



### • Water Surplus and Drought Management Update Conditions As of 3/28/2019

#### Summary

This report provides a preliminary accounting of water supply, demand, and storage conditions for calendar year (CY) 2019. This report considers conditions as of March 28, 2019.

Storm activity continues in both the northern Sierra and the Upper Colorado River Basin increasing the snow water content and the projected runoff in both watersheds. As a result, the State Water Project (SWP) allocation was increased to 70 percent on March 20. The improving hydrologic conditions allowed for continued delivery of Article 21 supplies, with Metropolitan receiving an estimated 60 TAF to date. Demands on Metropolitan’s imported supplies are suppressed given local supply conditions and continued water use efficiency efforts in the region. The current range of water supply demand balance scenarios project a net gain in dry-year storage this year. Additional increases to the SWP allocation remain possible under certain delta conditions.

#### Purpose

Informational

#### Attachments

Attachment 1: 2019 WSDM Storage Detail (Put Capacity at 70% SWP allocation)

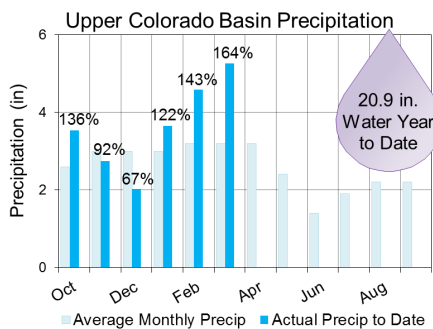
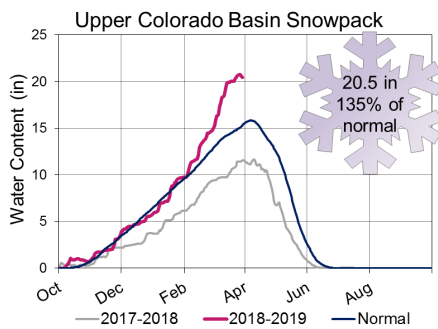
Attachment 2: Agreements to Exchange or Return Stored Water

#### Detailed Report

This Water Surplus and Drought Management (WSDM) report and the charts below provide an update on hydrologic conditions and estimated water supply and demand conditions for CY 2019.

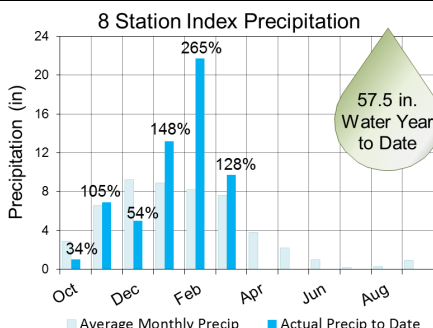
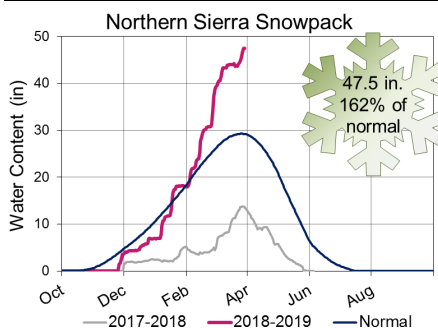
## HYDROLOGIC CONDITIONS

### Upper Colorado River Basin



- Snowpack continues to accumulate
- The April through July (A-J) runoff forecast increased to 133% of normal
- On track to the second highest A-J Runoff since CY 2000

### Sacramento River Basin



- Snowpack continues to accumulate, exceeding peak levels reached in WY 2016-17
- Overall precipitation to date is well above average but not at the levels reached in WY 2016-17

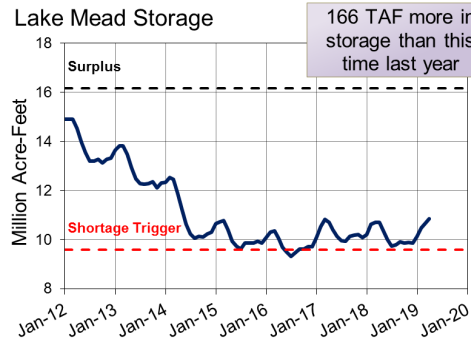
# 2019 SUPPLY ESTIMATE

Conditions as of 3/28/2019

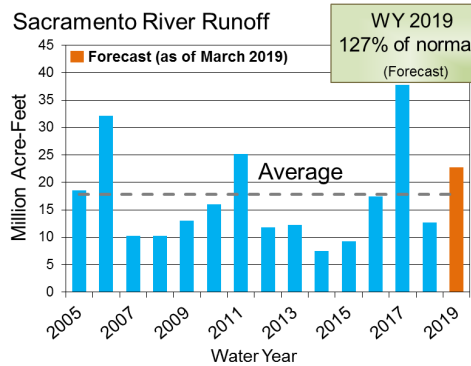
CRA Supplies	Acre-Feet
Basic Apportionment	550,000
IID/ MWD Conservation Program	85,000
PVID Following Program	49,000
Exchange w/ SDCWA (IID/Canal Lining)	238,000
Exchange w/ USBR (San Luis Rey Tribe)	16,000
Lower Colorado Water Supply Project	9,000
Agricultural Adjustment	0
<b>Total CRA Supplies</b>	<b>947,000</b>

SWP Supplies	Acre-Feet
Table A (70% SWP allocation)	1,338,000
Article 21	60,000
Port Hueneme	1,000
<b>Total SWP Supplies</b>	<b>1,399,000</b>

<b>Total Supplies (CRA + SWP)</b>	<b>2,346,000</b>
<i>(prior to storage actions)</i>	



- Runoff forecast increased to 133% of average, second highest volume since 2000
- Lake Mead storage is at the highest level in five years



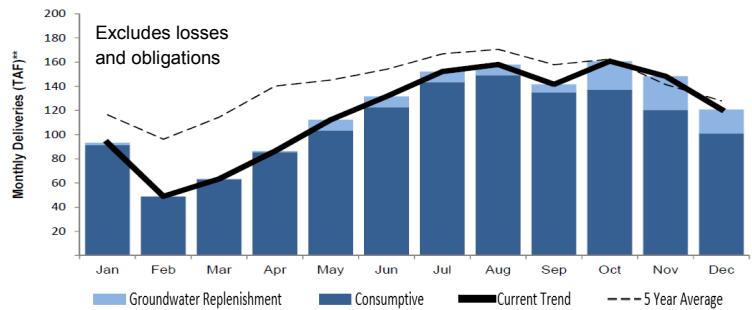
### SWP Allocation 70%

- Improved runoff forecast supported an increase to the SWP allocation
- Additional allocation increases still possible

## 2019 WATER DEMANDS

Current Demand	Acre-Feet
Member Agency Consumptive <sup>1</sup>	1,318,000
Member Agency Replenishment	101,000
Coachella Valley Water District Agreement	35,000
Exchange w/ San Luis Rey Tribe	16,000
System and Storage Losses	97,000
<b>Total Demands</b>	<b>1,567,000</b>

### 2019 Demand Estimate



<sup>1</sup> Includes exchange w/ SDCWA (IID/Canal Lining)

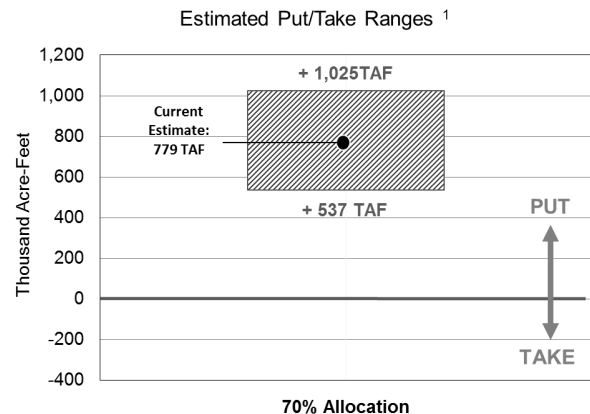
## MANAGING SUPPLIES AND DEMANDS

Supply/Demand Balance	Acre-Feet
Total Supplies	2,346,000
Total Demands	1,567,000
<b>Current Balance Estimate</b>	<b>779,000</b>

### 2019 WSDM Strategies/Actions

1. Dry-Year Storage: Initiate all practicable storage programs and projects to manage available supplies in 2019.
2. Article 21 Supplies: Maximized deliveries to offset carryover loss.
3. SWP Carryover: Metropolitan withdrew storage from San Luis Reservoir to minimize the conversion of carryover supplies to Project Water. No carryover remains in San Luis Reservoir. Metropolitan may replenish this storage in CY 2019 depending on contractual and operational considerations.
4. Transfer Supply Purchase: No purchases are being pursued in 2019. DWR is projecting limited to no capacity to export transfer supplies through the delta given the increased SWP allocation.

### 2019 Supply/Demand Balance Uncertainty



<sup>1</sup> Ranges reflect uncertainty of Colorado River higher priority water use and Member Agency water demand on Metropolitan.

## 2019 WSDM Storage Detail

WSDM Storage	1/1/2019 Storage Levels	Annual Available Put Capacity <sup>1</sup>	2019 Total Storage Capacity	
<b>Colorado River Aqueduct Delivery System</b>	<b>593,000</b>	<b>398,000</b>	<b>1,563,000</b>	
Lake Mead ICS	593,000	398,000 <sup>2</sup>	1,563,000	
<b>State Water Project System</b>	<b>820,000</b>	<b>298,000</b>	<b>1,796,000</b>	
MWD SWP Carryover <sup>3</sup>	94,000 <sup>4</sup>	173,000	267,000	
DWCV SWP Carryover <sup>3</sup>				
Castaic Lake (DWR Flex Storage)	154,000	0	154,000	
Lake Perris (DWR Flex Storage)	65,000	0	65,000	
Arvin Edison Storage Program <sup>5</sup>	154,000	0	350,000	
Semitropic Storage Program	187,000	65,000	350,000	
Kern Delta Storage Program	138,000	50,000	250,000	
Mojave Storage Program	19,000	0	330,000	
AVEK Storage Program	9,000	10,000	30,000	
<b>In-Region Supplies and WSDM Actions</b>	<b>977,000</b>	<b>237,000</b>	<b>1,536,000</b>	
Diamond Valley Lake	702,000	108,000	810,000	
Lake Mathews	141,000	19,000	182,000	
Lake Skinner	37,000	3,000	44,000	
CUP - IEUA/TVMWD (Chino Basin)	42,000	107,000 <sup>6</sup>	100,000	
CUP - Long Beach (Central Basin)	0		13,000	
CUP - Long Beach (Lakewood)	0		4,000	
CUP - Foothill (Raymond and Monks Hill)	0		9,000	
CUP - MWDOC (Orange County Basin)	0		66,000	
CUP - Three Valleys (Live Oak)	0		3,000	
CUP - Three Valleys (Upper Claremont)	1,000		3,000	
CUP - Western	5,000		12,000	
Cyclic - Upper San Gabriel	48,000		100,000	
Cyclic - Three Valleys	0		40,000	
Cyclic - Burbank	0		35,000	
Cyclic - Calleguas	0		5,000	
Cyclic - Eastern	1,000		10,000	
Cyclic - MWDOC	0		100,000	
<b>Other Programs</b>	<b>563,000</b>		<b>214,000</b>	<b>1,128,000</b>
Other Emergency Storage	328,000		0	328,000
DWCV Advanced Delivery Account	235,000		214,000	800,000
<b>Total</b>	<b>2,953,000</b>	<b>1,147,000</b>	<b>6,023,000</b>	
Emergency	626,000	0	626,000	
<b>Total WSDM Storage (AF) <sup>7</sup></b>	<b>2,327,000</b>	<b>1,147,000</b>	<b>5,397,000</b>	

<sup>1</sup> Put capacity assumed under a 70% SWP Table A Allocation.

<sup>2</sup> Assumes Congressional approval of the Drought Contingency Plan.

<sup>3</sup> Total Storage Capacity varies year to year based on prior year remaining balance added to current year contractual limits.

<sup>4</sup> Carryover balance adjusted to reflect the conversion of approximately 162 TAF to State Water Project supply.

<sup>5</sup> Puts are limited due to water quality considerations.

<sup>6</sup> Total estimated put capacity across all Conjunctive Use and Cyclic programs.

<sup>7</sup> Total WSDM Storage level is subject to change based on accounting adjustments.

## Agreements to Exchange or Return Stored Water

	<b>Future Returns</b>
Strand Ranch - Irvine Ranch <sup>1</sup>	4,000
Dudley Ridge WD – Irvine Ranch <sup>2</sup>	7,000
California ICS Agreement - IID <sup>3</sup>	132,000
Storage and Interstate Release Agreement with Southern Nevada Water Authority <sup>4</sup>	330,000
<b>Total (AF)</b>	<b>473,000</b>

<sup>1</sup> To be returned no later than 2024 at Irvine Ranch's request.

<sup>2</sup> Half to be returned to Dudley Ridge Water District and the other half to Irvine Ranch no later than 2022.

<sup>3</sup> IID can request return in any year, conditional on whether or not Metropolitan is implementing a Water Supply Allocation Plan.

<sup>4</sup> Up to 30,000 AF per year beginning no earlier than 2022.