



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



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



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

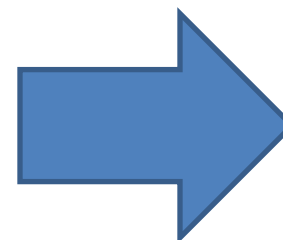
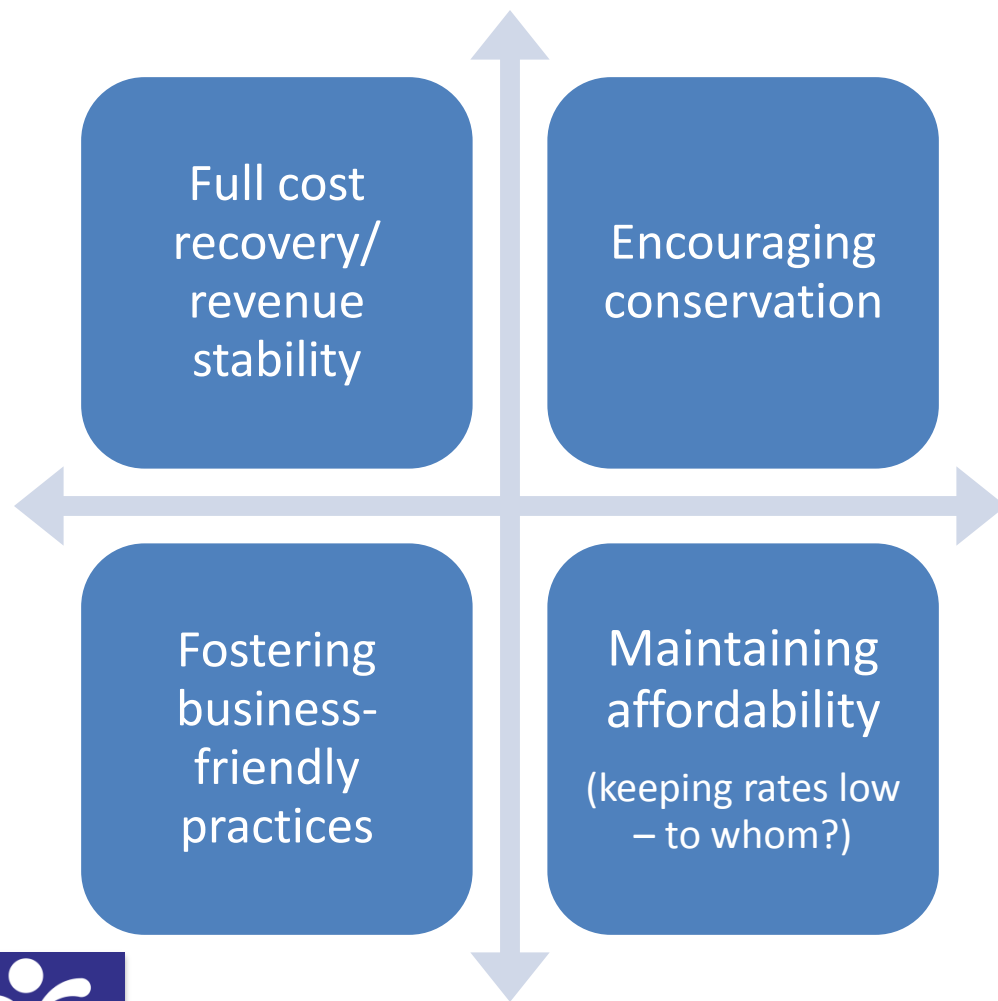


The Reef Condos – USVI

- 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



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.



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 |
|----------------------|---------|

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*

| <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



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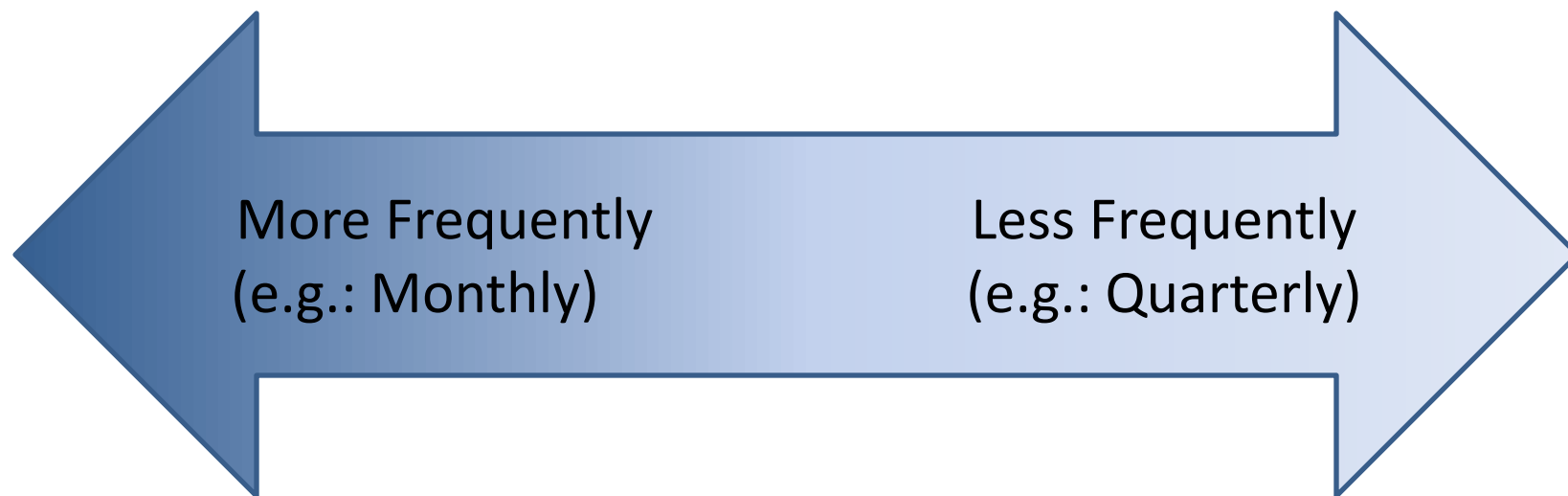


Customer Classes/Distinctions

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



Billing Period

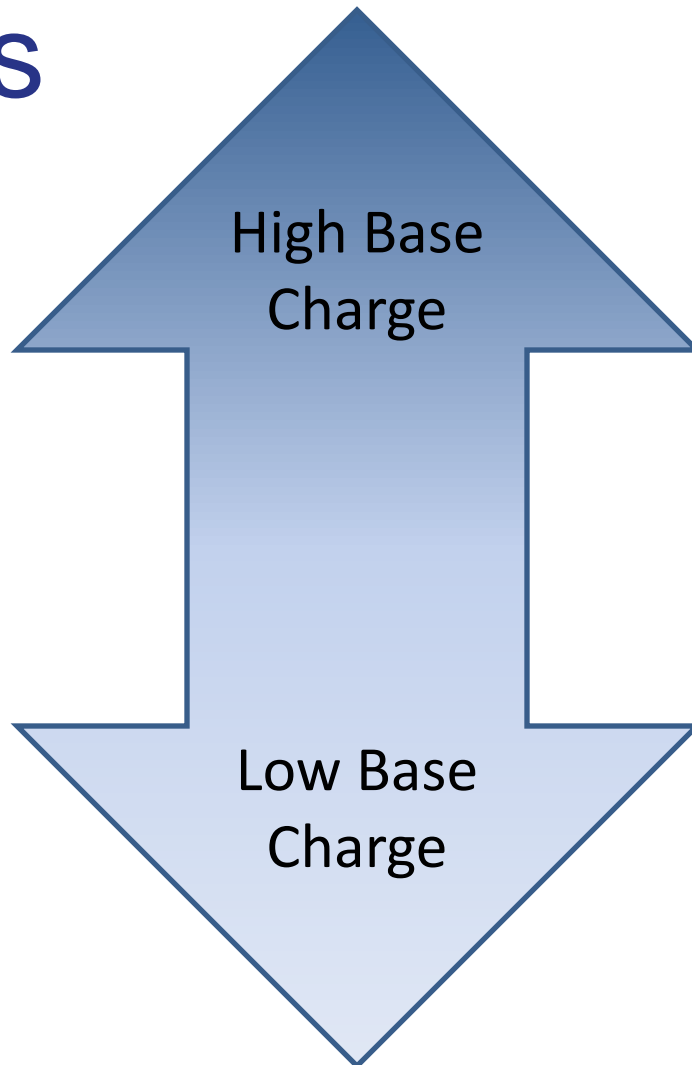


Suggestion: Use a monthly billing period if you can afford it



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)

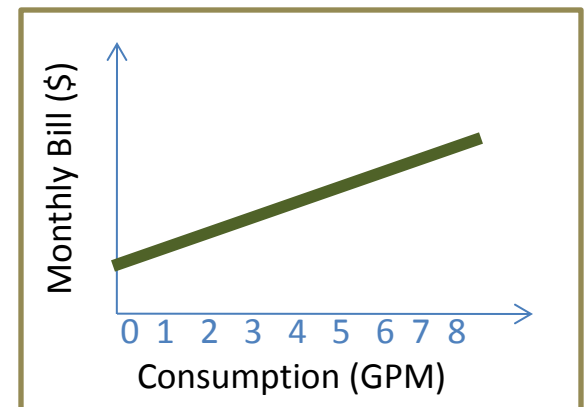
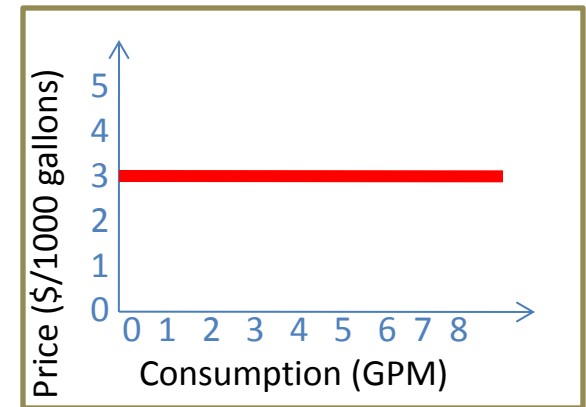
Suggestion: For systems with low base charges, do not include any consumption allowance. For systems with high base charges but wish to encourage conservation, keep consumption allowance low, if any.



Volumetric Rate Structure

Uniform (“Flat”) Rates

- Fair and simple





#2 Mount Pleasant

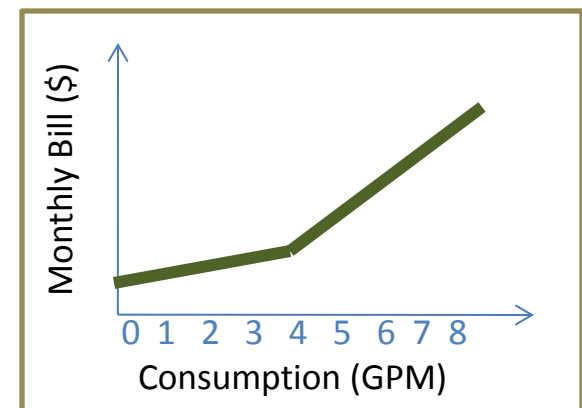
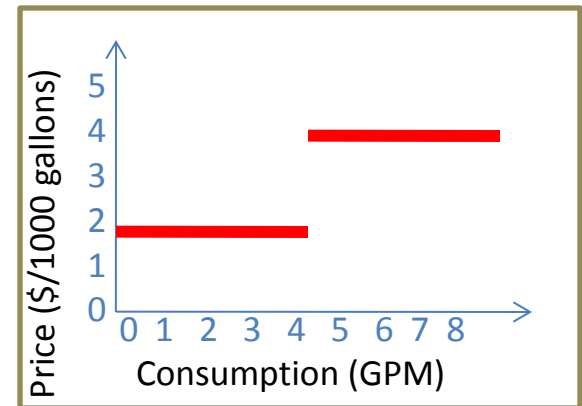
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Volumetric Rate Structure

Increasing Block Rates

- Conservation-oriented
- Consider large families





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Hydrant Meter

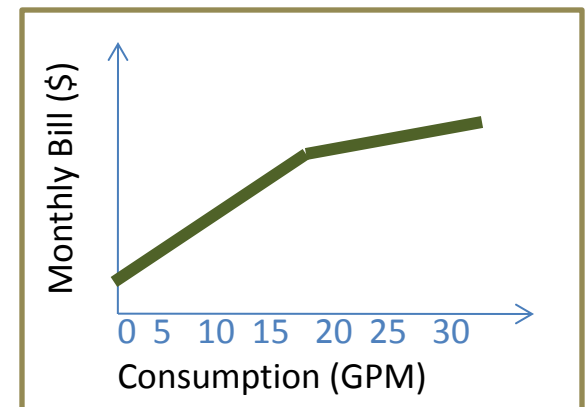
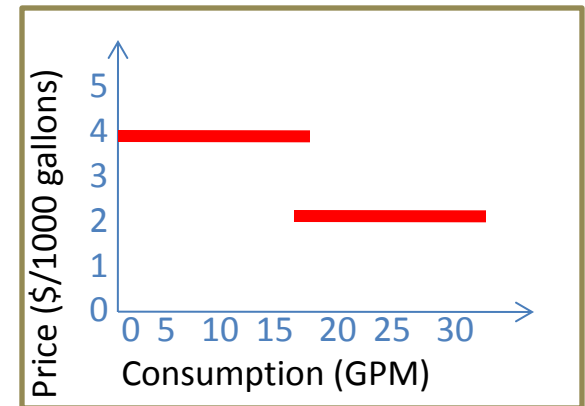
| | |
|----------------------|---------|
| Per thousand gallons | \$ 9.26 |
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Volumetric Rate Structure

Decreasing Block Rates

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





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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.*

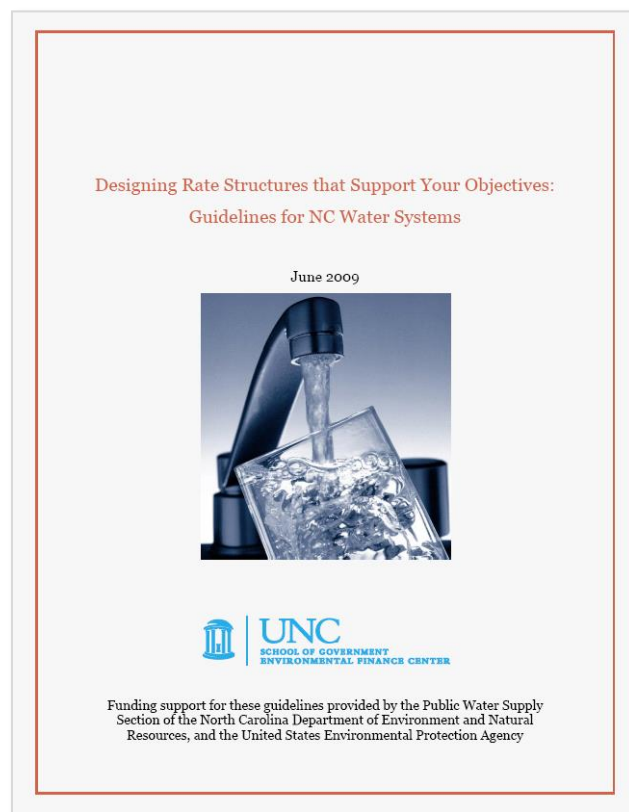


Designing Rate Structures That Support Your Objectives

Free guide
written for
system
managers

Available at:

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





Before we go...



http://efcnetwork.org/small_systems_blog/

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.”

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Blog



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

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



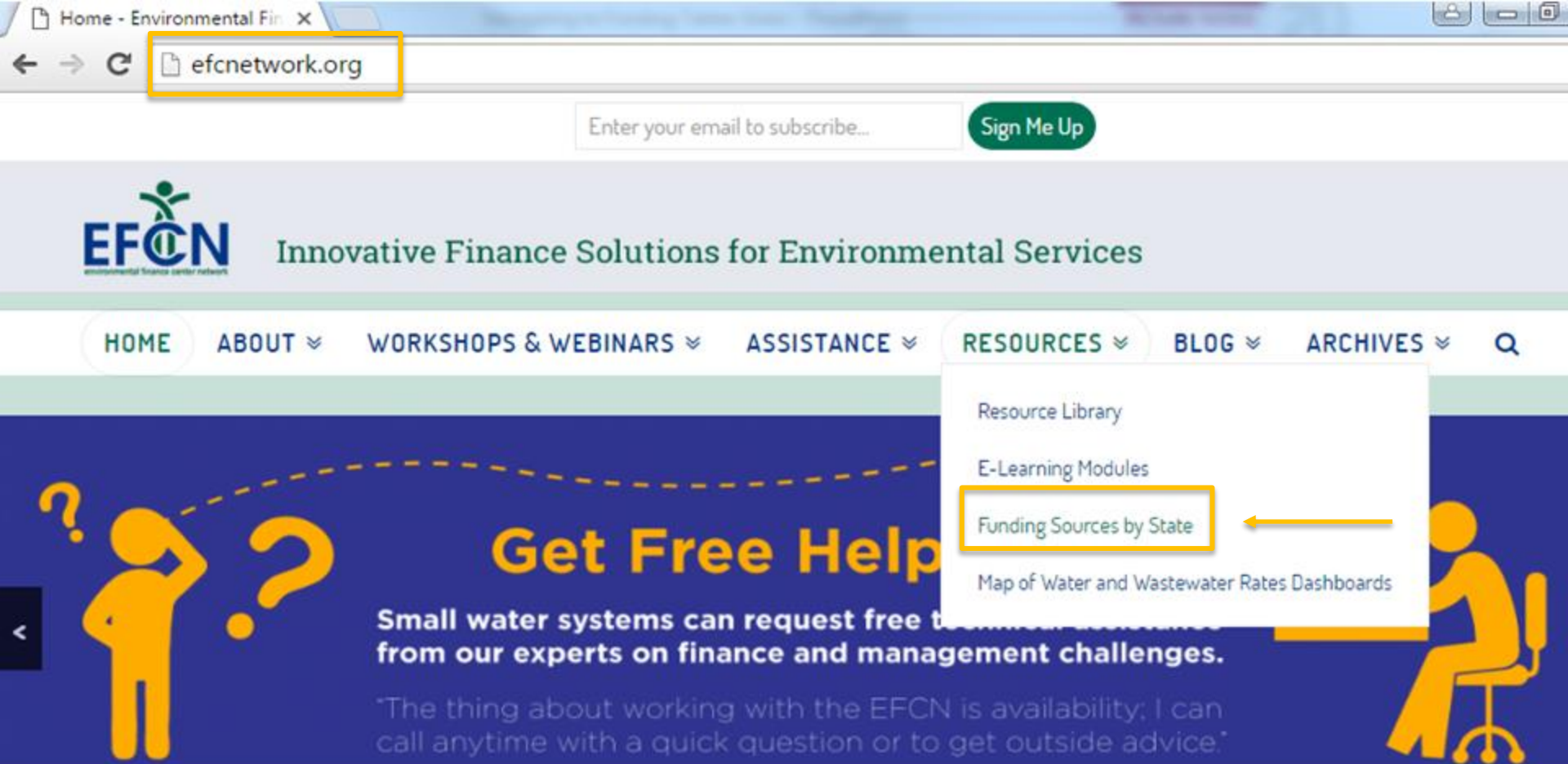
The Virtuous Cycle: Internal Energy Revolving Funds for Small Water Systems

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

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.

| State | Funding Source | Amount | Year | Notes |
|-------|----------------|-----------|------|-------|
| WA | State | \$100,000 | 2010 | |
| WA | Federal | \$50,000 | 2010 | |
| WA | Local | \$50,000 | 2010 | |
| WA | Private | \$50,000 | 2010 | |
| WA | Non-Profit | \$50,000 | 2010 | |
| WA | Other | \$50,000 | 2010 | |
| WA | Total | \$300,000 | 2010 | |
| OR | State | \$100,000 | 2010 | |
| OR | Federal | \$50,000 | 2010 | |
| OR | Local | \$50,000 | 2010 | |
| OR | Private | \$50,000 | 2010 | |
| OR | Non-Profit | \$50,000 | 2010 | |
| OR | Other | \$50,000 | 2010 | |
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| MT | State | \$100,000 | 2010 | |
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| ND | State | \$100,000 | 2010 | |
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| LA | Non-Profit | \$50,000 | 2010 | |
| LA | Other | \$50,000 | 2010 | |
| LA | Total | \$300,000 | 2010 | |
| MS | State | \$100,000 | 2010 | |
| MS | Federal | \$50,000 | 2010 | |
| MS | Local | \$50,000 | 2010 | |
| MS | Private | \$50,000 | 2010 | |
| MS | Non-Profit | \$50,000 | 2010 | |
| MS | Other | \$50,000 | 2010 | |
| MS | Total | \$300,000 | 2010 | |
| AL | State | \$100,000 | 2010 | |
| AL | Federal | \$50,000 | 2010 | |
| AL | Local | \$50,000 | 2010 | |
| AL | Private | \$50,000 | 2010 | |
| AL | Non-Profit | \$50,000 | 2010 | |
| AL | Other | \$50,000 | 2010 | |
| AL | Total | \$300,000 | 2010 | |
| AR | State | \$100,000 | 2010 | |
| AR | Federal | \$50,000 | 2010 | |
| AR | Local | \$50,000 | 2010 | |
| AR | Private | \$50,000 | 2010 | |
| AR | Non-Profit | \$50,000 | 2010 | |
| AR | Other | \$50,000 | 2010 | |
| AR | Total | \$300,000 | 2010 | |
| MO | State | \$100,000 | 2010 | |
| MO | Federal | \$50,000 | 2010 | |
| MO | Local | \$50,000 | 2010 | |
| MO | Private | \$50,000 | 2010 | |
| MO | Non-Profit | \$50,000 | 2010 | |
| MO | Other | \$50,000 | 2010 | |
| MO | Total | \$300,000 | 2010 | |
| IL | State | \$100,000 | 2010 | |
| IL | Federal | \$50,000 | 2010 | |
| IL | Local | \$50,000 | 2010 | |
| IL | Private | \$50,000 | 2010 | |
| IL | Non-Profit | \$50,000 | 2010 | |
| IL | Other | \$50,000 | 2010 | |
| IL | Total | \$300,000 | 2010 | |
| IN | State | \$100,000 | 2010 | |
| IN | Federal | \$50,000 | 2010 | |
| IN | Local | \$50,000 | 2010 | |
| IN | Private | \$50,000 | 2010 | |
| IN | Non-Profit | \$50,000 | 2010 | |
| IN | Other | \$50,000 | 2010 | |
| IN | Total | \$300,000 | 2010 | |
| OH | State | \$100,000 | 2010 | |
| OH | Federal | \$50,000 | 2010 | |
| OH | Local | \$50,000 | 2010 | |
| OH | Private | \$50,000 | 2010 | |
| OH | Non-Profit | \$50,000 | 2010 | |
| OH | Other | \$50,000 | 2010 | |
| OH | Total | \$300,000 | 2010 | |
| CA | State | \$100,000 | 2010 | |
| CA | Federal | \$50,000 | 2010 | |
| CA | Local | \$50,000 | 2010 | |
| CA | Private | \$50,000 | 2010 | |
| CA | Non-Profit | \$50,000 | 2010 | |
| CA | Other | \$50,000 | 2010 | |
| CA | Total | \$300,000 | 2010 | |
| NV | State | \$100,000 | 2010 | |
| NV | Federal | \$50,000 | 2010 | |
| NV | Local | \$50,000 | 2010 | |
| NV | Private | \$50,000 | 2010 | |
| NV | Non-Profit | \$50,000 | 2010 | |
| NV | Other | \$50,000 | 2010 | |
| NV | Total | \$300,000 | 2010 | |
| UT | State | \$100,000 | 2010 | |
| UT | Federal | \$50,000 | 2010 | |
| UT | Local | \$50,000 | 2010 | |
| UT | Private | \$50,000 | 2010 | |
| UT | Non-Profit | \$50,000 | 2010 | |
| UT | Other | \$50,000 | 2010 | |
| UT | Total | \$300,000 | 2010 | |
| WY | State | \$100,000 | 2010 | |
| WY | Federal | \$50,000 | 2010 | |
| WY | Local | \$50,000 | 2010 | |
| WY | Private | \$50,000 | 2010 | |
| WY | Non-Profit | \$50,000 | 2010 | |
| WY | Other | \$50,000 | 2010 | |
| WY | Total | \$300,000 | 2010 | |
| SD | State | \$100,000 | 2010 | |
| SD | Federal | \$50,000 | 2010 | |
| SD | Local | \$50,000 | 2010 | |
| SD | Private | \$50,000 | 2010 | |
| SD | Non-Profit | \$50,000 | 2010 | |
| SD | Other | \$50,000 | 2010 | |
| SD | Total | \$300,000 | 2010 | |
| NE | State | \$100,000 | 2010 | |
| NE | Federal | \$50,000 | 2010 | |
| NE | Local | \$50,000 | 2010 | |
| NE | Private | \$50,000 | 2010 | |
| NE | Non-Profit | \$50,000 | 2010 | |
| NE | Other | \$50,000 | 2010 | |
| NE | Total | \$300,000 | 2010 | |
| KS | State | \$100,000 | 2010 | |
| KS | Federal | \$50,000 | 2010 | |
| KS | Local | \$50,000 | 2010 | |
| KS | Private | \$50,000 | 2010 | |
| KS | Non-Profit | | | |



Thank you!

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