



# Water System Revenues

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# Session Objectives

- Understand how to pay for the costs of running your water system
- Look more closely at your rates



# How much money do you need?



# Systems Love Low Rates, but...

Government | City Services | About Us

You are here: [Home](#) > News Flash

**News Flash - All**

**News Flash - Home**

**Low Water and Sewer Rates**  
January 8, 2007

Once again, the City of [City Name] and sewage rates in [City Name] recent survey of [City Name] providers to evaluate [City Name] rates residents pay. [City Name] City of [City Name] is proud to say, based on [City Name] household, the City has the third lowest water and sewage bill of \$15.38, and sewage bill of \$10.36. As a result, [City Name] proved to have the third lowest combined residential water and sewage rates, of the 63 polled.

The commercial rates were also compared among the same providers, based on 150,000 gallons per month. [City Name] has the lowest sewage, as well as the lowest combined water and sewage rates of those polled. The average commercial monthly sewage bill is \$222.00, with the combined

Job Openings  
Citizen Survey Results  
Council Agenda  
Comprehensive Planning Information  
Community Assessment  
E-News Signup

Certified City of Ethics  
CITY EXCELLENCE

“Once again, the [City’s] Water Department proved to have some of the lowest water and sewage rates in the state.”





# What about customers?

THE STORIES BUSINESS FAITH TECHNOLOGY REAL NEWS THE BLOG CON

**HOT TOPICS:** Campaign 2012 Media Matters GBTV



+1 1.9k f L

BUSINESS

**RESIDENTS INCREDIBLY HAPPY ABOUT WATER SERVICE: *"I DON'T KNOW HOW THESE FOLKS DO IT – CLEAN WATER WHENEVER I NEED IT FOR ONLY A FEW DOLLARS A DAY!!"***

Posted on December 17, 2011 at 3:20pm by  **Becket Adams**

[Email »](#) [Print](#)

 Like 467  Send

 10  Tweet 78

[Comments \(3\)](#)

"These people are going to end up rioting about this," says Sheila Tyson, a community activist in Jefferson County, Ala. "If they let this stuff happen they are going to get the biggest riot the South has ever seen . . . I can see it coming."



Are we following the applicable laws?

Will our rates provide sufficient cost recovery?

What exactly does this include?

Will revenues be resilient to changing water demands?

Are we allocating the costs to the right customers?

Do these rates send the right signals to our customers, based on our objectives?

Will our customers understand these rates?

Will our customers be able to pay these rates?





# “Full Cost Pricing”

- Operations & maintenance expenditures
- Taxes and accounting costs
- Contingencies for emergencies
- Principal and interest on long-term debt
- Reserves for capital improvement
- Source water protection





# Ways To Pay

- Pay as you go (current receipts)
- Save in advance and pay
- Pay later (someone loans you money)
- Grants (let someone else pay)





# Grants Aren't Completely Free Money

- Application for the grant can be expensive – staff time and money
- Applications can take months to process
- Often lots of strings attached
- Often require a percentage match
- Lots of competition
- Difficult to sustain



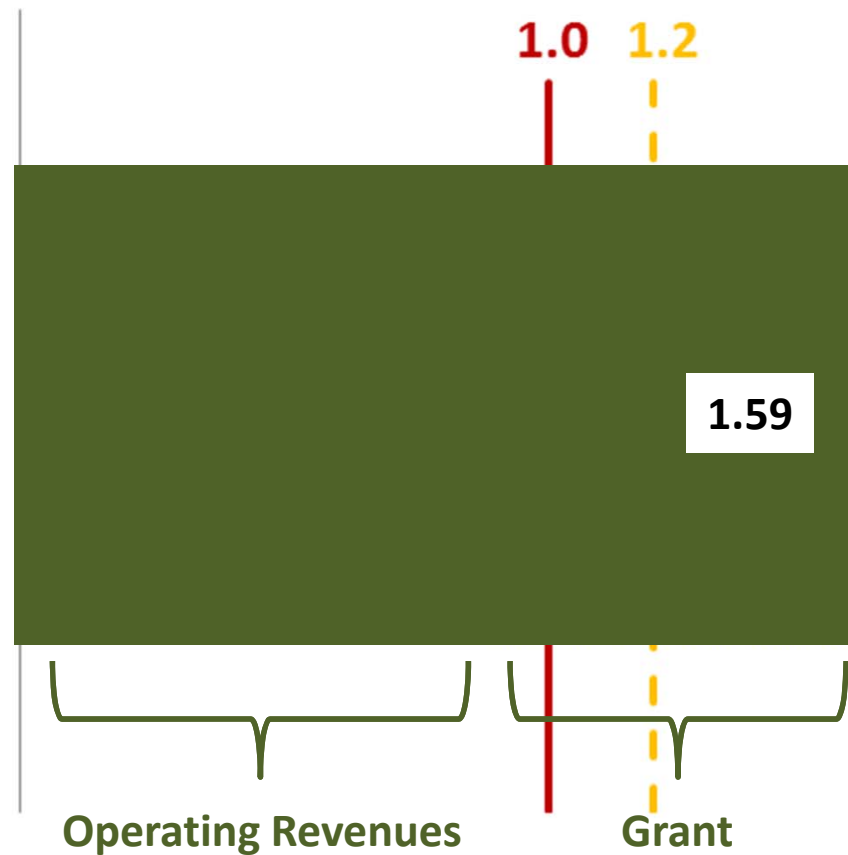
# Quick Thought on Grants

- This presentation is about *sustainable* program finance
- Grants are not sustainable finance



# Grants Can Distort Operating Ratio

**Sewer Program from  
Michigan**





# The Main Source: Your Revenue

- Pay as you go (current receipts)
- Save in advance and pay
- Pay later (someone loans you money)
- ~~• Grants (let someone else pay)~~





# Non-Rate Revenues

- Penalties
- Cellphone and radio receivers on the tank
- Ads on the tank
- Tap fees
- System development charges



# Town of Jacksonville

We charge a flat rate of \$15.00 monthly

P.O. - Box 133  
Jacksonville

We ARE a small town we do NOT have sewage



# Other Places with a Fixed Rate

- Small town in New York state that charges \$120/year, billed twice
- Trailer park in Ohio that includes water in the monthly rent
- HUD-subsidized apartments that must include water in rent
- City of Chicago



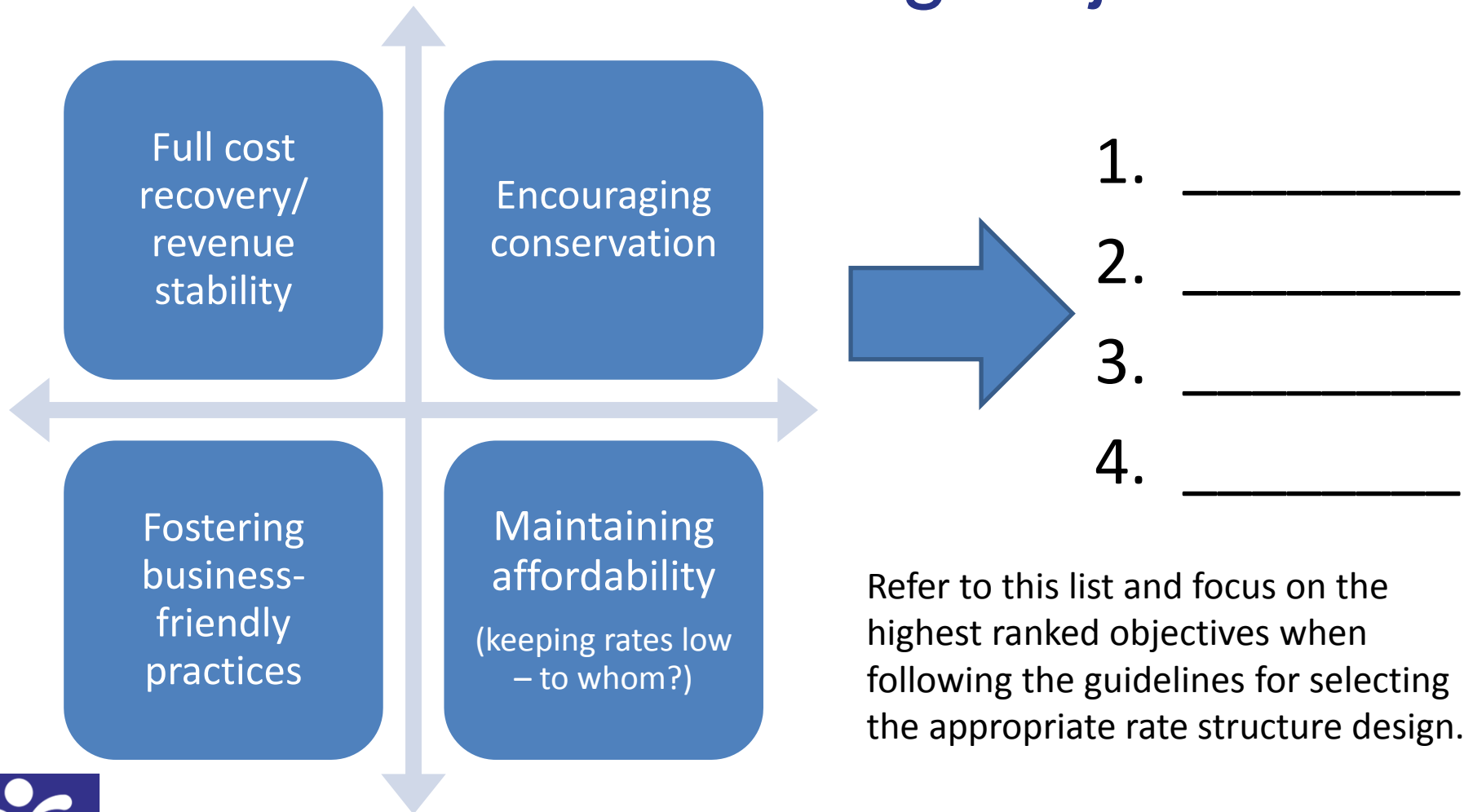
# The Reef Condos – USVI

- Has residential units and commercial (shops and restaurants)
- Flat rate structure for residents
- Decreasing block for commercial
- Bulk rate for the next condo complex over





# Rank Your Rate Setting Objectives



Refer to this list and focus on the highest ranked objectives when following the guidelines for selecting the appropriate rate structure design.



# Elements of Rate Structure Designs

1. Customer classes/distinction
2. Billing period
3. Base charge
4. Consumption allowance included with base charge
5. Volumetric rate structure
6. (If applicable) Number of blocks, block sizes and rate differentials
7. Frequency of rate changes



# Customer Classes/Distinctions

- One rate structure for all
- Target: All are equal



# Customer Classes/Distinctions

- Separate rate structure for residential, irrigation, commercial, industrial, governmental, or wholesale customers
- Target: Specific type of customer





# #3 City of Stockbridge

## Gallons of Water Metered

### Residential

0 through 4,000 gallons	\$ 4.56 Per Thousand	\$ 4.56 Per Thousand
4,001 through 9,000 gallons	\$ 6.99 Per Thousand	\$ 6.99 Per Thousand
9,001 gallons and up	\$ 9.42 Per Thousand	\$ 9.42 Per Thousand

### Commercial, Apartments and Mobile Home Parks

0 through 10,000	\$ 5.78 Per Thousand	\$ 5.78 Per Thousand
10,000 and up	\$ 6.95 Per Thousand	\$ 6.95 Per Thousand

### Irrigation

Per thousand gallons	\$ 9.26
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### Hydrant Meter

Per thousand gallons	\$ 9.26
----------------------	---------



# Customer Classes/Distinctions

- One rate structure, but with different base charges based on meter size
- Target: Non-residential or multi-family housing



## #2 Mount Pleasant

Water Meter Size	0 to 2,000 Gallons	Gallons Over 2,000
<b>Inside Town</b>		
5/8" or 3/4"	\$21.00	\$3.40/1000
1"	\$39.80	\$3.40/1000
1 1/2 "	\$112.40	\$3.40/1000
2" and up	\$218.00	\$3.40/1000
<b>Outside Town</b>		
5/8" or 3/4"	\$36.75	\$5.95/1000
1"	\$69.65	\$5.95/1000
1 1/2"	\$196.70	\$5.95/1000
2" and up	\$381.50	\$5.95/ 1000



## #3 City of Stockbridge

### Monthly Minimum Base Charge\*

<u>Meter Size</u>		<u>Water</u>	<u>Sewer</u>
3/4	Most Residential	\$ 6.00	\$ 6.00
1		\$ 7.00	\$ 7.00
1.5		\$ 37.00	\$ 12.00
2		\$ 100.00	\$ 12.00
3		\$ 175.00	\$ 12.00
4		\$ 225.00	\$ 12.00
6		\$ 300.00	\$ 12.00
8		\$ 400.00	\$ 12.00
10		\$ 700.00	\$ 12.00





# Customer Classes/Distinctions

- One rate structure for all, but with blocks that implicitly only target non-residential use
- Target: Non-residential



## #4 Union Point

INTOWN - 1/23/2006

STEP	RATE	CONSUMPTION
READY TO SERVE	\$21.00	
STEP 1	3.98	300,000
STEP 2	3.84	999,999,999



# Customer Classes/Distinctions

- Different rates for customers outside municipal limits/service area boundaries
- Target: “Outside” customers



## #2 Mount Pleasant

Water Meter Size	0 to 2,000 Gallons	Gallons Over 2,000
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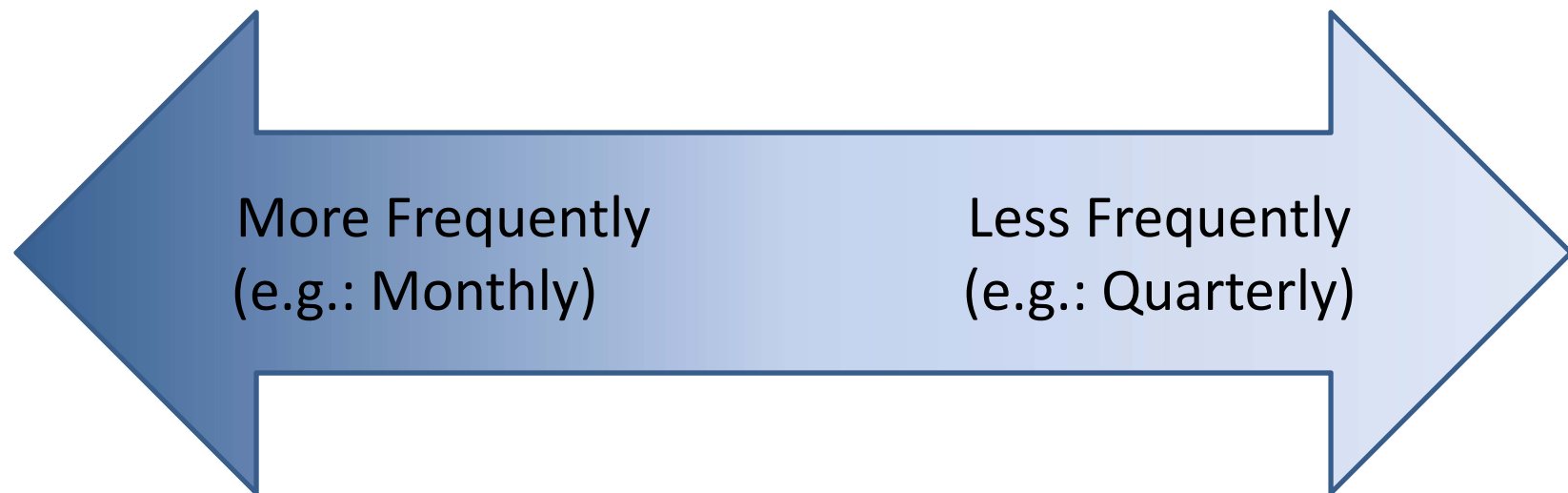


# Customer Classes/Distinctions

- Negotiated rate structure with individual high-use customers (typically an industrial customer)
- Target: Only one customer



# Billing Period

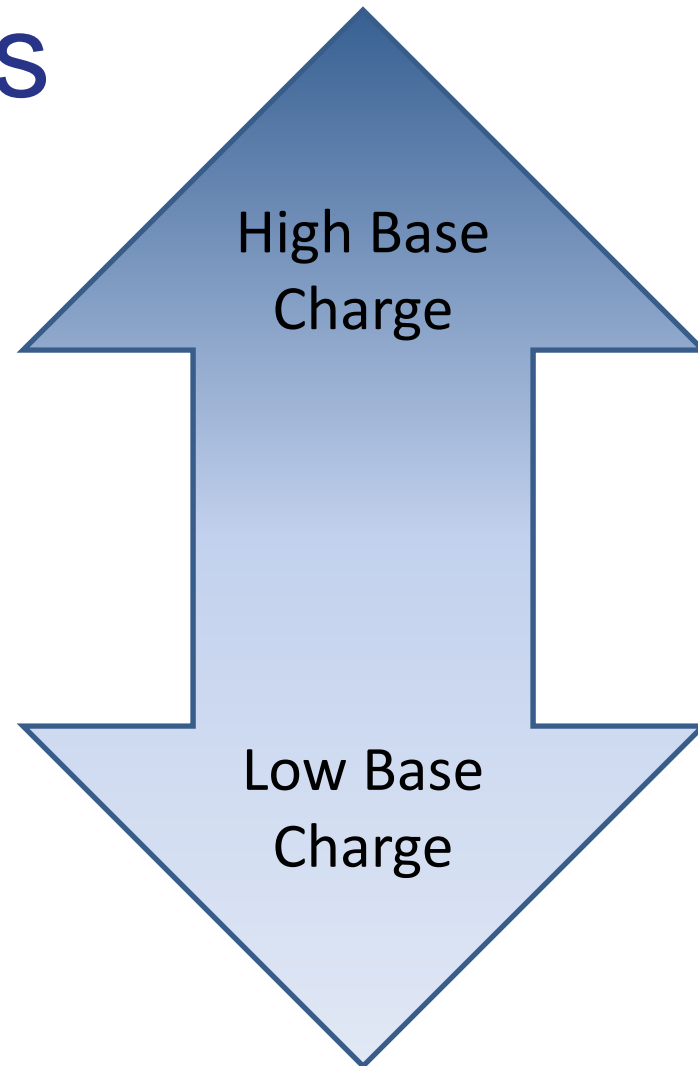


*Suggestion: Use a monthly billing period if you can afford it*



# Base Charges

*Suggestion:  
Smaller utilities  
should lean  
towards higher  
base charges*





# Consumption Allowance with Base Charge

Do not  
include any  
(0 gallons)

Include some  
amount  
(e.g. 1,000 gal/mo)

Include high  
amount  
(e.g. 3,000 gal/mo)

*Suggestion: For systems with low base charges, do not include any consumption allowance. For systems with high base charges but wish to encourage conservation, keep consumption allowance low, if any.*

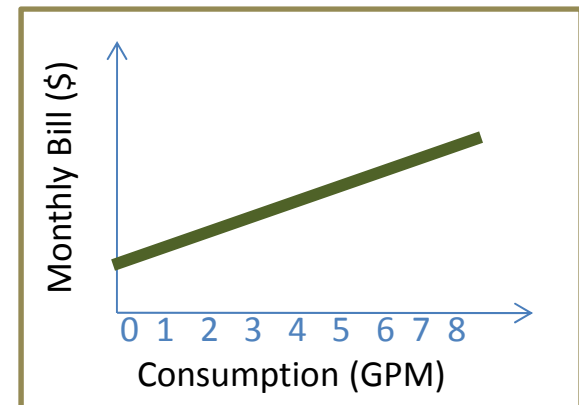
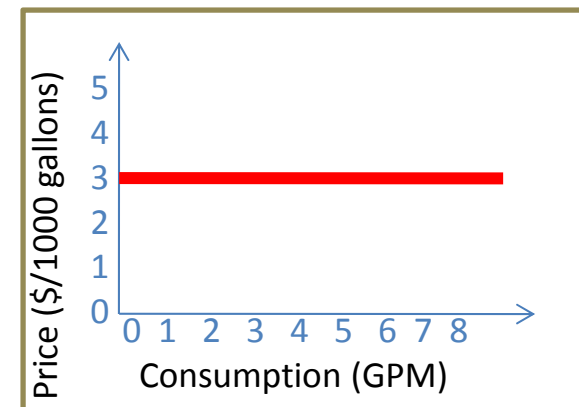




# Volumetric Rate Structure

## Uniform (“Flat”) Rates

- Fair and simple





## #2 Mount Pleasant

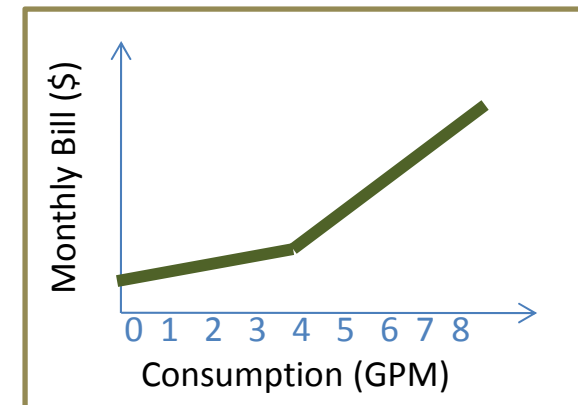
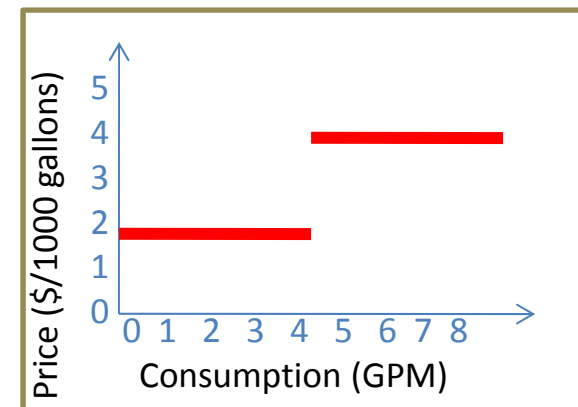
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# Volumetric Rate Structure

## Increasing Block Rates

- Conservation-oriented
- Consider large families





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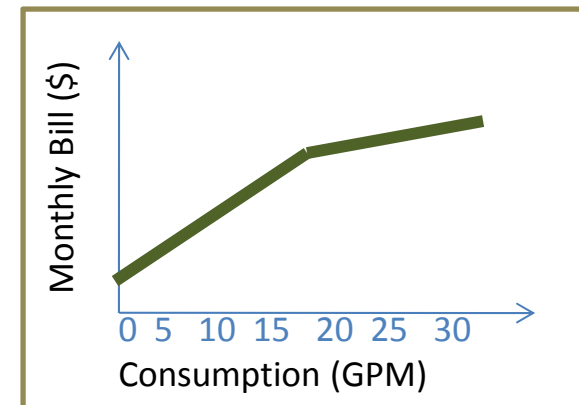
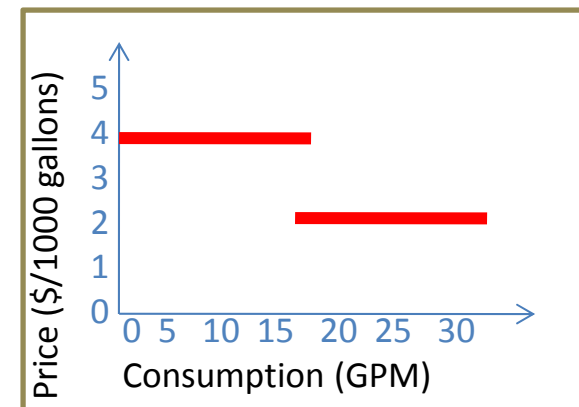




# Volumetric Rate Structure

## Decreasing Block Rates

- Provide price break for large users (e.g.: commercial)
- Do not use for residential





## #4 Union Point

INTOWN - 1/23/2006

STEP	RATE	CONSUMPTION
READY TO SERVE	\$21.00	
STEP 1	3.98	300,000
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# (If Applicable) Block Designs

For block rate structures to be effective:

- Decide on the correct number of blocks
- Decide on where the blocks should end/start
- Set significant rate differentials between blocks



# (If Applicable) Block Designs

For block rate structures to be effective:

- Keep in mind your base charge and consumption allowance
- Meter reading must be punctual, and meters must be replaced frequently
- Think about large families





## #5 – Too Many Blocks!

fixed 1000	Per 1000 gal.	water	Per 1000 gal.	sewer	combined
	rate	11.66	rate	13.10	24.76
2000	2.43	14.09	3.67	16.77	30.86
3000	4.85	18.94	7.41	24.18	43.12
4000	5.65	24.59	7.72	31.90	56.49
5000	5.78	30.37	8.06	39.96	70.33
6000	6.04	36.40	8.21	48.18	84.58
7000	6.23	42.63	8.40	56.58	99.20
8000	6.43	49.06	8.61	65.19	114.24
9000	6.63	55.68	8.79	73.97	129.65
10000	6.63	62.31	8.79	82.76	145.07
11000	6.63	68.93	8.79	91.55	160.48
12000	6.63	75.56	8.79	100.34	175.90
13000	6.63	82.18	8.79	109.13	191.31
14000	6.63	88.81	8.79	117.92	206.72
15000	6.63	95.43	8.79	126.71	222.14
15001-99999999	6.51	102.27	8.99	135.69	237.96



# Frequency of Rate Changes

- Always review your rates annually (recommended)
- Review your financial health indicators annually, and then review your rates if any of the indicators reflect poor financing
- Raise rates each year automatically based on inflation



# #8 Village of Richmond

## SECTION 3.27 ANNUAL INCREASE OF RATES AND FEES

The following fees: Water and Sewer Service, Building Permit Fees, School Impact Fees, Fire Prevention and Life Safety Donations and Municipal Impact Fees as set forth by Village ordinance are subject to an annual increase to be applied by the Village Treasurer by May 1 of each year using the following prescribed formula:

The above rates and Fees will be increased by the amount of the percentage increase of the Consumer Price Index (hereinafter defined) for the previous calendar year. Consumer Price Index ("CPI") means the U.S. City Averages for all Urban Consumers, All Items, (1982-1984=100) of the United States Bureau of Labor Statistics. The CPI for any calendar year shall be determined by averaging the monthly indices for that year. If the Bureau of Labor Statistics substantially revises the manner in which the CPI is determined, an adjustment shall



# Frequency of Rate Changes

- *Important: Avoid maintaining low rates at the expense of your utility's financial health. It will either lead to a sudden, massive rate increase in the future or to failing systems and endangering public health.*



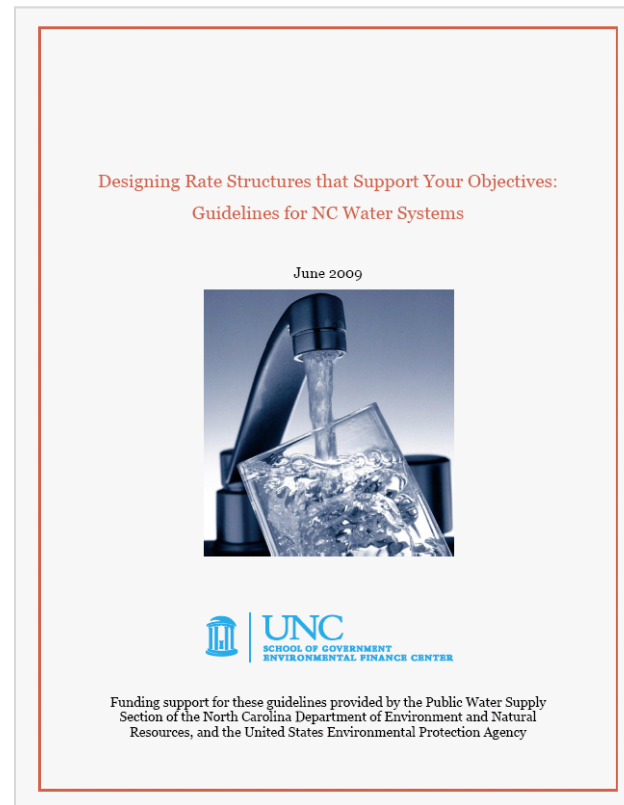


# Designing Rate Structures That Support Your Objectives

Free guide  
written for  
system  
managers

Available at:

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





# Before we go...



[http://efcnetwork.org/small\\_systems\\_blog/](http://efcnetwork.org/small_systems_blog/)

Learn more about water finance and management through our Small Systems Blog! Blog posts feature lessons learned from our training and technical assistance, descriptions of available tools, and small systems “success stories.”

Sign Me Up

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Innovative Finance Solutions for Environmental

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## Blog

**Magdalena, New Mexico: A Success Story from the Smart Management for Small Water Systems**

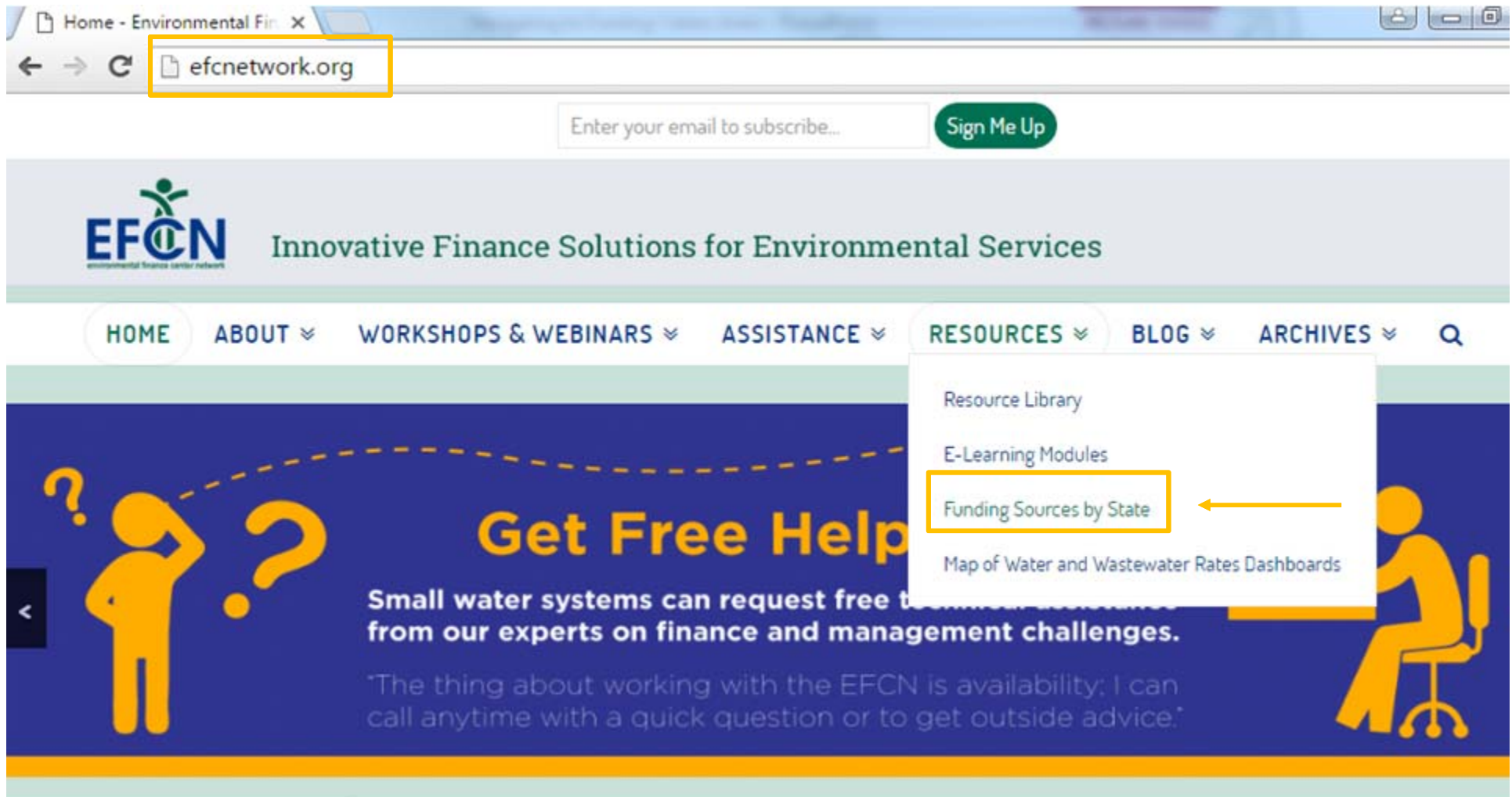
Written by: Allison Perch Allison Perch is a Program Coordinator with the Environmental Finance Center. The financial health of its water system is at risk? This is the question that Stephanie Finch, the town clerk

**The Virtuous Cycle: Internal Energy Revolving Funds for Small Water Systems**

Written by: David Tucker David Tucker is a Project Director with the Environmental Finance Center at pay for energy efficiency and renewable energy, helping cut utility costs? As energy is often the large

Smart Management for Small Water Systems Program Newsletter | Fall 2015

View Full Issue The Environmental Finance Center Network has published the third issue in a series



## Navigating to Funding Tables

Step 1: efcnetwork.org

Step 2: Select "Funding Sources by State" under the Resources Tab



[www.efcnetwork.org](http://www.efcnetwork.org)



UNC  
ENVIRONMENTAL FINANCE CENTER



# Funding Sources by State

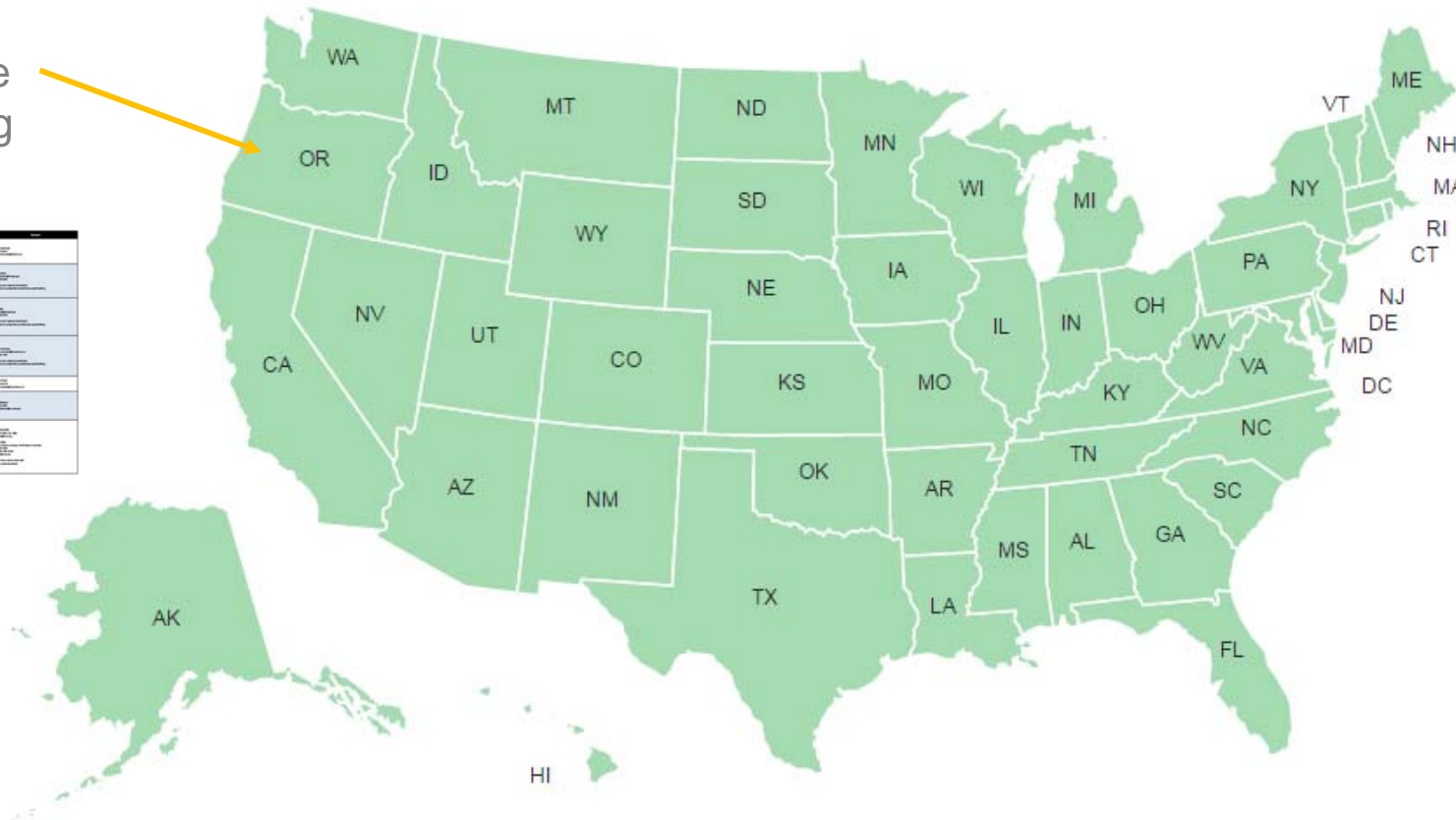
*Note: Some states may have additional resources listed below the map.*

Click on the map below to view funding sources for each state:

Click on an individual state to view funding table.



Funding Source	Amount
State	\$1,000,000
Federal	\$500,000
Local	\$250,000
Private	\$100,000
Non-Profit	\$50,000
Other	\$25,000







# Thank you!

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