



- Water Surplus and Drought Management Plan on water supply and demand as of September 22, 2009

### Summary

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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 September 22, 2009. The following are report highlights for this month:

- Estimated January 1, 2009 WSDM Storage Balance: 1.08 MAF
- Total CRA Related Supplies including Five-Year Supply Plan Actions: 1.19 MAF
- Total SWP Contract Related Supplies including Five-Year Supply Plan Actions: .920 MAF
- Total WSDM storage withdrawal capacity available at current 40 percent SWP Allocation: .646 MAF
- CY 2009 Estimated Total Demand with WSAP Level 2: 2.08 MAF

### Attachments

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[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

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This letter is the tenth 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.

The Board approved implementing 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 1.19 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](#).

Since last month's report, there has been an increase of approximately 73 TAF in the estimate of total Colorado River supplies for CY 2009. This change is due to a 58 TAF net increase in the Metropolitan's projected Water Budget Agricultural Adjustment and a 15 TAF increase in the Palos Verdes Irrigation District Land Fallowing estimate.

##### State Water Project

On May 20, 2009, the California Department of Water Resources (DWR) announced that the Table A allocation was increased to 40 percent of Table A contract amount. Under the current 40 percent Table A allocation, Metropolitan will receive Table A supplies of 765 TAF. Metropolitan will also take delivery of 86 TAF from Metropolitan's transfer and exchange agreements with the DWCV and the City of Port Hueneme; the SWP

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Turnback Pool; and Article 56 carryover water from 2008. Total CY 2009 SWP contract supplies under the current allocation are projected at about 851 TAF. An additional 35 TAF from the related Five Year Resource Options and 34 TAF from the Yuba Multi-Year Transfers results in SWP supplies of 920 TAF. A detailed listing of SWP supplies is contained in [Attachment 1](#).

There has been a net 10 TAF decrease in the estimate of SWP supplies since last month. This change is attributed to a 4 TAF decrease in the estimate of Article 56 carryover water from 2008, a 1 TAF decrease in the estimate of Yuba Multi Year Transfers, and a 5 TAF decrease in the Drought Water Bank estimate.

### Water Demands

The current trend water demand estimate for CY 2009 is 2.08 MAF. This demand incorporates actual water use through August 31, 2009, and remaining year estimates reflecting that the region will be operating under a Level 2 Water Supply Allocation Plan through the remainder of the year. The estimate also includes a 30 percent reduction under the Interim Agricultural Water Program (IAWP). Actual demands for the year will vary based on actual local supply production by the member agencies during the allocation year. The total demands also include deliveries of water as part of the exchange with DWCV. Metropolitan intends to meet the remainder of the exchange obligation through both the recovery of stored water in the Advance Delivery Account and through potential additional deliveries from its CRA supply.

SDCWA purchased transfer water from Placer County Water Agency that will be conveyed through Metropolitan's system. The transfer, which is scheduled for delivery in the months of September and October 2009, will result in an additional delivery of approximately 15 TAF to SDCWA. Based on current projections, this delivery will likely be classified as "Extraordinary Increase in Local Supply" for the purposes of the Water Supply Allocation Plan, and is in addition to the current trend water demand estimate of 2.08 MAF.

This month's current trend demand estimate is 10 TAF less than last month.

### **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 1.08 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 646 TAF of this amount is available in CY 2009, based on a SWP allocation of 40 percent. 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 31 TAF increase of the estimated WSDM storage available at a 40 percent SWP allocation. This difference is attributed to an adjustment in projected supplies available from the Central Valley groundwater storage programs and a call on the Supplemental Storage Program.

#### Storage/Exchanges with Future Return Obligations

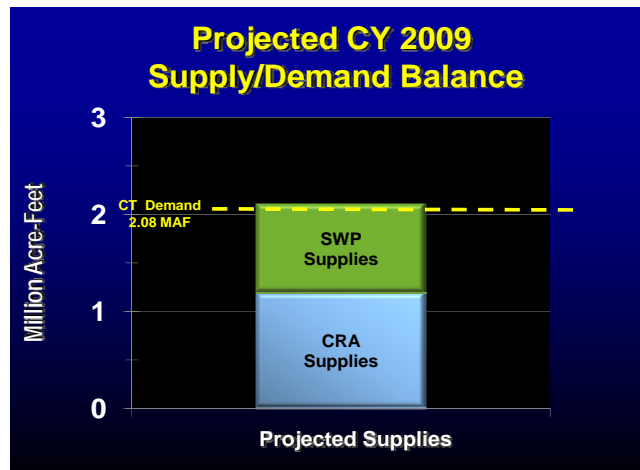
Over the past few years, Metropolitan has entered into storage/exchange agreements or withdrew water from storage accounts that require future return of the water. The table in [Attachment 3](#) shows a list of the future payback obligations from the exchange and storage programs in which Metropolitan participates. The exchange agreement executed in 2004 with the Southern Nevada Water Authority (SNWA) 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. Metropolitan has also scheduled deliveries of 30 TAF of water under this agreement in 2009. Nevada will request recovery of this stored water in the future. As part of a recently executed amendment, it is expected that Nevada will not request this water until 2022. Metropolitan also has an obligation

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to pay back approximately 119 TAF of Article 54 –Flexible Storage water. This amount includes 79 TAF of withdrawals from DWR storage in CY 2007 and 2008, and the current CY 2009 withdrawal estimate of 40 TAF. The payment deadlines for the 2007, 2008, and 2009 Article 54 water are at the end of 2012, 2013, and 2014, respectively. Under current operational estimates, Metropolitan expects to repay all of its 2007 obligation and most of its 2008 obligation by the end of this year. This will leave a remaining obligation of 44 TAF, 4 TAF of which is due in 2013 and 40 TAF due in 2014. In 2003, Metropolitan entered into an agreement with Coachella Valley Water District (CVWD) to credit the agency 32 TAF for CRA supplies received by Metropolitan 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. In 2008, Metropolitan entered into an exchange agreement with Desert Water Agency (DWA) for up to 36 TAF. DWA delivered approximately 8 TAF of non-state project water in 2008. Metropolitan has delivered a total of 1,200 AF of CRA exchange water in 2008 and 2009. Under the agreement provision, Metropolitan will deliver an annual minimum amount of CRA water until the balance is paid in full. The current balance would be paid in full no later than 2014.

### Water Balance and Actions

Under the current trend demand estimate of 2.08 MAF, which reflects a WSAP Level 2, and the currently projected supplies on the SWP and CRA of 2.11 MAF, conditions have improved such that there is no additional supply need or augmentation estimated at this time, as shown in the graphic below. Based on the supply and demand balance, approximately 30 TAF of additional supply will be utilized to replenish Metropolitan storage and improve Metropolitan’s outlook and preparation for 2010. The currently projected supplies from the SWP and CRA include approximately 85 TAF of storage withdrawals. This results in an approximately 55 TAF net withdrawal of WSDM storage for the purposes of balancing supplies and demands.



### 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 383 TAF or more of additional supply in 2009 if successfully implemented. Staff continues to pursue these 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.

There has been a net decrease of 25 TAF in expected supplies since last month’s report. The change is due to a 5 TAF decrease in the Drought Water Bank estimate. In addition Metropolitan is planning to defer the delivery of 20 TAF of available SNWA supplies due to improved conditions on the CRA. The balance of the water will be available in 2010.

**CY 2009 Projected CRA and SWP Supplies**  
(rounded to nearest thousandths)

<b>CRA BASIC PROGRAMS</b>	
Basic Total Apportionment	550,000
MWD Water Budget Agricultural Adjustment	163,000
<i>Priority 1,2, and 3b</i>	<i>-61,200</i>
<i>Imperial ID</i>	<i>196,000</i>
<i>Coachella Valley WD</i>	<i>30,900</i>
<i>Misc and Indian PPR's</i>	<i>-2,600</i>
IID-MWD Conservation Program	85,000
Lower Colorado Water Supply Project	4,000
PVID Land Fallowing	133,000
Canal Lining Water to MWD	15,000
Exchange with CVWD	-35,000
Water Exchanged with SDCWA (IID Transfer & All American Canal Lining)	133,000
Central Arizona Storage Demonstration Project	30,000
<b>CRA BASIC PROGRAMS TOTAL</b>	<b>1,078,000</b>
<b>FIVE YEAR SUPPLY RESOURCE OPTIONS: CRA</b>	
Additional PVID Transfers (Crop Stressing / Fallowing)	30,000
Expand SNWA Agreement	30,000
ICS Exchange	25,000
Agreements with CVWD	25,000
<b>TOTAL: CRA 5 YEAR SUPPLY RESOURCE OPTIONS</b>	<b>110,000</b>
<b>Colorado River Supplies Total</b>	<b>1,188,000</b>
<b>SWP BASIC PROGRAMS</b>	
MWD Table A	765,000
MWD 2008 Carryover	11,000
Desert Water/Coachella Valley exchange	72,000
Port Hueneme Agreement /Turnback Pool/Westland Mitigation	3,000
<b>SWP BASIC SUPPLIES TOTAL</b>	<b>851,000</b>
<b>SWP TRANSFERS</b>	
Yuba Multi Year Transfers	34,000
<b>SWP TRANSFERS TOTAL</b>	<b>34,000</b>
<b>5 YEAR SUPPLY RESOURCE OPTIONS: SWP</b>	
Drought Water Bank / NOD Transfers	30,000
In-Delta Transfers -- Delta Wetlands	5,000
<b>TOTAL: SWP 5 YEAR SUPPLY RESOURCE OPTIONS</b>	<b>35,000</b>
<b>SWP Supplies Total</b>	<b>920,000</b>
<b>TOTAL BASE SUPPLIES WITH WSDM &amp; 5 YEAR SUPPLY RESOURCE OPTIONS</b>	<b>2,108,000</b>

**CY 2009 Projected WSDM Supplies**

<b>Program</b>	<b>Estimated 1/1/2009 Storage Levels</b>	<b>Amount Available at 40% SWP Allocation</b>	<b>Amount Available at 50% SWP Allocation</b>	<b>CY 2009 Put Capacity</b>
<b>SURFACE STORAGE</b>	<b>452,000</b>	<b>405,000</b>	<b>405,000</b>	<b>794,000</b>
<i>Lake Mead ICS Account</i>	94,000	62,000	62,000	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>294,000</b>	<b>143,000</b>	<b>145,000</b>	<b>132,000</b>
<i>Arvin Edison Storage Program</i>	152,000	45,000	45,000	45,000
<i>Semitropic Storage Program</i>	109,000	74,000	74,000	32,000
<i>Kern Delta Storage Program</i>	23,000	16,000	16,000	55,000
<i>Mojave Storage Program</i>	10,000	8,000	10,000	0
<b>GROUNDWATER STORAGE PROGRAMS</b>	<b>331,000</b>	<b>88,000</b>	<b>88,000</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 Monkhill)</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>10,000</b>	<b>10,000</b>	<b>0</b>
<i>Supplemental Storage Program (Los Angeles)</i>	10,000	10,000	10,000	0
<b>OTHER PROGRAMS</b>	<b>143,000</b>	<b>0</b>	<b>0</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	0	0	0
<b>TOTAL</b>	<b>1,077,000</b>	<b>646,000</b>	<b>648,000</b>	<b>1,180,000</b>

\* The amount available for these programs are shown as zero because they have been accounted for in base supplies or implied in meeting DWCV exchange obligations.

**Programs Under Development in 2009**

<b>Program</b>	<b>Estimated 1/1/2009 Storage Levels</b>	<b>Amount Available at 40% 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	14,000
<i>MWD '09 Carryover</i>	0	0	0	185,000*
<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>285,000</b>

\* Put capacity is 100 taf at SWP allocations below 50%

**Future Payback Obligations**

<b>Program</b>	<b>Amount (Acre-Feet)</b>	<b>Year Initiated</b>	<b>Payback Deadline</b>
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	2012
	63,400	2008	2013
	40,000	2009	2014 **
	<b>Subtotal</b>	<b>118,800</b>	
Coachella Valley Water District Desert Water Agency	8,000	2003	2009
	7,100	2008	2014
<b>Subtotal</b>	<b>15,100</b>		
<b>TOTAL</b>	<b>203,900</b>		

\* Metropolitan wouldn't be expected to pay back the water until 2022

\*\* This is based on the current end of year estimate for net take in 2009.