

Water Supply Outlook

March 11, 2026



Water Management and Planning
CSKT Division of Water and Engineering Resources

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Overview

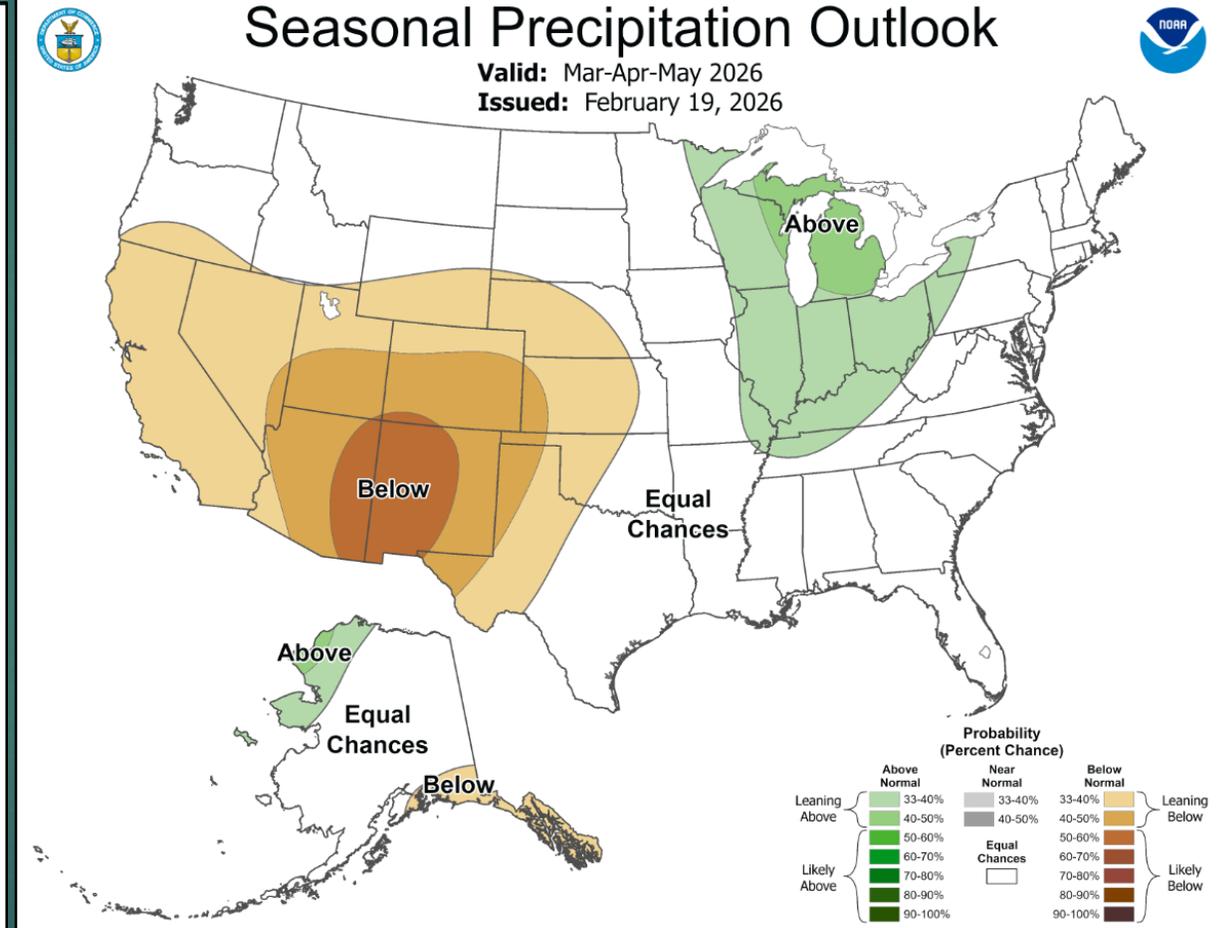
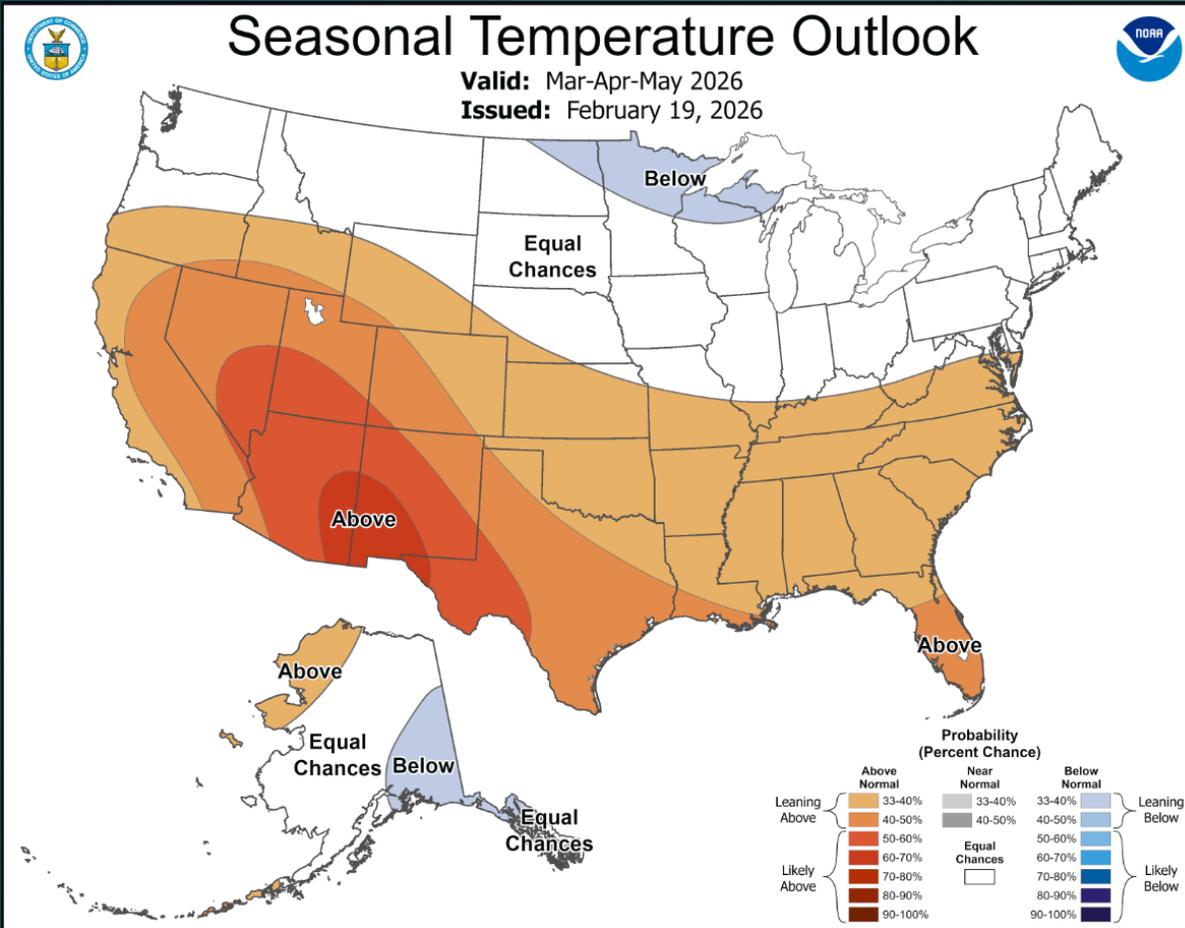
Part I

- ▶ Winter 2025-2026 has been unseasonably warm
- ▶ Seasonal outlooks are leaning warm and dry through summer
- ▶ Elevation discrepancies in snowpack continue
- ▶ Snowpack in the Flathead is at 87% (March 9, 2026)
- ▶ Accumulated precipitation for the Flathead is still above average at 111%
- ▶ Overall, reservoir storage is proximate to last year, with a few exceptions
- ▶ Flathead Basin Streamflow forecasts are predicting ~90% of normal for the remainder of water year 2026
- ▶ Examples of localizing or downscaling

Part II

- ▶ Forecasting with elevational discrepancies in snowpack
- ▶ FIIP Diversion, elevation in context
- ▶ Summary

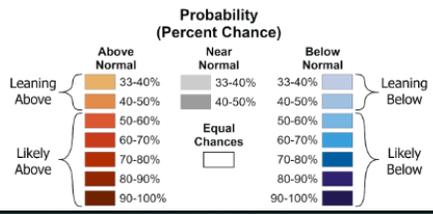
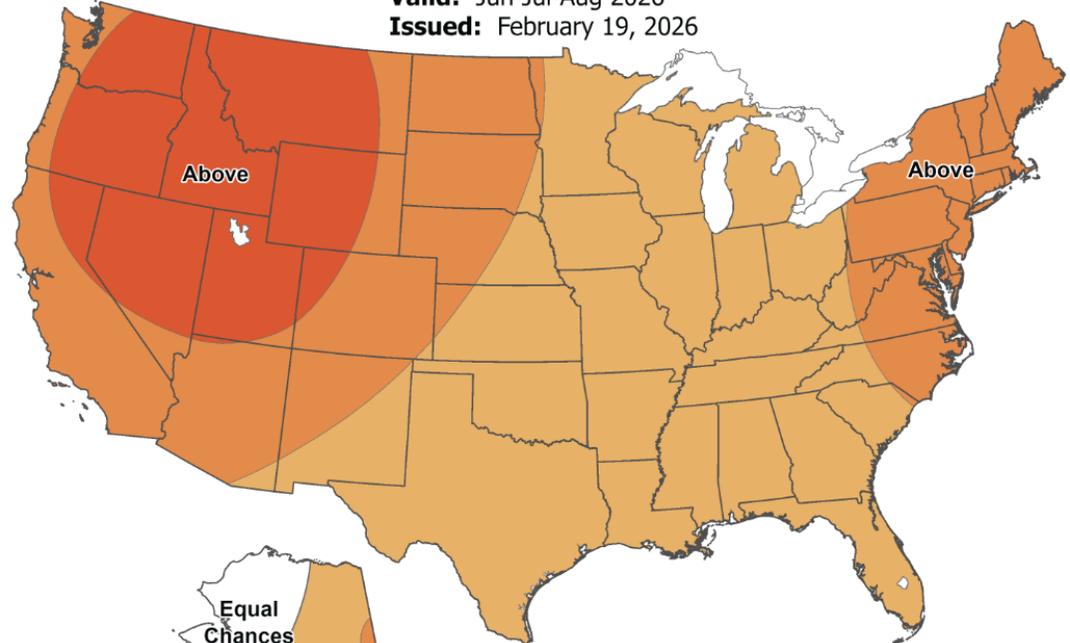
Mar-Apr-May



Jun-Jul-Aug

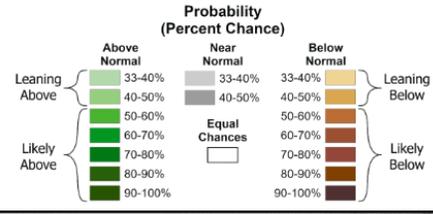
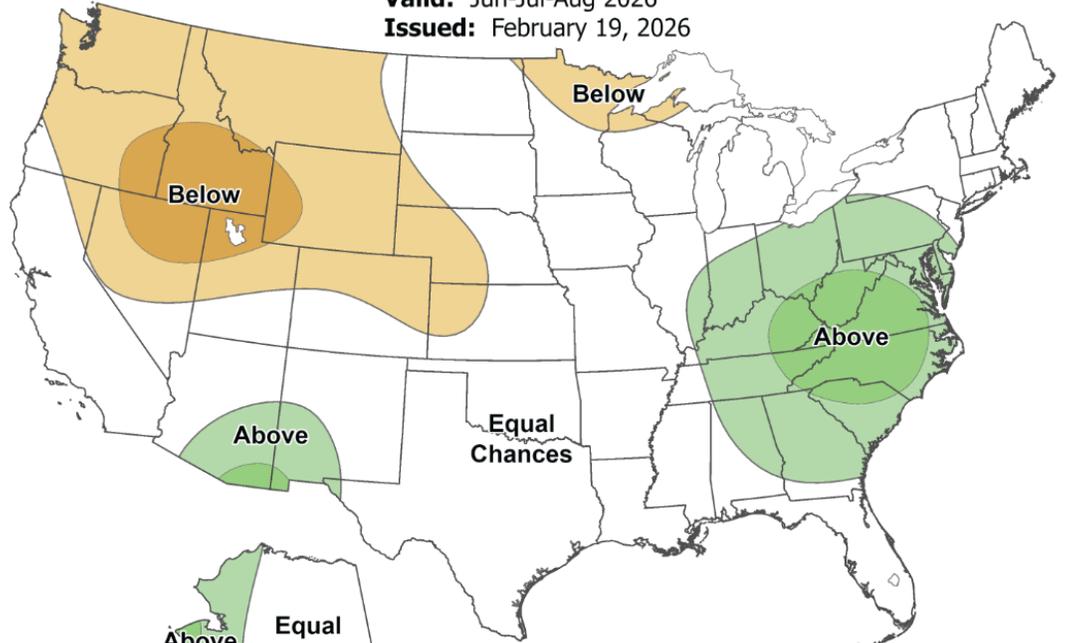
Seasonal Temperature Outlook

Valid: Jun-Jul-Aug 2026
Issued: February 19, 2026

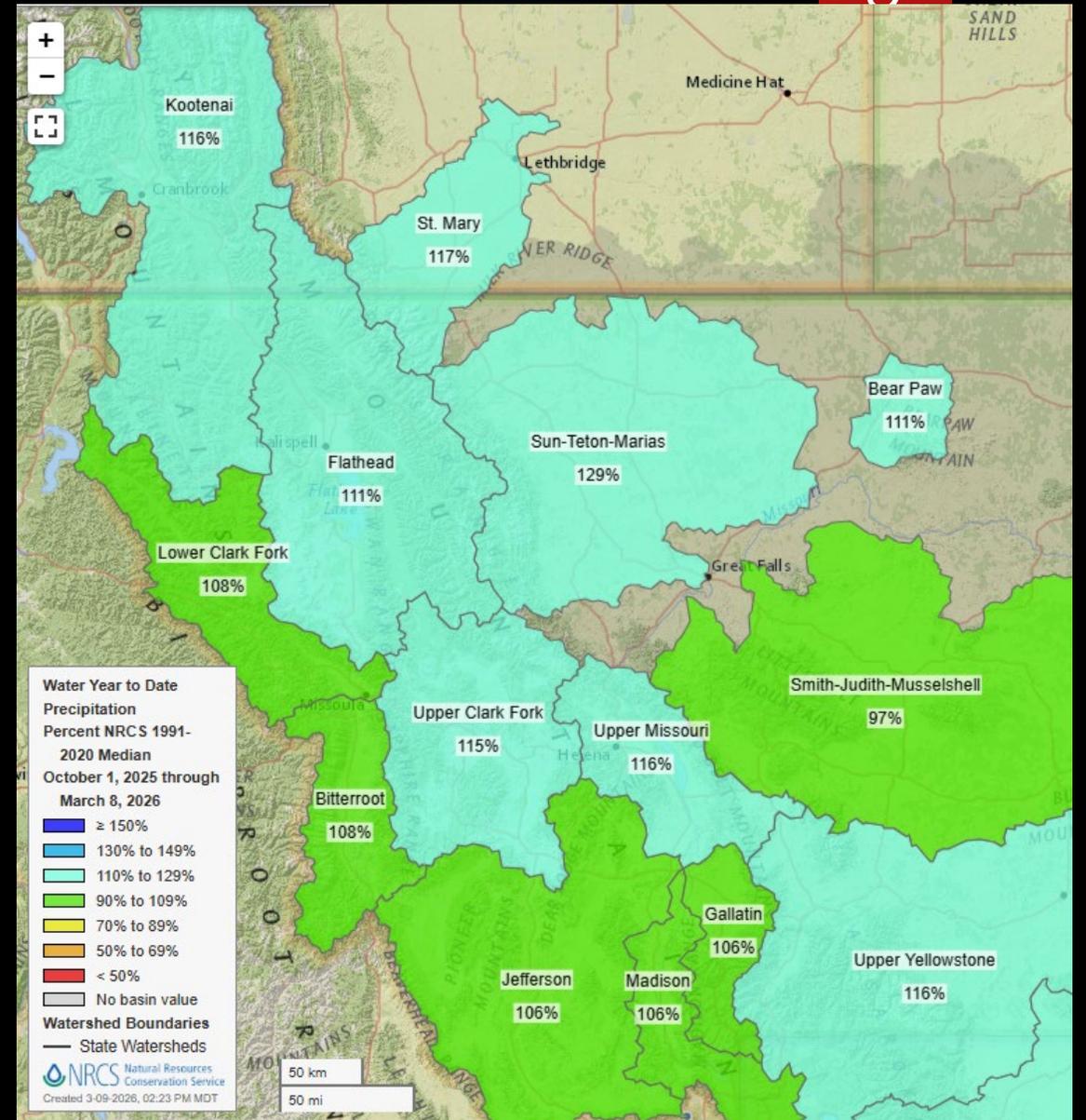
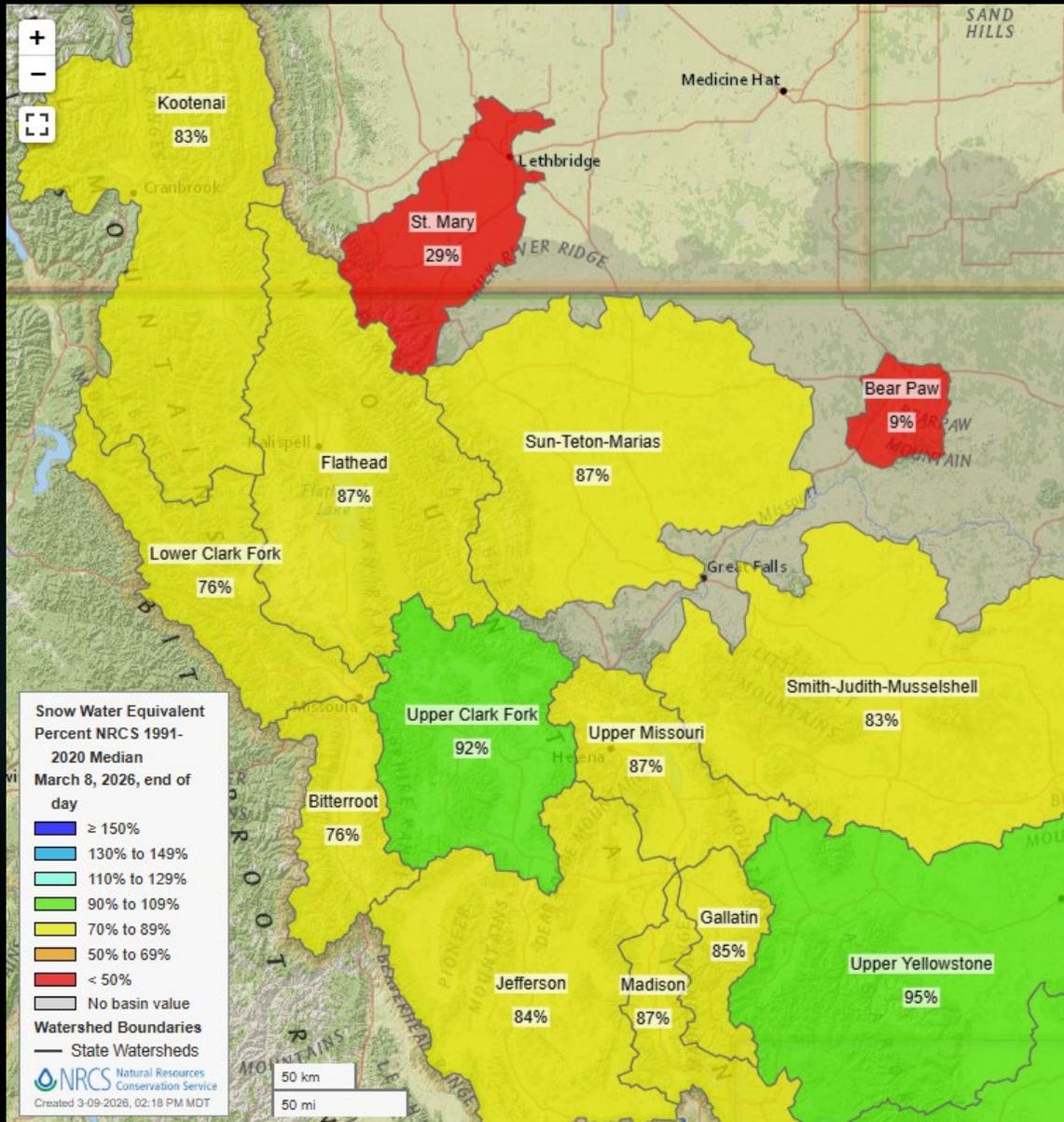


Seasonal Precipitation Outlook

Valid: Jun-Jul-Aug 2026
Issued: February 19, 2026



Basin SWE vs Precipitation

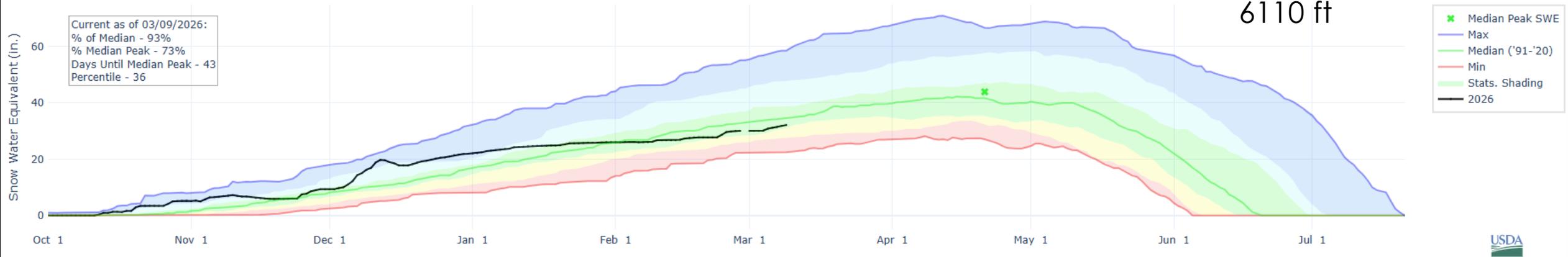


High Elevation SWE

NORTH FORK JOCKO, MT (667) SNOW WATER EQUIVALENT

6110 ft

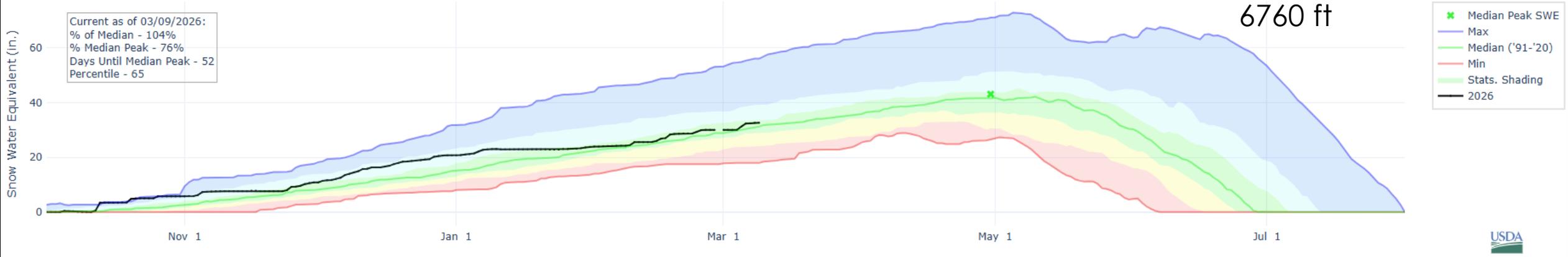
Current as of 03/09/2026:
 % of Median - 93%
 % Median Peak - 73%
 Days Until Median Peak - 43
 Percentile - 36



MOSS PEAK, MT (646) SNOW WATER EQUIVALENT

6760 ft

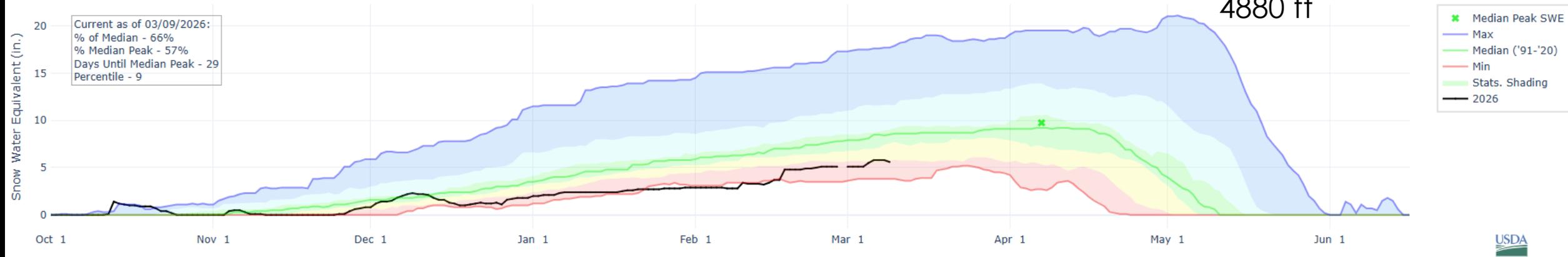
Current as of 03/09/2026:
 % of Median - 104%
 % Median Peak - 76%
 Days Until Median Peak - 52
 Percentile - 65



Low Elevation SWE

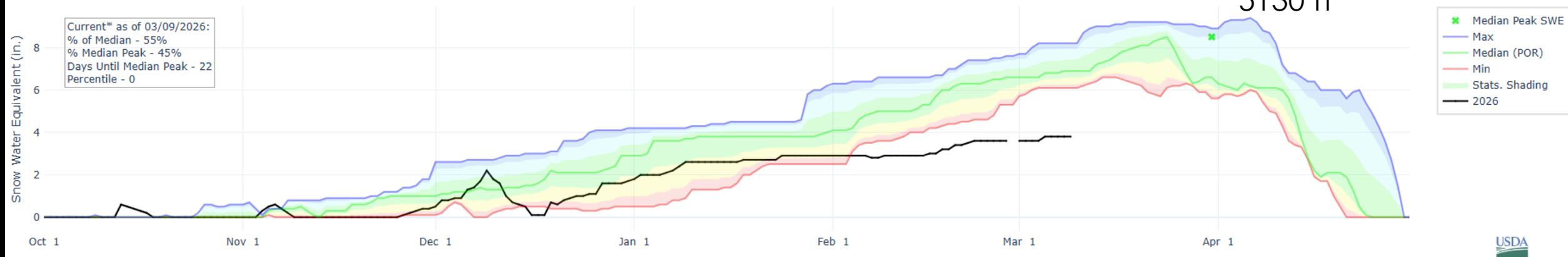
BISSON CREEK, MT (346) SNOW WATER EQUIVALENT

4880 ft

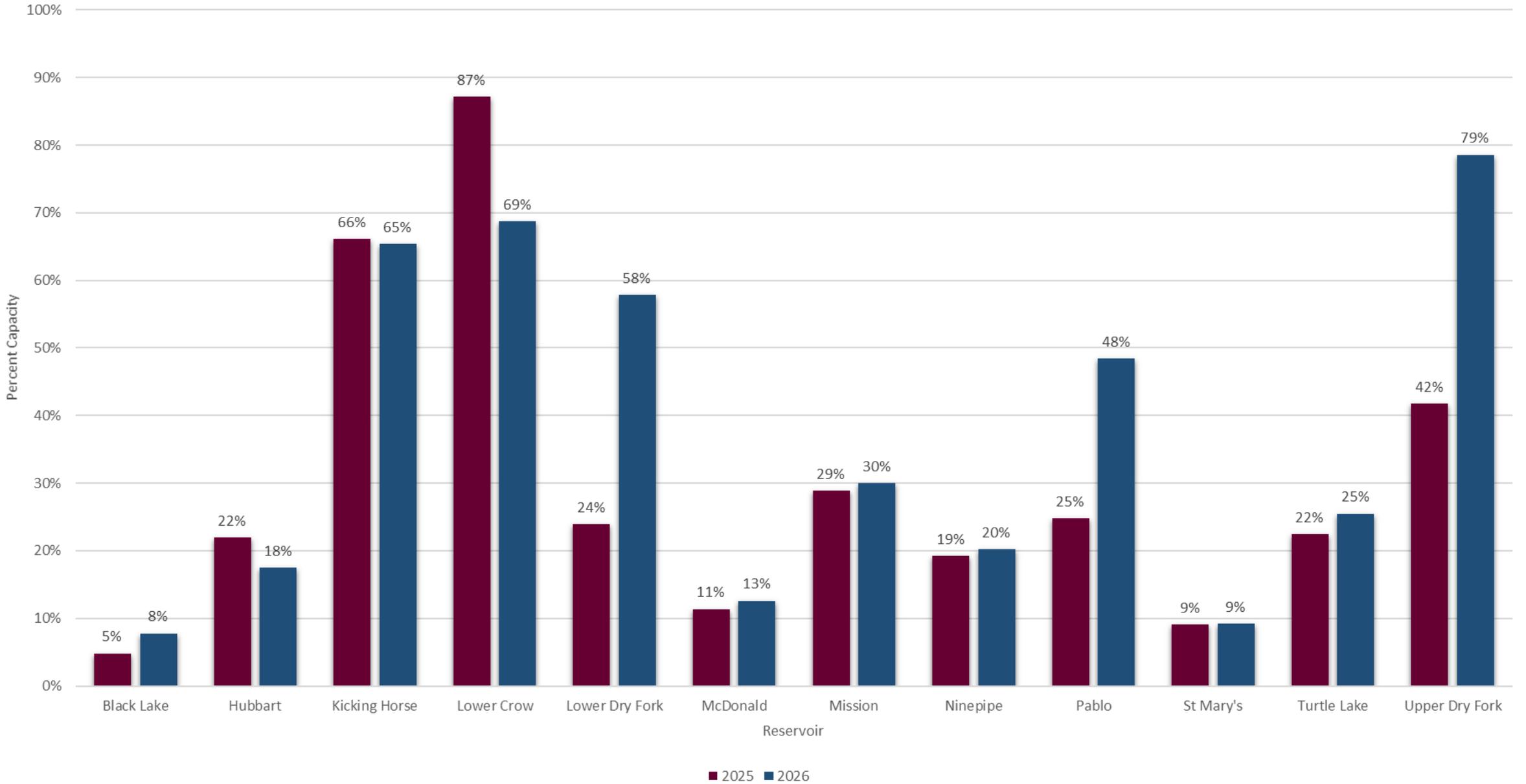


BASSOO PEAK, MT (1190) SNOW WATER EQUIVALENT

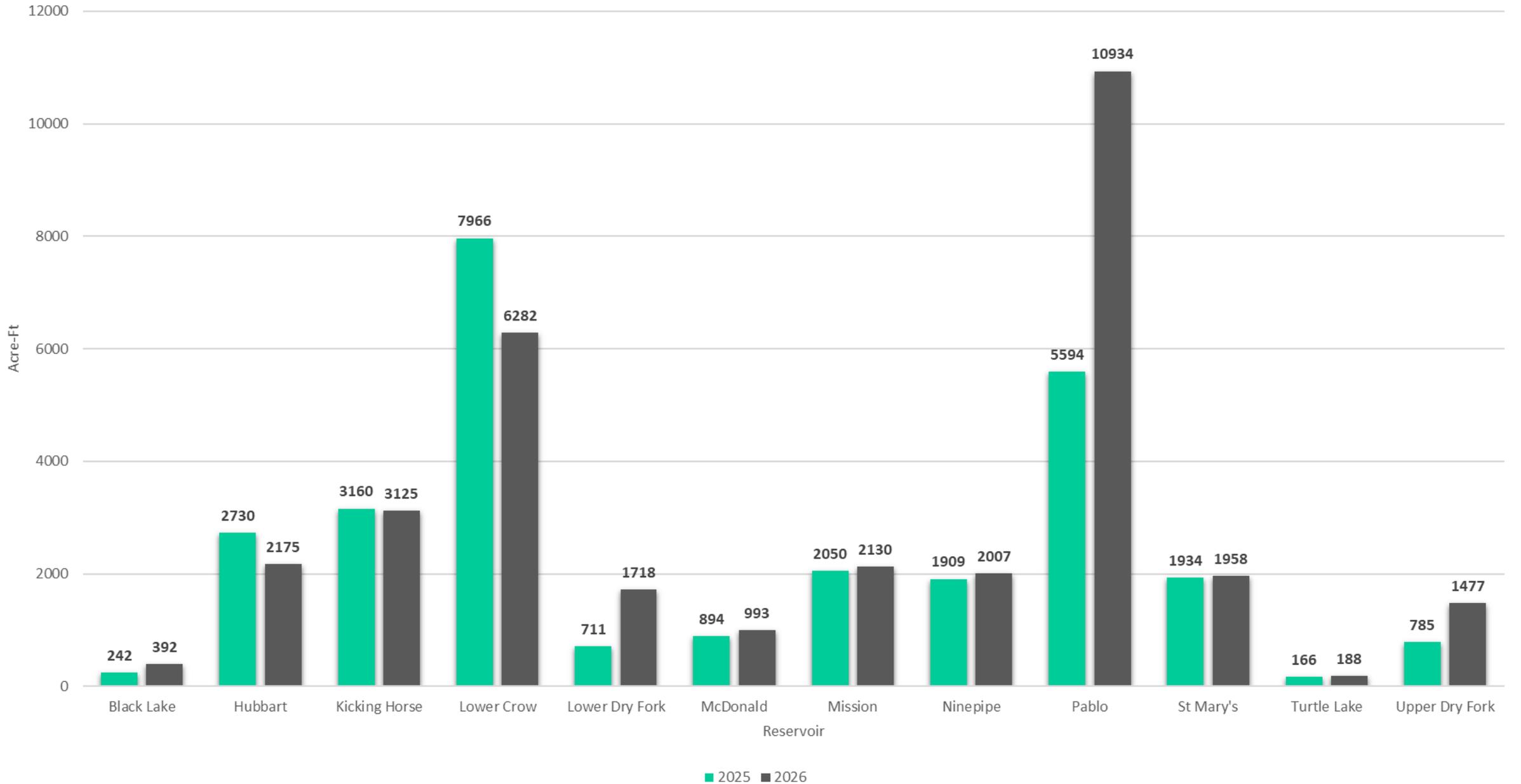
5130 ft



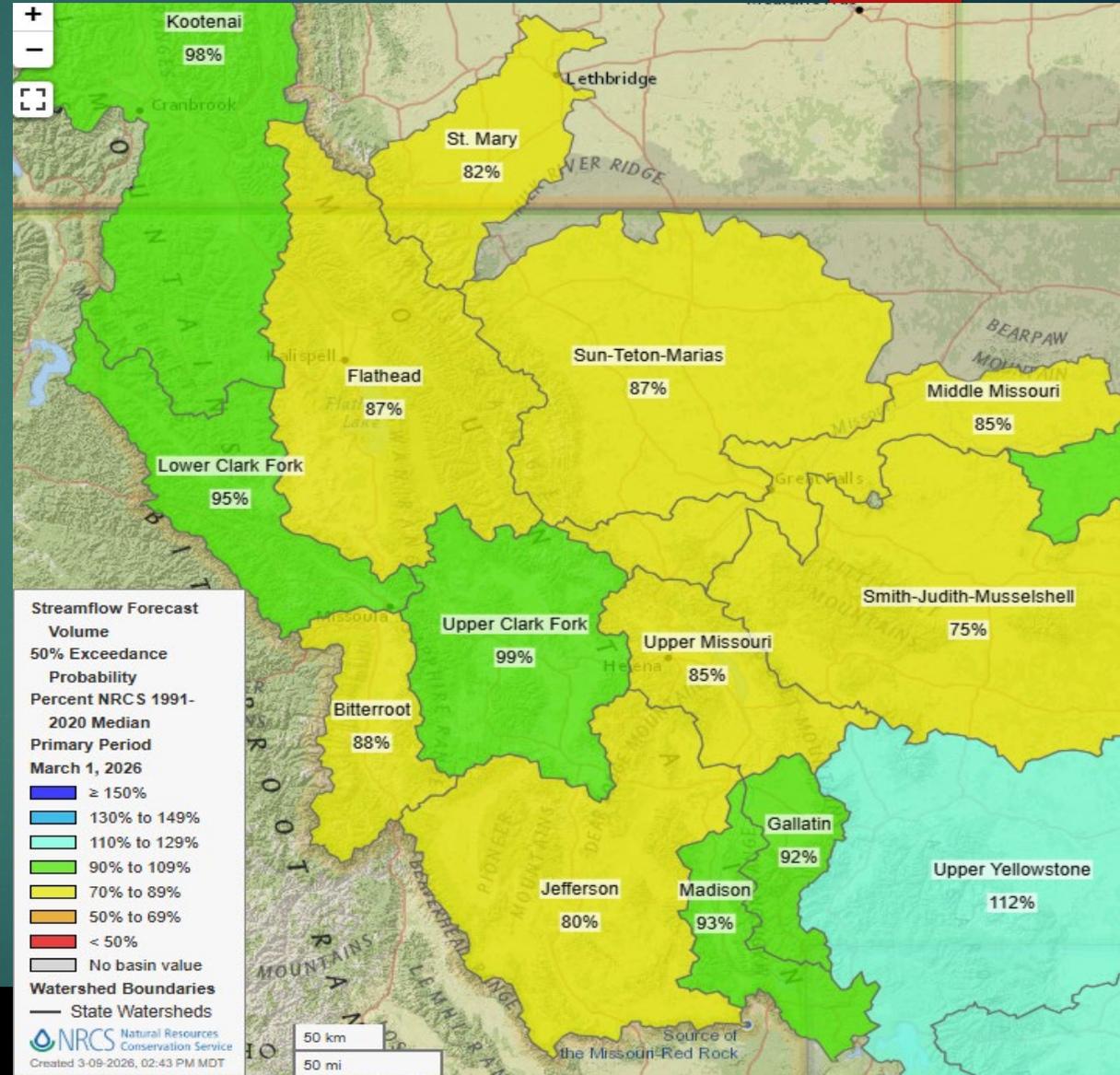
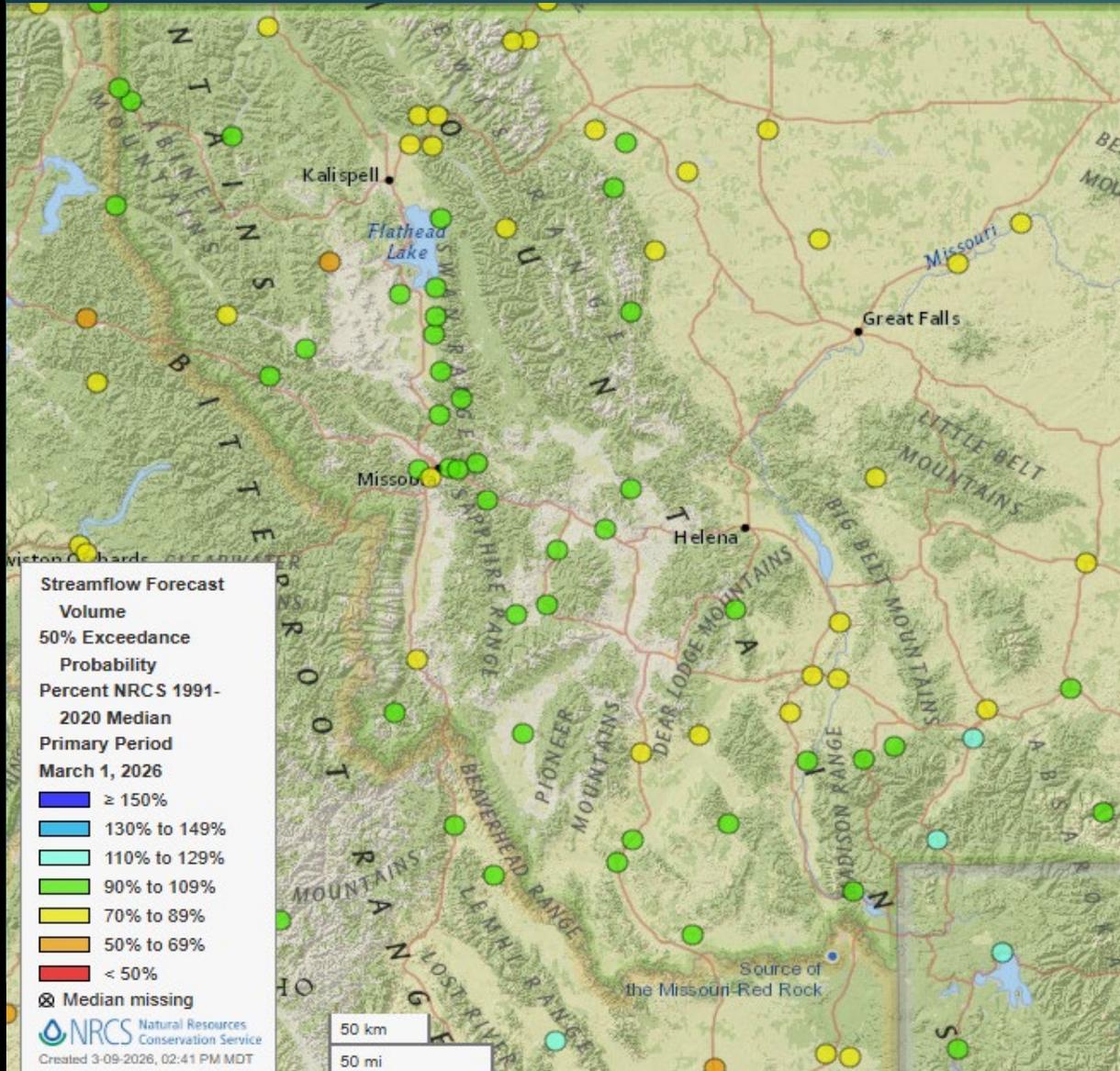
Reservoir Percent Capacity March 9



Reservoir Storage (Acre-ft) March 9



Streamflow Forecast



Flathead Basin Streamflow Forecast

11

Forecast Point		% Median
Hungry Horse Reservoir Inflow	APR-JUL	81%
	APR-SEP	82%
SF Jocko R nr Arlee	APR-JUL	94%
	APR-SEP	92%
MF Flathead R nr West Glacier	APR-JUL	89%
	APR-SEP	90%
Hellroaring Creek ab Reservoir nr Polson	APR-JUL	102%
	APR-SEP	102%
Mission Ck nr St. Ignatius	APR-JUL	100%
	APR-SEP	94%
Sf Flathead R nr Hungry Horse	APR-JUL	80%
	APR-SEP	82%
Flathead Lake Inflow	APR-JUL	90%
	APR-SEP	89%

Forecast Point		% Median
North Crow Creek nr Ronan	APR-JUL	100%
	APR-SEP	95%
Agency Crk nr Arlee	APR-JUL	93%
	APR-SEP	90%
South Crow Ck nr Ronan	APR-JUL	100%
	APR-SEP	98%
Flathead R at Columbia Falls	APR-JUL	86%
	APR-SEP	84%
NF Flathead R nr Columbia Falls	APR-JUL	86%
	APR-SEP	84%
Swan R nr Bigfork	APR-JUL	90%
	APR-SEP	91%
Mill Ck ab Bassoo ck nr Niarada	APR-JUL	66%
	APR-SEP	67%

Basin Average APR-JULY	90%
Basin Average APR-SEP	89%

Method 1 – Dry Cr Predictions

NRCS Forecast, Basin Reports, Mission Cr, March 1, 2026

2026							
Forecast Period	90%	70%	50%	% Median	30%	10%	30-Yr
April - July	21000	24000	26000	100	28000	31000	
April - September	23000	26000	29000	94	21000	35000	

1992 Linear Regression Analysis

Forecast procedures and reservoir operation curves for the Mission Valley: Flathead Agency Irrigation Division

$$\text{April - July runoff} = 0.39 * (\text{April-July Runoff}) \text{ Mission Creek} + 2360$$

2024 Dry Creek Prediction							
Forecast Period	Dry*	Normal*			Wet*	30-Yr Median	
	90%	70%	50%	% Median	30%		10%
April - July (AF)	8600	9770	10160		12110	14450	12500

2025 Dry Creek Prediction							
Forecast Period	90%	70%	50%	% Median	30%	10%	30-Yr Median
	April - July (AF)	10940	12110	12890		14060	15620

2026 Dry Creek Prediction,							
Forecast Period	90%	70%	50%	% Median	30%	10%	30-Yr Median
	April - July (AF)	10550	11720	12500	100	13280	14450

*Dry, Normal, Wet, based upon Appendix 3.7 but altered to fit the NRCS % Exceedance Values.

Total Reservoir % from Dry Cr.							
2024 Dry Creek Prediction		Dry*	Normal*			Wet*	
Forecast Period	90%	70%	50%	% Median	30%	10%	30-Yr Median
April - July (AF)	37	42	44		52	62	54

2025 Dry Creek Prediction							
Forecast Period	90%	70%	50%	% Median	30%	10%	30-Yr Median
April - July (AF)	47	52	55		60	67	54

2026 Dry Creek Prediction							
Forecast Period	90%	70%	50%	% Median	30%	10%	30-Yr Median
April - July (AF)	45	50	54		57	62	54

*Dry, Normal, Wet, based upon Appendix 3.7 but altered to fit the NRCS % Exceedance Values.

Operational Reservoir % from Dry Cr.							
2024 Dry Creek Prediction		Dry*	Normal*			Wet*	
Forecast Period	90%	70%	50%	% Median	30%	10%	30-Yr Median
April - July (AF)	41	47	49		58	69	60

2025 Dry Creek Prediction							
Forecast Period	90%	70%	50%	% Median	30%	10%	30-Yr Median
April - July (AF)	52	58	62		67	75	60

2026 Dry Creek Prediction							
Forecast Period	90%	70%	50%	% Median	30%	10%	30-Yr Median
April - July (AF)	51	56	60		64	69	60

*Dry, Normal, Wet, based upon Appendix 3.7 but altered to fit the NRCS % Exceedance Values.

Method 2 – Dry Cr Predictions

14

Dry Creek Calculations

$$\text{Inflow} = \text{Outflow} + \text{Delta Storage}$$

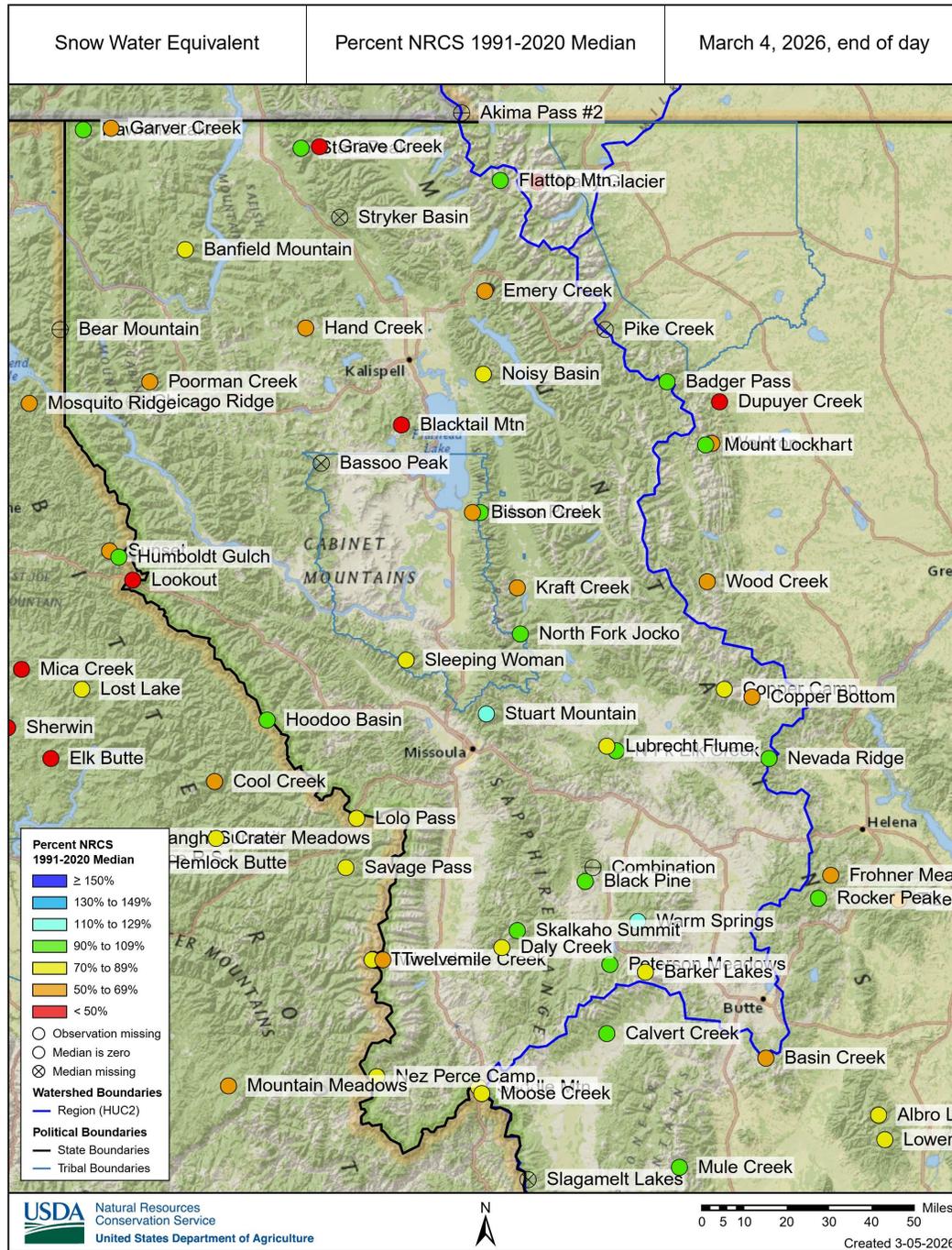
$$\text{Dry Cr. Inflow} = (\text{Mission DA} + \text{Mission F} + \text{Delta of Tabor}) - \text{Tabor Canal below Twin}$$

- Trim data to April – July

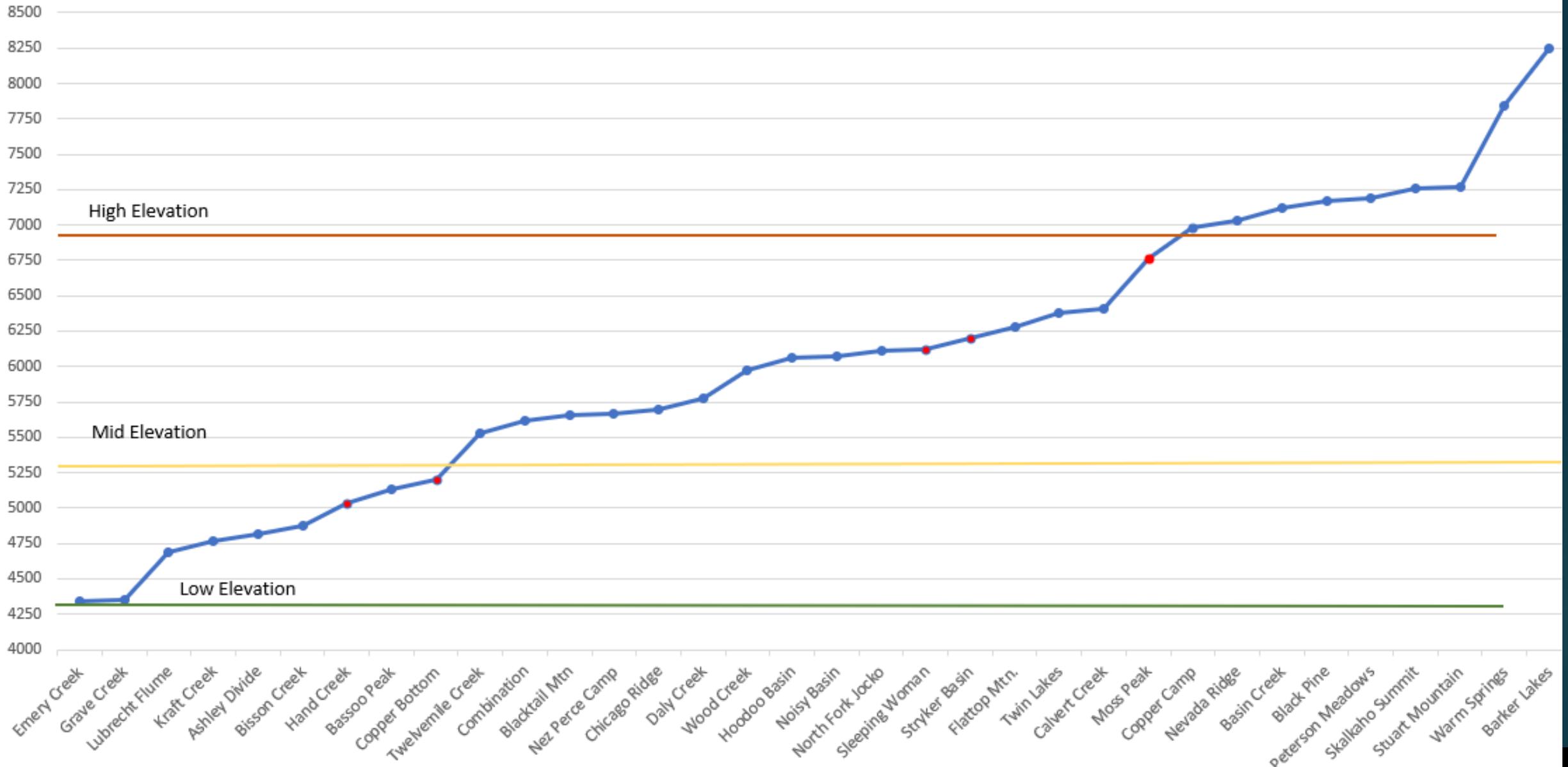
Calculated Tabor Infill Percentages.						
Year (CY)	April/July (CFS)	April/July (AF)	Total Reservoir % from Tabor Canal (23,295 ft.)	Total Reservoir % Est. from Dry Cr.	Operational Reservoir % Est. from Dry Cr. (20,879 ft.)	Operational Reservoir % Est. from Dry Cr.
2016	13029	25798	111%		124%	
2107	10624	21035	90%		101%	
2018	9512	18834	81%		90%	
2019	9740	19285	83%		92%	
2020	9739	19283	83%		92%	
2021	12352	24457	105%		117%	
2022	12680	25106	108%		120%	
2023	10277	20348	87%	54%	97%	61%
2024	9616	19041	82%	60%	91%	60%
2025	10203	20201	87%	51%	97%	57%

A scenic landscape photograph showing a mountain range with snow-dusted peaks under a cloudy sky. In the foreground, there are dense green pine trees. The middle ground features a valley with a forest and some buildings.

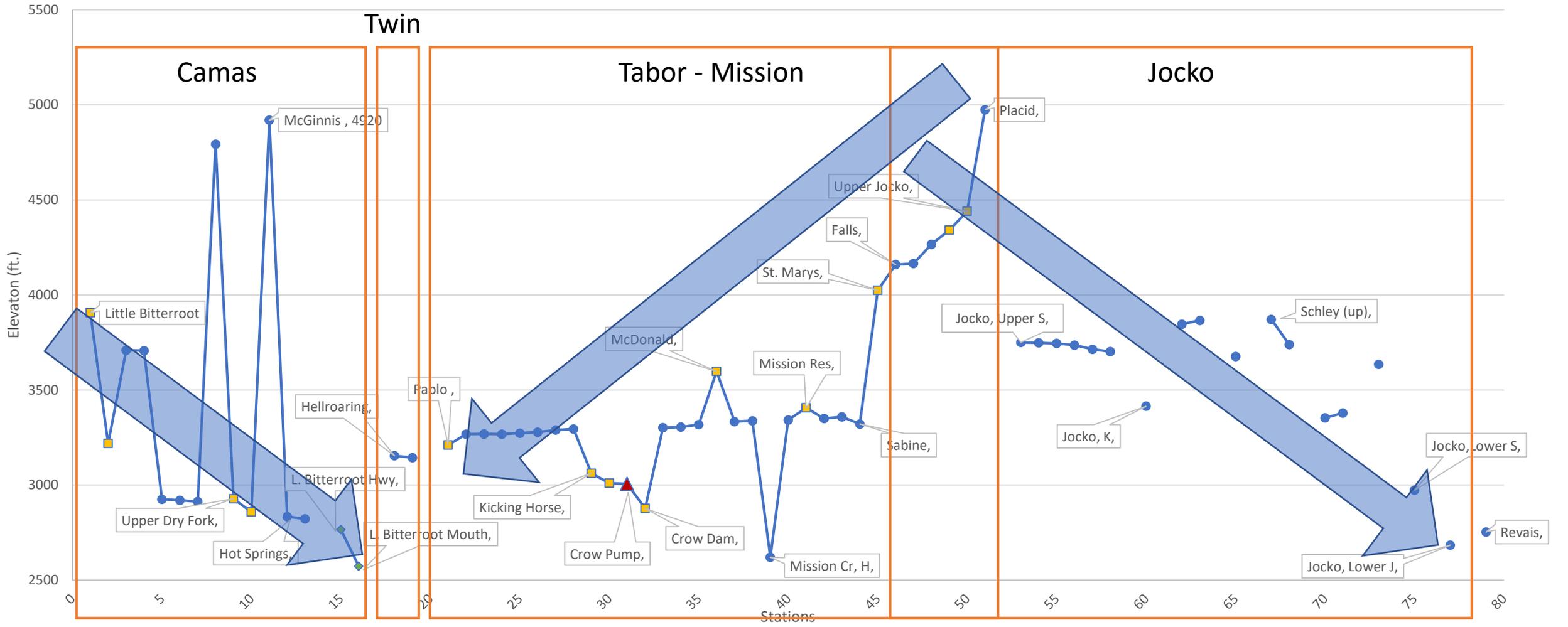
HOW MIGHT “NORMAL” HIGH TO MID-ELEVATION SNOW AND BELOW
“NORMAL” LOW ELEVATION SNOW AFFECT OUR PREDICTIONS.....



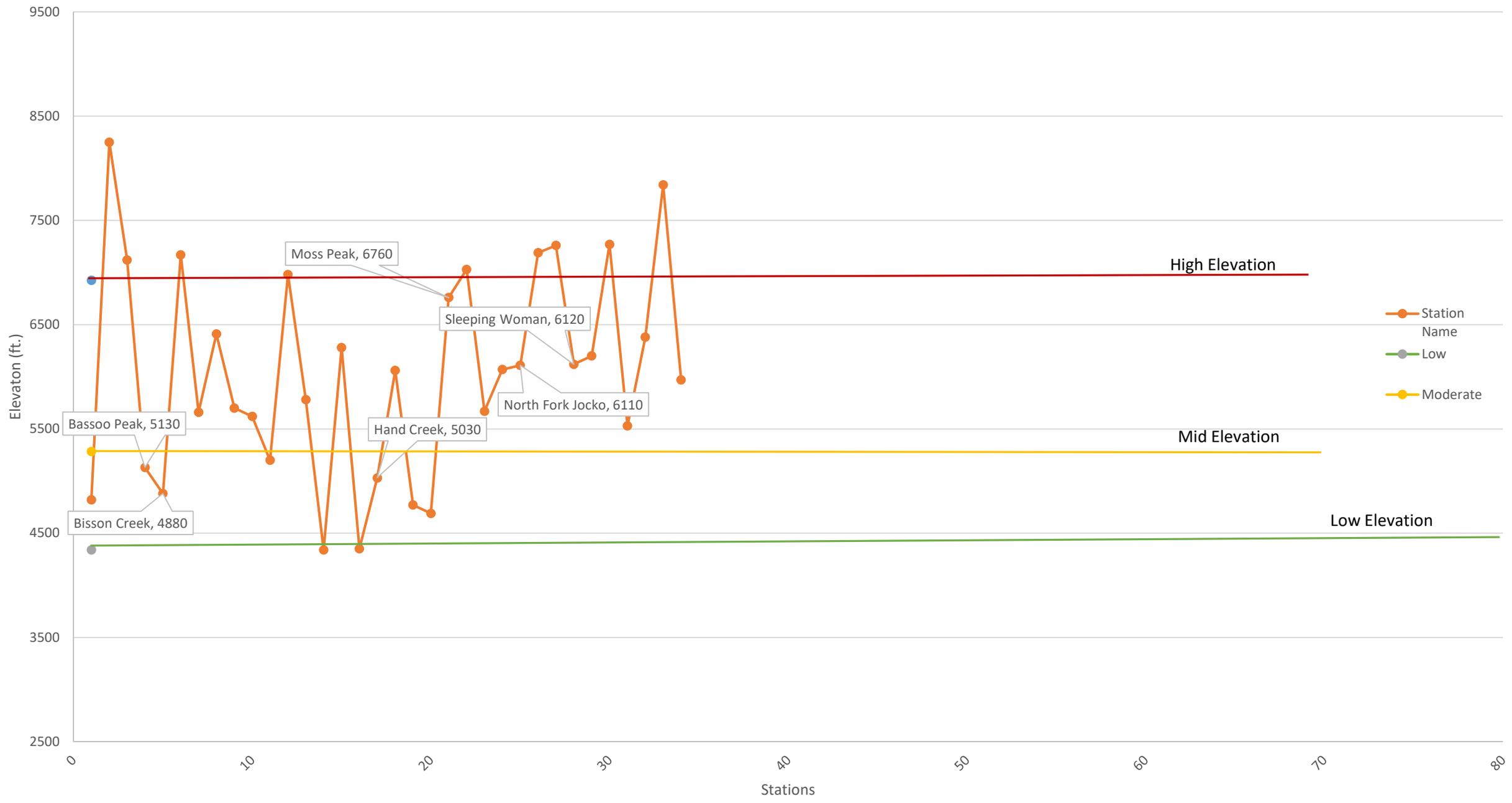
Western MT Snotel Station Name/Elevation



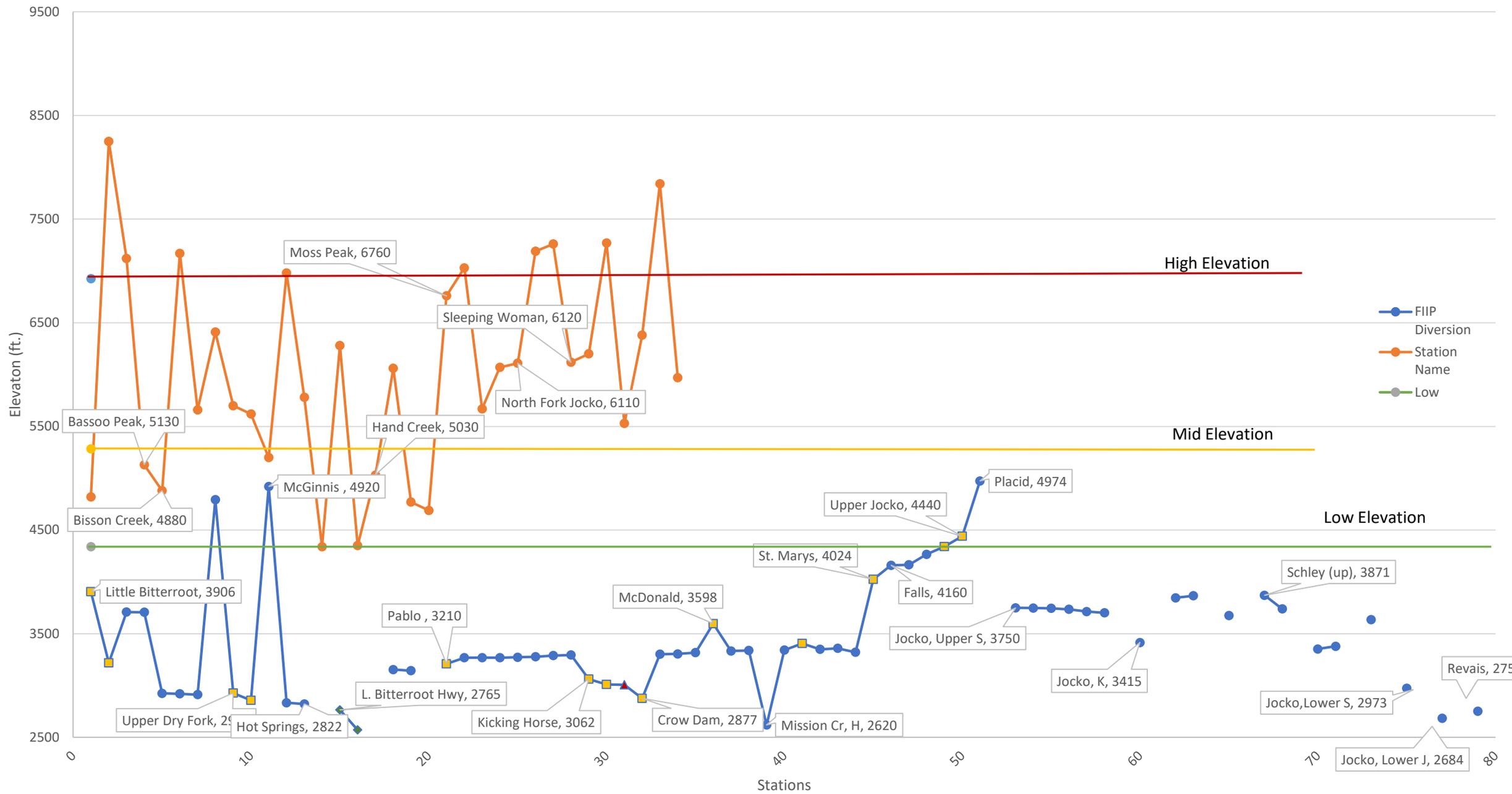
FIIP Diversion Elevations



Western MT Snowtel and FIIP Diversion Elevations



Western MT Snowtel and FIIP Diversion Elevations

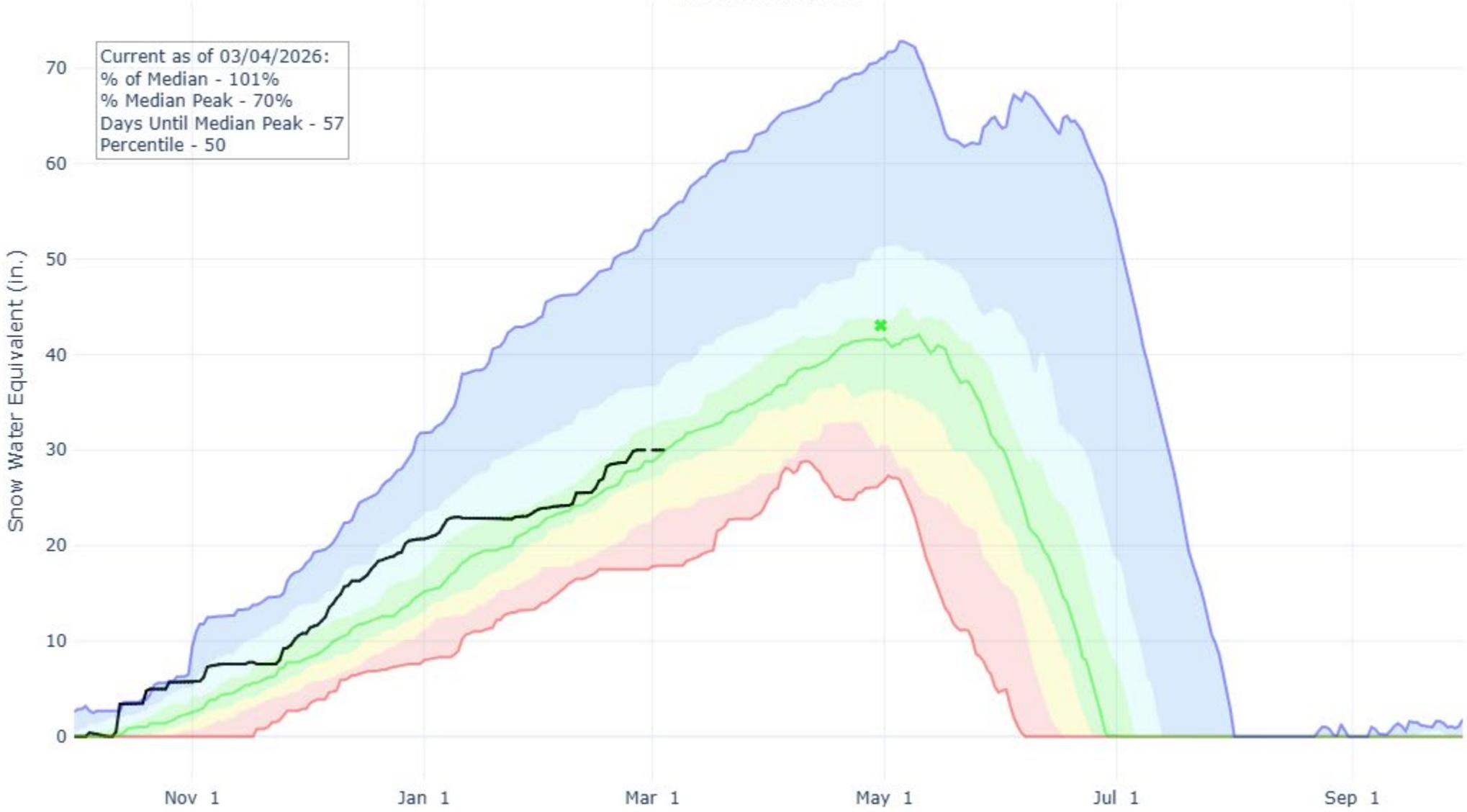


MOSS PEAK, MT (646) SNOW WATER EQUIVALENT

Reset Range

[Link to data: CSV / JSON](#)

Current as of 03/04/2026:
% of Median - 101%
% Median Peak - 70%
Days Until Median Peak - 57
Percentile - 50



- ✖ Median Peak SWE
- Max
- Median (POR)
- Median ('91-'20)
- Min
- Stats. Shading
- 2026
- 2025
- 2024
- 2023
- 2022
- 2021
- 2020
- 2019
- 2018
- 2017
- 2016
- 2015
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- 2006
- 2005

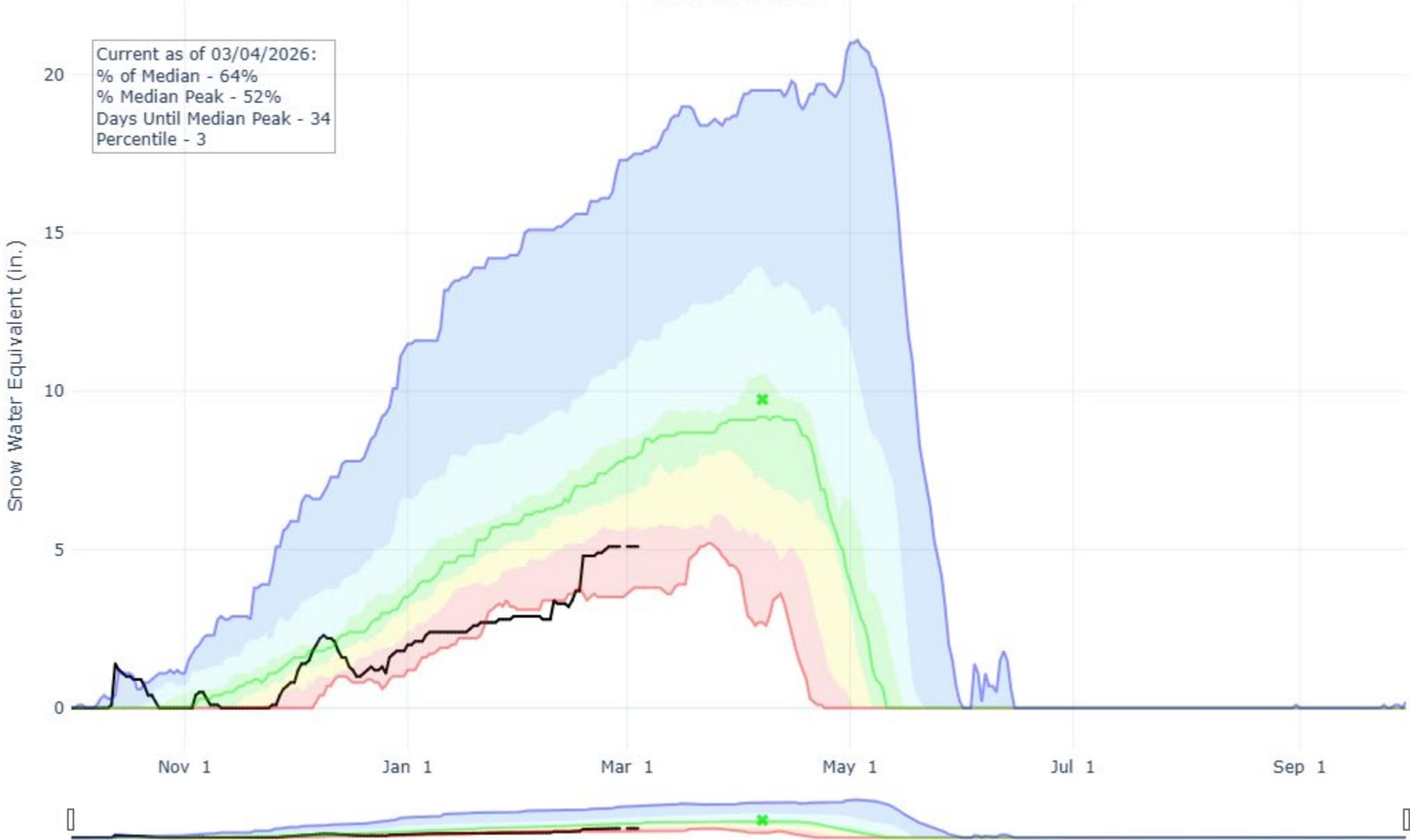


BISSON CREEK, MT (346) SNOW WATER EQUIVALENT

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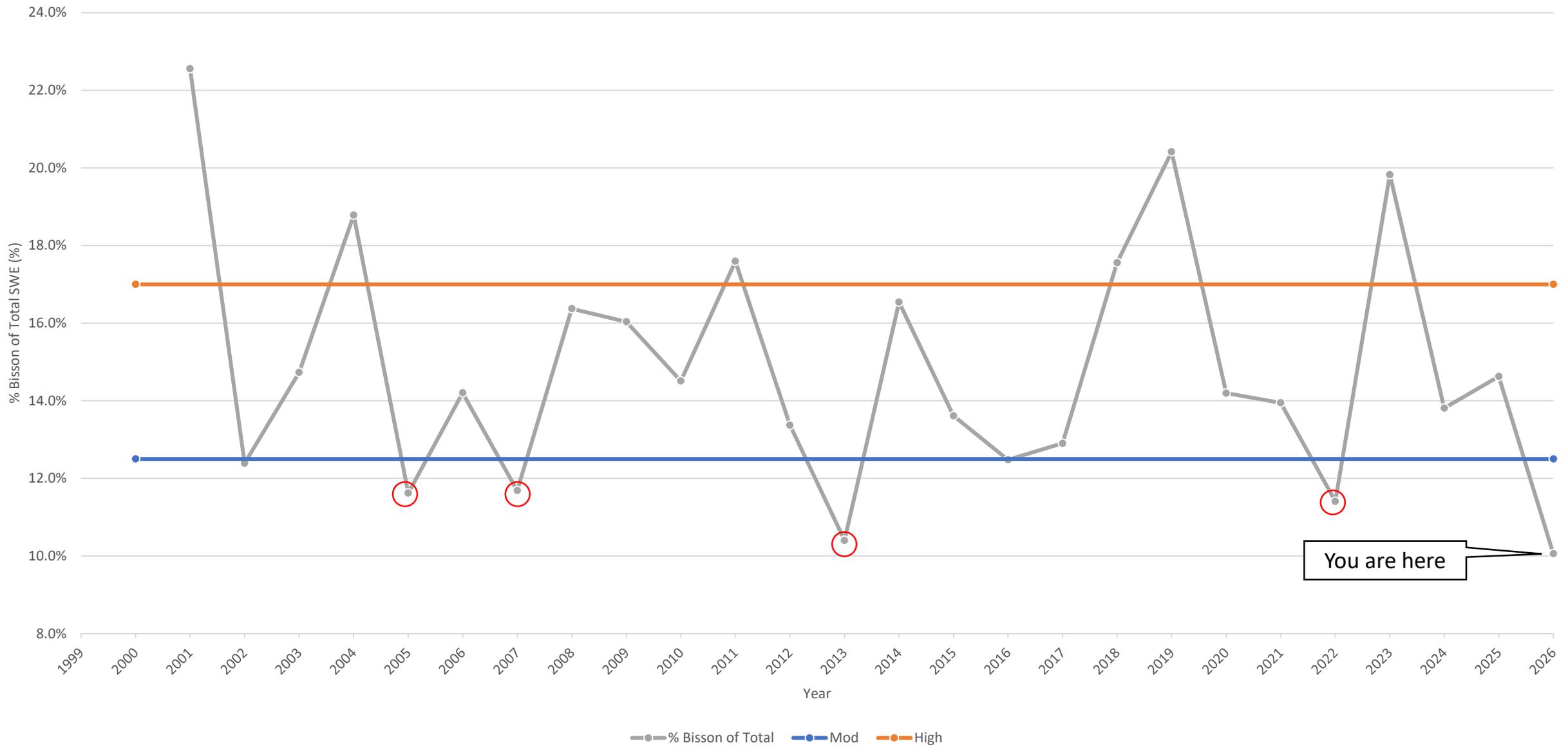
Current as of 03/04/2026:
% of Median - 64%
% Median Peak - 52%
Days Until Median Peak - 34
Percentile - 3



- ✖ Median Peak SWE
- Max
- Median (POR)
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- Stats. Shading
- 2026
- 2025
- 2024
- 2023
- 2022
- 2021
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- 2012
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- 2008
- 2007
- 2006
- 2005



Bisson % SWE of Total (Bisson & Moss), Quartiled

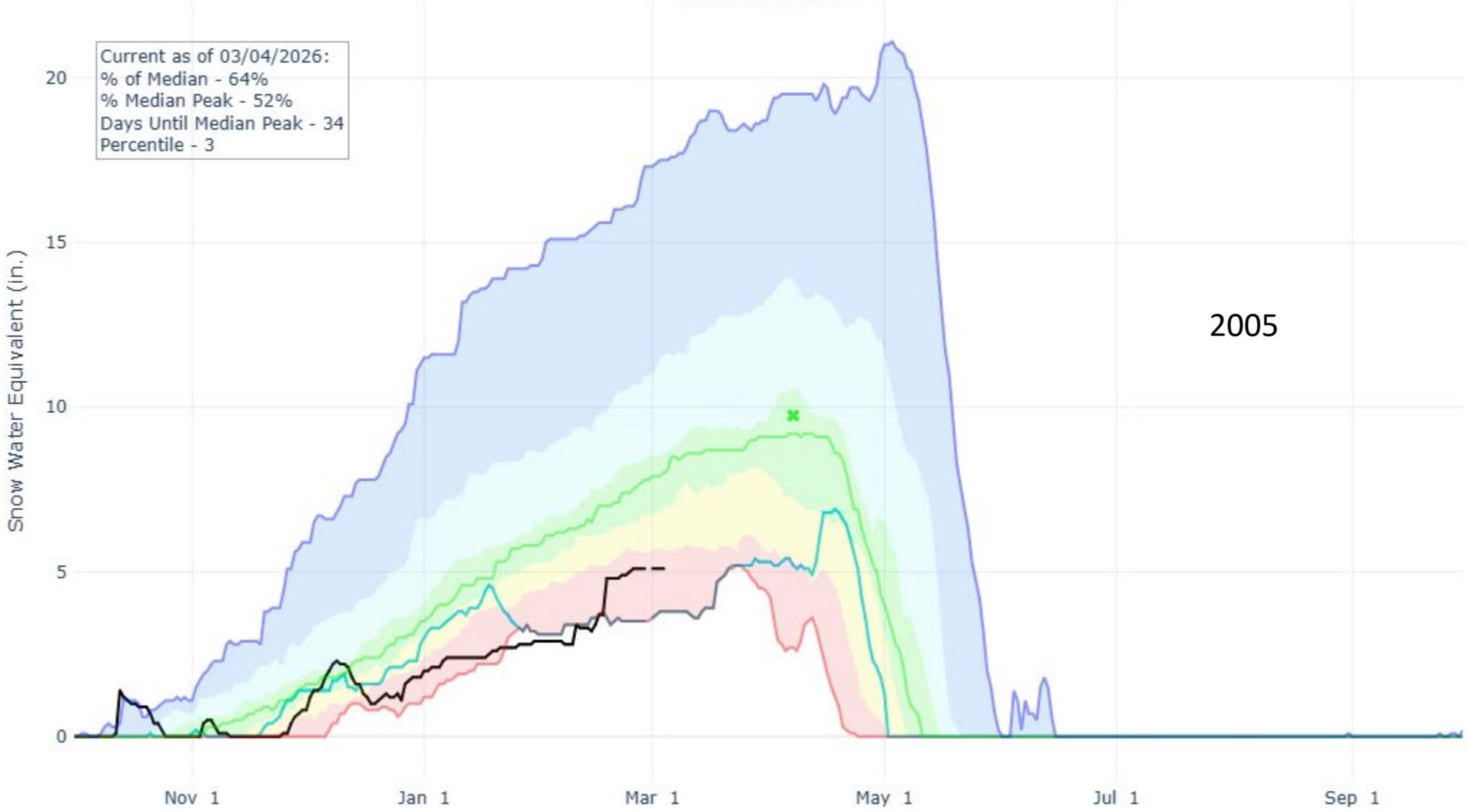


BISSON CREEK, MT (346) SNOW WATER EQUIVALENT

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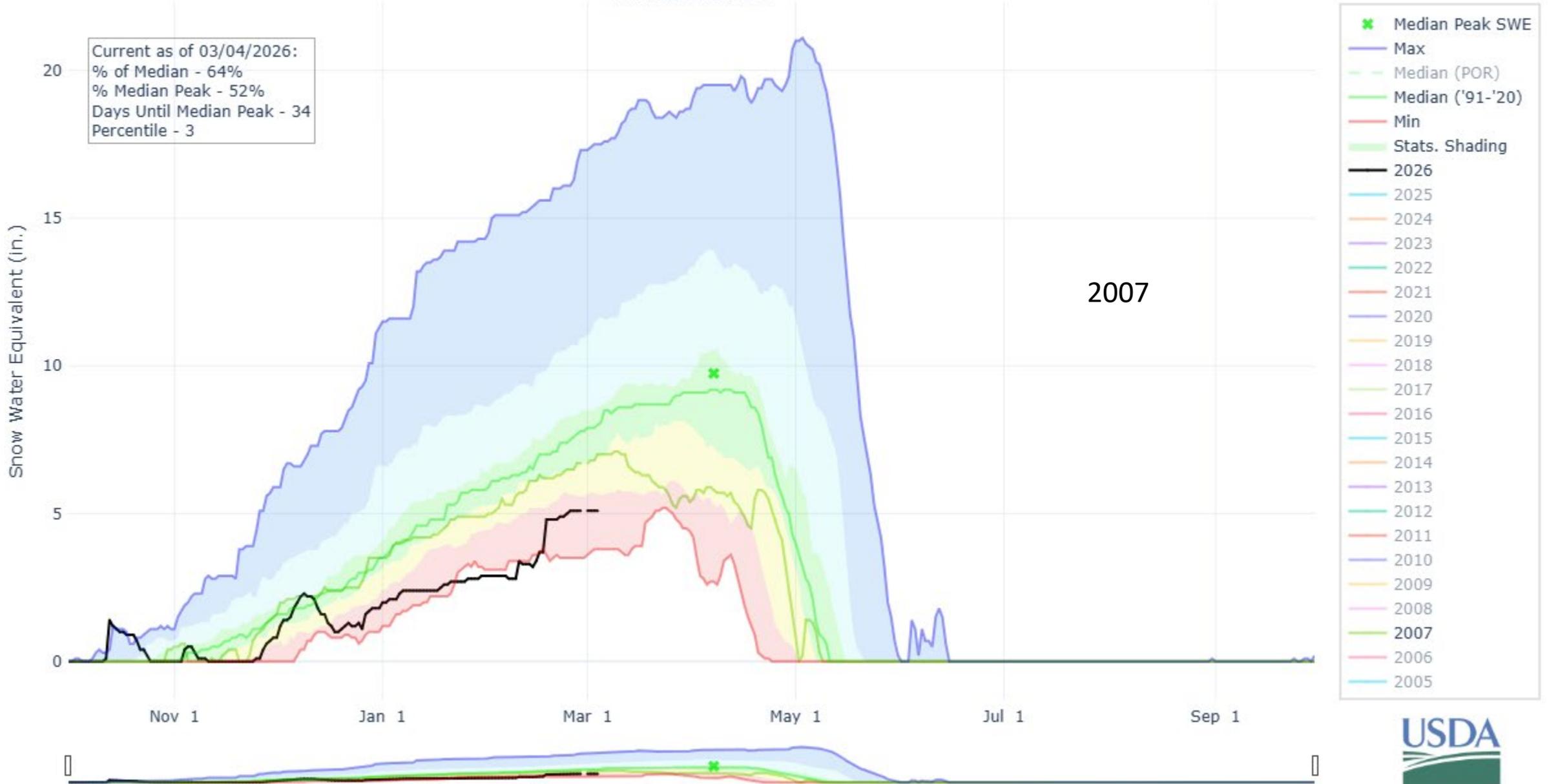


BISSON CREEK, MT (346) SNOW WATER EQUIVALENT

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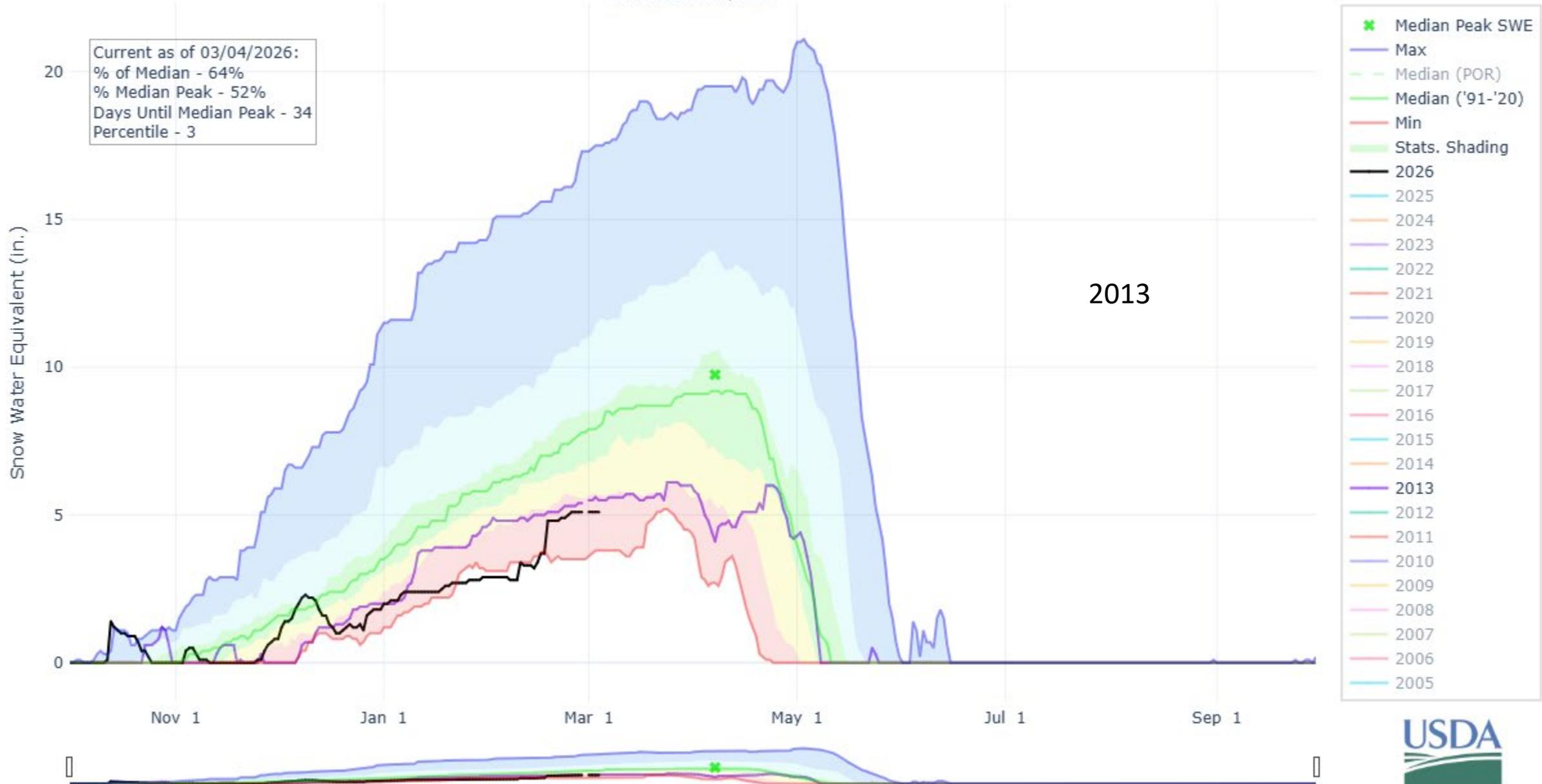


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2013

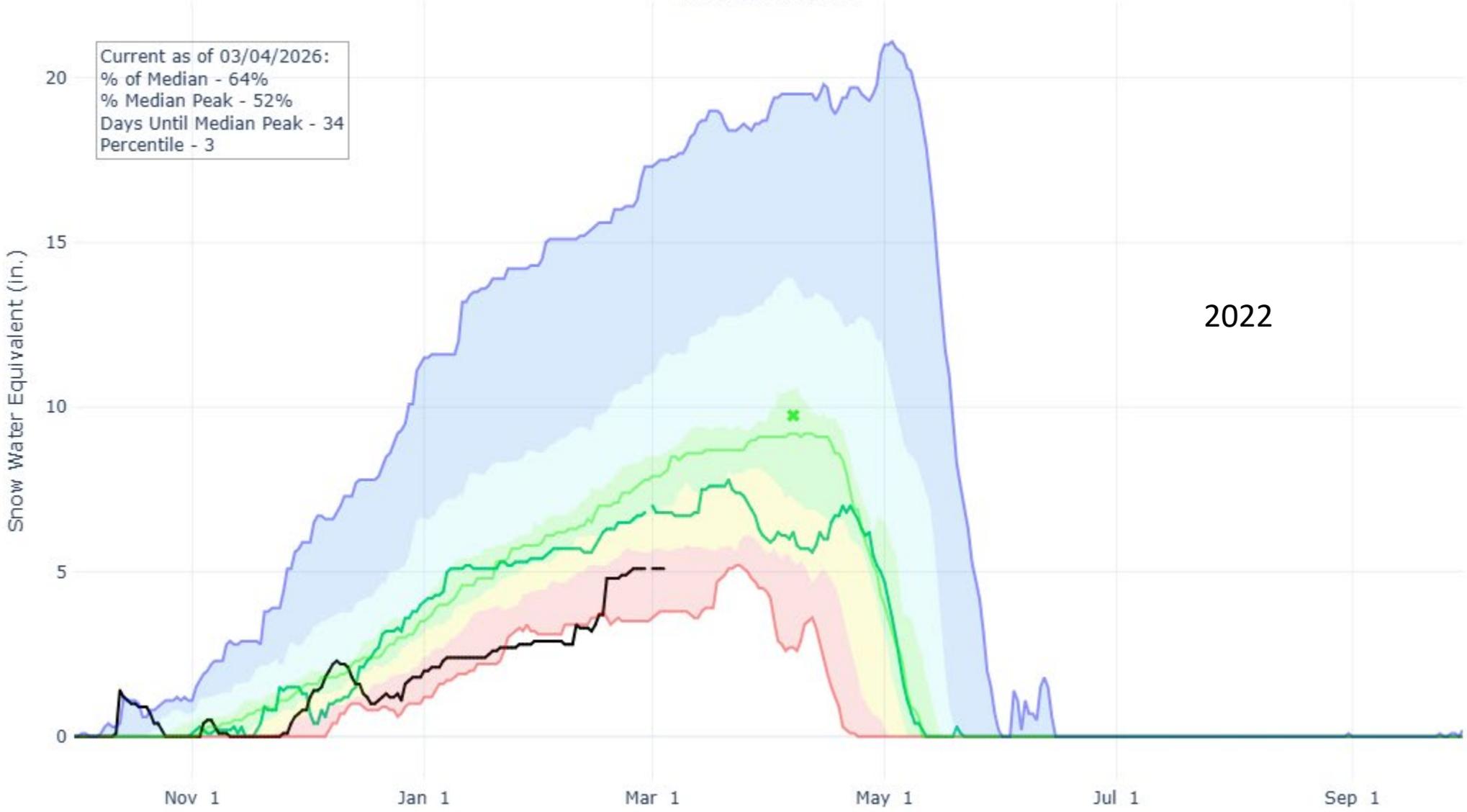


BISSON CREEK, MT (346) SNOW WATER EQUIVALENT

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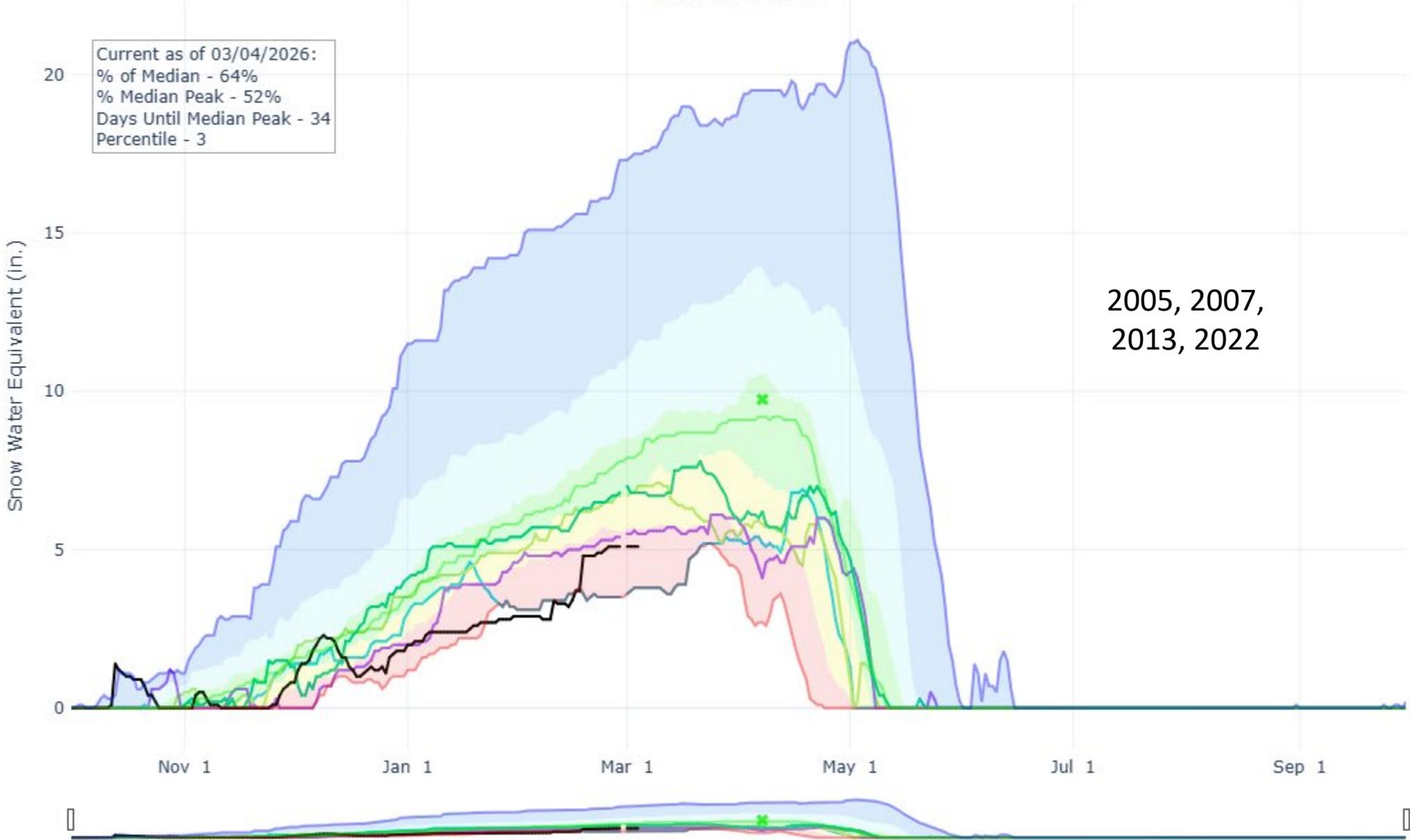


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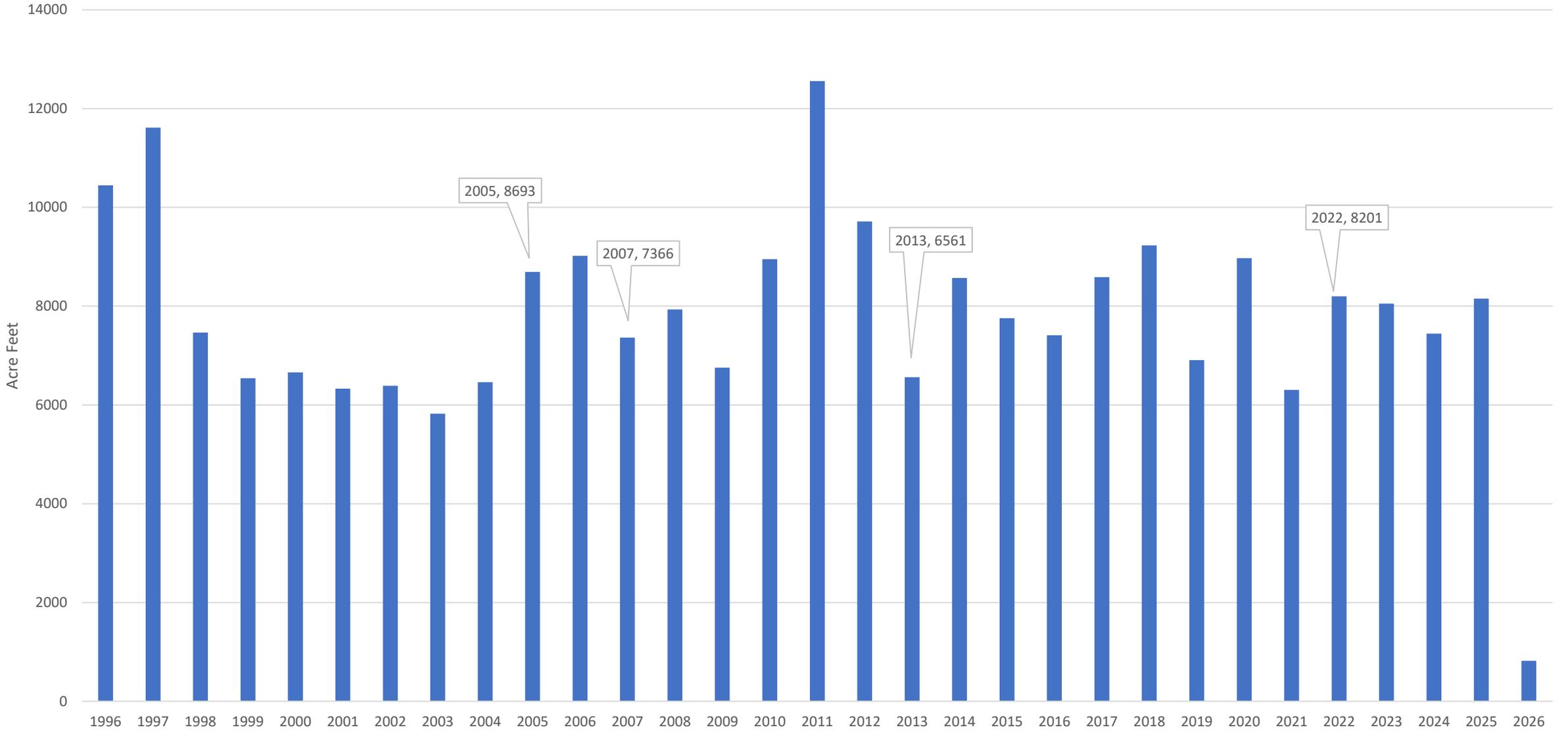


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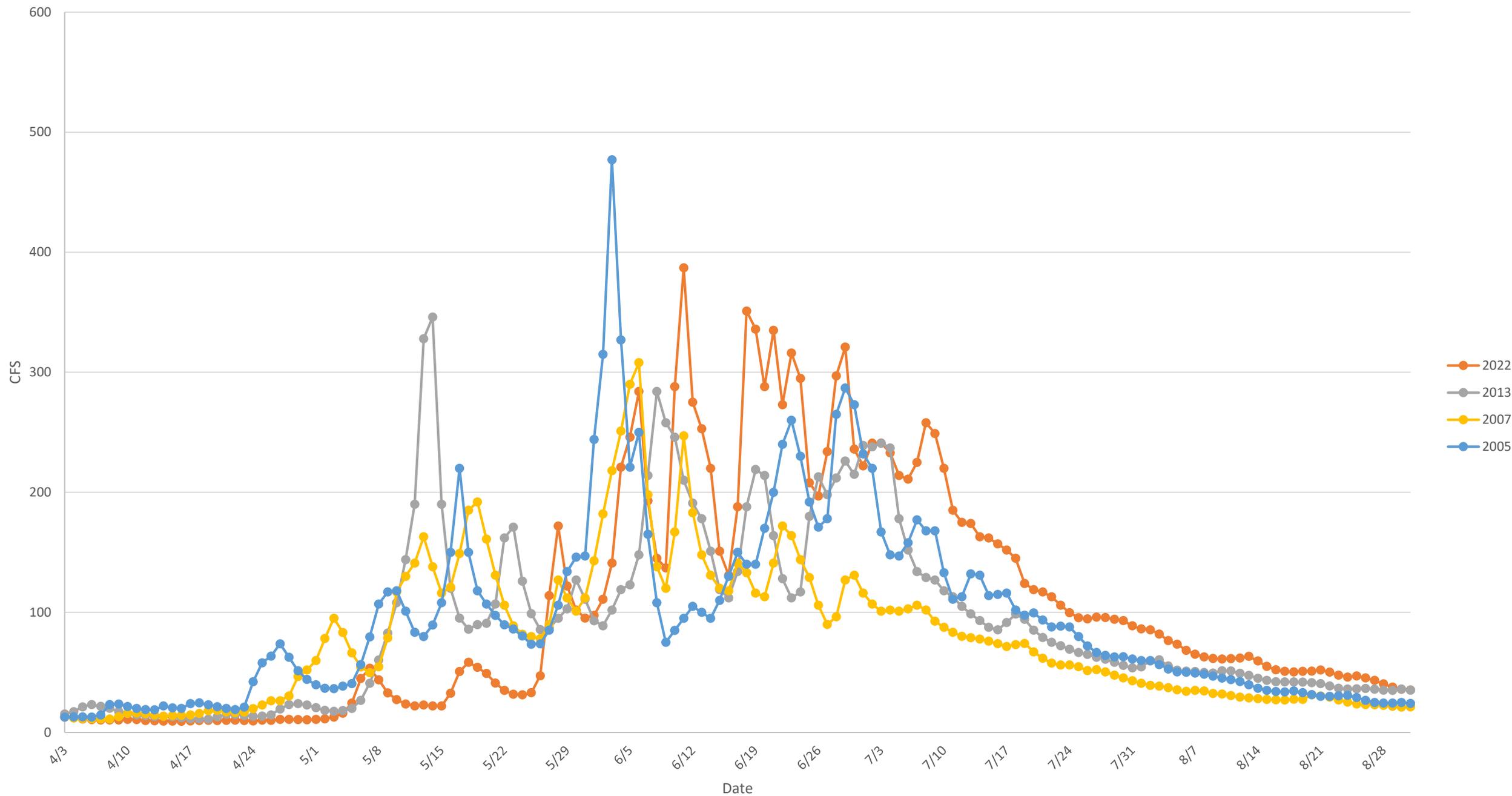
2005, 2007,
2013, 2022



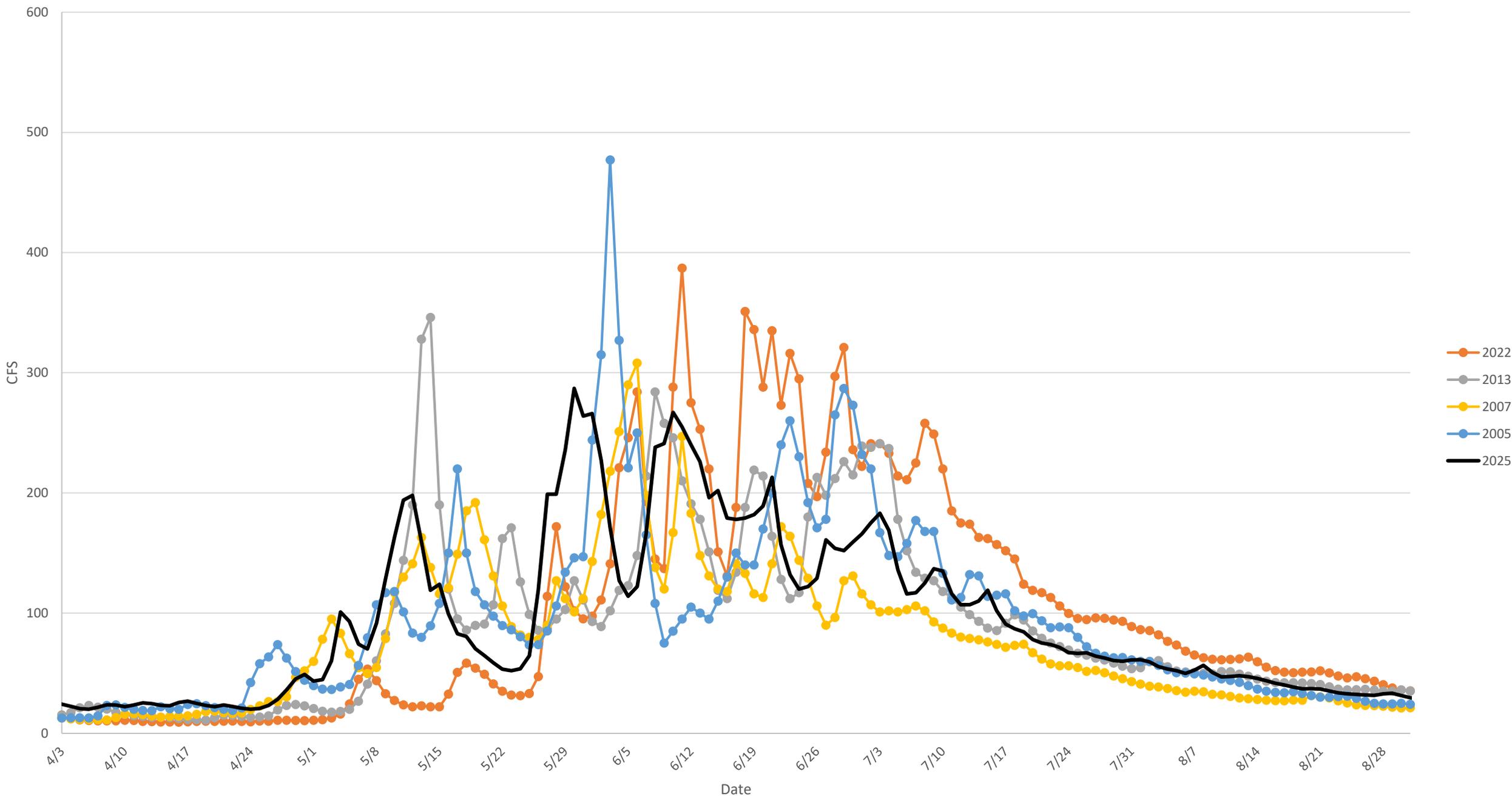
Hellroaring Gaged Annual Ac/Ft.



Mission Cr. Flows During Low Elevataion, Low Snotel Percentage

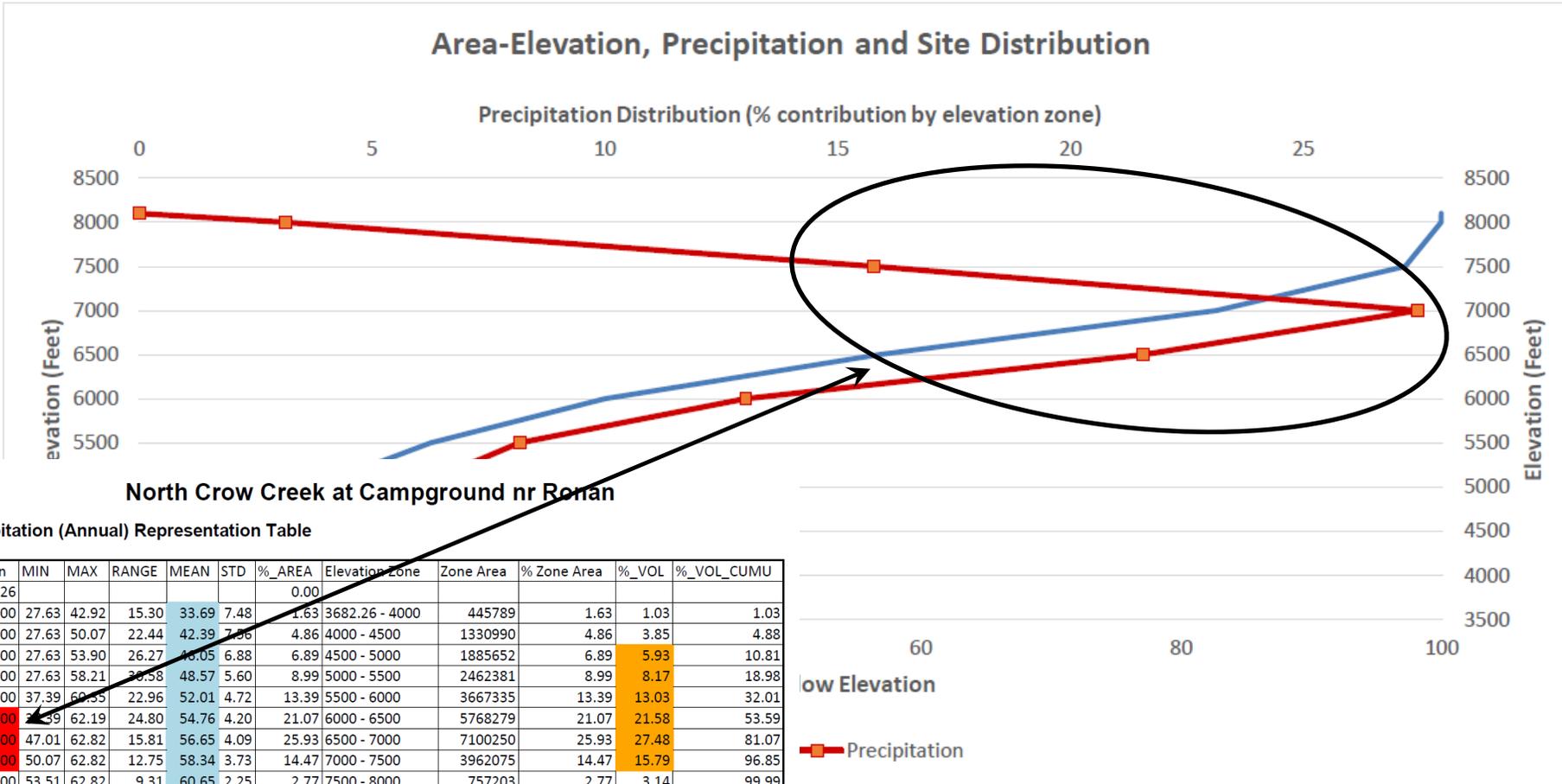


Mission Cr. Flows During Low Elevataion, Low Snotel Percentage



North Crow Creek at Campground nr Ronan

Area-Elevation, Precipitation and Site Distribution



North Crow Creek at Campground nr Ronan

Precipitation (Annual) Representation Table

Elevation	MIN	MAX	RANGE	MEAN	STD	%_AREA	Elevation_Zone	Zone Area	% Zone Area	%_VOL	%_VOL_CUMU
3682.26						0.00					
4000	27.63	42.92	15.30	33.69	7.48	1.63	3682.26 - 4000	445789	1.63	1.03	1.03
4500	27.63	50.07	22.44	42.39	7.96	4.86	4000 - 4500	1330990	4.86	3.85	4.88
5000	27.63	53.90	26.27	46.05	6.88	6.89	4500 - 5000	1885652	6.89	5.93	10.81
5500	27.63	58.21	30.58	48.57	5.60	8.99	5000 - 5500	2462381	8.99	8.17	18.98
6000	37.39	60.35	22.96	52.01	4.72	13.39	5500 - 6000	3667335	13.39	13.03	32.01
6500	37.39	62.19	24.80	54.76	4.20	21.07	6000 - 6500	5768279	21.07	21.58	53.59
7000	47.01	62.82	15.81	56.65	4.09	25.93	6500 - 7000	7100250	25.93	27.48	81.07
7500	50.07	62.82	12.75	58.34	3.73	14.47	7000 - 7500	3962075	14.47	15.79	96.85
8000	53.51	62.82	9.31	60.65	2.25	2.77	7500 - 8000	757203	2.77	3.14	99.99
8097.88	60.32	60.32	0.00	60.32	0.00	0.01	8000 - 8097.88	1962	0.01	0.01	100.00

Precipitation amount, summary statistics, and resulting volume are indicated for each elevation zone. Critical precipitation zones (red cells) are the elevations that have the potential for delivering the most significant runoff. These areas are determined by the following steps:

1. Eliminate the zones that in general do not receive sufficient precipitation (annual precipitation <= 20 inches) to contribute significant basin runoff (blue cells).
2. From the remaining elevation zones, eliminate the elevations that do not produce a significant proportion of basin runoff (orange cells).
3. Of these zones, select the elevations with the highest runoff, up to a threshold (2/3 of the total runoff), to indicate the elevation zones most important for producing runoff (red cells).

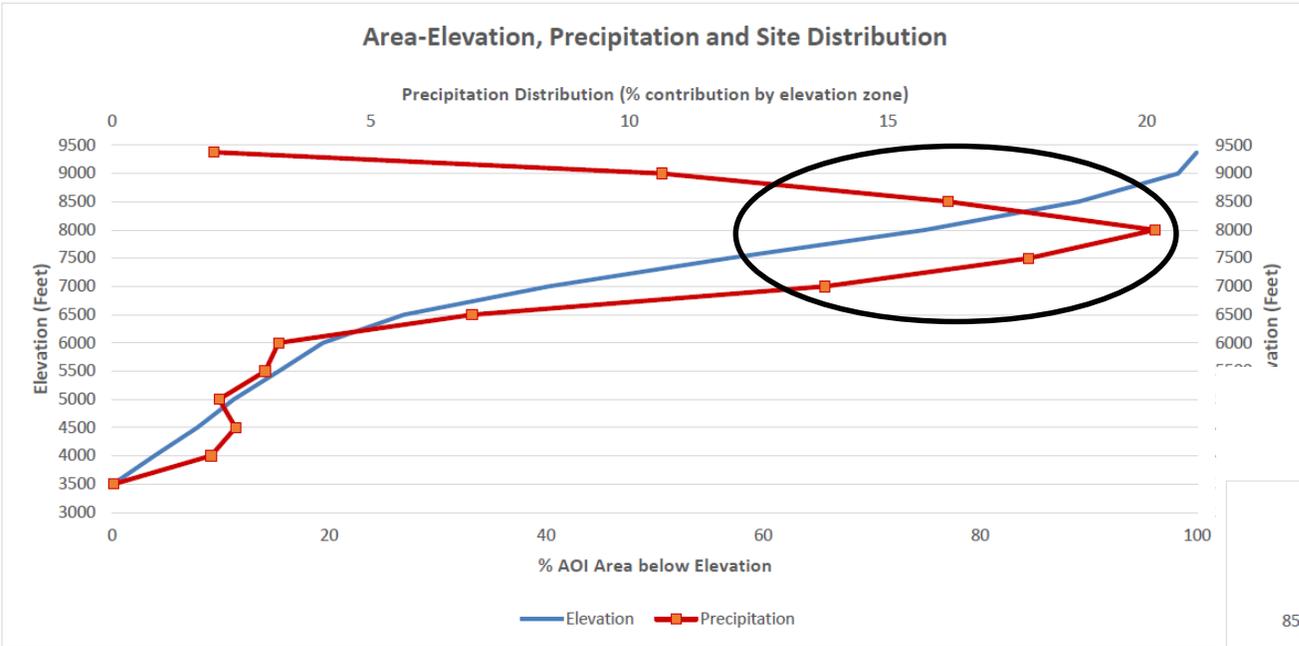
See the user manual for calculation specifics.

low Elevation

■ Precipitation

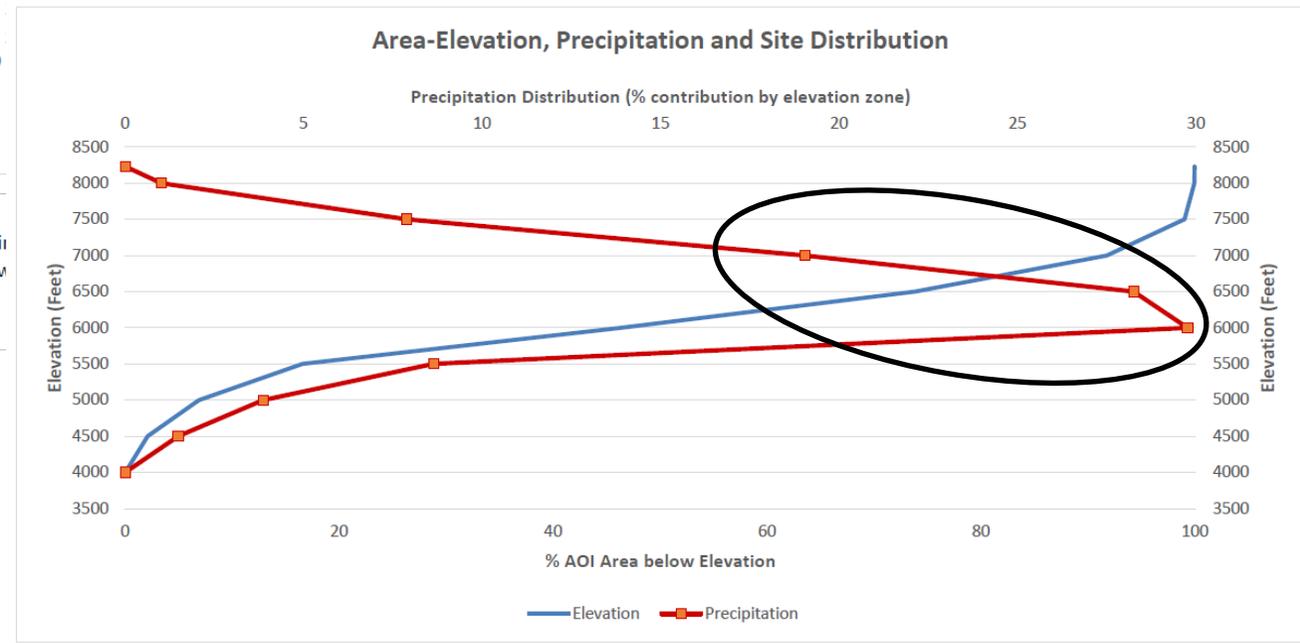
the area-elevation curve (blue) are plotted with snow monitoring chart shows the range of elevation covered by the monitoring

Mission Ck nr St. Ignatius



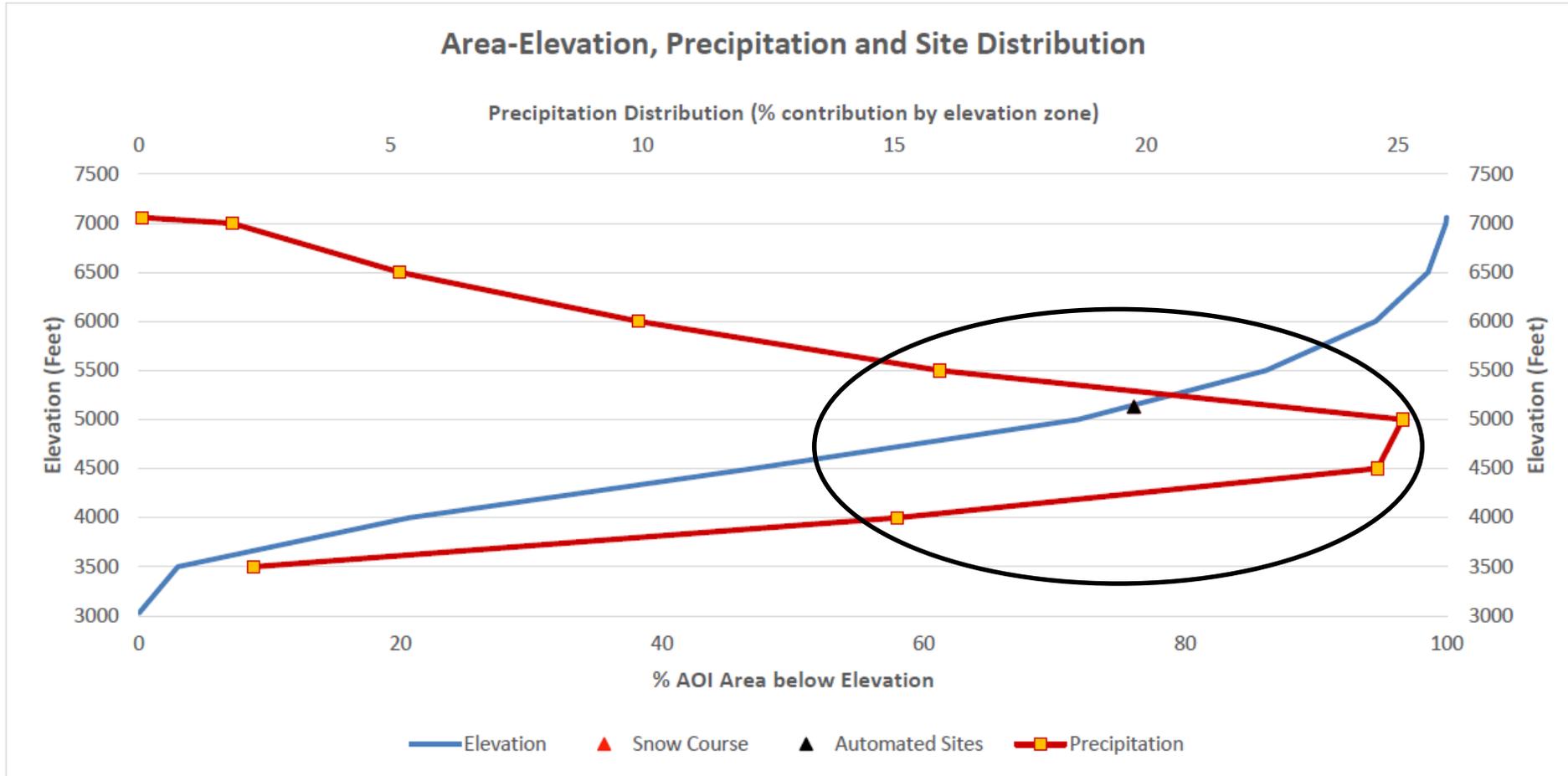
Precipitation Distribution - % contribution by elevation zone
 The percent of precipitation contribution by elevation zone (red) and the area-elevation curve (blue) are plotted with snow monitoring sites at their corresponding elevations. The position of the sites on the chart shows the range of elevation covered by the monitoring network and the percent of the basin's precipitation contribution occurring at each site's corresponding elevation.

SF Jocko R nr Arlee



Precipitation Distribution - % contribution by elevation zone
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Mill Ck ab Bassoo Ck nr Niarada

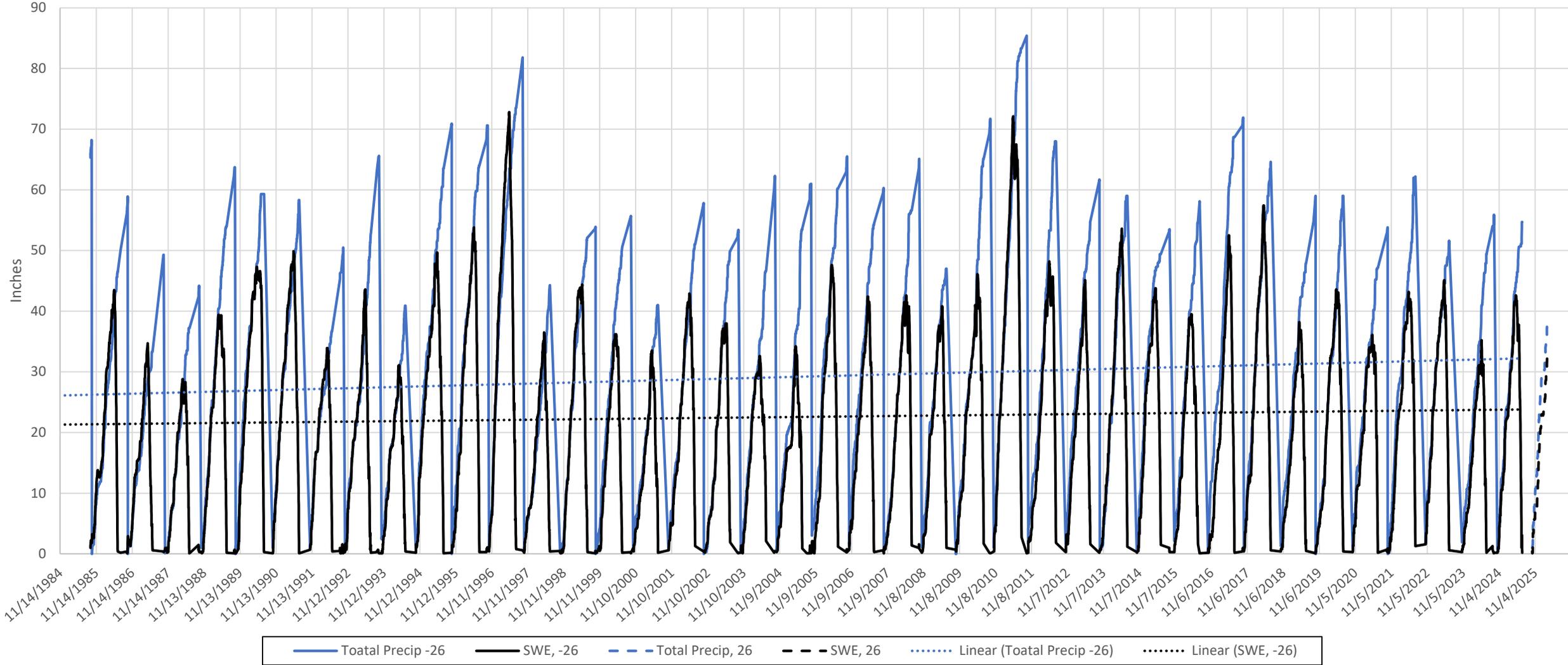


Precipitation Distribution - % contribution by elevation zone

The percent of precipitation contribution by elevation zone (red) and the area-elevation curve (blue) are plotted with snow monitoring sites at their corresponding elevations. The position of the sites on the chart shows the range of elevation covered by the monitoring network and the percent of the basin's precipitation contribution occurring at each site's corresponding elevation.

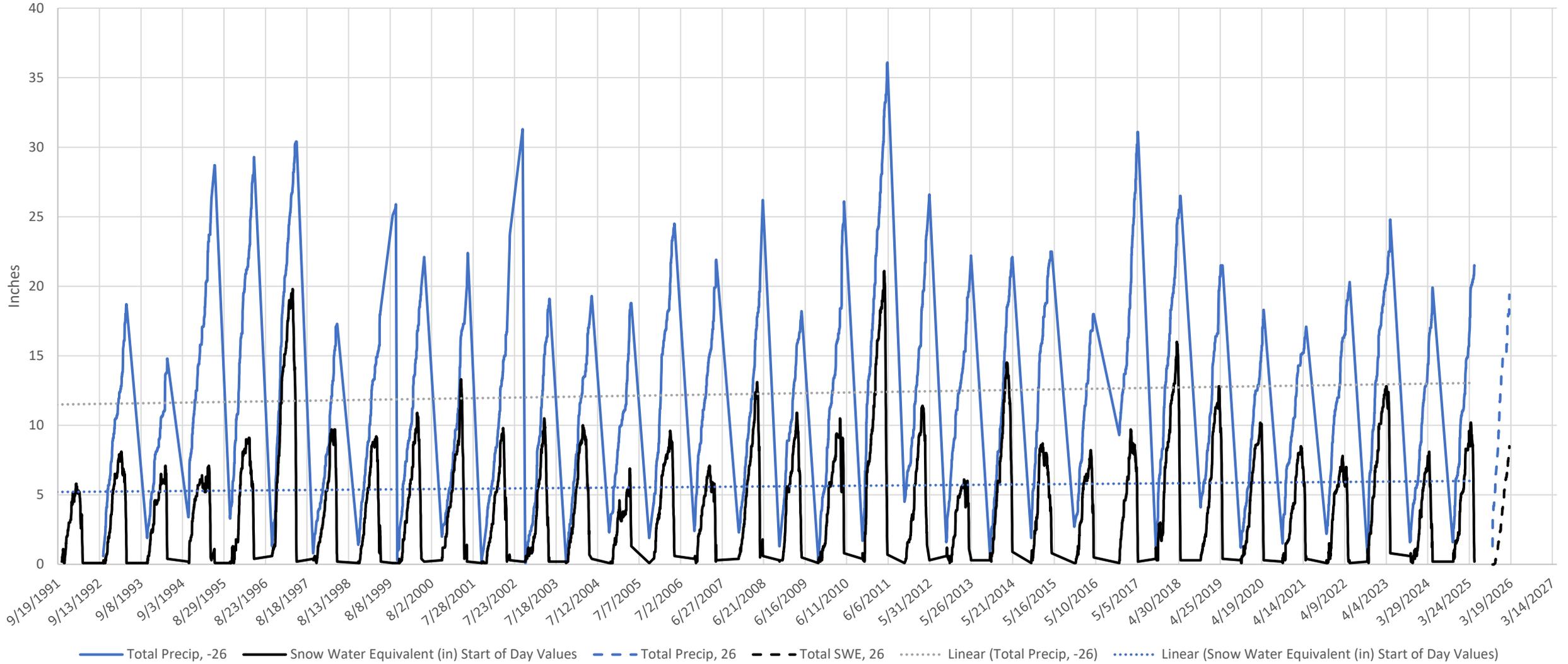
Mission Range

Moss Pk Snotel POR (Daily Avg minus zeros), Ele. 6,760 ft.



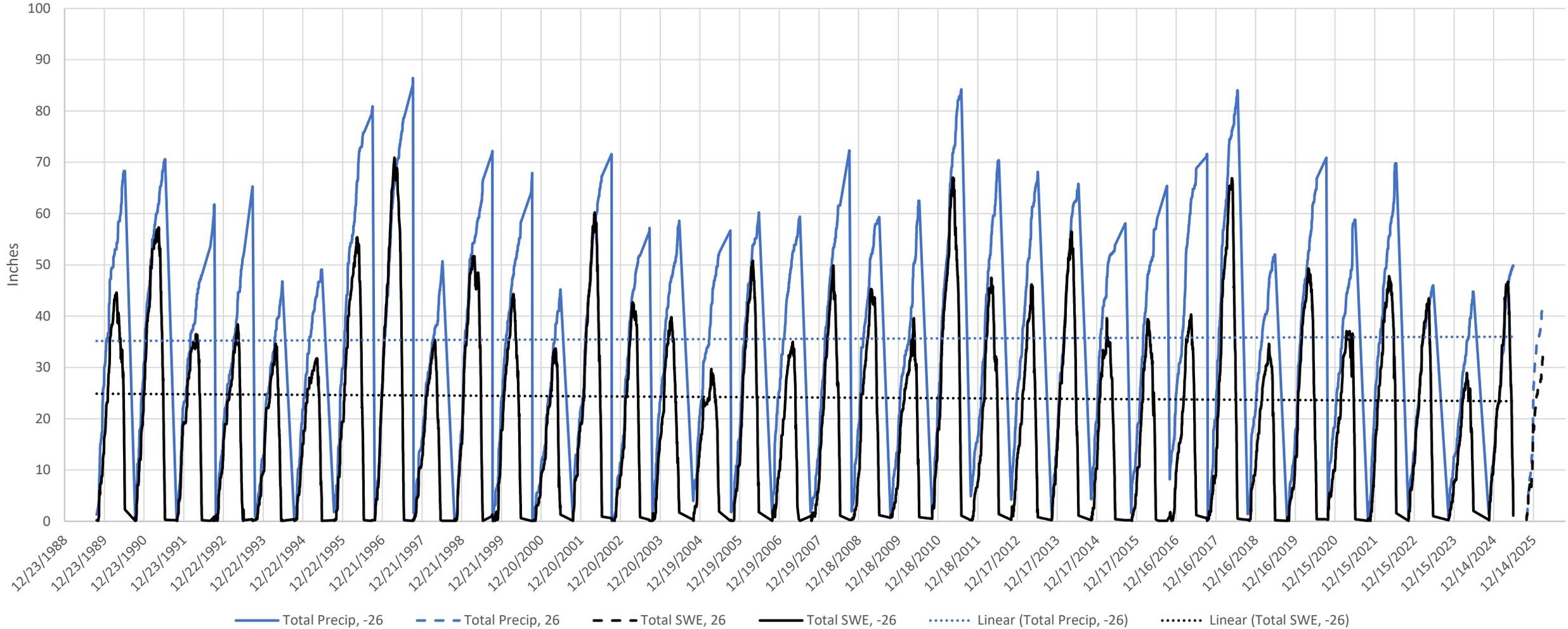
Mission Range

Bisson Cr. Snotel POR (Daily Avg. minus zeros), Ele. 4,880 ft.



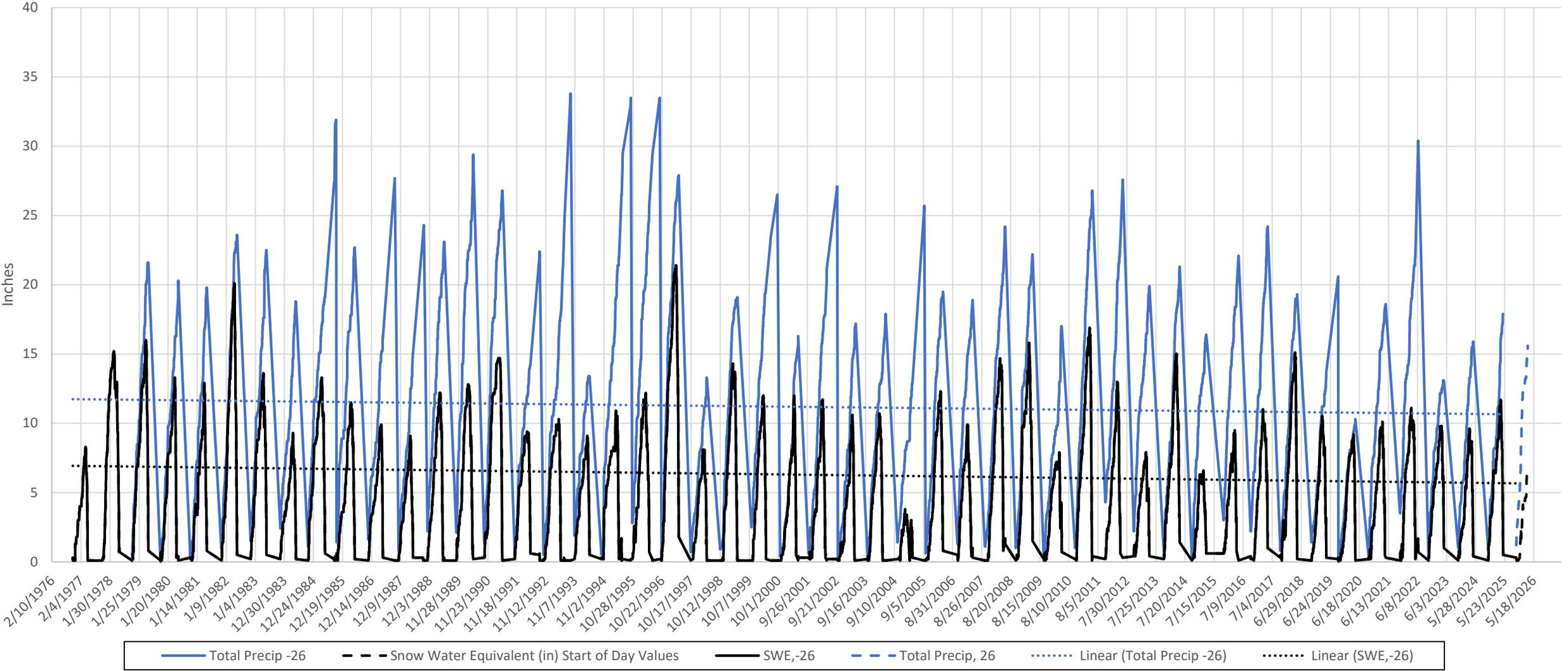
Mission Range

N.F.K. Jocko Snotel POR (Daily Avg. minus zeros), Ele. 6,110 ft.



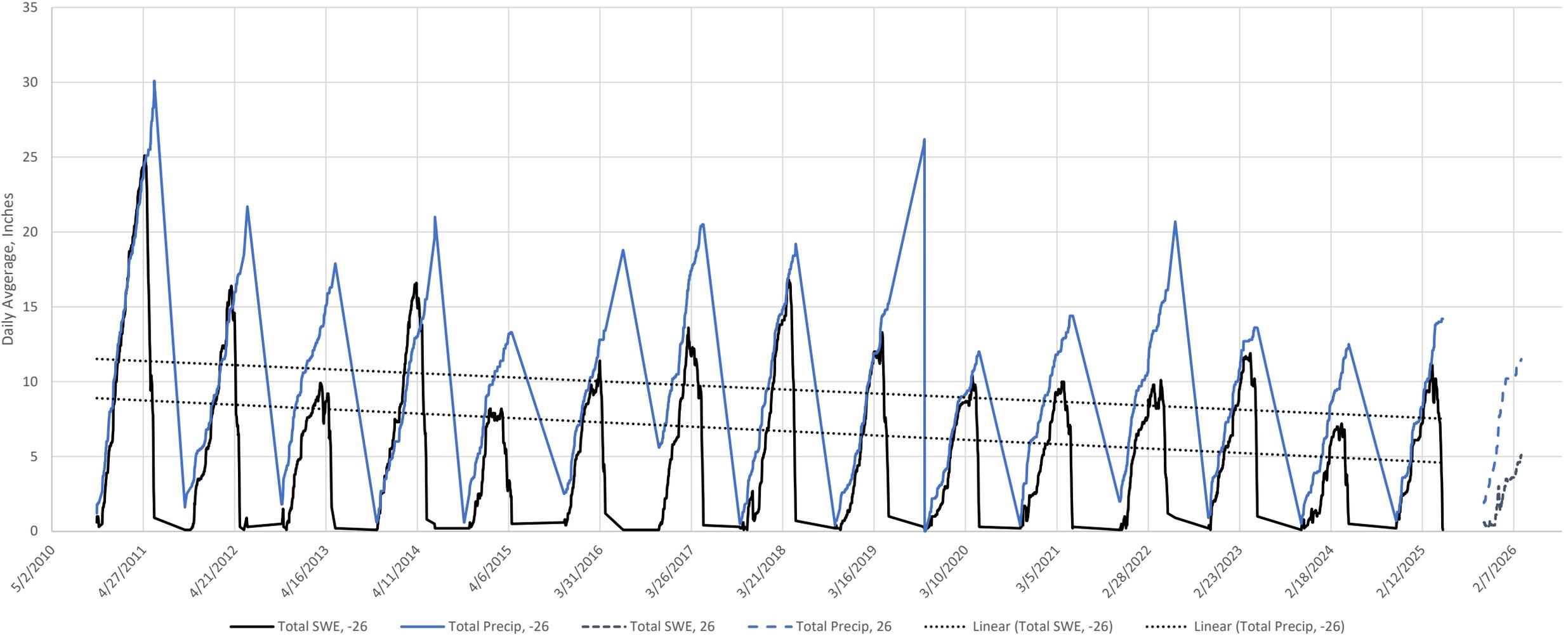
Camas Range

Hand Cr. Snotel POR (Daily Avg. minus zeros), Ele. 5,030 ft.



Camas Range

Blacktail Snotel POR (Daily Avg. minus zeros), Ele. 5,660 ft.



Summary

- Using high elevation snotel for overall watershed runoff conditions during “bi-modal” snow years appears to be valid, thus far.
 - I.e. Moss Peak SWE to Mission Creek Discharge
- Mission mountain range has demonstrated some resiliency to climate change, in terms of snowmelt/runoff, due to the mid-elevation valley area/precipitation being above 6,000 or 6,500 ft.
 - Precipitation in the form of snowpack is “At Risk” as warmer temperatures climb above 6,500 ft.
- Little Bitterroot Watershed is experiencing the effects of climate change and the trend suggests that will continue.
 - Precipitation in the form of snowpack is “Impacted” due to low elevation valley area/precipitation (<6,500 ft).
 - Leading to challenges in filling of reservoirs during snowmelt/runoff.