

# A Closer Look at NC Water Service Providers

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For the NCGA Environmental Review Commission  
Water & Sewer Systems Working Group  
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City enterprise

Sanitary district

County service district

County enterprise

Metro districts

Water/sewer authority

County w/s district

Interlocal agreement

Designed  
scale

Fire protection

Public health

Capital access

Econ. dev.

Regional issues

- Up/down conflict
- Scale economies
- Source water
  - Quantity
  - Quality

# Thoughts on possible study issues

- Powers and overall complexity?
- Competition to serve profitable areas?
- Failure to serve areas with needs?
- Balancing revenue needs with affordability?
- State help with capital funding?
- Regional scale issues?
  - Water quality/excess nutrients
  - Water quantity/storage, reuse and crossing basins
- State and regional institutional oversight?

# **SERVICE DELIVERY MODELS AND UTILITY FINANCE**

# Number of Local Government Water and Wastewater Utilities by Type

Type of Local Government	Number of Water/Wastewater Utilities	Had Lower Operating Revenues than Operating Expenditures + Debt
Authority	13	3 / 12 (25%)
County/District	62	18 / 46 (39%)
Metropolitan Water/Sewer District	4	2 / 3 (67%)
Municipality	394	93 / 337 (28%)
Sanitary District	22	4 / 16 (25%)

Sources: Classification by EFC (guided by LGC data); Financial data in FY2012 collected by Local Government Commission and analyzed by the EFC

# Capital Sources, Service Delivery Models and Rates

- Grants
  - More significant for smaller government owned systems
  - Grant funded assets generate depreciation expenses that are often not covered by rates contributing to poor financials on audit reports
  - Award criteria may lead to higher rates
- Governmental Loan Programs
  - More common among county/county districts, small and medium sized municipalities, non-profit corporations (USDA) and sanitary districts
  - Debt service payments covered by rates

# Capital Sources, Service Delivery Models and Rates

- Bond Market – General Obligation
  - Less common for water and sewer but still used by some municipalities and counties
  - Debt service covered by rates or sometimes by general revenue
- Bond Market – Revenue Bonds
  - Larger municipalities and county systems, and authorities
  - Bond covenants require rates to cover debt service plus some a safety factor (typically 1.1 to 1.4 times what is needed)

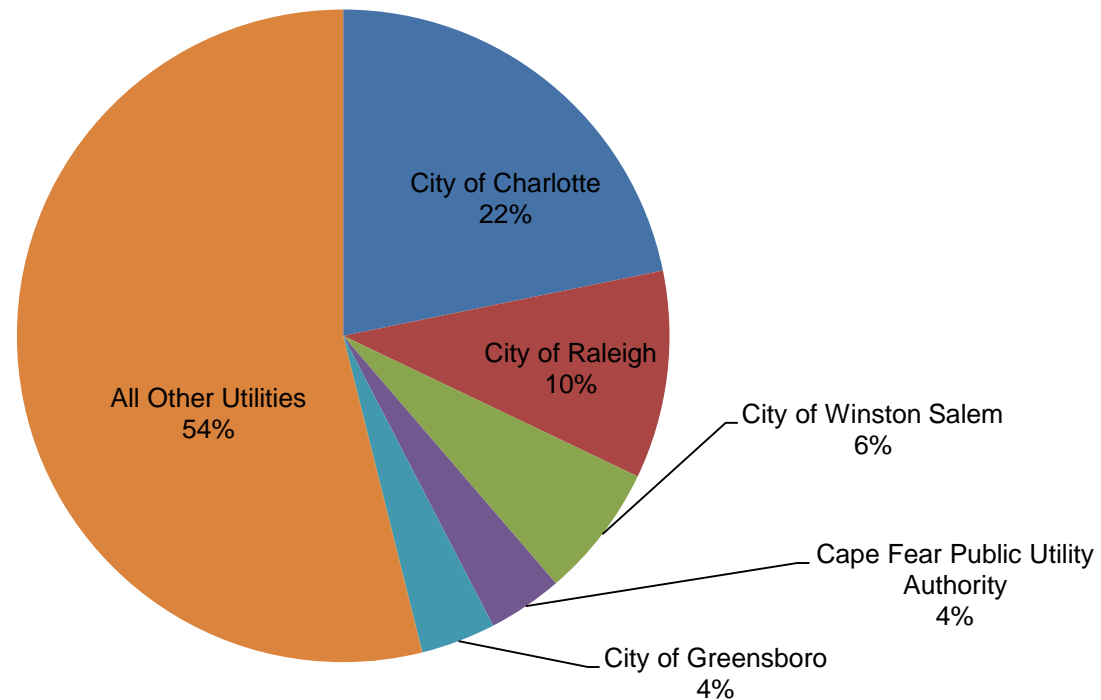
# Capital Sources, Service Delivery Models and Rates

- Sinking funds and capital reserve funds
  - Commonly used by larger more financially secure utilities
  - Rates cover current costs and future needs
- Pay as you go
  - Commonly used by systems with larger revenue stream
  - Rates cover a portion of annual capital expenditures
  - Capital from Investor Owned Utilities
- Investor owned utilities
  - Rates include a rate of return (8 to 12%)
- Contributed capital from developers
  - More significant for faster growing systems
  - Funded assets generate depreciation expenses that may not be covered by rates contributing to poor financials on audit reports



# NC water and sewer debt allocation among local governments with large outstanding debts\* as of June 30, 2012

\* Large debts = \$300 million or more



Data analyzed by the University of North Carolina Environmental Finance Center.

Data Source: North Carolina Department of State Treasurer State and Local Government Finance Division.

North Carolina State debt not included in debt totals.

Source: Financial data in FY2012 collected by Local Government Commission and analyzed by the EFC

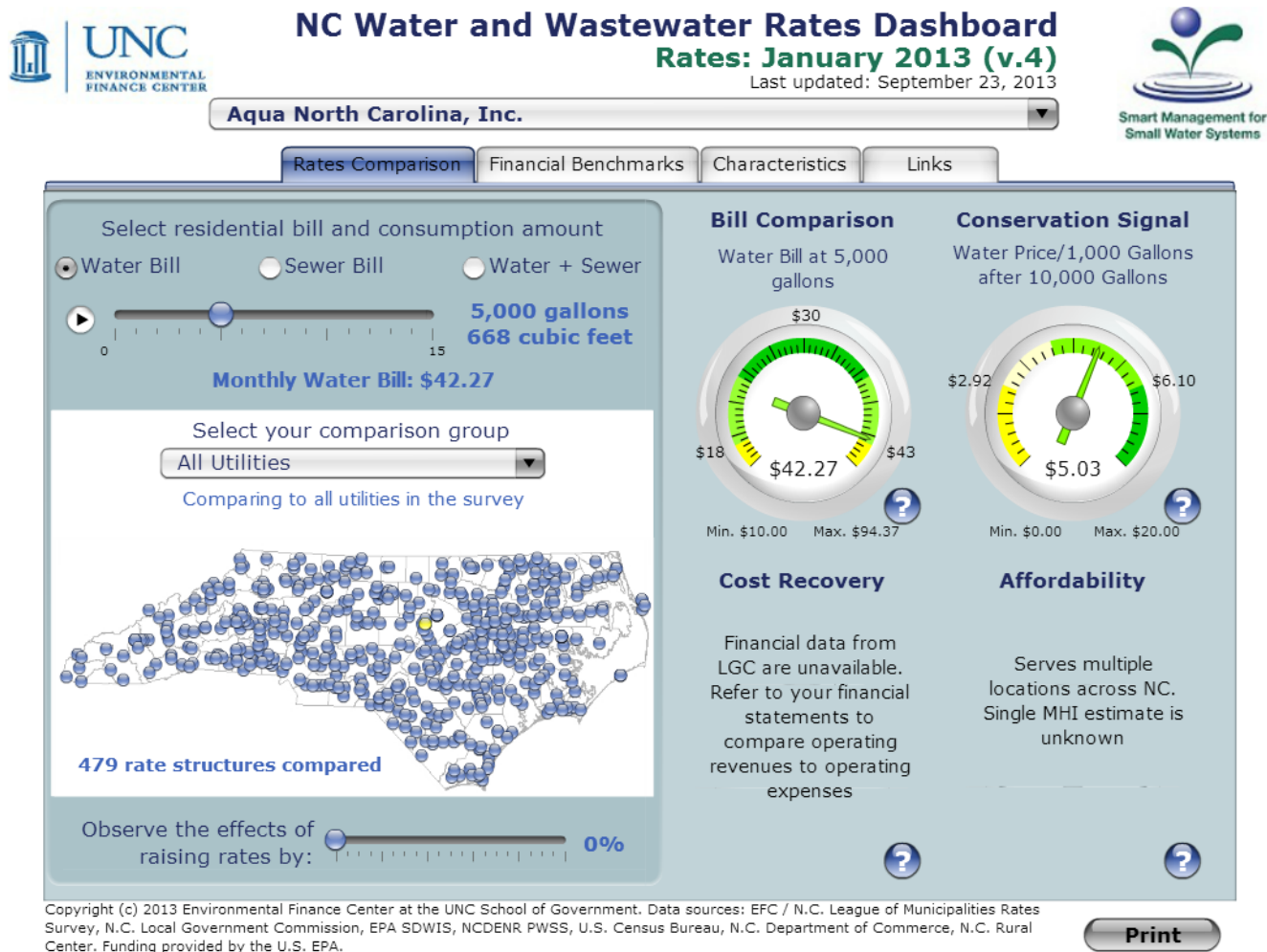
# No Clear Relationship between Type of Service Delivery Model and Rates

**Table 6: Median Water and Wastewater Monthly Bills at 5,000 gallons/month, by Utility Type**

Utility Type	Water Rate Structures		Wastewater Rate Structures	
	Number of Rate Structures	Median 5,000 gallons/month Monthly Bill	Number of Rate Structures	Median 5,000 gallons/month Monthly Bill
Municipality	377	\$27.50	364	\$34.64
County/District	71	\$36.25	37	\$40.00
Sanitary District	17	\$29.50	11	\$40.00
Authority/Metropolitan District	7	\$33.50	7	\$37.50
Not-For-Profit	35	\$29.08	1	\$33.75
For Profit	4	\$33.16	3	\$41.55
<b>All Rate Structures</b>	<b>511</b>	<b>\$28.88</b>	<b>425</b>	<b>\$34.95</b>

Source: NCLM & EFC's Annual Report on *Water and Wastewater Rates and Rate Structures in North Carolina*, January 2013

# Investor Owned Utility Rates vs. Other Delivery Models: Determining Peer Group is Challenging



Access the interactive EFC NC Rates Dashboard at <http://efc.sog.unc.edu> and find it in Resources / Tools



# NC Water and Wastewater Rates Dashboard

Rates: January 2013 (v.4)

Last updated: September 23, 2013



Smart Management for  
Small Water Systems

Carolina Water Service, Inc.

Rates Comparison

Financial Benchmarks

Characteristics

Links

Select residential bill and consumption amount

☒ Water Bill ☐ Sewer Bill ☐ Water + Sewer



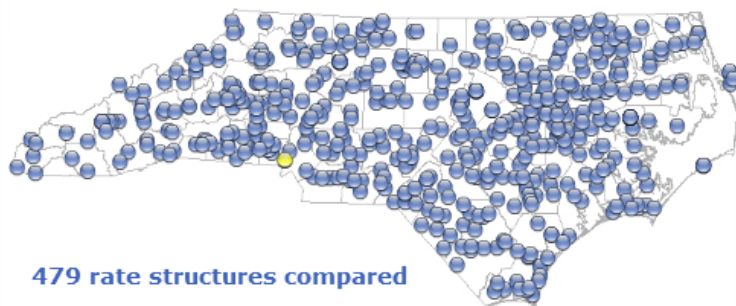
5,000 gallons  
668 cubic feet

Monthly Water Bill: \$41.81

Select your comparison group

All Utilities

Comparing to all utilities in the survey



479 rate structures compared

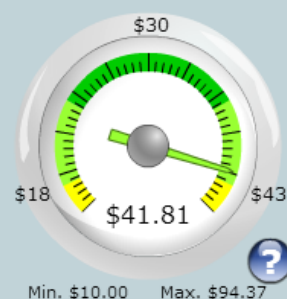
Observe the effects of  
raising rates by:



0%

## Bill Comparison

Water Bill at 5,000  
gallons



Min. \$10.00 Max. \$94.37

## Cost Recovery

Financial data from  
LGC are unavailable.  
Refer to your financial  
statements to  
compare operating  
revenues to operating  
expenses

## Conservation Signal

Water Price/1,000 Gallons  
after 10,000 Gallons



Min. \$0.00 Max. \$20.00

## Affordability

Serves multiple  
locations across NC.  
Single MHI estimate is  
unknown

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Print

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# Smaller Utilities Tend to Charge Higher Rates

**Table 5: Median Water and Wastewater Monthly Bills at 5,000 gallons/month, by Utility Size**

Utility Size (Service Population)	Water Rate Structures		Wastewater Rate Structures	
	Number of Rate Structures	Median 5,000 gallons/month Monthly Bill	Number of Rate Structures	Median 5,000 gallons/month Monthly Bill
1 - 999	117	\$29.35	98	\$38.83
1,000 – 2,499	90	\$30.48	80	\$36.80
2,500 – 4,999	81	\$30.29	77	\$34.58
5,000 – 9,999	75	\$27.05	55	\$35.00
10,000 – 24,999	76	\$28.60	55	\$31.80
25,000+	72	\$26.30	57	\$34.81
<b>All Rate Structures</b>	<b>511</b>	<b>\$28.88</b>	<b>425</b>	<b>\$34.95</b>

Source: NCLM & EFC's Annual Report on *Water and Wastewater Rates and Rate Structures in North Carolina*, January 2013

..... and have Lower Ratios..

Number of service connections	# of utilities			
< 1,000	162	17%	17%	66%
1,000 - 10,000	172	5%	21%	74%
> 10,000	48	0%	8%	92%

- 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%)

n = 382 (FY 2012, with SDWIS number of connections)

# Do Utilities with Low Financial Ratios Avoid Raising Rates?

Not based on FY2012 data for 422 utilities with financial and rates data:

	Operating revenues < Operating expenditures + Debt service (29% of utilities)	Operating revenues >= Operating expenditures + Debt service (71% of utilities)
% of utilities that raised combined water & sewer rates from FY2011 to FY2012	55%	56%
Median among combined water & sewer rate increases	5.1%	3.8%

Sources: EFC analysis of water/wastewater rates (NCLM & EFC annual rates surveys) and audited financial data (Local Government Commission)



# January 2013 Rates by River Basin

Figure 23: Median Water and Wastewater Monthly Bills at 5,000 gallons/month, by River Basin



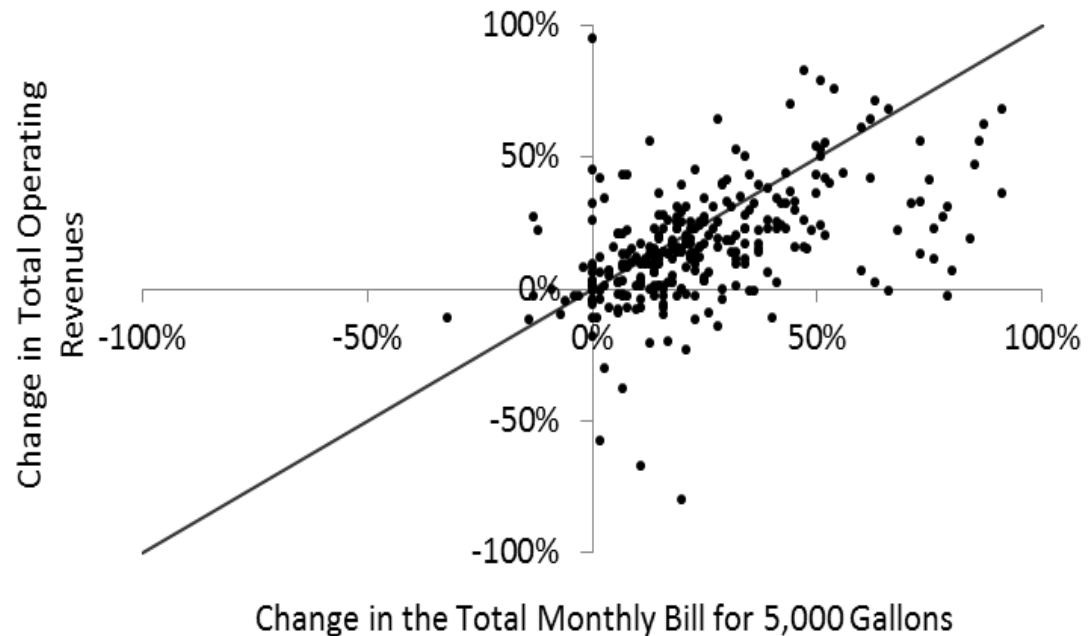
Source: NCLM & EFC's Annual Report on *Water and Wastewater Rates and Rate Structures in North Carolina*, January 2013



# Impacts of Pricing Structure and Falling Consumption

## 299 North Carolina Utilities: 2007 to 2011

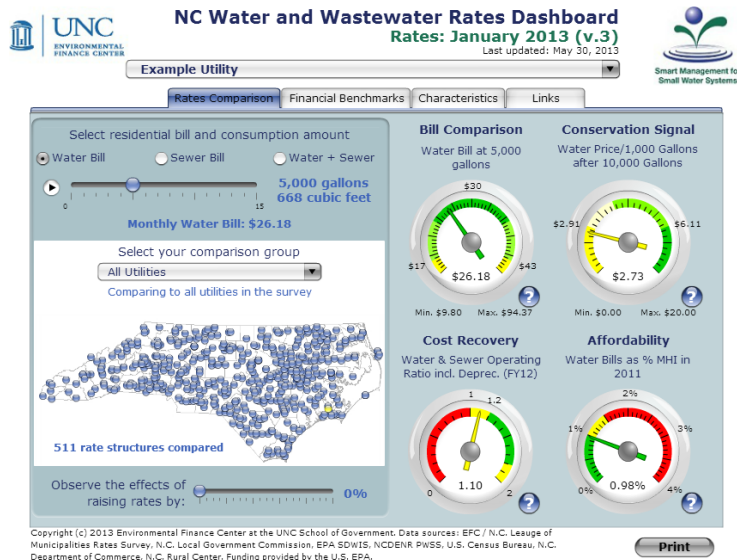
Data Sources: NCLM/EFC  
annual water and  
wastewater rates surveys,  
and the NC Local  
Government Commission  
data from audited financial  
statements of  
water/wastewater utilities.



# EFC Resources for NC

<http://efc.sog.unc.edu/>

Please contact us for direct assistance or for data analysis/sharing



- Financial performance ratios for utilities
- All utilities' rates over time
- Assessment of affordability
- Financial practices and policies of utilities
- Water system partnerships
- And more...

# Acknowledgements

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



- Local Government Commission at the Office of the State Treasurer

# Thank You

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