



Water Resources Management Group

● **Water Surplus and Drought Management Update** **Conditions as of 10/17/2024**

Summary

This report provides highlights for water year (WY) 2023-2024 hydrologic conditions, and an accounting of water supply, demand, and storage balance projections for calendar year (CY) 2024, as of October 17, 2024. Updated supply and hydrologic information will be provided during the oral report in November.

2024 Highlights:

Following the wet conditions of Water Year 2022-2023, the Western United States experienced a return to average hydrologic conditions in Water Year 2023-2024. The following are notable highlights for the year:

Colorado River Aqueduct Supplies

- Above normal snowpack in the Upper Colorado River Basin (115 percent of normal).
- Normal precipitation (100 percent of normal).
- Below normal inflows into Lake Powell (83 percent of normal).
- To help protect storage in Lake Mead, Metropolitan and its partners turned over several Colorado River supply programs to the United States Bureau of Reclamation under the Lower Colorado Conservation Program to keep water in Lake Mead as system water.
- In 2025, a Level 1 Shortage will govern the operation of Lake Mead. There are no impacts to Metropolitan at a Level 1 Shortage.
- Due to improved hydrologic conditions and conservation efforts, there is no expectation of Metropolitan making Drought Contingency Plan Contributions in 2025 or 2026.

State Water Project Supplies

- Above normal Northern Sierra snowpack (123 percent of normal).
- Near normal precipitation measured at the Northern Sierra 8-Station Index (91 percent of normal).
- Near normal runoff into the Sacramento River (99 percent of normal).
- The State Water Project allocation is 40 percent of Table A.
- The presence of threatened and endangered fish species near SWP pumping facilities impacted the ability to move water from the Delta and allow for further increases to the allocation.

Demands on Metropolitan

- The projected member agency demand on Metropolitan (i.e. combined consumptive and replenishment demand) in CY 2024 is the second lowest on record, with CY 2023 being the lowest since 1979.
- Ongoing conservation efforts and a strong water use ethic are evident throughout the region.

Water Management Tools

- Pre-delivered water to local storage managed by its member agencies through the Cyclic Program.
- Reduced obligations by (1) delivering water to member agencies who deferred deliveries through the Reverse Cyclic Program, and (2) delivering water to Desert Water Agency/Coachella Valley Water District.
- Stored surplus supply in Metropolitan's dry-year storage programs. Metropolitan's dry-year storage reserves at the end of CY 2024 is projected to be approximately 3.9 million acre-feet (MAF), a record-high storage balance for Metropolitan.

Purpose

Informational

Attachments

Attachment 1: Projected 2024 WSDM Storage Detail (40 percent SWP Table A allocation)

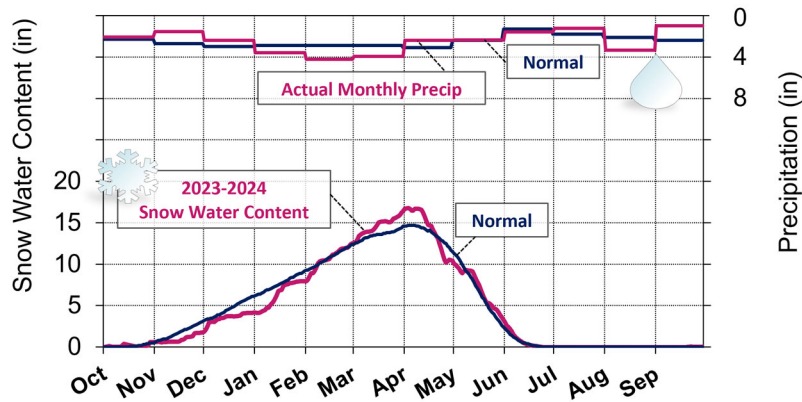
Attachment 2: Future Contributions and Obligations and Cyclic Program

Attachment 3: Range of Future Supply and Demand Gaps

Detailed Report

This Water Surplus and Drought Management (WSDM) report summarizes the hydrologic conditions for WY 2023-2024 and provides the water supply and demand conditions for CY 2024 as of October 17, 2024.

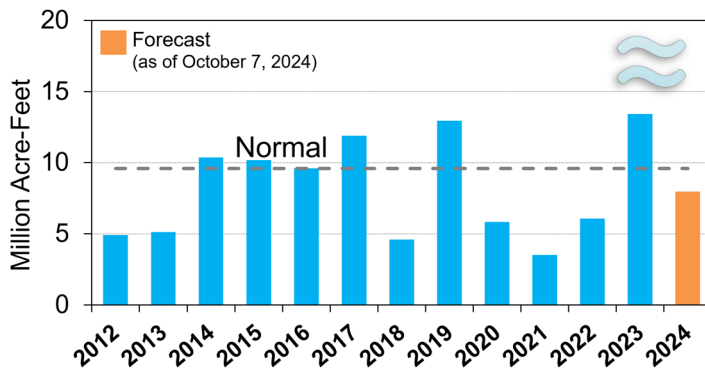
Upper Colorado Basin Snowpack & Precipitation



Upper Colorado River Basin

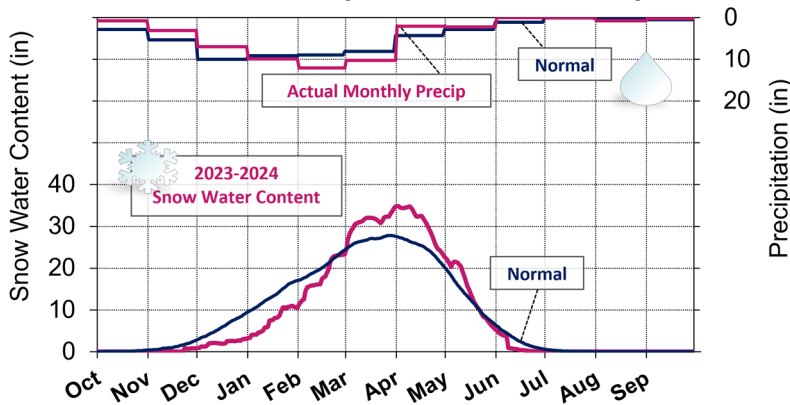
- ✳ Above normal peak snowpack water content: 16.7 inches or 115% of April 1 normal.
- ◆ Normal precipitation: 29.7 inches or 100% of normal.

Powell Unregulated Water Year Inflow



- ≈ Below normal runoff into Lake Powell: 7.9 MAF or 83% of normal.

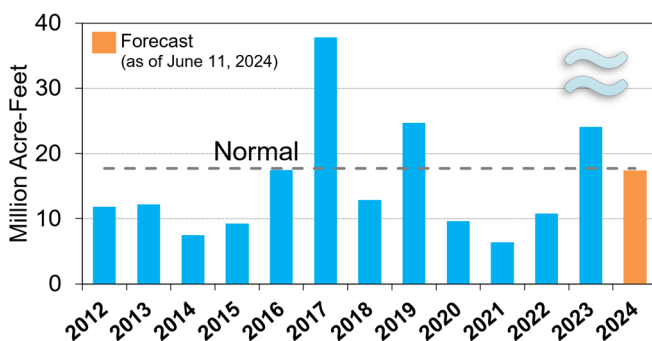
Northern Sierra Snowpack & 8 Station Precipitation



Sacramento River Basin

- ✳ Above normal peak snowpack water content: 34.8 inches or 123% of April 1 normal.
- ◆ Near normal precipitation: 48.2 inches or 91% of normal.

Sacramento River Water Year Runoff



- ≈ Near normal runoff into the Sacramento River: 17.4 MAF or 99% of normal.

CRA Supplies	Acre-Feet
Basic Apportionment	550,000
IID/MWD Conservation Program	105,000
CVWD - 2nd Amendment, Exchange of Additional Water	26,000
PVID Following Program ¹	0
Exchange w/ SDCWA (IID/Canal Lining) ²	228,000
Exchange w/ USBR (San Luis Rey Tribe)	16,000
Lower Colorado Water Supply Project	9,000
Bard Seasonal Following Program ¹	0
Quechan Diversion Forbearance ¹	0
Quechan Seasonal Following Program ³	0
Higher Priority Water Use Adjustment	99,000
Total CRA Supplies⁴	1,033,000

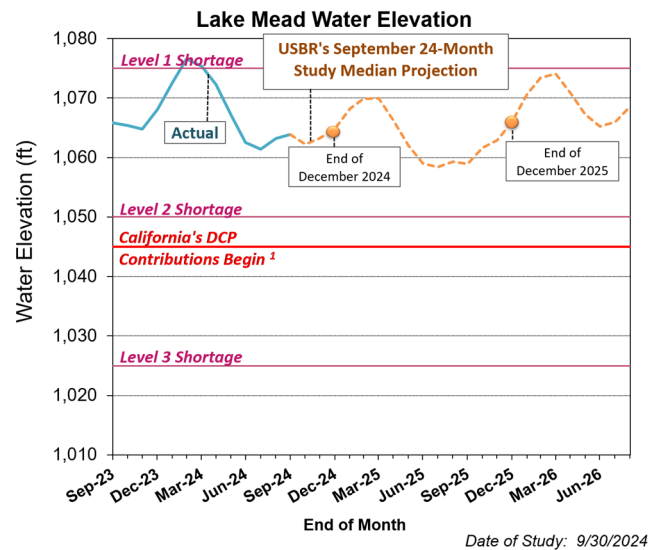
¹ Not a supply for Metropolitan in 2024. Water generated from these programs becomes system water as part of USBR’s Lower Colorado Conservation Program to help protect Lake Mead.

² Reduced by 50,000 AF to reflect the agreement between Metropolitan, SDCWA, and IID to leave 50,000 AF of water, that otherwise would be transferred to SDCWA and exchanged under the Exchange Agreement, in Lake Mead as system water as part of USBR’s Lower Colorado Conservation Program.

³ Rounded to the nearest thousand. Supply estimate is 281 AF.

⁴ Per USBR Forecast (10/15/2024). Total may not sum due to rounding.

- Lake Mead began the water year with 8.87 MAF of water in storage (34 percent of total capacity) and ended the water year with 8.71 MAF in storage (33 percent of capacity).
- The Lower Basin is at a Level 1 shortage in CY 2024. Under this level, Metropolitan’s operations and water supply are not impacted.



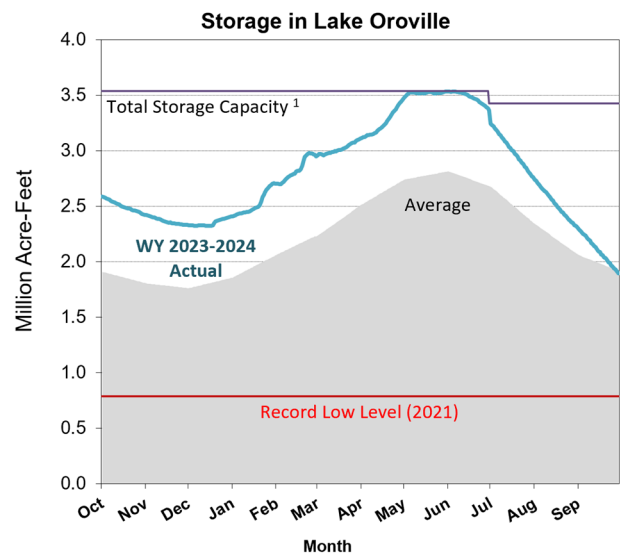
¹ Metropolitan is required to make Drought Contingency Plan (DCP) contributions in the following year if the August 24-month Study projects Lake Mead’s elevation to be at or below 1,045 feet on January 1. Since the August 2024 24-month Study projected Lake Mead’s elevation to be above 1,045 feet on January 1, 2025, Metropolitan is not required to make DCP contributions in 2025. This figure reflects the latest 24-month study (September 2024) available at the time of this report.

SWP Supplies	Acre-Feet
Table A (40% SWP allocation)	765,000
Port Hueneme ¹	1,000
Total SWP Supplies²	765,000
Total Supplies (CRA + SWP) (Prior to storage actions)²	1,798,000

¹ Rounded to the nearest thousand. Supply is 740 AF.

² Total may not sum due to rounding.

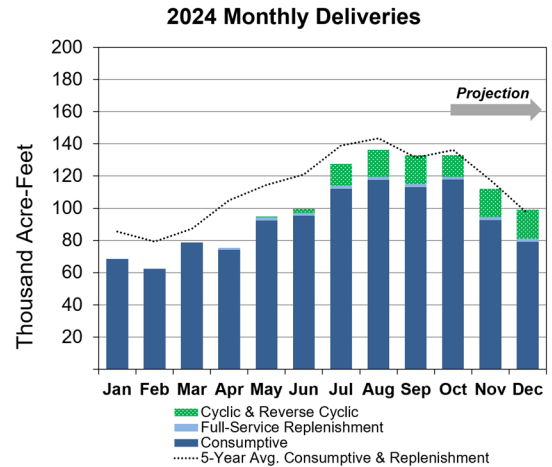
- The SWP Table A allocation for CY 2024 is 40 percent.
- Lake Oroville started the water year with 2.59 MAF in storage (76 percent of total capacity based on the updated capacity or 136 percent of the historical average). By the summer, Lake Oroville reached full capacity. Lake Oroville ended the water year with 1.89 MAF (55 percent of capacity or 99 percent of the historical average).



¹ In 2024, DWR began using a new storage capacity for Lake Oroville. DWR reduced the capacity by 3 percent to account for rock and silt settling on the bottom of the lake. Still, Lake Oroville remains the largest reservoir within the SWP.

Current Demand	Acre-Feet
Member Agency Consumptive ¹	1,104,000
Member Agency Replenishment	18,000
Coachella Valley Water District Agreement	50,000
Imperial Irrigation District Return ²	0
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	64,000
Cyclic Deliveries	95,000
2022 Reverse Cyclic Deliveries	5,000
Total Demands ³	1,350,000

¹ Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.
² Per USBR Forecast (10/15/2024).
³ Total may not sum due to rounding.

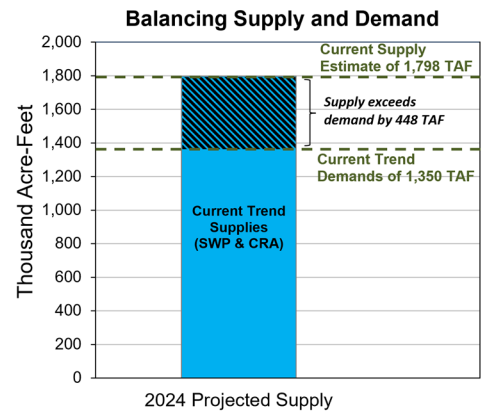


The combined consumptive and replenishment demand on Metropolitan is projected to be the second lowest on record, with last year being the lowest since 1979.

MANAGING REGIONAL SUPPLY AND DEMAND

Supply/Demand Balance	Acre-Feet
Total Supplies	1,798,000
Total Demands	1,350,000
Current Balance Estimate ¹	448,000

¹ Total may not sum due to rounding.



WSDM Strategies/Actions

The following summarizes the WSDM strategies/actions taken to address the estimated supply/demand balance in 2024.

- **Dry-Year Storage:** Metropolitan will manage surplus supplies by putting water into various dry-year storage accounts and will reposition stored water to maximize future drought reliability. Metropolitan is projecting to store an estimated 448 TAF of surplus supplies available in CY 2024. Metropolitan’s dry-year storage reserves at the end of CY 2024 is projected to be approximately 3.9 MAF, a record-high storage balance for Metropolitan.
- **2023 Supply Reconciliation:** Metropolitan has secured scheduled supplies not delivered in CY 2023 pursuant to Articles 14 (b) and 12 (e) of the State Water Project Contract for delivery in CY 2024.
- **Cyclic and Conjunctive Use Program Deliveries:** Metropolitan is delivering water to member agencies’ local storage through the Conjunctive Use Program and the Cyclic Program.
- **SWP Groundwater Banking Deliveries:** Metropolitan has delivered water to the Semitropic Storage Program and is making deliveries to the AVEK High Desert Water Bank Program.

2024 WSDM Storage Detail

	1/1/2024 Estimated Storage Levels	Net Projected Storage Action Put (+) / Take (-) ¹	Projected End of Year 2024 Balance ²	2024 Total Storage Capacity
WSDM Storage				
Colorado River Aqueduct Delivery System	1,544,000	69,000	1,614,000	1,622,000
Lake Mead ICS	1,544,000 ³	69,000	1,614,000	1,622,000 ⁴
State Water Project System	1,033,000	134,000	1,167,000	2,255,000
MWD & DWCV Carryover	297,000	103,000	400,000	446,000 ⁵
MWD Articles 14(b) and 12(e)	28,000 ⁶	-28,000	0	0
Castaic and Perris DWR Flex Storage	219,000	0	219,000	219,000
Arvin Edison Storage Program	100,000	0 ⁷	100,000	350,000
Semitropic Storage Program	190,000	27,000	217,000	350,000
Kern Delta Storage Program	141,000	0	141,000	250,000
Mojave Storage Program	19,000	0	19,000	330,000
AVEK Storage Program	27,000	0	27,000	30,000
AVEK High Desert Water Bank Program	11,000	32,000	43,000	280,000 ⁸
In-Region Supplies and WSDM Actions	1,016,000	38,000	1,054,000	1,246,000
Diamond Valley Lake	753,000	47,000	800,000	810,000
Lake Mathews and Lake Skinner	207,000	-36,000	171,000	226,000
Conjunctive Use Programs (CUP)	56,000	27,000	83,000	210,000 ⁹
Other Programs	586,000	207,000	793,000	1,181,000
Other Emergency Storage	381,000	0	381,000	381,000
DWCV Advanced Delivery Account	205,000	207,000	412,000	800,000
Total	4,180,000	448,000	4,628,000	6,304,000
Emergency	750,000	0	750,000	750,000
Total WSDM Storage (AF) ¹⁰	3,430,000	448,000	3,878,000	5,554,000

¹ Storage program losses included where applicable.

² Preliminary end of year balances, subject to DWR adjustments and USBR final accounting in May 2025.

³ Reflects USBR's final accounting for 2023, released May 2024. This amount is net of the water Metropolitan stored for IID in Lake Mead in an ICS sub-account.

⁴ This storage capacity is net of the water Metropolitan stored for IID in Lake Mead in an ICS sub-account.

⁵ Total storage capacity varies year-to-year as the contractual annual storage limit combines with the remaining balance from the previous year. There is a potential risk that Metropolitan's stored water be converted to SWP contractor water if San Luis Reservoir approaches full capacity.

⁶ Approved carryover supplies under Articles 14 (b) and 12 (e) of the State Water Project Contract for delivery in 2024.

⁷ Puts are limited due to water quality considerations.

⁸ This reflects the full storage capacity of the AVEK High Desert Water Bank because the construction of the recharge basins have been completed. Full recharge and recovery operation anticipated by 2027.

⁹ 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.

¹⁰ Total WSDM Storage level subject to change based on accounting adjustments. Total may not sum due to rounding.

Future Contributions and Obligations and Cyclic Programs

Table 1: Future Obligations ¹

	Beginning of Year 2024 Balance	Projected End of Year 2024 Balance
Water Stored for IID under the California ICS Agreement and its Amendment or the 2021 Settlement Agreement with IID	258,000	258,000 ²
Storage and Interstate Release Agreement with Southern Nevada Water Authority (SNWA)	330,000	330,000 ³
Coachella Valley Water District Agreement	105,000	70,000 ⁴
2022 Reverse Cyclic	7,000	3,000 ⁵
Total (AF) ⁶	700,000	660,000

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

² Reflects final accounting under USBR's 2023 Water Accounting Report released May 15, 2024. IID can request a return in any year, conditional on agreement terms.

³ SNWA may request up to 30,000 AF per year.

⁴ Obligation must be met by the end of 2026.

⁵ Deferred delivery from Calleguas Municipal Water District in 2022. Metropolitan is required to meet this obligation by 2027.

⁶ Total may not sum due to rounding.

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

	2025	2026
Likelihood of Required California Drought Contingency Plan Contribution ¹	0%	0%
Average Metropolitan DCP Contribution When Contributions Are Required (AF)	0	0

¹ Results from USBR's September 2024 Colorado River Mid-Term Modeling System (CRMMS) model run.

Table 3: Cyclic Program Activity ¹

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 to Date	
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	24,000	33,000	14,000	48,000	72,000	0
2024	0	46,000	0	46,000	0	46,000

¹ This table is updated with actual Cyclic Program activity on a monthly basis. Total may not sum due to rounding.

Potential Future Supply and Demand Gaps (Estimate as of November 2023)

Metropolitan's Water Surplus and Drought Management Plan provides a framework for managing Metropolitan's resources in periods of surplus and shortage. To guide 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 Calendar Years 2025 and 2026. 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 a 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 and key assumptions are shown in the table below. For 2025, the supply and demand balances may range from a shortage of ~1,011 TAF to a surplus of ~1,642 TAF, and for 2026, the balances may range from a shortage of ~1,032 TAF to a surplus of ~1,660 TAF. Regardless of the conditions that may materialize in the future, Metropolitan will continue to adhere to the WSDM Plan to capture surplus water in normal to wet conditions and use stored water and drought actions in drought conditions.

Item	2025 (TAF)		2026 (TAF)	
	Low Supply/ High Demand	High Supply/ Low Demand	Low Supply/ High Demand	High Supply/ Low Demand
SWP ¹	116	1,914	116	1,914
Colorado River ²	889	1,074	853	1,077
Demand on Metropolitan ³	-1,900	-1,100	-1,900	-1,100
Other Demand on Metropolitan ⁴	-116	-246	-101	-231
Supply/Demand Balance ⁵	-1,011	1,642	-1,032	1,660

¹ SWP supplies are based on a low of 5% to a high of 100% of Table A.

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

³ Demand on Metropolitan reflects the total replenishment and consumptive demand.

⁴ Includes Coachella Valley Water District exchange, San Luis Rey Agreement, system losses, and Reverse Cyclic and Cyclic Program deliveries.

⁵ The supply-demand balances should not be interpreted as an absolute range as they were determined by explicit assumptions to represent reasonable outcomes.