BUREAU OF RECLAMATION

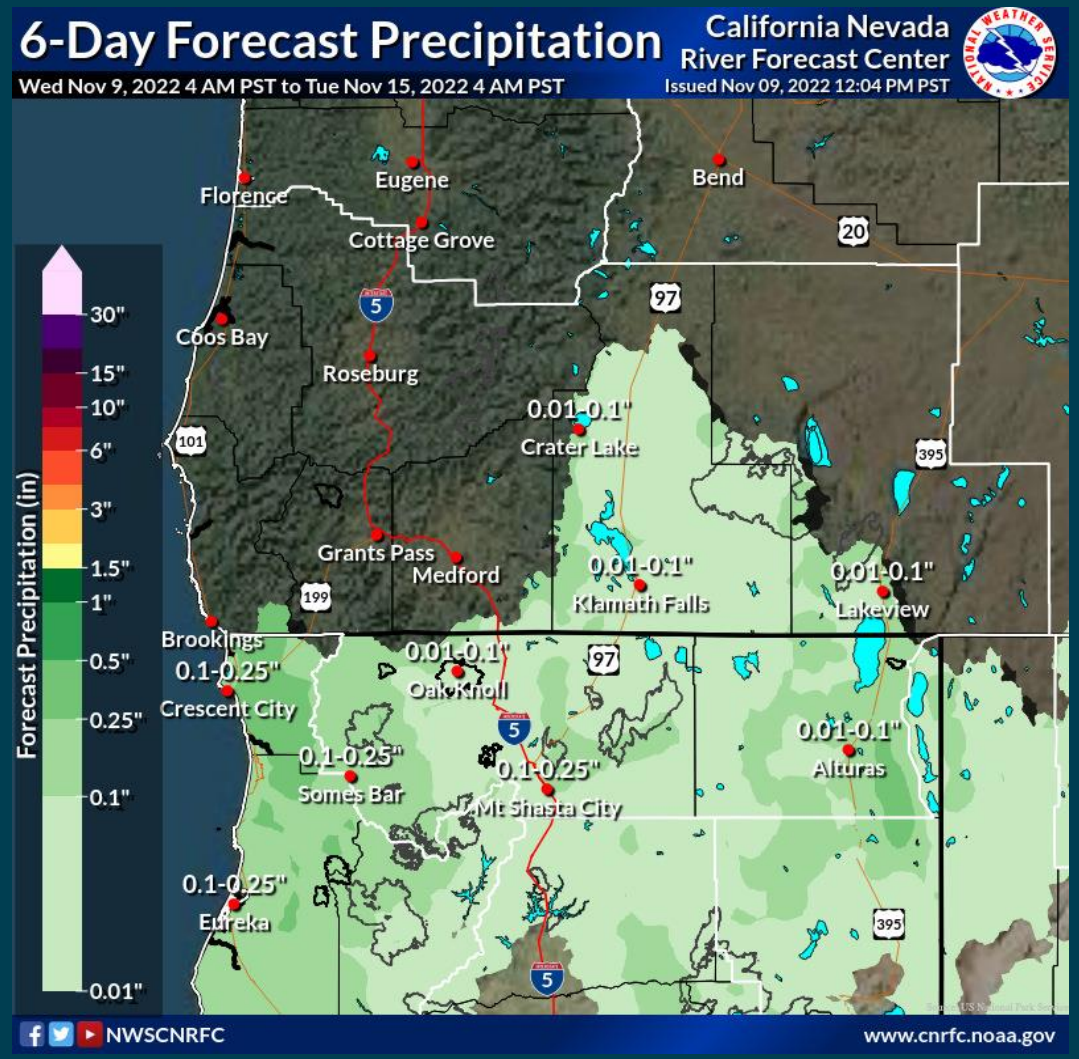
Klamath River Basin Hydrology and Operations Forecast Update

November 10, 2022

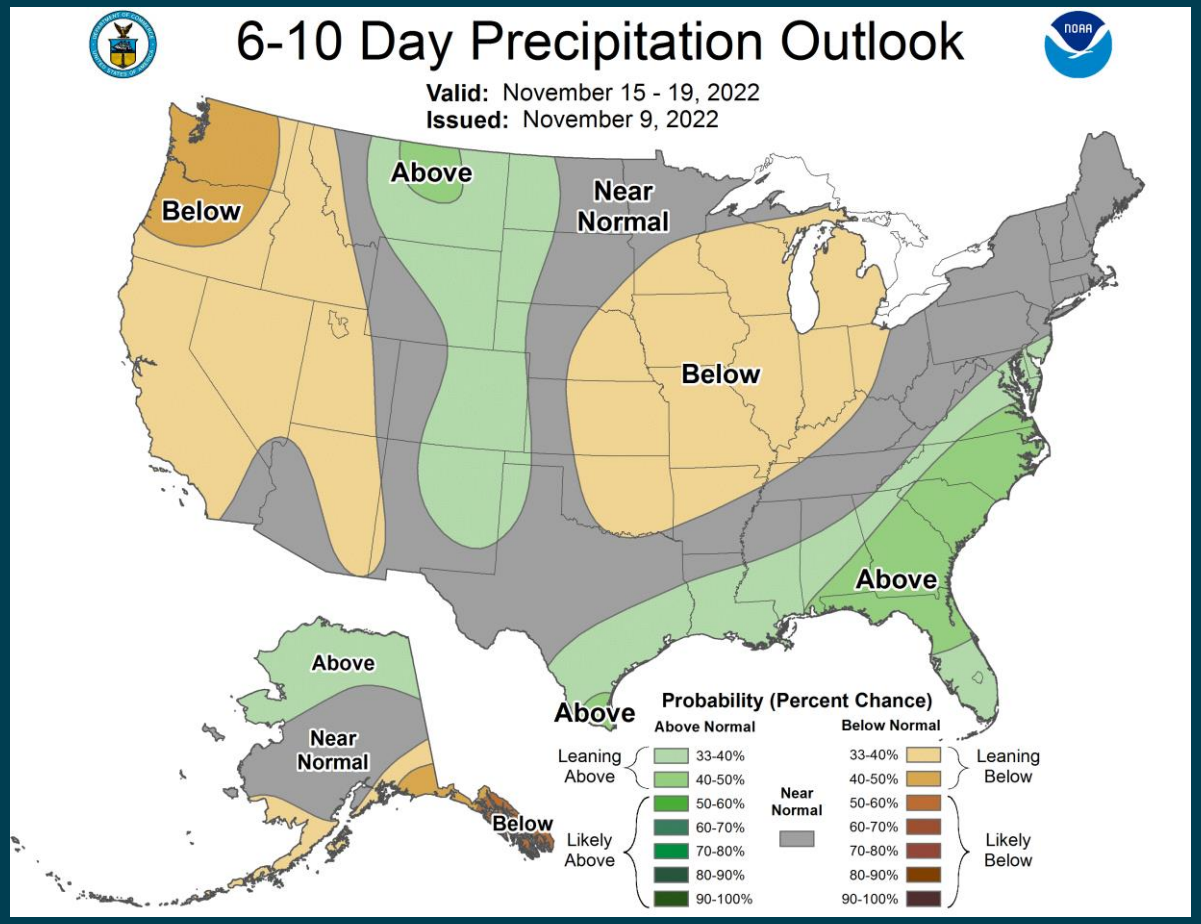
Snapshot of Water Year Conditions (since Oct 1)

- Precipitation at airport 1.31"/1.05" = 125% of normal
- Snow Water Equivalent 1.6"/0.1" = 1,600% of median (only 6 of 18 sites)
- UKL Elevation
  - Oct 1 = 4,138.71 feet or 183,076 TAF
  - Oct 24 - Nov 1 (minimum) = 4,138.60 feet or 175,486 TAF
  - Nov 8 = 4,138.73 feet or 184,457 TAF
- UKL Net Inflow
  - 67.792 TAF (2023)
  - 88.692 TAF (2022)
  - 67.708 TAF (2021)
  - 80.760 TAF (2020)

Near-term Forecast



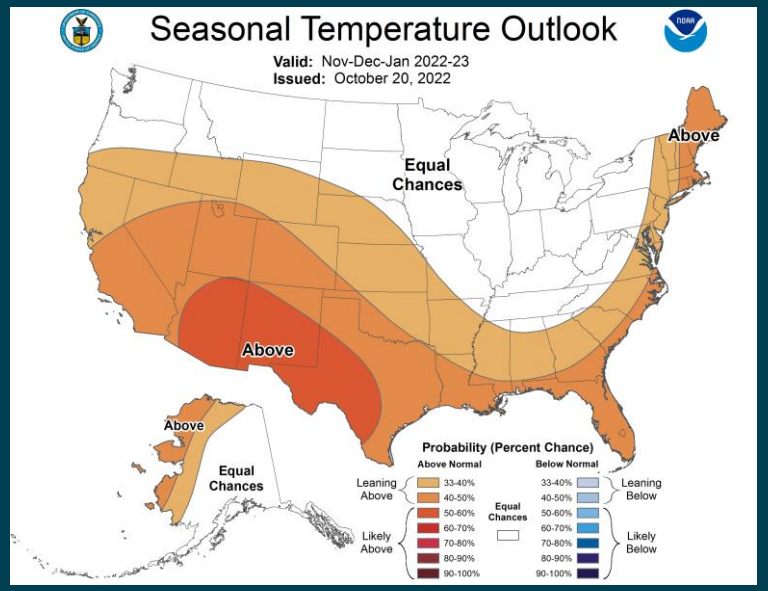
NOAA-CNRFC

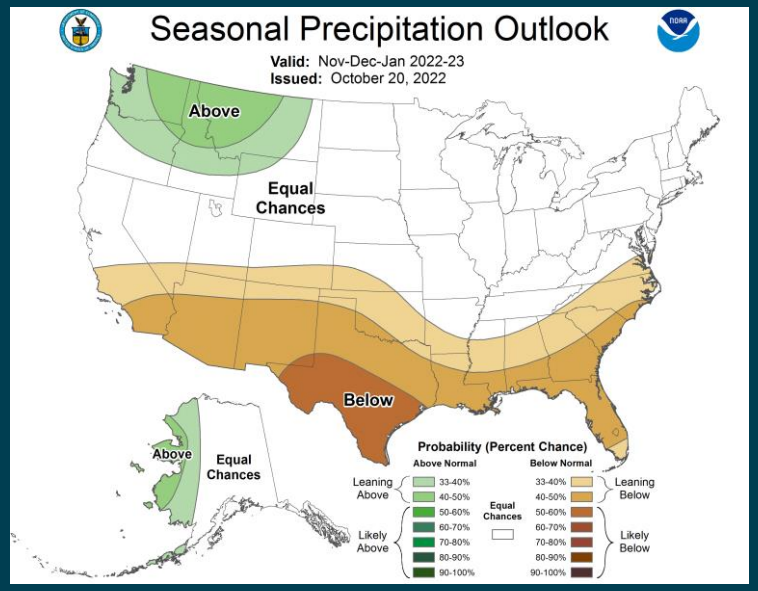


NOAA-NWS

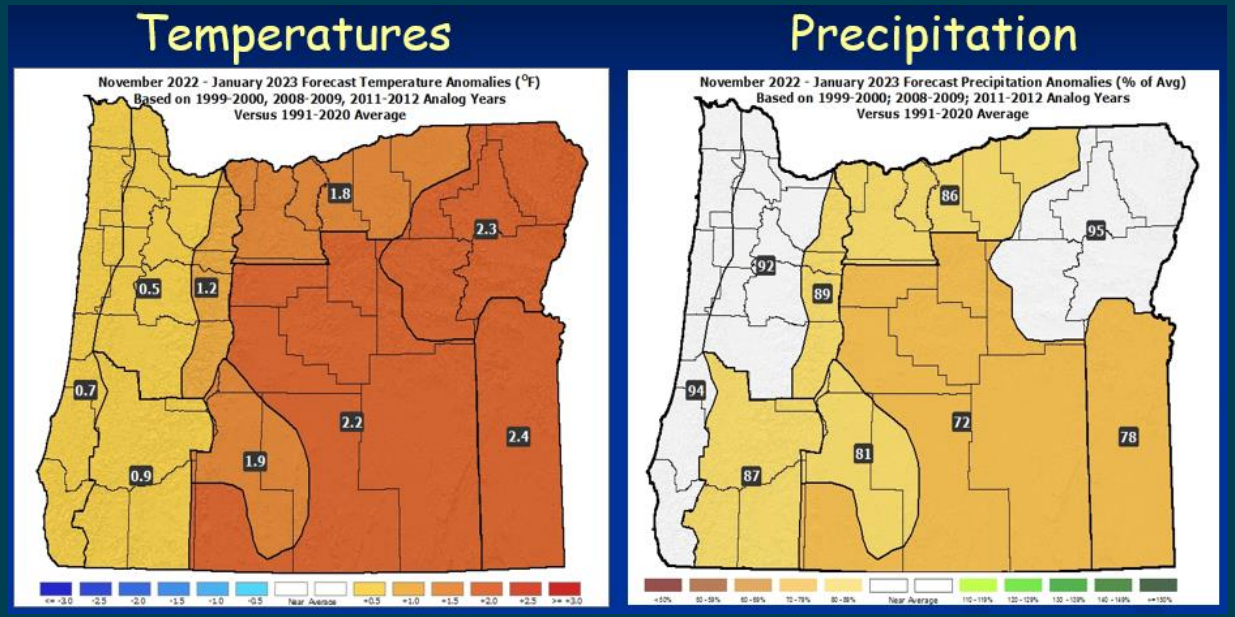
Seasonal Forecast

NOAA-NWS

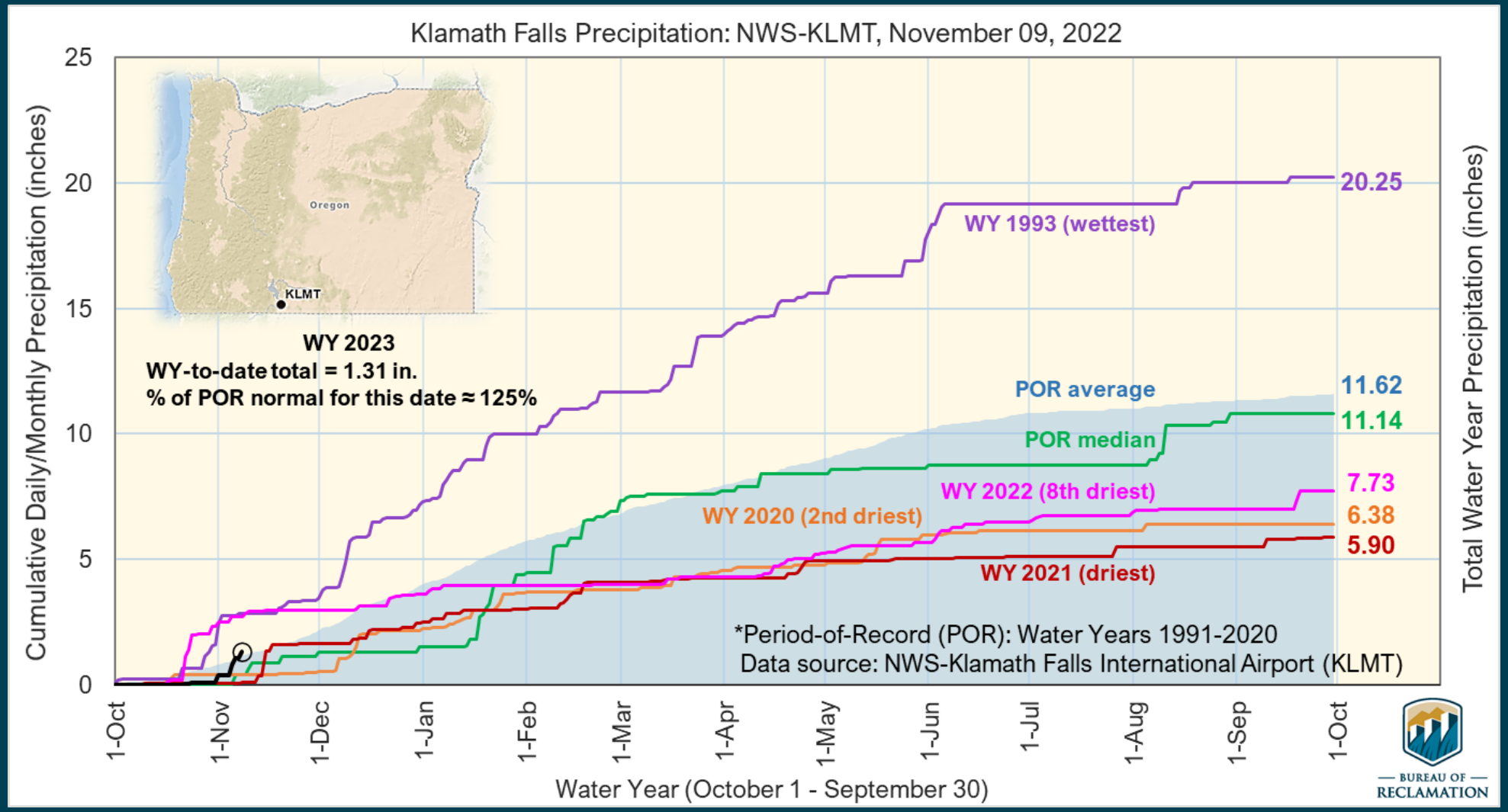




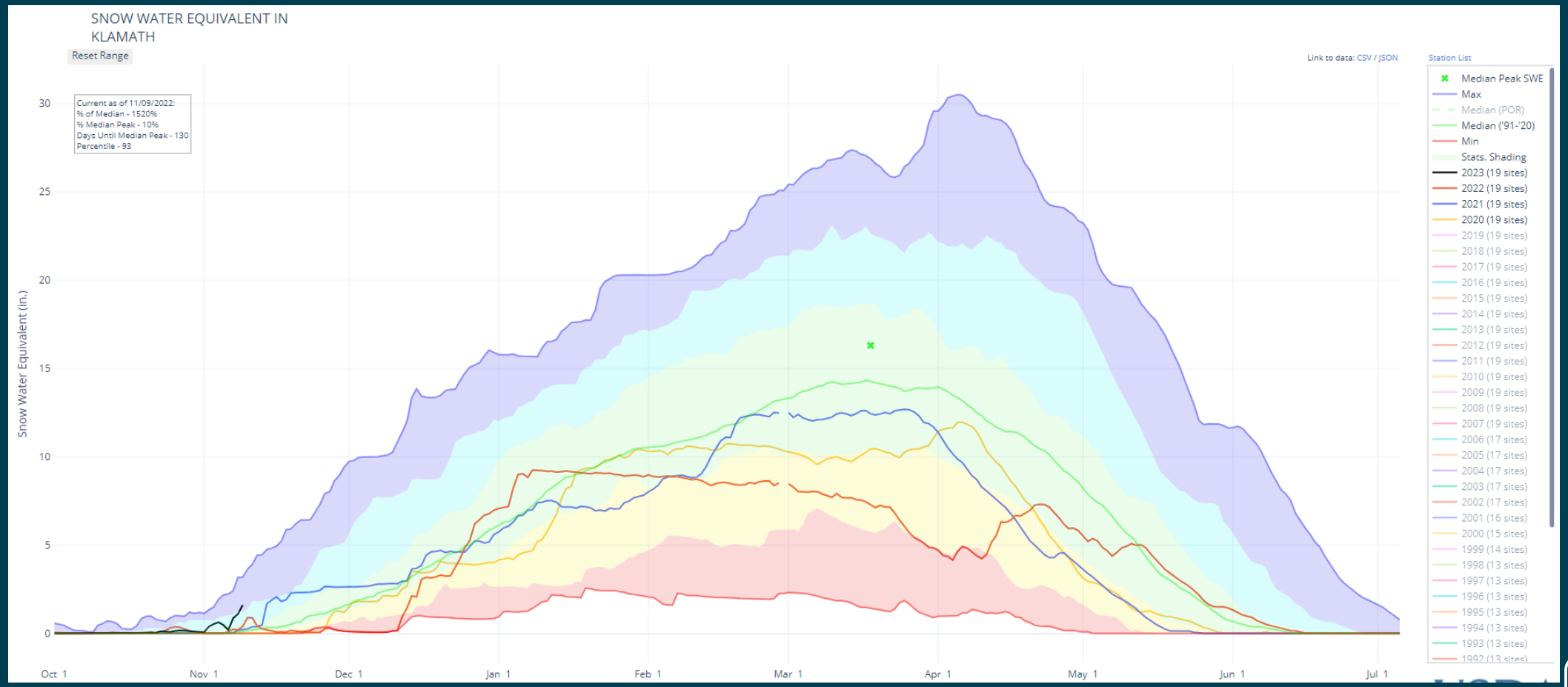
ODA
La Nina analogs



NWS Klamath Falls Airport Met Station WY 2023

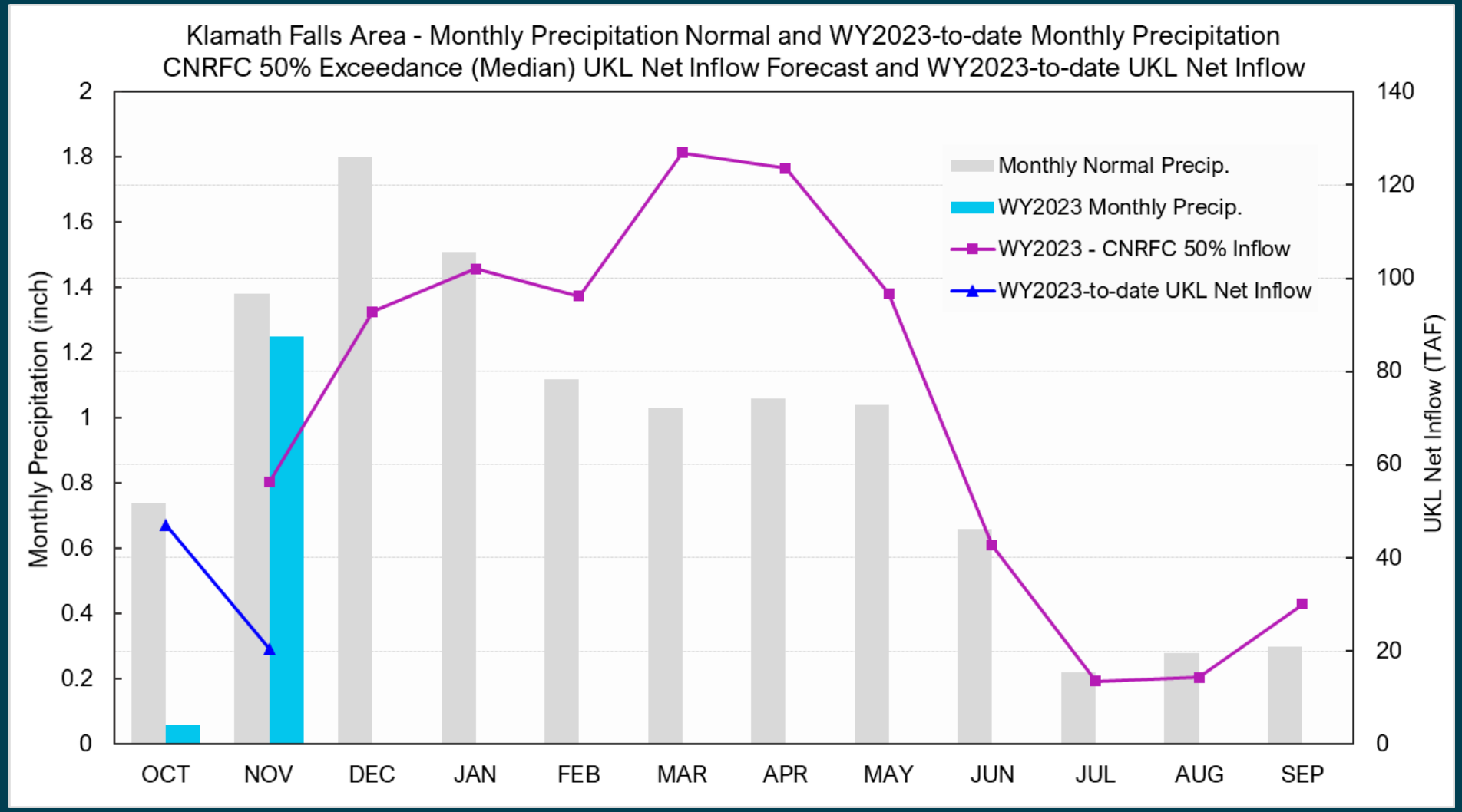


Upper Klamath Basin Snow Water Equivalent – NRCS WY 2023 vs. Last 3 Years



WY2023 in black; WY2022 in orange; WY2021 in blue; WY2020 in yellow

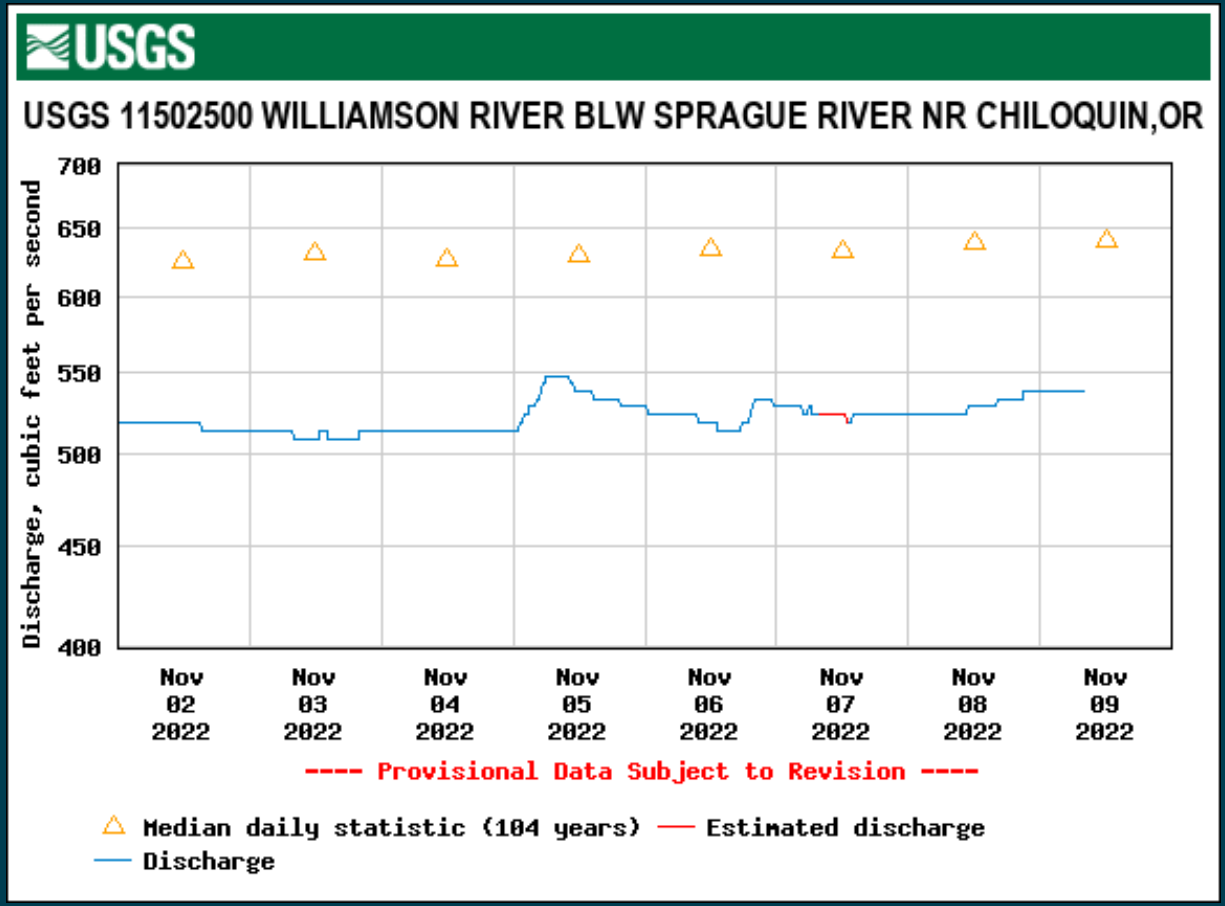
Precipitation vs. UKL Inflow



Through Nov 8: Normal = 0.31" 2022 = 1.25"

Tributary response

Williamson running at about 5% of daily mean for Nov 9

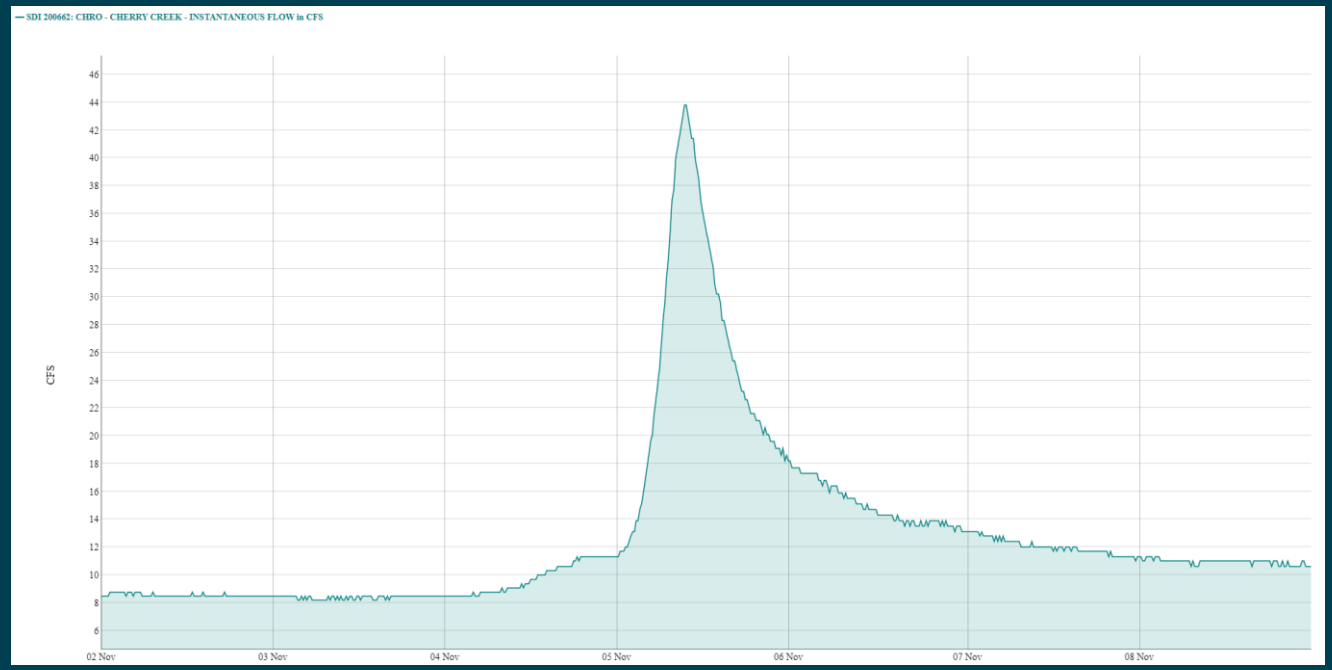


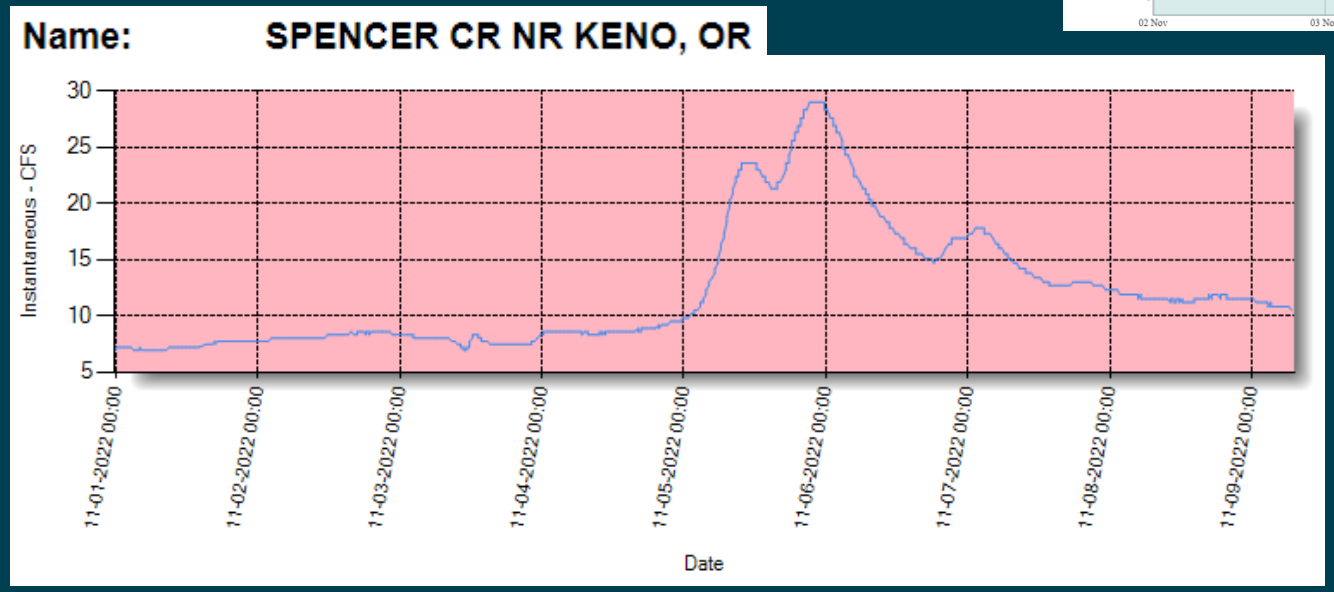
Daily discharge, cubic feet per second -- statistics for Nov 9 based on 104 water years of record more

Min (1938)	Most Recent Instantaneous Value Nov 9	25th percen-tile	Median	Mean	75th percen-tile	Max (1957)
520	538	590	641	690	761	1310

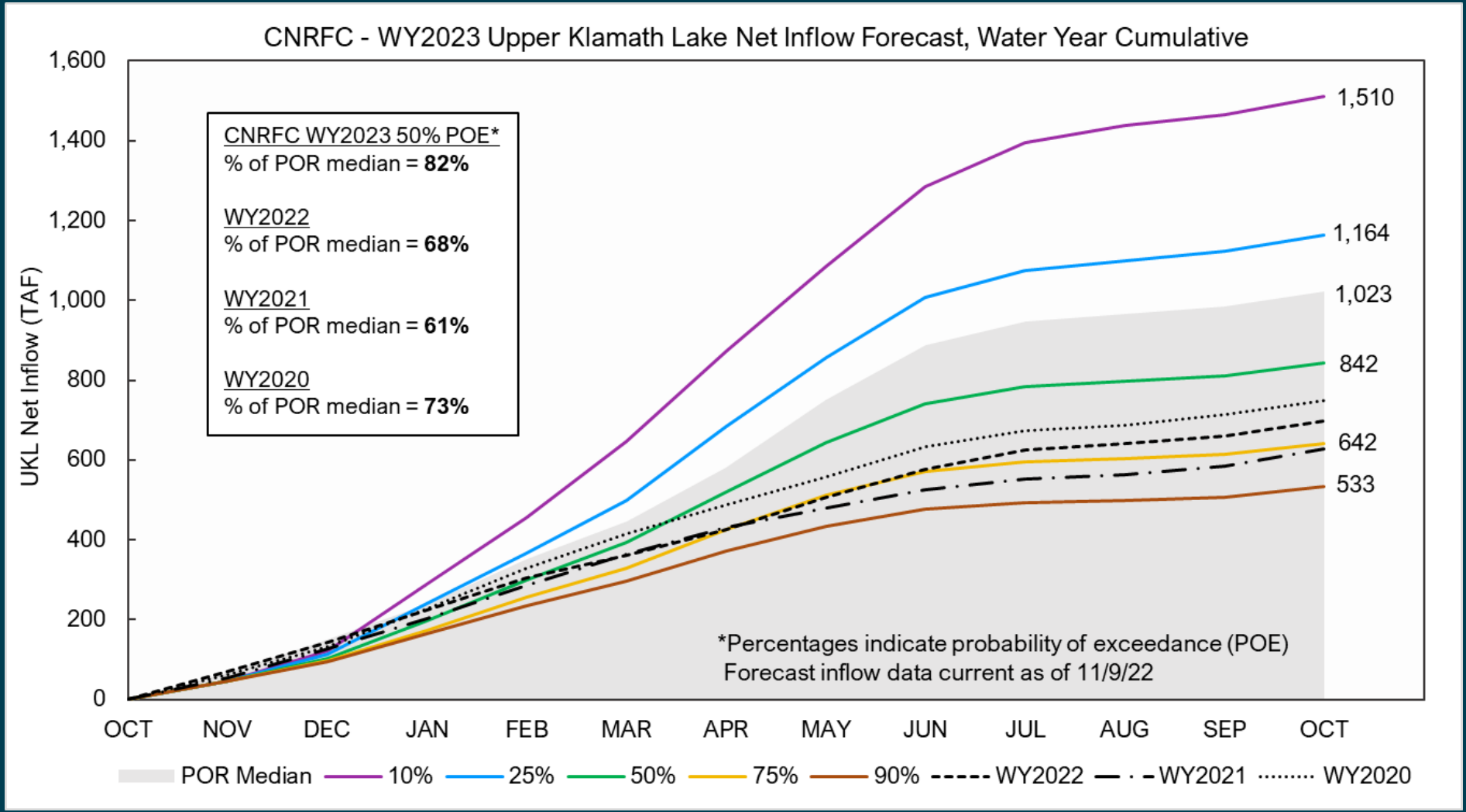
Tributary response

Cherry Creek and Spencer Creek both saw brief upticks in flow

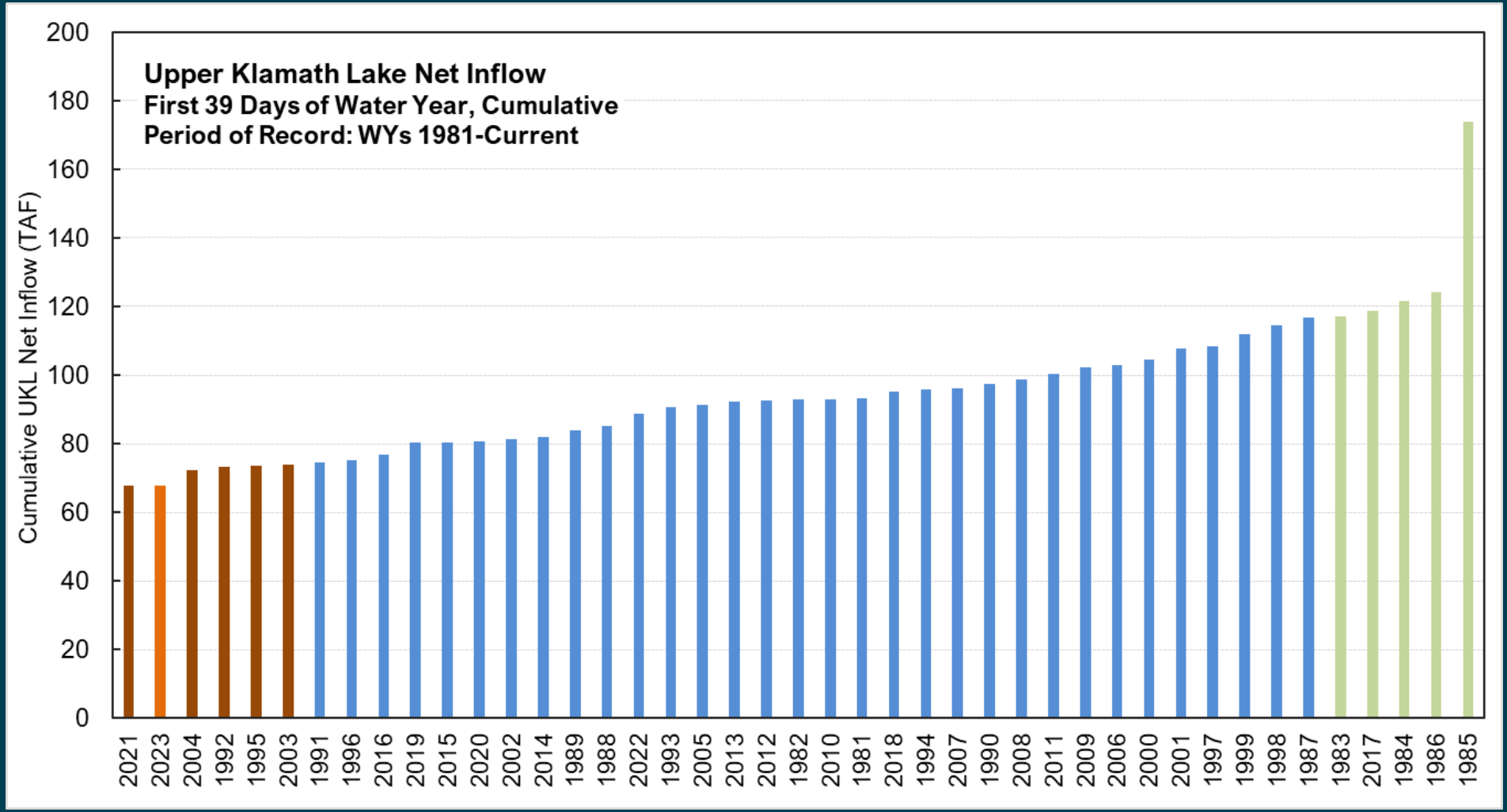




WY 2023 UKL Net Inflow Forecast



UKL Cumulative Net Inflow



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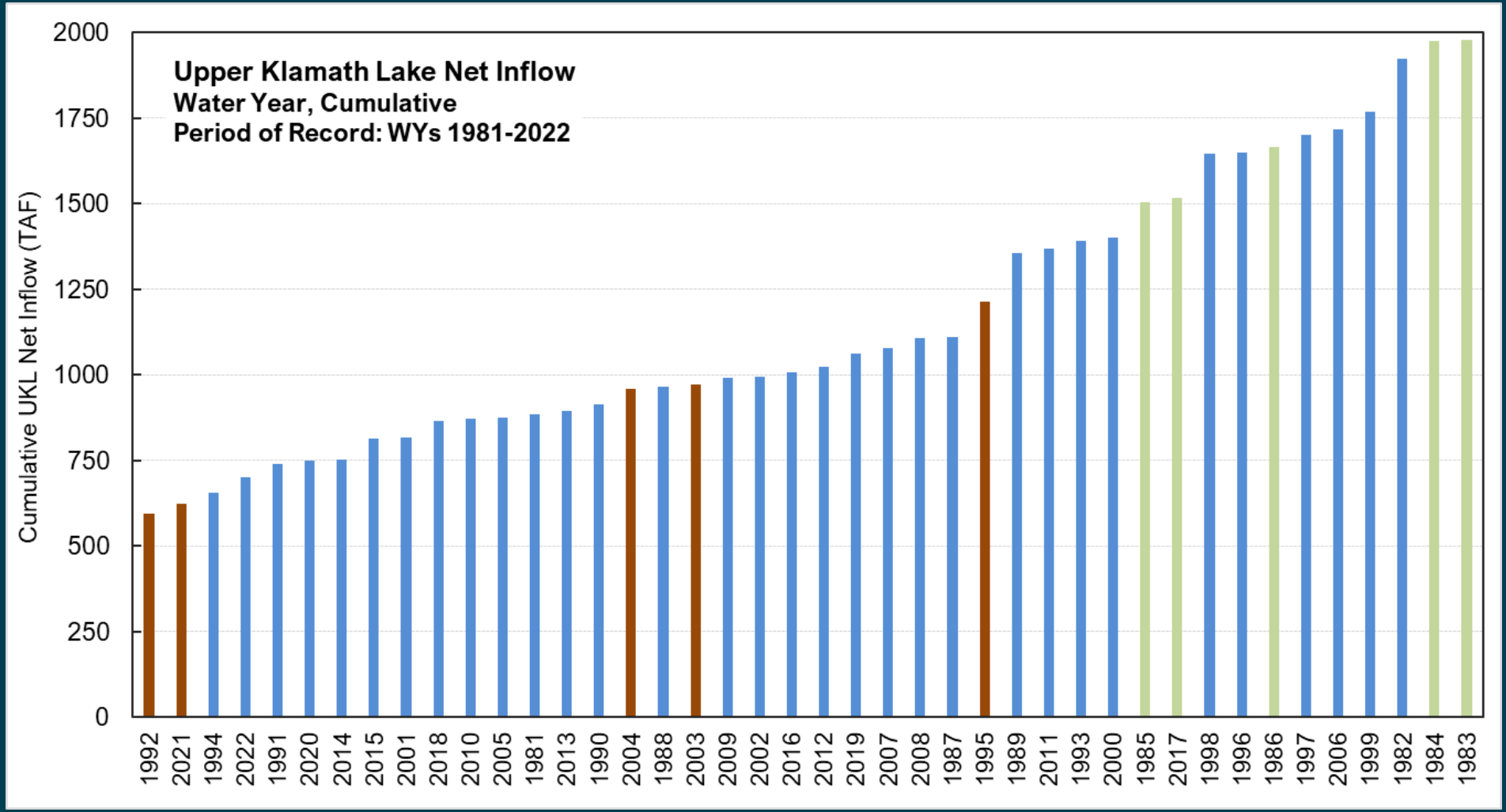
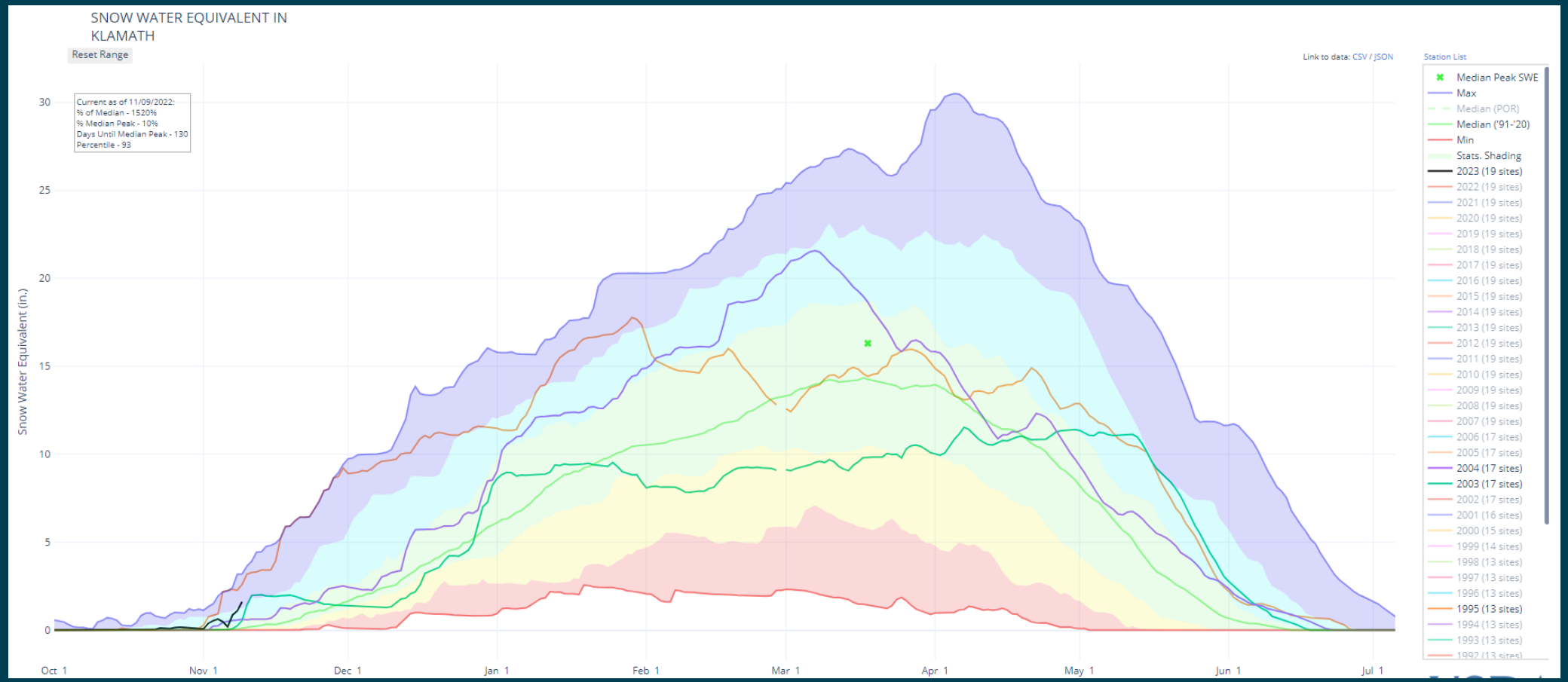
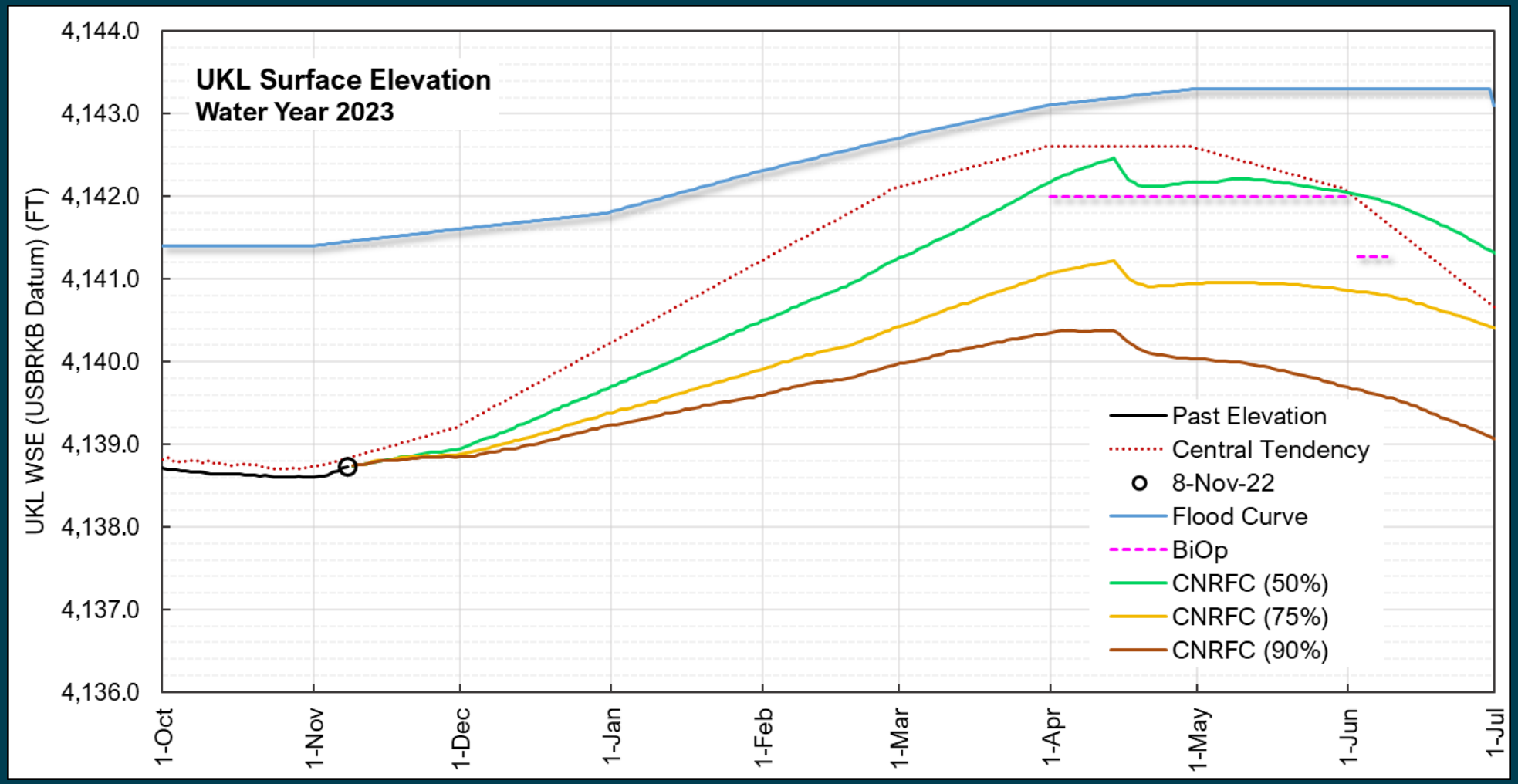


Upper Klamath Basin Snow Water Equivalent – NRCS WY 2023 vs Dry Years



WY2023 in black; WY1995 in orange; WY2003 in green; WY2004 in purple

Upper Klamath Lake Water Surface Elevation WY2023 - CNRFC



Upper Klamath Lake Water Surface Elevation WY2023

CNRFC Exceedance	50%	75%	90%
2023 EOF elev (FT)	4141.25	4140.41	4139.96
2023 Mar-Sep inflow (TAF)	448	313	237
2023 Prj Supp (TAF)	198	23	0
2023 EWA (TAF)	400	400	400
EWA Augmentation (TAF)	41	0	0
2023 proj min elev (FT)	4138.85	4138.78	4137.28

EOF = End-of-February

Prj Supp = Project Supply

EWA = Environmental Water Account

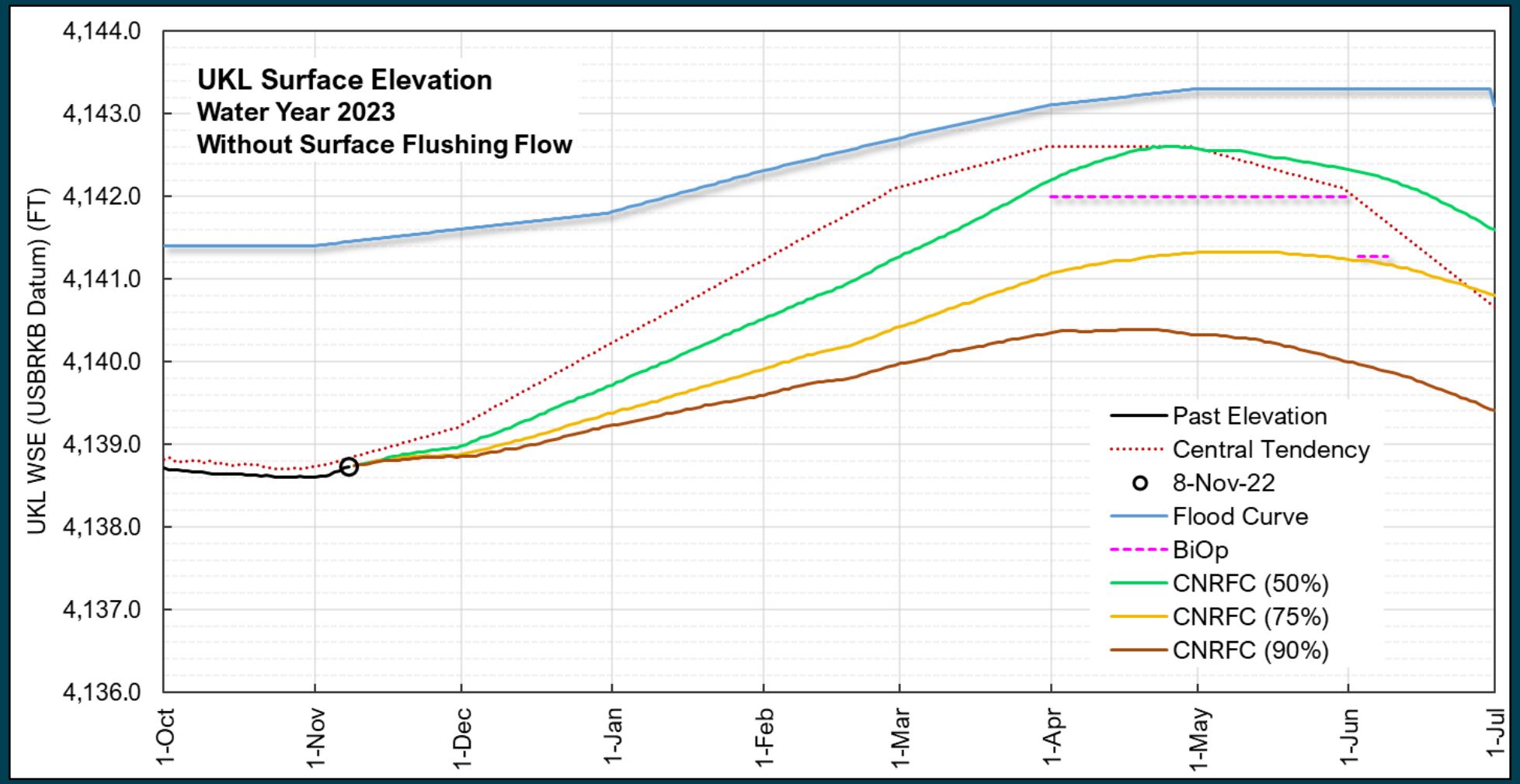
Proj min elev = Projected seasonal minimum elevation

Upper Klamath Lake Water Supply Distribution, Fall-Winter 2022/2023

CNRFC Exceedance	50%	75%	90%
Projected storage difference 4142.00’, March 1 (AF)	-64,026	-135,026	-169,930
Projected storage difference 4143.00’, March 1 (AF)	-154,510	-225,510	-260,414
Projected storage difference 4142.00’, April 1 (AF)	17,997	-82,241	-141,347
Projected storage difference 4143.00’, April 1 (AF)	-72,487	-172,725	-231,831
Projected UKL to River Releases, Nov-Feb (AF)	145,194	150,060	156,580
Projected F/W Total Ag Diversion, Nov-Feb (AF)	9,673	9,673	9,673
Projected F/W Total Refuge Diversion, Dec-Feb (AF)	2,142	2,142	2,142

F/W = Fall/Winter

Upper Klamath Lake Water Surface Elevation WY2023 - CNRFC



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2023 EWA (TAF)	400	400	400
EWA Augmentation (TAF)	41	0	0
2023 min elev (FT)	4139.19	4138.97	4137.62

EOF = End-of-February

Prj Supp = Project Supply

EWA = Environmental Water Account

Min elev = Seasonal minimum elevation

Thank You