Memorandum



DATE August 10, 2018

^{TO} Honorable Mayor and Council Members

SUBJECT Affirmed Ratings for City of Dallas Waterworks and Sewer System Revenue Refunding Bonds, Series 2018C

Standard and Poor's Global Ratings (S&P) and Fitch Ratings (Fitch) affirmed their ratings this week for Dallas Water Utilities (DWU) in advance of the August 29 sale of \$158 million City of Dallas Waterworks and Sewer System Refunding Bonds, Series 2018C.

In maintaining DWU's AAA rating, S&P cited several key factors, including:

- Continued strong management, which has ensured a 25-year water supply and is planning for a 50-year supply, insulating it from near-term drought-related stresses that plague the state from time to time;
- Deep and diverse service area economy that serves not only the city, but much of Dallas County as well; and
- Affordable rates, with a willingness to proactively and regularly adjust them.

Fitch maintained the 'AA+' rating and stable outlook the agency previously assigned to DWU. The key rating factors for Fitch are:

- A broad and diverse service territory;
- Elevated debt;
- Continued financial improvement;
- A strong operating profile; and
- Good rate flexibility.

Thank you for your continued support of Dallas Water Utilities. Please let me know if you need additional information.

ath Reich M. Elizabeth Reich

Chief Financial Officer

Attachment

 c: T.C. Broadnax, City Manager Larry Casto, City Attorney
Craig D. Kinton, City Auditor
Bilierae Johnson, City Secretary
Daniel F. Solis, Administrative Judge
Kimberly Bizor Tolbert, Chief of Staff to the City Manager
Majed A. Al-Ghafry, Assistant City Manager

Jon Fortune, Assistant City Manager Joey Zapata, Assistant City Manager Nadia Chandler Hardy, Chief of Community Services Raquel Favela, Chief of Economic Development & Neighborhood Services Theresa O'Donnell, Chief of Resilience Directors and Assistant Directors

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FITCH RATES DALLAS, TX'S WATER & SEWER REVS 'AA+'; OUTLOOK STABLE

Fitch Ratings-Austin-10 August 2018: Fitch Ratings has assigned a 'AA+' rating to the following bonds issued by the city of Dallas, TX (the city):

--Approximately \$158 million waterworks and sewer system revenue refunding bonds, series 2018C.

Bond proceeds will refund outstanding commercial paper of the city's water and sewer system (DWU or the system). The bonds are expected to sell Aug. 29, 2018 via competitive bid.

In addition, Fitch has affirmed the 'AA+' rating on the system's \$2 billion in outstanding parity debt.

The Rating Outlook is Stable.

SECURITY

Bonds are payable from a first lien pledge of net revenues of the system after payment of system operating and maintenance (O&M) expenses.

KEY RATING DRIVERS

BROAD AND DIVERSE SERVICE TERRITORY: DWU serves an extensive area that includes the city and much of the neighboring suburban communities on a wholesale basis. The city is the anchor of the large and diverse Dallas-Fort Worth regional economy.

ELEVATED DEBT: Debt metrics are relatively high but manageable. Ongoing capital needs are large but only expected to incrementally increase leverage ratios over time. The system supports a moderate amount of debt issued by the Tarrant Regional Water District (TRWD) and is payable as a system operating and maintenance (O&M) expense to build-out the Integrated Pipeline Project (the IPL) - the city's next major water supply source.

CONTINUED FINANCIAL IMPROVEMENT: Financial results continued to rebound to levels more in line with historical norms due to a favorable legal settlement with wholesale provider, controlled expenditures and continued moderate rate adjustments. Fiscal 2017 financial results saw marginal improvement with Fitch calculated debt service coverage (DSC), net of pension expense at about 1.8x and cash balances also improved modestly from the prior year.

STRONG OPERATING PROFILE: Historical planning and development of water supplies has positioned the system to meet long-term customer demands, even during drought conditions. Treatment capacity is also sufficient, and a water treatment expansion currently underway should ensure sufficient capacity for the foreseeable future.

GOOD RATE FLEXIBILITY: Rate increases have been regular and measured yet remain low relative to other large utilities both within and outside of the state. Continued moderate planned adjustments should preserve a favorable degree of flexibility going forward while sustaining strong financial margins.

RATING SENSITIVITIES

DETERIORATION OF FINANCIAL POSITION: Failure to consistently maintain financial results in line with historical norms, particularly given the scope of anticipated capital needs going forward, could result in downward rating pressure on the city of Dallas water and sewer system.

RISING CAPITAL AND DEBT: Escalation in out-year capital and debt funding and/or material changes in costs related to the Integrated Pipeline project beyond amounts already anticipated could pressure the rating given the relatively elevated nature of the existing debt profile.

CREDIT PROFILE

The system serves an expansive territory, providing retail water and sewer service to 1.2 million city residents. The system also provides wholesale treated water to 23 municipalities and wholesale sewer service to 11 customer cities in Dallas County (the county) and the contiguous counties. Water is treated at three water treatments plants with total capacity of 900 million gallons daily (mgd) and wastewater flows are treated at two wastewater treatment plants with total capacity of 280 mgd. Treatment capacity is ample for current demand levels.

Characteristic of a large, older city, wealth levels within the city limits are somewhat low (median household income for the city is around 80% of the state and U.S. average) and poverty rates are relatively high (around 50% higher than the national average). However, county wealth and poverty rates are closer to state and national averages and wholesale customers outside the county generally are quite affluent.

STRONG SERVICE TERRITORY

The city of Dallas (General Obligation Issuer Default Rating AA/Stable Outlook) is a center for technology, trade, finance and healthcare; it also ranks among the top visitor and leisure destinations in the state. The city has a diverse and stable economic base, and headquarters a broad array of corporate entities, serving as a nationally recognized technology, trade, and health service center. The city serves as corporate headquarters for AT&T, Southwest Airlines, Texas Instruments, 7-Eleven, Inc., HollyFrontier Corp., Pizza Hut, Inc. and other large corporate concerns.

Dallas county, which approximates the service area for both retail and treated wholesale water customers, has a population of over 2.6 million and has seen about 1% annual population growth since 2013. Wealth levels approximate state and national averages. Unemployment is also on par with state and national averages. Top retail system users represent the technology, government services, manufacturing and medical industries. The top wholesale customer base is made up of mature and stable communities in the Metroplex.

MODEST FINANCIAL REBOUND CONTINUES

DWU's financial performance appears to have rebounded closer to historical norms after a challenging few years. Financial results for fiscal year 2017 improved with Fitch calculated DSC at 1.8x, net of pension expense, up from 1.7x the year prior. This modest improvement to financial performance was largely due to continued moderate rates increases of about 1% on retail rates and about 7% on wholesale rates, and legal resolution of contested rates with the Sabine River Authority (SRA).

DWU and SRA came to a settlement in October 2017 over rates charged by SRA to DWU for purchased water from Lake Fork. While rates were in dispute, DWU continued to pay the elevated

purchase water rates into an escrow account. As part of the settlement, the escrow was released and DWU and SRA came to agreement on a rate setting methodology, which caps annual rate adjustments at no more than 5.5% annually. The settlement resulted in a decrease in operating expenses of \$24 million and increase in other revenues of \$23 million in fiscal 2017.

Fitch calculated total DSC for fiscal years 2018 to 2022 is expected remain around 1.7x to 1.8x based on the expectation of continued moderate annual rate adjustments on both residential and wholesale rates, additional costs associated with the IPL and future state revolving loan issuances. The system completed a retail rate study in 2017 that examined revenue sufficiency. The result was a slight reduction in lower volumetric tiers and the addition of a fifth tier. Achieving and maintaining forecasted results will be key to maintaining the rating going forward in order to provide a solid amount of pay-go capital spending and limit escalation in the system's debt profile.

ELEVATED BUT MANAGEABLE DEBT PROFILE

System debt obligations (including obligations associated with the IPL) are currently elevated. Debt levels are expected to rise incrementally over time, given the scope of capital spending and the city's practice of financing more than half of its capital improvement program with debt.

Debt levels are relatively reasonable for systems with significant wholesale service components like DWU, which offsets some concerns relating to the system's debt burden. In addition, the system's debt structure is relatively conservative (including the IPL obligations), consisting solely of fixed rate obligations apart from commercial paper outstanding at any given time, limiting interest rate and third party credit risks. The system also received approval of over \$330 million in low interest state revolving loans to support future capital investment. DWU's front-loaded debt structure, with MADS occurring in the five-year forecast period, affords the system a good deal of out-year structuring flexibility, if needed.

Most near-term capital needs are geared towards renewal and replacement of existing infrastructure and maintaining regulatory compliance, with a significant portion of costs devoted to replacing aging water and wastewater mains (around \$120 million annually). Total capital costs for fiscals 2018-2022 (not including costs associated with the IPL) are sizeable in terms of total dollars at \$1.6 billion, but reasonable in terms of annual cost per customer (\$366) relative to the 'AA' category median of \$312.

SOLID SUPPLY PORTFOLIO BUT RISING COSTS

Water supply is provided from six reservoirs, Trinity River water and indirect reuse, with diversion rights equal to 1,840 million gallons per day (mgd), or over 4.5x the historical five-year average production needs of the system. The existing and connected diversion rights also provide a current dependable yield (available supplies during a severe drought) of 431 mgd, around 1.1x the five-year average production amounts. Dependable yield will rise to 604 mgd sometime after 2020 when water from a seventh reservoir (Lake Palestine) will be added to the system as a result of the IPL, providing sufficient capacity to meet customer demands through around 2050.

The IPL is a major undertaking, consisting of an integrated water delivery transmission system project done in cooperation with the TRWD to move approximately 350 mgd of water from Lake Palestine in east Texas to the Metroplex. The project will consist of 150 miles of pipeline, three new pump stations on Lake Palestine and three new booster pump stations. The city has contracted with TRWD to design and build the transmission line that will connect Lake Palestine to the system as well as interconnecting certain TRWD reservoirs to the system. TRWD will own, operate and finance the IPL, with DWU owning 150 mgd of reserved capacity rights in the IPL and TRWD owning 197 mgd of reserved capacity rights.

Total capital costs associated with the IPL are currently estimated at over \$2 billion, with DWU's portion around \$1 billion. DWU's portion of the capital costs has been financed through contract revenue bonds issued by TRWD and payable by DWU as an O&M expense of the system. To date, TRWD has issued \$474 million in contract revenue bonds on behalf of DWU with \$446 million currently outstanding. DWU's remaining capital costs associated with the IPL will be funded through future issuances of additional TRWD contract revenue bonds over the next five years.

RATE FLEXIBILITY REMAINS

To account for the additional purchased water costs and other DWU needs, the city prudently increased its retail service rates by 1.6% and 2.6% for fiscal years 2018 and 2017, respectively. Wholesale customers experienced more significant rate increases largely due to the legal dispute SRA, which operates Lake Fork, one of DWU's primary water sources. Wholesale rates increased by about 6% for treated water and 9% to 10% for untreated water in fiscal years 2017 and 2016, respectively. Rate increases for wholesale service had been as high at 50% in fiscal 2016 due to the SRA rate dispute. Despite the rise in charges, residential charges are a moderate 1.5% of median household income and are relatively low compared to other large utilities across Texas and the nation.

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In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by information from Lumesis.

A January 2018 district court ruling that dismissed claims regarding payment of Puerto Rico Highways and Transportation Authority debt has raised questions about the scope of protections provided by Chapter 9 of the U.S. bankruptcy code to bonds secured by pledged special revenues. Fitch's rating criteria treat special revenue obligations as independent from the related municipality's general credit quality. The outcome of the litigation could result in modifications to Fitch's approach. For more information, see "What Investors Want to Know: The Impact of the Puerto Rico Ruling on Special Revenue Debt" available at www.fitchratings.com. Media Relations: Sandro Scenga, New York, Tel: +1 212 908 0278, Email: sandro.scenga@fitchratings.com.

Additional information is available on www.fitchratings.com

Applicable Criteria Rating Criteria for Public-Sector, Revenue-Supported Debt (pub. 26 Feb 2018) https://www.fitchratings.com/site/re/10020113 U.S. Water and Sewer Rating Criteria (pub. 30 Nov 2017) https://www.fitchratings.com/site/re/10010508

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Dallas; CP; Water/Sewer

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Outlook

Enterprise Risk Profile

Financial Risk Profile

Dallas; CP; Water/Sewer

Credit Profile				
US\$158.345 mil wtrwks and swr sys rev rfdg bnds (Dallas, Denton, Kaufman, And Rockwall Cntys) ser 2018 due 10/01/2047				
Long Term Rating	AAA/Stable	New		
Dallas WS				
Long Term Rating	AAA/Stable	Affirmed		
Dallas CP WS				
Short Term Rating	A-1+	Affirmed		
Tarrant Regl Wtr Dist, Texas				
Dallas, Texas				
Tarrant Regl Wtr Dist (Dallas) wtr				
Long Term Rating	AAA/Stable	Affirmed		

Rationale

S&P Global Ratings has assigned its 'AAA' long-term rating to Dallas' series 2018C water and sewer system revenue refunding bonds. At the same time, S&P Global Ratings affirmed its 'AAA' rating on the long-term revenue bonds, issued for Dallas Water Utilities (DWU), and on Tarrant Regional Water District's (TRWD) integrated pipeline (IPL) project contract revenue bonds, issued for DWU. In addition, S&P Global Ratings affirmed its 'A-1+' commercial paper (CP) rating, reflecting the long-term rating on DWU and the revolving credit agreements the city has in place to support each program. The outlook is stable.

Our rating on the Tarrant Regional Water District's IPL project bonds reflects the general creditworthiness of Dallas--the sole contracted participant. The city treats its take-or-pay obligation to the district as an unconditional operating expense of its waterworks and sanitary sewer system. As the sole contract revenue bond participant, the rating on the IPL project bonds reflects the rating on the city. Our long-term rating reflects our opinion of the general creditworthiness of DWU, and includes the system's extremely strong enterprise and financial risk profiles.

As of July 1, 2018, DWU had approximately \$2.1 billion in long-term debt outstanding, excluding the IPL debt. The series 2018C bond proceeds will be used to retire existing CP notes. A debt service reserve, in the amount of average annual debt service to be funded over 60 months, provides additional liquidity. A first-lien pledge on the net revenues of the city's waterworks and sanitary sewer system secures the bonds.

Outlook

The stable outlook reflects our expectation that the system's financial profile will remain commensurate with the ratings over our two-year horizon. We believe the strong management, including long-term planning and transparency regarding future rate adjustments, will continue to allow the city to fund identified needs even with the expectation of some additional debt over time.

While unlikely in the near term, we could lower the rating if the city's financial risk profile deteriorates, possibly due to a drain of cash by the general fund, increasing financial commitments related to rising pension-related costs, the aggressive use of riskier debt instruments, or new unfunded mandates from environmental regulators that could cause a spike in debt, and a sustained period of weaker financial performance.

Enterprise Risk Profile

Factors supporting the enterprise risk profile, in our opinion, include the system's:

- Continued strong management, which has ensured a 25-year water supply and is planning for a 50-year supply, insulating it from near-term drought-related stresses that plague the state from time to time;
- Deep and diverse service area economy that serves not only the city, but much of Dallas County as well; and
- Affordable rates, with a willingness to proactively and regularly adjust them.

The DWU system supplies retail water and wastewater service to Dallas, which has a population of about 1.3 million, as well as treated and raw water services to nearly all the cities in Dallas County on a wholesale basis, and to the Dallas-Fort Worth International Airport. Because the customer base is sufficiently large and diverse, in our view, DWU has no dependence on any of its principal retail customers for its operating revenues. Although we rate DWU's debt above that of the U.S., DWU has a predominantly locally derived revenue base. Local service charges, derived through an autonomous rate-setting process, represent virtually all of the entity's revenues. This, coupled with operating expense flexibility, precludes exposure to federal revenues.

The city is the economic engine in its namesake Dallas-Fort-Worth-Arlington metropolitan statistical area (MSA), with business and professional services, health care, and finance among a deep employment base that remains one of the most vibrant in the state. Dallas' exposure to the cyclicality of the commodity and energy sector is limited, although the city and the MSA are home to the corporate headquarters of some the largest firms in the industry, including AT&T Inc., ExxonMobil, and Southwest Airlines. Through June 2018, the county's unemployment rate was steady at 4.0%, in line with both that of the state and the nation. Because the city's ultimate service area includes most of Dallas County, we are also incorporating into our analysis the county's median household effective buying income, which is at 92% of the U.S. average. Given the sheer size of the customer base, the city is not dependent on any of its retail customers for operating revenues. In a typical fiscal year, wholesale sales for water and wastewater services account for about 20% total operating revenues.

DWU's raw water sources are largely intact, despite much of north Texas currently in moderate to severe drought conditions. In fact, the entire reservoir system remains in aggregate about 92% full as of August 2018. In 2012, city leaders implemented permanent, year-round mandatory maximum twice-weekly outdoor water conservation measures beyond the outdoor watering time-of-day measures that have been in place for years. City management also frequently updates its drought-management plan, along with its long-range water supply plan, as part of the regularly revised regional water supply planning process in which it participates. In addition to the joint venture with TRWD, the city also has other regional partnerships for conservation, supply, and environmental stewardship.

Management reviews utility rates annually, both for retail and wholesale customers. The most recent retail rate increase went into effect on Oct. 1, 2017. This 1.6% increase brought the average utility bill to about \$67. In our opinion, when considering service area income and poverty rate levels, utility rates remain affordable and provide for additional rate-raising flexibility. The recommendations from and implementation of a 2018 rate study were largely revenue neutral, save mainly of the creation of an additional tier for very high-use residential customers. Rates will be further stabilized after a recent legal settlement; Dallas challenged a 2015 rate increase in purchased raw water from Sabine River Authority's (SRA) Lake Fork reservoir in east Texas. While the dispute was ongoing, Dallas still made the full payment, but the portion reflecting the rate increase was put in escrow until the dispute was resolved. Early in fiscal 2018 when the dispute was finally resolved, the escrow had a balance of about \$68.7 million, which will now act as a rate-stabilization fund, smoothing the effect of SRA's rate increase until is the city extinguishes the balance sometime in the next five years. Management projects the net effect thereafter to increase operating expenses by approximately \$8 million per year.

Reflecting our operational management assessment (OMA), we view DWU to be a '2' on a scale of 1 to 6, with '1' being the strongest. This indicates, in our view, that operational and organizational goals are generally well aligned, even if some challenges exist. The primary challenge will be continuing the focus on renewal and replacements of aging underground infrastructure, as well as constructing the new assets necessary for the city to begin receiving water from the IPL project. The OMA of good also includes the city's efforts towards maintaining its distribution and collection systems; ongoing meter replacements have helped to keep nonrevenue water low, and in 2017 the city successful completed a sanitary sewer overflow initiative with the state environmental body. Both wastewater treatment plants have recently renewed their respective discharge permits, and the city is fully compliant with all prevailing environmental requirements. The current governance and management structure has also allowed critical decision making to be done with an eye toward financial integrity and maintaining operations at a high level.

Financial Risk Profile

Factors that support the financial risk profile, in our opinion, include the system's:

- Strong all-in coverage, boosted by substantial wholesale sales that provide cash flow certainty to overall operating revenues even if weather patterns affect retail sales;
- · Extremely strong liquidity; and
- Financial management practices that we consider strong, which indicate best practices across the utility and the city are well embedded and financial and operational goals are well aligned.

Fiscal 2017 all-in debt service coverage (DSC, S&P Global Ratings-calculated) was a strong 1.6x. Total DSC is consistently above management policy's set rates to achieve budgeted revenue bond DSC of at least 1.5x maximum annual debt service (MADS), which is well above the 1.25x average annual debt service rate covenant. We have reviewed the management team's financial forecast and view it as attainable. Even when excluding the planned use of the SRA-related escrow reserves, recurring revenues should generate extremely strong all-in DSC of generally 1.6x to 1.7x at least through 2020; actual annual DSC is projected to be closer to 1.8x. The wholesale water purchase

contracts–generally in place through the 2030s or longer--contain take-or-pay minimum amounts, paid monthly as an operating expense by each respective city, which lends further consistency to cash flow. Overall, city management has well-delineated financial management performance criteria for all its major operating funds, in our view, including for DWU, to which it holds itself strictly accountable and ensures overall financial integrity.

Despite the challenges facing the city's general fund budget, including the pension fund for the city's police and fire employees, city leaders remain committed to the utility's financial independence, and have not turned to DWU's surplus net revenues to plug any budget gap. Dallas provides pension benefits to its employees via three separate retirement plans: the Employees Retirement System, the Dallas Police and Fire Pension System (DPFP), and the Supplemental Police and Fire Pension Plan of the City of Dallas. The ERF is for all eligible employees, excluding firefighters and police officers. For fiscal 2017, the ERF was 78% funded, with DWU representing about 20% of the allocable total net pension liability. DWU has no direct exposure to the police and fire pension fund (DPFP), although between special state legislation in 2017 and a variety of local cost containment measures, DPFP appears to be back on a path towards long-term solvency. Lastly, aside from its pension benefits, Dallas provides certain other postemployment benefits (OPEB) for retired employees. As of Sept. 30, 2017, the plan was unfunded. The city contributed 56% of the annual OPEB cost, which amounted to \$15.4 million. It discontinued offering subsidized retiree health care for employees hired after Jan. 1, 2010.

Despite a \$3.43 billion, 10-year capital improvement program (CIP) through fiscal 2027, it's our view that financial performance can remain in line with historical robust levels. None of the identified capital commitments are associated with an unfunded regulatory mandate such as the federal Clean Water Act violations. The city has, in fact, an extraordinarily low ratio of both overflows and line breaks per mile, indicating in our view a strong level of discretionary maintenance.

DWU also maintains two series of CP notes, consisting of two separate liquidity agreements with three banks. Combined, the series D, which consists of the D-1 and D-2 subseries, and the series E, provide DWU access to \$600 million for capital improvements. Revolving credit agreements with State Street Bank and Bank of America support the series D program, while a liquidity agreement with JPMorgan Chase Bank supports the series E program.

Reflecting our financial management assessment (FMA), we view the city to be a '1' on a scale of 1 to 6, with '1' being the strongest. An FMA of strong, meaning policies are embedded and likely sustainable. Management produces and shares Interim financial results throughout the year and updates its multiyear financial projections and CIP throughout the fiscal year. There are formal policies regarding liquidity and investments, and the city produces independently audited financial statements annually. The city has no direct purchase debt or other less traditional financing obligations. We also view as supportive of consistent operational and financial performance management's long history of maintaining about a 50-50 debt-to-equity ratio and continued use of regular rate adjustments. Officials review rates annually and adjust them as necessary--including every year since 2004--a trend we anticipate will continue.

Ratings Detail (As Of August 8, 2018)				
Dallas WS				
Long Term Rating	AAA/Stable	Affirmed		

Ratings Detail (As Of August 8, 2018) (cont.)		
Dallas WS (AGM)		
Unenhanced Rating	AAA(SPUR)/Stable	Affirmed
Many issues are enhanced by bond insurance.		

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