Water System Revenues

Glenn Barnes

Environmental Finance Center

The University of North Carolina at Chapel Hill

919-962-2789

glennbarnes@sog.unc.edu

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...

"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

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

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"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."

Will our rates provide sufficient cost recovery?

What exactly does this include?

Are we following the applicable laws?

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

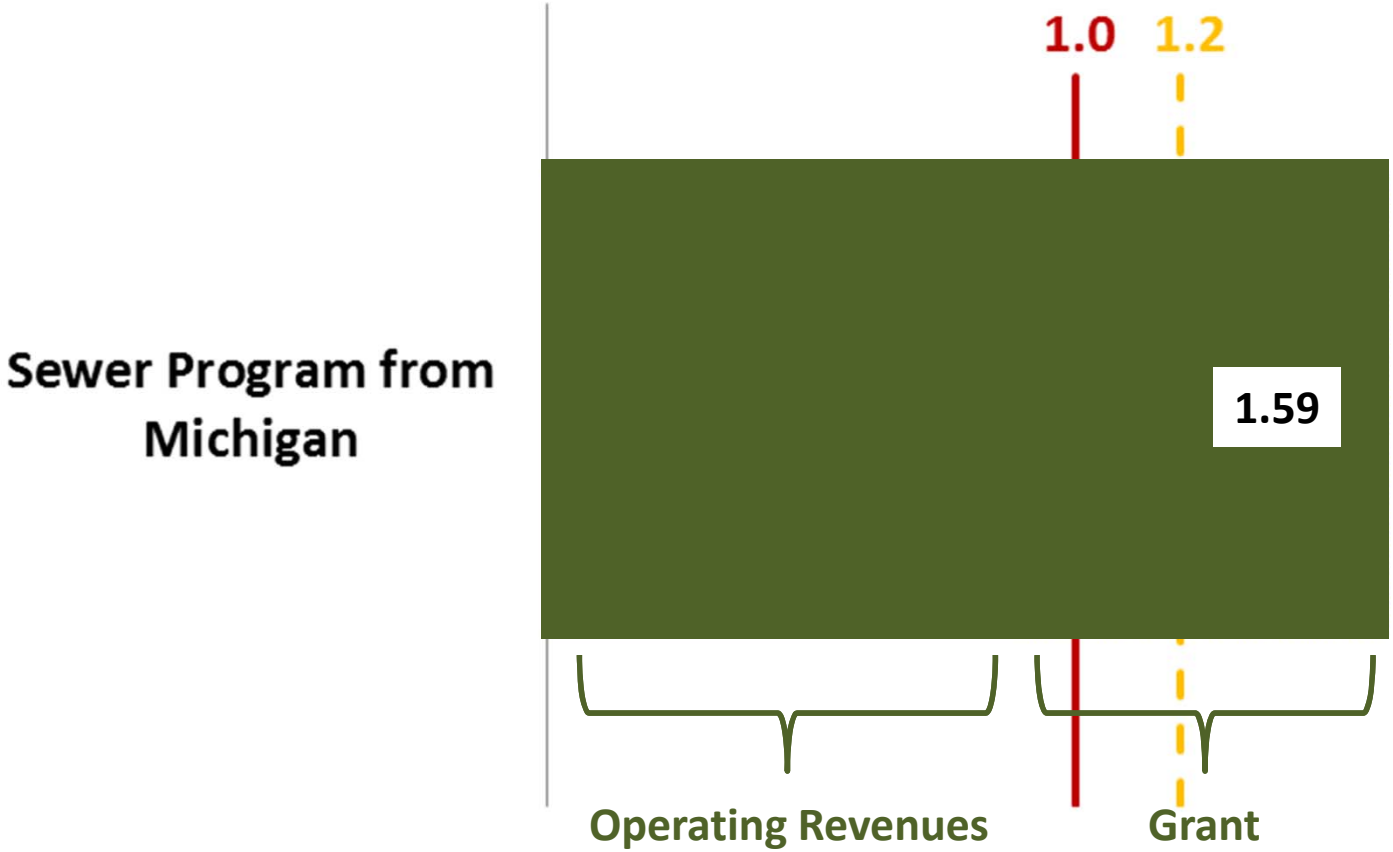
- Application for the grant can be expensive – staff time and money
- Applications can take months to process
- Often lots of strings attached
- Often require a percentage match
- Lots of competition
- Difficult to sustain

Quick Thought on Grants

- This presentation is about ***sustainable*** program finance

- Grants are not sustainable finance

Grants Can Distort Operating Ratio



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 in USVI 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

- Full cost recovery/ revenue stability
- Encouraging conservation
- Fostering business-friendly practices
- Maintaining affordability (keeping rates low – to whom?)

1. _____
2. _____
3. _____
4. _____

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

What are your rate setting objectives?

Back at your system, fill out page 1 of the exercise

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. (Optional) Drought Rates
8. 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

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
Inside Town		
5/8" or 3/4"	$21.00	$3.40/1000
1"	$39.80	$3.40/1000
1 ½ "	$112.40	$3.40/1000
2" and up	$218.00	$3.40/1000
Outside Town		
5/8" or 3/4"	$36.75	$5.95/1000
1"	$69.65	$5.95/1000
1 ½"	$196.70	$5.95/1000
2" and up	$381.50	$5.95/ 1000

#3 City of Stockbridge

Monthly Minimum Base Charge*

Meter Size		Water	Sewer
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

IN TOWN - 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

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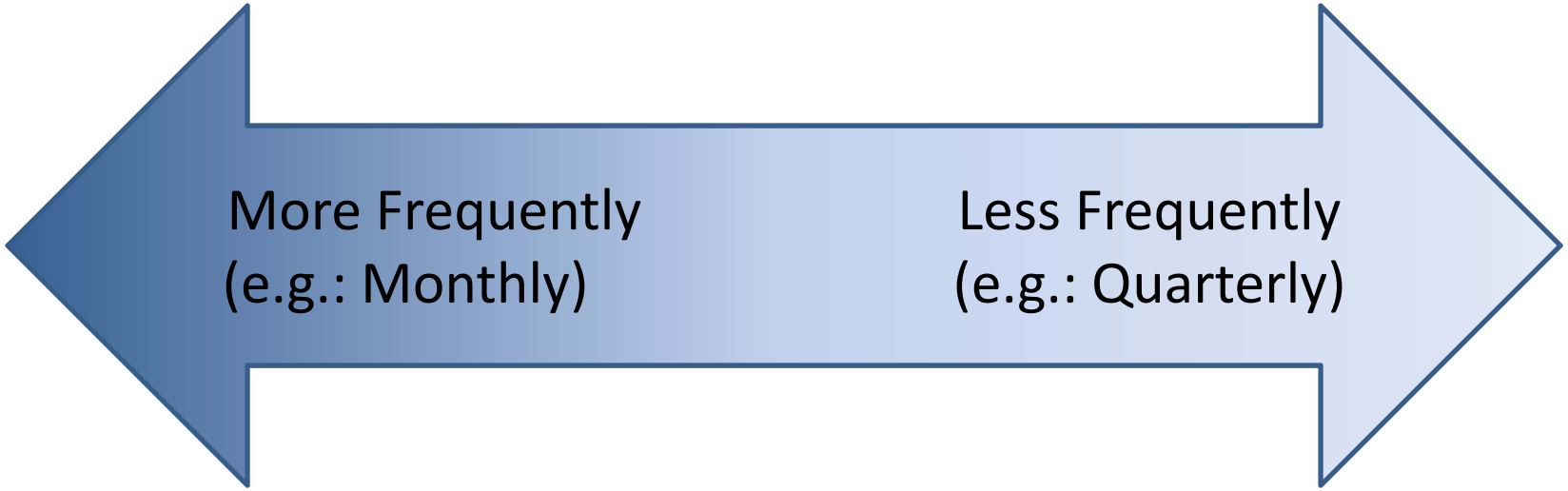
Customer Classes/Distinctions

- Negotiated rate structure with individual high-use customers (typically an industrial customer)

- Target: Only one customer

Mark your Customer Classes on your exercise sheet

Billing Period

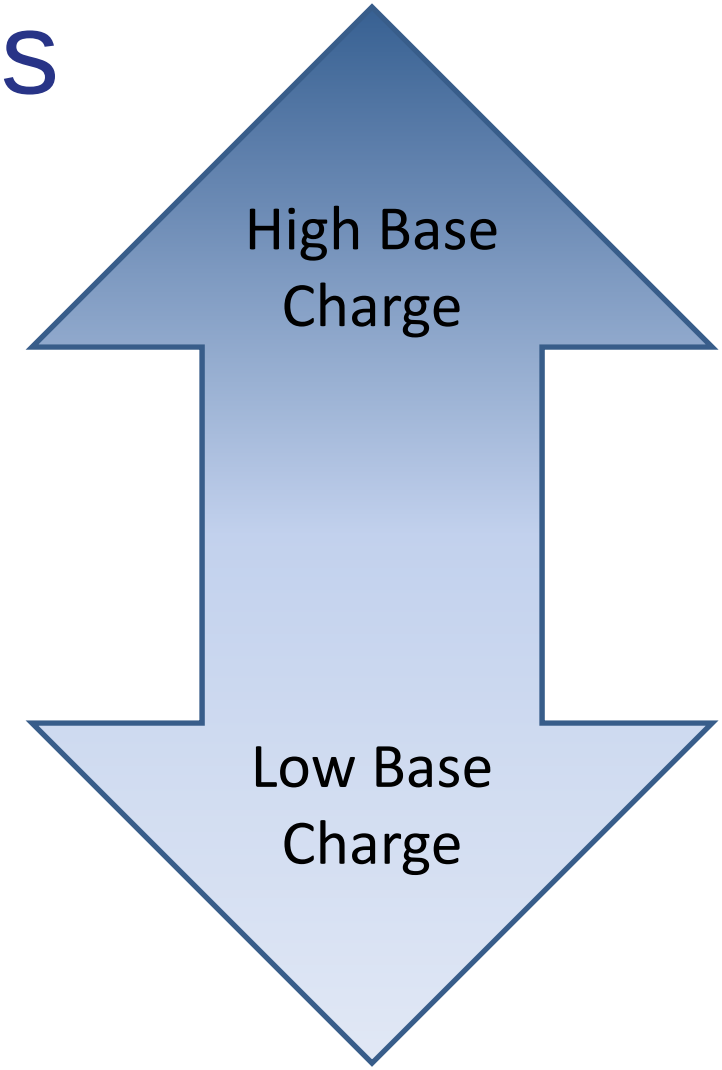


Suggestion: Use a monthly billing period if you can afford it

Mark your Billing Period on your exercise sheet

Base Charges

Suggestion: Smaller utilities should lean towards higher base charges



Mark your Base Charge on your exercise sheet

Consumption Allowance with Base Charge

Do not include any	Include some amount	Include high amount
(0 gallons)	(e.g. 1,000 gal/mo)	(e.g. 3,000 gal/mo)

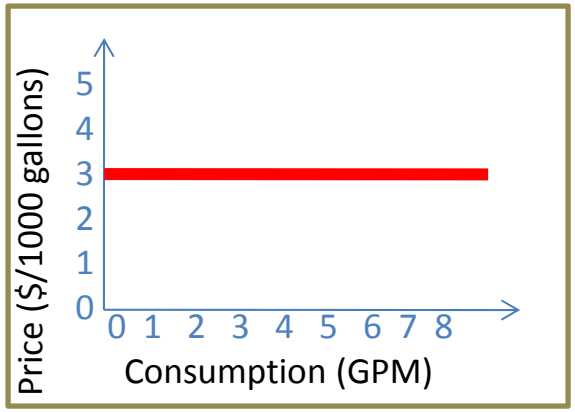
Suggestion: For systems with low base charges, do not include any consumption allowance. For systems with high base charges but wish to encourage conservation, keep consumption allowance low, if any.

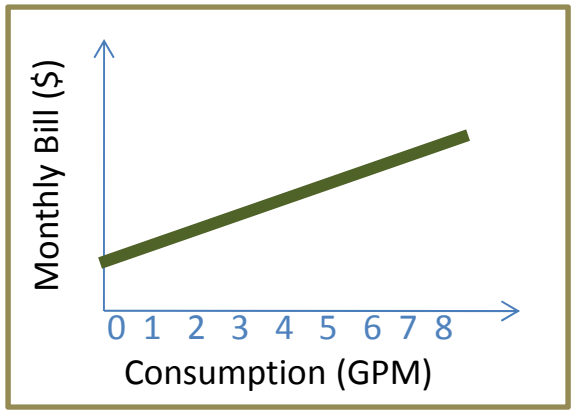
Mark your Consumption Included in the Base Charge on your exercise sheet

Volumetric Rate Structure

Uniform ("Flat") Rates

- Fair and simple





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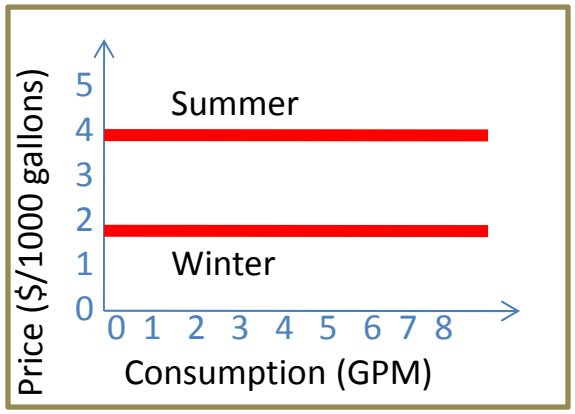
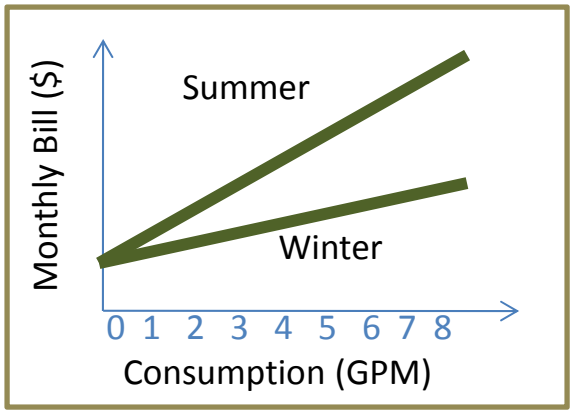
Volumetric Rate Structure

Seasonal (Uniform) Rates

- Conservation-oriented, good for seasonal communities





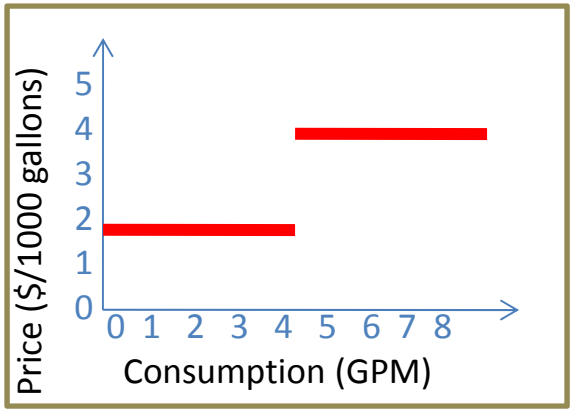
#6 Perquimins County

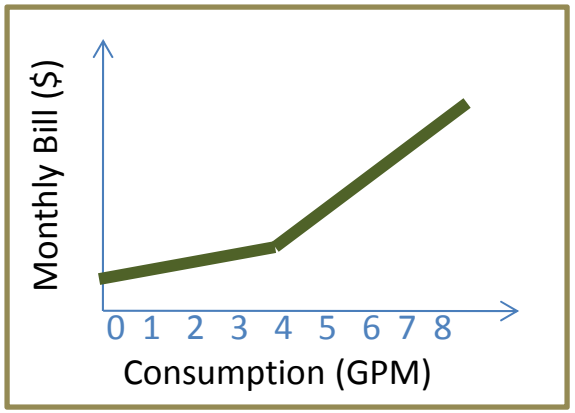
	Reconnection Fee	$25.00
	Water Meter Test	$100.00
Seasonal Water Conservation Rates		
$8/1000 gallons for usage more than 8000 gallons per month from May 1 through October 31		

Volumetric Rate Structure

Increasing Block Rates

- Conservation-oriented
- Consider large families





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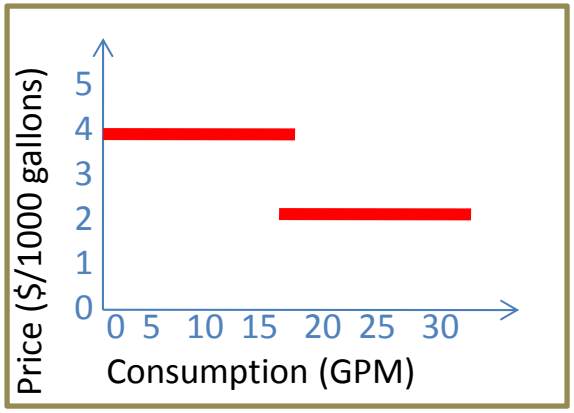
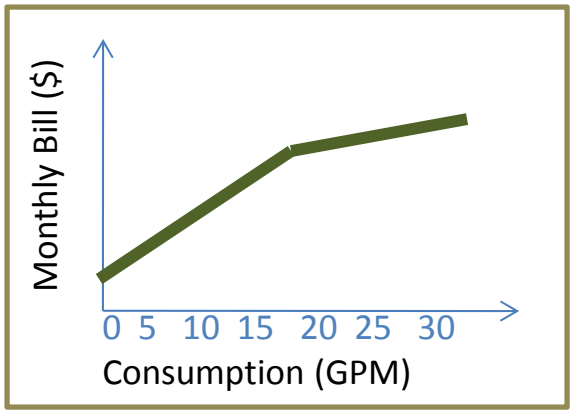
Per thousand gallons	$ 9.26

Volumetric Rate Structure

Decreasing Block Rates

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





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IN TOWN - 1/23/2006

STEP	RATE	CONSUMPTION
READY TO SERVE	$21.00	
STEP 1	3.98	300,000
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Mark your Rate Structure on your exercise sheet

(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!

	Per 1000 gal.	water	Per 1000 gal.	sewer	combined
fixed 1000	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

If you have block rates, mark your Number of Blocks on your exercise sheet

(Optional) Drought Rates

- Prepare for drought in advance: create an ordinance *in advance* to give the utility the ability to raise rates temporarily during a water shortage scenario (sometimes called “drought surcharges”).

#7 Lake Egypt Water District

3. That the above rates charged for non wholesale water customers shall be increased for any consumption above 2,000 as follows when the water level at the Lake of Egypt spillway, at any time during a billing cycle, falls below the levels specified:

   a. 24 inches below spillway rates shall increase $1.00 Per thousand gallons
   b. 30 inches below spillway rates shall increase $2.00 Per thousand gallons
   c. 36 inches below spillway rates shall increase $3.00 Per thousand gallons
   d. 40 inches below spillway rates shall increase $5.00 Per thousand gallons
   e. 48 inches below spillway rates shall increase $10.00 Per thousand gallons

Mark whether your have Drought Rates on your exercise sheet

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

Mark your Frequency of Rate Review on your exercise sheet

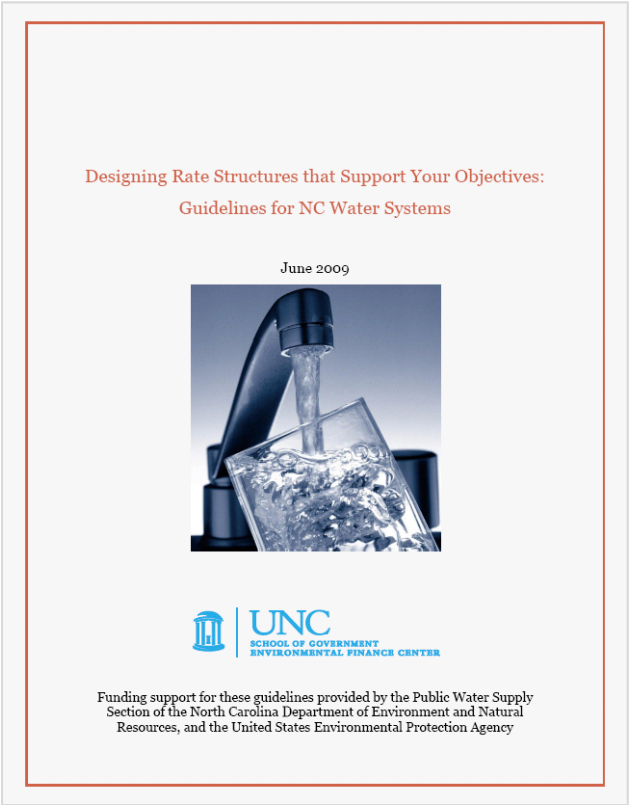
Frequency of Rate Changes

- *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/



Designing Rate Structures that Support Your Objectives:
Guidelines for NC Water Systems

June 2009

UNC
SCHOOL OF GOVERNMENT
ENVIRONMENTAL FINANCE CENTER

Funding support for these guidelines provided by the Public Water Supply Section of the North Carolina Department of Environment and Natural Resources, and the United States Environmental Protection Agency