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Contacts

Nicole Serrano 212-553-4143
VP-Senior Analyst
nicole.serrano@moodys.com

Christopher Coviello 212-553-0575
VP-Senior Analyst
christopher.coviello@moodys.com

Philadelphia Water & Sewer Enterprise

New Issue - Moody's Assigns A1 to Philadelphia Water & Sewer Enterprise, PA's $285M Series 2017; Outlook Stable

Summary Rating Rationale

Moody's Investors Service has assigned an A1 rating to Philadelphia Water & Sewer Enterprise, PA's $285 million Water and Wastewater Revenue Bonds, Series 2017. Concurrently, Moody's has affirmed the A1 rating on $1.97 billion of outstanding parity debt. The outlook remains stable.

The A1 rating reflects the system's healthy cash position and consistent debt service coverage, as well as its large and diverse service area. These positive characteristics are moderated by a sizeable consent order and the system's aging infrastructure, both of which will require significant capital investment going forward.

Credit Strengths

» Willingness to implement required annual rate increases

» Proposed debt increases financially offset by debt service cliff in 2018

» Healthy cash reserves and newly formalized reserve policy

» Closed-loop legal framework

Credit Challenges

» Consent Order & Agreement and aging infrastructure necessitate hefty CIP and related debt issuance

» Relatively untested rate board; continued rate increases are required to support debt and capital plan

Rating Outlook

The outlook is stable given consistent historical results, and the expectation of a continued positive trend. Rates are approved in concert with increases to debt service, which should keep annual debt costs manageable. Engineer and financial consultant reports are required for each bond issuance, also adding to operational stability and comprehensive debt planning.

Factors that Could Lead to an Upgrade

» Considerable improvement in debt service coverage

» Service area expansion / revenue growth beyond rate increases

Factors that Could Lead to a Downgrade

» Failure to increase rates commensurate with coverage requirements

» Material reductions in debt service coverage levels

» Notable deterioration in cash and liquidity

Key Indicators

Exhibit 1

Philadelphia Water and Sewer Enterprise, PA					
System Characteristics					
Asset Condition (Net Fixed Assets / Annual Depreciation)	22 years				
System Size - O&M (in $000s)	364,197				
Service Area Wealth: MFI % of US median	71.%				
Legal Provisions					
Rate Covenant (x)	1.20				
Debt Service Reserve Requirement	DSRF funded at MADS				
Financial Strength					
	2012	2013	2014	2015	2016
Operating Revenue ($000)	601,801	610,988	639,974	676,867	670,820
O&M ($000)	300,829	345,409	354,686	376,528	364,197
Net Funded Debt ($000)	1,667,321	1,619,397	1,716,239	1,889,599	1,746,224
Annual Debt Service Coverage (x)	1.58	1.40	1.42	1.48	1.42
Cash on Hand	371 days	260 days	289 days	292 days	300 days
Debt to Operating Revenues (x)	2.8x	2.7x	2.7x	2.8x	2.6x

Source: Moody's Investors Service

Recent Developments: Significant, Proactive Capital Improvement Plan

The Series 2017 bonds are being issued as part of a six-year Capital Improvement Plan. As of January 2017, the full cost of the program is expected to be $2.2 billion, with new bond issuance through 2022 to contribute $1.72 billion, or roughly 78%. The rest of the plan will be funded through capital reserves and pay-go spending.

About 23% of planned capital expenditures are related to the system's 2011 Consent Order & Agreement with the Pennsylvania Department of Environmental Protection (PaDEP) and the US Environmental Protection Agency (EPA). This consent order addresses the system's combined sewer overflow discharge to the Delaware and Schuylkill rivers.

To address the consent order, management has outlined a twenty-five year “Green Waters, Clean City” initiative, which utilizes green as well as traditional infrastructure expenditures to address stormwater management needs. The Department has partnered with other city departments in Philadelphia and also private business owners as part of this effort. As of fiscal 2016, the Department has met all of its initial five-year milestones.

Detailed Rating Considerations

Service Area and System Characteristic: Large and Diverse Service Area

The Philadelphia Water and Sewer Enterprise ("the system", or "the Department") serves a large and diverse urban and suburban base, consisting primarily of the City of Philadelphia (A2 negative). The water system serves more than 1.5 million individuals through 480,000 active customer accounts and one wholesale account with Aqua Penn.

The system maintains three treatment plants, which pull water from the Delaware (59% of water) and Schuykill (41% of water) rivers. These plants together have a rated treatment capacity of 546 MGD and a combined maximum source water withdrawal capacity of 680 MGD, well above the system's average and maximum daily water production of 238 MGD and 258 MGD, respectively, for 2016. The system's water meets all standards set by the DEP and EPA.

The wastewater system serves a moderately larger area with 545,000 retail accounts (including 50,000 storm water only accounts) and 10 wholesale accounts with neighboring communities and authorities. These wholesale accounts contributed about 5% of overall revenues for fiscal 2016. The wastewater system infrastructure includes three treatment plants. These plants provide a combined average treatment capacity of 522 MGD and peak capacity of 1,059 MGD, again well above the average flow of 379 MGD in 2016. The system maintains a long-term contract and lease with Philadelphia Municipal Authority to operate its Biosolids Recycling Center through fiscal 2028, and has realized approximately $10 million in annual savings since initiating the contract.

With a population of more than 1.5 million, Philadelphia is the fifth-largest city in the US. The population is growing, albeit slowly. The growth is primarily attributable to national demographic trends favoring urban areas, as well as the appeal of the city's substantial mix of universities, hospitals, and other employers.

Among the system's 10 largest customers - aside from the city itself, its school district, and its public housing authority - are the University of Pennsylvania (Aa1 stable), Honeywell Resin & Chemicals, Temple University (Aa3 stable), and the federal government, all of which provide stability and a healthy diversity to the local economy.

Philadelphia's demographic profile remains below average, with median family income estimated at 69% of the Commonwealth and 71% of the US medians. Poverty has been flat at 25% – 26% since 2010. Unemployment spiked to 10% in 2009, and while that number has certainly improved, it remains above the state and national rates. As of December 2016, unemployment is 5.9% for the city, versus 4.9% for the Commonwealth as a whole and 4.5% for the US.

We utilize Philadelphia's demographic statistics as a proxy for the system's socioeconomic profile, however, the overall profile is somewhat stronger than these numbers, as it includes wealthier suburbs in Montgomery (Aa1 stable), Bucks (Aaa stable), and Delaware (Aa1) counties.

Debt Service Coverage and Liquidity: Healthy Liquidity and Consistent Debt Service Coverage

The Department's commitment over the past decade to consistently increasing rates has led to stable debt service coverage, though coverage is moderately more narrow than peers. In 2016, Moody's adjusted net revenues covered debt service by approximately 1.42 times, and has been relatively stable in the 1.4 times range over the last five years.

Moody's evaluates coverage based on Generally Accepted Accounting Principles with a few adjustments, while the Department reports figures on a "legally enacted" basis that is more cash-focused. These two bases often differ from year-to-year. According to the system's calculation, senior-lien coverage, on a legally enacted basis, was 1.24 times for fiscal 2016. Though somewhat slim versus peers, coverage is consistent even on this basis, averaging 1.23 times for the last three fiscal years.

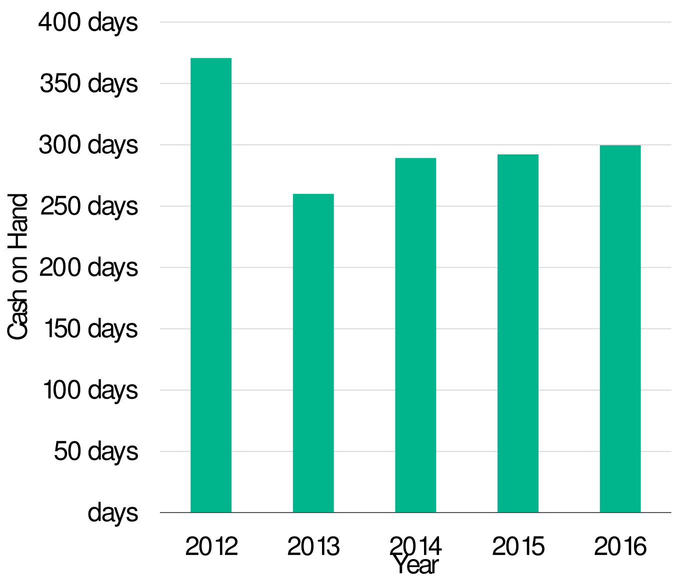
As noted, the Department's long term capital plans include significant additional debt. Based on management's five-year projections, which include a level customer base, additional annual rate increases, and modest revenue (4% average annual increase) and expenditure (3.5% average annual increase) growth, senior lien debt service coverage is expected to increase slightly from 1.25 times (fiscal 2017) to 1.30 times in fiscal 2019. Favorably, the system has a history of outperforming budgeted figures.

LIQUIDITY

The Department maintains ample liquidity. Favorably, as part of its transition to a rate board, management formalized reserve policies outside the indenture requirements, to ensure that liquidity remains strong. Management has adopted a formal a policy to maintain at least $110 million in its Rate Stabilization Fund and $15 million in its Residual Fund (adjusted for inflation). Additionally, the Department maintains Capital and Construction accounts that will be used to fund pay-go capital improvement.

At year-end 2016, total available operating cash in the Rate Stabilization and Residual funds amounted to $221 million, almost double the minimum requirement, and equating to approximately 217 day's cash on hand. In addition to these funds, the Department maintained $79 million in cash for operations during the same period. When all available cash is considered, unrestricted reserves as a percent of O&M increases to 82%, in line with national peers in the A1 rating category.

Exhibit 2



Source: Moody's Investors Service, Philadelphia Water & Sewer Enterprise CAFR 2012 - 2016

Debt and Legal Covenants

The Department's $1.97 billion of outstanding debt at year-end 2016 is manageable, but projected to grow significantly as part of its capital plan. Current debt is roughly 2.9 times revenues, and net funded debt is a significantly above average 78% of net fixed assets. Favorably, the existing debt structure is front-loaded, resulting in a debt service “cliff” in 2018, as debt service decreases from $206 million (fiscal 2017) to $156 million (fiscal 2019), a reduction of more than 30%. However, this annual savings is expected to be eliminated with the issuance of new debt in 2017 and beyond, resulting instead in relatively level debt service in the coming years.

The Department’s five-year capital improvement plan, which reflects the consent order as well as other capital needs, totals $2.2 billion and is 78% debt-funded. If the capital plan is executed as currently structured, the system’s debt burden will continue to grow.

LEGAL COVENANTS

The legal covenants governing the system’s senior lien bonds are satisfactory. The senior lien rate covenant is 1.2 times and the total debt service covenant is 1.0 times (although the system currently has no subordinate debt). The indenture permits transfers from the rate stabilization fund, meaning the department could use prior-year surpluses to meet its covenant. The additional bonds test is to comply with the rate covenant.

The debt service reserve fund requirement is maximum annual debt service. Additionally, the system, by ordinance, requires that any surety in a debt service reserve fund be rated Aa or higher. A $67 million surety policy with Assured Guaranty Municipal Corp (A2 stable) is not eligible to be included in the reserve requirement. Thus, the department has a debt service reserve fund cash-funded at MADS, plus the surety policy. Effectively, the debt service reserve is currently funded at 1.34 times MADS.

DEBT STRUCTURE

Debt is mostly fixed; there are only two variable rate issuances outstanding, with total principal of $71.4 million (4% of total debt). The 1997B bonds, with principal outstanding of $53.2 million (3% total debt), are unhedged and mature in 2027. The other variable rate series is the 2005B, with current principal outstanding of $18.18 million (1% total debt).

DEBT-RELATED DERIVATIVES

The 2005B series is hedged through a fixed-payor swap with Citigroup Financial Products. As of June 2016, the swap mark-to-market is -$1.5 million. The 2005B bonds and related swap mature in 2018.

PENSIONS AND OPEB

The city of Philadelphia operates one defined-benefit plan: the City of Philadelphia Public Employees Retirement System (not including the pension plan for the Philadelphia Gas Works). It is a mature plan that has roughly 66,000 members, 28,000 active employees and 38,000 retirees. As a result, aggregate contributions into the plan are less than the amount of benefits payable in any given year, resulting in a higher reliance on investment income to make up the difference.

Favorably, the city reduced its assumed rate of return on its pension plan, to 7.75% (2015) from 8.75% (2005), and increased employee contributions under current union contracts. In addition, the city recently negotiated for new DC 33 union employees to enter a stacked hybrid plan. However, the city's rate of return is still above-average when compared to other local governments, and as a result of poor market performance last year, the city revised its fiscal 2017 contribution by an additional $12 million.

The city's minimum municipal obligation (MMO) for the plan was $598.5 million for fiscal 2016, while the city's actual contribution was $660 million, or about 9% above the required amount. Of this amount, $55.1 million (8% of operating expenses) represented the contribution from the water and sewer system. The system's pension contribution has increased by $10.6 million or 28.1% over the last five years. Going forward, the system's contribution is projected to increase by another 33% to $64.3 million (9% of fiscal 2016 expenses) through fiscal 2021.

Management and Governance

The system is one of the city's ten operating departments. Its operations are accounted for in the Water Fund, which is an enterprise of the City. The system is closed-loop with a cap on General Fund transfers to the lesser of (a) net reserve earnings or (b) $4.994 million. The Water Revenue Bureau is responsible for the billing, metering, and collection of revenues for the system. Favorably, the system maintains five-year projections that run through fiscal 2022.

The system's management has consistently increased rates and maintained a healthy amount of operating cash on hand. Until fiscal 2015, the water commissioner had the authority to set rates, and raised rates consistently, averaging around 5% between 2009 and 2015. Rates are now approved by an independent five-member rate board, whose members are appointed by the mayor and confirmed by city council.

While the decision maker for the system's rate increases has changed, much of process remains the same, and includes position briefs, a period of discovery between participants to the proceeding and system management, as well as mandated public hearings. Despite level rates in fiscal 2016, the board adopted a 5.1% and 4.5% increase for fiscal 2017 and 2018, respectively.

Current projections include additional rate increases through fiscal 2021, though these rates have not yet been adopted by the board.

Legal Security

The system's bonds are secured by a senior lien on the net revenues of its water and sewer systems. The bonds are on parity with PennVest state revolving fund loans. The system currently has no subordinate debt.

Use of Proceeds

Proceeds of the Series 2017 bonds will be used to fund various capital projects for the water and wastewater infrastructures of the Philadelphia Water and Sewer Enterprise system.

Obligor Profile

The Philadelphia Water & Sewer Enterprise provides water and sewer treatment service to the City of Philadelphia and some of its surrounding suburbs.

Methodology

The principal methodology used in this rating was US Municipal Utility Revenue Debt published in December 2014. Please see the Rating Methodologies page on www.moodys.com for a copy of this methodology.

Ratings

Exhibit 3

Philadelphia (City of) PA Wtr. & Sew. Ent.

Issue	Rating
Water and Wastewater Revenue Bonds, Series 2017	A1
Rating Type	Underlying LT
Sale Amount	$285,575,000
Expected Sale Date	04/05/2017
Rating Description	Revenue: Government Enterprise

Source: Moody's Investors Service

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