

A blue-tinted background image showing industrial machinery, possibly a large pipe or valve, with various mechanical components and bolts visible.

# Meeting Affordability Objectives

Glenn Barnes

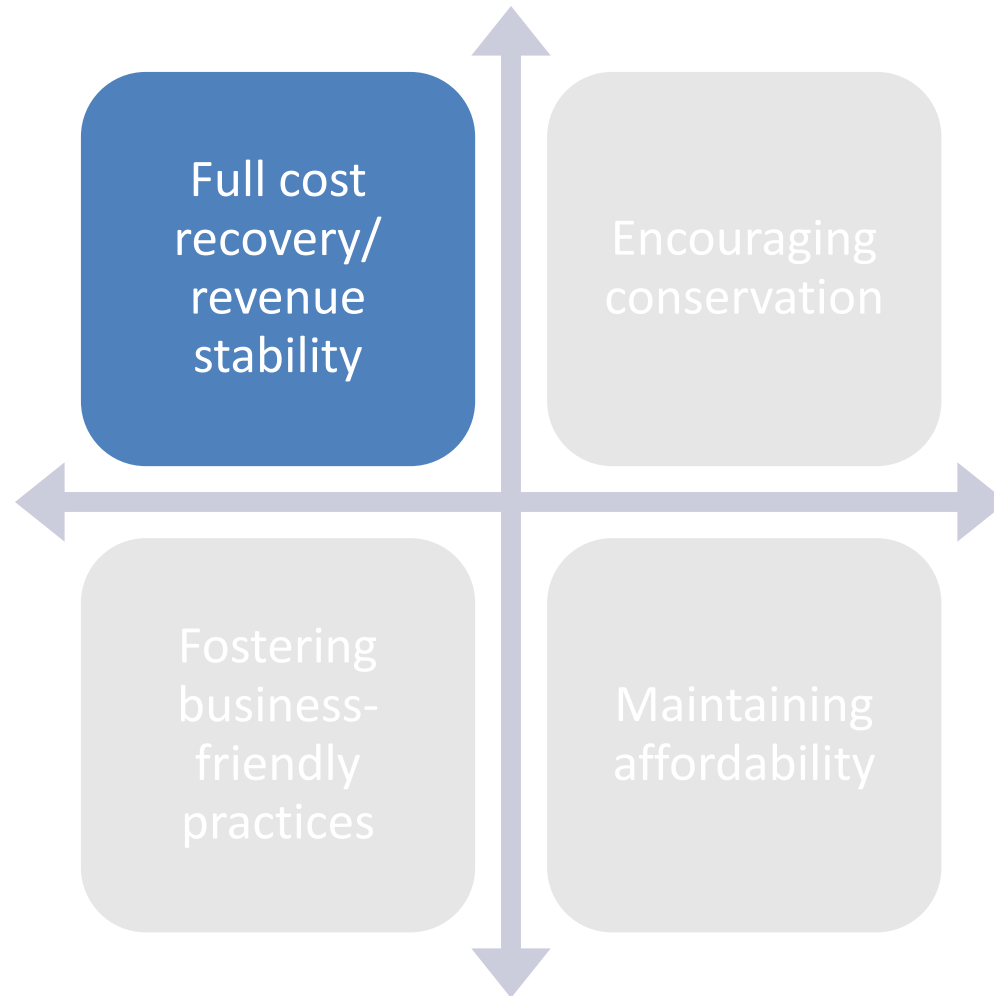
Environmental Finance Center

The University of North Carolina at Chapel Hill

919-962-2789

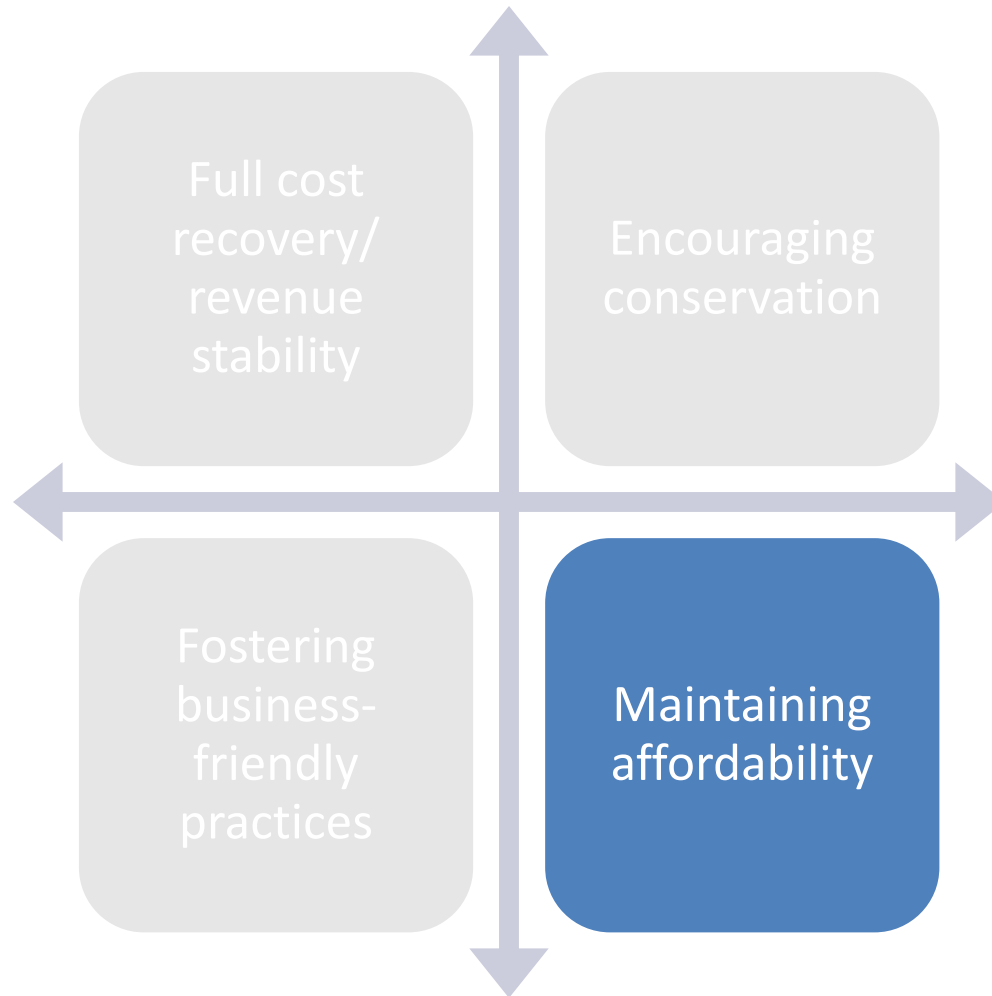
[glennbarnes@sog.unc.edu](mailto:glennbarnes@sog.unc.edu)

# So Far Today...

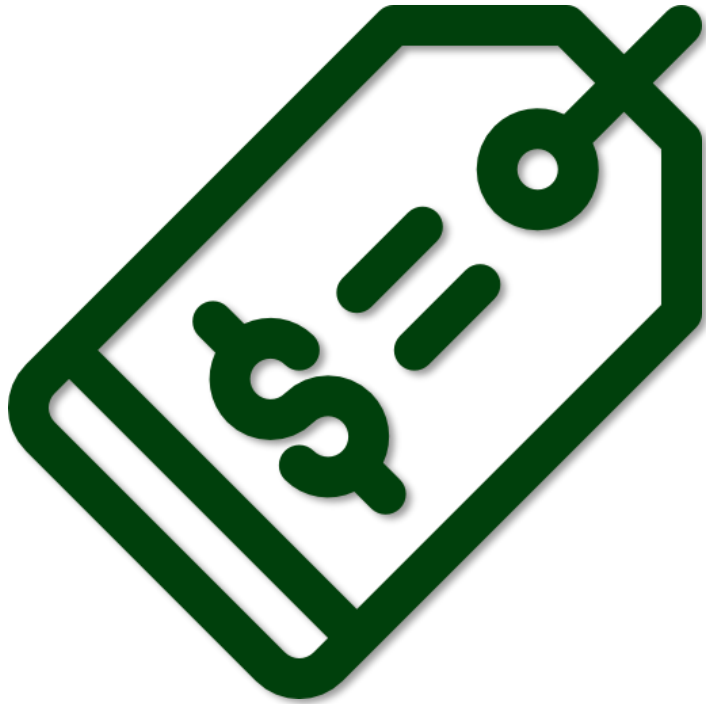




# Maintaining Affordability



# Two Approaches



Pricing signals  
through your rates



Non-price strategies



# First Things First

- There is no nationally accepted standard for affordability of water and wastewater service
- You know your own community the best. You should set the threshold for affordability



# Also...

- There is a difference between someone who has a legitimate financial issue and someone who doesn't have the best priorities in life
- In other words, some people have an ability to pay problem. Others simply have a *willingness* to pay problem



## Also...

- Percent MHI is a limited tool since it only shows you the middle customer in your community
- The American Community Survey has better data broken out by different income buckets

# Water and Wastewater Residential Rates Affordability Assessment Tool

Go to

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

and search for

“Affordability  
Assessment Tool”







# Why Do This?

- Altruistic reasons
- Business reasons
- External pressure



What does your system do to maintain affordability?

# Non-Price Strategies





# Help Specific Customers Save Money

<https://www.epa.gov/watersense/rebate-finder>

## WaterSense

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Homes

Commercial Buildings

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Product Search

## Rebate Finder



## Water Efficiency Can Pay Off!

Many WaterSense partners offer rebates for WaterSense labeled products—such as water-efficient toilets, showerheads, and faucets—as well as water conservation services. Search below to see what money-saving rebates are available in your area.

Note about the WaterSense Rebate Finder



Rebate Type

All Rebates



Partner Name

State/Province

All States



# Mammoth Community Water Dist.



Mammoth Community Water District

WATER IS OUR FUTURE



☐ **High Efficiency WaterSense® Labeled Toilets (HET):** Eligible toilets must be WaterSense labeled and use 1.28 gallons per flush (GPF) or have a high/low flush option (dual flush). Rebates are up to \$200 per toilet for the first two toilets in a unit, additional toilets are eligible for a rebate up to \$100. WaterSense toilets can be found online at: <http://www.epa.gov/WaterSense/products/toilets.html>



☐ **High Efficiency Clothes Washer (HECW):** Eligible washers must have a water factor (WF) of 4.5 or less. Rebate is up to \$400. Commercial clothes washers are eligible for up to \$600, special terms apply, call MCWD for more information. HECW water factors can be found online at the Consortium for Energy Efficiency website product list: <http://www.cee1.org> New machine installations require permit from Town of Mammoth Lakes.

## MCWD Rebates

Save water and money with MCWD's rebate program. We are currently offering rebates on toilets, clothes washers and pressure reducing valves for irrigation systems. Replacing old appliances and fixtures with new water efficient ones is an easy way to incorporate water savings in your daily life. For more information call Kris McDaniel at 760-934-2596 ext. 223, or by [clicking here](#) to send Kris McDaniel an email.

### PDF Rebate Downloads

Indoor Residential Rebate [Click Here](#)

Outdoor PRV Rebate [Click Here](#)

(W-9 Form - for Rebate(s) exceeding \$599.99)

### Product List Links





# Blue Lake Springs MWC, CA



BLUE LAKE SPRINGS  
MUTUAL WATER COMPANY

[Home](#)[About](#)[General Information](#)[Shareholder Information](#)[Reports](#)[Tips](#)[Contact](#)[USDA RD Loan](#)

**Rebate:** If all of the requirements listed below are satisfied, a rebate of \$50.00 per toilet (limit 2 per household) will be applied to the shareholders account. *Important – please read terms and conditions below.*



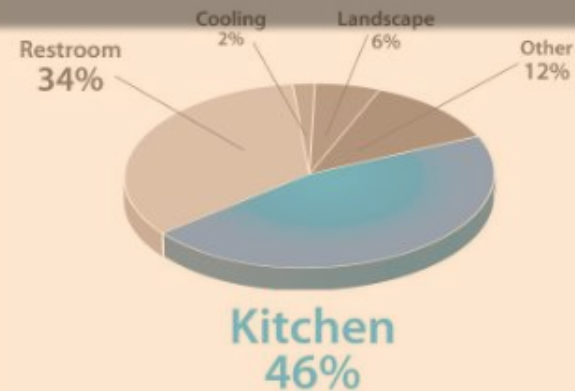
# West Basin Muni Water Dist., CA



WEST BASIN MUNICIPAL WATER DISTRICT

Providing a safe and reliable supply of high-quality water to the communities we serve

*Cash for Kitchens* was developed by West Basin Municipal Water District to provide restaurants and other food service facilities such as corporate kitchens, hotels, & schools, with water-use assessments to assist them in their efforts to save water. The assessments provide information on current water usage, strategies on how to conserve water and free materials to assist management in training their employees to be more water-efficient. Some kitchens may also qualify for free water-saving devices, such as a pre-rinse spray valve, faucet aerators, and flow restrictors.





# Santa Clara Valley Water Dist., CA

Santa Clara Valley

## Qualifying Irrigation Hardware and Rebate Amounts

In-line Drip Irrigation (see below for requirements)	\$0.25 per square foot
--	------------------------

Multi-Family (5 or more units) and Business/Institutional properties

\$1.00 per sq ft

## Qualifying Irrigation Hardware and Rebate Amounts

High-Efficiency Nozzles	Up to \$5 per nozzle
Rotor Sprinklers or Spray Bodies with Pressure Regulation and/or Check Valves	Up to \$20 per body
Rain Sensor	Up to \$50 per sensor
Dedicated Landscape Meter, Flow Sensor*, Hydrometer*	Up to \$1,000 per meter
Weather Based Irrigation Controller, 1-12 Stations**	Up to \$300 per controller
Weather-Based Irrigation Controller, 13-24 Stations**	Up to \$1,000 per controller
Weather-Based Irrigation Controller, 25 Stations Or Greater**	Up to \$2,000 per controller



# City of Big Bear Lake, CA

## **TURF BUYBACK PROGRAM**

Save money and time. Save water and get paid. It's that easy. Are you ready to remove some, or all, of your lawn? If you answered yes, then you're in the right place. If you answered no, please visit [Addicted to Grass](#).

**The Department of Water and Power (DWP) pays our customers \$0.50 for each square foot of turf removed.**

**There is no minimum amount removed or 1,000 square foot exclusion to the turf rebate. HOWEVER, if the same customer later decides to replant any turf they must reimburse the DWP for all turf rebates and abide by all current landscape regulations.**



# City of Kennedale, TX

## Residential Sprinkler System Evaluation Program

The Kennedale Public Works Department, in cooperation with the Tarrant Regional Water District, is proud to offer a [free sprinkler system evaluation program](#) for our residential customers.

The free evaluation will provide homeowners with basic knowledge of how their sprinkler system works, feedback on the current condition of equipment, and recommendations for improvement. When an appointment is scheduled, a licensed irrigator will perform a 45-minute assessment with the resident.

A summary of results and recommendations will then be provided. This program is not a sales pitch for additional contracting services and you will be under no pressure to make specific changes. We hope this opportunity will assist Kennedale residents to efficiently manage outdoor water use.

CLICK HERE TO LEARN MORE ABOUT THE  
 [Sprinkler System Evaluation Program](#)





# Assistance at the time of payment

# Budget Billing



[HOME](#) [MY ACCOUNT](#) [WATER SERVICE](#) [WATER QUALITY](#) [ABOUT](#) [EMERGENCIES](#)

Budget Billing is a fixed monthly charge for a 12 month cycle.

It's a great way to plan for household expenses as your amount due will not vary from month to month, saving you from the unpredictable changes in your water bill.

The monthly budget bill is calculated using the previous year's account history. To find out your Budget Bill amount, call customer service at [603-362-4299](tel:603-362-4299) or email [customerservice@hampsteadwater.com](mailto:customerservice@hampsteadwater.com).

#### Fees:

There are no fees or service charges for enrollment, to participate in Budget Billing, or for cancellation.

[Apply Now](#)

## Eligibility

### Requirements include:

- Must be a residential account (not a business/commercial account).
- Must be a HAWC customer for a minimum of 1 year.
- Must be set up for a no-fee recurring payments in MyHAWC. HAWC accepts all major credit cards and bank ACH payments.
- Accounts with overdue balances are not eligible for the program.

## Payments:

Accounts that are on Budget Billing must also be set-up for Auto Pay (Automatic Recurring Payments).

Refer to "Billing & Payment Information" for additional info about payment options.

## Reconciliation:

Accounts are reconciled each October. The new Budget Billing amount will be reflected on your November bill, which is the first bill in the 12 month cycle.

# [Hampstead Area Water Co., NH](#)





# Extensions

## Payment Extension Policy

Customers who are unable to pay their bill on time may request an extension. A Payment Extension is provided to temporarily extend the due date of the bill for those situations when a qualifying customer is in need. Only the account holder may request this service, and it must be requested prior to the scheduled cut-off day. Payment extensions can only be made on active accounts.

Customers will be allowed two extensions of five days each per 12 month period. Extensions will not be allowed on an account that has less than three billing cycles, if a final read is scheduled, or if the Town is aware the customer is moving. Customers must provide a reasonable cause or undue hardship requiring the extension. Based on the customer's payment history and the amount due, the Town may not be able to grant an extension in all situations.

This extension does not prevent the payment from being considered late, which will lead to additional charges on the account. Even if a payment extension has been granted, a second notice will be mailed. If payment is not received by the extension date, the payment extension will default and the account will be disconnected.

In addition, all accounts terminated for non-payment twice within six months

# Payment Plans

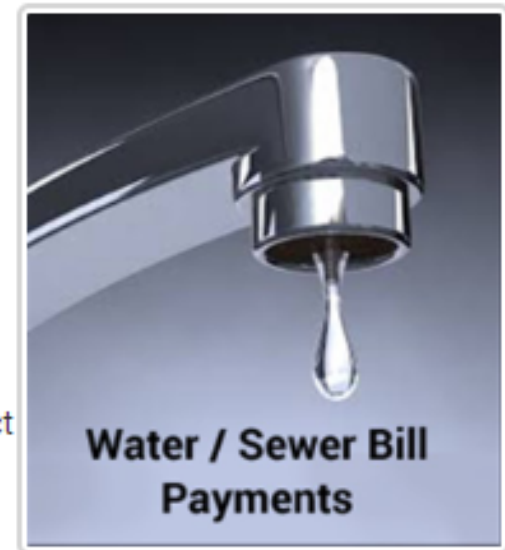
## Water & Sewer Payment

You can pay your bill online at :

<https://greensboromd.epayub.com>

Water bills are due Jan.30<sup>th</sup>, April 30<sup>th</sup>, July 30<sup>th</sup> and Oct 30<sup>th</sup>. Service will be terminated 7 days after the due date unless bills are paid in full or a payment plan has been set up.

Payment plans are available. You must set up a payment plan each quarter prior to the due date and a 33% deposit will be due at the time of set up. Failure to make your payment plan payment will result in automatic disconnect of service and payment in full will be required at that time to reconnect service.



[Town of Greensboro, MD](#)

# Bill Discounts



## Sr. Citizen Water & Sewer Bill Discount Policy

### Applications:

- [Printable](#)
- [Interactive](#)

The Senior Citizen Water and Sewer Bill Discount entitles seniors aged 65 or over, residing in their own residence with separate metered water service for that residential unit, a 10 percent discount on the Town of Ayer water and sewer bill. This discount provides substantial savings to seniors.

The discount is available on your quarterly bill for water and sewer use for the first 3000 cubic feet. Usage over 3000 cubic feet and usage on an irrigation meter is not eligible for the discount.

To be eligible for the discount you must meet the following criteria:

- You must be 65 years of age or older
- You must be the owner of the property
- You must occupy the property as your principal place of residence

[Town of Ayer, MA](#)



# Bill Discounts



Payments must be received at City Hall by the 10th of each month to avoid delinquency. Payments may be mailed to P.O. Box 39, Sisters, OR 97759. Payments may also be made in person at City Hall at 520 E. Cascade Avenue during regular business hours or through the drop box located at the front of the building. In addition, we offer the following payment options:

**Pay Online** – Click on the Online Bill Pay button above and register for a new account to pay your bill online. Online Bill Pay is an easy and secure web site that allows customers to make payments, view statements, view payment history for the last 6 months, sign up for paperless billing, and view inserts in PDF format.

**Automatic Bank Drafting** – Bank Drafting offers you the ability to have your utility bill automatically drafted from your bank account on the 10th of each month.

**Credit Card Drafting** – For customers who choose to have their utility bill paid by credit card, your bill will be automatically charged to your credit card on the 10th of each month.

## **Low Income Utility Assistance**

You may be eligible for utility assistance on your water and sewer bills. Approved applications receive a 25% discount. For further information contact Kim Keeton, Accounting Technician, at [kkeeton@ci.sisters.or.us](mailto:kkeeton@ci.sisters.or.us) or (541) 323-5209

[City of Sisters, OR](#)



# Temporary Assistance

## Village joins water bill assistance program for low-income residents

🕒 July 13, 2016    📁 [Wayne Metro News](#)

There's good news for Oxford Village residents who are behind on their water bills and struggling to catch up.

Last week, council voted 5-0 to participate in the Community Action Alliance Water Residential Assistance Program (WRAP).

The program, funded by the Great Lakes Water Authority, provides eligible low-income residents with up to \$1,000 per household per year in financial assistance to help pay water bills.

It was village Clerk Susan Nassar who brought WRAP to council's attention and suggested the municipality sign up.

"I feel this is a very beneficial program," she said. "We have some (residents who) are struggling very hard. It's not just seniors, either. It's young families. It's some singles. And it's not just houses. It's people in apartments. It hits everyone."

Nassar estimated eight to 10 percent of village water customers "are at least three months behind" on their bills.

There are 1,347 water meters in the village.

# Temporary Assistance

## Emergency Utility Assistance Program

**Press Release Date:** Friday, January 29, 2016 - 8:00am

Emergency Utility Assistance is a City of Washougal Utility program created to assist its low income customers who have a demonstrated need in paying their water and/or sewer utility bills.

Funding for this program is provided by the generous donations of City of Washougal Utility employees, customers and others. Every penny donated to this program goes directly to assist qualifying customers. None of the funds are used for administrative expenses. The tax donations made by citizens are tax deductible.

Administration of the Emergency Utility Assistance program is patterned after the Heating Assistance program. Eligibility for the Emergency Utility Assistance program is for those customers who are screened and meet requirements of the federal Low-Income Home Energy Assistance Program.



[City of Washougal, WA](#)



# Arrearage Forgiveness

## **HOW OFTEN WILL AN EXEMPTION BE GRANTED?**

Residential owner can qualify for a “*once in a lifetime*” exemption. The exemption applies to the individual owner and not the property address or billing number. For example, if an individual owns multiple rental properties, that owner must choose against which property, including his own home, the exemption will apply. Single family homeowners, without rental properties, using Borough Authority water could only apply the exemption against their domicile.

## **HOW MUCH OF MY BILL WILL BE FORGIVEN?**

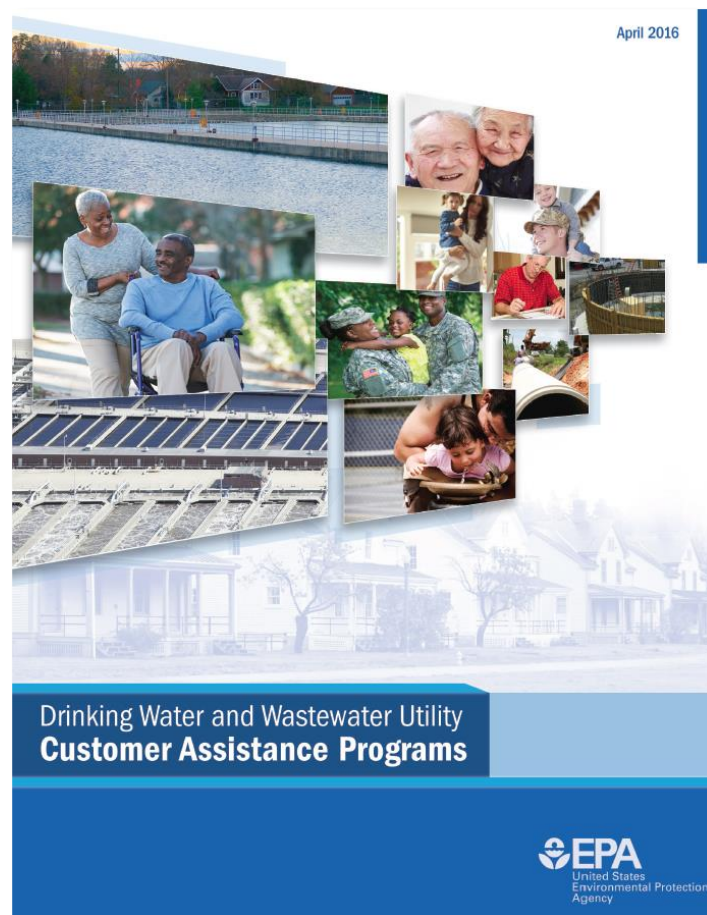
The program provides **ONLY LIMITED FORGIVENESS** of one’s Water bill. Pursuant to the guidelines established by the Authority, **ONLY THAT PORTION** of the bill which is **THREE (3) OVER THE AVERAGE CONSUMPTION WILL BE CONSIDERED FOR EXEMPTION**. Average consumption is derived from an owner’s last four (4) quarters of actual consumption.



# Compendium: Customer Assistance Programs (CAPs)

EPA developed compendium with examples of different types of water and wastewater CAPs across the U.S.

<https://www.epa.gov/waterfinancecenter/compendium-drinking-water-and-wastewater-customer-assistance-programs>



# Navigating Legal Pathways to Rate-Funded Customer Assistance Programs

## Navigating Legal Pathways to Rate-Funded Customer Assistance Programs:

A guide for Water and Wastewater Utilities

2017

## Alabama

Commission-regulated utilities  
Noncommission-regulated utilities

Water and wastewater utilities in Alabama fall under several rate setting regulatory systems.

### Commission-Regulated Utilities


The Alabama Public Service Commission (APSC) regulates private water and wastewater companies in Alabama.<sup>21</sup> Under *Ala. Code* § 37-1-34, the APSC does not have the authority to regulate government-owned utilities. Furthermore, per *Ala. Code* § 37-4-2.1, utilities serving less than 1,000 customers and purchasing water from a noncommission-regulated utility<sup>22</sup> can choose to be exempt from APSC regulation and instead fall under that utility's municipal authority.

*Ala. Code* § 37-1-81 states that commission-regulated utilities need to file rate schedules with the APSC before changing rates. In addition, *Ala. Code* § 37-1-80 states that commission-regulated utilities must charge "reasonable and just" rates. Alabama follows the "rate base theory" when determining what is just and reasonable, with the rate base (to determine the fair rate of return) being "the valuation placed on the utility property."<sup>23</sup> *Ala. Code* § 37-1-124 considers rates set by the APSC to be *prima facie* just and reasonable.<sup>24</sup> Furthermore, when the APSC finds rates to be unjust and unreasonable, *Ala. Code* § 37-1-97 gives it the power to adjust them to be just and reasonable.

Thus, commission-regulated utilities would likely need specific approval, in the form of an APSC order, to charge rates to be used to fund a low-income customer assistance program (CAP).

### Noncommission-Regulated Utilities

Municipalities, including cities and towns, have the right to operate and maintain rates for water utilities.<sup>25</sup> They are not subject to APSC regulation and thus can set their own water and wastewater rates.<sup>26</sup> For wastewater rates, under *Ala. Code* § 11-50-121, "all such charges shall be uniform for the same type, class, and amount of use or service by or from the sewer system." This code also lists factors that can be used to set rates, but does not mention socio-economic factors.<sup>27</sup>



State Population (2016):	4,863,300
Median Annual Household Income (2015):	\$43,623
Poverty Rate (2015):	18.8%
Typical Annual Household Water and Wastewater Expenditures (2016):	\$775
Alabama has 516 community water systems (CWS), of which 17 are privately-owned and 406 serve populations of 10,000 or fewer people. Alabama has 291 publicly owned treatment works facilities (POTWs), of which 204 treat 1 MGD or less. 58,937 people are served by privately-owned CWS; 5,548,854 are served by government-owned CWS; and 2,420,993 are served by POTWs.	
Estimated Long-Term Water and Wastewater Infrastructure Needs:	\$11.0 billion

Sources: U.S. Census Bureau 2016 Population Estimate & 2011-2015 American Community Survey 5-Year Estimates, 2016 EPC Rates Survey, U.S. Environmental Protection Agency's 2016 Safe Drinking Water Information System, 2011 Drinking Water Infrastructure Needs Survey & 2012 Clean Waterworks Needs Survey. See Appendix 1 for more details.

Based on the limits laid out above, noncommission-regulated water utilities appear to have very broad rate-setting authority that could be used to implement low-income CAPs funded by rate revenues. On the other hand, because of the aforementioned specific statutory limitation, wastewater utilities might face legal challenges if using rate revenues to fund low-income CAPs, but such programs would face fewer obstacles than programs using income-indexed rates or discounts.



# Lower the Cost of Providing Water Service

# Non Revenue Water



How can we limit the amount of water that leaks out of pipes and the amount for which we don't charge?





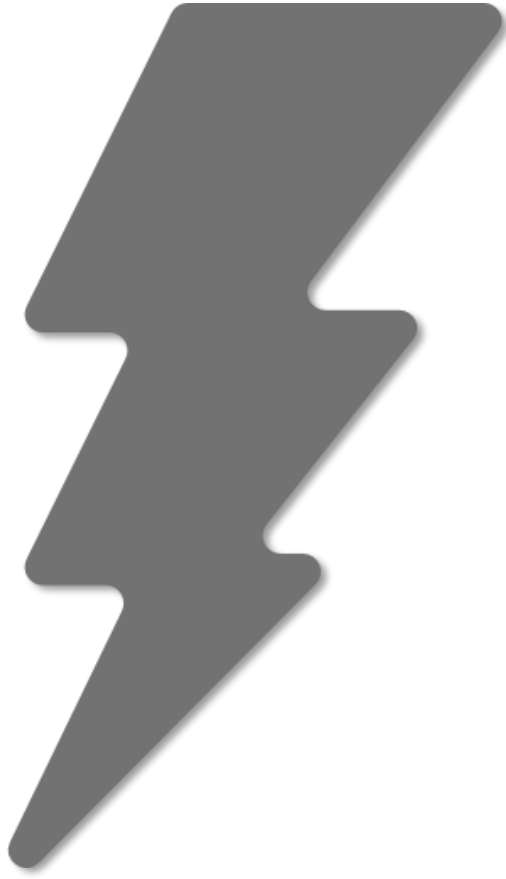
# Asset Management



How can we get the longest useful life out of our infrastructure, and will we be ready to replace it when necessary?



# Energy Management



What are ways that we can limit the energy needed to treat and deliver safe drinking water?

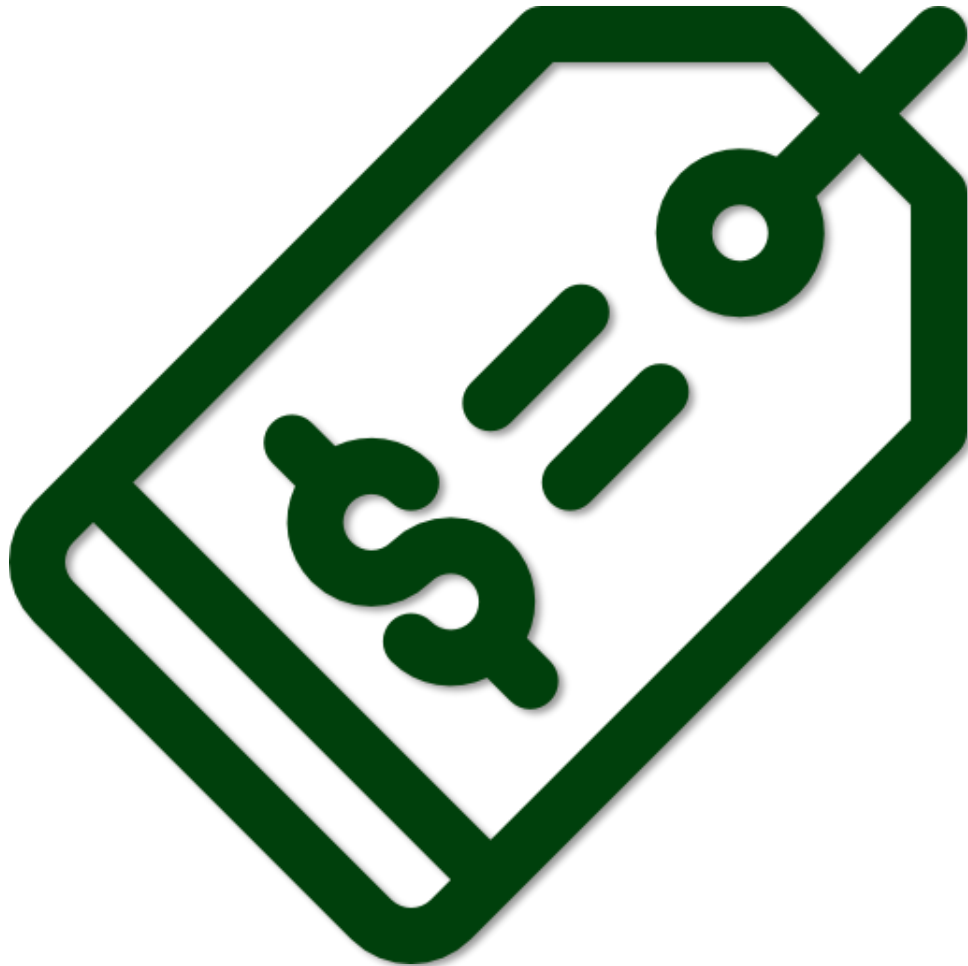


# Water System Partnerships

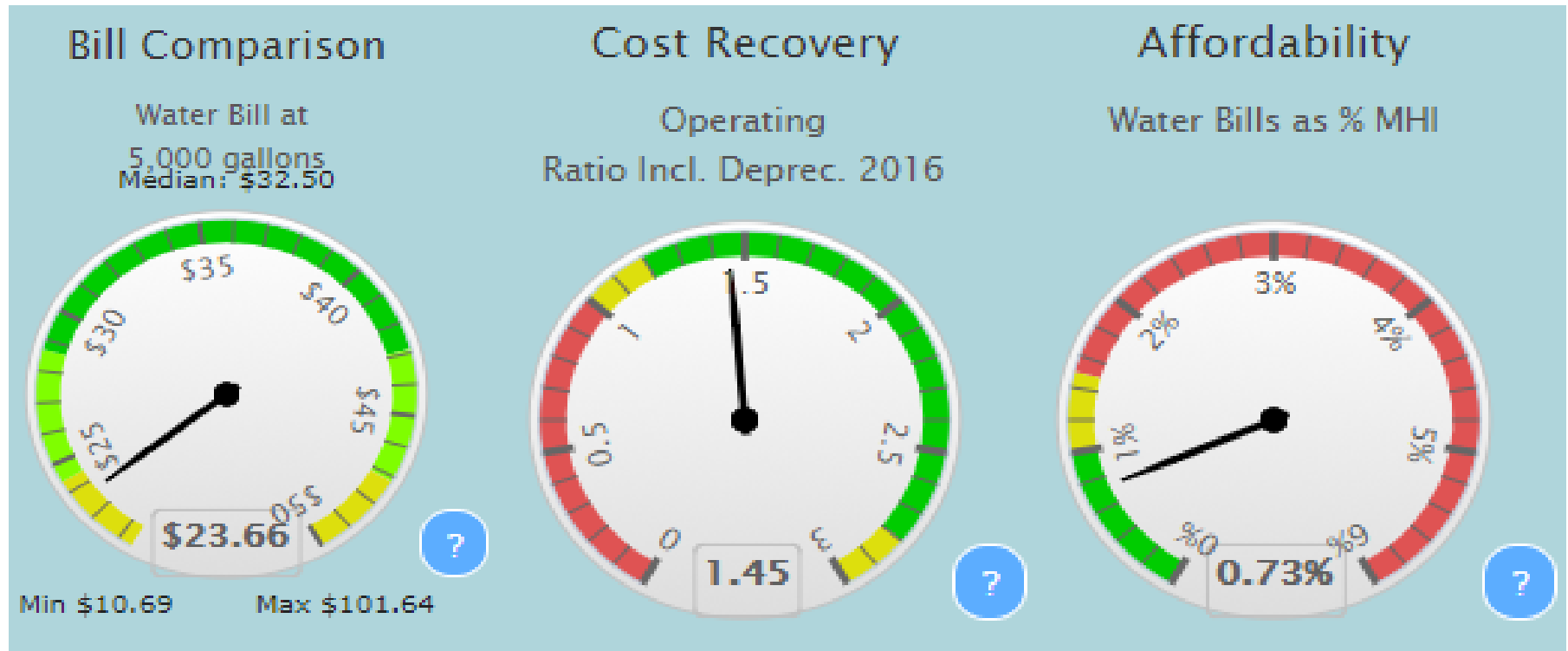


How can water systems work together to save money and improve service?

# Pricing Signals Through Rates

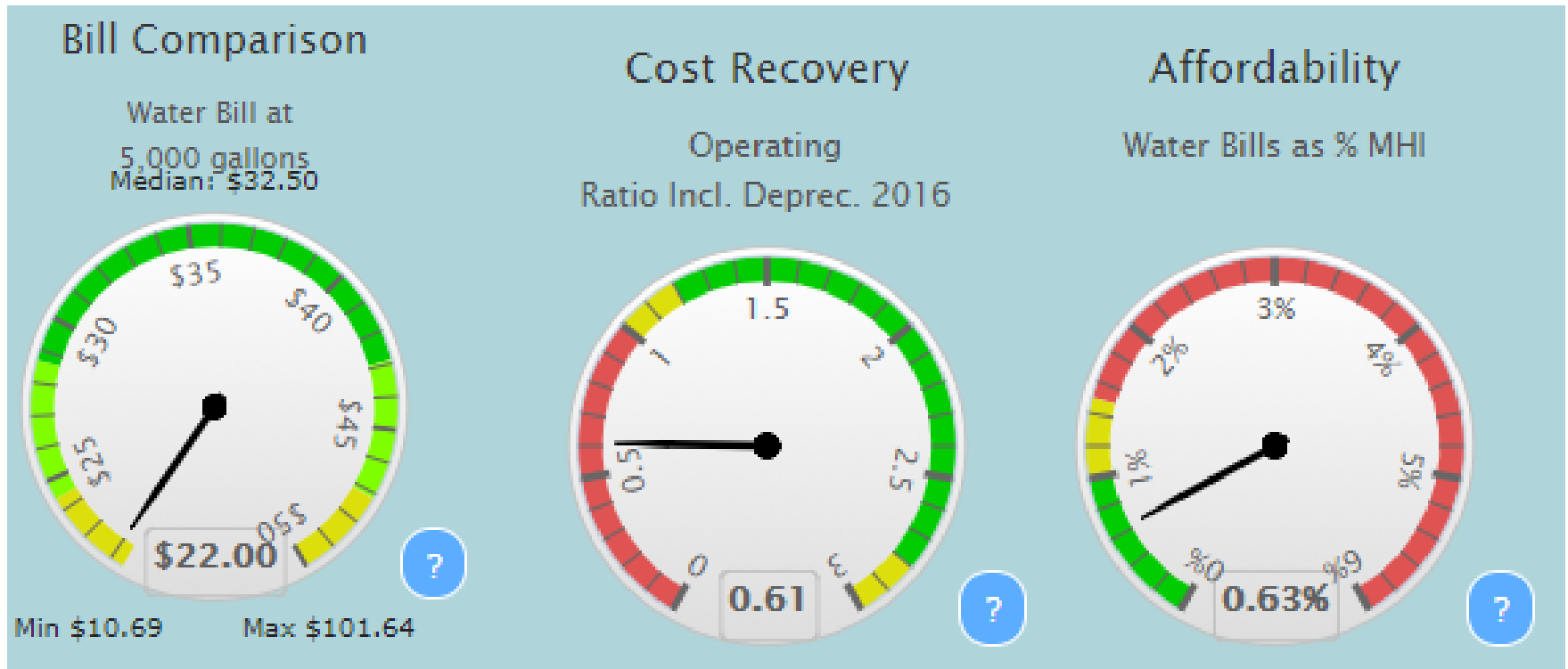


# Low Prices for All



Water system serving about 2,000 people with an MHI below the state average

# Low Prices for All



Water system serving about 600 people  
with an MHI closer to the state average



# Base Charge Includes Lifeline

## WATER RATES

Residential Inside-Monthly Minimum- <u>1st 3,000 Gallons</u>	\$	6.73 (1.98 per 1000 gallon)
Apartment Inside-Monthly Minimum-1st 3,000 Gallons	\$	6.73 (1.98 per 1000 gallon)
Commercial Inside-Monthly Minimum-1st 3,000 Gallons	\$	16.79 (1.98 per 1000 gallon)

Wilkesboro, NC



# Increasing Block with Low 1<sup>st</sup> Block

## **Base Water Rates (residential *effective 4/1/2015*)**

Line Size	Inside City Limits	Outside City Limits
5/8 – 3/4 inch line	\$ 15.50	\$ 25.20
1 inch line	\$ 15.50	\$ 25.20

## **Volume Rate (residential *effective 4/1/2015*)**

1 <sup>st</sup> 2,000 gallons	\$ 2.50 per 1,000 gal.	\$ 3.00 per 1,000 gal.
2,001 – 6,999 gallons	\$ 7.20 per 1,000 gal.	\$ 8.00 per 1,000 gal.
7,000 + gallons	\$ 9.00 per 1,000 gal.	\$ 9.00 per 1,000 gal.

Winder, GA





# Increasing Block with Low 1<sup>st</sup> Block

May 2016					
Description	Usage	Water		Sewer	
		Base Rate	Tier Rate	Base Rate	Tier Rate
Residential					
5/8" meter		\$10.05		\$10.73	
Tier 1	1k-3k		\$2.37		\$2.56
Tier 2	4k-7k		\$5.68		\$6.02
Tier 3	8k-20k		\$7.03		\$6.02
Tier 4	>20k		\$8.44		\$6.02

Clayton County, GA

# Rates for Special Classes of Customers



## ***2017 QUARTERLY RATES***

**WATER**                      \$39.57    0 – 5,000 Gallons  
\$ 6.60    Per T/Gallons 5,000 +

## ***2017 SENIOR RATES***

**Water**                      \$ 35.61    0 – 5,000 Gallons  
\$ 5.94    Per T/Gallons 5,000 +

Plymouth Village Water and Sewer, NH

# Income Based Rates



**Combined  
Water & Sewer**

**Quantity Charges  
CCF / Mo.**

**1st  
300 cf**

**Over  
300 cf**

**RESIDENTIAL  
WATER**

**2017 10.00%**

**2017** Regular Residential

1.47

2.46

**2017** Low Income Residential

1.33

2.21

(90 % of Regular Residential)

**Great Falls, MT**

# Income Based Rates

[SERVICES ▼](#)[PROGRAMS & INITIATIVES](#)[NEWS & EVENTS](#)[PUBLICATIONS & FORMS](#)

[Home](#) / [Press releases](#) / [Office of the Mayor](#) / Philadelphia Launches New, Income-Based, Tiered Assistance Program

## Philadelphia Launches New, Income-Based, Tiered Assistance Program



**For immediate release:** June 20, 2017 | **Published by:** [Office of the Mayor](#) | **Contact:** Mike Dunn [Mike.Dunn@phila.gov](mailto:Mike.Dunn@phila.gov) (215) 686-6210

PHILADELPHIA- The City of Philadelphia today announced a new affordability program for low-income customers and those with special hardships to help reduce their monthly water bills. The Tiered Assistance Program (TAP) provides customers with significant savings by offering a consistent bill based on their income. Applications will be available beginning July 1.

“TAP improves upon the City’s existing customer assistance programs by easing the financial burden on City residents most in need,” remarked Mayor Jim Kenney. “We are committed to making basic human services affordable for all citizens of Philadelphia, and this program is designed to do just that, which benefits the city as a whole.”

Program highlights:

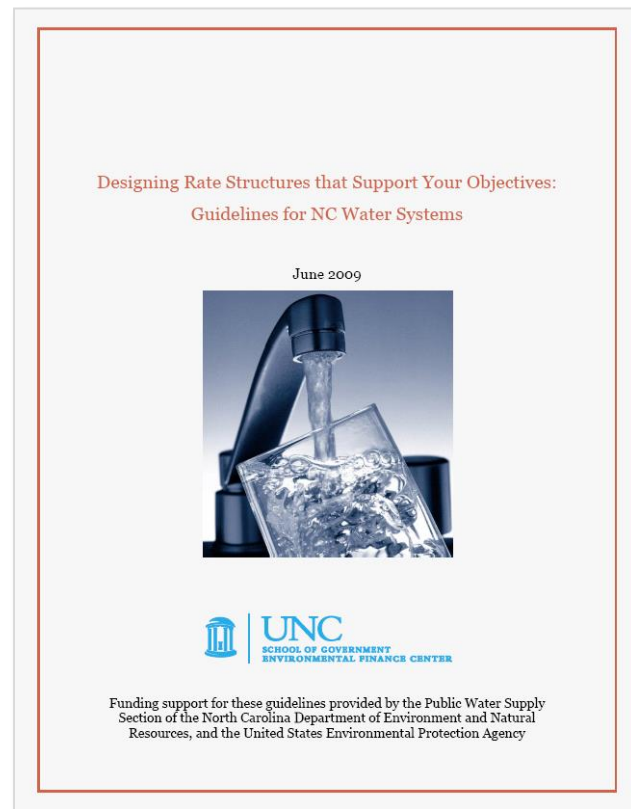
- Customers do not have to be behind on their bill
- Expanded eligibility: approximately 60,000 customers are now eligible

# 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.”



The screenshot shows the EFCN (Environmental Finance Center Network) website. At the top, there is a search bar and a "Sign Me Up" button. The EFCN logo is prominently displayed, followed by the tagline "Innovative Finance Solutions for Environmental". A navigation menu includes links for HOME, ABOUT, WORKSHOPS & WEBINARS, ASSISTANCE, and RESOURCES. Below the navigation, a breadcrumb trail indicates the current location: "BLOG". The main heading "Blog" is centered. The first blog post is titled "Magdalena, New Mexico: A Success Story from the Smart Management for Small Water Systems", written by Allison Perch. The second post is titled "The Virtuous Cycle: Internal Energy Revolving Funds for Small Water Systems", written by David Tucker. At the bottom, there is a link to the "Smart Management for Small Water Systems Program Newsletter | Fall 2015" and a note about the Environmental Finance Center Network's third issue.

[Sign Me Up](#)

**EFCN**  
environmental finance center network

Innovative Finance Solutions for Environmental

HOME ABOUT WORKSHOPS & WEBINARS ASSISTANCE RESOURCES

> BLOG

## 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, is asking.

**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 the University of California, Berkeley. He is helping cut utility costs? As energy is often the largest expense for small water systems, helping cut utility costs is often the largest expense for small water systems.

**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 of newsletters.



# Two Favors and a Reminder

- Please fill out an eval form for us before you leave
- Please leave the polling device on the table
- Contact us anytime for direct technical assistance on any finance and management topic of our project

A blue-tinted photograph of industrial machinery, possibly a large pipe or valve, serves as the background for the top portion of the slide.

# Thank you!

Glenn Barnes

Environmental Finance Center

University of North Carolina at Chapel Hill

919-962-2789

[glennbarnes@sog.unc.edu](mailto:glennbarnes@sog.unc.edu)