



● **Water Surplus and Drought Management Update** *Conditions as of 6/27/2022*

Summary

This report accounts for water supply, demand, and storage conditions for calendar year (CY) 2022 as of June 27, 2022. The report also tracks the hydrologic conditions for water year (WY) 2021-2022.

Imported supply available to help meet demand is currently estimated to be 1.17 million acre-feet (MAF) which includes 258 thousand acre-feet (TAF) of SWP supply and 911 TAF of Colorado River supply. Metropolitan's SWP supply includes 133 TAF of human health and safety (HH&S) supply from the Department of Water Resources (DWR). Any HH&S supply Metropolitan receives must be returned to DWR similar to water withdrawn from DWR's Flex Storage. The projected amounts to be returned to DWR are shown in Attachment 2. Metropolitan's Colorado River supply is based on the United States Bureau of Reclamation's (USBR) daily forecast of water use for California's Colorado River water users for this year. Since the Coachella Valley Water District is projected to use 17 TAF less than anticipated this year, that supply becomes available to Metropolitan and is now being shown in the Colorado River Supply table. Metropolitan's Colorado River supply also reflects the projected higher water use of other higher priority water users that decreases Metropolitan's projected Colorado River supply by 103 TAF. Despite this decrease, Metropolitan will be able to move a full Colorado River Aqueduct (CRA) this year. The current demand on Metropolitan is estimated to be 1.80 MAF. Since supply is less than demand, Metropolitan's supply/demand gap for calendar year 2022 is currently projected to be 629 TAF. Metropolitan will satisfy this supply/demand gap through storage withdrawals.

June 1st marked the beginning of Metropolitan's Emergency Water Conservation Program, and less than a month into the program, use of State Water Project (SWP) supply in the SWP Dependent Area has declined. At the time of this report, affected member agencies used 4 percent less than the June volumetric limit on aggregate as depicted in Attachment 3. To drive down demands of SWP supply, affected agencies used a combination of strategies including increased conservation messaging, rigorous outdoor watering restrictions and enforcement, and increased production of local supply. Water savings from this program are expected to decrease the region's annual demand on Metropolitan.

Conservation efforts across the region must continue especially as we enter the hotter summer months. For the SWP Dependent Area member agencies under the Emergency Water Conservation Program, Metropolitan is prepared to take additional actions which include banning all outdoor watering and moving all affected agencies to the volumetric limit compliance path should conservation efforts wane. Water saved this year will also help preserve critical water supplies for next year. This is especially important when the amount and conditions under which Intentionally Created Surplus (ICS) will be available to Metropolitan in 2023 is uncertain. This uncertainty is due to the Commissioner of the USBR's recent call for additional conservation efforts in 2023 to protect critical elevations in Lakes Powell and Mead. Metropolitan should have more information about the volumes and conditions under which ICS will be available in 2023 by next month.

Purpose

Informational

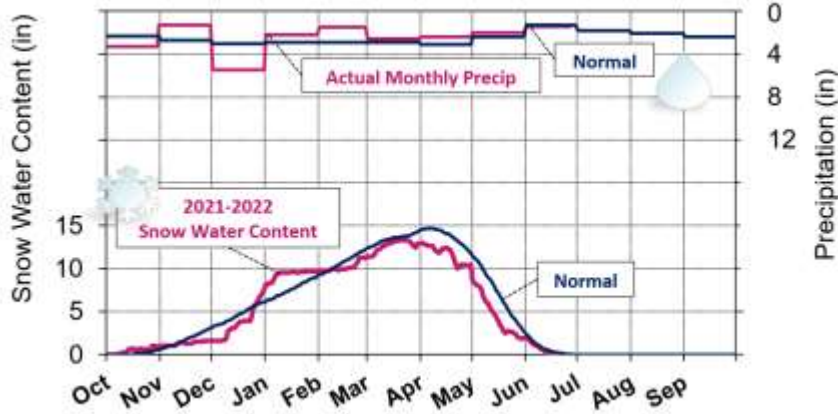
Attachments

- 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 2021-2022.

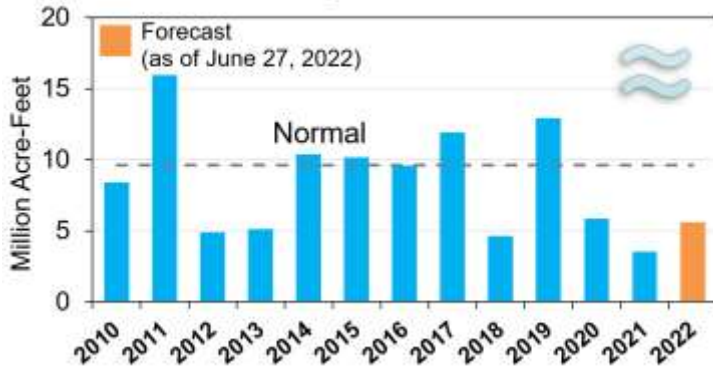
Upper Colorado Basin Snowpack & Precipitation



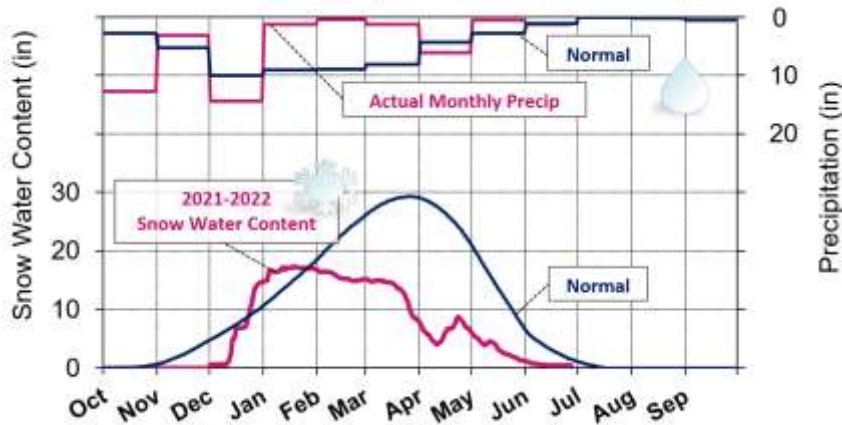
Upper Colorado River Basin

- ✳ Snowpack water content peaked in mid-March (13.3 inches or 91% of normal April 1).
- ◆ Near normal precipitation to date (22.2 inches or 91% of normal).
- ≈ Runoff into Lake Powell for WY 2022 is forecasted at 58% of normal.

Powell Unregulated Water Year Inflow



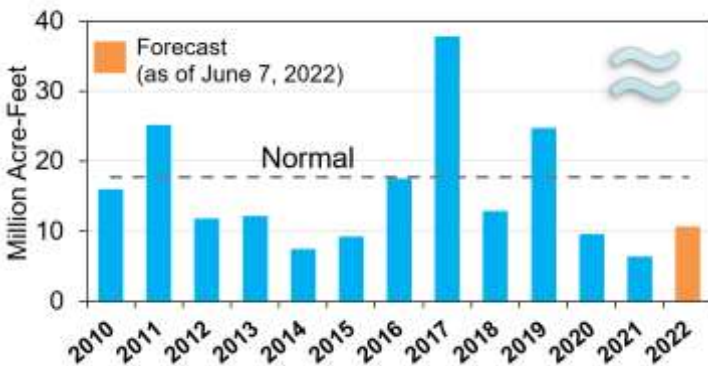
Northern Sierra Snowpack & 8 Station Precipitation



Sacramento River Basin

- ✳ Snowpack water content peaked low and early in mid-January (17.2 inches or 61% of normal April 1).
- ◆ Below normal precipitation at the 8 Station to date (41.2 inches or 79% of normal).
- ≈ Runoff into the Sacramento River for WY 2022 is forecasted at 60% of normal.

Sacramento River Water Year Runoff

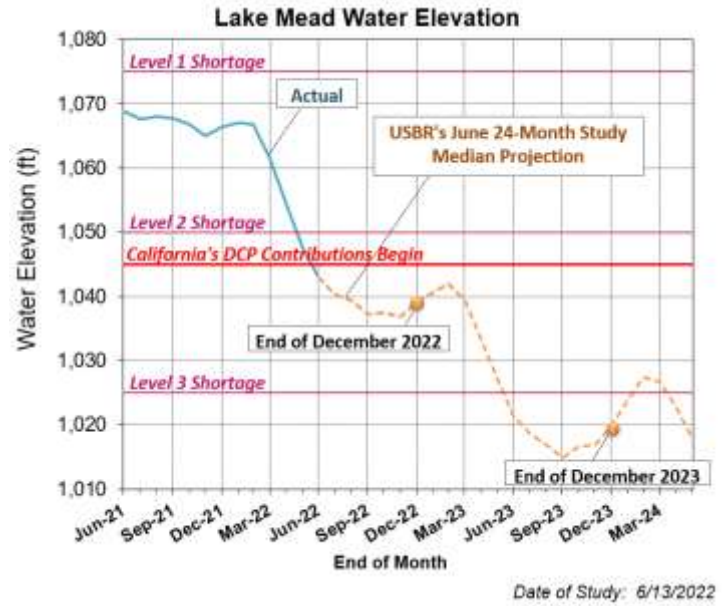


CRA Supplies	Acre-Feet
Basic Apportionment	550,000
IID/ MWD Conservation Program	105,000
CVWD - 2nd Amendment, Exchange of Additional Water	17,000
PVID Fallowing Program	25,000
Exchange w/ SDCWA (IID/Canal Lining)	280,000
Exchange w/ USBR (San Luis Rey Tribe)	16,000
Lower Colorado Water Supply Project	9,000
Bard Seasonal Fallowing Program	3,000
Quechan Diversion Forbearance	6,000
Quechan Seasonal Fallowing Program ¹	0
Higher Priority Water Use Adjustment ²	-103,000
Total CRA Supplies ³	911,000

¹ Rounded to the nearest thousand.

² Per USBR Forecast (6/27/22).

³ Total may not sum due to rounding.



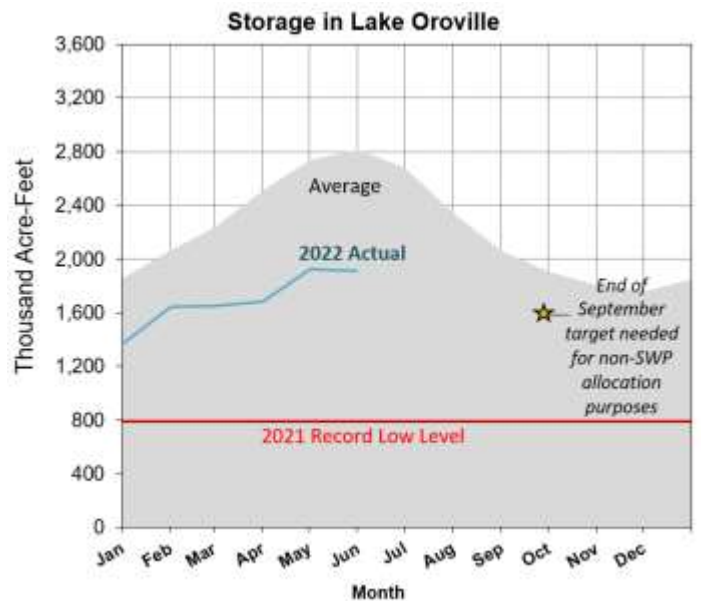
- Lake Mead storage is currently at its historic low at 7.2 MAF or elevation 1043.3 feet (28 percent of total capacity).
- The Lower Basin is at a Level 1 shortage in CY 2022. Supplies to Metropolitan will not be curtailed and Metropolitan will have full access to its Intentionally Created Surplus (ICS) in CY 2022 to fill the CRA.
- USBR’s June 24-Month Study continues to show Lake Mead’s water elevation declining over the next two years.
- Operations of Lakes Powell and Mead are uncertain in 2023. The triggers for shortage and Drought Contingency Plan (DCP) contributions could change based on current discussions in response to USBR’s call for additional conservation volumes of 2 MAF to 4 MAF in CY 2023. The graph shows physical elevations and existing triggers.

SWP Supplies	Acre-Feet
Table A (5% SWP allocation)	96,000
Article 21	0
Port Hueneme ¹	0
SWC Buyers Group Transfers ²	7,000
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	133,000
Total SWP Supplies ³	258,000
Total Supplies (CRA + SWP) (Prior to storage actions)	1,169,000

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.

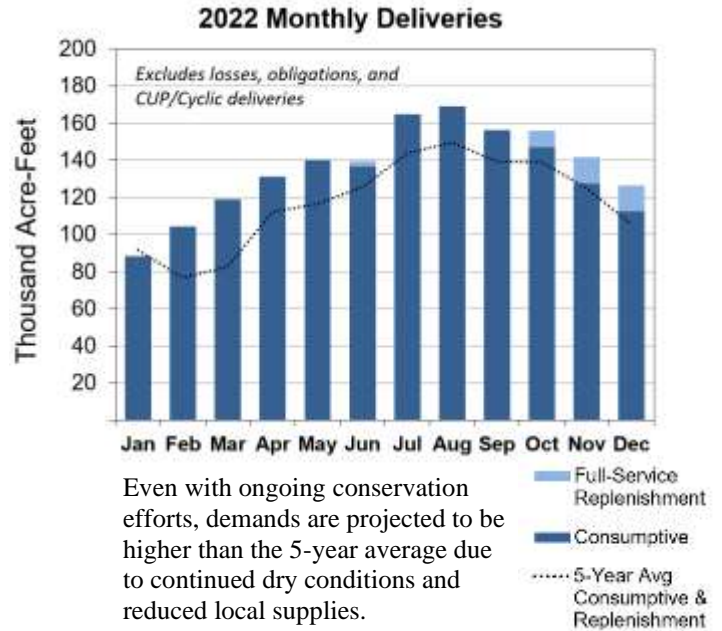


- In addition to the 5 percent Table A allocation, DWR is providing water for Contractors’ unmet Human Health and Safety needs (HH&S). DWR expects Contractors receiving HH&S water to take mandatory conservation measures; implement conjunctive use practices; acquire alternative supplies; and return any HH&S water to the SWP in a future year. DWR has approved 133 TAF of HH&S supply for Metropolitan thus far. Metropolitan began receiving deliveries of HH&S supplies in June.

- Lake Oroville is currently at 1.75 MAF (50 percent of total capacity) or 65 percent of historical average as of the date of this report.

Current Demand	Acre-Feet
Member Agency Consumptive ¹	1,605,000
Member Agency Replenishment	40,000
Coachella Valley Water District Agreement	15,000
Return to Imperial Irrigation District ²	72,000
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	50,000
Cyclic Deliveries	0
Total Demands ³	1,798,000

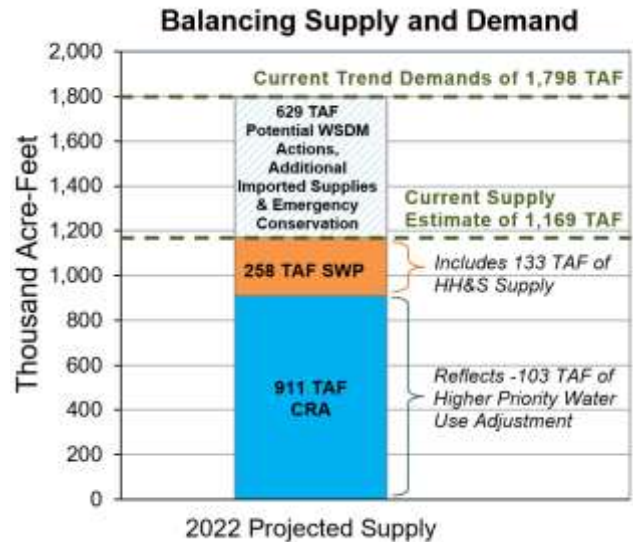
¹ Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.
² Per USBR Forecast (6/27/22).
³ Total may not sum due to rounding.



MANAGING REGIONAL SUPPLY AND DEMAND

Supply/Demand Balance	Acre-Feet
Total Supplies	1,169,000
Total Demands	1,798,000
Current Balance Estimate ²	-629,000

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.

2022 WSDM Storage Detail

	1/1/2022 Estimated Storage Levels	CY 2022 Take Capacity ¹	2022 Total Storage Capacity
WSDM Storage			
Colorado River Aqueduct Delivery System	1,252,000	304,000	1,657,000
Lake Mead ICS	1,252,000 ²	304,000 ³	1,657,000
State Water Project System	636,000	187,000	1,879,000
MWD SWP Carryover ⁴	38,000	38,000	350,000
DWCV SWP Carryover ⁴			
MWD Articles 14(b) and 12(e)	0	0	N/A
Castaic Lake (DWR Flex Storage)	0	0	154,000
Lake Perris (DWR Flex Storage)	49,000	49,000 ⁵	65,000
Arvin Edison Storage Program	136,000	17,000 ⁶	350,000
Semitropic Storage Program	218,000	51,000 ⁷	350,000
Kern Delta Storage Program	149,000	32,000	250,000
Mojave Storage Program	19,000	0	330,000
AVEK Storage Program	27,000	0	30,000
In-Region Supplies and WSDM Actions	795,000	426,000	1,246,000
Diamond Valley Lake	600,000	343,000	810,000
Lake Mathews and Lake Skinner	179,000	67,000	226,000
Conjunctive Use Programs (CUP) ⁸	16,000	16,000	210,000
Other Programs	674,000	10,000	1,181,000
Other Emergency Storage	381,000	0	381,000
DWCV Advanced Delivery Account	293,000	10,000	800,000
Total	3,357,000	927,000	5,963,000
Emergency	750,000	0	750,000
Total WSDM Storage (AF) ⁹	2,607,000	927,000	5,213,000

¹ Take capacity assumed under a 5 percent SWP Table A Allocation. Storage program losses included where applicable.

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, which IID can access to avoid an overrun.

³ Take capacity based on planned maintenance activities and current CRA supply estimate and includes return of water to IID.

⁴ Total storage capacity varies year to year based on prior year remaining balance added to current year contractual limits.

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)	352,000
DWR Flex Storage	219,000 ⁵
Human Health & Safety	133,000 ⁶
Total (AF)	1,154,000

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. Future return is projected to be reduced by 72,000 AF as shown on page 4.

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.

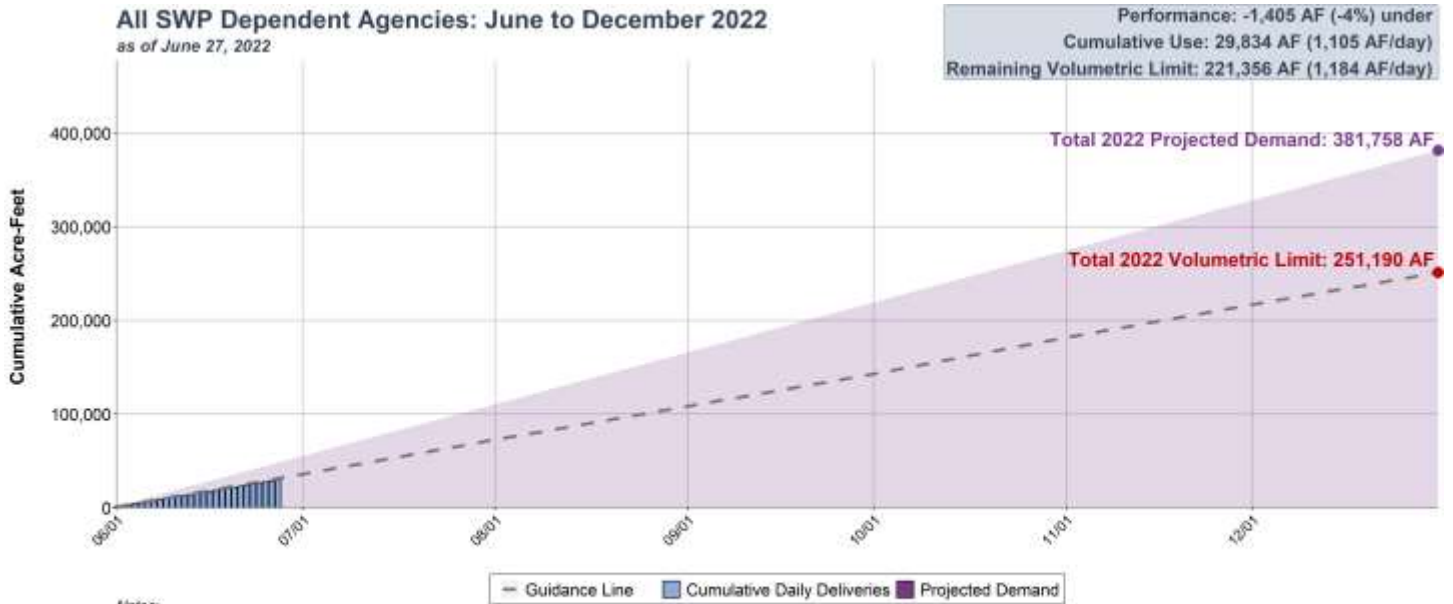
⁶ Metropolitan's scheduled CY 2022 Human Health & Safety deliveries. Any water taken must be returned within five calendar years.

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.