



One Water and Stewardship Committee

Update on Metropolitan's Groundwater Storage and Delivery Programs

Item 7a

June 12, 2023

Background



Water Surplus and Drought Management

- Diverse portfolio of groundwater and supply management programs
 - Out-of-region
 - Groundwater Storage
 - In-region
 - Cyclic Storage
 - Cost-Offset Program
 - Conjunctive Use Program
 - Supply management
 - Operational Shift Cost Offset Program
 - Reverse Cyclic Program

Groundwater Storage Programs



Storage Program Summary

Out-of-Region Programs Groundwater Storage



Storage Program	Max Storage (AF)	Max Put/ Take (AFY)	Current Storage (AF)	Issues/Considerations
Semitropic	350,000	90,500/ 38,200*	144,000	Delivering water for storage
Kern Delta	250,000	50,000/ 50,000	126,000	Kern Delta capacity to store for MWD is reduced due to high flows from the Kern River
Arvin-Edison	350,000	45,000/ 75,000	100,000	Unable to store water due to water quality issues
Antelope Valley-East Kern	30,000	30,000/ 30,000	27,000	No planned deliveries. Working to deliver water to HDWB program.
AVEK High Desert Water Bank (HDWB)	280,000	70,000/ 70,000	0	Under construction. Tentatively scheduled to start storing water in July 2023
Mojave	330,000	Mutual agreement/ 72,000	19,000	Unable to store water

*during low SWP allocation

In-Region Programs

In-Region Programs

Metropolitan tools help manage supplies locally during wet, surplus, and dry years



In-Region

Conjunctive
Use Program
(CUP)

Cyclic Program

Cyclic Cost-
Offset Program
(CCOP)

Supply Management

Operational
Shift Cost-
Offset Program
(OSCOF)

Reverse Cyclic
Program
(RCP)

Conjunctive Use Program



- Began in 1995 with the Las Posas Program
 - Las Posas Program mutually ended in 2011
- Expanded CUP Program in 2000
 - About \$72M in funding for facility improvements
 - \$45M in Prop 13
 - \$27M in MWD Funds
 - Nine (9) agreements
 - ✓Compton ✓Chino ✓Elsinore ✓Foothill ✓Lakewood
 - ✓Long Beach ✓Live Oak ✓Orange ✓Upper Claremont
- Current capacity of CUP Program:
 - 212,000 AF Total Storage
 - 70,000 AF of Dry Year Yield



Cyclic Program



- Pre-delivery of surplus supplies, for purchase at full-service rate in later years
 - Agreements establish Metropolitan-Member agency cyclic account
 - Eleven (11) active agreements
 - 24,000 acre-feet balance as of Jan. 2023
 - 545,000 acre-feet total capacity in-region
 - Two methods of delivery: **Direct and In-Lieu**
 - Metropolitan working to maximize puts to cyclic accounts
 - 141,000 acre-feet planned in 2023, including 29,000 AF with cost-offset credit
- | | | |
|---------------------|-----------------------------------|--|
| ✓ City of Burbank | ✓ Western MWD | ✓ San Diego County Water Authority |
| ✓ City of Pasadena | ✓ Eastern MWD | ✓ Upper San Gabriel Valley MWD |
| ✓ Calleguas MWD | ✓ Municipal Water District of OC* | ✓✓ Rancho California Water District via EMWD and/or WMWD |
| ✓ Three Valleys MWD | | |

Cyclic Cost-Offset Program (CCOP)



CCOP Board Authorization

- Board authorization in April 2019
- General Manager authority to:
 - Issue cost offset in a form of a credit to member agencies to capture additional water in cyclic accounts when:
 - Risk of not capturing all available imported supplies
 - Member agency takes action and incurs costs to accept cyclic deliveries at Metropolitan's request
 - Captured supplies are above baseline operations

Cyclic Cost-Offset Program (CCOP)



- Nine (9) agreements and drafting new agreements with three (3) member agencies
 - Establish operating plans with member agencies
 - Member agency takes action and incurs costs to accept cyclic deliveries at Metropolitan's request
 - Deliver water when needed
 - Regularly report to the OWS committee
- Coordinating pre-deliveries with member agencies
 - Plan to deliver 29,000 acre-feet
 - Additional deliveries expected

CCOP Process

Determining Need

Supplies Exceed Storage Management Availability



Initializing Credits

GM Initiated CCOP on April 15, 2023



Report to Board

- Conditions that led to action
- Provide delivery estimates
- Option for Board to stop CCOP

May 8, 2023
OWS Committee



Certification & Reconciliation

- Agency must accept surplus supplies above baseline
- Decrease local supply production
- Metropolitan Staff review costs incurred by agency
- Deliveries must be certified monthly and reconciled annually

Ending Credits

General Manager stops CCOP when regional supplies are no longer at risk



When would
CCOP credit
be made
available to
offset
Member
Agency
costs?











Need for additional
management actions

- Short-term actions for temporal conditions (e.g., Article 21 supplies)
- Long-term actions for conditions when supplies expected to exceed both demand and other storage management actions

In-Region Program Component

CUP

Cyclic + CCOP

 Agreement Terms	25 years	10 years
 Contractually Determined Puts	212,000 AF capacity	545,000 AF capacity
 Contractually Determined Takes	70,000 AF	✗
 Metropolitan Calls on Puts/Takes	✓	✗
 Billed at full-service rate	Upon extraction, unless agreement includes a buyback provision. No capacity charge.	At time of purchase, per purchase schedule. No capacity charge.
 Metropolitan offsets costs	During take years: pumping credit to offset O&M, power, and treatment costs (average \$312/AF) and watermaster fee (\$6/AF)	<u>CCOP</u> of up to \$264/AF and evaporative losses of up to 5% for two (2) years. Five (5) year purchase schedule.
 Considered in the Water Supply Allocation	✓	✗
 Metropolitan provided funding for infrastructure updates	~\$72 Million	✗

Dry-Year Supply Management

In-Region Programs

Operational Shift
Cost-Offset
Program
(OSCOP)

Reverse Cyclic
Program
(RCP)

Operational Shift Cost-Offset Program



Shaded regions illustrate reduced SWP use after shifting to CRW connections

- Shift demands from State Water Project (SWP) to Colorado River Water (CRW) to preserve SWP supplies
- Agreements between Metropolitan and Member agencies
 - ✓ City of Los Angeles
 - ✓ TVMWD
 - ✓ USGVMWD and CBMWD
 - ✓ City of Santa Monica
 - ✓ EMWD
- Issue credits for costs incurred by member agency operational changes to accommodate Metropolitan
- **Performance based:** Credit keyed to treatment surcharge and up to \$5/AF for additional costs to manage shift
 - **87,000 AF shifted, May 2021 to March 2023**

Reverse Cyclic Program






- Program offered only in CY 2022
- Agreement between Metropolitan and member agencies
 - ✓ USGVMWD
 - ✓ TVMWD
 - ✓ Calleguas MWD
- Pre-sale water at the 2022 full-service rate for deferred delivery in future at Metropolitan's discretion
 - 25,000 acre-feet purchased in 2022
- Metropolitan will deliver water to the member agency no later than 5 full calendar years from date of purchase
 - No losses will be associated with deliveries



In-Region Program Component

Operational Shift Cost-Offset

Reverse Cyclic

 Agreement Terms	CYs 2021, 2022, 2023	CY 2022
 Billed at full-service rate	At time of delivery. No capacity charge.	Billed in CY 2022. No capacity charge.
 Metropolitan cost offset	Up to treatment surcharge + \$5/AF	Member agency pays 2022 rate for future deliveries
 Certification and reconciliation procedures	✓	✓
 Supply management action to preserve SWP supplies	Shift from SWP supplies to Colorado River supplies	Defer delivery: Metropolitan will deliver water no later than five (5) full calendar years from the date of purchase

Programs
Help
Improve
Regional
Supply
Reliability

Next Steps

- Next workshop with groundwater agencies and Watermasters on **June 28, 2023**
- Metropolitan/member agency partnerships help increase the amount of water brought to the region
 - **Supplies managed locally**
 - Dry-years
 - Emergencies
- Developing recommendations for changes to the CCOP, which offsets member agency costs incurred to take action for Metropolitan
 - **Action Item for August Board**



Out-of-Region
Programs
Groundwater
Storage



Semitropic Program

Return Capability: Exchange and direct pump back

Storage Max: 350,000 acre-feet

Put: 90,500 acre-feet per year

Take: 38,200 acre-feet per year during low SWP allocation

Current Storage: ~144,000 acre-feet

Agreement Termination: November 2035

Status: Currently delivering water for storage

Out-of-Region
Programs
Groundwater
Storage



Kern Delta Program

Return Capability: Exchange and limited direct pump-back

Storage Max: 250,000 acre-feet

Put: 50,000 acre-feet per year

Take: 50,000 acre-feet per year

Current Storage: ~126,000 acre-feet

Agreement Termination: December 2029

Status: Unable to store due to high flows from the Kern River

Out-of-Region
Programs
Groundwater
Storage



Arvin-Edison Program

Return Capability: Exchange and direct pump back

Storage Max: 350,000 acre-feet

Put: 45,000 acre-feet per year

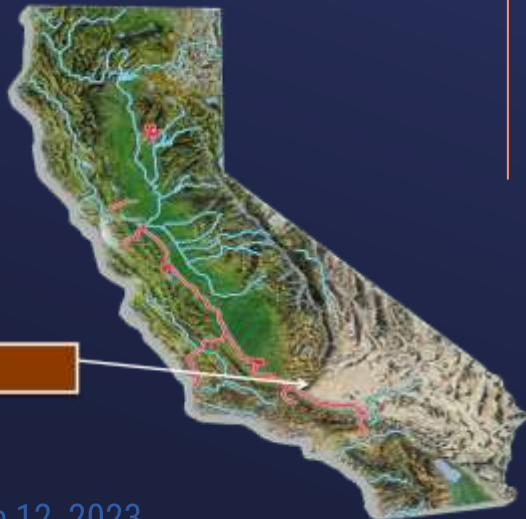
Take: 75,000 acre-feet per year

Current Storage: ~100,000 acre-feet

Agreement Termination: November 2035

Status: Unable to store due to water quality issues in the basin

Out-of-Region
Programs
Groundwater
Storage



Antelope Valley–East Kern Storage Program

Return Capability: Mainly exchange capability with SWP supplies

Storage Max: 30,000 acre-feet

Put: 30,000 acre-feet per year

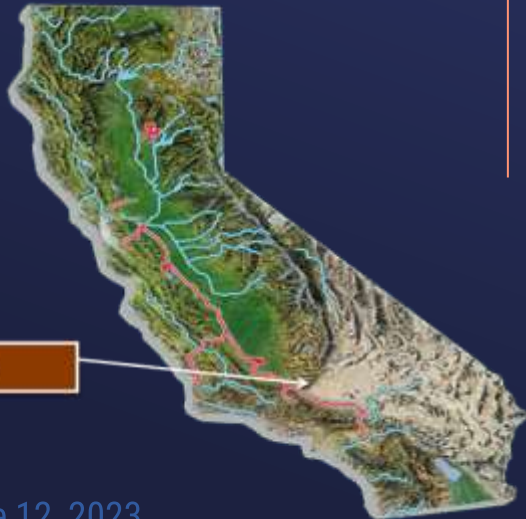
Take: 30,000 acre-feet per year

Current Storage: 27,000 acre-feet

Agreement Termination: December 2025

Status: No planned deliveries. Working to deliver water to HDWB program.

Out-of-Region
Programs
Groundwater
Storage



Antelope Valley – East Kern High Desert Water Bank Program

Return Capability: Direct pump back

Storage Max: 280,000 acre-feet

Put: 70,000 acre-feet per year

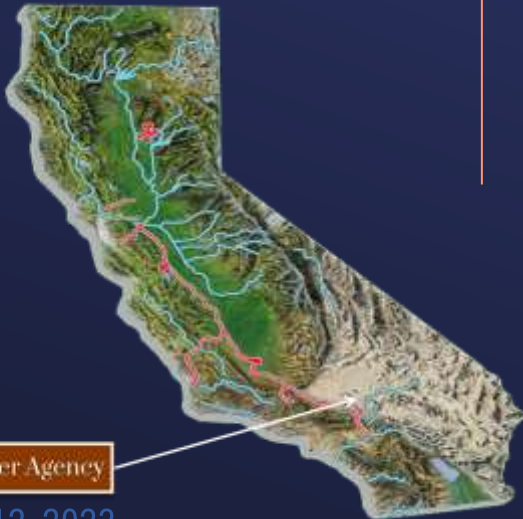
Take: 70,000 acre-feet per year

Agreement Termination: September 2037

Status: Under construction

- Tentatively scheduled to deliver water for recharge in July 2023
- Returning to Board with an Action Item

Out-of-Region
Programs
Groundwater
Storage



Mojave Water Agency

June 12, 2023

Mojave Program

Return Capability: Exchange only

Storage Max: 330,000 acre-feet

Put/Take Max: mutual agreement per year

Current Storage: ~19,000 acre-feet

Agreement Termination: December 2035

Status: Agency not accepting additional water to store