



- Water Surplus and Drought Management Plan on water supply and demand as of April 23, 2009

### Summary

---

This is a monthly report providing updates on CY 2009 regional water supply and demand conditions and potential actions under the Water Surplus and Drought Management Plan (WSDM Plan). The WSDM Plan provides the overall strategy for managing Metropolitan's resources to meet the range of estimated demands for the calendar year. This report considers conditions as of April 23, 2009. Staff will provide oral updates to this report at the monthly meeting of the Water Planning and Stewardship Committee. The following are report highlights for this month:

- Estimated January 1, 2009 WSDM Storage Balance: 1.09 MAF
- Total CRA Related Supplies including Five-Year Supply Plan Actions: 1.1 MAF
- Total SWP Contract Related Supplies including Five-Year Supply Plan Actions: 0.705 MAF
- Total WSDM storage withdrawal capacity available at current 30 percent SWP Allocation: 636 TAF
- CY 2009 Estimated Total Demand with WSAP Level 2: 2.05 MAF

### Attachments

---

[Attachment 1: Projected CRA and SWP Supplies for CY 2009](#)

[Attachment 2: Projected WSDM Supplies for CY 2009](#)

[Attachment 3: Future Payback Obligations](#)

### Detailed Report

---

This letter is the fifth in a series of monthly WSDM Plan updates on the developing water supply and demand conditions for CY 2009. These reports will apprise the Board of conditions that may impact water supply reliability for CY 2009, and identify any potential WSDM actions that may be required. From January through May, imported supplies from the State Water Project (SWP), Colorado River Aqueduct (CRA) and Los Angeles Aqueduct, as well as demands, are still variable due to weather and actual runoff conditions.

The Board approved the implementation of Metropolitan's Water Supply Allocation Plan at a Level 2 at its April 14, 2009 meeting. This action was taken in order to manage demands through the period of July 1, 2009 through June 20, 2010 given the limited supplies available in CY 2009, including limiting withdrawals of storage in order to maintain reasonable reserve levels.

#### 2009 Water Supply and Demand Balance

##### Colorado River Aqueduct

Staff's estimate of total Colorado River supplies for CY 2009, including related Five-Year Supply Plan actions is approximately 1.1 MAF. This schedule includes Metropolitan's Basic Apportionment (550 TAF) and all other Colorado River supplies developed to date, including water transfers, that are diverted at Metropolitan's intake at Lake Havasu. A detailed listing of the Colorado supplies is included as [Attachment 1](#).

There has been no change in the estimate of total Colorado River supplies for CY 2009.

# Board Report (Water Surplus and Drought Management Plan on water supply and demand as of April 23, 2009)

## **State Water Project**

On April 15, 2009, the California Department of Water Resources (DWR) announced that the Table A allocation has been increased from 20 percent to 30 percent of Table A amounts. This increase is due to the developing hydrology, runoff, and storage conditions. The current 30 percent Table A allocation is reflective of the following system storage and hydrologic conditions to date: Lake Oroville storage is approximately 59 percent full and the Northern Sierra snowpack is 83 percent of normal for April 23. It is also reflective of the actual and anticipated delivery restrictions in the Delta to protect Delta smelt. These restrictions have had an estimated impact to Metropolitan since the beginning of CY 2009 of approximately 90 TAF. DWR is expected to review and update the Table A allocation following the upcoming May 1 California Cooperative Snow Survey.

Under the current 30 percent Table A allocation, Metropolitan would receive Table A supplies of 573 TAF. Metropolitan would also take delivery of 68 TAF from Metropolitan's transfer and exchange agreements with the Desert Water Agency and Coachella Valley Water District (DWCV), and the City of Port Hueneme; the SWP Turnback Pool; and Article 56 carryover water from 2008. Total CY 2009 SWP contract supplies under the current allocation are projected at about 641 TAF. An additional 46 TAF from the related Five Year Resource Options and 18 TAF from the Yuba Multi-Year Transfers results in a total SWP total of 705 TAF. A detailed listing of SWP supplies is contained in [Attachment 1](#).

There has been an increase of approximately 200 TAF of SWP basic supplies since last month's report due to the recent increase in Table A allocation.

## **Water Demands**

As reported at the April Board Meeting, estimated water demands for CY 2009 are 2.05 MAF. This demand reflects that the region will be operating under a Level 2 Water Supply Allocation Plan implementation, which also includes a 30 percent reduction under the Interim Agricultural Water Program (IAWP). Actual demands for the year will vary based on water sales prior to the July 1, 2009 WSAP implementation and on actual local supply production by the member agencies during the allocation year. The total demands do not include deliveries of water as part of the exchange with DWCV. At this time, Metropolitan intends to recover water stored in the Advance Delivery Account to meet the obligations under this exchange. If the SWP Table A allocation exceeds 30 percent, Metropolitan would be obligated to deliver a portion of the obligation from its CRA supply.

There is no change in the estimate of CY 2009 demands under a WSAP Level 2 implementation.

## **WSDM Supplies and Management Actions**

### **WSDM Storage Portfolio**

In addition to the CRA and SWP related supplies described above, Metropolitan had a total of approximately 1.09 MAF of storage in its WSDM resource portfolio as of the beginning of CY 2009 (this figure excludes water stored for emergency purposes). Accounting for conveyance constraints, approximately 636 to 710 TAF of this amount is available in CY 2009, depending upon whether the SWP allocation is 30 percent or 50 percent, respectively. Some of the programs have contract provisions that allow for a supply increase in relation to an increase in SWP allocation. This estimate reflects the contractual minimum amounts of the programs and/or any agreed upon increase in minimum contractual amounts with banking partners. Detailed program level estimates of operational WSDM supplies for 2009 under the current SWP allocation, along with projected storage levels, are shown in [Attachment 2](#). Metropolitan staff will continue to work cooperatively with its member agencies and other partners to ensure coordination and effective program management. [Attachment 2](#) also shows approximately 219 TAF of water supply programs that are currently under development in 2009.

Since last month's report, there has been a net 8 TAF increase in the amount of WSDM storage available at a 30 percent SWP allocation. This difference is attributed to increase in projected supplies from the Central Valley groundwater storage programs.

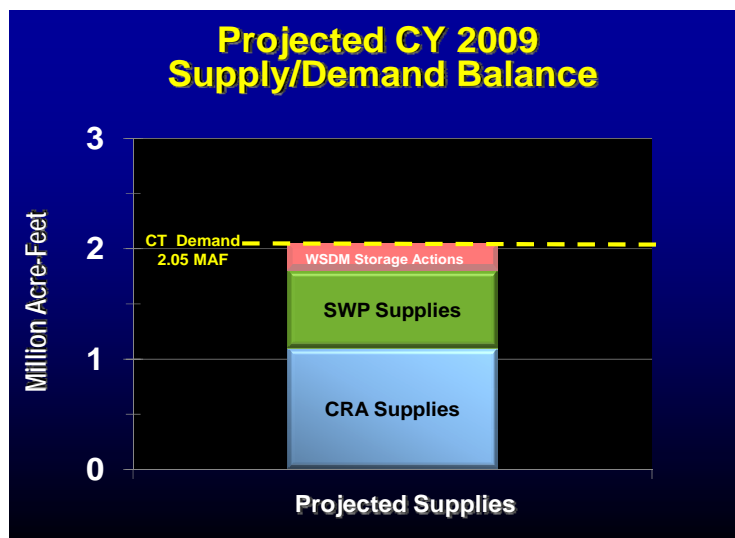
# Board Report (Water Surplus and Drought Management Plan on water supply and demand as of April 23, 2009)

## Storage/Exchanges

The table in [Attachment 3](#) shows a list of the exchange and storage programs that Metropolitan has participated in, that have a future payback obligations. The exchange agreement executed in 2002 with the Southern Nevada Water Authority allows Metropolitan to store unused Nevada apportionment of Colorado River water in California. The total amount of water stored through 2008 under this agreement is 70 TAF. Nevada will request recovery of this stored water in the future. It is expected that Nevada will not request this water until 2018. An agreement specifying return conditions is currently being negotiated and is expected to be brought to the Board for consideration in the next few months. Metropolitan also has an obligation to pay back approximately 79 TAF of Article 54 – Flexible Storage water that was withdrawn from DWR storage in CY 2007 and 2008. The 2007 water must be paid back by 2013, and the 2008 water must be paid back by 2014. In 2003 Metropolitan entered into an agreement with Coachella Valley Water District (CVWD) to credit the agency 32 TAF for CRA deliveries made in 2003. Metropolitan has made payback deliveries in 2007 and 2008 and it is estimated that Metropolitan will pay the remaining balance in full during CY 2009.

## **Water Balance and Actions**

In the absence of the implementation of a Level 2 Water Supply Allocation, current trend demand would have likely exceeded 2.2 MAF for CY 2009. However, with the implementation of the WSAP Level 2 demands are estimated to be at a level of 2.05 MAF. With the currently projected supplies on the SWP and CRA of 1.8 MAF, there is a resulting supply need of approximately 245 TAF. This need will be met through the withdrawal of WSDM storage actions as shown in the graphic below.



## **Five-Year Supply Plan Resource Options**

The Board has received reports and updates on the goals and progress of the Five-Year Supply Plan. These options could yield approximately 429 TAF or more of additional supply if successfully implemented. Staff continues to pursue their resource options that focus on six initiatives: extraordinary conservation, Colorado River transactions, near-term Delta actions, SWP transactions, groundwater recovery, and local resources. These supplies and conservation measures would enhance water supply reliability in Metropolitan’s service area given continued dry conditions and restrictions on the State Water Project deliveries from the Delta. As previously noted, related actions from the Five-Year Supply Plan are being accounted for under either the SWP or CRA total delivery estimates. The conservation measures associated with the Five-Year Supply Plan now account for actions that are necessary to achieve water savings needed to meet allocations under a Level 2 WSAP allocation.

**CY 2009 Projected CRA and SWP Supplies**

<b>CRA BASIC PROGRAMS</b>		
Basic Total Apportionment		550,000
MWD Water Budget Agricultural Adjustment		-60,000
<i>Priority 1,2, and 3b</i>	-56,000	
<i>Imperial ID</i>	0	
<i>Coachella Valley WD</i>	0	
<i>Misc and Indian PPR's</i>	-4,000	
DWCV Obligation		-51,000
IID-MWD Conservation Program		85,000
Lower Colorado Water Supply Project		7,000
PVID Land Fallowing		118,000
Canal Lining Water to MWD		15,000
Exchange with CVWD		-35,000
Water Exchanged with SDCWA (IID Transfer & All American Canal Lining)		131,000
Other Programs/Ag Adjustment/DWCV Callback		180,000
<i>Ag Adjustment</i>	60,000	
<i>DWCV Callback</i>	30,000	
<i>Other Programs</i>	90,000	
<b>CRA BASIC PROGRAMS TOTAL</b>		<b>940,000</b>
<b>5 YEAR SUPPLY RESOURCE OPTIONS</b>		<b>160,000</b>
<b>Colorado River Supplies Total</b>		<b>1,100,000</b>
<b>SWP BASIC PROGRAMS</b>		
MWD Table A		573,000
MWD 2008 Carryover		15,000
Desert Water/Coachella Valley exchange (Table A)		51,000
Port Hueneme Agreement /Turnback Pool/Westland Mitigation		2,000
<b>SWP BASIC SUPPLIES TOTAL</b>		<b>641,000</b>
<b>Yuba Multi Year Transfers</b>		<b>18,000</b>
<b>5 YEAR SUPPLY RESOURCE OPTIONS</b>		<b>46,000</b>
<b>SWP Supplies Total</b>		<b>705,000</b>
<b>TOTAL w/ 5 YEAR SUPPLY RESOURCE OPTIONS</b>		<b>1,805,000</b>

**CY 2009 Projected WSDM Supplies**

<b>Program</b>	<b>Projected 1/1/2009 Storage Levels</b>	<b>Amount Available at 30% SWP Allocation</b>	<b>Amount Available at 50% SWP Allocation</b>	<b>CY 2009 Put Capacity</b>
<b>SURFACE STORAGE</b>	<b>450,000</b>	<b>403,000</b>	<b>403,000</b>	<b>794,000</b>
<i>Lake Mead ICS Account</i>	92,000	60,000	60,000	200,000
<i>MWD '08 Carryover*</i>	15,000	0	0	0
<i>Castaic Lake (DWR Flex Storage)</i>	79,000	79,000	79,000	75,000
<i>Lake Perris (DWR Flex Storage)</i>	61,000	61,000	61,000	4,000
<i>Diamond Valley Lake</i>	203,000	203,000	203,000	400,000
<i>Lake Mathews &amp; Lake Skinner (Dry-Year Storage)</i>	0	0	0	115,000
<b>CENTRAL VALLEY BANKING PROGRAMS</b>	<b>311,000</b>	<b>115,000</b>	<b>189,000</b>	<b>132,000</b>
<i>Arvin Edison Storage Program</i>	152,000	34,000	52,000	45,000
<i>Semitropic Storage Program</i>	126,000	55,000	104,000	32,000
<i>Kern Delta Storage Program</i>	23,000	23,000	23,000	55,000
<i>Mojave Storage Program</i>	10,000	3,000	10,000	0
<b>GROUNDWATER STORAGE PROGRAMS</b>	<b>331,000</b>	<b>118,000</b>	<b>118,000</b>	<b>254,000</b>
<b>CONJUNCTIVE USE PROGRAMS</b>	<b>165,000</b>	<b>75,000</b>	<b>75,000</b>	<b>87,000</b>
<i>IEUA/TVMWD (Chino Basin)</i>	63,000	30,000	30,000	25,000
<i>Long Beach (Cent. Basin)</i>	7,000	0	0	3,000
<i>Long Beach (Lakewood)</i>	2,000	1,000	1,000	1,000
<i>Foothill (Raymond and Monks Hill)</i>	1,000	1,000	1,000	2,000
<i>Calleguas (N. Las Posas)</i>	54,000	20,000	20,000	33,000
<i>MWDOC (Orange County Basin)</i>	36,000	22,000	22,000	17,000
<i>Three Valleys (Live Oak)</i>	1,000	0	0	1,000
<i>Three Valleys (upper Claremont)</i>	0	0	0	1,000
<i>Compton</i>	1,000	1,000	1,000	1,000
<i>Western</i>	0	0	0	3,000
<b>CYCLIC PROGRAMS</b>	<b>13,000</b>	<b>13,000</b>	<b>13,000</b>	<b>0</b>
<i>Cyclic - USG</i>	0	0	0	0
<i>Cyclic - PM (Three Valleys)</i>	13,000	13,000	13,000	0
<i>Cyclic - IEUA (Chino Basin)</i>	0	0	0	0
<b>SUPPLEMENTAL PROGRAMS</b>	<b>10,000</b>	<b>0</b>	<b>0</b>	<b>0</b>
<i>Supplemental Storage Program (Los Angeles)</i>	10,000	0	0	0
<b>OTHER PROGRAMS</b>	<b>143,000</b>	<b>30,000</b>	<b>30,000</b>	<b>167,000</b>
<i>Advance Delivery Account (DWCV) *</i>	57,000	0	0	167,000
<i>SBVMWD Coordinated Operating Agreement</i>	50,000	0	0	0
<i>Central Arizona Storage Demonstration Project</i>	36,000	30,000	30,000	0
<b>TOTAL</b>	<b>1,092,000</b>	<b>636,000</b>	<b>710,000</b>	<b>1,180,000</b>

\* MWD '08 Carryover and DWCV, and are shown as zero because they have been accounted for in base supplies

**Programs Under Development in 2009**

<b>Program</b>	<b>Projected 1/1/2009 Storage Levels</b>	<b>Amount Available at 30% SWP Allocation</b>	<b>Amount Available at 50% SWP Allocation</b>	<b>CY 2009 Put Capacity</b>
<i>Conj. Use - Pasadena</i>	22,000	0	0	0
<i>MWD '09 Carryover</i>	0	0	0	200,000
<i>DWCV '09 Carryover</i>	0	0	0	86,000
<i>Hayfield Storage Program</i>	100,000	0	0	0
<i>EWA Wet/Dry Exchange</i>	50,000	0	0	
<i>Sac. Valley Transfers Stored in Shasta</i>	47,000	0	0	0
<b>TOTAL</b>	<b>219,000</b>	<b>0</b>	<b>0</b>	<b>286,000</b>

### Future Payback Obligations

Program	Amount (Acre-Feet)	Year Initiated	Payback Deadline
Storage and Interstate Release Agreement with Southern Nevada Water Authority	10,000	2004	As requested*
	10,000	2005	
	5,000	2006	
	45,000	2008	
<b>Subtotal</b>	<b>70,000</b>		
SWP Flexible Storage Account	15,400	2007	2013
	63,400	2008	2014
<b>Subtotal</b>	<b>78,800</b>		
Coachella Valley Water District	8,000	2003	2009
<b>TOTAL</b>	<b>156,800</b>		

\*Metropolitan wouldn't be expected to pay back the water until at least 2018