THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Report
Water Resource Management Group

- **Water Surplus and Drought Management Update** ***Conditions as of 10/25/2022***

Summary

This report accounts for water supply, demand, and storage conditions for calendar year (CY) 2022 as of October 25, 2022. The report also tracks the hydrologic conditions for the new water year, (WY) 2022-2023, which began on October 1.

For CY 2022, an estimated 1.33 million acre-feet (MAF) of imported supply are available to help meet demand. The State Water Project (SWP) portion is 258 thousand acre-feet (TAF), which includes 134 TAF of human health and safety water from the Department of Water Resources. The Colorado River supply is 1,068 TAF and reflects the higher priority water use adjustment as reported by the United States Bureau of Reclamation (USBR). Through the priority system, water not used by the higher priority water users becomes 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 28 TAF. This estimate may continue to fluctuate as we approach the end of the year.

The demand on Metropolitan is currently estimated at 1.67 MAF for CY 2022. The demand projection has been decreasing all year. This reflects the successes of ongoing conservation efforts and the use of local supplies that is reducing the need for the limited SWP supply. In fact, SWP Dependent Area agencies under the Emergency Water Conservation Program (EWCP) have dropped their water use by roughly 34 percent below their expected water use and are collectively 4 percent below the volumetric limits set in the EWCP. The current supply/demand gap is estimated to be 347 TAF. Metropolitan will satisfy this gap through withdrawals from storage as detailed on **Attachment 1.** Metropolitan is projecting to end the year with 2.3 MAF of water in its dry-year storage accounts.

Operational limitations, potential conservation mandates from USBR, and future water obligations limit access and availability to our storage accounts. Metropolitan is expecting a low initial Table A allocation from the SWP and is not planning for a full Colorado River Aqueduct (CRA) next year due to the conditions on the Colorado River.

As for the upcoming hydrologic conditions, the National Weather Service's seasonal precipitation outlook is advising that La Niña conditions are expected to persist this winter for a third consecutive year. This rare "triple-dip La Niña" has only occurred twice before since the 1950's when records began. For Southern California, the outlook indicates increased chances of below normal precipitation. For Northern California and the Upper Colorado River Basin, there are equal chances for above, below, or normal precipitation. Metropolitan will continue to track, monitor, and report the developing hydrologic conditions as we move through the new water year.

For these reasons, Metropolitan staff will update the Board of Directors in December on potential adjustments to the SWP Dependent Area EWCP for 2023; discuss the implementation of a regionwide Water Supply Allocation Plan for 2023; and call for immediate voluntary outdoor water use reductions and extraordinary conservation in Blended and Colorado River Exclusive Areas. Effective and timely conservation is imperative because it will help stretch limited supply and mitigate the region's need for deeper mandatory cuts.

Purpose

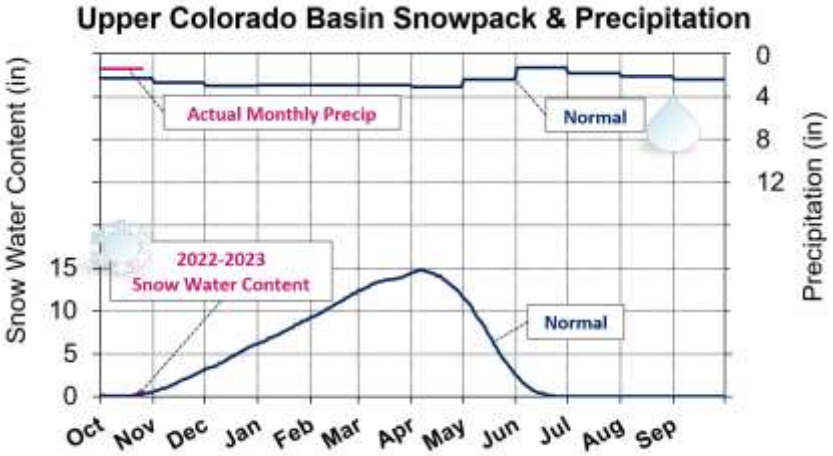
Informational

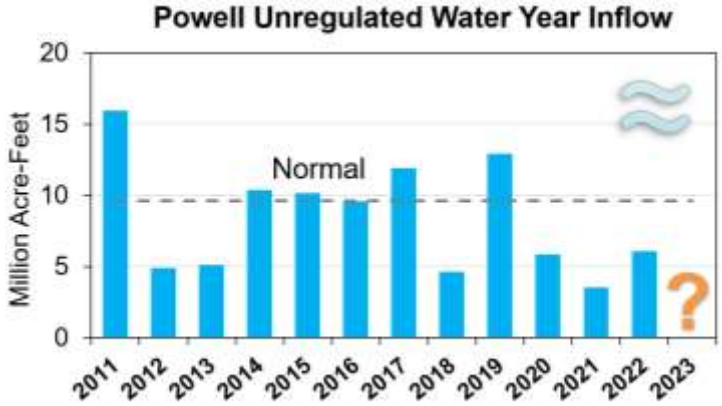
Attachments

Attachment 1:	Projected 2022 WSDM Storage Detail (5 percent SWP Table A allocation)
Attachment 2:	Agreements to Exchange or Return Stored Water, Potential Magnitude of California's Drought Contingency Plan Contribution, and Cyclic Program Balances
Attachment 3:	Emergency Water Conservation Program Performance

Detailed Report

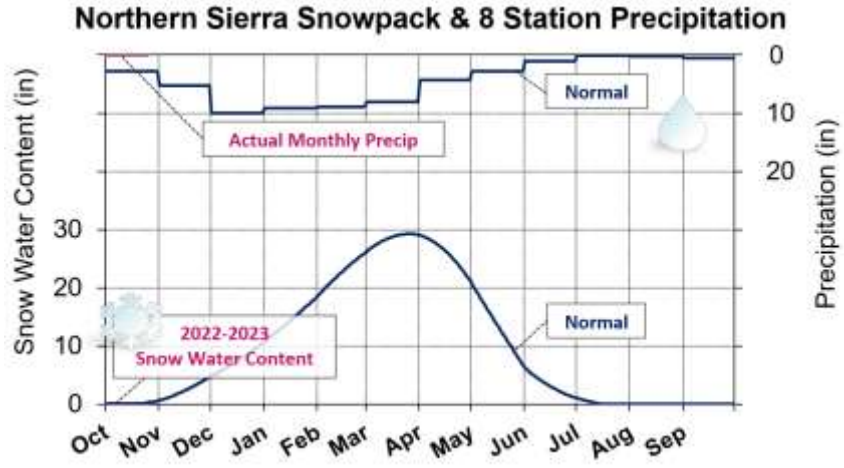
This Water Surplus and Drought Management (WSDM) report updates water supply and demand conditions for CY 2022 and developing hydrologic conditions for WY 2022-2023.

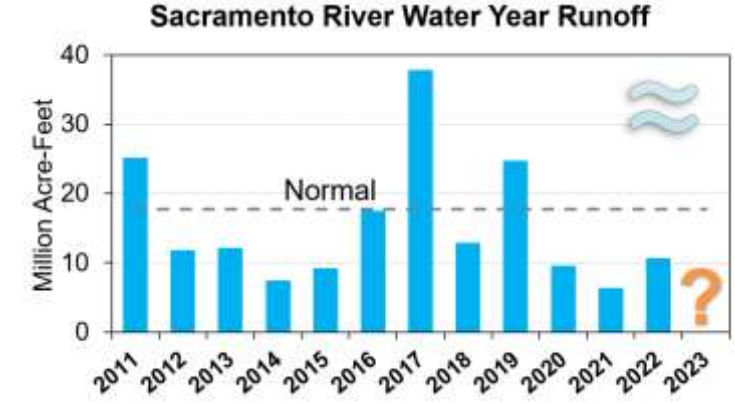




Upper Colorado River Basin

- ❄ Above normal snowpack water content for this date (0.6 inches or 200% of normal for this date). Snow data early in the season may not provide a valid measure of conditions.
- ♦ Below normal precipitation to date (1.4 inches or 83% of normal for this date).
- ≈ Runoff forecast for WY 2023 unavailable at the time of this report.



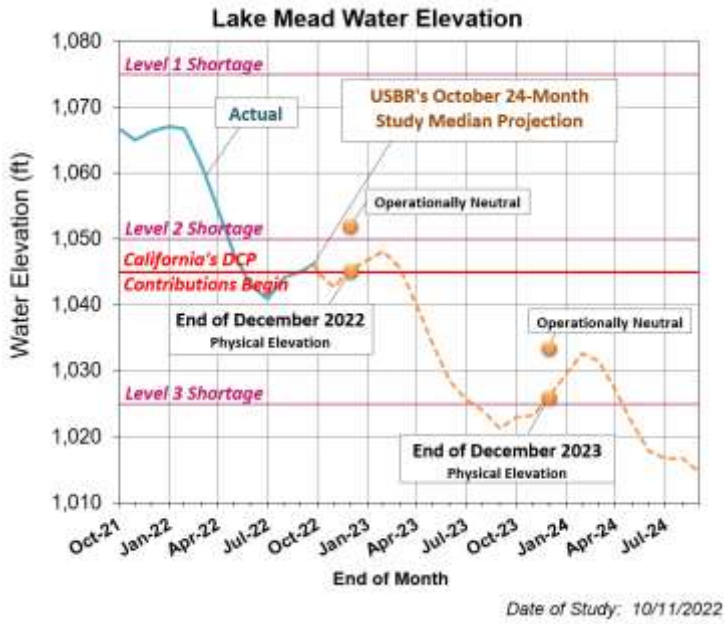


Sacramento River Basin

- ❄ No snow reported.
- ♦ No rain reported.
- ≈ Runoff forecast for WY 2023 unavailable at the time of this report.

CRA Supplies	Acre-Feet
Basic Apportionment	*550,000*
IID/ MWD Conservation Program	*105,000*
CVWD - 2nd Amendment, Exchange of Additional Water	*45,000*
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]	*28,000*
Total CRA Supplies [3]	**1,068,000**

[1] Rounded to the nearest thousand.
[2] Per USBR Forecast (10/25/22).
[3] Total may not sum due to rounding.

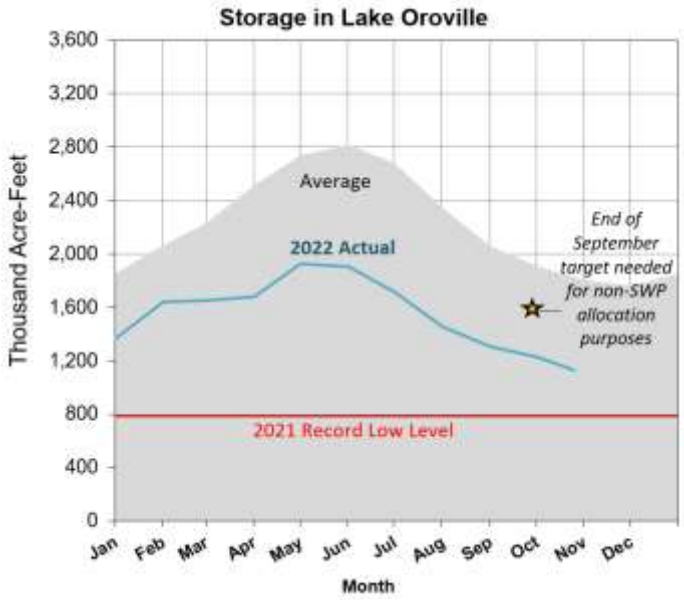


- Lake Mead storage is currently 7.4 MAF or elevation 1,046.3 feet (28 percent of total capacity).
- The Lower Basin is at a Level 1 shortage in CY 2022. Supplies to Metropolitan will not be curtailed and Metropolitan will have full access to its Intentionally Created Surplus (ICS) in CY 2022 to fill the CRA.
- 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 submitted a proposal 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 Supplies [3]	**258,000**

Total Supplies (CRA + SWP) (Prior to storage actions)	**1,326,000**

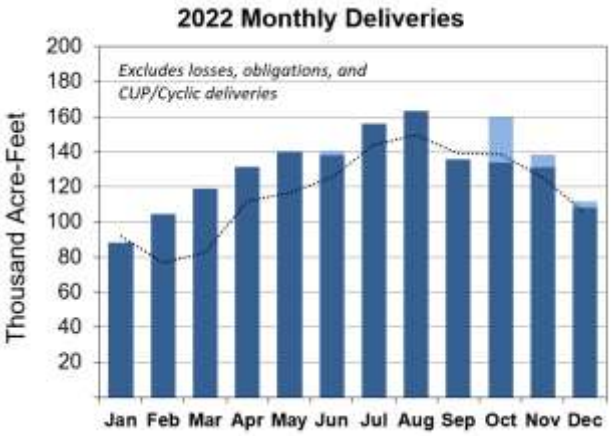
[1] Rounded to the nearest thousand.
[2] Current estimate subject to change based on buyer/seller participation and losses.
[3] Total may not sum due to rounding.



- 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 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 1.13 MAF (32 percent of total capacity) or 62 percent of historical average as of the date of this report.
- The initial SWP Table A allocation for 2023 is expected to start low based on a conservative dry hydrology, current low storage, and releases to be made through the year to meet SWP contractual and regulatory obligations.

Current Demand	Acre-Feet
Member Agency Consumptive [1]	*1,552,000*
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]	**1,673,000**

[1] Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.
[2] Per USBR Forecast (10/25/22).
[3] Total may not sum due to rounding.

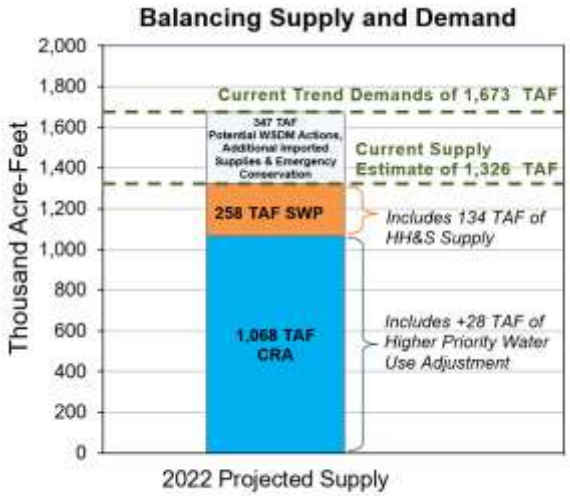


Even with ongoing conservation efforts, demands are projected to be higher than the 5-year average due to continued dry conditions and reduced local supplies.

MANAGING REGIONAL SUPPLY AND DEMAND

Supply/Demand Balance	Acre-Feet
Total Supplies	*1,326,000*
Total Demands	*1,673,000*
Current Balance Estimate [1]	**-347,000**

[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

WSDM Storage	1/1/2022 Storage Levels	Net Projected Storage Action Put (+) / Take (-)	Projected End of Year 2022 Balance [1]	2022 Total Storage Capacity
Colorado River Aqueduct Delivery System	**1,252,000**	**-68,000**	**1,184,000**	**1,657,000**
Lake Mead ICS	1,252,000 [2]	-68,000	1,184,000	1,657,000
State Water Project System	**636,000**	**-159,000**	**477,000**	**1,879,000**
MWD SWP Carryover [3]	38,000	-15,000 [4]	23,000	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	-50,000 [7]	168,000	350,000
Kern Delta Storage Program	149,000	-31,000	118,000	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**	**-109,000**	**686,000**	**1,246,000**
Diamond Valley Lake	600,000	-110,000	490,000	810,000
Lake Mathews and Lake Skinner	179,000	10,000	189,000	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**	**-347,000**	**3,010,000**	**5,963,000**
Emergency	750,000	0	750,000	750,000
Total WSDM Storage (AF) [9]	**2,607,000**	**-347,000**	**2,260,000**	**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 23,000 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.

Potential Magnitude of California's Drought Contingency Plan Contribution

	2022	2023	2024	2025	2026
Likelihood of Required California Drought Contingency Plan Contribution [1]	0%	0%	73%	63%	63%
Average Metropolitan DCP Contribution When Contributions Are Required (AF)	0	0	266,000	298,000	294,000

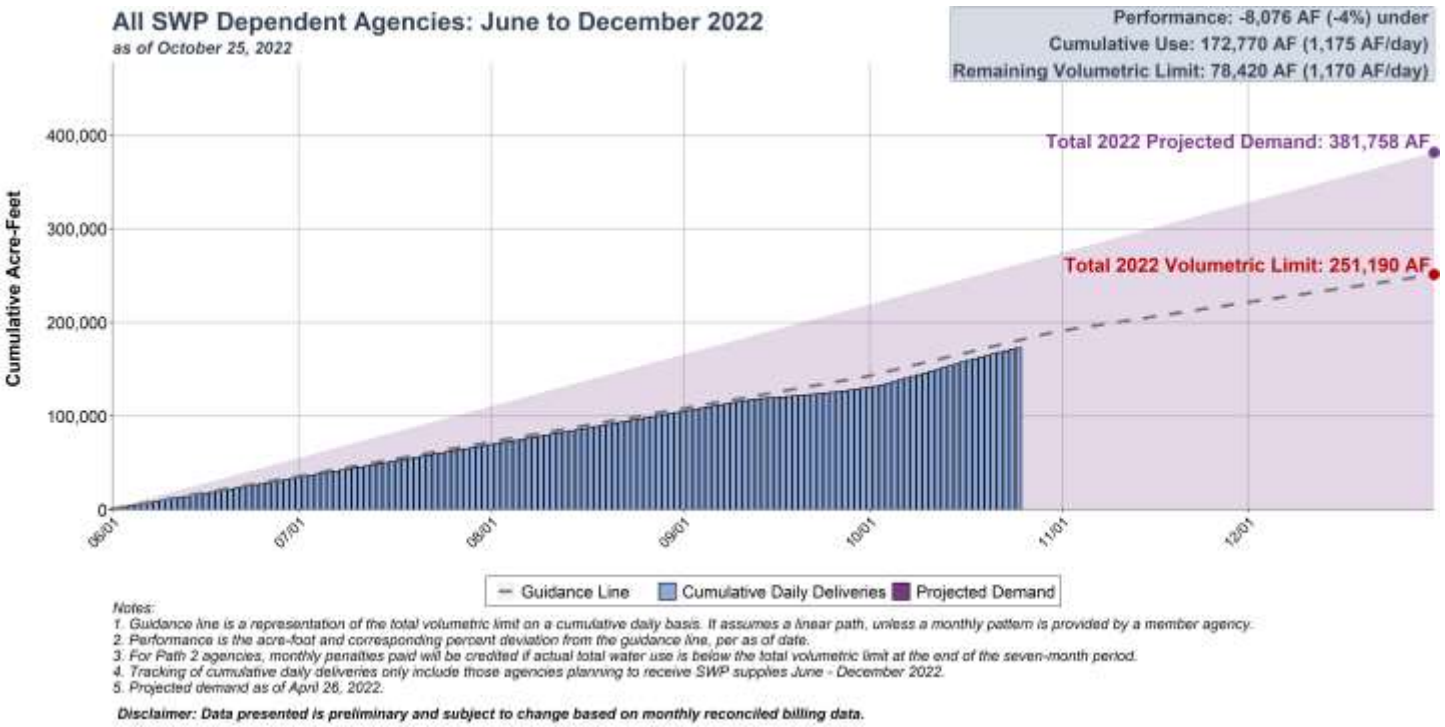
[1] Results from USBR's October 2022 Colorado River Mid-Term Modeling System (CRMMS) model run.

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 26, 2022.*

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