

- Water Surplus and Drought Management Plan on water supply and demand as of June 21, 2007

Summary

Each year, Metropolitan faces a wide range of possible supply and demand conditions. The Water Surplus and Drought Management Plan (WSDM Plan) provides a strategy framework to manage Metropolitan's resources to meet the range of possible hydrologic conditions for the upcoming year. Currently, the approved CRA and SWP base supplies total approximately 2.18 MAF. When combined with the approximately 755 TAF of WSDM supplies and additional WSDM management actions available through the rest of the year, Metropolitan expects to be able to cover the range of estimated demands in CY 2007. Trends in supply and demand conditions for the year have led staff to initiate WSDM actions to mitigate potential deficits in supplies for the year. These actions are detailed in this report as well as a discussion of potential impacts to operations due to Delta Smelt.

Attachments

[Attachment 1: Colorado River and State Water Project Supplies](#)

[Attachment 2: WSDM Supplies for CY 2007](#)

[Attachment 3: Conjunctive Use Programs](#)

Detailed Report

Each month the Board is apprised of developing water supply and demand conditions for the calendar year. This report covers conditions through June 21, 2007.

Delta Smelt Actions Affecting State Water Project Supplies

As previously reported to the Board, there continues to be uncertainty as to the amount of SWP supplies that will be available for delivery to Metropolitan due to the ongoing issues with pumping operations and actions being taken to protect the Delta Smelt. In late May, there was a voluntary shutdown of SWP pumps, with minimal deliveries being made only to agencies with health and safety demands that could not be met with another source. In mid-June, pumping operations were restored, with a gradual ramp-up in exports. On June 23, 2007 federal judge Oliver Wanger rejected the National Resources Defense Council's request for a temporary restraining order, which would have greatly curtailed pumping. At this point in time, the Department of Water Resources is expecting to be able to deliver the official allocation of 60 percent of Table A amounts to the State Water Contractors.

To date, Metropolitan has remaining SWP Table A scheduled deliveries of approximately 550 TAF under a 60 percent allocation. Through a combination of deliveries from State Water Project facilities and a reclassification of water delivered by DWR to Castaic Lake, Metropolitan took delivery of approximately 220 TAF since last month's report. In essence, this reduces the amount of SWP Table A supplies that could continue to be at risk for the rest of the year. Based on estimates of potential pumping restrictions that may be applied over the remainder of the year for protection of the fishery, staff estimates that the remaining SWP scheduled deliveries may be reduced and that approximately 275 TAF to 385 TAF acre-feet may be delivered. Staff will keep the Board apprised of any additional fish protection actions and associated impacts to the water supplies.

Precipitation

The water year 2007 has been a dry year statewide, especially in Central and Southern California. Much of Southern California is on track to have one of the driest years on historical record, potentially surpassing the prior record set in 2001/02. These conditions can lead to higher than normal demands for Metropolitan water, resulting from a combination of elevated retail-level water demands and lower than normal local supplies.

Board Report (Water Surplus and Drought Management Plan on water supply and demand as of June 21, 2007)

In Northern and Central California, forecasts of unimpaired runoff from Sierra Nevada watersheds are well below average. The Colorado River Basin also had below normal rainfall and snowpack this year, and continues in drought conditions with below average runoff in seven of the last eight years. However, because the snowpack accumulation season is now over, the impact of these conditions on imported water supplies are now known with a high degree of certainty (see below).

Water Supply and Demand Balance

Colorado River Aqueduct

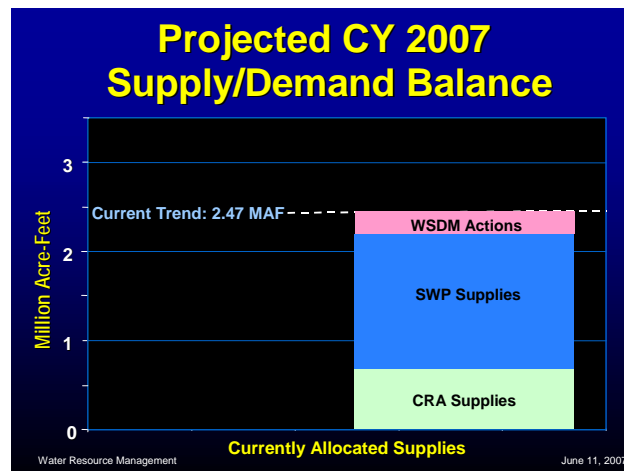
Staff's estimate of Colorado River supplies for CY 2007 is approximately 694 thousand acre-feet (TAF) based on Metropolitan's approved water order from the Federal Bureau of Reclamation (Reclamation). This figure includes 550 TAF of basic total apportionment supplies, approximately 72 TAF of additional CRA base supplies from the Imperial Irrigation District Program and IID/San Diego County Water Authority Transfer & Exchange Agreement in CY 2007, and 63 TAF under the PVID Land Fallowing Program. A detailed listing of the Colorado supplies is included as [Attachment 1](#). The estimate of Colorado River supplies is relatively firm.

State Water Project

Staff's estimate of total SWP supplies for CY 2007 is 1.48 million acre-feet (MAF). This figure includes a SWP Table A allocation of 1.15 MAF based on DWR's latest SWP allocation of 60 percent of Table A amounts. While it is still possible the final SWP allocation could change, the hydrologic conditions are relatively firm as the majority of the water year has passed. It is the operational conditions due to the Delta Smelt actions that remain uncertain. In addition to the Table A supplies, Metropolitan has delivered 28 TAF of SWP supplies from extended carryover supplies stored in CY 2006, and 167 TAF of Article 21 supplies through the period covered under this update. Metropolitan's exchange agreement with the Desert Water Agency and Coachella Valley Water District, transfer agreement with the San Bernardino Valley Municipal Water District, agreement with the city of Port Hueneme and acquisition of Turnback Pool A supplies are scheduled to provide an additional 134 TAF. A detailed listing of the SWP supplies is included as [Attachment 1](#).

Demand

Current total demands on Metropolitan for CY 2007 are projected to be 2.47 MAF under the current trend. This current trend includes updated information from the member agencies on the impacts of the dry hydrology on their local supplies, most notably from the City of Los Angeles and from the San Diego County Water Authority. The current trend also includes estimates of actual demands for the year through May. As stated in last month's report, the demands do not include the obligation to deliver water in the amount of 102,660 acre-feet as part of the exchange with Desert Water Agency and Coachella Valley Water District (DWCV). Metropolitan intends to meet the obligation through water stored in the Advance Delivery Account agreement with those two agencies.



Board Report (Water Surplus and Drought Management Plan on water supply and demand as of June 21, 2007)

WSDM Supplies and Management Actions

In addition to the base CRA and SWP supplies, Metropolitan entered CY 2007 with approximately 2.5 MAF of supplies in its WSDM resource portfolio. This figure does not include approximately 700 TAF of surface storage set aside for emergency purposes. These supplies, which include surface storage and groundwater storage, will be utilized to meet deficits between supply and demand under an extremely dry scenario. A detailed listing of the WSDM supplies is included as [Attachment 2](#).

Calendar Year Actions

Based on current trend demands, staff has estimated an expected deficit between supply and demand of approximately 300 TAF for 2007 (this figure does not include the risk of SWP Table A allocations being reduced below 60 percent if Delta Smelt actions prevents planned operations). As previously reported, Metropolitan has initiated calls on its Central Valley storage programs. Metropolitan has also initiated replenishment cuts and noticed participating agencies in in-basin groundwater programs for calendar year withdrawals in the month of May. June also marked the release of a region-wide coordinated conservation public outreach effort and media campaign. Net withdrawals from surface storage for the year have not been initiated to date, as demands have not yet indicated a need. The WSDM supplies and management actions that would be needed under that projected deficit are listed in the table below. There has been significant increase in the amount of Central Valley storage program water available. This is a result of excess program capacity in the Semitropic agreement that Metropolitan will be able to utilize this year. Metropolitan will be able to withdraw approximately 118 TAF from Semitropic, an increase to the previous estimate of 56 TAF. Because of this increase, and because of minor adjustments in the other Central Valley program withdrawal schedules, Metropolitan expects to be able to draw 165 TAF of Central Valley Storage. This action, combined with 30 TAF of In-Basin Groundwater, will reduce the potential need for withdrawals from surface storage. Metropolitan has also determined that, in order to maintain maximum flexibility with Colorado River supplies, the current obligation to deliver water to DWCV will be met through a storage withdrawal from the Advance Delivery Account. All of these actions are reflected in [Attachment 2](#). Take capacity from the Advance Delivery Account is now accounted for as unavailable for the remainder of the year, and the remaining take capacity (based on amounts taken to date) from the other programs are reflected as well.

Table of Identified WSDM Actions	Action Under Current Trend Demand	Amount Taken to Date
Central Valley	165 TAF	10,146 AF
Replenishment	105 TAF	15,479 AF
In-Basin Groundwater	30 TAF	0
Surface Water	0 TAF	0
TOTAL	300 TAF	25,625 AF

As mentioned above, Metropolitan initiated replenishment cuts and noticed in-basin groundwater programs of calendar year withdrawals in May. Those member agencies with Cyclic Storage agreements may continue to receive replenishment deliveries through the provisions of those agreements. In order to better manage peak demands through the hot summer months, Metropolitan and the member agencies have called for voluntary conservation of indoor and outdoor water use.

At the June 2007 Water Planning and Stewardship Committee meeting, a question was raised regarding the availability of in-basin groundwater conjunctive use programs in 2008. The list of Metropolitan’s conjunctive use programs along with their current storage levels, contractual on-line dates and 2008 take capacities are shown in [Attachment 3](#). It is estimated that Metropolitan will be able to extract about 69 TAF in 2008, an increase of approximately 48 TAF over 2007 levels.

Board Report (Water Surplus and Drought Management Plan on water supply and demand as of June 21, 2007)

The WSDM actions described above show a reasonable estimate of the actions that will be taken to address the hydrologic and weather conditions that Metropolitan faces this year. Because of the continuing uncertainties related to SWP supplies due to potential Delta smelt operational constraints, it may be necessary to deviate from this plan. For this calendar year, supply deficiencies caused by decreased SWP supplies will likely be managed through additional surface storage withdrawals. However, actions that support the protection of surface water storage would be taken in order to provide the best opportunity to manage through extended pumping constraints on the SWP in the future. Such actions may result in a deviation from the normal WSDM Plan implementation.

Strategic Approach for 2008

The fishery conditions that are impacting the SWP and Delta operations are expected to continue over the next few years. At the June 2007 Member Agency Manager's Meeting, staff described the water management strategies that are being put in place to better prepare for uncertain conditions. The major strategies are:

- Extend extraordinary conservation messaging and program implementation to reduce demands
- Exercise interruptions to the Replenishment Program and Interim Agricultural Water Program
- Maximize recovery of water from Central Valley storage and banking programs
- Develop water purchase and exchange programs to augment available water supplies
- Develop and implement a shortage allocation plan

Staff will continue to keep the Board apprised of developments in these areas as more information is available.

CRA and SWP Supplies Allocated as of June 21, 2007	
Colorado River Supplies	
Basic Total Apportionment	550,000
IID-MWD Conservation	85,000
SDCWA-IID & canal lining	71,500
San Luis Rey Supplemental Water	4,500
Central Arizona storage recovery	16,804
Lower Colorado Water Supply Project	4,946
Restore Reregulated water	-21,649
Adjustments for USBR System Conservation in PVID	-7,000
PVID Land Fallowing	62,550
MWD Water Budget Adjustment	-72,444
<i>Priority 1,2, and 3b</i>	-69,186
<i>Imperial ID</i>	0
<i>Coachella Valley WD</i>	1512
<i>Misc. and Indian PPR's</i>	-4,770
<i>Colorado River Supplies Total</i>	<i>694,207</i>
State Water Project Supplies	
Table A (60 percent allocation)	1,146,840
MWD DWCV turnback pool and Article 21	176,281
Carryover and 14b	28,098
Desert Water/Coachella Valley exchange	102,660
San Bernardino Valley MWD Coordinated Operation Agreement	30,000
Port Hueneme Agreement	1,110
<i>State Water Project Supplies Total</i>	<i>1,484,989</i>
Total	2,179,196

WSDM Supplies for CY 2007				
Program	1/1/07 Storage Levels	Capacity Available for Storage	CY 2007 Take Capacity	CY 2007 Put Capacity
<i>CRA Storage</i>				
Advance Delivery Account (DWCV)	224,000	376,000	0	150,000
Lake Mead Storage Demonstration Program	47,500	199,000	0	50,000
Central Arizona Underground Storage Demonstration Project	89,000	0	0	0
<i>Subtotal</i>	<i>360,500</i>	<i>575,000</i>	<i>0</i>	<i>200,000</i>
<i>SWP Storage</i>				
Sac. Valley Transfers Stored in Shasta	47,000	0	0	0
EWA Wet/Dry Exchange	50,000	100,000	50,000	100,000
Arvin Edison Storage Program	212,500	37,500	21,500	37,500
Semitropic Storage Program	346,000	4,000	118,000	4,000
Kern Delta Storage Program	38,800	211,200	1,500	50,000
SBVMWD Coord. Operating Agmt.	50,000	0	19,400	0
Mojave Storage Program	45,000	0	26,000	0
Castaic Lake (Flex Storage)	154,000	0	154,000	0
Lake Perris (Flex Storage)	65,000	0	65,000	0
MWD Carryover 07/08*	0	0	0	200,000
DWCV Carryover 07/08*	0	0	0	85,000
<i>Subtotal</i>	<i>1,008,300</i>	<i>352,700</i>	<i>455,400</i>	<i>476,500</i>
<i>In-Region Storage</i>				
Diamond Valley Lake	740,000	80,000	200,000	70,000
Lake Mathews & Lake Skinner	173,000	53,000	60,000	44,000
Cyclic - USG	48,300	51,700	Up to stored volume	Varies
Cyclic - PM (Three Valleys)	12,800	27,200	Up to stored volume	Varies
Cyclic - IEUA (Chino Basin)	1,700	98,300	Up to stored volume	0
Conj. Use - IEUA (Chino Basin)	48,000	52,000	0	25,000
Conj. Use - Long Beach (Cent. Basin)	13,000	0	4,300	0
Conj. Use - FM (Live Oak Basin)	500	2,500	0	750
Conj. Use - Calleguas (N. Las Posas)	51,000	159,000	16,700	33,000
Conj. Use - MWDOC	28,000	32,000	0	15,000
Conj. Use - Three Valleys	3,400	0	0	0
Conj. Use - Foothill	2,400	6,600	0	2,500
Conj. Use - Compton	600	1,700	0	500
Conj. Use - Long Beach (Lakewood)	0	3,600	0	900
Conj. Use - Pasadena	22,000	0	0	0
Supplemental Storage Program (Los Angeles)	20,000	0	5,000	0
Supplemental Storage Program (MWDOC)	16,000	0	14,000	0
<i>Subtotal</i>	<i>1,180,700</i>	<i>567,600</i>	<i>300,000</i>	<i>191,650</i>
Total	2,549,500	1,495,300	755,400	868,150

* CY'06 Carryover amounts are included in SWP base supplies*

Conjunctive Use Programs			
Program	Current Storage (as of 6/11/2007)	Contractual on-line date	Take Capacity /DYY (AF) 2008
Long Beach	13,000	current	4,300
Calleguas North Las Posas	60,338	currently partial (phase 1 & 2) -fully on-line early 2009	16,700
Orange County	49,689	March 2008 (possible early extraction of Oct 2007)	15,000
Chino basin	87,779	March 2008 (possible early on-line performance)	24,750
Long Beach- Lakewood	1,800	March 2008	900
Compton	1,144	September 2008	191
Live Oak	687	March 2008	750
Upper Claremont Heights	0	March 2008	750
Foothill	3,411	March 2008	2,250
Elsinore Valley	0	March 2008	3,000
Raymond Basin	21,744	no contract	
TOTAL	239,594		68,591