



● Water Surplus and Drought Management Update *Conditions as of 8/2/2021*

Summary

This report provides an accounting of water supply, demand, and storage conditions for calendar year (CY) 2021. This report considers conditions as of August 2, 2021.

The State Water Project (SWP) allocation is 5 percent of Table A. Warm temperatures and extremely dry soils have depleted the expected runoff from the Northern Sierra Snowpack. Runoff into the Sacramento River for the water year is projected to be the fourth lowest on record. Water years 2020 and 2021 are the second driest two-year period on record following 1976-1977.

On July 23, 2021, the State Water Resources Control Board (SWRCB) notified senior right holders in the Delta watershed that there are insufficient supplies for any diversions for some pre-1914 appropriative claims or to support full diversion by some riparian claims. In addition, the SWRCB approved an emergency curtailment regulation on August 3, 2021. Staff continues to evaluate the impacts to transfers and will reflect any additional impacts in subsequent reports.

In the Upper Colorado River Basin, runoff into Lake Powell is also projected to be well below normal. The water year runoff is projected to be the second lowest on record. The latest United States Bureau of Reclamation (USBR) 24-month study, released in July, continues to project Lake Mead's water elevation to fall below the Level 1 shortage trigger (1,075 feet) at the end of the calendar year. The first ever shortage declaration is anticipated to be announced in August for the Lower Basin which will impact Arizona, Nevada, and Mexico.

The current demand estimate is 1.78 million AF. This results in a supply/demand gap of 644 TAF given the current 5 percent SWP allocation and the Colorado River Aqueduct (CRA) supply estimate. To satisfy the supply/demand gap and preserve SWP surface storage for a potentially dry 2022, Metropolitan is withdrawing water from its dry-year storage and purchasing north of Delta water transfers. To preserve limited SWP supplies, Metropolitan is making operational adjustments to maximize use of Colorado River supplies and in-region storage, continuing to work with agencies on the implementation of the new Operational Shift Cost-Offset Program, and developing and evaluating additional drought actions.

Purpose

Informational

Attachments

- Attachment 1: Projected 2021 WSDM Storage Detail (5 percent SWP allocation)
Attachment 2: Agreements to Exchange or Return Stored Water and Cyclic Program Balances

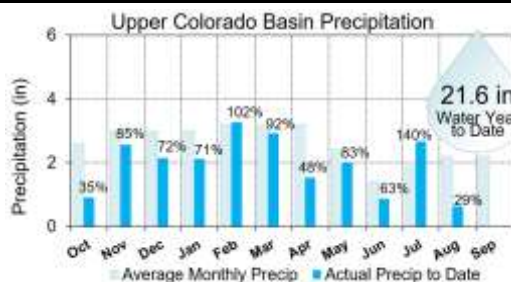
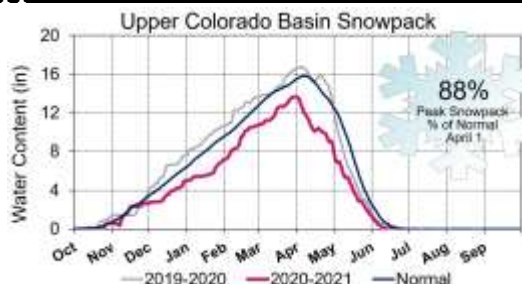
Detailed Report

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.

HYDROLOGIC CONDITIONS

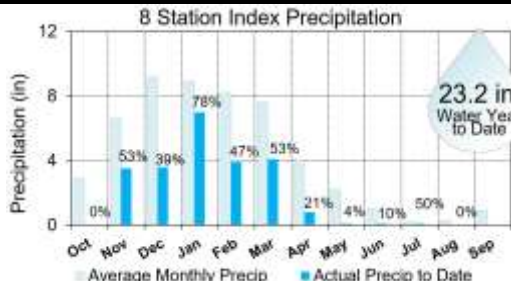
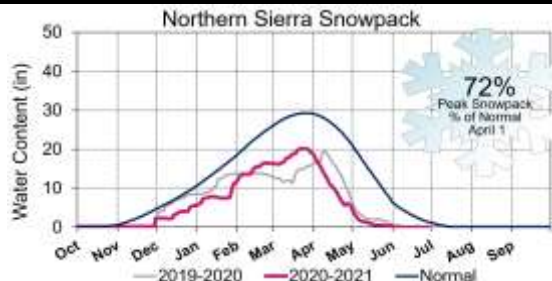
Conditions as of 8/2/2021

Upper Colorado River Basin



- Precipitation measured 21.6 inches or 80% of normal water year to date.
- Runoff into Lake Powell is forecasted to be 32% of average.

Sacramento River Basin



- Snowpack peaked at 72 percent of April 1 normal.
- Sacramento River runoff is forecasted to be 38% of average.

2021 SUPPLY ESTIMATE

Conditions as of 8/2/2021

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	0
Total CRA Supplies	1,015,000

¹ Final adjustment could range by more than plus or minus 100 TAF.

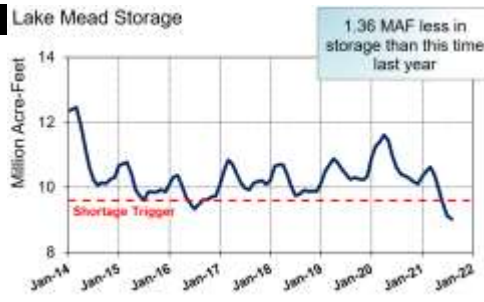
SWP Supplies	Acre-Feet
Table A (5% SWP allocation)	96,000
Article 21	0
Port Hueneme ¹	0
SWC Buyers Group Transfers ²	6,000
Yuba Accord Dry-Year Purchase Program ²	20,000
Total SWP Supplies ³	122,000

Total Supplies (CRA + SWP) 1,137,000
(Prior to storage actions)

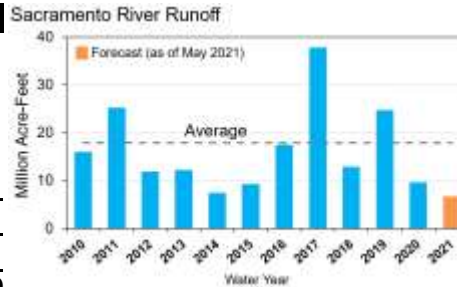
¹ Rounded to the nearest thousand. Supply is 92.5 AF.

² Current estimate subject to seller performance and losses.

³ Staff is aware of two member agency-managed SWP storage programs, neither are moving water into MWD service area in 2021



- Lake Mead storage is at 9.03 MAF (elevation 1067.85 feet).
- USBR's July 24-month study continues to show Lake Mead's water elevation declining over the next two years. In August, the 24-month study will continue to project Lake Mead falling below 1,075 feet on January 1, 2022, and the first ever shortage (Level 1) will be declared for CY 2022.



- Staff continues to evaluate the impacts of the notice of water unavailability to senior water right claimants and the emergency curtailment regulation to transfers.

2021 WATER DEMANDS

Current Demand	Acre-Feet
Member Agency Consumptive ¹	1,638,000
Member Agency Replenishment	27,000
Coachella Valley Water District Agreement	50,000
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	50,000
Cyclic Deliveries	0
Total Demands	1,781,000

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

2021 Demand Estimate



- With continued dry and warm conditions, 2021 demands are projected to be higher than the 5-year average, and July consumptive demands are the highest since 2014.

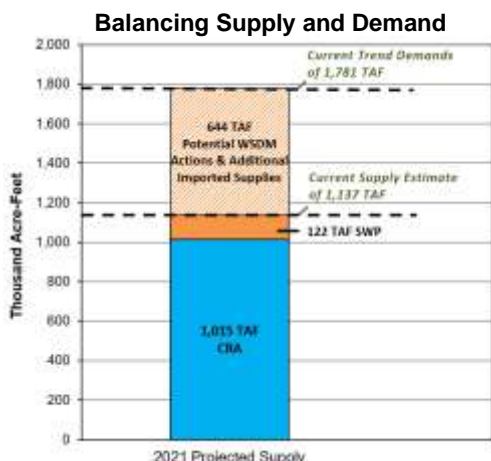
MANAGING SUPPLIES AND DEMANDS

Supply/Demand Balance	Acre-Feet
Total Supplies	1,137,000
Total Demands	1,781,000
Current Balance Estimate	-644,000

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 (e.g. Lake Mead ICS account, SWP Carryover storage, SWP Banking Programs, SWP Flexible storage accounts, in-region surface reservoirs).
- Purchasing an estimated 37 TAF (26 TAF after losses) 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.
- The Operational Shift Cost-Offset Program agreement is in place with the Los Angeles Department of Water and Power. LADWP began shifting deliveries in July. Metropolitan is exploring other opportunities to shift to Colorado River service connections with Upper San Gabriel Valley Municipal Water District, Three Valleys Municipal Water District, and Eastern Municipal Water District.



2021 WSDM Storage Detail

	1/1/2021 Estimated Storage Levels	CY 2021 Take Capacity ¹	2021 Total Storage Capacity
WSDM Storage			
Colorado River Aqueduct Delivery System	1,293,000	101,000	1,657,000
Lake Mead ICS	1,293,000 ²	101,000 ³	1,657,000
State Water Project System	1,052,000	495,000	1,879,000
MWD SWP Carryover ⁴	207,000	207,000	350,000
DWCV SWP Carryover ⁴			
MWD Articles 14(b) and 12(e)	0	0	N/A
Castaic Lake (DWR Flex Storage)	154,000	154,000	154,000
Lake Perris (DWR Flex Storage)	65,000	65,000	65,000
Arvin Edison Storage Program	142,000	0 ⁵	350,000
Semitropic Storage Program	261,000	42,000	350,000
Kern Delta Storage Program	177,000	27,000 ⁶	250,000
Mojave Storage Program	19,000	0	330,000
AVEK Storage Program	27,000	0	30,000
In-Region Supplies and WSDM Actions	872,000	499,000	1,246,000
Diamond Valley Lake	704,000	447,000	810,000
Lake Mathews and Lake Skinner	127,000	14,000	226,000
Conjunctive Use Programs (CUP) ⁷	41,000	38,000	210,000
Other Programs	694,000	56,000	1,181,000
Other Emergency Storage	381,000	0	381,000
DWCV Advanced Delivery Account	313,000	56,000	800,000
Total	3,911,000	1,151,000	5,963,000
Emergency	750,000	0	750,000
Total WSDM Storage (AF) ⁸	3,161,000	1,151,000	5,213,000

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

² Reflects USBR's final accounting for 2020, released in May 2021.

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 Take amounts dependent on exchange capabilities. Began receiving exchange of surface water supplies in August. Accounting will be updated once deliveries are reconciled.

⁶ Reduced by 13 TAF due to dry conditions impacting the exchange.

⁷ 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.

⁸ 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	164,000
Storage and Interstate Release Agreement with Southern Nevada Water Authority ³	330,000
Total (AF)	494,000 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.

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	32,000	45,000

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