

RatingsDirect®

Summary:

Philadelphia; Joint Criteria; Water/Sewer

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Credit Profile		
US\$293.295 mil wtr and wastewtr rev bnds ser 2017 due 10/01/2052		
Long Term Rating	A+/Stable	New
Philadelphia wtr & swr		
Long Term Rating	A+/Stable	Affirmed

Rationale

S&P Global Ratings assigned its 'A+' long-term rating to Philadelphia's series 2017 water and wastewater revenue bonds, affirmed its 'A+' long-term ratings and underlying ratings (SPURs) on the city's existing water and wastewater revenue, and also affirmed its 'AA+/A-1+' rating on Philadelphia's series 1997B bonds, which are jointly secured by the city and the letter of credit (LOC) provider TD Bank N.A. Except for when applying joint criteria, in which case the outlook is not meaningful, the outlook on the bonds is stable.

The city will use the series 2017 bond proceeds to finance capital improvements to its water and wastewater system.

The 'A+' rating is based on the following characteristics:

- A very strong enterprise risk profile generally reflecting a broad and diverse service base and rates we view as affordable,
- A very strong financial risk profile primarily supported by a large available rate stabilization fund and debt service coverage (DSC) that exceeds covenanted minimum levels, and
- "Strong" operational and financial management assessments (OMA, FMA), reflecting robust policies and procedures that are well-embedded.

We view as credit weaknesses the following:

- Income levels for Philadelphia city and county that are measurably weaker than surrounding areas, and
- A sizable capital improvement plan (CIP) combined with an already high debt-to-capitalization ratio.

Securing debt service are net revenues of the water and sewer fund, which includes (net of operating expenses) rates and charges of the system, transfers from the rate stabilization fund, and interest earnings. Rates must be set to generate revenues and charges plus transfers from the rate stabilization fund that represent at least 1.2x annual debt service on senior revenue bonds and 1.0x coverage when including all subordinate debt (if outstanding, which currently they are not) and certain other transfers. The city can issue additional debt as long as it is complying with the rate covenant at the time of issuance and net revenue projections are sufficient to provide for rate covenant compliance for the two fiscal years following the debt issuance. As long as Assured Guaranty Municipal Corp. (AGM; formerly FSA) insures any of the city's 2005A, 2005B, and a portion of the 2010A bonds, it requires that the city maintain net system revenues (excluding transfers from the rate stabilization fund) totaling at least 90% of operating

requirements (90% test). This provides additional bondholder protection, in our view, since this effectively limits how much the system can rely on draws from the rate stabilization fund. This provision also applies to the additional bonds test.

Philadelphia's combined water and sewer system is highly leveraged and the \$2.2 billion 2018-2023 CIP is likely to require significant additional debt funding. However, since the city entered into a 25-year consent order and agreement with the Pennsylvania Department of Environmental Protection in 2011, a good portion of the CIP projects are now definable. As debt is layered in, we would expect that annual debt service costs would also steadily increase as additional debt is issued. We expect that management will continue to raise rates, as it has in the past, to fund these additional costs, as well as cash-funded capital costs and general operating expenses. Total debt has consistently represented no less than about two-thirds of capitalization, which we consider high. Given the large CIP, we do not expect this to change materially over time.

Only about 4% of the city's water and sewer revenue debt outstanding at the end of the 2016 fiscal year is variable rate, and just 3% remains unhedged after taking into account a floating-to-fixed interest rate swap related to the city's 2005B bonds (notional amount of \$18.2 million); these bonds have been purchased by Bank of America pursuant to a variable-rate securities agreement that expires at bond maturity in 2018 and payable at 68.5% of LIBOR. The swap counterparty is Citigroup Inc. Under the swap, the city receives the 2005B bond rate or 68.5% of LIBOR and pays a fixed rate of 4.53%. The additional termination event for the counterparty and city are the same: if the ratings fall below 'A-'. As long as AGM insures the city's swap payments, no termination event based on the city's water and wastewater rating can occur as long as we rate AGM at least 'A'. Counterparty risk is somewhat elevated since we rate Citigroup 'A-/Negative'. The city, however, maintains the option of terminating the swap if Citigroup's ratings fall below the rating trigger; according to management, there are no current plans to change counterparties or terminate the swap.

Enterprise and financial risk profiles

Philadelphia's water and wastewater systems provide service to roughly 1.6 million people in the city with wholesale service providing services to additional residents outside city boundaries. The systems predominantly serve retail residential customers in the city, but also serve 12 surrounding townships and utility authorities on a wholesale basis. The number of retail accounts has remained relatively stable since 2001 and currently totals about 480,000 for the water system and 545,000 for the wastewater system, which includes about 50,000 stormwater-only accounts. The water department customer base, in which the city is the leading user, remains stable and diverse: The 10 leading retail customers accounted for about 10% of total revenue in fiscal 2016. Water withdrawal and wastewater treatment capacities are 680 million gallons per day (mgd) and 522 mgd, respectively. We consider water capacity adequate, given average use of less than half that; sewer average use is about 90% of capacity, but the city is actively working on enhancing treatment capacity.

Because the service base spans both Philadelphia and suburban areas, the demographic profile takes into account a wide range of socioeconomic scales. The city's unemployment rate has historically been above the national average, and was 5.9% for December 2016, as reported by the U.S. Bureau of Labor Statistics. In our opinion, income indicators for both the city and county are just adequate, with median household effective buying income (MHHEBI) at 72% of national levels; meanwhile, we consider combined metropolitan area median household incomes good at 114% of the

national average. Portions of Bucks, Delaware, and Montgomery counties are part of the service base, which all have stronger median household income levels.

We view rates as affordable despite county poverty rates and city income levels that do not compare well with national averages. As part of our criteria application, we benchmark rate affordability against Philadelphia County's income levels and its poverty rates, which was last reported at about 26% by the U.S. Department of Agriculture. But rate increases have generally been regular and consistent. Since 2006, management has generally been raising rates by about 4%-7%, including the last 4.5% increase effective July 1, 2017. Management estimates that the average monthly combined bill currently totals \$74.06 for 600 cubic feet of use.

Despite generally stable financial performance, the city does rely on periodic draws on its rate stabilization fund (RSF) to support operations. During the prior three fiscal years, it drew \$1.6 million from its RSF in 2016, but deposited an aggregate of \$44.4 million during fiscal years 2014 and 2015. Management's latest available financial projections show the water department continuing to rely periodically on RSF draws to meet its minimum coverage requirements, but the projections do not indicate the balance dropping below \$174 million.

As reported on an unaudited basis, the system has been able to meet its targeted coverage of debt service by 1.2x. Management can reach this target by making a transfer into or out of its RSF, but the city also remains in compliance with the 90% test, as indicated above. On an audited basis, DSC has also generally remained at or above this 1.2x figure, and we calculate DSC for the fiscal year ended June 30, 2016 at 1.2x. We base our calculation on net audited operating revenues backing out depreciation and including miscellaneous non-operating revenues and expenses, and debt service on all revenue bonds and Pennvest loans. While operating transfers out for cost reimbursement to other departments is subtracted from net available for debt service, we do not count rate stabilization transfers in either revenues available or an operating expense.

Unrestricted cash levels, including the RSF balance, at the end of each fiscal year also demonstrate stable financial performance, in our view. The combined unrestricted and RSF balances have typically represented 225-275 days' operations (between about \$225 million to \$290 million). The bond ordinance also stipulates that amounts on deposit in the water department's RSF, capital fund, and residual fund (totaling \$551 million at 2016 fiscal year-end) can all be loaned to the revenue fund to pay operating expenses or even debt service because the revenue fund is included as pledged security for the revenue bonds.

We view both the operational and financial management policies for the water department as strong and well-embedded. The city has a full asset management program that helps inform its CIP project prioritization, good communication to ratepayers, related especially to implementation of its long-term control plan, green infrastructure projects, and rate plans; consistent rate adjustments through an independent rate board; and generally overall strong financial management practices applied to all its financial operations.

Outlook

The stable outlook reflects our opinion that the water department should be able to continue meeting or exceeding its financial projections as long as it keeps making consistent rate adjustments and controlling its overall costs in a fashion

consistent with or better than what the projections indicate. The outlook is also supported by the large service base, which adds both geographic and socio-economic diversity to the department's rate base.

Upside scenario

If the city's actual financial performance significantly exceeds current projections, we could raise the rating. However, we view this scenario as fairly remote, at least within the two-year outlook horizon, given the city's large amount of capital and debt needs that we believe will support future financial performance more likely to be in line with what the current projections show, which is generally steady improvement in financial metrics as opposed to significant changes compared to historical trends.

Downside scenario

If financial metrics deteriorate, or a significant amount of additional capital spending is added to the city's CIP, we could lower the rating or revise the outlook to negative.

Ratings Detail (As Of March 22, 2017)		
Philadelphia wtr & wastewtr (BAM)		
<i>Unenhanced Rating</i>	A+(SPUR)/Stable	Affirmed
Philadelphia wtr & swr		
<i>Unenhanced Rating</i>	A+(SPUR)/Stable	Affirmed
Philadelphia wtr & wastewtr		
<i>Unenhanced Rating</i>	A+(SPUR)/Stable	Affirmed
Philadelphia wtr & wastewtr VRDB - 1997B		
<i>Unenhanced Rating</i>	A+(SPUR)/Stable	Affirmed
<i>Long Term Rating</i>	AA+/A-1+	Affirmed

Many issues are enhanced by bond insurance.

Certain terms used in this report, particularly certain adjectives used to express our view on rating relevant factors, have specific meanings ascribed to them in our criteria, and should therefore be read in conjunction with such criteria. Please see Ratings Criteria at www.standardandpoors.com for further information. Complete ratings information is available to subscribers of RatingsDirect at www.globalcreditportal.com. All ratings affected by this rating action can be found on the S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column.

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