



● **Board of Directors**
Water Planning and Stewardship Committee

5/9/2017 Board Meeting

8-6

Subject

Adopt CEQA determination and adopt resolution to declare a “Condition 1 – Water Supply Watch”

Executive Summary

This letter recommends that the Board adopt a Water Supply Watch Resolution calling for local agencies to achieve continued water use efficiency through voluntary conservation measures. In May 2016, Metropolitan’s Board approved moving from a “Condition 3 – Water Supply Allocation” to a “Condition 2 – Water Supply Alert,” the level it currently maintains. This shift reflected the success of Metropolitan’s conservation and public outreach programs prior to and during the drought and the region’s sustained water demand reduction response. In addition, the hydrologic conditions started to improve that year, and Metropolitan began storing water in its dry-year storage programs for the first time since the drought began.

Statewide hydrologic conditions continue to improve in the current water year and, in fact, the northern California water year precipitation record was broken in April 2017. These improvements prompted the Governor to declare an end to the drought state of emergency in California on April 7, 2017. Metropolitan also is forecasting to add over a million acre-feet to its dry-year storage reserves. Although this represents the largest annual storage increase in Metropolitan’s history, it will not return Metropolitan’s reserves back to pre-drought levels. Staff is, therefore, recommending that Metropolitan’s Board adopt a resolution declaring a “Condition 1 – Water Supply Watch.” This level more appropriately reflects current conditions, the actions taken by the Governor and the projected dry-year storage reserves at the end of calendar year 2017. Should the forecasted unprecedented increase in storage gains occur through the end of calendar year 2017, staff may recommend moving to a “Baseline – Water Use Efficiency” status in calendar year 2018.

Details

Background

The Water Surplus and Drought Management Plan (WSDM Plan) provides a water management framework that accounts for the degree or “stage” of shortage. These stages are defined by parameters such as shortage levels and expected State Water Project (SWP) and Colorado River Aqueduct supplies. Each stage has associated actions that could be taken as part of the response to prevailing shortage conditions. Consistent with the WSDM Plan, Metropolitan uses the following system of conditions to communicate the urgency of the region’s water supply situation:

Baseline: Water Use Efficiency	Ongoing implementation of conservation, recycling and outreach programs to achieve permanent increases in water use efficiency and build storage reserves.
Condition 1: Water Supply Watch	Local agency voluntary dry-year conservation measures and use of regional storage reserves.

Condition 2: Water Supply Alert	Regional call for cities, counties, member agencies and retail water agencies to implement extraordinary conservation through drought ordinances and other measures to mitigate use of storage reserves.
Condition 3: Water Supply Allocation	Implement Metropolitan Water Supply Allocation Plan.

Metropolitan’s dry-year storage balances and projected puts and takes within the calendar year can provide guidance for recommending movement between these conditions. Currently, Metropolitan is in a “Condition 2 – Water Supply Alert” stage as defined in the WSDM Plan. The following provides a timeline of the events that led to this condition:

- On February 11, 2014, the Board adopted a “Condition 2 – Water Supply Alert” calling for local agencies to achieve extraordinary conservation by adopting and enforcing drought ordinances and other measures as dry conditions continued following the driest year on record in 2013.
- On December 9, 2014, the Board approved adjustments to Metropolitan’s Water Supply Allocation Plan (WSAP) including updating the base period, updating the Conservation Demand Hardening credit, including a separate allocation for drought-impacted groundwater basins, and replacing the penalty rates with an Allocation Surcharge.
- On April 14, 2015, the Board declared a regional “Condition 3 – Water Supply Allocation” and implemented the WSAP at a Regional Shortage Level 3 to address the unprecedented drought conditions and water needs within the Metropolitan service area.
- On May 10, 2016, the Board declared a “Condition 2 – Water Supply Alert” reflecting the improved hydrologic conditions and water needs within Metropolitan’s service area.

Key Considerations for Declaring a Condition 1 – Water Supply Watch

Staff is recommending moving to a “Condition 1 – Water Supply Watch” from the current “Condition 2 – Water Supply Alert.” A resolution describing the water supply conditions in California and Metropolitan’s service area and implementing the actions recommended above is included as [Attachment 1](#).

Metropolitan’s water supply and dry-year storage reserves steadily declined to record low levels during the unprecedented drought that extended from Water Year (WY) 2012/13 through WY 2014/15. This decline began to turn around in WY 2015/16 as precipitation levels in northern California reached normal conditions for the first time since the drought began. Metropolitan’s Board responded to these improvements by not extending the “Condition 3 – Water Supply Allocation” but instead moving to a “Condition 2 – Water Supply Alert.”

These improved conditions continue into the current water year. In fact, in April 2017, the 8-Station Index surpassed the previous record precipitation accumulation of 88.5 inches set in WY 1982/83, making the current water year the wettest on record for northern California. On April 7, 2017, the Governor declared an end to the drought state of emergency in California. Metropolitan also is projecting to add over one million acre-feet to its dry-year storage reserves, the largest annual increase in Metropolitan’s history. The regular WSDM Plan update report for this month is included as [Attachment 2](#) to this letter, rather than as a separate report.

Metropolitan considered the improved water supply conditions and actions taken by the Governor but also recognizes the year-to-year uncertainty of shortages and operational constraints facing the SWP. In addition, staff acknowledges that although regional storage resources are recovering, they are not yet at pre-drought levels. Staff recommends moving to a “Condition 1 – Water Supply Watch.” Should the forecasted unprecedented increase in storage gains occur through the end of calendar year 2017, staff may recommend moving to a “Baseline – Water Use Efficiency” status in calendar year 2018.

Policy

By Minute Item 47393, dated February 12, 2008, the Board adopted the Water Supply Allocation Plan.

By Minute Item 48376, dated August 17, 2010, the Board adopted proposed adjustments to the Water Supply Allocation Plan, and the allocation of seawater barrier supplies for the 2010/11 Allocation Year.

By Minute Item 48803, dated September 13, 2011, the Board adopted adjustments to the Water Supply Allocation Plan.

By Minute Item 49979, dated December 9, 2014, the Board adopted adjustments to the Water Supply Allocation Plan.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The proposed action is not defined as a project under CEQA (Public Resources Code Section 21065, State CEQA Guidelines Section 15378) because the proposed action involves continuing administrative activities such as general policy and procedure making. In addition, where it can be seen with certainty that there is no possibility that the proposed action may have a significant effect on the environment, the proposed action is not subject to CEQA (Section 15061(b)(3) of the State CEQA Guidelines).

The CEQA determination is: Determine that the proposed action is not defined as a project under Public Resources Code Section 21065 and State CEQA Guidelines Section 15378, and is not subject to CEQA pursuant to Section 15061(b)(3) of the State CEQA Guidelines.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination that the proposed action is not defined as a project and is not subject to CEQA, and

Adopt a resolution shown in [Attachment 1](#) to declare a “Condition 1 – Water Supply Watch.”

Fiscal Impact: None directly related to moving between the systems of conditions developed to communicate the urgency of the region’s water supply situation.

Business Analysis: Moving to a “Condition 1 – Water Supply Watch” is consistent with Metropolitan’s storage management framework and encourages continued conservation efforts even as hydrologic conditions improve.

Option #2

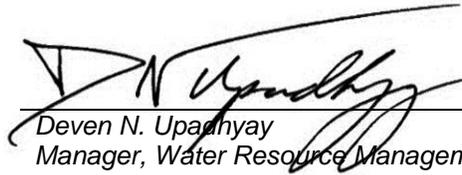
Do not adopt the proposed Water Supply Watch Resolution

Fiscal Impact: None

Business Analysis: Requiring extraordinary conservation measures, consistent with the current “Condition 2 – Water Supply Alert” status, may send the wrong message to water agencies and consumers in Metropolitan’s service area. Water supplies are projected to be much higher than demands in calendar year 2017. Maintaining a “Condition 2 – Water Supply Alert” may lead to a loss in credibility.

Staff Recommendation

Option #1



Deven N. Upadhyay
Manager, Water Resource Management

4/24/2017
Date



Jeffrey Kightlinger
General Manager

4/25/2017
Date

Attachment 1 – Water Supply Watch Resolution

Attachment 2 – WSDM Plan Update Report

Ref# wrm12657754

**RESOLUTION OF THE BOARD OF DIRECTORS
OF THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA
CALLING FOR A WATER SUPPLY WATCH**

WHEREAS, the state of California is experiencing record wet conditions, snowpack is at about 160% in Northern California, and water year 2017 is the wettest year on record; and

WHEREAS, the California Department of Water Resources current State Water Project Table A Allocation is eighty five percent of contract amounts; and

WHEREAS, despite the precipitation, the state of California has endured a severe multi-year drought that continues to impact storage levels on the Colorado River's two main reservoirs; and

WHEREAS, the statewide state of emergency due to drought conditions was rescinded by Governor Edmund G. Brown, Jr., effective April 7, 2017; and

WHEREAS, Metropolitan's Water Surplus and Drought Management Plan guides Metropolitan's water supply management actions and includes provisions for implementing water conservation; and

WHEREAS, our changing climate requires California to continue to adopt and adhere to measures that help prepare for more frequent and persistent periods of limited water supply; and

WHEREAS, Metropolitan relies on the actions of its 26 member agencies and their retailer agencies to enact and implement local conservation measures.

NOW THEREFORE BE IT RESOLVED that the Board of Directors of The Metropolitan Water District of Southern California, under its Water Surplus and Drought Management Plan, declares that Southern California in Metropolitan's service area is in a Water Supply Watch condition; and

BE IT FURTHER RESOLVED that Metropolitan encourages all cities, counties, member agencies and retail water agencies to implement conservation measures that continue to preserve regional storage reserves; and

BE IT FURTHER RESOLVED that Metropolitan will work with all cities, counties, member agencies and retail water agencies in the region to identify mechanisms that would encourage and facilitate the adoption of rate structures and other mechanisms to promote water conservation; and

BE IT FURTHER RESOLVED that Metropolitan will coordinate with the member agencies to develop a unified regional message in the media and outreach campaigns in order to communicate the need for continued conservation to the general public, businesses, stakeholder industries and public officials; and

BE IT FURTHER RESOLVED that Metropolitan intends to work with and assist its member agencies, and the region's cities, counties and retail water agencies to help ensure a reliable near-term and long-term water supply, to adopt and implement appropriate conservation ordinances and measures, and to inform retail water users of the Water Supply Watch conditions and the need for sustained water use efficiency practices.

I HEREBY CERTIFY that the foregoing is a full, true, and correct copy of a resolution adopted by the Board of Directors of The Metropolitan Water District of Southern California at its meeting held May 9, 2017.

Secretary of the Board of Directors
of the Metropolitan Water District
of Southern California



THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

Report

Water Resources Management

- Water Surplus and Drought Management Plan

Summary

This Water Surplus and Drought Management (WSDM) report provides a preliminary accounting of water supply, demand, and storage conditions for calendar year (CY) 2017. This report considers conditions as of May 1, 2017.

The Water Year (WY) to date hydrologic conditions in the Upper Colorado River and northern California watersheds continue to be above average. Snowpack peaks to date in both watersheds are above their respective April 1 averages as we enter into the spring snowmelt season. As a result, the water year runoff that is comprised of the observed flows to date and the anticipated snowmelt are projected to be above average in each watershed. Despite above average conditions, the inflows into Lake Powell are not expected to trigger equalization releases. The median condition runoff forecast for northern California, however, is projected to be the second highest in the historic record. As a result, DWR has increased the SWP allocation to 85 percent for 2017. Further, DWR has made available Article 21 supplies and Metropolitan began taking delivery of these supplies in March. These supplies are in addition to the SWP allocation.

Staff is projecting that supplies will exceed demands in CY 2017 and anticipates setting a new record for the largest increase dry-year storage reserves for a calendar year.

Purpose

Informational

Attachments

[Exhibit A: Projected 2017 WSDM Storage Detail \(85% SWP allocation\)](#)

Detailed Report

This WSDM report updates the developing water supply and demand conditions for CY 2017. This report provides the Board with an update on hydrologic conditions and a detailed accounting of WSDM conditions that may impact water supply reliability for CY 2017.

2017 Estimated Colorado River Aqueduct Supplies

The Upper Colorado River Basin snowpack peaked on March 10, 2017 measuring 130 percent of the April 1 average. The observed inflows to Lake Powell to date along with the anticipated spring snowmelt is suggesting a water year runoff forecast of 124 percent of normal. This would be the first above normal runoff since WY 2010/11. Despite wet conditions, the Bureau of Reclamation's April 24-Month Study does not project the necessary inflows to Lake Powell to trigger equalization releases. Nevertheless, the storage gains that are achieved in Lake Powell this year will improve the probability of equalization next year that will help balance storage levels between Lake Powell and Lake Mead.

The table below shows staff's estimate of Colorado River supplies for CY 2017 prior to water management actions. The total of 960 TAF is referred to as the Colorado River Aqueduct (CRA) base supply and is comprised of Metropolitan's Basic Apportionment (550 TAF) and the established Colorado River supply programs developed to date. The established supply programs have a range of uncertainty, therefore the yield shown reflects staff's current estimate. A larger degree of uncertainty involves the water use of the higher priority agricultural users. The agricultural use, which could be positive or negative, will be better known as the year progresses at which time appropriate adjustments will be made to the Colorado River supply projection. Therefore, at this time, the projected water supply includes Metropolitan's Basic Apportionment (550 TAF) and estimate for the established Colorado River supply programs developed to date without an agricultural use adjustment.

Date of Report: 5/9/2017

Board Report (Water Surplus and Drought Management Plan)

2017 Colorado River Aqueduct Base Supply Estimate (Acre-Feet)	
Basic Apportionment	550,000
IID/MWD Conservation Program	85,000
PVID/Bard Following Programs	125,000
Exchange with SDCWA (IID Transfer and Canal Lining)	178,000
Canal Lining Water to MWD	16,000
Lower Colorado Water Supply Project	6,000
CRA Supply Before Water Management And Storage Actions	960,000

2017 Estimated State Water Project Supplies

The most recent snowpack peak in northern California was observed on April 18, 2017, and measured 157 percent of normal. This is the largest snowpack peak since 2011. The observed river flows to date and anticipated spring snowmelt is suggesting a median water year runoff forecast of 208 percent of normal. This would be the second highest runoff in the historic record. On April 14, 2017 DWR announced an increase to the SWP allocation to 85 percent. This increase was based on the April 1 snow surveys, continued wet conditions, SWP reservoir storage levels and a determination on the operating criteria for Lake Oroville for the remainder of the calendar year.

In addition, DWR continues to make available supplies consistent with Article 21 of the long-term contract for the SWP. The criteria necessary to make these supplies available include meeting all State Water Contractor (Contractor) demands, filling the State's share of San Luis Reservoir, and having excess capacity at Banks Pumping Plant. These criteria are only met intermittently, which means Article 21 supplies are highly variable in nature. Metropolitan has taken delivery of approximately 100 TAF of "Article 21" supplies to date and will continue to seek opportunities to take deliveries of future available supplies.

The table below shows staff's estimate of SWP contractual supplies for CY 2017.

2017 State Water Project Supply Estimate (Acre-Feet)	
Table A Supply (85% SWP allocation)	1,625,000
Article 21 (received as of May 1)	100,000
Port Hueneme Agreement	2,000
SWP Contractual Supply	1,727,000

2017 Demands and Losses Estimate

The table below summarizes the estimated demands, obligations and losses for CY 2017 under the current trend demand projection. Demands on Metropolitan include Member Agency consumptive use which includes water exchanged with San Diego County Water Authority and sea water barrier requirements. Member Agency replenishment demands include water for groundwater basins and surface reservoir recharge and reflect demand levels under relatively wet conditions. Metropolitan staff continues to work with Member Agencies to refine these demands to reflect low groundwater levels and capacity to replenish as water supplies become available. CY 2017 demands also include obligations to deliver water to the Coachella Valley Water District under a long-term delivery and exchange agreement. Losses for CY 2017 are an estimate of Metropolitan distribution system losses, and evaporative and contractual losses from storage. Storage losses will fluctuate based on the SWP allocation and final accounting of the actual puts to storage.

Board Report (Water Surplus and Drought Management Plan)

2017 Estimated Demands, Losses and Obligations (Acre-Feet)	
Member Agency Consumptive Demands	1,250,000
Member Agency Replenishment Demands	144,000
Coachella Valley Water District Agreement	35,000
System and Storage Losses	76,000
Total Estimated Demands and Losses	1,505,000

Transfer/Exchanges

Metropolitan staff is pursuing exchange agreements or other programs that will benefit the region. Metropolitan has entered into unbalanced exchange agreements with Castaic Lake Water Agency and Central Coast Water Authority to help manage roughly 46,000 acre-feet of their SWP supplies that were at risk of spilling as DWR filled San Luis Reservoir. Through this unbalanced exchange, Metropolitan will yield roughly 15,000 acre-feet. In addition, Metropolitan, Southern Nevada Water Authority (SNWA) and the Central Arizona Project are funding conservation programs in Mexico and share the conserved water per the terms of International Boundary and Water Commission Minute No. 319. Metropolitan contributed \$2.5 million for conservation projects and will receive roughly 24,000 acre-feet of binational Intentionally Created Surplus (ICS) water for its share of the funding in 2017. Combined, these programs would yield approximately 39,000 acre-feet.

2017 Water Supply Balance

The following table shows the estimated net balance between demands and water supplies at an 85 percent SWP allocation for CY 2017.

2017 Water Supply and Demand Balance Estimate (Acre-Feet)	
	85% SWP Allocation w/ Current Demands
CRA Supplies	960,000
SWP Supplies	1,727,000
Transfer/Exchanges	39,000
Total Supplies	2,726,000
Total Demands and Losses	1,505,000
Net Water Supply and Demand Balance	1,221,000

Metropolitan is projecting that supplies will exceed demand levels in CY 2017. As shown above, there is an estimated surplus of 1.2 MAF under an 85 percent SWP allocation. Metropolitan anticipates adding to its storage reserves in CY 2017 thus continuing the storage recovery that began in CY 2016.

Based on this estimated recovery and a beginning dry-year storage balance of 1.3 MAF, Metropolitan's dry-year storage balance at the end of CY 2017 could be up to 2.5 MAF. This includes a 214 TAF increase to Metropolitan's ICS account in Lake Mead including the binational ICS component. **Exhibit A** shows the starting balance, estimated put and take capacities for CY 2017 and total storage capacity for each of Metropolitan's storage programs at a 85 percent SWP allocation. Metropolitan will exercise flexibility and opportunities within the current storage programs to increase put capacities depending on supply/demand balances. Under these projected conditions, the level of surplus supplies may or may not exceed the put capacity of regional storage programs, depending on the many variables listed in this report.

Board Report (Water Surplus and Drought Management Plan)

Future Payback Agreements

Metropolitan has two types of payback agreements; Dry-year Exchanges and Operational Exchanges. The following table shows a list of the future dry-year exchange payback amounts from programs in which Metropolitan participates. Dry-year exchanges are those with payback provisions that are beyond one year from the exchange date.

The exchange agreement with the SNWA was executed in 2004 and later amended to address changing conditions. The agreement allows Metropolitan to store unused Nevada apportionment of Colorado River water in California. SNWA may request recovery of this stored water in the future. Return may commence as early as 2022, however, SNWA has other supplies available that would likely delay the need for returns until after this date. Metropolitan did not store any SNWA water in 2016 and does not plan to store any SNWA water in 2017.

The California Extraordinary Conservation ICS agreement with the Imperial Irrigation District (IID) and other agencies executed in 2007, and later amended in 2015 to expand volumes, allows Metropolitan to store conserved IID water in excess of its Quantification Settlement Agreement (QSA) conservation commitments. The water may be returned at IID's request. Metropolitan does not plan to store any IID water in 2017.

In 2014, Metropolitan exercised Article 54 of its long-term water supply contract with the State of California and took delivery of 219 TAF from the SWP system. Repayment is required by 2020. Metropolitan paid 30 TAF of this obligation back in 2015, an additional 124 TAF repayment in 2016 through storage management actions, and the remaining balance of 65 TAF was repaid in January and February 2017.

Repayments are subject to final DWR accounting. The table below shows all outstanding Dry-year Exchange payback amounts.

Dry-year Exchange/Program	Payback Amount (Acre-Feet)	Payback Term
Storage and Interstate Release Agreement with Southern Nevada Water Authority	330,000	Up to 30,000 AFY (no earlier than 2022)
California ICS Agreement - IID	98,000 ¹	Any year, conditional on whether or not Metropolitan is implementing a WSAP
Total	428,000	

¹ Estimated and subject to final U.S. Bureau of Reclamation Colorado River Accounting.

The following table shows the future Operational Exchange payback amounts from the programs in which Metropolitan participates. Operational exchanges are those with payback provisions that may be within one year of the exchange date and provide Metropolitan increased flexibility in the timing and conveyance of deliveries. In 2014, Metropolitan took possession of 5 TAF of water from Irvine Ranch. Metropolitan returned 1 TAF in 2015 and the remaining 4 TAF is to be returned no later than 2024 at Irvine Ranch's request. Metropolitan has also taken possession of 2 TAF of water from Dudley Ridge Water District in coordination with Irvine Ranch. Half of this supply must be returned to Dudley Ridge and the other half to Irvine Ranch no later than 2022.

Operational Exchange/Program	Payback Amount (Acre-Feet)	Payback Term
Strand Ranch - Irvine Ranch	4,000	No later than 2024
Dudley Ridge WD – Irvine Ranch	2,000	No later than 2022
Total	6,000	

Board Report (Water Surplus and Drought Management Plan)

Projected 2017 WSDM Storage Detail (85% SWP Allocation)

Exhibit A

WSDM Storage	1/1/2017 Storage Levels	CY 2017 Take Capacity ¹	CY 2017 Additional Put Capacity ¹	Total Capacity ¹
Colorado River Aqueduct System	85,000	54,000	214,000	1,604,000
Lake Mead Extraordinary Conservation ICS	5,000	5,000	190,000	1,500,000
System Efficiency and Binational ICS	80,000	49,000	24,000	104,000
State Water Project System	723,000	578,000	264,000	1,845,000
MWD SWP Carryover	168,000	168,000	32,000 ²	200,000
DWCV SWP Carryover	42,000	42,000	65,000 ²	107,000
Castaic Lake (DWR Flex Storage)	154,000	154,000	0	154,000
Lake Perris (DWR Flex Storage)	0	0	65,000	65,000
Arvin Edison Storage Program	108,000	29,000	22,000	389,000
Semitropic Storage Program	125,000	125,000	53,000	350,000
Kern Delta Storage Program	99,000	60,000	27,000	250,000
Mojave Storage Program	27,000	0	0	330,000
In-Region Storage	739,000	441,000	388,000	1,389,000
Diamond Valley Lake	566,000	376,000	244,000	810,000
Lake Mathews	135,000	57,000	47,000	182,000
Lake Skinner	37,000	7,000	7,000	44,000
IEUA/TVMWD (Chino Basin)	0	0	10,000	100,000
Long Beach (Cent. Basin)	0	0	0	13,000
Long Beach (Lakewood)	0	0	0	4,000
Foothill (Raymond and Monks Hill)	0	0	0	9,000
MWDOC (Orange County Basin)	0	0	16,000	66,000
Three Valleys (Live Oak)	1,000	1,000	0	6,000
Three Valleys (Upper Claremont)	0	0	1,000	3,000
Western	0	0	3,000	12,000
Cyclic - Upper San Gabriel	0	0	60,000	100,000
Cyclic - Three Valleys	0	0	0	40,000
Other Programs	366,000	38,000	400,000	1,128,000
Other Emergency Storage	328,000	0	0	328,000
To Be Determined Storage Action ³	0	0	261,000	0
DWCV Advance Delivery Account	38,000	38,000	139,000	800,000
Total	1,913,000	1,111,000	1,266,000	5,966,000
Emergency	626,000	0	0	626,000
Total WSDM Storage⁴	1,287,000	1,111,000	1,266,000	5,340,000

¹ Take, Put, and Total capacities assumed under an 85% SWP Table A Allocation.

² Metropolitan could put amounts in addition to this subject to increase risk of spill.

³ Metropolitan will exercise flexibility and opportunities within current storage programs to increase put capacities if needed.

⁴ Total WSDM Storage level is subject to change based on accounting adjustments.