THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Report
Water Resource Management Group

- **Water Surplus and Drought Management Update** ***Conditions as of 2/22/2022***

Summary

This report accounts for water supply, demand, and storage conditions for calendar year (CY) 2022 as of February 22, 2022. In addition, this report tracks the hydrologic conditions for water year (WY) 2021-2022.

Following an unusually dry January, conditions remained dry in February for both imported supply watersheds. Precipitation in northern California for the first two months of the calendar year is projected to be the driest January-February on record. Snowpack in the northern Sierra and Upper Colorado River Basin are below normal for this date and more storms are needed to reach normal hydrologic condition levels for the water year. The northern Sierra and the Upper Colorado River Basin snowpack are 52 and 71 percent of their respective April 1st normal.

Metropolitan's projected supply/demand gap estimate for calendar year 2022 is currently 415 thousand acre-feet based on a demand estimate of 1.71 million acre-feet, the 15 percent SWP Table A allocation, and the Colorado River Aqueduct (CRA) supply estimate of 1.0 million acre-feet. Metropolitan has sufficient WSDM actions available to satisfy the identified supply/demand gap for 2022 at the current Table A allocation. Metropolitan will continue with its extraordinary drought operations and to develop new supplies through partnerships with member agencies and others. These actions will help preserve SWP supplies and reduce use of storage supplies this year to better position Metropolitan for continued dry conditions this year and a potential dry 2023.

Purpose

Informational

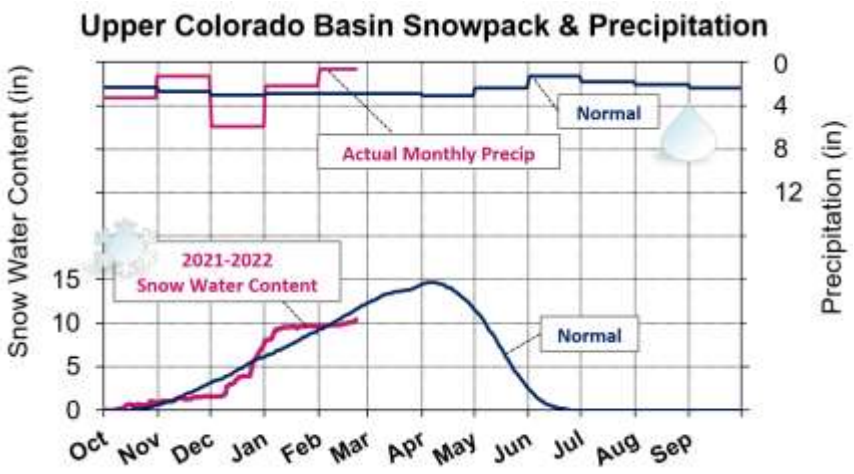
Attachments

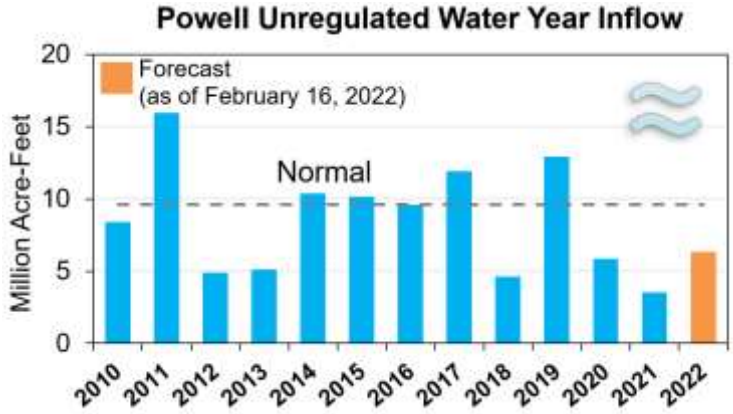
Attachment 1: Projected 2022 WSDM Storage Detail (15 percent SWP Table A allocation)

Attachment 2: Agreements to Exchange or Return Stored Water, Potential Magnitude of California's Drought Contingency Plan Contribution, and Cyclic Program Balances

Detailed Report

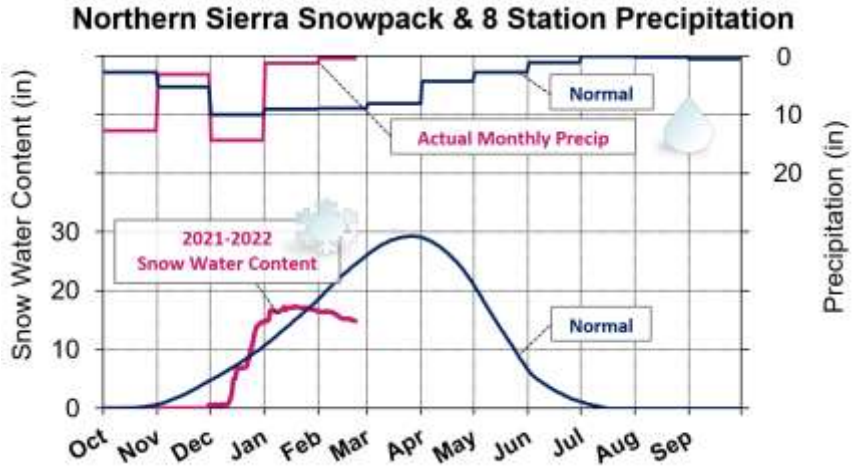
This Water Surplus and Drought Management (WSDM) report updates water supply and demand conditions for CY 2022 and developing hydrologic conditions for WY 2021-2022.

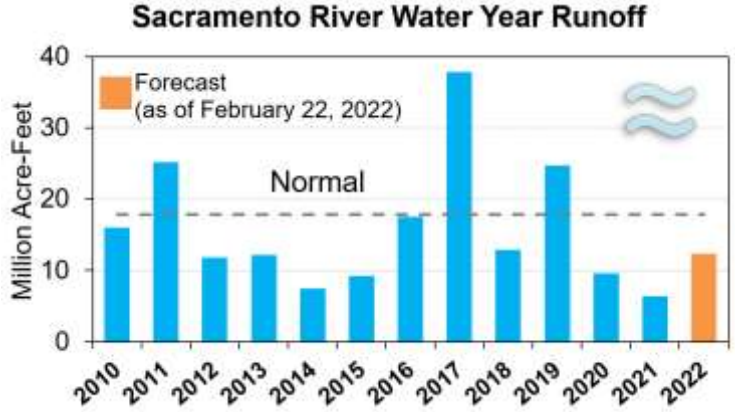




Upper Colorado River Basin

- ❄ Below normal snowpack water content for this date (10.4 inches).
- ♦ Above normal precipitation to date (13.4 inches).
- ≈ Runoff into Lake Powell for WY 2022 is forecasted at 66% of normal.



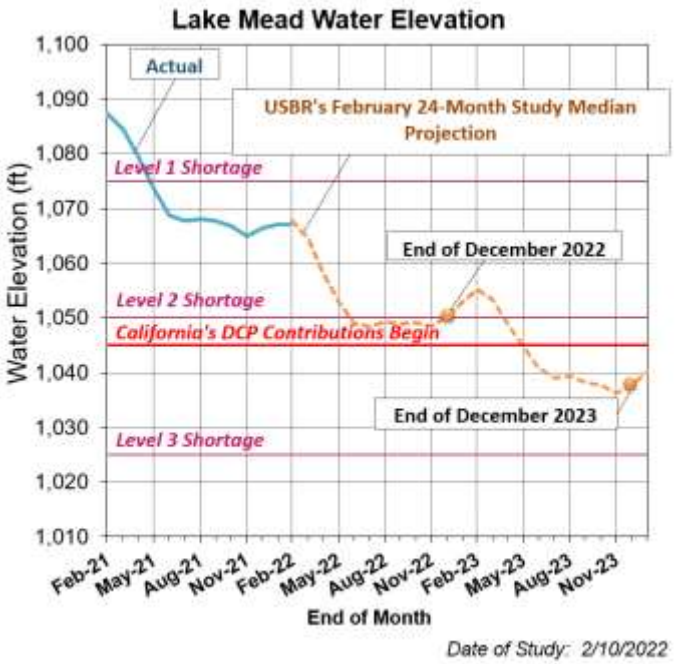


Sacramento River Basin

- ❄ Below normal snowpack water content for this date (14.9 inches).
- ♦ Below normal precipitation at the 8 Station to date (31.9 inches). January and February on pace to be the driest January and February on record.
- ≈ Runoff into the Sacramento River for WY 2022 is forecasted at 69% of normal.

CRA Supplies	Acre-Feet
Basic Apportionment	*550,000*
IID/ MWD Conservation Program	*105,000*
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	*6,000*
Quechan Diversion Forbearance	*6,000*
Quechan Seasonal Fallowing Program	*3,000*
Higher Priority Water Use Adjustment [1]	*0*
Total CRA Supplies	**1,000,000**

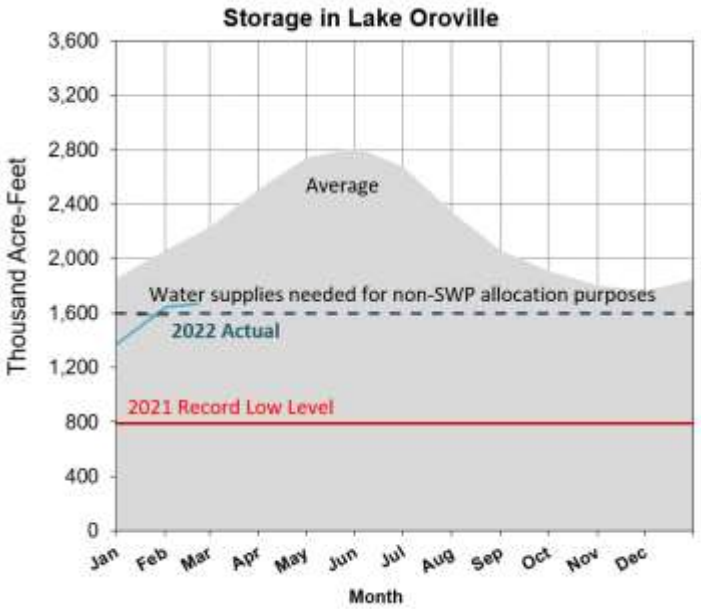
[1] Final adjustment could vary by more than 100 TAF.



- Lake Mead storage is currently at 8.96 MAF (elevation 1066.9 feet).
- 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.

SWP Supplies	Acre-Feet
Table A (15% SWP allocation)	*287,000*
Article 21	*0*
Port Hueneme [1]	*0*
SWC Buyers Group Transfers	*0*
Yuba Accord Dry-Year Purchase Program	*0*
MWDOC/IRWD Partnership [2]	*4,000*
Purchase of SDCWA's Semitropic Supply [2]	*4,000*
Total SWP Supplies	**295,000**
Total Supplies (CRA + SWP) (Prior to storage actions)	**1,295,000**

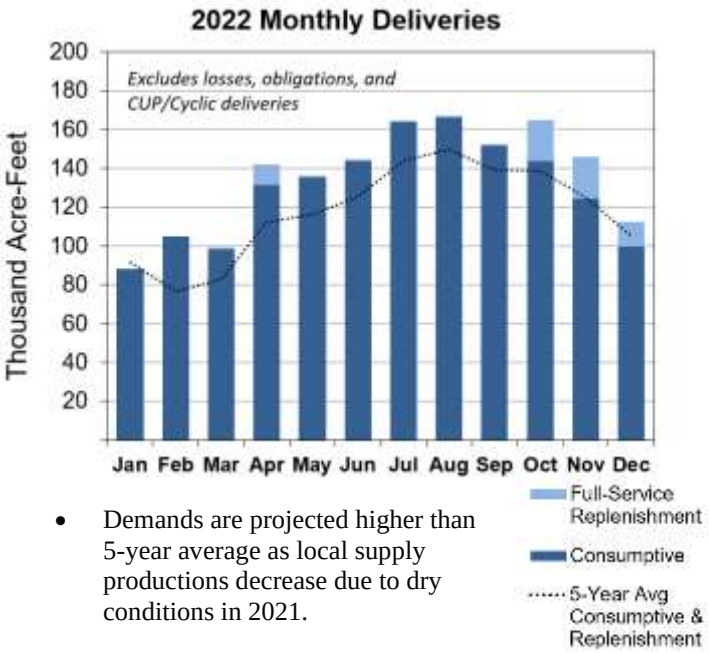
[1] Rounded to the nearest thousand. Supply is 277.5 AF.
[2] Agreements signed in February.



- The 2022 Table A allocation is 15 percent. Changes to the allocation are possible depending on hydrologic conditions in northern California. The final allocation is typically determined in May or June.
- Storage in Lake Oroville is currently at 1.66 MAF (47 percent of total capacity) or 76 percent of historical average as of the date of this report.

Current Demand	Acre-Feet
Member Agency Consumptive [1]	*1,559,000*
Member Agency Replenishment	*70,000*
Coachella Valley Water District Agreement	*15,000*
Exchange w/ San Luis Rey Tribe	*16,000*
System and Storage Losses	*50,000*
Cyclic Deliveries	*0*
Total Demands	**1,710,000**

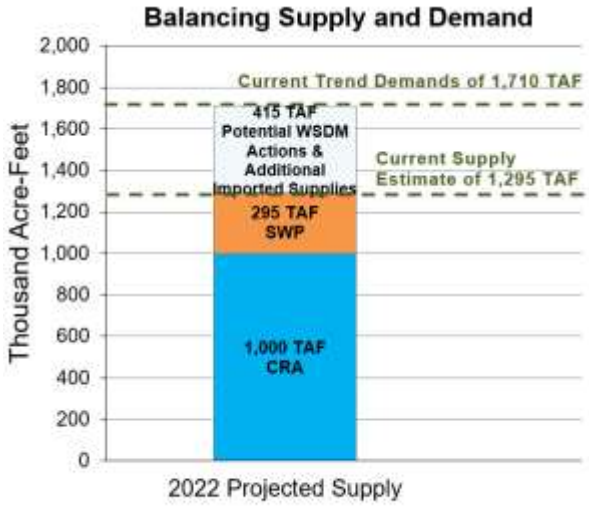
[1] Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.



- Demands are projected higher than 5-year average as local supply productions decrease due to dry conditions in 2021.

MANAGING SUPPLIES AND DEMANDS

Supply/Demand Balance	Acre-Feet
Total Supplies	*1,295,000*
Total Demands	*1,710,000*
Current Balance Estimate	**-415,000**



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.

- Withdrawing 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 from Castaic Lake.
- Increased exchange amounts with Arvin-Edison for Metropolitan to receive Friant surface water supplies.
- Maximizing the 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.
- Partnering with the San Diego County Water Authority to purchase their groundwater stored in the Semitropic Water Bank and lease 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.
- In February, Metropolitan's board approved the Reverse Cyclic Program through which member agencies would purchase supplies this year for deferred delivery in a future year to help preserve SWP storage; and to enter into agreement with the State Water Contractors to pursue transfer supplies.

2022 WSDM Storage Detail

WSDM Storage	1/1/2022 Estimated Storage Levels [1]	CY 2022 Take Capacity [2]	2022 Total Storage Capacity
Colorado River Aqueduct Delivery System	**1,243,000**	**238,000**	**1,657,000**
Lake Mead ICS	1,243,000	238,000 [3]	1,657,000
State Water Project System	**636,000**	**191,000**	**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	50,000 [7]	350,000
Kern Delta Storage Program	149,000	37,000	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**	**39,000**	**1,181,000**
Other Emergency Storage	381,000	0	381,000
DWCV Advanced Delivery Account	293,000	39,000	800,000
Total	**3,348,000**	**894,000**	**5,963,000**
Emergency	750,000	0	750,000
Total WSDM Storage (AF) [9]	**2,598,000**	**894,000**	**5,213,000**

[1] Start of year balances, subject to DWR adjustments and USBR final accounting in May 2022.

[2] Take capacity assumed under a 15 percent SWP Table A Allocation. Storage program losses included where applicable.

[3] Take capacity based on planned maintenance activities and current CRA supply estimate.

[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 per agreement signed in February. 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]
California ICS Agreement – IID [2]	240,000
Storage and Interstate Release Agreement with Southern Nevada Water Authority [3]	330,000
Coachella Valley Water District Agreement [4]	210,000
Total (AF)	**780,000 [5]**

[1] Rounded to the nearest thousand.

[2] IID can request return in any year, conditional on whether or not Metropolitan is implementing a Water Supply Allocation Plan.

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

[4] Obligation to be met by the end of 2026.

[5] Subject to change based on accounting adjustments.

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%	65%	62%	64%
Average Metropolitan DCP Contribution When Contributions Are Required (AF)	0	0	235,000	285,000	289,000

[1] Results from USBR's January 2022 Colorado River Simulation System (CRSS) model run which is the latest CRSS study at the time of this report. Study assumes 500+ Plan actions implemented to date; any further 500+ Plan activities would add new water to Lake Mead and would reduce the probabilities in the table.

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.