



Smart Management for
Small Water Systems

Water Financial Management

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Government Finance Officers Association

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Today's Topics

- ✓ Financial Capacity
 - ✓ Financial Reserves & Ratios
 - ✓ Revenue Sufficiency
 - ✓ Basics of Water Rates
 - ✓ Long-term Planning
 - ✓ Financing Water Projects
 - ✓ Credit Worthiness
- 



Why Care About Finances?

- Systems with unsustainable funding fail
- US EPA & Illinois EPA care
 - Technical, **Financial** & Managerial Capacity
- Lenders care
- Protection of health & environment
- Reflection of government/citizen trust





How are Most Utilities Funded?

- Operational Expenditures:
 - Rates & fees from customers (current)
 - Pays:
 - Labor, chemicals, repairs, consumables, energy, short-lived equipment, sometimes infrastructure
- Capital Expenditures:
 - Rates & fees from customers (over time)
 - Pays:
 - Infrastructure principal & interest



Best Practices in Utility Finances

- Utilities are self-supported financially
- Utilities neither subsidize or are subsidized by other governmental functions
 - Either directly – i.e. money transferred from water fund to street fund
 - Or indirectly – i.e. water fund pays full wages/benefits of employee who spends half their time repairing streets
- Utilities charge full cost-of-service pricing
 - Income and expenses examined regularly
 - Charge enough to maintain system – reinvest in assets
- Utilities use pricing to help reach other policy goals



Financial Capacity



Financial Capacity

- The utility has financial resources to supply safe drinking water in the short and long-term.
- Revenue Sufficiency
- Credit Worthiness
- Fiscal Management & Controls
 - Source: USEPA



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Revenue Sufficiency

- Utility has enough income to meet ongoing expenses
 - i.e. electricity, labor, chemicals, existing debt payments
- Utility has enough income to meet upcoming expenses
 - i.e., new loan payment next year, new treatment plant into service
- Utility adequately funds reserves

The background of the slide is a composite image. The top portion shows a close-up of a white pressure gauge with black markings and a needle, mounted on a red industrial pipe. The bottom and middle portions of the slide are filled with dynamic, high-speed photography of water splashing and bubbling, creating a sense of movement and energy. A semi-transparent white horizontal band is centered across the image, containing the main title.

Reserves & Ratios to Consider



Operating Reserves

- ▶ Funds on hand in case the operating expenses suddenly increase or revenue decreases
- ▶ Should be the equivalent of **at least three months** of operating costs
 - ▶ Generally aim for 6
- ▶ Think of it as a cushion, like a savings account – “just in case”



Equipment Replacement Reserves

- ▶ **NOT for large capital improvements** (new tank or well)
 - ▶ *It's for the little stuff – repairs you know have to happen and scheduled replacements (replacing meters or hydrants)*
 - ▶ *Avoid costs/time delays associated with bond or loan processes*
- ▶ **Develop inventory of your assets** (motors, vehicles, pumps, meters, etc.)
- ▶ **Prioritize your assets, estimate replacement dates**
- ▶ **Determine the costs of scheduled repairs/replacements**
- ▶ **I.e. Motor with 10 year life, estimated to cost \$20,000 in 10 yrs**
 - ▶ **Fund reserve with \$2,000 annually to replace 10 years from now**





Capital Improvement Reserves

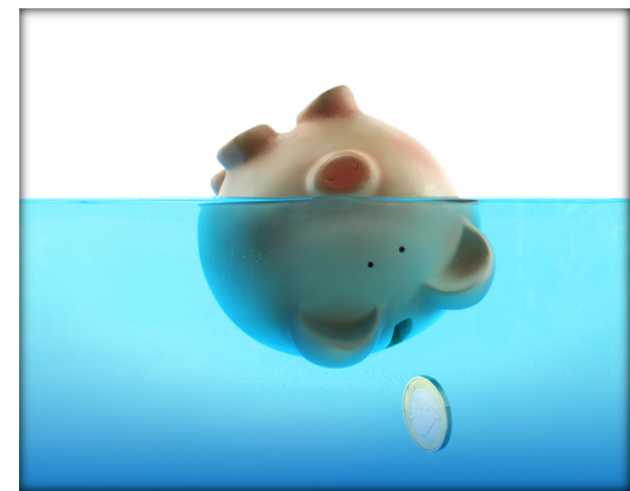
- ▶ **Necessary to pay upfront costs**
- ▶ **Engineering, land, surveys, legal, etc.**
- ▶ **Informed by Capital Improvement Plan**
- ▶ **Use reduces debt burden**
- ▶ **Reserve fund most likely to have large swings in value**
- ▶ **Best practice – transfer most depreciation expense to this fund**





Debt Reserves

- ▶ Many funding agencies **require** a debt service reserve account to be maintained (*typically at 10%*)
- ▶ The Debt Service Reserve **can** be funded from proceeds of the **loan or bonds**
 - ▶ *System could save money on financing costs if this can be funded from funds on hand*





Operating Ratio

Judges if incoming cash is sufficient

$$\text{Operating Ratio} = \frac{\text{Operating Revenues}}{\text{Operating Expenses}}$$

Needs to be greater than 1.0



Days of Cash on Hand

Shows how long system could operate without any additional income

$$= \frac{\text{Unrestricted cash \& investments}}{\text{Daily operating expenses exc. depr. \& amort.}}$$

Anything less than 3-6 months is danger zone



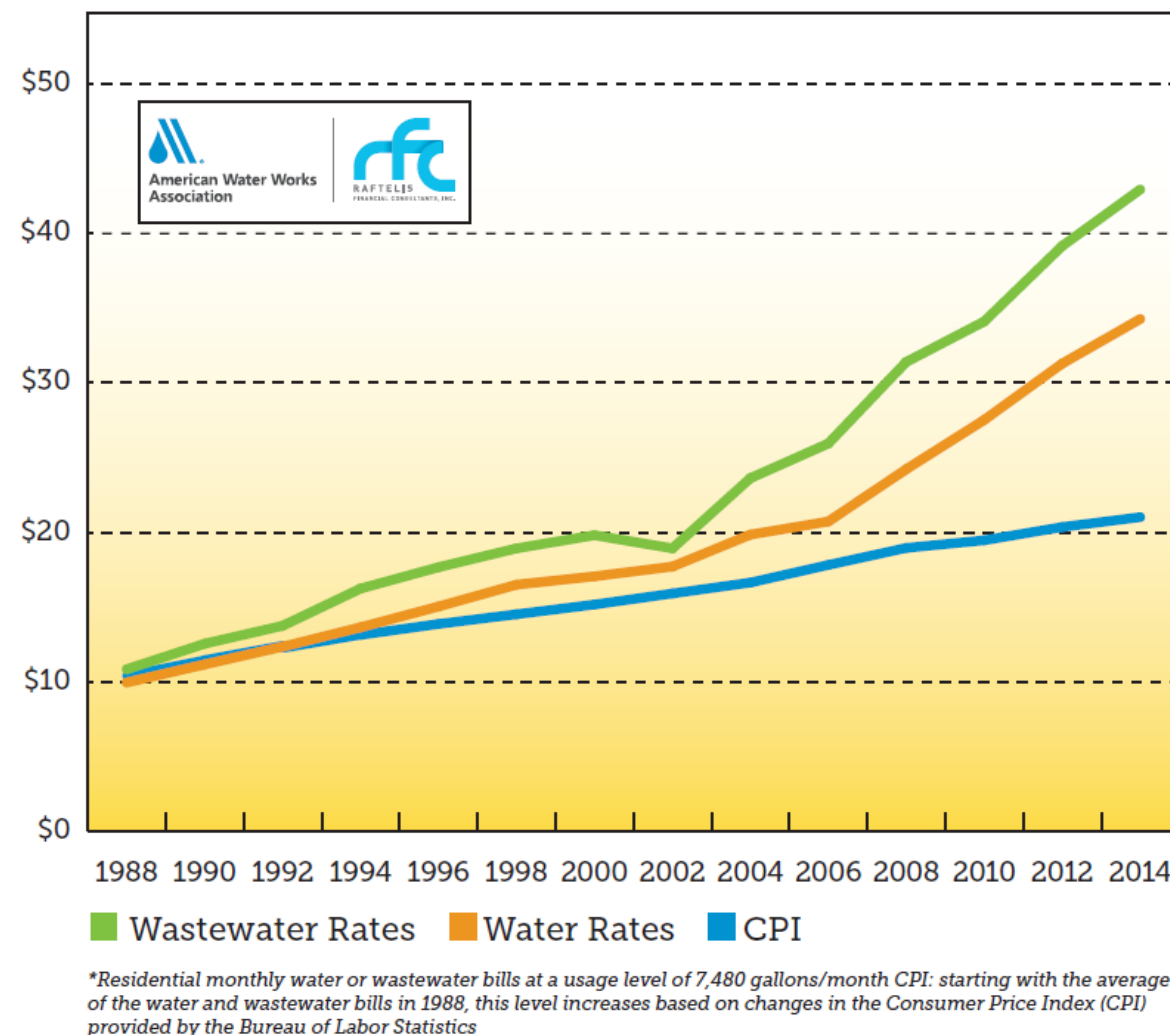
Water Rates 101

- Vast majority of water utility income from rates
 - **Need to get these right!**
- Rates should be considered annually/periodically
- Most utilities have monthly minimum and volumetric rates
 - i.e. \$25 a month for service, + \$5.00 per thousand gallons used



Water Rates 102

- Simple is better for small systems
 - Administrative burden
 - Customer confusion
- Consider the extra costs associated with:
 - High flow rates
 - High volumetric usage (particularly seasonal)
- Water service can become unaffordable





Drivers for Long-Term Planning & Finances

- Stuff wears out
- Stuff becomes obsolete
- Regulations change
- Environmental conditions change
- Stagnant or declining populations
- Understand pressures on your system



Long-term Planning Basics

- Equipment Replacement Planning
 - i.e., “Let’s set aside \$1000 annually so we can pay for a new well pump 10 years from now. That’s about how long the old one lasted”
- Capital Improvement Planning
 - i.e. replace 3 miles of water mains in 2021.
 - Finance it through USDA Rural Development
 - Increase rates by 22% by then to pay back loan



Financing Water Projects

- Large water infrastructure projects generally have debt financing.
- What is available? Who can I contact to learn more?
- Wait!!! I want a grant. Tell me about those.



Loan Programs

- Illinois State Revolving Fund
 - Water & sewer/stormwater
- USDA Rural Development
 - Water & sewer/stormwater
- Don't forget bond issuance!





Grants & Loan Principal Forgiveness

- Community Development Block Grant
- State Revolving Fund – Principal Forgiveness
- USDA Rural Development
 - Grants
 - Emergency Community Water Assistance Grants



Illinois
Department of Commerce
& Economic Opportunity



Credit Worthiness

- Lenders want their money back!
- Behave responsibly
 - Keep track of ratios over time
 - Monitor rates and income
 - Have sound policies regarding finances
 - Meet current debt obligations
 - Contact funders if seeking a loan
 - Reach out to peers & municipal advisors if issuing bonds



Questions?



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