



● **Water Surplus and Drought Management Update** *Conditions as of 8/30/2022*

**Summary**

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This report accounts for water supply, demand, and storage conditions for calendar year (CY) 2022 as of August 30, 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 1.22 million acre-feet (MAF) which includes 258 thousand acre-feet (TAF) of State Water Project (SWP) supply and 966 TAF of Colorado River supply. Metropolitan's SWP supply includes 134 TAF of human health and safety supply from the Department of Water Resources, which includes 1 TAF of supply DWR recently approved for the Upper Feeder Pipeline shutdown. The current demand on Metropolitan is estimated to be 1.71 MAF. Since last month's report, the annual estimate of member agencies' consumptive demand continues to decrease mainly due to the region's ongoing conservation efforts including drastic water-use reductions by the SWP Dependent Area member agencies under the Emergency Water Conservation Program. Affected member agencies under the program used 37 percent less than what was expected without emergency conservation and 3 percent less supply than their volumetric limits to date. Thus, agencies under the first compliance path (Path 1) will continue with current 1-day-a-week watering restrictions for the month of October. Since supply is less than demand, Metropolitan will satisfy this gap through storage withdrawals.

To preserve SWP supply, Metropolitan executed an agreement with the Calleguas Municipal Water District and in August activated the Reverse Cyclic Program to defer some deliveries to a future year under the Reverse Cyclic Program. The accounting of this program will be reflected in subsequent WSDM reports as more information becomes available.

Though the SWP Dependent Area is currently the most stressed, Metropolitan and the state is calling upon all residents and businesses throughout the region to step up conservation efforts. These conservation efforts will be crucial as conditions on the Colorado River deteriorate; at the time of this report, it remains uncertain as to how the United States Bureau of Reclamation's call for additional conservation efforts from the Basin states in 2023 to protect critical elevations in Lakes Powell and Mead will impact Metropolitan. As such, Metropolitan staff are considering ways to implement supply allocations for the entire region should regionwide mandatory reductions be needed.

**Purpose**

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Informational

**Attachments**

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- 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

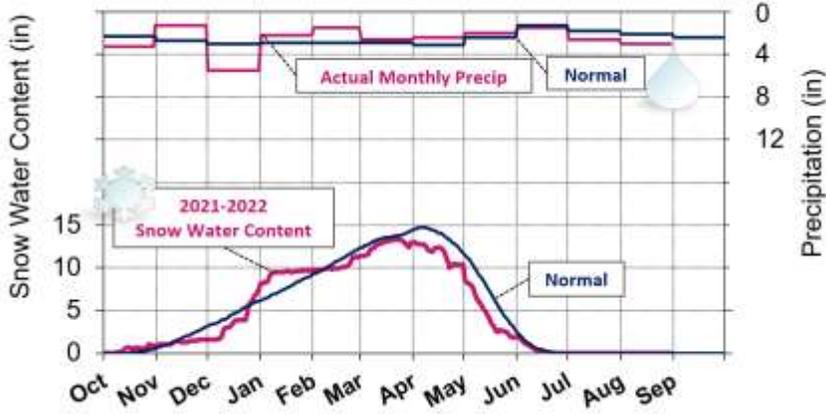
**Detailed Report**

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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.

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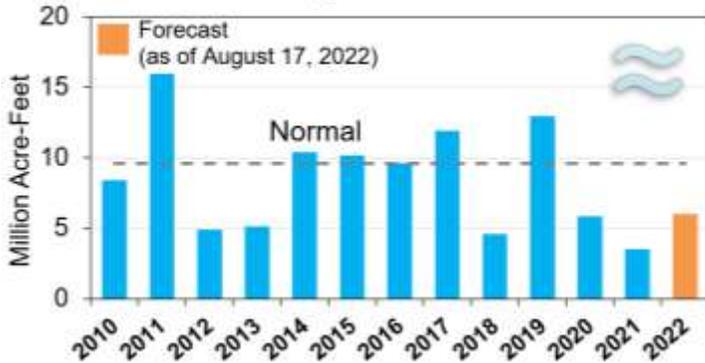
Upper Colorado Basin Snowpack & Precipitation



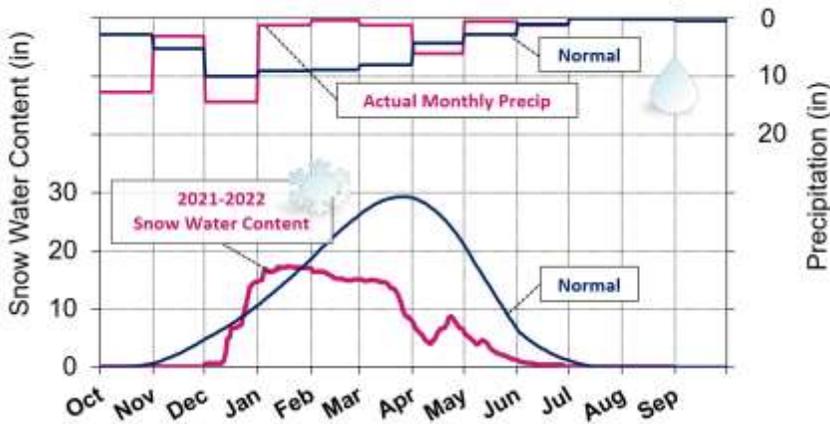
Upper Colorado River Basin

- ✳ Snowpack water content peaked in mid-March (13.3 inches or 91% of normal April 1).
- ◆ Above normal precipitation to date (27.8 inches or 102% of normal).
- ≈ Runoff into Lake Powell for WY 2022 is forecasted at 63% of normal.

Powell Unregulated Water Year Inflow



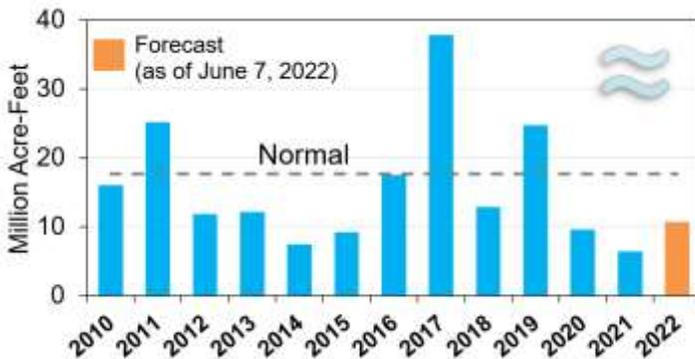
Northern Sierra Snowpack & 8 Station Precipitation



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 (41.4 inches or 79% of normal).
- ≈ Runoff into the Sacramento River for WY 2022 is forecasted at 60% of normal.

Sacramento River Water Year Runoff



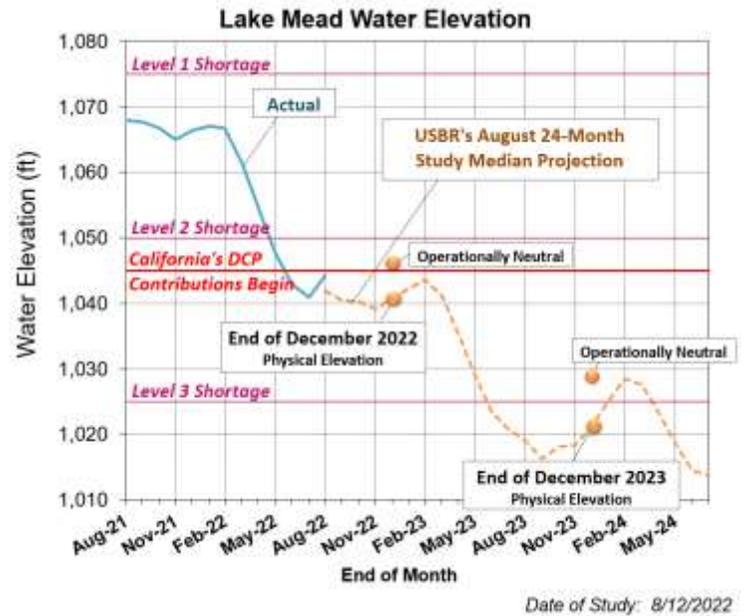
CRA Supplies	Acre-Feet
Basic Apportionment	550,000
IID/ MWD Conservation Program	105,000
CVWD - 2nd Amendment, Exchange of Additional Water	33,000
PVID Fallowing Program	25,000
Exchange w/ SDCWA (IID/Canal Lining)	280,000
Exchange w/ USBR (San Luis Rey Tribe)	16,000
Lower Colorado Water Supply Project	9,000
Bard Seasonal Fallowing Program	3,000
Quechan Diversion Forbearance	6,000
Quechan Seasonal Fallowing Program <sup>1</sup>	0
Higher Priority Water Use Adjustment <sup>2</sup>	-63,000
<b>Total CRA Supplies<sup>3</sup></b>	<b>966,000</b>

<sup>1</sup> Rounded to the nearest thousand.

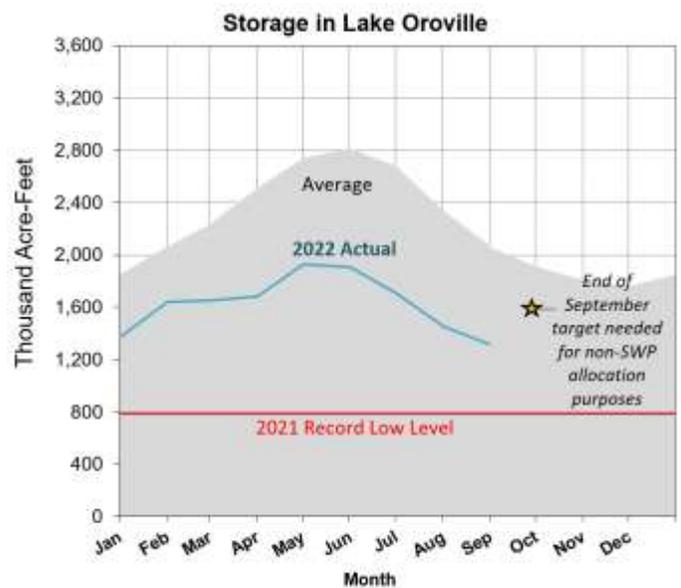
<sup>2</sup> Per USBR Forecast (8/30/22).

<sup>3</sup> Total may not sum due to rounding.

- Lake Mead storage is currently 7.3 MAF or elevation 1,044.3 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 based on the August 24-month study, which projects Lake Mead’s January 1, 2023 tier-determining elevation to be 1,047.6 feet (within the elevation band of 1,045 and 1,050 feet). To make 2023 Mead operations neutral with respect to a reduction of 480 TAF in the 2022 release from Powell to Mead, USBR determined the projected Mead elevation by modeling the reservoir as if the 480 TAF of water had been released. Under a Level 2a shortage, Metropolitan will not be impacted. However, it is uncertain how USBR’s call for Basin states to develop additional conservation to protect critical elevations in Lakes Powell and Mead will impact Metropolitan.



SWP Supplies	Acre-Feet
Table A (5% SWP allocation)	96,000
Article 21	0
Port Hueneme <sup>1</sup>	0
SWC Buyers Group Transfers <sup>2</sup>	6,000
Yuba Accord Dry-Year Purchase Program <sup>2</sup>	14,000
MWDOC/IRWD Partnership	4,000
Purchase of SDCWA’s Semitropic Supply	4,000
Human Health & Safety Supply	134,000
<b>Total SWP Supplies<sup>3</sup></b>	<b>258,000</b>



**Total Supplies (CRA + SWP)** **1,224,000**  
**(Prior to storage actions)**

<sup>1</sup> Rounded to the nearest thousand.

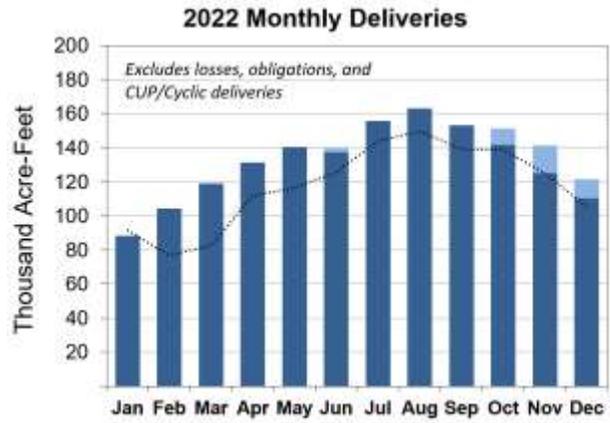
<sup>2</sup> Current estimate subject to change based on buyer/seller participation and losses.

<sup>3</sup> 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, which includes 1 TAF of supply for the Upper Feeder Pipeline shutdown.
- Lake Oroville is currently at 1.31 MAF (37 percent of total capacity) or 63 percent of historical average as of the date of this report.

Current Demand	Acre-Feet
Member Agency Consumptive <sup>1</sup>	1,580,000
Member Agency Replenishment	40,000
Coachella Valley Water District Agreement	15,000
Return to Imperial Irrigation District <sup>2</sup>	6,000
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	50,000
Cyclic Deliveries	0
<b>Total Demands <sup>3</sup></b>	<b>1,707,000</b>

<sup>1</sup> Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.  
<sup>2</sup> Per USBR Forecast (8/30/22).  
<sup>3</sup> 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	1,224,000
Total Demands	1,707,000
<b>Current Balance Estimate <sup>2</sup></b>	<b>-483,000</b>

<sup>1</sup> 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

	1/1/2022 Estimated Storage Levels	CY 2022 Take Capacity <sup>1</sup>	2022 Total Storage Capacity
<b>WSDM Storage</b>			
<b>Colorado River Aqueduct Delivery System</b>	<b>1,252,000</b>	<b>179,000</b>	<b>1,657,000</b>
Lake Mead ICS	1,252,000 <sup>2</sup>	179,000 <sup>3</sup>	1,657,000
<b>State Water Project System</b>	<b>636,000</b>	<b>188,000</b>	<b>1,879,000</b>
MWD SWP Carryover <sup>4</sup>	38,000	38,000	350,000
DWCV SWP Carryover <sup>4</sup>			
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 <sup>5</sup>	65,000
Arvin Edison Storage Program	136,000	17,000 <sup>6</sup>	350,000
Semitropic Storage Program	218,000	51,000 <sup>7</sup>	350,000
Kern Delta Storage Program	149,000	33,000	250,000
Mojave Storage Program	19,000	0	330,000
AVEK Storage Program	27,000	0	30,000
<b>In-Region Supplies and WSDM Actions</b>	<b>795,000</b>	<b>426,000</b>	<b>1,246,000</b>
Diamond Valley Lake	600,000	343,000	810,000
Lake Mathews and Lake Skinner	179,000	67,000	226,000
Conjunctive Use Programs (CUP) <sup>8</sup>	16,000	16,000	210,000
<b>Other Programs</b>	<b>674,000</b>	<b>11,000</b>	<b>1,181,000</b>
Other Emergency Storage	381,000	0	381,000
DWCV Advanced Delivery Account	293,000	11,000	800,000
<b>Total</b>	<b>3,357,000</b>	<b>804,000</b>	<b>5,963,000</b>
Emergency	750,000	0	750,000
<b>Total WSDM Storage (AF) <sup>9</sup></b>	<b>2,607,000</b>	<b>804,000</b>	<b>5,213,000</b>

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

<sup>2</sup> 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.

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

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

<sup>5</sup> Available for withdrawal from Castaic Lake in 2022 pursuant to an MWD-DWR agreement.

<sup>6</sup> Take amounts dependent on exchange capabilities.

<sup>7</sup> 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.

<sup>8</sup> 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.

<sup>9</sup> Total WSDM Storage level subject to change based on accounting adjustments.

## Agreements to Exchange or Return Stored Water

	<b>Future Returns <sup>1</sup></b>
<b>CR Total (AF)</b>	<b>802,000</b>
Water Stored for IID under the California ICS Agreement and its Amendment or the 2021 Settlement Agreement with IID	262,000 <sup>2</sup>
Storage and Interstate Release Agreement with Southern Nevada Water Authority	330,000 <sup>3</sup>
Coachella Valley Water District Agreement	210,000 <sup>4</sup>
<b>SWP Total (AF)</b>	<b>353,000</b>
DWR Flex Storage	219,000 <sup>5</sup>
Human Health & Safety	134,000 <sup>6</sup>
<b>Total (AF)</b>	<b>1,155,000</b>

<sup>1</sup> Rounded to the nearest thousand. Subject to change based on accounting adjustments.

<sup>2</sup> IID can request return in any year, conditional on agreement terms. Future return is projected to be reduced by 6,000 AF as shown on page 4.

<sup>3</sup> Up to 30,000 AF per year beginning no earlier than 2022.

<sup>4</sup> Obligation to be met by the end of 2026.

<sup>5</sup> 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 49,000 AF in 2022 and will need to return this amount by 2027.

<sup>6</sup> 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

	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>
Likelihood of Required California Drought Contingency Plan Contribution <sup>1</sup>	0%	0%	77%	71%	67%
Average Metropolitan DCP Contribution When Contributions Are Required (AF)	0	0	282,000	302,000	293,000

<sup>1</sup> Results from USBR's August 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 <sup>1</sup>	50,000	0	0	0	32,000	18,000

<sup>1</sup> Projected Cyclic program activity for the year. Subject to change.

## Emergency Water Conservation Program Performance

