



# Water System Finance 101



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

[www.efcnetwork.org](http://www.efcnetwork.org)





# Session Objectives

- Describe the financial framework for local government public enterprises
- Explore practices for managing the water system enterprise fund



# 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.
- 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.



# Enterprise Fund

Governmental water systems are typically managed as **Enterprise Funds**.

An Enterprise Fund is a self-sustaining fund, where the revenues and expenses for that business unit are not commingled with others from other governmental activities (i.e. the General Fund)



# From Authority to Implementation

**G.S. 160A-311,312**

Local governments given power to provide services



**G.S. 160A-313**

Local governments given authority to finance services



**G.S. 160A-314**

Local governments given authority to charge rates and fees for services



**Local ordinance**

Local government decides to charge rates and fees



**ENTERPRISE/UTILITY IS BORN**



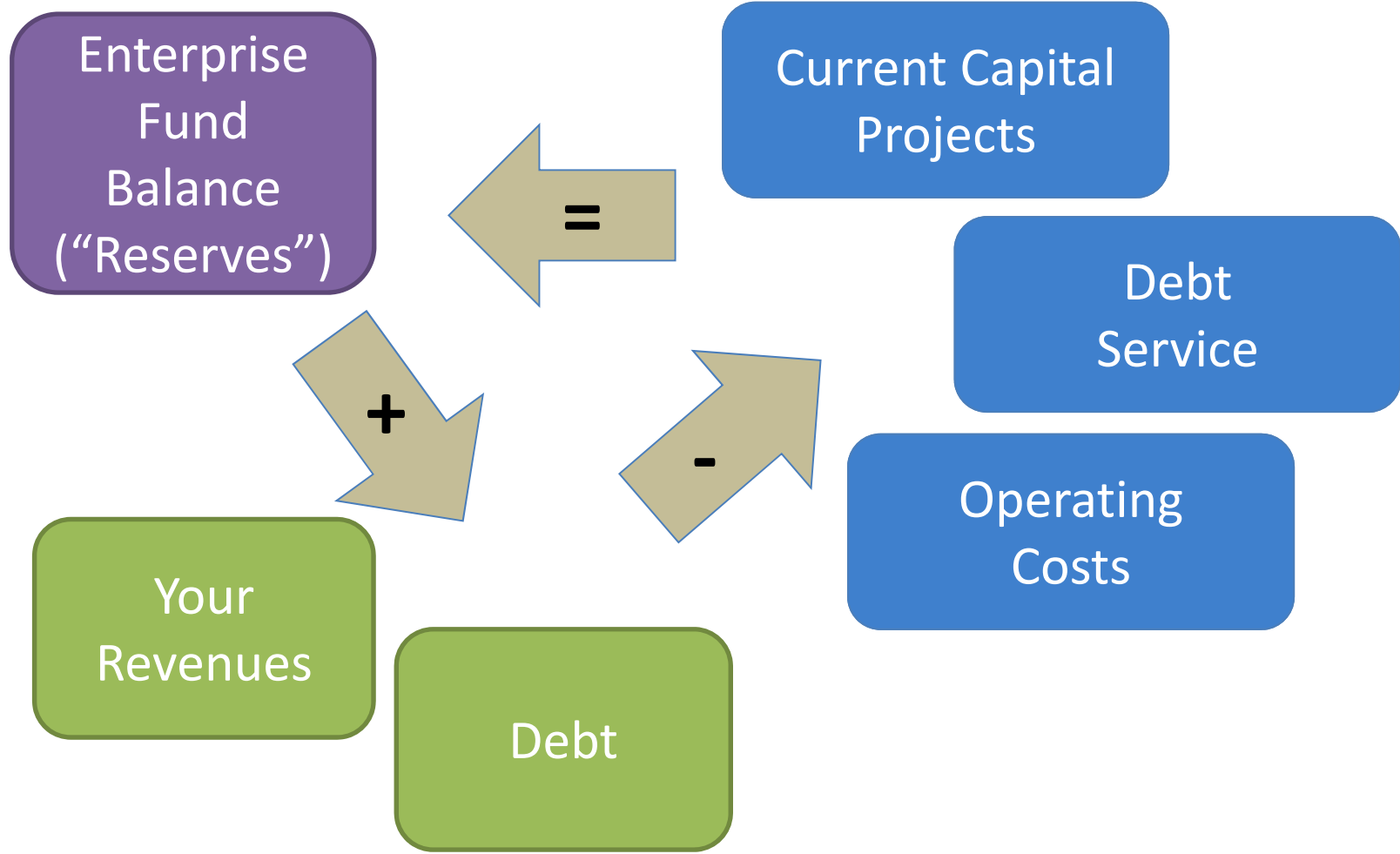
# Guiding Principle for Enterprise Funds

## Self-sufficiency

Revenues collected = Costs expended  
(in a given year or over time)



# Water System Finance Diagram







# Three Types of Costs

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



# Methods to Budget for Capital Costs

- Create and maintain a Capital Improvement Plan
- “Fund” your depreciation, with a little extra
- Estimate from past expenses, but adjust for the future

Do NOT ignore capital costs and only budget for O&M. Every utility has capital costs that need to be budgeted.



# Two Types of Revenues

- **System Income**—Money from rates, connection fees, penalties, grants, other sources
  - Note: To be a true Enterprise Fund, not subsidized by taxes.
- **Debt**—Money from bonds and loans



# System Income

For most water systems, revenue from **rates** account for ~80-90% of total revenues (often more).



# Reserves

If revenues exceed costs, the extra money can go into one or more reserve account(s) specifically for the water system



# 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

(see <http://efc.web.unc.edu/2013/02/12/right-sizing-reserve-funds/>)

- 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?



# Transfers between General Fund and Enterprise Fund

- OK if paying for services rendered or payment in lieu of taxes
  - In fact, don't report it as a "transfer" but as an expense (on the LGC forms)
- Maybe OK if loaning money that *gets paid back*
- Not OK if just moving money between the two funds when one falls short (i.e. subsidizing)
  - Technically can do that, but draws scrutiny from LGC and would be ineligible for state-subsidized funding for the enterprise fund (NC G.S. 159G-37)



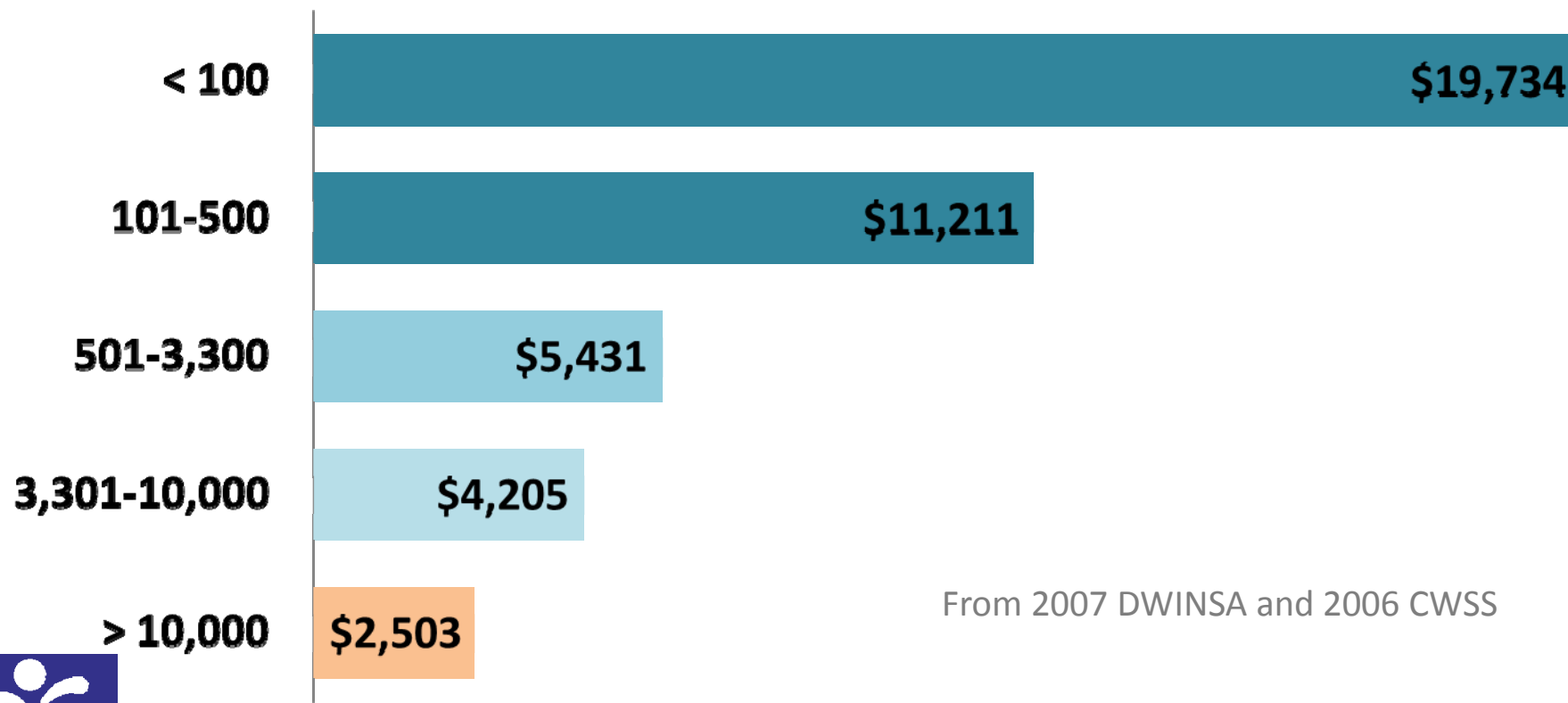


# Why does system size matter?

## What's the issue with small systems?



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

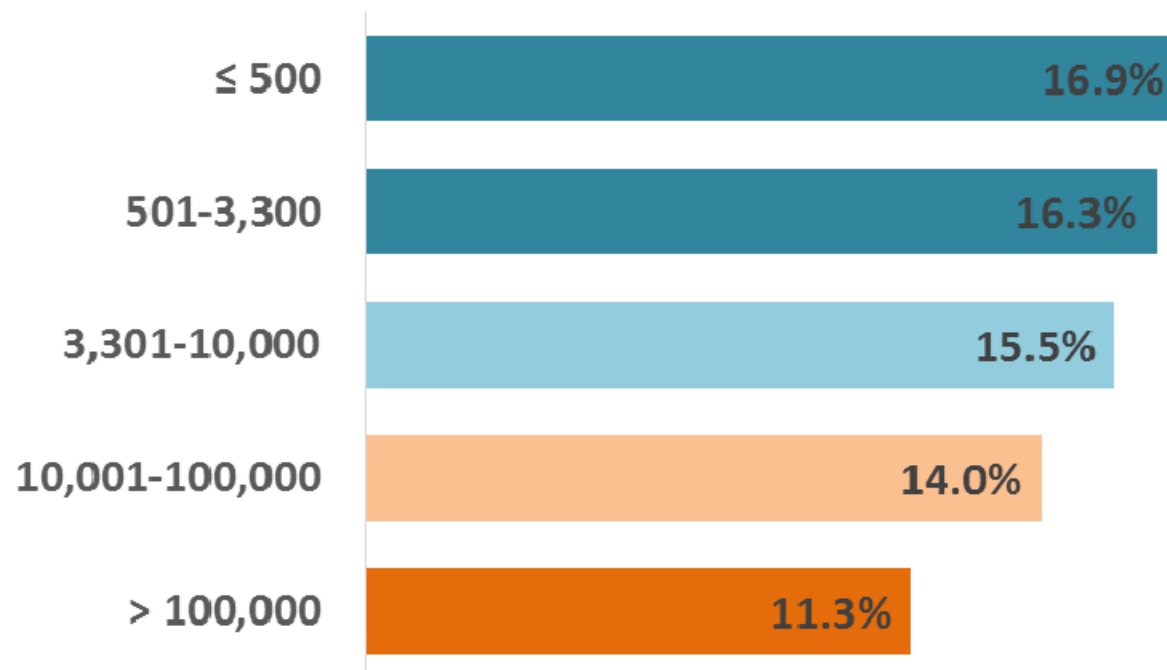


From 2007 DWINSA and 2006 CWSS



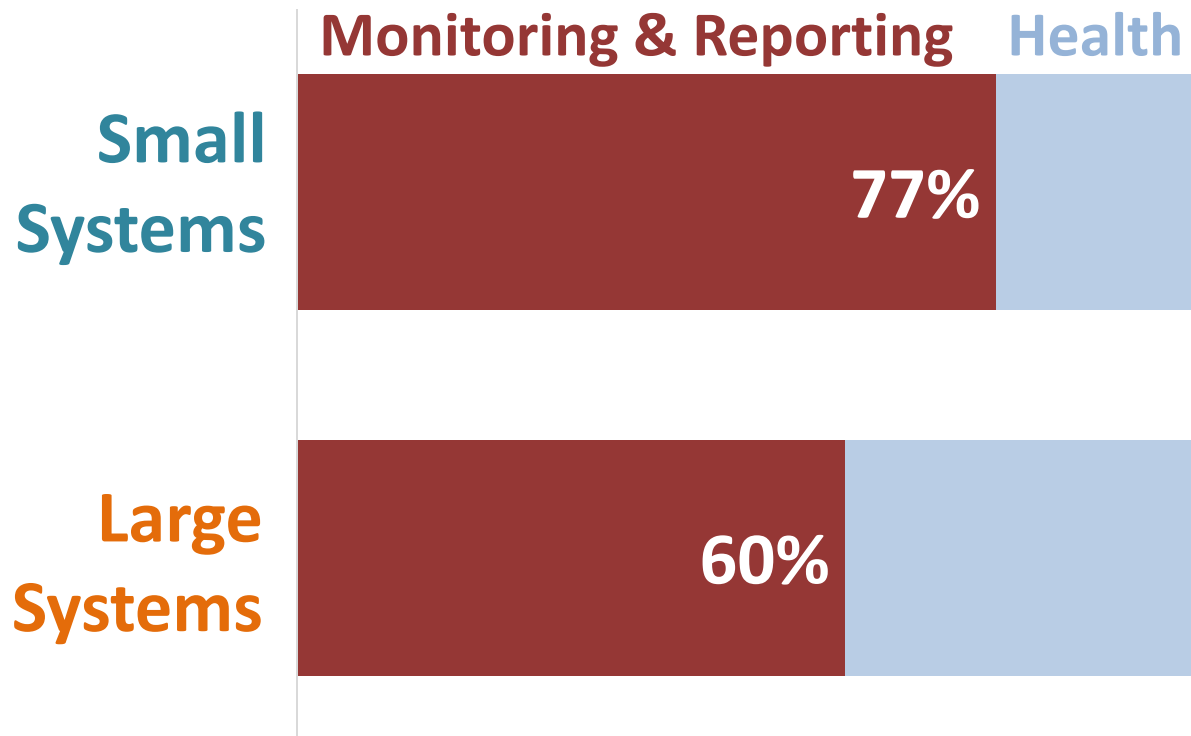
# And Small Systems have higher numbers of annual health violations

% of Community Water Systems with Violations





# Monitoring & Reporting violations make up a larger share of total violations





# Small System Challenges

- Dis-economies of scale
- Insufficient revenue from small customer base
- Regulatory compliance needs
- Addressing current and future infrastructure needs
- Workforce – retirements and high turnover
- Difficulty in raising funds for capital projects



## 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



# For More Information

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