



Water System Rate Setting for Board Members, Local Elected Officials, and System Owners

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Webinar Objectives

- Understand common types of rate setting objectives
- Learn how to match rate structure elements with rate setting objectives

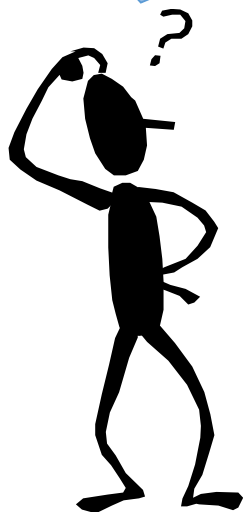


Rate structures are the primary way that we as water systems “communicate” with our customers

Here’s a question we hear often...



Are our
rates right?

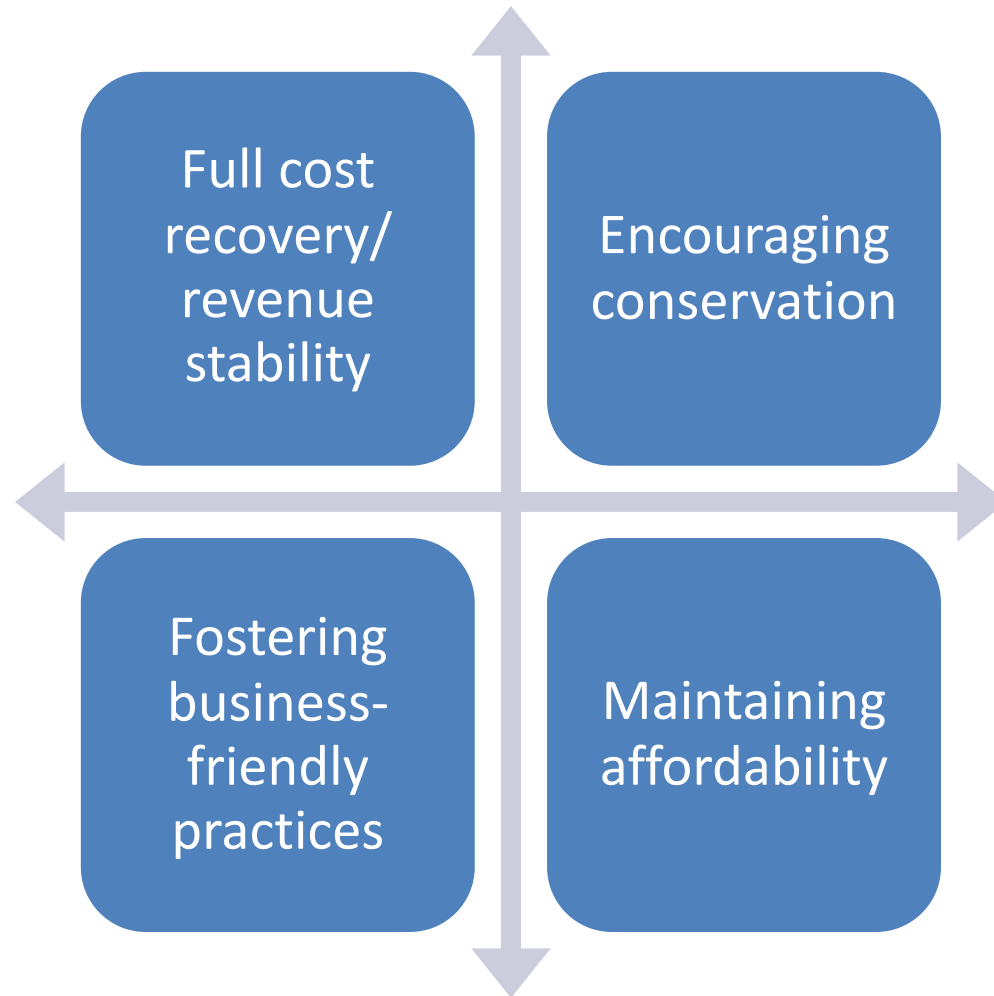


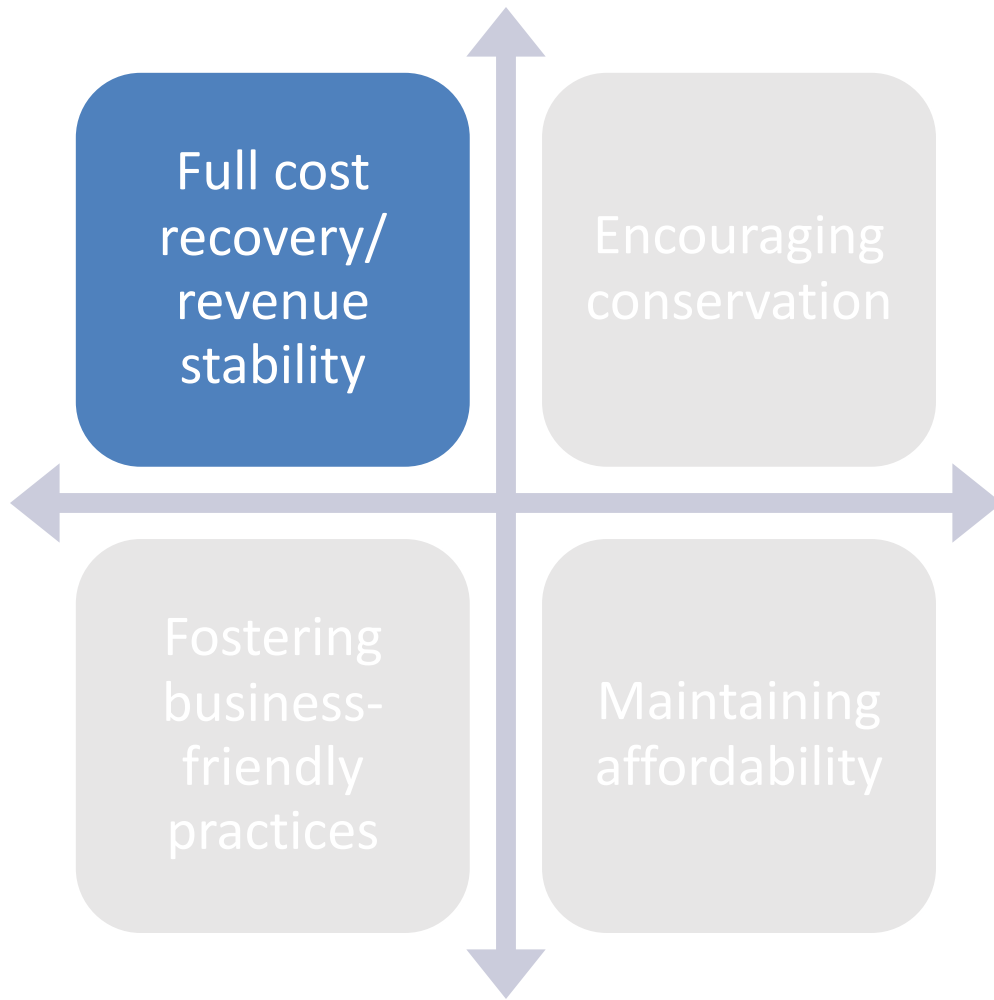
It depends...





Water System Objectives





Bring in enough revenue to cover the full cost of running the water system:

- O&M
- Capital needs
- Debt service

Why do this?



Full cost
recovery/
revenue
stability

Encouraging
conservation

Fostering
business-
friendly
practices

Maintaining
affordability

Use pricing to
encourage
customers to
reduce their
water
consumption

Why do this?



Full cost
recovery/
revenue
stability

Encouraging
conservation

Fostering
business-
friendly
practices

Maintaining
affordability

Use pricing to encourage businesses and agriculture to locate to your community or stay in your community

Why do this?



Full cost
recovery/
revenue
stability

Encouraging
conservation

Fostering
business-
friendly
practices

Maintaining
affordability

Ensure that all customers in your water system are able to afford enough water to live on

Why do this?



Poll Questions



Objectives and Rate Structures

Your rate structure is a tool to help you meet your water system objectives



Rates can be super easy...

We charge a flat rate of \$15.00 monthly

P.O. - Box 133
Jacksonville

We ARE a small town we do NOT have sewage



...relatively straight-forward...

WATER

NEW RATE SCHEDULE: If and when the Water and Sewer Manager determines the feasibility of water services to an applicant, water services will be furnished at the following monthly rate:

A. RESIDENTIAL RATES:

Flat Fee (1000 Gallons) (0—135 Cubic Feet) \$11.00

Rate Per Thousand/Gallons (135 Cubic Feet) 2.00



...or more involved.

WATER BILLS ARE SUBJECT TO THE FOLLOWING RATE STRUCTURE:

RESIDENTIAL WATER:

0 to 2000 gallons:----- \$15.00 Minimum Bill
Additional:----- \$4.75 for 2001-5000 gallon
\$6.00 for 5001-11,000 gallon
\$5.50 for 11,001 gallon & up

COMMERCIAL WATER:

0 to 2000 gallons:----- \$21.25 Minimum Bill
Additional: ----- \$7.00 2001 – 12,000 gal
\$6.75 12,001 – 27,000 gal
\$6.50 27,001 gallon & up



And then there is this...

Single outlet (Minimum charge)	\$193.00
One Bath	316.00
1 ½ or 2 Bath	349.00
2 ½ Bath	379.00
3 or more Baths	413.00
Additional apartment/same service	316.00
Swimming pool	126.00
Each Boat slip with water available	16.00
Each Rental or Commercial Mooring	6.15
Each restaurant/snack bar seat	16.00

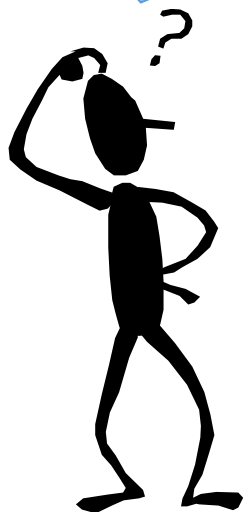
(Annual Rates)

Rate structures on the webinar today





Are our
rates right?



It depends...





Full Cost Pricing

- The goal of full cost pricing is to have the charges for water cover the entire cost of running the water system today and into the future
- There are many ways to structure rates to generate the same amount of revenue

A blue-tinted photograph of industrial machinery, possibly a water treatment plant, featuring large pipes and valves.

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. Frequency of rate changes

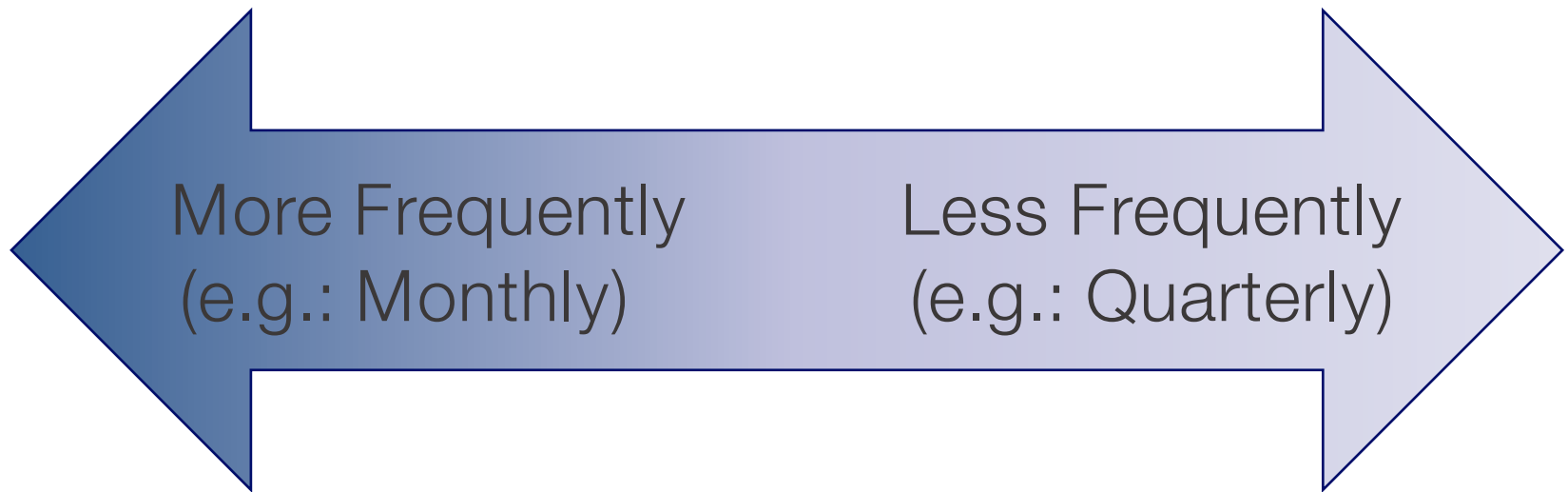


Customer Classes/Distinctions

- One rate structure for all
- Separate rate structure for residential, irrigation, commercial, industrial, governmental, or wholesale customers
- Base charge based on meter size
- Inside/Outside structure
- Negotiated rates with individual customers



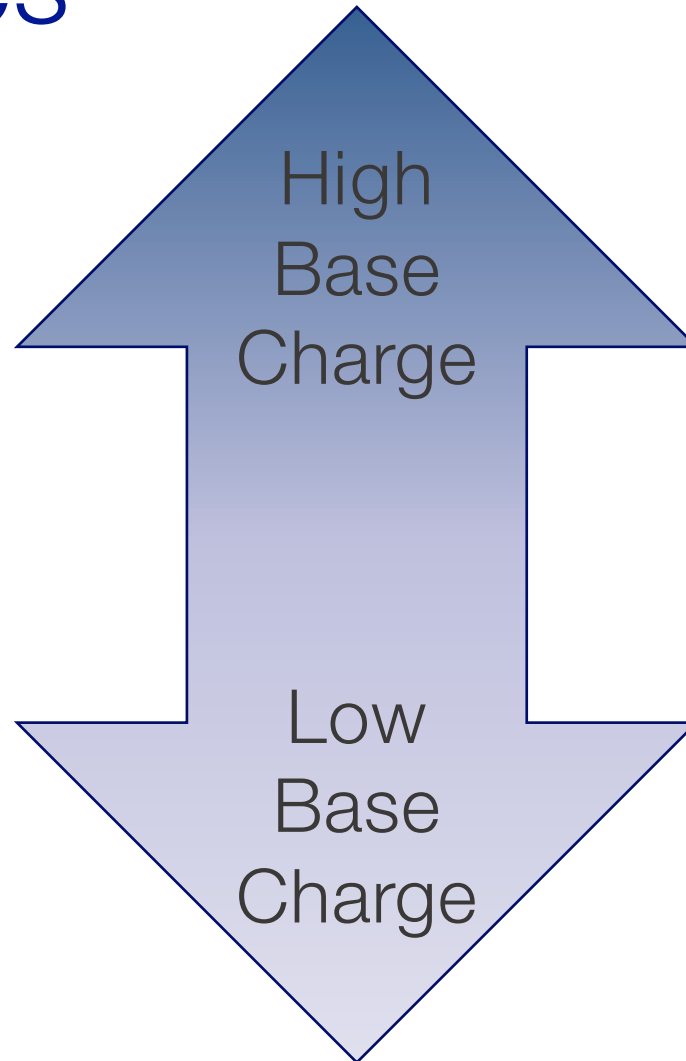
Billing Period



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

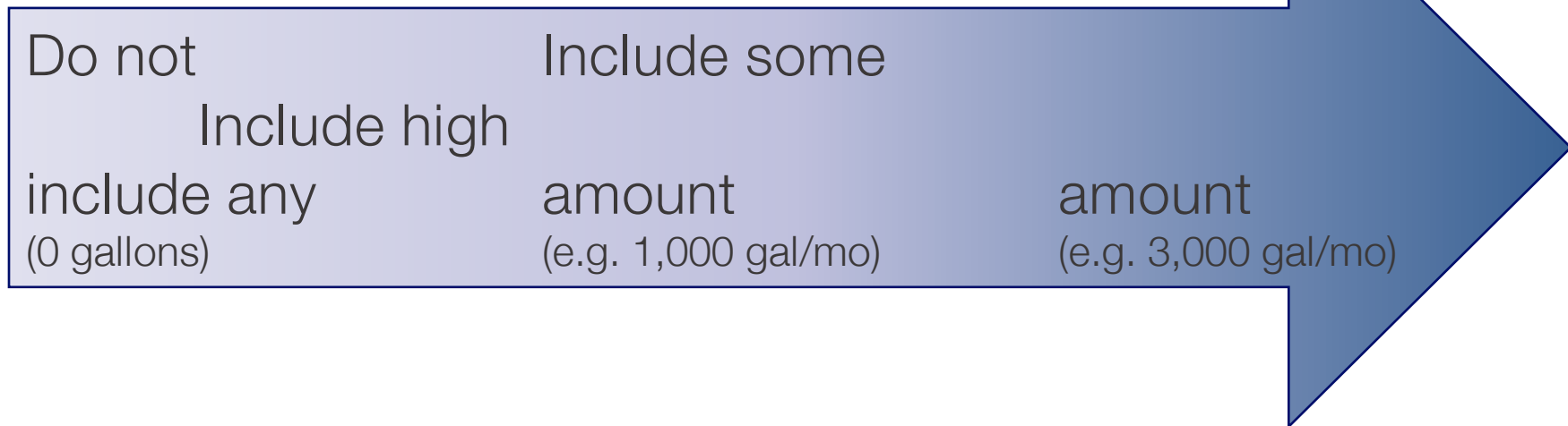
Base Charges

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





Consumption Allowance with Base Charge

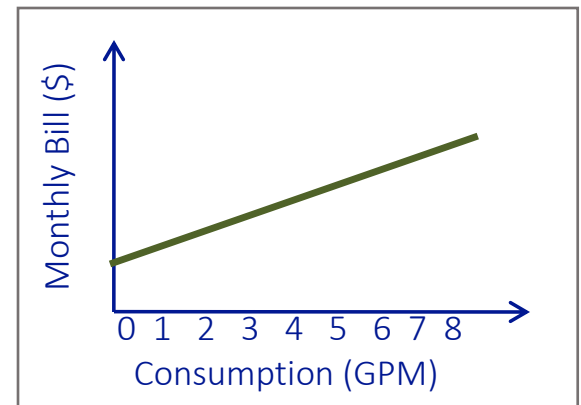
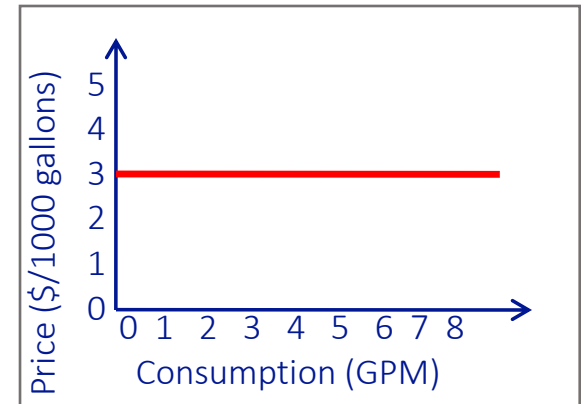


Suggestion: For systems with low base charges, do not include any consumption allowance. For systems with high base charges but wish to encourage conservation, keep consumption allowance low, if any.

Volumetric Rate Structure

Uniform (“Flat”) Rates

- Fair and simple





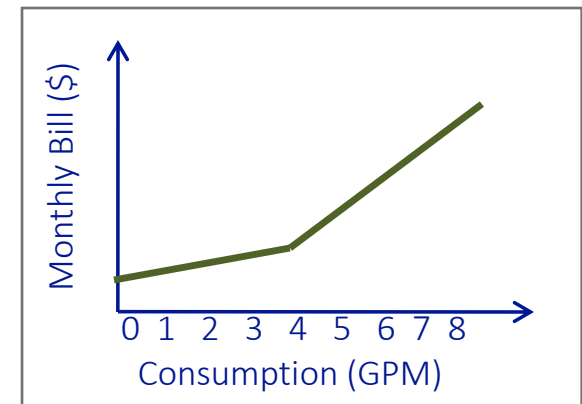
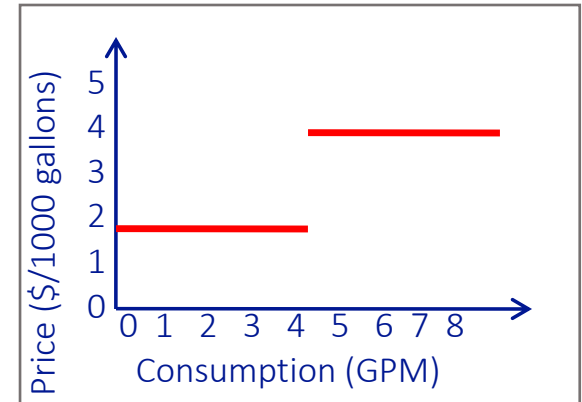
Town of Mount Pleasant, NC

Water Meter Size	0 to 2,000 Gallons	Gallons Over 2,000
Inside Town		
5/8" or 3/4"	\$22.36	\$4.08 /1000
1"	\$41.16	\$4.08 /1000
1 1/2 "	\$113.76	\$4.08 /1000
2" and up	\$219.36	\$4.08 /1000
Outside Town		
5/8" or 3/4"	\$39.13	\$7.14 /1000
1"	\$72.03	\$7.14 /1000
1 1/2"	\$199.08	\$7.14 /1000
2" and up	\$383.88	\$7.14 /1000

Volumetric Rate Structure

Increasing Block Rates

- Conservation-oriented
- Consider large families





City of Stockbridge, GA

Residential

0 through 4,000 gallons	\$ 5.27 Per Thousand
4,001 through 9,000 gallons	\$ 8.10 Per Thousand
9,001 gallons and up	\$ 10.90 Per Thousand

Commercial, Apartments and Mobile Home Parks

0 through 10,000	\$ 6.69 Per Thousand
10,000 and up	\$ 8.03 Per Thousand

Irrigation

Per thousand gallons	\$ 10.72
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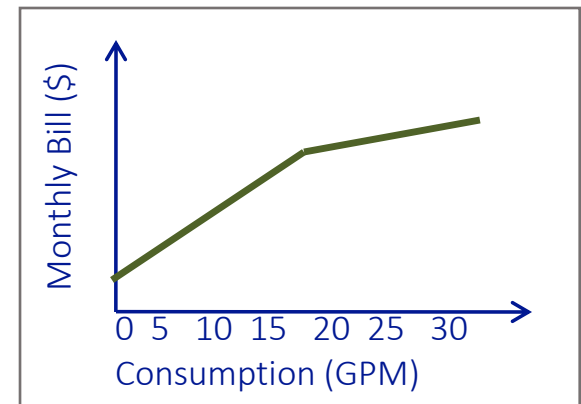
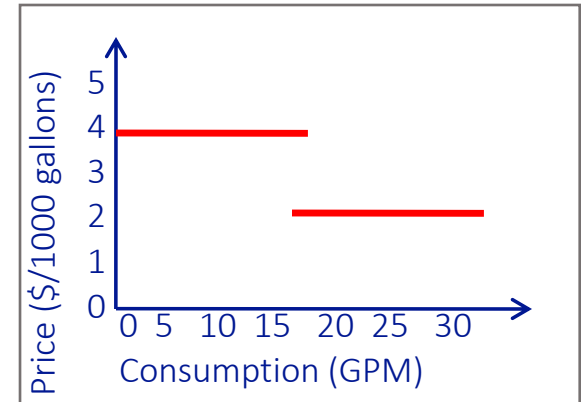
Hydrant Meter

Per thousand gallons	\$ 10.72
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Volumetric Rate Structure

Decreasing Block Rates

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





Ardmore, AL

COMMERCIAL WATER:

0 to 2000 gallons:-----\$21.25 Minimum Bill

Additional: -----\$7.00 2001 – 12,000 gal

\$6.75 12,001 – 27,000 gal

\$6.50 27,001 gallon & up

A blue-tinted photograph of industrial machinery, possibly a water pump or engine, with various pipes, valves, and mechanical components visible.

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



Village of Richmond, IL

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 be made in the revised index which would produce results equivalent, as nearly as possible, to those which would be obtained if the CPI had not been so revised. If the 1982-1984 average shall no longer be used as an index of 100, such change shall constitute a substantial revision. If the CPI becomes unavailable to the public because publication is discontinued or otherwise, the Village shall substitute therefore a comparable index based upon changes in the cost of living or purchasing power of the consumer dollar published by any other governmental agency or, if no such index is available, then a comparable index published by a major bank or other financial

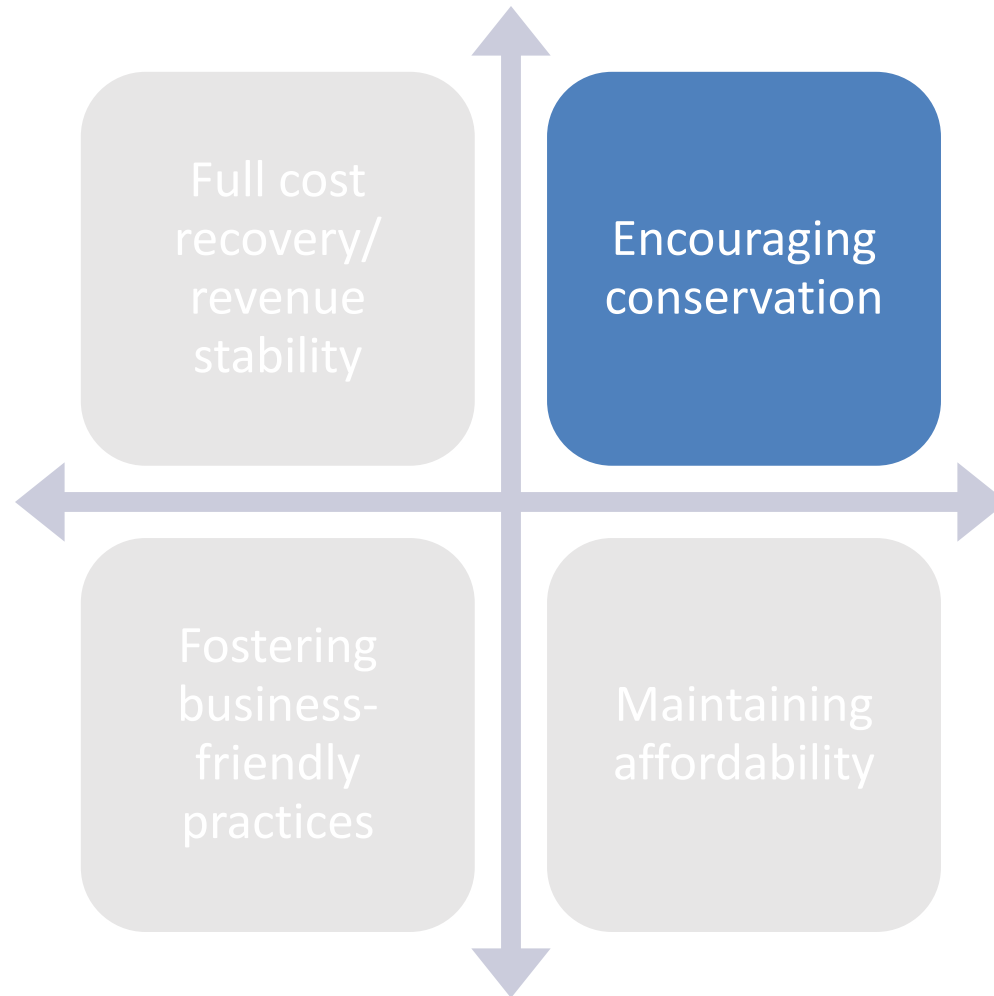


Frequency of Rate Changes

Important!!!

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

Encouraging Conservation



https://www.waterboards.ca.gov/waterrights/water_issues/programs/drought/pricing/



Board



Programs



Drinking Water



Water Quality



Water Rights



Notices



Water Boards



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State Water Board Drought Year Water Actions

Conservation Water Pricing

Conservation pricing is an effective tool to prevent wasteful water use. As a result, it is an important part of the portfolio for local water agencies' efforts to conserve water in the short- and long-term.

Directive 8 of Governor Jerry Brown's April 1, 2015 [Executive Order B-29-15](#) promotes water conservation pricing mechanisms. This webpage provides background on the directive and issues related to conservation pricing, including compliance with applicable laws. On **July 8, 2015**, the State Water Board conducted a [workshop](#) to receive stakeholder input on the implementation of Directive 8.

QUICK LINKS

- [Background](#)
- [Efficacy of Conservation Pricing](#)
- [Mechanics of Developing Conservation Pricing](#)
- [Best Practices/Examples](#)
- [Proposition 218 Compliance Information](#)
- [Public Workshop](#)
- [Related Documents](#)
- [Stay Informed](#)

Background

Water pricing can reduce demand by providing an economic incentive for consumers to conserve water. Many water suppliers have established rate structures to incentivize water conservation.

Pursuant to the Executive Order, the State Water Board is to direct urban water suppliers to develop rate structures and other pricing mechanisms to maximize water conservation consistent with statewide water use restrictions. The specific form of that direction is left to the discretion of the State Water Board.

The State Water Board is aware that rate-setting is a complex undertaking that involves numerous local determinations. There is no one-size-fits-all approach to rate-setting, let alone setting rates that promote conservation. Conservation water pricing must be carefully tailored to local circumstances to be effective. Further complicating rate-setting, local water agencies must carefully construct and document their rate structures to comply with constitutional limitations from Proposition 218.



Increasing Block Rates

Rate per 1,000 gallons - Tiered

Tier	Water Usage	Rate per 1,000 gallons (\$)
1	First 5,000 gallons or less	\$13.00
2	Next 5,001 – 15,000	\$17.75
3	Next 15,001 – 25,000 (Over 15,000 cattle lessees)	\$18.75
4	25,001 or more for all except cattle lessees	\$19.75

Napu'u Water, Inc.



Low or No Base Charge, Higher Volumetric Charge

WHAT ARE THE WATER AND SEWER RATES?

Water \$2.78 per 100 cubic feet of water.

Sewer \$7.19 per 100 cubic feet of water used.

HOW MANY GALLONS ARE THERE IS A 100 CUBIC FEET?

There are 748 gallons in 100 cubic feet.

HOW OFTEN WILL I RECEIVE A WATER/SEWER BILL?

The Town bills for water/sewer quarterly so you will receive a bill 4 times a year.

DOES THE TOWN HAVE ANY ADJUSTMENT FOR FILLING A POOL?

Farmington, NH



Seasonal Rates

RATES AND CHARGES

OCTOBER THROUGH APRIL

\$ 3.00 PER 1,000 GALLONS

MAY THROUGH SEPTEMBER

\$ 4.60 PER 1,000 GALLONS

Cactus Stellar Limited, AZ



Seasonal Rates

TOWN OF IPSWICH WATER & SEWER RATES

WATER RATE

Non-residential water rate (Base Rate): \$8.33 per 100 cubic feet (Effective May 1, 2016)

Residential water rate (Seasonal Rate):

Summer (May 1, 2017 – September 30, 2017): \$12.50 per 100 cubic feet

Winter (Nov 1, 2016 – April 30, 2017): \$3.38 per 100 cubic feet

Ipswich, MA



Higher Irrigation Rates

Residential

0 through 4,000 gallons	\$ 5.27 Per Thousand
4,001 through 9,000 gallons	\$ 8.10 Per Thousand
9,001 gallons and up	\$ 10.90 Per Thousand

Commercial, Apartments and Mobile Home Parks

0 through 10,000	\$ 6.69 Per Thousand
10,000 and up	\$ 8.03 Per Thousand

Irrigation

Per thousand gallons	\$ 10.72
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Stockbridge, GA



Low Supply Surcharges

COMMODITY RATES PER 1,000 GALLONS PER MONTH BY CONSERVATION STAGE IN EFFECT

(Zero Gallons Included in Base Rate)			Stages 1 & 2	Stage 3 ^a	Stage 4 ^a
1st Tier:	0 – 4,000 Gallons	\$	6.80	6.80	6.80
2nd Tier:	4,001 – 13,000 Gallons	\$	10.20	10.20	10.20
3rd Tier:	13,001 – 20,000 Gallons	\$	12.30	15.00	20.00
4th Tier:	20,001 – 30,000 Gallons	\$	12.42	20.00	40.00
5th Tier:	over 30,000 Gallons	\$	12.55	30.00	70.00

^a

Stage 3 and 4 water resource conditions are reached when any combination of build-out, water use, and adjustments to useable CAP allocation causes 80% or 90%, respectively, of the total useable CAP allocation to be used (see Policies & Procedures).

Tonto Hills Water Improvement District, AZ

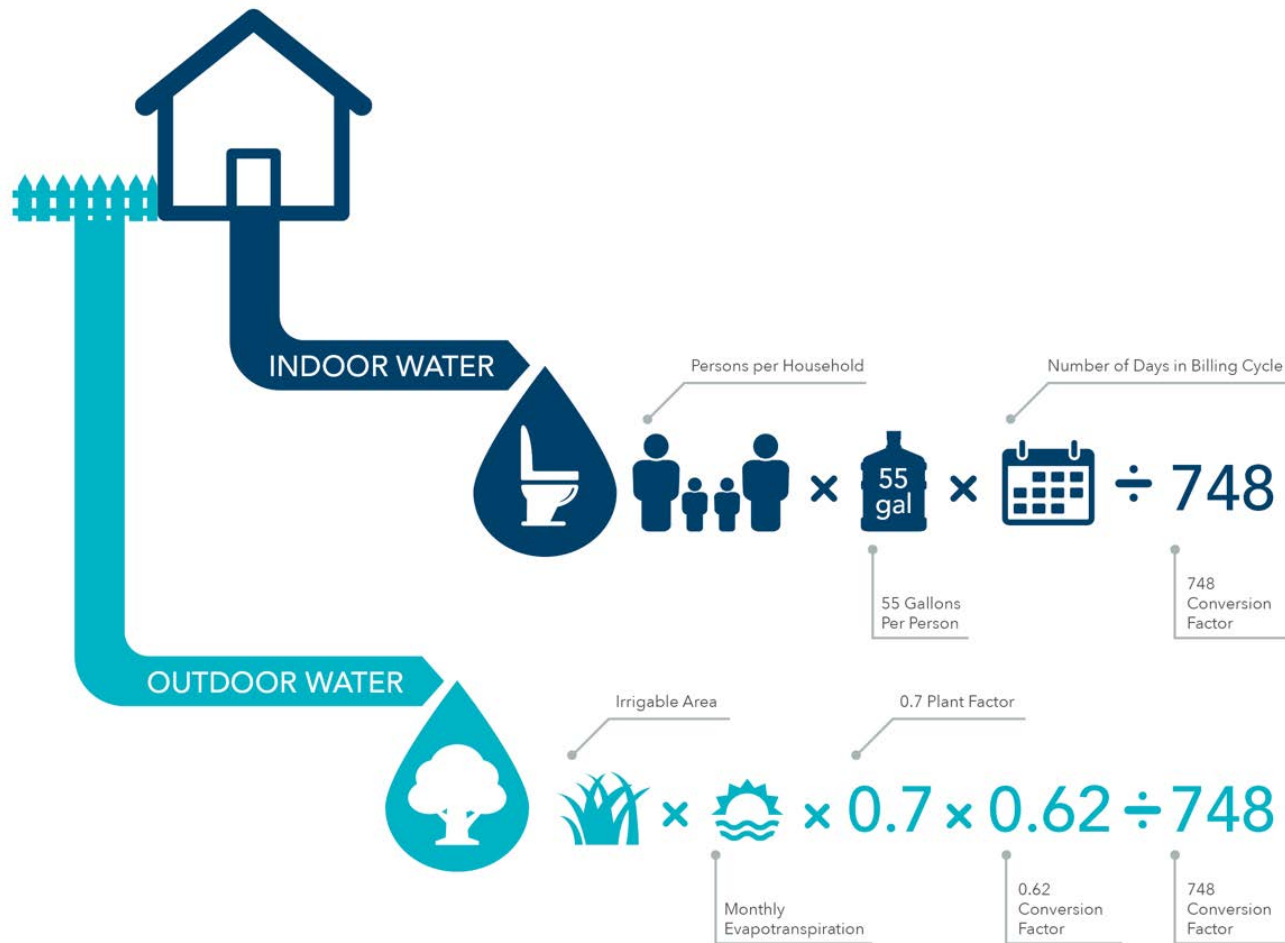


Drought Surcharges

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

Lake Egypt Water District, IL

Budget Based Rates



Moulton Niguel Water District, CA



Budget Based Rates

RESIDENTIAL & COMMERCIAL



Water Budget Based Rate Structure and Cost Allocations

Customers whose water use remains within their water budgets are billed at the lowest available rates, and customers who exceed their water budgets are billed at higher rates for the amount of water they use above their water budget. All water rate revenue in excess of the cost of imported water will be designated for the Water Efficiency Fund to fund new water supply projects and invest in water efficiency improvements to maintain reliability.



Water Efficiency Fund

To most effectively manage water resources, the Water Efficiency Fund was created to help promote water conservation, invest in new sources of water supply and develop water use efficiency programs. The program implements rebates for water efficient fixtures and appliances, water conservation educational campaigns, and more, to promote drought-friendly practices within the local community. The Water Efficiency Fund receives most of its funding through the "non-budget tiers" (currently Tiers 3, 4, and 5 for residential customers and Tiers 2, 3, and 4 for non-residential customers) of water and recycled water rate revenue. The greater the demand for water, the greater the need to expand the Water Supplies, Conservation and Water Use Efficiency Programs and incur related costs. These incremental cost increases are therefore proportionately allocated to customers who use water within Tiers 3, 4, and 5.

When Systems Partner Together



For Local Governments

What is Proposition 218?

Background

In November 1996, California voters passed Proposition 218, the “Right to Vote on Taxes Act”. This constitutional amendment protects taxpayers by limiting the methods by which local governments can create or increase taxes, fees and charges without taxpayer consent. Proposition 218 requires voter approval prior to imposition or increase of general taxes, assessments, and certain user fees.

The Environment Prior to Proposition 218

Proposition 13 dramatically changed the California property tax landscape after its passage in 1978. The result was a severe limitation on ad valorem property taxes (property taxes based on assessed value of property). Consequently, local governments had to look elsewhere to find money to fund public services and improvements. These agencies turned to benefit-based assessments, special taxes and user fees, which were not subject to Prop. 13 limitations. However, this resulted in increasing property tax bills, the main concern that Prop. 13 attempted to control.

Proposition 218 Tax Reform

Prop. 218 radically changes the way in which local governments raise revenues by ensuring taxpayer approval of charges and increases to existing charges. Voters are also given the ability to repeal or reduce charges by voter initiative.

California



Proposition 218 gave

<https://www.cacities.org/Resources-Documents/Member-Engagement/Professional-Departments/City-Attorneys/Library/2016/Spring-2016/5-2016-Spring-Adopting-Conservation-Based-Water-Ra.aspx>



Adopting Conservation-Based Water Rates That Meet Proposition 218 Requirements

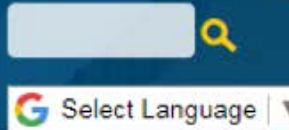
Wednesday, May 4, 2016 General Session; 3:15 – 4:55 p.m.

Kelly J. Salt, Best Best & Krieger

For Privately Owned Systems



California Public
Utilities Commission



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Water Division

The California Public Utilities Commission (CPUC) is responsible for ensuring that California's investor-owned water utilities deliver clean, safe, and reliable water to their customers at reasonable rates. Water Division regulates over a 100 investor-owned water and sewer utilities under the CPUC's jurisdiction providing water service to about 16 percent of California's residents. Approximately 95 percent of that total is served by 9 large water utilities each serving more than 10,000 connections. Annual water and wastewater revenues under the CPUC's regulation total \$1.4 billion.



[What's Regulated](#)

[Services We Provide](#)



Looking for Consumer Information?

Information on our programs, complaint process, brochures, and more!

[Visit the Consumer Information Website](#)

More In This Section

- [Balancing Accounts](#)
- [Consumer Information](#)
- [Low Income Rulemaking](#)
- [Water Presentations](#)



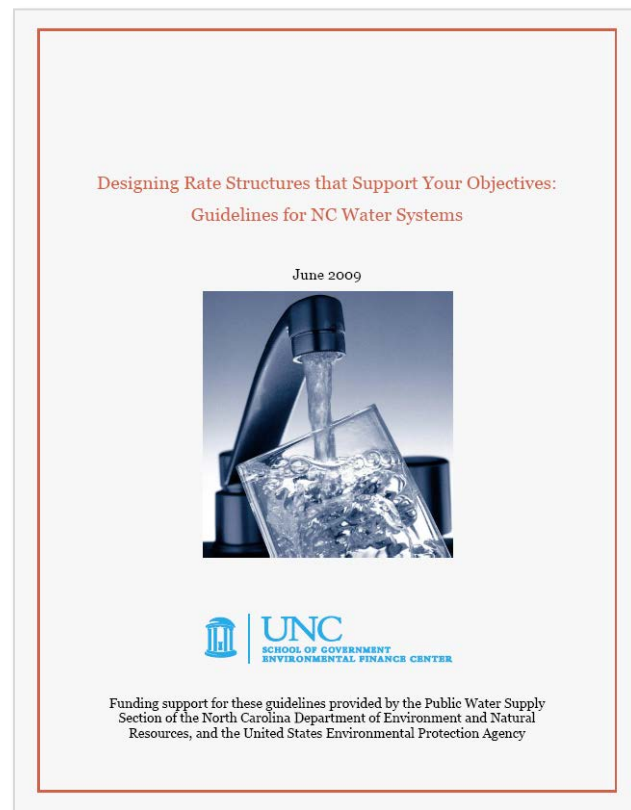
For Non Profit Systems


Designing Rate Structures That Support Your Objectives

Free guide
written for
system
managers

Available at:

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





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