

Water Surplus and Drought Management Plan on water supply and demand as of November 20, 2008

Summary

This is the monthly report on the CY 2008 and projected CY 2009 regional water supply and demand conditions as of November 20, 2008. Staff will provide oral updates to this report at the monthly meeting of the Water Planning and Stewardship Committee. The Water Surplus and Drought Management Plan (WSDM Plan) provides the overall strategy for managing Metropolitan's resources to meet the range of estimated demands for the calendar year. The following are report highlights for this month:

2008

- SWP (35 percent Table A allocation) and CRA Base Supplies¹: 1.44 MAF
- WSDM Storage Balances as of January 1, 2008: 1.76 MAF
- WSDM Storage estimated withdrawals through CY 2008: 633 TAF
- Identified Transfers and Exchanges for CY 2008: 192 TAF
- 2008 Current Trend Total Demand: 2.26 MAF

2009

- SWP (15 percent Table A allocation) and CRA Base Supplies: 1.23 MAF
- Projected January 1, 2009 WSDM Storage Balance: 1.02 MAF
- 2009 Current Trend Total Demand Range: 2.2 – 2.4 MAF
- Five Year Supply Plan Resource Options identified for CY 2009: 451 TAF – 1.05 MAF

Attachments

[Attachment 1: Projected CRA and SWP Supplies for CY 2008](#)

[Attachment 2: Projected WSDM Supplies for CY 2008](#)

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

Detailed Report

This letter is the monthly WSDM Plan report on water supplies and demands for CY 2008. The purpose of this report is to keep the Board apprised of developing conditions that may impact water supply reliability and any potential WSDM actions that may be required for the year.

2008 Water Supply and Demand Balance

Colorado River Aqueduct

Staff's estimate of total Colorado River supplies for CY 2008 is approximately 871 TAF based on the most recent forecast submitted to the Federal Bureau of Reclamation and other developments. This schedule includes Metropolitan's Basic Apportionment (550 TAF) and all other Colorado River supplies, including water transfers, that are diverted at Metropolitan's intake at Lake Havasu. Colorado River base supplies¹ are approximately 701 TAF. A detailed listing of the Colorado River's current forecast schedule is included in [Attachment 1](#).

There have been no changes since last month.

¹ This figure does not include 45 TAF of water from the SNWA agreement described under 'Transfers and Exchanges', 25 TAF of Central Arizona Storage Recovery water, and the 20 TAF increase in PVID program since last year, 34 TAF of Drop 2 Reservoir water, and 46 TAF of Lake Mead ICS water.

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State Water Project

Since February 1, 2008, the State Water Project (SWP) allocation for Metropolitan has remained at 35 percent of the Table A contract amount. This allocation reflects the record dry conditions experienced in March through May which led to lower than normal runoff and also includes the impacts from SWP operational constraints, including Delta export restrictions resulting from the Federal District Court's remedy order to protect Delta smelt.

There have been no changes since last month. A detailed listing of SWP supplies is listed in [Attachment 1](#).

Water Demands

Metropolitan's current trend estimated for water demand is 2.26 MAF, with a range of 2.21 MAF under wet/cool conditions to 2.31 MAF under hot/dry conditions for the remainder of the year. This range of estimated demand covers total water deliveries, a part of which is included in Metropolitan's projections of its rates and revenues. It reflects that water sales under the replenishment program have been discontinued, and that water sales under the Interim Agricultural Water Program are reduced by 30 percent. 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.

Since last month's report, total demand at the current trend increased by about 20 TAF, due to weather/climate conditions.

WSDM Supplies and Management Actions

WSDM Storage Portfolio

In addition to base CRA and SWP supplies, Metropolitan had a total of approximately 1.76 MAF of storage in its WSDM resource portfolio as of the beginning of CY 2008. The available WSDM supplies and management actions for calendar year 2008 are approximately 802 TAF. This estimate reflects the contractual minimum amounts of the programs and/or any agreed upon increase in minimum contractual amounts with banking partners. Some of the programs also have contract provisions that allow for a supply increase in relation to an increase in SWP allocation. Detailed program level estimates of operational WSDM supplies for 2008 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 the water supply programs currently under development (unavailable in 2008).

Since last month's report, there has been an increase in the projected available WSDM storage supplies for CY 2008 of about 25 TAF. This increase is due to a change in the projected supply available to Metropolitan from the Central Valley Storage Programs and an adjustment of conjunctive use and surface storage numbers. These programs have either water in storage or obligations on the part of another agency to provide water, but do not have facilities or finalized agreements for delivery.

Transfers/Exchanges

In November 2007, the Board authorized the General Manager to enter into an agreement with the State Water Project Contractors Authority to pursue up to 200 TAF of water transfer agreements with sellers located in the Sacramento and San Joaquin Valleys for CY 2008. Contracts have been signed for up to 55 TAF in the Sacramento Valley (net of delta conveyance losses), and up to 8 TAF south of the Delta.

In addition to these State Water Project transfers, there is 25 TAF of recovered water from the 1992 Central Arizona groundwater storage program and approximately 20 TAF of increased PVID following from last year that would increase CY 2008 supplies. Furthermore, an exchange agreement that started in 2002 with the Southern Nevada Water Authority allows Metropolitan to store unused Nevada apportionment of Colorado River water in California. An additional 45 TAF acre-feet under this agreement was stored for CY 2008. Nevada may request recovery of this stored water in the future, but this request is not anticipated until 2015 or beyond. In April 2008, the Board approved

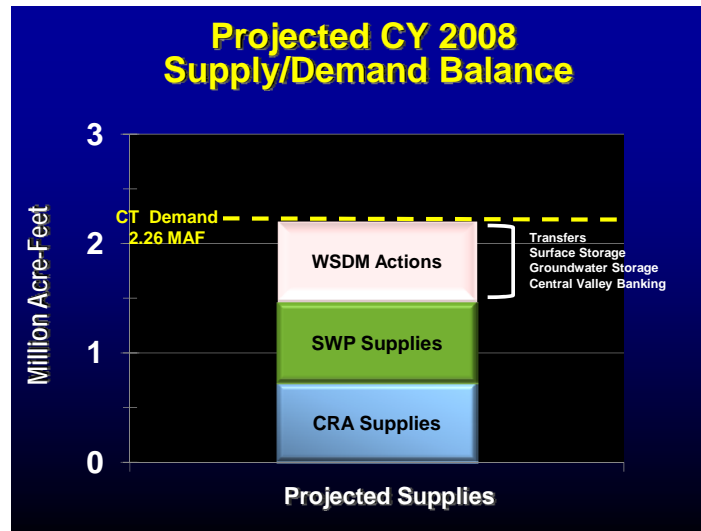
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the joint funding agreement for the Drop 2 Reservoir Project that will result in approximately 34 TAF of new supplies available to Metropolitan in CY 2008. These Colorado River actions could produce a combined total of 124 TAF acre-feet in CY 2008, bringing the total amount of transfers and exchanges identified for the year to 192 TAF.

There have been no changes since last month.

Water Balance and Actions

With currently allocated supplies on the SWP and CRA of 1.44 MAF, Metropolitan would be required to execute approximately 825 TAF of WSDM actions to meet the current trend total demand of 2.26 MAF.



The table below shows the current estimate of the actions that will be taken to balance the currently allocated SWP and CRA base supplies and demand, as well as the amount of water taken to date from the various WSDM actions.

Current Trend Demand:	2,263,000
Base Supplies	1,437,978
WSDM ACTIONS	825,022

Table of Identified WSDM Actions	Actions Under Current Trend Demand	Amount Taken to Date*	Remaining
Transfers and Exchanges	192,000	158,000	34,000
Central Valley Programs	174,000	155,800	18,200
In-Basin Groundwater	63,000	21,000	42,000
Surface Water	396,000	304,765	91,235
TOTAL	825,000	639,565	185,435

* These are current estimates pending further reconciliation.

In the event that calendar year demands exceed identified WSDM actions, the additional supply needs will be supplemented by surface storage reserves. Conversely, if the demands turn out to be lower than anticipated, the excess supply will be stored in surface reservoirs, enhancing the flexibility for CY 2009.

The table below summarizes surface reservoir storage. Metropolitan has a total of 1.35 MAF in surface water storage, of which 680 TAF is available for dry-year yield. Under the current demand and supply projections,

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396 TAF of surface water would be utilized, along with the other WSDM actions, to meet the current trend demand. Based on the table below, a balance of 284 TAF of surface water would remain in dry year storage for future years.

Surface Storage	Emergency Storage	Dry-Year	Total
Diamond Valley Lake, Lake Mathews, and Lake Skinner	319,200	430,800	750,000
Flex Storage	-	203,600	203,600
Lake Mead ICS	-	46,200	46,200
DWR Emergency Storage	354,300		354,300
Total	673,500	680,600	1,354,100
Projected CY 2008 Take at Current Trend Demand		396,000	396,000
Remaining Balance	673,500	284,600	958,100

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 from 451 TAF to 1.05 MAF of additional supply if successfully implemented. The resource options focus on six initiatives: 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. Staff will continue to provide updates on the 2009 supply situation along with the progress and implementation of the Five-Year Supply Plan.

CY 2008 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)	79,786
Canal Lining Water to MWD	5,864
Central Arizona storage recovery	25,000
Lower Colorado Water Supply Project	6,679
PVID Land Fallowing	82,109
Southern Nevada Water Authority Water Exchange	45,000
System Efficiency ICS (Drop 2 Reservoir)	34,000
Extraordinary Conservation ICS (Lake Mead ICS)	46,170
MWD Water Budget Agricultural Adjustment	-88,060
<i>Priority 1,2, and 3b</i>	96,690
<i>Imperial ID</i>	0
<i>Coachella Valley WD</i>	13,004
<i>Misc and Indian PPR's</i>	-4,374
Colorado River Supplies Total	871,548
State Water Project Supplies	
Table A (35 percent allocation)	669,025
Turnback pool	1,689
Desert Water/Coachella Valley exchange (Table A/Turnback Pool)	60,036
San Bernardino Valley MWD Coordinated Operation Agreement	4,000
Port Hueneme Agreement	1,850
State Water Project Supplies Total	736,600
Total	1,608,148

Projected WSDM Supplies for CY 2008

Program	1/1/2008 Storage Levels	Amount Available at 35% SWP Allocation	CY 2008 Put Capacity
SURFACE STORAGE	680,600	514,800	514,900
<i>Lake Mead ICS Account</i>	46,200	46,200	200,000
<i>Castaic Lake (DWR Flex Storage)</i>	138,600	138,600	15,400
<i>Lake Perris (DWR Flex Storage)</i>	65,000	65,000	0
<i>Diamond Valley Lake</i>	390,100	224,300	213,000
<i>Lake Mathews & Lake Skinner (Dry-Year Storage)</i>	40,700	40,700	86,500
CENTRAL VALLEY BANKING PROGRAMS	488,900	174,000	131,700
<i>Arvin Edison Storage Program</i>	189,400	37,400	45,000
<i>Semitropic Storage Program</i>	249,300	121,000	31,700
<i>Kern Delta Storage Program</i>	31,300	7,100	55,000
<i>Mojave Storage Program</i>	18,900	8,500	0
GROUNDWATER STORAGE PROGRAMS	545,800	63,100	187,950
CONJUNCTIVE USE PROGRAMS	213,500	56,100	37,950
<i>IEUA/TVMWD (Chino Basin)</i>	88,400	32,200	12,000
<i>Long Beach (Cent. Basin)</i>	10,600	4,500	3,300
<i>Long Beach (Lakewood)</i>	1,800	0	900
<i>Foothill (Raymond and Monks Hill)</i>	2,900	1,700	2,250
<i>Calleguas (N. Las Posas)</i>	58,600	6,000	0
<i>MWDOC (Orange County Basin)</i>	49,000	11,000	15,000
<i>Three Valleys (Live Oak)</i>	700	0	750
<i>Three Valleys (upper Claremont)</i>	0	0	750
<i>Compton</i>	1,100	300	0
<i>Western</i>	400	400	3,000
CYCLIC PROGRAMS	61,700	0	0
<i>Cyclic - USG</i>	48,300	<i>Up to stored volume</i>	0
<i>Cyclic - PM (Three Valleys)</i>	13,400	<i>Up to stored volume</i>	0
<i>Cyclic - IEUA (Chino Basin)</i>	0	0	0
SUPPLEMENTAL PROGRAMS	27,000	7,000	0
<i>Supplemental Storage Program (Los Angeles)</i>	20,000	0	0
<i>Supplemental Storage Program (MWDOC)</i>	7,000	7,000	0
OTHER PROGRAMS	243,600	0	150,000
<i>Advance Delivery Account (DWCV) *</i>	121,400	0	150,000
<i>SBVMWD Coordinated Operating Agreement **</i>	50,000	0	0
<i>Central Arizona Storage Demonstration Project **</i>	72,200	0	0
OTHER WSDM ACTIONS	50,000	50,000	0
<i>EWA Wet/Dry Exchange</i>	50,000	50,000	0
TOTAL	1,765,300	801,900	834,550

* DWCV is shown as zero because it has been accounted for in base supplies.

** Central Arizona and SBVMWD COA are shown as zero because they have been accounted for in Transfers & Exchanges.

Programs Under Development in 2008

Program	1/1/2008 Storage Levels	Amount Available at 35% SWP Allocation	CY 2008 Put Capacity
<i>Conj. Use - Pasadena</i>	21,700	0	0
<i>Hayfield Storage Program</i>	100,000	0	0
<i>MWD '08 Carryover</i>	0	0	200,000
<i>DWCV '08 Carryover</i>	0	0	85,550
<i>Sacramento Valley Transfers Stored in Shasta</i>	47,000	0	0
TOTAL	168,700	0	285,550

2009 Resource Options

<u>Resource Options</u>	<u>Annual Yield</u>
	<u>TAF</u>
Conservation	215 – 415
CR Transactions	113– 262
Near-Term Delta Actions	0 – 0
SWP Transactions	110 – 343
Groundwater Recovery	8 – 25
Local Resources	5 – 7
Total	451 – 1,052