

A wide-angle photograph of the Philadelphia skyline as seen from across a river. The water is dark and reflects the sky. Lush green trees line both banks of the river. In the background, a dense cluster of skyscrapers is visible under a clear, light blue sky. The most prominent building on the right is the Comcast Center, a tall, modern glass skyscraper. Other notable buildings include the Independence Seaport Building and the Comcast Building. A bridge spans the river in the middle ground.

Philadelphia Water Department

Financial Plan

December 2015



THE PHILADELPHIA WATER DEPARTMENT SIX-YEAR FINANCIAL PLAN PROVIDES A STRONG FINANCIAL FRAMEWORK

Vision

To be America's model 21st century urban water utility – one that fully meets the complex responsibilities and opportunities of our time and our environment.

Mission

Provide the Greater Philadelphia region with integrated water, wastewater, and stormwater services. Protect public health by always delivering the Water Department's customers the highest quality of drinking water at a competitive and affordable cost. Protect the environment by managing and treating the region's wastewater and stormwater, protecting and advocating for rivers and streams and their watersheds, and protecting sources of drinking water. Support the sustainable growth of Philadelphia and its residents, communities, businesses, and industries as well as the financial well-being of the utility. Continue to be America's most innovative utility with a constant focus on quality, efficiency, customer service, affordability and sustainability.

Values

PROFESSIONALISM: Employing a highly qualified workforce that takes pride in maintaining the highest level of service.

QUALITY: Supplying products and services of the highest possible standards.

SERVICE: Delivering courteous, respectful, informed and collaborative service to our customers, partners and the general public.

Objectives

The objectives represent the core strategies that the Water Department ("Department") will pursue and believes are essential to the achievement of becoming America's model 21st century urban water utility

- Improve customer service, outreach, and assistance
- Increase workforce strength and diversity
- Improve utility's financial health
- Invest in capital planning
- Protect infrastructure
- Uphold excellence in core services
- Ensure sustainable utility operations
- Support a strong and diverse Philadelphia business community



Philadelphia Water Strategic Plan

Version 1.2, Updated Fall 2015



Note: The Water Department Strategic Plan adopted on May 2013, Updated Fall 2015





STRATEGIC DIRECTION

WATER DEPARTMENT STRATEGIC PLAN

The Water Department (“Department”) Strategic Plan serves as a guide for future decision-making and provides a structure through which annual reviews can be accomplished to assure that the goals and objectives retain their relevance over time. By laying out a course of action, this plan represents a disciplined process for making fundamental decisions and shaping the Department’s future.

The plan represents the collaboration of the Executive Management, and the management team, as well as input from staff. The plan is designed to be a lasting framework, although updates should be made to goals, objectives, and initiatives as the organization moves forward and circumstances change.

This plan contains the Department’s vision, mission statement, values, objectives, and initiatives. It addresses the Department’s current challenges and helps ensure continued success in operations and management of resources and assets.

The Water Department’s vision describes its desired future state and guides the organization toward that future, while the mission of the utility describes the purpose of the organization and its role within the service area. Values articulate the deeply-held beliefs, norms, and qualities of the utility, and are the basis from which each PWD staff member should operate.

FOCUS AREAS

The strategic plan, and the accompanying strategic framework, is the direct result of evaluation and analysis of the elements of the environmental scan and the needs of key stakeholders. Early in the process, three key themes emerged. These have been called focus areas and are:

PROFESSIONALISM

Employ a highly qualified workforce that takes pride in maintaining the highest level of service

QUALITY

Supply products and services of the highest possible standards

SERVICE

Deliver courteous, respectful, informed and collaborative service to our customers, partners and the general public



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FY 2016 – FY 2021 FINANCIAL PLAN

Overview

The Water Department's improved financial performance and its success in achieving and maintaining strong bond ratings is primarily due to financial planning. In March 2015, Standard and Poor's Ratings Services, Moody's Investors Service and Fitch Ratings reaffirmed their current A, A1 and A+ ratings, respectively, on PWD's senior lien bonds. This financial plan serves as one of management's tools to monitor progress in meeting financial goals and to proactively address future financial and operational issues.

The necessity of a six-year financial plan is clear:

1. The Water Department operates under a regulatory and capital project-driven environment that requires a longer term six-year planning horizon. In order to provide our customers with the best service possible while ensuring gradual and predictable rate increases, the Department must plan for all projects on a long-term and integrated basis, including both capital and operating requirements. A six-year capital budget is also prepared to address the major regulatory, operational and capital project issues that will impact service, operations, and rates over the next six years.
2. The Department is charged with the following: (1) propose rates so that each customer is charged based on actual cost to provide each service, (2) increase and implement rates transparently and predictably, and (3) use financially prudent options to mitigate future customer impacts. Since proposed future rate increases are primarily driven by growing operating and maintenance costs to maintain the system, a higher capital program addressing an aging system coupled with regulatory mandates and debt service on existing bonds and bond related covenants, the development of a six-year financial plan allows the Department to meet these key goals.
3. A six-year plan is required to bridge current operations and related capital and operating budgets with these long term goals.

Financial policies, strategic planning, priorities and guidance in several key financial areas drive the development of the FY 2016 – 2021 financial plan. Given the Department's substantial borrowing needs over the next six years, adherence to these financial policies is crucial in order to cost-effectively access the capital markets and retain our credibility with customers and regulators.



KEY FINANCIAL POLICIES

DEBT SERVICE COVERAGE – The Department will set rates and develop operating and capital budgets that ensure minimum senior debt service coverage of 124 percent in FY2016, 125 percent in FY2017, 126 percent in FY2018, and 135 percent by FY2019, maintaining this level of coverage thereafter.

- This coverage level exceeds the Department’s General Bond Ordinance requirement of 120 percent senior debt service coverage.
- Excess operating revenue above stated projections will be used to increase debt service coverage and result in additional pay-as-you-go capital funding.

CASH RESERVES – The Department must maintain at least \$110 million in the Rate Stabilization Fund (RSF) and \$15 million in the Residual Fund, adjusted for inflation.

- **RATE STABILIZATION FUND** – Established in conjunction with the Series 1993 Revenue Bonds to provide funds to cover annual expenditures when the revenues are less than projected and to prevent the need for large swings in rates year to year.
 - Required \$45 million dollar loan from RSF to Operating to cover potential appropriation shortfalls.
- **RESIDUAL FUND** – Established to maintain the remaining revenues after payment of all operating expenses, all debt service obligations (including those under a Swap agreement), scheduled transfers to the RSF and required deposits to the Capital Account of the Construction Fund
 - Residual Fund may be used to fund the following and among other things: operating expenses, transfers to any other Water Fund accounts (other than the Revenue Fund or the RSF), and transfers to the City’s General Fund in an amount not to exceed the lower of (a) net revenue earnings (as defined in the Ordinance) and (b) \$4.994 million
 - The Department does not set rates to cover 100% budget as such these funds are required to allow for any unforeseen expenses and to also balance the original budget.

PAY-GO FINANCING OF CAPITAL

- PWD will target to fund at least 20% of the capital program with cash, thereby reducing a portion of long-term borrowing requirements or needs.

DEBT ISSUANCE - PWD will strive to match the period of debt repayment, in total, with the lives of the assets financed by any such debt and will strive to secure the least costly financing for capital projects.

CASH MANAGEMENT AND INVESTMENT POLICIES

PWD follows the City of Philadelphia’s Policy on investing set by the City Treasurer’s Office. More information on this policy can be found on its website:

<http://www.phila.gov/treasurer/Pages/default.aspx>



RATE SETTING POLICIES

The City Charter, as recently amended by City Council and the electors to establish the Rate Board, mandates that the standards pursuant to which rates and charges are fixed must generate, at a minimum, an amount equal to operating expenses and debt service incurred for water supply, sewage and sewage disposal purposes

The Water Department's rate-setting policies are based on the following principles:

1. Rates and charges may not generate amounts in excess of the total appropriation from the Water Fund to the Water Department and to all other departments, boards or commissions, plus a reasonable sum to cover unforeseeable expenses
2. In fixing rates and charges, the Rate Board shall recognize the importance of the Financial Plan
3. Rates and charges must be in accordance with sound utility rate making principles
4. Decision to approve, modify or reject a rate proposal must be made in a written report and in a timely manner, but no later than 120 days from the filing of notice to adjust rates by the Water Department
5. Rates and charges shall be equitably apportioned among customer classes
6. Rates and charges shall be just, reasonable and nondiscriminatory as to the same class of customers
7. Special rates and charges shall be established for charities and public housing
8. Rate increases, if required, are implemented transparently and predictably



EXPANDED FINANCIAL POLICIES

1. The Water Department will maintain financial practices and policies that result in high quality investment grade bond ratings so as to ensure the lowest practical cost of debt necessary to finance the Water Department's long-term capital program.
2. The Water Department will maintain strong levels of operating cash reserves, which will reside in the Rate Stabilization and Residual Funds, for the management of unforeseen expenses.
3. The reserves will, at a minimum, include any requirements contained in the Water Department's General Bond Ordinance.
4. The Water Department will maintain a minimum senior debt service coverage of 124 percent in FY2016, 125 percent in FY2017, 126 percent in FY2018, and 135 percent by FY2019, maintaining this level of coverage thereafter, which are in excess of the General Bond Ordinance requirement of 120 percent. Senior debt service coverage will be calculated in accordance with the General Bond Ordinance.
5. The Water Department will whenever possible use the least costly type of financing for capital projects, based on a careful evaluation of the Water Department's capital and operating requirements and financial position for each year.
6. The Water Department will attempt to match the period of debt repayment, in total, with the lives of the assets financed by any such debt.



FINANCIAL RESULTS

FY2013, FY2014, FY2015, and Target Budget FY2016



Budget to Year-End Results and Budget to FY2016 Target Projection

- The Water Department does not set rates to cover 100% of its operating budget in any fiscal year.
 - The Department must rely on the rate stabilization fund and budgetary controls to bridge the gap between rate setting and original budget
 - During FY2013, the Department utilized 93% of its budget including the \$4.6 million withdrawal from the rate stabilization fund
 - During FY2014, the Department utilized 97% of its budget including the \$22.9 million deposit to the rate stabilization fund
 - During FY2015, the Department utilized 96% of its budget including the \$21.4 million deposit to the rate stabilization fund
 - For FY2016, Black & Veatch is projecting 94.6% budget utilization including the \$36.9 million withdrawal from the rate stabilization fund

Comparison of Historical to Actual Budget (\$000s)

	FY2013		FY2014		FY2015		FY2016	
	Original Budget	Year-End Actual	Original Budget	Year End Actual	Adopted Budget *	Year End Actual (Unaudited)	Original Budget	Projected B&V
Personal Services	115,699	104,392	116,125	108,957	116,685	118,718	126,121	123,199
Personal Services - Fringe Benefits	43,130	40,369	34,530	41,044	35,480	48,294	53,115	49,358
Pension Obligation Bond Debt Service	9,430	20,452	19,200	22,450	11,700	11,415	12,100	12,100
Pension Payment	46,638	35,507	48,800	38,305	42,000	40,861	45,700	46,529
Advances & Misc. Payments / Future Labor Oblig.	-	-	-	-	10,510	-	-	-
<i>Sub-Total Employee Benefits</i>	<i>214,897</i>	<i>200,720</i>	<i>218,655</i>	<i>210,756</i>	<i>216,375</i>	<i>219,288</i>	<i>237,036</i>	<i>231,186</i>
Purchase of Services	156,865	134,416	157,164	133,942	168,030	149,986	177,090	159,027
Materials, Supplies & Equipment	53,935	48,295	53,966	49,413	54,540	47,407	54,444	48,915
Contributions, Indemnities & Taxes	6,602	5,090	6,602	6,037	6,605	3,842	6,605	6,505
Debt Service	201,986	201,015	205,355	204,646	213,190	200,799	227,139	220,713
Payments to Other Funds ¹	57,605	53,006	58,456	75,661	66,965	74,913	65,000	59,589
Total	691,889	642,544	700,198	680,455	725,704	696,235	767,314	725,935

¹Breakdown of Payments to Other Funds

Payments to General Fund (interfund transfer)	12,605	10,793	13,243	7,714	14,000	6,245	10,537	6,545
Payments to Capital Projects Fund	19,000	19,380	19,900	20,193	20,697	20,705	21,215	21,215
Payments to Residual	26,000	22,833	25,313	24,829	32,268	26,507	33,248	31,829
Payment to RSF	-	-	-	22,925	-	21,456	-	-
<i>Sub-total Payments to Other Funds</i>	<i>57,605</i>	<i>53,006</i>	<i>58,456</i>	<i>75,661</i>	<i>66,965</i>	<i>74,913</i>	<i>65,000</i>	<i>59,589</i>

Note: PWD made transfers to the General Fund in FY2013 and FY2014 from the Residual Fund to account for scoop payments



Water Department Coverage and Transfers

Historical and Projected Water Department Debt Service Coverage (\$000s)

Description	HISTORICAL			PROJECTED
	FY2013	FY2014	FY2015 (Unaudited)	FY2016 (Projected B&V)
Total Water & Wastewater Service Revenue	595,278	633,627	665,198	644,101
Other Income ¹	12,012	9,392	11,648	23,800
Revenues	607,290	643,019	676,846	667,931
Transfer From / (To) Rate Stabilization Fund	4,666	(22,925)	(21,456)	36,900
Revenues Including RSF Transfer	611,956	620,094	655,390	704,831
Total Operating Expense	(399,316)	(410,797)	(426,767)	(452,179)
Adjustment between Debt Service and Net Operating Expenses due to Timing Differences			4,470	
Liquidated Encumbrances ²	31,148	37,436	19,389	21,105
Net Operating Expenses	(368,168)	(373,361)	(402,908)	(431,074)
Net Revenues Available for Debt Service	243,788	246,733	252,482	273,757
Total Senior Debt Service	(201,015)	(201,710)	(205,270)	(220,713)
Total Subordinate Debt Service				
Net Revenues	42,773	45,023	47,212	53,044
Capital Account Deposit ³	(19,380)	(20,194)	(20,705)	(21,215)
Residual Fund Deposit from Water Operating Fund	22,833	24,829	26,507	31,819
Residual Fund Deposit from Interest Earnings on DSRF	560		746	843
Transfer to Construction Fund	-	-	(36,811)	(31,800)
Transfer to City General Fund (SCOOP)	(560)	(400)	(746)	(789)
Transfer to Debt Service Reserve Fund ⁴	(22,400) ⁴	-	-	-
Total Senior Debt Service Coverage	1.21	1.22	1.23	1.24
Total Coverage	1.11	1.11	1.12	1.13

¹ Includes other operating and non-operating income, including interest income on funds and accounts transferable to the Revenue Fund. Other income shifts due to DSRF release and allocation of miscellaneous revenues

² Liquidated Encumbrances are assumed as contra-expense

³ FY2015 transfers to Capital Fund is trued-up for missed transfer in FY2014

⁴ PWD made transfer to DSRF to cure AGM surety that no longer met required rating threshold



Fiscal Year 2013 – Fiscal Year 2015 Financial Results, Fiscal Year 2016 Target

- ❖ In Fiscal Years 2013, 2014 and 2015, the Water Department met debt service coverage requirements with a revenue bond debt service coverage ratio of at least 1.20 each year, and a total debt service coverage ratio of at least 1.11 each year.
 1. In Fiscal Year 2013, the Water Department met debt service coverage requirements with a revenue bond debt service coverage ratio of 1.21 and a total coverage ratio of 1.11, after taking into account a withdrawal of \$4,666,000 from the Rate Stabilization Fund.
 2. For Fiscal Year 2014, the Water Department met debt service coverage requirements with a revenue bond debt service coverage ratio of 1.22 and a total coverage ratio of 1.11, after taking into account a deposit to the Rate Stabilization Fund of \$22,925,000.
 3. For Fiscal Year 2015, the Water Department met debt service coverage requirements with a revenue bond debt service coverage ratio of 1.23 and a total coverage ratio of 1.12, after taking into account a deposit to the Rate Stabilization Fund of \$21,456,200.
 4. For Fiscal Year 2016, the Water Department is projecting a debt service coverage requirement with a revenue bond debt service coverage ratio of 1.24 and a total coverage ratio of 1.13, after taking into account a projected withdrawal of \$54 million from the Rate Stabilization Fund.



Review of Coverage Calculations

	FY13	FY14	FY15 (unaudited)
Coverage A¹:			
Net Revenues	\$243,788	\$246,733	\$252,482
/Revenue Bonds Debt Service	\$201,015	\$201,710	\$205,270
= Coverage A	1.21	1.22	1.23
Coverage B²:			
Net Revenues	\$243,788	\$246,733	\$252,482
/Total Debt Service + Transfer to Capital Fund	\$220,395	\$221,904	\$225,975
= Coverage B	1.11	1.11	1.12
Coverage C³:			
Net Revenues +/- Transfer (To) From Rate Stabilization Fund	\$239,122	\$269,658	\$273,938
/Revenue Bonds Debt Service	\$201,015	\$201,710	\$205,270
= Coverage C	1.19	1.34	1.33

¹ **Coverage A:** The rate covenant contained in the General Ordinance requires the City to establish rates and charges for the use of the Water and Wastewater Systems sufficient to yield Net Revenues, as defined therein, in each fiscal year at least equal to 120% of the Debt Service Requirements for such fiscal year (excluding debt service due on any Subordinated Bonds).

² **Coverage B:** In addition, Net Revenues, in each fiscal year, must equal at least 100% of: (i) the Debt Service Requirements (including Debt Service Requirements in respect of Subordinated Bonds) payable in such fiscal year; (ii) amounts required to be deposited for Subordinated Bonds payable in such fiscal year; (iii) amounts required to be deposited into the Debt Reserve Account during such fiscal year; (iv) debt service on all General Obligations Bonds issued for the Water and Wastewater Systems payable in such fiscal year; (v) debt service payable on Interim Debt in such fiscal year; and (vi) the Capital Account Deposit Amount for such fiscal year, less amounts transferred from the Residual Fund to the Capital Account during such fiscal year. To ensure compliance with the rate covenant, the General Ordinance requires that the City review its rates, rents, fees, and charges at least annually.

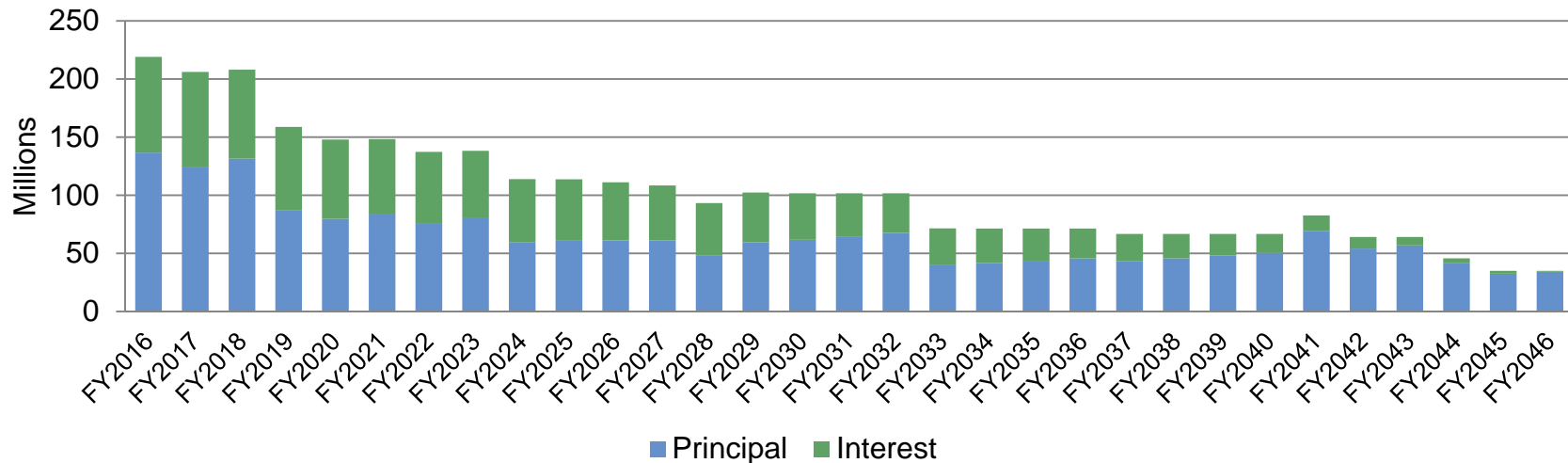
³ **Coverage C:** As long as the Insured Bonds are outstanding, the City covenants to establish rates and charges for the use of the System sufficient to yield Net Revenues (excluding amounts transferred from the Rate Stabilization Fund into the Revenue Fund during, or as of the end of, such fiscal year) at least equal to 90% of the Debt Service Requirements (excluding debt service on any Subordinated Bonds) in such fiscal year.



Existing Debt Service as of June 30th, 2015

- PWD has \$1.9 billion of bonds outstanding (par as of June 30th, 2015), with a final maturity in July 2045 (FY2046)
 - \$1.8 billion of fixed rate bonds
 - \$60.4 million of unhedged variable-rate bonds (3.7% of total)
 - \$51.6 million of hedged variable-rate bonds with a swap that terminates on August 1, 2018 (3.2% of total)
 - Swap Counterparty – Citigroup Financial Products, Inc.
 - The City pays a fixed rate of 4.53% and receives a floating rate equal to the variable interest rate due on the Series 2005B bonds
 - PWD’s Series 2005B variable-rate bonds were remarketed as a direct purchase
 - PWD’s bonds have an average life of 13 years
 - \$153 million borrowed under the PennVest Loan Program
- The City has no subordinated debt outstanding

PWD Annual Debt Service



■ Principal ■ Interest



Fund Balances and Days Cash on Hand

Historical Water Department Cash Balances	HISTORICAL			PROJECTION
	FY2013	FY2014	FY2015 (unaudited)	FY2016 (Projected B&V)
Water Operating Fund ¹	82,494	71,136	79,976	70,000
Water Capital Fund ²	150,604	260,834	446,819	236,970
Water Rate Stabilization Fund	161,239	184,631	206,298	169,306
Water Residual Fund	2,085	25,275	14,990	15,255
Total Liquidity	396,422	541,876	748,083	491,531
Unrestricted Fund Balances ³	245,818	281,042	301,264	254,561
Restricted Fund Balances ⁴	150,604	260,834	446,819	236,970

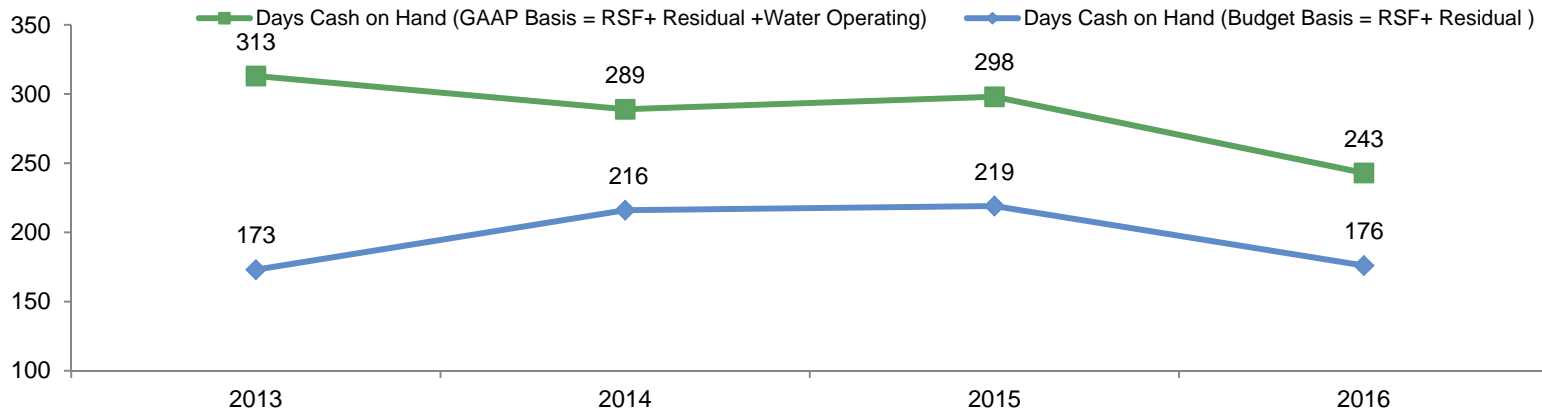
¹ Represents Current Asset - Equity in Treasurer's Account

² Represents bond proceeds and self generated funds dedicated for capital projects

³ Unrestricted fund balances include monies in the Water Operating Fund, RSF and Residual Funds

⁴ Restricted fund balances include bond proceeds and self generated funds dedicated for capital projects

Historical Days Cash on Hand



1. Days Cash on Hand GAAP Basis; current unrestricted cash (Equity in Treasurer's Account Current + Rate Stabilization Fund + Residual Fund), divided by (operating expenditures minus depreciation), divided by 365.

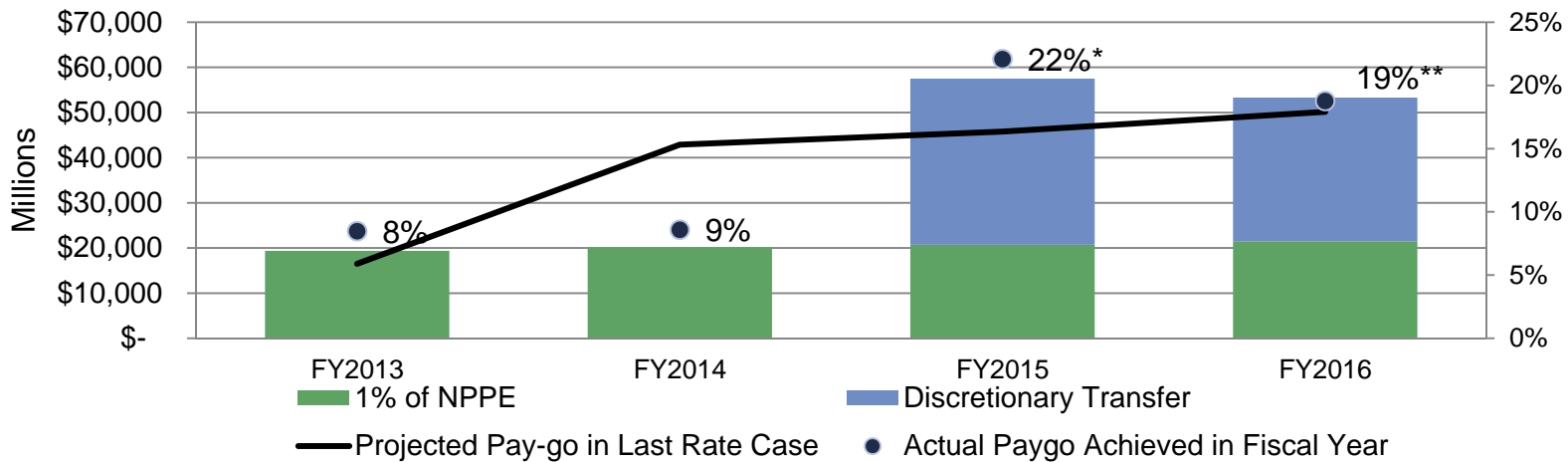
2. Days Cash on Hand Budgetary basis; Rate Stabilization Fund + Residual Fund), divided by (operating expenditures minus depreciation), divided by 365.



Cash Funding of Capital Projects

- The General Bond Ordinance requires, at a minimum, that the Department deposit 1% of the depreciated value of the property plant and equipment (“NPPE”) of the City’s System to the Construction Fund.
- In addition to the required 1% of NPPE, the Water Department has targeted an additional amount of pay-as-you-go (Discretionary Transfer). The Target is to fund 20% of the capital program from pay-as-you-go funding in each fiscal year.
- The Water Department did not meet this target in either FY2013 or FY2014. The Department is not projected to meet the 20% target in FY2016.

Historical Review of Pay As Go Funding of Capital Budget



*While preparing the FY 2014 year-end fund transfers, PWD erroneously omitted to request a transfer from the Residual Fund to the Capital Funds in the amount of \$18.6 million. Because the error was discovered after the FY 14 preliminary financial statements were issued, Central Finance approved for the transfer transaction to occur in FY 2015.

** FY2016 transfers are projected.



Summary of Results 2012 Rate Case Projections versus Year-End Results

The financial projections in the 2012 rate case show that we out-performed our projections in Fiscal Years 2013, 2014 and 2015. This is primarily due to:

1. Actual revenue results exceeded projections by 1.47% per year on average, totaling \$28 million, for Fiscal Years 2013, 2014, and 2015.
2. Actual expense results were under projections from the previous rate case projections for Fiscal Years 2013, 2014 and 2015. The main reasons for differences are below:
 - A. Pension payments and health care costs were \$30 million lower than projections
 - B. Liquidated encumbrances were \$28 million higher than projections. The under projection of liquidated encumbrances (commitments cancelled) was due largely to an aggressive effort by the City's Office of the Director of Finance to properly liquidate unused prior year fund commitments
 - C. Other expenses were \$20 million lower than projections
3. Because of the over performance of revenues and the under spending of expenses, the Net Revenues available for debt service were greater than projected, which lead to deposits in the Rate Stabilization Fund and subsequent increases in the Fund balances.



Financing and Reserve Policies 2012 to 2015

During the 2012 rate case, the Water Department agreed to financial targets to debt service coverage, liquidity and internally generated funds, as summarized below:

- The Department's debt service coverage levels should trend above the minimum required by the General Water and Wastewater Revenue Bond Ordinance of 1989, as amended and supplemented General Bond Ordinance and demonstrate a continued achievement of continuously improving coverage ratios;
- The Department should improve its liquidity by targeting a minimum balance in the Rate Stabilization Fund and the Residual Fund of \$100 million and \$15 million respectfully adjusted for inflation to more closely mirror other major "A" and "AA" rated utilities reserves and liquidity levels; and
- The Department should increase the percentage of capital projects funded from self-generated capital so as to more closely mirror other major "A" and "AA" rated utilities and thereby decrease borrowing needs.
- The Department was able to achieve the above financial targets during the prior four fiscal years.



FINANCIAL PLAN KEY POLICIES AND ASSUMPTIONS FY2016 to FY2021



Rate Increase Drivers

The increased costs are primarily driven by renewal of aging infrastructure, labor contract settlements and regulatory mandates. These costs do not typically vary with output and will increase over time.

1. Substantial capital costs to replace and renew aging infrastructure. The Water Department's Capital Budget for FY2016 to FY2021 totals \$1.78 billion.
2. The Water Department entered into a Consent Order & Agreement on June 1st, 2011 which imposes on the Department certain state and federal mandates. These mandates impact both the operating and capital budgets.
3. The City of Philadelphia recently completed the labor agreement negotiations and has established contracts with both District Council 33 and District Council 47 resulting in increased salary costs. In addition the contribution to the City's pension fund is growing over the next several years.
4. Continued reductions in annual consumption of approximately 0.6% per year, which is primarily due to the annual reduction in the usage per account associated with 5/8" meter General Service Customer
 - A. Bucks County Water and Sewer Authority terminated its wholesale water contract on June 30th, 2014 totaling a revenue loss of approximately \$7 million annually.
5. Growth in existing assistance programs and expansion of a low income program



KEY REVENUE ASSUMPTIONS AND PROJECTIONS

Projected service revenues under existing rates reflect the adopted rates for Fiscal Year 2015 (effective July 1, 2014).

- ❖ Total system accounts are anticipated to remain stable over the projection period.
- ❖ Projected water usage volume reflects an annual decrease of approximately 0.6%, which is primarily due to the annual reduction in the usage per account associated with 5/8" meter General Service Customers.
- ❖ Projected revenues, under existing rates, reflect the anticipated cumulative receipts for the water, sanitary sewer, and stormwater services (including retail, City and wholesale receipts) each fiscal year.
 - ❖ The receipts are estimated based on the projected system billings for a fiscal year and the associated cumulative three year collection rate of 96.3% for the fiscal year billings to Non-City accounts (excluding stormwater only), and 65.1% for fiscal year billings to Non-City stormwater only accounts. The receipts for City billings are based on 100% of the projected billings for each fiscal year.
- ❖ Operating Fund and Rate Stabilization Fund interest earnings are projected, based on projected fund balances and 0.4% interest earnings rate.
- ❖ Penalties are projected based on 1.45% of billings under existing rates.
- ❖ Miscellaneous revenues are projected based on historical and budgeted levels as presented below.
 - ❖ Miscellaneous City Revenue 2016 – 2021 \$1.96 Million a year
 - ❖ Other Miscellaneous Income 2016 – 2021 \$8.0 Million a year
 - ❖ State and Federal Grants 2016 - 2021 \$1.0 Million a year
 - ❖ License & Inspection Permits 2016 \$3.0 Million 2017 – 2021 \$3.0 Million a year
 - ❖ Miscellaneous Procurement 2016 - 2021 \$0.3 Million a year
 - ❖ Affordability Program Discounts¹ 2018 - 2021 (\$16.1) Million a year to (\$18.6) Million a year
- ❖ Rate Stabilization Fund Utilization – The six-year plan and near-term revenue projections assume utilization of \$37 million in FY2016, \$19.3 million in FY17 and \$39.0 million in FY18.



KEY OPERATING EXPENSES ASSUMPTIONS AND PROJECTIONS

- ❖ Operating Expenses
 - ❖ Operating Expenses for fiscal year 2017 through 2021 are projected based on the application of the following annual escalation factors to the projected fiscal year 2016 operating expense categories:
 - ❖ Labor Costs – 3.0%
 - ❖ Electric Costs – 0% in FY17, 5% in FY18 to FY21
 - ❖ Chemical Costs – 3.3% in FY17, 3.3% in FY18 to FY21
 - ❖ The following costs were projected based on the cost increases reflected in the City's five year plan
 - ❖ Pension
 - ❖ Pension Obligations
 - ❖ Benefits
 - ❖ Public Property – Increase in Rental Space Cost
 - ❖ Additional Adjustments for Projected Operating Expenses
 - ❖ Personnel services is projected to increase to accommodate additional headcount for in-sourcing initiatives to support the capital improvement program, the consent order and agreement as well as continuing to maintain infrastructure and Pension contributions as a result of increased staffing
 - ❖ Professional services is projected to increase to accommodate the budgeting of city grants to low income customers (contra revenue), additional maintenance at our plants, pumping stations and stormwater facilities and additional utility mark outs of water and sewer infrastructure.
 - ❖ Supplies and Equipment costs are projected to increase to accommodate the increased use of chemicals, additional parts for equipment and the anticipated implementation of AMI costs.
 - ❖ Reimbursement to the general fund for an upfront payment to construct combined sewer outfall in fiscal years 2017 & fiscal year 2018.
 - ❖ Operating Expenses for fiscal years 2017 through 2021 include an additional \$3.55 million of Stormwater Management Incentive Program (SMIP) and Greened Acre Retrofit Program (GARP) costs.
 - ❖ Liquidated encumbrances are anticipated to be \$19 million in fiscal year 2016 based on the outstanding balance of prior year obligations. Liquidated encumbrances for fiscal years 2017 to 2021 are projected to be 12% of projected Services (class 200) and Materials and Supplies (class 300) expenses in each fiscal year.



DEBT SERVICE ASSUMPTIONS AND PROJECTIONS

The six-year financial plan reflects the following major assumptions for projected bond issuance:

1. Interest on variable rate debt assumed to be 3.0 percent in FY2016 through FY2021
2. Interest on Fixed debt assumed to be 5.25 percent in FY2017 through FY2020
3. Interest on Fixed debt assumed to be 5.50 percent in FY2021
4. FY2016 - \$0
5. FY2017 – \$270.0 Million
6. FY2018 – \$275.0 Million
7. FY2019 – \$280.0 Million
8. FY2020 – \$270.0 Million
9. FY2021 – \$285.0 Million
10. Projected debt service for FY2017 and FY2018 reflect interest only payments, thereafter a level debt service amortization is assumed
11. Projected debt service reflects current Pennvest amortization schedules

The six-year financial plan reflects the following minimum assumptions for debt service coverage, pay as go capital and fund balances:

1. FY2015: 1.23
2. FY2016: 1.24
3. FY2017: 1.25
4. FY2018: 1.26
5. FY2019: 1.35
6. FY2020: 1.35
7. FY2021: 1.35
8. Capital Account Deposit
 - A. Projected FY2015 Capital Account Deposit based on 1% of FY2014 net plant investment (original cost less depreciation)
 - B. Projected FY2016 to FY2021 Capital Account Deposit inflated 2.5% per year



Financial Projections

Historical and Projected Water Department Debt Service Coverage (\$000s)

Description	HISTORICAL			PROJECTED					
	FY2013	FY2014	FY2015 (Unaudited)	FY2016 (Projected B&V)	FY2017	FY2018	FY2019	FY2020	FY2021
Total Water & Wastewater Service Revenue	595,278	633,627	665,198	644,101	675,376	707,463	736,593	767,407	805,815
Other Income ¹	12,012	9,392	11,648	23,800	23,178	6,889	24,980	5,355	4,514
Revenues	607,290	643,019	676,846	667,931	698,554	714,352	761,573	772,762	810,329
Transfer From / (To) Rate Stabilization Fund	4,666	(22,925)	(21,456)	36,900	19,300	39,000	(12,300)	(100)	1,200
Revenues Including RSF Transfer	611,956	620,094	655,390	704,831	717,854	753,352	749,273	772,662	811,529
Total Operating Expense	(399,316)	(410,797)	(426,767)	(452,179)	(480,917)	(494,508)	(506,897)	(520,482)	(535,274)
Adjustment between Debt Service and Net Operating Expenses due to Timing Differences			4,470						
Liquidated Encumbrances ²	31,148	37,436	19,389	21,105	22,746	23,051	23,575	24,200	24,820
Net Operating Expenses	(368,168)	(373,361)	(402,908)	(431,074)	(458,171)	(471,457)	(483,322)	(496,282)	(510,454)
Net Revenues Available for Debt Service	243,788	246,733	252,482	273,757	259,683	281,895	265,951	276,380	301,075
Total Senior Debt Service	(201,015)	(201,710)	(205,270)	(220,713)	(207,715)	(223,661)	(196,920)	(204,693)	(222,948)
Total Subordinate Debt Service									
Net Revenues	42,773	45,023	47,212	53,044	51,968	58,234	69,031	71,687	78,127
Capital Account Deposit ³	(19,380)	(20,194)	(20,705)	(21,215)	(21,745)	(22,289)	(22,846)	(23,417)	(24,003)
Residual Fund Deposit from Water Operating Fund	22,833	24,829	26,507	31,819	30,223	35,945	46,185	48,270	54,124
Residual Fund Deposit from Interest Earnings on DSRF	560		746	843	794	799	766	764	813
Transfer to Construction Fund	-	-	(36,811)	(31,800)	(30,400)	(35,900)	(46,300)	(48,300)	(54,200)
Transfer to City General Fund (SCOOP)	(560)	(400)	(746)	(789)	(794)	(799)	(766)	(764)	(813)
Transfer to Debt Service Reserve Fund	(22,400) ⁴	-	-	-	-	-	-	-	-
Total Senior Debt Service Coverage	1.21	1.22	1.23	1.24	1.25	1.26	1.35	1.35	1.35
Total Coverage	1.11	1.11	1.12	1.13	1.13	1.15	1.21	1.21	1.21

¹ Includes other operating and non-operating income, including interest income on funds and accounts transferable to the Revenue Fund. Other income shifts due to DSRF release and allocation of miscellaneous revenues

² Liquidated Encumbrances are assumed as contra-expense

³ FY2015 transfers to Capital Fund is true-up for missed transfer in FY2014

⁴ Transfer from RSF to DSRF to fund AGM policy which no longer meet the rating requirements of the General Bond Ordinance.



Projected Cash Balances and Liquidity

Historical and Projected Wastewater System Cash Balances (\$000)

	HISTORICAL			PROJECTED					
	FY2013	FY2014	FY2015 (unaudited)	FY2016 (Projected B&V)	FY2017	FY2018	FY2019	FY2020	FY2021
Water Operating Fund ¹	82,494	71,136	79,976	70,000	70,000	70,000	70,000	70,000	70,000
Water Capital Fund ²	150,604	260,834	446,819	236,970	278,466	308,460	354,465	375,260	426,273
Water Rate Stabilization Fund	161,239	184,631	206,298	169,306	150,006	111,006	123,306	123,406	122,206
Water Residual Fund	2,085	25,275	14,990	15,255	15,132	15,232	15,170	15,194	15,173
Total Liquidity	396,422	541,876	748,083	491,531	513,604	504,698	562,941	583,860	633,652
Unrestricted Fund Balances ³	245,818	281,042	301,264	254,561	235,138	196,238	208,476	208,600	207,379
Restricted Fund Balances ⁴	150,604	260,834	446,819	236,970	278,466	308,460	354,465	375,260	426,273

Source: Philadelphia Water Department; Based on non-GAAP financials and forecasts

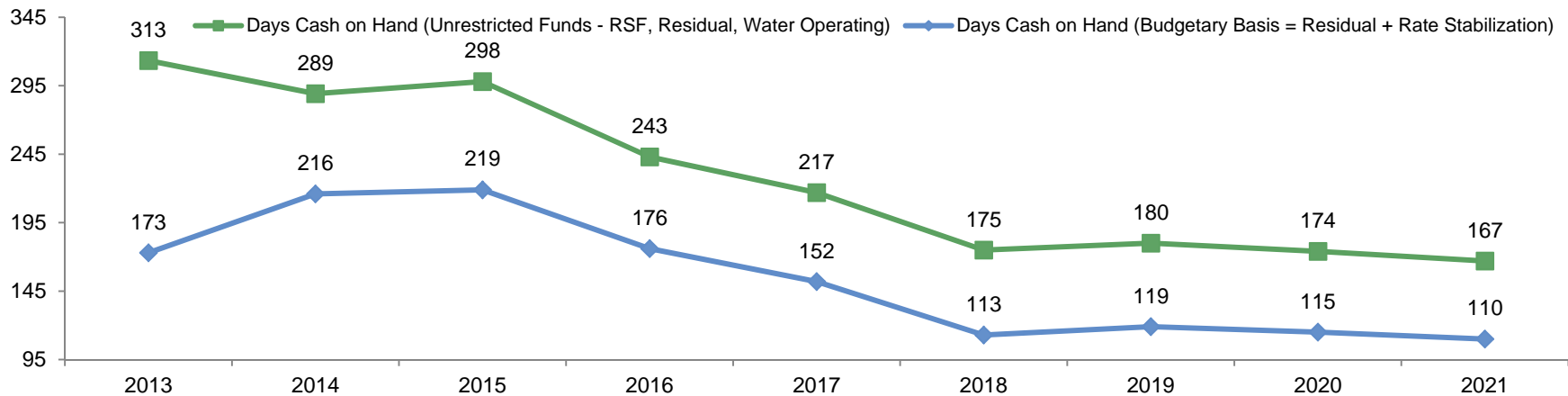
¹ Represents Current Asset - Equity in Treasurer's Account

² Represents bond proceeds and self generated funds dedicated for capital projects

³ Unrestricted fund balances include working capital, monies in the RSF and Residual Funds

⁴ Restricted fund balances include bond proceeds and self generated funds dedicated for capital projects

Historical and Projected Days Cash on Hand



Source: Philadelphia Water Department

Assumptions: Pro-forma Operating expense less D&A projected to grow at 3.5%; Current liabilities due from operating fund projected to grow at 1%; Non-current equity in Treasurer's account and cash restricted for capital projects sourced from Black & Veatch Projected Revenue and Revenue Requirements Table 1



Summary of Rating Agency Measurements and Peers





Executive Summary – Sector Review

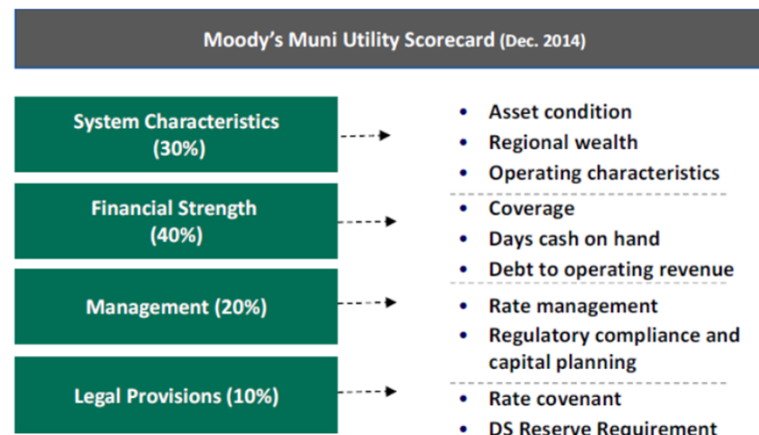
- ❖ Rating Agency outlook for the U.S. water and sewer sector is stable despite ongoing operating and capital pressures. Economic recovery is uneven across the US regions.
- ❖ Water and sewer systems typically display robust credit characteristics due to monopolistic nature of service. 58 percent of large systems are rated “AA” (S&P).
- ❖ General credit strengths that support credit quality and rating stability include strong financial and operating performance and affordable debt levels.
- ❖ Local rate setting is a key factor in the sector’s performance and stability. Fitch notes that Northeast systems financial results are flat, while debt levels are up, debt burden is down slightly. Reflects increased revenue to offset increased investment in capital.

Source. Public Financial Management, Financial Advisor to the City of Philadelphia, Water Department.



New Rating Methodologies

- ❖ The three major rating agencies have developed industry-specific rating methodologies, and have identified the particular financial metrics they use to determine their ratings. Below and in the following pages, we have reviewed the three rating agency factors.
- ❖ Moody's released a new rating methodology for municipal utilities in December 2014. The methodology includes: (i) a scorecard that assigns weights and values to the factors we consider most important in utility revenue bond analysis and (ii) a framework for approaching the relationship between a municipality's revenue bonds and its General Obligation bonds, in cases when these securities exhibit disparate credit quality.
- ❖ Primary factors that drive the credit analysis for utilities are the size and health of the system and its service area, the financial strength of its operations, the legal provisions governing its management, and the strength of its rate management and regulatory compliance.¹

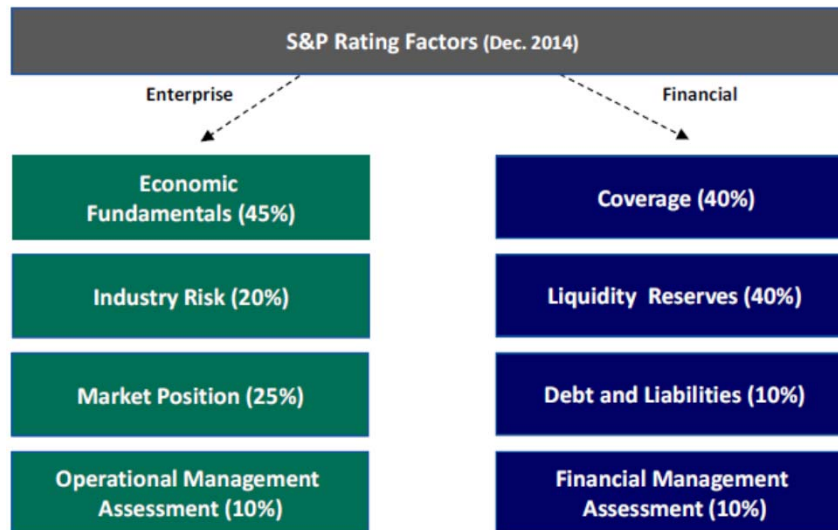


¹ Source: Moody's Investors Service, US Municipal Utility Revenue Debt, December 2014.



New Rating Methodologies

- ❖ S&P proposed a new rating methodology for municipal utilities in December 2014. The proposed criteria use the same framework as criteria for other municipal enterprise sectors. Specifically, the criteria assign ratings using a framework that considers enterprise risk (enterprise profile) and financial risk (financial profile). One depicts how the enterprise and financial profile assessments interact with overriding factors and peer comparisons to arrive at the final rating.
- ❖ The enterprise risk profile and financial risk profile will be measured through an evaluation of the following factors, with the respective weights in parentheses¹

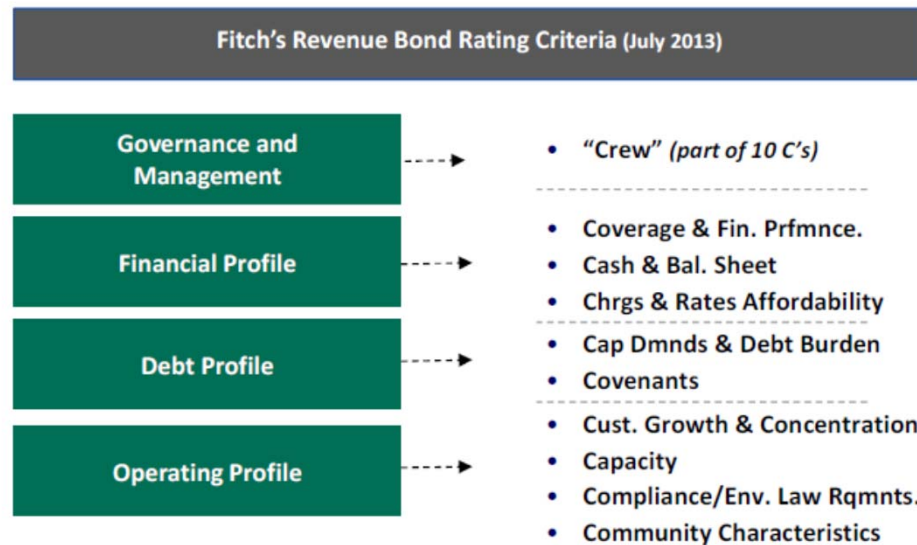


¹ Source: S&P Ratings Services, US Public Finance Waterworks, Sanitary Sewer, And Drainage Utility Systems, December 2014.



New Rating Methodologies

- ❖ Fitch focuses its rating analyses to specific factors known as the “10 Cs”, which are a subset of the Revenue-Supported Rating Criteria. The 10 Cs include: (i) crew, an informal term for management, (ii) coverage and financial performance, (iii) cash and balance sheet considerations, (iv) charges and rate affordability, (v) capital demands and debt burden, (vi) covenants, (vii) customer growth and concentration, (viii) capacity, (ix) compliance with environmental laws and regulations, and (x) community characteristics.



1 Source: Fitch .



Rating Agency Economic / Financial Measures

- ❖ A significant portion of issuer ratings are not controlled by the issuer
 - ❖ Region's underlying economics are important
 - ❖ Approximately 12.5% of Moody's scorecard is related to Service Area Wealth and approximately 35% of S&P ratings are derived from economic statistics
- ❖ Economic metrics which play a large role in rating methodologies
 - ❖ Percent of population in poverty
 - ❖ Median household income and relationship to US median household income
 - ❖ Annual utility bill as percent of median household income
- ❖ Rating of municipal utility often tied to rating of parent City
- ❖ Water Department cannot control economic metrics and should continue to focus on the tools/metrics that are in our control
 - ❖ Senior Debt Service Coverage
 - ❖ Days Cash on Hand
 - ❖ Pay as you go capital funding



Major Credit Factors for the City of Philadelphia Water Department

Fitch Rated: A+/Stable Outlook (3/23/2015)	Moody's Rated: A1/Stable Outlook (3/19/2015)	S&P Rated: A/Positive Outlook (3/20/2015)
Strengths		
<ul style="list-style-type: none"> Essential service provider to large and diverse regional service area Ample water supply and overall system treatment capacity 	<ul style="list-style-type: none"> Large and diverse service area, stable operating profile Narrow but consistent debt service coverage Demonstrated willingness to increase user rates 	<ul style="list-style-type: none"> Diverse and broad service area Competitive rate structure Stable financing performance
Challenges		
<ul style="list-style-type: none"> Relatively weak demographics in the city Above average debt levels with sizeable additional borrowing plans Narrow debt service coverage levels 	<ul style="list-style-type: none"> A moderately weak legal structure that allows for the use of RSF to meet coverage Narrow debt service coverage Above average leverage with significant additional debt planned Relatively weak demographics 	<ul style="list-style-type: none"> Weaker economic profile Overreliance on Rate Stabilization Fund withdrawals to support operations \$1.8 billion capital improvement program will require additional debt financing for a utility that is highly leveraged.
Positive Credit Impact Items		
<ul style="list-style-type: none"> Continued sound management and stable operations Continued and improving liquidity Continued compliance with consent order and agreement 	<ul style="list-style-type: none"> Improvement in debt service coverage more consistent with peer credits Increased improvements in service base 	<ul style="list-style-type: none"> Financing performance meets or exceeds current projections No significant costs or unanticipated projects beyond current CIP City economic profile continues to steadily improve



Water and Sewer Peer Review

	Philadelphia Water Department Philadelphia	Baltimore Department of Public Works Baltimore	DC Water Washington, DC	New York City Water New York City	Chicago Department of Water Management Chicago
System Founding	1801	1787	1935/1996	1776	1851
Population (millions)	1.56	0.62	0.66	8.49	2.72
Consent Order or Consent Decree?	Yes	Yes	Yes	No	No
CIP Size (bn)	\$1.78	\$3.7	\$3.80	\$17.00	\$2.88
Utility Ratings Fitch / Moody's/S&P	A+/A1/A	NR/Aa2/AA	AA-/Aa3/AA-	AA+/Aa2/AA+	AA+/Baa1/A
City Ratings Fitch / Moody's/S&P	A-/A2/A+	NR/Aa2/AA	AA/Aa1/AA	AA/Aa2/AA	BBB+/Baa2/BBB+
Median Household Income ¹	\$36,200	\$41,385	\$65,830	\$52,259	\$47,270
Unemployment Rate ¹	8.0%	8.7%	7.8%	6.5%	7.7%

¹ Median Household Income and Unemployment Rate relate to the City proper and do not include the service area outside of the City.



Peer Rating Agency Comparison

	Philadelphia Water Department Philadelphia	Baltimore Department of Public Works Baltimore	DC Water Washington, DC	New York City Water New York City	Department of Water Management Chicago
Service Area	Large/Diverse	Large/Diverse	Stable	Large/Diverse	Large/Diverse
Good Management Review?	Yes	Yes	Yes	Yes	Yes
Liquidity (days cash on hand)	250 – 289 ²	142	200-328	290	269-440
Total Long Term Debt (bn)	\$1.9	\$1.2	\$2.5	\$30.2	\$2.4
Remaining Useful Life	23 years	63 years (water) 30 years (sewer)	63 years	38 years	64 years (water) 59 years (sewer)
Senior Lien Rate Covenant	1.20X	1.15X	1.20X	1.15X	1.20X (water) 1.25X (sewer)
Actual Coverage	1.30X-1.40X ^A	1.63X (water) 1.42X (sewer)	1.45X-1.73X ^A	3.75X	2.30 X(water) 1.70X (sewer)

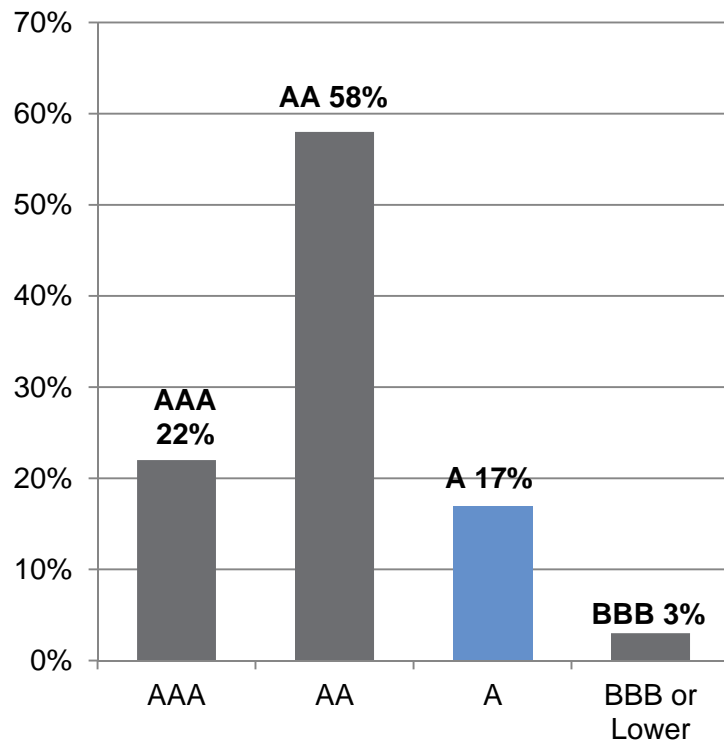
² A range indicates that S&P and Moody's provided different estimates for the metric.



Rating Distribution of Large Systems

Standard & Poor’s utility rating distribution for issuers with population of 500,000 and higher is presented below.

The majority of PWD peer systems are currently rated in the “AA” Category.



City	Rating
Boston Water and Sewer Commission	Aa1/AA+/AA+
City of Cleveland Water Enterprise	Aa1/AA
City of Baltimore Water and Sewer Enterprise	Aa2/AA-
District of Columbia Water and Sewer	Aa2/AA/AA-
Chicago Department of Water Management	AA+/Baa1/A
Louisville and Jefferson County Metropolitan Sewer District	Aa3/AA/AA-
New York City Municipal Water and Finance Authority	Aa2/AA+/AA+
Northeast Ohio Regional Sewer District	Aa1/AA+
Philadelphia Water Department	A1/A/A+

Source. Public Financial Management, Financial Advisor to the City of Philadelphia, Water Department.



Key Credit Ratio Peer Review

Moody's: U.S. Water and Sewer Credit Ratios: Medians (FY 2014)	PWD		A	AA
Total Long Term Debt (\$000)	1,830,387		27,883	79,663
Total Operating Revenues (\$000)	610,988		11,590	34,964
Operating ratio (%)	56.50		62.20	59.60
Debt Ratio (%)	66.70		37.30	31.80
Total Annual Senior Lien Debt Service Coverage (x)	1.40		2.54	2.40
Total Annual Debt Service Coverage (x)	1.40		1.81	2.03
Fitch: U.S. Water and Sewer Credit Ratios: Medians (FY 2014)	PWD	Large System (>500,000)	A	AA
	1,607,000 (water)			
Population	2,300,000 (wastewater)	928,281	139,915	339,172
MHI \$ ¹	45,303	50,065	43,197	62,688
Total Water Customers	475,000	218,450	20,930	90,576
Total Sewer Customers	530,000	237,446	34,933	94,179
Average Annual CIP Costs Per Customer \$	201	318	352	260
CIP Debt Financed %	70	58	64	35
Debt to Equity (x)	7.2	5.9	9.5	3.6
Total Outstanding Long-Term Debt Per Customer \$	1,926	2,382	2,218	1,934
Senior Lien ADS Coverage	1.40	2.3	2.4	2.5
Days Cash on Hand	290	296	366	442
Standard & Poor's: U.S. Water and Sewer Ratios: Medians (FY 2013)	PWD	Pop Above 500,000	A	AA
	1,700,000 (water)			
Population	2,300,000 (wastewater)	998,454	18,919	74,051
EBI as % of U.S.	75.4	98	85	103
Water Rate \$	28.71	30.12	40.84	32.84
Sewer Rate \$	35.52	42.54	40.45	38.81
Total Operating Revenues \$	639,974	174,087	4,245	15,835
Days' Cash (Excluding RSF*)	60-90*	281	283	417
Senior-lien Debt Service Coverage	1.20	2.02	1.73	2.4
All-in Debt Service Coverage	1.20	1.53	1.43	1.87

¹ Fitch and S&P count customers served by wholesale agreements as direct customers of the system

Source: Public Financial Management, Financial Advisor to the City of Philadelphia, Water Department.



Source Documents

City of Philadelphia, Water Department Rating Reports

1. FITCH RATING REPORT - http://www.phila.gov/investor/Bond_Ratings.html
2. MOODY'S RATING REPORT - http://www.phila.gov/investor/Bond_Ratings.html
3. S&P's RATING REPORT - http://www.phila.gov/investor/Bond_Ratings.html

Special Commentary

1. Fitch, 2015 Water and Sewer Medians, Special Report
2. Moody's, US Municipal Utility Revenue Debt
3. S&P, 2014 Review of US Municipal Water and Sewer Ratings

A wide-angle photograph of the Philadelphia skyline across the Schuylkill River. The river flows from the foreground towards the city, with a bridge visible in the middle ground. The skyline is filled with various skyscrapers, including the Comcast Center on the right. The foreground is lined with lush green trees and foliage. The sky is a clear, pale blue with some light clouds.

Philadelphia Water Department