



- Water Surplus and Drought Management Plan on water supply and demand as of July 30, 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 July 30, 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: 1.12 MAF
- Total SWP Contract Related Supplies including Five-Year Supply Plan Actions: 0.93 MAF
- Total WSDM storage withdrawal capacity available at current 40 percent SWP Allocation: 619 TAF
- CY 2009 Estimated Total Demand with WSAP Level 2: 2.09 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](#)

[Attachment 4: Fiscal Year 08/09 Storage Withdrawal](#)

Detailed Report

This letter is the eighth 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 1.12 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 a net increase of approximately 18 TAF in the estimate of total Colorado River supplies for CY 2009. This change is primarily due to increased projections of 52 TAF from the U.S. Bureau of Reclamation in Agricultural Water underuse. The additional water supply obviates the projected need to draw from Lake Mead ICS.

State Water Project

On May 20, 2009, the California Department of Water Resources (DWR) announced that the Table A allocation has been increased to 40 percent of Table A contract amount. Under the current 40 percent Table A allocation,

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Metropolitan will receive Table A supplies of 765 TAF. Metropolitan will also take delivery of 90 TAF from Metropolitan's transfer and exchange agreements with the 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 855 TAF. An additional 40 TAF from the related Five Year Resource Options and 35 TAF from the Yuba Multi-Year Transfers results in SWP supplies of 930 TAF. A detailed listing of SWP supplies is contained in [Attachment 1](#).

There has been a net increase of approximately 5 TAF of SWP basic supplies since last month's report due to adjustments in projected Five Year Resource Options.

Water Demands

The current trend water demand estimate for CY 2009 is 2.09 MAF. This demand incorporates actual water use through June 30, 2009, estimated water use for the month of July, and reflects that the region will be operating under a Level 2 Water Supply Allocation Plan for the remainder of the year. It 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 some 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.

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 619 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 15 TAF decrease in the estimated January 1, 2009 storage balance amount. This decrease is attributed to a 17 TAF accounting reconciliation from a December 2008 agreement with San Diego County Water Authority (SDCWA) and a 2 TAF adjustment in the Lake Mead ICS account. Under the agreement, Metropolitan transferred water from its Semitropic Water Storage Program account into SDCWA's Semitropic Groundwater Storage Program account in exchange for taking direct delivery of a water transfer. There has also been a 42 TAF increase of 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 the reallocation of approximately 49 TAF of Lake Mead ICS storage withdrawals from the base CRA supply back into WSDM storage due to an increase in projected CRA supply.

Storage/Exchanges with Future Return Obligations

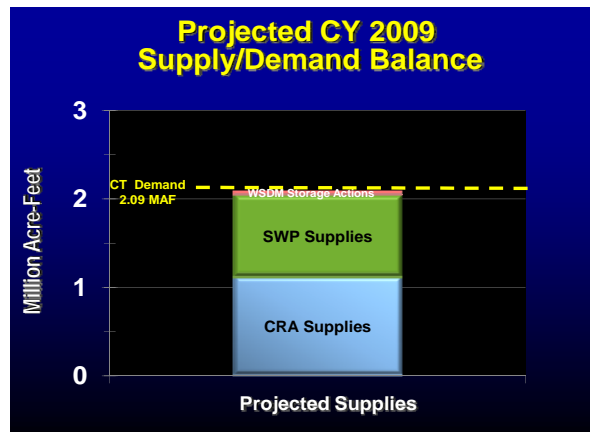
Over the past few years, Metropolitan has entered into storage/exchange agreements or withdrew water from storage accounts that require future return of the water. The table in [Attachment 3](#) shows a list of the future payback obligations from the exchange and storage programs in which Metropolitan 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. Nevada will request recovery of this stored water in the future. As part of the recently executed amendment, it is expected that Nevada will not request this water until 2022. Metropolitan also has an obligation to pay back approximately 119 TAF of Article 54 –Flexible Storage water, this includes

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79 TAF of withdrawals from DWR storage in CY 2007 and 2008, and the current CY 2009 net take estimate of 40 TAF. The payment deadlines for the 2007, 2008, and 2009 Article 54 water are 2012, 2013, and 2014, respectively. Metropolitan's expects to fulfill its 2007 and most of its 2008 obligation by the end of this year, leaving the projected 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 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 2.09 MAF, which reflects a WSAP Level 2, and the currently projected supplies on the SWP and CRA of 2.05 MAF, there is an additional supply need of approximately 40 TAF. This need will be met through the withdrawal of additional WSDM storage actions above the amounts already accounted for in the base SWP and CRA supplies, 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 408 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 4 TAF increase since last month's estimate due to 7 TAF increase in projected Drought Water Bank/NOD Transfers and a 3 TAF decrease in the projected In-Delta Transfers.

Fiscal Year 2008/09 Storage Withdrawals

There was a Water Planning and Stewardship Committee request for quantifying the amount of storage withdrawals made during Fiscal Year 2008/09. In [Attachment 4](#), the detailed tables show that an estimated storage take of 796 TAF took place between July 1, 2008 and June 30, 2009. It is important to note that this figure includes estimates of storage withdrawals that have been prorated over CY 2009, because most of the

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storage program use is not reconciled until the end of the year. This estimate also includes water that has been withdrawn from storage due to regulatory and operational needs and will be replaced by the end of CY 2009.

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

CRA BASIC PROGRAMS	
Basic Total Apportionment	550,000
MWD Water Budget Agricultural Adjustment	87,000
<i>Priority 1,2, and 3b</i>	<i>-70,400</i>
<i>Imperial ID</i>	<i>140,500</i>
<i>Coachella Valley WD</i>	<i>19,400</i>
<i>Misc and Indian PPR's</i>	<i>-2,600</i>
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
Central Arizona Storage Demonstration Project	30,000
CRA BASIC PROGRAMS TOTAL	988,000
FIVE YEAR SUPPLY RESOURCE OPTIONS: CRA	
Additional PVID Transfers (Crop Stressing / Fallowing)	30,000
Expand SNWA Agreement	50,000
ICS Exchange	25,000
Agreements with CVWD	25,000
TOTAL: CRA 5 YEAR SUPPLY RESOURCE OPTIONS	130,000
Colorado River Supplies Total	1,118,000
SWP BASIC PROGRAMS	
MWD Table A	765,000
MWD 2008 Carryover	15,000
Desert Water/Coachella Valley exchange	72,000
Port Hueneme Agreement /Turnback Pool/Westland Mitigation	3,000
SWP BASIC SUPPLIES TOTAL	855,000
SWP TRANSFERS	
Yuba Multi Year Transfers	35,000
SWP TRANSFERS TOTAL	35,000
5 YEAR SUPPLY RESOURCE OPTIONS: SWP	
Drought Water Bank / NOD Transfers	35,000
In-Delta Transfers -- Delta Wetlands	5,000
TOTAL: SWP 5 YEAR SUPPLY RESOURCE OPTIONS	40,000
SWP Supplies Total	930,000
TOTAL BASE SUPPLIES WITH WSDM & 5 YEAR SUPPLY RESOURCE OPTIONS	2,048,000

CY 2009 Projected WSDM Supplies

Program	Estimated 1/1/2009 Storage Levels	Amount Available at 40% SWP Allocation	Amount Available at 50% SWP Allocation	CY 2009 Put Capacity
SURFACE STORAGE	452,000	405,000	405,000	794,000
<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 & Lake Skinner (Dry-Year Storage)</i>	0	0	0	115,000
CENTRAL VALLEY BANKING PROGRAMS	294,000	126,000	128,000	132,000
<i>Arvin Edison Storage Program</i>	152,000	40,000	40,000	45,000
<i>Semitropic Storage Program</i>	109,000	58,000	58,000	32,000
<i>Kern Delta Storage Program</i>	23,000	20,000	20,000	55,000
<i>Mojave Storage Program</i>	10,000	8,000	10,000	0
GROUNDWATER STORAGE PROGRAMS	331,000	88,000	88,000	254,000
CONJUNCTIVE USE PROGRAMS	165,000	75,000	75,000	87,000
<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
CYCLIC PROGRAMS	13,000	13,000	13,000	0
<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
SUPPLEMENTAL PROGRAMS	10,000	0	0	0
<i>Supplemental Storage Program (Los Angeles)</i>	10,000	0	0	0
OTHER PROGRAMS	143,000	0	0	167,000
<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
TOTAL	1,077,000	619,000	621,000	1,180,000

* 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

Program	Estimated 1/1/2009 Storage Levels	Amount Available at 40% SWP Allocation	Amount Available at 50% SWP Allocation	CY 2009 Put Capacity
<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
TOTAL	219,000	0	0	286,000

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

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	
	Subtotal	70,000	
SWP Flexible Storage Account	15,400	2007	2012
	63,400	2008	2013
	40,000	2009	2014 **
	Subtotal	118,800	
Coachella Valley Water District Desert Water Agency	8,000	2003	2009***
	7,100	2008	2014
Subtotal	15,100		
TOTAL	203,900		

* 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.

*** Letter agreement under development to defer payback deadline.

FISCAL YEAR 08/09 Storage Withdrawal

Program	July 1, 2008 Storage	June 30, 2009 *	Estimated Storage Withdrawal
SURFACE STORAGE	681,000	238,000	443,000
<i>Lake Mead ICS Account</i>	141,000	63,000	78,000
<i>Castaic Lake (DWR Flex Storage)</i>	132,000	0	132,000
<i>Lake Perris (DWR Flex Storage)</i>	65,000	21,000	44,000
<i>Diamond Valley Lake</i>	343,000	139,000	204,000
<i>MWD '08 Carryover</i>	0	15,000	-15,000
<i>Lake Mathews (Dry-Year Storage)</i>	0	0	0
<i>Lake Skinner (Dry-Year Storage)</i>	0	0	0
CENTRAL VALLEY BANKING PROGRAMS	390,000	245,000	145,000
<i>Arvin Edison Storage Program</i>	168,000	129,000	39,000
<i>Semitropic Storage Program</i>	185,000	91,000	94,000
<i>Kern Delta Storage Program</i>	27,000	15,000	12,000
<i>Mojave Storage Program</i>	10,000	10,000	0
GROUNDWATER STORAGE PROGRAMS	418,000	210,000	208,000
CONJUNCTIVE USE PROGRAMS	202,000	148,000	54,000
<i>IEUA/TVMWD (Chino Basin)</i>	85,000	61,000	24,000
<i>Long Beach (Cent. Basin)</i>	7,000	7,000	0
<i>Long Beach (Lakewood)</i>	2,000	2,000	0
<i>Foothill (Raymond and Monkhill)</i>	1,000	1,000	0
<i>Calleguas (N. Las Posas)</i>	56,000	49,000	7,000
<i>MWDOC (Orange County Basin)</i>	49,000	26,000	23,000
<i>Three Valleys (Live Oak)</i>	1,000	1,000	0
<i>Three Valleys (upper Claremont)</i>	0	0	0
<i>Compton</i>	1,000	1,000	0
<i>Western</i>	0	0	0
CYCLIC PROGRAMS	13,000	0	13,000
<i>Cyclic - USG</i>	0	0	0
<i>Cyclic - PM (Three Valleys)</i>	13,000	0	13,000
<i>Cyclic - IEUA (Chino Basin)</i>	0	0	0
SUPPLEMENTAL PROGRAMS	10,000	10,000	0
<i>Supplemental Storage Program (Los Angeles)</i>	10,000	10,000	0
OTHER PROGRAMS	193,000	52,000	141,000
<i>Advance Delivery Account (DWCV)</i>	79,000	31,000	48,000
<i>SBVMWD Coordinated Operating Agreement</i>	50,000	0	50,000
<i>Central Arizona Storage Demonstration Project</i>	64,000	21,000	43,000
TOTAL	1,489,000	693,000	796,000

* The Jan-June 2009 numbers include estimates of storage withdrawals that have been prorated over CY 2009. These numbers will most likely change due to end of year reconciliations.