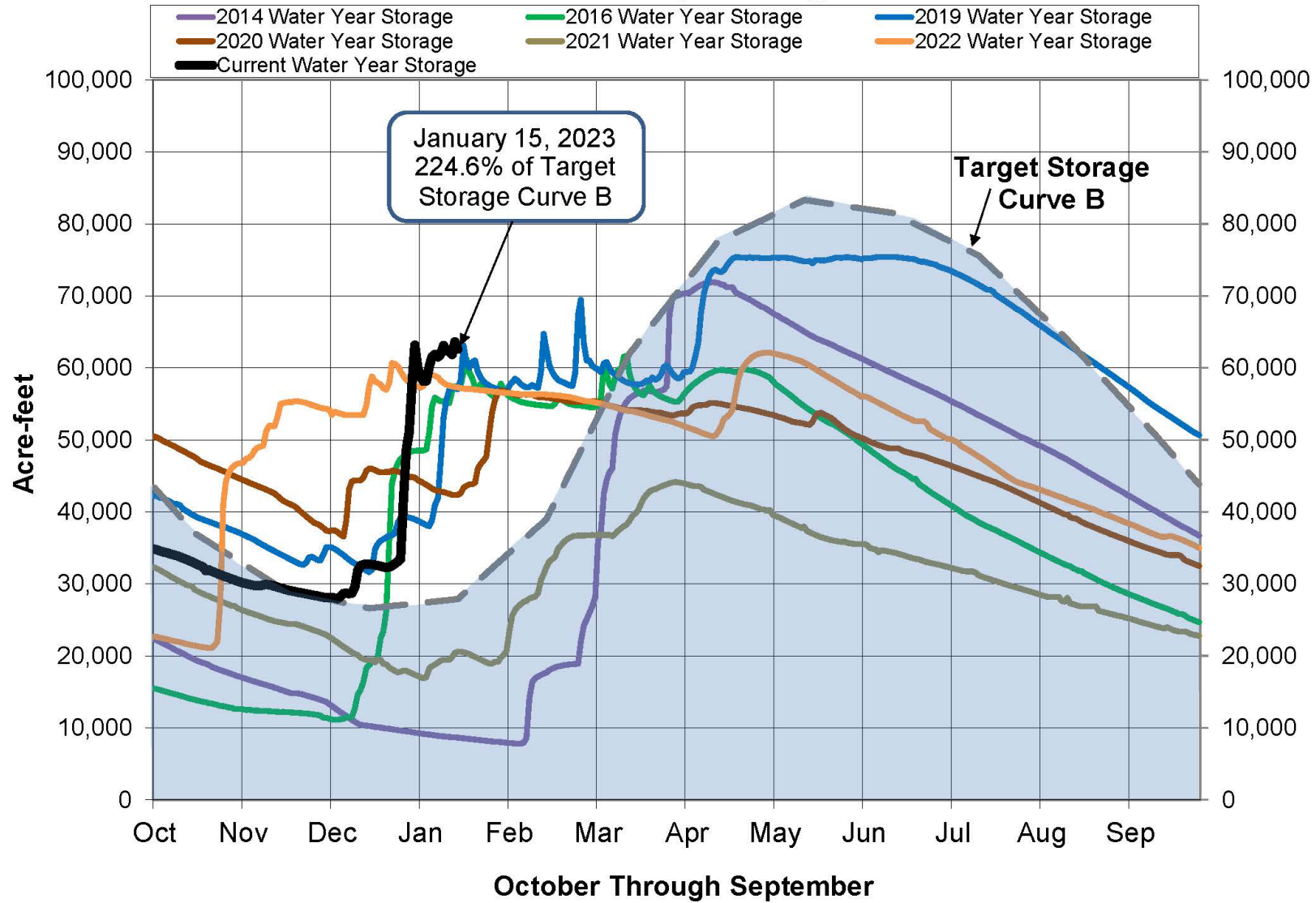


# Water and Recycled Water Update

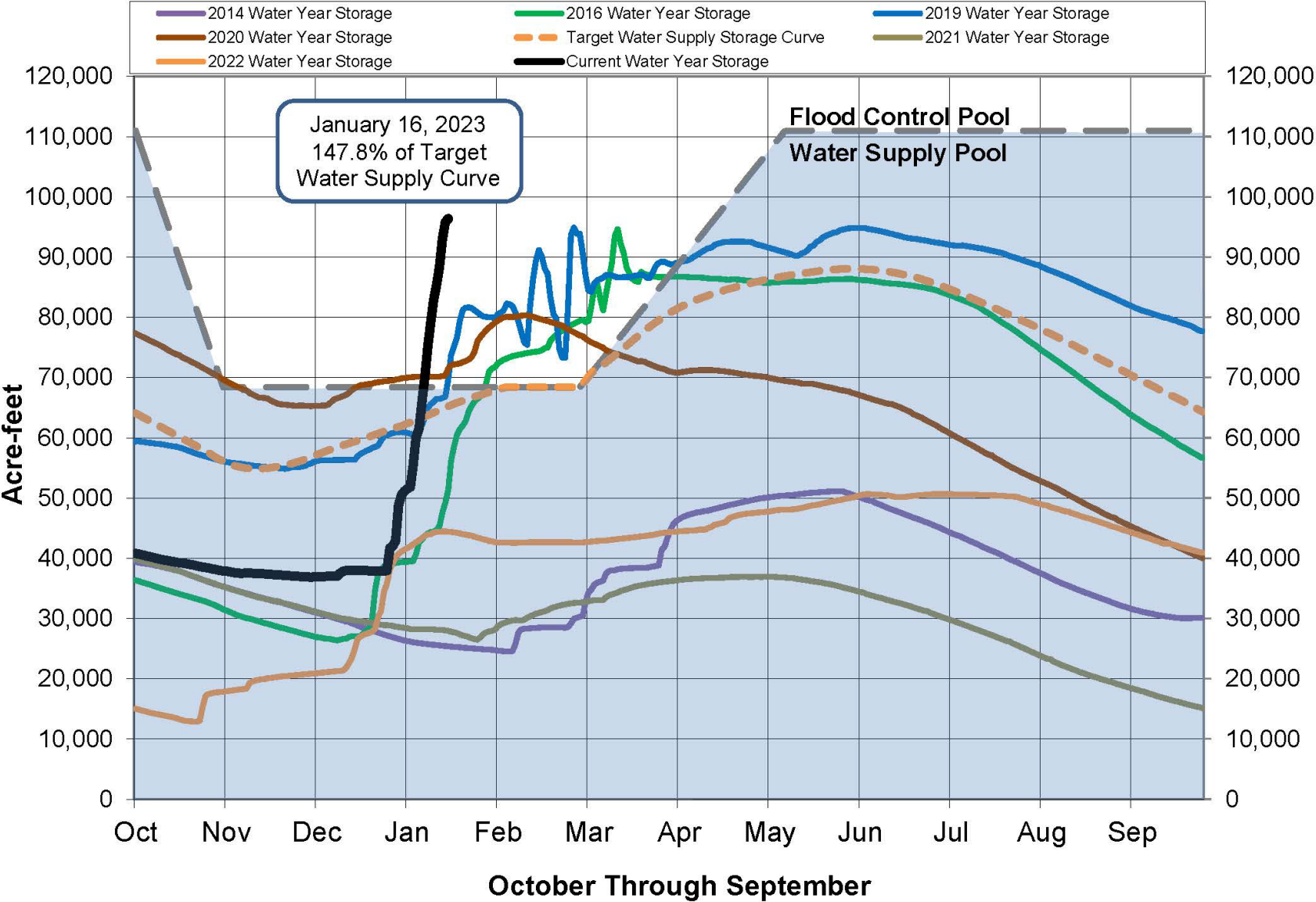
Board of Public Utilities Meeting  
January 19, 2023

Peter Martin – Deputy Director Water Resources  
Mike Prinz – Deputy Director Water Reuse

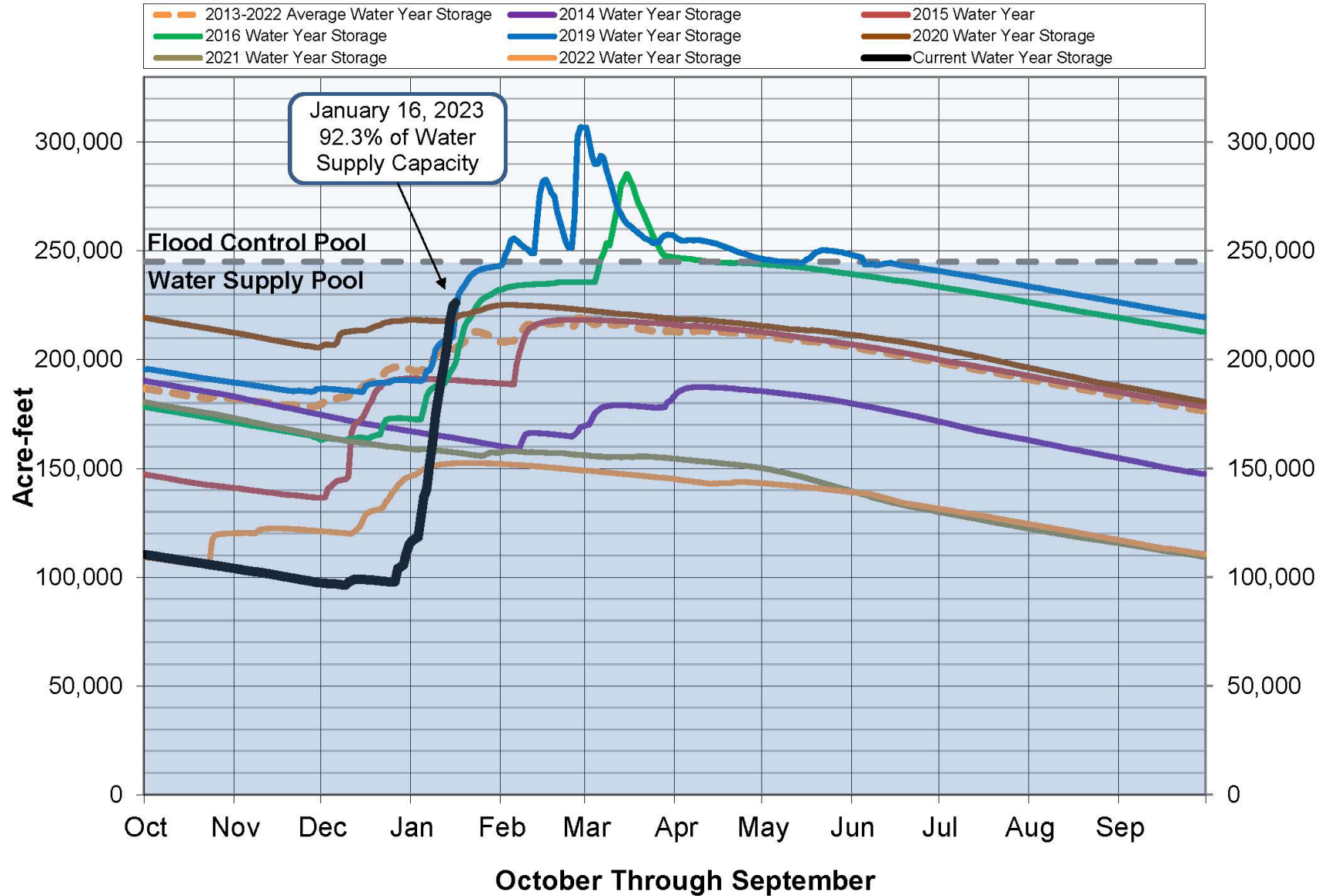
# Lake Pillsbury Storage



# Lake Mendocino Storage



# Lake Sonoma Storage





# Water Year Rainfall Totals to Date

Location	Rainfall Oct 1, 2022 – January 16, 2023	Percentage of Normal*		<b>LAST WATER YEAR</b> Rainfall Oct 1, 2021 – Jan 16, 2022	Percentage of Normal*
Ukiah	24.89"	155%		15.26"	95%
Santa Rosa	24.14"	154%		22.06"	141%

Source: CA-NV River Forecast Center

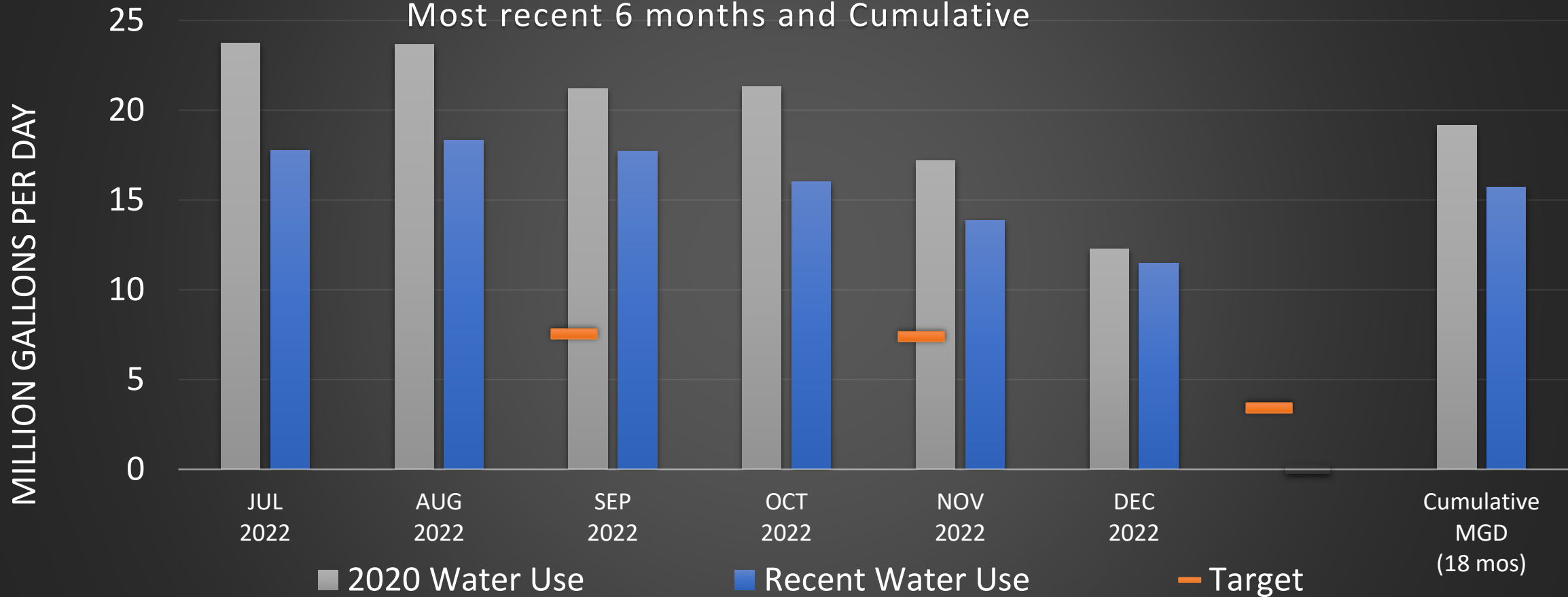
\*Percentage of Normal based on 1981-2010 Averages

# Lake Mendocino and Lake Sonoma Operations

- **Lake Mendocino storage exceeded flood control storage curve January 8<sup>th</sup>**
  - USACE is now operating and making releases
  - WY 2021 – 2026 Major Deviation in Control Manual to store additional 11,650 AF above curve (FIRO)
- **Lake Sonoma flood storage is exceeded at 245,000 AF**
  - Authorization for Minor Deviation to store additional 9,500 AF before February 15

# Santa Rosa Drought Response

Most recent 6 months and Cumulative



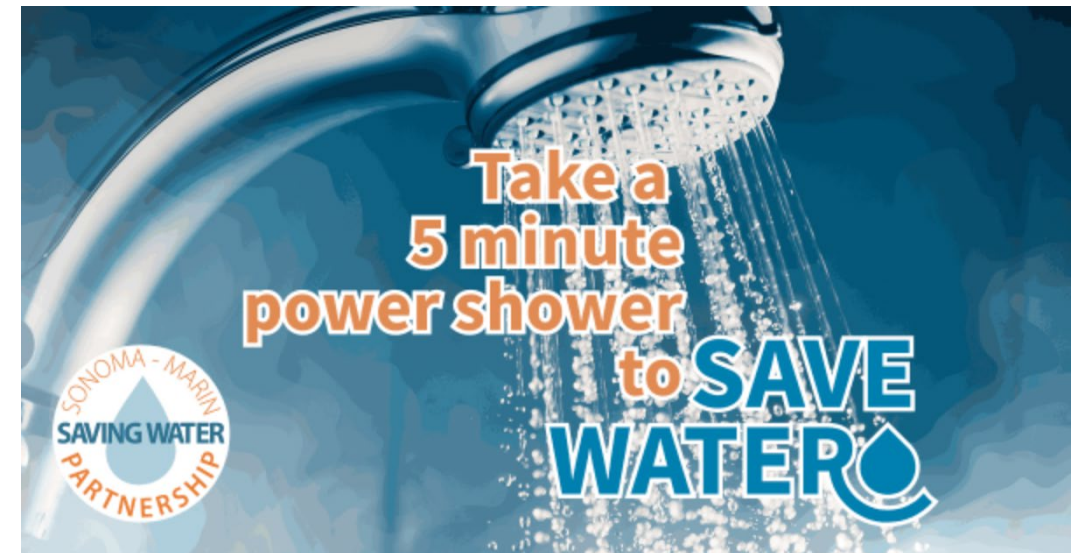
- In December 2022, Santa Rosa residents reduced water use by **7%** compared to December 2020
- From July 2021 - December 2022, water use has been reduced by **18%** compared to 2020 (18 months)

# 2023 Outreach Plan

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We have built a flexible outreach plan to address conditions as they change:

- Coordinating with Regional Partners
- Governor's Executive Order N-7-2022 remains in effect
  - Minimum requirement for implementation of specific actions consistent with a shortage level of up to 20%
- Remain focused on saving water indoors this winter
- Planning for several events in Spring





# Plant Status: January 9, 2023





# Plant Status: January 9, 2023





# Forecasting Toolbox



<https://cw3e.ucsd.edu/iwv-and-ivt-forecasts/>

# Forecasting Toolbox

Model

GFS Ensemble

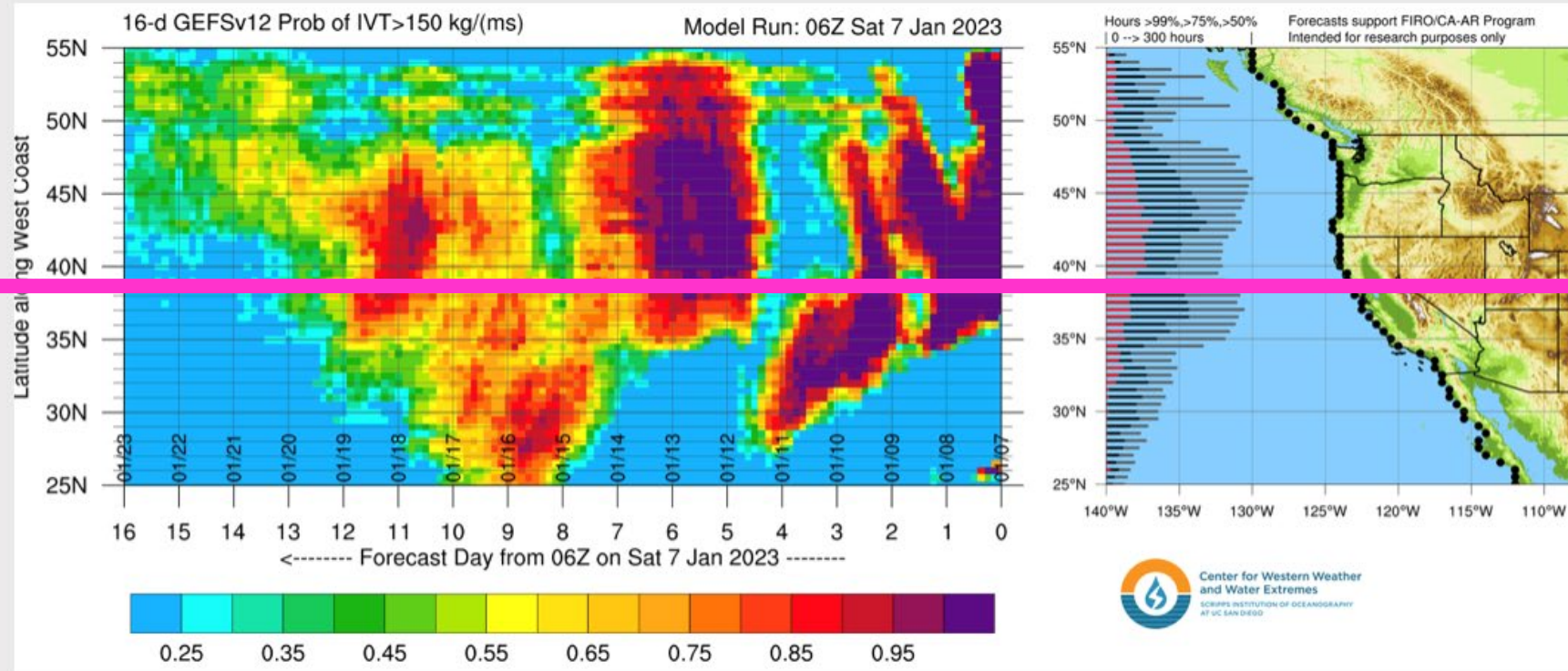
Type

Probability of IVT >150 kg/(m s)

Location

Coastal

dProg/dT



# Forecasting Toolbox

Model

GFS Ensemble

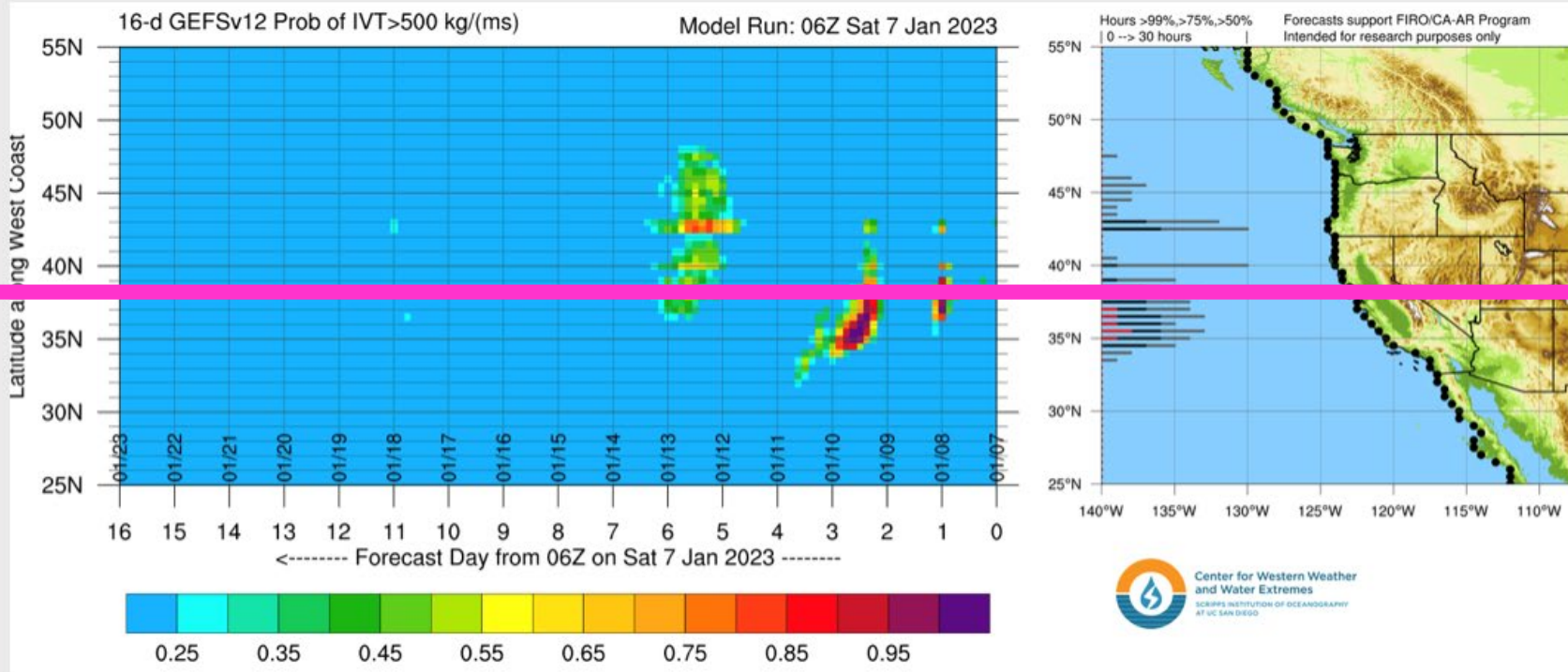
Type

Probability of IVT > 500 kg/(m s)

Location

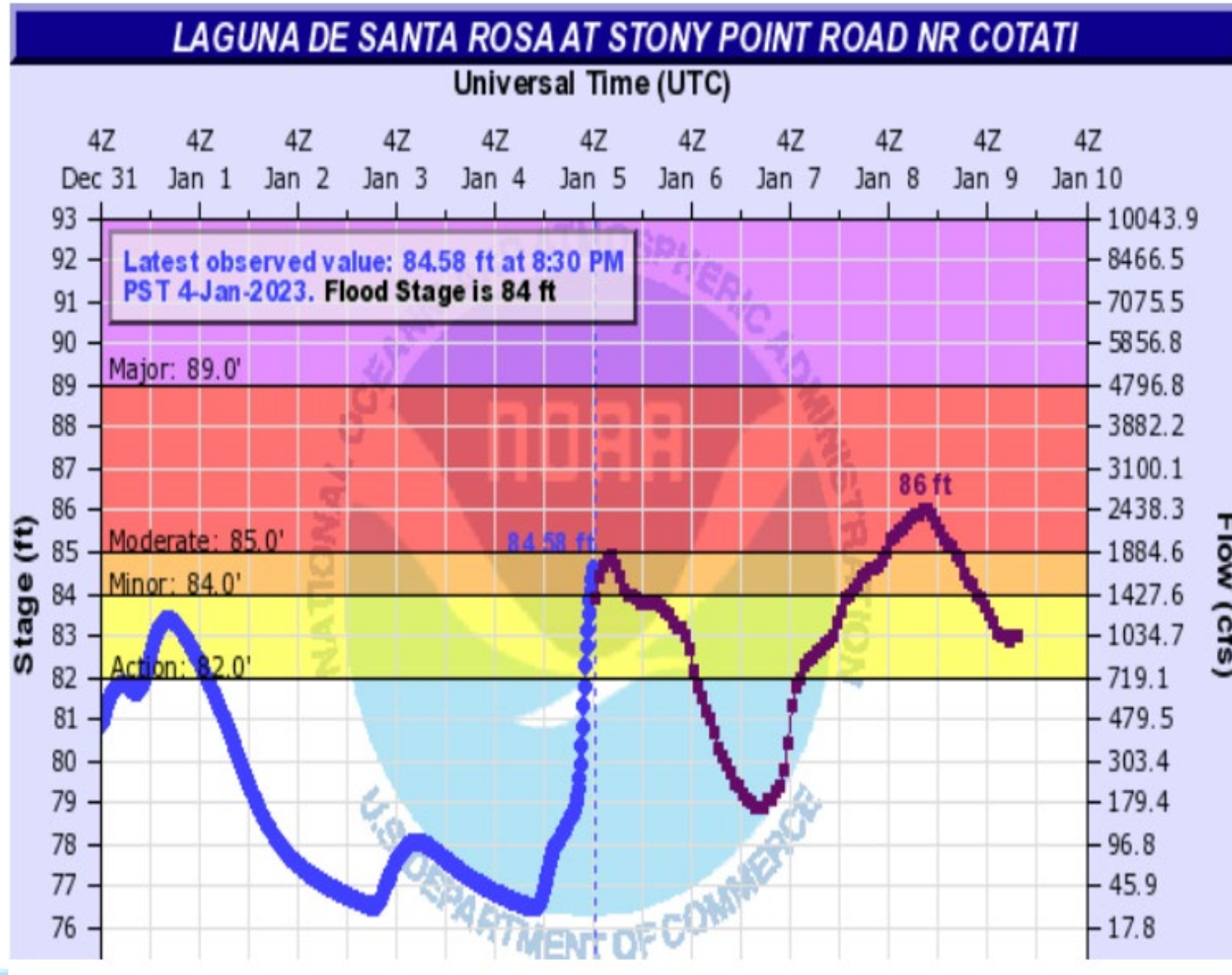
Coastal

dProg/dT





# Forecasting Toolbox







OPERATIONS AND  
EMERGENCY EXIT  
ONLY

HEAD  
TO  
ENTERING  
TRAFFIC





OPERATIONS AND  
EMERGENCY EXIT  
ONLY

FIELD  
TO  
EMERGENCY

100

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100

100





OPERATIONS AND  
EMERGENCY EXIT  
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TO  
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0811  
EMERGENCY  
CALL  
311





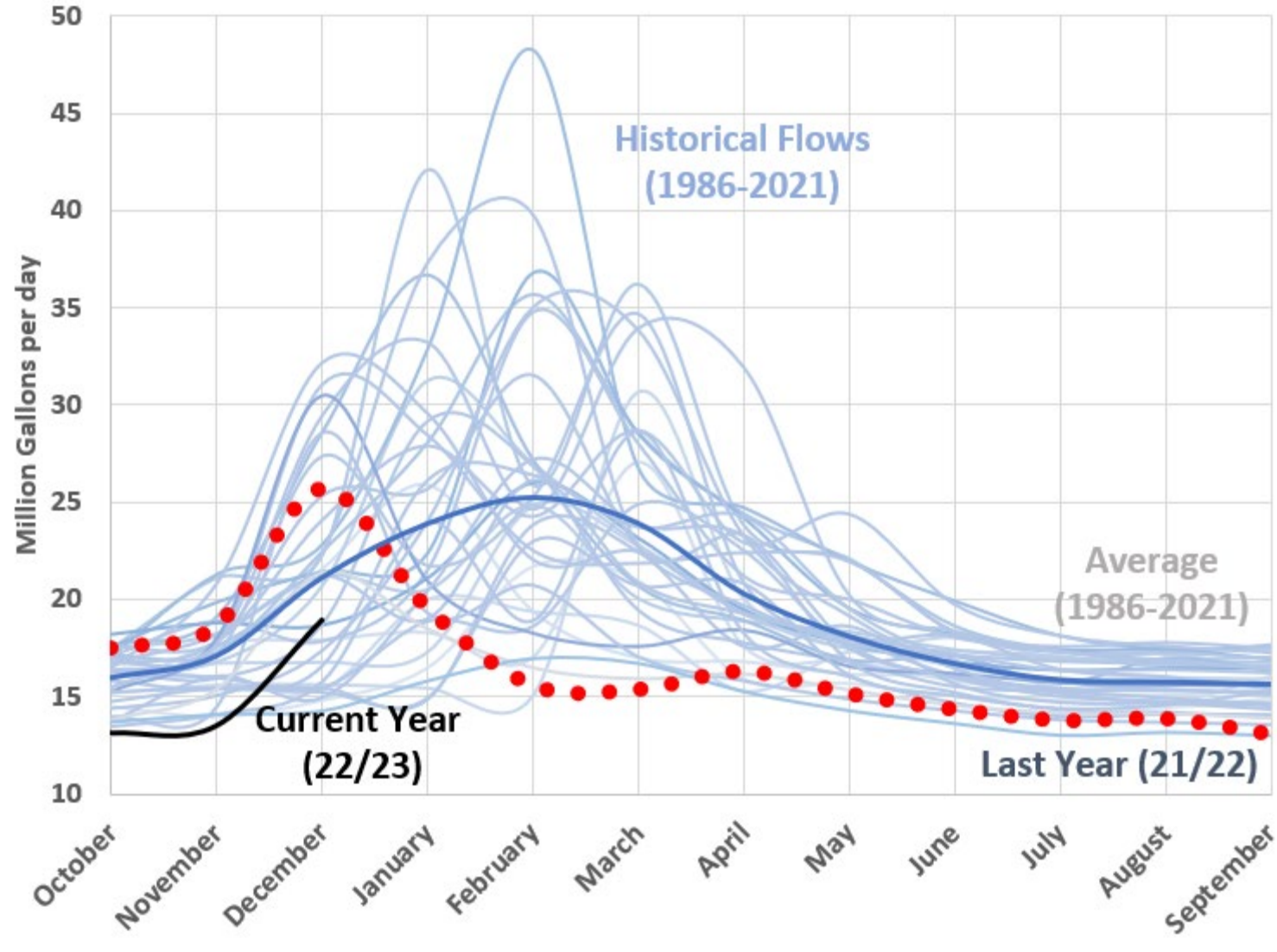


# Pine Flat Road Challenges

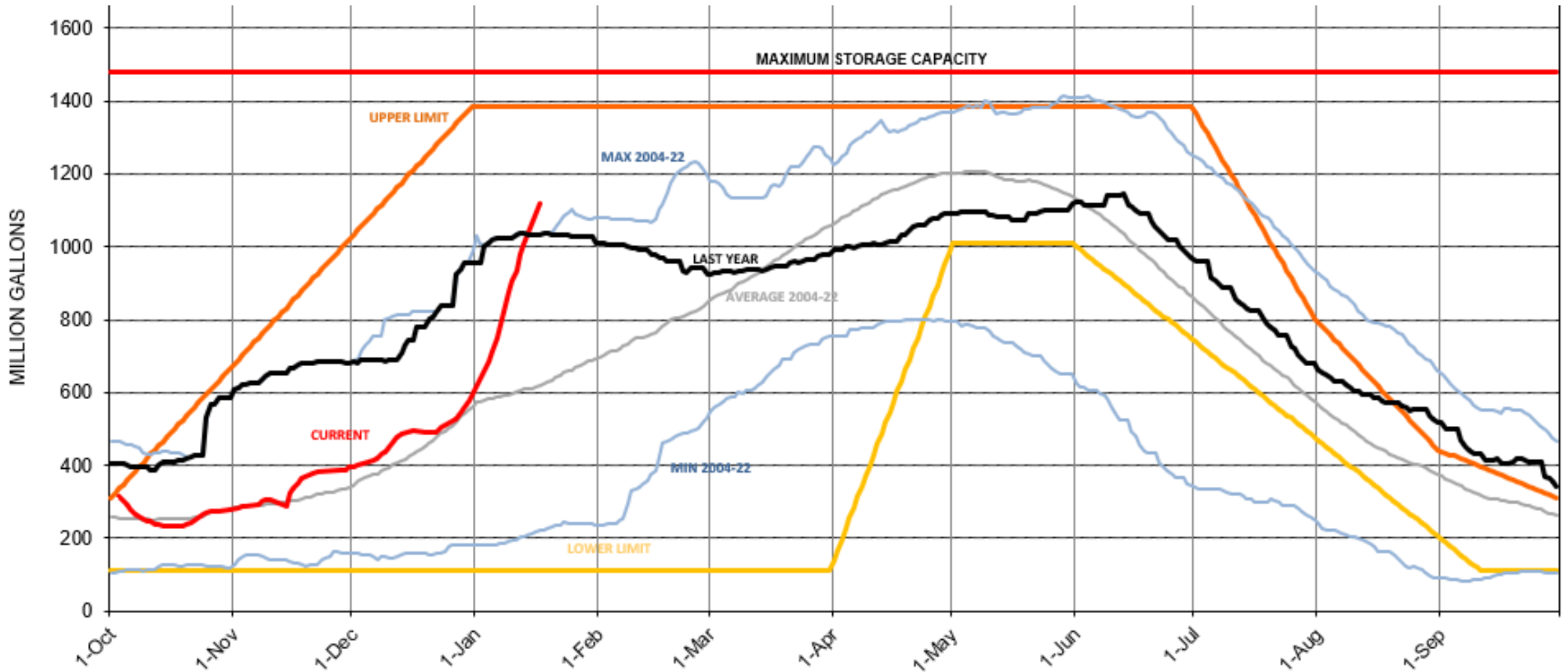




# Recycled Water Production



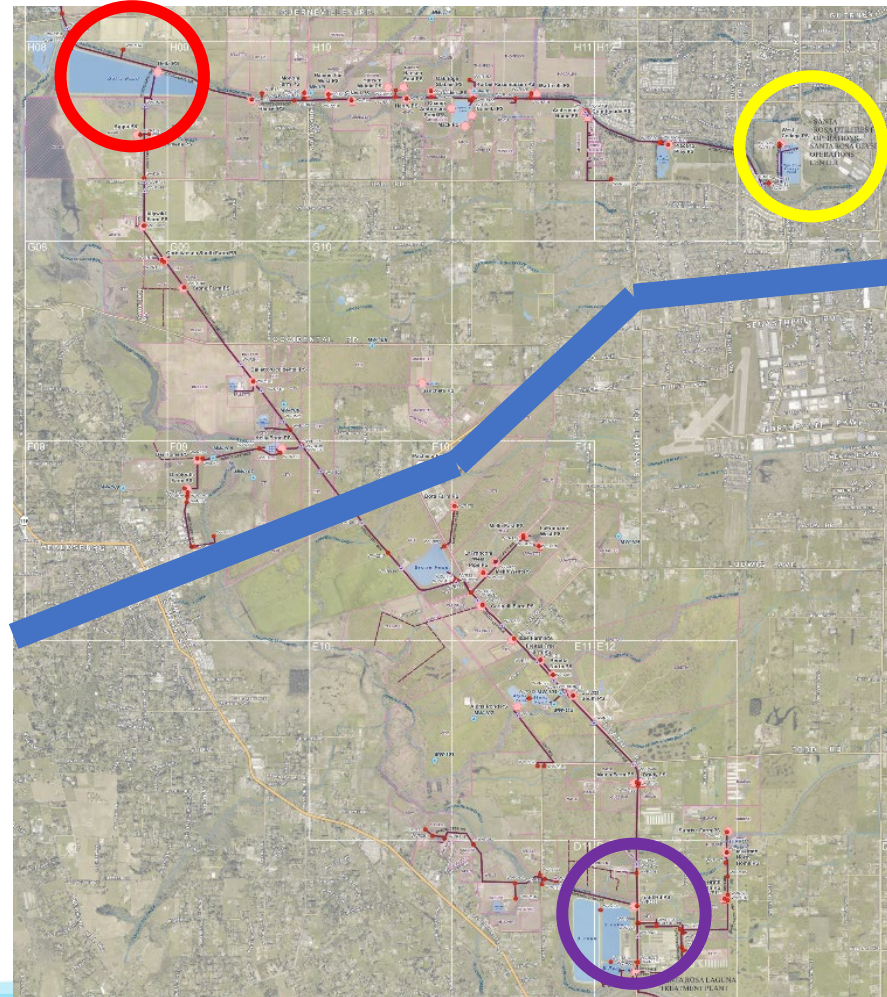
# Current Recycled Water Storage



# Geysers Delivery Status

2017	107.15%
2018	100.00%
2019	100.00%
2020	91.47%
2021	95.49%
2022	91.17%

# Recycled Water Discharge Started 01/18/2023



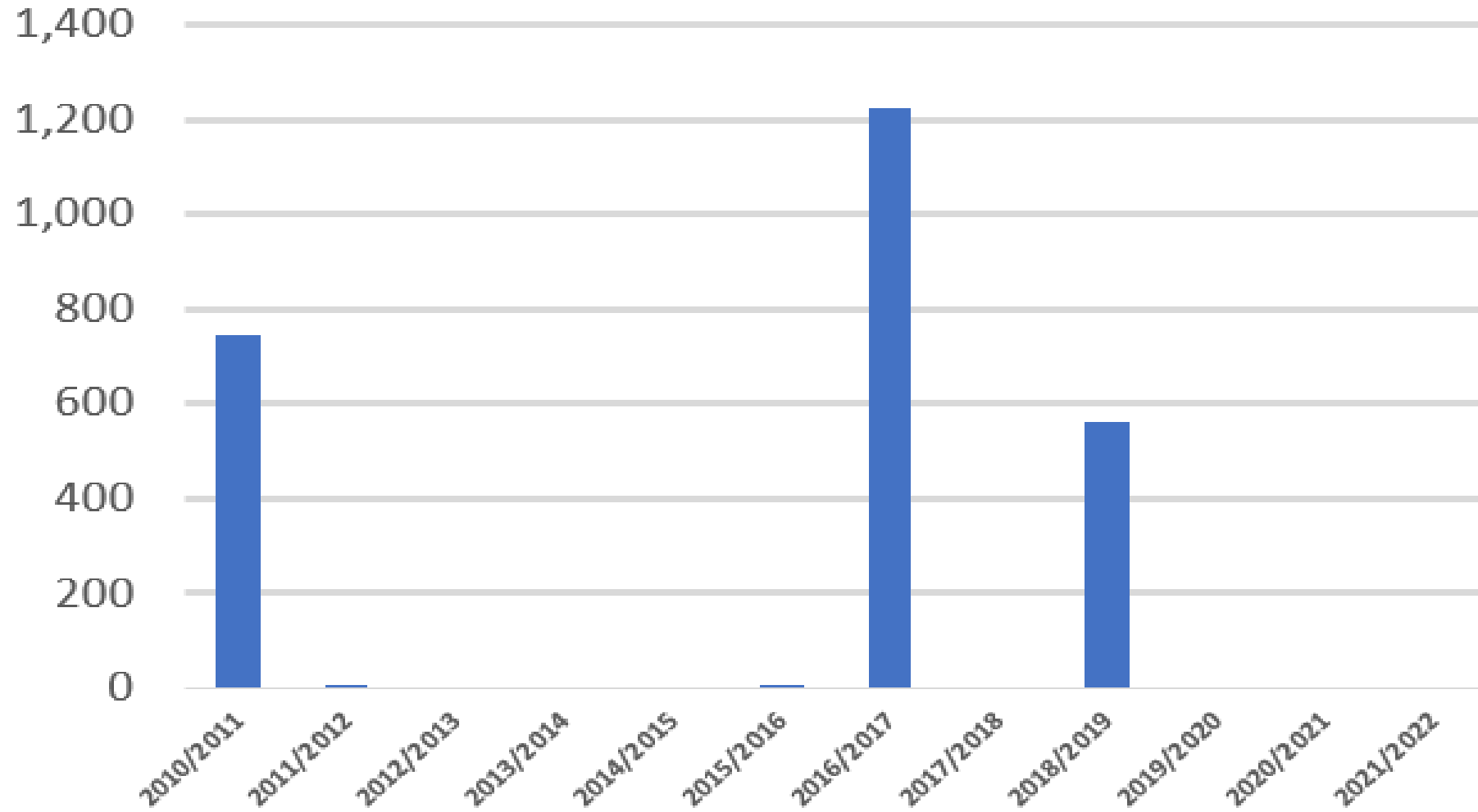
# Overview of the Discharge Process

- **Triggered by rainy weather**
  - High Laguna Treatment Plant Flows (over 45 MGD, recently)
  - Result: Relatively High Recycled Water Storage Levels
  - Geysers operation flow rate continues simultaneously (17-18 MGD)
- **Monitor Receiving Water Quantity/Quality – Santa Rosa Creek @ Laguna de Santa Rosa**
  - Flow
  - Temperature
  - pH
  - Turbidity
  - Dissolved Oxygen
- **Calculate maximum allowable discharge flow rate based on Recycled Water Quality**
  - Normally automated with Data Sondes, USGS Stream Gauge Data
  - Real Time Adjustments
  - All according to NPDES Discharge Permit

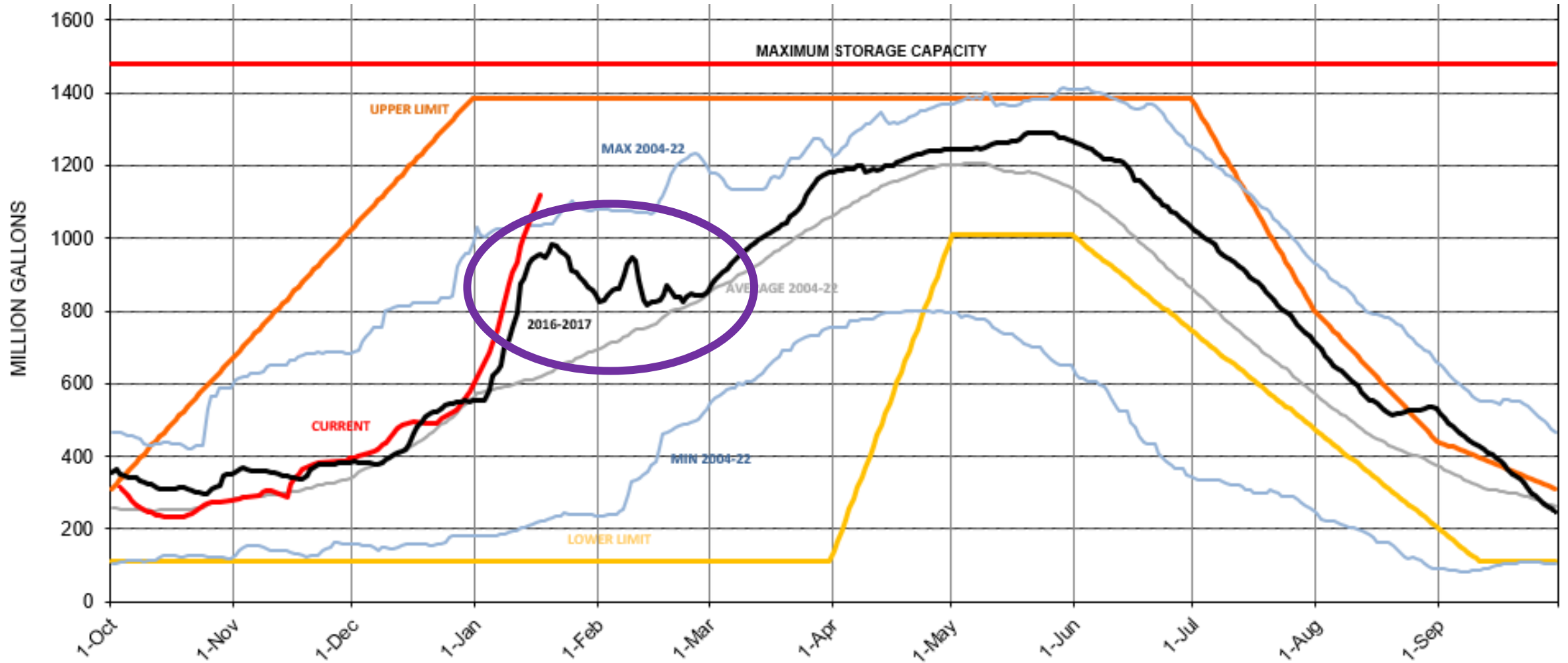


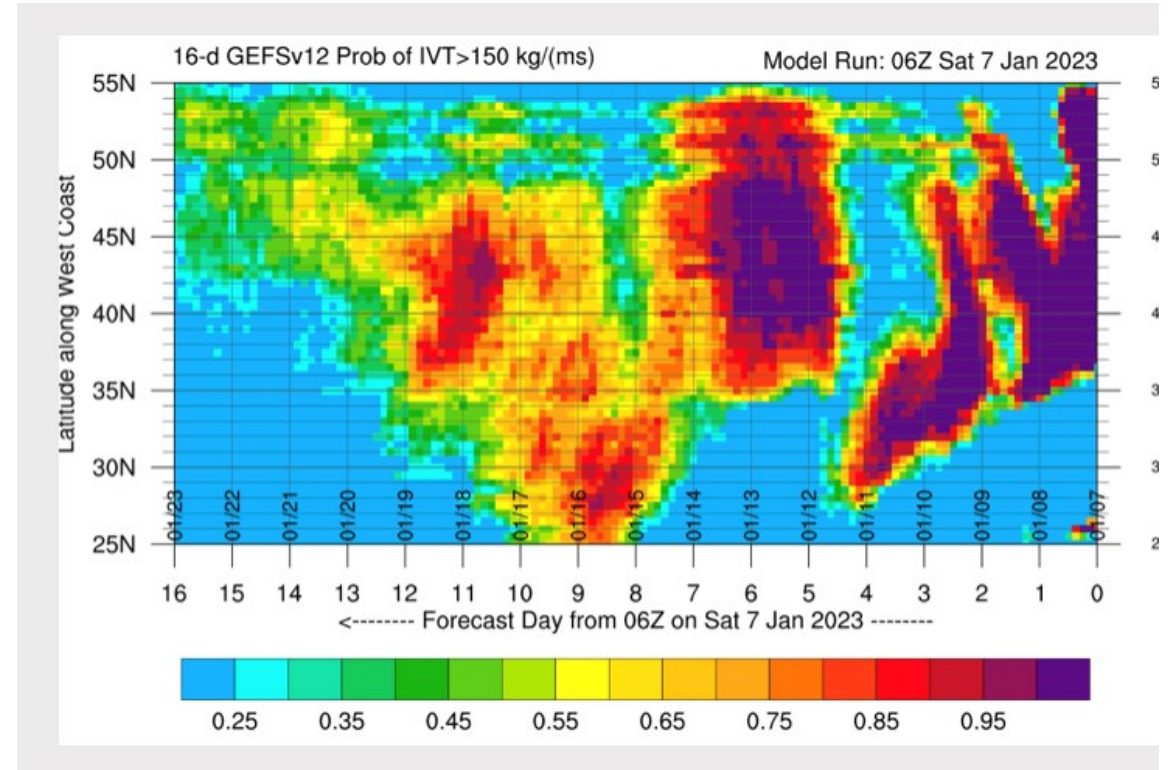
# Recent Historical Discharge Trend

Discharge Volume (million gallons)



# Recycled Water Storage, Example Discharge Year





# Questions?