

**MONTECITO WATER DISTRICT
MEMORANDUM**

SECTION: 5-A

DATE: AUGUST 27, 2024

TO: BOARD OF DIRECTORS

FROM: GENERAL MANAGER

SUBJECT: QUARTERLY WATER SUPPLY UPDATE

RECOMMENDATION:

Information only.

DISCUSSION:

Overview

The District’s 3-year water supply outlook remains favorable following a second consecutive wet winter across the State. The 2023/24 winter brought above average rainfall locally and many locations statewide topping off and/or spilling surface water reservoirs. Despite favorable rainfall conditions this past winter, the US Drought Monitor indicates a slight worsening of drought conditions statewide since April, with over 22% of the state in abnormally dry or moderate drought conditions (Figure 1).

According to District records, rainfall totals in Montecito and at Jameson Lake thus far this water year are 182% and 150%, respectively of the historical average. Rainfall in December produced sufficient inflow to Jameson Lake resulting in a full reservoir on December 21, 2023, of which spilled through August 2024. February storms produced sufficient inflow to Lake Cachuma resulting in a full reservoir, of which spilled through June 2024. Rainfall and snowpack conditions in Northern California, which is indicative of the availability of State Water Project supplies, were about average this past winter.

According to the National Weather Service Climate Prediction Center, as of August 8, 2024, ENSO-neutral is expected to continue for the next several months, with La Niña favored to emerge during September-November (66% chance) and persist through the Northern Hemisphere winter 2024-25 (74% chance during November-January). Past El Niño and La Niña conditions have been

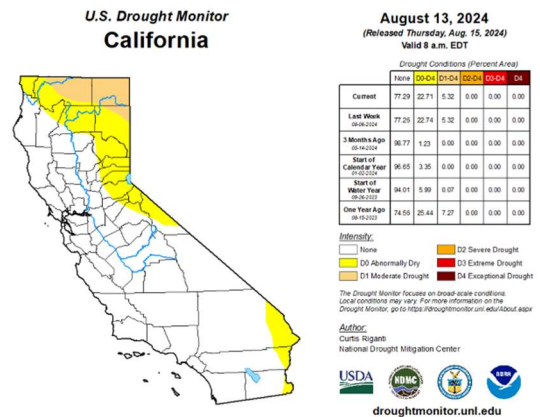


Figure 1: US Drought Monitor Map

highly variable, from extremely wet to extremely dry conditions locally and/or statewide, and therefore the anticipated impacts of this change are uncertain.

Figure 2: Rainfall at Jameson Lake WY2024

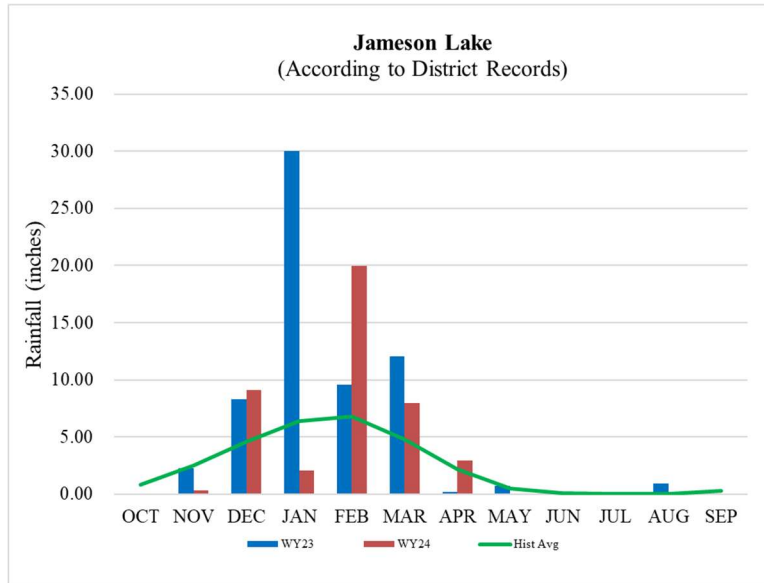
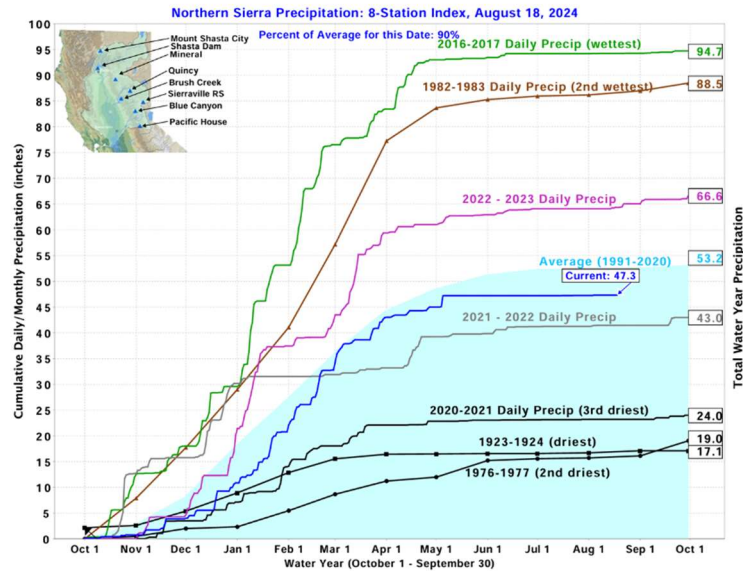


Figure 3: Rainfall in Northern California WY2024



The District’s 3-year water supply outlook indicates adequate water to meet projected customer water demand through WY 2027 without projected water shortages, or the need for SWP or supplemental water supplies. Total water production to date for WY 2024 is about 15% under budget which is attributable to the above average wet conditions experienced locally this past winter, and a cooler and foggy spring and early summer.

Despite favorable water supplies conditions, efficient water use remains necessary to extend the availability of water supplies and to bolster long-term water supply reliability. Many water use

efficiency-related initiatives continue including water use efficiency rebates, development of water budgets, utilization of automated metering infrastructure (AMI or smart meters), and the ongoing evaluation of additional local rainfall independent water supplies.

Update on Water Sources

The **Cachuma Project**, a United States Bureau of Reclamation (USBR) owned and operated surface water reservoir and a critical local surface water supply for the District, reached 100% of current full storage capacity in early February 2024 and spilled through mid-June 2024. As of June 30, 2024, the Cachuma project is more than 100% of capacity. The Cachuma Project has historically supplied about 40% of the District's annual water supply but this has reduced to between 25-30% since the acquisition of desalination. The District's full Cachuma Project contractual entitlement is 2,651 AF. In July 2024, USBR issued a 100% allocation for WY 2025, which begins October 1, 2024. Projected Cachuma Project water deliveries for WY 2024 are planned at approx. 1,031 acre feet.

As of June 30, 2024, the District has 2,776 AF of Cachuma Project water available. With the February 2024 spill, stored Cachuma Project water allocated in a prior water year, also referred to as carryover water, was lost. The District lost approx. 1,800 acre feet of carryover water as a result of the spill. Additionally, any water delivered during a spill condition is considered surplus water and is not counted against the allocation. The District delivered 223 AF during the five month spill event. The District's 3-year water supply outlook projects a 100% Cachuma Project allocation through WY 2026 with reduced availability thereafter.

Jameson Lake, another critical local surface water supply for the District, is at 100% of the current full storage capacity (4,848 acre feet) as of June 30, 2024. Rainfall in December 2023 produced sufficient inflow resulting in a full reservoir occurring on December 21, 2023 and spill conditions continuing thru August 2024. Jameson Lake is a District owned and operated facility and serves as a longer-term drought supply with reduced deliveries available over an extended drought period. Projected annual deliveries are consistent with the District's 2020 modified rule curve for the reservoir, which plans for up to 2,000 acre feet of deliveries when the lake is full, reducing to between 500 to 800 acre feet per year thereafter as the lake level declines. The purpose of increased deliveries when the lake is full is to draw down the level from full to create available storage capacity to capture runoff, if any, in subsequent years. Projected Jameson Lake water deliveries for WY 2024 are planned at approx. 1,136 acre feet.

Doulton Tunnel is a 2.2-mile tunnel through the Santa Ynez Mountains allowing for the passage of Jameson Lake deliveries to the South Coast for delivery to the District's service area. The tunnel itself experiences water intrusion which contributes to water deliveries. Tunnel intrusion is groundwater and is highly dependent on hydrology. Deliveries have historically ranged from 50 gallons per minute (gpm) to 1,500 gpm, but typically average between 150 gpm to 350 gpm. As of August, 2024, tunnel intrusion is trending at about 425 gpm and is gradually decreasing. Doulton Tunnel deliveries for WY 2024 are planned at 475 AF.

Groundwater serves as an important drought supply for the District. During average or wet conditions, the District rests its wells, allowing the groundwater basin to recover. During below-average or dry periods, the District increases groundwater production from the basin. The District has six potable and six non-potable active groundwater wells capable of pumping a combined total of approximately 700 acre feet per year (AFY). The District's 3-year water supply outlook projects groundwater production to be between 100 and 300 acre feet per year through WY 2027, depending on hydrologic conditions. Groundwater deliveries for WY 2024 are expected to be approximately 128 acre feet, which is primarily non-potable production.

The **State Water Project (SWP)** is a supplemental surface water source supplying water from Northern California. The District's full Table A entitlement is 3,300 acre feet, which includes a 300 acre foot drought buffer. The Department of Water Resources reviews SWP water availability monthly and releases allocation updates, with the final annual allocation typically expected around May 1. The final SWP Table A allocation for 2024 is 40% or 1,320 acre feet. With favorable local water supply conditions following the 2022/23 and 2023/24 winters, these SWP supplies are surplus to the District's needs and deliveries are not anticipated through WY 2027.

The District participates in the **Semitropic Groundwater Banking and Exchange Program**. During average or wet conditions, the District stores surplus water in a groundwater basin for future use during below-average or dry conditions. Participation in this program provides a guaranteed right to withdraw or recover up to 1,500 acre feet per year of District-stored water and store up to 4,500 acre feet at any time. The District's contract with Semitropic allows for the storage of water in excess of the stored water right of 4,500 acre feet if Semitropic has available capacity within their groundwater banking program. To date the program is at approx. 50-60% of capacity and has never in its history reached the program storage capacity limit. The District continues to maximize the storage of surplus SWP water in Semitropic. As of July 31, 2024, the District has stored and available for use 5,579 acre feet of its surplus SWP water. Storing surplus SWP supplies in Semitropic bolsters the District's drought supplies and reduces the risk of loss of this water to spill conditions.

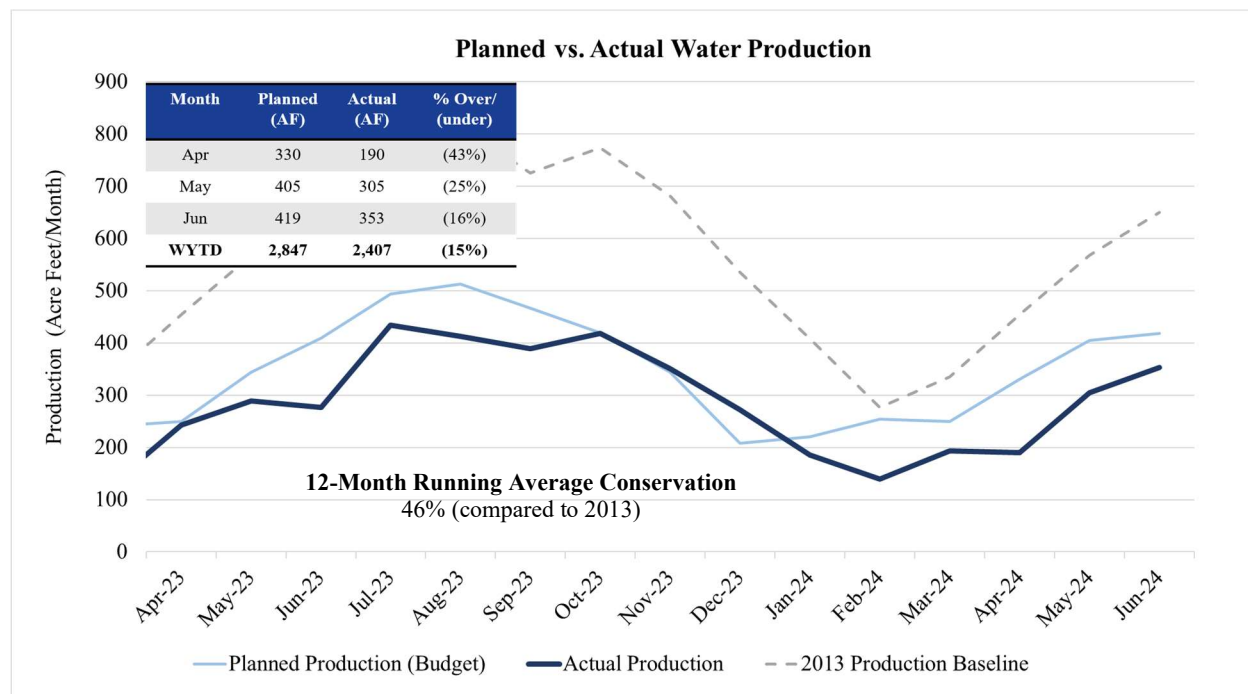
Desalination deliveries began in January 2022, with the District receiving 117.4 acre feet of water per month from the City of Santa Barbara, in accordance with the September 2020 *Water Supply Agreement (WSA)*. These deliveries are made possible by the City's operation of its desalination facility. This local, rainfall independent water supply is nearly 100% reliable and serves as a baseline supply for the District, helping to mitigate the impact of ongoing and future regulatory, environmental, and climatic challenges affecting other water sources. Deliveries, pursuant to the WSA occur irrespective of hydrologic conditions. Under most circumstances, any portion of the monthly delivery not accepted by the District, such as when demands are low, is lost. The District's 3-year water supply outlook projects regular monthly deliveries of 117.4 acre feet.

Customer Water Use (Demand)

Customer water use thus far this water year continues to trend below budget (see Figure 4). As of June 30, 2024, customer water use is 15% below budget, which is attributable to the above average wet winter, and a cooler and foggier spring and early summer. This water use trend is similar that

of WY2023 which experienced similar weather conditions. As anticipated, customer water use in July and August 2024 is trending closer to budget as the region enters the warmer and drier months of the year. Annual budgeted water sales align with the 5-year average customer use or approx. 3,950 AF.

Figure 4: Customer Water Use Trends



In December 2022, the District adopted its first *Water Use Efficiency Plan* (WUEP) which is a long-term plan targeting permanent changes in customer use water, consistent with the State’s goal of *Making Conservation a California Way of Life*. The Plan includes a variety of recommended actions to encourage and help achieve a permanent long-term reduction in water use. The District began implementation of its WUEP with a Pilot Conservation Program that provided customer rebates for specific water conservation-related actions, easily implemented by customers that reduce water use in the near- and long-term. This included rebates for high efficiency toilet and appliance replacements, mulch installation, landscape conversions, and others. In early 2024, the District transitioned to the full water conservation program which modified some of the existing rebates, adding additional rebates, and initiating other actions with the objective of achieving a permanent reduction in water use. More information on the available rebates is available on the District’s website.

In 2018, the California Legislature enacted two key policy bills – Senate Bill 606 (SB 606) and Assembly Bill 1668 (AB 1668) – to implement a new framework for long-term water conservation and drought planning for water suppliers. AB 1668 and SB 606 build on the State’s ongoing efforts *Making Conservation a California Way of Life*, including Senate Bill X7-7, creating a new foundation for long-term improvements in water conservation and drought planning. SB 606 and AB 1668 establish guidelines for efficient water use and a framework for the implementation and oversight of the new standards. Among other provisions, the legislation includes establishing urban

water use objectives (UWUO) and long-term standards for efficient water use that apply to urban retail water suppliers. The UWUO is an estimate of aggregate efficient water use from the previous year based on adopted water use efficiency service area characteristics for that year. All UWUO requirements became effective in 2024 and compliance must be achieved by 2027. An urban supplier that does not meet its UWUO may be required by the State to enact policies and projects that result in a reduction in water use. The District's preliminary reporting indicates it is currently in compliance with its UWUO.

Supporting compliance with the UWUO legislation, in October 2022, the District kicked off the development of water budgets. A water budget is a property-specific determination of the total water required for efficient use indoors and outdoors, and serves as a tool to guide customers in conservation while maintaining landscaping and the garden-like atmosphere of the community. Water budgets account for seasonal changes in water use such as irrigation in winter versus summer and provide flexibility to customers to choose how they use water on their property while discouraging water waste and excessive use. The development of water budgets is nearing completion and expected to be completed and rolled out for customer use in October/November 2024.

Some Ongoing Water Supply Challenges

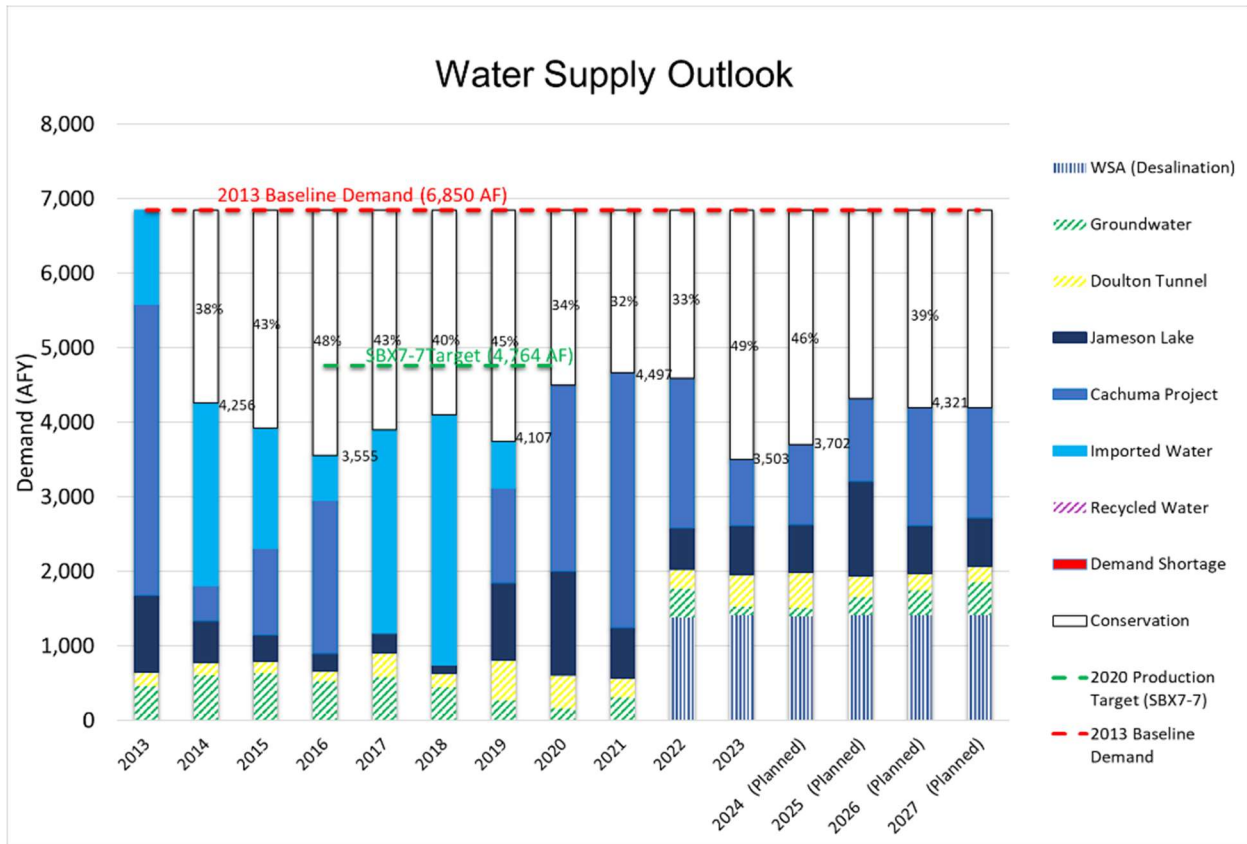
1. *Warren Act Contract Renewal* – Central Coast Water Authority (CCWA) holds a contract with the United States Bureau of Reclamation (USBR), referred to as the Warren Act Contract, that permits the use of Cachuma Project (Project) facilities for the delivery of Non-Project Water (imported water including State Water Project and supplemental water supplies). The current three-year Warren Act contract expires on September 30, 2024 and an extension is currently being negotiated. USBR is proposing a new provision that would apply a 3% conveyance loss to all imported Non-Project Water. If accepted, this unjustified conveyance loss will further reduce limited supplies, specifically during future drought conditions when supplies are already strained.
2. *Fish Passage Around Bradbury Dam* – Water Rights Order 2019-148 requires USBR further investigate the feasibility of providing fish passage around Bradbury Dam for Steelhead, despite prior analyses indicating it is infeasible.
3. *Alder Creek Diversions* – Restoration of the District's Alder Creek Flume, which was destroyed in the 2017 Thomas Fire, continues to be delayed by the United States Forest Service (USFS). The flume diverts storm flows from Alder Creek, contributing to inflows to Jameson Lake. Continued delays by the USFS risks the loss of FEMA funding for this approved project and results in an annual loss of surface water until restored.
4. *Future Access to Banked Supplies* – Semitropic Water Storage District Groundwater Sustainability Agency collaborated with other Groundwater Sustainability Agencies within the Kern County Groundwater Subbasin to develop a single Groundwater Sustainability Plan (GSP) pursuant to the Sustainable Groundwater Management Act (SGMA). The Department of Water Resources has identified deficiencies in the Kern County Groundwater Subbasin GSP and has scheduled a February 20, 2025 public hearing to consider placing it in probationary status under SGMA. With the District's participation in the Semitropic Groundwater Banking and Exchange Program, the impact of this pending

probationary status on the Program and the District’s access to stored supplies remains uncertain.

Water Supply Outlook

Based on available information, including assumed below average hydrologic conditions in WY2025 through WY2027, the District’s 3-year water supply outlook indicates adequate water to meet planned customer use without anticipated water shortages or the need for imported water. Despite the favorable water supply condition, efficient water use remains essential to the long-term reliability of the District’s water supply. Demand management is necessary to ensure alignment with planned use continues.

Figure 5: District Water Supply Outlook/Strategy



Focus continues to be on efficient water use, in particular the implementation of the 2022 *Water Use Efficiency Plan* and associated water conservation rebates, the establishment of water budgets, and utilization of automated metering infrastructure (AMI or smart meters). These will provide customers and the District with tools to effectively manage water use, including avoiding water waste and loss.

Additionally, the District continues to evaluate other means of bolstering water supply reliability including the acquisition of new sources of local reliable water supplies and additional groundwater banking. Since 2018, the District has evaluated the feasibility of implementing a **Recycled Water** project. The District’s 2023 *Enhanced Recycled Water Feasibility Study*, prepared in collaboration with the Montecito Sanitary District (MSD), recommended a regional indirect potable reuse (IPR) project involving multiple special districts and benefiting multiple

urban water purveyors and groundwater basins. The project proposed to treat secondary wastewater effluent from the MSD Wastewater Treatment Plant (WWTP), implement advanced treatment at the MSD WWTP site, and convey purified water south to the Carpinteria Groundwater Basin for injection. The District would recover the injected water either through supply exchanged with the Carpinteria Valley Water District or direct pump back to the District's distribution system. In September 2023, the District was selected for a \$1M grant through the USBR WaterSmart: Water Recycling and Desalination Planning Program to fund preliminary design (30% design) and environmental review for this project. Unfortunately, capital costs for public works projects have increased significantly since 2021 due to extraordinary inflation and other factors. This has resulted in an estimated 40% increase in the projected cost of the District's contemplated IPR project. Due to cost increases and a reduction in available State and Federal funding programs, at its March 25, 2024 meeting, the District's Board of Directors placed the recycled water project on hold until further notice including forgoing the \$1M USBR WaterSMART Planning Grant. If additional planning and construction grant funding opportunities become available and/or the anticipated unit cost of advanced treated water decreases making a recycled water project financially viable, the District will consider reinitiating a recycled water project.

In addition, the District continues its evaluation of potentially storing surplus surface water in the Montecito and Carpinteria Groundwater Basins. Separate **Groundwater Banking** evaluations are currently underway and expected to be completed in the next several months.

Primary sources of water supply used to meet customer demands in WY 2024 include the Water Supply Agreement with the City of Santa Barbara (desalination), Jameson Lake and Doulton Tunnel, and the Cachuma Project. Drought supplies including groundwater, and banked water stored in the Semitropic Water Storage District Groundwater Banking and Exchange Program will remain in reserve for future use.

The District continuously evaluates water supply conditions and the need for additional supplement water and/or demand-management measures to ensure water supply availability over a three-year planning period and beyond.

ATTACHMENTS

1. Quarterly Water Supply Update Presentation



Item 5-A

Quarterly Water Supply Update

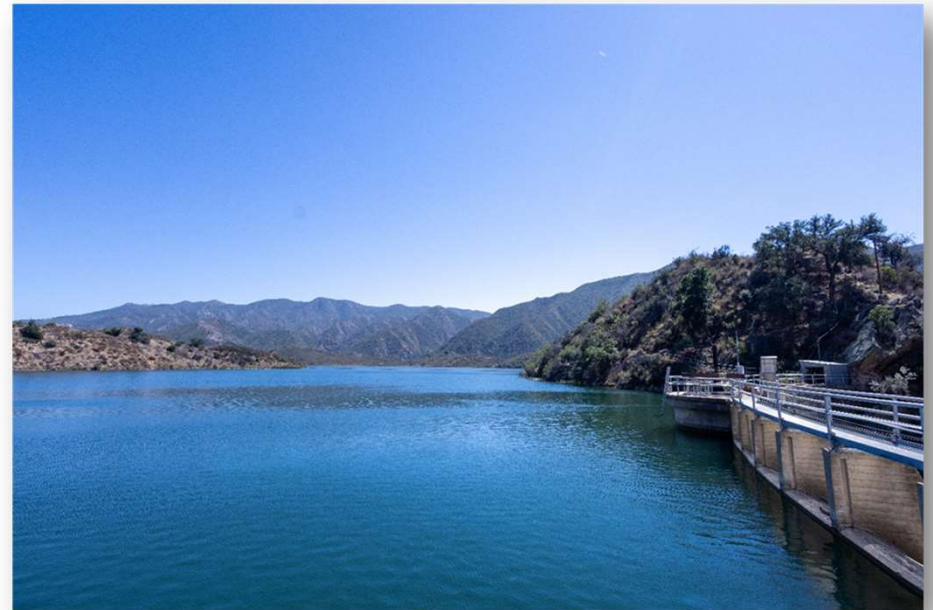


Meeting of the Board of Directors

August 27, 2024

Outline

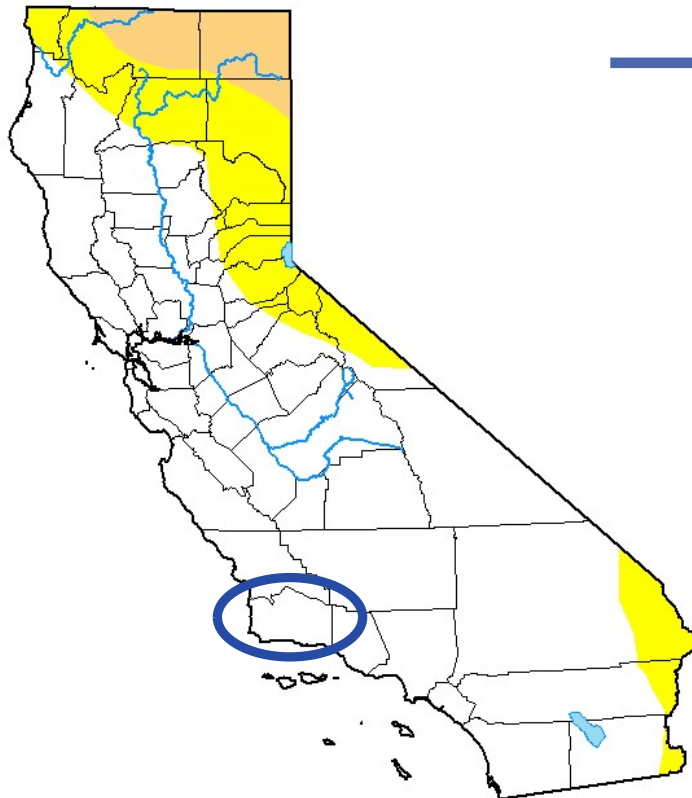
1. Hydrologic Conditions
2. Water Use Trends
3. Water Supply Status
4. Water Supply Outlook
5. Supporting Initiatives





**U.S. Drought Monitor
California**

August 13, 2024
(Released Thursday, Aug. 15, 2024)
Valid 8 a.m. EDT



Drought Conditions (Percent Area)

	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	77.29	22.71	5.32	0.00	0.00	0.00
Last Week 08-06-2024	77.26	22.74	5.32	0.00	0.00	0.00
3 Months Ago 05-14-2024	98.77	1.23	0.00	0.00	0.00	0.00
Start of Calendar Year 01-02-2024	96.65	3.35	0.00	0.00	0.00	0.00
Start of Water Year 09-26-2023	94.01	5.99	0.07	0.00	0.00	0.00
One Year Ago 08-15-2023	74.56	25.44	7.27	0.00	0.00	0.00

Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

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:

Curtis Riganti
National Drought Mitigation Center



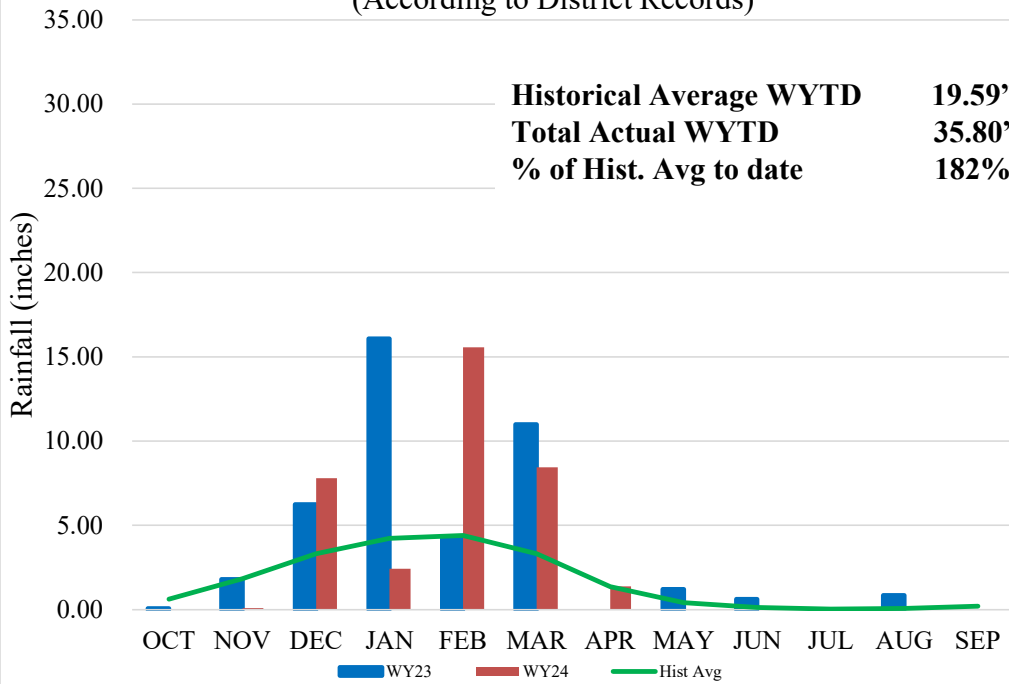
droughtmonitor.unl.edu



Rainfall

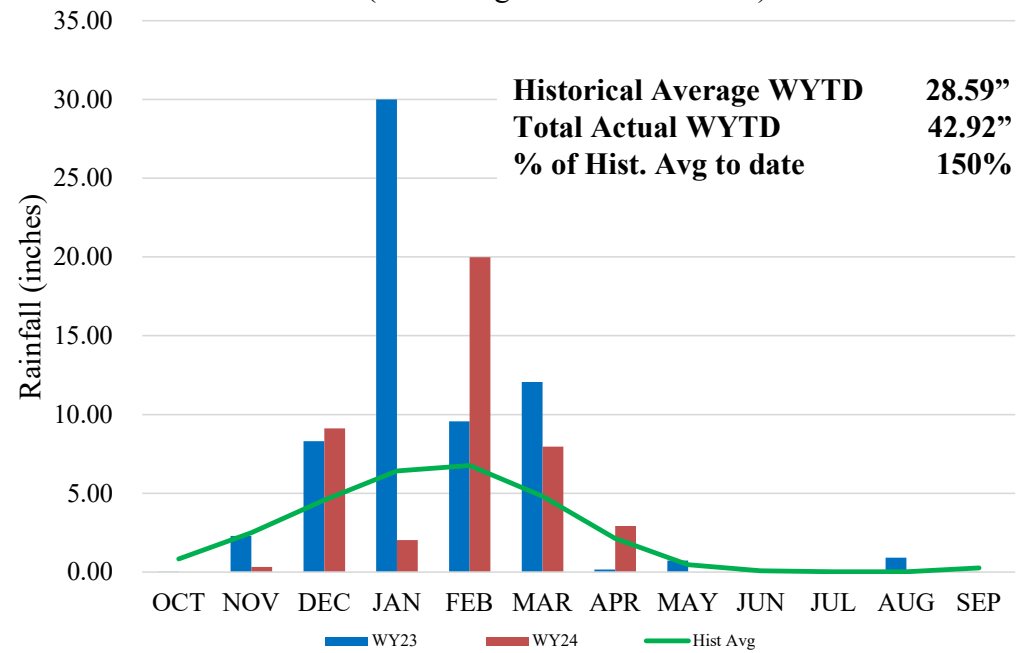
Montecito
(According to District Records)

Historical Average WYTD **19.59"**
Total Actual WYTD **35.80"**
% of Hist. Avg to date **182%**



Jameson Lake
(According to District Records)

Historical Average WYTD **28.59"**
Total Actual WYTD **42.92"**
% of Hist. Avg to date **150%**



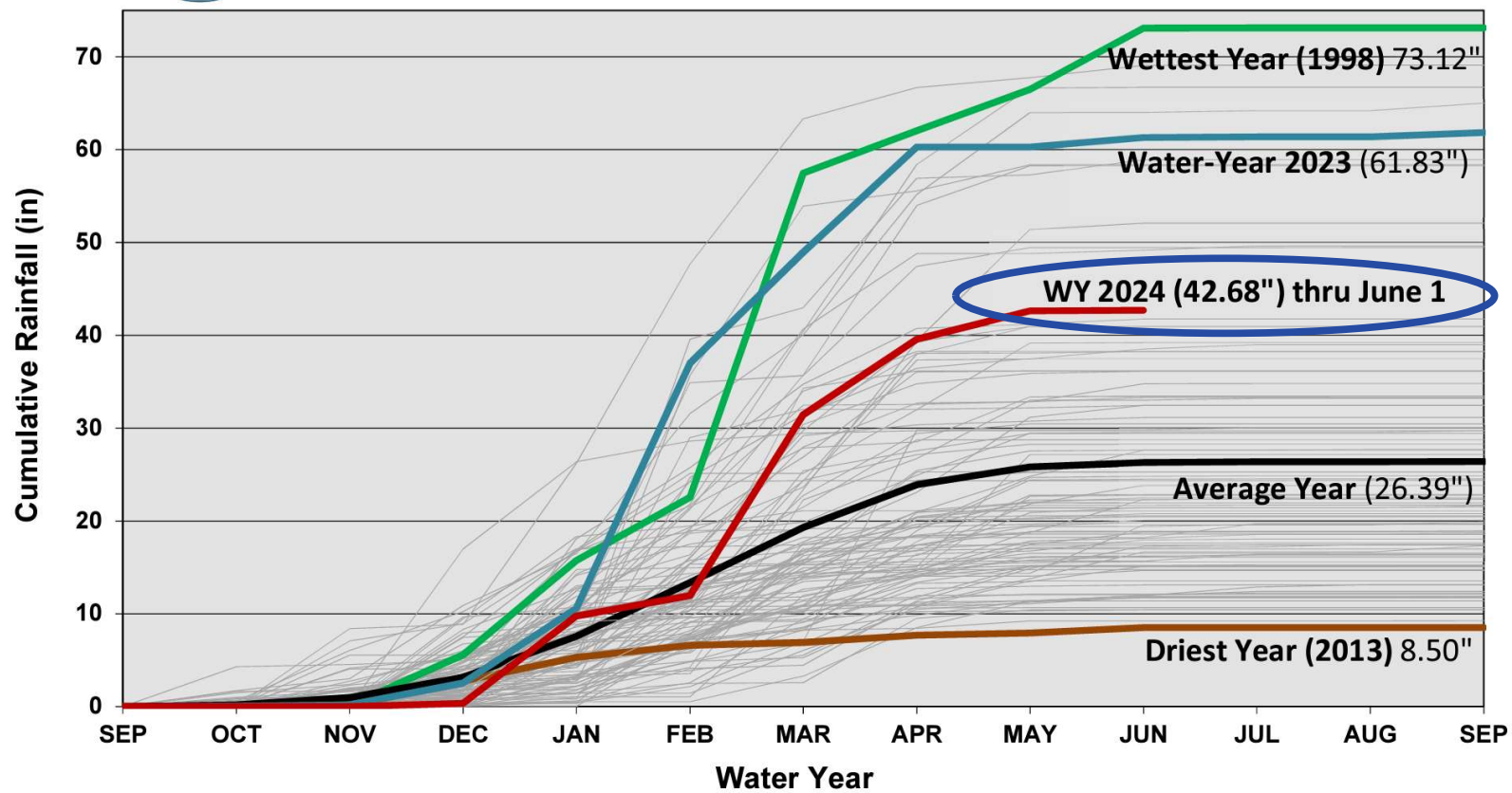


104 Years of Rainfall - Gibraltar Dam

Water Years 1920 - 2024

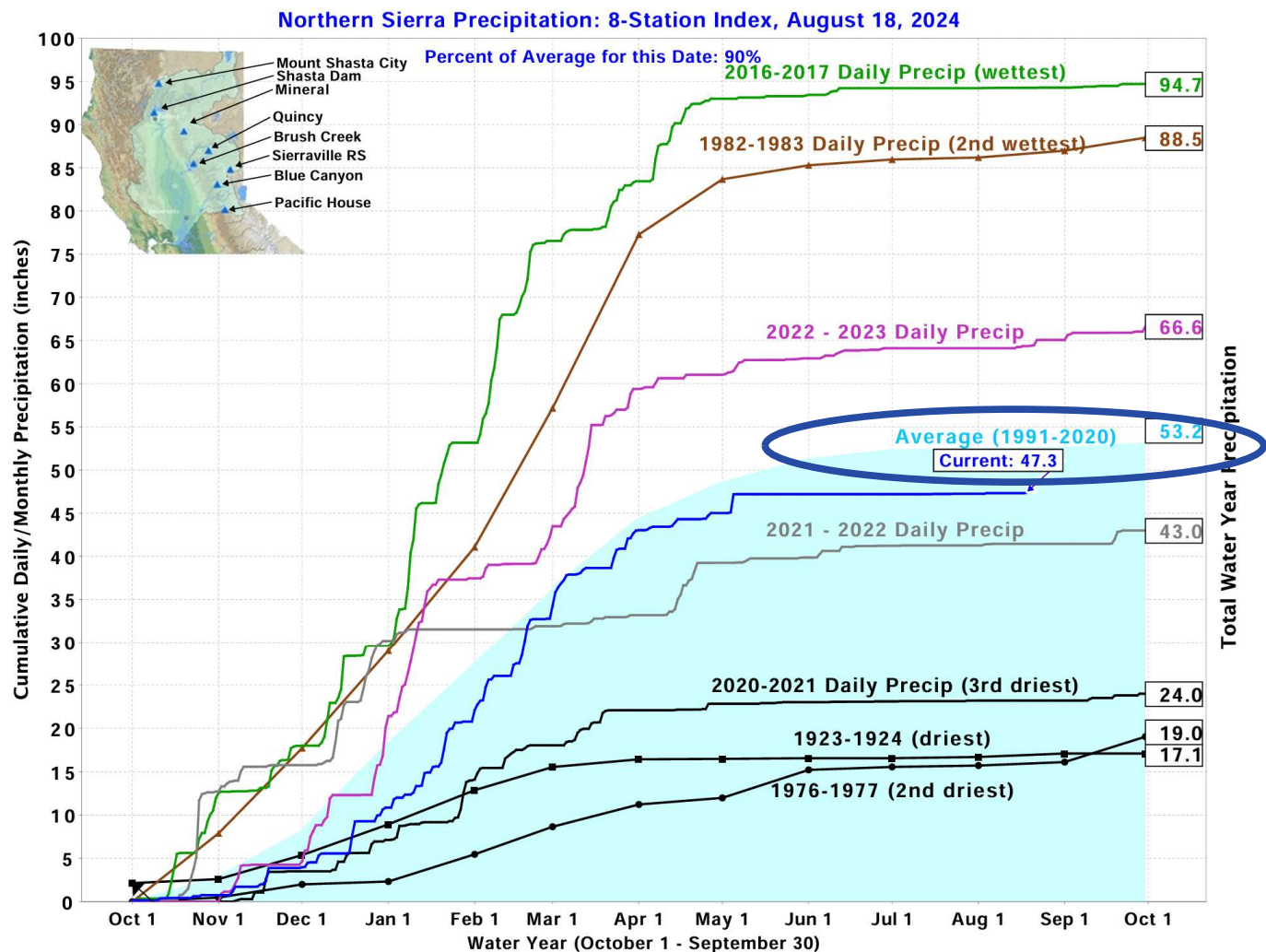
(WY2024 through June 1, 2024)

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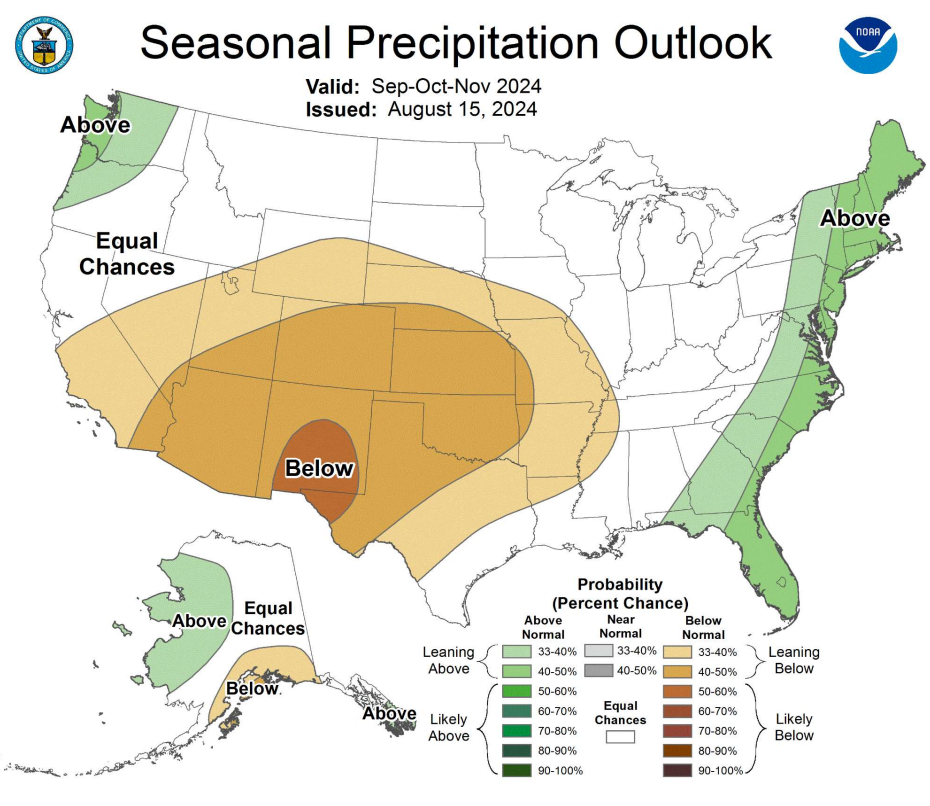
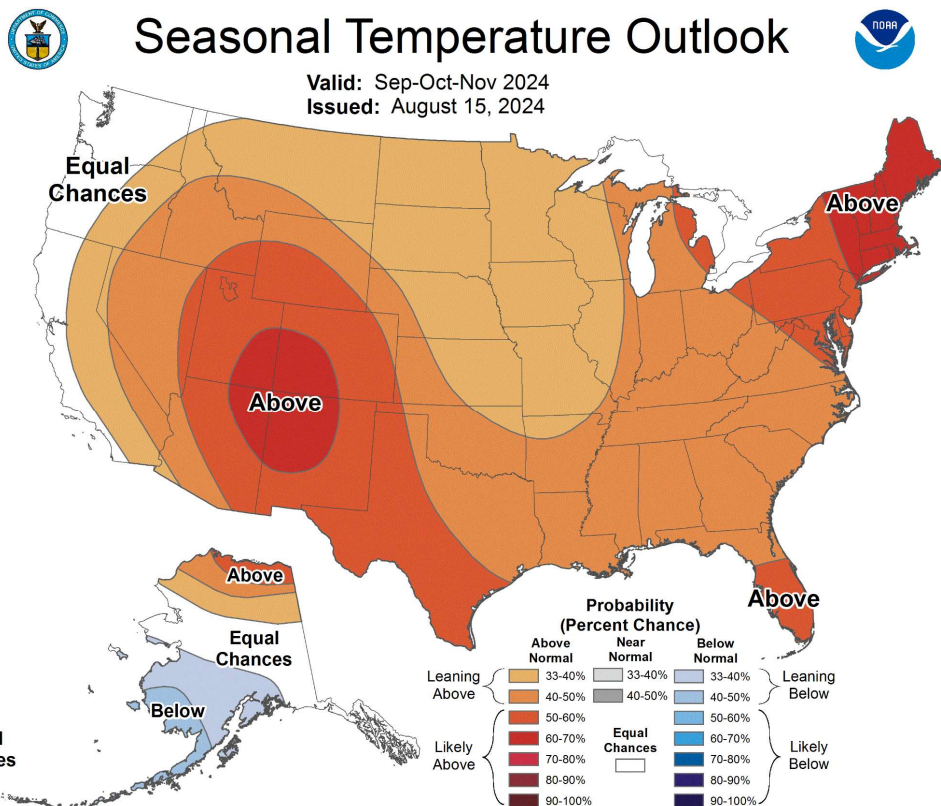


HYDROLOGIC CONDITIONS - STATEWIDE



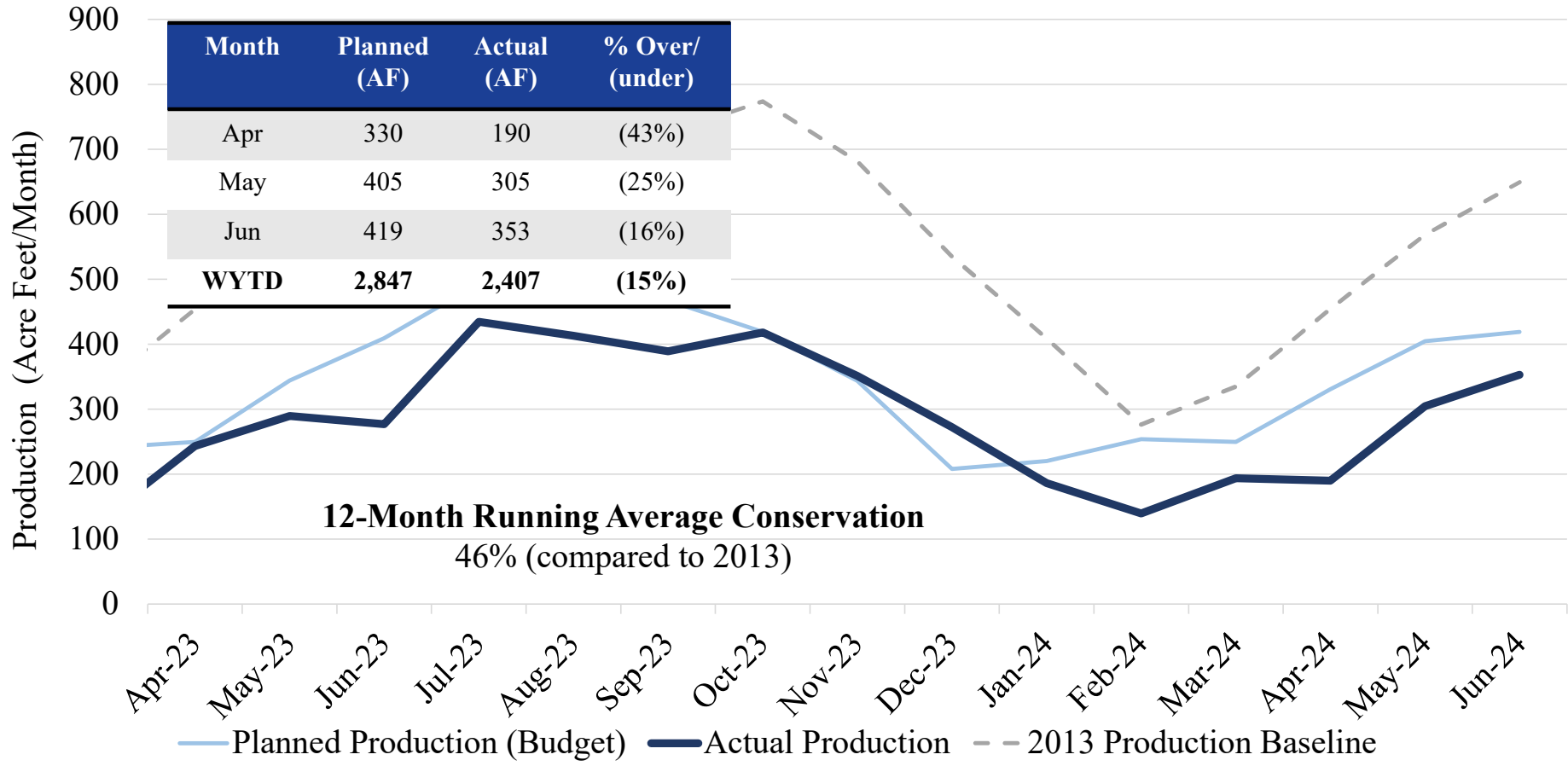


NWS Prediction



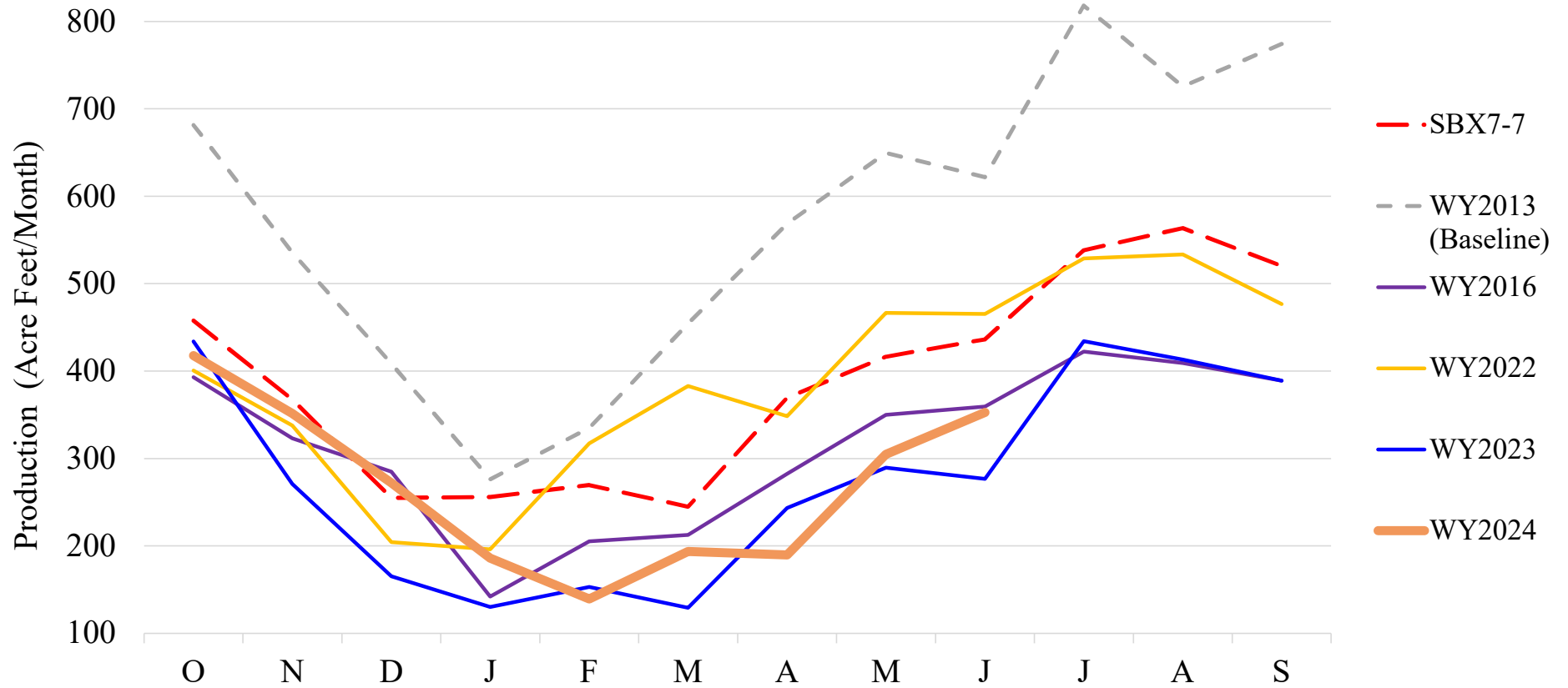


Planned vs. Actual Production





Annual Water Production Comparison





Cachuma Project

As of June 30, 2024

- 1. >100% of full storage capacity (194,832 AF*)
- 2. Spilled February – June 2024
- 3. ±1,800AF carryover lost to spill; ±223 AF surplus delivered
- 4. Water Available in Cachuma
 - WY24 allocation (100%) 2,651 AF
 - ID1 Exchange 125 AF
 - Total 2,776 AF
- 5. USBR granted 100% allocation for WY25



* Data obtained from County of Santa Barbara Flood Control District – *Rainfall and Reservoir Summary, as of December 31, 2023*

Jameson Lake

As of June 30, 2024



1. Current storage 4,848 AF (+100% capacity)
2. Spilled Dec 21, 2023 thru Aug 18, 2024
3. Water quality remains excellent; organic loading low
4. Targeting maximum deliveries in accordance with modified rule curve
5. Doulton Tunnel Intrusion ± 425 gpm (56 AFM)
 - full deliveries resumed in May 2024

Groundwater

As of June 30, 2024

1. Basin recovery continues following consecutive above average wet winters
2. Potable wells remain OFF; allowing for continued basin recharge; no near-term planned use
3. Evaluation of groundwater injection underway
4. Groundwater Management (Montecito GSA)
 - A. GSP adopted in May 2023 and DWR review remains pending
 - B. Copies available at montecitogsa.com
 - C. GSP implementation ongoing; focus on data acquisition / monitoring



Paden Well

Imported Water

As of June 30, 2024



1. State Water Project (SWP) Water
 - a. 2024 Table A Allocation 40% (final)
 - b. SWP remains surplus; No planned deliveries to Cachuma in 2024
 - c. Maximizing storage of surplus SWP water in Semitropic
 - d. Available SWP Water

• 2024 Table A allocation is 40%	1,320 AF
• Art 56 Carryover Water (as of 1/1/24)	1,323 AF
• Art 14b Water	148 AF
• ID1 exchange	(162 AF)
• Stored in Semitropic (Feb-Jun)	<u>(1,714 AF)</u>
Total	915 AF
• Planned banking in Semitropic (Jul-Dec)	(±430 AF)
• Remaining planned ID1 exchange (Jul-Nov)	<u>(±366 AF)</u>
Projected availability in SLR as of 12/31/24	119 AF
2. Supplemental Water- Not needed through WY2027



Stored Water

As of June 30, 2024

Semitropic Groundwater Banking & Exchange Program

- a. General terms of participation
 - 2nd priority right to bank up to 1,500 AFY
 - 1st priority right to withdraw 1,500 AFY
 - Guaranteed storage up to 3x shares 4,500 AF
 - Storage in excess of 3x shares permitted if Semitropic has unused storage capacity available
- b. Water stored (after 10% leave behind)

• 2018-2023	3,649 AF
• 2024	<u>1,543 AF</u>
Total	5,192 AF
- c. Reserved additional ±430 AF recharge capacity (Jul thru Dec)



Desalination

As of March 31, 2024

1. 2020 Water Supply Agreement with City of Santa Barbara
 - 50-year water supply contact
 - 1,430 AFY
 - deliveries irrespective of hydrologic conditions
 - deliveries commenced January 1, 2022
2. 117.38 AF delivered monthly
3. Treated as base supply



City of Santa Barbara, Charles E. Meyer Desalination Facility

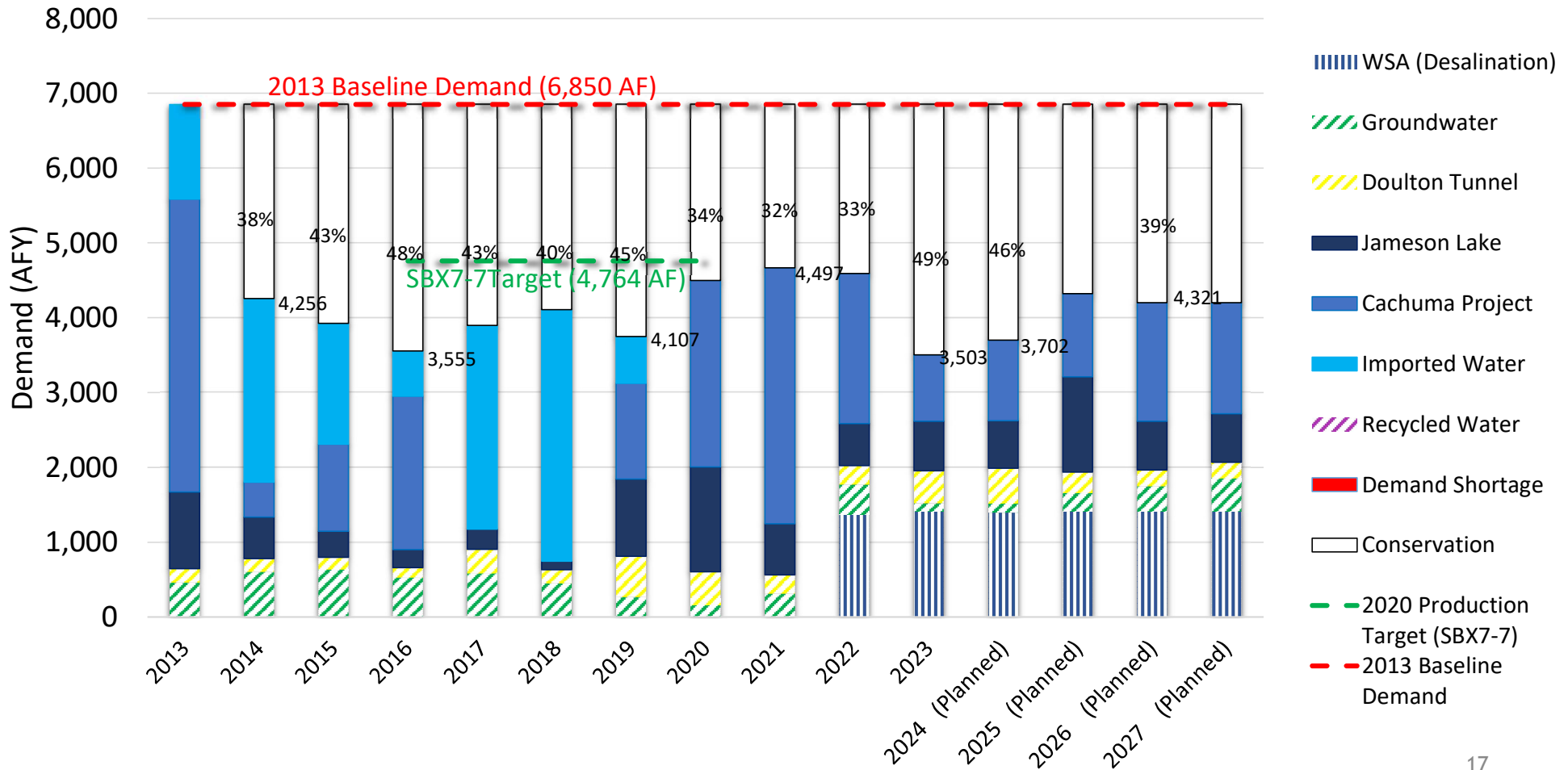


Water Supply Summary

Source	Total Available as of 6/30/24 (AF)	Total WY24 Planned (AF)	Total WY24 Production to Date (AF)
1. Cachuma Project	2,776	1,031	504
2. Jameson Lake	4,848	1,136	476
3. Doulton Tunnel Infiltration	125 AF/mo	475	311
4. Potable/NP Groundwater	80 AF/mo	270	73
5. Imported (SWP /Supplemental water)	915	0	0
6. WSA (Desalination)	117.4 AF/mo	1,409	1,056
7. Stored (Semitropic)	5,192	0	0
Total		4,321	2,420



Water Supply Outlook





Supporting Actions

1. Maximizing storage of surplus SWP water in Semitropic
2. Finalized agreement with Homer for transfer (or sale) of surplus SWP water (May 2024); Pursing agreement DWR/County of SB/Kern County
3. Evaluating the potential storage of surplus supplies in Montecito and Carpinteria Groundwater Basins
4. Continue ongoing initiatives supporting efficient water use
 - Water use efficiency rebates
 - Developing Water Budgets; implementation planned for late October 2024
 - Development of Demonstration Garden
 - Use of Automated Metering Infrastructure

Questions

