



CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: February 7, 2023

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Water Supply Update and Annual Water Supply Management Report

RECOMMENDATION: That Council:

- A. Receive an update on the Three-Year Water Supply Strategy; and
- B. Approve and adopt the City of Santa Barbara Water Supply Management Report for the 2022 Water Year, finding that the groundwater resources are in long-term balance in accordance with the conjunctive management element of the City's Enhanced Urban Water Management Plan.

EXECUTIVE SUMMARY:

This water supply update provides an overview of the City of Santa Barbara's (City) water supplies following the conclusion of Water Year (WY) 2022 and includes an analysis with the conclusion that the City's available water supplies are sufficient to meet demands for at least the next three years. Recent above-average rainfall in January has filled Gibraltar Reservoir to 100% capacity; the reservoir began spilling on January 5, 2023. Lake Cachuma is also at capacity. The January storms have significantly improved the City's water supply situation, eliminating the potential for a supply shortage for at least the next three years. This report also provides a summary of the 2022 Annual Water Supply Management Report (WSMR), which is a backward-looking document summarizing water supplies and issues for WY 2022 (October 1, 2021 through September 30, 2022). The report fulfills a mitigation requirement for the Coastal Branch of the State Water Project (SWP) to manage water supplies in a manner that prevents the long-term overdraft of local groundwater supplies.

DISCUSSION:

Water Supply Update

WY 2023 began on October 1, 2022, ending WY 2022. At the start of each new WY, staff update the City's water supply planning charts to reflect actual water used during the previous WY (in this case, October 1, 2021, through September 30, 2022) and extends the three-year water supply strategy one additional year for water security purposes. Thus, this supply strategy extends through WY 2025. Updates to the City's water supply

planning strategy are conservative to ensure water security for our community. This conservative planning approach allows staff to determine if the City has sufficient water to meet demands under three additional years of drought or during unanticipated supply interruptions due to equipment or infrastructure failure.

The recent update to the City's water supply planning strategy demonstrates that, even if drought conditions return next year or we experience supply interruptions, the City's water demands can be met for at least the next three years (through WY 2025) using water from Lake Cachuma, Gibraltar Reservoir, Mission Tunnel infiltration, desalination, and recycled water. A full Gibraltar Reservoir and a nearly full Lake Cachuma means the City can primarily rely on its surface water supplies over the next several years to meet community demands. However, conservatively assuming drought conditions return next year and persist for the next three years, the City should continue to embrace conservation as a way of life. Santa Barbara water customers' current 12-month running average conservation is 25% compared to 2013 baseline water demands, an approximately 2,500 acre-foot per year savings compared to pre-drought demands.

In May 2022, in response to statewide drought conditions, the California State Water Resources Control Board (SWRCB) adopted regulations requiring water agencies to implement the water-saving actions associated with a Stage Two Water Shortage, as defined in their Water Shortage Contingency Plans. In June 2022, Council adopted a Stage Two Water Shortage Alert in response to the SWRCB's regulations. If California experiences another dry winter, additional regulations are expected from the SWRCB. Staff is monitoring the situation and will report to Water Commission and Council on any new requirements. The analysis provided in this report is based on the City's specific water supply conditions, regardless of statewide requirements. Based on the above-average precipitation received through the end of January, staff plans to return to Water Commission and Council in spring 2023 with revisions that reflect our improved water supply situation and the State's amended regulations.

Annual Water Supply Management Report

The WSMR summarizes activities of the past WY (October 2021 through September 2022). The WSMR fulfills a mitigation requirement of the Coastal Branch of the SWP for managing water supplies to prevent long-term overdraft of local groundwater. City staff also uses the WSMR to inform Council and the public of recent activities and current water supply conditions. Council is tentatively scheduled to review and adopt the WSMR at their February 7, 2023, meeting; at that time, the draft report will be finalized. Summarized below are key issues in the WSMR for each City water source.

Lake Cachuma

One of the most important indicators of the City's water supply status is storage in Lake Cachuma, which ended WY 2022 at 36% capacity. Around July each year, the United States Bureau of Reclamation (Reclamation) determines the Cachuma Member Units', including the City's, allocation for the upcoming WY. In the past, this determination was

based primarily on current lake storage levels and the amount of available unaccounted-for water, or inflows that had not yet been allocated to Cachuma water use or users. In the past two years, Reclamation has modeled projected lake storage and drawdown to determine the allocation, with modeling efforts assuming no new inflows and looking ahead for two years. Cachuma Operation and Maintenance Board (COMB) staff and the Cachuma Member Units also model lake storage and try to work with Reclamation to determine an appropriate allocation based on the best available data. The COMB lake elevation and storage model indicated a 15% allocation was appropriate for WY 2023; however, Reclamation chose to set the allocation at 0%. Key issues for Lake Cachuma are the Cachuma Project State Water Rights Order, Cachuma Project Biological Opinion, and Cachuma Contract 2020. For a complete description of each issue, refer to the attached Draft Water Supply Management Report.

Gibraltar Reservoir

In WY 2022, the City received 1,626 AF of water from Gibraltar. At the end of WY 2022, Gibraltar was functionally empty and ready to capture winter rains. After recent storms, it is now full and spilling. Siltation related to the 2007 Zaca Fire, the 2016 Rey Fire, and the 2017 Thomas Fire has resulted in a significant reduction in storage capacity in Gibraltar. A bathymetric survey performed in August 2021 indicates Gibraltar has a maximum storage capacity of 4,693 AF, which is approximately one-third of its original capacity. The continued reduction in storage capacity was the impetus for initiating the Pass Through option under the 1989 Upper Santa Ynez River Operations Agreement (Pass Through Agreement). A final environmental assessment (EA) for the Warren Act Contract needed between Reclamation and the City to fully implement the Pass Through Agreement has yet to be released by Reclamation. Staff worked with Reclamation in 2019 to review and negotiate the draft Warren Act Contract language. Staff continues to wait for a response from Reclamation regarding outstanding EA issues.

Groundwater

The City's practice is to conjunctively use its groundwater basins by increasing pumping during droughts when surface water is limited. In response to recent drought conditions, increased groundwater pumping in WYs 2015 through 2018 provided an important water supply. The City has been resting its groundwater basins since the spring of 2017, and has relied more on surface water supplies and desalinated water. Due to ongoing dry conditions, the City began pumping groundwater from two wells located in the Storage Unit 1 groundwater basin this summer, for a total of 203 AF of groundwater in WY 2022. The City plans to continue using groundwater supplies through the next three WYs, should dry conditions persist. Based on the remaining estimated yields of the basins, groundwater resources are in long-term balance, and groundwater production does not exceed the estimated basin yield. The City has factored this into its water supply planning and does not plan to use groundwater supplies beyond the estimated remaining yield. This practice will ensure groundwater resources are kept in long-term balance. The City continues to monitor groundwater levels and water quality for seawater intrusion.

State Water Project

The City receives imported water from the SWP through the Central Coast Water Authority, a joint powers authority formed in 1991 to finance, construct, manage, and operate regional treatment and conveyance facilities delivering State water to member agencies, including the City. The 2022 SWP allocation was historically low at 5% of Table A contract amounts, which is 165 AF for the City. In addition to the 165 AF, the City had 734 AF of unused SWP water stored in the San Luis Reservoir. The City also purchased 862 AF of supplemental water in 2022, which was again stored in the San Luis Reservoir. The City used 384 AF of SWP water to supply its customers in WY 2022. It also exchanged 139 AF of SWP water for Cachuma allocation with the Sana Ynez River Water Conservation District, Improvement District No. 1, pursuant to the exchange agreement between both parties. Currently, the City has approximately 1,200 AF of SWP water stored in the San Luis Reservoir. Key issues for the SWP include the Delta Conveyance Project, State Water Contract Assignment, and legal action against the County of Santa Barbara. For a complete description of each issue, please refer to the attached Draft WSMR.

Desalination

In response to the severity of the recent drought, the City reactivated the Charles E. Meyer Desalination Plant (Plant) in 2017, which has a production capacity of 3,125 AFY. The City-owned Plant is operated under a contract with IDE Americas, who delivered 2,874 AF of desalinated water to the City's water system in 2022. In February 2021, Council changed the role of desalinated water within the City's water supply portfolio from a drought relief/recovery supply to a drought preparedness, response, and recovery supply. Due to the continuous production of desalinated water since the Plant's reactivation, the City has been able to store much of its Cachuma allocation in Lake Cachuma as carryover water. As a result, the City currently has nearly two years' worth (over 18,000 AF) of water demand stored in Lake Cachuma, which provides water supply security and stretches water supplies for future dry years.

Recycled Water

The City's upgraded recycled water filtration plant went online on November 2, 2015, replacing the previous filtration plant constructed in 1989. The goal of this project was to eliminate or significantly reduce the need to use potable water for blending to meet Title 22 water quality requirements. In 2022, the City supplied recycled water customers with 981 AF of water and 21 AF of potable blend water, marking a continued significant reduction in potable water use due to the project. Recycled water is an important component of the City's water supply portfolio since every drop of recycled water used to irrigate landscapes or flush toilets offsets potable water that would have been used instead.

Water Conservation

In accordance with the 2020 EUWMP, the City's Water Conservation Program functions to minimize the use of potable water supplies, meet the requirements of the California Water Efficiency Partnership Best Management Practices, and achieve compliance with State mandates. Water conservation measures are evaluated for cost-effectiveness based on the avoided cost of additional water supplies. The City updated its Water Conservation Strategic Plan in 2020, including its adopted conservation measures and programs. In WY 2022, City customers continued conserving water at high levels (25% compared to 2013 pre-drought water demands).

Supply Summary

The total water supply produced in WY 2022 was 11,450 AF, with 91 gallons used per person per day. The community continues to make water conservation a way of life, with the total demand for water in 2022 comparable to demands in the late 1950s.

BUDGET/FINANCIAL INFORMATION:

The proposed action has no financial impact on the City.

SUSTAINABILITY IMPACT:

A diverse and reliable water supply is essential for sustaining the City. Groundwater resources are in long-term balance in accordance with the conjunctive management element of the City's Enhanced Urban Water Management Plan.

ENVIRONMENTAL REVIEW:

Receiving water supply updates and approving and adopting a water supply management report are exempt from California Environmental Quality Act review.

WATER COMMISSION RECOMMENDATION:

The Water Supply Outlook was presented to the Water Commission on November 17, 2022, and the Annual Water Supply Management Report was presented on December 15, 2022. The Commission voted 3:0:2 in support of staff's recommendations.

ATTACHMENT: 2022 Draft Water Supply Management Report

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APPROVED BY: City Administrator's Office