PHILADELPHIA WATER DEPARTMENT
STATEMENT 2B

BEFORE THE
PHILADELPHIA WATER, SEWER AND STORM WATER RATE BOARD

In the Matter of the Philadelphia Water Department's Proposed Change in Water, Wastewater and Stormwater Rates and Related Charges	Fiscal Years 2026 – 2027

Direct Testimony

of

Peter Nissen and Charles Matthews

on behalf of

The Philadelphia Water Department

Dated: February 2025

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I. INTRODUCTION AND PURPOSE OF TESTIMONY

Q1. PLEASE STATE YOUR NAME AND TITLE.

A1. My name is Peter Nissen. I am a Managing Director of Acacia Financial Group, Inc. ("Acacia").

Testifying with me is Charles Matthews, a Managing Director of Public Financial Management ("PFM").

Q2. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS PROCEEDING?

A2. Together, we are financial advisors for the Philadelphia Water Department ("PWD" or the "Department"). We are submitting this testimony on behalf of the Department.

Q3. WOULD EACH OF YOU PLEASE DESCRIBE YOUR RESPECTIVE EDUCATIONAL BACKGROUNDS AND RELEVANT WORK EXPERIENCE.

A3. Our respective backgrounds and experience are summarized below:

<u>Mr. Nissen</u>

I am a 30-year veteran of the public finance industry, having worked with other financial advisory firms before founding Acacia in 2006. Prior to founding Acacia, I worked for four years as an engineer with an international engineering corporation. I serve as day-to-day advisor to many of Acacia's clients.

For Acacia, I represent multiple revenue secured issuers including water/wastewater (including PWD), toll roads, airports, and parking facilities. I oversee the firm's quantitative services including the evaluation of derivative products. I have extensive experience in the preparation and review of financing documentation and in the marketing and pricing negotiation of both taxable and tax-exempt debt on both a competitive and negotiated basis.

My resume is attached to our Memorandum (Schedule FA-1).

Mr. Matthews

I am a Managing Director in PFM's financial advisory practice. I am based in PFM's Philadelphia office. I rejoined PFM in March 2021 after spending the last decade as an investment banker with RBC Capital Markets and most recently Janney Montgomery Scott. I began my public finance career at PFM in 1996 and prior to that in municipal bond sales, trading and underwriting with First Albany Corporation.

My resume is attached to our Memorandum (Schedule FA-1).

Q4. PLEASE DESCRIBE THE PURPOSE OF THIS DIRECT TESTIMONY.

A4. The purpose of our testimony is to highlight our findings and recommendations set forth in the attached Financial Memorandum (Schedule FA-1) as additional support for the Department's Financial Plan, related policies and financial metrics in the context of the instant rate proceeding.

II. DISCUSSION OF THE DEPARTMENT'S FINANCIAL POLICIES AND METRICS

Q5. PLEASE SUMMARIZE THE FINDINGS AND RECOMMENDATIONS OF YOUR MEMORANDUM.

A5. As described more fully in our Memorandum (Schedule FA-1), we advance the following findings and recommendations:

- The Department's current credit ratings are by Moody's Investor's Service, Inc. ("Moody's"), A1, "stable outlook;" S&P Global Ratings ("S&P") A+, "stable outlook;" and Fitch Ratings, Inc. ("Fitch"), A+, "stable outlook."
- These favorable credit ratings allow PWD to access the bond markets on reasonable terms to support its sizable capital program.
- The current credit ratings are tied to PWD either achieving or making incremental progress toward achieving reasonable financial goals or targets (financial metrics) as set forth in the Department's Financial Plan, Schedule FP-1.
- PWD's current financial metrics (cash reserves, debt service coverage, pay-go financing), as incorporated in its Financial Plan and acknowledged in the 2018 Rate Determination, are reasonable targets.[1]
- A key financial metric to maintain is the $135 million balance for the Rate Stabilization Fund ("RSF") which is an appropriate balance for financial planning.
- PWD's financial metrics are, in general, significantly below peer median metrics for water/sewer utilities in similar rating categories and size.

[1] Please note that financial metrics should not be static. In a future proceeding, the Department should consider if the metrics first acknowledged in the 2018 Rate Determination should be changed to stay in alignment with the expectations of the rating agencies, industry norms, best practices, and market conditions.

- The statements of the rating agencies in October 2024, regarding, among other things, future rate increases, clearly indicate their concern that future rates must be sufficient to sustain debt service coverages and maintain financial reserves.

Q6. YOU MENTIONED VARIOUS RATING AGENCY STATEMENTS AND CONCERNS. PLEASE PROVIDE A SUMMARY OF RATING AGENCY REPORTS RELATED TO PWD RECENT BOND ISSUES.

A6. The most recent (October 2024) rating agency reports can be found at Schedule FP-3. Those reports (quoted below) articulated the following rating concerns:

- "If rate increases are insufficient to meet current projections for DSC (debt service coverage), we could lower our rating. We could also do so if there is a willingness to permanently reduce liquidity because of unforeseen capital costs or in lieu of rate increases or if failure to invest in infrastructure results in a rise in asset failure or greater exposure to operating vulnerabilities*." S&P, October 2024*
- "Significant rate increases, approved by an independent rate-setting board, are needed over the forecast period to maintain and improve system assets and comply with a state consent order and agreement (COA). The operating risk profile reflects capital investment needs, expected to remain elevated due to long-term asset rehabilitation and efforts to address combined sewer overflows (CSOs) and master plan execution. Leverage may slightly increase over the next few fiscal years but should still support the 'a' financial profile assessment. However, the rating could come under pressure if recommended rate increases are delayed or capital needs continue to grow." *Fitch, October 2024*.
- "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 capital plan improvement plan implies nearly $800 million of capex annually, which would be a significant increase from capex up until recently. Funding $800 million of capex annually will require greater revenue, meaning the department will be raising rates considerably each year." *Moody's, October 2024*.

We would also direct your attention to the prior September 2023 rating agency reports, which articulated similar rating concerns:

- "While the City's Rate Board has historically supported rate increases to maintain ample capacity for PWD's operations and capital needs, we foresee future challenges that could place downward pressure on PWD's financial position, most notably funding of a large capital improvement program (CIP) while concentrating on rate affordability. Setting rates to the legal minimum leaves very little cushion for future revenue deviations, which could threaten compliance in any given year without additional unplanned use of the RSF." *S&P 2023*
  If PWD's appetite for rate adjustments wanes and current projections for DSC (debt service coverage) and liquidity are not met, then we could lower the rating. We could also do so if there is a willingness to permanently reduce the liquidity because of unforeseen capital costs or in lieu of rate increases." *S&P 2023*
- "Management's plan is sound, but the department's rate board has historically declined to approve rate increases at management's requested levels. We expect that management will adjust its budget accordingly if requested increases are not approved, though this will likely be at the expense of capital investment and/or strengthening reserves" *Moody's 2023*

> "Should future rate increases not be realized, or if reserves are drawn down beyond current expectations, PWD's current credit profile could be pressured."
> *Moody's 2023*

III. CONCLUSION

Q7. PLEASE STATE YOUR KEY RECOMMENDATIONS WITH REGARD TO THE DEPARTMENT'S REQUESTED INCREASE IN RATES.

A7. Our key recommendations are that the Rate Board should (i) be guided by the PWD Financial Plan and policies and financial metrics identified therein; (ii) reaffirm the use of PWD financial metrics as reasonable targets in the current rate case; and (iii) approve the proposed rate relief to ensure that the Department can reach its financial objectives and better serve ratepayers.

As noted in our attached Memorandum (Schedule FA-1):

> Failing to provide rate increases necessary to manage to PWD financial metrics places the Department at risk of higher borrowing costs as a result of credit rating downgrade(s) and departs from financial "best practices" as well as the Rate Board's 2018 Rate Determination (approving PWD metrics).

The effect of a lower than requested rate increase in a particular year necessitates marginally higher rate increases in future years to recover the lost revenue in the first year as well as the lost revenue from the deferred rate increase in each subsequent year.

Consistent with the foregoing, we strongly recommend that the Rate Board adopt the

Department's proposed rate increase in this proceeding. Rates and charges must be set at levels to sufficiently support the financial metrics and policies identified in the Department's Financial Plan and current financial profile.

Q8. DOES THIS CONCLUDE YOUR TESTIMONY?

A8. Yes, it does.

Memorandum

February 14, 2025

TO: City of Philadelphia Water Department
FROM: Charles Matthews, Managing Director, PFM Financial Advisors, LLC
Peter Nissen, Managing Director, Acacia Financial Group, Inc.
RE: Discussion of Water Department Financial Policies and Metrics

Introduction

The purpose of this memorandum ("Memorandum") is to support our expert testimony regarding the importance of financial policies and related metrics utilized in financial planning by the Philadelphia Water Department ("PWD" or "Department"), concluded and adopted as "reasonable targets[1]" by the Philadelphia Water Sewer and Storm Water Rate Board ("Rate Board"). These policies and targeted financial metrics should be strongly considered in the current rate proceeding.

These metrics (including targeted debt service coverage, pay-go financing and Rate Stabilization Fund balances) are, at present and over time, critical to a strong credit profile and to the sustainability of the system by maintaining robust liquidity levels which will provide protection from unforeseen financial events or economic downturns. Consistent use of these targeted metrics in financial planning also allows the Department to maintain favorable credit ratings to efficiently enter the capital (bond) market and achieve a reasonable cost of capital (lower interest rates) that redounds to the benefit of ratepayers. In opining as to these policies, we are relying on PFM's and Acacia's national water and sewer experience[2], credit agencies published metrics and methodology, and industry best practices. In preparing this memorandum, we have also reviewed and examined materials provided by the Department, reports and publications from the rating agencies, and comparative information on peer water and sewer systems.

The projected revenue and revenue requirements presented by the Department's Engineering Rate Consultant, Black & Veatch, assume, among other factors, reasonable rate increases that will allow the PWD to comply with its rate covenants with investors and

[1] See 2018 Rate Determination determining, concluding and adopting targeted financial metrics.
[2] PFM and Acacia are registered municipal advisors with the Municipal Securities Rulemaking Board (MSRB) and the U.S. Securities and Exchange Commission (SEC). Acacia and PFM currently serve as financial advisors to the Water Department. Firm resumes are attached.

to manage to the financial metrics discussed in this Memorandum. These policies were developed to (i) position PWD with adequate minimum debt service coverage and cash reserves; (ii) address capital needs aimed at maintaining assets; and (iii) increase pay-go funding to lower the overall debt burden.

Importance of Financial Metrics

The critical financial metrics discussed in our testimony include debt service coverage, level of system liquidity (measured by days cash on hand), level of pay-go financing of capital (i.e., funding of capital from current revenues) and system leverage, including measuring life of the assets to debt. We will continue to emphasize the importance of these metrics on the Department's financial trends and the resulting impact on its credit profile. These agreed upon metrics are within industry norms and are considered best practices. It is our position that the requested revenue requirements are well within industry standards and that it is critical for PWD to maintain and continue to manage to its targeted financial metrics over a reasonable period, which will be possible with the requested revenue increases.

Public Utilities Versus Private Utilities

Publicly owned utilities have two major sources of funds to address capital needs: (i) revenues and fees generated from rates (pay-go); and (ii) proceeds from debt issuance (bonds or government loan programs). This differs from private (or investor) owned utilities, who can also rely on investor equity to fund projects in exchange for a return on equity.

In each year, the Department incurs both operating and capital expenses to operate, maintain, and improve the Water and Wastewater Systems. PWD, like other utilities, incurs capital costs to (i) make long-term infrastructure improvements (e.g., water main replacements, sewer replacements, pumping stations, water and wastewater plant improvements); (ii) maintain and improve the level of service provided to customers; and (iii) ensure compliance with environmental regulations. As a municipally-owned utility, PWD establishes rates and charges that are designed to generate revenues that exceed operating costs and debt service in order (i) to provide funds for reserves to provide for unforeseen circumstances, if necessary, and (ii) to provide a contribution from rates to capital costs to avoid relying exclusively on debt financing.

The aforesaid revenues above current costs are referred to as “coverage.” For an investor-owned utility, these excess funds are partially paid out as dividends to shareholders. For publicly owned utilities, there are no external dividend payments and the margin above current costs stays within the system for the benefit of ratepayers over time. This common use of coverage with public owned utilities is illustrated by the fact that the median debt service coverage for US publicly owned, combined systems is 2.30 times (2.3x) and the median days cash on hand is 511 days. (Moody's Ratings, Water & Sewer Utilities Sector Profile, October 2024). Please note that PFM and Acacia are not aware of any major water and wastewater systems that rely exclusively on debt as the sole source of funding for its capital improvements over time.

Financial Metrics

PWD key financial policies impact its rate increase requests. Pursuant to the Rate Ordinance, the Rate Board shall "recognize the importance of financial stability to customers and fully consider the Water Department's Financial Stability Plan" (Philadelphia Code 13-101 (4)(b)(i)) in addition to considering "peer utility practices, best management practices and projected impacts on customer rates" (Philadelphia Code 13-101 (4)(b)(ii)).

The Department has developed key financial policies (i.e., financial metrics) as a part of its annual Financial Stability Plan and has incorporated these metrics in the rate increase request. Such metrics include (i) managing to a debt service coverage ("DSC") of 1.3 times (1.3x) over time, (ii) maintaining minimum combined balances in the Rate Stabilization Fund ("RSF") and Residual Fund ("RF") of $150 million and (iii) targeting 20% "pay-go" revenues to support the Department's capital needs. These financial metrics were first articulated in the 2018 Rate Determination. As the system's operational budget grows with the passage of time, these metrics should be revisited in alignment with system size, industry norms, best practices and the expectations of the rating agencies.

While acknowledging that some of these targets were purposely softened for purposes of the 2023 general rate proceeding, it is critical to return to these targets during the Rate Period (by FY 2027) not only for the purposes of adequately funding the capital improvement plan and providing sufficient reserves, but also to avoid possible rating downgrades and the additional cost burdens arising therefrom. In addition, it is imperative to recognize that any diminution of targeted rate increases has a cumulative effect. Not only are the financial metrics affected in the fiscal year that the rate increase is diminished, but the same effect carries forward into subsequent years. That is, even more substantial increases become necessary in subsequent years to recover the lost revenue in the first reduced year as well as all of the following affected years.

Bond Credit Rating Agencies

While Moody's Investors Service, Inc. ("Moody's), S&P and Fitch Ratings, Inc. ("Fitch") analyze credits with slightly different methodologies and criteria, the PWD's respective ratings of A1/A+/A+ (each with a stable outlook) show a consistency of rating views by all three rating agencies. This consistency benefits PWD as investors price to the lowest rating, if there are significant discrepancies. A downgrade by any single rating agency yields a negative financial impact on the Department in connection with future debt offerings.

Since the last rate proceeding, PWD has completed two new money issuances and two refundings representing $1.16 billion in par issued while generating $21.8 million in net present value savings. These bond transactions are favorably impacted by the continued positive credit profile of the Department and its ability to continue to raise rates to support the required debt service needs.

It bears emphasis that the most recent review by each of the rating agencies was not a perfunctory exercise with rating affirmation a foregone conclusion. Each of the rating agencies emphasized the need for significant rate increases to support the capital plan and reserve balances and the importance of these increases in the maintenance of the current ratings.

Below are direct quotations from the rating agency reports issued in connection with the revenue bonds issuance in the Fall of 2024 mentioned earlier addressing debt service coverage, rate stabilization fund balances, Rate Board approval of rate increases, credit challenges and rating downgrade scenarios:

Debt Service Coverage

- *Moody's states:*

"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."

- *S&P states:*

"Rate increases for 2024 and 2025 were 9% and 8%, respectively, which was approximately 90% of the amount requested. This is projected to provide 1.25x coverage (with the use of a small portion of the RSF). The relatively narrow margin provides minimal cushion for future revenue or expense deviation, which could result in a greater need for additional unplanned use of the RSF or weakened excess revenues. The city expects to return to its 1.3x coverage target by 2026."

Rate Stabilization Fund Balances

- *Moody's states:*

"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."

- *S&P states:*

"While the outlook also incorporates some planned spend down in the RSF as indicated in PWD's current projections, we would also expect that along with the improving DSC, the RSF reductions will be no greater than what current projections show[3] and that the RSF will be replenished.[4]

Importance of a Rate Increase Approval from the Rate Hearing Board

- *Moody's states:*

"The department's forecasts show aggressive annual increases to accommodate additional debt, and its ability to secure these rate increases from the Philadelphia Rate Board will be crucial to its credit profile going forward."[3]

- *S&P states:*

"Governance risks are currently a neutral factor in the rating but could become elevated if future rate increases start to generate lower revenue than management's current projections indicate. Rate board approval is required for all rate increases."

- *Fitch states:*

"Significant rate increases, approved by an independent rate-setting board, are needed over the forecast period to maintain and improve system assets and comply with a state consent order and agreement."

Credit Challenges

- *Moody's states:*

"Aggressive rate increases required to preserve financial position."

- *S&P states:*

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[3] City of Philadelphia, Pennsylvania Water and Wastewater Revenue Bonds, Series 2024C Official Statement

[4] S&P Global Ratings' RatingDirect Report dated September 17, 2021 stated that "If we believe that future rate covenant compliance is likely to rely on … deplet[ing] the RSF below the targeted $120 million indicated in its current projections, or require significant capital or COA project delays, we would likely lower the rating."

"Future challenges may emerge because of the large capital improvement program (CIP) and rising operating expenses, which are expected to continue given compliance requirements, inflation, and supply chain factors."

- *Fitch states:*

"The leverage trend depends on substantial rate increases that increase funds available for debt service. If necessary approvals for projected rate increases are not obtained, Fitch expects PWD to adjust operating or capital spending, and related debt plans to meet internal financial targets and maintain leverage consistent with the current assessment. Failure to make necessary adjustments while complying with regulatory mandates would pressure the rating."

Downgrade Scenarios

- *Moody's states:*

"Coverage below 1.25x" and "Indication that rate board will not approve the rate increase necessary to fund the department's capital plan."

- *S&P states:*

"If rate increases are insufficient to meet current projections for DSC, we could lower our rating. We could also do so if there is a willingness to permanently reduce liquidity because of unforeseen capital costs or in lieu of rate increases or if failure to invest in infrastructure results in a rise in asset failure or greater exposure to operating vulnerabilities."

- *Fitch states:*

"Failure to secure rate increases in a timely manner to sufficiently support capital plan needs."

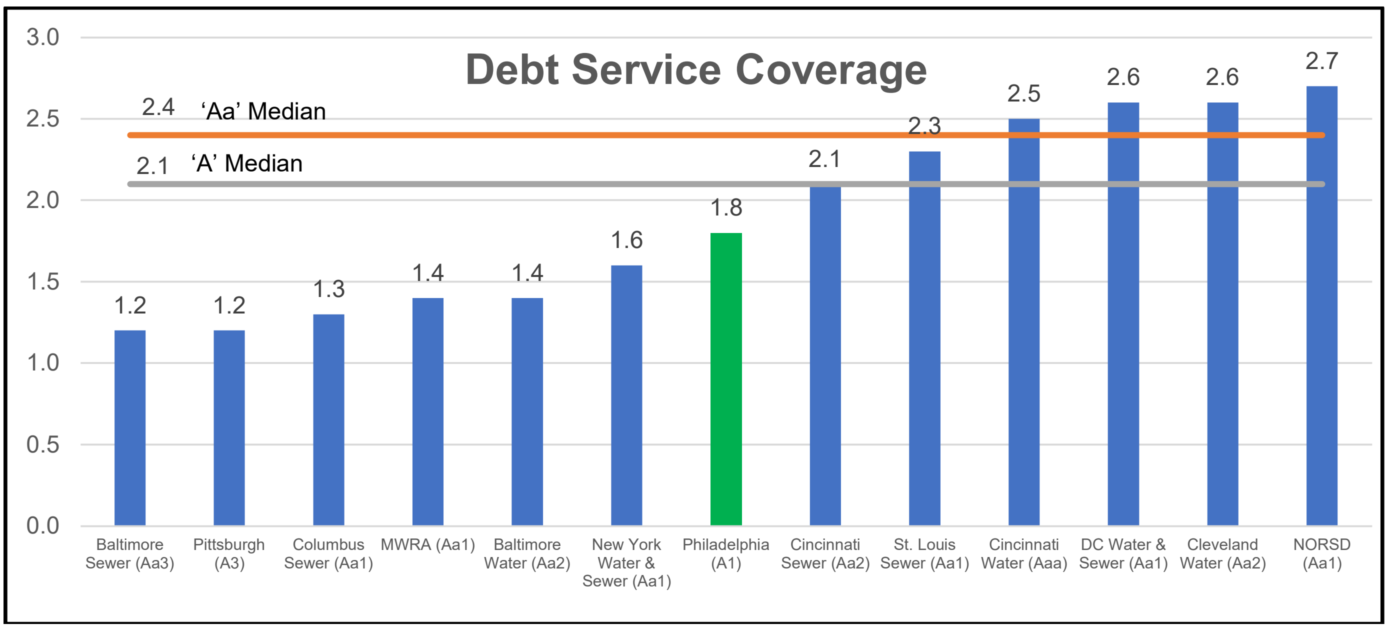
The rating agencies specifically consider the dynamic between the Department and the Rate Board and stress the importance of approving needed rate increases that would allow the Department to strengthen its financial position and maintain its A1/ A+/ A+ rating.

Peer Utilities

PWD has selected certain peer systems to provide important benchmarking critical to organizational best practices. While systems each have their own characteristics based on regions, size, and service area, the selected peers are of similar size, service areas of industrial urban centers and are located largely in the mid-Atlantic and Midwestern regions of the country. Peer comparisons and benchmarking performance indicators are a component of best practices and are specifically mentioned as a factor the Board must consider in the rate making decision.

Below are charts which indicate that PWD, as compared to its peers, remains on the weaker side of these key financial ratios. Given that PWD already bears weaker metrics than its peers and that simply achieving the targeted goals approved by the Rate Board (1.30x DSC, 20% pay-go, $150 million RSF and RF combined balances) will only maintain PWD in this weaker position, the need to achieve these targeted metrics could not be more clear, as the consequences of failing to do so risks increased costs to the Department.

The first table (Debt Service Coverage versus Moody's Bond Rating) illustrates that higher debt service coverage correlates to higher credit ratings. The orange and grey horizontal lines indicate respectively Moody's median debt service coverage for Aa rated and A rated water and sewer utilities. The Department's weaker credit rating (A1) relative to these peers of similar or weaker coverage but better rating, shows the importance of targeting and "re- attaining" the 1.3x coverage[5].

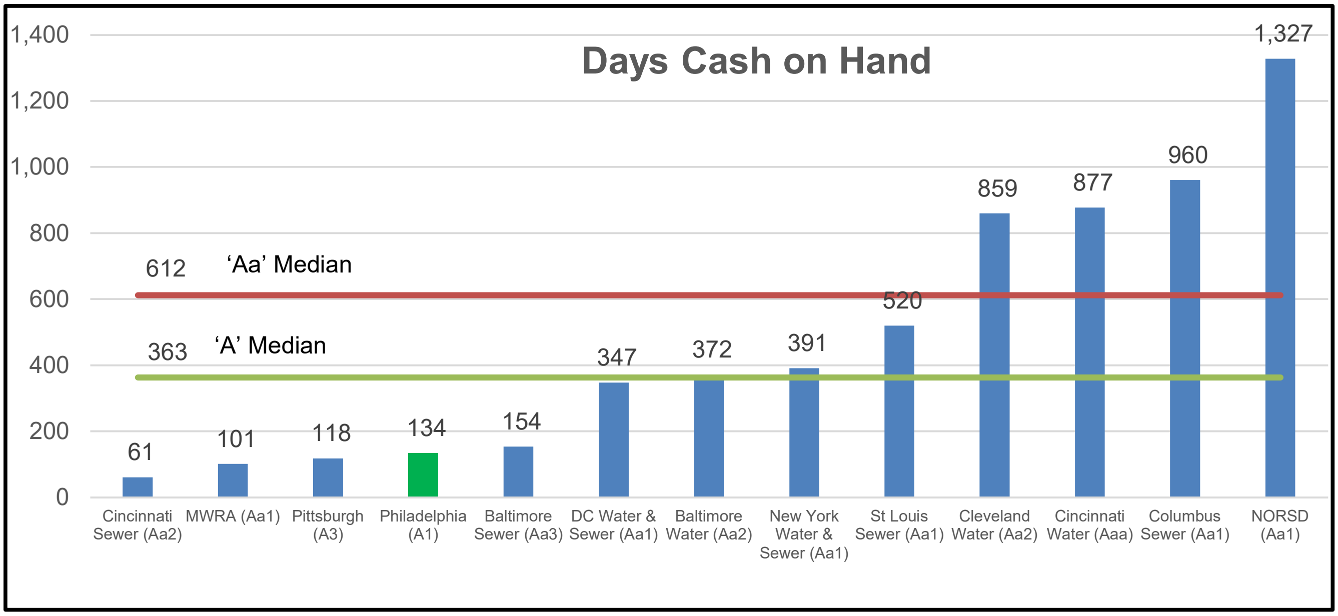


(Moody s MFR, 2023)

The second table (Days Cash on Hand versus Moody's Bond Rating) illustrates that higher liquidity correlates to higher credit ratings. The red and green horizontal lines indicate respectively Moody's median days cash on hand (measure of liquidity) for Aa rated and A rated water and sewer utilities. The Department's weaker credit rating (A1) relative to these peers of similar or weaker liquidity but better rating, shows the importance of

[5] For purposes of comparison within these peer charts, Moody's utilizes a different calculation for debt service coverage, resulting in the 1.8x coverage shown, than the methodology applied for purposes of the legal Bond Ordinance.

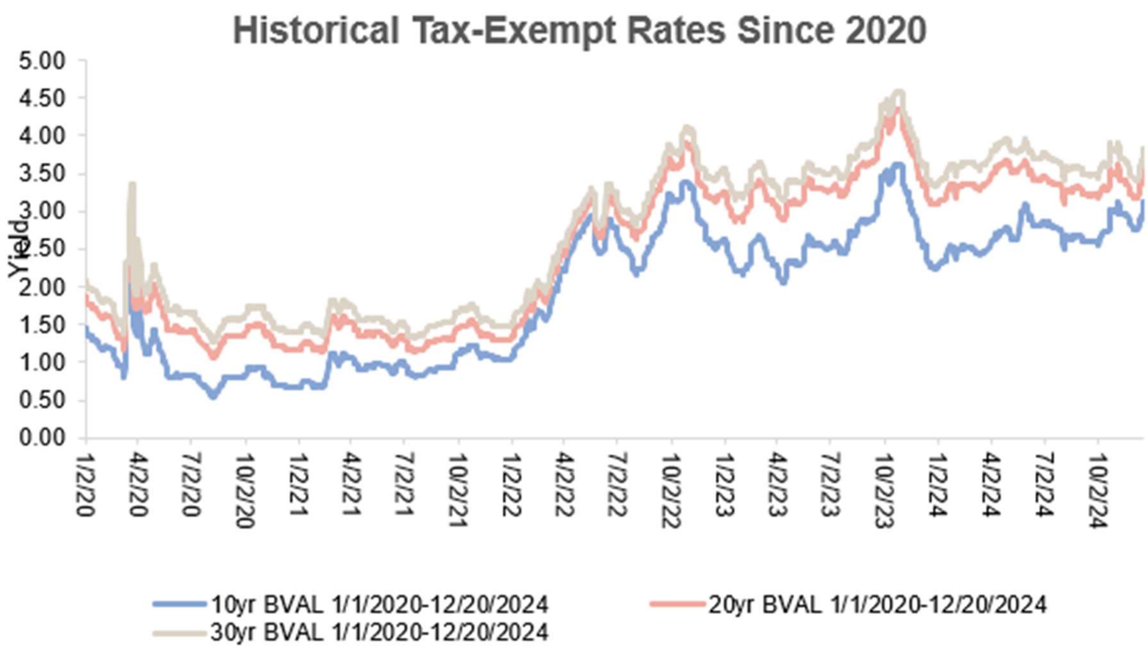
targeting the $150 million RSF and RF balance.



(Moody s MFR, 2023)

Cost of Capital

The Department's credit rating directly affects the interest rates on its future revenue bond issuances, which in turn impacts the annual revenue bond debt service that the Department must pay. This also influences the cost of alternative financing options such as letters of credit, bank loans, and the implementation of its commercial paper program. Higher-rated credits have greater access to and lower costs for these short-term, variable-rate options, which can be even more important in a higher interest rate environment. The graph below illustrates that tax-exempt interest rates (BVAL[6] yields) have generally trended higher since January 2020. Moreover, "AAA" rated credits are able to access the market at tighter credit spreads (relative to BVAL yields) compared to "AA" and "A" rated credits. This means that the Department must focus on maintaining and improving its credit rating to achieve the lowest possible cost of funding when issuing Revenue Bonds.



Source: Bloomberg Evaluated Pricing Service (BVAL)

Over the next five years, the Department expects to issue approximately $2.30 billion in additional revenue bond debt. On this anticipated debt, every 50 basis point (or ½ of a percentage point) increase in borrowing rates adds an additional $8.0 million per year in debt service costs to the Department. This increase is cumulative, placing additional stress on debt service coverage requirements.

[6] Bloomberg Evaluated Pricing Service ("BVAL") is a generally accepted market index for tax-exempt short and long term fixed interest rates in the municipal bond market.

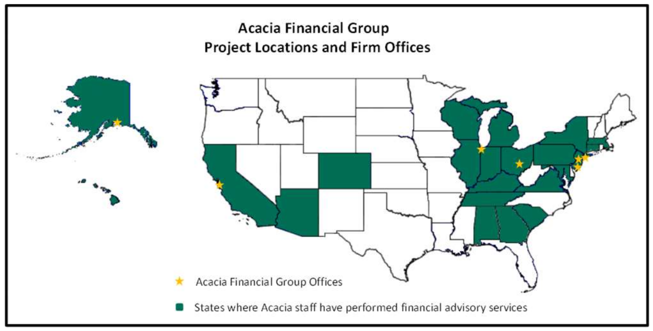
It is critical for the Department, to continue its strategic use of PennVest loans and its pursuit of grant funding. The lower interest rates on the Pennvest loans offset some of the cost that the Department would have had or will have to bear with only publicly offered Revenue Bonds, benefiting the rate base.

Conclusion

It is our position that the requested revenue requirements are well within industry standards and should be approved. As noted above, it is critical for the Department to maintain and continue to manage to its targeted financial metrics during FY 2026, FY 2027 and during the financial planning period.

Failing to provide rate increases necessary to manage to PWD financial metrics places the Department at risk of higher borrowing costs as a result of credit rating downgrade(s) and departs from financial “best practices” as well as the Rate Board's 2018 Rate Determination and subsequent decisions (affirming PWD financial metrics).

Acacia Firm Overview



Acacia is an independent, women-owned firm providing comprehensive financial advisory services to governmental entities. The firm has been in business under its current name and management since 2006. Our professionals have the experience and expertise to assist with all of our client's financial advisory needs, including plan of finance development and execution, financial modelling, strategic planning, credit review and rating agency strategy, review of financial documents and the analysis of the long-term implications of various financing options.

Over the past 5 years, Acacia advised on over $108 billion of tax-exempt and taxable financings. The firm's team of professionals has a proven track record of success managing engagements for governmental entities ranging from small local governments to the largest state authorities. Over the past several years, Acacia has priced bonds and notes an average of two to three times a week, keeping the entire team current as to market conditions and innovative financing structures. Acacia is consistently ranked as a top financial advisory firm on a national level.

Acacia's definition of quality financial advisory services extends beyond knowledge of the public finance industry. It encompasses commitment to the client's mission, creativity in developing financial solutions and a demonstrated determination to solve problems and overcome obstacles on an issuer's behalf. In total, the firm has 17 public finance professionals and 3 support staff.

General and Water/Wastewater Experience

Acacia advises a wide variety of governmental clients, ranging from large, complex state agencies to local level issuers. We have provided services in connection with the development and implementation of detailed plans of finance including the execution of traditional financings for new money and refunding transactions, complicated multi-series refunding and restructuring transactions and short and long-term products. Acacia is an expert in the various complexities of negotiated and competitive financings and has tailored our services to best serve our clients. Acacia professionals have developed comprehensive cash-flow, tax impact and user rate models, assisted with the development and compilation of rating agency and investor presentations and provided advice relating to the structuring and financing of long-term debt management plans.

Acacia professionals currently advise on over 25 sewer and water utility clients throughout the country. We have advised these clients on plan of finance development, capital planning, cash flow and rate models, debt capacity, option analysis, rating agency strategies, investment advisory, and the use of federal programs. Among our recent national clients are the City of Chicago, City of Philadelphia Water Department, San Diego County Water Authority, South Central Connecticut Regional Water Authority, Bergen County Utilities Authority (NJ), and Wayne County (MI). Acacia also has extensive experience with State Revolving Fund Loan Programs.

Below is a sampling of the water and wastewater issuers that Acacia has represented in recent years:

- Atlantic County Utilities Authority (NJ)
- Bayshore Sewerage Authority (NJ)
- Bergen County Utilities Authority (NJ)
- Bordentown Sewerage Authority (NJ)
- Brick Township Municipal Utilities Authority (NJ)
- Cape May County Municipal Utilities Authority (NJ)
- Chicago, City of (Water Department) (IL)
- Chester Water Authority (PA)
- DuPage Water Commission (IL)
- Essex County Utilities Authority (NJ)
- Illinois Finance Authority SRF (IL)
- Lacey Township Municipal Utilities Authority (NJ)
- Lambertville Municipal Utilities Authority (NJ)
- Metropolitan Water Reclamation District of Greater Chicago (IL)
- Moorestown Township (NJ)
- New Jersey Water Supply Authority (NJ)
- New York State Environmental Facilities Corporation (NY)
- North Jersey District Water Supply Commission (NJ)
- Old Bridge Municipal Utilities Authority (NJ)
- Philadelphia Water Department, City of (PA)
- San Diego County Water Authority (CA)
- South Central Connecticut Regional Water Authority (CT)
- Toms River Municipal Utilities Authority (NJ)
- Washington Township Municipal Utilities Authority (NJ)
- Wisconsin State (WI)

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Mr. Nissen is a Managing Director and shareholder with Acacia Financial Group, Inc. Mr. Nissen serves as head of quantitative matters for the firm.

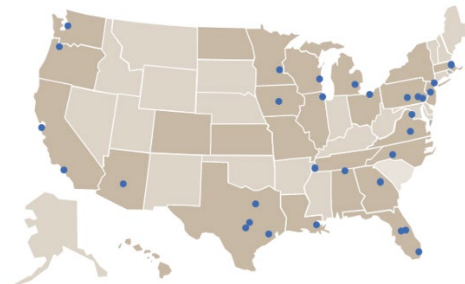
Mr. Nissen has 30 years of experience working for both large and small municipal advisory firms. His experience includes general obligation, lease revenue/subject to appropriation, toll roads, airports, solid waste, water and wastewater, higher education, health care, major economic development, not-for-profit (501(c)(3)), MSA tobacco secured, gaming industry, tax lien sales, PILOT bonds and multiple complex refundings. Major clients represented include: States of New Jersey, Ohio, New York, Massachusetts, Alaska, Cities of Philadelphia (City, PAID, PRA, PMA, PEA), New York, Los Angeles, Chicago, Philadelphia Water Department, Chester Water Authority (PA), New Jersey EDA, NJ Sports and Exposition Authority, NJ Building Authority, NJ Health Care Facilities Financing Authority, Casino Reinvestment Development Authority, South Jersey Transportation Authority, Delaware River Port Authority, Philadelphia School District, SEPTA, Alaska International Airport Systems and others.

Mr. Nissen has developed complex rate setting, life-cycle and debt capacity analysis for many reveunue secured utilities. Debt structures completed have included fixed rate, synthetic fixed rate, variable rate demand bonds, auction rate securities, private placement and LOC structures. Refunding structures completed have included current and advance fixed rate refundings, synthetic fixed rate refundings (with and without integration), forward refundings (with and without optionality), cross-over refundings, “cinderella” structures. He has made presentations to ratings agencies & bond insurers; negotiated with insurers, LOC banks; provided testimony before local and State level boards and committees. Mr. Nissen has provided reasonableness opinions and valuation opinions on debt issuances and asset transfers.

Mr. Nissen has a BA in Civil Engineering from Drexel University. Mr. Nissen has passed the MSRB Series 50 and 54 Examinations.

PFM Financial Advisors LLC

The original practice of PFM was founded over 45 years ago with the mission of providing independent financial advice to state and local governments, governmental agencies, and authorities when bringing their debt to the market, investing funds, or undertaking capital planning and budgeting. PFM Financial Advisors LLC (“PFM” or “PFMFA”) has one of the largest financial advisory teams in the public finance industry, maintaining an expansive national presence. PFM Financial Advisors LLC is a registered municipal advisor with the Securities and Exchange Commission (“SEC”) and the Municipal Securities Rulemaking Board (“MSRB”). Our SEC Number is 867-02030 and our MSRB ID is K1162. PFM and its affiliates currently have more than 300 personnel, located in 31 offices and locations across the United States (as of 12/7/21).

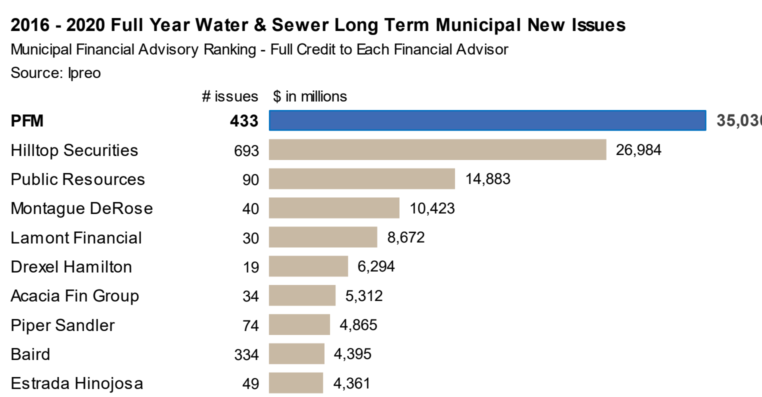


PFM and its affiliates (described below) are wholly owned by its 42 Managing Directors, who set the firm’s strategic direction. It is comprised of four affiliates that are indirect, wholly owned subsidiaries of a holding company known as PFM II, LLC. Employees of our affiliates are co-located in PFM’s offices across the country.

- ✓ **PFM Financial Advisors LLC:** advises on debt management and portfolio optimization, transaction structuring and execution, capital and financial planning, credit analysis, and policy development, among other services.
- ✓ **PFM Swap Advisors LLC (“PFMSA”):** PFMSA includes professionals dedicated to advising clients on obtaining interest rate swaps, caps, and collars in order to help manage exposure to interest rates.
- ✓ **PFM Group Consulting LLC:** PFM Group Consulting LLC (“MBC”) provides a broad range of services, including multi-year financial planning, consolidating and shared-services analysis, operational and program analysis, revenue maximization, fleet management, workforce analysis, and pension and other post-employment benefits (OPEB) review and strategies.
- ✓ **PFM Solutions LLC:** PFM Solutions LLC is our affiliate through which innovative services are developed, such as Synairo, a flexible financial modeling platform designed to produce dynamic, multi-year financial projections to facilitate strategic planning for various industry sector.

Water Utility Clients:

PFM is consistently ranked as the top financial advisor in the water and wastewater sector, with Ipreo having ranked PFM’s financial advisory business as the top financial advisory firm for water and sewer issues, in terms of overall issues and/or principal amount for 17 of the past 20 years, having advised on 60% more in principal amount than our nearest competitor over that time period. As illustrated in the chart to the right, during the last five years (2016-2020), PFM advised on 433 water and sewer transactions with a total par amount of approximately $35.0 billion.[1] Communities across the country face ever-increasing pressure to meet new and existing environmental quality standards, improve customer service and



[1] *Source: Ipreo, as of December 31, 2021.*

become more efficient, all while maintaining competitive rates. We believe our experience and leadership provides us unique insight into this rapidly evolving sector.

In addition to the bond transactions on which we have advised clients, we regularly assist water and wastewater clients with non-bond financial advisory projects. We routinely advise on strategic matters such as resource acquisitions, rate structures that allow for system growth without penalizing the existing customer base, financial reserve policies and credit matters. Our current advisory relationships with water and wastewater utilities across the country provide us with a comprehensive understanding of the unique financial and environmental considerations facing the region, while the breadth and depth of our national water and wastewater practice give us the national experience to apply it. A list of several of these clients is included below.[2]

- Austin Water and Wastewater Utility (TX)
- Baltimore Water and Wastewater (MD)
- Central Marin Sanitation Agency (CA)
- City of New Orleans, Water & Sewerage Board (LA)
- City of Toledo, Department of Public Utilities (OH)
- Clark County Water Reclamation District (NV)
- Contra Costa Water District (CA)
- DC Water and Sewer Authority (DC)
- Erie County Water Authority (NY)
- Fairfax County Integrated Sewer System (VA)
- Fairfax County Water Authority (VA)
- Great Lakes Water Authority (MI)
- Hampton Roads Sanitation District (VA)
- Kansas City Water Department (MO)
- Las Vegas Valley Water District (NV)
- Los Angeles Department of Water & Power (CA)
- Maryland Water Quality Administration (MD)
- Massachusetts Water Resources Authority (MA)
- Metropolitan Sewer District of Greater Cincinnati (OH)
- Metropolitan St. Louis Sewer District (MO)
- Nassau Sewer and Storm Water Finance Authority (NY)
- New Jersey Environmental Facilities Trust (NJ)
- New Jersey Water Supply Authority (NJ)
- NY State Environmental Facilities Corporation
- Oklahoma City Water Utility Trust (OK)
- Passaic Valley Sewerage Commission (NJ)
- Philadelphia Water Department (PA)
- Portland, Bureau Environment Services (OR)
- Rhode Island Clean Water Finance Agency
- San Antonio Water System (TX)
- San Diego County Water Authority (CA)
- Southern Nevada Water Authority (NV

[2] *Client list is as of June 30, 2021 and is provided for informational purposes only. Client list does not constitute an endorsement or testimonial of services provided by PFM's financial advisory business.*

Charles “Chuck” Matthews

Director

PFM Financial Advisors LLC

Charles “Chuck” Matthews is a Director in PFM’s financial advisory practice and is based in the Philadelphia office. He rejoined the firm in March 2021 after spending the last decade as an investment banker with RBC Capital Markets and most recently Janney Montgomery Scott. He began his public finance career at PFM in 1996 and prior to that in municipal bond sales, trading and underwriting with First Albany Corporation.

Charles advises clients throughout PFM’s Mid-Atlantic and South footprint. He has worked on financings for various credit structures throughout his career including, General Municipal, Water and Sewer, Transportation, K-12, Higher Education and Health Care. Some of his clients include the City of Philadelphia (PA), the City of Norfolk (VA), the City of Wilmington (DE), Pennsylvania Turnpike Commission, SEPTA (PA) and MARTA (GA), The School District of Philadelphia and Temple University Health System to name a few.

Charles resides in Philadelphia and is active in his community having served on several boards in his neighborhood of Northwest Philadelphia and volunteering his time with youth sports organizations. Most recently he co-founded a grass roots non-partisan campaign called Cycle To Vote to increase voter turnout and promote voter education and awareness in the Philadelphia area during the 2020 election.

Charles holds a Bachelor of Arts in Economics from Princeton University and a Master of Science in Finance from The George Washington University as well as his Series 50 (Municipal Advisor Representative) license.

CM

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Specialties
Financial Advisory

State & Local Governments, Transportation, Higher Education

Education
B.A. in Economics
Princeton University

M.S. in Finance
The George Washington University

Professional Designations or Licenses
Municipal Advisor Representative (Series 50)

Started with PFM: 2021

Started in the Field: 1996