Memorandum

INCLUDED WITH FRIDAY MEMOS ON June 28, 2019

CITY OF DALLAS

DATE June 26, 2019

TO Honorable Mayor and Members of the City Council

SUBJECT **Moody's Investor Service Downgrades Dallas Water Utilities Following Review Resulting from Court Ruling in Puerto Rico – RATING ACTION**

On May 13, 2019, I sent a memorandum explaining that Moody's Investor Service (Moody's) had placed seven water and sewer utilities systems, including Dallas Water Utilities, and one special assessment district under review for downgrade, following a ruling on Puerto Rico from the US Court of Appeals for the First Circuit. According to Moody's, the review was driven by rating differentials between the utilities and their "parent" issuer.

Today, Moody's downgraded to Aa2 from Aa1, the City's Waterworks and Sewer Enterprise, TX revenue bonds, as well as the contract revenue bonds issued through the Tarrant Regional Water District. This downgrade was a result of Moody's decision to use the Court's ruling on the Puerto Rico case to project what might occur under similar circumstances in Dallas. Moody's states, "the risks to bondholders of the strong interrelatedness between the city and its utility is highlighted by the March 26th ruling by the 1st Circuit Court of Appeals," that upheld a lower court ruling that Puerto Rico is not required to pay debt service on special revenue bonds during the pendency of bankruptcy proceedings.

The City has made no fundamental changes to the Dallas Waterworks and Sewer System during the period of review, and Moody's maintains that "the Aa2 rating reflects the system's extremely large service area, healthy asset condition, robust capital program, ample water supply and treatment capacity, strong financial performance, and slightly elevated, though manageable, debt burden as the system continues to carry out a robust capital plan." Notably, "the rating also considers strong legal protections for creditors … in the form of a statute that secures the systems net-revenue pledge." Moody's states that the outlook for the revenue bonds is stable.

DATE June 26, 2019

SUBJECT Moody's Investors Service Downgrades Dallas Water Utilities Following Review Resulting from Court Ruling in Puerto Rice – RATING ACTION

Please find attached the press release provided by Moody's today. If you have any questions or need further information, please do not hesitate to contact me.

M. Elizabeth Reich

M. Elizabeth Reich
Chief Financial Officer

[Attachment]

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MOODY'S
INVESTORS SERVICE

Rating Action: Moody's downgrades to Aa2 Dallas Waterworks & Sewer Enterprise, TX's revenue bonds; outlook stable

26 Jun 2019

Water Transmission Facilities Contract Revenue Bonds (City of Dallas Project) also downgraded to Aa2

New York, June 26, 2019 -- Moody's Investors Service has downgraded to Aa2, from Aa1, the rating on the Moody's rated City of Dallas Waterworks and Sewer Enterprise, TX revenue bonds, as well as the Water Transmission Facilities Contract Revenue Bonds (City of Dallas Project) issued through the Tarrant Regional Water District (City of Dallas Project). The rating action impacts $1.4 billion in Moody's rated revenue bonds and $426 million in Moody's rated contract revenue bonds. The outlook is stable. This concludes our review of the utility revenue bond rating, which was placed under review on May 13, 2019.

RATINGS RATIONALE

The downgrade to Aa2 aligns the rating of the water and sewer system more closely to the city of Dallas' (A1 stable) rating, bringing the utility's rating to two notches above the city's general obligation limited tax (GOLT) rating. The downgrade is being driven by the strong legal and governance linkages between the city and the water and sewer system; the system is ultimately a department of the city, despite having a service area that is two times the city's geographic limits.

The risks to bondholders of the strong interrelatedness between the city and its utility is highlighted by the March 26th ruling by the 1st Circuit Court of Appeals that upheld a lower court ruling that the Commonwealth of Puerto Rico (Ca negative) is not required to pay debt service on "special revenue" bonds of Puerto Rico Highway & Transportation Authority (C negative) during the pendency of the bankruptcy proceedings. In the event of serious fiscal stress of the city, there is greater risk for system creditors that the city could impair pledged revenue than if the system were legally independent of the city.

The two-notch rating distinction between the rating of the system and the city reflects primarily the healthy credit fundamentals of the system, including the system's extremely large service area, healthy asset condition, robust capital program, ample water supply and treatment capacity, strong financial performance, and slightly elevated, though manageable, debt burden as the system continues to carry out a robust capital plan. The rating also considers strong legal protections for creditors both in the form of a statute that secures the systems net-revenue pledge, and through the "closed loop" structure of the indenture/resolution and as required by the city's voter-approved charter. Finally, the rating incorporates the system's exposure to the Dallas Employees' Retirement Fund.

RATING OUTLOOK

The stable outlook reflects the likelihood that favorable demographic trends and city council support for as-needed rate increases will result in the system maintaining its strong financial position and adequate debt service coverage levels. The stable outlook also incorporates the likelihood that rising pension costs associated with the Dallas Employees' Retirement Fund will remain manageable compared to its impact on the city's finances.

FACTORS THAT COULD LEAD TO AN UPGRADE

- Upgrade of the city's GOLT rating

- Reduced ratio of debt to operating revenues

- Significant improvement to debt service coverage

FACTORS THAT COULD LEAD TO A DOWNGRADE

- Trend of declining system liquidity

- Downgrade of the city's GOLT rating; material increases to the unfunded pension liability associated with ERF

LEGAL SECURITY

The revenue bonds are secured by net revenues of the water and sewer system.

USE OF PROCEEDS

Not applicable.

PROFILE

The City of Dallas Waterworks and Sewer Enterprise is a large water and sewer utility serving 300,000 retail accounts within the city of Dallas. The system also provides wholesale water and wastewater treatment to numerous local governments in the Dallas - Fort Worth metroplex.

METHODOLOGY

The principal methodology used in these ratings was US Municipal Utility Revenue Debt published in October 2017. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

REGULATORY DISCLOSURES

For ratings issued on a program, series or category/class of debt, this announcement provides certain regulatory disclosures in relation to each rating of a subsequently issued bond or note of the same series or category/class of debt or pursuant to a program for which the ratings are derived exclusively from existing ratings in accordance with Moody's rating practices. For ratings issued on a support provider, this announcement provides certain regulatory disclosures in relation to the credit rating action on the support provider and in relation to each particular credit rating action for securities that derive their credit ratings from the support provider's credit rating. For provisional ratings, this announcement provides certain regulatory disclosures in relation to the provisional rating assigned, and in relation to a definitive rating that may be assigned subsequent to the final issuance of the debt, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive rating in a manner that would have affected the rating. For further information please see the ratings tab on the issuer/entity page for the respective issuer on www.moodys.com.

Regulatory disclosures contained in this press release apply to the credit rating and, if applicable, the related rating outlook or rating review.

Please see www.moodys.com for any updates on changes to the lead rating analyst and to the Moody's legal entity that has issued the rating.

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MOODY'S
INVESTORS SERVICE

CREDIT OPINION
27 June 2019

Rate this Research

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Dallas (City of) TX Waterworks & Sewer Ent.

Update to credit analysis following downgrade to Aa2

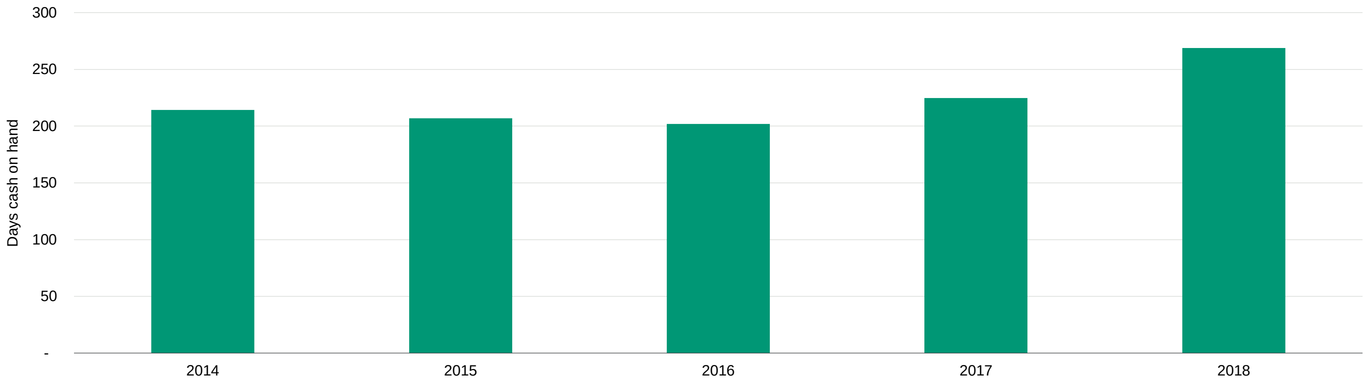
Summary

The Dallas Waterwork and Sewer Enterprise ("the system" or "the enterprise") (Aa2 stable) credit profile considers the close credit relationship between the city of Dallas (A1 stable) and the system, as well as the strong credit fundamentals of the system. The linkage between the two entities is driven by its shared governance, as the city council is the responsible body over general city operations as well as the enterprise system. This credit link between a parent government and its enterprise was highlighted by the March 26th ruling by the 1st Circuit Court of Appeals that upheld a lower court ruling that the Commonwealth of Puerto Rico (Ca negative) is not required to pay special revenue debt service on bonds of Puerto Rico Highway & Transportation Authority (C negative) during the pendency of the bankruptcy proceedings. Following this ruling, in the event of serious fiscal stress, the risk remains that the system could be adversely impacted by actions taken by the city in such an unprecedented scenario.

However, the enterprise system exhibits credit strengths that bolster the profile, including both legal protections and system fundamentals. Specifically, the legal framework protecting bondholders is strong, both in state legislation and the bond legal documents, including secured pledge of net revenues and the closed loop of funds as required in the city's voter-approved charter. Additionally, the system exhibits healthy credit fundamentals. The system is a very large, regional water and wastewater service provider with a healthy asset condition, ample water supply and system capacity, and strong financial performance. Being a large provider, system management exhibits robust and long-range capital planning to access additional water supply and replace aging infrastructure, though this has resulted in a slightly elevated debt level relative to revenues. The profile is also constrained by its exposure to the Dallas Employees's Retirement Fund, though allocated pension leverage and annual pension costs to the system are manageable.

On June 26, 2019 we downgraded the Dallas Waterworks and Sewer Enterprise revenue bond rating to Aa2, as well as contract revenue bonds issued through the Tarrant Regional Water District (City of Dallas Project).

Exhibit 1
Key credit fundamentals of the enterprise system remain strong
Days cash on hand improved since 2016



Source: Moody's Investors Service, city audited financial reports

Credit strengths

» Large service area that is nearly double the size of the city of Dallas

» DFW region exhibits strong economic indicators

» Long history of rate increases to support capital needs

» Strong bond holder legal protections

Credit challenges

» Slightly elevated ratio of debt to operating revenues

» Exposure to ERF unfunded pension liability

Rating outlook

The stable outlook reflects the expectation that favorable demographic trends, strong financial management and strategic planning, and ongoing city council support of rate increases as needed will lead to maintenance of solid liquidity and adequate debt service coverage levels for the system. The stable outlook also incorporates the expectation that rising pension costs associated with the Dallas Employees' Retirement Fund, and allocated to the system, will remain a small percentage of operating expenses.

Factors that could lead to an upgrade

» Reduced ratio of debt to operating revenues

» Significant improvement to debt service coverage

» Upgrade of the city's GOLT rating

Factors that could lead to a downgrade

» Trend of declining system liquidity

» Downgrade of the city's GOLT; material increases to the unfunded pension liability associated with ERF

Key indicators

Exhibit 2

Dallas (City of) TX Waterworks & Sewer Ent.					
System Characteristics					
Asset Condition (Net Fixed Assets / Annual Depreciation)	42 years				
System Size - O&M (in $000s)	$300,230				
Service Area Wealth: MFI % of US median	72.29%				
Legal Provisions					
Rate Covenant (x)	1.25				
Debt Service Reserve Requirement	DSRF funded at less than 3-prong test OR springing DSRF (A)				
Management					
Rate Management	Aa				
Regulatory Compliance and Capital Planning	Aaa				
Financial Strength					
	2014	2015	2016	2017	2018
Operating Revenue ($000)	$564,546	$573,327	$607,329	$632,469	$668,624
System Size - O&M ($000)	$251,181	$295,619	$313,288	$284,684	$300,230
Net Revenues ($000)	$315,300	$281,743	$298,142	$374,285	$376,168
Net Funded Debt ($000)	$2,193,658	$2,327,609	$2,405,576	$2,468,023	$2,573,544
Annual Debt Service ($000)	$185,852	$178,354	$182,900	$182,000	$202,597
Annual Debt Service Coverage (x)	1.7x	1.6x	1.6x	2.1x	1.9x
Cash on Hand	214 days	207 days	202 days	225 days	269 days
Debt to Operating Revenues (x)	3.9x	4.1x	4.0x	3.9x	3.8x

Source: Moody's Investors Service, city audited financial reports, bond legal documents

Profile

The City of Dallas Waterworks and Sewer Enterprise is a large water and sewer utility serving 300,000 retail accounts within the city of Dallas. The system also provides wholesale water and wastewater treatment to numerous local governments in the Dallas - Fort Worth metroplex.

Detailed credit considerations

Service area and customer base: large wholesale and retail service base; strong planning for long-term water resources

The Dallas waterworks and sewer system serves a growing area of residential, commercial and retail development. The system has 300,000 water accounts and provides water on a wholesale basis to 27 local governments in the metro area (23 treated, and 5 untreated water). Water supply is available from six surface water impoundments and from water in the Elm Fork of the Trinity River. All of the sources are located in north central and east Texas. The city's dependable connected water supply yield is 431 million gallons per day (MGD) from current connections, and increases to 604 MGD including available but not yet connected supply. As of 2017, the average demand on the system was 372 MGD and the peak was 511 MGD. Future surface water impoundments are anticipated, including an important connection to Lake Palestine which is under construction and expected to be available after 2020, though not needed until 2027. The city's current water supply is estimated to be adequate until about the year 2027 which increases to 2050 upon completion of the connection to Lake Palestine. Long-term affordable water supply options continue to be identified – the city updated their long range water supply plan in fiscal 2014 in order to secure water through 2070.

The system also includes wastewater collection and treatment, and serves the City of Dallas on a retail basis, and provides treatment services to 11 local governments in the area. Wastewater infrastructure includes over 4,020 miles of pipe and two treatment plants. The plants are permitted to treat 280 MGD on an average daily basis. As of 2017, the average daily usage was 162 MGD and the peak usage of 302 MGD.

Debt service coverage and net working capital: healthy debt service coverage supported by regular rate increases

The city's trend of annually raising rates is prudent and a favorable credit factor given the utility's increasing expenditure requirements. The City Council, who approves water and sewer rates, has demonstrated willingness to increase rates as needed. Both water and sewer rates for retail service (which represents the majority of system revenues) have increased by 1.6-5.3% over the past three fiscal years, wholesale rates have also increased similarly over the period, though increased a higher 7.2% in fiscal 2018 . Rates are proposed to remain flat in fiscal 2020, and increase by 1-4.6% annually through 2024.

In fiscal 2018, net revenues available for debt service totaled $376.2 million, which covered annual debt service requirements of $202.6 million by 1.86 times. City officials have a goal to maintain fiscal year-end maximum debt service coverage of 1.5 times. Prudently, the target is used for budgeting purposes in order to account for any reductions in water revenues and still sufficiently meet the rate covenant and additional bonds test.

In fiscal 2019, revenues are forecast to be $30.7 million under budget due to wholesale customers receiving a credit to revenues as a result of the Sabine River Authority (SRA) settlement, which will be offset by fund balance, and decreased water consumption. Expenditures are projected to be $24.4 million below budget primarily due to a decreased capital construction transfer to offset the consumption-related revenue reduction.

LIQUIDITY

The system's liquidity has improved, with cash increasing from $145.9 million in 2013 to $221.1 million in fiscal 2018, representing a healthy 269 days of operating expenditures. The city has also adopted a financial policy to maintain an unreserved cash balance that provides a minimum quick ratio of 1.50 times and 30 days of budgeted expenditures. Based on year to date financial information as of April 2019, there is a planned used of $6.8 million of reserves, though even with the draw reserves will remain healthy.

Debt and legal covenants: substantial capital plan to replace aging infrastructure and source additional water supply; strong legal structure

The systems' debt to revenues ratio will likely remain elevated though manageable in the near term given additional borrowing plans. The fiscal 2018 ratio of debt to revenues has come down slightly over the past few years, though remains moderately elevated at 3.9 times revenues, which is in line with similarly sized enterprises with substantial capital needs to serve a regional population. The system has undertaken a robust capital improvement plan for the system to replace aging infrastructure and expand to accommodate growth. The current annual CIP investment requires $315-$395 million annually through 2023. The city uses a combination of commercial paper, revenue bonds and cash contributions from current revenues to fund annual capital needs. The current city council authorization for the CP program is $600 million. The system's total debt includes is approximately $2.2 billion in revenue bonds and $426.3 million in contract revenue bonds associated with the integrated pipeline project.

DEBT STRUCTURE

The system issues 30 year, fixed rate, revenue bonds to take out the outstanding CP. Overall revenue bond debt structure descends over time. As May 2019, MADS of approximately $199.6 million occurs in 2022, while average annual debt service is about $113.5 million. Approximately 36% of principal will amortize within 10 years with a final maturity in 2049.

LEGAL STRUCTURE

The bonds are secured by a first lien on the net revenues of the system. The contract revenue bonds are secured by a pledge of gross operating revenues and are considered an O&M expense.

Legal provisions associated with the revenue bonds provide strong bondholder security. Texas government code 1208 perfects the lien on pledged revenues, which can point to increased bondholder recovery in the event of severe fiscal distress of the city. Additionally, per the current city charter and management practices, there exists a strict separation of accounts and assets between general city operations and the system, except for payments in lieu of taxes, street rental fees, and charges for services rendered. While the charter may be amended by a vote of the residents, an amendment impacting the system is not currently contemplated.

The bond documents include a rate covenant that requires net revenues to produce 1.25 times peak debt service, and the additional bonds test is 1.25 times average annual debt service. A reserve fund is required to be maintained at 100% average annual debt service funded over 60 months. All of the debt service reserves have been cash funded. As of September 2018 the balance in the DSRF was

$102 million. Outstanding CP notes (rated P-1) have a subordinate lien on system net revenues. Finally, the Bond Ordinance requires equal monthly installments for the next payment of principal and interest due.

DEBT-RELATED DERIVATIVES

The system is not a party to debt-related derivative agreements.

PENSIONS AND OPEB

The system funds a portion of the city's single-employer Employee Retirement Fund ("ERF"). As of fiscal 2018, the system was allocated 21.4% of the reported ERF net pension liability of $765.6 million, based on a 7.75% discount rate. The Moody's Adjusted Net Pension Liability ("ANPL") of the ERF as of fiscal 2018 was $3.3 billion, based on an assumed rate of return of 3.6%. Based on an assumed 21.4% share, the ANPL attributable to the system is $713.9 million, or 1.1 times revenues.

Based on the water system's share of the pension liability, the contribution from the system in 2018 would have been about $13 million, or a small 1.9% of revenues. The annual contributions to ERF fall below an amount that would prevent the liability from growing or "treading water", based on reported assumptions. In order to tread water on the liability, the contribution from the system would need have needed to increase by $5.7 million in 2018, for a total of $18.7 million, or 2.8% of revenues. Assuming a pension contribution equal to the tread water indicator were made, coverage in 2018 would have decreased only slightly, to 1.83 times from the actual 1.86 times.

Management and governance: sophisticated management team

Management of the Dallas Waterworks and Sewer System provide departmental administration within the framework of the city's council-manager form of government. Subject to the direction and supervision of the Office of the City Manager, the Director of Water Utilities is charged with management of the system. The system demonstrates good governance through annual adoption of rate increases to support system needs, and maintenance of policies for debt service coverage and liquidity.

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