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Summary:

Southern California Metropolitan Water District, California; General Obligation; Water/Sewer

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Credit Profile

US\$139.955 mil wtr rev rfdg bnds ser 2018 Series B due 01/01/2039		
<i>Long Term Rating</i>	AAA/Stable	New
Southern California Metro Wtr Dist wtr		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Southern California Metro Wtr Dist subordinate wtr rev rfdg bnds		
<i>Long Term Rating</i>	AA+/Stable	Affirmed
Southern California Metro Wtr Dist WTRSWR		
<i>Long Term Rating</i>	AAA/A-1+/Stable	Affirmed

Rationale

S&P Global Ratings assigned its 'AAA' long-term rating to the Southern California Metropolitan Water District's (MWD, or the district) 2018 series B senior-lien water revenue refunding bonds. At the same time, we affirmed our various ratings on the district's existing revenue bonds, including our:

- 'AAA' long-term rating and underlying rating (SPUR) on MWD's senior-lien revenue bonds;
- 'AA+' long-term rating on MWD's subordinate-lien revenue bonds;
- 'A-1+' short-term rating on MWD's senior-lien self-liquidity revenue bonds (variable-rate bonds without bank enhancement); and
- 'AAA' long-term component of the dual rating on MWD's special variable-rate water revenue bonds (variable-rate bonds with bank liquidity facilities).

The outlook, where applicable, is stable.

The ratings reflect our view of the district's:

- Role as the primary wholesaler to an extremely robust and diverse service territory in Southern California;
- Ability to draw water supplies from the Colorado River, the State Water Project (SWP), stored water, and supplemental water transfers to keep supplies and regional demands in balance;
- Extremely strong member credit quality, particularly that of San Diego County Water Authority (SDCWA) and Los Angeles Department of Water and Power (LADWP); and
- Demonstrated willingness and ability to raise rates, with board-approved 3.0% rate increases effective Jan. 1, 2019, and Jan. 1, 2020, and projected 3.0% to 4.1% annual rate increases planned (not yet board approved) through 2028, which, in our view, will support sound financial metrics over the next decade;

- The potential for substantial borrowing in the future to help finance a portion of California WaterFix, the proposed \$16.7 billion water conveyance system through the Sacramento-San Joaquin River Delta; and
- Strong financial management, which includes conservative financial forecasting, robust drought and resource adequacy planning, and well-delineated policies to address any contingent liabilities.

The district has a predominantly locally derived revenue base. Local service charges, derived through an autonomous rate-setting process, represent virtually all of the system's revenue. This, coupled with operating expense flexibility, limits exposure to federal revenue.

The district is issuing the 2018 series B bonds to refund the outstanding 2008 series A bonds for debt service savings. Following the issuance of the 2018 series B bonds, the district will have approximately \$3.1 billion aggregate principal amount of senior-lien bonds and \$1.03 billion of subordinate lien bonds outstanding.

According to the indenture, the district must demonstrate that net operating revenue for the past fiscal year or 12 of the past 24 months to issue additional senior-lien revenue bonds, or projected net operating revenue for the first year after financed water improvements have been completed must be at least 1.2x future maximum annual debt service (MADS) on previously issued and proposed bonds. The district may adjust revenue for changes in water rates or board-approved charges as well as projected revenue from additions to the water system. MWD may also exclude any principal payments it so designates in calculating MADS. MWD's board policy is to maintain 2.0x annual senior lien debt service coverage (DSC) by net operating revenue, which we view as strong, and 1.2x fixed-charge coverage (across both the senior and subordinate liens), which we view as good, especially for a wholesaler.

MWD is the main water wholesaler to 26 member agencies serving approximately 18.9 million customers in Los Angeles, Orange, Riverside, San Bernardino, San Diego, and Ventura counties in Southern California. The district provides 40% to 60% of the water within its 5,200-square-mile service area, depending on water conditions. The leading 10 customers represented about 85% of water transaction revenue and water volume in fiscal 2018, with the SDCWA the largest customer by transactions at 22.7% of water volume and 17% of transaction revenues. Although no customer is required to purchase water from MWD, all members must pay a readiness-to-serve charge calculated from historical purchase levels.

The district's service territory is extremely large, offering it several advantages, including the ability to spread its costs over a large customer base. In addition, a very minor rate increase can generate millions in water transaction revenue. MWD filters and disinfects an average of 0.8 billion to 1.0 billion gallons of water per day at five treatment facilities, with a total maximum treatment capacity of 2.4 billion gallons per day. About 50% of MWD's delivered water requires treatment.

Water transactions totaled 1.61 million acre-feet (MAF) in fiscal 2018, which was up 4.5% from the prior year. For fiscal 2017, the district's water transactions totaled 1.54 MAF, which was the lowest level since 1999 and down from the 10-year high of 2.26 MAF in 2008. For forecasting purposes, the district assumes that water transactions will gradually rise to 1.80 MAF in 2021 and then remain stable thereafter, based on Colorado River Aqueduct diversions of about 0.8 MAF to 0.9 MAF annually and SWP allocations of 50% annually. Although we believe these assumptions are reasonable as long-term averages, we expect that year-to-year actuals will vary significantly based on annual

hydrologic conditions. In particular, demand from LADWP varies significantly depending on water availability from the southern Sierras, which feeds the Los Angeles Aqueduct.

The proposed California WaterFix (three new water intakes and two 40-foot-wide tunnels with a combined 9,000-cfs of conveyance capacity) would entail a substantial infrastructure investment to improve the infrastructure that carries water through the Sacramento-San Joaquin Delta. The project is intended to address the Delta's vulnerability to risks related to earthquakes, flooding, saltwater intrusion and sea-level rise, and reduce impacts to fish. The Department of Water Resources (DWR), MWD and other key stakeholders are currently analyzing a scenario under which the SWP contractors will pay for 67% of the project costs in proportion to their Table A allocations, while the district, separate from its participation as a SWP contractor, would be responsible for the remaining 33%.

On May 14, 2018, MWD and two other districts that agreed to fund the project formed a new agency, the Delta Conveyance Design and Construction Joint Powers Authority, which will be responsible for the design and construction of the project. We understand that a separate joint powers authority, Delta Conveyance Finance Authority has been formed to facilitate financing the project, and that the participating agencies will be responsible for their proportionate share of the new debt. We understand that MWD could sell, exchange, or lease this additional capacity to other parties, including CVP contractors (and other entities receiving federal water deliveries such as the Santa Clara Valley Water District.) This current capacity and financing scenario is preliminary, and is subject to change.

The capital costs associated with the WaterFix project will likely be significant--most recently estimated at \$16.7 billion--of which MWD's share could total \$10.8 billion. DWR's economic analysis published on Sept. 20, 2018 assumes a 15-year construction period and operations beginning in 2034. Although the method for financing the project has not been established, and significant hurdles remain before the project becomes reality, DWR currently estimates that the unit cost of supplies preserved through WaterFix would be about \$684 per acre-foot, and the unit cost of conveyance and treatment of that water is up to \$550 per acre-foot depending on point of delivery, which while expensive, is relatively cost competitive when compared to desalination (estimated at from \$2,000 to \$4,000 per acre-foot by the department) or recycled water (estimated at \$1,500 to \$2,500 per acre-foot.)

If the WaterFix project moves forward, it will ultimately be paid for by the customers of the retail water agencies and cities that receive water from the state's delivery system, including entities served by MWD or that utilize MWD's system capacity. In our view, SWP water imported through the Delta is already the most expensive source for many of the retail water purveyors served by MWD, and the additional capital costs proposed for WaterFix would raise these costs further. However, water supply alternatives (such as those intended to help replenish local groundwater basins, improve reliability and meet water quality standards) are limited, and those currently under consideration may not be meaningfully cheaper.

We believe that recently implemented rate increases and board-approved future rate increases (as well as future rate increases, subject to board adoption) should allow the district's overall financial margins to remain sound in the near term, and that MWD's critical role as a key water supplier should provide it with revenue-raising flexibility. The district has adopted annual rate increases since 2004 and most recently adopted 3.0% rate increases effective Jan. 1, 2019, and Jan. 1, 2020. Based on the 10-year forecast, management anticipates annual rate increases of 4.1% for 2021

through 2028, which, along with the board-approved rate adjustments for fiscals 2019 and 2020, management anticipates will be sufficient to fund the district's 64.6% share of the WaterFix project.

Fiscal 2018 operating revenue were \$1.46 billion, up 9.3% or \$122 million, above the prior year. The increase was primarily due to \$134.7 million of higher water sales, of which \$82.4 million was related to higher water rates and \$52.3 million due to higher volumes sold. At the same time, operating expenses increased 3.9% year-over-year to \$963 million, while debt service increased to \$340 million from \$308 million. As calculated by S&P Global Ratings, MWD's all-in DSC was 1.6x in both fiscals 2018 and 2017, up from 1.4x in fiscal 2016. Fixed-charge coverage--which includes the portion of SWP capital costs and WaterFix costs not paid from dedicated property taxes--was 1.5x in fiscal 2018, up from 1.4x in 2017.

The district projects fixed charge coverage declining to about 1.2x by fiscal 2028 based on substantially rising costs associated with the WaterFix project. MWD's board policy is to maintain 2.0x annual senior-lien DSC by net operating revenue, which we view as strong, and 1.2x fixed-charge coverage (across both the senior and subordinate liens), which we view as good, especially for a wholesaler.

MWD has historically held a strong liquidity position in part to serve as a natural hedge against its variable-rate debt exposure. The total unrestricted reserve position (which consists of the water rate stabilization fund and the revenue remainder fund) at the end of fiscal 2018 was \$474 million, equivalent to 171 days of operating expenses. We understand the district does not plan to spend down its cash reserves, and we view strong reserves (and the maintenance of the dedicated credit facilities) as necessary if the district can't refund or remarket (or is unsuccessful in doing so) the \$315 million of senior-lien self-liquidity weekly VRDOs or the \$447 million of subordinate index tender bonds. Based on the 10-year forecast, management anticipates that unrestricted reserves will remain stable through 2019 and then gradually rise to more than \$600 million by 2023.

MWD's near-term capital program is manageable, in our view, at \$1.15 billion (or about \$230 million per year on average; or \$138 million in pay-as-you-go funding and \$92 million in debt funding per year) through fiscal 2023. Major capital projects include Colorado River Aqueduct improvements and refurbishments, distribution system renewal and replacement projects, system reliability projects, and various projects at its Weymouth Treatment Plant and Diemer Treatment Plant.

Outlook

The stable outlook reflects our view that Southern California's continued dependence on MWD for water will likely remain strong, and that MWD's ability to supply needed water is critical to the health of the Southern California economy, creating a large political incentive to meet future water demand. The outlook additionally reflects our anticipation that MWD will raise rates sufficiently to manage through its capital needs during the next five years. We could lower the ratings or revise the outlook to negative, or both, in the unlikely event that the district's DSC or liquidity position significantly deteriorates.

Ratings Detail (As Of November 16, 2018)

Ratings Detail (As Of November 16, 2018) (cont.)

Southern California Metro Wtr Dist spl var rate wtr rev rfdg bnds		
<i>Long Term Rating</i>	AAA/A-1+/Stable	Affirmed
Southern California Metro Wtr Dist spl var rt wtr rev rfdg bnds		
<i>Long Term Rating</i>	AAA/A-1+/Stable	Affirmed
Southern California Metro Wtr Dist spl var rt wtr rev rfdg bnds		
<i>Long Term Rating</i>	AAA/A-1+/Stable	Affirmed
Southern California Metro Wtr Dist var rate wtr rev rfdg bnds ser 2016B-1		
<i>Long Term Rating</i>	AAA/A-1/Stable	Affirmed
Southern California Metro Wtr Dist var rate wtr rev rfdg bnds ser 2016 B-2		
<i>Long Term Rating</i>	AAA/A-1/Stable	Affirmed
Southern California Metro Wtr Dist water rev rfdg bnds		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Southern California Metro Wtr Dist wtrwks GO rfdg bnds ser 2014A dtd 12/11/2014 due 03/01/2016-2021		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Southern California Metro Wtr Dist wtr rev bnds ser 2017A due 06/30/2046		
<i>Long Term Rating</i>	AAA/A-1/Stable	Affirmed
Southern California Metro Wtr Dist wtr rev bnds (2008 Authorization) due 07/01/2024		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Southern California Metro Wtr Dist wtr rev rfdg bnds		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Southern California Metro Wtr Dist wtr rev rfdg bnds		
<i>Short Term Rating</i>	A-1+	Affirmed
Southern California Metro Wtr Dist wtr (FGIC) (SEC MKT)		
<i>Unenhanced Rating</i>	AAA(SPUR)/Stable	Affirmed
Southern California Metro Wtr Dist WTRSWR		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Southern California Metro Wtr Dist WTRSWR		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Southern California Metro Wtr Dist WTRSWR		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Southern California Metro Wtr Dist WTRSWR		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
Southern California Metro Wtr Dist WTRSWR		
<i>Long Term Rating</i>	AAA/Stable	Affirmed
The Metropolitan Water District of Southern California, Water Revenue Bonds, 2000 Authorization, Seriew B-3		
<i>Long Term Rating</i>	AAA/A-1/Stable	Affirmed

Many issues are enhanced by bond insurance.

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