

May 16, 2024

Snow2Flow Update for Lochsa & Selway Rivers

Current as of 05/16/2024:
% of Median - 57%
% Median Peak - 28%
Days Since Median Peak - 39
Percentile - 32

**2024 Lochsa Snow similar
to 2007 and 2001.**

* Median Peak SWE
— Median ('91-'20)
Stats. Shading
— 2024 (2 sites)
— 2007 (2 sites)
— 2001 (2 sites)

Snow Water Equivalent (in.)

50
40
30
20
10
0

Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1

(May 16, 12.9) Median ('91-'20)
(May 16, 7.4) 2024 (2 sites)
(May 16, 6.8) 2001 (2 sites)
(May 16, 4.0) 2007 (2 sites)

LOCSHA RIVER AND LOLO PASS SNOTEL

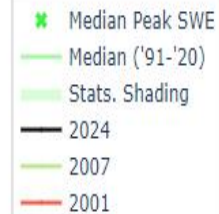
On average, peak streamflow for the Lochsa River near Lowell, Idaho occurs when Lolo Pass SNOTEL is between **55 and 80%** melted.

Summary of years using only "snowmelt peak" and categorized by max SWE magnitude.

Max SWE Category	Max SWE Magnitude (inches)	Number of Years in Analysis	Average percent melted at time of peak streamflow
Below average	<22	7	78
Average	21 – 34	13	80
Above average	>33	7	55

The average percent melted for the full 32-year period of record is 77% melted.

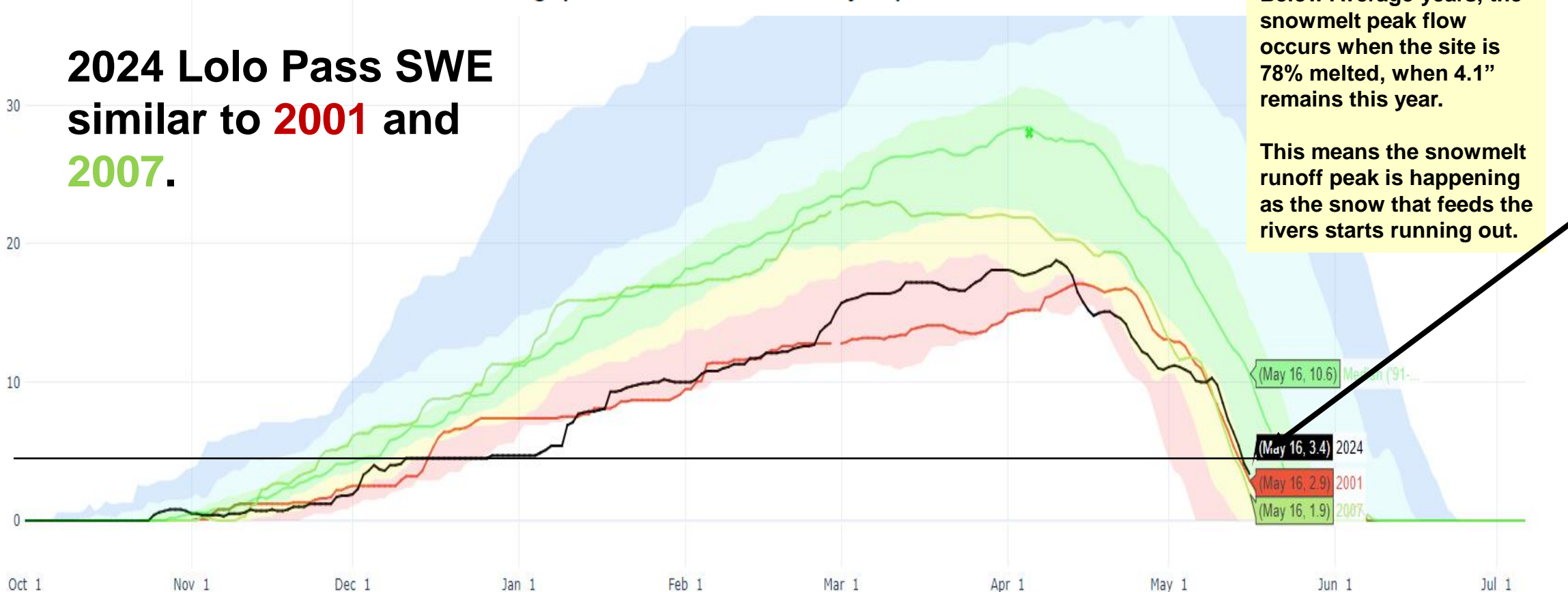
Current as of 05/16/2024:
 % of Median - 32%
 % Median Peak - 12%
 Days Since Median Peak - 41
 Percentile - 32

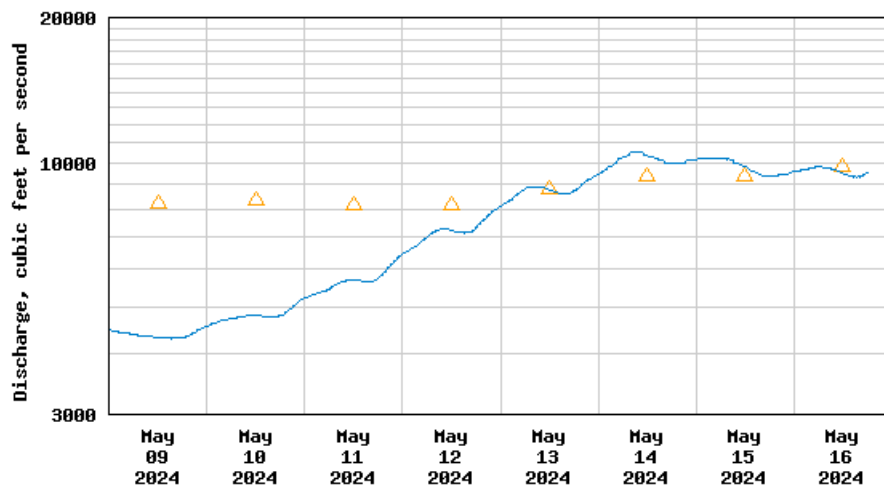


2024 Lolo Pass SWE
 similar to **2001** and
2007.

2024 Lolo Pass SWE
 peaked at 18.8" on Apr 10
 and is at 3.4" today. In
 Below Average years, the
 snowmelt peak flow
 occurs when the site is
 78% melted, when 4.1"
 remains this year.

This means the snowmelt
 runoff peak is happening
 as the snow that feeds the
 rivers starts running out.





Based on daily USGS flow data shows the flow is leveling off as the snow continues to drain out of the basin and less snow covered area remains to feed the streams that feed the Lochsa.

NWS Forecast & Trend shows a peak happening in the next day or two, but the next model run will probably be adjusted to show decreasing flows with the return of cooler temps on Friday and maybe rest of month.

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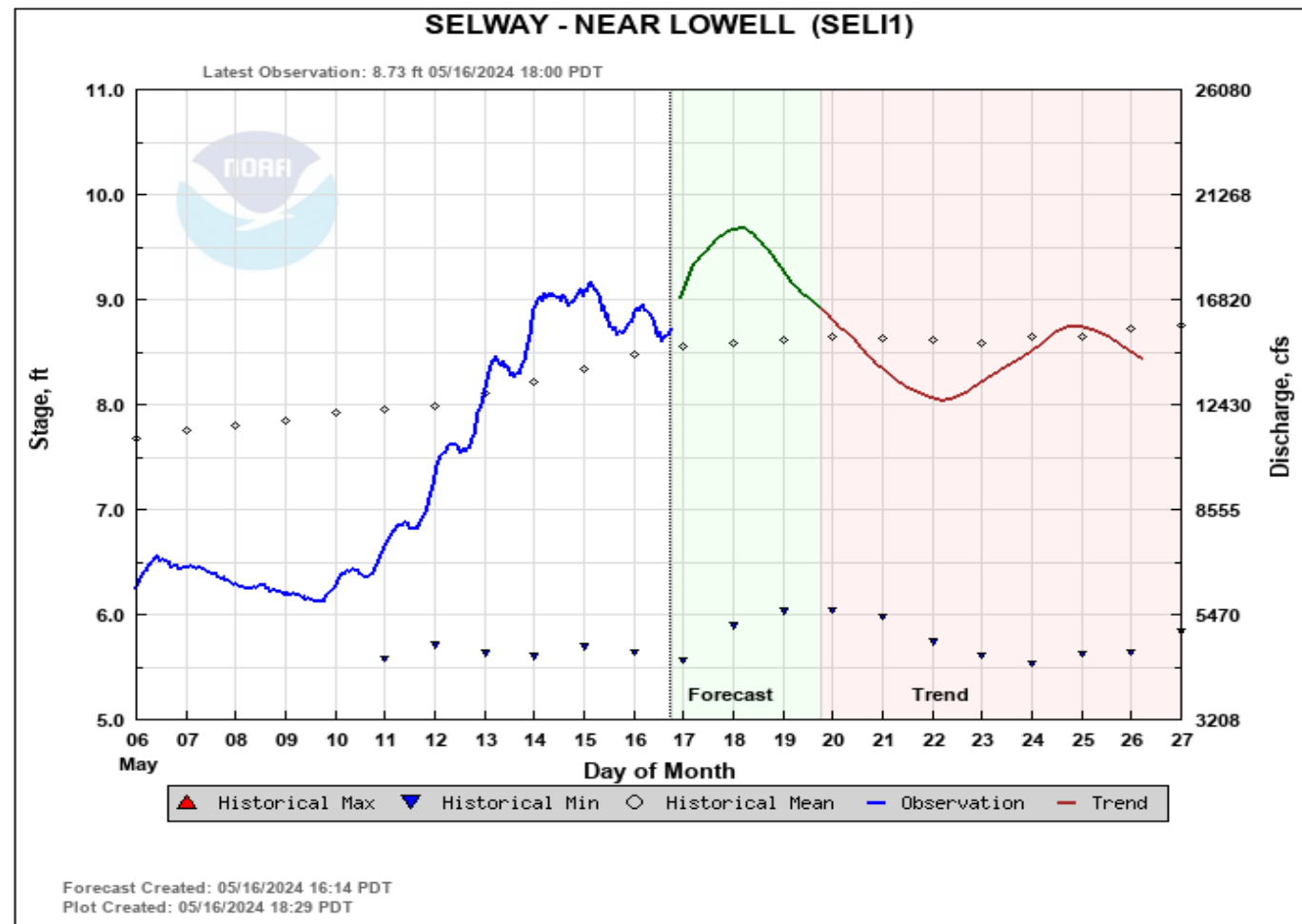
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Daily discharge, cubic feet per second -- statistics for May 16 based on 96 water years of record [more](#)

Min (1983)	25th percentile	Most Recent Instantaneous Value May 16	Median	Mean	75th percentile	Max (1997)
4220	7380	9540	9840	10900	13300	27900

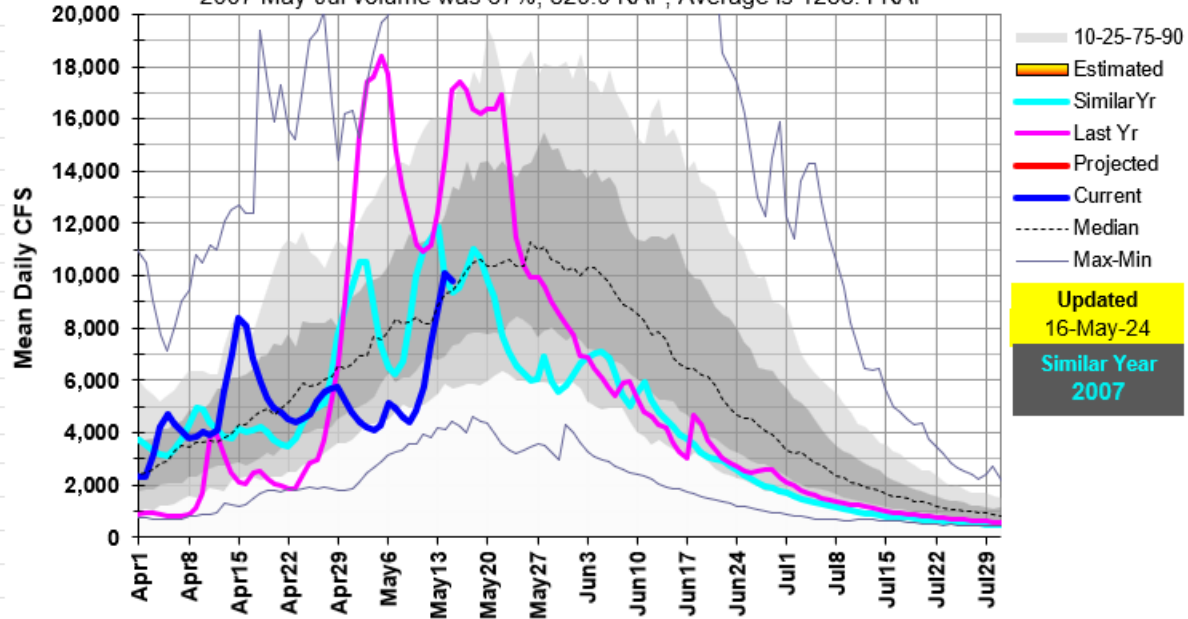
Keep in mind the Snow2Flow Relationship is based on snow and snowmelt relationship with peak flows.

Any given day with rain can generate additional peaks or a higher peak for the season.



13337000: Lochsa R near Lowell, ID

2007 May-Jul volume was 67%, 829.9 KAF, Average is 1238.4 KAF



Runoff for similar snow years:

2024 May-Jul forecast is for 790 KAF which is in the ballpark with these two years:

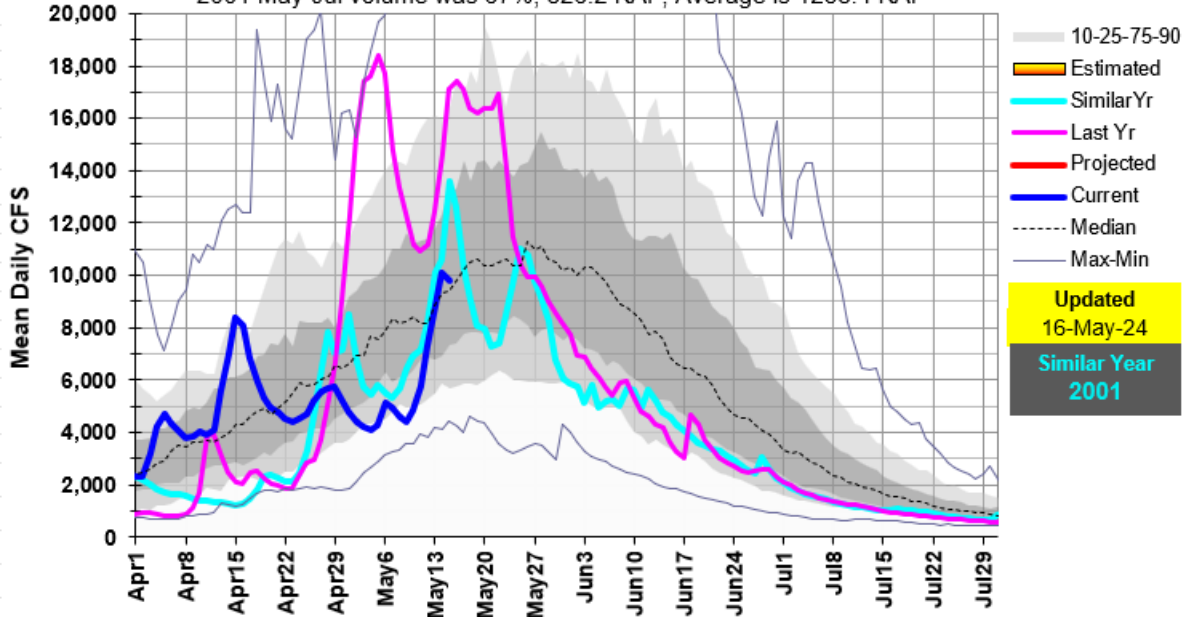
2007 May-Jul volume was 829 KAF

2001 May-Jul volume was 826 KAF

Hopefully, the cooler and wetter weather expected in the 2nd half of May will delay remaining snowmelt and push the recession flows out beyond the **May & June 2007 and 2001 levels.**

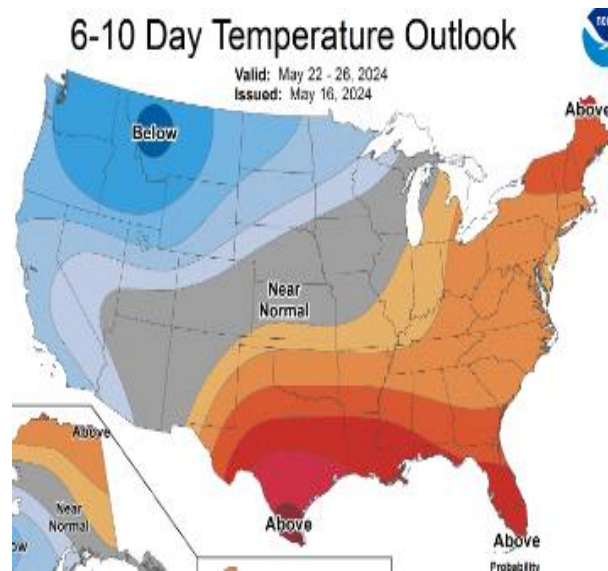
13337000: Lochsa R near Lowell, ID

2001 May-Jul volume was 67%, 826.2 KAF, Average is 1238.4 KAF



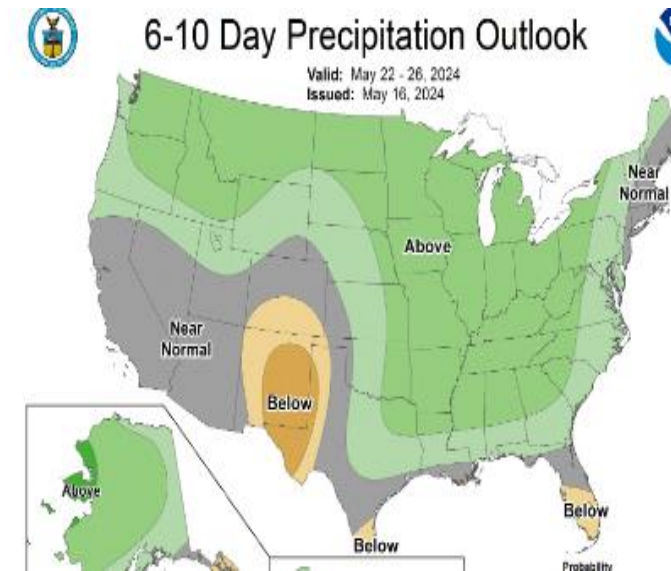
6-10 Day Temperature Outlook

Valid: May 22 - 26, 2024
Issued: May 16, 2024



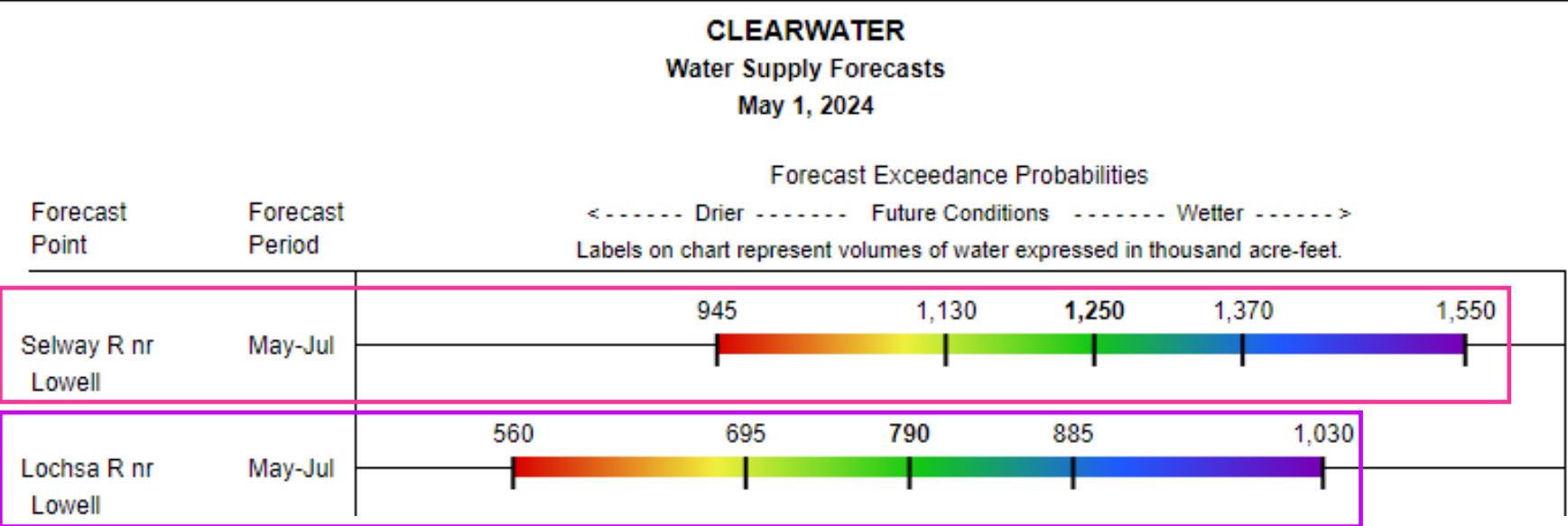
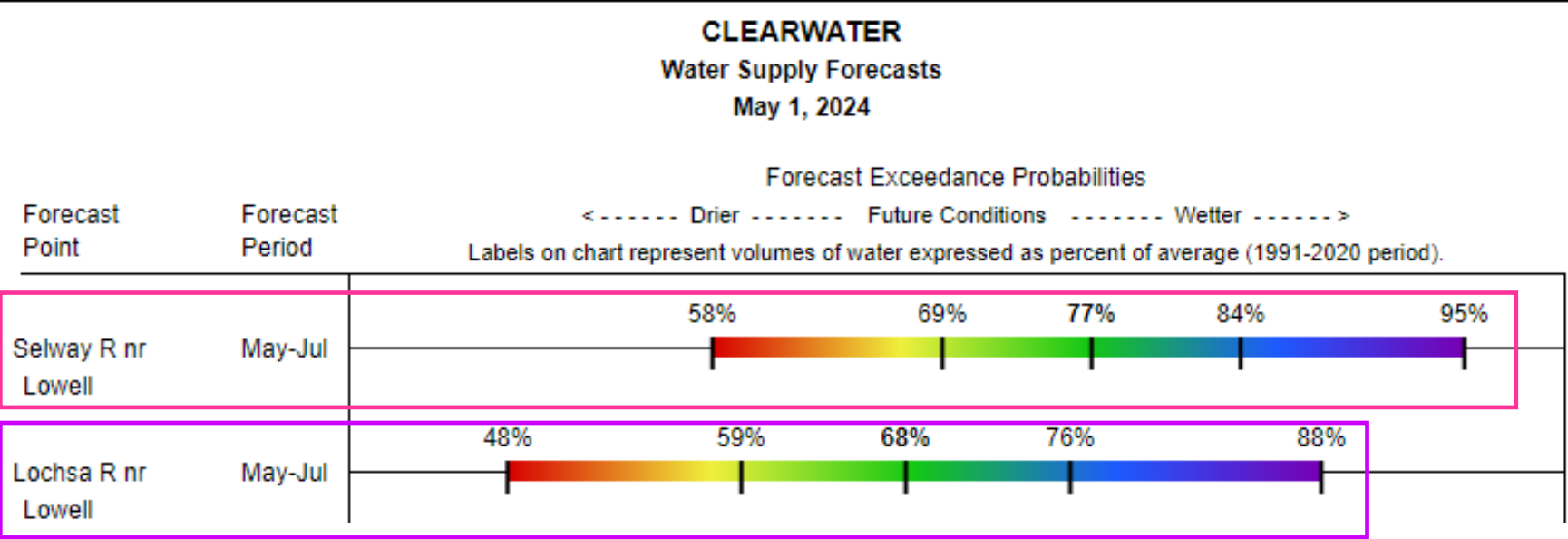
6-10 Day Precipitation Outlook

Valid: May 22 - 26, 2024
Issued: May 16, 2024



May 1, 2004

Lochsa & Selway Rivers Streamflow Forecasts



Lochsa River May-Jul Volume Streamflow Forecast 76% of avg, 790 KAF with a range of 560 to 1030 KAF

Selway River May-Jul Volume Streamflow Forecast 77% of avg, 1250 KAF with a range of 945 to 1550 KAF

2024 Selway Snow similar to 2015 and 2001.

Current as of 05/16/2024:
% of Median - 78%
% Median Peak - 36%
Days Since Median Peak - 40
Percentile - 28

✱ Median Peak SWE
— Median ('91-'20)
Stats. Shading
— 2024 (4 sites)
— 2015 (4 sites)
— 2001 (4 sites)

Snow Water Equivalent (in.)

35
30
25
20
15
10
5
0

Oct 1 Nov 1 Dec 1 Jan 1 Feb 1 Mar 1 Apr 1 May 1 Jun 1 Jul 1

(May 16, 10.9) Median ('91-'20)
(May 16, 8.5) 2024 (4 sites)
(May 16, 6.8) 2001 (4 sites)
(May 16, 4.4) 2015 (4 sites)

On average, peak streamflow for the Selway River near Lowell, Idaho occurs when Twin Lakes SNOTEL is between **26 and 33%** melted.

Summary of all years by max SWE magnitude

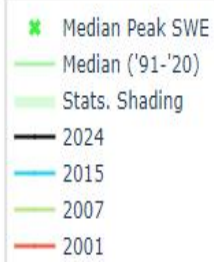
Max SWE Category	Range of Max SWE Magnitude (inches)	Number of Years in Analysis	Average percent melted at time of peak streamflow
Below average	<35	11	33
Average	34 – 49	25	33
Above average	>48	12	26

Note - this analysis uses all years available and did not eliminate potential non-snowmelt peaks

The average percent melted for the full 48-year period of record is 33% melted.

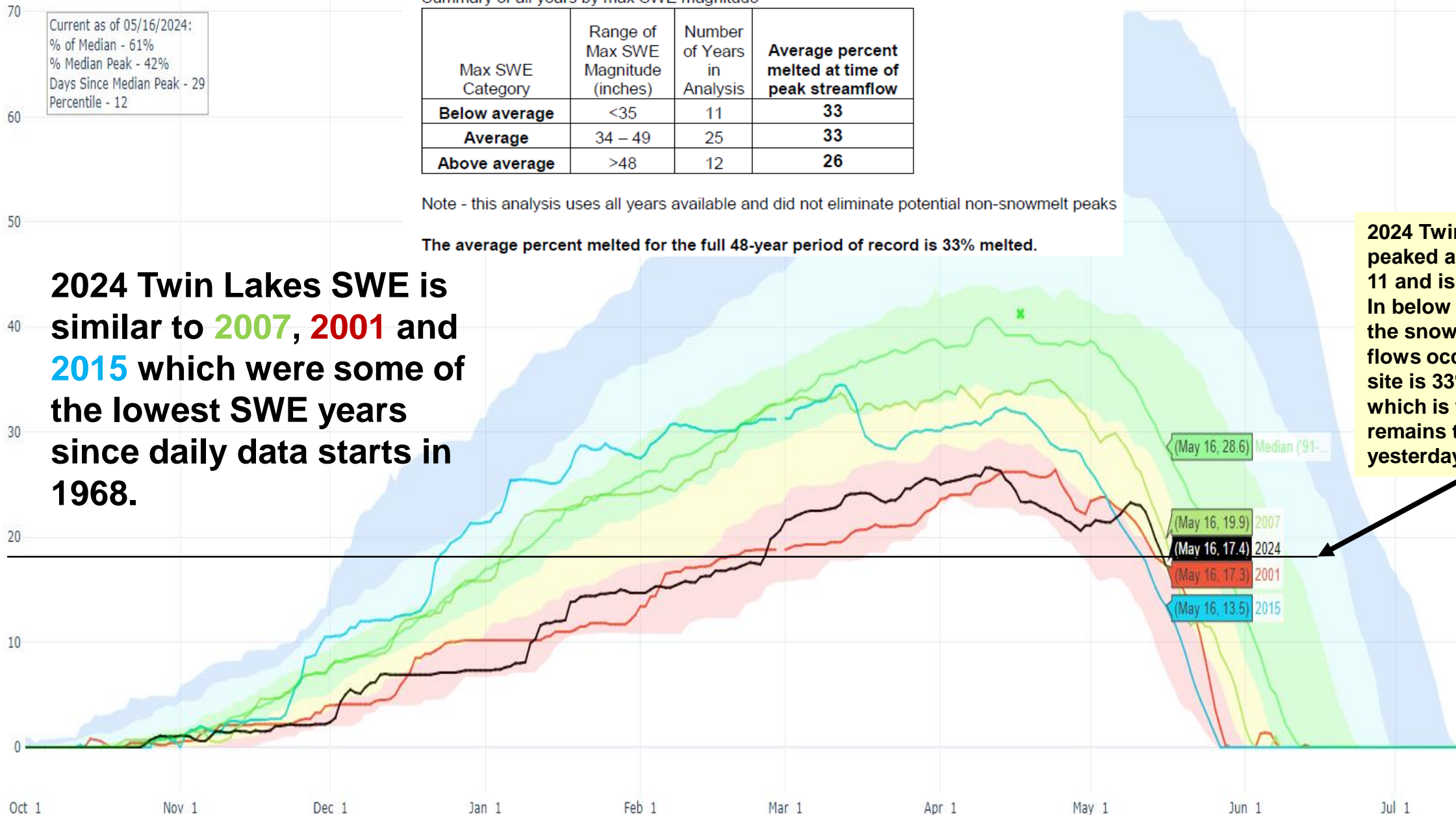
Current as of 05/16/2024:
% of Median - 61%
% Median Peak - 42%
Days Since Median Peak - 29
Percentile - 12

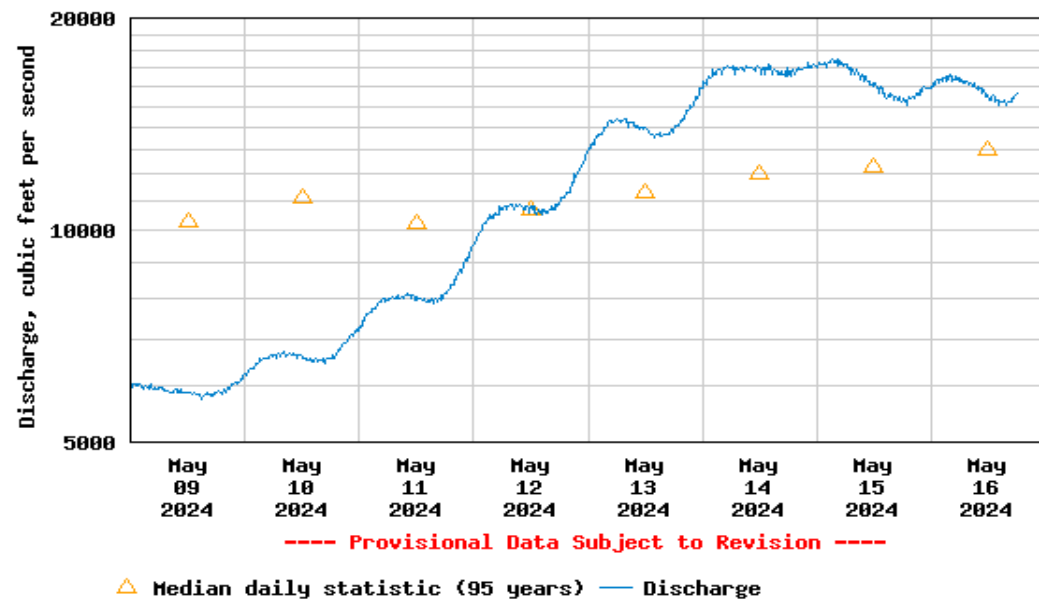
2024 Twin Lakes SWE is similar to 2007, 2001 and 2015 which were some of the lowest SWE years since daily data starts in 1968.



2024 Twin Lakes SWE peaked at 26.6" on Apr 11 and is at 17.4" today. In below average years, the snowmelt peak flows occurs when the site is 33% melted, which is when 17.8" remains this year yesterday.

Snow Water Equivalent (in.)





Nailed it ! Based on daily USGS flow data shows flow peaked yesterday as snow starts to run out. With cooler temps moving in, this is likely the peak for this year unless usually wet conditions occur later in May/early June.

NWS Forecast & Trend shows a peak happening in the next day or two, but the next model run will probably be adjusted to show decreasing flows with return of cooler temps.

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See this graph on the [Monitoring Location Pages](#)

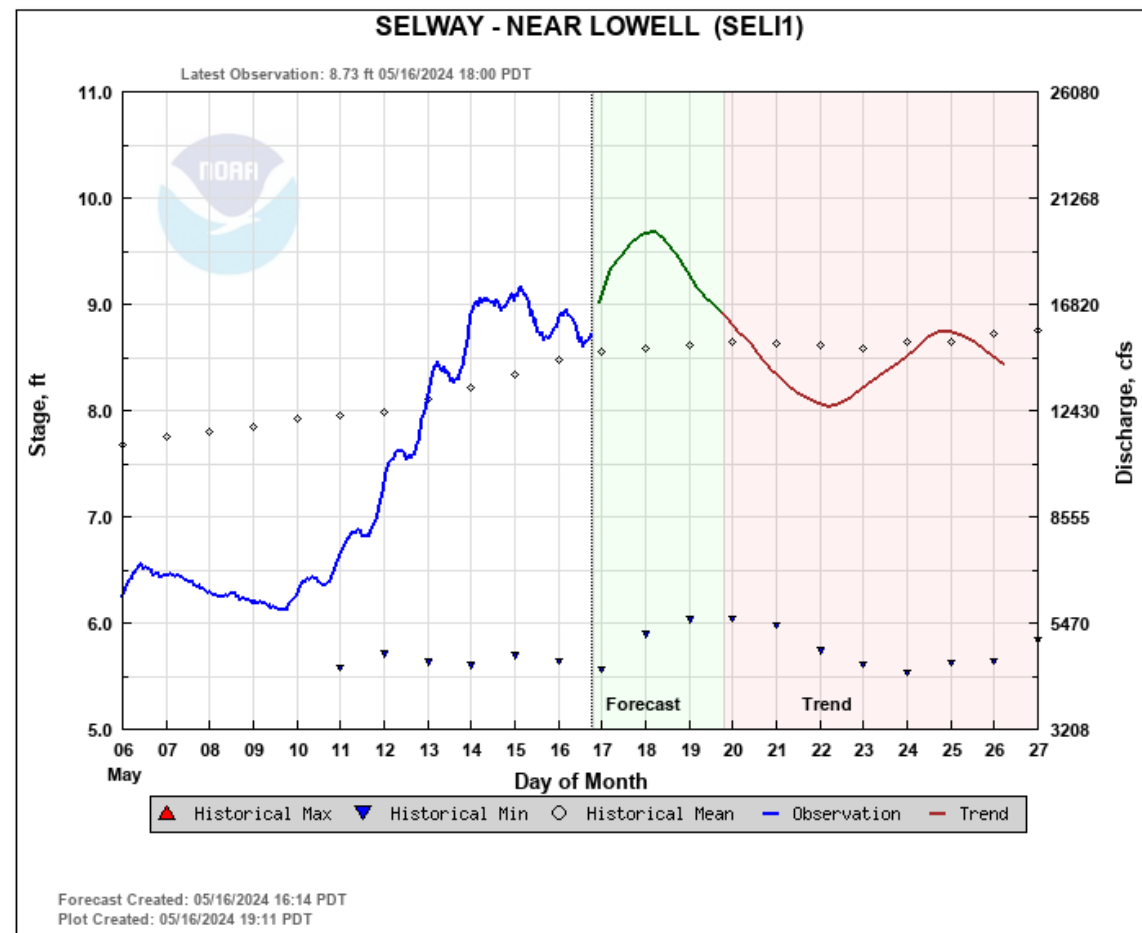
[Share this graph](#) |

Daily discharge, cubic feet per second -- statistics for May 16 based on 95 water years of record [more](#)

Min (1983)	25th percentile	Median	Mean	Most Recent Instantaneous Value May 16	75th percentile	Max (1949)
4580	9940	13000	14500	15700	17600	36800

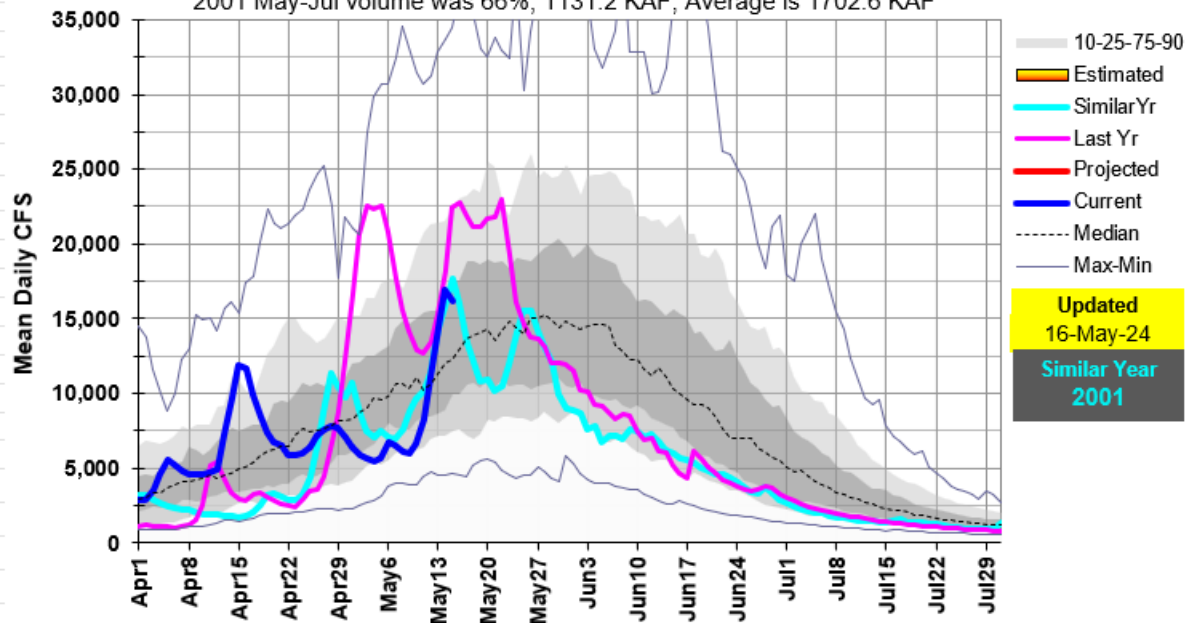
Keep in mind the Snow2Flow Relationship is based on snow and snowmelt relationship with peak flows.

Any given day with rain can generate additional peaks or a higher peak for the season.



13336500: Selway R near Lowell, ID

2001 May-Jul volume was 66%, 1131.2 KAF, Average is 1702.6 KAF



Runoff for similar snow years:

2024 May-Jul forecast is for 1250 KAF:

2001 May-Jul volume was 1131 KAF

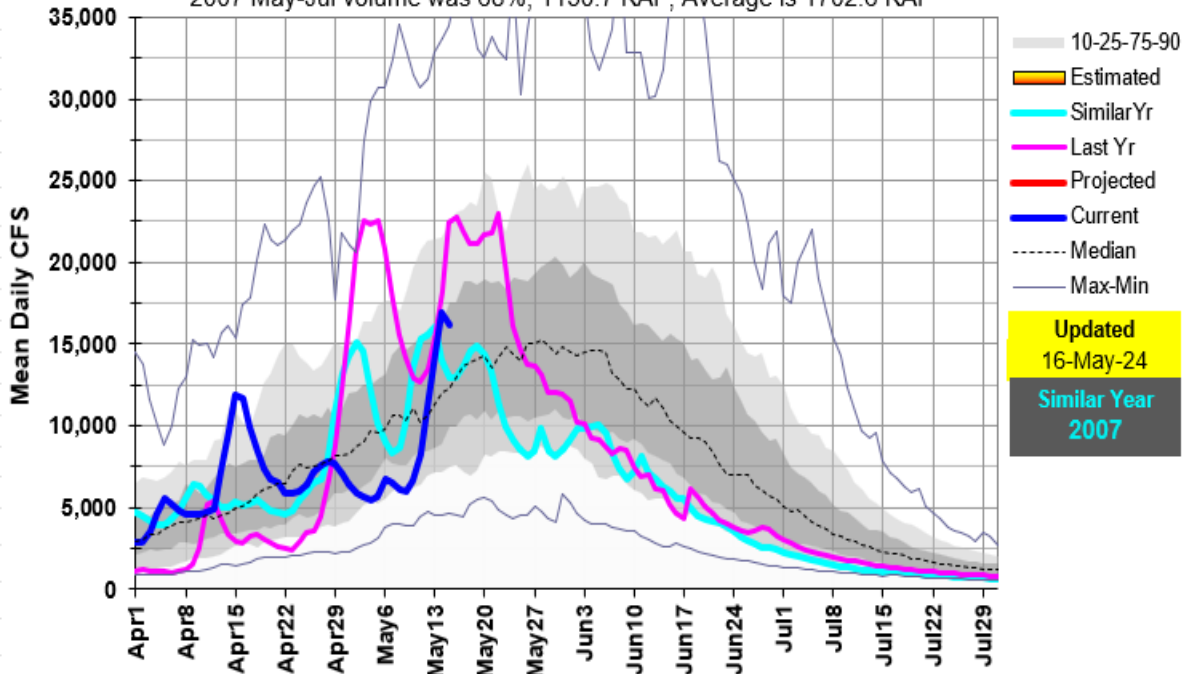
This looks like the best recession year/pattern to watch now especially if May's 2nd half brings cooler temps and another peak when summer's warmer temps return to stay.

2007 May-Jul volume was 1150 KAF

2015 May-Jul volume was 916 KAF

13336500: Selway R near Lowell, ID

2007 May-Jul volume was 68%, 1150.7 KAF, Average is 1702.6 KAF



13336500: Selway R near Lowell, ID

2015 May-Jul volume was 54%, 916.7 KAF, Average is 1702.6 KAF

