



● **Water Surplus and Drought Management Update** *Conditions as of 2/15/2023*

Summary

This report provides an accounting for water supply, demand, and storage conditions for calendar year (CY) 2023 as of February 15, 2023. This report also tracks the hydrologic conditions for water year (WY) 2022-2023. Updated supply and hydrologic information will be provided during the oral report in March.

The California Department of Water Resources (DWR) increased the State Water Project (SWP) allocation to 30 percent on January 26, 2023. Subsequently, Metropolitan's SWP supply is 574 thousand acre-feet (TAF). This supply now exceeds Metropolitan's estimated unmet Human Health and Safety (HH&S) needs, and DWR is no longer allocating HH&S supplies for Metropolitan in CY 2023.

Metropolitan's Colorado River supply is currently estimated to be 884 TAF. This reflects the United States Bureau of Reclamation's (USBR) daily forecast of water use for California's Colorado River water users for this year. Water usage by the higher priority water users impacts Metropolitan's supply. Metropolitan's combined State Water Project and Colorado River supplies are estimated to be 1.46 million acre-feet (MAF) for CY 2023 at the current allocation.

The CY 2023 current trend demand on Metropolitan is estimated to be 1.52 MAF. This is a 146 TAF decrease from last month's estimate. The reduction in the current trend demand reflects the ongoing conservation efforts and the improving local supply conditions from the substantial precipitation received in Metropolitan's service area and member agencies' watersheds. The current supply/demand gap is estimated to be 60 TAF. Metropolitan has sufficient storage resources and system capacity to satisfy this gap.

The acute water shortage underlying the Water Shortage Emergency Condition declared in April 2022 has been alleviated with the current SWP allocation and storage resources available to SWP Dependent Area. The SWP Dependent Area has been under the Emergency Water Conservation Program (EWCP) that mandated strict outdoor watering restrictions and imposed penalty-enforced volumetric limits on water use. Because of improved SWP supply conditions, staff will recommend to the Board at the March board meeting to remove the EWCP effective immediately.

In contrast to the last several years, the hydrologic conditions this water year to date have improved greatly. The northern Sierra snowpack is already at 113 percent of the April 1 normal. This means that there is more than a full season's snowpack already on the ground. The February 1 median forecasted runoff for WY 2023 is 20 MAF which is more than the observed runoff of the last two water years combined. The current hydrologic conditions will lead to additional increases to the SWP allocation even if dry conditions return for the remainder of the water year. Further, there is a potential for demands on Metropolitan to continue to decrease given the improved local supply conditions. If that occurs, Metropolitan will shift to a surplus condition per the Water Surplus and Drought Management (WSDM) Plan and will put water into storage.

Despite the short-term improvement in supply from the SWP, the Colorado River watershed remains in a 23-year drought. On-going negotiations with the Basin States and potential changes to the 2007 Interim Guidelines initiated by USBR introduce great uncertainty in future supplies. Future SWP supplies are also uncertain and can quickly return to dry conditions. This warrants continuing the Regional Drought Emergency declared by the Board in December 2022 for all member agencies. Under the drought emergency, all member agencies are expected to continue to take actions to reduce their use of SWP and Colorado River supplies and continue to implement the demand response actions outlined in their State-mandated Water Shortage Contingency Plans for a shortage level of up to 20 percent.

Purpose

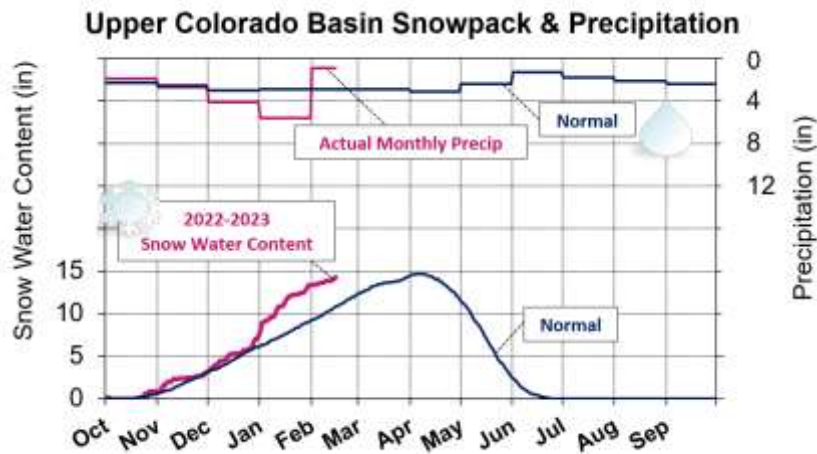
Informational

Attachments

- Attachment 1: Projected 2023 WSDM Storage Detail (30 percent SWP Table A allocation)
- Attachment 2: Future Contributions and Obligations and Cyclic Program
- Attachment 3: Emergency Water Conservation Program Performance
- Attachment 4: Future Supply and Demand Gaps

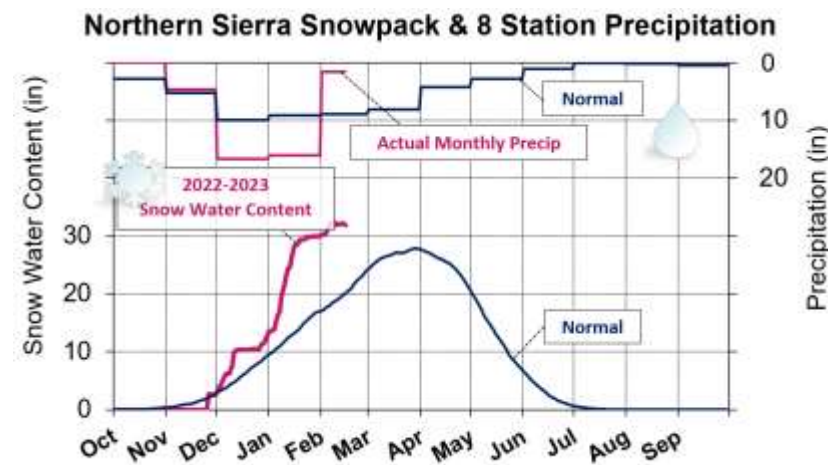
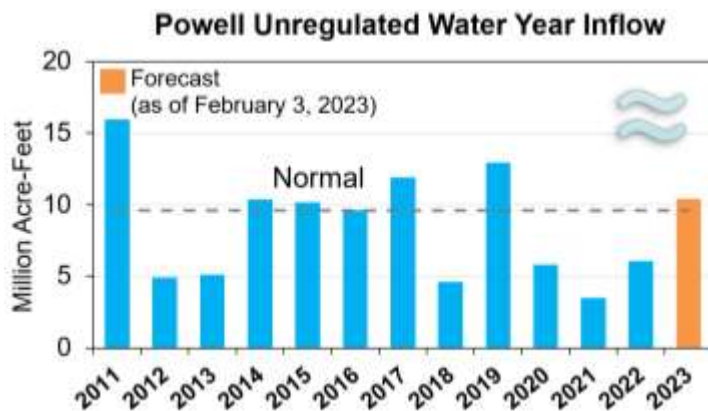
Detailed Report

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



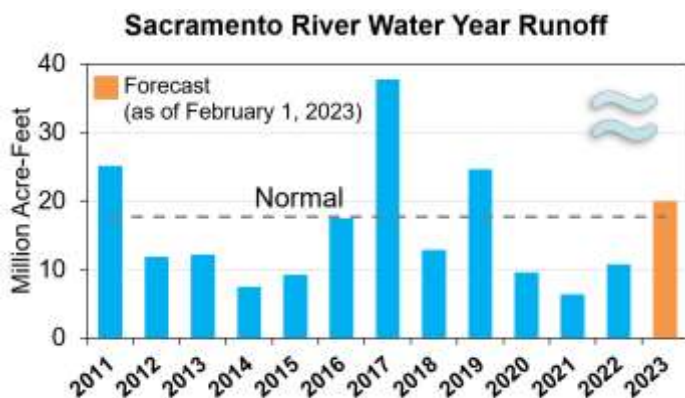
Upper Colorado River Basin

- * Above normal snowpack water content for this date (14.3 inches or 132% of normal for this date).
- ◆ Above normal precipitation to date (15.0 inches or 120% of normal for this date).
- ≈ Runoff into Lake Powell for WY 2023 is forecasted at 109% of normal.



Sacramento River Basin

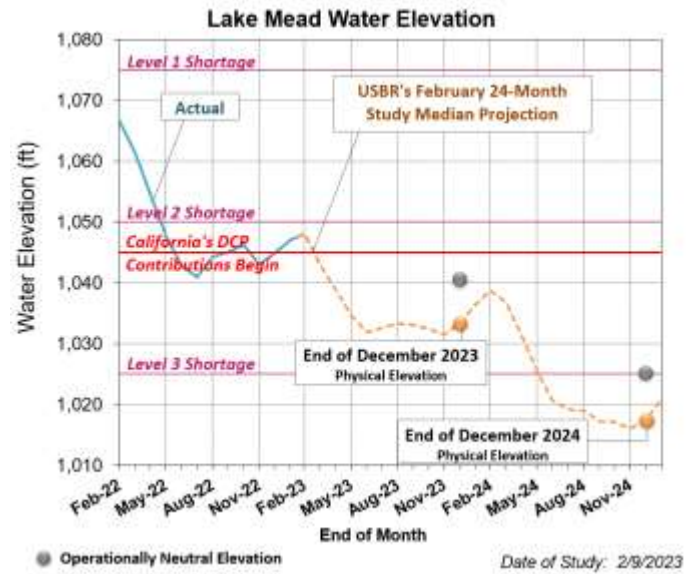
- * Above normal snowpack water content for this date (31.9 inches or 156% of normal for this date). Snowpack well above the April 1 normal (113% of April 1 normal).
- ◆ Above normal precipitation to date (39.1 inches or 122% of normal for this date).
- ≈ Runoff into the Sacramento River for WY 2023 is forecasted at 113% of normal.



CRA Supplies	Acre-Feet
Basic Apportionment	550,000
IID/ MWD Conservation Program	105,000
CVWD - 2nd Amendment, Exchange of Additional Water	7,000
PVID Following Program	38,000
Exchange w/ SDCWA (IID/Canal Lining)	278,000
Exchange w/ USBR (San Luis Rey Tribe)	16,000
Lower Colorado Water Supply Project	9,000
Bard Seasonal Following Program	6,000
Quechan Diversion Forbearance	0
Quechan Seasonal Following Program	0
Higher Priority Water Use Adjustment	-124,000
Total CRA Supplies ^{1,2}	884,000

¹ Per USBR Forecast (2/15/23).

² Total may not sum due to rounding.

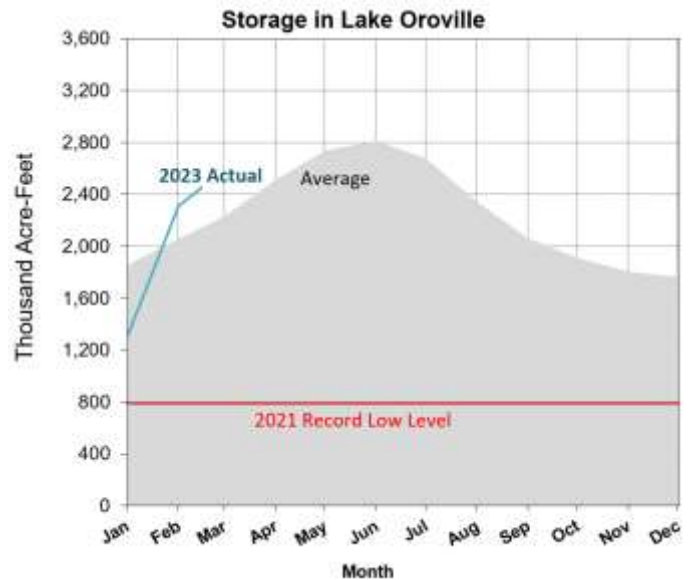


- Lake Mead storage is currently 7.51 MAF or elevation 1,047.6 feet (29 percent of total capacity).
- The Lower Basin is at a Level 2a shortage in CY 2023. Under this level, Metropolitan is not impacted.
- However, due to the critical conditions on the Colorado River, USBR initiated a fast-track process to modify the 2007 Interim Guidelines for operations in 2023, 2024, and possibly through 2026. USBR plans to issue a draft Supplemental Environmental Impact Statement (SEIS) for public comment in the Spring and a final SEIS and Record of Decision in Summer 2023.
- Metropolitan may use ICS to meet future DCP contributions; additional use of ICS to meet service area demand remains uncertain.

SWP Supplies	Acre-Feet
Table A (30% SWP allocation)	573,000
Port Hueneme ¹	1,000
Human Health & Safety Supply	0
Total SWP Supplies ²	574,000
Total Supplies (CRA + SWP) (Prior to storage actions)	1,458,000

¹ Rounded to the nearest thousand.

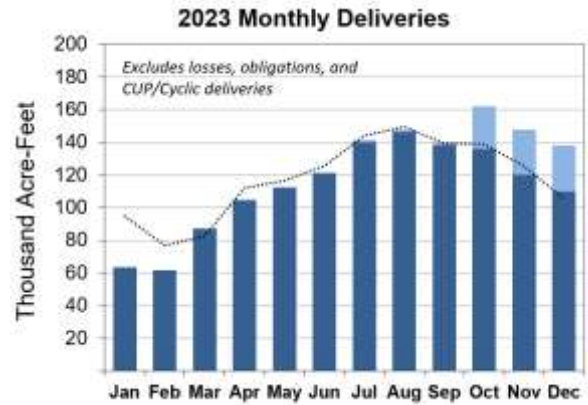
² Total may not sum due to rounding.



- With a 30 percent SWP Table A allocation, DWR is no longer delivering human health and safety supply and Metropolitan will not incur any HH&S obligations for calendar year 2023. Additional increases to the SWP Table A allocation are expected as DWR’s subsequent allocation studies continue to incorporate forecasted runoff from the developing snowpack
- Lake Oroville is currently at 2.45 MAF (69 percent of total capacity) or 114 percent of historical average as of the date of this report.

Current Demand	Acre-Feet
Member Agency Consumptive ¹	1,349,000
Member Agency Replenishment	88,000
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	1,518,000

¹ Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.
² Per USBR Forecast (2/15/23).
³ Total may not sum due to rounding.

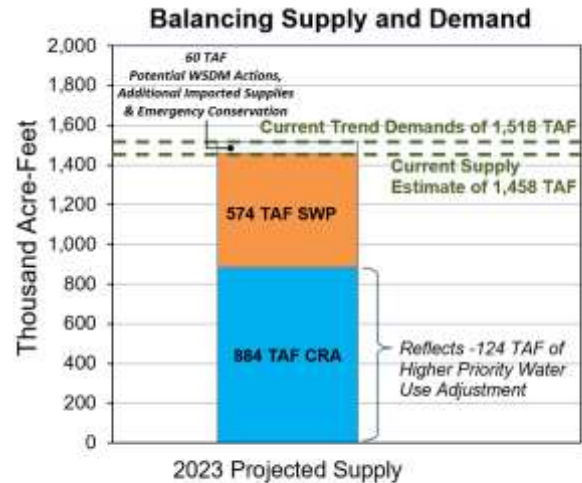


January and February deliveries were below the 5-year average due to significant rain in early 2023. Consumptive demands are projected to be similar to the 5-year average for the remainder of the year.

MANAGING REGIONAL SUPPLY AND DEMAND

Supply/Demand Balance	Acre-Feet
Total Supplies	1,458,000
Total Demands	1,518,000
Current Balance Estimate ¹	-60,000

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 2023, enhance Metropolitan’s capability of delivering supplies to the SWP Dependent Areas, and reduce storage withdrawals in 2023. Should conditions warrant, surplus supplies will be stored in a manner to achieve equitable reliability across the region.

- Evaluating transfer supply opportunities and ability to move any north-of-Delta transfers.
- Balance use of available imported supplies from both the SWP and Colorado River.
- Continue coordination with our partners to maximize supply development.
- Continue to allocate available SWP supplies for EWCP until Board ends program.
- Continue to utilize and manage storage assets to satisfy current and future year demands, with special emphasis on rebuilding storage for SWP dependent area.
- Incorporate new drought actions into existing suite of WSDM actions.
- Staff does not anticipate a need for a regionwide WSAP supply allocation during fiscal year 2023-24 due to improved conditions. Staff continues to evaluate supply and demand conditions as they develop.

2023 WSDM Storage Detail

	1/1/2023 Estimated Storage Levels ¹	CY 2023 Take Capacity ²	2023 Total Storage Capacity
WSDM Storage			
Colorado River Aqueduct Delivery System	1,139,000	TBD	1,657,000
Lake Mead ICS	1,139,000 ³	TBD ⁴	1,657,000
State Water Project System	492,000	158,000	1,879,000
MWD SWP Carryover ⁵	28,000	28,000	350,000
DWCV SWP Carryover ⁵			
MWD Articles 14(b) and 12(e)	0	0	N/A
Castaic and Perris DWR Flex Storage	3,000	3,000	219,000
Arvin Edison Storage Program	120,000	8,000 ⁶	350,000
Semitropic Storage Program	158,000	57,000	350,000
Kern Delta Storage Program	137,000	39,000	250,000
Mojave Storage Program	19,000	9,000	330,000
AVEK Storage Program	27,000	14,000	30,000
In-Region Supplies and WSDM Actions	698,000	329,000	1,246,000
Diamond Valley Lake	494,000	237,000	810,000
Lake Mathews and Lake Skinner	194,000	82,000	226,000
Conjunctive Use Programs (CUP) ⁷	10,000	10,000	210,000
Other Programs	662,000	40,000	1,181,000
Other Emergency Storage	381,000	0	381,000
DWCV Advanced Delivery Account	281,000	40,000	800,000
Total	2,991,000	527,000	5,963,000
Emergency	750,000	0	750,000
Total WSDM Storage (AF) ⁸	2,241,000	527,000	5,213,000

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

² Take capacity assumed under a 30 percent SWP Table A Allocation. Storage program losses included where applicable.

³ This amount is net of the water Metropolitan stored for IID in Lake Mead in an ICS sub-account.

⁴ Take capacity will be based on planned maintenance activities, current CRA supply estimate, and operational decisions to protect Metropolitan's future CRA diversions. Although capacity is currently available, Metropolitan is planning to limit its take of ICS in 2023.

⁵ Total storage capacity varies year to year based on prior year remaining balance added to current year contractual limits.

⁶ Began receiving surface water supplies in-lieu of groundwater in February using the Friant Kern Canal. Take amounts dependent on the capacity of the Friant Kern Canal.

⁷ 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.

⁸ Total WSDM Storage level subject to change based on accounting adjustments.

Future Contributions and Obligations and Cyclic Programs

Table 1: Future Obligations

	Future Returns ¹
Water Stored for IID under the California ICS Agreement and its Amendment or the 2021 Settlement Agreement with IID	276,000 ²
Storage and Interstate Release Agreement with Southern Nevada Water Authority	330,000 ³
Coachella Valley Water District Agreement	210,000 ⁴
DWR Flex Storage	216,000 ⁵
2022 Reverse Cyclic	25,000 ⁶
2022 Human Health & Safety	134,000 ⁷
Total (AF)	1,191,000

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.

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 required to return 46,000 AF by 2027 for withdrawals in 2022.

⁶ Deferred delivery from Calleguas Municipal Water District, Upper San Gabriel Valley Municipal Water District, and Three Valleys Municipal Water District. Metropolitan will deliver water to the member agencies by 2027.

⁷ Metropolitan's CY 2022 Human Health & Safety deliveries. This water must be returned by 2027. If the SWP allocation reaches 40 percent or greater, a minimum obligation of 96,000 acre-feet is required.

Table 2: Potential Magnitude of California's Drought Contingency Plan Contribution

	2023	2024	2025	2026
Likelihood of Required California Drought Contingency Plan Contribution ¹	0%	60%	63%	56%
Average Metropolitan DCP Contribution When Contributions Are Required (AF)	0	205,000	265,000	278,000

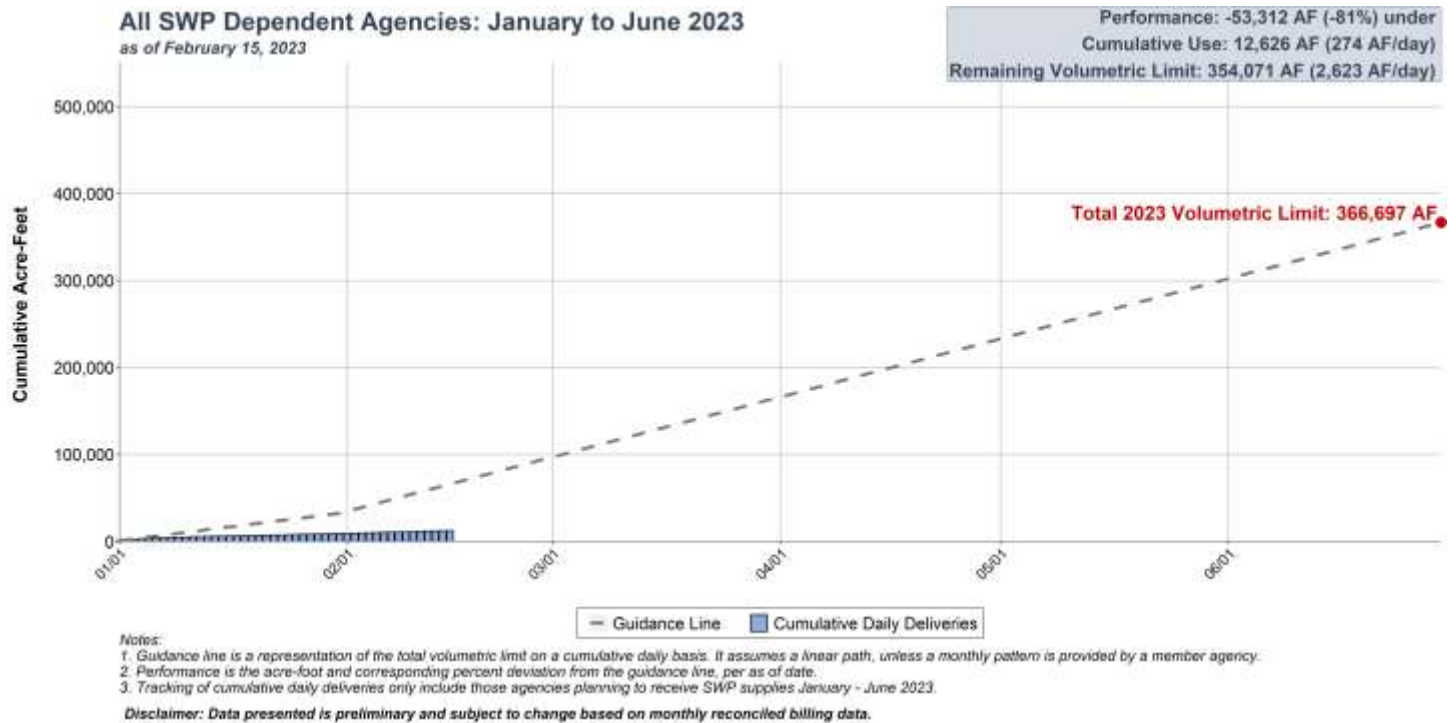
¹ Results from USBR's February 2023 Colorado River Mid-Term Modeling System (CRMMS) model run.

Table 3: 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	79,000
2021	79,000	0	0	0	28,000	51,000
2022	51,000	0	0	0	27,000	24,000
2023 ¹	24,000	0	0	0	24,000	0

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

Emergency Water Conservation Program Performance



Future Supply and Demand Gaps (Estimate as of December 2022)

Metropolitan's Water Surplus and Drought Management Plan provides a framework for managing Metropolitan's resources in periods of surplus and shortage. To guide the WSDM actions, Metropolitan constructs plausible scenarios with different supply and demand assumptions. The table below shows the projected range of plausible end-of-year supply and demand balances for CY 2023 and 2024. These ranges provide a bookend for the wide range of supply and demand balances that may unfold.

To reflect a reasonable range of future outcomes, the low supply projection is coupled with high demand projection as one bookend and the high supply projection is coupled with the low demand projection for the other bookend. The resulting ranges are shown in the table below. In 2023, the shortage projection for the service area is shown as ~520 TAF with a five percent SWP Table A allocation and Human Health and Safety (HH&S) supply, low Colorado River supply, and high demands. A surplus of ~725 TAF is shown with a 70 percent SWP Table A allocation, high Colorado River supply, and low demands. For 2024, the supply and demand balances may range from a shortage of ~920 TAF to a surplus of ~865 TAF. Regardless of the conditions that may materialize in the next two years, Metropolitan will continue to adhere to the WSDM Plan to capture surplus amount of water in normal to wet conditions and use stored water and drought actions in drought conditions.

Item	2023 (TAF)		2024 (TAF)	
	Low Supply/High Demand	High Supply/Low Demand	Low Supply/High Demand	High Supply/Low Demand
SWP ¹	+300	+1,340	+300	+1,340
Colorado River ²	+960	+1,005	+660	+985
Demand on Metropolitan ³	-1,700	-1,400	-1,800	-1,200
Additional Obligations ⁴	-80	-220	-80	-260
Supply/Demand Balance ⁵	(-520)	725	(-920)	865

¹ SWP supplies are based on a low of 5% Table A allocation + HH&S to a high of 70% Table A allocation.

² Colorado River supplies are based on estimated transfers, exchanges, higher priority water use, and DCP contributions.

³ Demand on Metropolitan reflect the total of replenishment and consumptive demand.

⁴ Additional obligations include system losses, repayment of HH&S, etc.

⁵ The supply demand balances should not be interpreted as an absolute range as they were determined by explicit assumptions to represent reasonable outcomes. The actual supply and demand balance, shown in the WSDM report, may fall outside of this range as information becomes available for specific components throughout the year.