Quick Messages and Selling Points on Raising Rates and Financial Performance for your Board and Public Presentations

NCAWWA-WEA Finance and Management Committee Seminar
February 19, 2014
Greensboro, NC
Dedicated to enhancing the ability of governments and other organizations to provide environmental programs and services in fair, effective, and financially sustainable ways through

- Applied Research
- Teaching
- Program Design and Partnerships

UNC SCHOOL of GOVERNMENT

How you pay for it matters.
Objectives

Review

- Useful resources
- Key messages and supporting analysis
- Key performance indicators
What staff considers when setting rates

*Will rates provide sufficient cost recovery?*

- Are we following the applicable laws?
- Are we allocating the costs to the right customers?
- Will our customers understand these rates?
- Will our customers be able to pay these rates?
- What exactly does this include?
- Will revenues be resilient to changing water demands?
- Do these rates send the right signals to our customers, based on our objectives?
…and then there are the questions from the public and from the Board

- Why are you raising rates (again)?
- Can’t you just cut costs?
- What happened to the revenues from the last rate increase?
- Are you operating efficiently?
- Are customers afford these rates?
- What happened if we don’t raise rates (fully)?
- Are you financially managing the utility well?
- How much are other utilities charging?
- Are taxes and other charges also rising?
- Are we the only ones?
Get some data! Be prepared to answer questions with facts.

Resources include (but not limited to…)

Your income statement!

And your C.I.P. or Asset Management Plan!

Basically, your own internal financial records.

<table>
<thead>
<tr>
<th>Water and Sewer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Charges for services</td>
<td>$11,329,883</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td></td>
</tr>
<tr>
<td>Total operating revenues</td>
<td></td>
</tr>
<tr>
<td>Operating expenses:</td>
<td></td>
</tr>
<tr>
<td>Personal services</td>
<td>3,400,559</td>
</tr>
<tr>
<td>Contractual services</td>
<td>344,422</td>
</tr>
<tr>
<td>Utilities</td>
<td>754,107</td>
</tr>
<tr>
<td>Repairs and maintenance</td>
<td>747,315</td>
</tr>
<tr>
<td>Other supplies and expenses</td>
<td>498,213</td>
</tr>
<tr>
<td>Insurance claims and expenses</td>
<td></td>
</tr>
<tr>
<td>Depreciation</td>
<td>1,163,140</td>
</tr>
<tr>
<td>Total operating expenses</td>
<td>6,907,756</td>
</tr>
<tr>
<td>Operating income (loss)</td>
<td>4,422,127</td>
</tr>
<tr>
<td>Nonoperating revenues (expenses):</td>
<td></td>
</tr>
<tr>
<td>Interest and investment revenue</td>
<td>454,793</td>
</tr>
<tr>
<td>Miscellaneous revenue</td>
<td></td>
</tr>
<tr>
<td>Interest expense</td>
<td>(1,600,830)</td>
</tr>
<tr>
<td>Miscellaneous expense</td>
<td></td>
</tr>
<tr>
<td>Total nonoperating revenue (expenses)</td>
<td>(1,146,037)</td>
</tr>
<tr>
<td>Income (loss) before contributions and transfers</td>
<td>3,276,090</td>
</tr>
<tr>
<td>Capital contributions</td>
<td>1,645,919</td>
</tr>
<tr>
<td>Transfers out</td>
<td>(290,000)</td>
</tr>
</tbody>
</table>
Useful Resources

NCLM & EFC’s annual “Water & Wastewater Rates and Rate Structures in North Carolina” report.

A complete “State of Rates in NC”. Answers many FAQs about rates, rate structure designs, how rates have changed, affordability, and financial sustainability in NC.

Available at [http://efc.sog.unc.edu](http://efc.sog.unc.edu) (Programs / Drinking Water / NC Water & Wastewater Rates & Rate Structures)
Useful Resources

NCLM & EFC’s annual “Water & Wastewater Rates and Rate Structures in North Carolina” tables of data.

Data on >500 NC utilities’ rates and rate structure designs.

Available at [http://efc.sog.unc.edu](http://efc.sog.unc.edu) (Programs / Drinking Water / NC Water & Wastewater Rates & Rate Structures)

Useful Resources
EFC’s NC Water & Wastewater Rates Dashboard
http://efc.sog.unc.edu/  Find it in Resources / Tools
Benchmark your rates and your financial performance
Useful Resources

The Local Government Commission’s County & Municipal Fiscal Analysis Tool
Available at https://www.nctreasurer.com/slg/Pages/Fiscal-Analysis-Tool.aspx

Create a pdf dashboard of eight financial performance indicators & compare your ratios to up to 5 other counties or municipalities.
Useful Resources


Report describes trends in revenues, costs and rates, as well as factors influencing revenues, and strategies that utilities across the country are using to increase the resiliency of their revenues.

NC is heavily featured in the report.

Available for WRF members at http://www.waterrf.org/Pages/Projects.aspx?PID=4366
Defining a Resilient Model for Water Utilities

Not shown on map: fewer than 25 utilities in Alaska and Hawaii. Data on rates, revenues and financial performance of subsamples of 7,316 water and wastewater utilities across the United States and Canada were obtained from several national and regional data sets and merged by the Environmental Finance Center at the University of North Carolina, Chapel Hill and Raftelis Financial Consultants, Inc. Data for some utilities were not analyzed depending on time period and focus of the analyses. Partner utilities are utilities that provided additional data, guidance, and feedback to the researchers throughout the project.
What are some quick messages that you can take away from some of these resources?
Key messages with comparative, factual data

- Costs are rising
- Demands are decreasing…for many
- Many utilities in NC are not financially sustainable
- You are not alone in requesting rate increases
- Your Board is not alone in granting them
- There are benefits to raising rates more frequently (and slowly) over time rather than postpone needed rate increases
- Most utilities are raising rates faster than CPI
Nationally, O&M costs alone are higher now than they have been in the past few years.

In North Carolina, O&M expenses are also rising among all local government utilities (FY1997-2011)

Average Operating Expenses Excluding Depreciation

Fiscal Year


Data obtained by the Local Government Commission analyzed by the Environmental Finance Center.
Utilities are taking on more debt

Long-term debt for 192 water and combined utilities from 2003-2012

Data analyzed by the Environmental Finance Center at the University of North Carolina, Chapel Hill.
Data source: Moody's rating agency. The same group of utilities is used each year, and only utilities with debt data available for all ten years were used.

Average residential demand has declined in NC

Monthly Residential Water Use Among the Same 217 Water Systems in NC

10th to 90th Percentile
25th to 75th Percentile (middle line is the Median)

Analysis by the Environmental Finance Center at the University of North Carolina.
Data source: NC Local Water Supply Plans (NC Department of Environment and Natural Resources, Division of Water Resources)

Source: https://efc.web.unc.edu/2012/05/24/residential-water-use-is-declining-in-north-carolina/
...and is still declining
Average residential demand is declining in NC

Source: https://efc.web.unc.edu/2012/05/24/residential-water-use-is-declining-in-north-carolina/
Revenues from rates are sometimes not sufficient to pay expenses in NC

Local Government-Owned Water and Wastewater Utilities' Cost Recovery in FY 2013

- Operating revenues < operating expenditures (11%)
- Operating revenues < operating expenditures + principal + interest on long-term debt (19%)
- Operating revenues > operating expenditures + principal + interest on long-term debt (71%)

Depreciation is not included in operating expenditures. Data obtained from the Local Government Commission, analyzed by the Environmental Finance Center at UNC.

n = 448 (FY 2013)
... which is especially true for smaller water systems

Local Government-Owned Water and Wastewater Utilities' Cost Recovery in FY 2013

- Operating revenues < operating expenditures (11%)
- Operating revenues < operating expenditures + principal + interest on long-term debt (19%)
- Operating revenues > operating expenditures + principal + interest on long-term debt (71%)

<table>
<thead>
<tr>
<th>Number of service connections</th>
<th># of utilities</th>
<th>Operating revenues &lt; operating expenditures</th>
<th>Operating revenues &lt; operating expenditures + principal + interest on long-term debt</th>
<th>Operating revenues &gt; operating expenditures + principal + interest on long-term debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1,000</td>
<td>177</td>
<td>16%</td>
<td>21%</td>
<td>63%</td>
</tr>
<tr>
<td>1,000 - 10,000</td>
<td>185</td>
<td>5%</td>
<td>19%</td>
<td>76%</td>
</tr>
<tr>
<td>&gt; 10,000</td>
<td>48</td>
<td>0%</td>
<td>6%</td>
<td>94%</td>
</tr>
</tbody>
</table>

n = 410 (FY 2013, with SDWIS number of connections)
Nearly half of NC utilities raise rates each year

Percent of Rate Structures that Increased Residential Rates between 2012 and 2013

In fact, this has been the case in NC for several years now.

Majority of NC utilities *review* rates every year (even if not raise them)

34) During the last few years, what best describes how often your utility reviewed its customer rates?
Pick one.

- Don't know: 1%
- More than once a year: 7%
- Other: 1%
- Over 5 years: 3%
- Every few years: 13%
- Annually: 75%

*n = 262*

Even during the recession, most Boards in NC approved requested rate increases.

It’s rare for utilities in NC to keep rates unchanged for years

It’s rare for utilities in NC to keep rates unchanged for years

Source: NCLM/EFC’s annual “Water & Wastewater Rates and Rate Structures in North Carolina” (2013). Available at http://efc.sog.unc.edu (Programs / Drinking Water / NC Water & Wastewater Rates & Rate Structures)
Utilities that don’t raise rates frequently tend to face higher rate increases when they do.

And even then, they fall way behind utilities that raise rates slowly but more frequently.

Average 5-year cumulative rate increase by frequency of rate adjustments

Data analyzed by the Environmental Finance Center at the University of North Carolina, Chapel Hill and Rafelis Financial Consultants, Inc. Rate change data were known for five consecutive years for all utilities in the cohorts of each state. Data sources: Annual rates surveys conducted by GEFA/EFC (2008-2012), NCLM/EFC (2009-2013), OH EPA (2006-2010), TX Municipal League (2008-2012), and the Wisconsin Public Service Commission (2008-2012).

Utilities with higher cumulative rate increases tended to have higher credit ratings (= lower interest rates)

… which translate into substantial savings (financial repercussions of covering debt)

Cost savings from interest rate differences due to credit rating

<table>
<thead>
<tr>
<th>Principal</th>
<th>Credit Rating</th>
<th>Interest Rate (2009)$^1$</th>
<th>Interest Rate (2013)$^1$</th>
<th>Principal + Interest After 1 year (at 2009 rate)</th>
<th>Principal + Interest After 1 year (at 2013 rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>$40,000,000</td>
<td>AA</td>
<td>0.049</td>
<td>0.0275</td>
<td>$41,960,000</td>
<td>$41,100,000</td>
</tr>
<tr>
<td>$40,000,000</td>
<td>BAA</td>
<td>0.074</td>
<td>0.039</td>
<td>$42,960,000</td>
<td>$41,560,000</td>
</tr>
</tbody>
</table>

Cost Savings in 1 year: $1,000,000 $460,000

Most utilities in NC are raising rates faster than CPI

Cumulative bill increases for 1,961 utilities in six states compared to regional CPI

Georgia: 352 Utilities
North Carolina: 393 Utilities
California: 134 Utilities
Texas: 194 Utilities
Ohio: 325 Utilities
Wisconsin: 563 Utilities

Data analyzed by the Environmental Finance Center at the University of North Carolina, Chapel Hill and Raftelis Financial Consultants, Inc. Rates data for all utilities in this analysis were known for all consecutive years and the cohort of utilities is the same for all years. Inflation of the regional Consumer Price Index is shown for the region each state is located in: South for GA, NC, TX; West for CA; Midwest for OH, WI. Data sources: Annual and biennial statewide rates surveys conducted by Raftelis Financial Consultants (CA), Georgia Environmental Finance Authority/Environmental Finance Center, North Carolina League of Municipalities/Environmental Finance Center, Ohio EPA, Texas Municipal League, and Wisconsin Public Service Commission; Regional Consumer Price Indices by the U.S. Bureau of Labor Statistics.

How much did utilities raise rates between 2012 and 2013 in NC?

Median increase to monthly bill for 5,000 gallons:
- $1.60 water
- $1.91 sewer

Median increase to monthly bill for 5,000 gallons:
- 5.7% water
- 5.3% sewer

But do you present numbers to the Board (and customers)? Bullet points? Tables? Graphs? Visualizations? Something else?

What about benchmarking rates as well?
Comparing rates…
What’s wrong with it?

- Poor sample selection (number, types of systems)
- Comparing only one bill amount
- Comparing nothing besides rates
  - pressure to keep rates low …
  - … regardless of financial condition of utility
  - ignores customers’ ability to pay
  - ignores price signals and utility’s policies
**Solution: provide more information?**

185 pages of wonderful tables, full of data you can use!

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**Rate Table 1: FY09-10 Water Rate Structures for Residential Customers**

<table>
<thead>
<tr>
<th>Utility / Rate Structure</th>
<th>Service Population</th>
<th>Billing Period</th>
<th>Base Charge Pricing</th>
<th>Monthly Gallons Provided with Base Charge (Allowance)</th>
<th>Water Rate Structure</th>
<th>Number of Blocks</th>
<th>First Block Maximum (Monthly Gallons)</th>
<th>Implied Rate Structure for Residential Usage (&lt; 15,000 GPM)</th>
<th>Outsider/Inside Bill Differential at 5,000 Gallons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aberdeen</td>
<td>5,455</td>
<td>Bi-monthly</td>
<td>Constant</td>
<td>0</td>
<td>Increasing Block</td>
<td>5</td>
<td>2,500</td>
<td>Increasing Block</td>
<td>186%</td>
</tr>
<tr>
<td>Ahoskie</td>
<td>4,479</td>
<td>Monthly</td>
<td>Constant</td>
<td>0</td>
<td>Uniform Rate</td>
<td>0</td>
<td>200%</td>
<td>Uniform Rate</td>
<td>0%</td>
</tr>
<tr>
<td>Alamance</td>
<td>800</td>
<td>Bi-monthly</td>
<td>Constant</td>
<td>2</td>
<td>Uniform Rate</td>
<td>0</td>
<td>200%</td>
<td>Uniform Rate</td>
<td>0%</td>
</tr>
<tr>
<td>Alexander County - Bethlehem</td>
<td>16,042</td>
<td>Monthly</td>
<td>Constant</td>
<td>2.246</td>
<td>Decreasing Block</td>
<td>3</td>
<td>224,400</td>
<td>Uniform Rate</td>
<td>0%</td>
</tr>
<tr>
<td>Alexander County - Sugarloaf and Hay 16</td>
<td>10,917</td>
<td>Monthly</td>
<td>By Meter Size</td>
<td>0</td>
<td>Uniform Rate</td>
<td>0</td>
<td>200%</td>
<td>Uniform Rate</td>
<td>0%</td>
</tr>
</tbody>
</table>

Compare with caution. High rates may be justified and necessary to protect public health.

**Rate Table 2: FY09-10 Monthly-Equivalent RESIDENTIAL WATER Bills at Various Consumption Levels (Includes Base Charges)**

| Utility / Rate Structure         | Service Population | Oper / Revenue Op. Expense (FY09 LQD Rate) | Zero Gallons (0 cf) | 3,000 Gallons (401 cf) | 5,000 Gallons (682 cf) | 6,000 Gallons (802 cf) | 10,000 Gallons (1,337 cf) | 15,000 Gallons (2,005 cf) | Insider / Outsider / Zero Gallons (0 cf) | 3,000 Gallons (401 cf) | 5,000 Gallons (682 cf) | 6,000 Gallons (802 cf) | 10,000 Gallons (1,337 cf) | 15,000 Gallons (2,005 cf) |
|----------------------------------|--------------------|-------------------------------------------|---------------------|------------------------|------------------------|------------------------|--------------------------|--------------------------|------------------------------------------|------------------------|------------------------|------------------------|--------------------------|--------------------------|------------------------|
| Aberdeen                         | 5,455              | $120.62                                   | $16.62             | $15.19                 | $12.38                 | $11.43                 | $29.75                   | $35.49                   | $42.05                                   | $57.25                 | $65.39                 | $73.63                 | $82.39                   | $91.75                   |
| Ahoskie                          | 4,479              | $106.09                                   | $25.00             | $20.30                 | $16.25                 | $13.90                 | $46.50                   | $53.00                   | $61.25                                   | $70.50                 | $80.88                 | $91.89                 | $103.20                  | $115.20                  |
| Alamance                         | 800                | $80.00                                    | $16.00             | $12.75                 | $10.40                 | $8.75                  | $22.50                   | $26.00                   | $31.20                                   | $36.50                 | $42.00                 | $48.50                 | $55.00                   | $61.50                   |
| Alexander County - Bethlehem     | 16,042             | $44.28                                    | $9.49              | $7.13                  | $5.32                  | $4.04                  | $12.00                   | $15.00                   | $19.00                                   | $23.00                 | $27.25                 | $32.50                 | $38.75                   | $45.00                   |
| Alexander County - Sugarloaf and Hay 16 | 10,917        | $27.92                                    | $11.31             | $9.20                  | $7.10                  | $5.30                  | $13.50                   | $17.00                   | $21.00                                   | $25.00                 | $30.00                 | $35.00                 | $40.00                   | $45.00                   |

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**Notes:**
- FAQ: Frequently Asked Questions
- MCRA: Metropolitan Area Rate
- FY09: Fiscal Year 2009
- LQD: Local Quota Discount
- ZEO: Zero Energy Option
- ERO: Energy Rate Option
- SCRM: System Capacity Reserve Margin
- DSR: Distribution System Reserve
- 002: Project 2002
- 005: Project 2005
- 010: Project 2010
- 020: Project 2020
- 030: Project 2030
- 040: Project 2040
- 050: Project 2050
- 060: Project 2060
- 070: Project 2070
- 080: Project 2080
- 090: Project 2090
- 100: Project 2100

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**Special Note:**
- All data and information provided are subject to change and should be verified before use.
- For detailed information, please refer to the original source documents.
Well from this dashboard we have comparably low cost recovery.
Acknowledgement

- Public Water Supply Section (Division of Water Resources, NC DENR)

- Water Research Foundation

- U.S. Environmental Protection Agency