



Smart Management for
Small Water Systems

Financial Management for Small Water Systems

Planning for the Next Five Years and Beyond

Biloxi, MS

April 24, 2019



UNC
ENVIRONMENTAL
FINANCE CENTER



NADO
NATIONAL ASSOCIATION OF DEVELOPMENT ORGANIZATIONS
RESEARCH FOUNDATION



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Housekeeping



CEU Certificates

If you need a CEU certificate, you will need to confirm the following on the roster today before you leave:

- Is your name spelled correctly?
- Did you provide an email address UNIQUE TO YOU? A unique email address is required to receive your certificate.
- Did you mark the checkbox that you need a certificate?

Within 30 days of the training, you will receive an email with instructions to print your certificate. Emails from EFCN may be blocked or go to your Junk mail. To avoid this issue, add wwwhipps@syr.edu to your email Contacts or check your Junk mail frequently.

EFCN will apply to the water operator state licensing agency for CEU preapproval when applicable. You may be awarded CEUs by your agency. It is your responsibility to confirm with the agency that training meets relevancy criteria established for your license type as some agencies may not apply CEUs to your license if the training topic is not relevant to your position.

EFCN follows the IACET Standard of CEU calculation.
0.1 CEU = 1 Contact Hour or 1 Professional Development Hour

Questions? Please contact wwwhipps@syr.edu



Environmental Finance Center Network (EFCN)

The Environmental Finance Center Network (EFCN) is a university-based organization creating innovative solutions to the difficult how-to-pay issues of environmental protection and improvement. The EFCN works with the public and private sectors to promote sustainable environmental solutions while bolstering efforts to manage costs.



The Small Systems Program Team

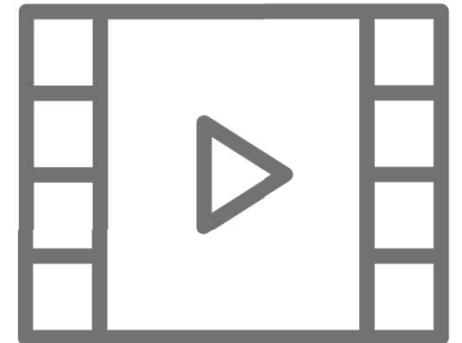
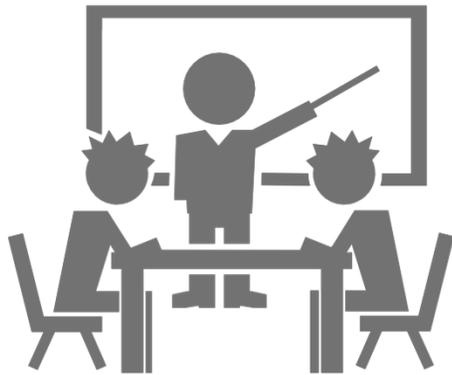
- Environmental Finance Center at The University of North Carolina at Chapel Hill
- Southwest Environmental Finance Center at the University of New Mexico
- Syracuse University Environmental Finance Center
- Environmental Finance Center at Wichita State University
- EFC West
- Environmental Finance Center at the University of Maryland
- New England Environmental Finance Center at the University of Southern Maine
- Great Lakes Environmental Infrastructure Center
- Government Finance Officers Association (GFOA)
- National Association of Development Organizations (NADO)





Smart Management for Small Water Systems Program

FREE





Areas of Expertise



Asset Management



Rate Setting and Fiscal Planning



Leadership Through Decision-making and Communication



Water Loss Reduction



Energy Management Planning



Accessing Infrastructure Financing Programs



Workforce Development



Water Conservation Finance and Management



Collaborating with Other Water Systems



Resiliency Planning



Managing Drought



Quick Introductions

1. Name?
2. Organization?
3. Responsibility?
4. Details on your water system
5. What are you most proud of at your water system?
6. What is your biggest issue?



Workshop Objectives

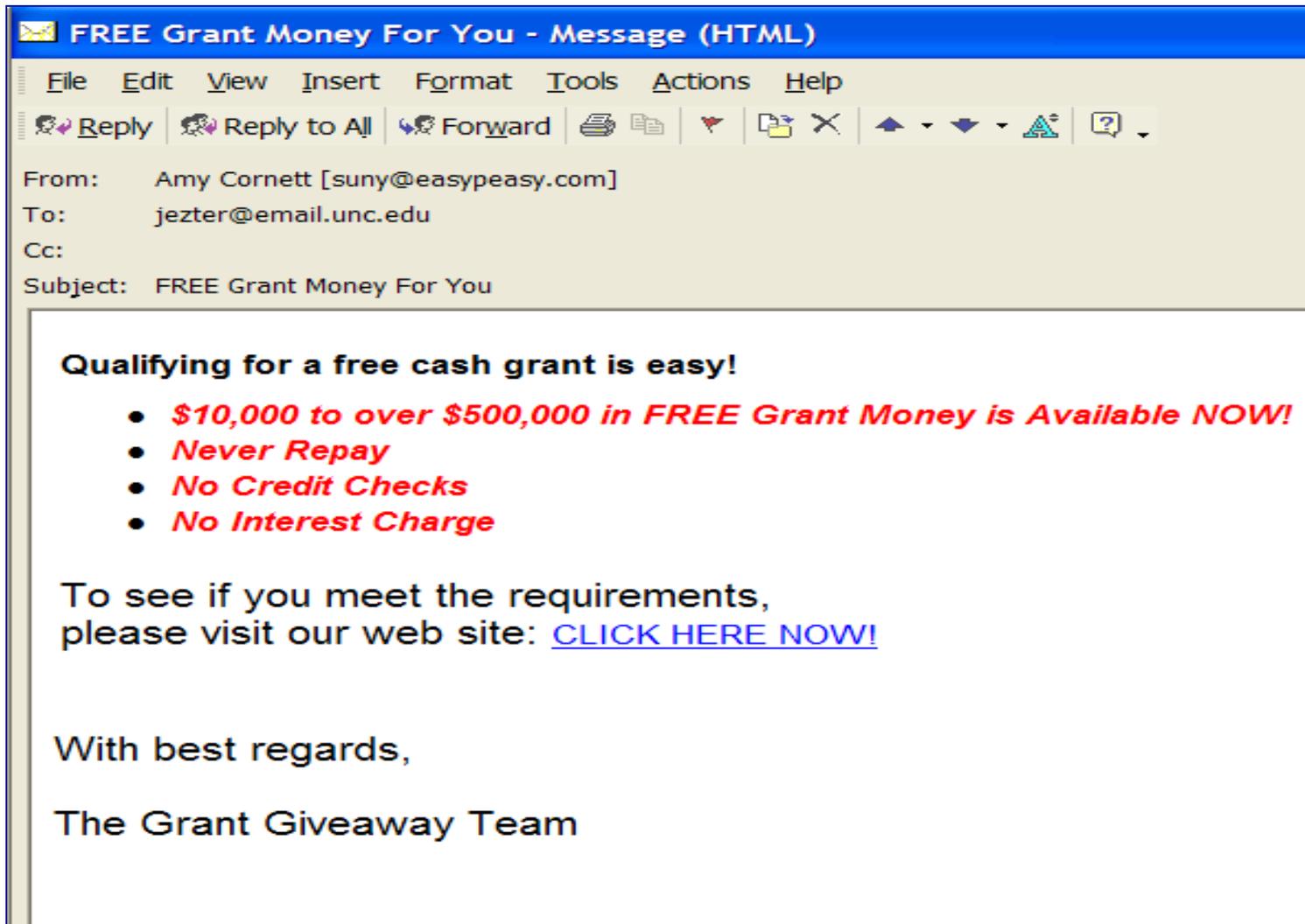
- Understand how your system is doing financially
- Learn how to plan for and finance your water system now and into the future
- Provide forum for sharing finance and management perspectives, ideas, and experiences



Agenda

- Water Finance 101
- Assessing Financial Condition
- Available Funding Programs
- Long-Term System Planning
- Revenues and Rate Design

Topics Not Covered



FREE Grant Money For You - Message (HTML)

File Edit View Insert Format Tools Actions Help

Reply Reply to All Forward

From: Amy Cornett [suny@easypeasy.com]
To: jezter@email.unc.edu
Cc:
Subject: FREE Grant Money For You

Qualifying for a free cash grant is easy!

- ***\$10,000 to over \$500,000 in FREE Grant Money is Available NOW!***
- ***Never Repay***
- ***No Credit Checks***
- ***No Interest Charge***

To see if you meet the requirements,
please visit our web site: [CLICK HERE NOW!](#)

With best regards,

The Grant Giveaway Team



World » Nigeria's anti-corruption unit finds \$43 million cash in Lagos apartment

Live TV

U.S. Edition +



Nigeria's anti-corruption unit finds \$43 million cash in Lagos apartment

By **Yemisi Adegoke, CNN**

Updated 10:03 AM ET, Fri April 14, 2017



Watch: Millions seized from Nigerian apartment 01:14

Story highlights

Nigeria's anti-corruption agency discovered \$43 million in cash at a Lagos apartment

This is the latest in a string of busts thanks to a new whistleblowing policy

Lagos (CNN) — The Nigerian anti-corruption unit discovered more than \$43 million in US dollars at an upscale apartment in Lagos.

The anti-graft agency said in a statement it raided the apartment Tuesday after a tipoff about a "haggard"

Top stories



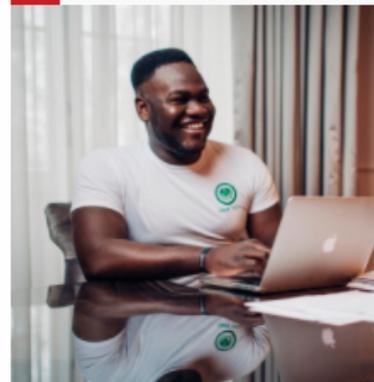
MLB team spent \$900M, still doesn't have a ring



Conservatives accuse the Pope of spreading heresy

Ad

WorldRemit



How to keep close to home

"I still love Nigeria and stay in touch with friends and family there." - Akin.



A few questions for you before
we continue...



What type of system are you?

- A. Local Government
- B. Non-Profit
- C. For-Profit
- D. Other
- E. Not a System



How many people do you serve?

- A. Up to 500
- B. 501 to 3,000
- C. 3,001 to 10,000
- D. More than 10,000
- E. Not a System



What is your background?

- A. Science/Engineering
- B. Law
- C. Finance
- D. Management
- E. South African Literature



Water Finance 101

Carol Rosenfeld

Environmental Finance Center

The University of North Carolina at Chapel Hill

919-843-5240

crosenfeld@sog.unc.edu



Session Objectives

- Learn how to think about your water system as a financial entity
- Understand some basic financial facts about water systems across the country



Let's Start With the Basics

- What does your water system do?



Water Systems Serve Multiple Purposes Sometimes Those Purposes Conflict

- 1) System serves an important **environmental and health purpose** -- protecting community's water resources and supplying community with highest quality drinking water.



Dr. John L. Leal



Water Systems Serve Multiple Purposes Sometimes Those Purposes Conflict

- 1) System serves an important **environmental and health purpose** -- protecting community's water resources and supplying community with highest quality drinking water.
- 2) System serves an important **public service** – providing community with basic services that everyone in the community can afford.
- 3) System serves as a well managed **public enterprise** – putting into practice forward-thinking sustainable business practices.

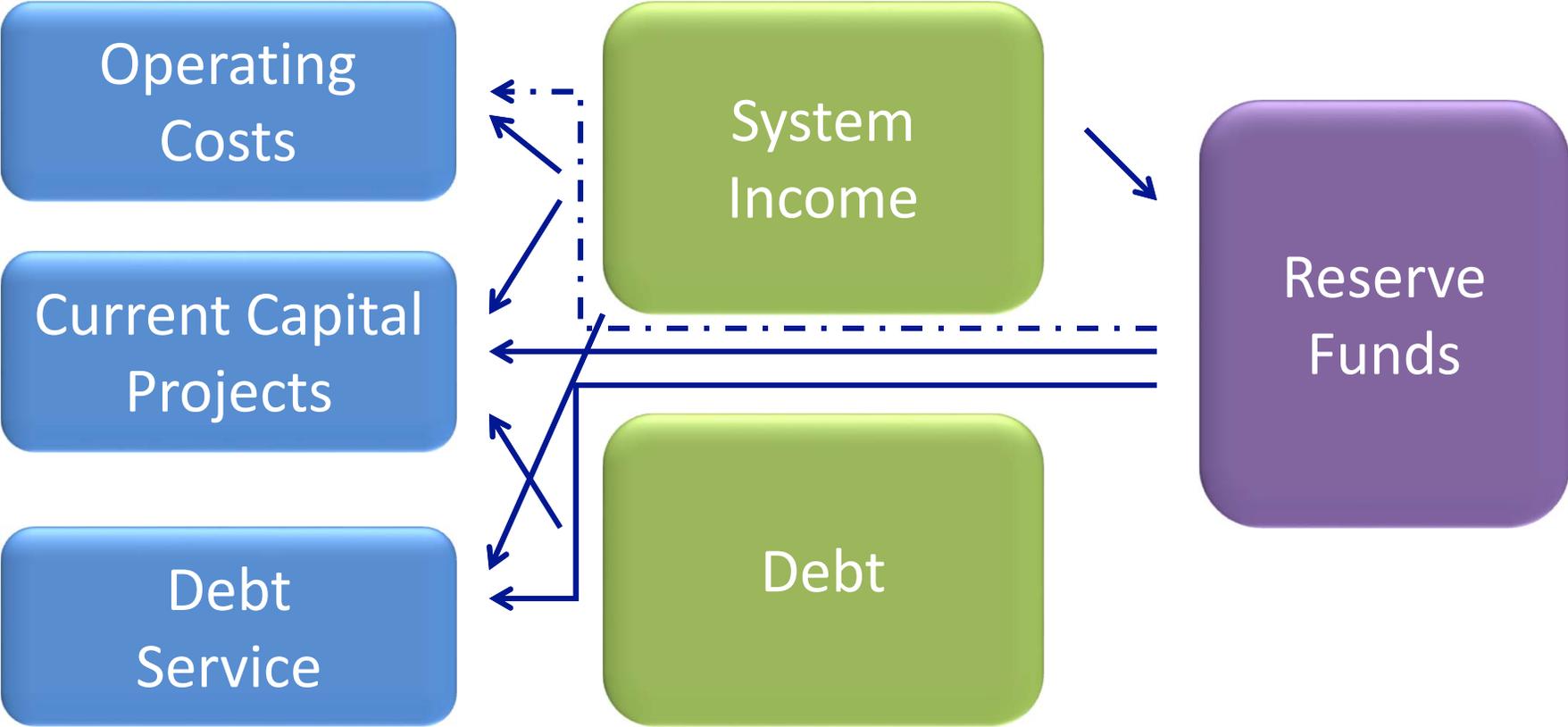


What motivates you the most?

- A. Public Health
- B. Public Service
- C. Public Enterprise
- D. All of the Above



Water System Finance Diagram





Three Types of Costs

- **Operating Costs**—what you need to run the system day in and day out
- **Capital Costs**—rehabilitation and replacement of existing infrastructure and new infrastructure
- **Debt Service**—what you owe on loans and bonds



Two Types of Revenues

- **System Income**—Money from rates, tap fees, system development charges, grants, penalties, other sources
 - Note: To be a true enterprise fund, not taxes!
- **Debt**—Money from bonds and loans



Many Types of Reserve Funds

- **Capital Reserve Fund**—Infrastructure rehabilitation and replacement
- **Repair Fund**—Known, ongoing maintenance issues
- **Emergency Fund**—Unknown, unanticipated maintenance issues
- **Rainy Day Fund**—Unexpected revenue shortfalls



How Much Do You Need In Your Reserves?

- It depends
- Enough to pay for your most expensive piece of equipment?
- Enough to cover your costs if you had no revenue for two months?
- Enough to cover the projects in your capital improvement plan?



Financial Facts About Public Water Systems



In the United States, there are

147,413

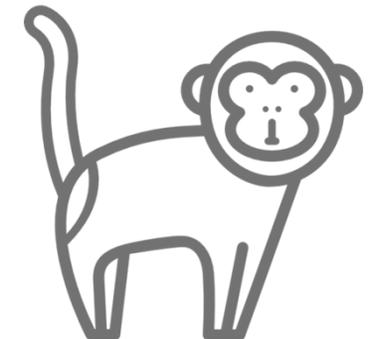
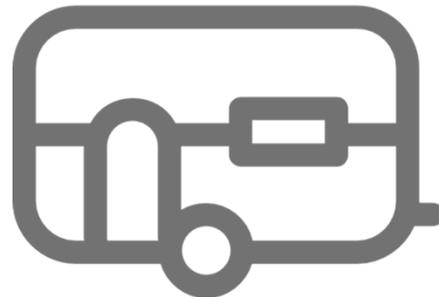
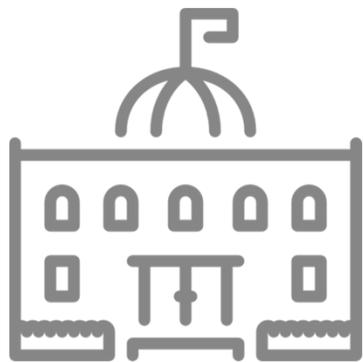
**“public” drinking
water systems**

Source: EPA SDWIS Database as of July 1, 2016



Confusing Terminology

- “Public” water systems are publically regulated regardless of whether they are owned by a public or private entity





EPA Divides Public Water Systems Into Three Types

- Community Water Systems (**CWS**)
- Non-Transient, Non-Community Water Systems (**NTNC**)
- Transient, Non-Community Water Systems (**TNC**)

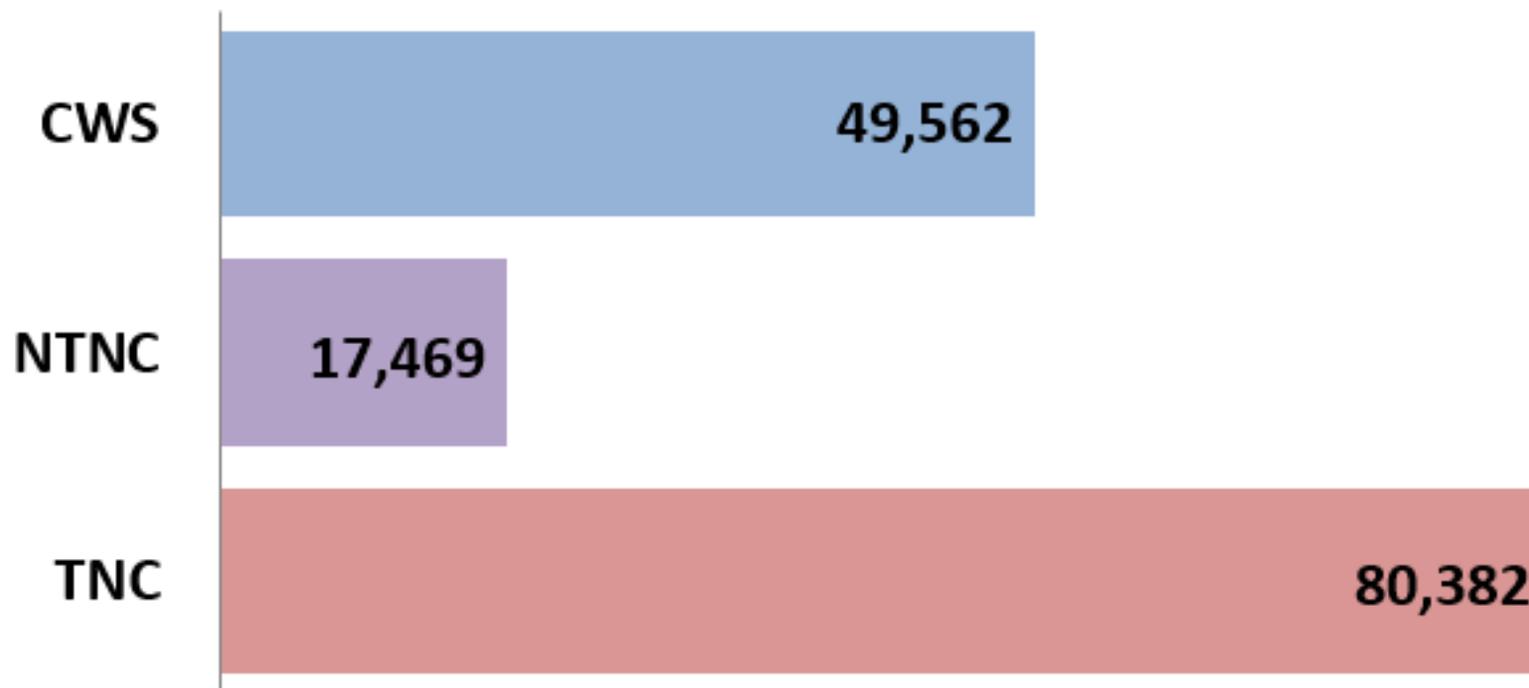


Which Type They Are Depends on Who They Serve

- **CWS** serve the same 25+ people/15+ connections regularly where they live
- **NTNC** serve the same 25+ people regularly outside of the home
- **TNC** serve 25+ people regularly but not the same people



Most Water Systems are Transient Non-Community Systems



Source: EPA SDWIS Database as of July 1, 2016



EPA Also Divides Systems into Five Categories Based on Number People Served

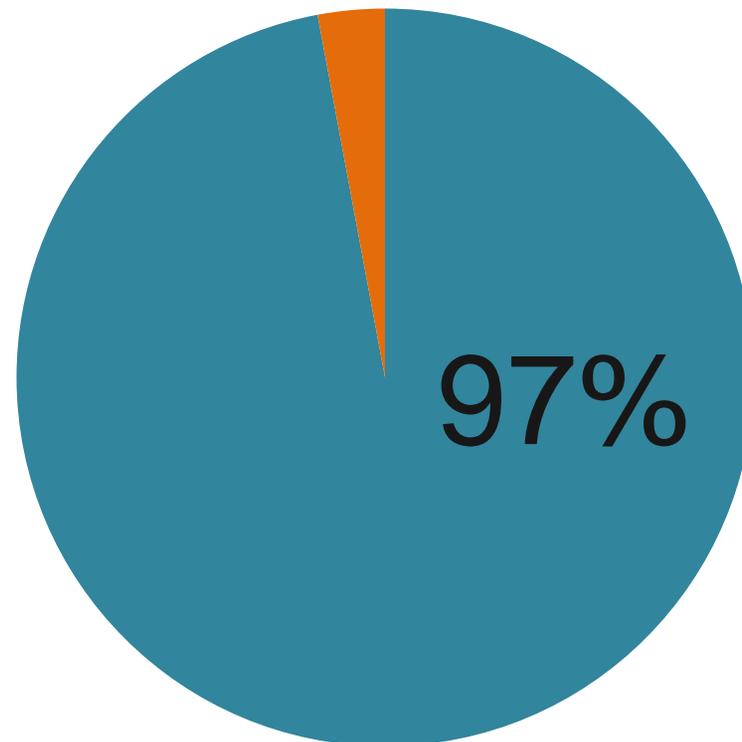
- Small Systems** {
- Very Small: Up to 500
 - Small: 501 to 3,300
 - Medium: 3,300 to 10,000

- Large Systems** {
- Large: 10,001 to 100,000
 - Very Large: More than 100,000



Most Water Systems are Small

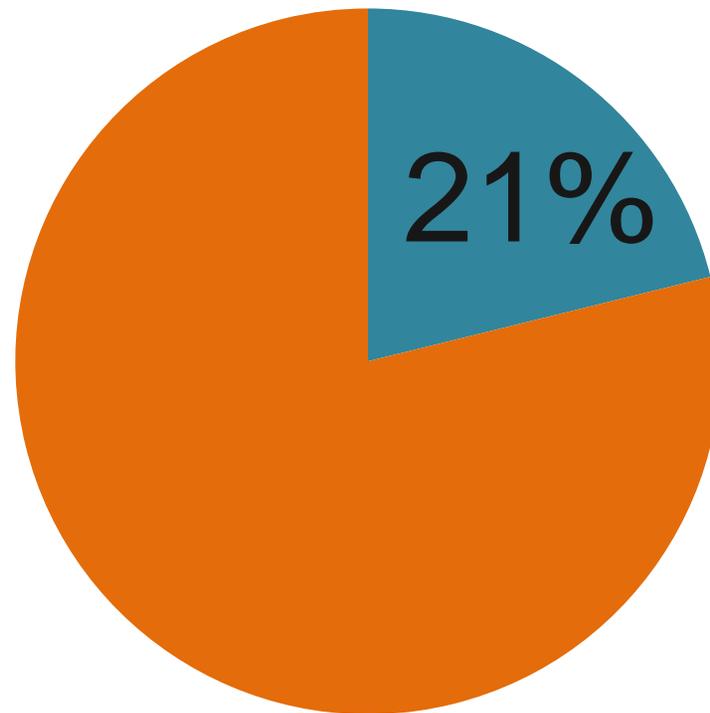
They serve 10,000 or fewer customers



Source: EPA SDWIS Database as of July 1, 2016



Collectively, Though, **Large Systems** Serve Far More Total People



Source: EPA SDWIS Database as of July 1, 2016



Almost all Non-Community Systems are Small

- More than 99% of **NTNC** and **TNC** serve 10,000 or fewer people
- At least 85% serve 500 or fewer people

Source: EPA SDWIS Database as of July 1, 2016



Community Water Systems have the most **Large** and **Very Large** **Large** Systems



Source: EPA SDWIS Database as of July 1, 2016

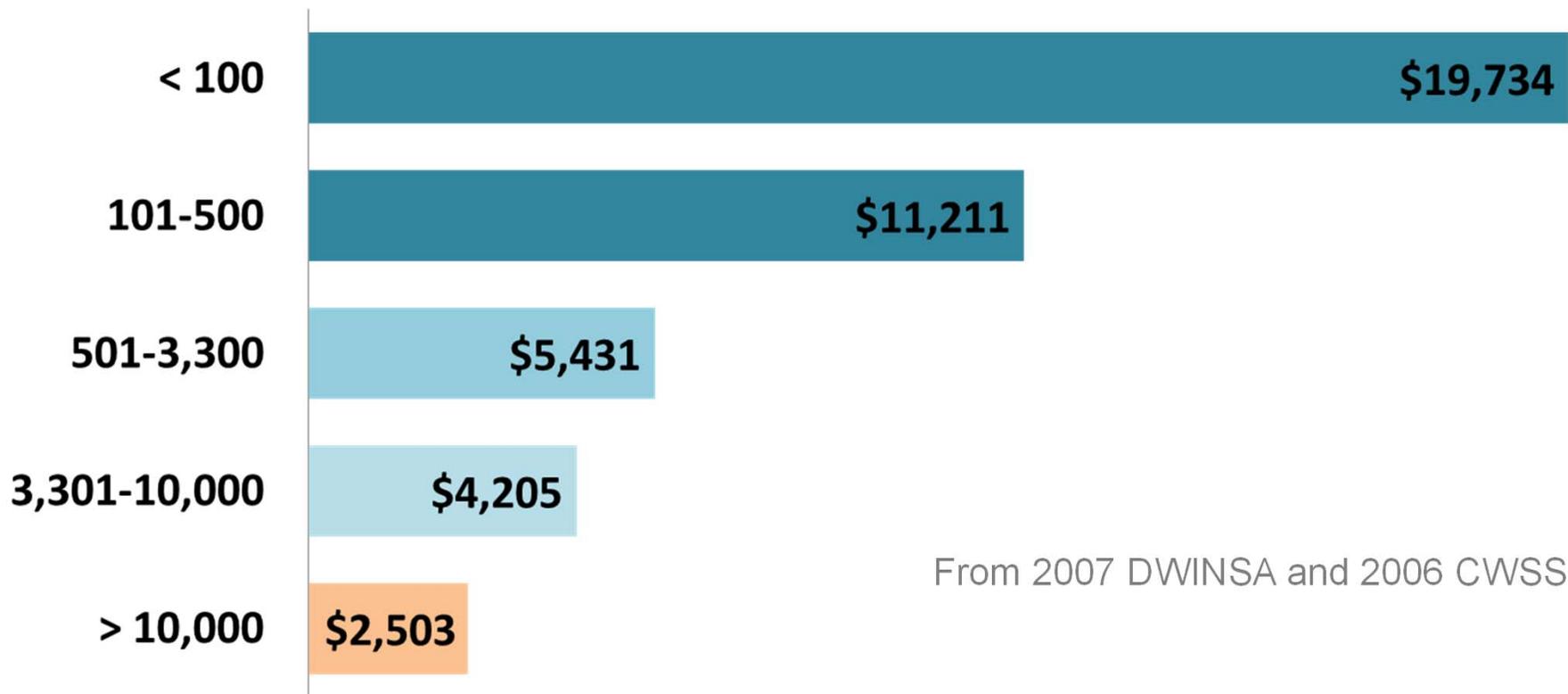


Why does system size matter?

What's the issue with small systems?



The Infrastructure Needs Per Residential Connection are Much Greater for Small Systems

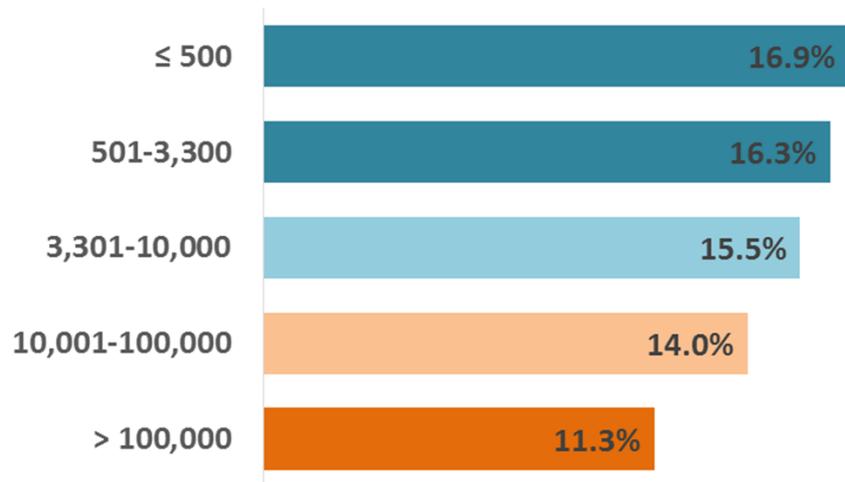


From 2007 DWINSA and 2006 CWSS

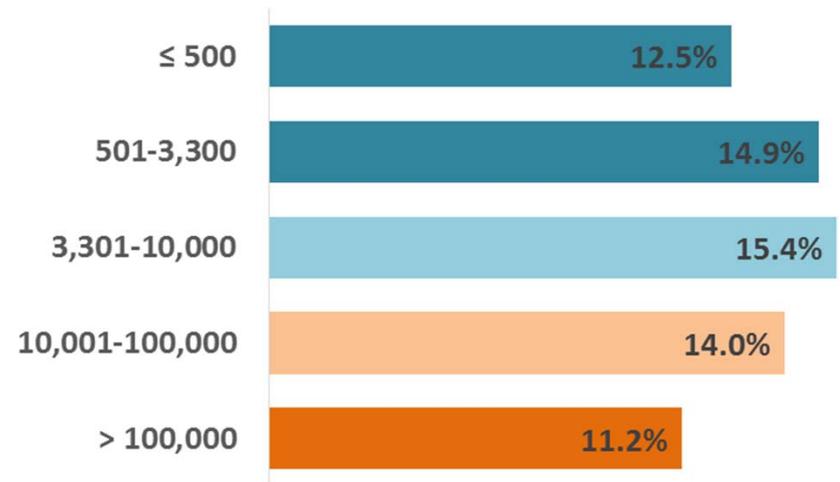


And Small Systems have higher numbers of annual health violations

Community Water Systems



All Systems



From SDWIS Data, July 1st 2015- June 30th 2016



In Other Words...

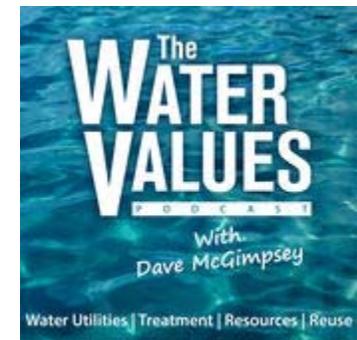
- Water systems require a large amount of very expensive infrastructure and skilled staff
- And that infrastructure, skilled staff, and other fixed costs don't go away when customers use less water individually or collectively
- From an expert...



Let's hear from an expert



Dave McGimpsey interviews George Hawkins, CEO of DC Water, on the Water Values Podcast (Change Leadership episode)



<http://www.podcasts.com/the-water-values-podcast-44/episode/change-leadership-with-dc-water-ceo-george-hawkins>





Is My Water System Financially Healthy?

CITY OF WOODBINE, GEORGIA
STATEMENT OF NET ASSETS
PROPRIETARY FUNDS
DECEMBER 31, 2010

Enterprise Funds
Water and Sewer

ASSETS	
Current Assets	
Cash	\$ 28
Receivables, net	4
Total current assets	32
Capital assets	
Land	11
Buildings	11
Less accumulated depreciation	(11)
Total capital assets	11
Total Assets	\$ 43
LIABILITIES	
Current Liabilities	
Accounts payable	6
Customer deposits	1
Bonds payable	1
Total current liabilities	8
LONG-TERM LIABILITIES	
Bonds payable	1
Notes payable	1
Total long-term liabilities	2
Total Liabilities	10
NET ASSETS	\$ 33
Invested in capital assets, net of related liabilities	2
Restricted for debt services	2
Unrestricted	9
Total net assets	\$ 4.05 million
Total Liabilities and Net Assets	\$ 4.05 million

The accompanying notes are an integral part of these financial statements.

15

BREAK

