NWRFC Water Supply Forecasts

March 12th, 2024

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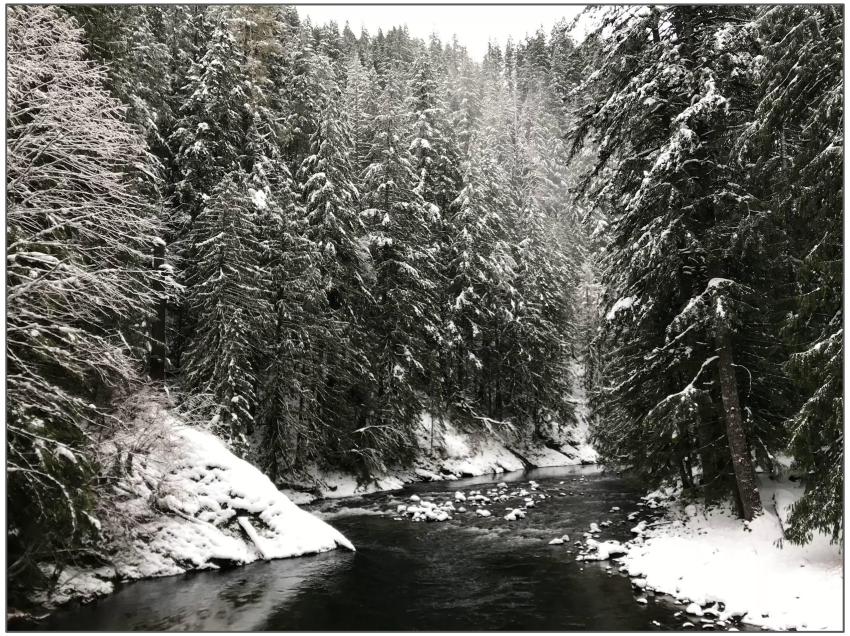


Takeaways

- Some improvements in water supply forecasts from last month

- Water year to date precipitation is above normal in southern ID, and below normal for central and northern ID. Water year to date temperatures are warmer than normal

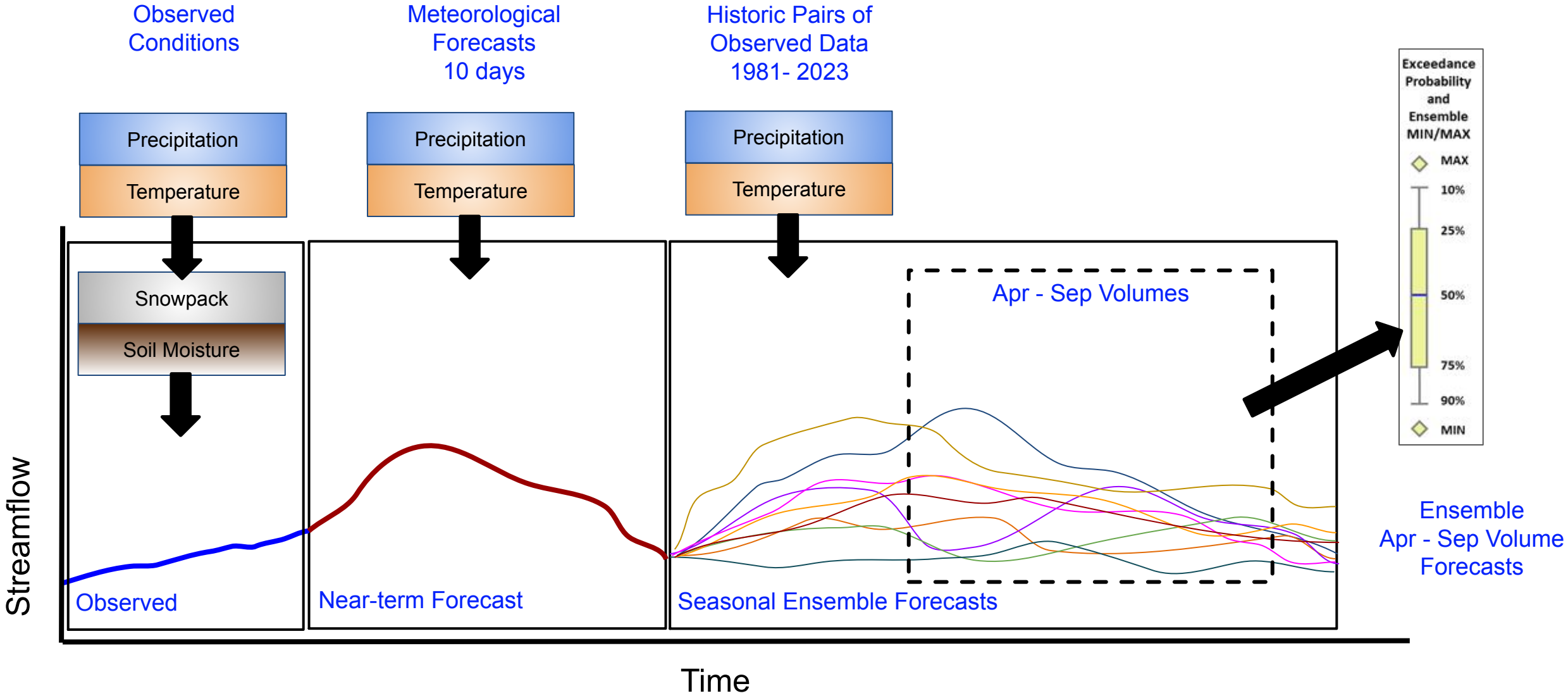
- Snowpack is above normal in southern ID, normal to below normal in central ID, and well below normal in northern ID

- 10-day weather forecast calls for below normal precipitation

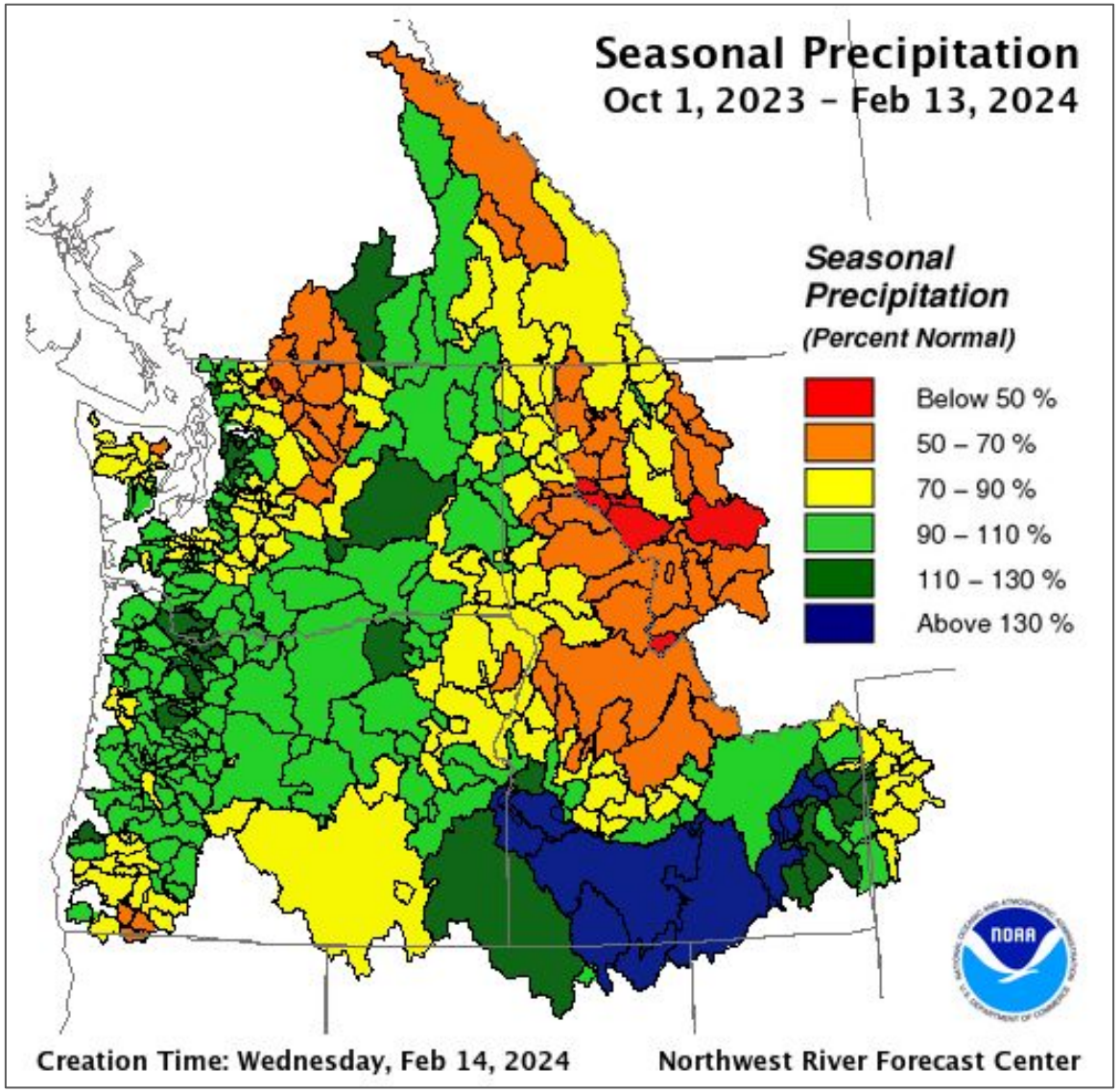
- Water year to date runoff is normal to above normal in southern and central ID, and below normal in northern ID

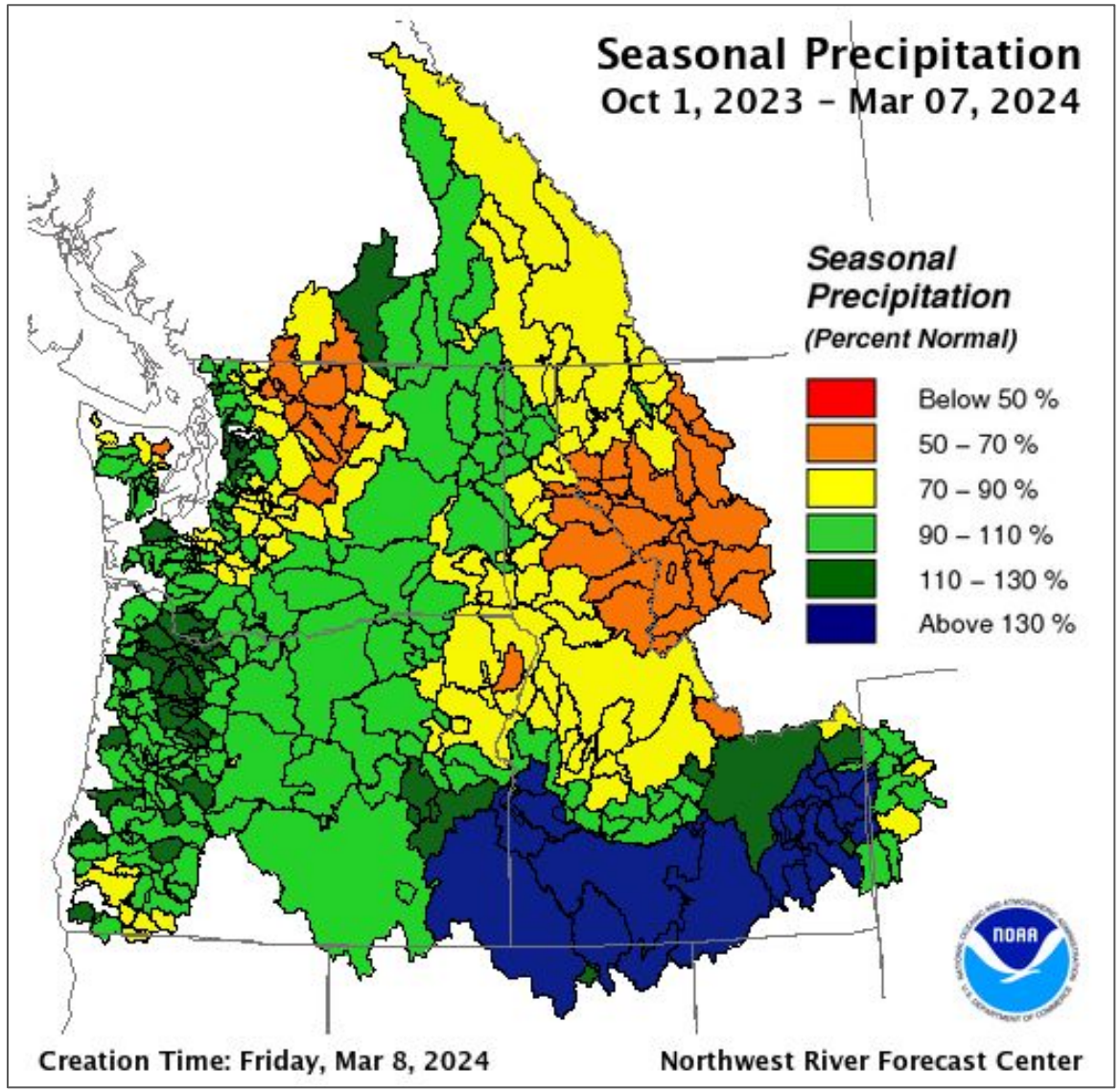
- Apr-Sep water supply forecasts have increased over last month, with near normal in the Upper Snake and Boise, and below normal for most of the rest of ID

NWRFC Forecast Technique



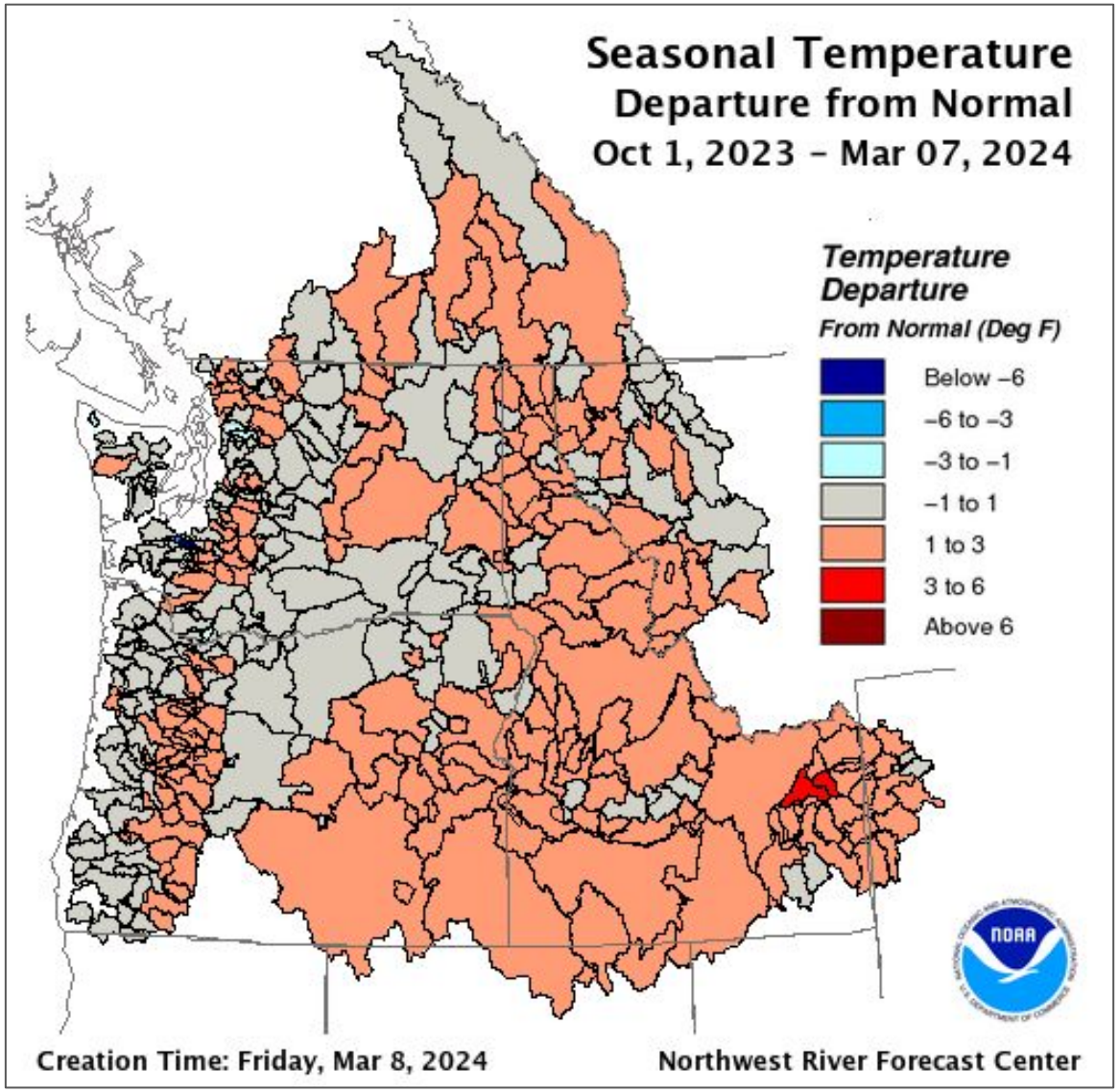
Water Year to Date Precipitation

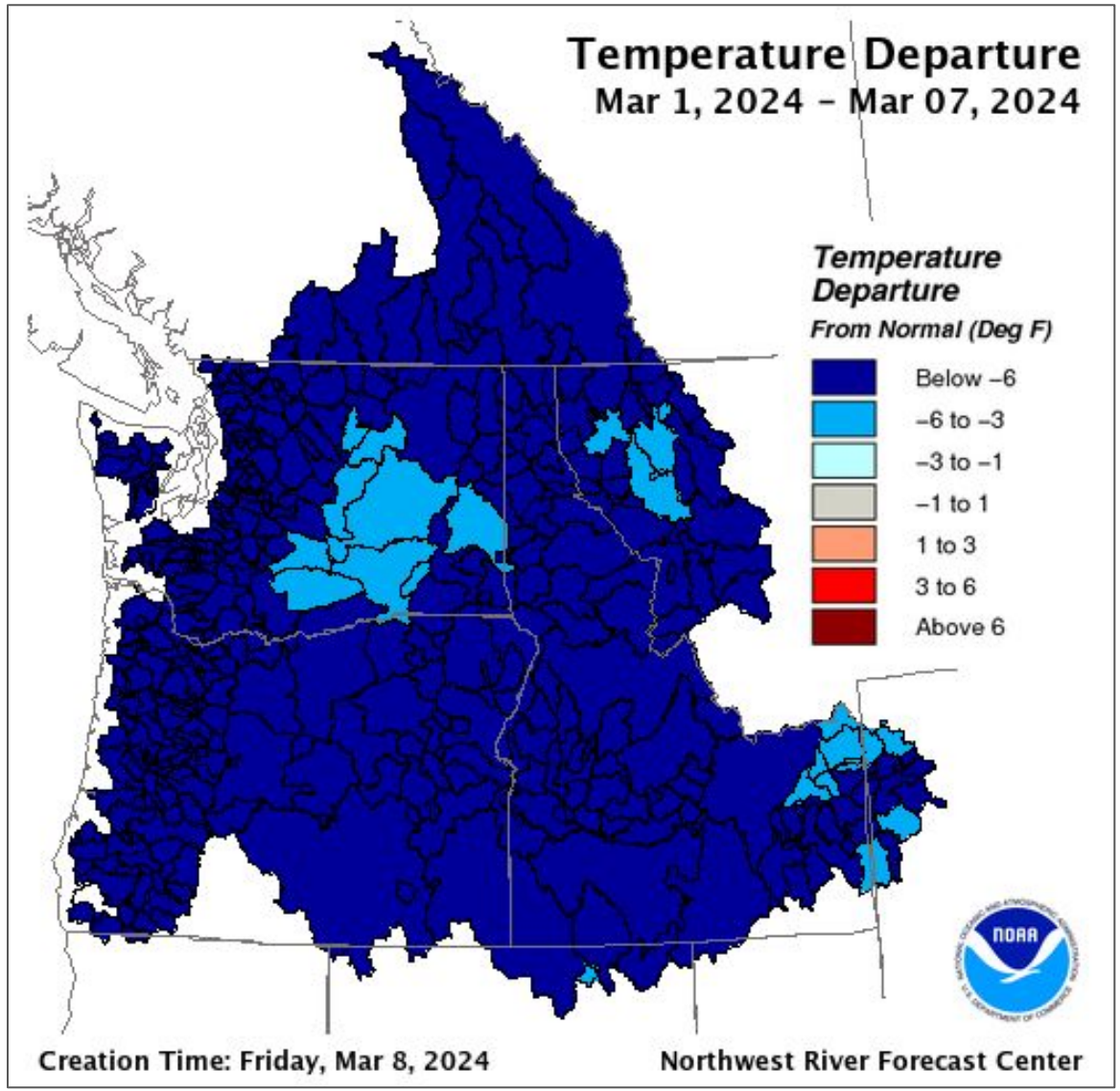




nwrfc.noaa.gov/water_supply/wy_summary/wy_summary.php?tab=2

Water Year to Date Temperature





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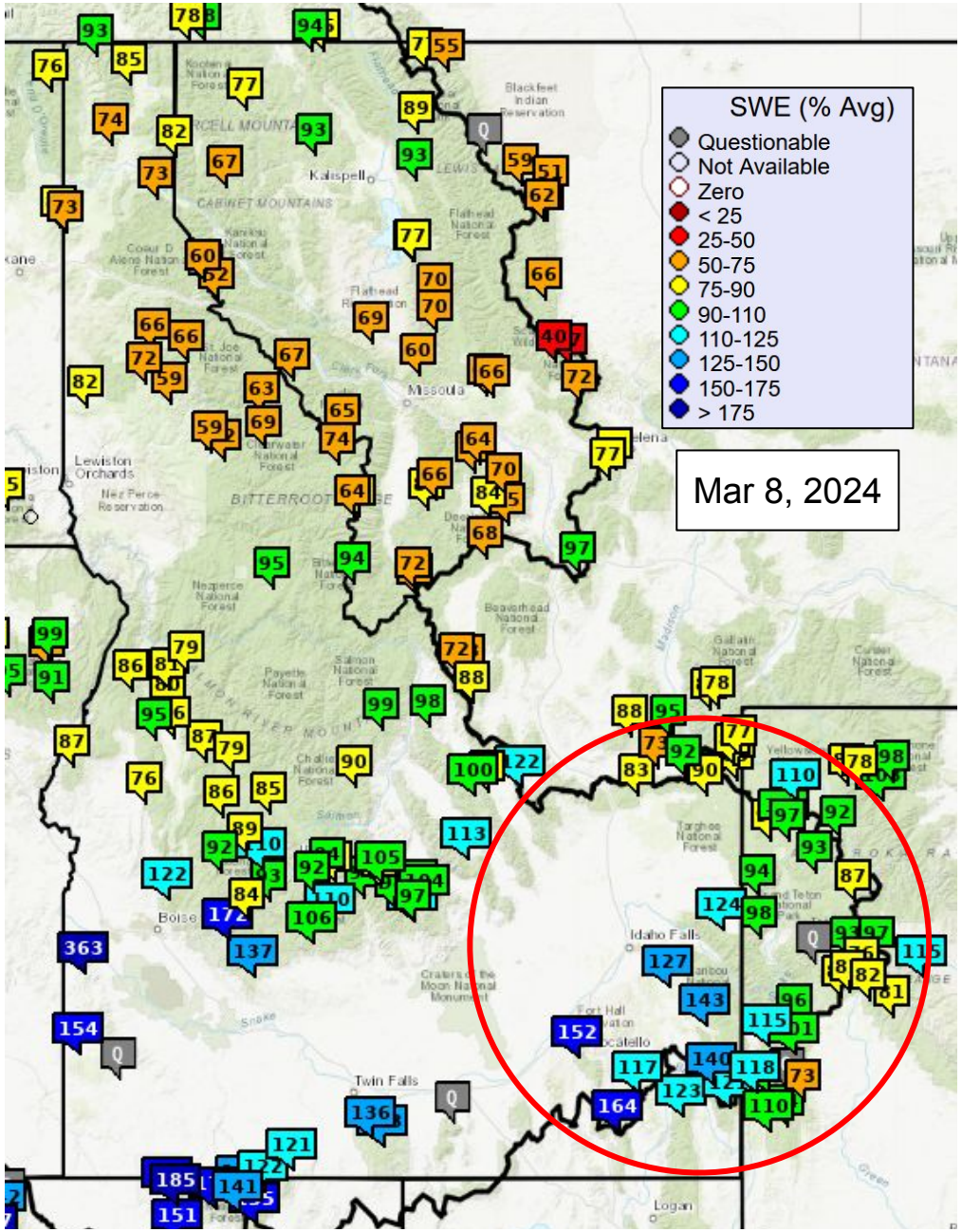
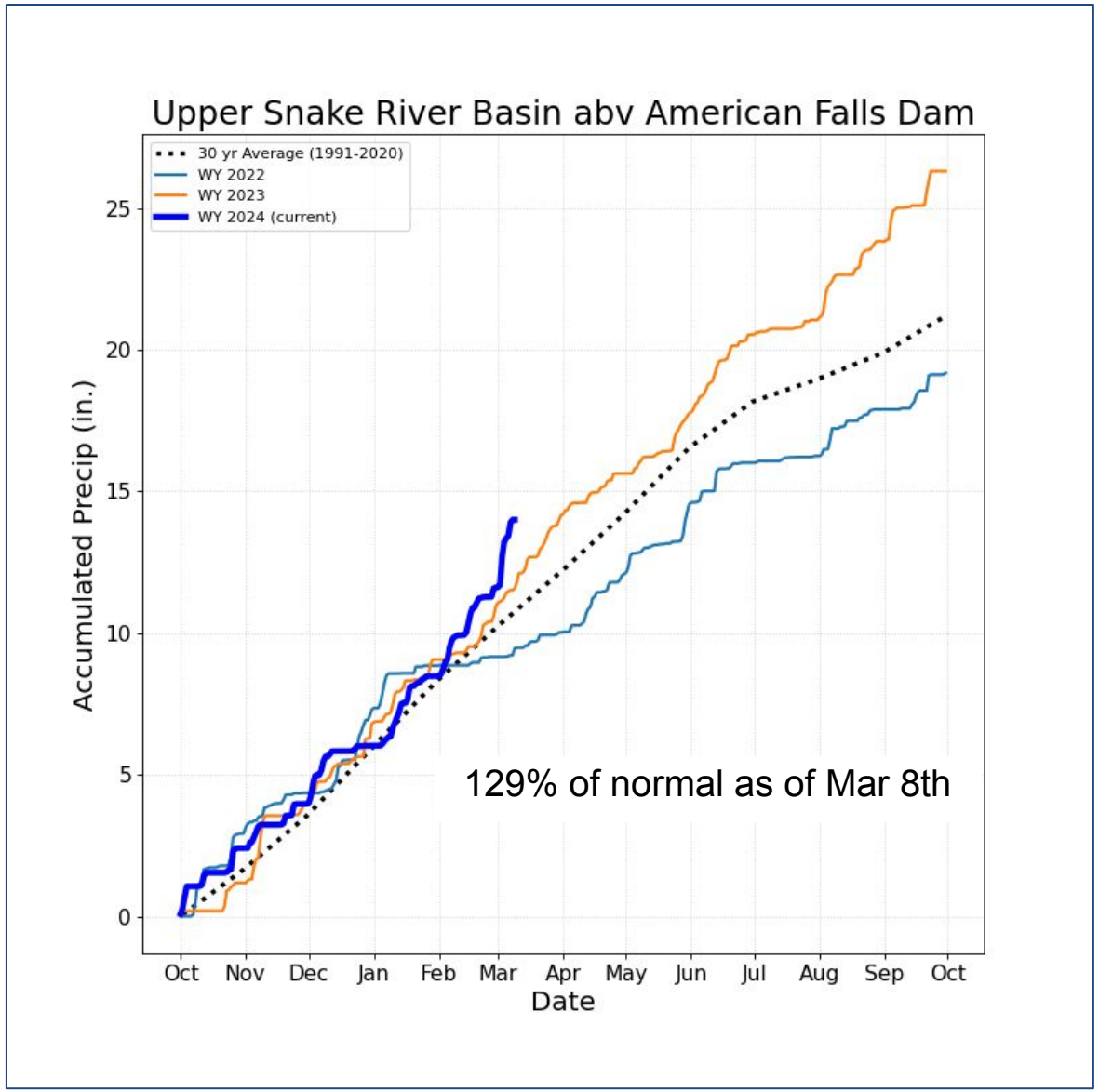
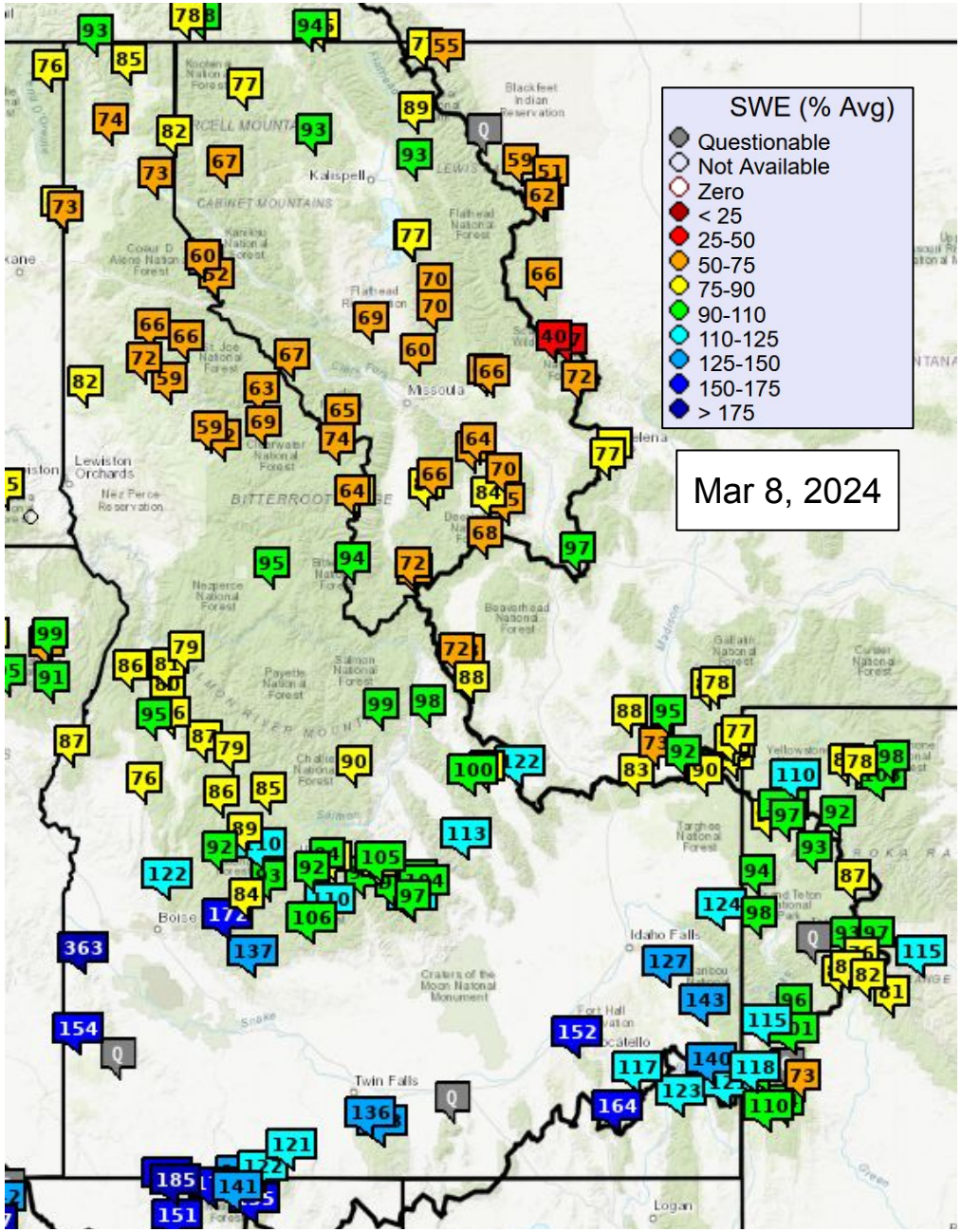
Snowpack and Precipitation

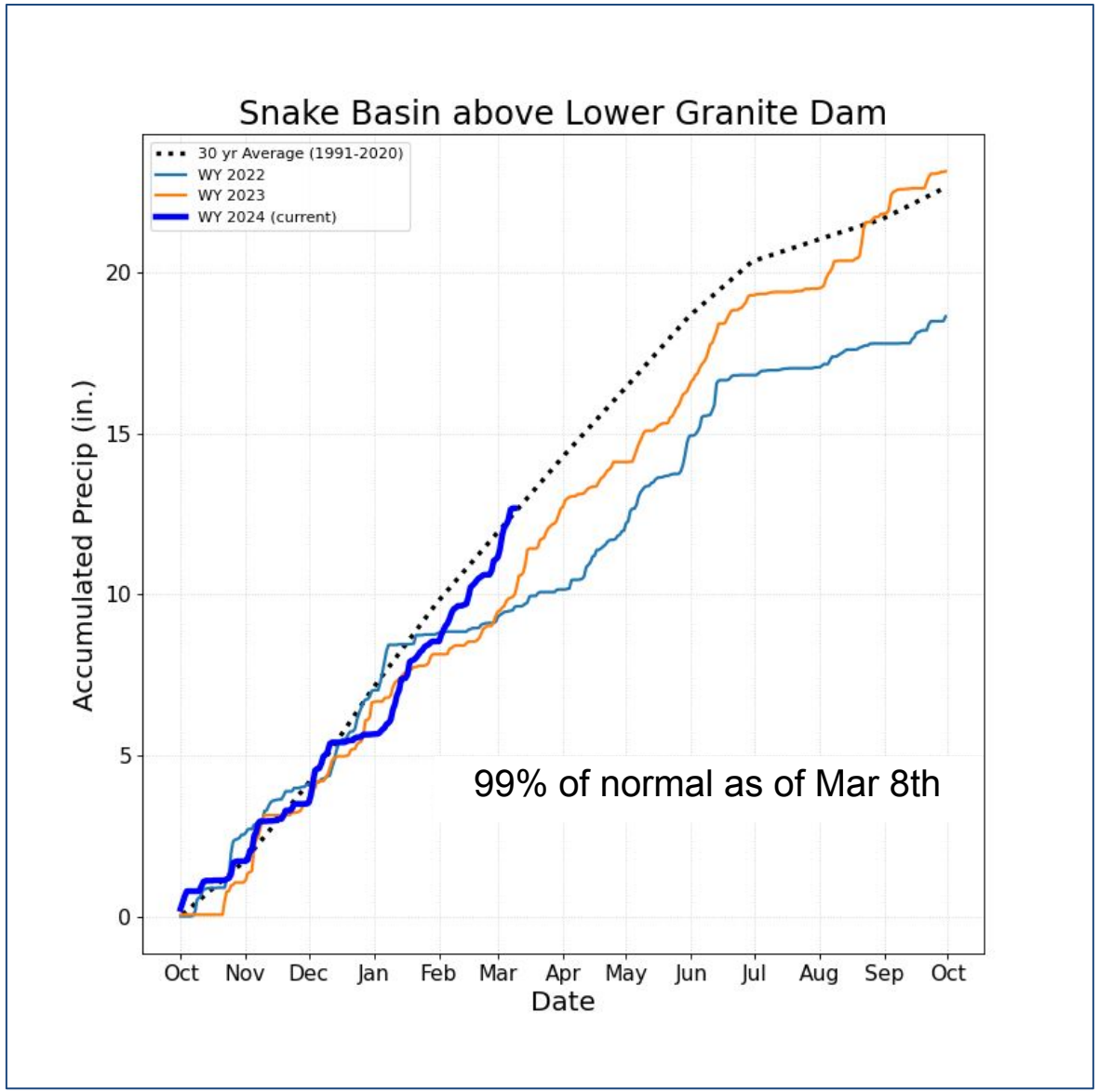




Snow data from NRCS, BC Hydro, and Alberta Environment and Parks.
Precip averages from PRISM OSU and PCIC.

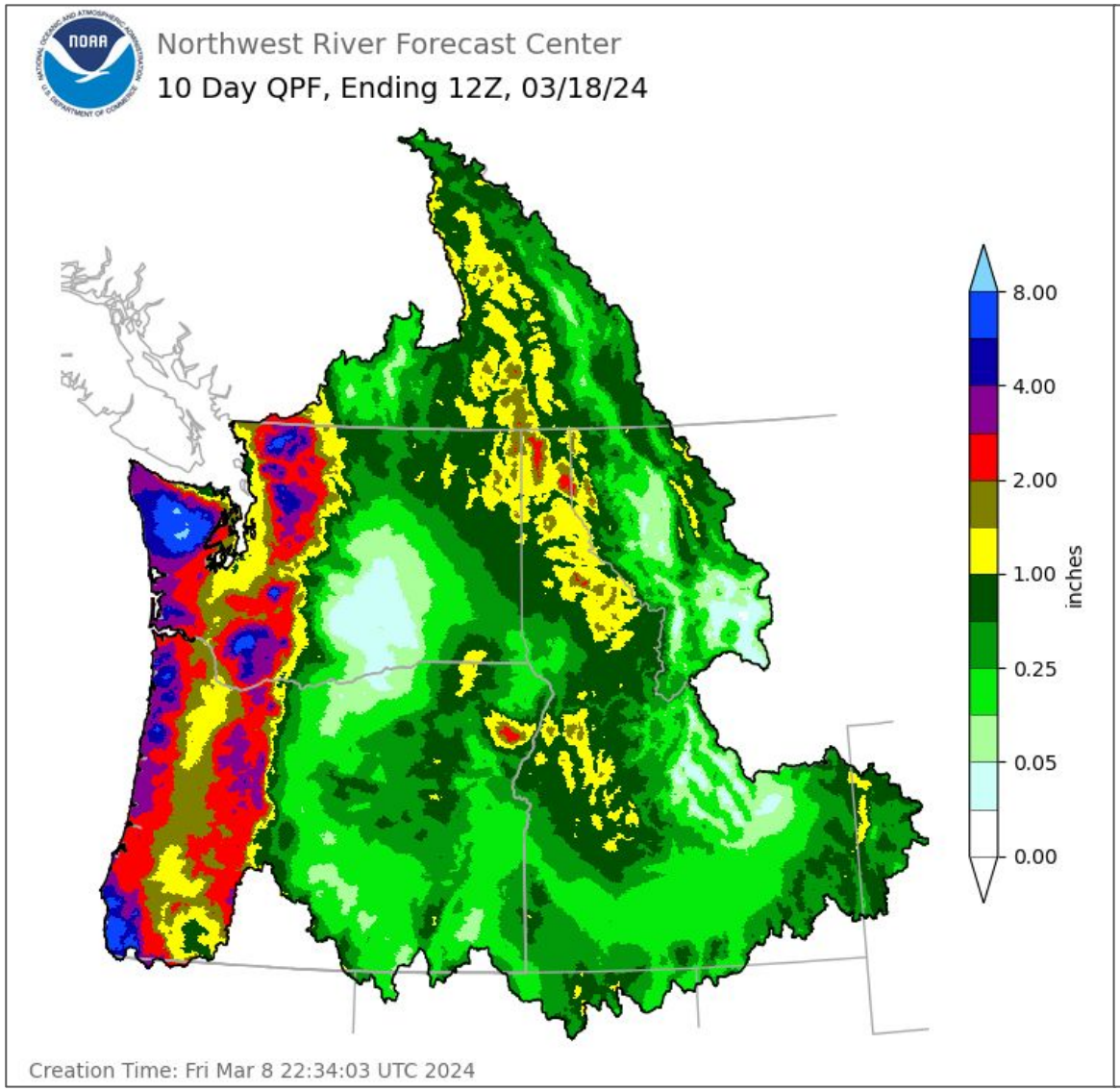
Snowpack and Precipitation

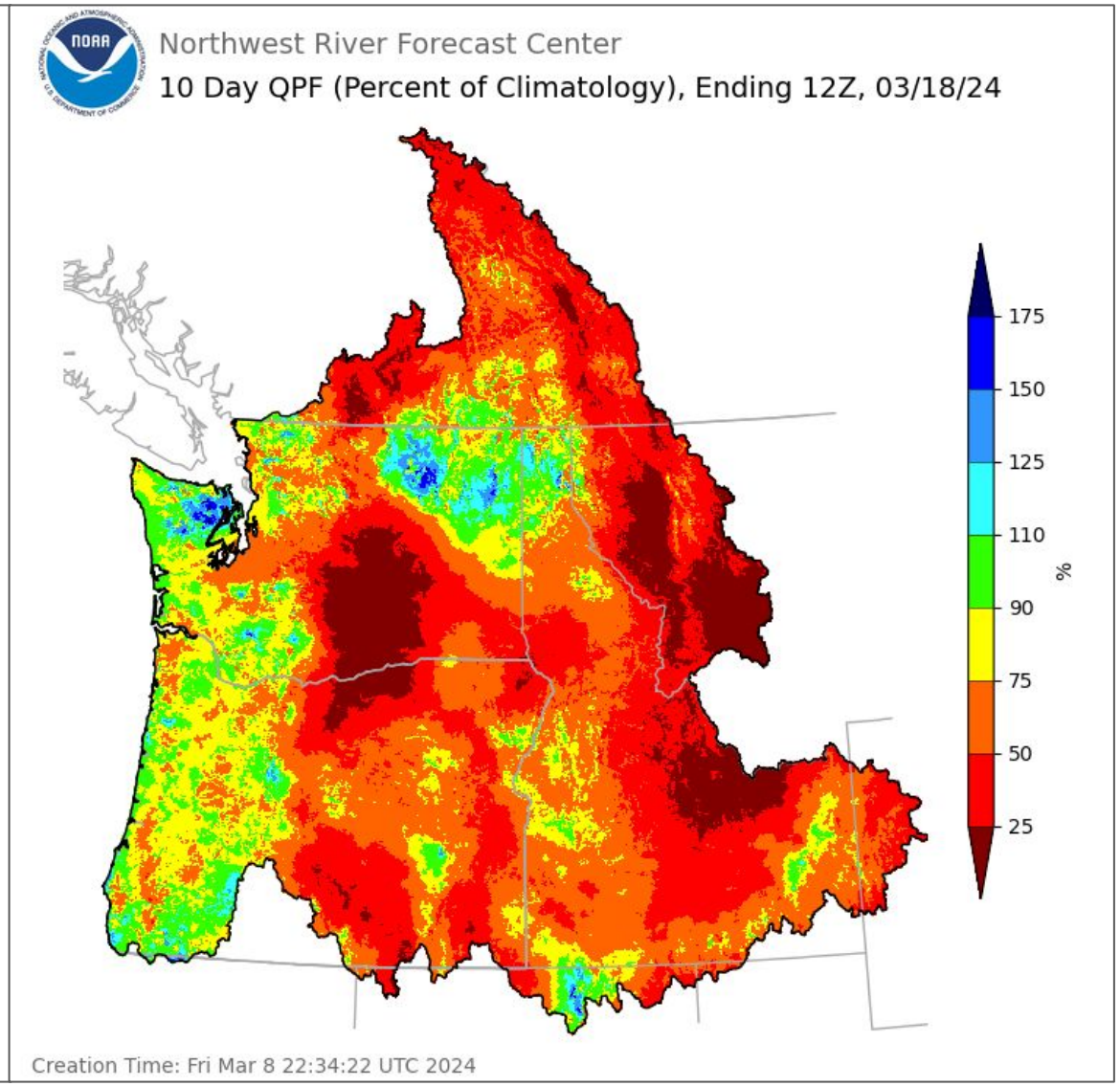




Snow data from NRCS, BC Hydro, and Alberta Environment and Parks.
Precip averages from PRISM OSU and PCIC.

10 Day Precipitation Forecast used in ESP10





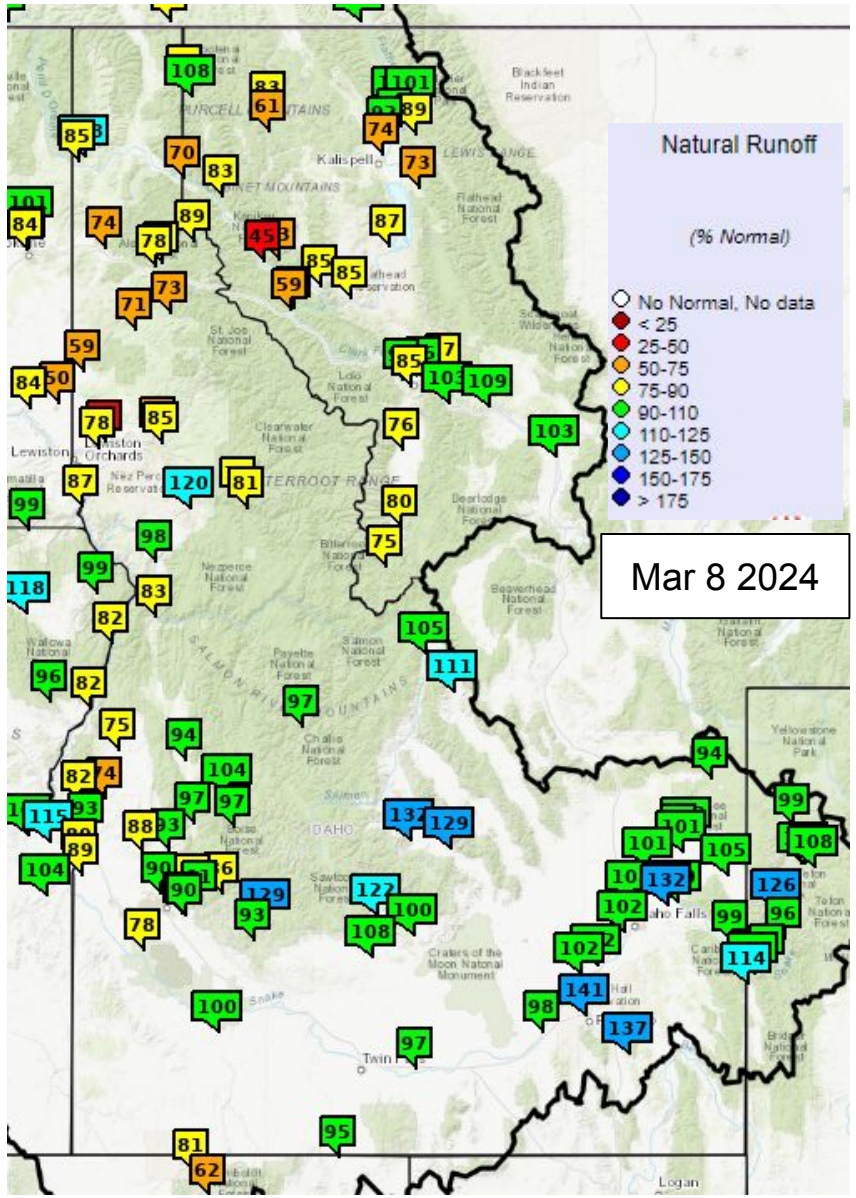
Quantitative Precipitation Forecast (QPF) Sources
Days 1 - 2 NWS Weather Forecast Offices (WFO) in the US, WPC in BC
Days 3 - 7 NWS Weather Prediction Center (WPC)
Days 8 - 10 NWS National Blend of Models (NBM)

Water Year to Date Adjusted Runoff

% Normal Runoff Oct 1 - Mar 8

Snake River Basin	Current	(chng*)
Island Park	94	(+1)
Snake near Heise	100	(0)
American Falls	98	(-1)
Lucky Peak	90	(-5)
Payette nr Horseshoe Bend	93	(-2)
Dworshak	72	(2)
Palouse near Potlatch	59	(4)
Lower Granite	84	(-1)
North Idaho Basins	**Current**	**(chng*)**
Coeur D'Alene at Cataldo	78	(+4)
St. Joe at Calder	73	(+2)

* Change since Feb. 14



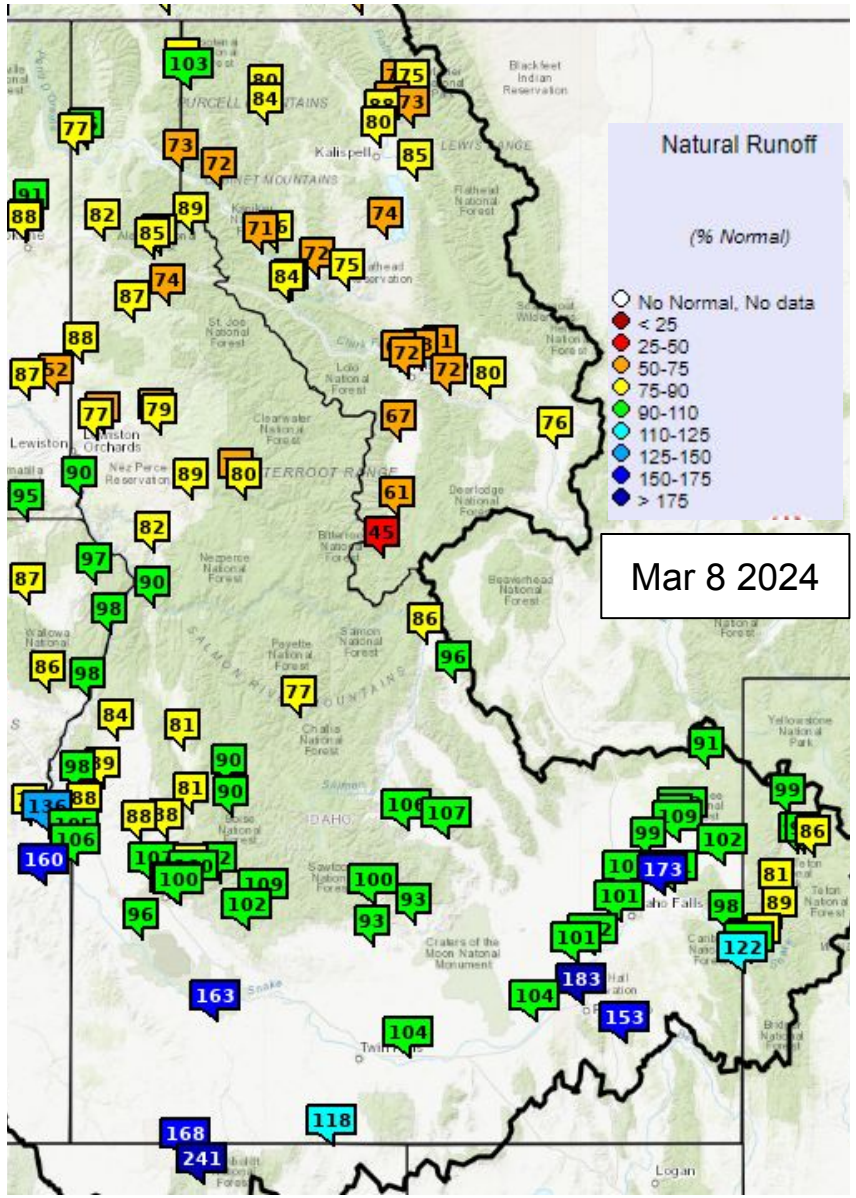
https://www.nwrfc.noaa.gov/natural/index.html?version=20190313v1

Water Supply Forecasts

% Normal Apr - Sep

Snake River Basin	Current	(chng*)
Island Park	91	(+2)
Snake near Heise	101	(+7)
American Falls	104	(+7)
Lucky Peak	100	(+6)
Payette nr Horseshoe Bend	88	(+7)
Dworshak	74	(+4)
Palouse near Potlatch	88	(+19)
Lower Granite	87	(+5)
North Idaho Basins	**Current**	**(chng*)**
Coeur D'Alene at Cataldo	85	(+12)
St. Joe at Calder	74	(+7)

* Change since Feb. 14



https://www.nwrfc.noaa.gov/natural/index.html?version=20190313v1

ESP10 Water Supply Forecast

SNAKE - AT AMERICAN FALLS DAM (AMFI1)
Forecasts for Water Year 2024

Natural Forecast

ESP with 10 Days QPF **Ensemble:** 2024-03-08 **Issued:** 2024-03-08

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	5726	6419	104	7867	6167
APR-JUL	4885	5391	102	6719	5266
JAN-SEP	6718	7367	102	8841	7190
JAN-JUL	5871	6372	101	7706	6289
OCT-SEP	7818	8467	102	9941	8275

Experimental

HEFS with 15 days EQPF **Ensemble:** 2024-03-08 **Issued:** 2024-03-08

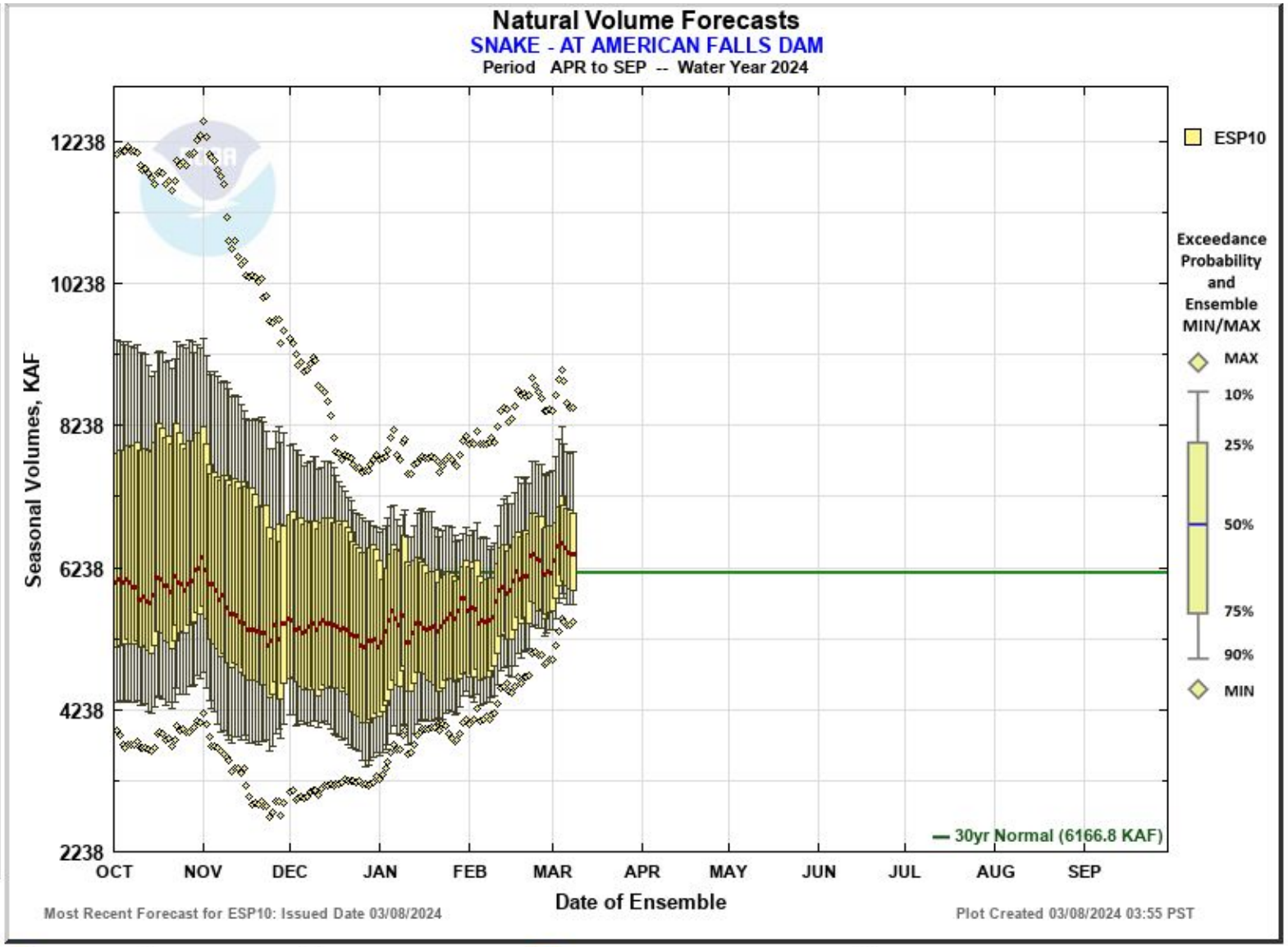
APR-SEP	5566	6338	103	7652	6167
APR-JUL	4766	5400	103	6605	5266
JAN-SEP	6600	7402	103	8658	7190
JAN-JUL	5802	6423	102	7610	6289
OCT-SEP	7700	8502	103	9758	8275

Reference

ESP with 0 Days QPF **Ensemble:** 2024-03-08 **Issued:** 2024-03-08

APR-SEP	5671	6622	107	7987	6167
APR-JUL	4832	5603	106	6889	5266
JAN-SEP	6668	7666	107	9014	7190
JAN-JUL	5829	6617	105	7903	6289
OCT-SEP	7769	8766	106	10114	8275

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



Max Scale | Scale To Data | Scale To Last 45 Days | Show Min/Max Ensemble Volume | Show Tooltips Help

https://www.nwrfc.noaa.gov/natural/plot/nat_forecasts.php?id=AMFI1

ESP10 Water Supply Forecast

SNAKE - LOWER GRANITE DAM (LGDW1)
Forecasts for Water Year 2024

Natural Forecast

ESP with 10 Days QPF **Ensemble:** 2024-03-08 **Issued:** 2024-03-08

Forecast Period	Forecasts Are in KAF				30 Year Average (1991-2020)
	90 %	50 %	% Average	10 %	
APR-SEP	17498	20735	87	26279	23929
APR-JUL	15278	18323	85	23691	21589
APR-AUG	16376	19461	85	25050	22827
JAN-SEP	23969	27491	87	33504	31446
JAN-JUL	21793	25075	86	30916	29106
OCT-SEP	27830	31351	87	37365	35973

Experimental

HEFS with 15 days EQPF **Ensemble:** 2024-03-08 **Issued:** 2024-03-08

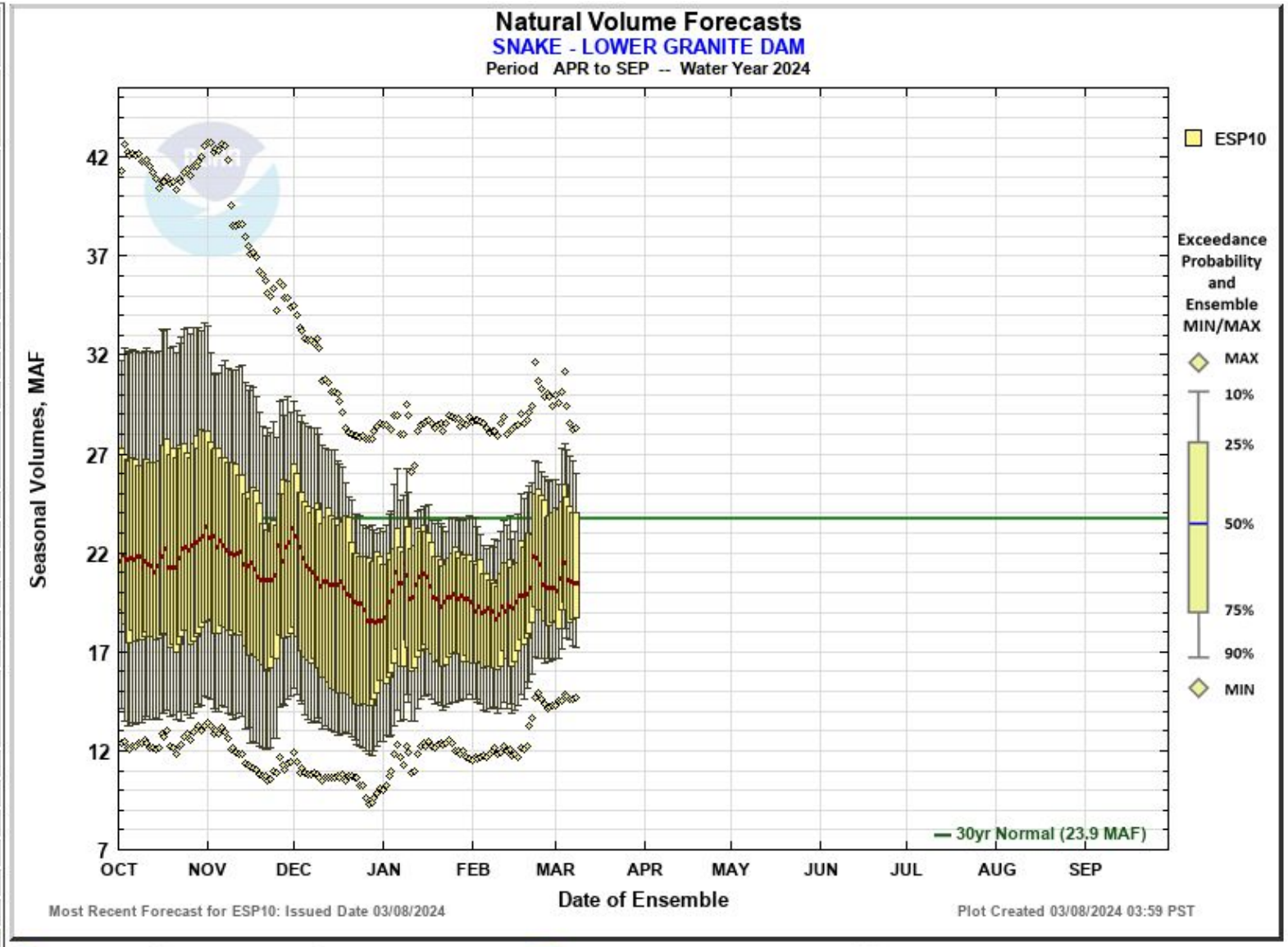
APR-SEP	16541	20540	86	25806	23929
APR-JUL	14400	18150	84	23197	21589
APR-AUG	15458	19304	85	24564	22827
JAN-SEP	23369	27789	88	32883	31446
JAN-JUL	21184	24899	86	30275	29106
OCT-SEP	27230	31650	88	36744	35973

Reference

ESP with 0 Days QPF **Ensemble:** 2024-03-08 **Issued:** 2024-03-08

APR-SEP	16505	20923	87	26509	23929
APR-JUL	14271	18591	86	23852	21589
APR-AUG	15390	19728	86	25246	22827
JAN-SEP	23681	28443	90	34005	31446
JAN-JUL	21529	25708	88	31296	29106
OCT-SEP	27542	32304	90	37866	35973

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



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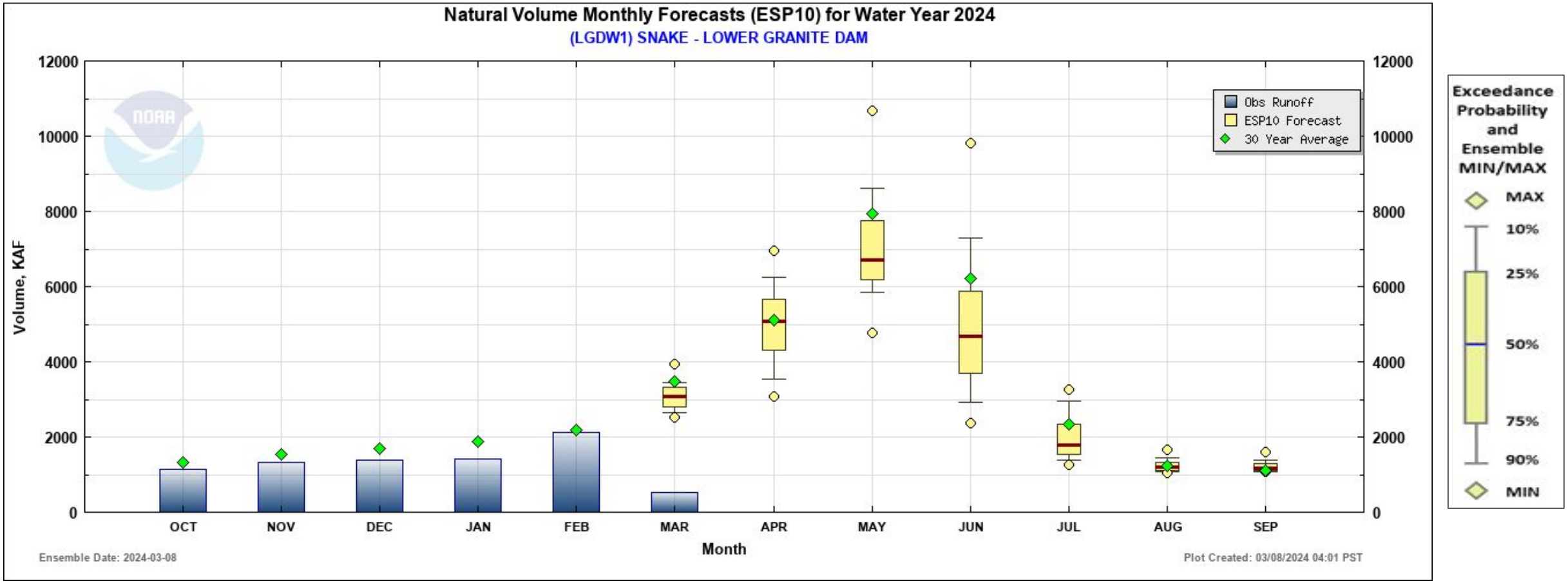
ESP10 Water Supply Forecast



https://www.nwrfc.noaa.gov/natural/plot/monthly/monthly_natural_forecasts.php?id=LGDW1