



- Water Surplus and Drought Management Plan on water supply and demand as of January 15, 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 January 15, 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: 1.08 MAF
- SWP (Current 15 percent Table A allocation) and CRA Base Supplies: 1.20 MAF
- Projected WSDM storage withdrawal capacity available at current 15% SWP Allocation: 589 TAF
- Five Year Supply Plan Resource Options identified for CY 2009: 426 TAF
- CY 2009 Current Trend Total Demand: 2.38 MAF

Attachments

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

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

[Attachment 3: 2009 Identified Resource Options](#)

Detailed Report

This letter is the second 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 highly variable due to weather conditions.

2009 Water Supply and Demand Balance

Colorado River Aqueduct

Staff's estimate of Colorado River supplies for CY 2009 is approximately 887 TAF, based on the anticipated 2009 diversion schedule of Metropolitan's water order from the U.S. Bureau of Reclamation. 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.

Since last month's report, there was an increase in 68 TAF of the estimated CRA supplies. This change is due to unused California agricultural apportionment at the end of 2008, which also allowed Metropolitan to keep water in the Lake Mead ICS program for use this year, increases in the estimated withdrawal from the Central Arizona storage program, and a change in the 2009 estimate MWD Water Budget Agricultural Adjustment. A detailed listing of the Colorado supplies is included as [Attachment 1](#).

State Water Project

On January 21, 2008, the California Department of Water Resources (DWR) released an updated water allocation study that includes the very dry December and January hydrologic conditions in the SWP watershed. At this time, the official Table A allocation has not been changed, but the information in the water allocation study indicates that there is a possibility for a reduced allocation if the hydrology stays dry. The existing 15 percent

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allocation is reflective of the following system storage and hydrologic conditions to date: Lake Oroville storage is approximately 28 percent full, the 2009 runoff forecast is 73 percent of normal and the Northern Sierra snowpack is 53 percent of normal. The updated allocation study also includes SWP operational constraints and Delta export restrictions resulting from the Draft Operations Criteria and Plan (OCAP) Biological Opinion for Delta smelt. DWR will continue to review hydrologic and storage conditions on a monthly basis and update the SWP allocation, as appropriate, throughout the year.

Under the current 15 percent Table A allocation, Metropolitan will receive Table A supplies of 287 TAF. Metropolitan would also take delivery of 26 TAF from Metropolitan's transfer and exchange agreements with the Desert Water Agency and Coachella Valley Water District and the City of Port Hueneme. Total CY 2009 SWP contract supplies under the initial allocation are projected at 315 TAF. A detailed listing of SWP supplies is contained in [Attachment 1](#), and includes the projected SWP supply at both a 15 and 50 percent allocation. This is provided to illustrate the potential range in SWP supply that is possible with a shift towards wetter hydrology and an increase in allocation adjustments.

There have been no changes in the SWP supply since last month's report, although it is possible that DWR could reduce the allocation following the February Cooperative Snow Survey.

Water Demands

Water demands for calendar year 2009 are projected to be 2.38 MAF at the current trend, with a range of 1.85 MAF under wet/cool conditions to 2.83 MAF under hot/dry conditions. This range of estimated demand reflects that water sales under the replenishment program will have been discontinued for two years and that groundwater agencies may be more reliant on firm imported water supplies to make up groundwater basin deficits. The demand also reflects that water sales under the Interim Agricultural Water Program (IAWP) are reduced by 30 percent, and that approximately 75 TAF of demand has been "opted-out" of the program by the member agencies. The total demands do not include deliveries of water as part of the exchange with Desert Water Agency and Coachella Valley Water District (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 will be obligated to deliver a portion of the obligation from its CRA supply.

Estimated water demands at the current trend have increased by 157 TAF since last month's report, due to the inclusion of additional firm sales resulting from groundwater agencies and IAWP Opt-Out.

WSDM Supplies and Management Actions

WSDM Storage Portfolio

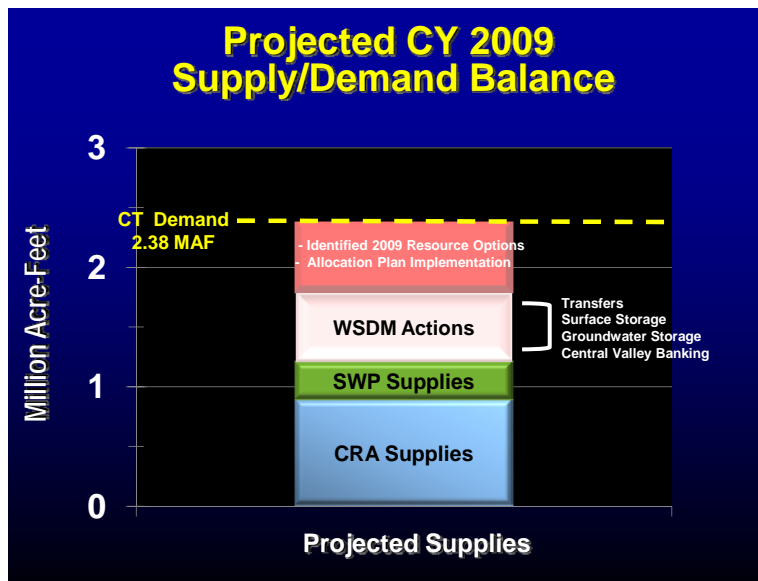
In addition to base CRA and SWP supplies, Metropolitan has a total of approximately 1.08 MAF of storage in its WSDM resource portfolio as of the beginning of CY 2009 (this figure excludes water stored for emergency purposes). Accounting for conveyance constraints, approximately 589-640 TAF of this amount is available in CY 2009, depending upon whether the SWP allocation is 15 percent or 50 percent. 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 an 8 TAF increase in the beginning amount of WSDM storage. This difference is attributed to storage levels adjustments as a result of further 2008 reconciliations for surface storage and groundwater programs.

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Water Balance and Actions

Under the current trend demand of 2.38 MAF and with the allocated base supplies on the SWP and CRA of 1.20 MAF, there is a resulting supply gap of 1.18 MAF. Metropolitan would be required to utilize the full 589 TAF amount available (at a 15 percent SWP allocation) of WSDM actions towards meeting the current trend demand. Since the projected calendar year demand exceeds the identified WSDM actions, the remaining supply need of 589 TAF would be met through 2009 Identified Five Year Supply Plan Resource Options (see [Attachment 3](#) and section below for further information) and implementation of the Water Supply Allocation Plan. The following graphic and table both show in more detail the estimate of actions that will be taken to balance the currently allocated SWP and CRA base supplies and demand.



CY 2009 Projected Supply and Demand Table (in acre-feet)

DEMAND: CT Deliveries	2,380,000
BASE SUPPLIES (with current 15% SWP allocation)	1,202,000
Supply Gap	1,178,000

WSDM ACTIONS	
<i>Transfers & Exchanges</i>	24,000
<i>Surface Water</i>	352,000
<i>Groundwater Storage</i>	88,000
<i>Central Valley Programs</i>	125,000
WSDM ACTIONS TOTAL	589,000

Additional Supply Needs*	589,000
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* To be met through the Identified 2009 Resource Options and potential implementation of the Water Supply Allocation Plan.

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Five-Year Supply Plan Resource Options

The Board has received reports and updates on the goals and progress of the Five-Year Supply Plan. A set of additional resource options for 2009 are being developed and are shown on [Attachment 3](#). These options could yield approximately 426 TAF or more of additional supply if successfully implemented. The resource options 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 in the event that critical dry conditions and court ordered restrictions on the State Water Project deliveries continue.

Since last month, there has been an approximately 70 TAF decrease in the expected yield. This is attributed to a net decrease of 65 TAF in SWP Transactions (75 TAF decrease in Drought Water Bank estimates and 10 TAF increase in In-Delta Transfers) and a 5 TAF decrease in Groundwater Recovery (inability to recover water from San Bernardino Valley MWD due to a low SWP allocation). Staff will continue to provide updates on the 2009 supply situation along with the progress and implementation of the Five-Year Supply Plan.

CY 2009 Projected CRA and SWP Supplies

Colorado River Diversion Schedule		
Basic Total Apportionment		550,000
IID-MWD Conservation Program		85,000
Water Exchanged with SDCWA (IID Transfer & All American Canal Lining)		116,000
Canal Lining Water to MWD		12,000
Central Arizona storage recovery		35,000
Lower Colorado Water Supply Project		7,000
PVID Land Fallowing		118,000
System Efficiency ICS (Drop 2 Reservoir)		34,000
Lake Mead ICS		25,000
Extraordinary Conservation ICS (Lake Mead ICS)		0
Exchange with CVWD		-35,000
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	
Colorado River Supplies Total		887,000
State Water Project Supplies		
	15% SWP Allocation	50% SWP Allocation
MWD Table A	287,000	956,000
Desert Water/Coachella Valley exchange (Table A/Turnback Pool)	26,000	86,000
San Bernardino Valley MWD Coordinated Operation Agreement	0	20,000
Port Hueneme Agreement	2,000	2,000
State Water Project Supplies Total	315,000	1,064,000
Total	1,202,000	1,961,978

WSDM Projected Supplies for CY 2009

Program	Projected 1/1/2009 Storage Levels	Amount Available at 15% SWP Allocation	Amount Available at 50% SWP Allocation	CY 2009 Put Capacity
SURFACE STORAGE	443,000	352,000	352,000	785,000
<i>Lake Mead ICS Account*</i>	91,000	0	0	200,000
<i>Castaic Lake (DWR Flex Storage)</i>	88,000	88,000	88,000	66,000
<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	304,000	125,000	176,000	132,000
<i>Arvin Edison Storage Program</i>	154,000	34,000	38,000	45,000
<i>Semitropic Storage Program</i>	117,000	71,000	108,000	32,000
<i>Kern Delta Storage Program</i>	23,000	20,000	20,000	55,000
<i>Mojave Storage Program</i>	10,000	0	10,000	0
GROUNDWATER STORAGE PROGRAMS	346,000	88,000	88,000	254,000
CONJUNCTIVE USE PROGRAMS	168,000	75,000	75,000	87,000
<i>IEUA/TVMWD (Chino Basin)</i>	66,000	30,000	30,000	25,000
<i>Long Beach (Cent. Basin)</i>	6,000	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>	52,000	20,000	20,000	33,000
<i>MWDOC (Orange County Basin)</i>	39,000	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	145,000	0	0	167,000
<i>Advance Delivery Account (DWCV) *</i>	60,000	0	0	167,000
<i>SBVMWD Coordinated Operating Agreement</i>	50,000	0	0	0
<i>Central Arizona Storage Demonstration Project *</i>	35,000	0	0	0
OTHER WSDM ACTIONS	0	24,000	24,000	0
<i>Yuba Multi Year Transfers</i>	0	24,000	24,000	0
TOTAL	1,083,000	589,000	640,000	1,171,000

* Lake Mead, DWCV, and Central Arizona are shown as zero because it has been accounted for in base supplies.

Programs Under Development in 2009

Program	Projected 1/1/2009 Storage Levels	Amount Available at 15% 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

2009 Identified Resource Options

Resource Options	Approximate Annual Yield *
	<u>TAF</u>
Extraordinary Conservation	215
CR Transactions	158
Near-Term Delta Actions	0
SWP Transactions	45
Groundwater Recovery	3
Local Resources	5
Total	426

*Conservative values are shown. Actual yield may vary and could exceed values shown