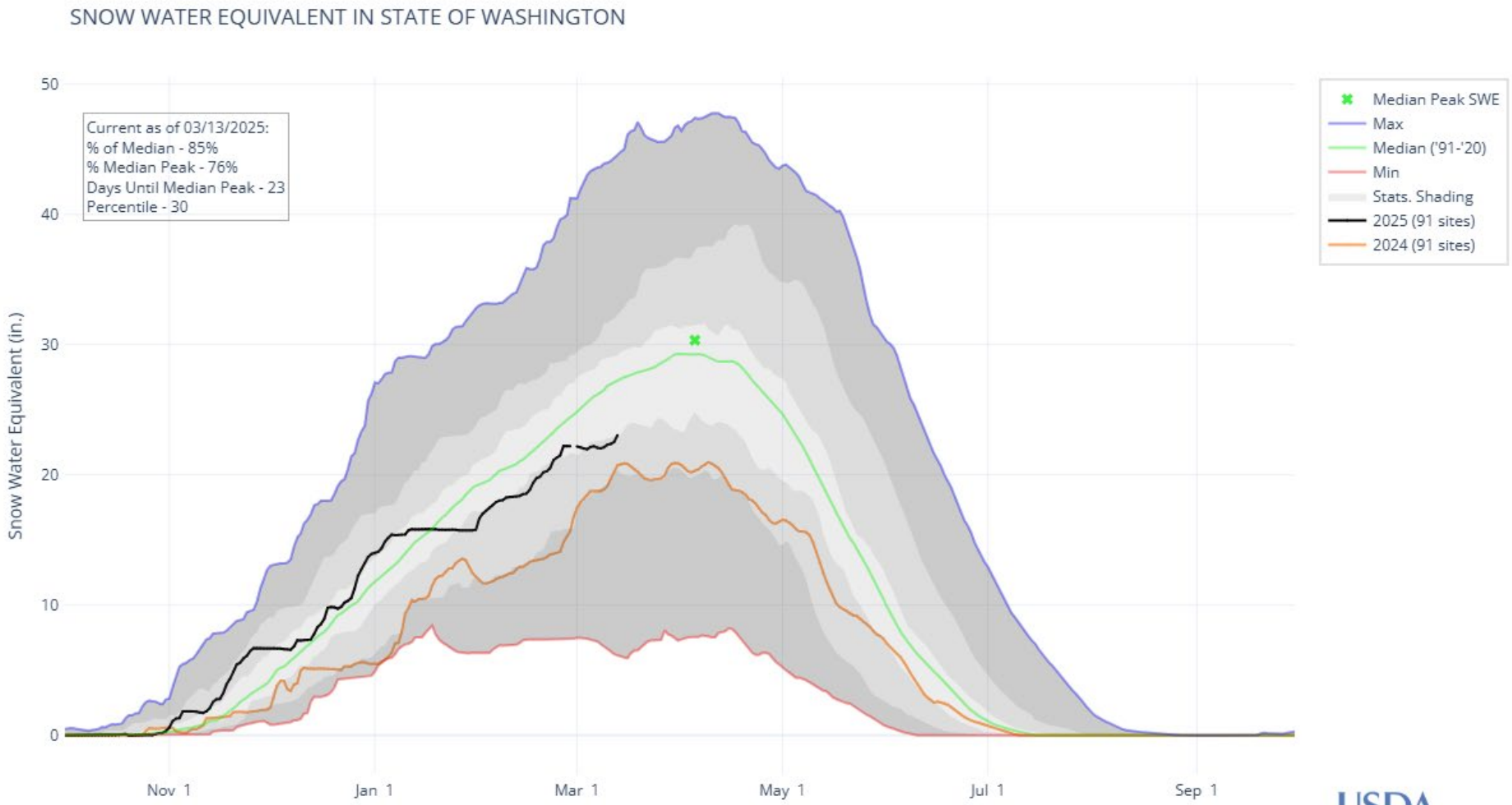
Statewide Snowpack

Profile for Snow Water Equivalent

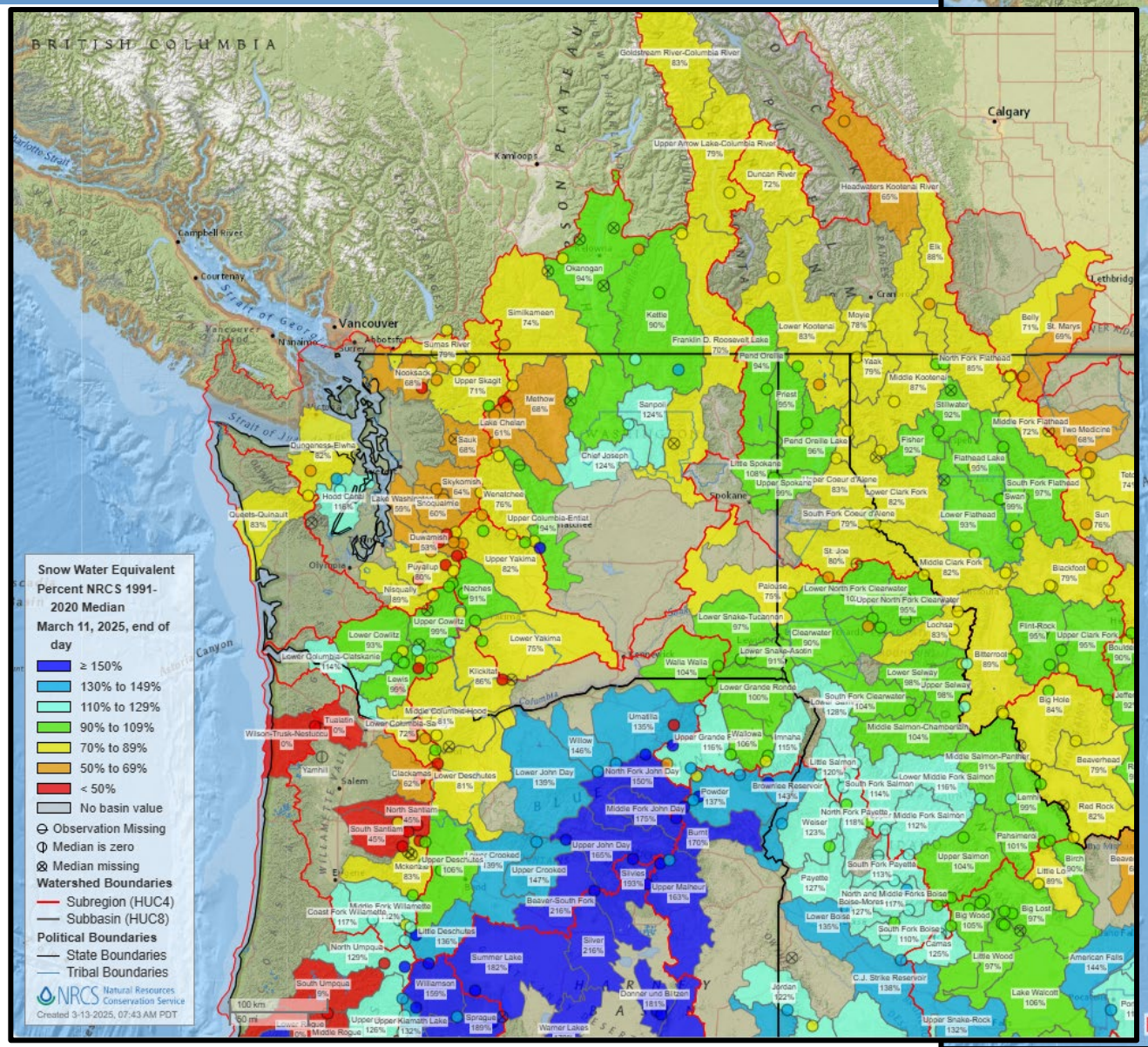
United States Department of Agriculture
Natural Resources Conservation Service

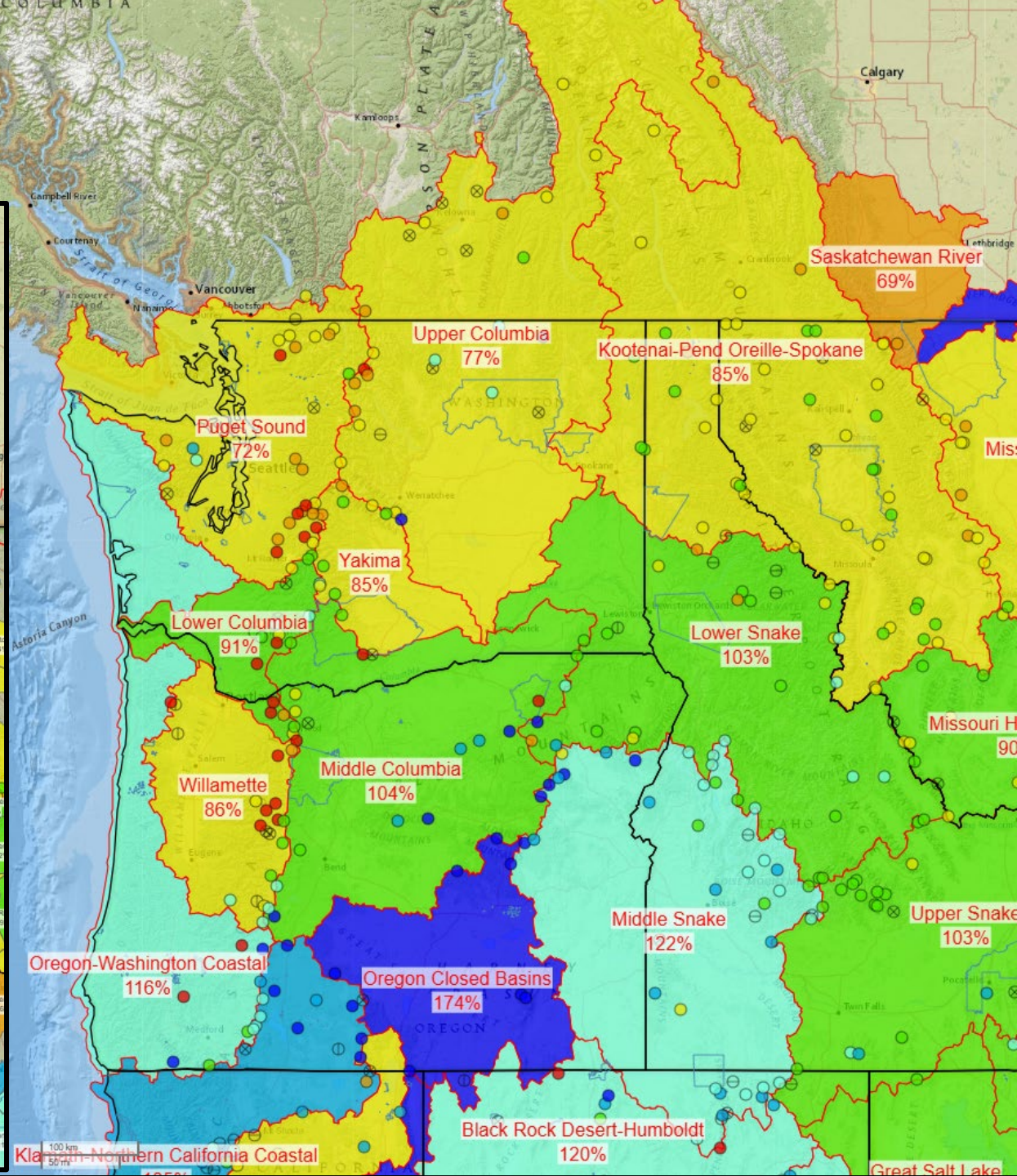
Statewide Snowpack:
85% of Normal
76% of median peak

Snowpack Percentile: 30



Columbia Basin Snowpack Conditions



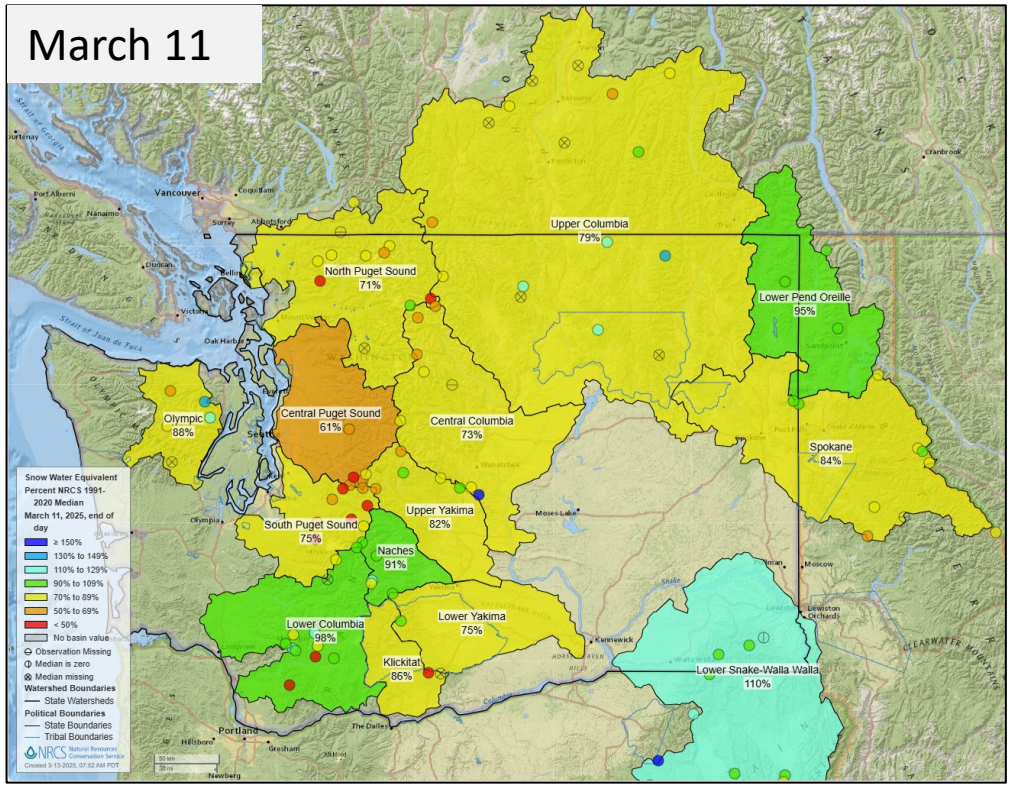


Snowpack in Washington

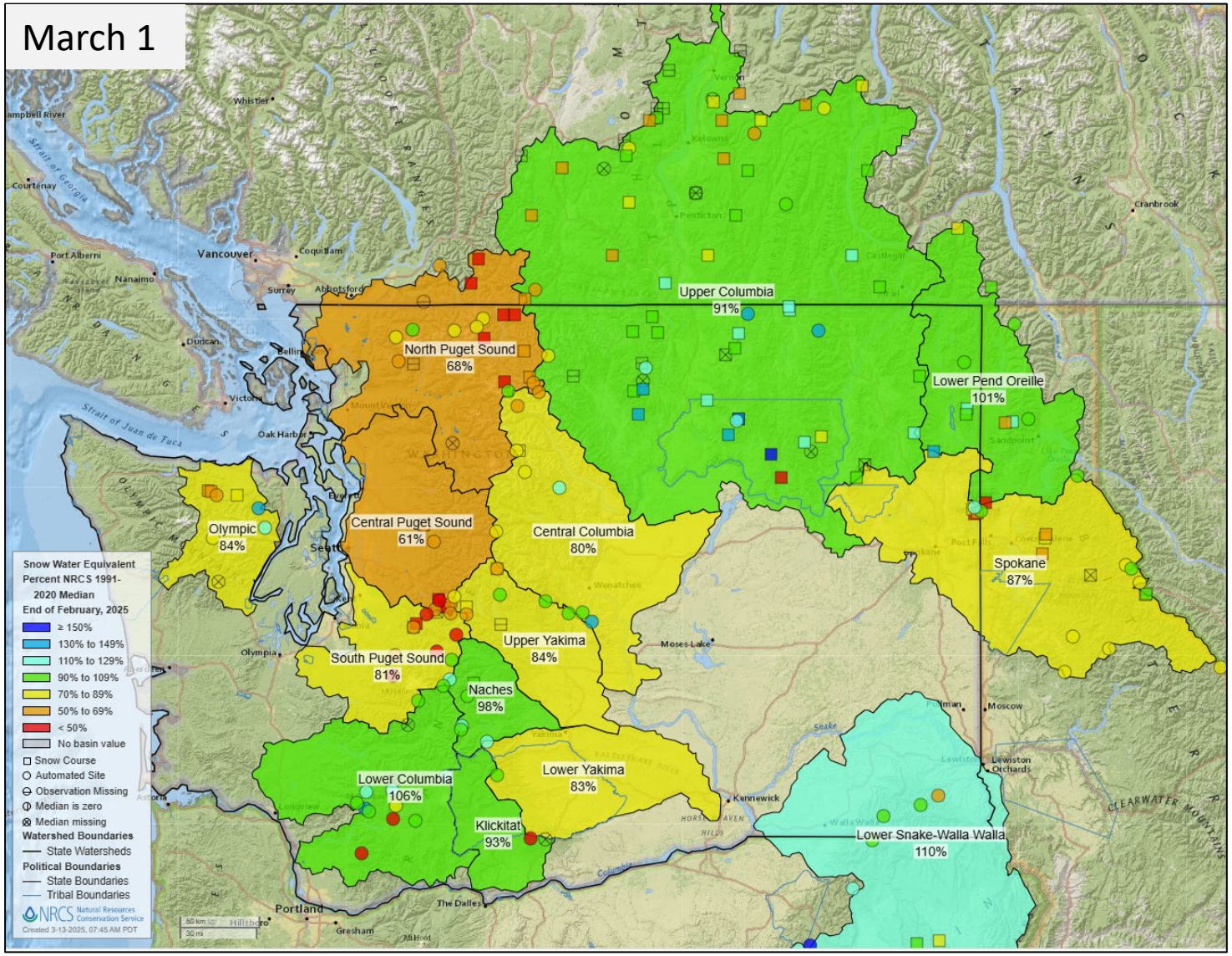
Basin & Site Map

United States Department of Agriculture
Natural Resources Conservation Service

March 11



March 1

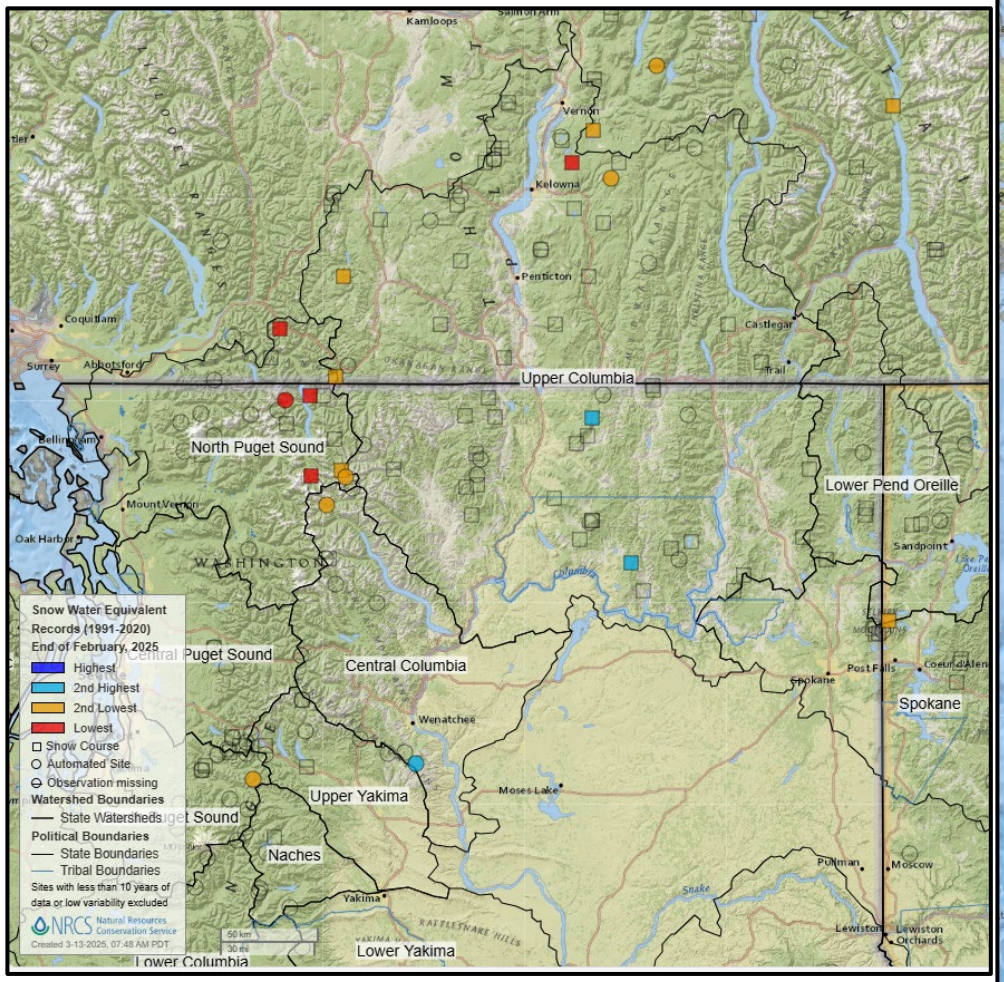


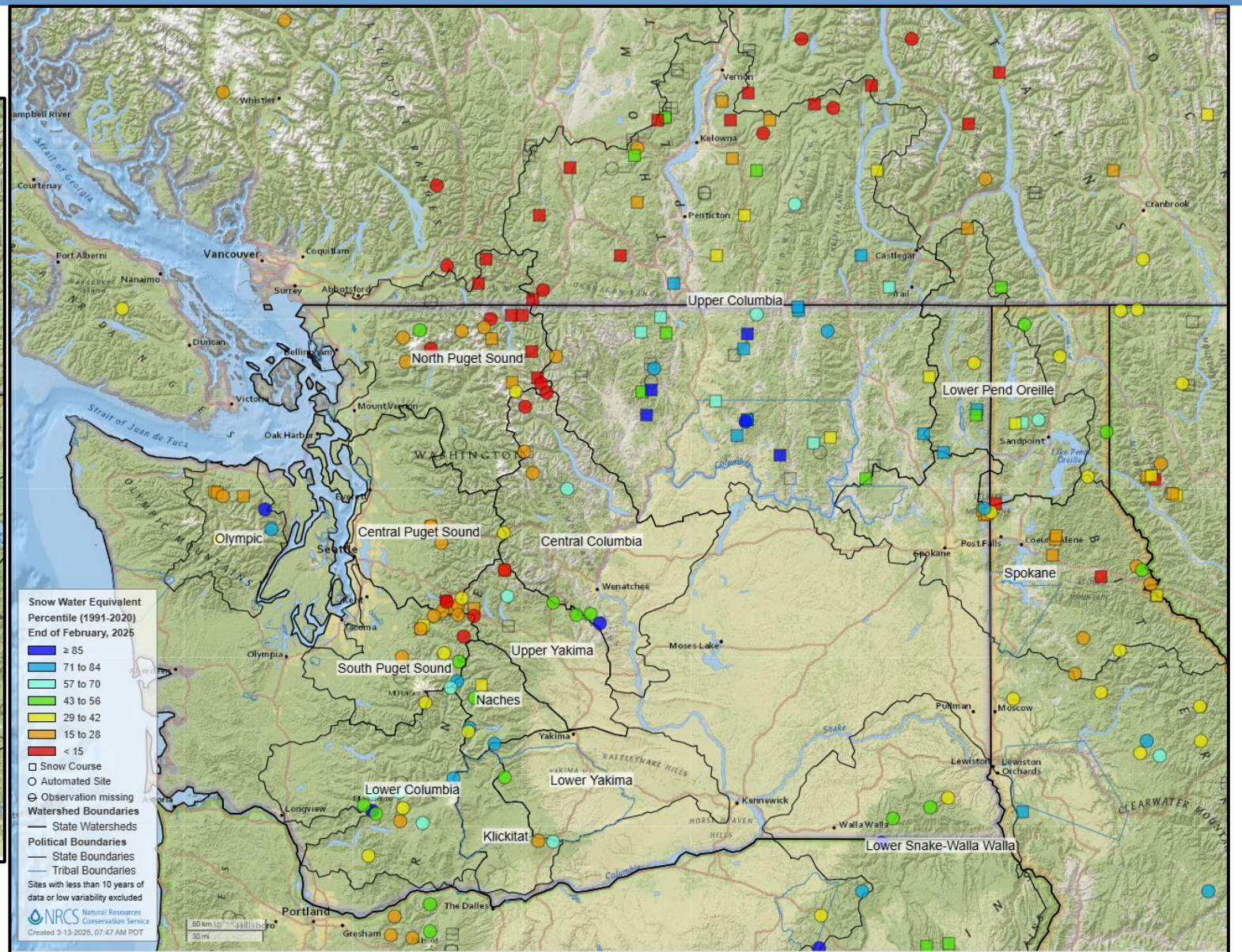
Snowpack in Washington – March 1

Basin & Site Map

USDA United States Department of Agriculture

Natural Resources Conservation Service





USDA United States Department of Agriculture

Natural Resources Conservation Service

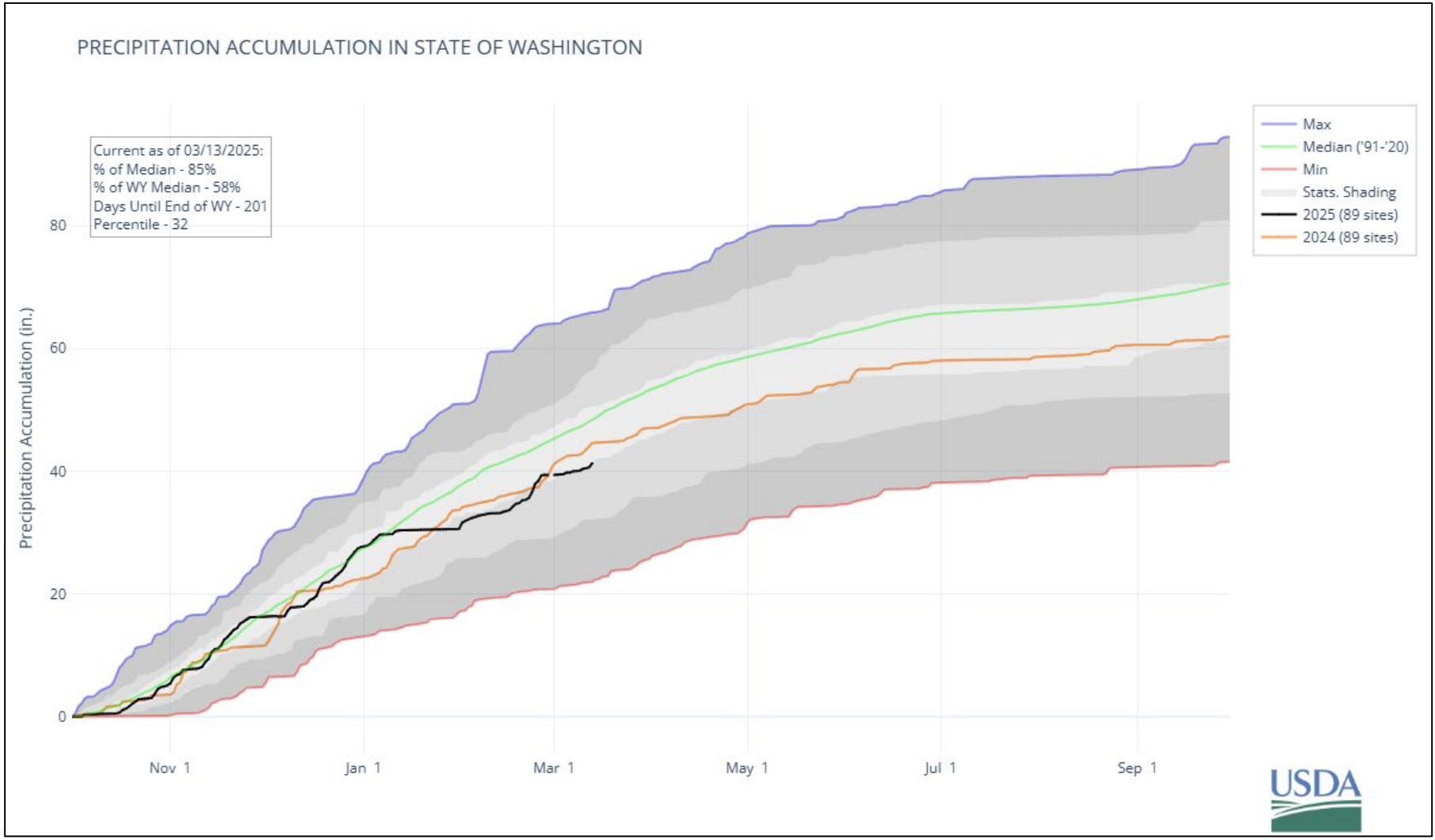
Precipitation Conditions

Statewide WYTD Precipitation

United States Department of Agriculture
Natural Resources Conservation Service

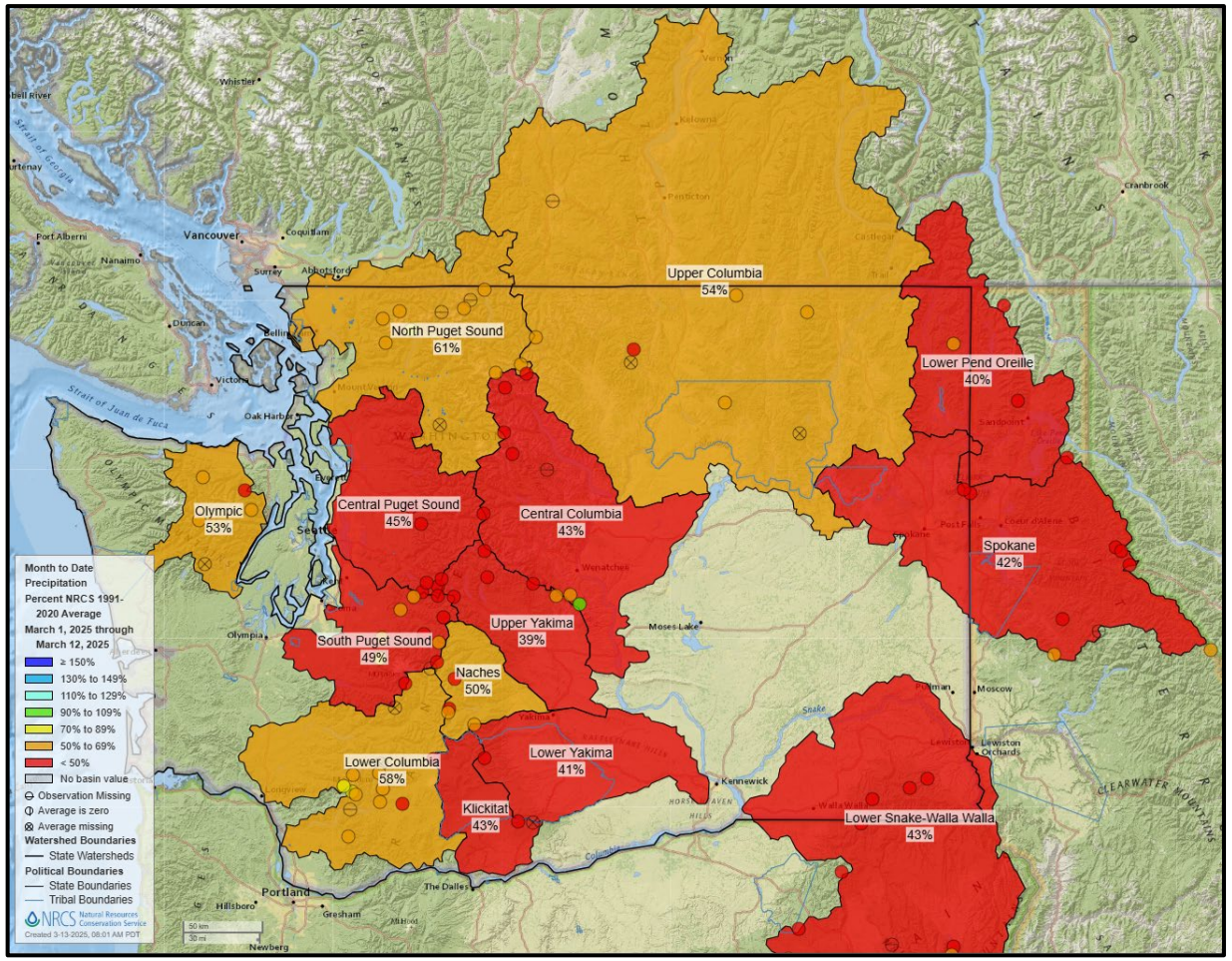
Statewide WYTD Precipitation:
85% of normal

32 – percentile (normal period)



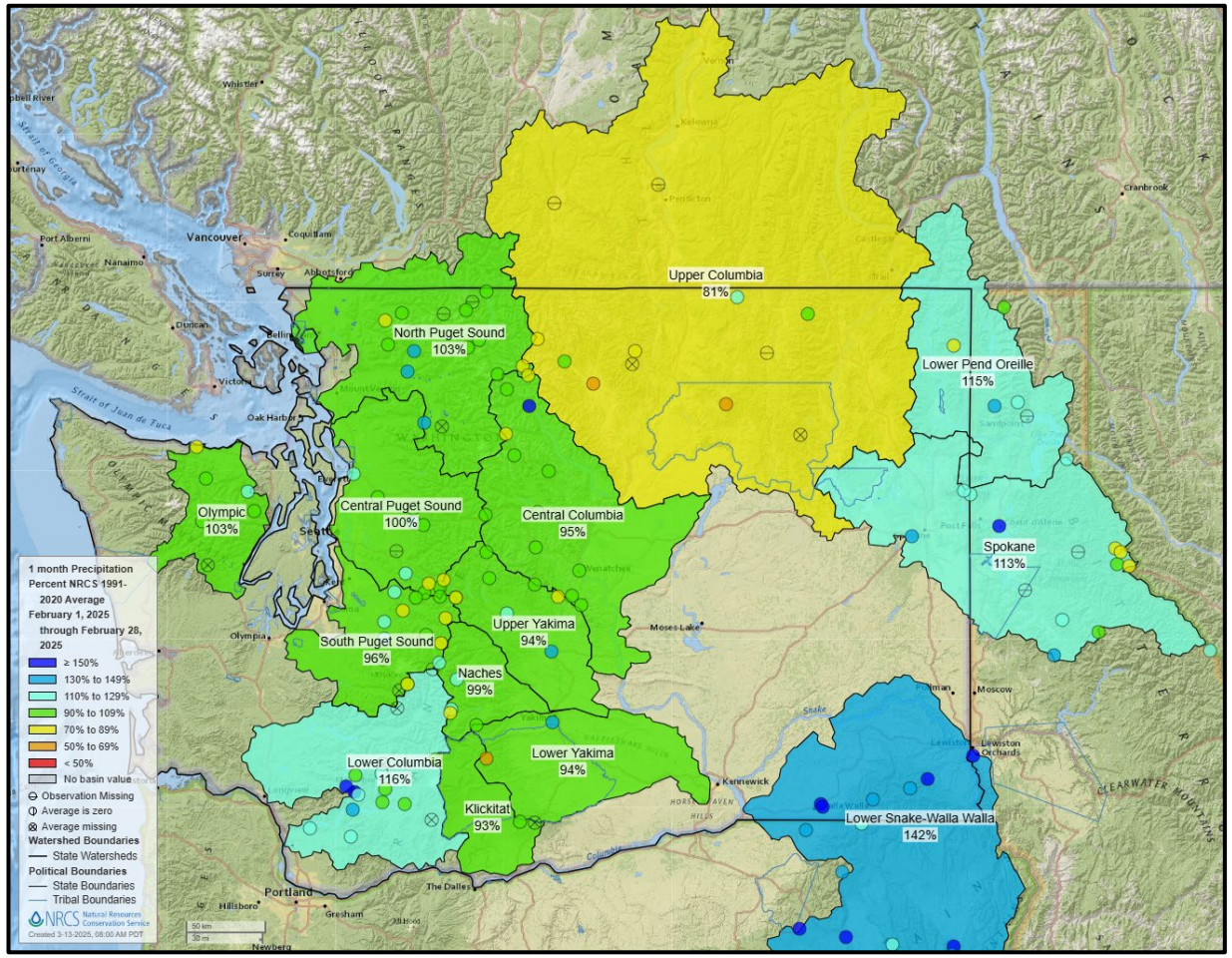
Month-to-Date Precipitation

United States Department of Agriculture
Natural Resources Conservation Service



Month-to-Date

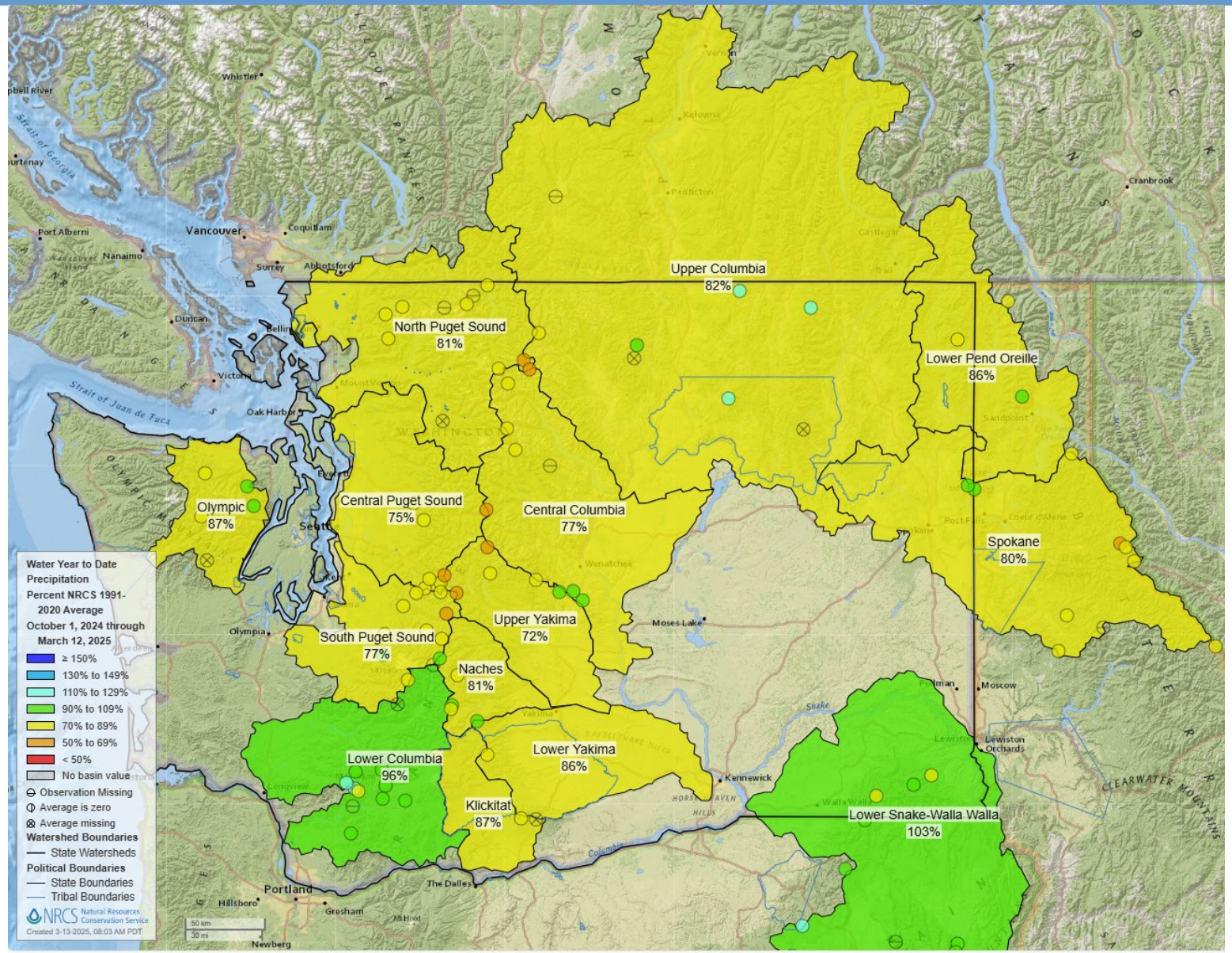
February



WYTD Precipitation – Site Map

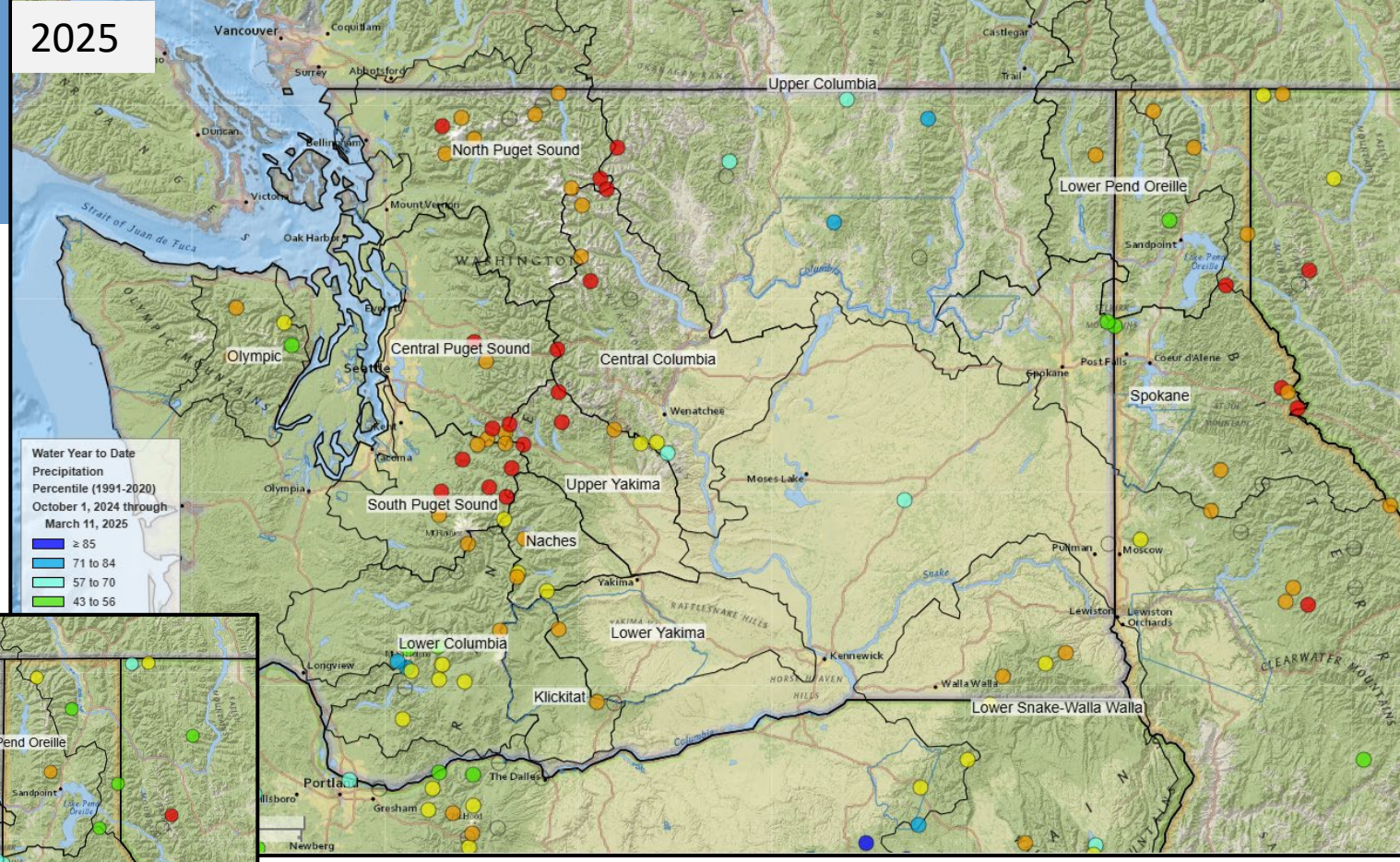
Percent of Normal

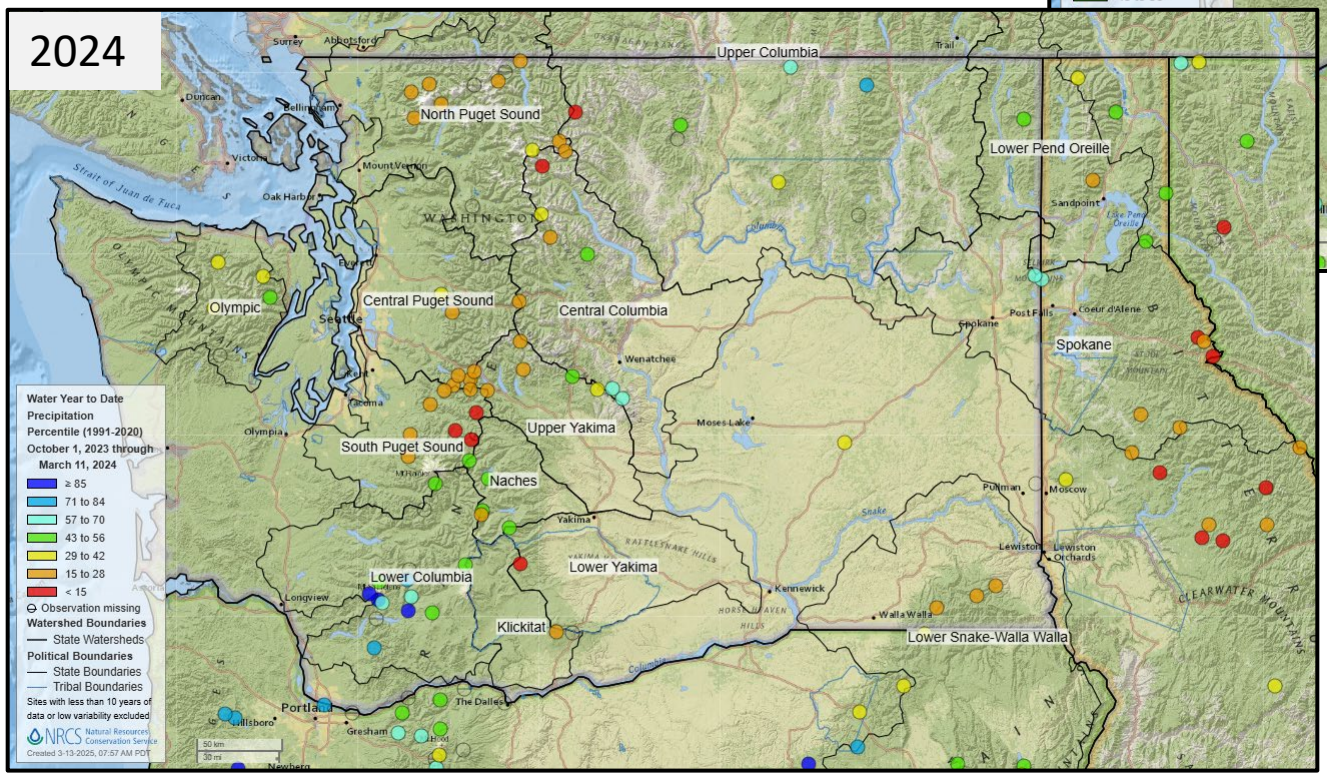
United States Department of Agriculture
Natural Resources Conservation Service



WYTD Precipitation – Site Map

Percentile

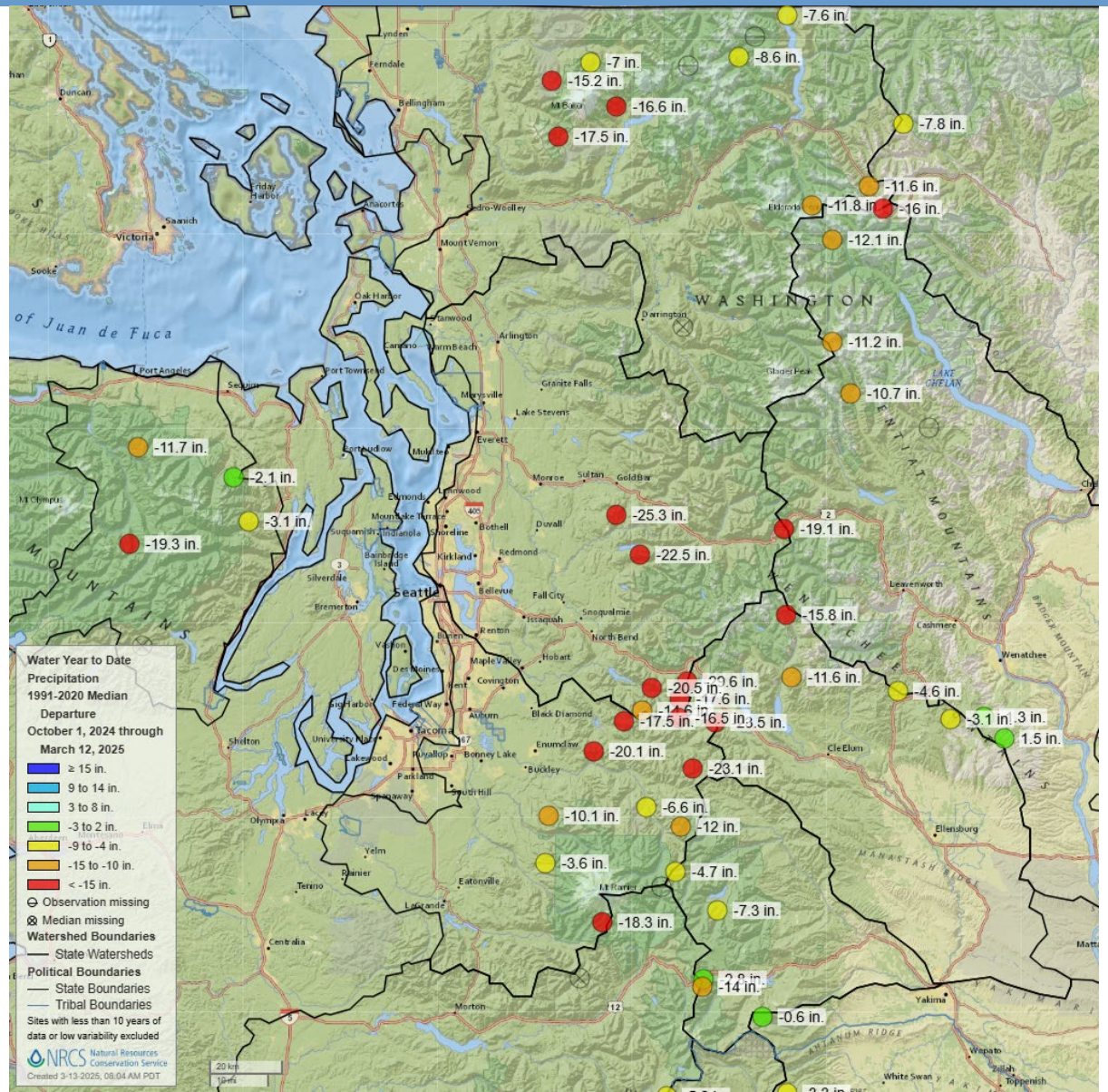




Catching Up to Normal WYTD Precipitation

Normal (median) Departure

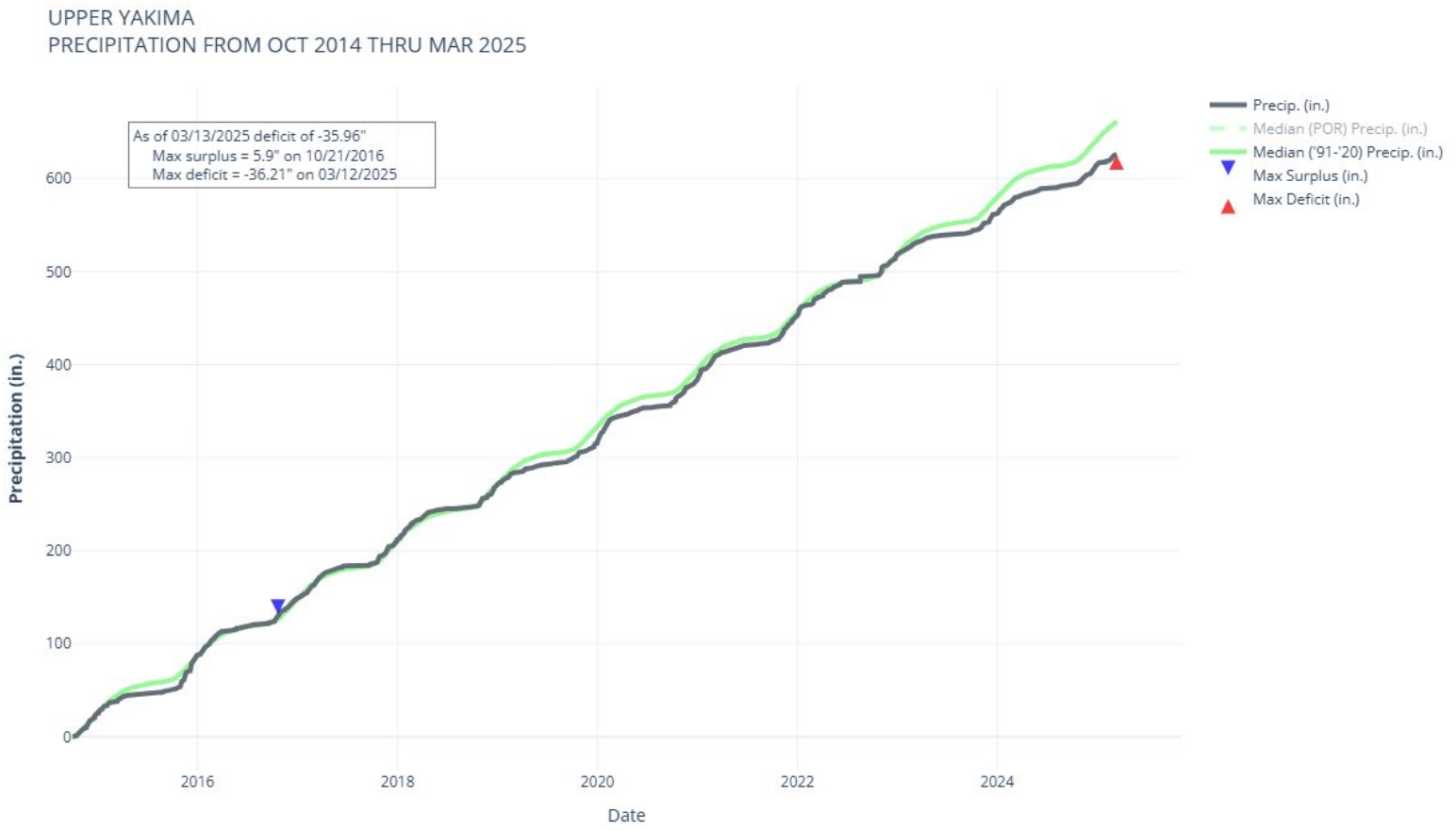
United States Department of Agriculture
Natural Resources Conservation Service

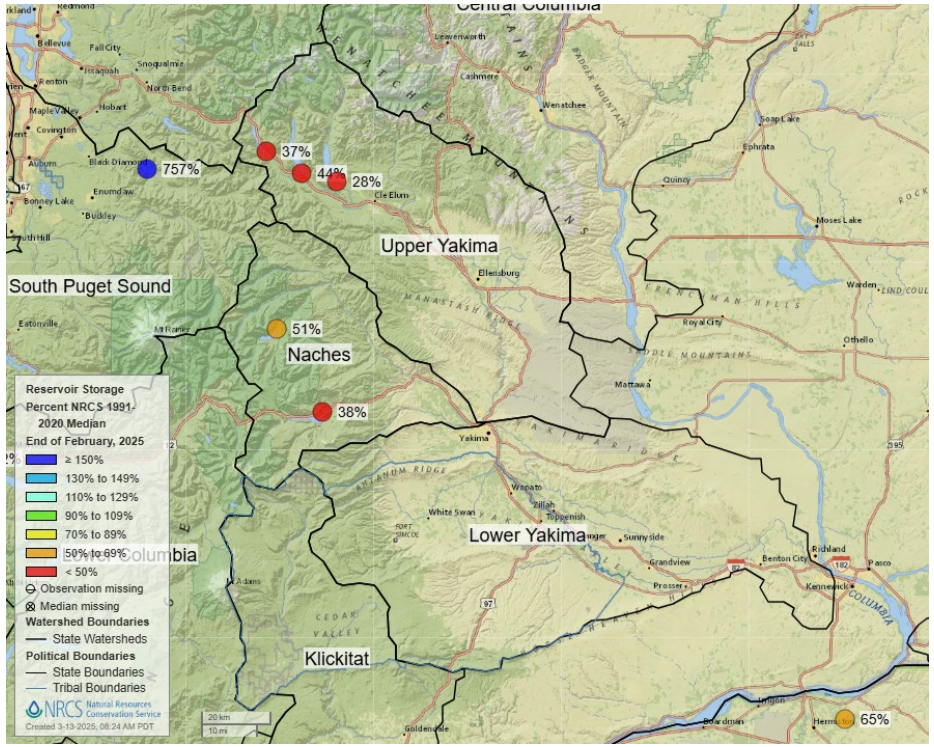


Compounding Precipitation Deficits: Yakima Basin

Last decade

United States Department of Agriculture
Natural Resources Conservation Service

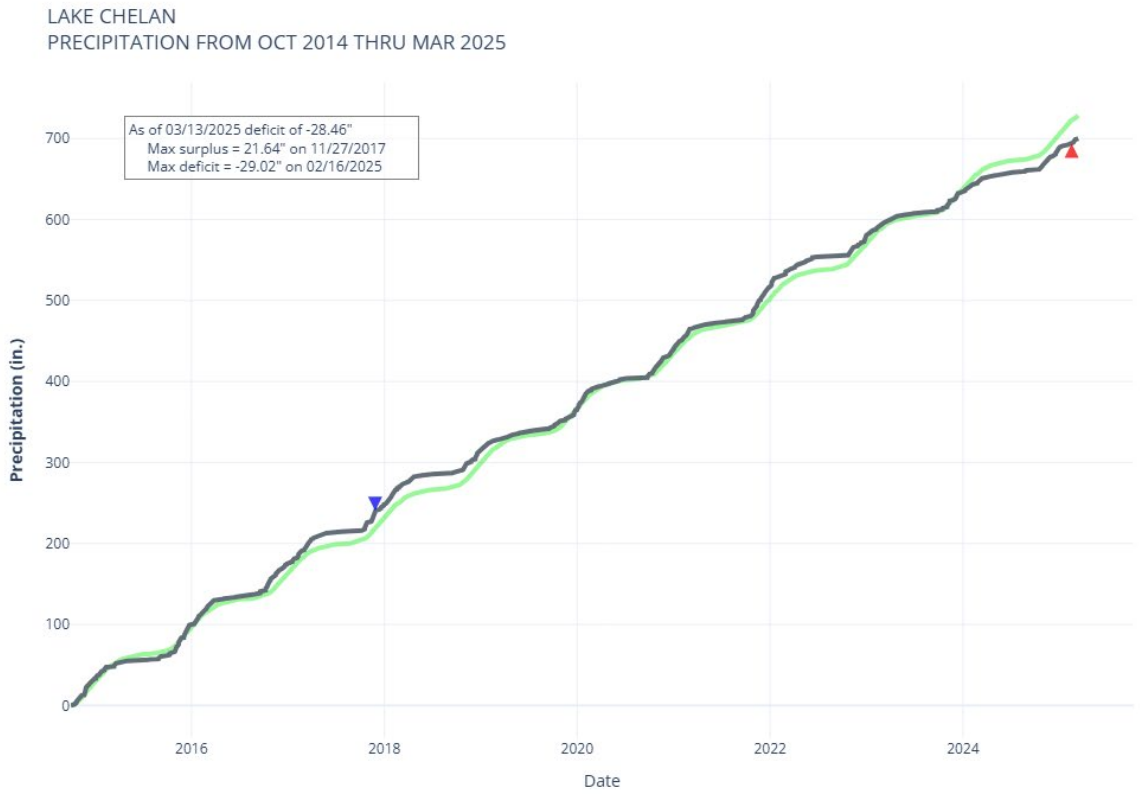


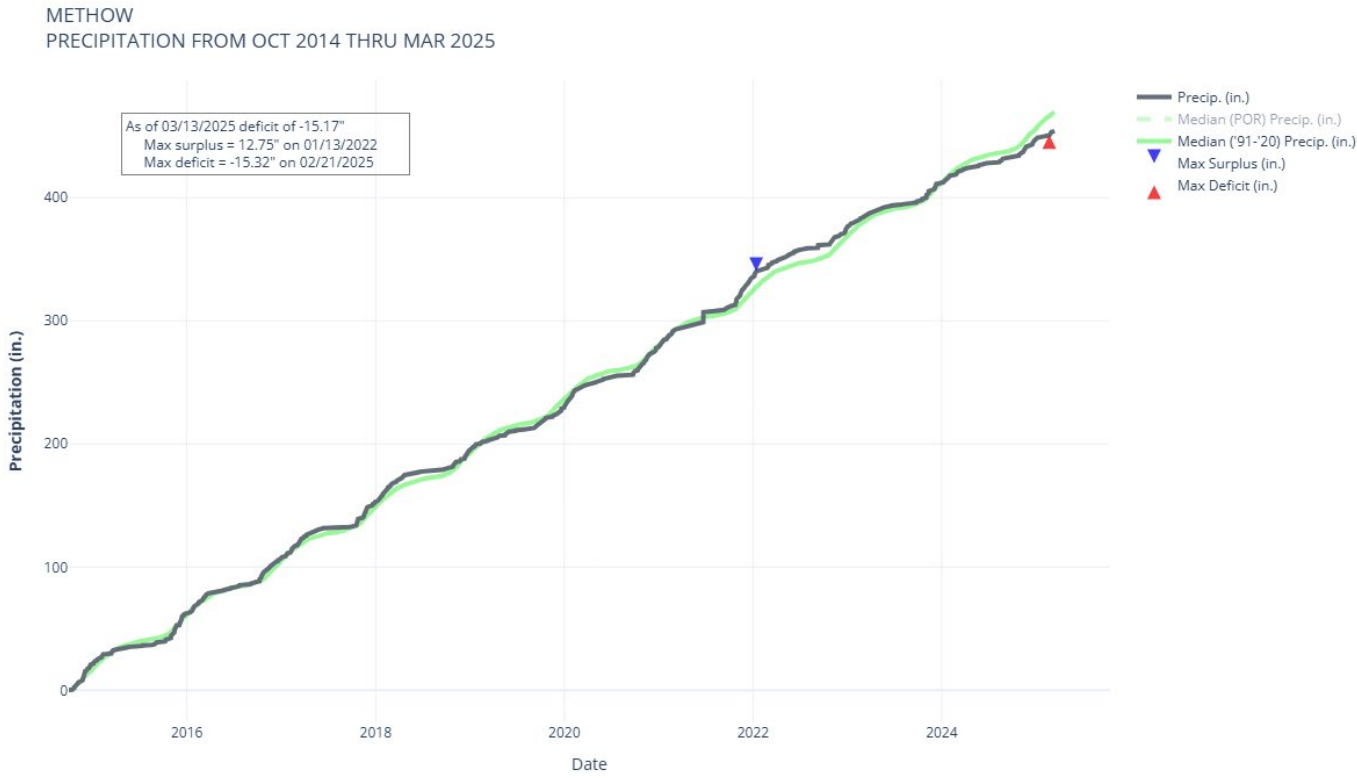


Compounding Precipitation Deficits: Methow & Chelan

Last decade

USDA United States Department of Agriculture
Natural Resources Conservation Service

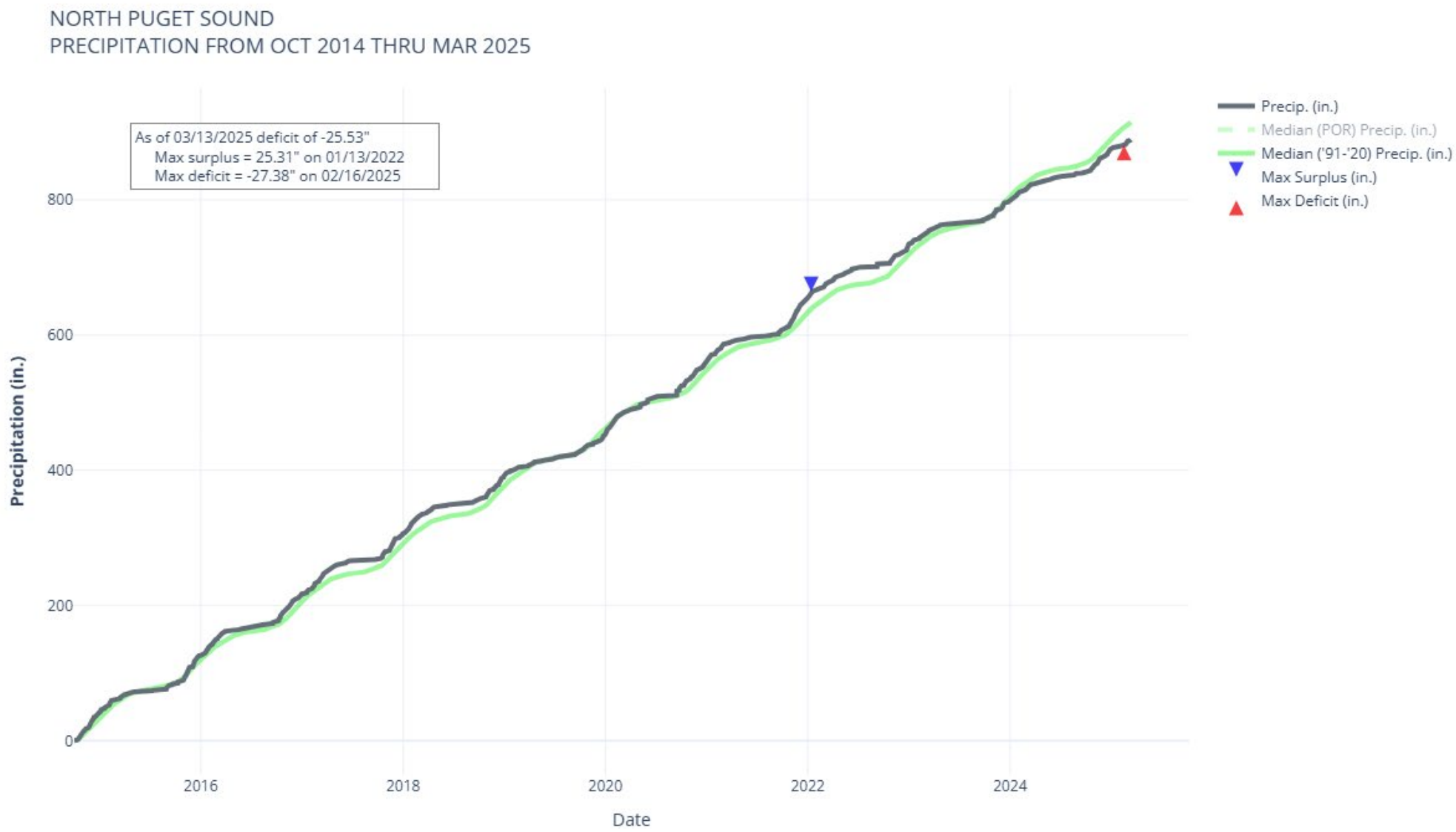




Compounding Precipitation Deficits: North Puget Sound

Last decade

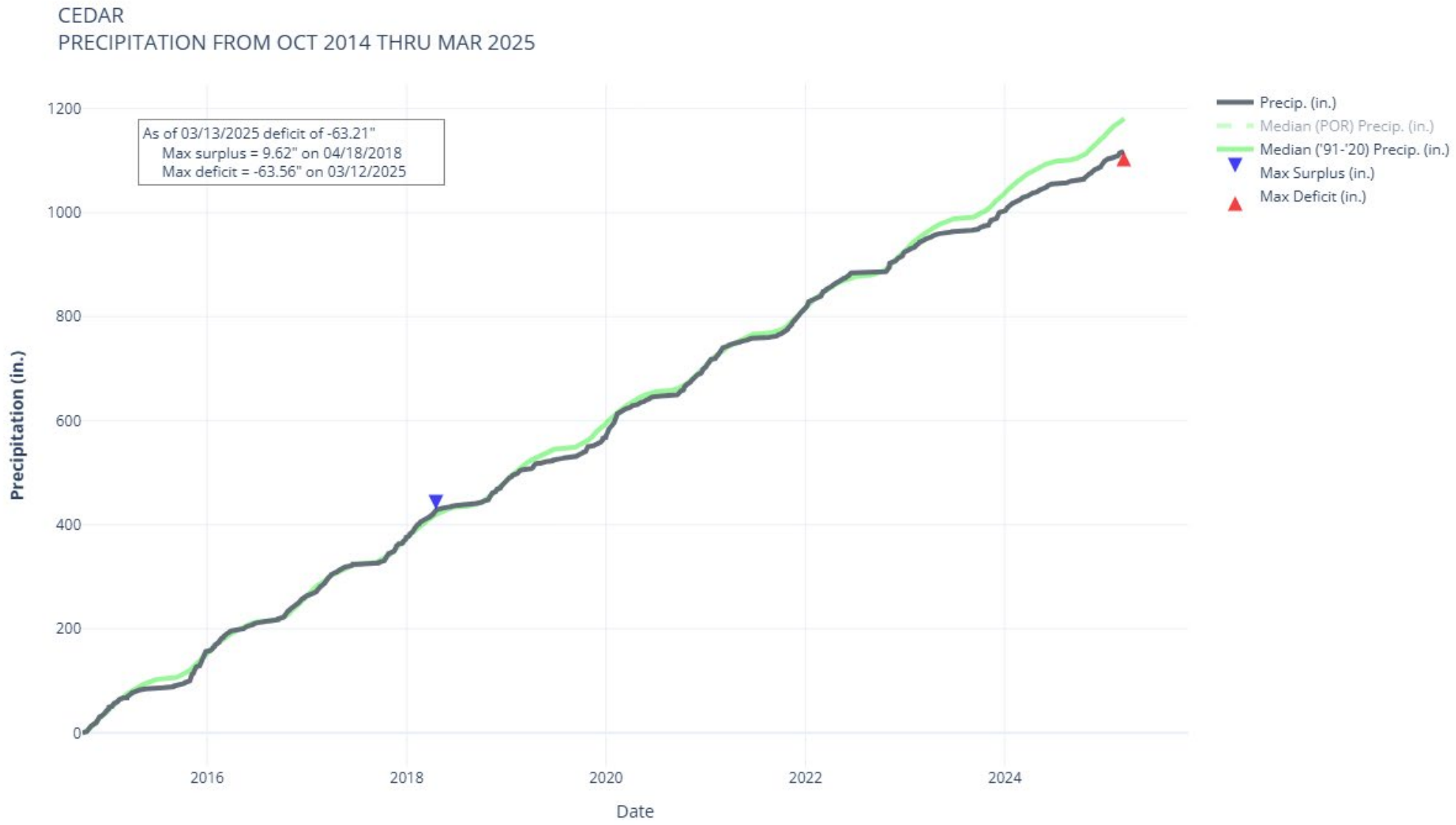
USDA United States Department of Agriculture
Natural Resources Conservation Service



Compounding Precipitation Deficits: Cedar Basin

Last decade

United States Department of Agriculture
Natural Resources Conservation Service



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Soil Moisture

Soil Moisture

NASA GRACE and SPoRT-LiS

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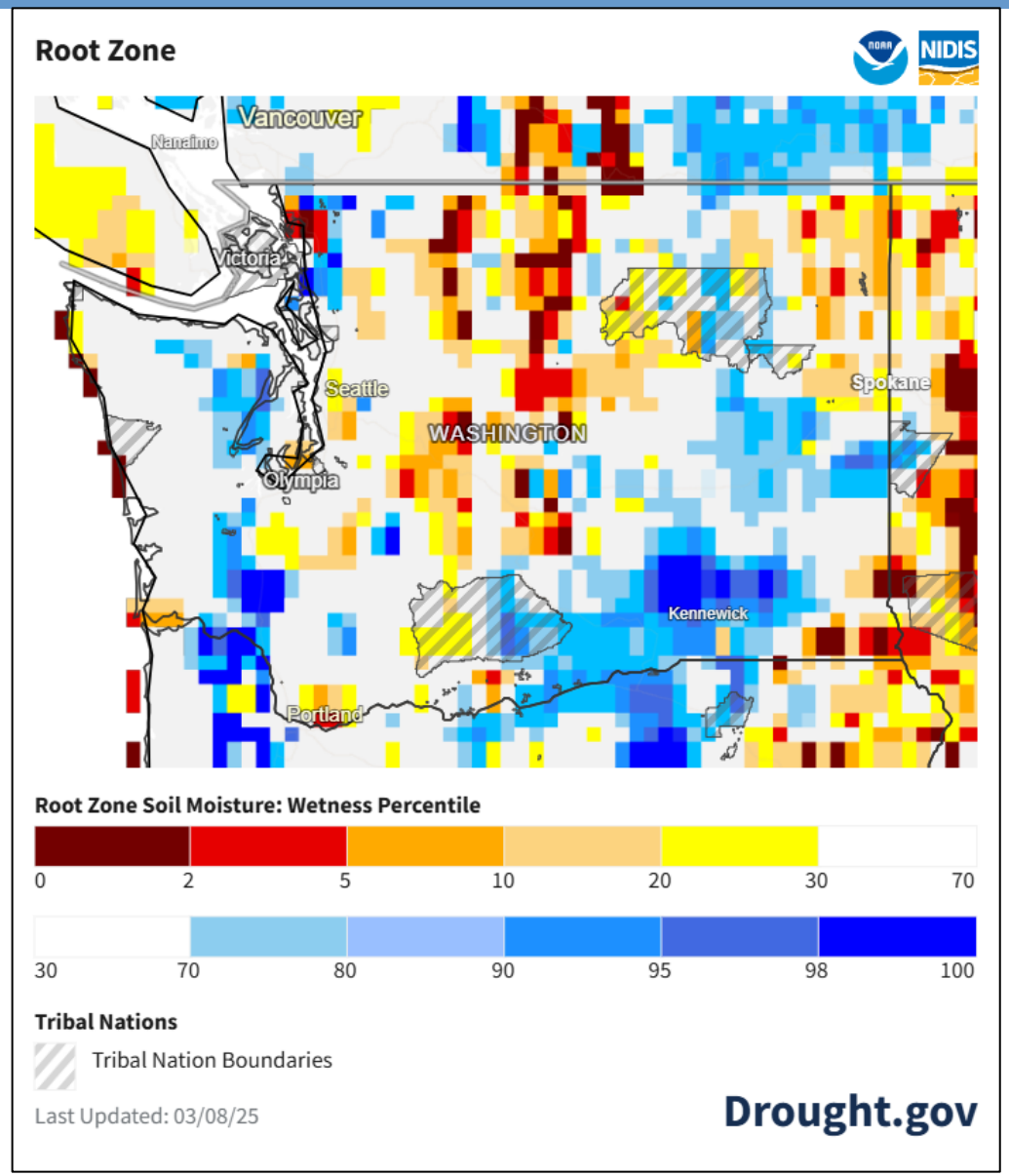
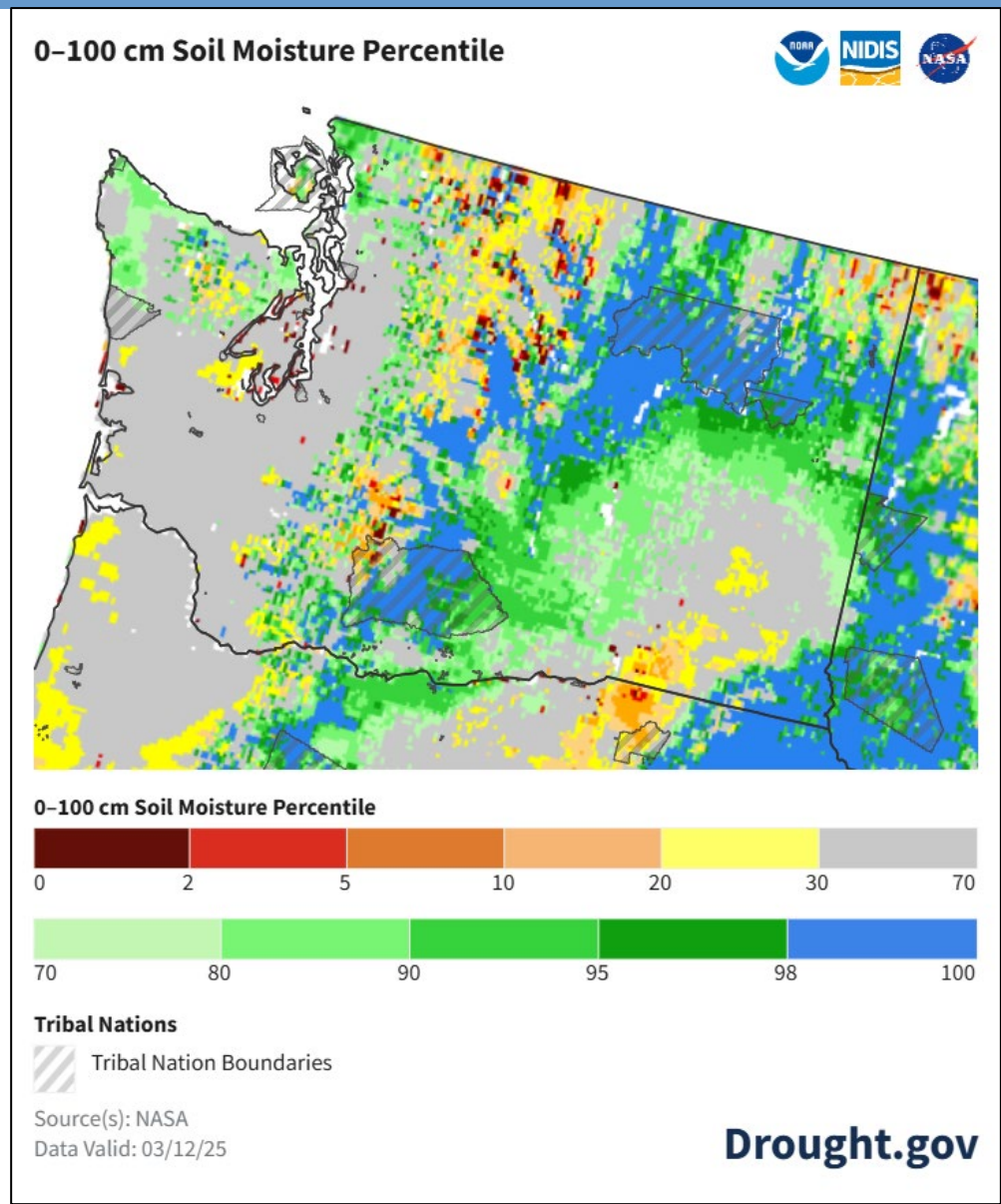
Natural Resources Conservation Service





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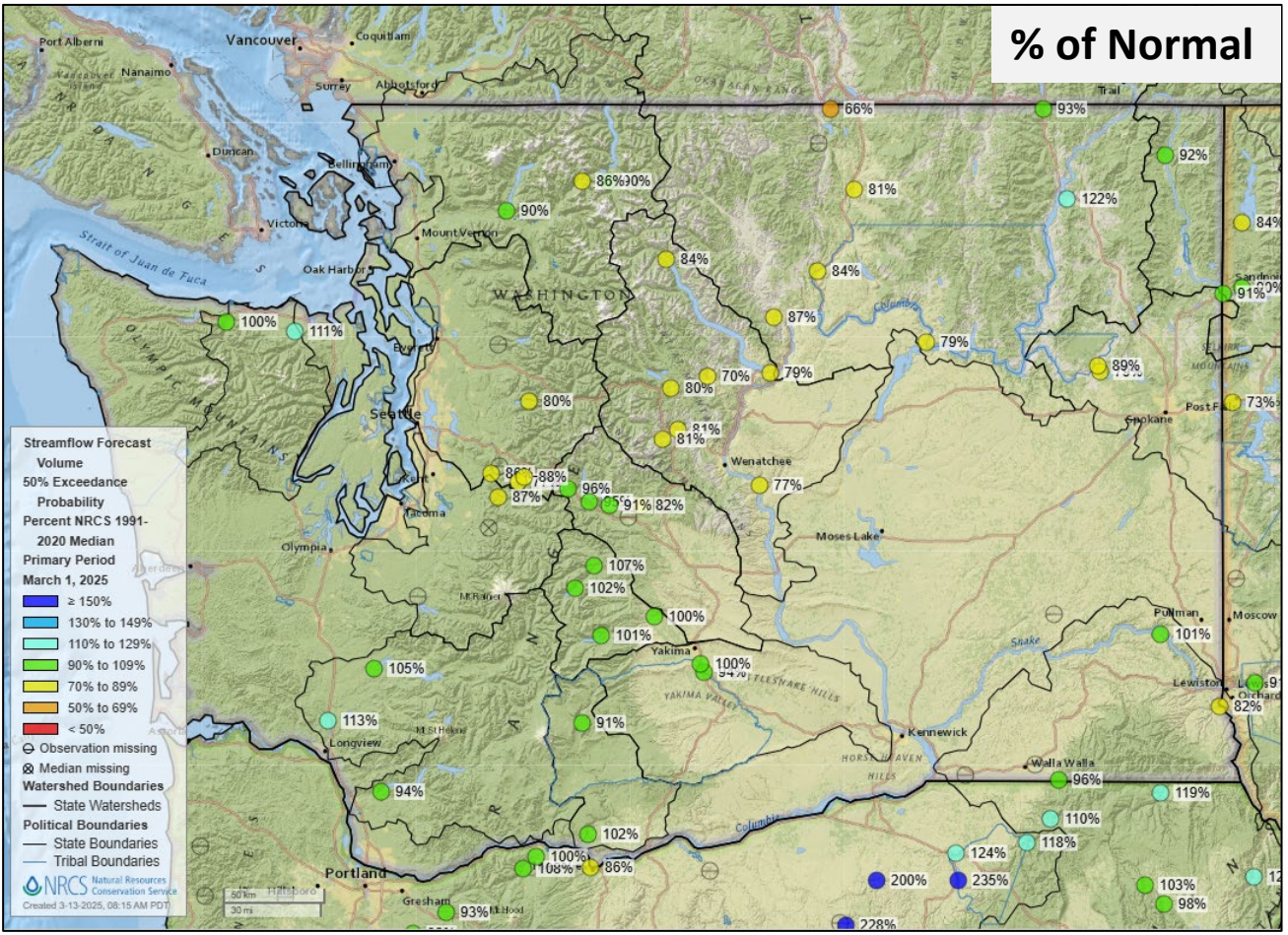
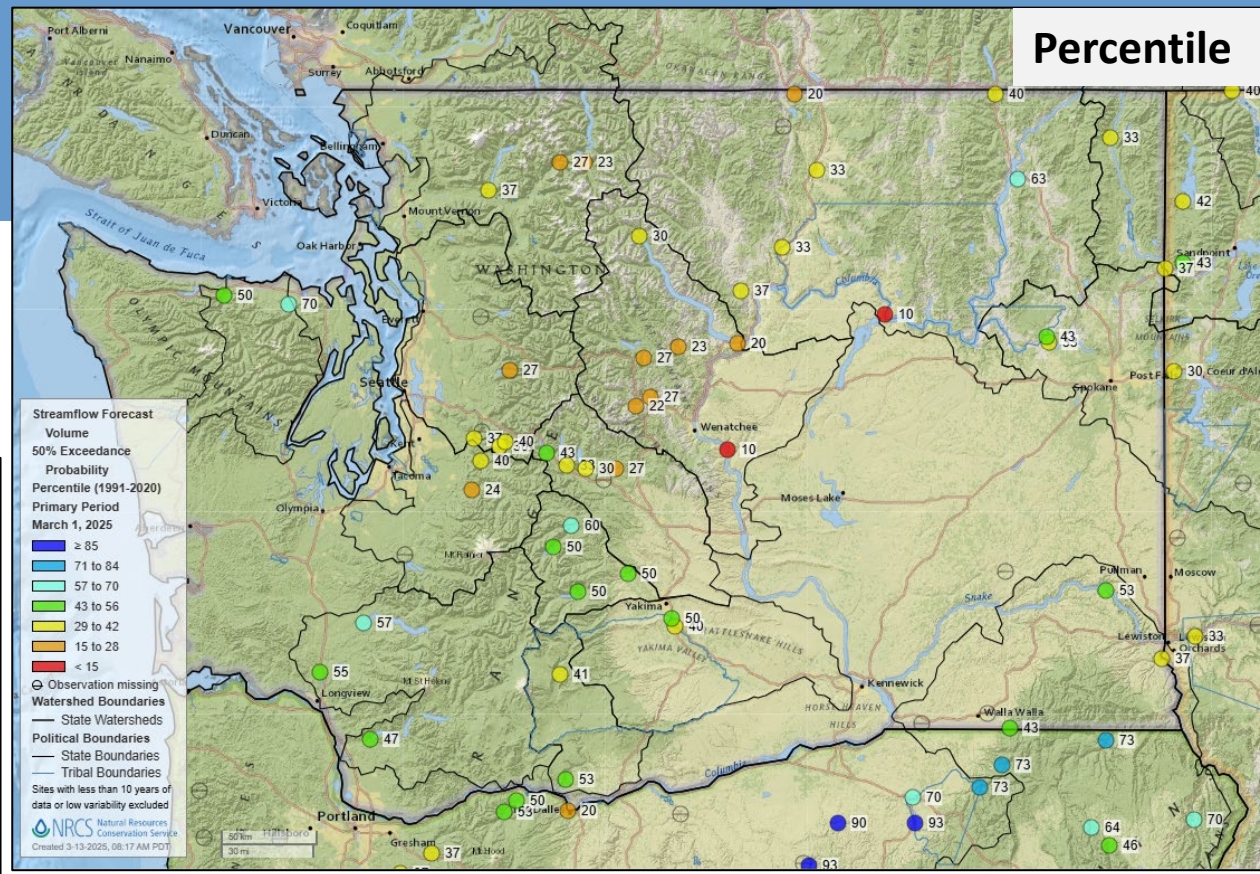
Natural Resources Conservation Service

Water Supply Outlook as of Feb. 1

Water Supply Forecasts

Feb. 1

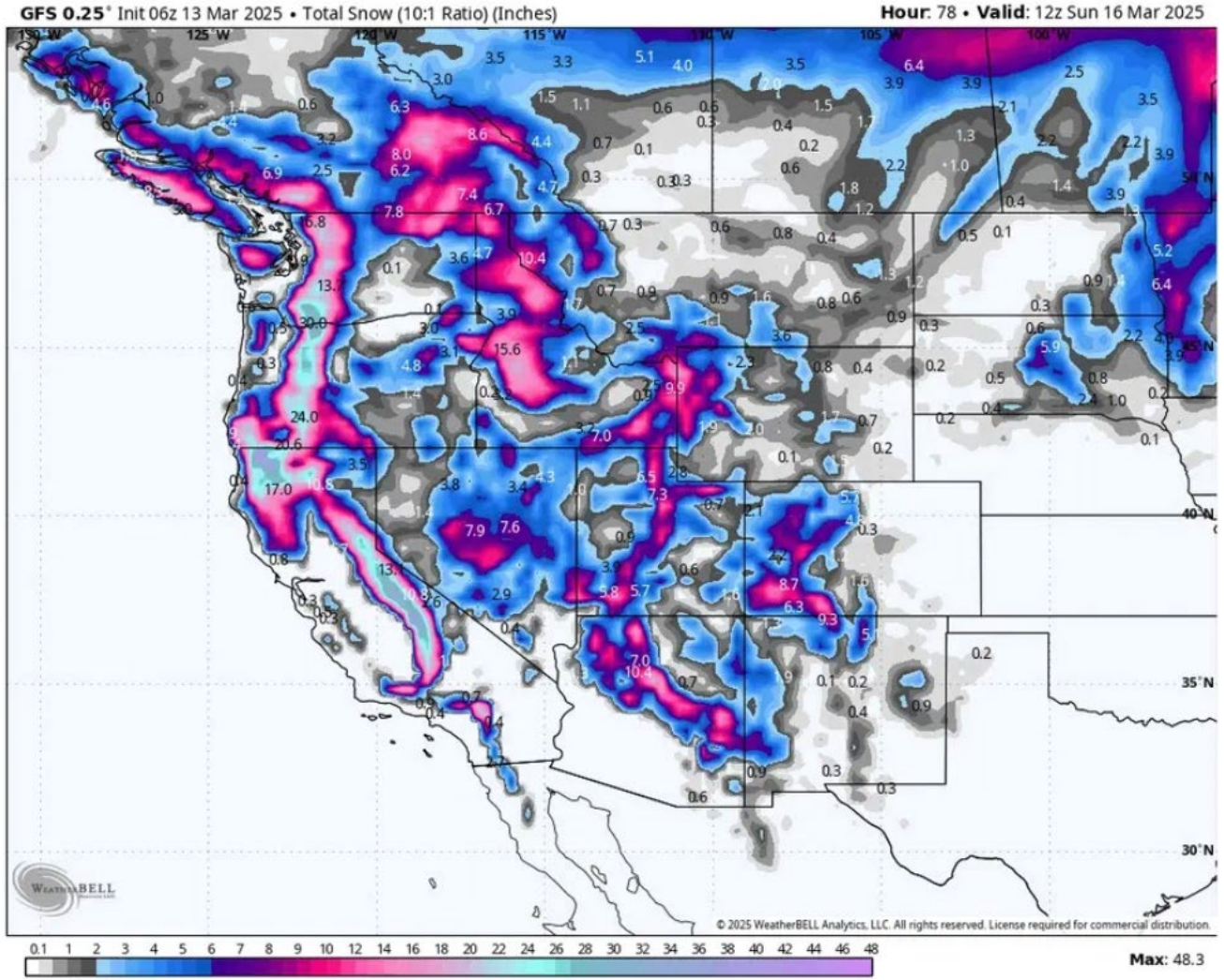


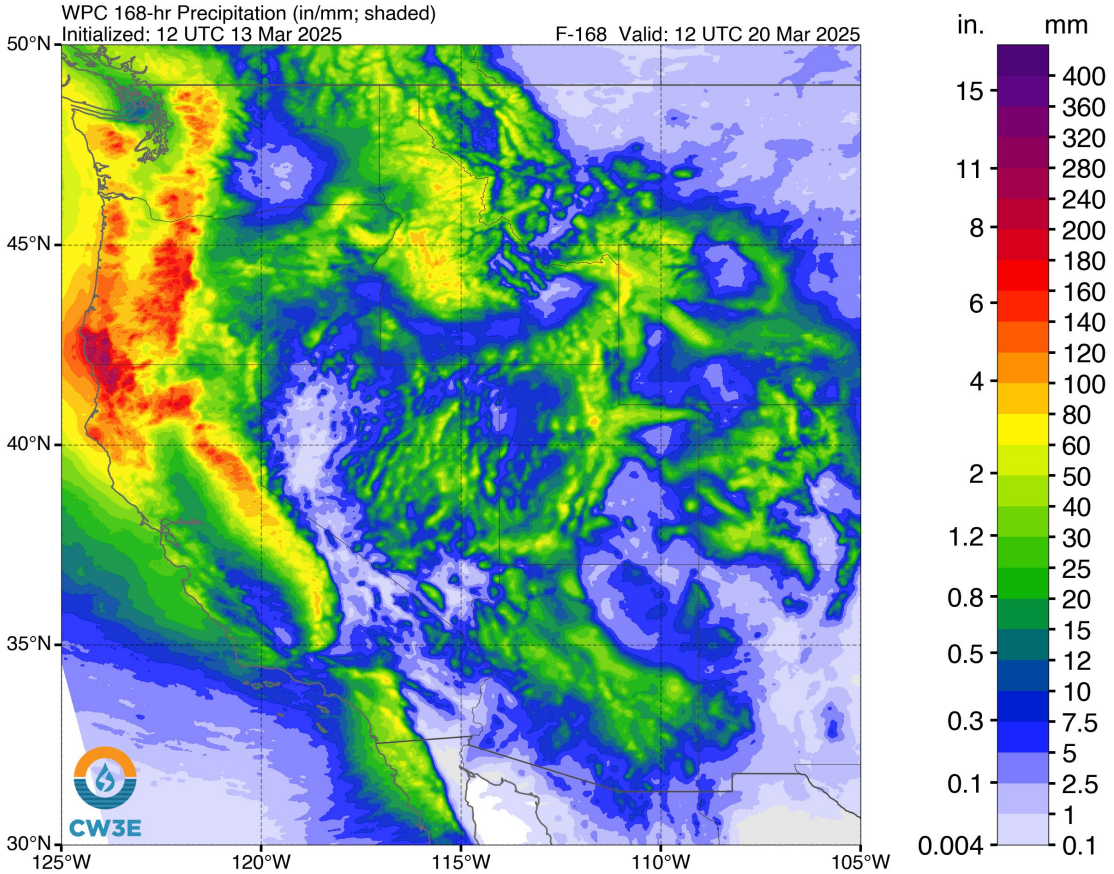


Looking ahead

Near-Term Snow & Precipitation Forecast

United States Department of Agriculture
Natural Resources Conservation Service





USDA United States Department of Agriculture

Natural Resources Conservation Service

Thank you!

Matt Warbritton
Supervisory Hydrologist
USDA NRCS SSWSF
Portland Data Collection Office
matt.warbritton@usda.gov
503-307-2829

Washington Snow Survey and Water Supply Program Website

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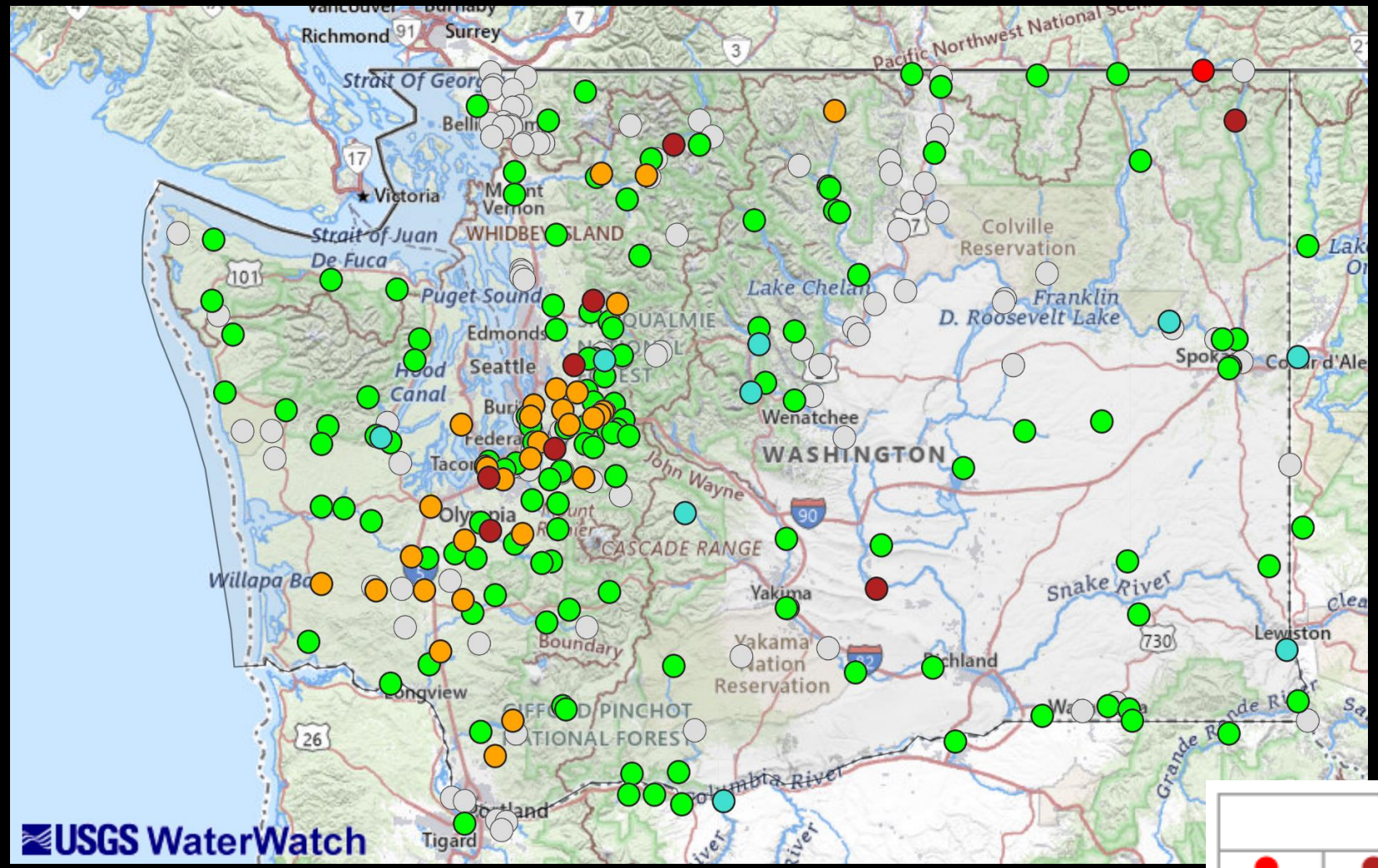
Streamflow & Groundwater Conditions in Washington State as of 13 March 2025

Presented on 13 March 2025
to the Washington Water Supply Availability Committee

by Nicholas Sutfin,
nsutfin@usgs.gov
USGS Washington Water Science Center

7-day Average Streamflow

Conditions as of 12 March 2025



Preliminary Information- Subject to Revision. Not for Citation or Distribution.

WaterWatch is scheduled to be discontinued in 2026

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

https://waterwatch.usgs.gov/index.php?id=pa07d&sid=w__gmap&r=wa

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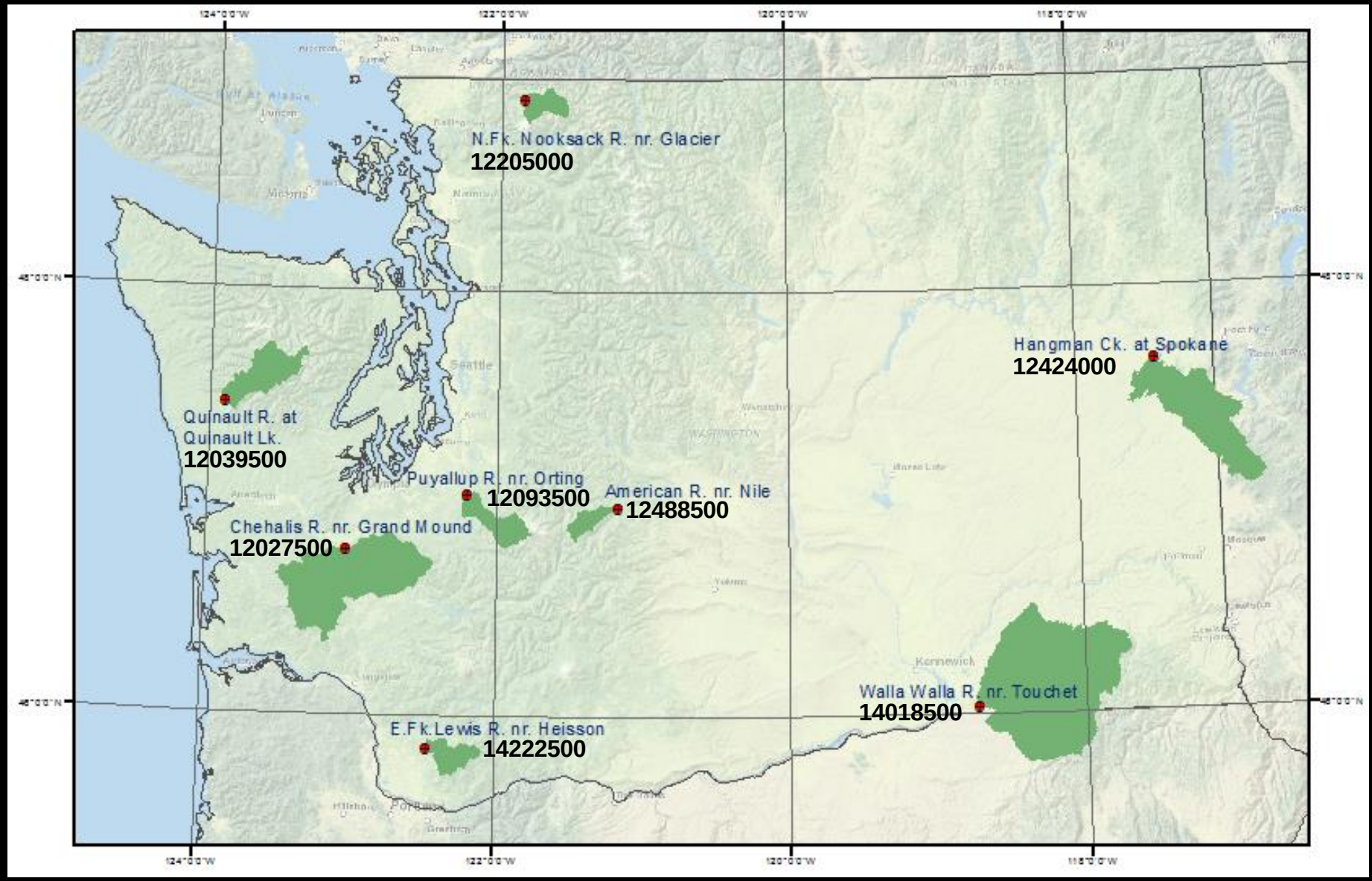
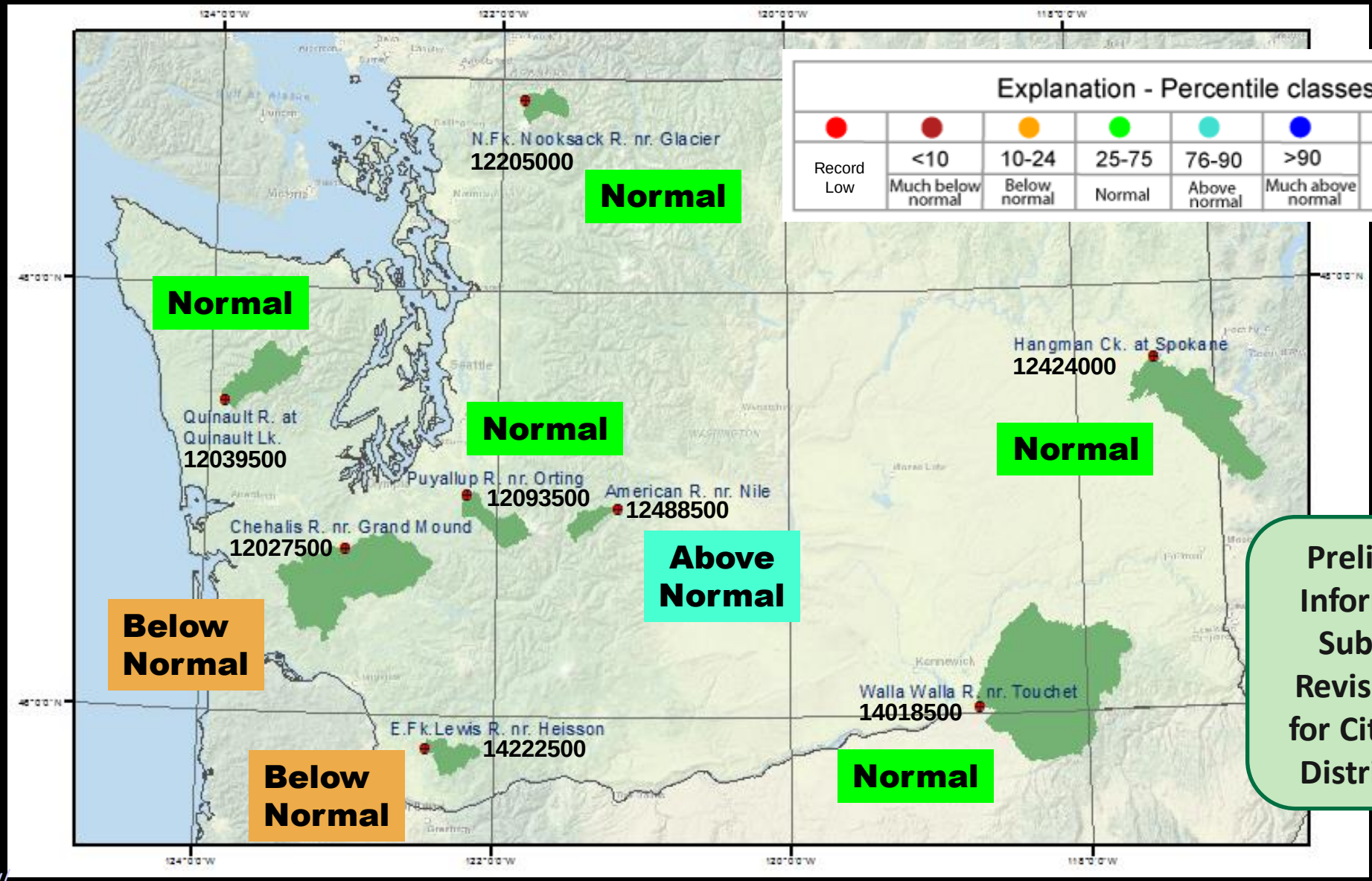
Index Gaging Stations

(Stations that measure natural or near-natural streamflow)



Index Gaging Stations

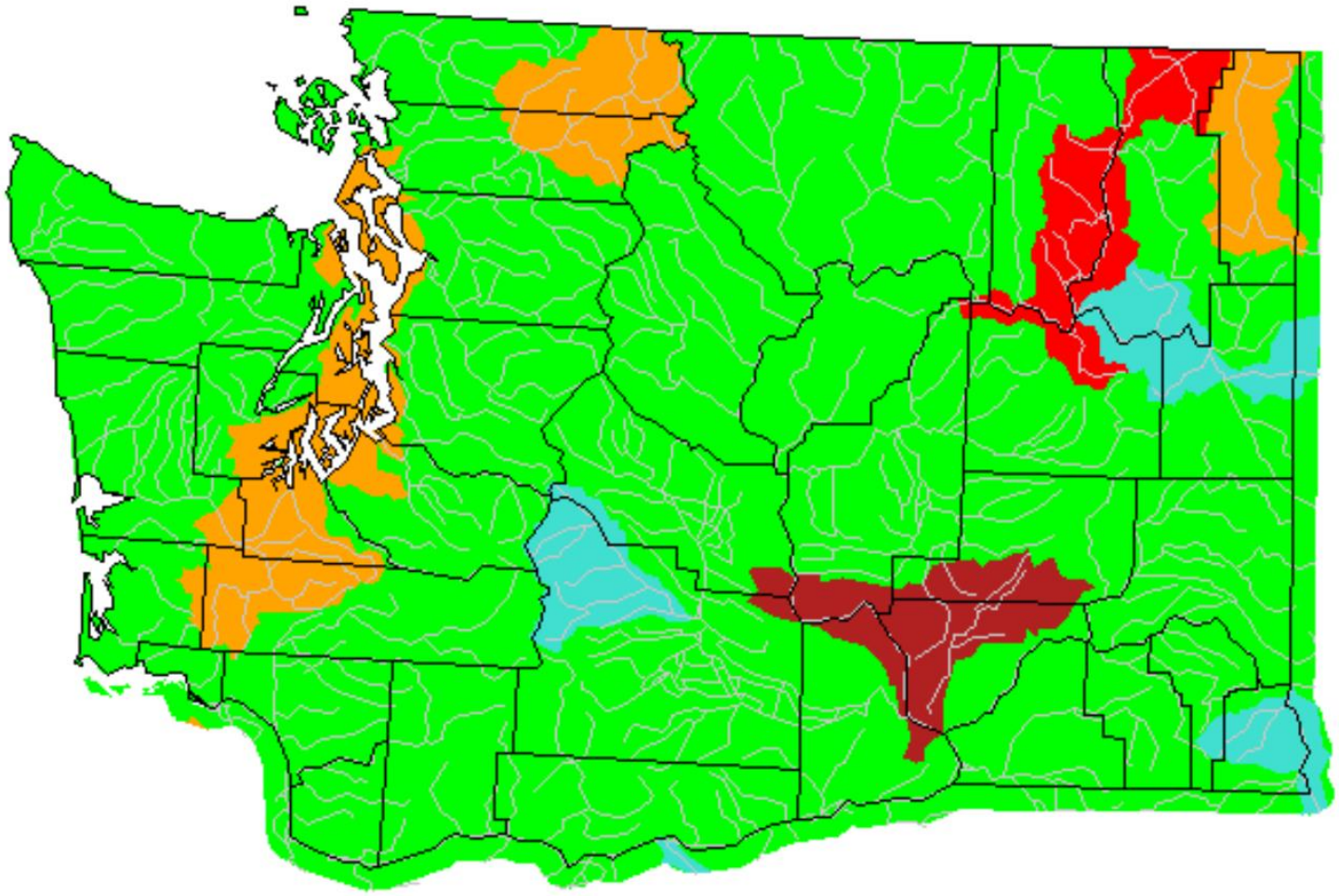
7-day average streamflow as of 12 March 2025



https://waterwatch.usgs.gov/

Average streamflow
compared to historical streamflow

7-day average as of 12 March 2025



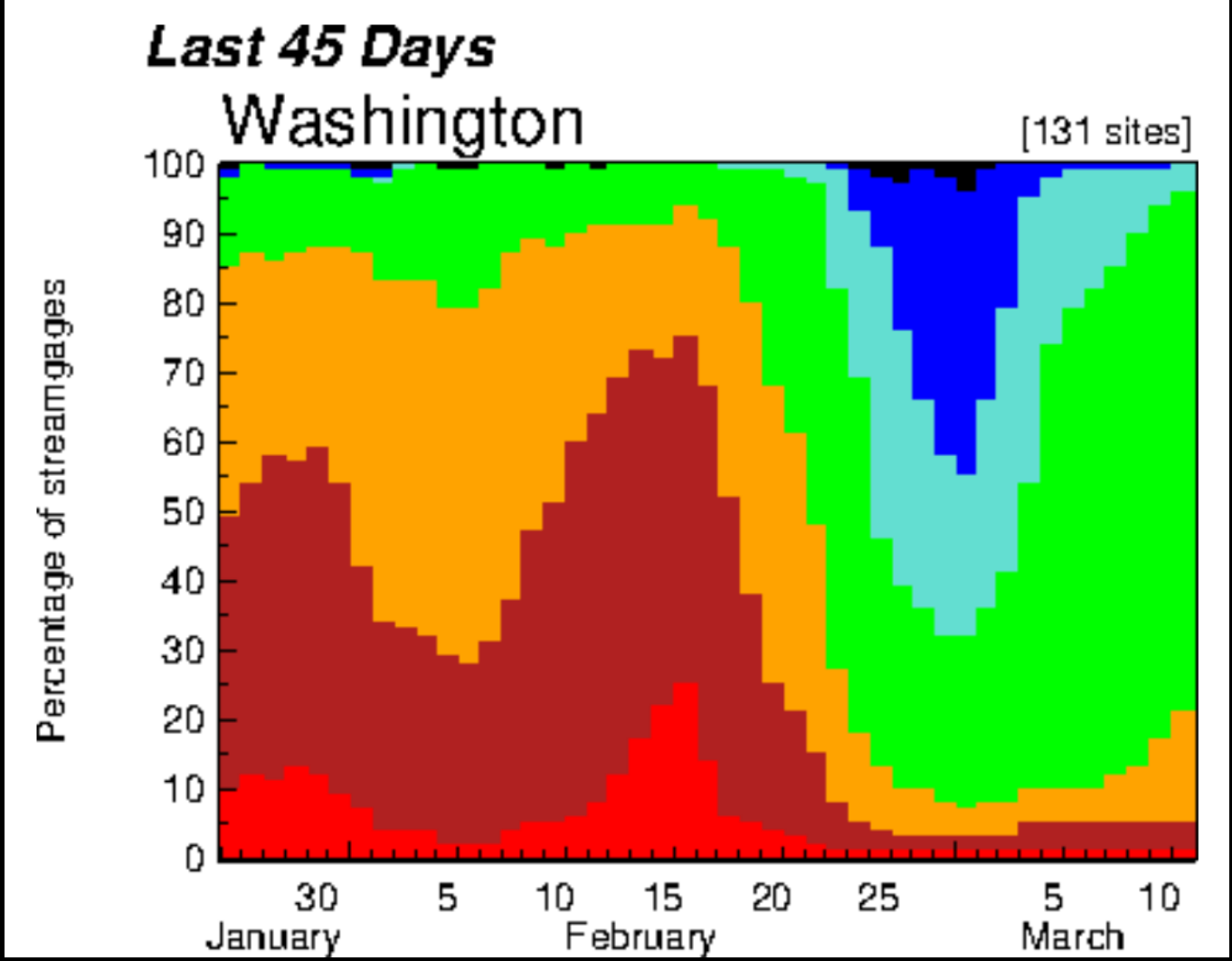
Explanation - Percentile classes						
Record Low	<10	10-24	25-75	76-90	>90	Record High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

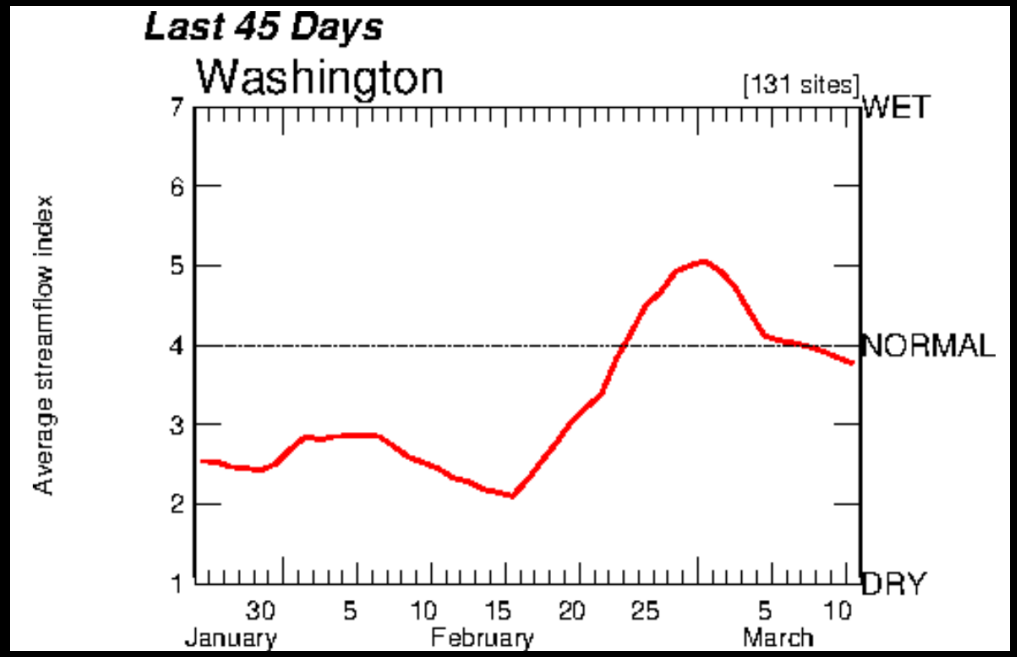
https://waterwatch.usgs.gov/

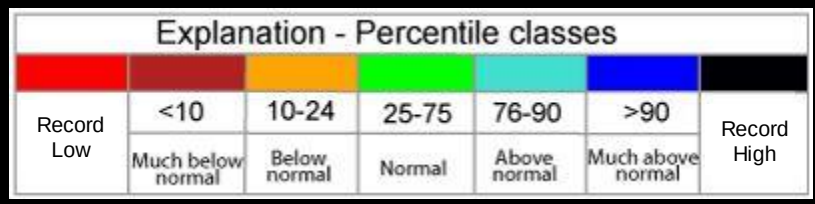
7-day average streamflow

Most USGS stream gages at normal as of 12 March 2025



Preliminary Information-Subject to Revision.
Not for Citation or Distribution.



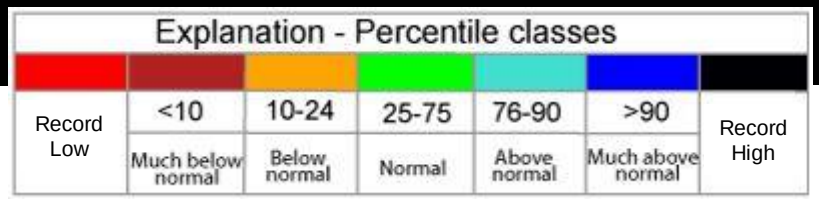


https://waterwatch.usgs.gov/

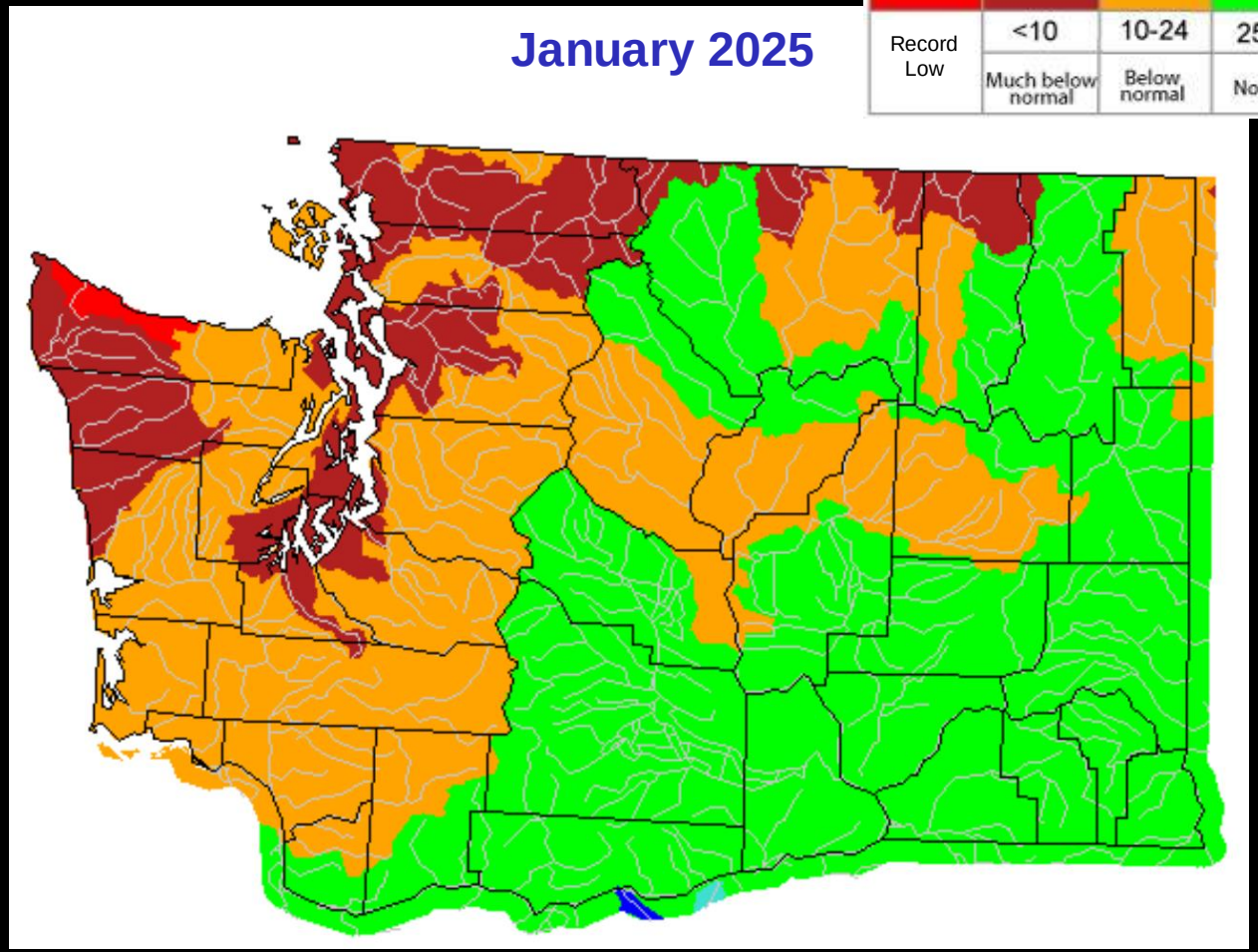
Monthly average streamflow

compared to historical streamflow

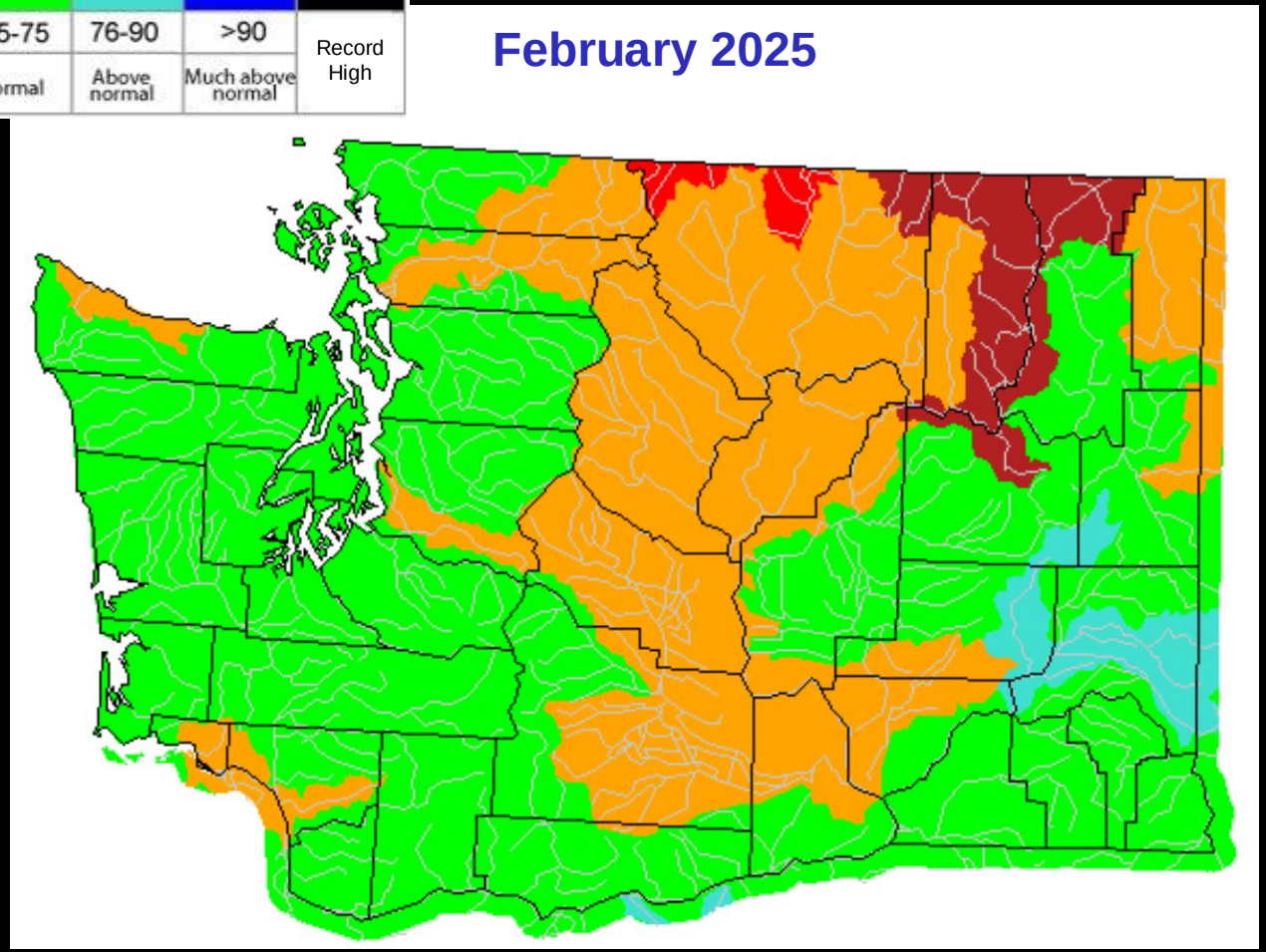
USGS science for a changing world



January 2025



February 2025



Preliminary Information-Subject to Revision. Not for Citation or Distribution.

https://waterwatch.usgs.gov/

USGS
science for a changing world

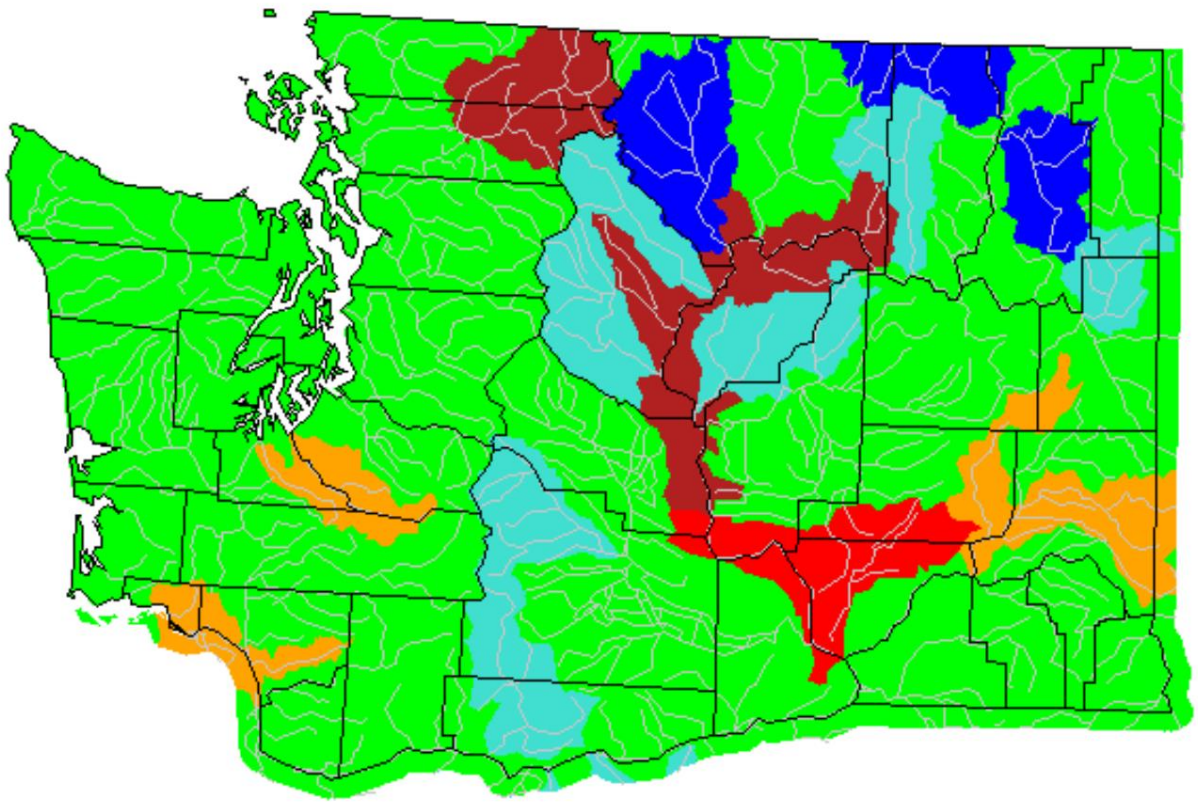
Monthly average streamflow

compared to historical streamflow

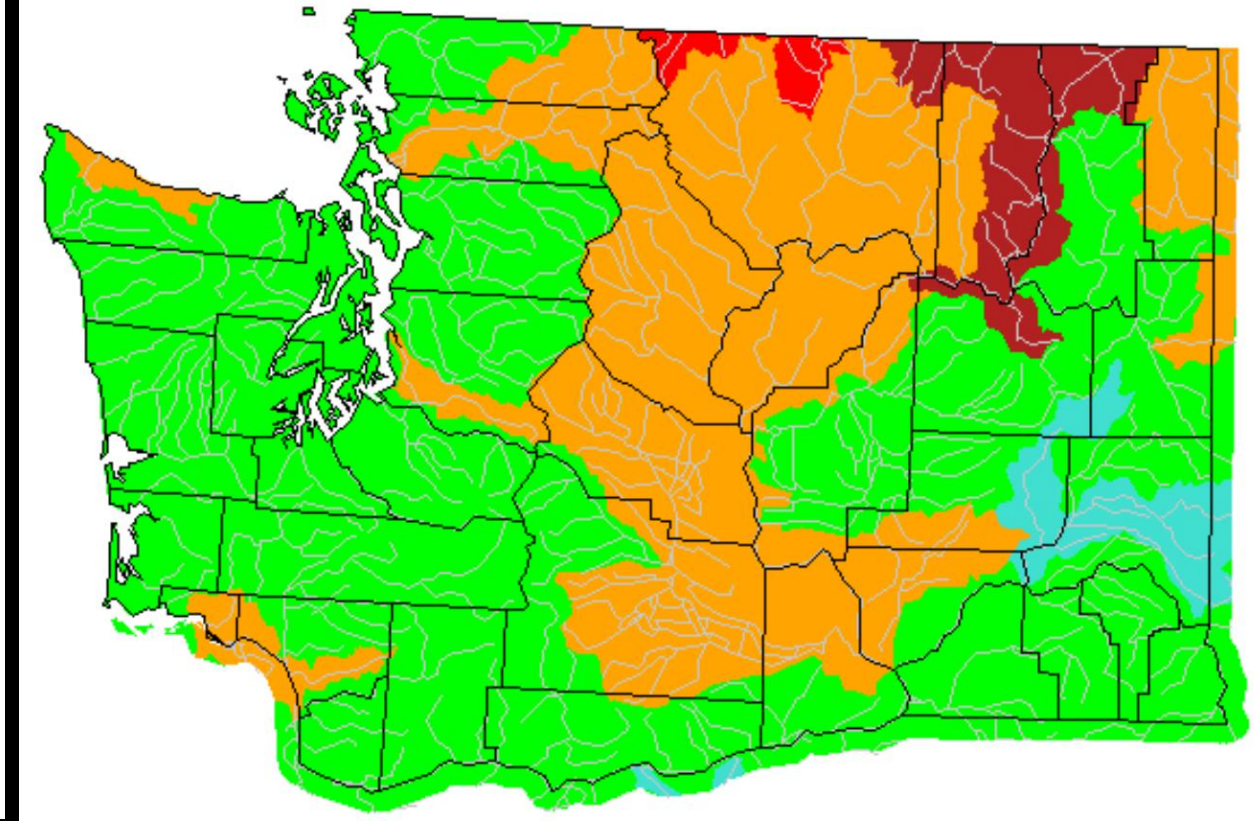
Explanation - Percentile classes

Record Low	<10	10-24	25-75	76-90	>90	Record High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

February 2024



February 2025

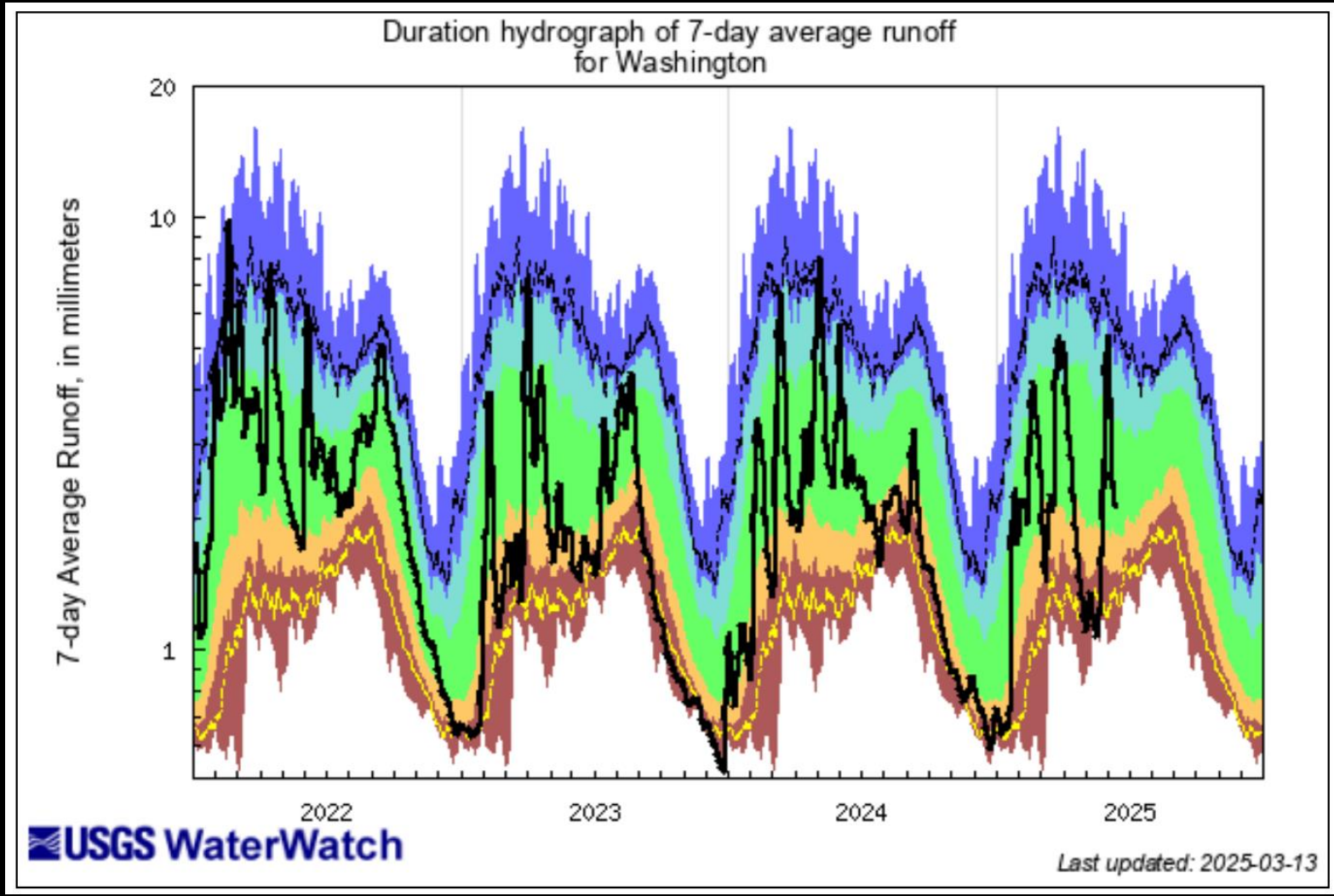


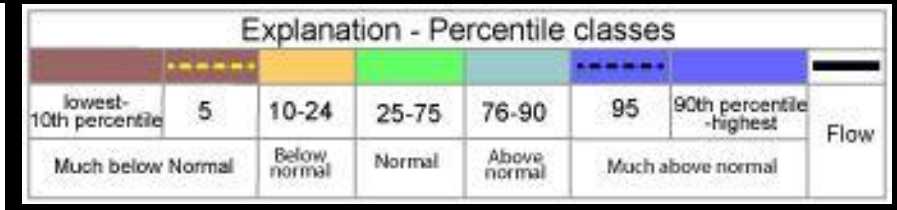
Preliminary Information-Subject to Revision. Not for Citation or Distribution.

https://waterwatch.usgs.gov/

Area-Based Runoff Duration Hydrograph

7-day average streamflow





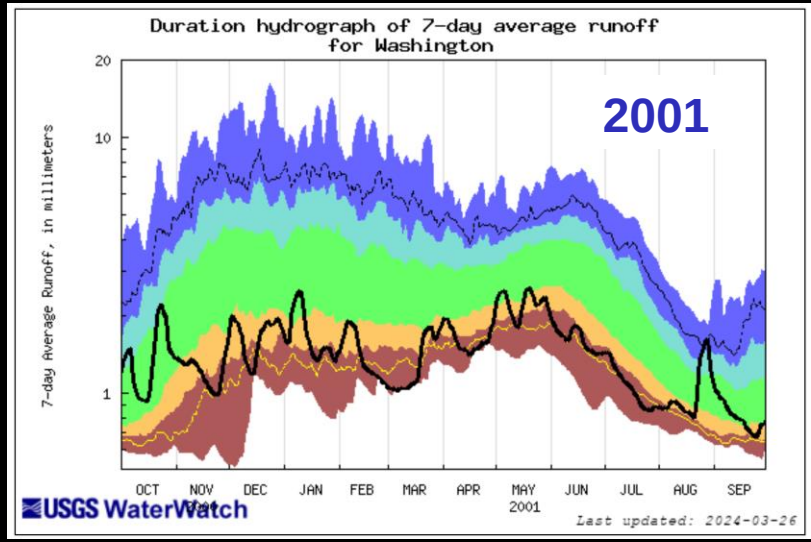
Preliminary Information-Subject to Revision. Not for Citation or Distribution.

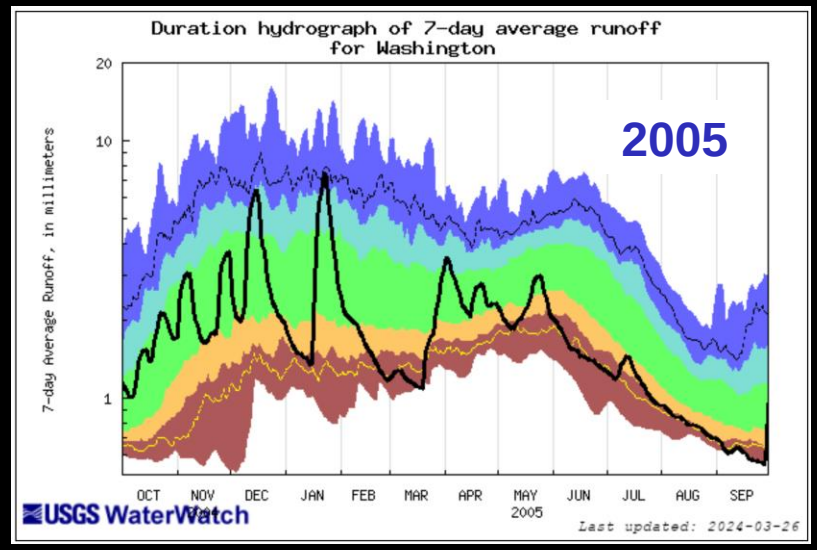
For some streams, flow statistics may have been computed from mixed regulated and unregulated flows; this can affect depictions of flow conditions.

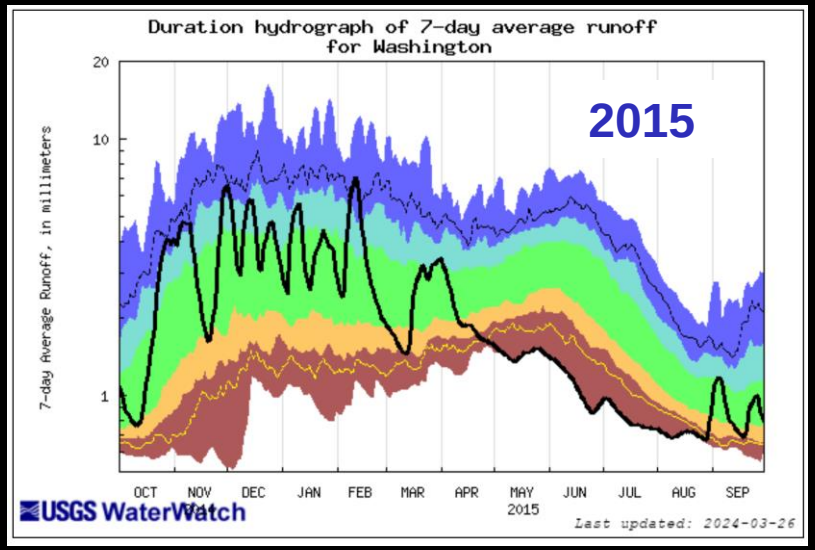
https://waterwatch.usgs.gov/

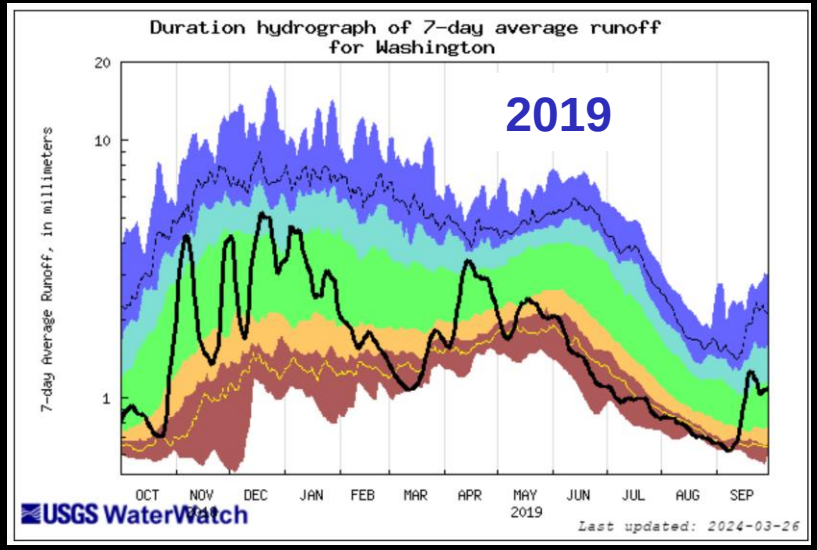
Area-Based Runoff Duration Hydrograph

7-day average streamflow

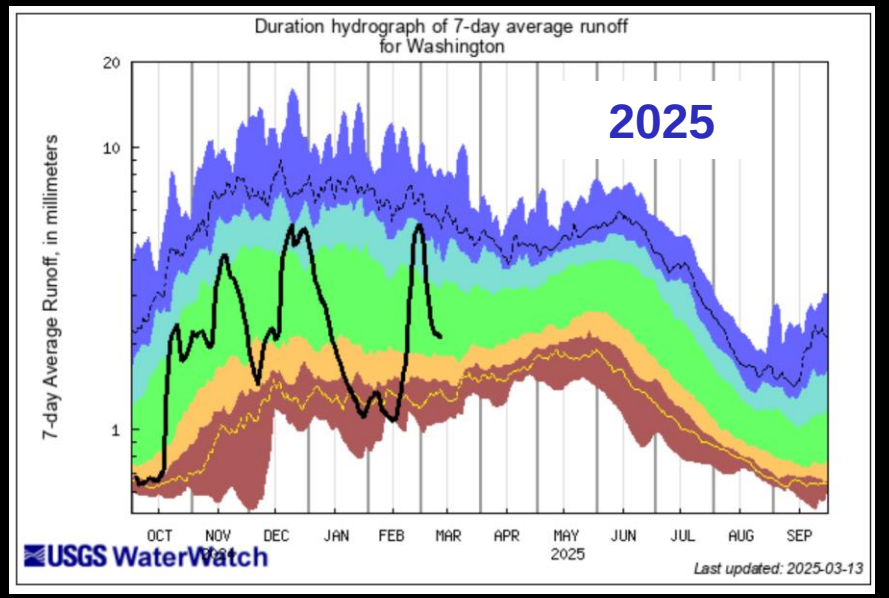


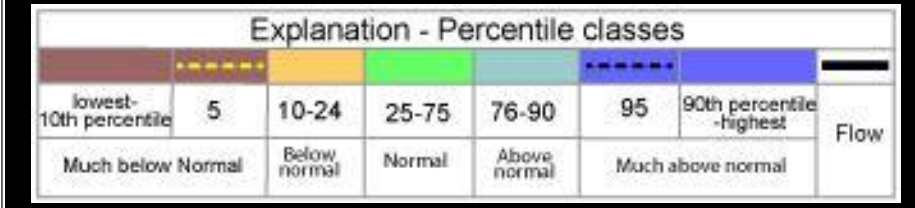






Duration hydrograph for the year compared to recent years of drought





Preliminary Information-Subject to Revision. Not for Citation or Distribution.

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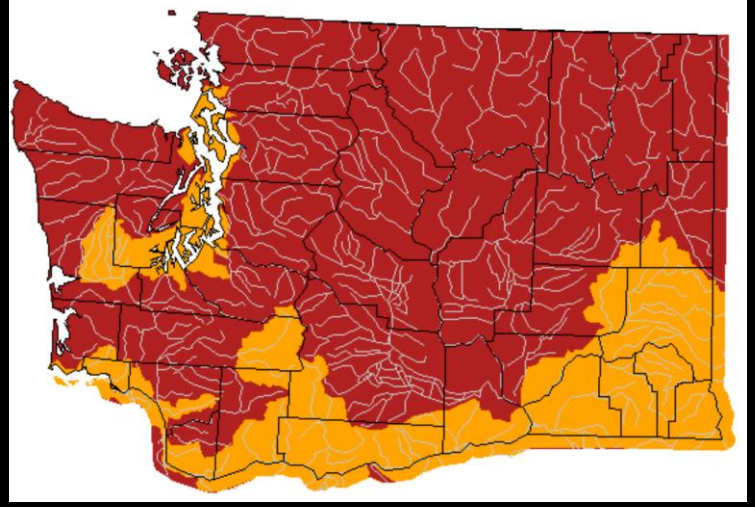
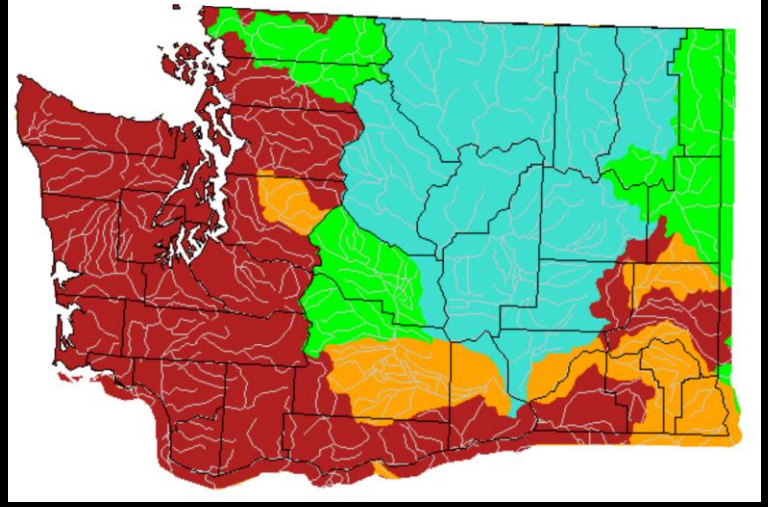
Monthly average streamflow

compared to historical streamflow

February 2001



February 2005

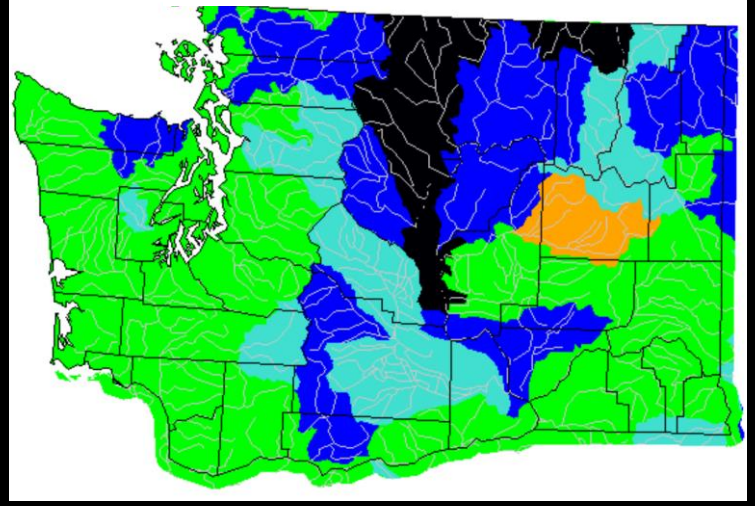


Explanation - Percentile classes						
Record Low	<10	10-24	25-75	76-90	>90	Record High
	Much below normal	Below normal	Normal	Above normal	Much above normal	

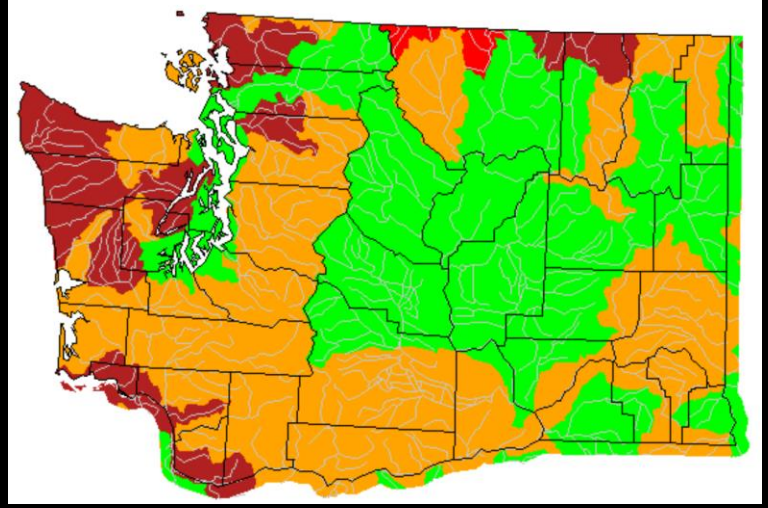
https://waterwatch.usgs.gov/

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

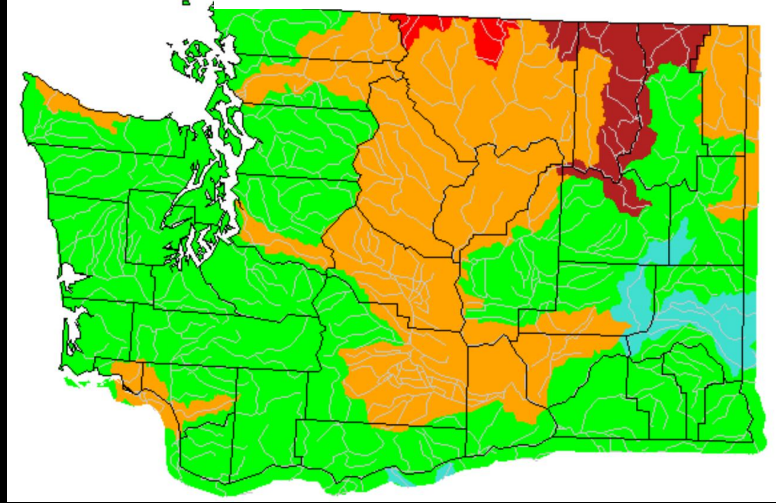
February 2015



February 2019



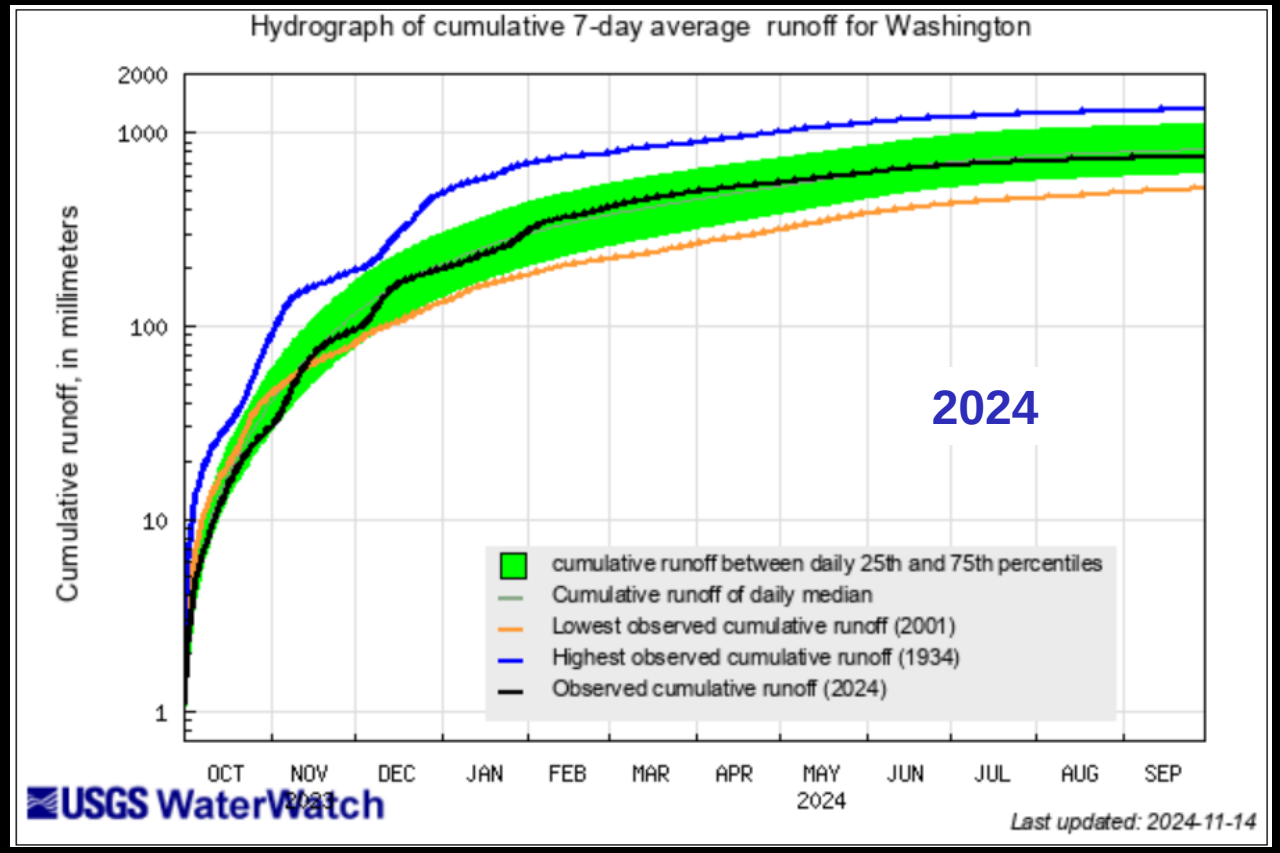
February 2025



Cumulative runoff hydrograph

Area-based runoff based on 7-day average

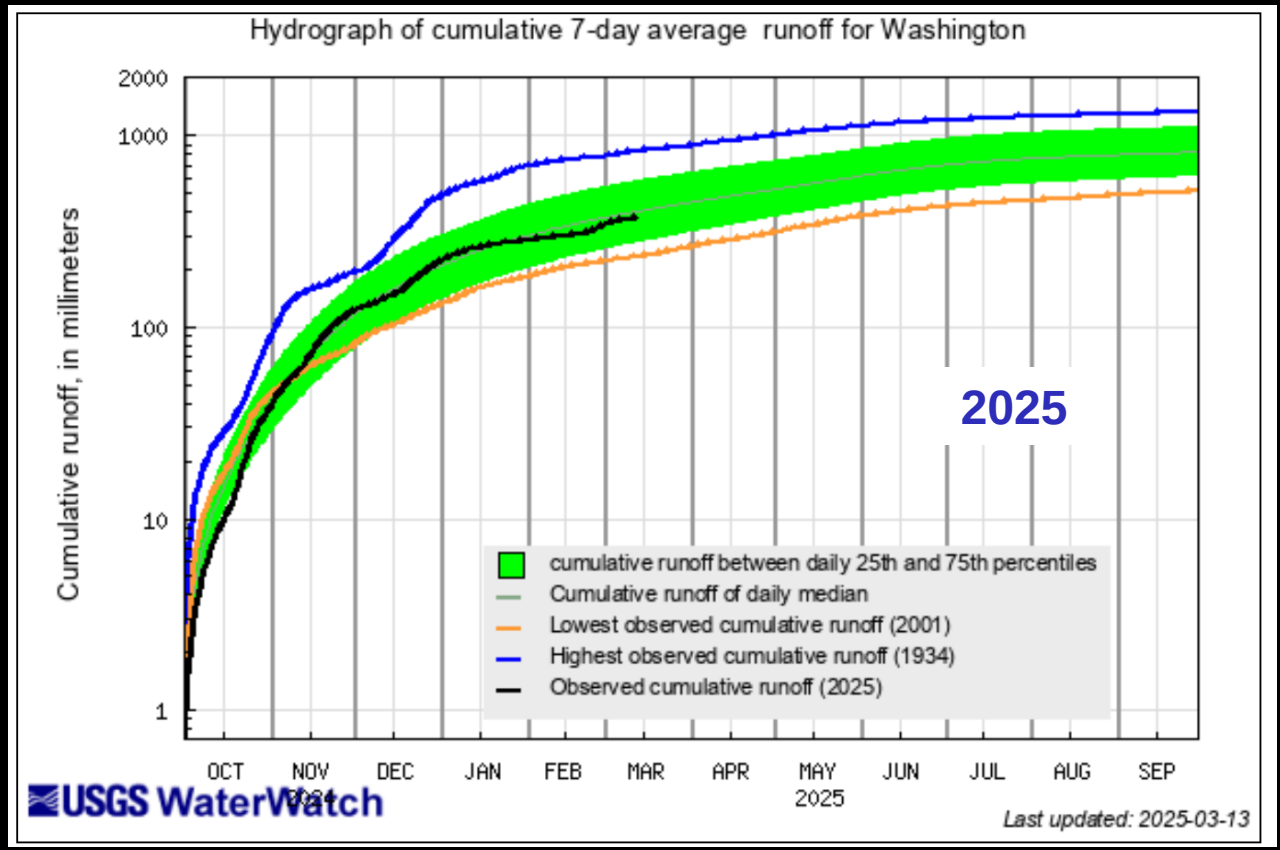
Normal for 2025 water year as of 13 March



2024 water year

Area-based runoff may have been computed from mixed regulated and unregulated streamflows

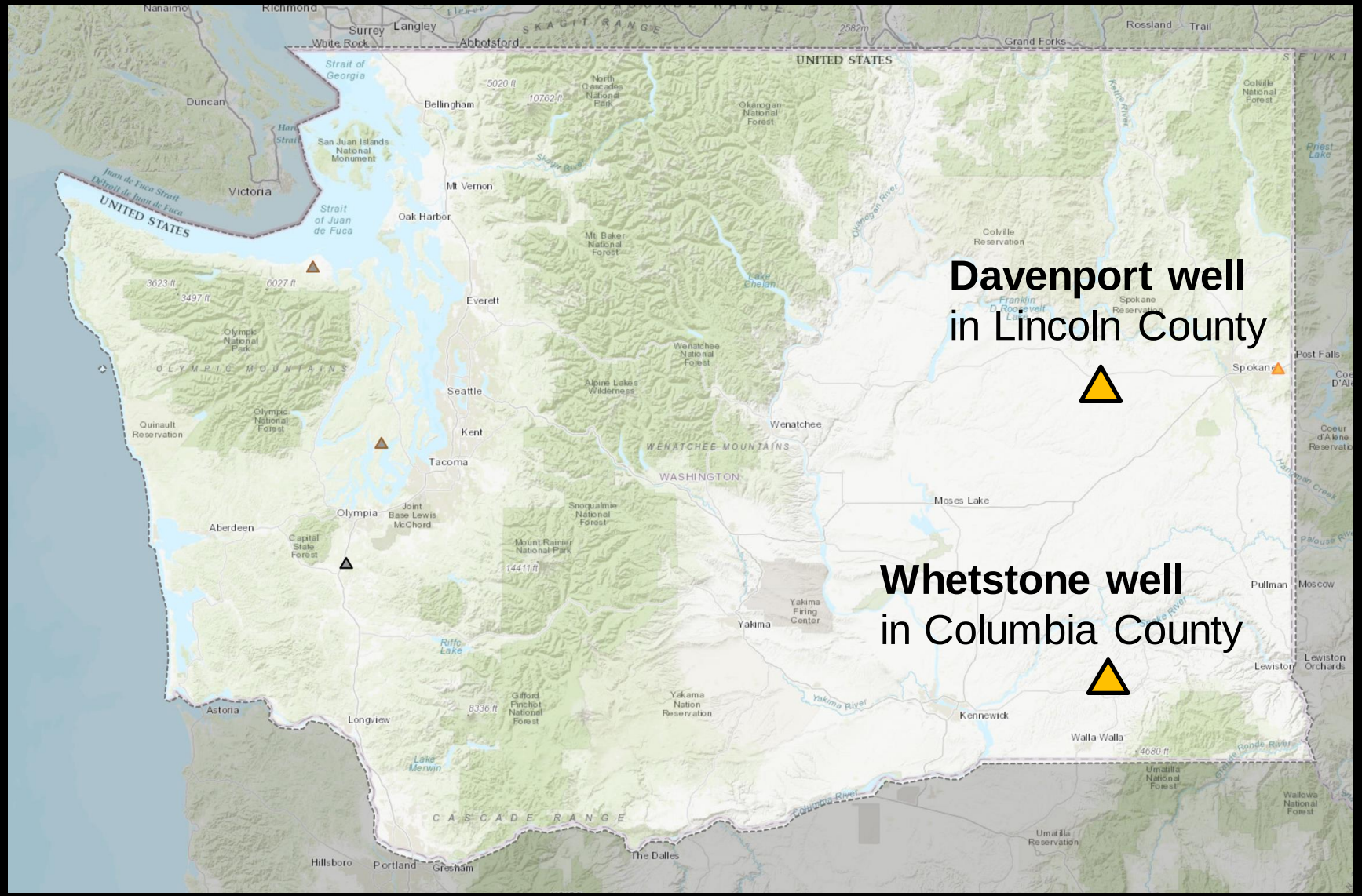
https://waterwatch.usgs.gov/



2025 water year

Preliminary Information-Subject to Revision.
Not for Citation or Distribution.

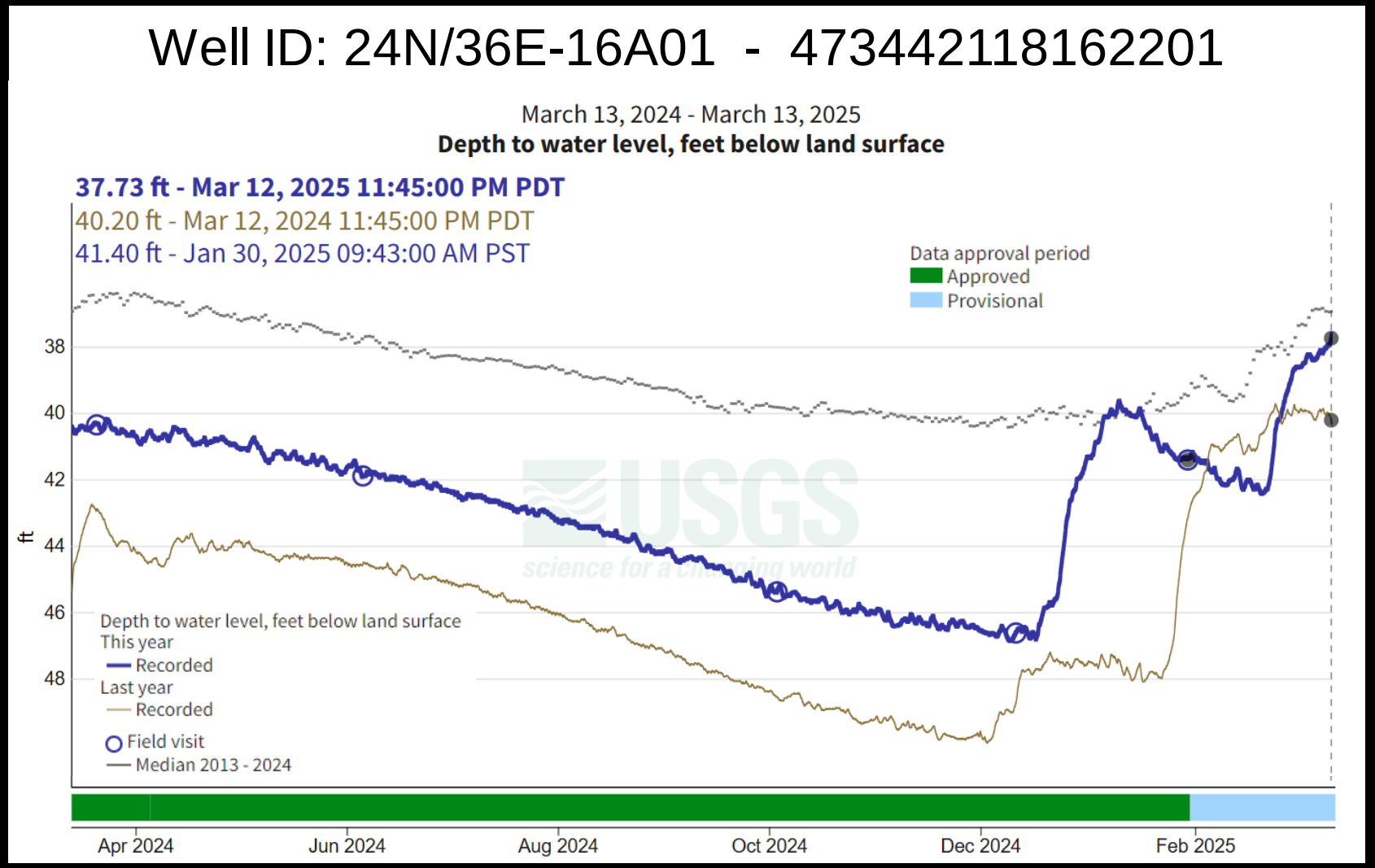
Two reference groundwater wells



https://dashboard.waterdata.usgs.gov/app/nwd/en/?aoi=state-wa

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

Davenport Well Groundwater Conditions



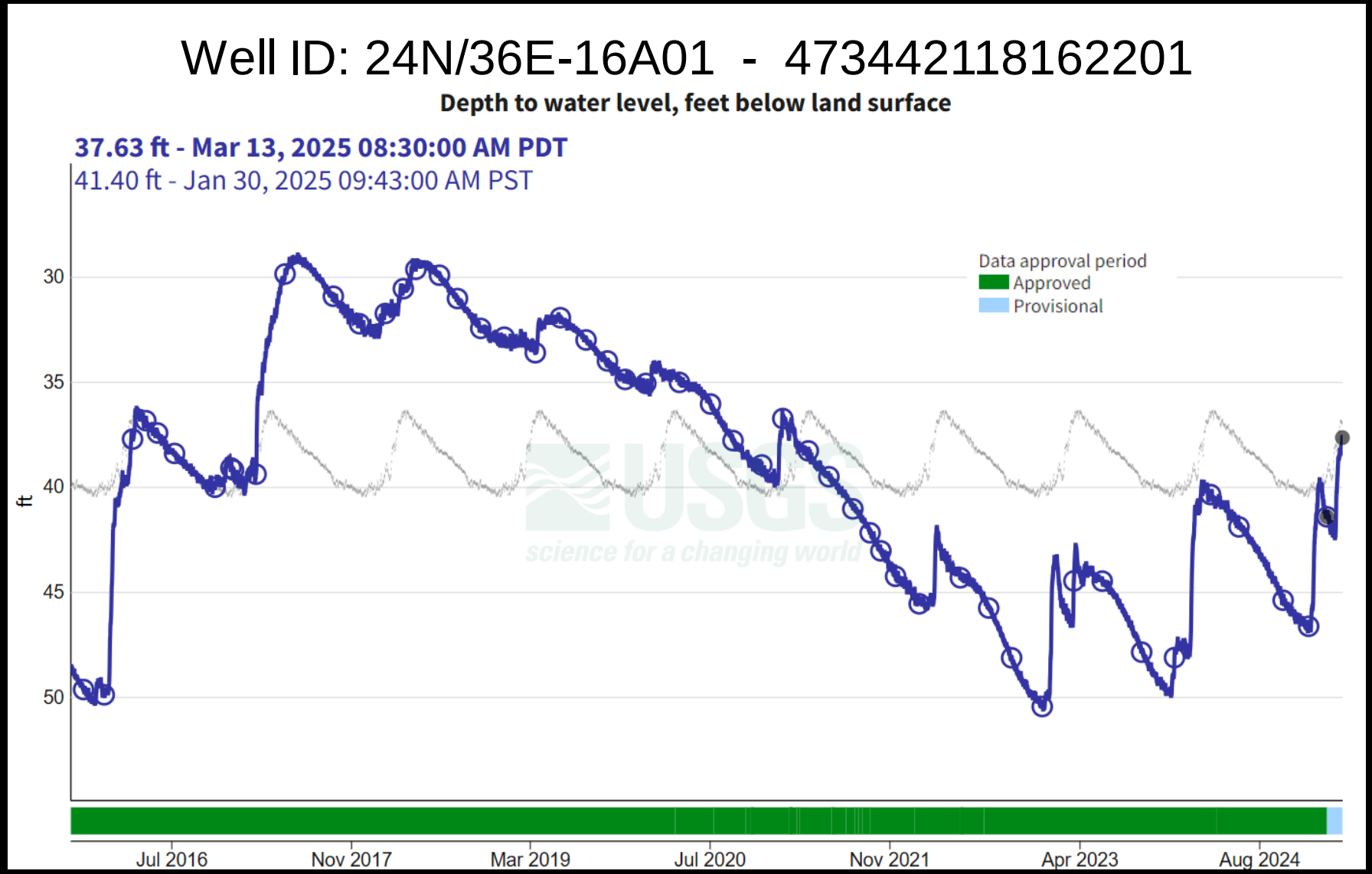
Davenport well

Well Details

- Lincoln County
- 117-ft deep
- Wanapum Basalt

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

Davenport Well Groundwater Conditions



Well Details

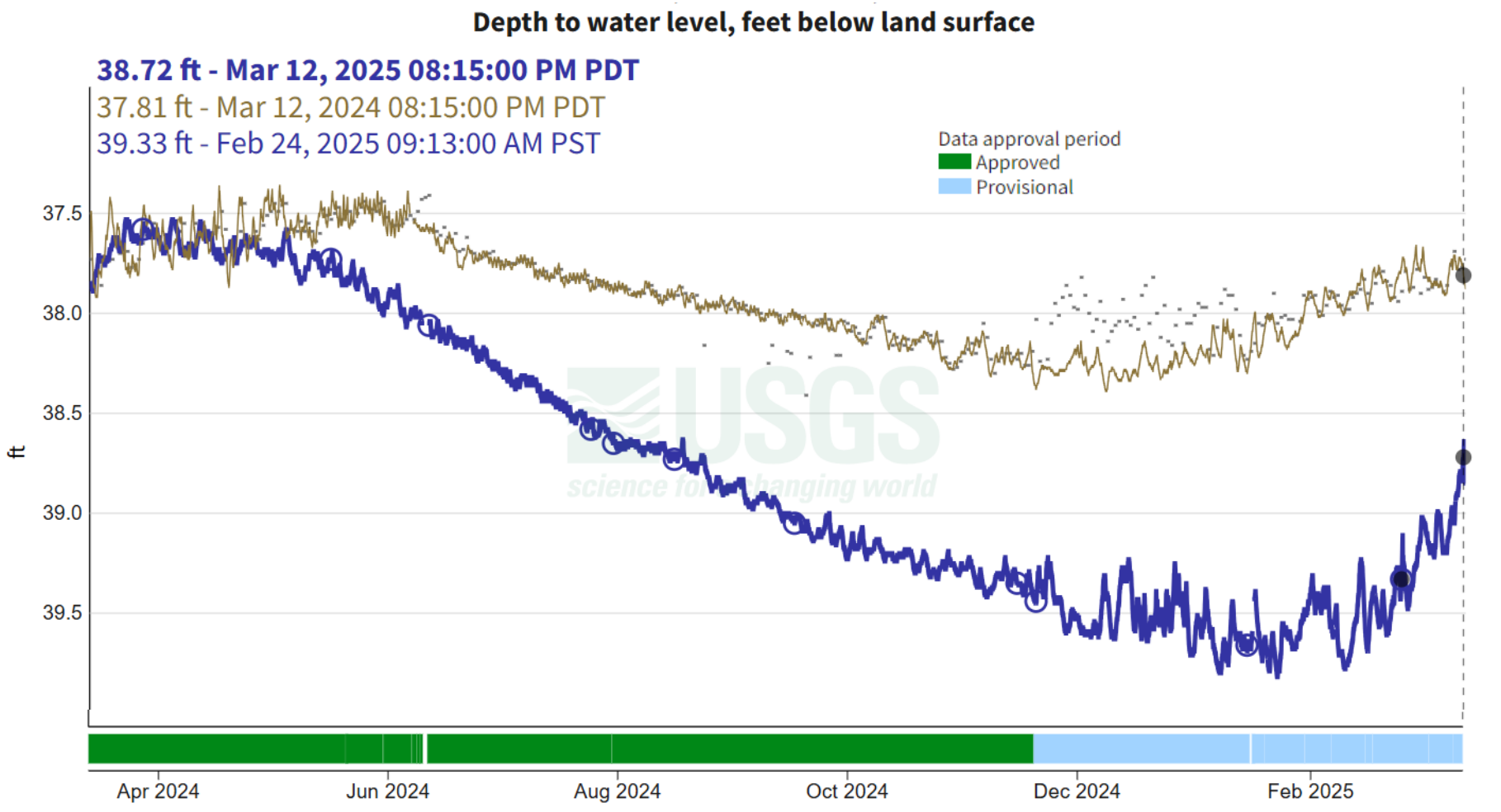
- Lincoln County
- 117-ft deep
- Wanapum Basalt

Preliminary Information- Subject to Revision. Not for Citation or Distribution.

https://dashboard.waterdata.usgs.gov/app/nwd/en/?aoi=state-wa

Whetstone Well Groundwater Conditions

Well ID: 10N/37E-23R01 - 461935118081501



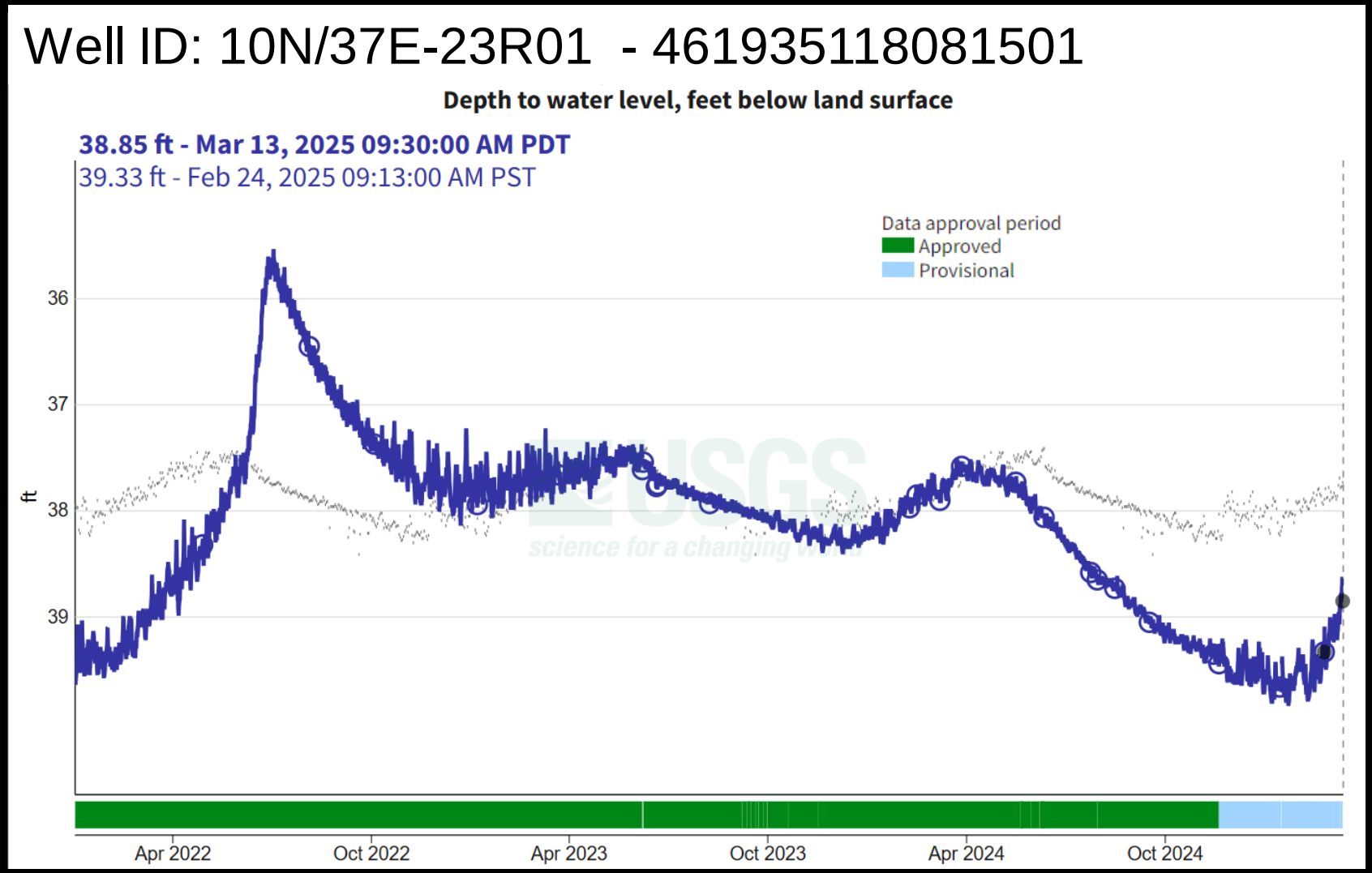
Whetstone well

Well Details:

- Columbia County near Waitsburg
- 172.5-ft deep
- Grande Ronde Basalt Formation

Preliminary Information-Subject to Revision. Not for Citation or Distribution.

Whetstone Well Groundwater Conditions



Well Details:

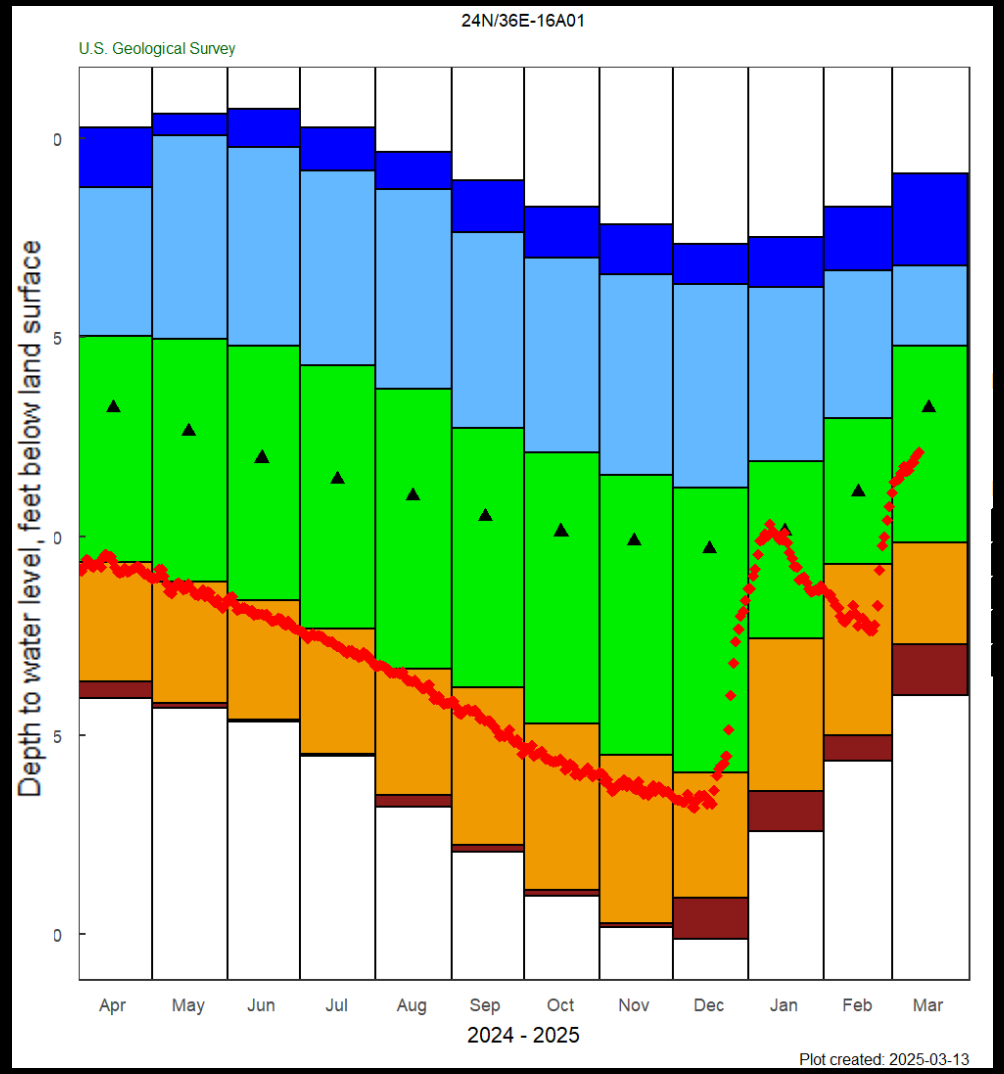
- Columbia County near Waitsburg
- 172.5-ft deep
- Grande Ronde Basalt Formation

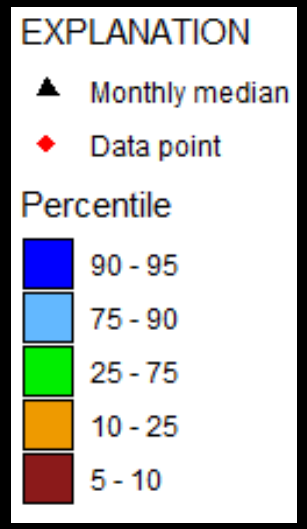
Preliminary Information- Subject to Revision. Not for Citation or Distribution.

https://dashboard.waterdata.usgs.gov/app/nwd/en/?aoi=state-wa

Groundwater Conditions

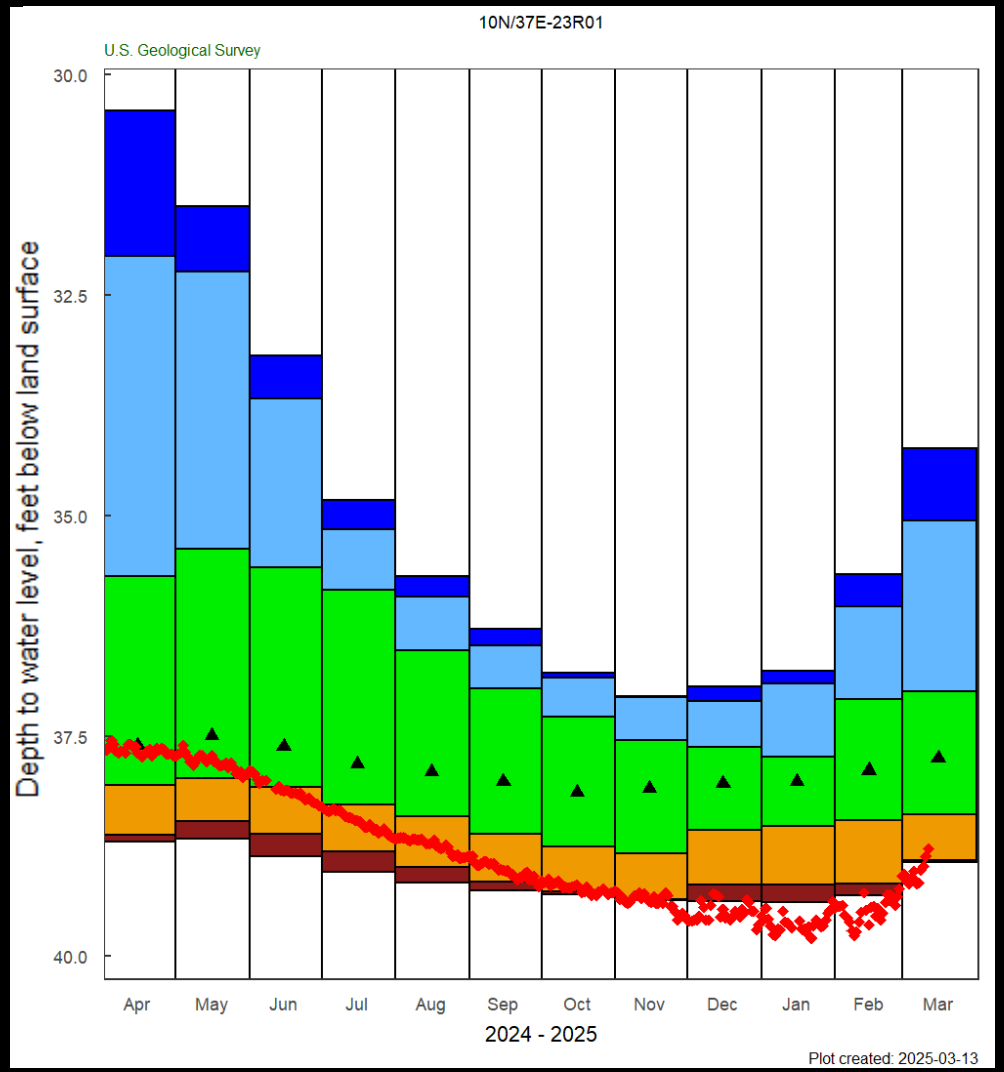
Davenport well





Preliminary Information- Subject to Revision. Not for Citation or Distribution.

Whetstone well



Summary of Washington Streamflow and Groundwater Conditions as of 13 March 2025

USGS science for a changing world

7-day average streamflow at eight index gaging stations:

Normal

- Nooksack River
- Quinault River
- Puyallup River nr. Orting
- Hangman Creek
- Walla Walla River

Above Normal

- American River

Below Normal

- Chehalis River nr. Grand Mound
- EF Lewis River

Cumulative Runoff Hydrograph

Normal for water year 2025

Monthly average groundwater conditions:

- Davenport well –
  - Normal
- Whetstone well
  - Below normal

Preliminary Information- Subject to Revision. Not for Citation or Distribution.