



● **Water Surplus and Drought Management Update** *Conditions as of 4/1/2022*

Summary

This report accounts for water supply, demand, and storage conditions for calendar year (CY) 2022 as of April 1, 2022. The report also tracks the hydrologic conditions for water year (WY) 2021-2022.

January through March was the driest start of the calendar year in recorded history for the state of California. This severely reduced available water supply for the State Water Project (SWP). In response, the State took measures to stretch the limited water supply for the current year as well as prepare for a potential dry 2023. On March 18, 2022, the Department of Water Resources (DWR) reduced the SWP Table A allocation from 15 percent to 5 percent. To help offset the reduced allocation, DWR will provide additional water for any unmet critical human health and safety needs (HH&S) at 55 gallons per person per day. This includes water for indoor uses like drinking, cooking, and sanitation, but does not include water for other uses (e.g., commercial, industrial, and institutional needs). DWR requires all contractors receiving HH&S water to implement robust conservation actions with mandatory requirements. On March 28, 2022, Governor Newsom signed Executive Order N-7-22 calling on local water suppliers to implement more aggressive water conservation measures and having the State Water Resources Control Board evaluate a ban on watering ornamental grass on commercial properties.

The United States Bureau of Reclamation (USBR) began releasing its daily forecast of water use for California's Colorado River water users for this year. The current forecast indicates that several higher priority water users are projected to use significantly more water than in recent years, decreasing Metropolitan's projected Colorado River supply by 130 thousand acre-feet (TAF) from last month's report. Metropolitan will be able to satisfy demands by withdrawing a like amount from storage. The USBR forecast also shows that the Imperial Irrigation District (IID) is currently projected to use 68 TAF more than its submitted water order. Metropolitan expects IID to meet this demand by withdrawing from water it has stored previously with Metropolitan, thereby reducing Metropolitan's return obligation to IID.

Metropolitan's projected supply/demand gap estimate for calendar year 2022 is currently estimated to be 848 TAF based on a demand estimate of 1.82 million acre-feet, the 5 percent SWP Table A allocation, and the Colorado River Aqueduct (CRA) estimate. Consecutive years of low SWP allocations and storage withdrawals have left insufficient supplies to meet normal demands in the SWP Dependent Area. As such, Metropolitan will request delivery of HH&S water. To support the implementation and enforcement of mandatory conservation at the retail level and conform to DWR's HH&S guidance, staff will seek board action in April to establish a SWP Emergency Conservation Plan. Also in April, staff will seek board action to secure 2022 Sacramento Valley water transfers to provide additional resource options to the SWP Dependent Area. If approved, these actions will help balance current year water supply in the SWP Dependent Area and prepare for a potential dry 2023.

Purpose

Informational

Attachments

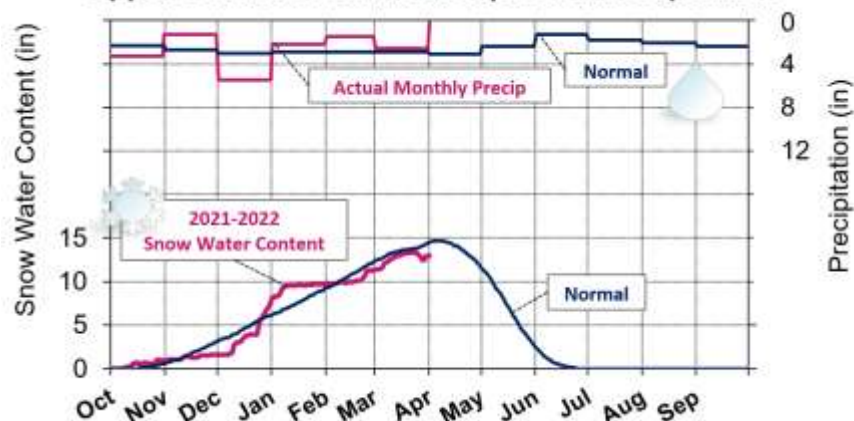
Attachment 1: Projected 2022 WSDM Storage Detail (5 percent SWP Table A allocation)

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

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.

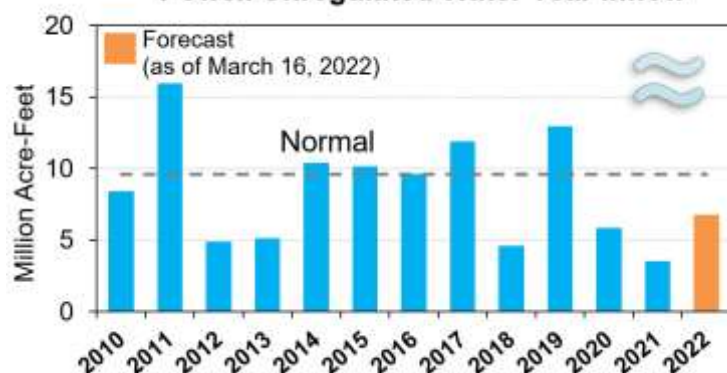
Upper Colorado Basin Snowpack & Precipitation



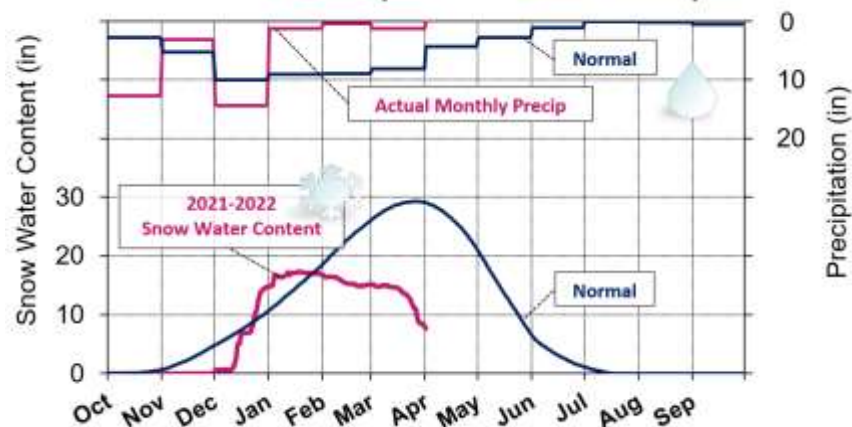
Upper Colorado River Basin

- ❄ Snowpack water content peaked in mid-March (13.3 inches or 91% of normal April 1).
- 💧 Near normal precipitation to date (15.8 inches).
- ≈ Runoff into Lake Powell for WY 2022 is forecasted at 71% of normal.

Powell Unregulated Water Year Inflow



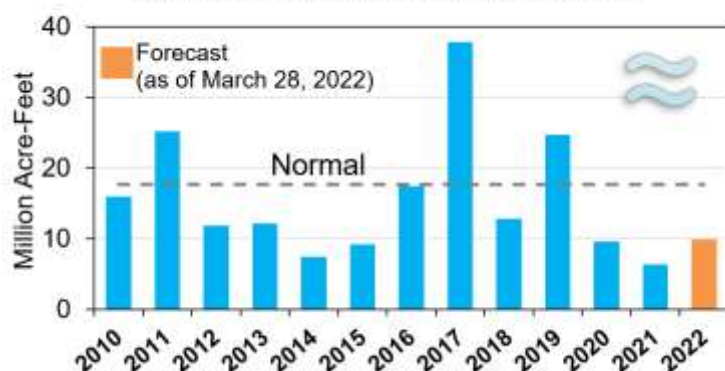
Northern Sierra Snowpack & 8 Station Precipitation



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 (33.2 inches). January through March was the driest start of the calendar year in recorded history.
- ≈ Runoff into the Sacramento River for WY 2022 is forecasted at 56% of normal.

Sacramento River Water Year Runoff



CRA Supplies	Acre-Feet
<i>Basic Apportionment</i>	550,000
<i>IID/ MWD Conservation Program</i>	105,000
<i>PVID Fallowing Program</i>	25,000
<i>Exchange w/ SDCWA (IID/Canal Lining)</i>	280,000
<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> ¹	3,000
<i>Quechan Diversion Forbearance</i>	6,000
<i>Quechan Seasonal Fallowing Program</i> ²	0
<i>Higher Priority Water Use Adjustment</i> ³	-130,000
Total CRA Supplies ⁴	867,000

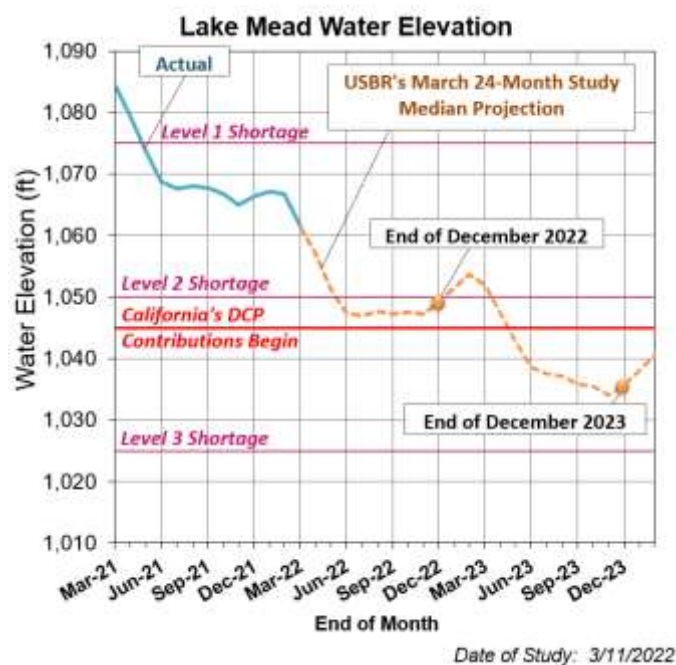
¹ Reduced by 3 TAF due to unanticipated reduction in participating acreage.

² Reduced by 3 TAF due to unanticipated reduction in participating acreage.

Rounded to the nearest thousand. Supply is 356 AF.

³ Per USBR Forecast (3/28/22).

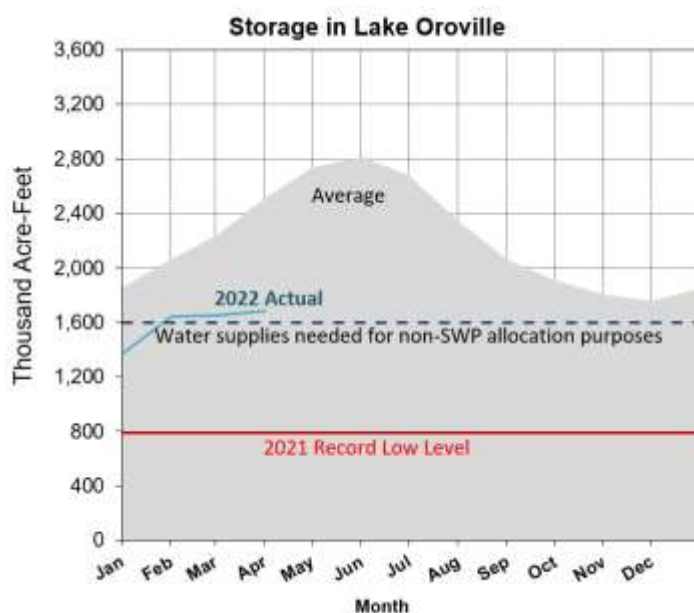
⁴ Total may not sum due to rounding.



- Lake Mead storage is currently at 8.52 MAF (elevation 1061.2 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
<i>Table A (5% SWP allocation)</i>	96,000
<i>Article 21</i>	0
<i>Port Hueneme</i> ¹	0
<i>SWC Buyers Group Transfers</i>	0
<i>Yuba Accord Dry-Year Purchase Program</i>	0
<i>MWDOC/IRWD Partnership</i>	4,000
<i>Purchase of SDCWA's Semitropic Supply</i>	4,000
Total SWP Supplies	104,000
Total Supplies (CRA + SWP)	971,000
(Prior to storage actions)	

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

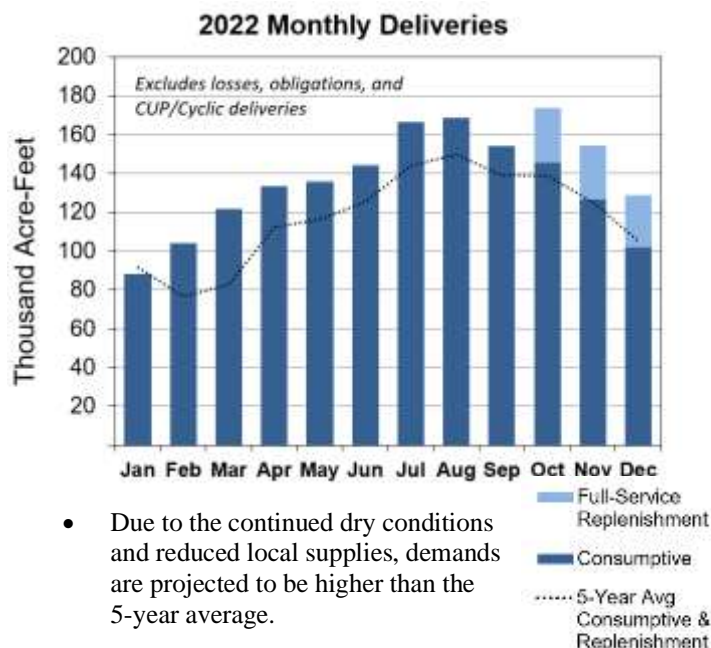


- In addition to the 5 percent Table A allocation, DWR will also provide water for Contractors' unmet Human Health and Safety needs (HH&S). DWR expects Contractors receiving HH&S water to take mandatory conservation measures; implement conjunctive use practices; acquire alternative supplies; and return water to the SWP in a future year for any HH&S supplies received. Changes to the allocation are unlikely given the ongoing record dry conditions and the rainy season is behind us.
- Storage in Lake Oroville is currently at 1.68 MAF (48 percent of total capacity) or 67 percent of historical average as of the date of this report.

Current Demand	Acre-Feet
Member Agency Consumptive ¹	1,583,000
Member Agency Replenishment	87,000
Coachella Valley Water District Agreement	15,000
Return to Imperial Irrigation District ²	68,000
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	50,000
Cyclic Deliveries	0
Total Demands	1,819,000

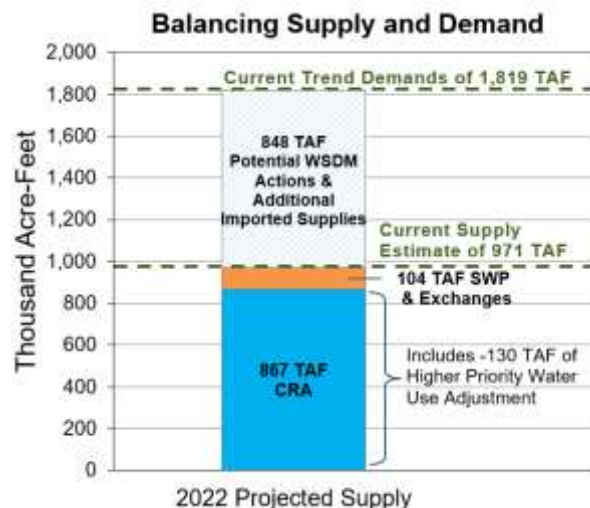
¹ Includes exchange w/ SDCWA (IID/Canal Lining) and CUP sales.

² Per USBR Forecast (3/28/2022).



MANAGING REGIONAL SUPPLY AND DEMAND

Supply/Demand Balance	Acre-Feet
Total Supplies	971,000
Total Demands	1,819,000
Current Balance Estimate	-848,000



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.

- 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.
- Seeking board action in April to secure one-year water transfers with various water districts north of the Sacramento-San Joaquin River Delta for up to 75,000 AF of additional supplies and to establish a SWP Dependent Area allocation plan.

2022 WSDM Storage Detail

	1/1/2022 Estimated Storage Levels ¹	CY 2022 Take Capacity ²	2022 Total Storage Capacity
WSDM Storage			
Colorado River Aqueduct Delivery System	1,243,000	347,000	1,657,000
Lake Mead ICS	1,243,000	347,000 ³	1,657,000
State Water Project System	636,000	184,000	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	16,000 ⁶	350,000
Semitropic Storage Program	218,000	49,000 ⁷	350,000
Kern Delta Storage Program	149,000	32,000	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	20,000	1,181,000
Other Emergency Storage	381,000	0	381,000
DWCV Advanced Delivery Account	293,000	20,000	800,000
Total	3,348,000	977,000	5,963,000
Emergency	750,000	0	750,000
Total WSDM Storage (AF) ⁹	2,598,000	977,000	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 5 percent SWP Table A Allocation. Storage program losses included where applicable.

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

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. 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	240,000 ²
Storage and Interstate Release Agreement with Southern Nevada Water Authority	330,000 ⁴
Coachella Valley Water District Agreement	210,000 ⁴
Total (AF)	780,000 ⁵

¹ Rounded to the nearest thousand.

² IID can request return in any year, conditional on agreement terms. Projected to be reduced by 68,000 AF as shown on page 4.

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%	67%	67%	60%
Average Metropolitan DCP Contribution When Contributions Are Required (AF)	0	0	248,000	279,000	283,000

¹ Results from USBR's March 2022 Colorado River Mid-Term Modeling System (CRMMS) model run which is the latest CRMMS study at the time of this report.

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.