



● **Water Surplus and Drought Management Update** *Conditions as of 10/25/2021*

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**Summary**

This report provides an accounting of water supply, demand, and storage conditions for calendar year (CY) 2021 as of October 25, 2021.

On October 19, 2021, Governor Gavin Newsom issued a proclamation extending the drought emergency statewide due to the worsening drought. This latest proclamation added all counties within Metropolitan's service area. The proclamation urges Californians to step up their water conservation efforts, directs local water suppliers to implement their Water Shortage Contingency Plans (WSCP) taking into account the possibility of a third dry year.

In a strong start to the new water year that began in October, an atmospheric river event brought much needed precipitation to both imported supply watersheds. The Northern Sierra 8-Station Precipitation Index accumulated 11.6 inches, nearly four times the typical amount for the entire month of October. Precipitation in the Upper Colorado River Basin measured 2.7 inches, slightly above the amount typically received in October.

The latest estimate for the CY 2021 supply/demand gap is 543 TAF, given the projected demand, the 5 percent SWP allocation, and the Colorado River Aqueduct (CRA) supply estimate which includes the latest forecast for the higher priority water use adjustment. To satisfy this supply/demand gap, Metropolitan is withdrawing water from its dry-year storage programs and purchased north of Delta water transfers. To preserve limited SWP supplies, Metropolitan is making operational adjustments to maximize use of Colorado River supplies, implementing the Operational Shift Cost-Offset Program, and developing additional drought actions. In August, Metropolitan declared a Water Supply Alert to increase drought awareness.

In November, Metropolitan's Board of Directors will consider adopting a resolution declaring a regional drought emergency. The resolution calls upon member agencies to take measures that reduce their dependency on SWP supplies for the duration of the drought emergency and to implement appropriate voluntary and mandatory drought actions from their WSCPs. Also, in November, Metropolitan's Board of Directors will vote to expand its conservation programs. These actions will help manage demands by promoting water use efficiency and better position the region should dry conditions continue into the next year.

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**Purpose**

Informational

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**Attachments**

Attachment 1: Projected 2021 WSDM Storage Detail (5 percent SWP allocation)

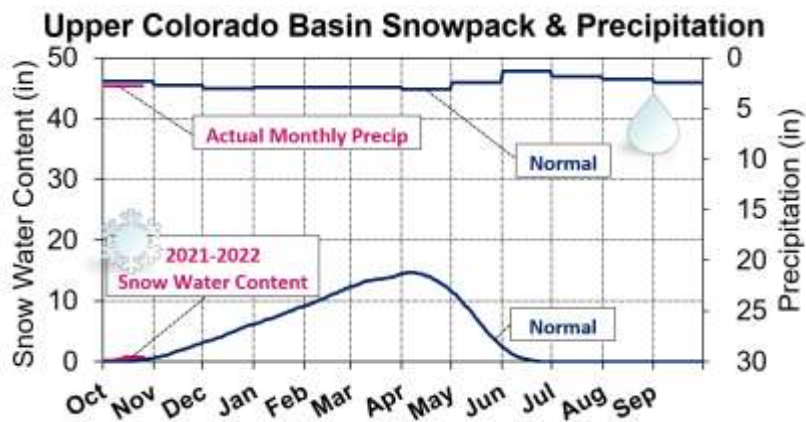
Attachment 2: Agreements to Exchange or Return Stored Water, Potential Magnitude of California's Drought Contingency Plan Contribution, and Cyclic Program Balances

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**Detailed Report**

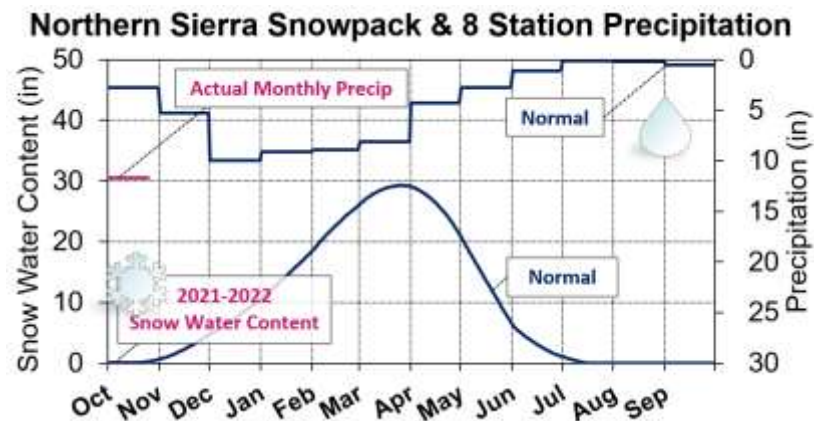
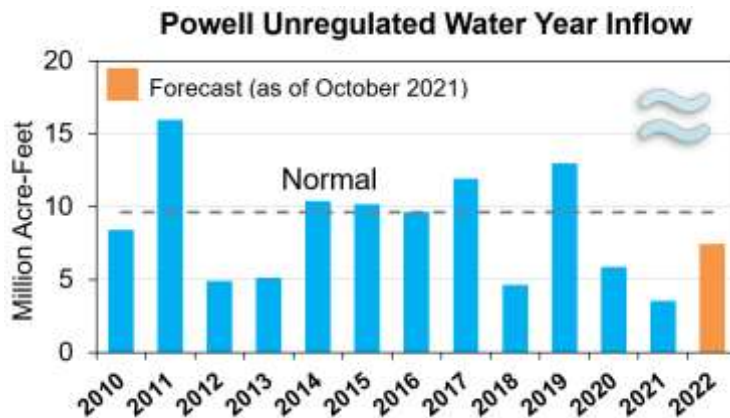
This Water Surplus and Drought Management (WSDM) report provides an overview of developing hydrologic conditions and estimated water supply and demand conditions for CY 2021.

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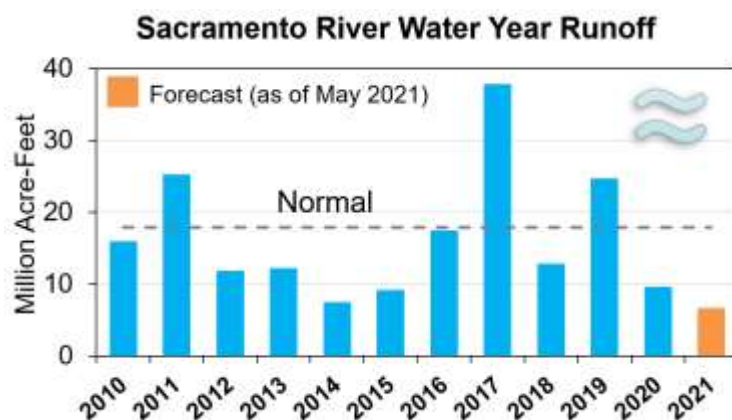
### Upper Colorado River Basin

- ❄ Water content of the snowpack measured 0.6 inches, slightly above normal for this date.
- ◆ Precipitation measured 2.7 inches, slightly above the amount typically received in October.
- ≈ Runoff into Lake Powell for WY 2022 is forecasted at 77% of normal.



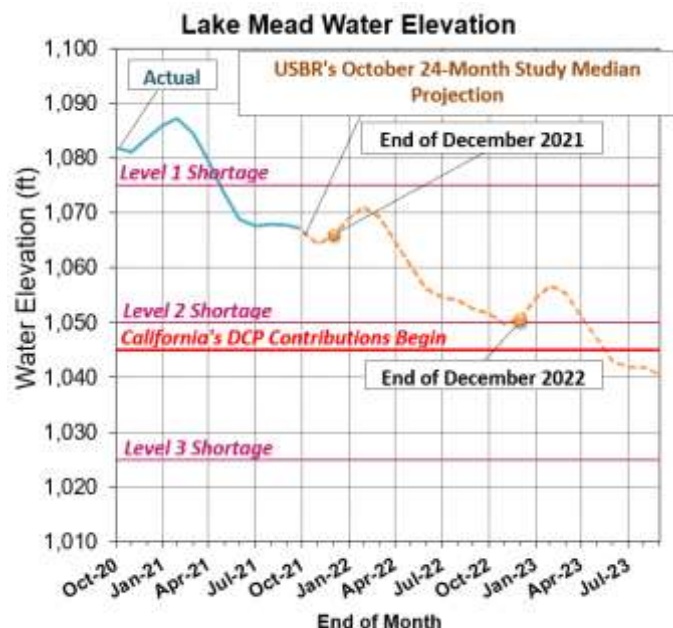
### Sacramento River Basin

- ❄ No snow reported.
- ◆ Precipitation measured 11.6 inches, four times the amount typically received in October.
- ≈ Runoff forecast for WY 2022 unavailable at the time of this report.



<b>CRA Supplies</b>	<b>Acre-Feet</b>
<i>Basic Apportionment</i>	550,000
<i>IID/ MWD Conservation Program</i>	105,000
<i>PVID Fallowing Program</i>	40,000
<i>Exchange w/ SDCWA (IID/Canal Lining)</i>	283,000
<i>Exchange w/ USBR (San Luis Rey Tribe)</i>	16,000
<i>Lower Colorado Water Supply Project</i>	9,000
<i>Bard Seasonal Fallowing Program</i>	6,000
<i>Quechan Diversion Forbearance</i>	6,000
<i>Higher Priority Water Use Adjustment <sup>1</sup></i>	65,000
<b>Total CRA Supplies</b>	<b>1,080,000</b>

<sup>1</sup> Per USBR Forecast (10/25/21). Does not include up to 25 TAF of water to be stored in IID's subaccount within Metropolitan's ICS account.



Date of Study: 10/13/2021

- The higher priority water users used less than their water orders. Through the priority system, water not used by the higher priority water users becomes a supply to Metropolitan.
- Lake Mead storage is currently at 8.98 MAF (elevation 1067.23 feet).
- The Lower Basin will be in a Level 1 shortage in CY 2022. Supplies to Metropolitan will not be curtailed and Metropolitan will have full access to its ICS in CY 2022.

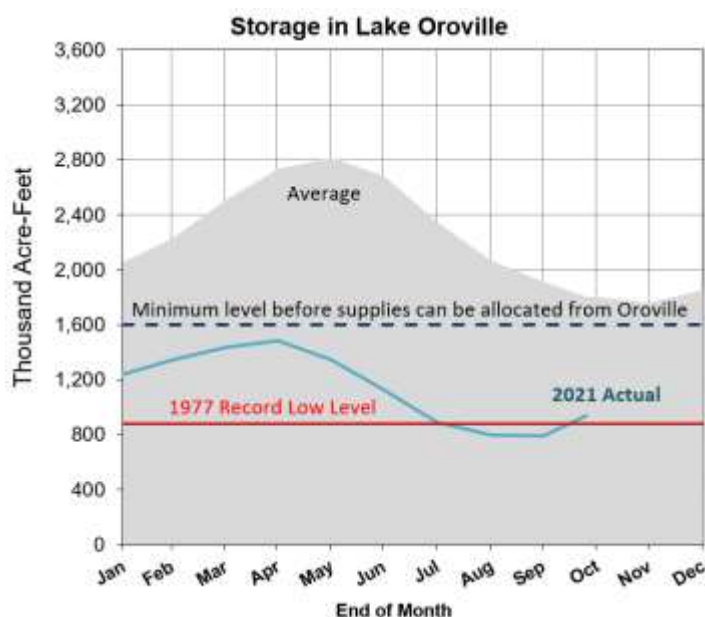
<b>SWP Supplies</b>	<b>Acre-Feet</b>
<i>Table A (5% SWP allocation)</i>	96,000
<i>Article 21</i>	0
<i>Port Hueneme <sup>1</sup></i>	0
<i>SWC Buyers Group Transfers <sup>2</sup></i>	6,000
<i>Yuba Accord Dry-Year Purchase Program <sup>2</sup></i>	23,000
<b>Total SWP Supplies</b>	<b>125,000</b>

**Total Supplies (CRA + SWP)**  
**(Prior to storage actions)**

<sup>1</sup> Rounded to the nearest thousand. Supply is 92.5 AF.

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

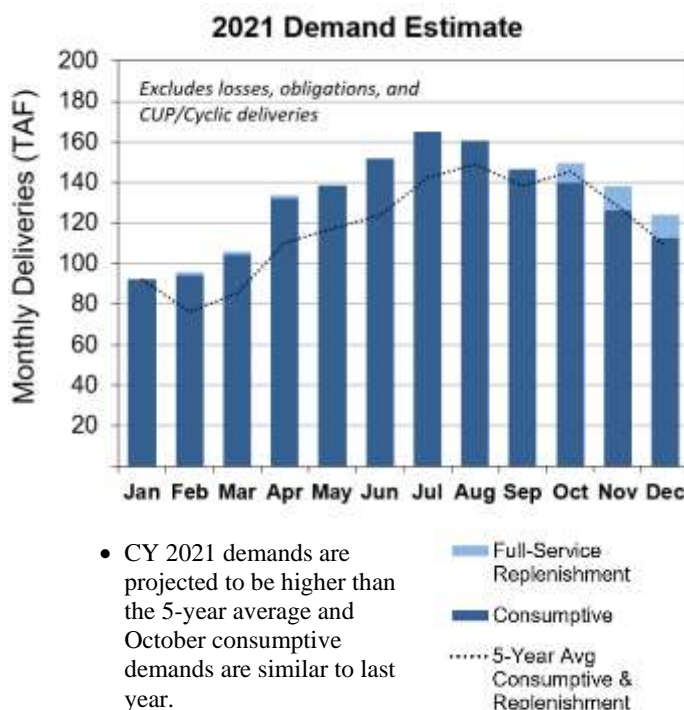
<sup>3</sup> Staff is aware of two member agency-managed SWP storage programs. Neither are moving water into MWD service area in 2021.



- Storage in Lake Oroville is currently at 941 TAF or 52% of historical average.
- CY 2022 is anticipated to begin with an initial SWP allocation of zero percent of contract amounts.
- Under a 0% SWP allocation, the Department of Water Resources may provide for, at a minimum, essential human health and safety needs for the SWP Contractors. Metropolitan has completed its assessment for the health and safety needs for the SWP only areas for CY 2022.

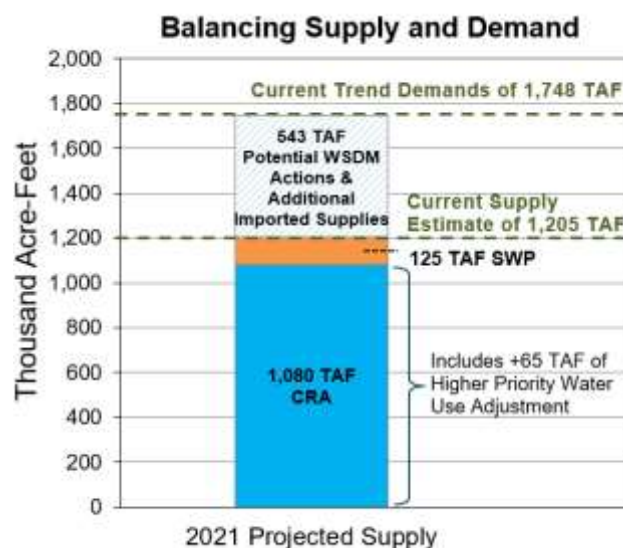
Current Demand	Acre-Feet
Member Agency Consumptive <sup>1</sup>	1,594,000
Member Agency Replenishment	38,000
Coachella Valley Water District Agreement	50,000
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	50,000
Cyclic Deliveries	0
<b>Total Demands</b>	<b>1,748,000</b>

<sup>1</sup> Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.



## MANAGING SUPPLIES AND DEMANDS

Supply/Demand Balance	Acre-Feet
Total Supplies	1,205,000
Total Demands	1,748,000
<b>Current Balance Estimate</b>	<b>-543,000</b>



## Dry-Year WSDM Strategies/Actions

The following WSDM actions are being pursued or are underway to satisfy the estimated supply/demand gap and to preserve SWP storage for a potentially low SWP allocation in 2022.

- Withdrawing water from dry-year storage reserves.
- Purchasing north of Delta transfers through the Yuba Accord and the SWC Buyers Group.
- Adjusting system operations to preserve SWP supplies and maximize use of Colorado River or stored supplies. These actions include pumping at the Greg Avenue pump station, drafting water from Diamond Valley Lake to serve Mills Plant, and shifting demand to Colorado River service connections.
- Los Angeles Department of Water and Power and Three Valleys Municipal Water District continue to shift deliveries in October under the Operational Shift Cost-Offset Program.
- Metropolitan, in coordination with member agencies, is evaluating additional drought actions targeted at Metropolitan's SWP dependent areas. Categories for the drought actions are system and operations, shift timing of deliveries, increase local supplies, increase conservation, and expand WSDM programs.
- Metropolitan is working with the San Bernardino Valley Municipal Water District, a SWP Contractor, to identify opportunities to enhance Metropolitan's capability of delivering supplies to areas that are reliant on SWP supplies.

## 2021 WSDM Storage Detail

WSDM Storage	1/1/2021 Estimated Storage Levels	Projected Storage Action <sup>1</sup> Put (+) / Take (-)	Projected End of Year 2021 Balance <sup>2</sup>	2021 Total Storage Capacity
<b>Colorado River Aqueduct Delivery System</b>	<b>1,293,000</b>	<b>4,000</b>	<b>1,297,000</b>	<b>1,657,000</b>
Lake Mead ICS	1,293,000 <sup>3</sup>	4,000	1,297,000	1,657,000
<b>State Water Project System</b>	<b>1,052,000</b>	<b>-427,000</b>	<b>625,000</b>	<b>1,879,000</b>
MWD SWP Carryover <sup>4</sup>	207,000	-183,000	24,000	350,000
DWCV SWP Carryover <sup>4</sup>				
MWD Articles 14(b) and 12(e)	0	0	0	N/A
Castaic Lake (DWR Flex Storage)	154,000	-154,000	0	154,000
Lake Perris (DWR Flex Storage)	65,000	-16,000	49,000	65,000
Arvin Edison Storage Program	142,000	-4,000 <sup>5</sup>	138,000	350,000
Semitropic Storage Program	261,000	-43,000	218,000	350,000
Kern Delta Storage Program	177,000	-27,000	150,000	250,000
Mojave Storage Program	19,000	0	19,000	330,000
AVEK Storage Program	27,000	0	27,000	30,000
<b>In-Region Supplies and WSDM Actions</b>	<b>872,000</b>	<b>-89,000</b>	<b>783,000</b>	<b>1,246,000</b>
Diamond Valley Lake	704,000	-104,000	600,000	810,000
Lake Mathews and Lake Skinner	127,000	45,000	172,000	226,000
Conjunctive Use Programs (CUP) <sup>6</sup>	41,000	-30,000	11,000	210,000
<b>Other Programs</b>	<b>694,000</b>	<b>-31,000</b>	<b>663,000</b>	<b>1,181,000</b>
Other Emergency Storage	381,000	0	381,000	381,000
DWCV Advanced Delivery Account	313,000	-31,000	282,000	800,000
<b>Total</b>	<b>3,911,000</b>	<b>-543,000</b>	<b>3,368,000</b>	<b>5,963,000</b>
Emergency	750,000	0	750,000	750,000
<b>Total WSDM Storage (AF) <sup>7</sup></b>	<b>3,161,000</b>	<b>-543,000</b>	<b>2,618,000</b>	<b>5,213,000</b>

<sup>1</sup> Storage program losses included where applicable.

<sup>2</sup> Preliminary end of year balances, subject to DWR adjustments and USBR final accounting in May 2022.

<sup>3</sup> Reflects USBR's final accounting for 2020, released in May 2021.

<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> Take amounts dependent on exchange capabilities. Began receiving exchange of surface water supplies in August.

<sup>6</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>7</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>
California ICS Agreement – IID <sup>2</sup>	243,000
Storage and Interstate Release Agreement with Southern Nevada Water Authority <sup>3</sup>	330,000
<b>Total (AF)</b>	<b>573,000 <sup>4</sup></b>

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

<sup>2</sup> IID can request return in any year, conditional on whether or not Metropolitan is implementing a Water Supply Allocation Plan.

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

<sup>4</sup> Subject to change based on accounting adjustments.

## 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%	3%	66%	72%	63%
Average Metropolitan DCP Contribution When Contributions Are Required (AF)	0	180,000	259,000	282,000	308,000

<sup>1</sup> Results from USBR's revised August 2021 Colorado River Simulation System (CRSS) model run. Study assumes no drought response activities; any new water added to Lake Mead would reduce the probabilities in the table.

## Cyclic Program Activity

<b>CY</b>	<b>Starting Balance (AF)</b>	<b>CY Actions (AF)</b>				<b>Ending Balance (AF)</b>
		Cyclic Pre-Delivery	Cyclic Cost-Offset Pre-Delivery	Total Pre-Delivery	Sale Out of Cyclic	
2019	50,000	147,000	19,000	166,000	91,000	125,000
2020	125,000	2,000	0	2,000	50,000	77,000
2021 <sup>1</sup>	77,000	0	0	0	32,000	45,000

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