



● **Water Surplus and Drought Management Update** *Conditions as of 11/29/2021*

Summary

This report provides an accounting of water supply, demand, and storage conditions for calendar year (CY) 2021 as of November 29, 2021. In addition, this report is tracking the hydrologic conditions for water year (WY) 2021-2022.

The CY 2021 supply/demand gap is currently estimated to be 565 thousand acre-feet, given the projected demand, the 5 percent State Water Project (SWP) allocation for 2021, and the Colorado River Aqueduct supply estimate. To satisfy this supply/demand gap, Metropolitan is withdrawing water from its dry-year storage programs and purchasing north of Delta water transfers. To preserve limited SWP supplies, Metropolitan made operational adjustments to maximize use of Colorado River supplies, implemented the Operational Shift Cost-Offset Program, and is currently developing additional drought actions. To increase drought awareness, Metropolitan declared a Water Supply Alert in August. In addition, Metropolitan declared a Drought Emergency in November, calling on its member agencies dependent on state project water to use increased conservation measures or other means to reduce their use of these limited supplies.

On December 1, 2021, the Department of Water Resources (DWR) announced its initial SWP allocation for 2022. Given the unprecedented drought conditions and limited water supply, DWR is currently not able to allocate in a traditional manner. Instead, DWR's initial allocation is based on deliveries for health and safety water needs for the first time in the history of the SWP. DWR may return to a more traditional allocation process if the hydrologic and reservoir conditions improve. As for the Colorado River supplies, the Lower Basin will experience its first-ever shortage in 2022. While Metropolitan's supplies are not reduced in a Level 1 shortage, if Lake Mead's water level continues to drop, Metropolitan will be required to make contributions under the 2019 Lower Basin Drought Contingency Plan (DCP) Agreement as early as 2023.

Purpose

Informational

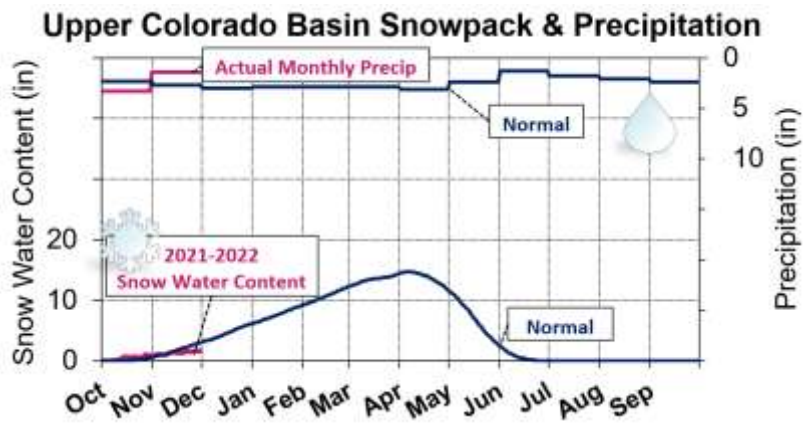
Attachments

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

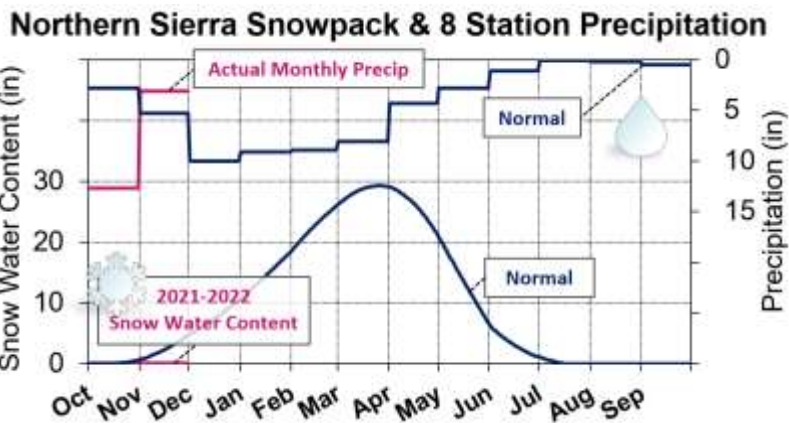
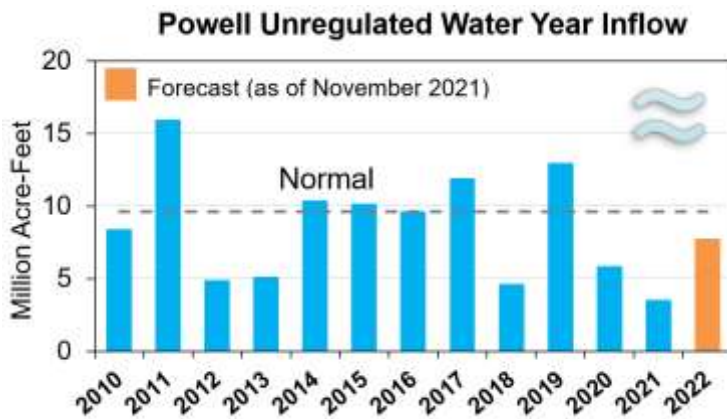
Detailed Report

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



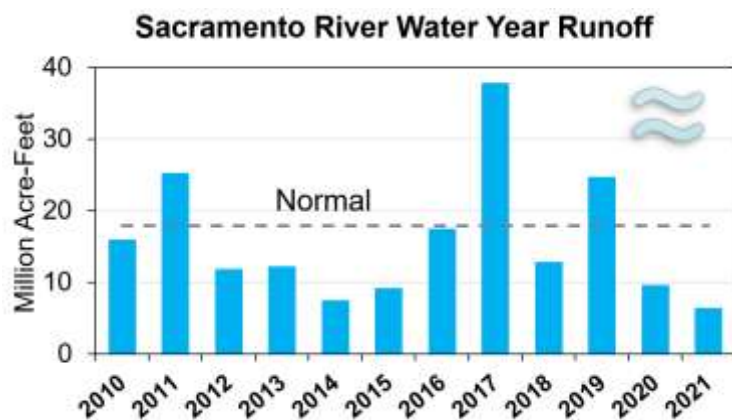
Upper Colorado River Basin

- * Below normal snowpack water content to date (1.6 inches).
- ◆ Near normal precipitation for October and November (4.6 inches).
- ≈ Runoff into Lake Powell for WY 2022 is forecasted at 81% of normal.



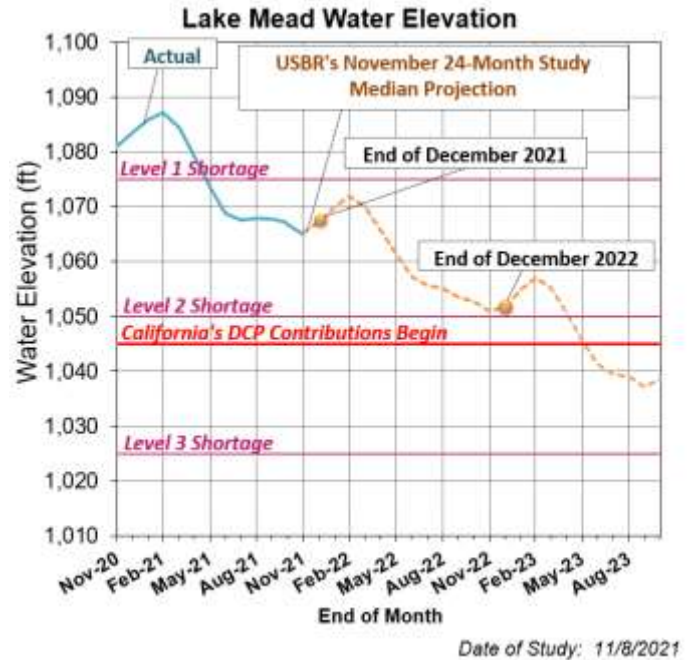
Sacramento River Basin

- * No snow reported.
- ◆ Nearly double precipitation to date as result of the October atmospheric river (15.8 inches).
- ≈ Runoff forecast for WY 2022 unavailable at the time of this report.



CRA Supplies	Acre-Feet
Basic Apportionment	550,000
IID/ MWD Conservation Program	105,000
PVID Fallowing Program	40,000
Exchange w/ SDCWA (IID/Canal Lining)	283,000
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
Higher Priority Water Use Adjustment ¹	66,000
Total CRA Supplies	1,081,000

¹ Per USBR Forecast (11/29/21). Does not include up to 25 TAF of water requested to be stored in IID’s subaccount within Metropolitan’s ICS account.

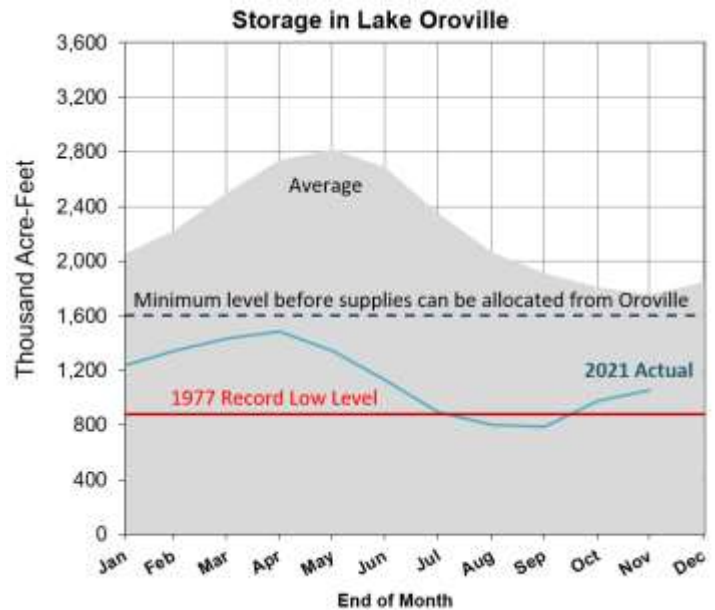


- The higher priority water users are using less water than their water orders to date. Through the priority system, water not used by the higher priority water users becomes a supply to Metropolitan.
- Lake Mead storage is currently at 8.80 MAF (elevation 1064.9 feet).
- The Lower Basin will be in a Level 1 shortage in CY 2022. Supplies to Metropolitan will not be curtailed and Metropolitan will have full access to its Intentionally Created Surplus (ICS) in CY 2022. However, water levels in Lake Mead are projected to decline, increasing the likelihood of Metropolitan making contributions in future years.

SWP Supplies	Acre-Feet
Table A (5% SWP allocation)	96,000
Article 21	0
Port Hueneme ¹	0
SWC Buyers Group Transfers ²	4,000
Yuba Accord Dry-Year Purchase Program ²	23,000
Total SWP Supplies ³	123,000

Total Supplies (CRA + SWP) **1,204,000**
(Prior to storage actions)

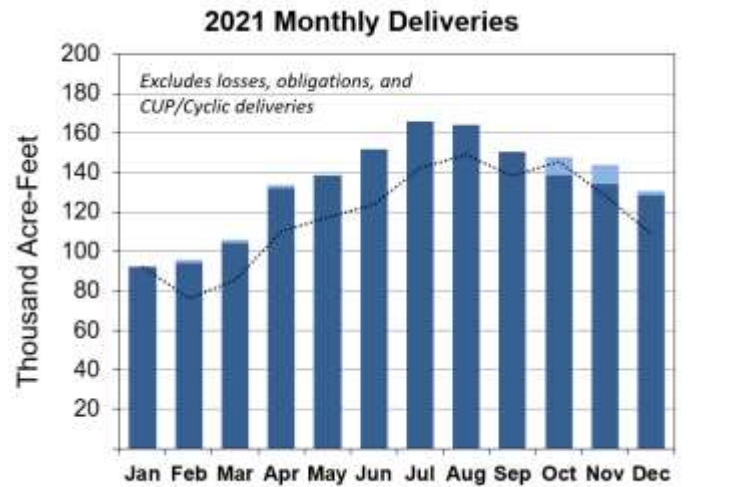
¹ Rounded to the nearest thousand. Supply is 92.5 AF.
² Current estimates subject to change based on buyer/seller participation and losses.
³ Staff is aware of two member agency-managed SWP storage programs. Neither are moving water into MWD service area in 2021.



- Storage in Lake Oroville is currently at 1,054 TAF (30 percent of total capacity) or 60 percent of historical average as of the date of this report.
- For the first time in the history of the SWP, the initial SWP allocation for 2022 will be based on minimum unmet water demands for health and safety as authorized by Article 18(a) of the long-term water supply contract. This is a departure from the traditional allocation process where each member of the State Water Contractors (SWC), Inc. receives the same percent of their requested amount.

Current Demand	Acre-Feet
Member Agency Consumptive ¹	1,625,000
Member Agency Replenishment	27,000
Coachella Valley Water District Agreement	50,000
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	51,000
Cyclic Deliveries	0
Total Demands	1,769,000

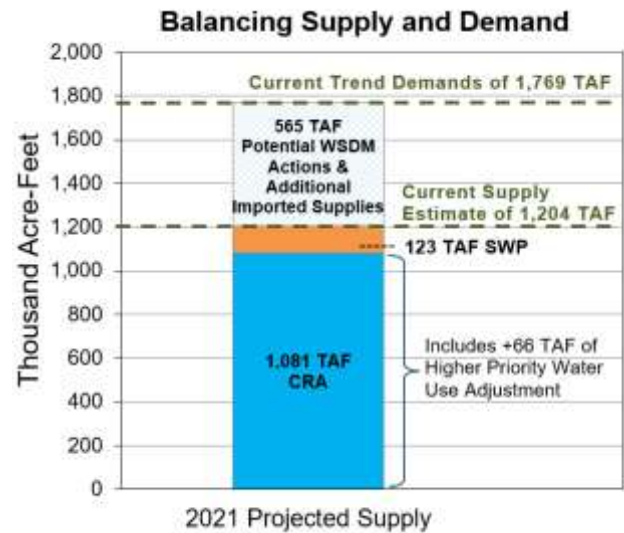
¹ Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.



- CY 2021 demands are projected to be higher than the 5-year average and November consumptive demands are the highest since 2013.
- Member agencies deferred part of their replenishment deliveries of SWP supplies to a future year when supplies are available. This is not included in the total deliveries made in 2021.

MANAGING SUPPLIES AND DEMANDS

Supply/Demand Balance	Acre-Feet
Total Supplies	1,204,000
Total Demands	1,769,000
Current Balance Estimate	-565,000



Dry-Year WSDM Strategies/Actions

The following summarizes actions taken in 2021 to satisfy the estimated supply/demand gap and to preserve SWP storage for a potentially dry 2022.

- Withdrew water from dry-year storage reserves.
- Purchased north of Delta transfers through the Yuba Accord and the State Water Contractors Buyers Group.
- Adjusted distribution system operations to preserve SWP supplies and maximize use of Colorado River or stored supplies. These operations include pumping at the Greg Avenue pump station to move Colorado River and stored supplies into the SWP dependent areas and drafting water from Diamond Valley Lake to serve the Lakeview Pipeline and for the first time, the Mills Plant.
- Worked 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.
- Continued coordination with member agencies to identify new drought actions targeted at Metropolitan’s SWP dependent areas. These drought actions fall under system and operations, shifting timing of deliveries, increasing local supplies, increasing conservation, and expanding WSDM programs.
- Continued partnerships with non-member agencies such as the San Bernardino Valley Municipal Water District, a SWP Contractor, to identify opportunities to enhance Metropolitan’s capability of delivering supplies to Metropolitan’s SWP dependent areas.
- All of these actions preserve SWP supplies in SWP storage for future use by potentially all member agencies.

2021 WSDM Storage Detail

WSDM Storage	1/1/2021 Estimated Storage Levels	Projected Storage Action ¹ Put (+) / Take (-)	Projected End of Year 2021 Balance ²	2021 Total Storage Capacity
Colorado River Aqueduct Delivery System	1,293,000	6,000	1,299,000	1,657,000
Lake Mead ICS	1,293,000 ³	6,000	1,299,000	1,657,000
State Water Project System	1,052,000	-432,000	620,000	1,879,000
MWD SWP Carryover ⁴	207,000	-186,000	21,000	350,000
DWCV SWP Carryover ⁴				
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	-5,000 ⁵	137,000	350,000
Semitropic Storage Program	261,000	-43,000	218,000	350,000
Kern Delta Storage Program	177,000	-28,000	149,000	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	872,000	-85,000	787,000	1,246,000
Diamond Valley Lake	704,000	-106,000	598,000	810,000
Lake Mathews and Lake Skinner	127,000	51,000	178,000	226,000
Conjunctive Use Programs (CUP) ⁶	41,000	-30,000	11,000	210,000
Other Programs	694,000	-54,000	640,000	1,181,000
Other Emergency Storage	381,000	0	381,000	381,000
DWCV Advanced Delivery Account	313,000	-54,000	259,000	800,000
Total	3,911,000	-565,000	3,346,000	5,963,000
Emergency	750,000	0	750,000	750,000
Total WSDM Storage (AF) ⁷	3,161,000	-565,000	2,596,000	5,213,000

¹ Storage program losses included where applicable.

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

³ Reflects USBR's final accounting for 2020, released in May 2021.

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

⁵ Take amounts dependent on exchange capabilities. Began receiving exchange of surface water supplies in August.

⁶ 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.

⁷ 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	243,000
Storage and Interstate Release Agreement with Southern Nevada Water Authority ³	330,000
Total (AF)	573,000 ⁴

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

¹ Results from USBR's August 2021 Colorado River Simulation System (CRSS) model run which is the latest study at the time of this report. Study assumes no drought response activities; any new water added to Lake Mead 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	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 ¹	77,000	0	0	0	28,000	49,000

¹ Projected Cyclic program activity for the year. Subject to change.