



Smart Management for
Small Water Systems

Water System Rates & Finance Workshop



UNC
ENVIRONMENTAL
FINANCE CENTER



American Water Works
Association

This program is made possible under a cooperative agreement with the US EPA.



Housekeeping



About the 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 Smart Management for Small Water Systems Program

This program is offered free of charge to all who are interested. The Program Team will conduct activities in every state, territory, and the Navajo Nation. All small drinking water systems are eligible to receive free training and technical assistance.

What We Offer

Individualized technical assistance, workshops, small group support, webinars, eLearning, online tools & resources, blogs



The Small Systems Program Team

- Environmental Finance Center at The University of North Carolina at Chapel Hill
- Environmental Finance Center at Wichita State University
- EFC West
- New England Environmental Finance Center at the University of Southern Maine
- Southwest Environmental Finance Center at the University of New Mexico
- Syracuse University Environmental Finance Center
- Environmental Finance Center at the University of Maryland
- American Water Works Association (AWWA)



UNC
ENVIRONMENTAL
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**WICHITA STATE
UNIVERSITY**
HUGO WALL SCHOOL
OF PUBLIC AFFAIRS

Environmental Finance Center



EFCWest
Environmental Finance Center West



New England
Environmental
Finance Center



**SOUTHWEST
ENVIRONMENTAL
FINANCE CENTER**



**Environmental
Finance
Center**
Syracuse University



**ENVIRONMENTAL
FINANCE CENTER**



American Water Works
Association



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

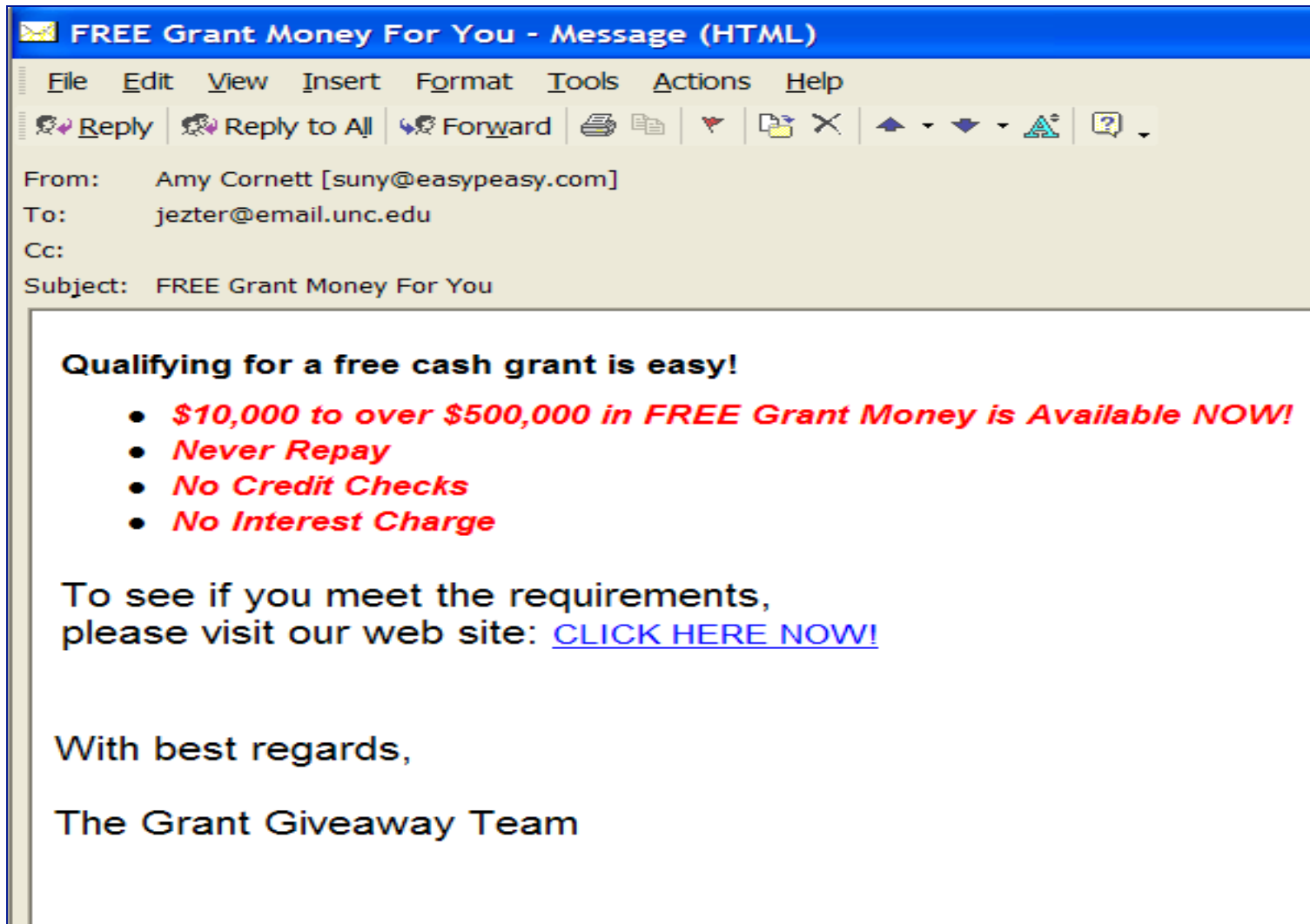
- Understand your system's current financial condition
- Learn how to plan for and finance your water system now and into the future
- Provide forum for sharing finance and management perspectives, ideas, and experiences



Agenda

- Water Finance 101
- Assessing Financial Condition
- Long Term System Planning
- Revenues

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

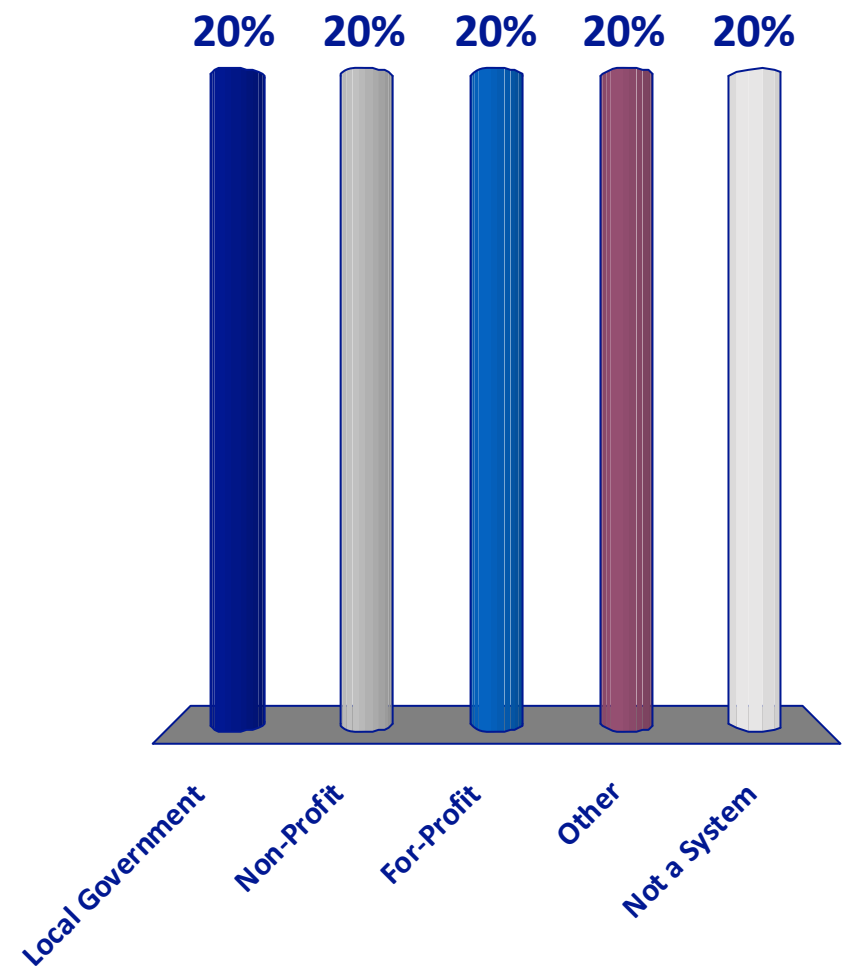


**A few questions for you before
we continue...**



What type of system are you?

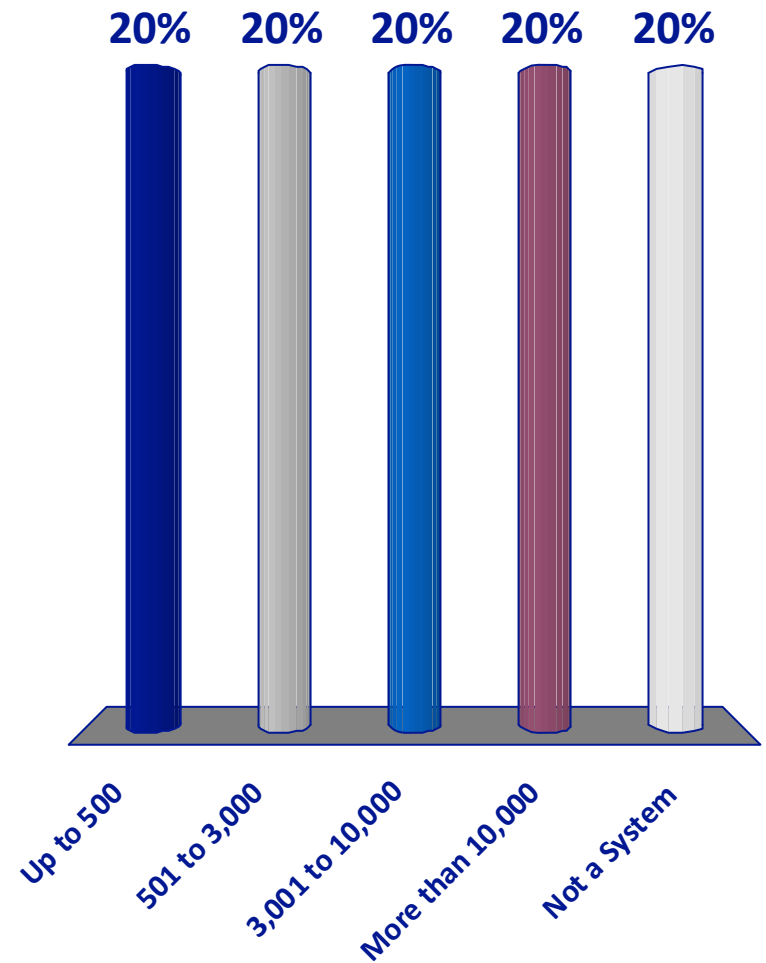
- A. Local Government
- B. Non-Profit
- C. For-Profit
- D. Other
- E. Not a System





How many people do you serve?

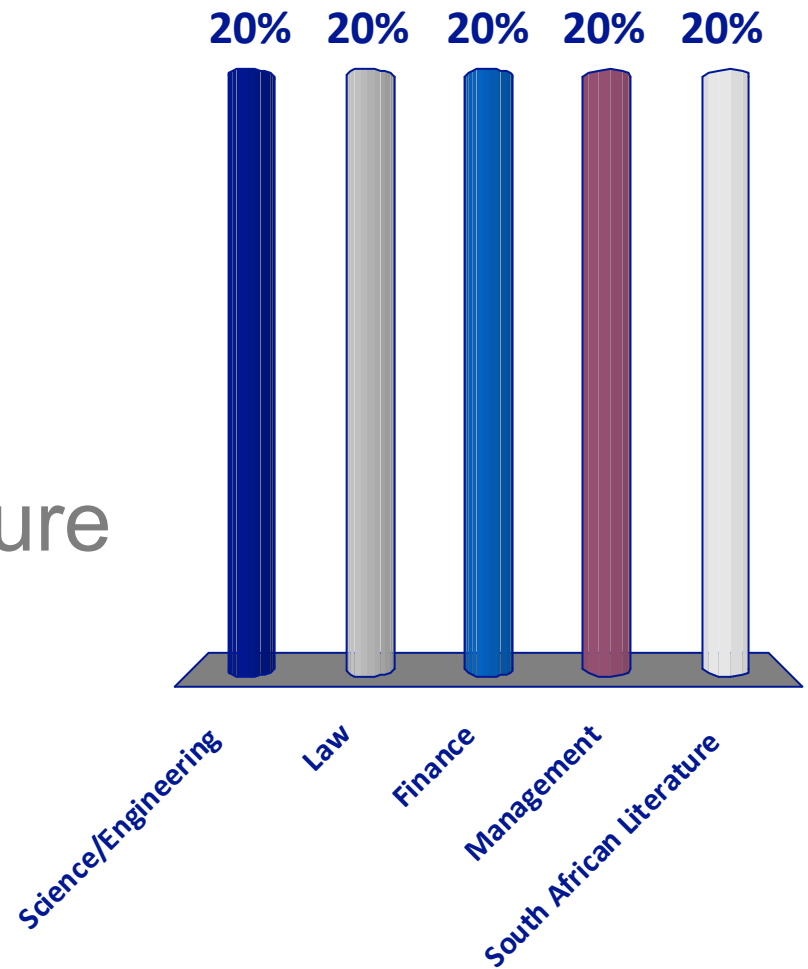
- A. Up to 500
- B. 501 to 3,000
- C. 3,001 to 10,000
- D. More than 10,000
- E. Not a System





What is your background?

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





Water Finance 101

Glenn Barnes

Environmental Finance Center

The University of North Carolina at Chapel Hill

919-962-2789

glennbarnes@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

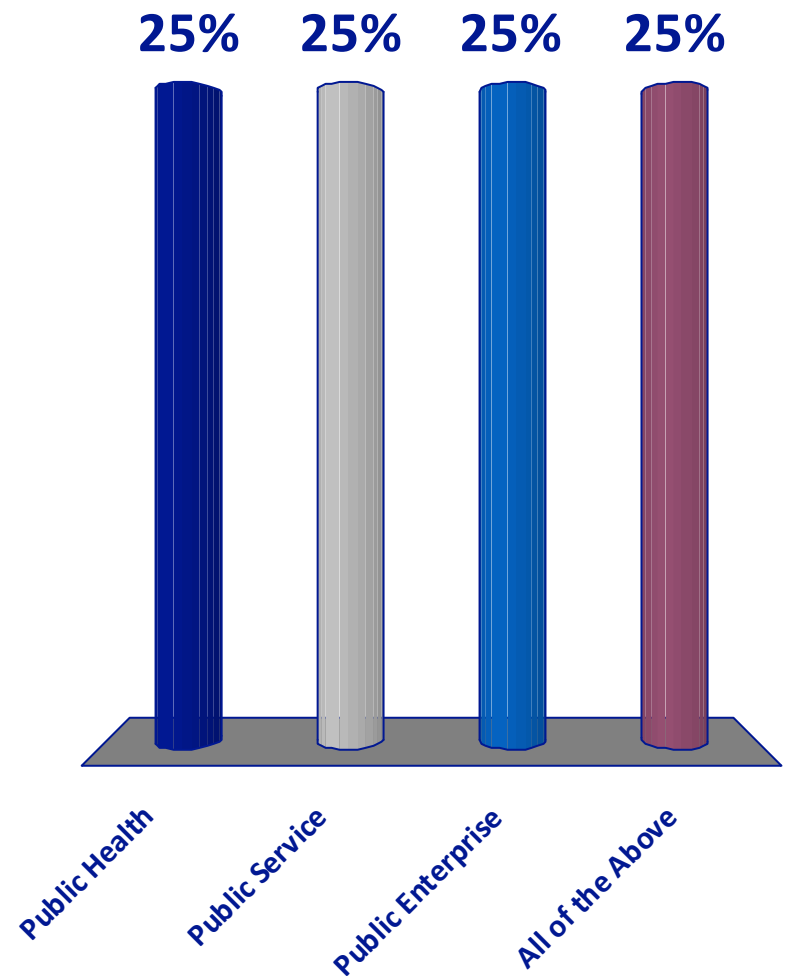
Sometimes Those Purposes Conflict

- 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.



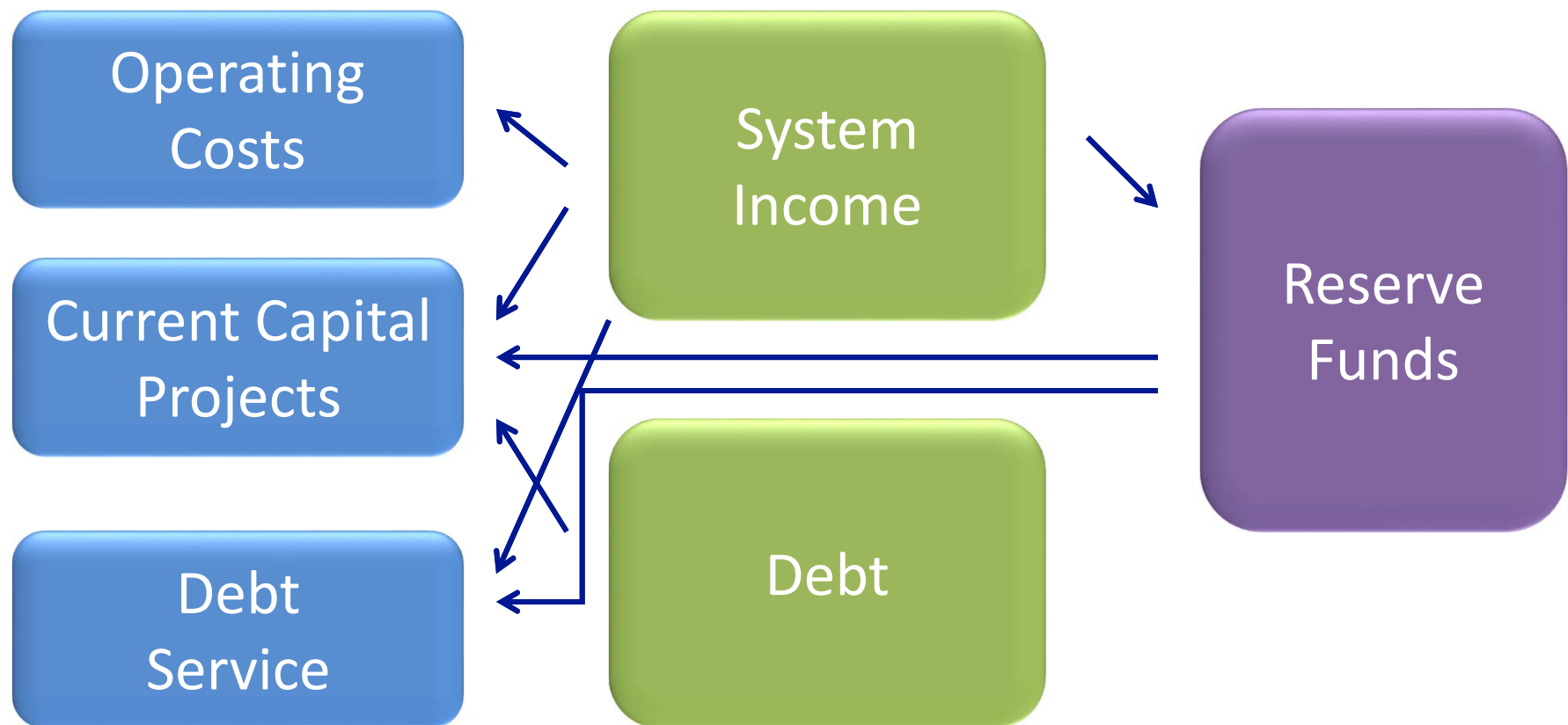
What motivates you the most?

- 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

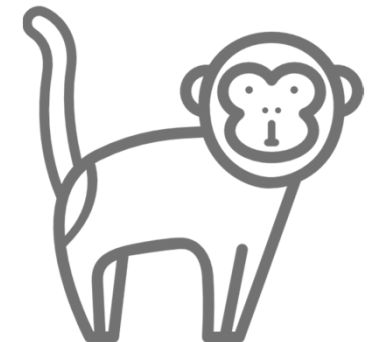
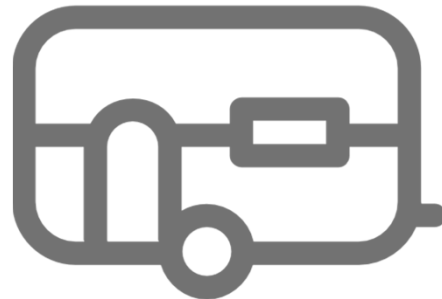
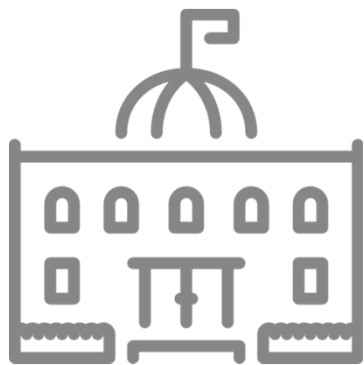
“public” drinking
water systems

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**)

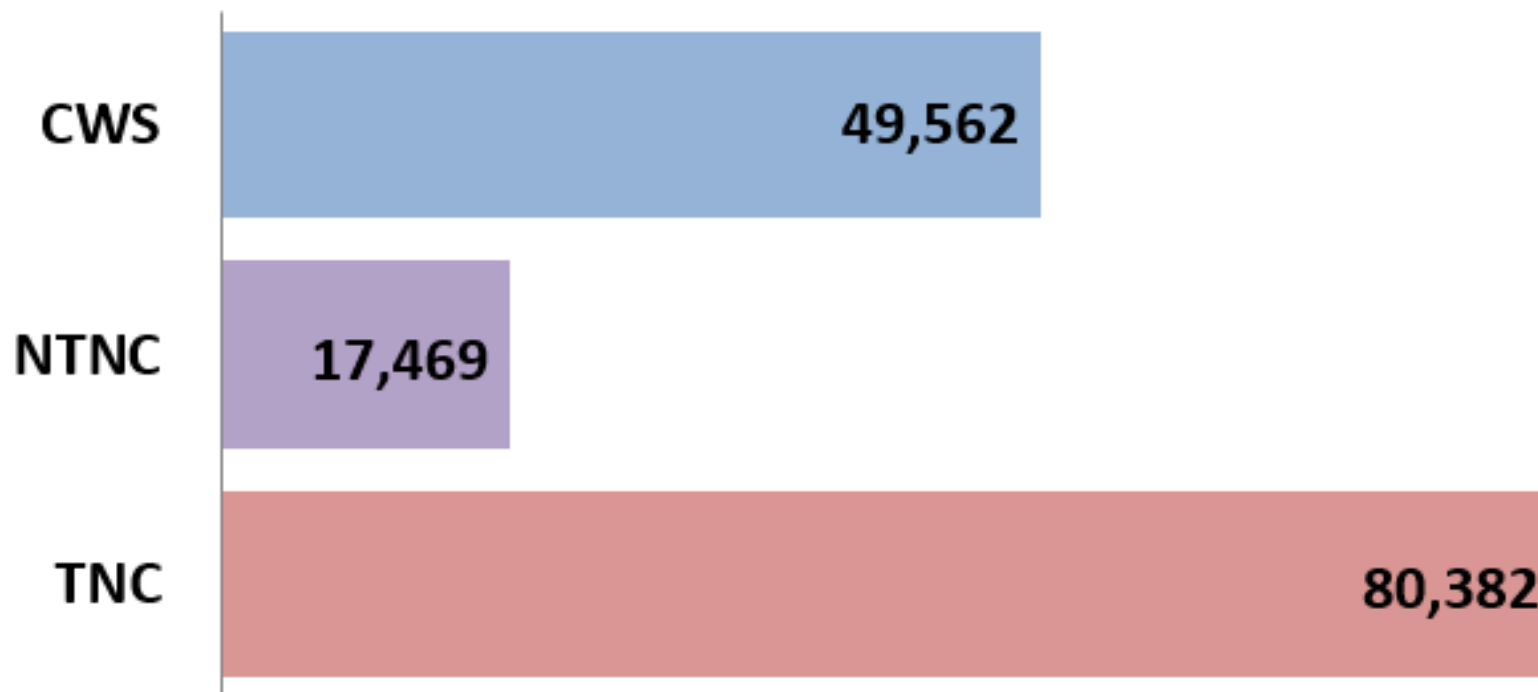


Which Type They Are Depends on Who They Serve

- **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

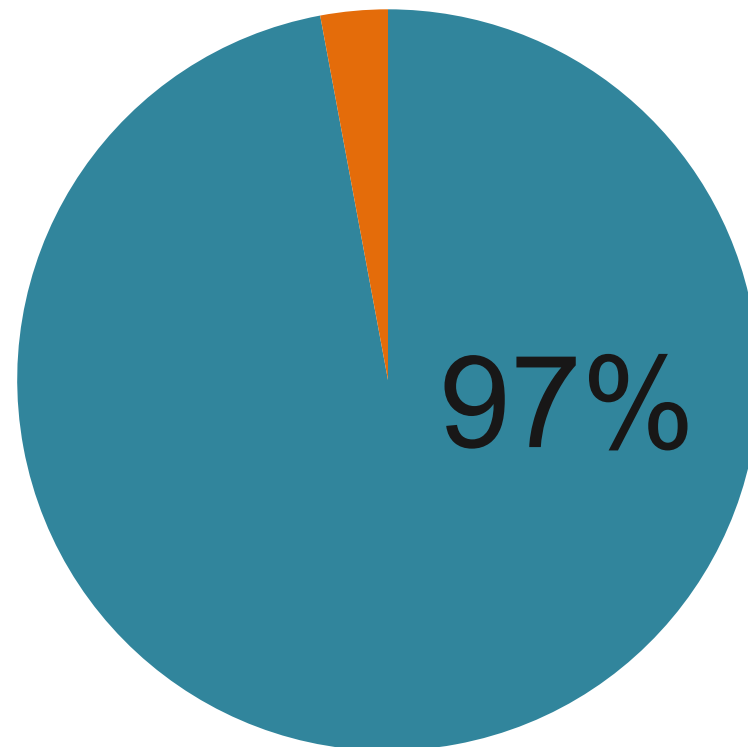
- Small Systems** {
- Very Small: Up to 500
 - Small: 501 to 3,300
 - Medium: 3,300 to 10,000

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



Most Water Systems are Small

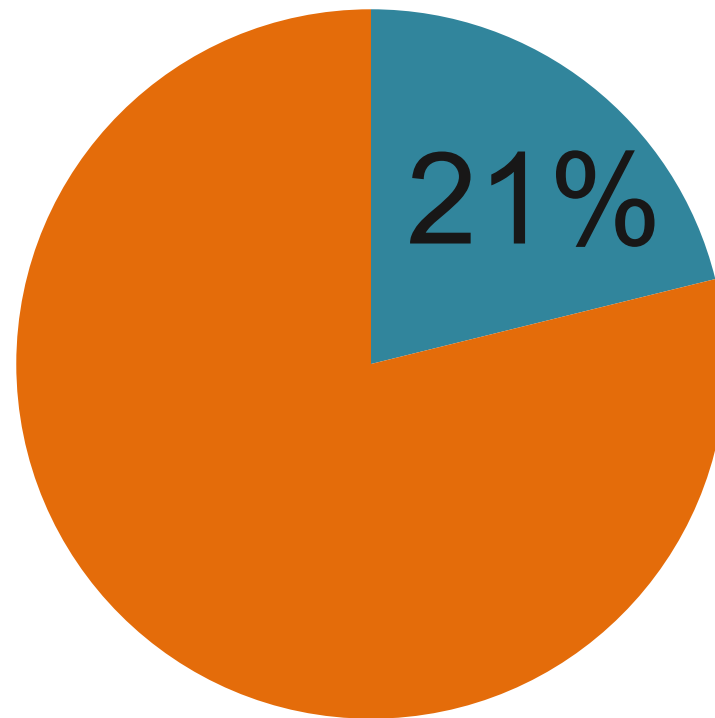
They serve 10,000 or fewer customers



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

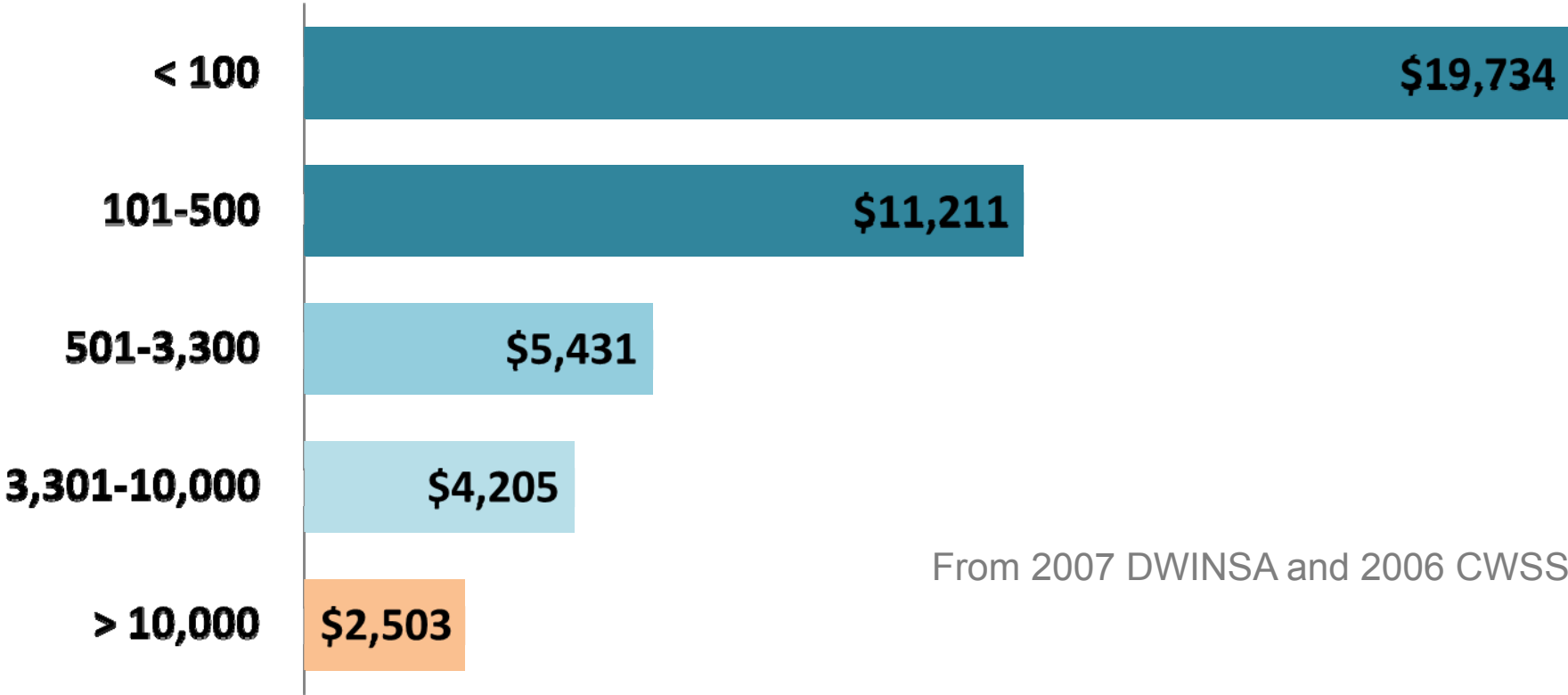


Why does system size matter?

What's the issue with small systems?



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

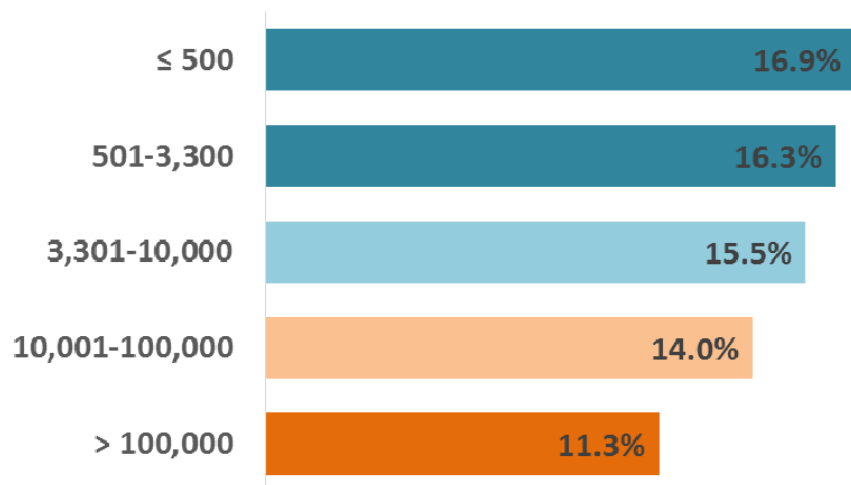


From 2007 DWINSA and 2006 CWSS

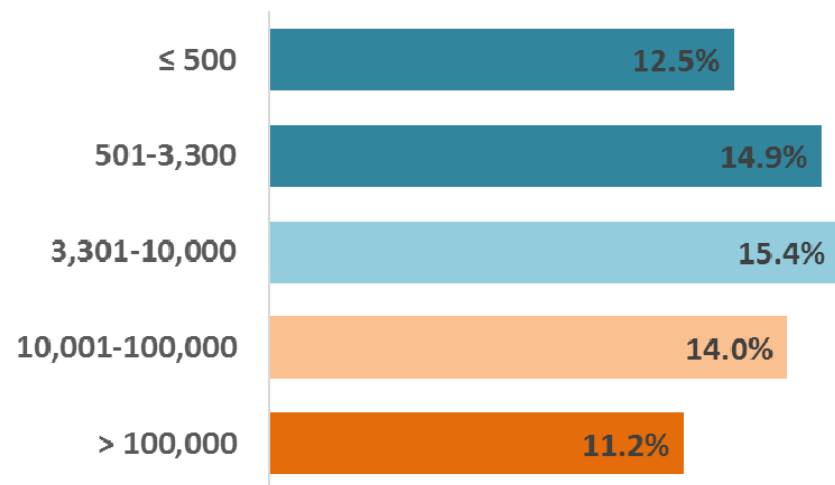


And Small Systems have higher numbers of annual health violations

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



Is My Water System Financially Healthy?

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

	Estimated Funds Water and Sewer
ASSETS	
Current Assets	
Cash	\$ 25
Receivables, net	1
Total current assets	26
Capital assets	
Land and	0
buildings	0
Less accumulated depreciation	0
Total capital assets	0
Total Assets	\$ 26
LIABILITIES	
Current Liabilities	
Accounts payable	\$ 0
Customer deposits	0
Bonds payable	0
Total current liabilities	0
Long-term liabilities	
Bonds payable	0
Total long-term liabilities	0
Total liabilities	0
NET ASSETS	
Invested in capital assets, net of related	0
restricted assets	0
Unrestricted	26
Total net assets	26
Total Liabilities and Net Assets	\$ 26

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

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BREAK

