BUREAU OF RECLAMATION

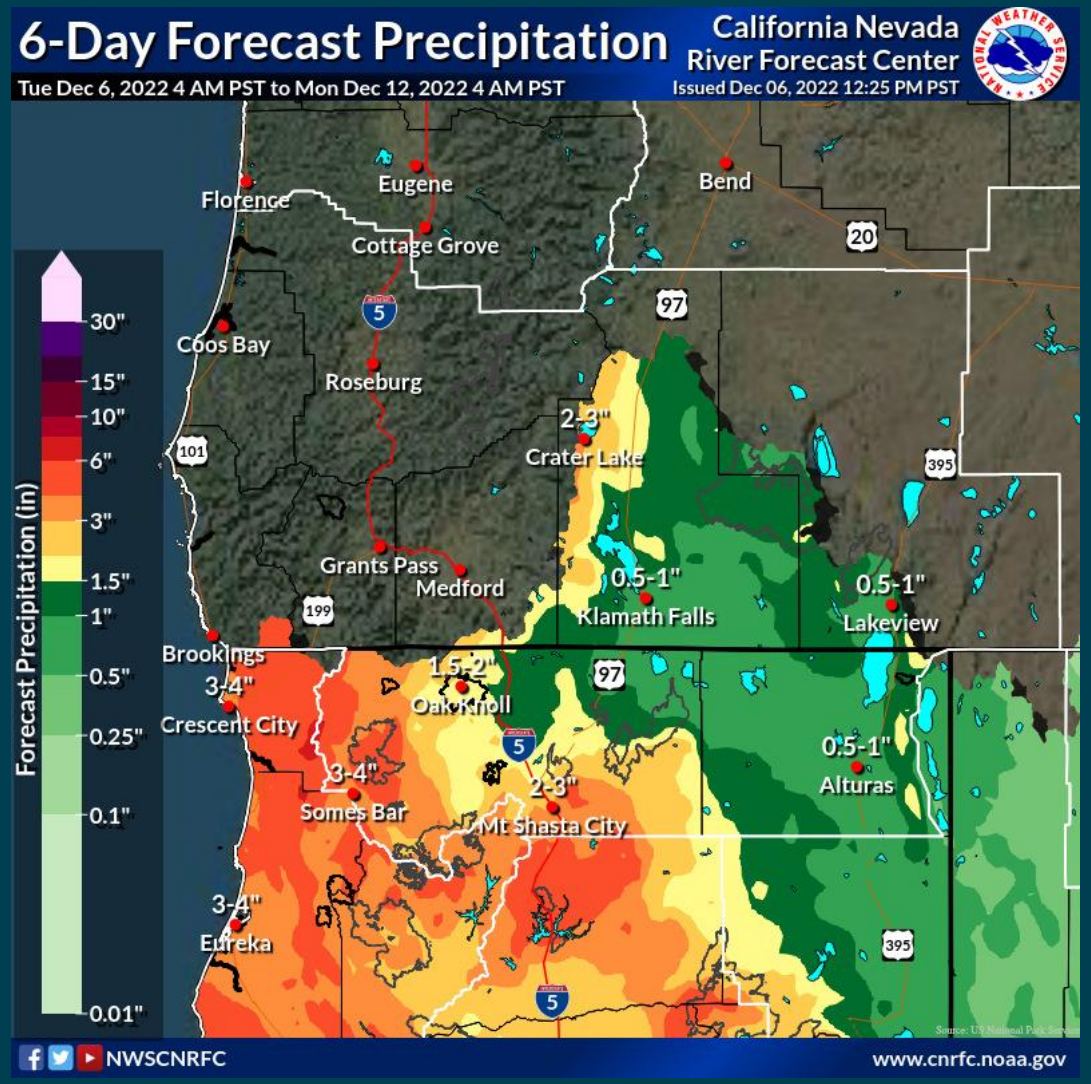
Klamath River Basin Hydrology and Operations Forecast Update

December 08, 2022

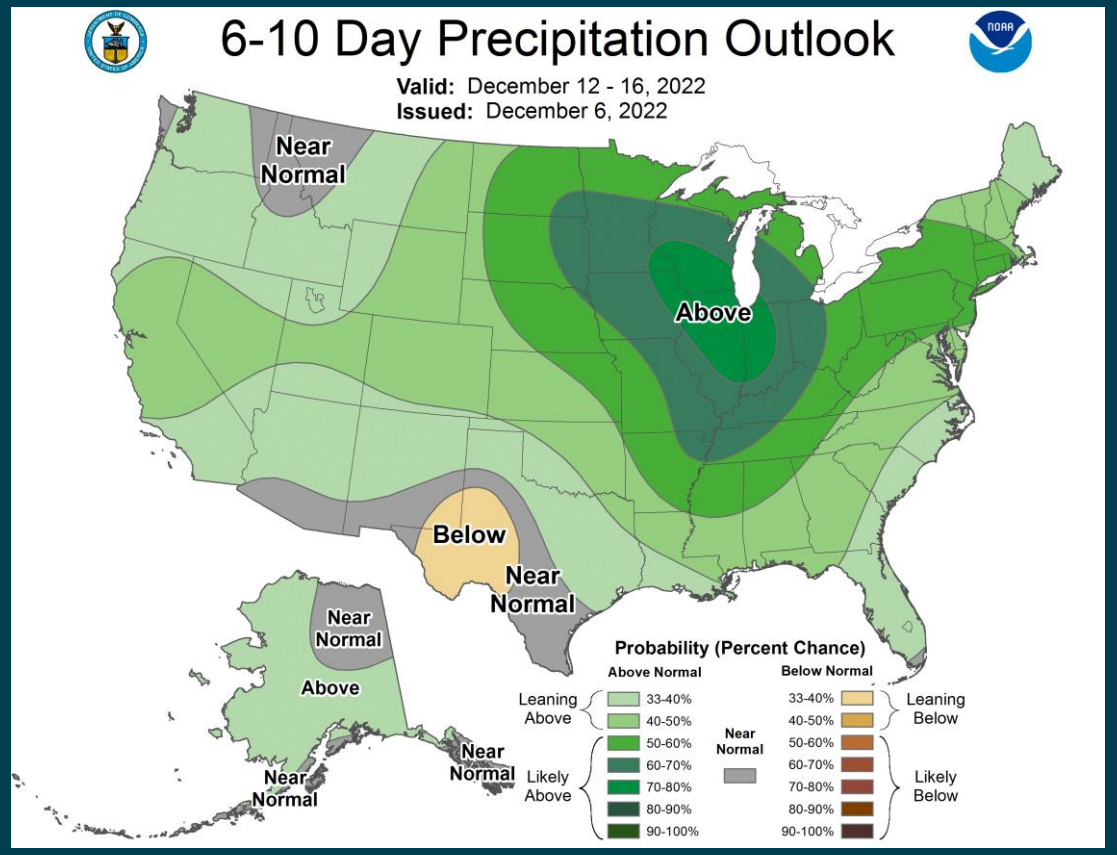
Snapshot of Water Year Conditions (Oct 1 – to date)

- Precipitation: airport 1.74" = 69% of normal; SNOTEL = 85% of median
- Snow Water Equivalent 3.8" = 167% of median (19 SNOTEL sites)
- UKL Elevation
  - Nov 1 = 4,138.60 feet or 175,486 AF
  - Nov 10 - Dec 7 (minimum) = 4,138.78 feet or 187,912 AF
  - Dec 6 = 4,139.04 feet or 205,894 AF
- UKL Net Inflow-to-date (through 12/6)
  - 129.79 TAF (WY2023)
  - 154.98 TAF (WY2022)
  - 140.27 TAF (WY2021)
  - 150.50 TAF (WY2020)

Near-term Forecast



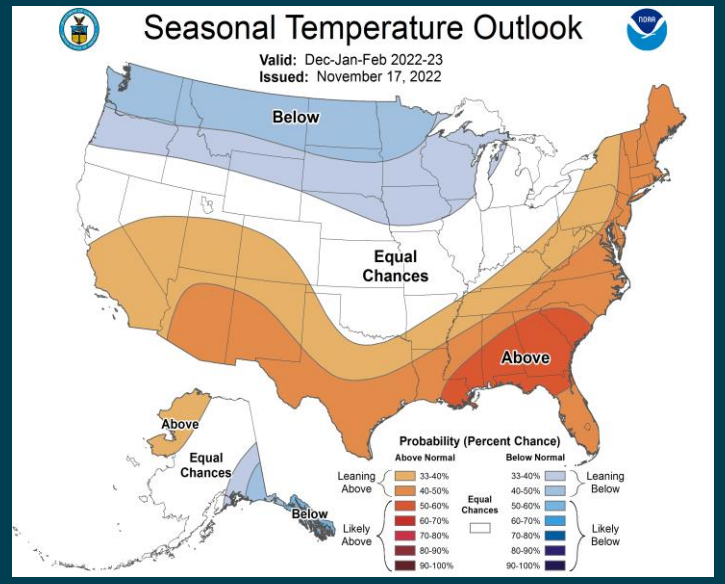
NOAA-CNRFC

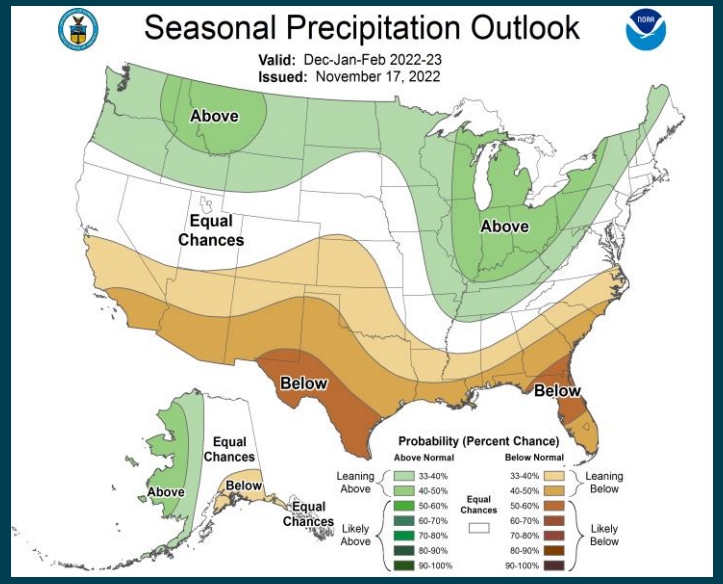


NOAA-NWS

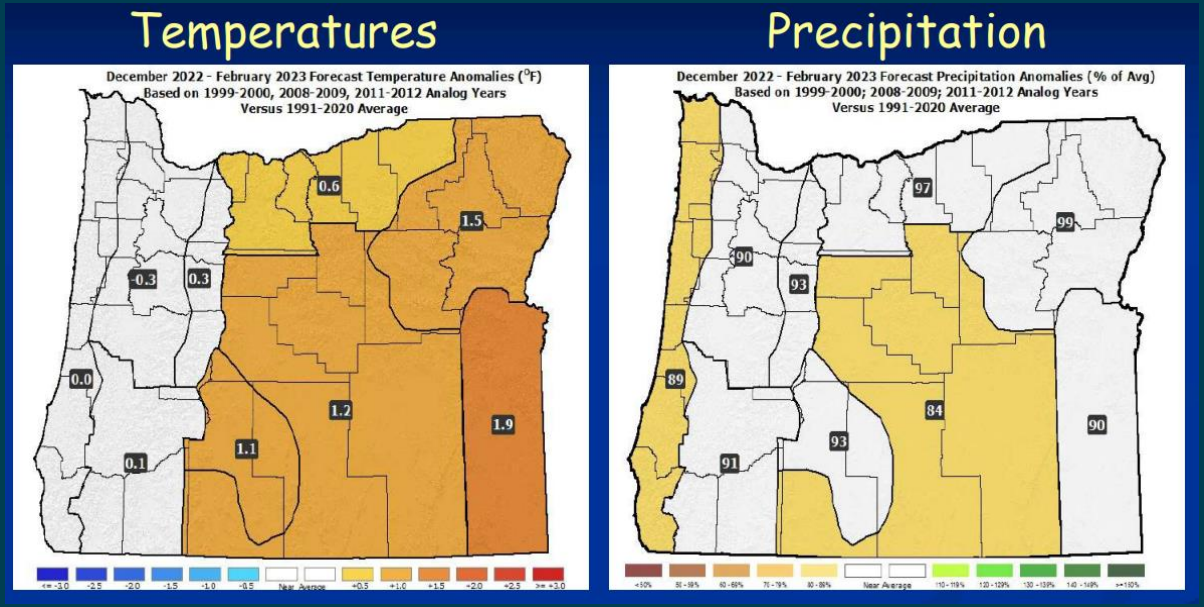
Seasonal Forecast

NOAA-NWS

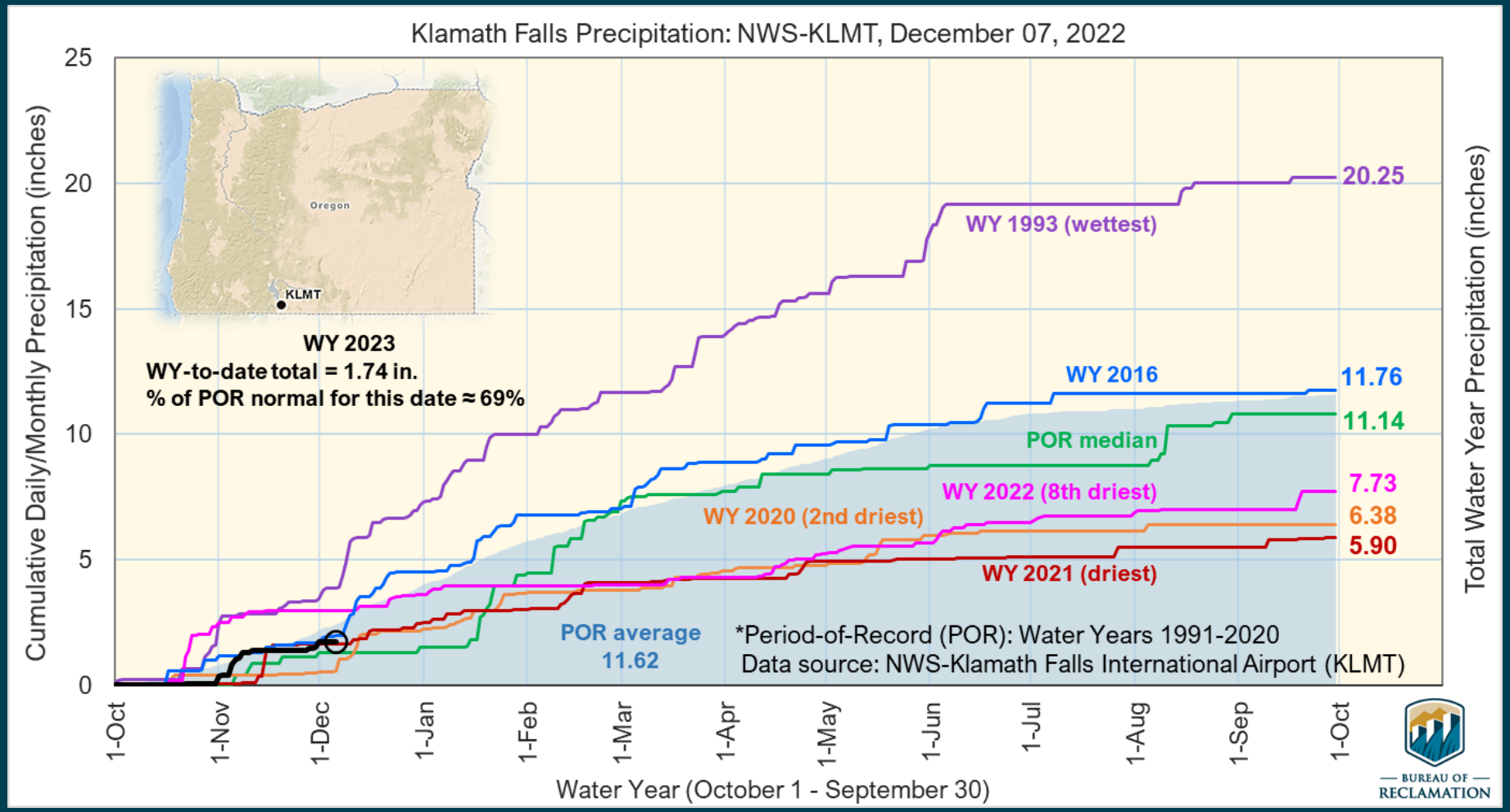




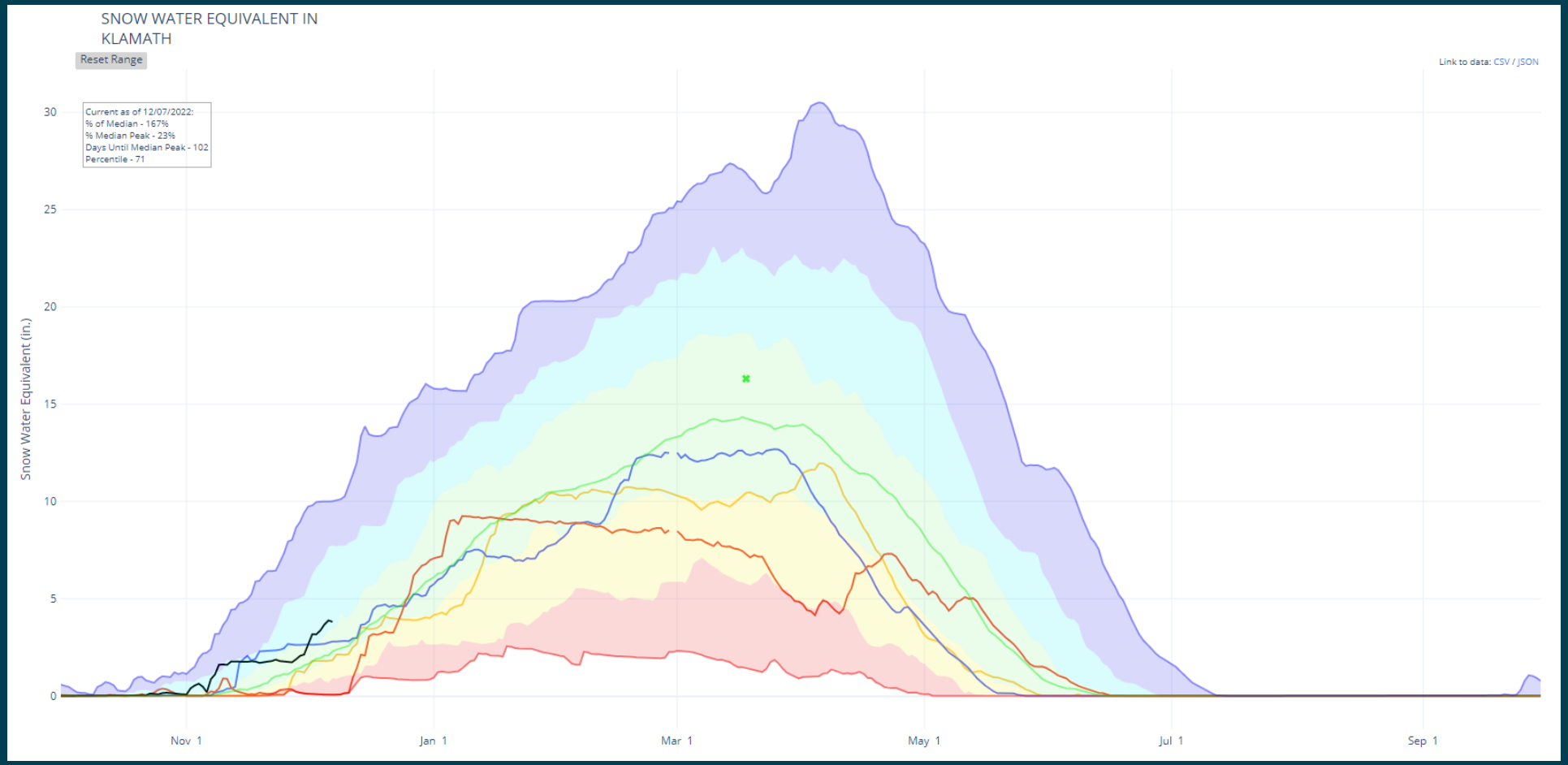
ODA
La Nina analogs



NWS Klamath Falls Airport Met Station WY2023

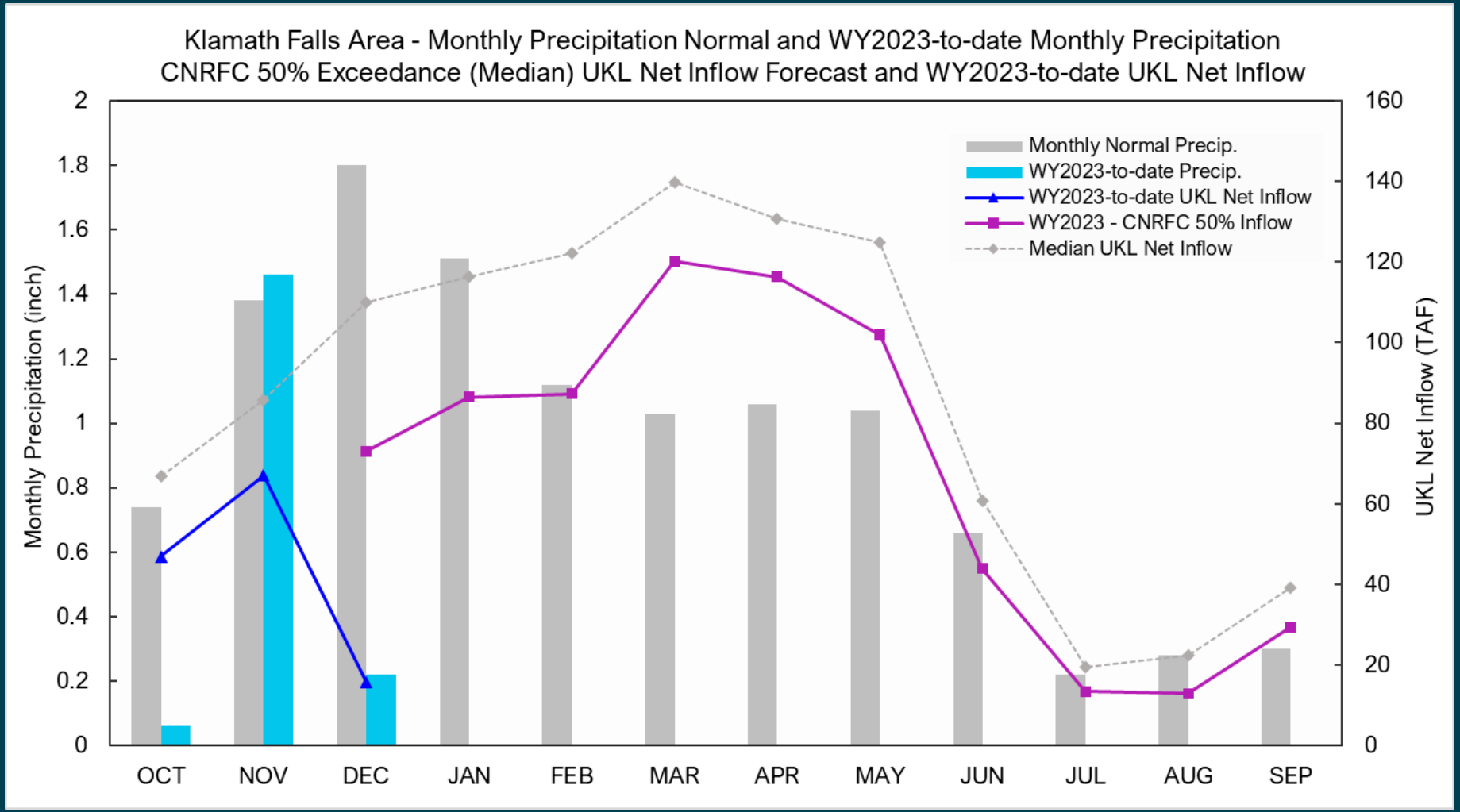


Upper Klamath Basin Snow Water Equivalent – NRCS WY2023 & Last 3 Water Years

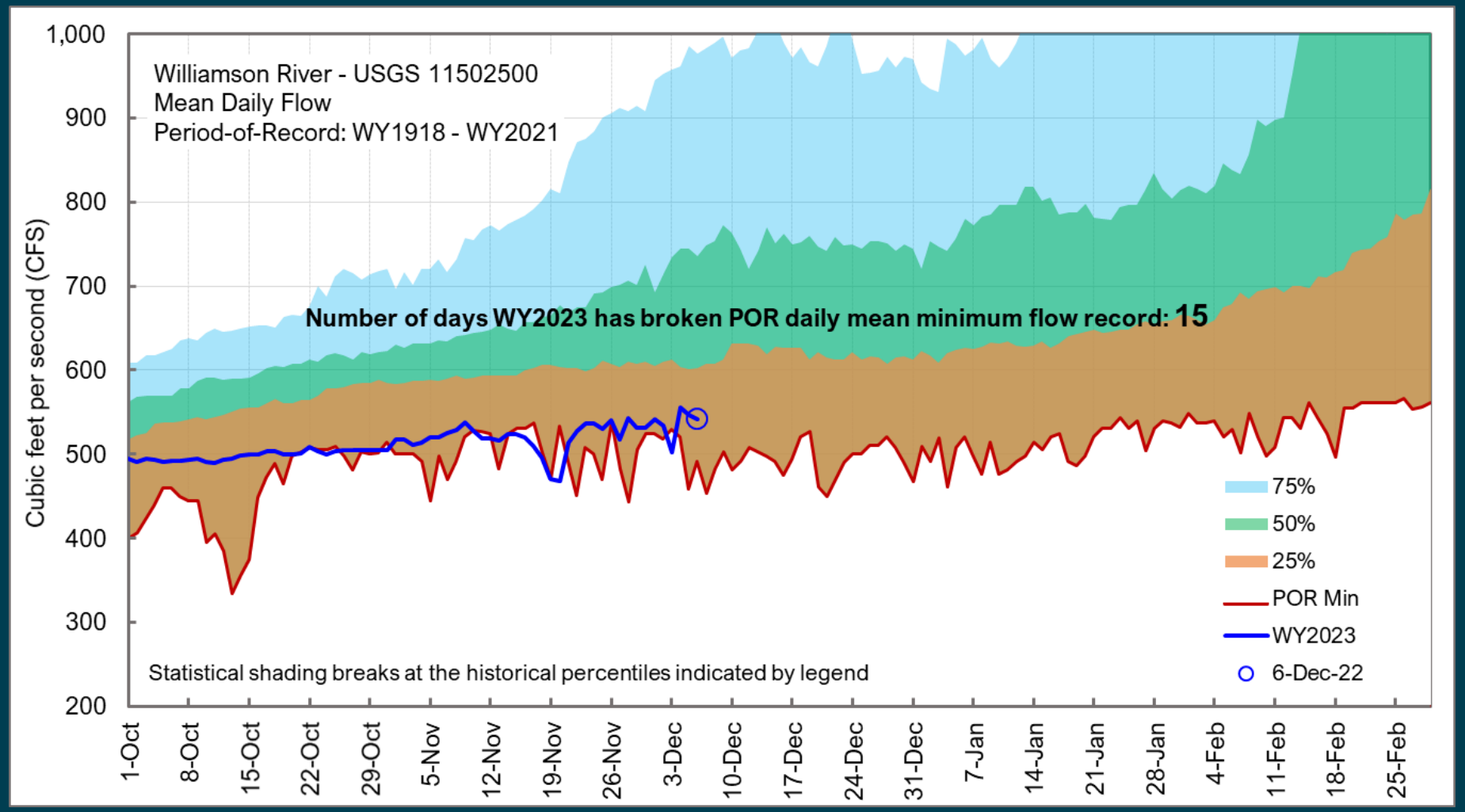


WY2023 in black; WY2022 in orange; WY2021 in blue; WY2020 in yellow

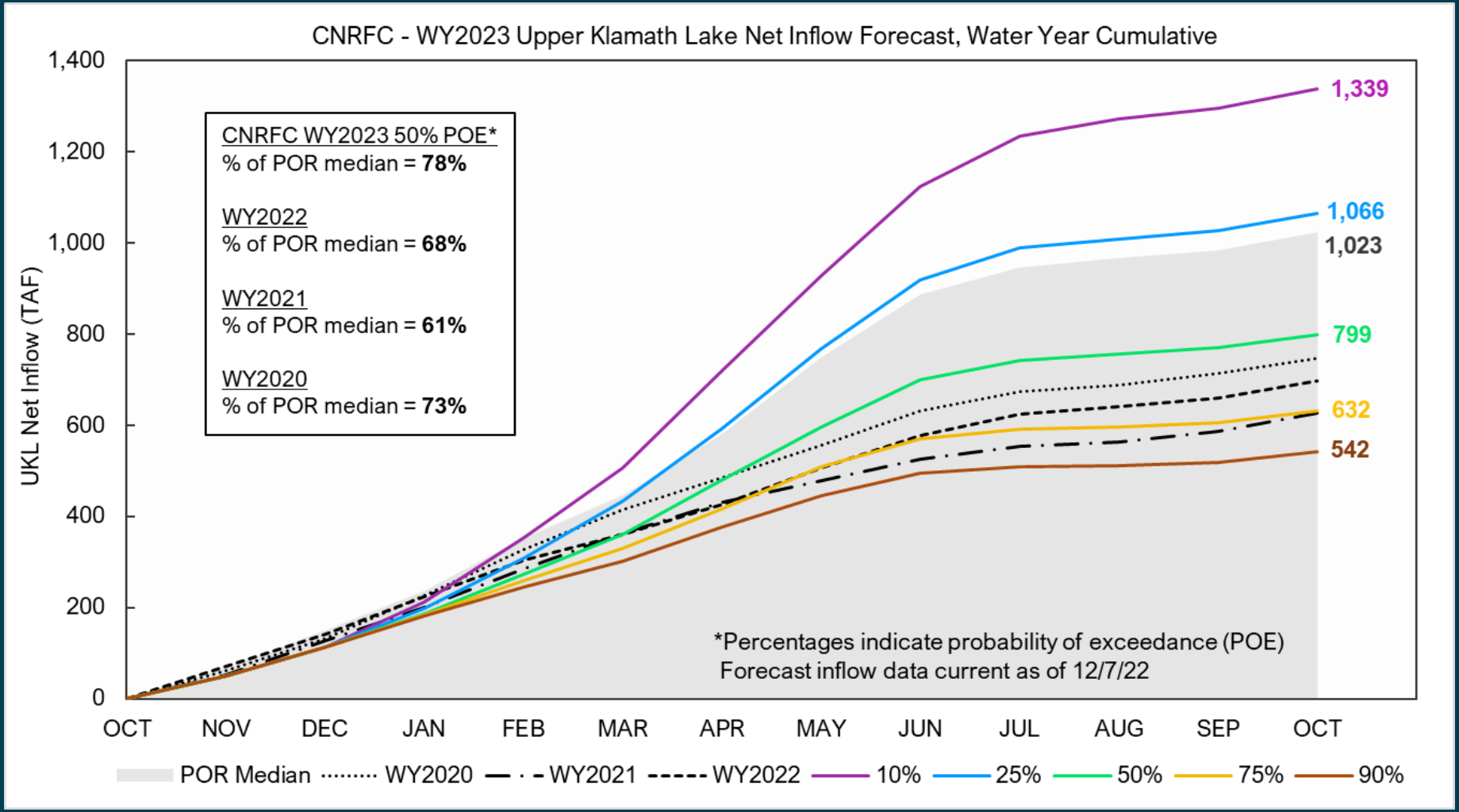
Precipitation vs. UKL Inflow



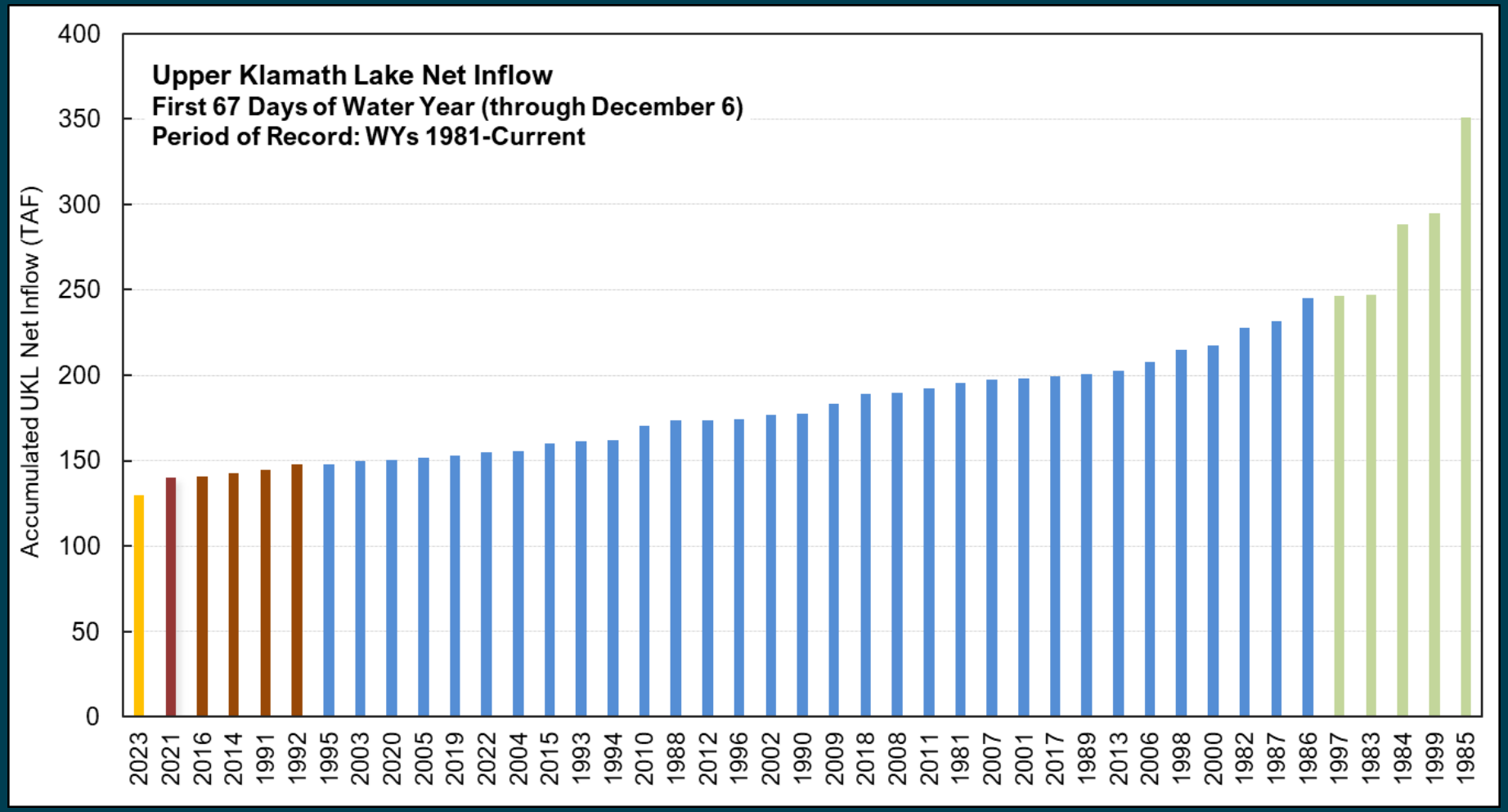
Williamson River



WY2023 UKL Net Inflow Forecast



UKL Cumulative Net Inflow



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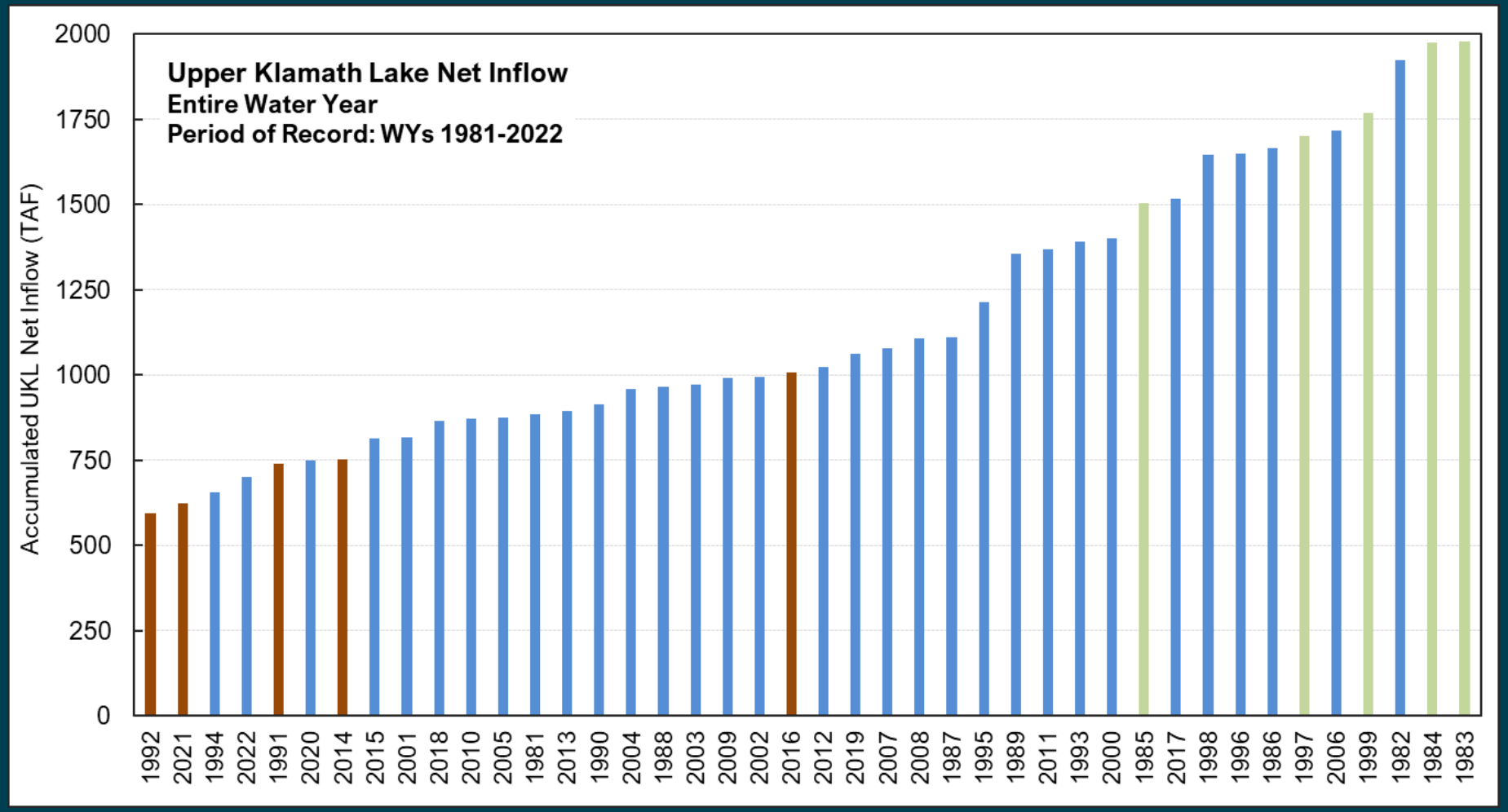
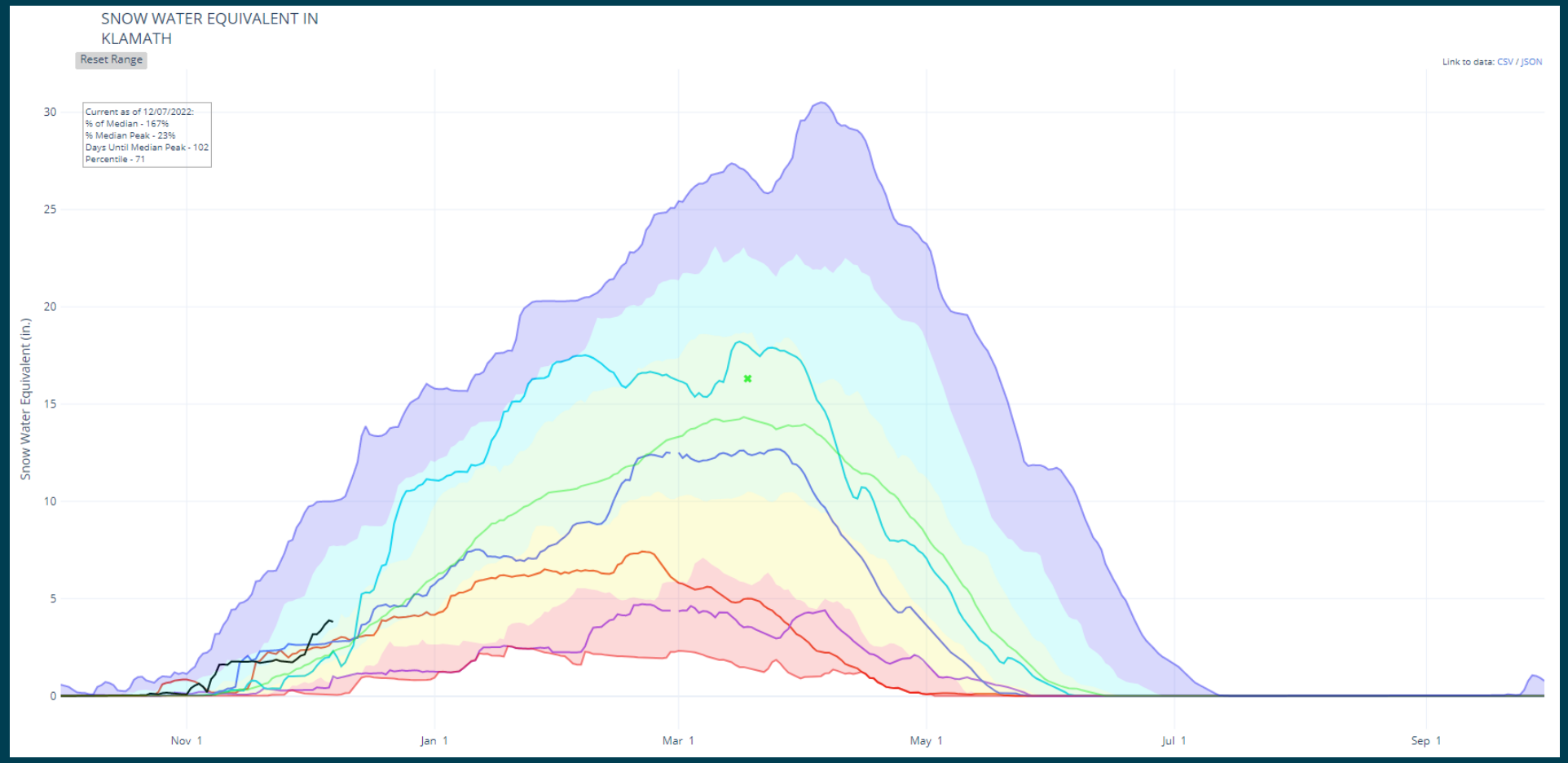
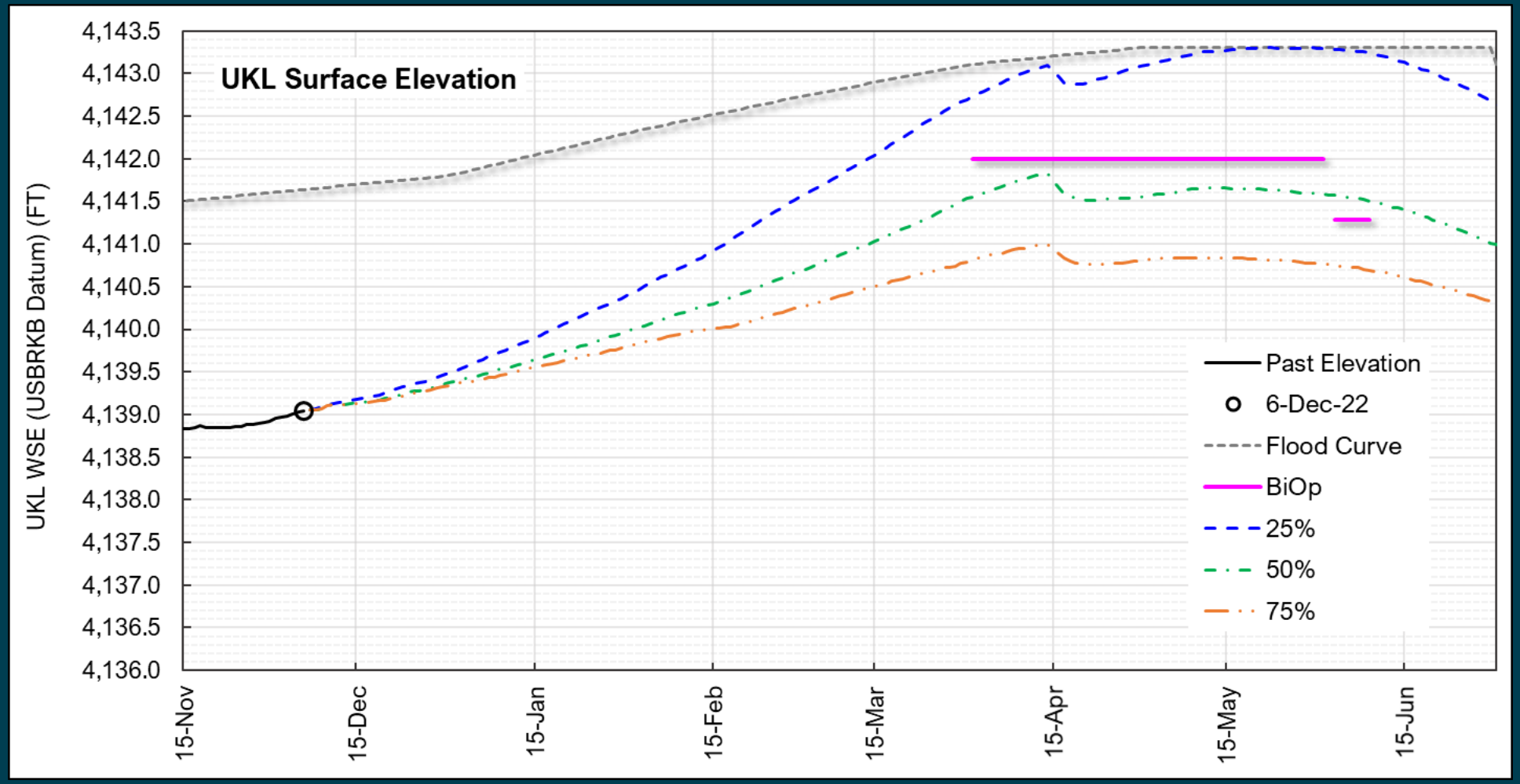


Upper Klamath Basin Snow Water Equivalent – NRCS WY2023 & Dry Years



WY2023 in black; WY2016 in cyan; WY2021 in lavender; WY1992 in red; WY2014 in purple

Upper Klamath Lake Water Surface Elevation WY2023



Forecast UKL inflow volumes taken from CNRFC Monthly Probability Dec. 6 issuance

Upper Klamath Lake Water Surface Elevation WY2023

Exceedance	25%	50%	75%
2023 EOF elev (FT)	4141.50	4140.63	4140.22
2023 Mar-Sep inflow (TAF)	632	438	303
2023 Project Supply (TAF)	272	137	0
2023 EWA (TAF)	573	440	400
EWA Augmentation (TAF)	60	40	0
2023 proj min elev (FT)	4139.40	4138.86	4138.80

EOF = End-of-February

EWA = Environmental Water Account

Proj min elev = Projected seasonal minimum elevation

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

Exceedance	25%	50%	75%
Projected storage difference 4142.00’, March 1 (AF)	-43,776	-116,580	-149,946
Projected storage difference 4143.00’, March 1 (AF)	-134,260	-207,064	-240,430
Projected storage difference 4142.00’, April 1 (AF)	65,946	-40,246	-104,198
Projected storage difference 4143.00’, April 1 (AF)	-24,538	-130,730	-194,682
Projected UKL to River Releases, Nov-Feb (AF)	146,709	151,229	154,389
Projected F/W Total Ag Diversion, Nov-Feb (AF)	9,337	9,337	9,337
Projected F/W Total Refuge Diversion, Dec-Feb (AF)	2,142	2,142	2,142

F/W = Fall/Winter

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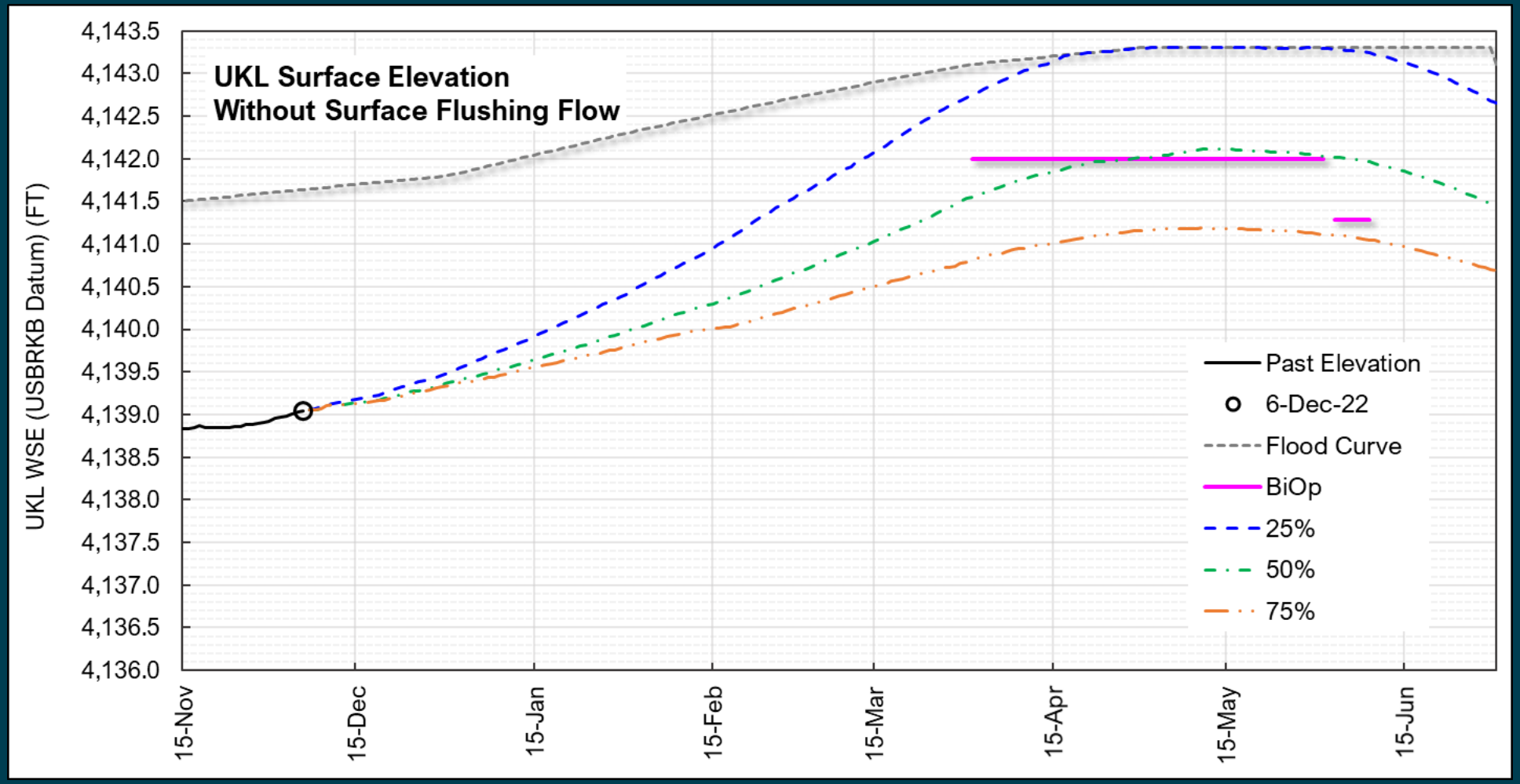

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2023 EWA (TAF)	573	400	400
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2023 min elev (FT)	4139.97	4139.37	4138.96

EOF = End-of-February

EWA = Environmental Water Account

Min elev = Seasonal minimum elevation

Thank You