

Staff Report

TO: Board of Directors

FROM: Chip Close, Director of Water Operations
Thor Larson, Water Resources Superintendent

DATE: February 14, 2024

SUBJECT: Water Supply Update / Surplus Water Declaration

WATER OPERATIONS

RECOMMENDATION:

Receive an update on current & forecasted water supply conditions and adopt Resolution No. 2024-07 making a declaration of surplus water availability for 2024.

BACKGROUND:

Prior to the start of the irrigation season, the NID Hydrography team analyzes forecasted water availability for the upcoming summer months. The forecast incorporates current storage and anticipated snowpack runoff based on snow survey data. This analysis is utilized to determine water availability for full deliveries and to decide whether the Water Shortage Contingency plan will be enacted.

Once the water availability analysis is complete, a determination of surplus water supply is made. Surplus water is defined as water exceeding the needs of customers within our service area boundary. In years where a surplus of water is declared, the District, as per CA Water Code Section 22259, can sell the surplus supply to customers outside the District's boundary. Historically, the District has provided surplus water services to a small number of outside District customers. Additionally, NID supplies raw water to the City of Grass Valley and Nevada City through a long-term surplus water supply agreement.

The current and forecasted water supply portfolio is as follows: District reservoir storage as of February 1st is 210,900 Acre Feet, representing 108% of the average for this time of year. The forecasted runoff from the Department of Water Resources is not yet available, so staff has projected the remainder of the year

based on a worst-case scenario of 50% of the average moving forward. This 50% forecast correlates to approximately 65,700 Acre Feet in expected watershed runoff from NID's watershed. Although PG&E anticipates having water available for purchase per the Coordinated Operating Agreement, an estimated amount is not available at this time. Given the lack of specific PG&E numbers, staff has conducted the water availability analysis without this information.

When taken in total, the water supply information above indicates a forecasted available April 1st water supply of 276,600 Acre Feet. This exceeds the 235,700 AF necessary for a normal year, as established in the District's Drought Contingency Plan. The excess availability supports a declaration of surplus for the 2024 irrigation season.

BUDGETARY IMPACT:

A declaration of surplus water will allow for continued revenue from historic outside District sales. The fee for outside District customer sales includes a 25% increase to offset the lack of tax revenue contributions from out of District parcels. The estimated revenue in water sales from surplus customers for the 2024 irrigation season is shown below:

Outside District Customers (Based on 2023)

16 Customers Fixed Fee Outside District	(16 X \$713.73) = \$11,419.68
17 Miners Inches @ Outside District Rate	(17 X \$420.61) = \$7,150.37
	<u>Total = \$18,570.05</u>

Outside District Municipal Customers

City of Grass Valley R/W Usage (Based on 2020 demand)
 Base Rate + Per Acre Feet (\$713.73 + (\$370.99 X 924.82 AF) = \$343,098.97

City of Grass Valley T/W Usage (Based on 2020 demand)
 Base Rate + Per Acre Feet (\$1,833.40 + (\$851.60 X 54.57 AF) = \$46,471.81

City of Nevada City R/W Usage (Based on 2023 demand)
 Base Rate + Per Acre Feet (\$713.73 + (\$370.99 X 187.74 AF) = \$70,363.39

Total Municipal Sales = \$459,934.17

Total Estimated Surplus Sales (\$18,570.05 + \$459,934.17) = \$478,504.22

/ac

Attachment (1):

- Water Supply PowerPoint



RESOLUTION NO. 2024-07

OF THE BOARD OF DIRECTORS OF THE NEVADA IRRIGATION DISTRICT

DECLARING SURPLUS WATER CONDITIONS FOR 2024

WHEREAS, Nevada Irrigation District (District) provides water for residential, commercial, industrial, agricultural, municipal, environmental, recreation, hydroelectric generation, and fire protection and prevention purposes, as well as other beneficial uses of water; and

WHEREAS, according to the District's the Drought Contingency Plan and Board Policy #8200, a water supply analysis must be conducted prior to April 1 to determine available water deliveries and assess surplus availability; and

WHEREAS, the 2022/2023 water year was one of the wettest on record, with an April 1st snowpack that was ranked as the 3rd highest in recorded history, leading to above average run off; and

WHEREAS, careful water management throughout the 2023 irrigation season capitalized on the increased runoff, maintaining a high reservoir carryover storage into 2024; and

WHEREAS, as of February 1st, precipitation amounts at the District's Bowman Lake recording station are at 82% of the average for this date; and

WHEREAS, the February 1, snow survey results indicated a snowpack with a water content of only 55% of average, however, recent storms occurring after the survey have increased the snowpack; and

WHEREAS, the District's current water storage is at 210,900 acre-feet, representing 108% of average for this date, with lower elevation reservoirs nearly full, and high elevation reservoirs forecast to fill and spill once snow runoff begins; and

WHEREAS, the forecasted available water supply for April 1, 2024, is 276,600 acre-feet, exceeding the threshold for the implementation of the Drought Contingency Plan as established in the District's Urban and Agricultural Water Management Plans by 40,900 acre-feet; and

WHEREAS, the current and forecasted available water supply exceeds the needs of current internal customer demands and can be classified as surplus water conditions per California Water Code Section 22259; and

NOW, THEREFORE, BE IT RESOLVED AND PROCLAIMED by the Board of Directors of the Nevada Irrigation District that a surplus water condition exists for 2024. The Board authorizes local water sales, at the discretion of the General Manager, to traditional surplus water purchasers.

BE IT FURTHER RESOLVED that, given the District's favorable water supply position and the anticipated ongoing demand for water from neighboring out-of-District municipalities and private water users, the District's General Manager is authorized and delegated responsibility to establish rules and regulations for such surplus water sales. This includes determining eligibility, setting prices, defining terms, establishing limitations on volume and delivery season, and other requirements in the discretion of the General Manager.

BE IT FURTHER RESOLVED this Resolution shall become effective immediately upon adoption by the Board of Directors.

PASSED AND ADOPTED by the Board of Directors of Nevada Irrigation District at a meeting duly called and held within the District on the 14th day of February, 2024, by the following roll call vote:

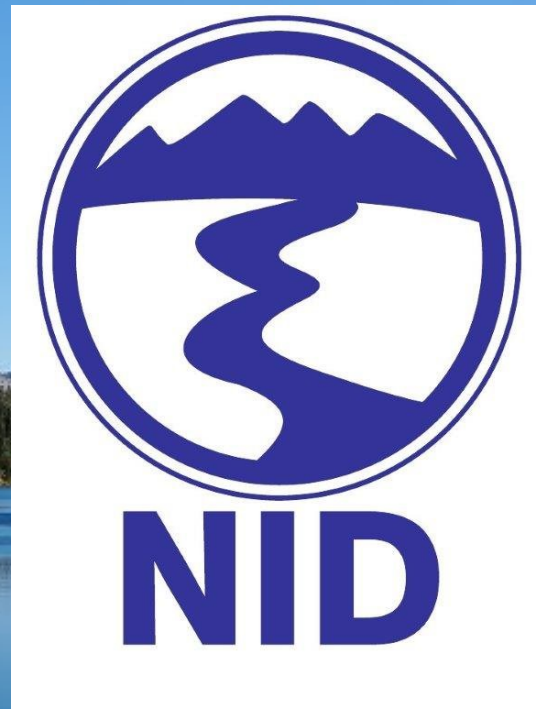
AYES:	Directors:
NOES:	Directors:
ABSENT:	Directors:
ABSTAINS:	Directors:

President of the Board of Directors

Attest:

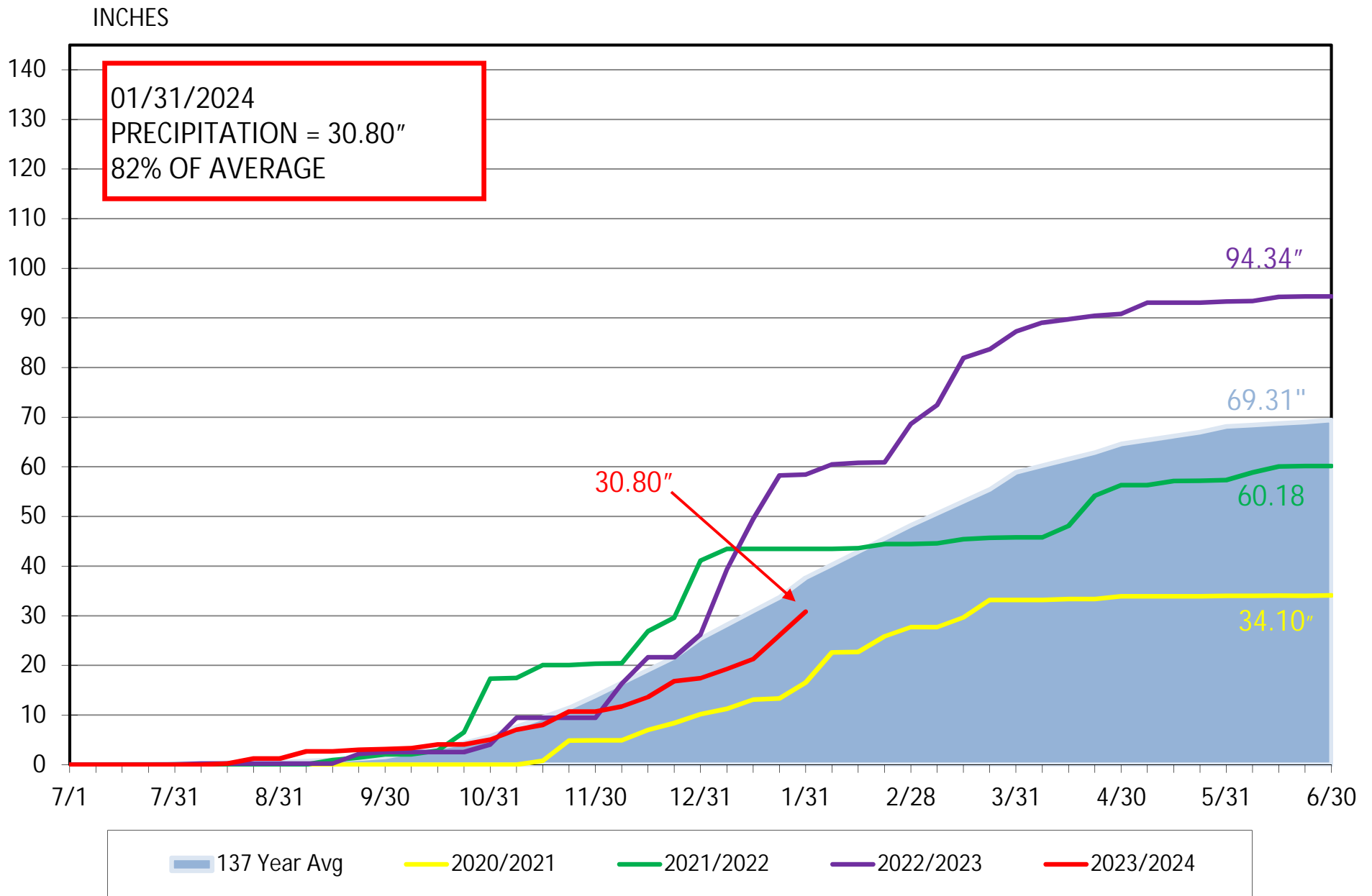
Secretary to the Board of Directors

Nevada Irrigation District Water Supply Update February 14, 2024

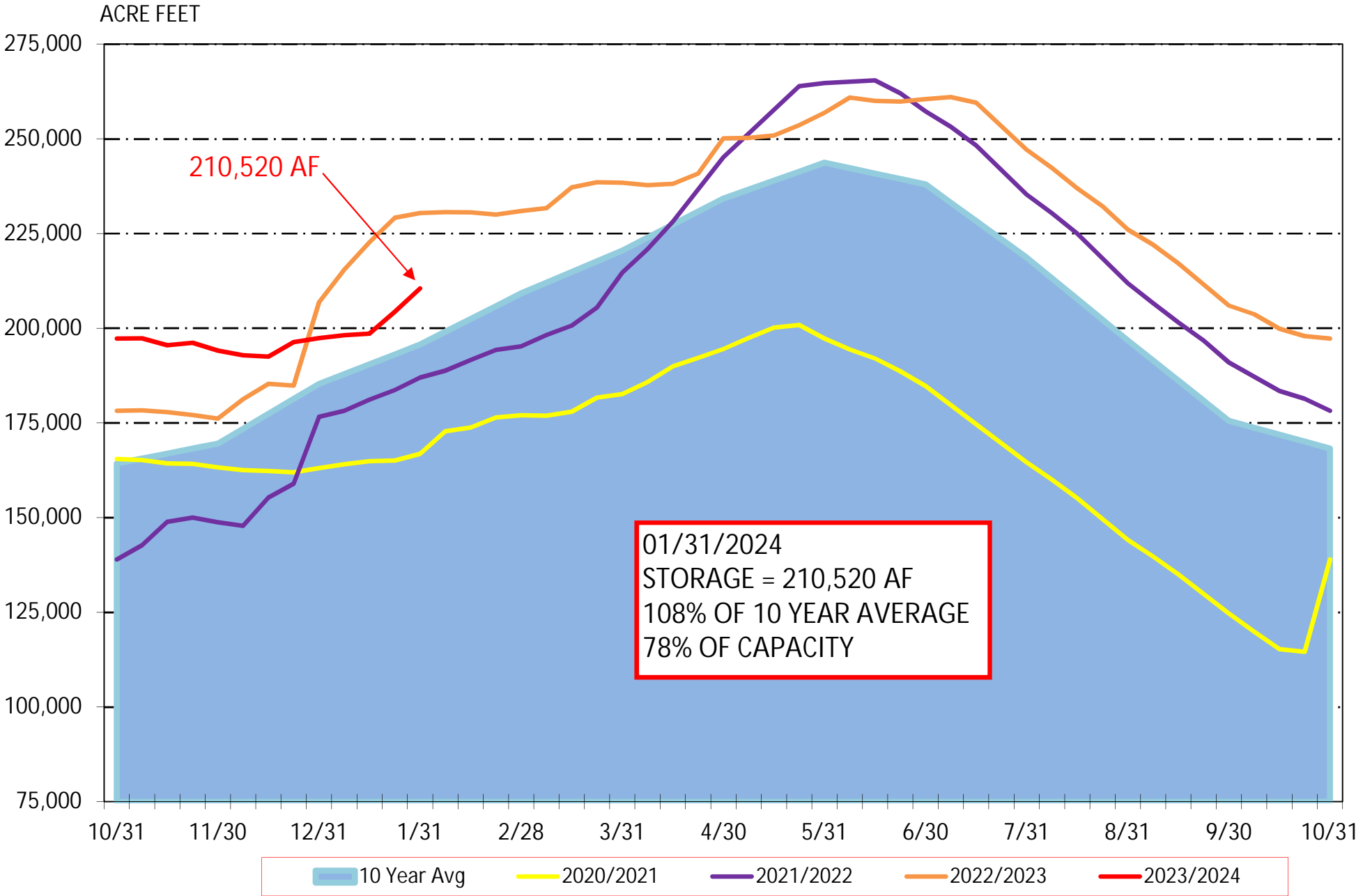


Proudly serving portions of Nevada, Placer, and Yuba Counties

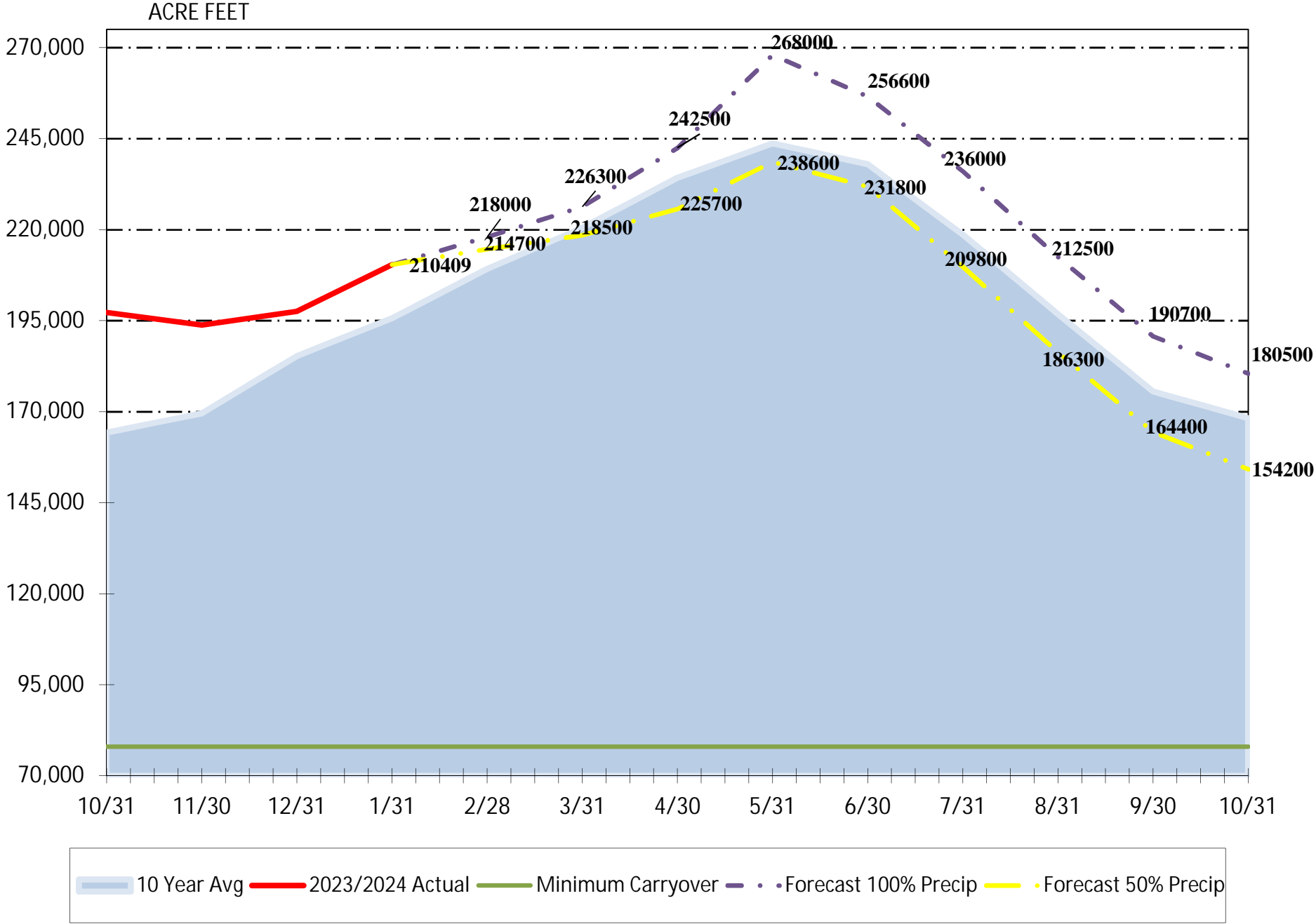
BOWMAN LAKE PRECIPITATION



NID RESERVOIR STORAGE



2024 STORAGE STATUS

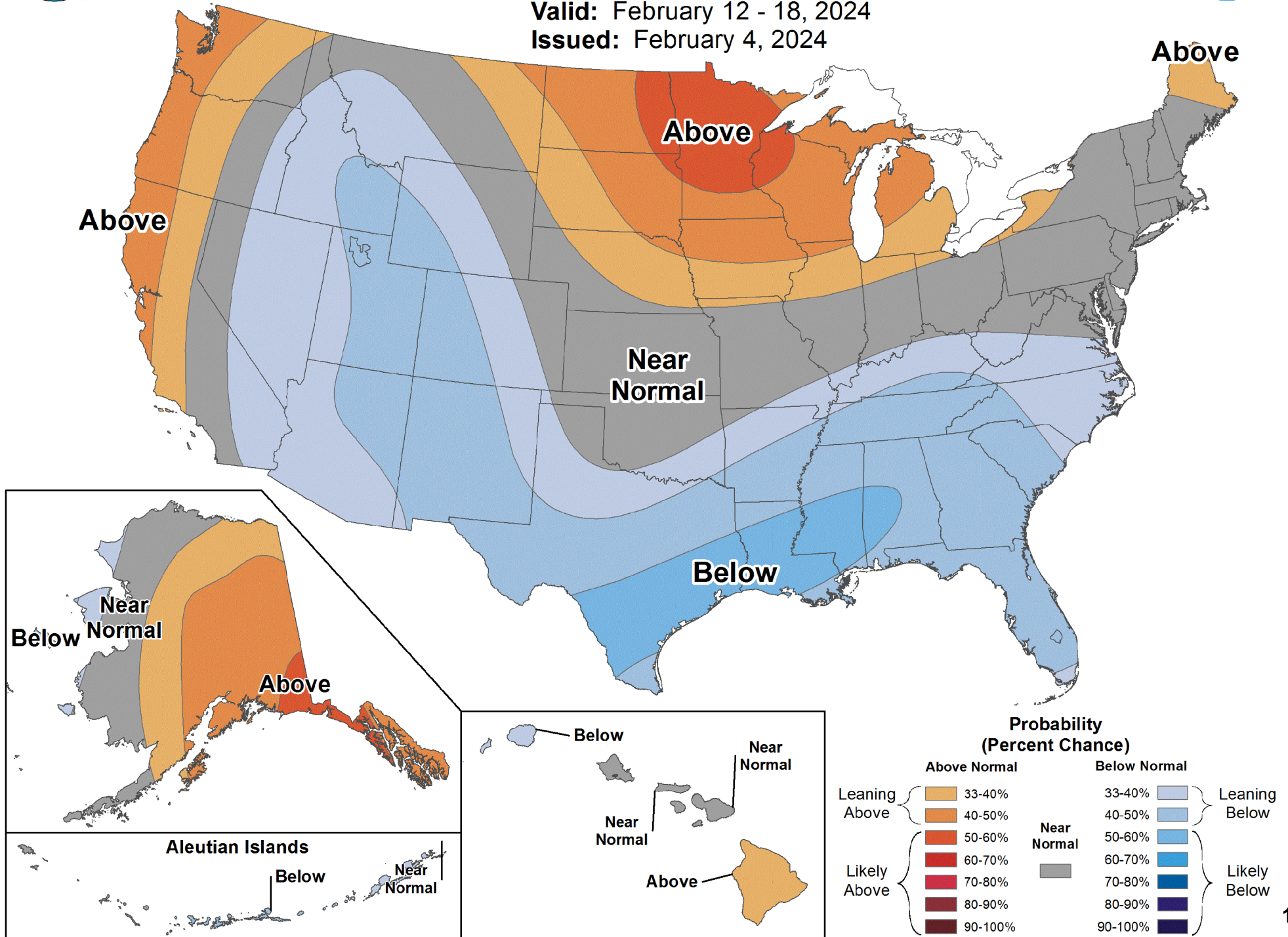




8-14 Day Temperature Outlook



Valid: February 12 - 18, 2024
Issued: February 4, 2024



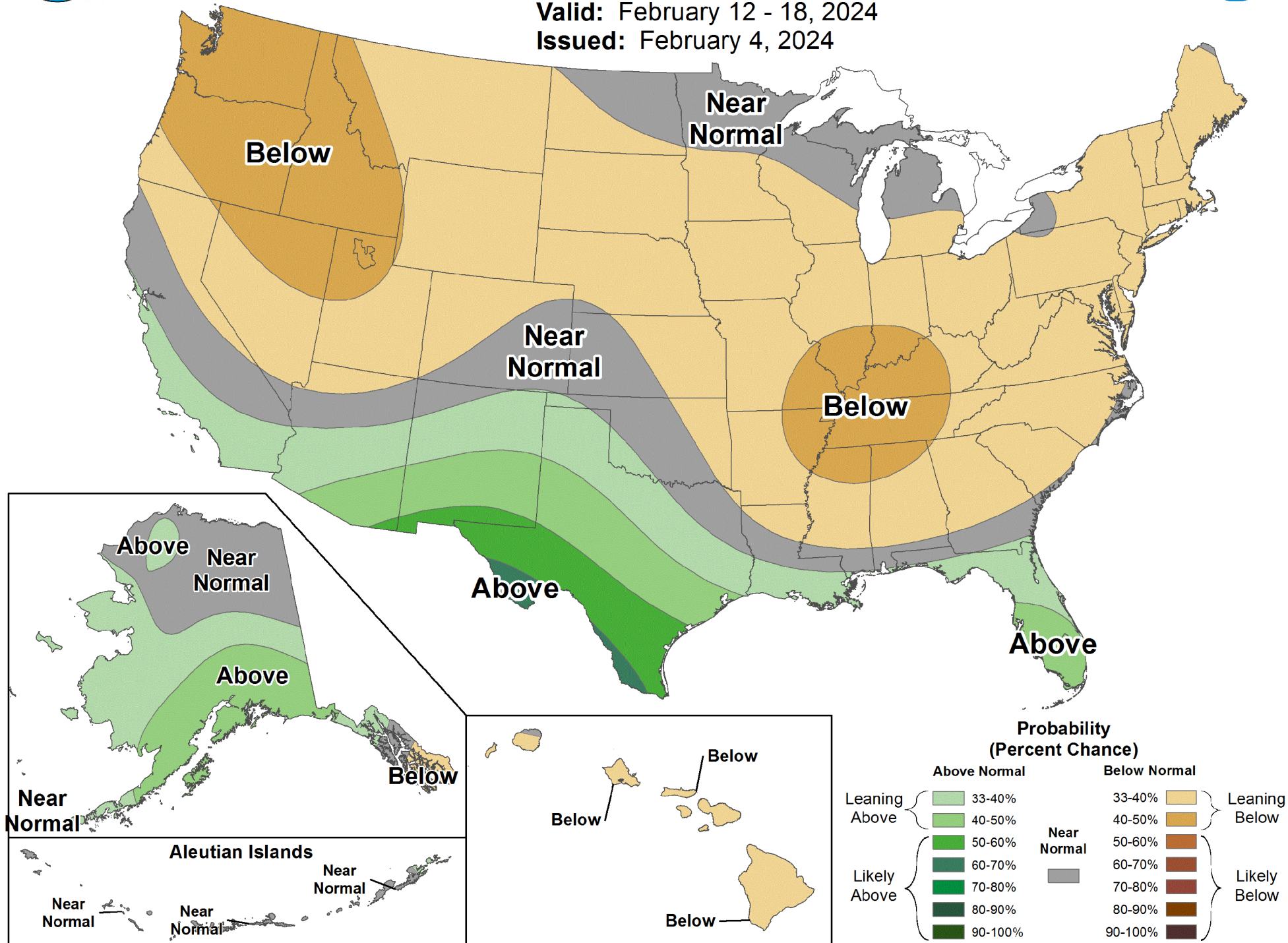


8-14 Day Precipitation Outlook



Valid: February 12 - 18, 2024

Issued: February 4, 2024



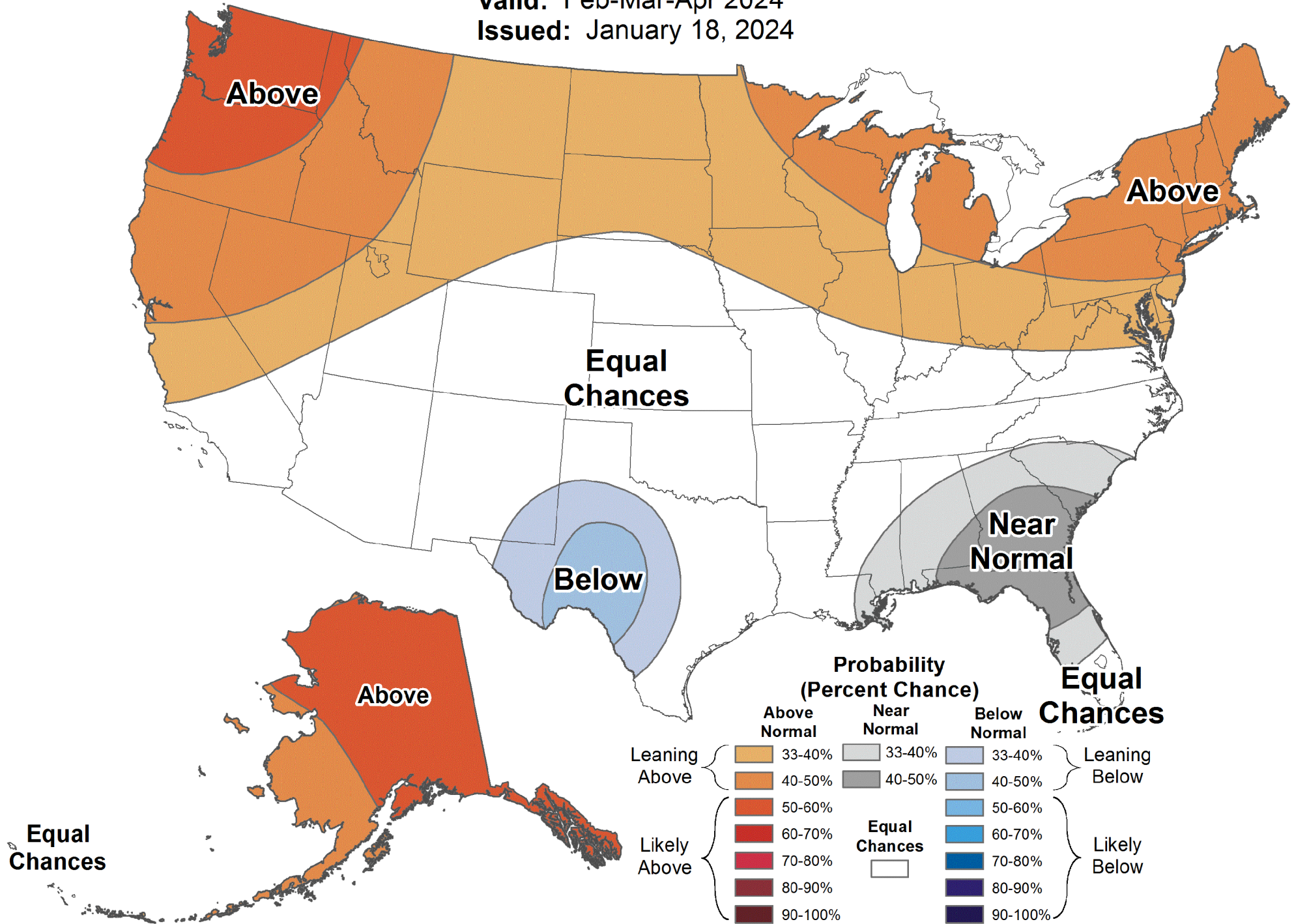


Seasonal Temperature Outlook



Valid: Feb-Mar-Apr 2024

Issued: January 18, 2024



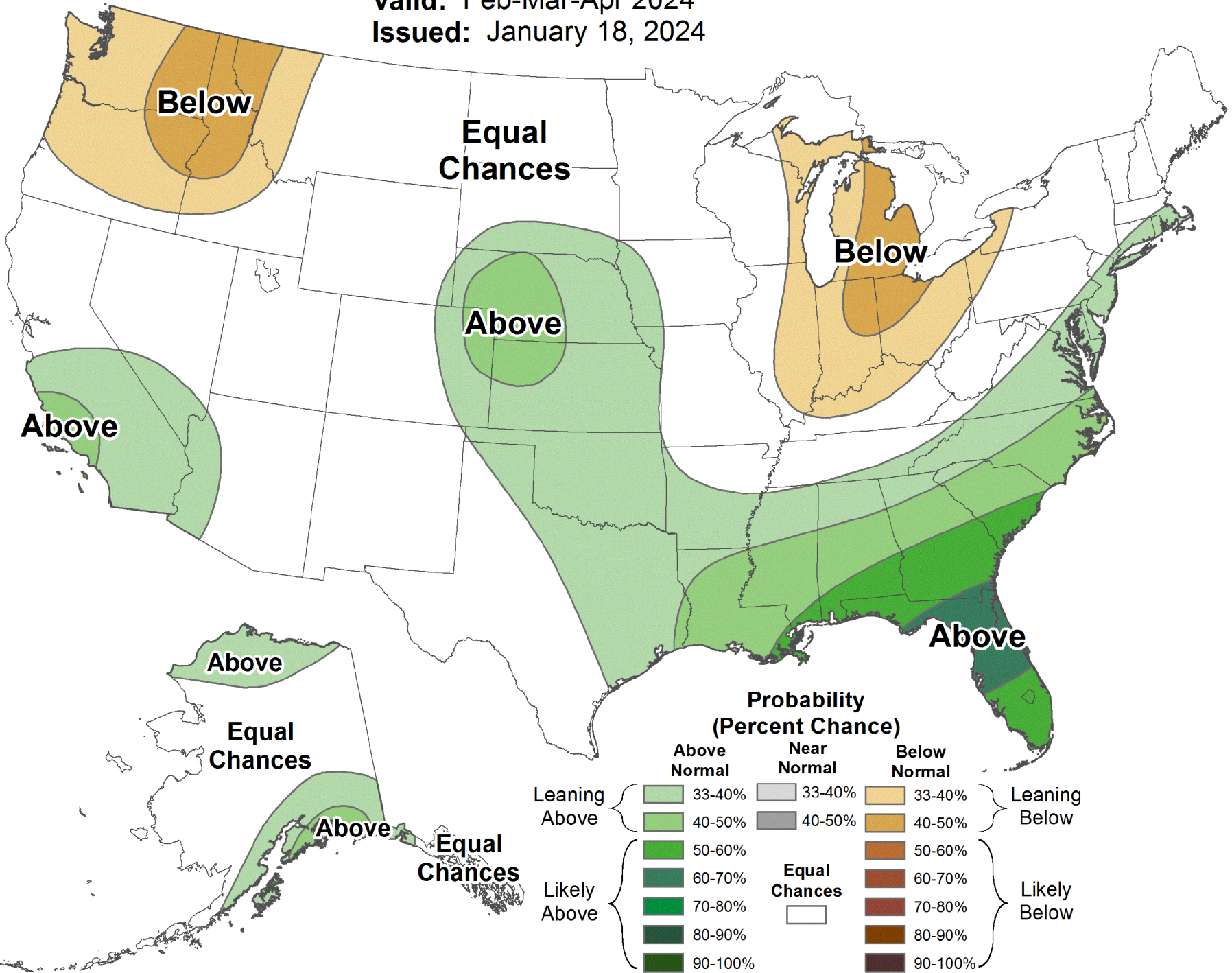


Seasonal Precipitation Outlook



Valid: Feb-Mar-Apr 2024

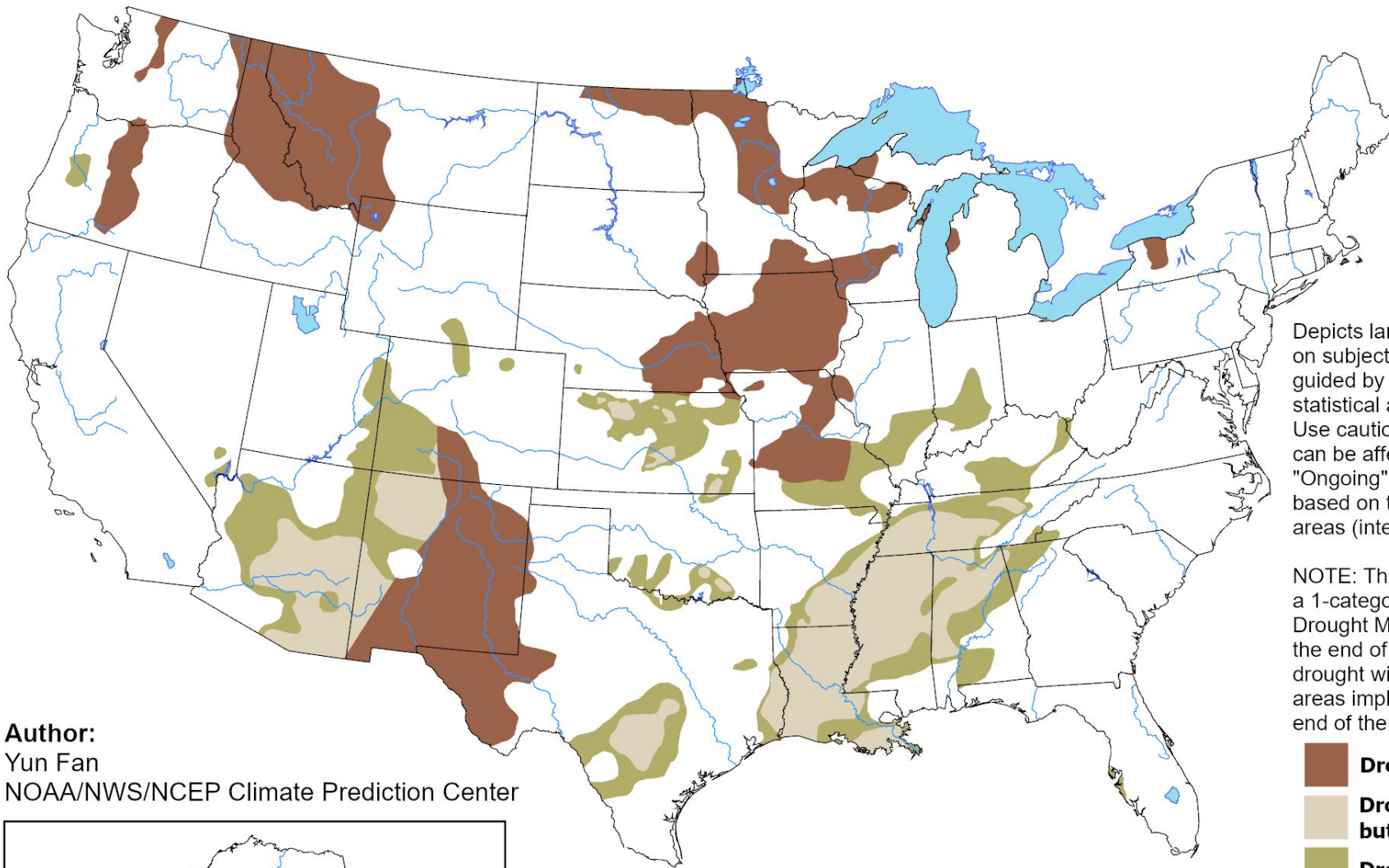
Issued: January 18, 2024



U.S. Monthly Drought Outlook

Drought Tendency During the Valid Period

Valid for February 2024
Released January 31, 2024

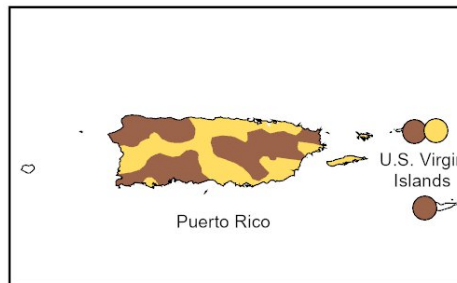
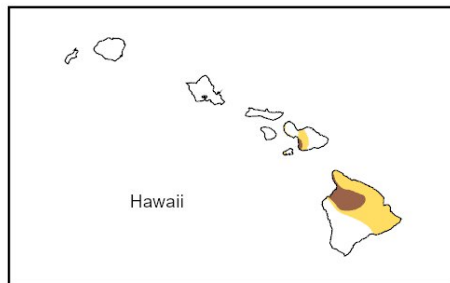
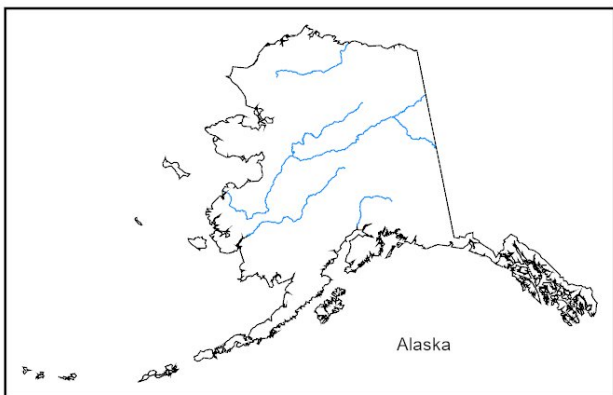


Depicts large-scale trends based on subjectively derived probabilities guided by short- and long-range statistical and dynamical forecasts. Use caution for applications that can be affected by short lived events. "Ongoing" drought areas are based on the U.S. Drought Monitor areas (intensities of D1 to D4).

NOTE: The tan areas imply at least a 1-category improvement in the Drought Monitor intensity levels by the end of the period, although drought will remain. The green areas imply drought removal by the end of the period (D0 or none).

Author:
Yun Fan
NOAA/NWS/NCEP Climate Prediction Center

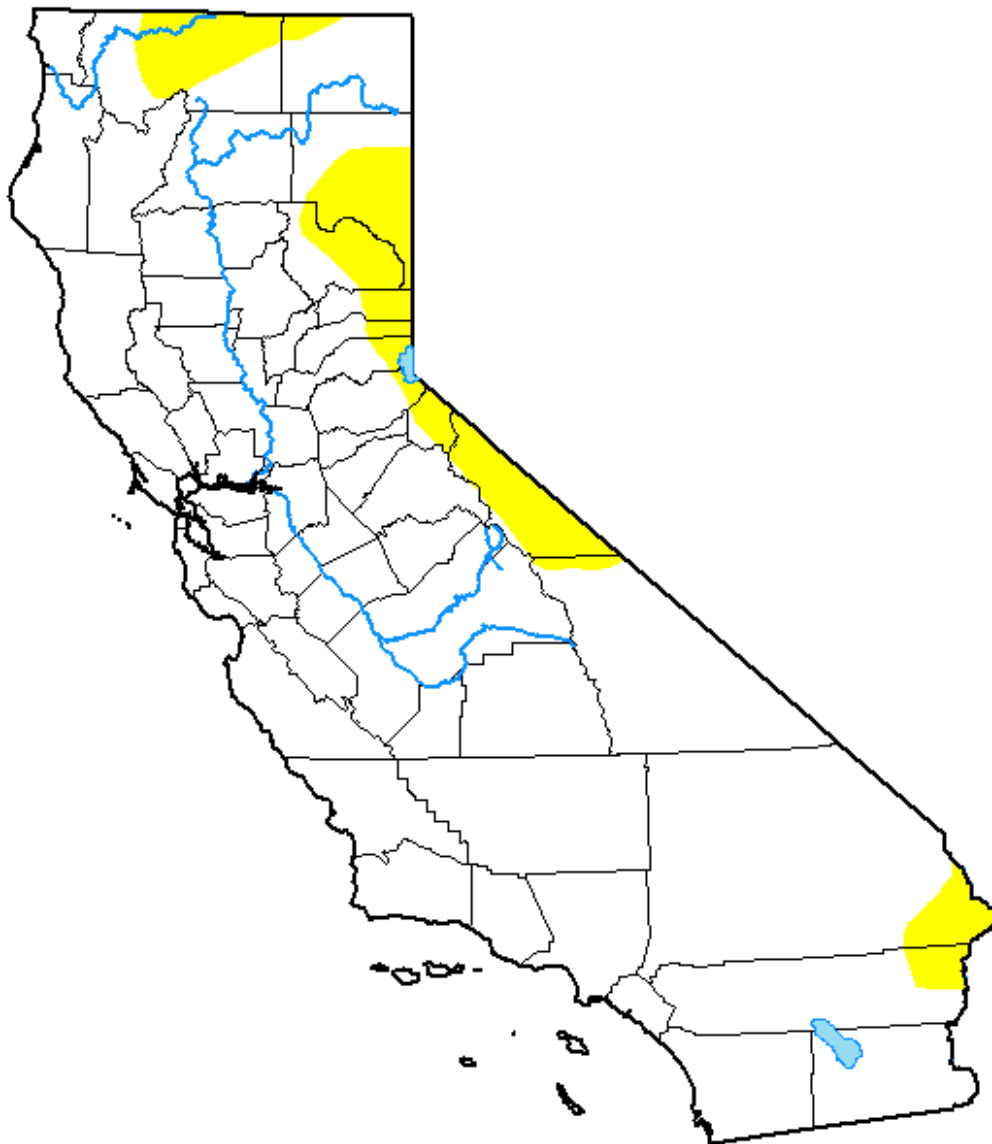
-  **Drought persists**
-  **Drought remains, but improves**
-  **Drought removal likely**
-  **Drought development likely**
-  **No drought**



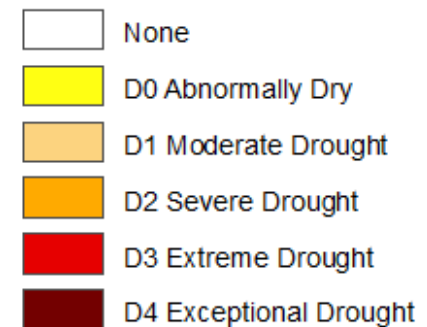
<https://go.usa.gov/3eZ14>

U.S. Drought Monitor California

January 30, 2024
(Released Thursday, Feb. 1, 2024)
Valid 7 a.m. EST



Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

Author:

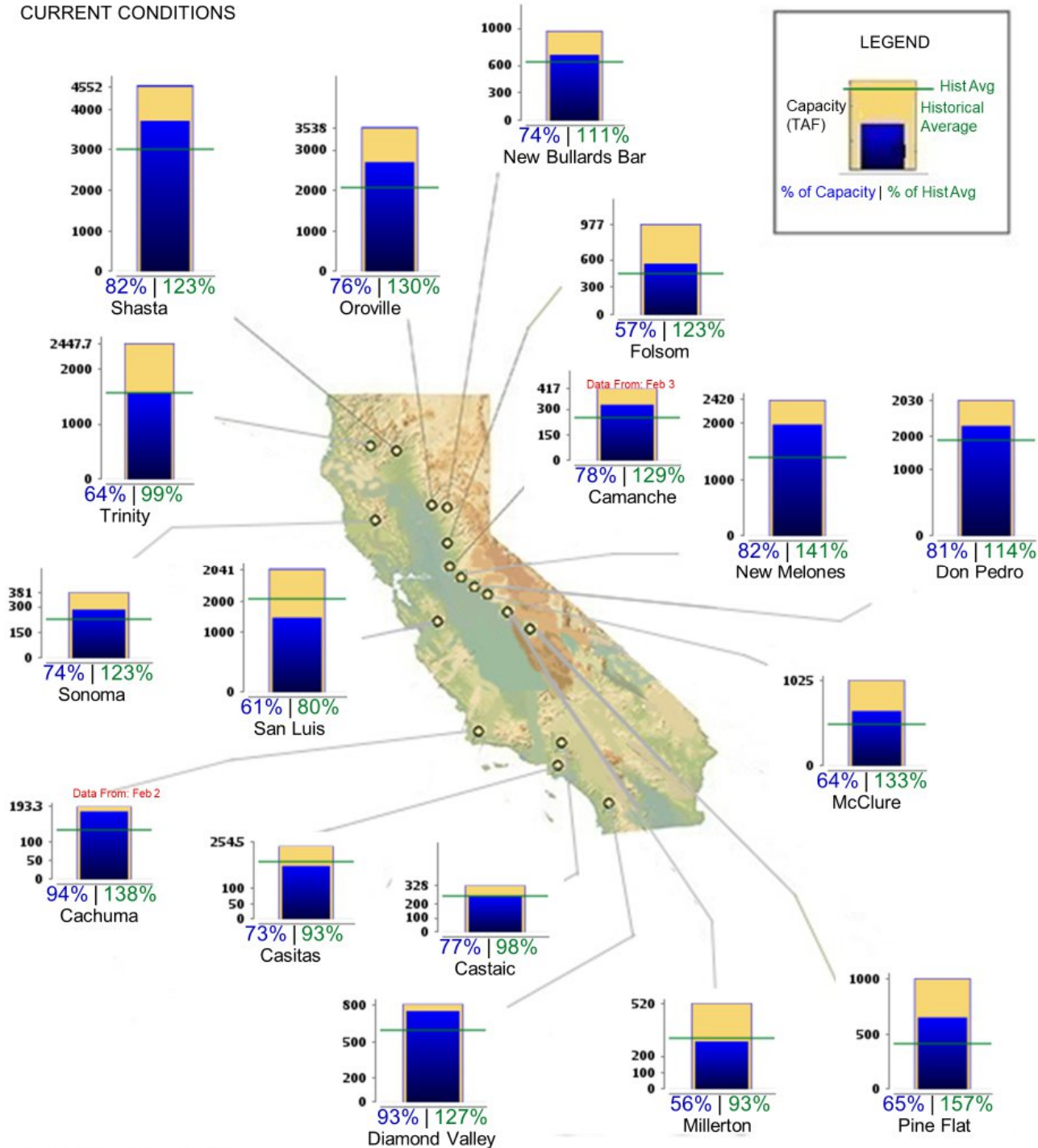
Brian Fuchs
National Drought Mitigation Center



CALIFORNIA MAJOR WATER SUPPLY RESERVOIRS

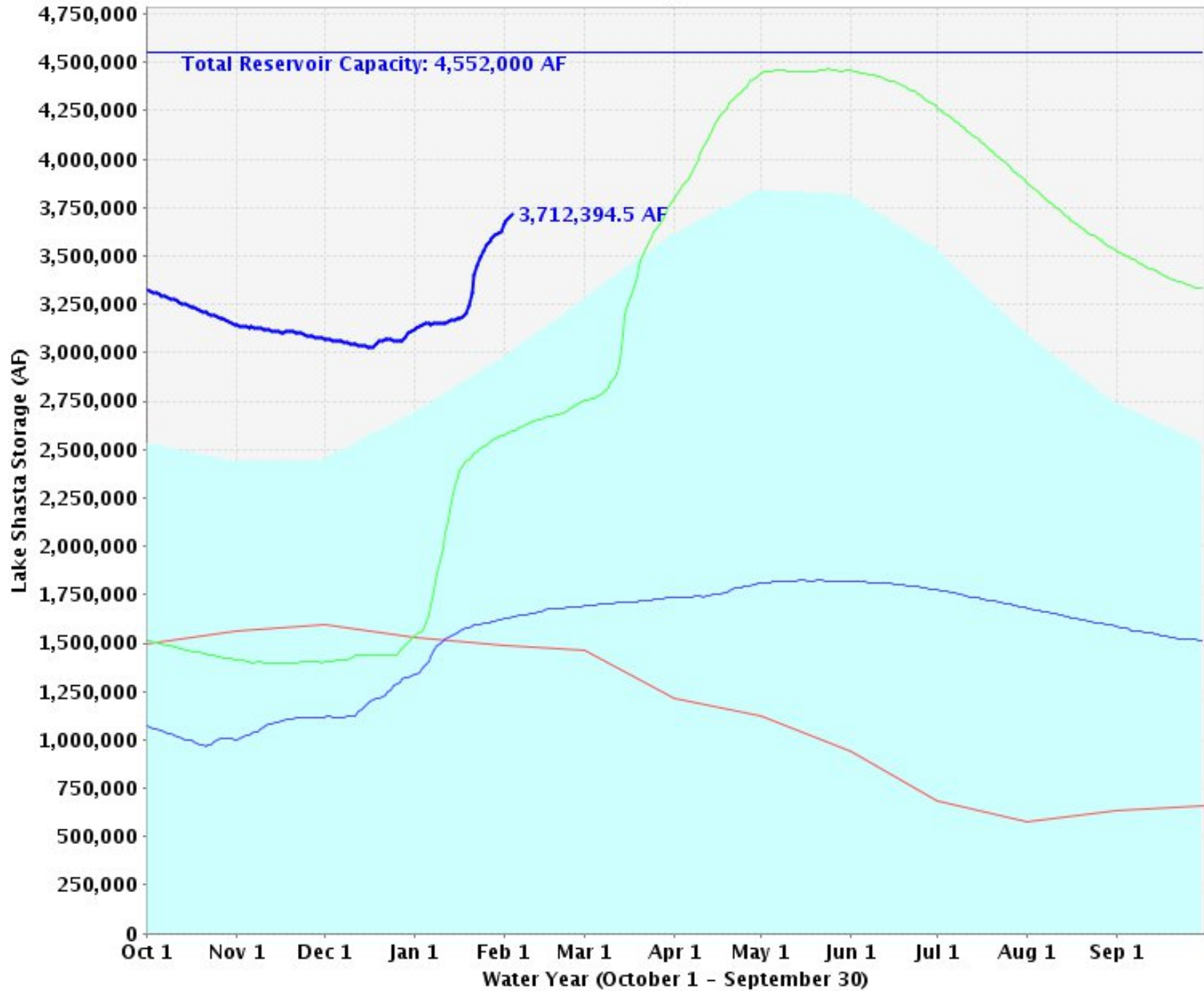
Midnight - February 4, 2024

CURRENT CONDITIONS



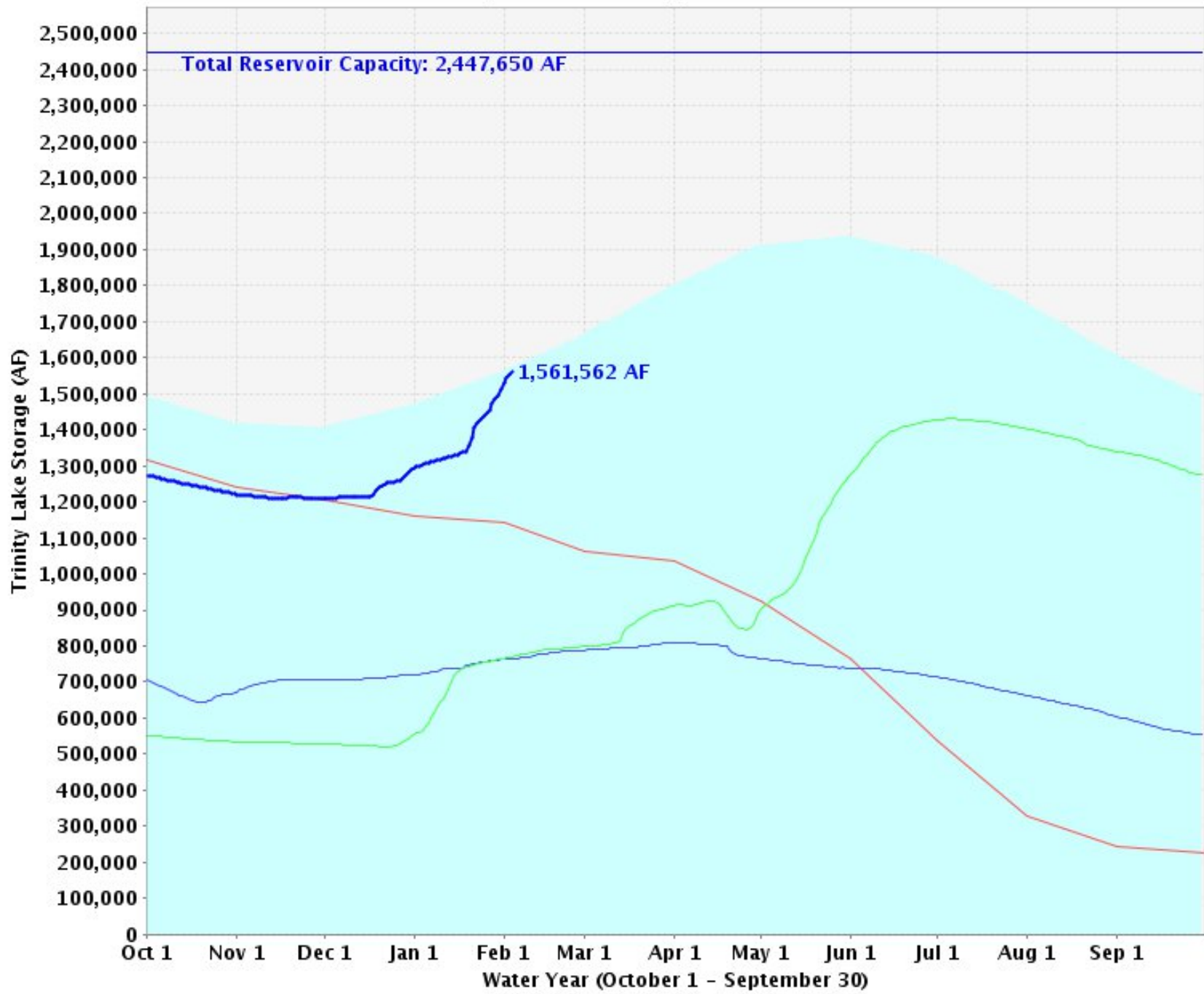
Updated 02/05/2024 09:48 AM

Lake Shasta Storage Levels



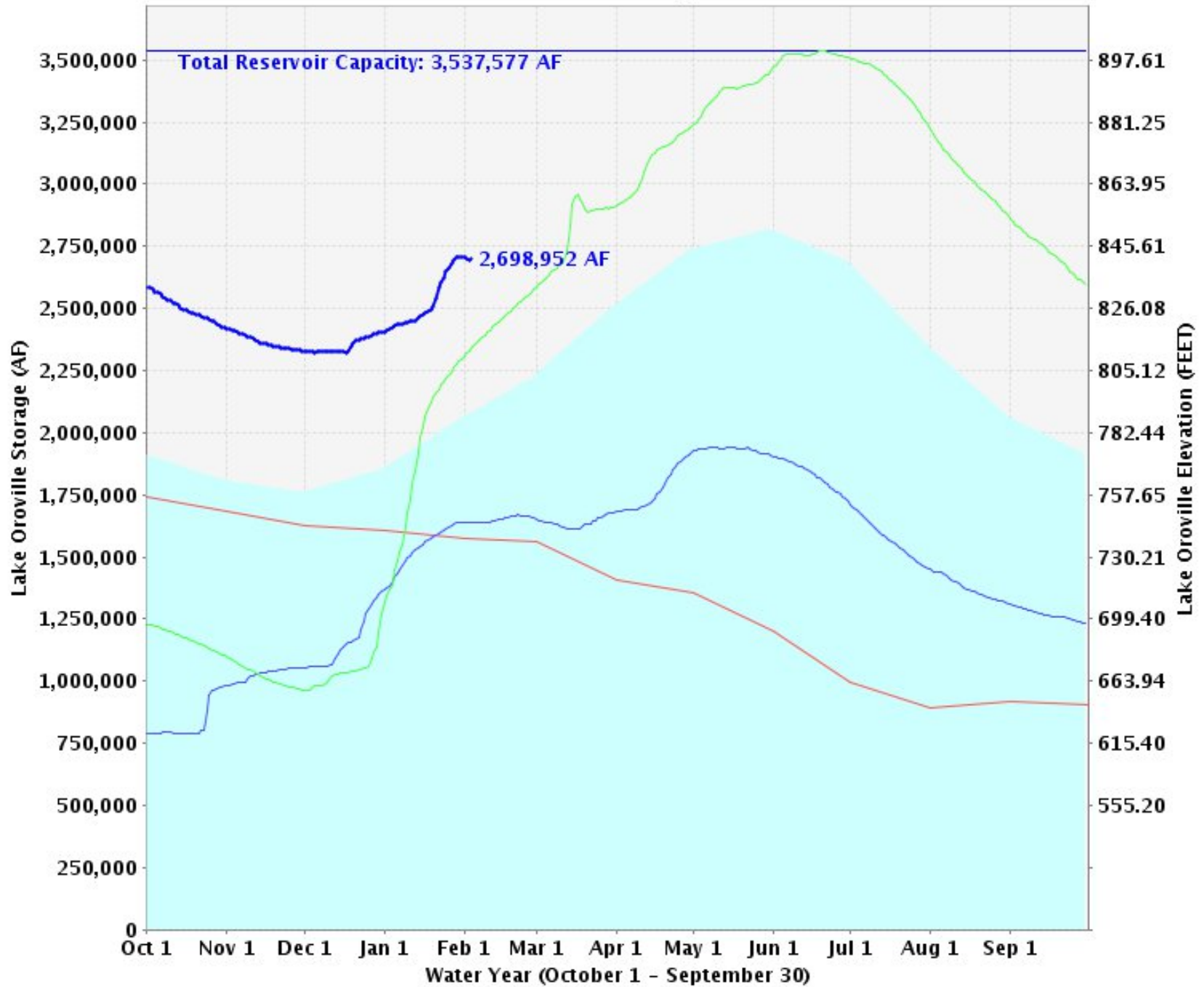
■ Historical Average
 — Total Reservoir Capacity
 — 1976-1977 (dry)
 — 2021-2022
 — 2022-2023
 — 2023-2024(current)

Trinity Lake Storage Levels



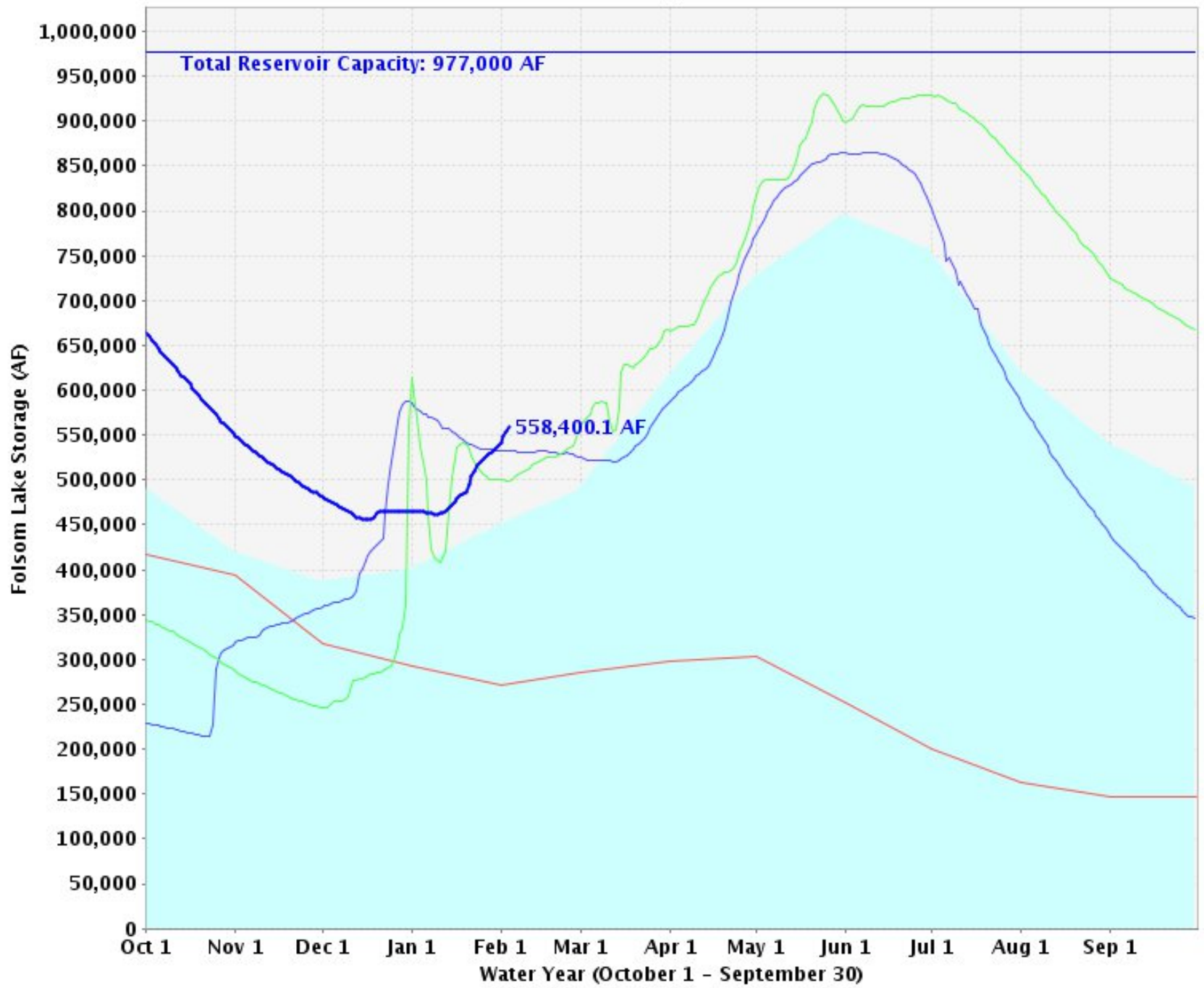
■ Historical Average
 — Total Reservoir Capacity
 — 1976-1977 (dry)
 — 2021-2022
 — 2022-2023
 — 2023-2024(current)

Lake Oroville Storage Levels



■ Historical Average
 — Total Reservoir Capacity
 — 1976-1977 (dry)
 — 2021-2022
 — 2022-2023
 — 2023-2024(current)

Folsom Lake Storage Levels



■ Historical Average
 — Total Reservoir Capacity
 — 1976-1977 (dry)
 — 2021-2022
 — 2022-2023
 — 2023-2024(current)

New Bullards Bar Reservoir Storage Levels

