



● **Water Surplus and Drought Management Update** *Conditions as of 11/29/2022*

Summary

This report accounts for water supply, demand, and storage conditions for calendar year (CY) 2022 as of November 29, 2022. This report also tracks the hydrologic conditions for water year (WY) 2022-2023.

For CY 2022, an estimated 1.34 million acre-feet (MAF) of imported supply are available to help meet demand. The State Water Project (SWP) supply is 258 thousand acre-feet (TAF), which includes 134 TAF of water allocated for Human Health and Safety needs from the Department of Water Resources (DWR) consistent with terms of the State Water Contract. The Colorado River supply is 1,083 TAF and reflects the adjustment to Metropolitan’s supply from higher priority water use as reported by the United States Bureau of Reclamation (USBR). Through the priority system, water not used by the higher priority water users in California becomes available as a supply to Metropolitan. The higher priority water users continue to use less water than their approved water orders, resulting in an increase in Metropolitan’s projected Colorado River supply by an estimated 35 TAF. This estimate may continue to fluctuate as we approach the end of the year.

The demand on Metropolitan is currently estimated at 1.66 MAF for CY 2022. The demand projection has been decreasing all year from previous estimates. This reflects the effectiveness of ongoing conservation efforts and the increased use of local supplies that is reducing the need for the limited SWP supply. SWP Dependent Area agencies under the Emergency Water Conservation Program (EWCP) have dropped their water use by roughly 35 percent below their expected water use and are collectively 3 percent below the collective volumetric limits set in the EWCP. The current estimated supply/demand gap is estimated to be 322 TAF. Metropolitan will satisfy this gap through withdrawals from storage as detailed on **Attachment 1** and through continued demand reductions from the EWCP. Metropolitan is projecting to end the year with 2.3 MAF of water in its dry-year storage accounts.

As for CY 2023, DWR announced its initial SWP allocation on December 1, 2022. Given the continuation of unprecedented drought conditions and limited water supply in 2022, the initial allocation for 2023 is 5 percent of Table A contract amounts. DWR is also provisionally allocating additional SWP supplies to meet Human Health and Safety needs. Allocations will be updated monthly as snowpack and runoff information is assessed, with a final allocation typically determined in May or June 2023. Hydrologic conditions to date are presented on page 2. Metropolitan is not planning for a full Colorado River Aqueduct (CRA) in CY 2023 due to dire conditions on the Colorado River.

Operational limitations, potential conservation mandates from USBR, and future water obligations will limit access and availability to Metropolitan’s dry-year storage accounts for CY 2023. In response, Metropolitan staff will update the Board of Directors in December on initial volumetric limits for the SWP Dependent Area EWCP for 2023 and call for immediate outdoor water use reductions and extraordinary conservation in Blended and Colorado River Exclusive Areas. Metropolitan is also anticipating the need for regionwide imported supply restrictions under a Water Supply Allocation Plan to be put into effect later in 2023. Effective and timely conservation by the region is crucial to stretch the limited supply we have and mitigate the region’s need for deeper mandatory impacts in future years.

Purpose

Informational

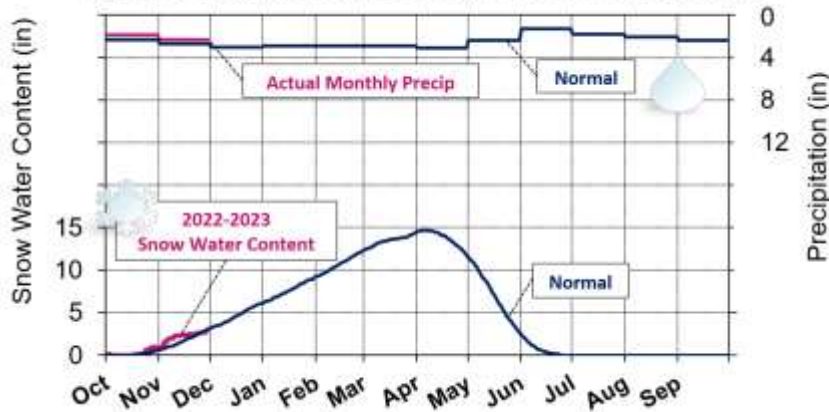
Attachments

- Attachment 1: Projected 2022 WSDM Storage Detail (5 percent SWP Table A allocation)
- Attachment 2: Agreements to Exchange or Return Stored Water and Cyclic Program Balances
- Attachment 3: Emergency Water Conservation Program Performance

Detailed Report

This Water Surplus and Drought Management (WSDM) report updates water supply and demand conditions for CY 2022 and developing hydrologic conditions for WY 2022-2023.

Upper Colorado Basin Snowpack & Precipitation



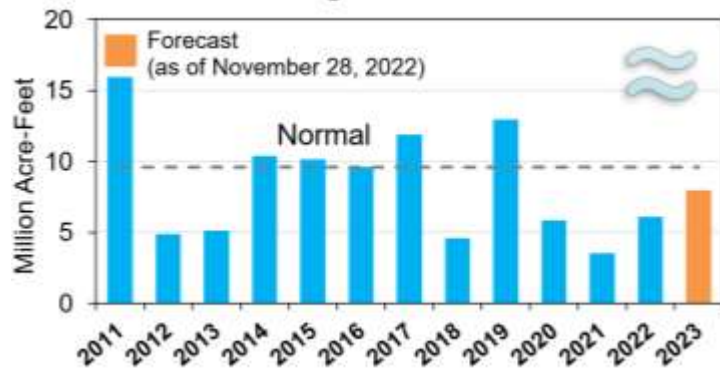
Upper Colorado River Basin

✳ Normal snowpack water content for this date (3.0 inches or 100% of normal for this date). Snow data early in the season may not provide a valid measure of conditions.

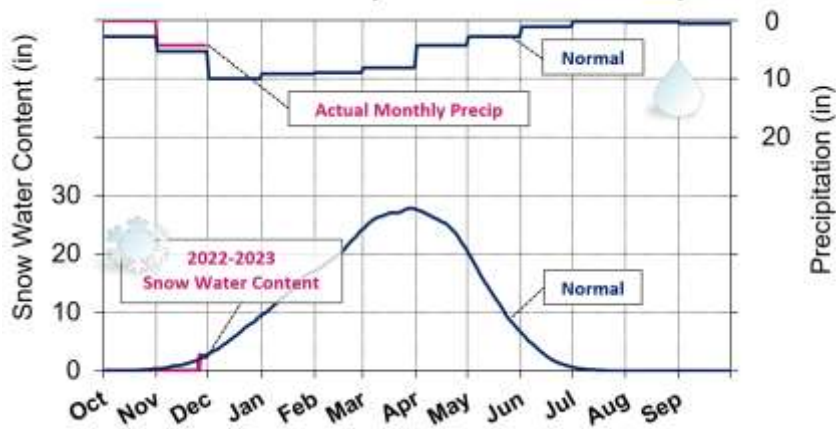
◆ Below normal precipitation to date (4.2 inches or 86% of normal for this date).

≈ Runoff into Lake Powell for WY 2023 is forecasted at 83% of normal.

Powell Unregulated Water Year Inflow



Northern Sierra Snowpack & 8 Station Precipitation



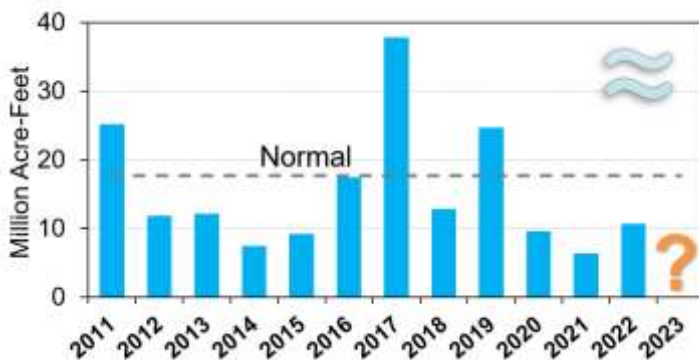
Sacramento River Basin

✳ Near normal snowpack water content for this date (2.5 inches or 98% of normal for this date). Snow data early in the season may not provide a valid measure of conditions.

◆ Below normal precipitation to date (4.3 inches or 54% of normal for this date).

≈ Runoff forecast for WY 2023 unavailable at the time of this report.

Sacramento River Water Year Runoff



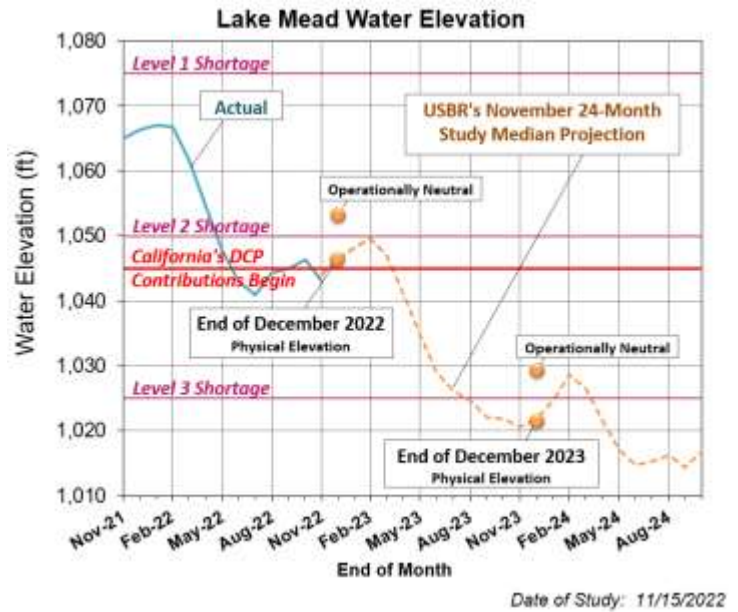
CRA Supplies	Acre-Feet
Basic Apportionment	550,000
IID/ MWD Conservation Program	105,000
CVWD - 2nd Amendment, Exchange of Additional Water	53,000
PVID Following Program	25,000
Exchange w/ SDCWA (IID/Canal Lining)	280,000
Exchange w/ USBR (San Luis Rey Tribe)	16,000
Lower Colorado Water Supply Project	9,000
Bard Seasonal Following Program	3,000
Quechan Diversion Forbearance	6,000
Quechan Seasonal Following Program ¹	0
Higher Priority Water Use Adjustment ²	35,000
Total CRA Supplies³	1,083,000

¹ Rounded to the nearest thousand.

² Per USBR Forecast (11/29/22).

³ Total may not sum due to rounding.

- Lake Mead storage is currently 7.2 MAF or elevation 1,043.1 feet (28 percent of total capacity).
- The Lower Basin is at a Level 1 shortage in CY 2022. Supplies to Metropolitan will not be curtailed and Metropolitan will have full access to its Intentionally Created Surplus (ICS) in CY 2022 to fill the CRA.
- The Lower Basin will be in a first-ever Level 2a shortage in CY 2023. Under a Level 2a shortage, Metropolitan will not be impacted. However, due to the critical conditions on the Colorado River, USBR has called on the Basin states to develop additional conservation to protect critical elevations in Lakes Powell and Mead. Metropolitan and other California water agencies that rely on Colorado River supplies have committed to reduce water use by up to 400,000 acre-feet each year beginning in 2023 through 2026.
- Metropolitan will use ICS to meet future DCP contributions; additional use of ICS to meet service area demand remains uncertain.



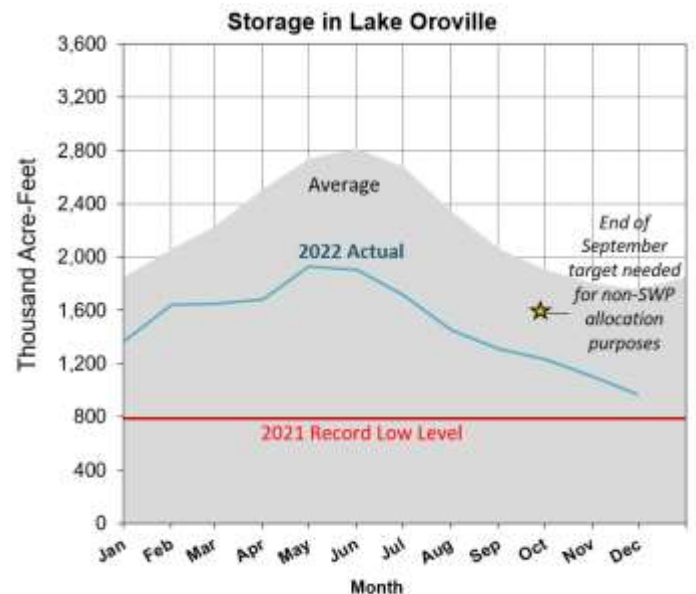
SWP Supplies	Acre-Feet
Table A (5% SWP allocation)	96,000
Article 21	0
Port Hueneme ¹	0
SWC Buyers Group Transfers ²	6,000
Yuba Accord Dry-Year Purchase Program ²	14,000
MWDOC/IRWD Partnership	4,000
Purchase of SDCWA's Semitropic Supply	4,000
Human Health & Safety Supply	134,000
Total SWP Supplies³	258,000
Total Supplies (CRA + SWP)	1,341,000
(Prior to storage actions)	

¹ Rounded to the nearest thousand.

² Current estimate subject to change based on buyer/seller participation and losses.

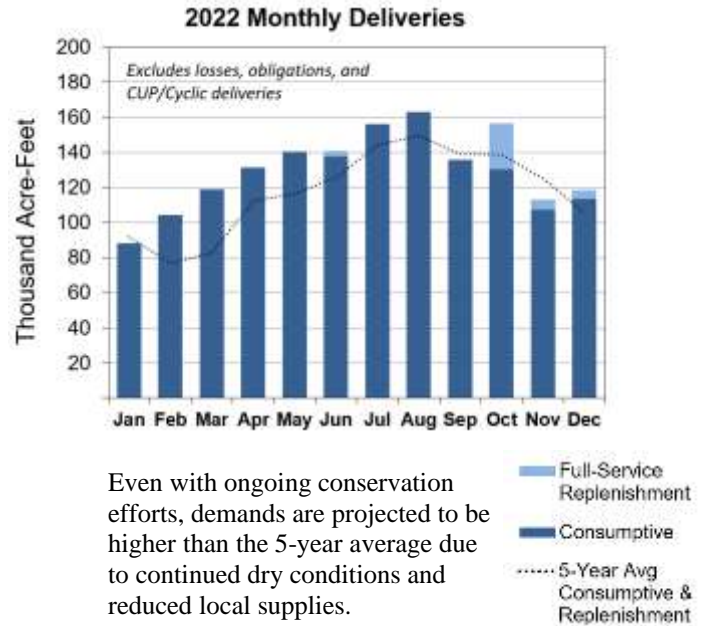
³ Total may not sum due to rounding.

- In addition to the 5 percent Table A allocation, DWR is providing water for Contractors' unmet Human Health and Safety needs (HH&S) in CY 2022. DWR expects Contractors receiving HH&S water to take mandatory conservation measures and return any HH&S water to the SWP in a future year. DWR has approved 134 TAF of HH&S supply for Metropolitan.
- Lake Oroville is currently at 968 TAF (27 percent of total capacity) or 55 percent of historical average as of the date of this report.
- The initial SWP Table A allocation for CY 2023 is 5 percent plus additional supplies to meet HH&S needs.



Current Demand	Acre-Feet
Member Agency Consumptive ¹	1,542,000
Member Agency Replenishment	40,000
Coachella Valley Water District Agreement	15,000
Return to Imperial Irrigation District ²	0
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	50,000
Cyclic Deliveries	0
Total Demands ³	1,664,000

¹ Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.
² Per USBR Forecast (11/29/22).
³ Total may not sum due to rounding.

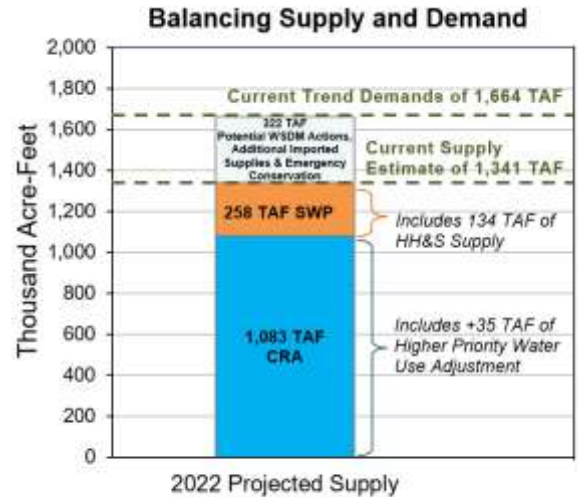


Even with ongoing conservation efforts, demands are projected to be higher than the 5-year average due to continued dry conditions and reduced local supplies.

MANAGING REGIONAL SUPPLY AND DEMAND

Supply/Demand Balance	Acre-Feet
Total Supplies	1,341,000
Total Demands	1,664,000
Current Balance Estimate ¹	-322,000

¹ Total may not sum due to rounding.



Dry-Year WSDM Strategies/Actions

The following WSDM actions are being pursued or are underway to satisfy the estimated supply/demand gap in 2022, enhance Metropolitan’s capability of delivering supplies to the SWP Dependent Areas, and reduce storage withdrawals in 2022.

- Strategic withdrawals of water from dry-year storage reserves.
- Coordinating with member agencies to identify new drought actions targeted at Metropolitan’s SWP Dependent Areas.
- Executed an agreement with DWR to allow for water withdrawals from Perris Flex storage at Castaic Lake.
- Increased exchange amounts with Arvin-Edison for Metropolitan to receive Friant surface water supplies.
- Maximizing use of Colorado River or stored supplies by using the Greg Avenue pump station and drafting water from Diamond Valley Lake to serve the Lakeview Pipeline and the Mills Plant.
- Advancing infrastructure improvements to reduce the impact of the current drought and provide future system flexibility.
- Working with member agencies to switch from service connections providing SWP supplies to alternate connections that use Colorado River supplies, both within and outside of the Operational Shift Cost-Offset Program.
- Purchasing San Diego County Water Authority’s groundwater stored in the Semitropic Water Bank and leasing their pumping capacity.
- Partnering with non-member agencies such as the San Bernardino Valley Municipal Water District, a SWP Contractor, for exchange opportunities.
- Utilizing the Coordinated Operating Agreement with Municipal Water District of Orange County and Irvine Ranch Water District to enhance SWP supplies.
- Securing one-year transfers with various water districts north of the Sacramento-San Joaquin River Delta.
- Implementing the Emergency Water Conservation Program in the SWP Dependent Area.
- Receiving deliveries of HH&S supply from DWR to help meet demands in the SWP Dependent Area.
- Executed a Reverse Cyclic Program agreement with the Calleguas Municipal Water District to defer some deliveries to a future year.

2022 WSDM Storage Detail

	1/1/2022 Storage Levels	Net Projected Storage Action Put (+) / Take (-)	Projected End of Year 2022 Balance ¹	2022 Total Storage Capacity
WSDM Storage				
Colorado River Aqueduct Delivery System	1,252,000	-53,000	1,199,000	1,657,000
Lake Mead ICS	1,252,000 ²	-53,000	1,199,000	1,657,000
State Water Project System	636,000	-157,000	479,000	1,879,000
MWD SWP Carryover ³	38,000	-23,000 ⁴	15,000	350,000
DWCV SWP Carryover ³				
MWD Articles 14(b) and 12(e)	0	0	0	N/A
Castaic and Perris DWR Flex Storage	49,000	-46,000 ⁵	3,000	219,000
Arvin Edison Storage Program	136,000	-17,000 ⁶	119,000	350,000
Semitropic Storage Program	218,000	-51,000 ⁷	167,000	350,000
Kern Delta Storage Program	149,000	-20,000	129,000	250,000
Mojave Storage Program	19,000	0	19,000	330,000
AVEK Storage Program	27,000	0	27,000	30,000
In-Region Supplies and WSDM Actions	795,000	-101,000	694,000	1,246,000
Diamond Valley Lake	600,000	-109,000	491,000	810,000
Lake Mathews and Lake Skinner	179,000	17,000	196,000	226,000
Conjunctive Use Programs (CUP) ⁸	16,000	-9,000	7,000	210,000
Other Programs	674,000	-11,000	663,000	1,181,000
Other Emergency Storage	381,000	0	381,000	381,000
DWCV Advanced Delivery Account	293,000	-11,000	282,000	800,000
Total	3,357,000	-322,000	3,035,000	5,963,000
Emergency	750,000	0	750,000	750,000
Total WSDM Storage (AF) ⁹	2,607,000	-322,000	2,285,000	5,213,000

¹ Preliminary end of year balances, subject to DWR adjustments and USBR final accounting in May 2023.

² Reflects USBR's final accounting for 2021, released in May 2022. This amount is net of the water Metropolitan stored for IID in Lake Mead in an ICS sub-account.

³ Total storage capacity varies year to year based on prior year remaining balance added to current year contractual limits.

⁴ Net storage action of withdrawing 38,000 AF from carryover and adding/repositioning 15,000 AF of previously banked groundwater into carryover storage.

⁵ Available for withdrawal from Castaic Lake in 2022 pursuant to an MWD-DWR agreement.

⁶ Take amounts dependent on exchange capabilities.

⁷ Includes leasing 5,000 AF of return capacity from SDCWA. This provides Metropolitan the ability to withdraw more of its groundwater stored in the program.

⁸ Total of all CUP programs including IEUA/TVMWD (Chino Basin); Long Beach (Central Basin); Long Beach (Lakewood); Foothill (Raymond and Monk Hill); MWDOC (Orange County Basin); Three Valleys (Live Oak); Three Valleys (Upper Claremont); and Western.

⁹ Total WSDM Storage level subject to change based on accounting adjustments.

Agreements to Exchange or Return Stored Water

	Future Returns ¹
CR Total (AF)	802,000
Water Stored for IID under the California ICS Agreement and its Amendment or the 2021 Settlement Agreement with IID	262,000 ²
Storage and Interstate Release Agreement with Southern Nevada Water Authority	330,000 ³
Coachella Valley Water District Agreement	210,000 ⁴
SWP Total (AF)	350,000
DWR Flex Storage	216,000 ⁵
Human Health & Safety	134,000 ⁶
Total (AF)	1,152,000

¹ Rounded to the nearest thousand. Subject to change based on accounting adjustments.

² IID can request return in any year, conditional on agreement terms.

³ Up to 30,000 AF per year beginning no earlier than 2022.

⁴ Obligation to be met by the end of 2026.

⁵ Flexible storage withdrawals from Castaic Lake and Lake Perris must be returned within five calendar years. Metropolitan is required to return 170,000 AF by 2026 for withdrawals in 2021. Metropolitan is planning to withdraw 46,000 AF in 2022, as shown on page 5, and will need to return this amount by 2027.

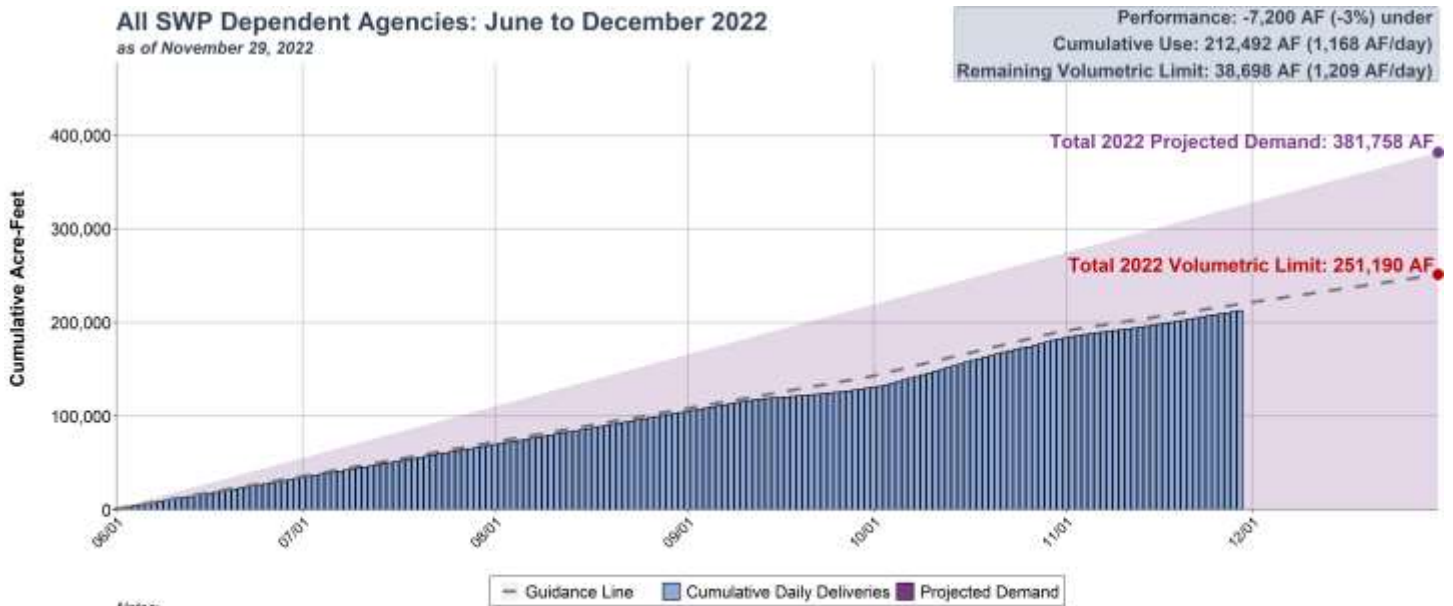
⁶ Metropolitan's scheduled CY 2022 Human Health & Safety deliveries. Any water taken must be returned by 2027.

Cyclic Program Activity

CY	Starting Balance (AF)	CY Actions (AF)				Ending Balance (AF)
		Cyclic Pre-Delivery	Cyclic Cost-Offset Pre-Delivery	Total Pre-Delivery	Sale Out of Cyclic	
2019	51,000	147,000	19,000	166,000	91,000	126,000
2020	126,000	2,000	0	2,000	50,000	78,000
2021	78,000	0	0	0	28,000	50,000
2022 ¹	50,000	0	0	0	32,000	18,000

¹ Projected Cyclic program activity for the year. Subject to change.

Emergency Water Conservation Program Performance



Notes:

1. Guidance line is a representation of the total volumetric limit on a cumulative daily basis. It assumes a linear path, unless a monthly pattern is provided by a member agency.
2. Performance is the acre-foot and corresponding percent deviation from the guidance line, per as of date.
3. For Path 2 agencies, monthly penalties paid will be credited if actual total water use is below the total volumetric limit at the end of the seven-month period.
4. Tracking of cumulative daily deliveries only include those agencies planning to receive SWP supplies June - December 2022.
5. Projected demand as of April 28, 2022.

Disclaimer: Data presented is preliminary and subject to change based on monthly reconciled billing data.