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CREDIT OPINION
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Metropolitan Water District of Southern California

Update to credit analysis

Summary

The Metropolitan Water District of Southern California (Aa1 stable) benefits from an immense service area that includes over 300 cities across six counties within southern California. MWD's service area population of approximately 19 million people continues to grow, with median income levels that approximate those of the US. MWD's financial performance remains consistent, with sound debt service coverage and liquidity levels enhanced by adopted policies, the availability of a rate stabilization reserve and measured, intentional rate increases. MWD continues to increase water storage and facilitate interstate agreements to ensure reliable supplies in the face of climate change, supporting long-term credit quality. Based on the state's historic, six-year drought, MWD has sufficient water in storage, in excess of emergency supplies, to withstand a multiyear drought period. This serves to offset risks associated with California's current drought conditions. MWD's leverage is relatively high, reflecting the significant scope of the water wholesaler's capital projects, although its debt portfolio remains balanced and guided by policy, with favorable oversight of variable rate debt and swap agreements.

We regard the coronavirus outbreak as a social risk under our ESG framework, given the substantial implications for public health and safety. We do not see any material immediate credit risks for The Metropolitan Water District of Southern California. However, the situation surrounding coronavirus is rapidly evolving and the longer term impact will depend on both the severity and duration of the crisis. If our view of the credit quality of MWD changes, we will update our opinion at that time.

In addition to preparing for seismic events, MWD's emergency planning includes a Pandemic Action Plan, which is now in effect. MWD's Emergency Operations Center has been activated and is operating virtually to coordinate its response. As examples of modified operations, field crews are now working in consistent teams of two individuals to limit exposure, roughly three-quarters of employees are working remotely, and MWD purchased 302 laptops to facilitate remote work. To date, MWD reports that there have been no significant impacts to either its work force or supply chains.

Credit strengths

» Favorable position as water wholesaler for treated and untreated water supplies to expansive service area

» Growing service area population with income levels in line with US medians

» Consistent financial performance supported by long-term planning and measured rate increases

» Favorable and increasing water storage capacity

Credit challenges

» Pressured water supplies vulnerable to climate change

» Large capital plan to finance additional water supplies and address environmental concerns

» Efforts on the part of some member agencies to reduce water purchases

» Ongoing litigation challenging rates and regulatory requirements

Rating outlook

The stable outlook reflects our expectation that MWD will maintain sound financial performance with consistent debt service coverage and liquidity levels despite the long term challenge of meeting the water demands of a growing population, the increasing cost pressures of regulatory requirements, and environmental risks that will reduce the reliability of available water supplies. It also incorporates our expectation that MWD will effectively manage through the impacts of the coronavirus crisis, which are likely to include lower demand and somewhat reduced flexibility to increase rates as evidenced by a reduced rate increase for fiscal 2021.

Factors that could lead to an upgrade

» Material and sustained increase in debt service coverage by net revenues

» Long-term alleviation of water supply pressure including sustained growth in stored water supply

Factors that could lead to a downgrade

» Significantly weakened debt service coverage

» Prolonged drought period that would significantly reduce available supplies

» Capital costs required to meet future supply or environmental requirements that would significantly weaken financial performance

Key indicators

Exhibit 1

Metropolitan Water District of So. California					
System Characteristics					
Asset Condition (Net Fixed Assets / Annual Depreciation)	29 years				
System Size - O&M (in $000s)	$868,050				
Service Area Wealth: MFI % of US median	97.83%				
Legal Provisions					
Rate Covenant (x)	1.0x				
Debt Service Reserve Requirement	None				
Management					
Rate Management	Aaa				
Regulatory Compliance and Capital Planning	Aaa				
Financial Strength					
	2015	2016	2017	2018	2019
Operating Revenue ($000)	$1,590,818	$1,329,010	$1,315,368	$1,446,358	$1,303,431
System Size - O&M ($000)	$1,016,988	$1,212,910	$935,119	$902,256	$868,050
Net Revenues ($000)	$702,811	$292,974	$541,565	$716,606	$652,260
Net Funded Debt ($000)	$4,480,095	$4,295,077	$4,382,023	$4,299,550	$4,028,095
Annual Debt Service ($000)	$253,058	$303,000	$307,605	$340,000	$333,000
Annual Debt Service Coverage (x)	2.8x	1.0x	1.8x	2.1x	2.0x
Annual Debt Service Coverage - reported (x)	2.7x	1.6x	1.6x	1.6x	1.4x
Cash on Hand	288 days	222 days	240 days	125 days	193 days
Debt to Operating Revenues (x)	2.8x	3.2x	3.3x	3.0x	3.1x

Moody's debt service coverage figures reflect adjusted Operations and Maintenance (O&M) to reconcile actual changes in cash related to contributions for pensions and OPEB, consistent with our cross-sector Adjustments to Pension and OPEB Data Reported by GASB Issuers, Including States and Local Governments Methodology. As a result, Annual Debt Service Coverage varies from metrics reported by MWD.
Source: Metropolitan Water District of Southern California Audited Financial Statements and Moody's Investors Service

Profile

Comprising 26 member agencies including 14 cities, 11 municipal water districts and one county water authority, MWD serves as a water wholesaler to a 5,200 square mile service area with over 19 million residents. MWD provides supplemental water to its member agencies that represent a critical portion of the members' water supply mix, with these supplies projected to represent roughly 50% of member agencies' water supplies over at least the next 25 years. The district is a wholesale supplier only with no direct retail customers.

Detailed credit considerations

Service area and system characteristics: critical water wholesaler with additions to storage intended to offset supply challenges stemming from growing needs and climate change

As the second largest water utility in the nation, MWD will remain firmly positioned as a critical wholesale water provider supplying between 40% and 60% of all or portions of six counties within southern California. While member agencies continue to develop their own water supplies from recycled and desalination sources, reliance on MWD remains stable and in some cases will increase as a results of water quality regulations, underscoring the essentiality of this water to the region.

MWD derives its water supplies from two principal sources: deliveries from the State Water Project (SWP) and the Colorado River. For calendar year 2020, water deliveries from the SWP currently equal 20% of the contracted amount, which equates to approximately 382,300 acre-feet (AF) of water for MWD. This figure is down from 35% of the contracted amount in 2018 and 75% in 2019, reflecting a dry winter from 2019 to 2020. As of May 4, 2020, northern Sierra precipitation equaled 57% of the 50-year average, with snowpack at only 20% of average.

Favorably, as of May 4th, the upper Colorado River Basin snowpack was measured at 81% of the 30-year average, with total system storage in the Colorado River Basin equal to 51% of capacity. As a result of improved storage levels, no shortage will be declared on the Colorado River supply in 2020, and as a result, this source will provide over 1 million AF, a significant increase from approximately 857,000 during the drought year of 2018.

While variable water supplies and the risk of drought represent a long-term credit pressure, these risks are offset to a significant degree by MWDs strong level of stored water supply, which includes both surface reservoirs and groundwater storage and equals approximately 6.0 million AF in total capacity. As of January 1, 2020, stored water supplies reached a record high of 3.9 million AF, increasing from 2.9 million AF in 2019. Of this amount, approximately 750,000 AF of stored water is reserved for emergency events such as supply interruptions from earthquakes or extended drought. The district expects to close the calendar year with 3.1 million AF of water in storage; roughly double projected water transactions of 1.6 million AF in each of the next two fiscal years.

MWD is currently in the process of updating its Integrated Water Resources Plan, which is expected to be completed in 2021, and is continually at work to harden supplies and increase storage. As an example, efforts are underway to develop a regional recycled water program to free up existing supplies for consumption rather than groundwater recharge. As an initial step, a 500,000 gallon-per-day advanced wastewater treatment demonstration plant was opened in October 2019.

The maintenance of strong water storage levels is a key credit factor that helps MWD manage the fluctuations of its water supplies. Supply variability will likely increase with the rising impact of climate change, which is forecast to increase the severity and frequency of droughts. We expect that MWD will mitigate these impacts by deploying its stored supply and implementing conservation as needed. MWD will also build water resilience by broadening its ground water use and improving the efficiency of SWP water deliveries through its participation in the Bay-Delta conveyance project.

Approximately 50% of MWD's water deliveries are treated water, disinfected at five water treatment plants. The plants typically treat between 0.8 and 1.0 billion gallons per day, well within a maximum capacity of approximately 2.4 billion gallons per day. MWD is continually monitoring the development of legislation on environmental requirements, and is currently in compliance with all state and federal drinking water regulations and permits.

Debt service coverage and liquidity: coverage and liquidity is expected to remain stable despite disruptions from coronavirus pandemic

Despite expectations of reduced consumption and a slight reduction in rate increases for fiscal 2021, MWD's debt service coverage and liquidity levels will remain stable, supported by adopted policies, strong oversight and multi-year planning. After falling to a low of 1.4x in fiscal 2016, inclusive of transfers from the rate stabilization fund, debt service coverage has since improved. In fiscal 2019, debt service coverage equaled 1.43x, exclusive of any transfers. This figure remained stable despite a decline in water revenues from close to $1.3 billion in fiscal 2018 to $1.1 billion in fiscal 2019 due to a record wet year, and coverage is projected to improve to 1.55x in fiscal 2020.

Going forward, debt service coverage should remain stable at around 1.5x, reaching a targeted 2.0x in fiscal 2025. Notably, in response to the significant and far reaching impacts of the coronavirus crises, MWD made adjustments to its adopted biennial budget for calendar year 2021 and 2022; one of which was to reduce a planned rate increase of 5% in each year to a 3% increase for calendar year 2021 and a 4% increase in calendar year 2022. This change was made in consultation with member agencies in an effort to provide some rate relief to their retail customers. MWD has also taken immediate steps to reduce some planned expenditures including suspending vehicle purchases and closely scrutinizing any new hires.

Importantly, the budget retains spending on critical long-term projects including $25 million per year for planning for the large tunnel project associated with the Bay-Delta conveyance project; $15 million in annual spending for planning costs associated with the regional recycled water program; and $43 million per year for demand management.

Despite planned rate increases, MWD's water supplies remain competitively priced, with Tier I untreated water at $755 per AF as of January 1, 2020, and Tier 1 treated water priced at $1,078 per AF.

MWD's board will reconvene in September to closely review actual performance and water use during the summer months, along with potential payment delinquencies among member agencies' retail customers, and will reevaluate additional budget adjustments that may be needed. While achieving a debt service coverage target of 2x has now been delayed by two years under the revised projections, MWD's financial performance will remain sound supported by strong oversight and multi-year planning and forecasting.

LIQUIDITY

MWD maintains favorable liquidity levels, offsetting risks associated with variable water purchases, potential supply shortages and variable rate debt. At the end of fiscal 2019, unrestricted reserves of $460 million equaled a favorable 193 days' cash. This remains consistent with a targeted liquidity range from a minimum of $256.9 million (the level required to provide 18 months' of rate protection assuming a 20% decline in water sales) and $626.4 million (the required liquidity to provide a total of 3.5 years of rate protection assuming a 20% declines in sales.)

None of the member agencies have any purchase requirements, and during the Great Recession, MWD experienced a decline in water sales ranging between 5% and 8%. Over a ten-year forecast period, liquidity, combined rate stabilization and unrestricted reserve balances are expected to remain within MWD's target liquidity range of a minium of 18 months rate protection and an identified maximum providing an additional two years' protection assuming a 20% decline in sales.

An assumed 20% decline in water sales is conservative and in line with some industry stress scenarios, providing assurance that MWD will successfully meet this target even with moderated rate increases.

Debt and Legal Covenants: large debt portfolio with additional planned issuances

MWD's water revenue debt includes $3.2 billion in fixed rate obligations and $825 million (20% of total debt) in variable rate obligations. In addition to outstanding revenue bonds, MWD has $37.3 million in outstanding general obligation debt.

Over the next ten years, MWD plans to issue approximately $960 million to finance planned capital improvements. In response to the coronavirus crisis, MWD has made adjustments to its capital program, shifting a 60/40 split between cash and debt financed projects to a 55/45 split in fiscal 2021. Given the scope of MWD's capital projects, this is a reasonable adjustment to ensure sound liquidity levels given additional uncertainty. Major projects include improvements to the Colorado River Aqueduct facilities and water distribution system. Improvements are also planned at two treatments plants to improve water reliability.

In addition to more routine system improvements, MWD will have to share in the costs of repairs to the Oroville Dam, with its portion estimated at $243 million as well as the ultimate solution to the Bay-Delta conveyance project.

DEBT STRUCTURE

Amortization of MWD's revenue bonds is slightly below average, with roughly 40% of principal repaid over ten years, although remain in line with industry norms given the scope and scale of the projects. Variable rate obligations include $222 million in direct placements, $272 million in 13-month SIFMA notes supported by self liquidity, and $332 million in daily VRDOs backed by stand-by purchase agreements. The nearest liquidity facility expiration date is June 2021. MWD has taken concrete steps to reduce its variable rate exposure as well as its exposure to liquidity renewals and variable rate debt supported by its own liquidity.

The rate maintenance requirement for the senior bonds is 1.0x coverage of all obligations, with an additional bonds test of 1.2x.

DEBT-RELATED DERIVATIVES

Close to 60% of the district's existing variable rate obligations are associated with derivatives, issued in conjunction with debt issuances between 2002 and 2005. The outstanding national amount of these swaps is currently $493.6 million, with a negative mark-to-market approaching $73.2 million as of May 2020. Each of the district's eight swaps are fixed-payer agreements with interest rates ranging from 2.98% to 3.36%. MWD continues to monitor the swaps but has no immediate plans to terminate them. The final maturity of the swaps is 2030.

PENSIONS AND OPEB

Metropolitan contributes to the California Public Employees' Retirement System (CalPERS), an agent multiple-employer public employee defined benefit pension plan. In fiscal 2019, MWD's adjusted net pension liability, using our methodology for pension adjustments, equaled $1.6 billion. MWD's fiscal 2019 pension contributions approached $56.5 million or a moderate 4.2% of operating revenue.

MWD also participates in the CalPERS OPEB plan. Using our same methodology for adjusting pension data, in fiscal 2019, the district's net OPEB liability totaled $404.4 million. MWD contributed $32 million to fund the annually required contribution, representing a manageable 2.4% of operating revenues.

ESG considerations

ENVIRONMENTAL CONSIDERATIONS

Environmental risks associated with periodic droughts and long-term climate change represent a significant credit pressure. Even in the current year, in which Colorado snowpack is measured at 106% of normal levels, the runoff forecast is estimated at only 68% of normal due to climate change. Reduced runoff levels are associated with dryer ground conditions absorbing more water; warmer temperatures that result in faster melting, with more water lost to evaporation, and an earlier start to spring, with plants consuming a greater portion of melting snowpack. Drought pressures on the Colorado River will require greater cooperation and planning among agencies in California, Arizona, and Nevada, and the ability to shift to other sources when supplies in Lake Mead fall.

Within California, MWD continues to increase storage to address precipitation levels that have shifted from snow to rain, with investments in the necessary infrastructure to bank additional supplies.

SOCIAL CONSIDERATIONS

Social considerations also represent a significant credit consideration and are discussed above in the description of MWD's service area. Although some of MWD's member agencies continue to augment their local supplies, regulatory issues and the costs of meeting environmental requirements will continue to make MWD's water an attractive source. Orange County, as one example, is expected to increase its purchases as a result of having to close down some of its ground water wells because of contamination by per- and poly-fluoroalkyl substances (“PFAS”). MWD will also continue to face litigation surrounding environmental issues and rates and charges.

GOVERNANCE CONSIDERATIONS

MWD's governance is strong as evidenced by adopted policies, multiyear rate setting practices and long-term capital planning. It is governed by a 38 member board of directors with each member agency being represented by at least one board member. Member agencies can also have an additional board member for each 5% of MWD's full that is also within the member agency's service area. Board member votes are allocated proportionally by the percentage of MWD assessed value within the member agency's service area. The district has sole rate setting authority independent of the state and California Public Utilities Commission.

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CLIENT SERVICES

Americas	1-212-553-1653
Asia Pacific	852-3551-3077
Japan	81-3-5408-4100
EMEA	44-20-7772-5454

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