Making Ends Meet in a Tough Economy:

The Water & Sewer Rate Study Advantage

Baxter & Woodman, Inc. Webinar

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Today's Presenters:

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Baxter & Woodman Experience

- Over 20 rate studies since 2003
- Small and large communities throughout the Chicago region
- Rate analysis and connection/impact fee studies
- Also experienced in water/wastewater master planning and facility planning

The infrastructure dilemma:

- Age: much of the water/sewer infrastructure in Chicago area is 50+ years old
- Deterioration: water main breaks, sewer backups, etc. are happening more often
- Regulations: new EPA rules require enhanced treatment and make distribution/collection system operations more involved
- Money: how to keep up in a difficult economy?

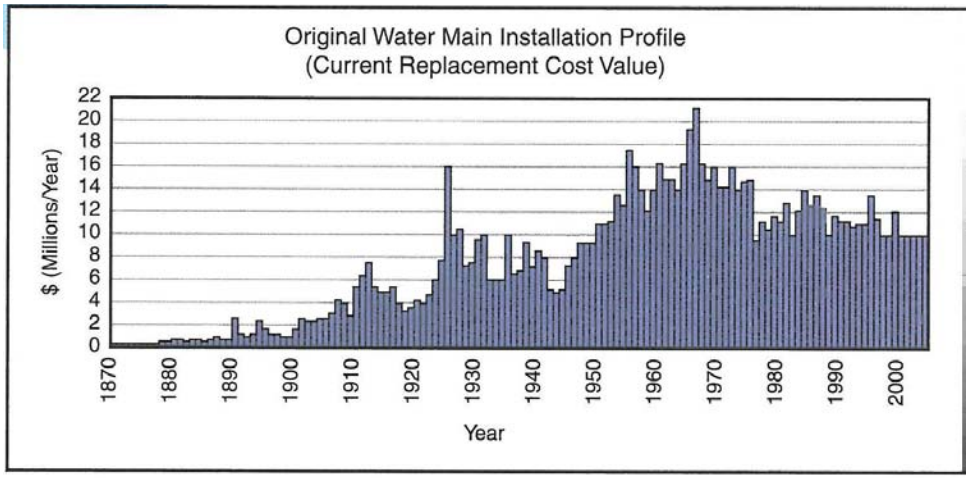
ASCE Infrastructure Report Card

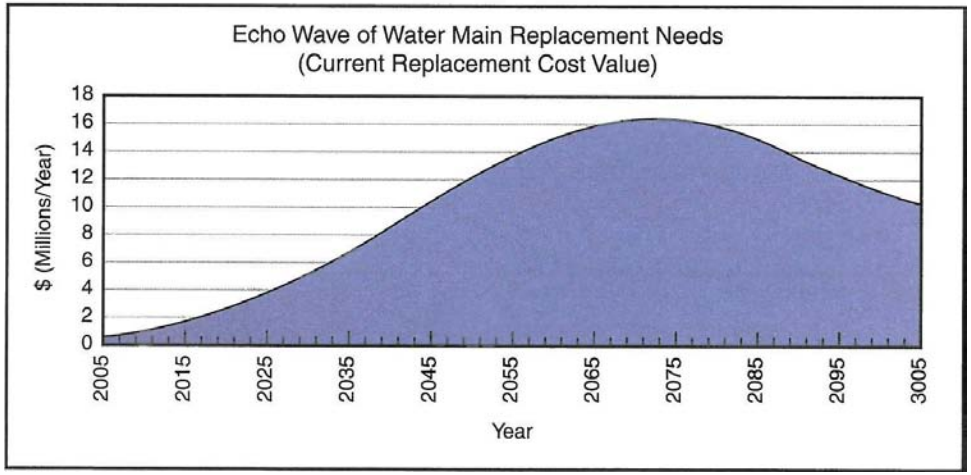
- Low marks for Illinois water and wastewater infrastructure
- Over the next 20 years, $13.5 billion in funding is needed for **each** water and wastewater infrastructure statewide
- But it’s not all doom and gloom...

Crisis vs. Catastrophe

- Crisis: A key juncture at which decisive action must be taken to avoid damage or harm.
- Catastrophe: A momentous event resulting in failure or ruin.
- Our infrastructure is not in ruins yet!
- Poor report card refers to need for action to prevent future infrastructure failure.

Ramping up Infrastructure Spending





SOURCE:

Water Infrastructure at a Turning Point: The Road to Sustainable Asset Management

(AWWA, 2006)

The “Turning Point”

“The choice we face – the turning point – is either to adopt strategies that will lead to the systematic renewal of our water [and wastewater] infrastructure, or accept the erosion over time of reliable service, public health, and environmental quality.”

Water Infrastructure at a Turning Point:

The Road to Sustainable Asset Management

AWWA, 2006

What does this mean to your community?

- A good first step is to adjust rates annually to reflect inflation in operating costs
- More significant rate adjustments needed in the future to increase infrastructure funding
- Ultimately comes down to a question of risk – how much can you accept?

How can a rate study help you?

- Determine the best timing for rate increases to minimize financial impacts on ratepayers
- Make an informed decision on the affordability of important infrastructure projects
- Demonstrate eligibility for gov’t funding
- Documentation to back up the reasons for a rate increase

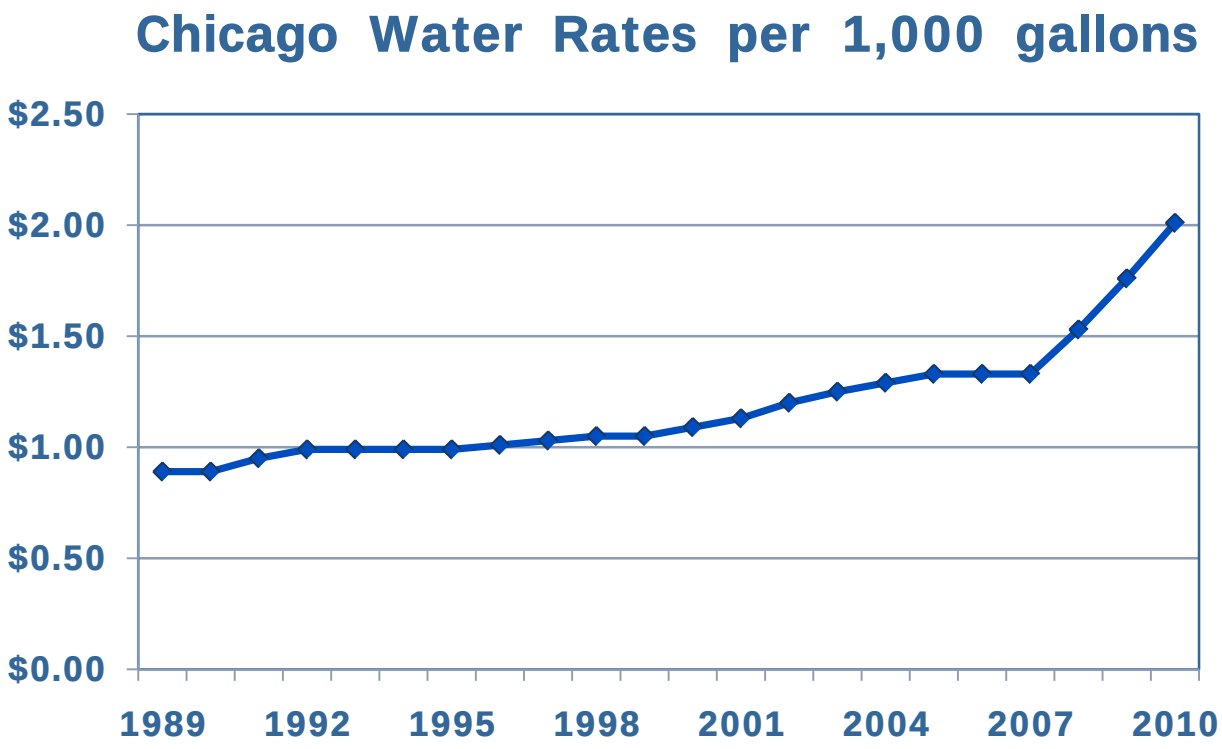
What is a rate study?

- Thorough evaluation of operating expenses:
  - Where are they now?
  - How will they change in the future?
- Revenue optimization/alternate revenue sources
- Comparison of infrastructure needs, costs, and available funding
- Alternatives analysis: rate structure, rate increase phasing

Step 1: Take a hard look at expenses

- Water supply costs
- IEPA unfunded mandates – enhanced chemical safety, additional well monitoring
- Trends in commodity and utility inflation
- Rising costs for employee benefits
- Infrastructure renewal requirements

Operating costs on the rise:



→ Chicago water rates have increased an average of 4% per year since 1989

Step 2: Re-evaluate revenue streams

- Compare budgeted water/sewer receipts to billing trends – is your budget realistic?
- Ensure other fees are covering pertinent costs:
  - Water meter fees
  - Water service shut-off/restoration fees
  - Water/sewer system connection fees
- Compare receipts to water pumpage and billing

Step 2: Revenue Streams – billing

Fiscal Year	Average Monthly Water Usage, Industrial Sector (gallons)
2005	1,136,000
2006	506,000
2007	66,000
2008	50,000

→ **Red flag: No major process changes or staffing reductions during this time.**

Step 2: Re-evaluate revenue streams

Compare revenue lost to the long-term options for reducing water loss:

- Billing software audit
- Leakage testing
- Water main replacement
- Water meter replacement

Step 3: Funding for Capital Projects

- Use a rate study in conjunction with capital improvement planning studies:
  - What is the true cost to rate payers?
  - Better to go for bonds or loans?
  - Optimum timing to minimize rate increases
  - Are grants an option?

Step 3: Funding for Capital Projects

- USDA Rural Development Program
  - **Any** community with population of 10,000 or less may apply for funding
  - Eligibility based on median household income (MHI) and ability to get loans from other sources
  - Project must not be for growth/future development
  - Preference given to projects over $1 million

Step 3: Funding for Capital Projects

Issue: multi-million dollar treatment plant seemed out of reach for small community

Funding Scenario	Monthly Sewer Bill
Loan is only source of funding	$70.68
Grants cover 45% of the project cost, loan covers the rest	$59.48
Threshold for grant funding (1.5% of annual median household income)	$58.60

Step 4: Funding for System Renewal

- Different from one-time capital projects – system renewal is a never-ending process
- Spending is typically lower than needed due to “out of sight, out of mind” mentality
- A rate study can provide a roadmap to gradually increase system renewal spending
- Carefully consider risk of failure vs. risk of opposition to rate increase

Step 4: Funding for System Renewal

Not all publicity is good publicity:

" 'Wall of Water' Traps Motorists in Maryland"

"Tense Rescues Follow Water Main Break"

"Icy Wall of Water Traps 'Horrified' Motorists"

Step 4: Funding for System Renewal

Diameter (in.)	Length (ft.)	Cost per ft.	Totals
2	393	$145	$ 57,000
4	86,678	$145	$12,568,000
6	32,821	$145	$ 4,759,000
8	12,818	$155	$ 1,987,000
10	21,067	$165	$ 3,476,000
12	5,333	$175	$ 933,000
Totals	**158,717**		**$23,780,000**

Step 4: Funding for System Renewal

General indicator of funding needs:

Annual Water Main Replacement Spending	Water Main Replacement Cycle
$1,000,000	100 years
$500,000	200 years
$250,000	400 years

Step 5: Alternatives Analysis

- Evaluate varying levels of infrastructure spending and how they would affect rates
- Assess timing and phasing of rate increases
- Look at different rate structures and how they would affect different classes of rate payers
- Bottom line: meet system needs and minimize risk while preventing undue hardship on rate payers

Water Conservation:
The Paradox

- Pros: protection of valuable resource, eliminate need for larger infrastructure (cost savings)
- Con: reduction in revenues?
- A rate study can evaluate multiple conservation rate structures to determine if reduction in revenues is a real concern

Conclusions

- A rate study can:
  - Raise revenues for critical infrastructure reinvestment.
  - Resolve cash flow issues and dwindling reserves in the face of the economic downturn.
  - Help a utility make informed decisions on rates and justify rate increases to the public.
  - ***Bring your utility's infrastructure report card up to an "A".***

Questions?

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