Smart Management for Small Water Systems

Utility Rate Setting & Financial Planning Training

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EFCN environmental finance center network

American Water Works Association

UNC ENVIRONMENTAL FINANCE CENTER

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Water Finance 101

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

Public Water System Characteristics

- These utilities are enterprises
- They raise bulk of their revenues generally from bills and other fees
- They have a high percentage of fixed costs
- They protect public health and environment
- They are service industries
- They are production industries
- They are self-regulating monopolies
- They are balanced by democracy

ACCOUNTING

Government Accounting

- GAAP – Generally Accepted Accounting Principles
  - establishes the rules & conventions that guide the form and content of general-purpose financial statements
- GASB – Governmental Accounting Standards Board
  - the primary standard-setting authority for gov't, excluding the federal gov't

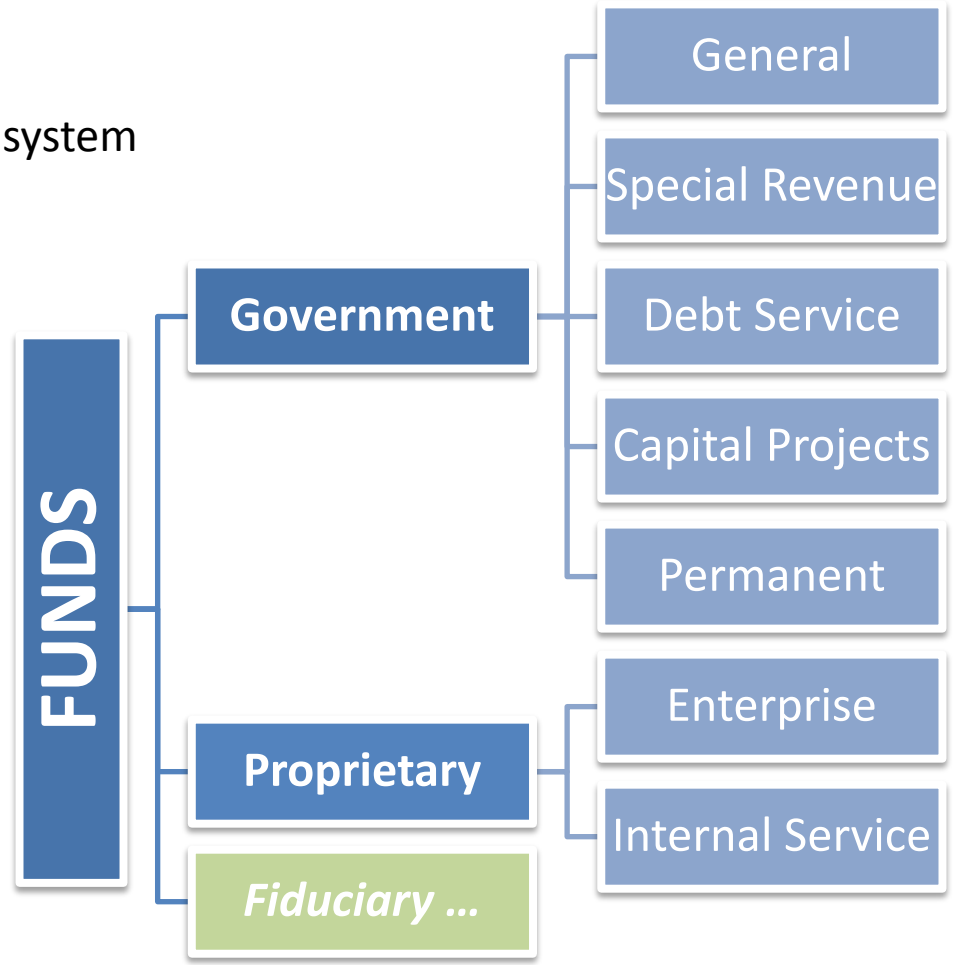
GASB
Governmental Accounting Standards Board

Fund Accounting

- An accounting system that is unique to state & local gov't
- A government's resources are segregated into categories, (i.e. "funds") to identify both the source of funds and the use of funds
- State and local governments use three broad categories of funds: *governmental* funds, *proprietary* funds and *fiduciary* funds

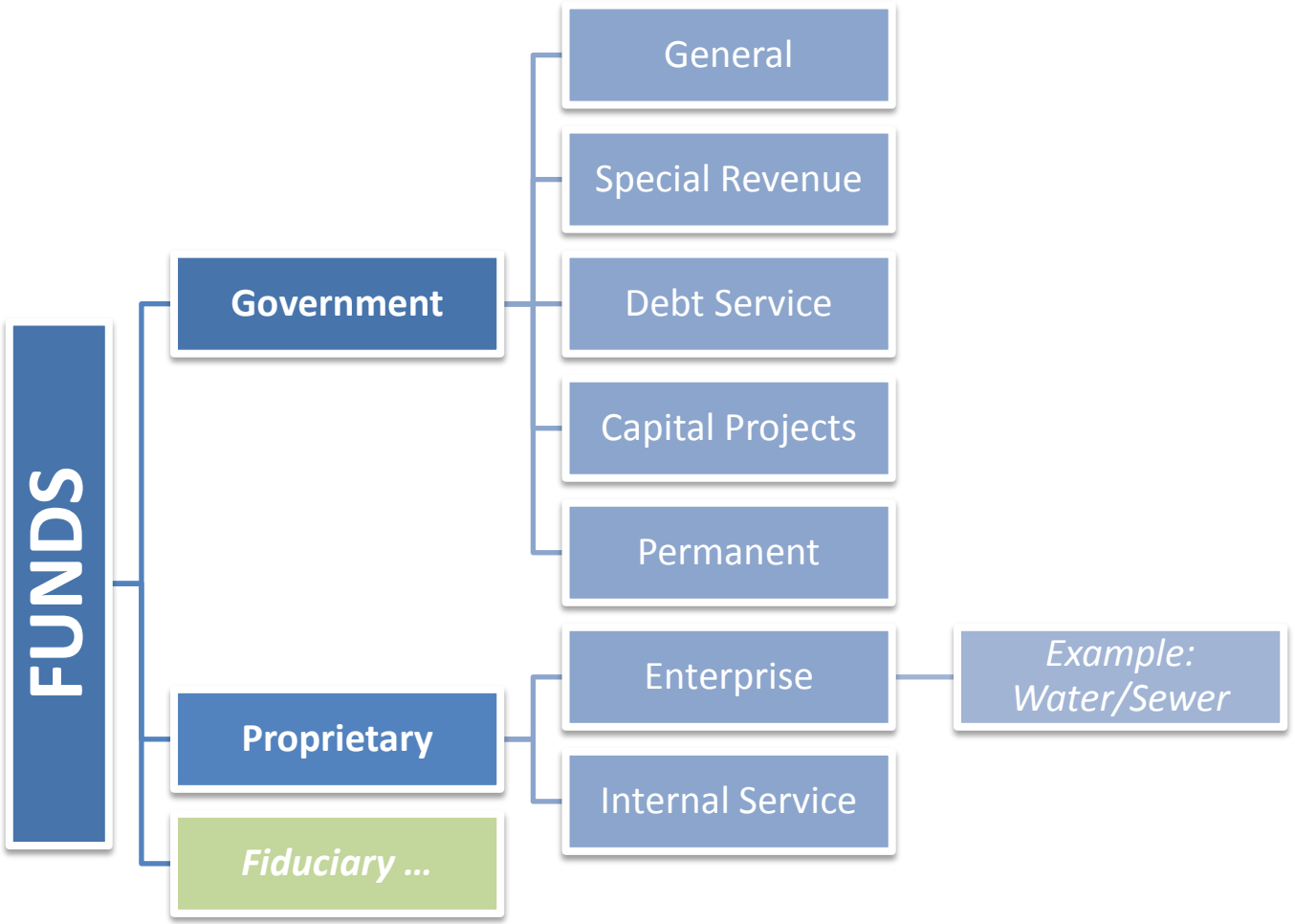
Fund Accounting

Where would water system fall?



Slide compiled by UNC EFC

Fund Accounting



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Fund Accounting

- Examples of Government Funds:
  - General Fund – each gov't has one account for all resources that are not required to be accounted for in other funds. Includes most major gov't functions such as police, fire, sanitation etc.
  - special revenue – established to account for resources that are legally restricted for specific purposes, e.g. lottery money for education
  - capital projects – used when buying/building major capital **facilities**

Exercise – *"Fun with Funds"*

Which fund(s) should be used to account for the following activities:

Activity	Fund(s)
Police	
An electric utility system	
Construction of a new wastewater plant	
Public Transit	
Municipal motor vehicle pool (maintenance)	

Let’s Go Back to the Basics

- What does your water system do?

Water Systems Serve Multiple Purposes

Sometimes Those Purposes Conflict

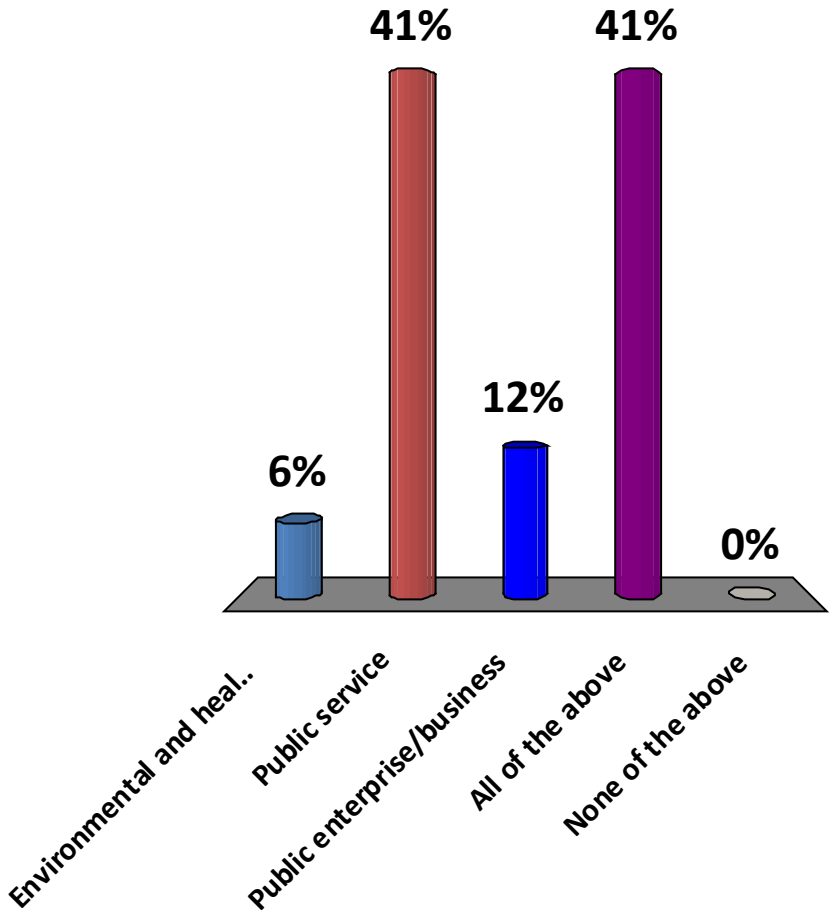
1) System serves an important **environmental and health purpose** -- protecting community's water resources and supplying community with highest quality drinking water.

2) System serves an important **public service** – providing community with basic services that everyone in the community can afford.

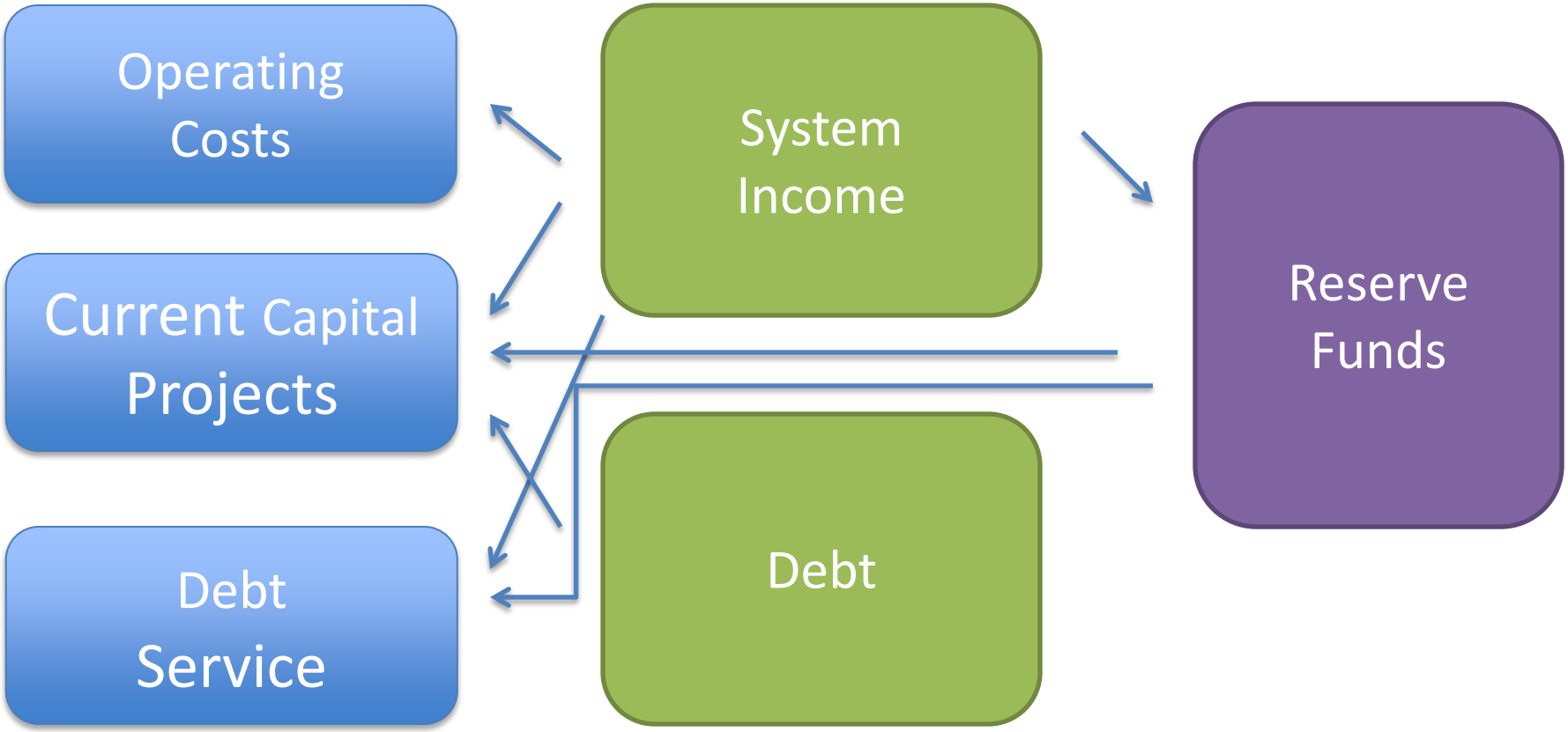
3) System serves as a well managed **public enterprise** – putting into practice forward-thinking sustainable business practices.

How do you see your system primarily?

1. Environmental and health purpose
2. Public service
3. Public enterprise/business
4. All of the above
5. None 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—repair 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, impact fees, grants, other sources
  - Note: To be a true enterprise fund, not taxes!

- Debt—Money from bonds and loans

“Ideal” Pricing Has Several Characteristics

Sometimes Those Characteristics Conflict

- Prices cover full “costs” of service
- Prices send and reinforce strategic messages
- Prices follow State’s laws and policies
- Beneficiaries pay for their benefits
- Ability to pay is recognized and addressed
- Simple

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

157,230

"public" drinking water systems

Possibly 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

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

Small Systems

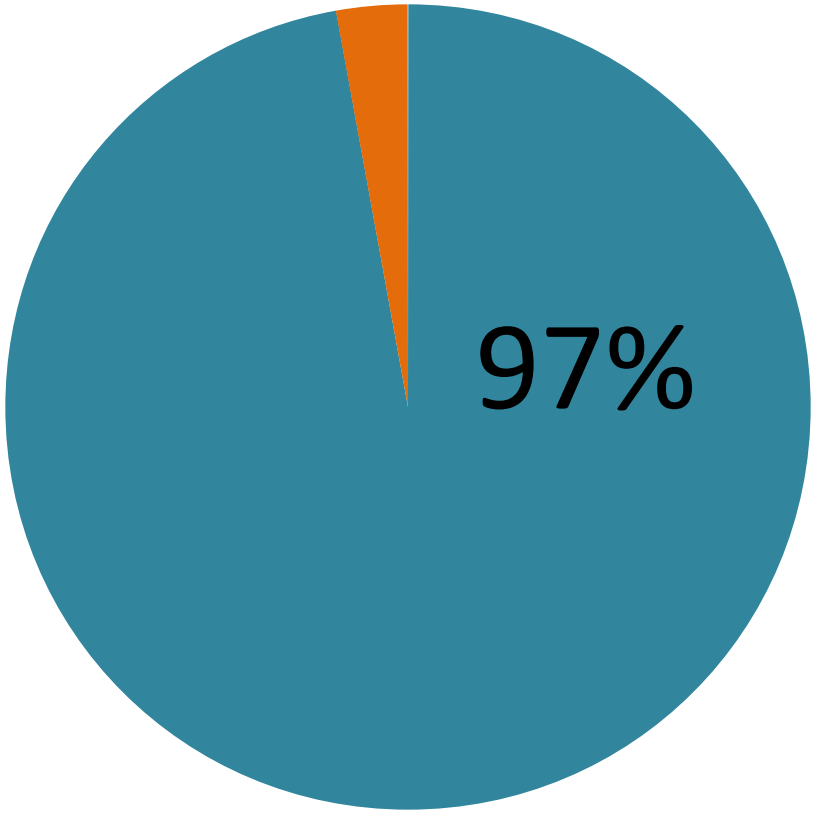
- Very Small: Up to 500
- Small: 501 to 3,300
- Medium: 3,300 to 10,000

Large Systems

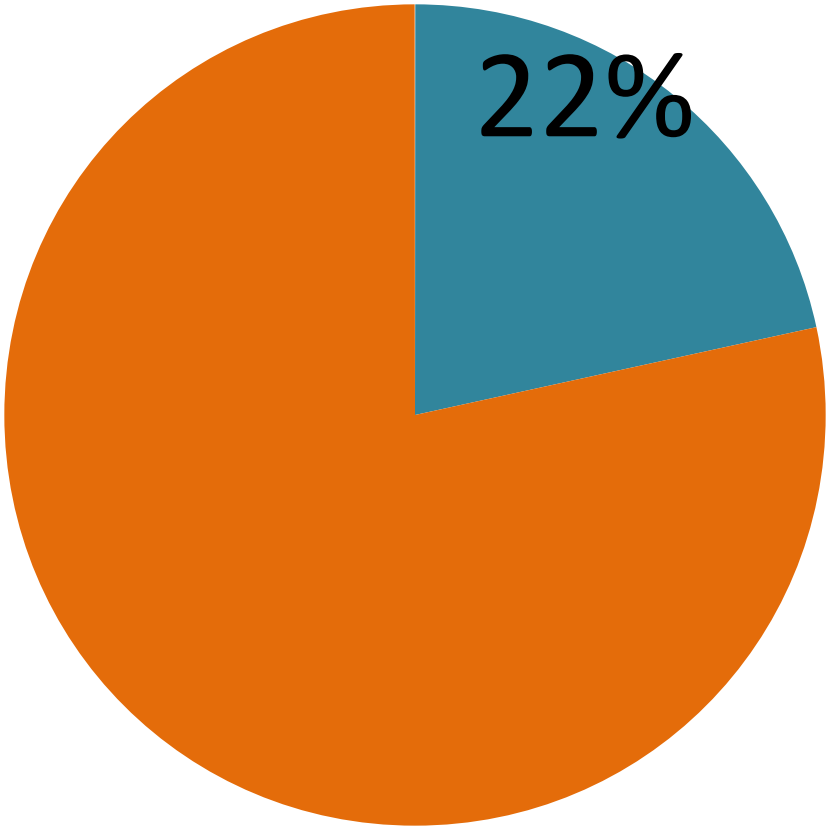
- Large: 10,001 to 100,000
- Very Large: More than 100,000

Most Water Systems are Small

They serve 10,000 or fewer customers



Collectively, Though, Large Systems Serve Far More Total People



Almost all Non-Community Systems are Small

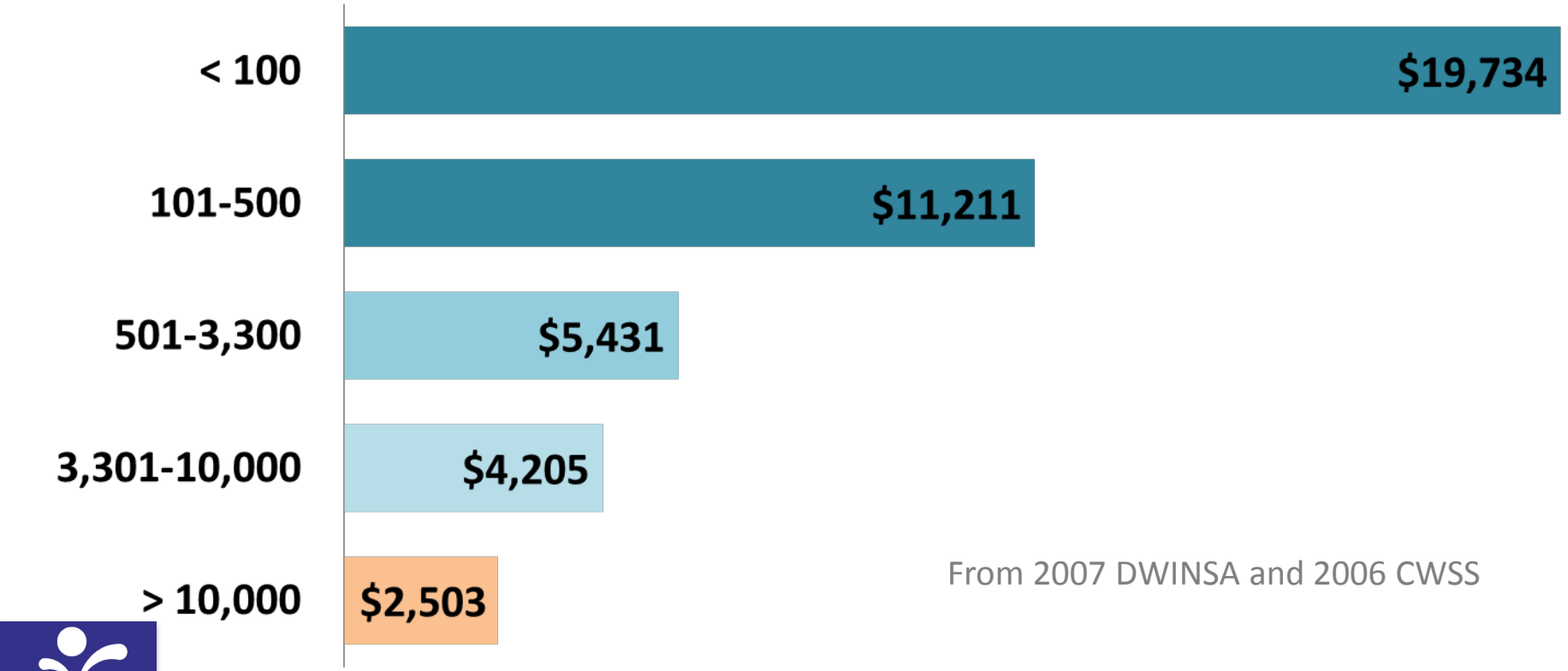
- More than 99% of **NTNC** and **TNC** serve 10,000 or fewer people

- At least 85% serve 500 or fewer people

Why does system size matter?

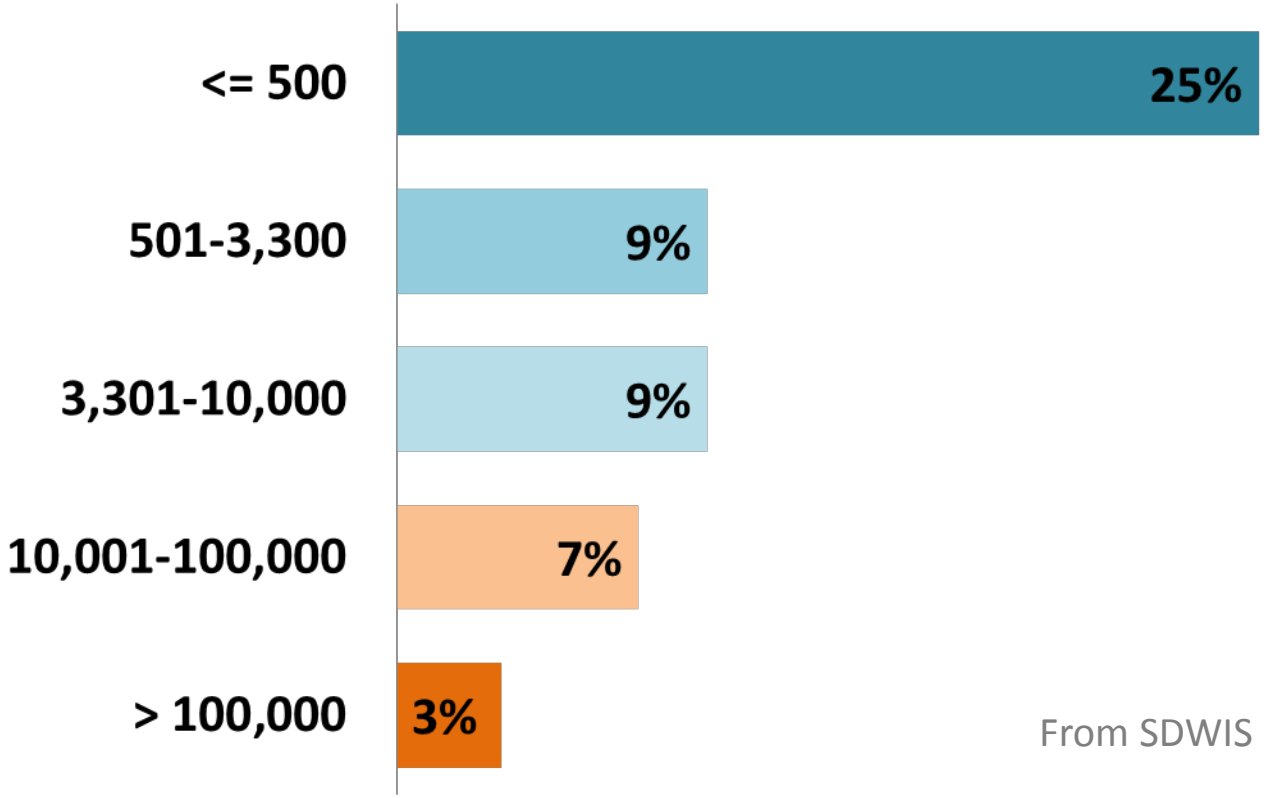
What's the issue with small systems?

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



From 2007 DWINSA and 2006 CWSS

And Small Systems Have Far Higher Numbers of Annual Health Violations



From SDWIS 2011 Q3 Data

Other Challenges

- Increase in mergers
- Asset-intensive systems
- Changing regulations that impact bottom line
- Backlog in capital investments
- Interruptions in supplies that hurt revenues
- Loss of major customers
- Sagging revenues
- A service or a commodity?

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

Next …

Presentation from Funder