

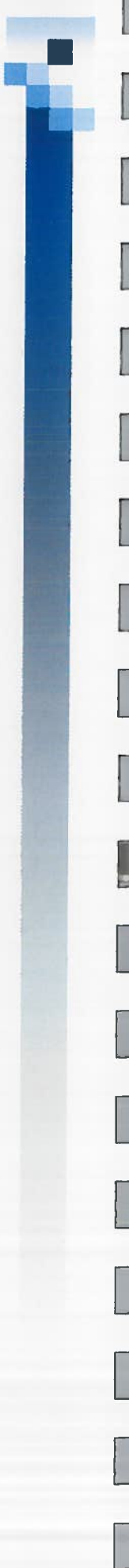


Rate-Setting Considerations

Philadelphia Water Rate Board

February 18, 2016

Amawalk
Consulting Group LLC



Contents

- Potential Decisions for the Board's Consideration
- Policy Decision: Rate-Setting Objectives
- Rate-Setting Process Overview
- Revenue Requirements (\$ to be Raised to Pay the Bills)
 - Operation & Maintenance Expenses
 - Debt Service for Future Debt/Cash-Financed Capital
 - Rate Covenant/Contingencies
- Policy Decision: Role of the Board in Revenue Requirements, Cost of Service, Customer Classes & Rates
- A Few Observations
- Current Rate Design
- Affordability Program
- Appendix



Potential Decisions for the Board's Consideration

- Board Policies:
 - Rate-Setting Objectives
 - Capital Financing & Reserves
 - Cash Management & Investment
- Role of the Board in Revenue Requirements, Cost of Service & Customer Classes & Rates
- Appendix: Role of the Board After Rate-Setting



Policy Decision: Rate-Setting Objectives (1)

- ***Equity*** - Rates should be similar for customers or customer classes served under similar conditions; resulting in no undue discrimination among customers or customer classes.
- ***Revenue Adequacy and Stability*** - Rates produce sufficient revenues to pay: principal & interest on debt; annual capital costs paid from revenues; the cost to operate and maintain the system; required deposits to maintain reserves or otherwise satisfy bond covenants and desired credit ratings; and other funds needed to preserve financial integrity. It is also suggested to smooth out rate increases, no dramatic rate changes from year-to-year.
- ***Efficiency*** - Use the rate schedule to encourage the wise use of the utility resources to achieve objectives such as water conservation and economic development.

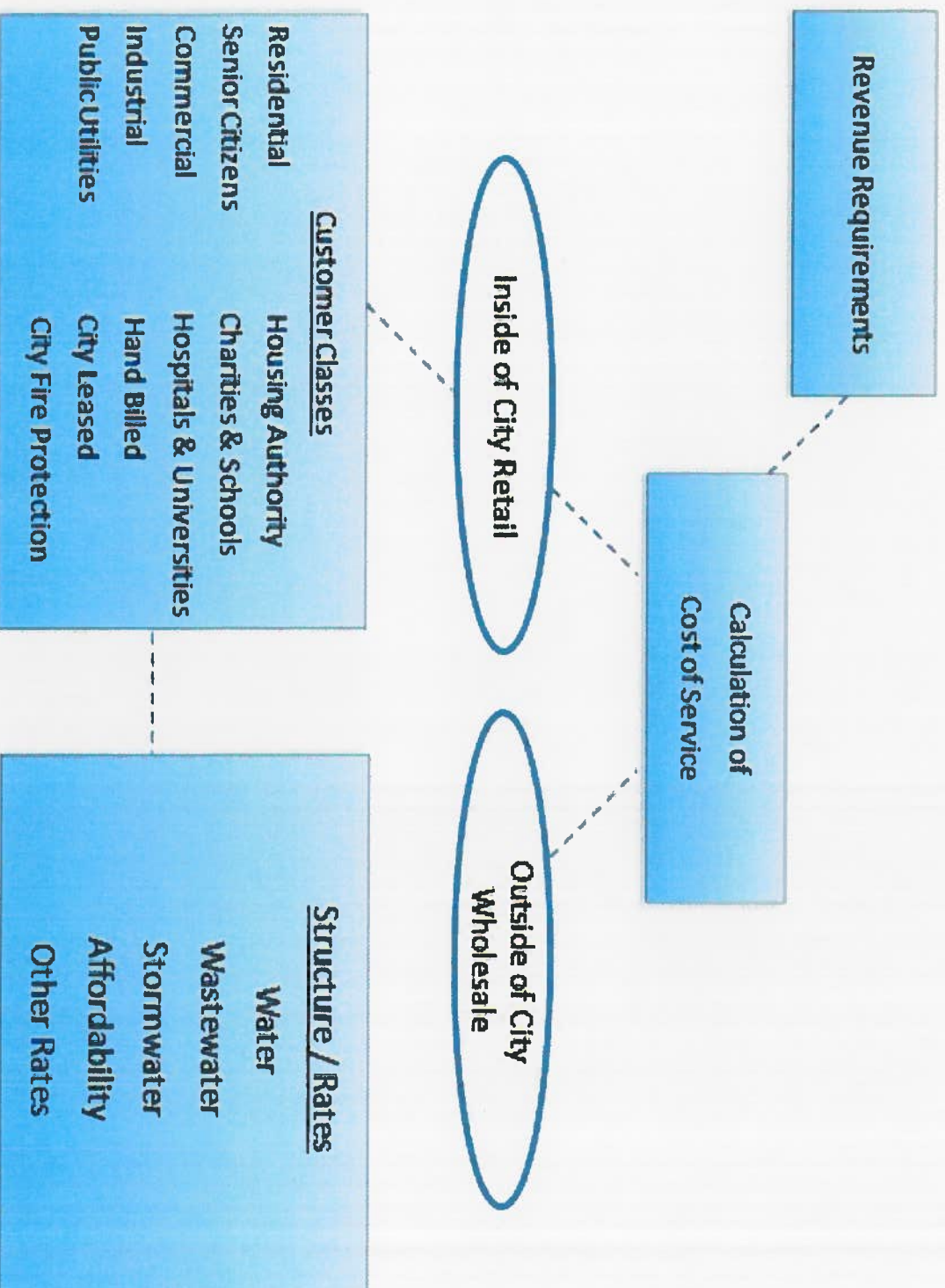


Policy Decision: Rate-Setting Objectives (2)

- ***Public Understanding and Acceptance*** - The rate structure should be understandable and acceptable to the rate-paying population in order to maintain customer satisfaction and to enable users to make rational decisions regarding their purchase of services.
- ***Administrative Feasibility*** - Practical limits should be considered placed on the number of customer classes, the complexity of the rate schedule and other billing-related matters. There is a balance between the complexity of the rate structure in ensuring fairness as well as the logistics and cost associated with administering such a structure.
- ***Defensibility*** – Rate structures should be able to withstand challenges from customers or other parties.

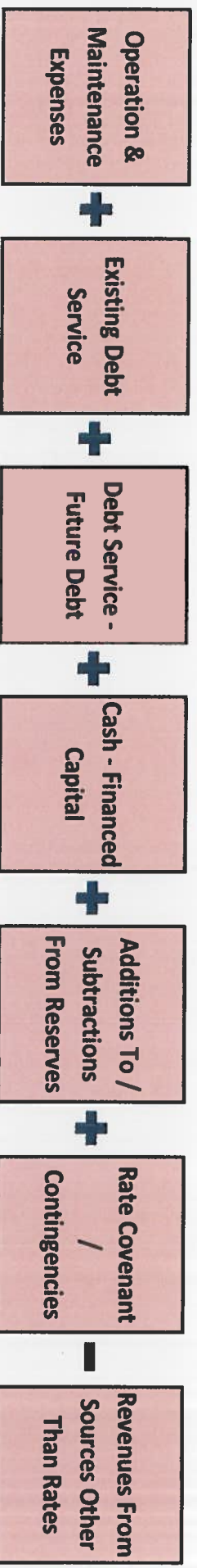
There are other potential objectives to consider, e.g., assisting customers in need, or achieving designated levels of financial performance

Rate-Setting Process: Overview



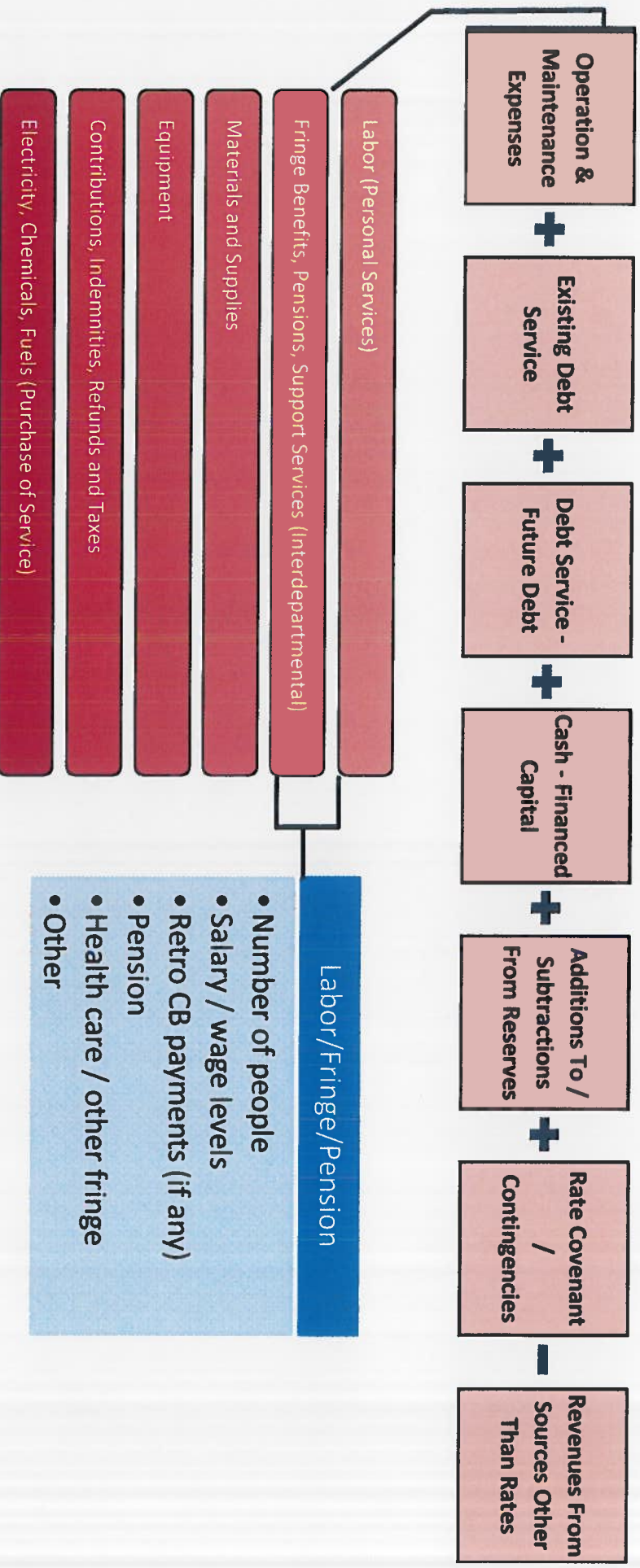
Revenue Requirements

How much money needs to be raised from rates in each year?



Revenue Requirements

Examples of the Operation & Maintenance Expense Components



Revenue Requirements

Debt Service for Future Debt/Cash-Financed Capital

Sources of CIP funds: New debt + cash from System revenues

Projected Flow of Funds - Construction Fund

(in thousands of dollars)

Line No.	Description	Fiscal Year Ending June 30,		
		2016	2017	2018
Disposition of Bond Proceeds				
1	Proceeds From Sale of Bonds	0	270,000	275,000
	Transfers:			
2	Debt Reserve Account (a)	0	0	7,219
3	Cost of Bond Issuance (b)	0	4,050	4,125
4	Construction Fund (c)	0	265,950	263,656
5	Total Issue		270,000	275,000
Construction Fund				
6	Beginning Balance	391,103	191,418	210,568
7	Transfer From Bond Proceeds	0	265,950	263,656
8	PENNVEST Loan Proceeds	0	7,155	0
9	Capital Account Deposit	21,215	21,745	22,289
10	Transfer from Residual Account	31,100	30,300	35,400
11	Total Available	443,418	516,568	531,913
12	Net Cash Financing Required	-252,000	-306,000	-324,001
13	Ending Balance	191,418	210,568	207,912

Impact on annual revenue requirements

These amounts are new debt; there will be debt service to pay in subsequent years

Cash to be used for capital construction

Revenue Requirements

Rate Covenant/Contingencies

Rate Covenant Compliance

	FY14	FY13	FY12
Coverage A¹:			
Net Revenues	\$246,733	\$243,788	\$229,680
/Revenue Bonds Debt Service	\$201,710	\$201,015	\$191,400
= Coverage A	1.22	1.21	1.2
Coverage B²:			
Net Revenues	\$246,733	\$243,788	\$229,680
/Total Debt Service + Transfer to Capital Fund	\$221,904	\$220,395	\$211,290
= Coverage B	1.11	1.11	1.09
Coverage C³:			
Net Revenues +/- Transfer (To) From Rate Stabilization Fund	\$269,658	\$239,122	\$238,206
/Revenue Bonds Debt Service	\$201,710	\$201,015	\$191,400
= Coverage C	1.34	1.19	1.24

¹**Coverage A:** Net Revenues at least equal to 120% of the Debt Service Requirements (excluding debt service due on any Subordinated Bonds).

²**Coverage B:** Net Revenues must equal at least 100% of: (i) the Debt Service Requirements (ii) amounts required to be deposited for Subordinated Bonds (iii) amounts required to be deposited into the Debt Reserve Account (iv) debt service on all 6.0 Bonds issued for the Water and Wastewater Systems (v) debt service payable on Interim Debt and (vi) the Capital Account Deposit Amount less amounts transferred from the Residual Fund to the Capital Account.

³**Coverage C:** As long as the Insured Bonds are outstanding, Net Revenues (excluding amounts transferred from the Rate Stabilization Fund into the Revenue Fund) at least equal to 90% of the Debt Service Requirements (excluding debt service on any Subordinated Bonds).

Source: OS for 2015A/B Bonds

More money
has to be raised
each year than
is actually
needed to pay
bills – the
pledge made to
bondholders as
part of the rate
covenant
requires this
excess of funds
to achieve
“coverage”




Policy Decision: Board Role in Revenue Requirements, Cost of Service & Rates

- How much input does the Board have to the revenue requirements?
 - O&M expenses
 - CIP
 - Capital financing strategy
 - Other components including reserves, covenant compliance, etc.
- How much input does the Board have to the cost of service computations and customer class designations?
- Board responsibility for rate-setting:
 - Water, wastewater & stormwater rates, other rates & charges
 - Affordability program
- Policies and practices in first rate-setting could differ in future rate-settings, at the discretion of the Board



A Few Observations

- Things that are helpful to understand for the process:
 - Historical budget vs actual revenues, expenses, et al
 - Operating, capital and system strengths as well as opportunities for improvement
 - Risks and how they are mitigated
 - Rate projections after the next two years
- Annual revenues and expenditures are a closed loop: a few more \$ raised or a little less \$ spent than budgeted rolls forward to a subsequent year for the benefit of ratepayers
- Rate-setting is a zero sum practice: a little less in charges for one group means that another group has to pay more
- No rate structure is perfect: typically cannot satisfy every objective simultaneously



Rate Design – Current Household Structure

What's in my bill?

Your bill consists of three parts:

A USAGE CHARGE for treatment and delivery of drinking water, the collection and treatment of sewage and related environmental services;

A SERVICE CHARGE for costs associated with metering, billing and collection operations; and

A STORMWATER CHARGE for the costs of collection and treatment of all rain water in the City that drains to our waterways or to our sewer collection system.

Most customers, including households and small businesses, have a 5/8-inch meter.

Source: PWD

USAGE CHARGES

Water Usage:

600 cf x \$39.05/1000 cf = \$23.43

Wastewater Usage:

600 cf x \$28.07/1000 cf = \$16.84

SERVICE CHARGE

For a 5/8-inch meter: \$13.01

(See table to the right for allocation between water and sewer charges.)

STORMWATER CHARGE	\$14.15
--------------------------	----------------

TOTAL MONTHLY BILL	\$67.43
---------------------------	----------------

(Includes Usage, Service & Stormwater Charges)

Rate Design – Comparison With Peers

Municipalities	Minimum Charge	Fixed \$/Bill	Fixed \$/Meter Size	Capital Recovery Fee	Water Consumption ¹	Wastewater Use [*]	Stormwater Charge ^{**}	Senior Discount	Other Affordability Prog	Wholesale/Outside-of-City
Philadelphia	✓	✓	✓		D	U	GA, IA	✓	✓	✓
DC				✓	I ¹	U	IA		✓	✓
New York	✓				U	U			✓	✓
Baltimore	✓	✓ ²			D	U	IA	✓	✓	✓
Boston					I	I		✓		
Pittsburgh	✓	✓		✓	U	U				✓
Allentown			✓		U	U				✓
Columbus		✓ ³	✓ ³		I ³	U	IA	✓	✓	✓
Cleveland	✓ ⁴	✓ ⁴	✓ ⁴		I	U	IA	✓	✓	✓
Atlanta		✓			I	I		✓	✓	✓

* Legends: U = Uniform, I = Inclining, D = Declining

** Legends: GA = Gross Area, IA = Impervious Area

¹ DC Water's water rate structure is inclining for residential and uniform for non-residential

² The state of Maryland charges a flat Bay Restoration Fee per Equivalent Dwelling Unit for wastewater discharge cleanup

³ Columbus charges meter-based fee for water and bill-based fee for sewer; water rate structure is inclining for residential and declining for commercial

⁴ Cleveland Water charges a meter-based fee; Northeast Ohio Regional Sewer District charges a per bill fixed fee;

Cleveland Water Pollution Control charges a minimum fee per bill and a meter-based fixed fee



Affordability Program

- Excerpts from the Council Ordinance:

(3) The IWRAP program is authorized under the following terms and conditions: (a) Monthly IWRAP bills shall be affordable for low-income households, based on a percentage of the household's income and a schedule of different percentage rates for (i) households with income up to fifty percent (50%) of FPL, (ii) households with income from fifty percent (50%) to (100%) of FPL, and (iii) households with income from one hundred percent (100%) to one hundred fifty percent (150%) of FPL, and shall be charged in lieu of the Department's service, usage, and stormwater charges. That goal shall be achieved through a discount on generally-applicable residential rates or other bill calculation mechanism based upon each Customer's actual income and, if practicable, historical usage, in a manner consistent with applicable federal law. The percentage of income limitations to be imposed at each level by the first sentence shall be determined by the Water, Sewer and Storm Water Rate Board, which also shall have discretion to establish more, but not fewer, Low-Income tiers.



Affordability Program

- Some challenges:
 - Achieving a high participation rate among eligible households
 - Updating the eligibility of a property for benefits as income changes and/or customers move
 - Making sure that the benefits are going to the desired portion of the customer base and not to unintended recipients
 - Keeping administrative costs low relative to the benefits provided
 - Keeping the effect of program benefits and costs reasonable for other ratepayers (zero sum practice)



Appendix

- Financial Policies: DC Water Example
- User Charges: Comparisons With Peers
- Rate-Setting: Comparisons With Peers
- Policy Decision: Board Role After Rate-Setting



Policy Decision: Financial Policies – DC Water Example

DC Water's Board of Directors has adopted a series of key financial policies for financing, rate-setting, and cash and investment management. These policies have served as the key parameters used to successfully develop DC Water's ten-year financial plan, Capital Improvement Program and operating budgets. The policies will continue to guide the development and implementation of the Authority's long-term financial plans.

Capital Financing and Reserves Policy

- Senior debt service coverage will be maintained at 140%, exceeding DC Water's bond indenture requirements of 120%.
- Cash reserves will be maintained at a level equivalent to 120 days operating expenses (objective \$125.5 million).
- A portion of the capital program will be financed on a pay-go basis from cash reserves that exceed the operating and maintenance reserve level, thereby reducing the need for long-term debt.
- DC Water will secure the least costly financing for capital projects based on careful evaluation of the Authority's financial position and capital operating needs.

Rate-setting and Budgetary Policy

- Rates that, together with other revenue sources, cover current costs and meet or exceed all bond and other financial requirements.
- Rates that yield a reliable and predictable stream of revenues.
- Rates based on annually updated forecasts of operating and capital budgets.
- Rates structures that are legally defensible.
- Rates structures that customers can understand.
- Rate increases, if required, that are implemented transparently and predictably.

To the extent annual revenues exceed costs, the Board's policy will continue to utilize all available options to mitigate future customer impacts and annual increases, including transferring some or all of such excess funds to the Rate Stabilization Fund.

Cash Management and Investment Policy

The goals of DC Water's cash management and investment policy are safety, liquidity, diversity and return on investment.

User Charges – Comparison With Peers

How will Philadelphia compare nationally?

Below is a comparison of combined water, sewer, and stormwater monthly charges in cities across the nation. Rates shown are either current, or proposed for 2016, according to available data.



Source:

Rates based on published water, sewer, and stormwater rate schedules available online as of 8/1/15 and assumes 6 CCF or 4,488 gallons of billed water and sewer discharges.

1. Effective June 2016, Chicago will raise rates when ever the Consumer Price Index raises. 2. Proposed rate for 7/1/16 was used. 3. Rate increases were approved for 2016

4. Philadelphia Water's typical residential customer average monthly bill totals have been rounded to the nearest ten cents.

Source of above chart is PWD. The results of Amawalk surveys show similar rankings for residential & commercial customers. For much larger customers, Philadelphia charges can be below peer averages since the unit rate for water declines with increasing usage.



Rate-Setting – Comparison With Peers

- Similar to Philadelphia:
 - These utilities typically have a closed financial loop so a little more \$ raised or a little less spent vs budget carries forward to a subsequent year for the benefit of ratepayers
 - Community outreach is performed
 - Multiple public hearings are held or multiple public meetings are conducted followed by one hearing
- Different from Philadelphia:
 - Less detail is provided on the components of the budget
 - Utility personnel often serve as the hearing officers
 - No compensation to outside parties for review of the proposed budget and rates
 - Costs of the rate-setting process are typically much lower



Policy Decision: Board Role After Rates

- Consider this rate-setting process and what features the Board would like to keep for the next process, additions that could be made, and what should be modified or eliminated
- Identify issues, topics or other matters that the Board wishes to have researched or analyzed with a subsequent report to the Board
- Monitor the PWD's progress on key parameters including revenue, expenditures, reserve levels, customer use/feedback on the affordability program and other performance measures vs. plan
 - “To ensure compliance with the Rate Covenant, the General Ordinance requires that the City review its rents, fees and charges promptly upon any material change in the circumstances which were contemplated at the time such rents, rates, fees and charges were reviewed, but not less frequently than once each Fiscal Year”