

**CREDIT OPINION**

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

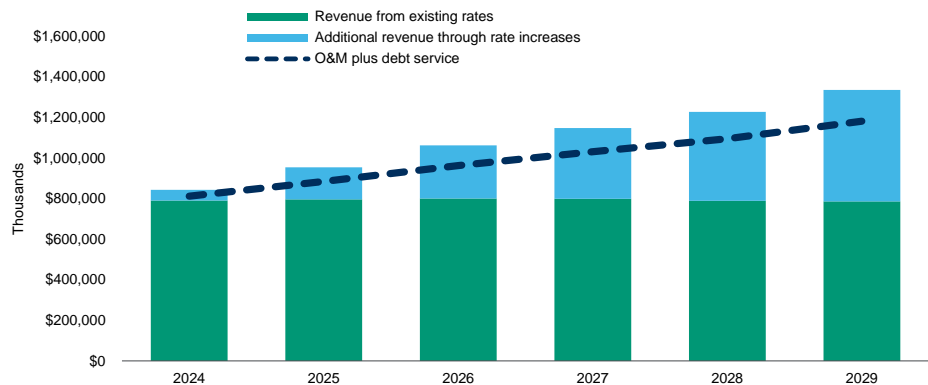
## Update to credit analysis

### Summary

The [Philadelphia Water and Sewer Enterprise](#), PA (Philadelphia Water Department, A1 stable) will maintain adequate debt service coverage (1.75x in 2023) even as its leverage grows to fund a \$4.8 billion capital improvement program. The department plans to issue \$500 million to \$700 million of debt annually, meaning the current debt to revenue of about 3x may grow closer to 4x by 2028. The department's forecasts show aggressive annual increases to accommodate this additional debt, and its ability to secure these rate increases from the Philadelphia Rate Board will be crucial to its credit profile going forward. Finally, the rating incorporates various linkages to the City of Philadelphia (A1 stable). While the department has certain insulations built in, it is still an enterprise fund of the city and is managed by appointees of the city.

Exhibit 1

### Rate increases will be vital to covering rising debt service in future years



Source: Moody's Ratings, Philadelphia Water

On Oct. 10, we assigned an A1 rating to the Philadelphia Water and Sewer Enterprise's proposed \$558.4 million Water and Wastewater Revenue Bonds, Series 2024C, while affirming the A1 ratings on its outstanding debt.

## Credit strengths

- » Large, dynamic service area consisting mostly of the City of Philadelphia
- » Adequate coverage and liquidity
- » Demonstrated willingness to increase user rates

## Credit challenges

- » Substantial capital plan will increase debt burden
- » Aggressive rate increases required to preserve financial position
- » Demographic challenges in parts of city

## Rating outlook

The stable outlook anticipates that the department will continue to aggressively raise user rates in order to accommodate a larger debt burden and preserve its solid financial position.

## Factors that could lead to an upgrade

- » Consistent coverage above 2x (on a Moody's-adjusted basis)
- » Proven ability to address all capital needs while keeping debt at reasonable levels
- » Increase in days cash on hand above 350 days, including rate stabilization fund

## Factors that could lead to a downgrade

- » Coverage below 1.25x (on a Moody's-adjusted basis)
- » Indication that rate board will not approve the rate increases necessary to fund the department's capital plan
- » Debt to revenue exceeding 5x

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the issuer/deal page on <https://ratings.moody's.com> for the most updated credit rating action information and rating history.

## Key indicators

Exhibit 2

### Philadelphia Water and Sewer Enterprise, PA

#### System Characteristics

Asset Condition (Net Fixed Assets / Annual Depreciation)	21 years
System Size - O&M (in \$000s)	\$523,495
Service Area Wealth: MFI % of US median	72.5%

#### Legal Provisions

Rate Covenant (x)	1.20
Debt Service Reserve Requirement	Funded at MADS (Aaa)

#### Management

Rate Management	A
Regulatory Compliance and Capital Planning	A

#### Financial Strength

	2019	2020	2021	2022	2023
Operating Revenue (\$000)	\$746,072	\$733,318	\$718,572	\$766,367	\$817,096
System Size - O&M (\$000)	\$449,522	\$463,501	\$436,489	\$481,777	\$523,495
Net Revenues (\$000)	\$320,604	\$293,534	\$283,178	\$279,167	\$329,102
Net Funded Debt (\$000)	\$1,802,833	\$1,953,971	\$2,073,530	\$2,240,281	\$2,481,969
Annual Debt Service (\$000)	\$177,296	\$192,478	\$158,397	\$182,061	\$187,701
Annual Debt Service Coverage (x)	1.81x	1.53x	1.79x	1.53x	1.75x
Cash on Hand	92 days	104 days	151 days	136 days	133 days
Debt to Operating Revenues (x)	2.4	2.7	2.9	2.9	3.04

Note that operating revenue excludes investment earnings, which are included in our net revenues figure. Also, our operations and maintenance expenditures figure does not correspond to the figure in the city's financial statements because we make an adjustment for noncash pension and OPEB expenses.

Source: Moody's Ratings

## Profile

The Philadelphia Water Department provides drinking water and wastewater treatment to the City of Philadelphia and some surrounding communities, serving a population of approximately 1.6 million.

## Detailed credit considerations

### Service area and system characteristics: Dynamic regional economy with challenging demographics

The Philadelphia Water Department's service area consists of a large and dynamic regional economy with a number of powerful institutional anchors in education, healthcare, financial services, media and other industries.

The 10th-largest rated municipal water or sewer utility by revenue, the department draws drinking water from the Delaware and Schuylkill Rivers, and operates two water treatment and three wastewater treatment plants. Total capacity for both water and wastewater is more than 500 million gallons per day.

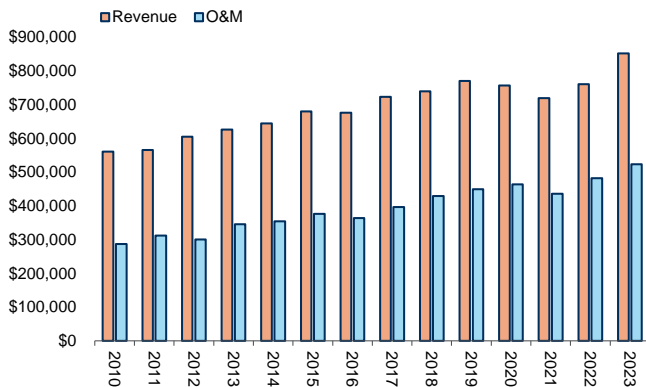
Most of the ways we evaluate socioeconomic strength show Philadelphia as weak. Of the 20 biggest Moody's-rated cities by population, Philadelphia ranks last in median household income, and next-to-last in per capita income. Of the 20 biggest Moody's-rated cities in the US, Philadelphia as of 2022 had the highest rates (meaning the weakest) of poverty, unemployment, and households on public assistance or food stamps.

The dynamic of an employment hub with a significant education and medical presence that also faces a challenging demographic profile will persist for the city indefinitely.

### Financial strength: Solid financial performance with good liquidity; debt to increase

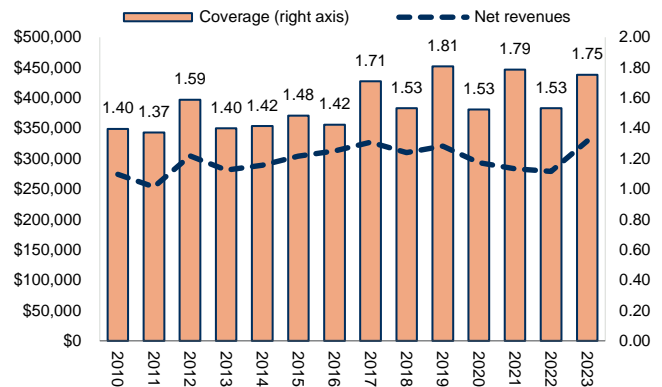
The department's consistently solid financial performance will continue because of the department's commitment to hitting its coverage target while maintaining a decent amount of cash in its rate stabilization fund.

Exhibit 3  
**Department consistently generates good net revenues**  
 \$ in thousands



Source: Moody's Ratings

Exhibit 4  
**With adequate debt service coverage**  
 \$ in thousands



Source: Moody's Ratings

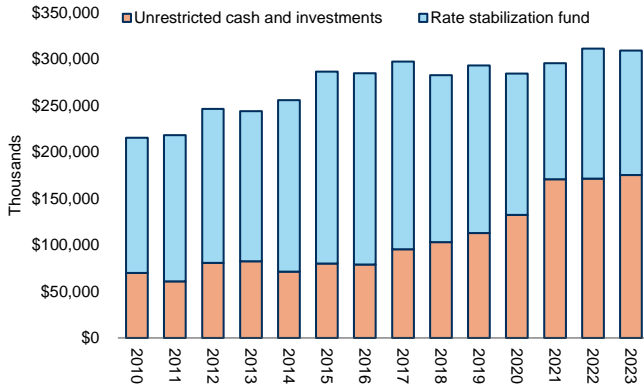
Coverage is likely to remain in this range because the department's rate covenant requires it to generate sufficient net revenue to cover O&M, debt service, and a capital account deposit of at least 1% of net property, plant and equipment. That capital account deposit requirement, which requires at least some surplus funds be generated each year, combined with conservative budgeting will assure coverage of well more than 1x, though coverage is unlikely to rise much above current levels because of the department's rate-setting process (see management below).

**Liquidity**

The Philadelphia Water Department holds good liquidity, although many rated municipal utilities hold significantly more.

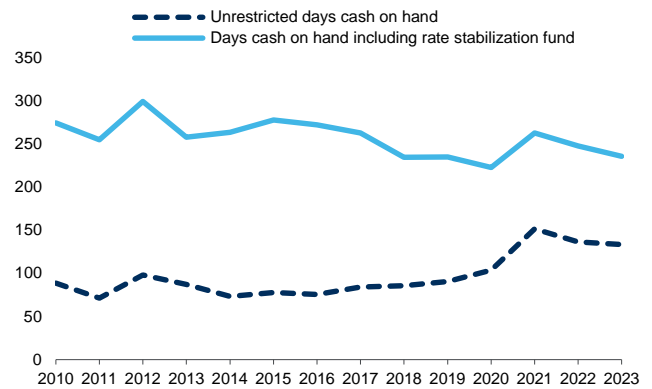
Our official liquidity metric indicates 133 days cash on hand, based on the department's unrestricted cash. This figure does not include the department's rate stabilization fund, which is technically restricted but is available to the department. Including the cash held in the rate stabilization fund, liquidity is a stronger 236 days cash on hand, which is still below the median for highly rated utilities but is adequate for the department's purposes.

Exhibit 5  
**Cash**



Source: Philadelphia Water Department

Exhibit 6  
**Cash on hand**



Source: Moody's Ratings

**Debt**

The department's currently moderate debt of \$3.2 billion is equal to about 3x revenue, which is typical for utilities this size (the median debt to revenues for the 50 biggest water/sewer utilities by O&M is 3x). Because the department plans to issue roughly \$500 million to \$700 million of debt annually to fund its capital program, this debt will increase (annual principal amortization is only about \$100 million).

As a result, debt will roughly double from 2023 levels by 2028, and based on the current forecast will increase to closer to 4x revenue. The department's ability to continue increasing its revenue while carrying a greater debt burden will be crucial to its credit profile going forward.

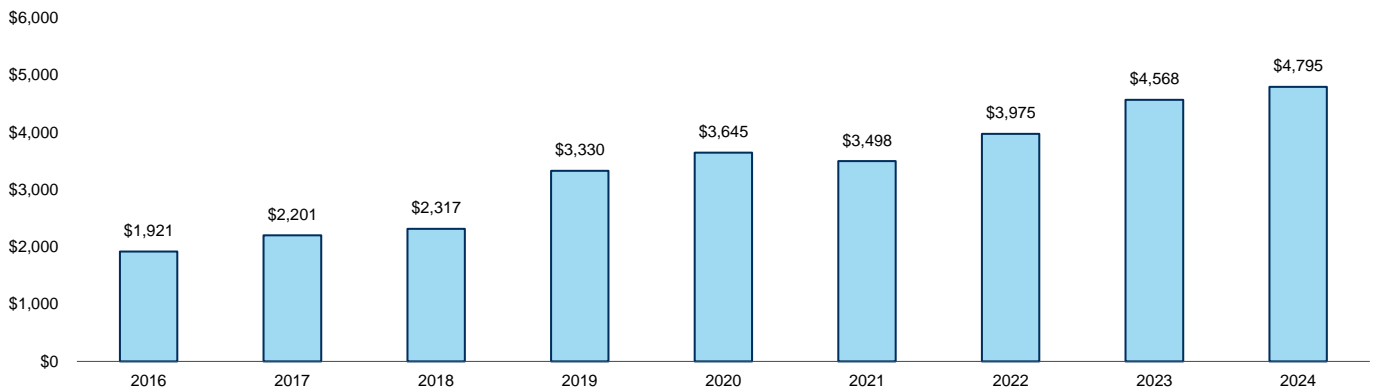
**Management: Department will enact aggressive rate increases to cover substantial capital needs**

Like any municipal utility as old as Philadelphia's, the department faces substantial capital investment requirements for the foreseeable future. These capital needs imply a need for aggressive rate increases each year, without which the department would have difficulty funding its capital plan.

The department's six-year, \$4.8 billion capital improvement program implies nearly \$800 million of capex annually, which would be a significant increase from capex up until recently. A little less than a third of the capital plan stems from a consent order related to sewer overflows, but mostly it's replacing aging infrastructure.

Exhibit 7

**6-year capital plan continues to grow**  
\$ in millions

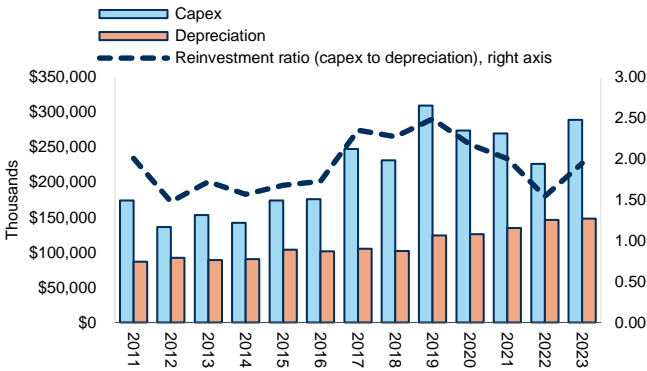


Each year shows the capital budget summary for the six years that follow.  
Source: Philadelphia Water Department

While the traditional ways we use to measure capital adequacy indicate a system with aged infrastructure, this is to be expected for a utility that launched in 1801. Favorably, the department has been investing in its infrastructure, and capital adequacy metrics are stable.

Exhibit 8

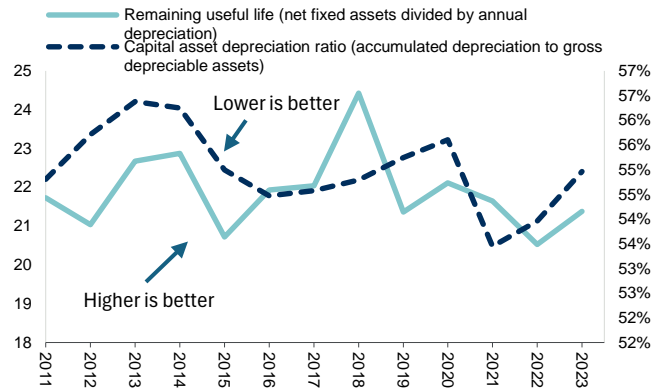
**Capex has exceeded depreciation**



Source: Moody's Ratings

Exhibit 9

**Capital adequacy metrics are stable**



Source: Moody's Ratings

Funding \$800 million of capex annually will require greater revenue, meaning the department will be raising rates considerably each year.

**Philadelphia Rate Board**

The department's rates are set by the Philadelphia Water, Sewer and Storm Water Rate Board, which the city established in 2014. The five-member board is appointed by the mayor and has at times not approved the full rate increase requested by the department. The

board will limit how much surplus the department can accumulate, but pursuant to the rate board ordinance, it must establish rates sufficient for the department to comply with its rate and debt service covenants.

Exhibit 10

**Philadelphia Water will continue to request significant rate increases**

<b>Year</b>	<b>Increase requested</b>	<b>Increase approved</b>
2017	5.42%	4.52%
2018	5.42%	4.52%
2019	1.60%	1.33%
2020	4.50%	1.20%
2021	6.20%	0%
2022	8.61%	1.85%
2023	5.89%	5.37%
2024	11.02%	9.64%
2025	8.77%	8.16%
2026 (forecast)	13.95%	
2027 (forecast)	7.85%	
2028 (forecast)	9.10%	

The forecast rate increase requests starting in 2026 are based on current projections. Note that the department withdrew its rate increase request in 2021; this request was not rejected by the board.

Source: Philadelphia Water Department

**Legal provisions: Rate covenant will assure adequate coverage**

The department has three rate covenants: 1.2x debt service for senior lien debt, 1x all obligations (including the capital transfer described above), and 0.9x debt service excluding transfers from the rate stabilization fund.

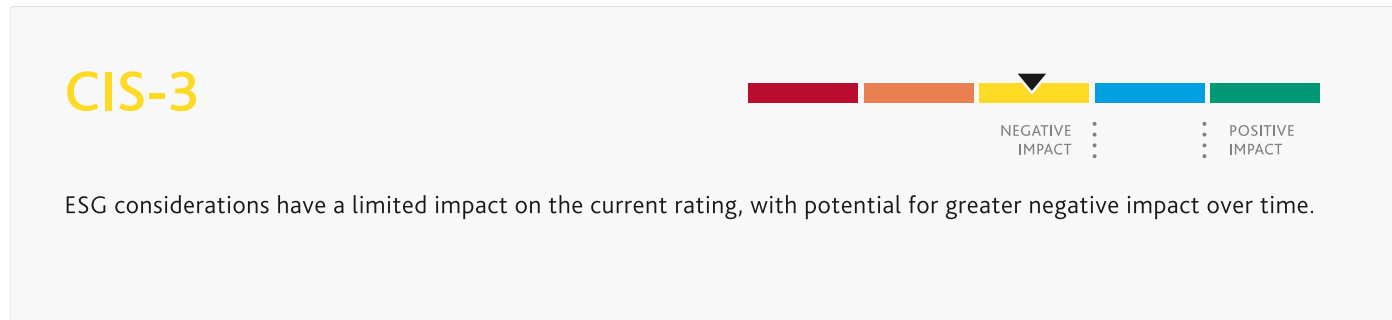
It also has a debt reserve reserve fund sized at maximum annual debt service on its bonds.

## ESG considerations

### Philadelphia (City of) PA Wtr. & Sew. Ent.'s ESG credit impact score is CIS-3

Exhibit 11

#### ESG credit impact score

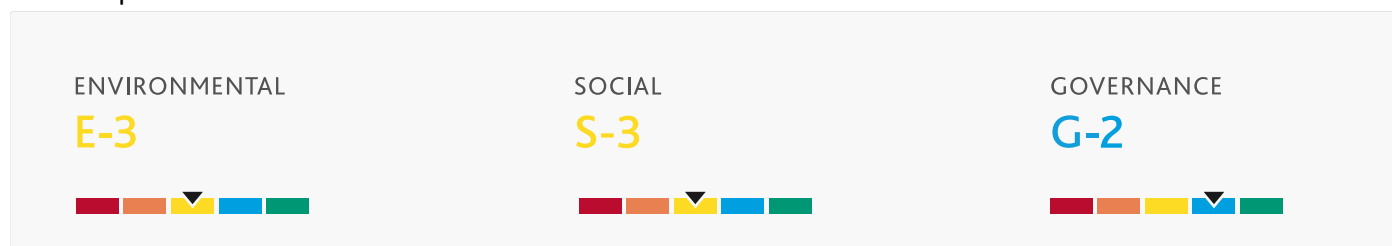


Source: Moody's Ratings

Philadelphia Water Department, PA's ESG credit impact score of **CIS-3** indicates that ESG considerations have a moderately negative impact on the department's credit rating due largely to environmental and social considerations.

Exhibit 12

#### ESG issuer profile scores



Source: Moody's Ratings

### Environmental

The department's credit exposure to environmental risks is slightly negative, primarily given moderately negative exposure to water management risk. Wastewater operations face risks of increased operating costs or capital requirements given a large consent order for combined sewer overflows. While the department is more than halfway through its 20-year plan for consent order remediation, the possibility of further costs as well as the need for material rate increases to complete the plan exist. Favorably, the system has not violated any regulations in recent years. The system has low exposure to physical climate risks, carbon transition, natural capital and waste and pollution considerations.

### Social

The department's credit exposure to social risks is slightly negative, largely reflecting the city's high poverty and elevated income disparity, which has pressured the department's rate raising ability in the past. The system also has exposure to responsible production risk, which we view as moderately negative across the sector. Water utilities are at risk of health violations resulting from catastrophic events, changes in source water quality, failures in treatment or transmission processes or revised regulations. These risks are balanced by relatively low exposure to health and safety, human capital, and customer relations considerations.

### Governance

Philadelphia Water Department has low exposure to governance risk. The system benefits from solid financial strategy and strong risk management considerations, very favorable management credibility and track record considerations. These governance strengths are somewhat offset by slightly negative exposure to board structure. Utilities overseen by a municipal government have moderately



negative exposure to board structure, and the department has seen its requests for rate increases curtailed by a municipal rate board. While the department budget management is strong, board oversight somewhat limits the department's financial flexibility.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click [here](#) to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

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