



One Water and Adaptation Committee

3/9/2026 Committee Meeting

6a

Subject

Provide an update on the current groundwater storage programs in the Central Valley and efforts to identify and evaluate potential new groundwater storage partnerships

Executive Summary

This item provides the Board with information on Metropolitan's existing groundwater storage programs and potential new partnerships in the Central Valley. Metropolitan's groundwater storage programs along the State Water Project (SWP) have been instrumental in managing surplus surface water supplies and providing dry-year reliability for the region. Since 1994, Metropolitan has invested in programs to bolster its storage capacity with various banking partners in the Central Valley and the Antelope Valley, including programs with Semitropic Water Storage District (Semitropic), Arvin-Edison Water Storage District (Arvin-Edison), Kern Delta Water District (Kern Delta), Antelope Valley-East Kern Water Agency (AVEK), and Mojave Water Agency (Mojave). In total, Metropolitan has delivered over 1.7 million acre-feet (AF) of water and recovered more than 1.3 million AF through its banking programs. Metropolitan continues to seek groundwater storage opportunities to prepare for the future. As such, memoranda of understanding (MOUs) have been executed with other potential partners, including Friant Water Authority (Friant) and Westlands Water District (Westlands), Kern County Water Agency (KCWA), the Water Blueprint for the San Joaquin Valley Education Fund (Blueprint), and San Geronio Pass Water Agency (San Geronio). These MOUs allow the parties to explore mutually beneficial projects or programs such as groundwater storage, transfers, and exchange opportunities.

Details and Background

Background

Since 1994, Metropolitan has invested in several out-of-region groundwater storage programs, increasing its available storage capacity by 1.65 million AF. All storage programs have a one-time assessment loss of 10-11 percent when water is stored. Each program is described in detail below.

Semitropic Groundwater Banking and Exchange Program

The first Central Valley storage program was with Semitropic in 1994. Metropolitan invested a total of \$47 million to develop the program and currently has a 350,000 AF share of storage capacity in the program. Stored supplies in this program can be recovered by direct pumpback of the stored water to the California Aqueduct, or by Metropolitan exchanging these stored supplies for a portion of Semitropic's surface water allocation on the aqueduct. The program provides a range of put capacities (putting water into storage) from 31,675 to 90,500 acre-feet per year (AFY), depending on the availability of other partners' unused capacity. Similarly, the take capacity (withdrawal of water from storage) ranges from 38,200 to 239,700 AFY based on the final SWP allocation and available unused capacity. The agreement is set to expire in 2035.

Arvin-Edison Water Management Program

In 1996, Metropolitan invested \$12 million to partner with Arvin-Edison on the Arvin-Edison Water Management Program. The program provides Metropolitan with storage capacity of 350,000 AF, put capacity of 45,000 AFY, and take capacity ranging from 40,000 to 75,000 AFY, depending on the final SWP allocation. In 2007, the

program was expanded to include the Water Quality Sub Account (WQSA), in which Metropolitan may take delivery of Arvin-Edison surface water in Spring, and return an equivalent amount of water to Arvin-Edison in Summer. The WQSA provides operational flexibility to Arvin-Edison while delivering financial and water quality benefits to Metropolitan. Due to detections of 1,2,3-TCP in groundwater in 2018, Metropolitan has suspended the return of groundwater from the program until the water quality concerns can be further evaluated and managed. Metropolitan and Arvin-Edison are in discussions regarding future utilization of the program. The agreement is set to expire in 2035.

Kern Delta Water Management Program

Metropolitan and Kern Delta entered into an agreement in 2003 for the groundwater banking and exchange. Metropolitan's share of the program is 250,000 AF of storage capacity and 50,000 AFY of put-and-take capacity. Water can be recovered from the program by direct delivery from the groundwater basin or exchanges on the California Aqueduct. The agreement expires in 2029.

Mojave Water Management Program

In 2003, Metropolitan and Mojave entered into an agreement for the Mojave Water Management Program. Under the program, Metropolitan has a storage capacity of 390,000 AF. The put-and-take capacities are based on mutual agreement, and the final SWP allocation must be greater than 20 percent to recover water from the program to ensure Mojave has enough supplies to meet its firm demands. Metropolitan and Mojave staff are discussing potential amendments to the agreement to improve the program's efficiency and meet the needs of both parties. The agreement expires in 2035.

AVEK Storage and Exchange Programs

In 2016, Metropolitan and AVEK entered into an agreement to develop exchange and storage programs for SWP supplies. The exchange program allows AVEK to provide water to Metropolitan in an unbalanced exchange, which AVEK has not exercised. Under the storage program, Metropolitan has a storage capacity of 30,000 AF and a put-and-take capacity of 30,000 AFY. However, for AVEK to meet its firm demands, the SWP allocation must be greater than 20 percent to recover supplies from the program. The agreement was extended in 2025 to allow Metropolitan additional time to access its water while the High Desert Water Bank (HDWB) is constructed. The agreement will remain in effect until water can be recovered from the HDWB.

AVEK High Desert Water Bank Program

In 2019, Metropolitan and AVEK entered into an agreement to develop the HDWB. Under the agreement, AVEK will build and operate a groundwater recharge and recovery program, and Metropolitan will pay for all capital costs for the construction of the facilities. The current authorization for capital costs is \$211 million. However, in 2024, Metropolitan entered into a contract with the United States Bureau of Reclamation (USBR) for USBR to fund up to \$82 million of capital and project management costs in exchange for Metropolitan leaving 168,000 AF of conserved Colorado River water in Lake Mead. Once fully operational, the program will provide Metropolitan with a storage capacity of 280,000 AF and a put-and-take capacity of 70,000 AFY, with direct pump back to the SWP. Currently, program facilities are still under construction, and staff are evaluating potential options for addressing arsenic and nitrate in the groundwater. To date, the recharge basins, 20 recovery wells, the conveyance pipeline, and the turnout structure have been constructed. The remaining facilities which include seven additional recovery wells, electrical infrastructure, pipelines, and the treatment system are in various stages of design and construction. The original agreement expiration date of 2037 was extended and is set to terminate in 2057.

Sustainable Groundwater Management Act (SGMA)

The Semitropic Groundwater Banking and Exchange Program, the Arvin-Edison Water Management Program, and the Kern Delta Water Management Program are all located within the Kern County Groundwater Subbasin, which has been designated as critically overdrafted by the Department of Water Resources (DWR). The subbasin was at risk of probation and potential state intervention by the State Water Resources Control Board due to groundwater management deficiencies under SGMA related to subsidence, water quality, and other issues. The agencies within the subbasin made significant adjustments to their groundwater sustainability plans where the State Water Resources Control Board returned regulatory oversight to DWR. Metropolitan continues to monitor and participate in these SGMA proceedings to protect its storage programs and its interests in the SWP infrastructure in the subbasin.

Storage Program Status

Metropolitan's SWP groundwater storage account balances are summarized in the table below.

SWP Groundwater Storage Program	2026 Starting Balance (AF)
Semitropic*	237,000
Arvin-Edison	100,000
Kern Delta	142,000
Mojave	19,000
AVEK Storage & Exchange	30,000
AVEK HDWB	45,000

*Balance includes 20,000 AF to be sold to Semitropic in 2026.

Potential Partnerships

Since 2024, Metropolitan has signed four MOUs with various agencies to explore additional water management actions. In general, the purpose of the MOUs is for Metropolitan and its potential partners to collaborate, explore, and potentially develop new, mutually beneficial water management projects or programs. Each MOU and its progress are described in detail below.

Friant Water Authority and Westlands Water District

In May 2024, Metropolitan entered into an MOU with Friant and Westlands to evaluate opportunities to collaborate on new water management efforts, including surface and groundwater storage, transfers/exchanges, and policy support. There have been several positive discussions with both agencies.

Water Blueprint for the San Joaquin Valley Education Fund

Metropolitan and Blueprint entered into an MOU to evaluate, explore, and potentially develop projects or programs. Blueprint is a nonprofit coalition of water users/districts, farmers, commodity groups, municipalities, engaged with non-governmental organizations, community-based groups, and academia. Under the MOU, Metropolitan and Blueprint will partner on a groundwater investigation to identify suitable areas for groundwater banking within the Central Valley. Under a separate funding agreement, Metropolitan will reimburse Blueprint for up to \$238,820 in costs for the study, which is expected to take approximately nine months to complete. The partnership with Blueprint has sparked interest among some of its members in collaborating with Metropolitan. Metropolitan staff have been in discussions with Consolidated Irrigation District and Kaweah and Tule subbasins regarding potential partnership opportunities.

Kern County Water Agency

Metropolitan and KCWA executed an MOU in 2025. The purpose of the MOU is to address the long-term needs of Metropolitan and KCWA's Member Units (Member Units) with the goals of improved cost-effectiveness and/or water supply reliability. The MOU's objectives are to: (1) reduce regional reliance on any one water source and diversify supplies to enable flexibility as conditions change; (2) improve physical infrastructure, or access to physical infrastructure, through shared resources, science, data, and technology; (3) optimize and diversify SWP supplies and groundwater banking; and (4) develop funding opportunities for Member Units that maximize regional resources and provide opportunities to re-invest water supplies and infrastructure.

San Geronio Pass Water Agency

In 2025, Metropolitan and San Geronio executed an MOU to explore several water management programs, such as surface storage, groundwater storage, and transfers/exchanges. Metropolitan and San Geronio staff have discussed potential groundwater banking, surface storage partnerships, and infrastructure investments. Metropolitan staff are currently evaluating potential opportunities.

Summary

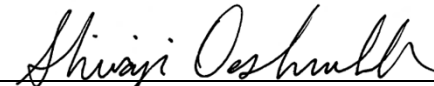
Metropolitan’s groundwater storage programs have been an invaluable asset for managing supplies amid changing conditions. Building a diverse portfolio of water management actions remains a priority for Metropolitan. As such, Metropolitan continues to explore opportunities not only to increase its storage capacity but, most importantly, to improve its reliability during droughts. Metropolitan staff are working under the current MOUs to develop and evaluate potential projects and programs, while in chorus working with existing partners to begin discussions on renegotiating agreements for programs nearing their terms. Metropolitan staff will keep the Board apprised of future program development and agreement renegotiation.



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3/4/2026

Date



Shivaji Deshmukh
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3/4/2026

Date