



Smart Management for  
Small Water Systems

# Water System Management and Finance for Board Members

Wilmington, NC  
December 6, 2017



UNC  
ENVIRONMENTAL  
FINANCE CENTER



American Water Works  
Association

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



# Housekeeping

# The Environmental Finance Center (EFC) at UNC



Part of the UNC School of Government.

Dedicated to enhancing the ability of governments and other organizations to provide environmental programs and services in fair, effective and financially sustainable ways.



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



## 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)



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WICHITA STATE  
UNIVERSITY  
HUGO WALL SCHOOL  
OF PUBLIC AFFAIRS  
*Environmental Finance Center*



SOUTHWEST  
ENVIRONMENTAL  
FINANCE CENTER



Environmental  
Finance  
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*Syracuse University*



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# 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

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

# Quick Introductions

1. Name?
2. Organization?
3. Responsibility?
4. What is your system's biggest issue?
5. What motivates you to serve?





# Workshop Objectives

- Understand your responsibilities
- Learn management best practices
- Provide forum for sharing finance and management perspectives, ideas, and experiences

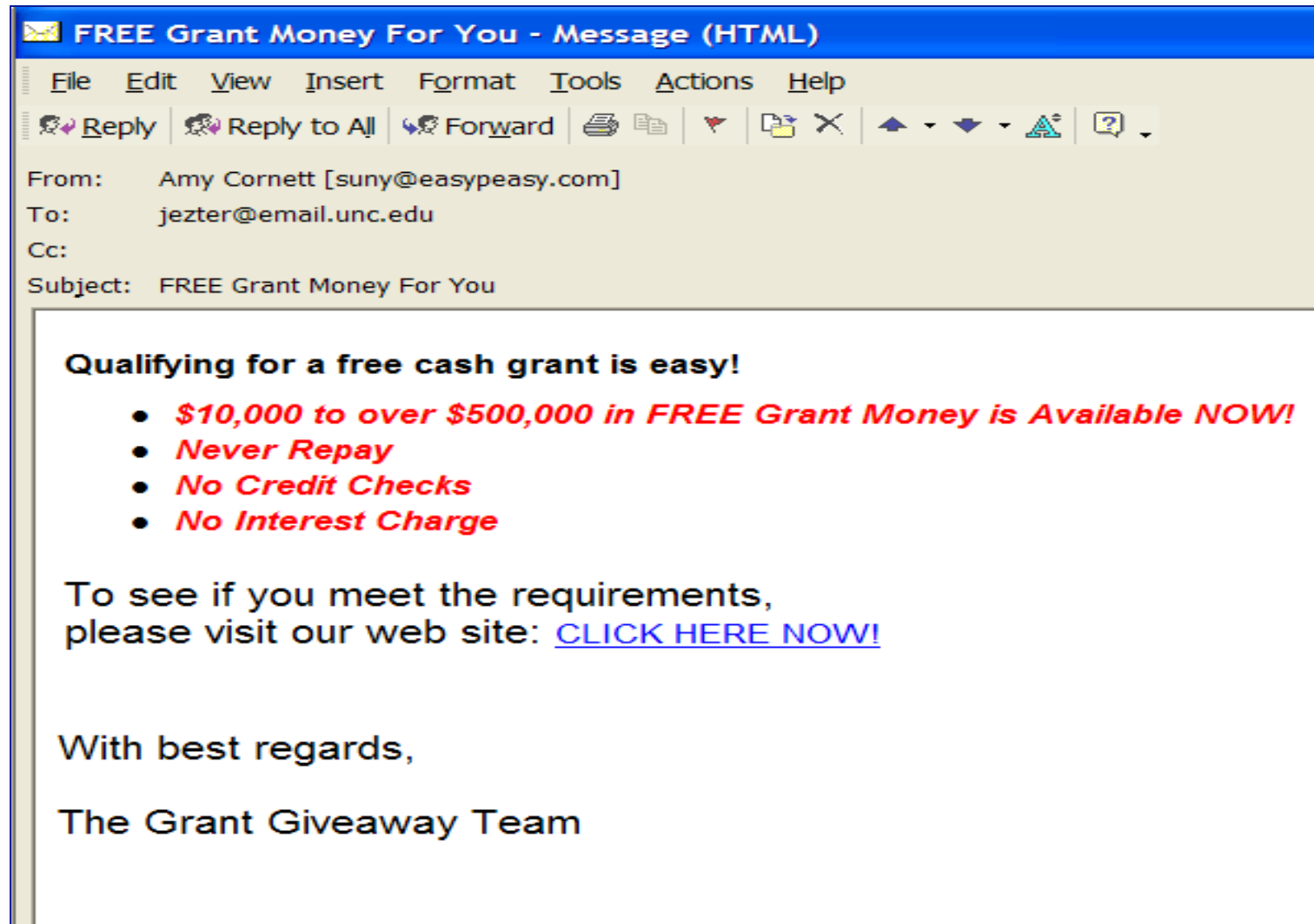




# Agenda

- What is a water system?
- Roles and responsibilities of board and staff
- Effective communication

# Topics Not Covered





# What Is A Water System?

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)



# Session Objectives

- What your water system does
- Your water system as a financial entity
- Regulatory framework



# 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.



Our water systems have big financial challenges.

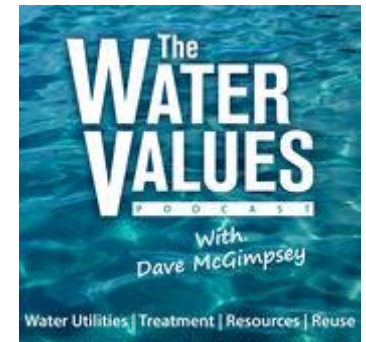
Let's hear from an expert



# Let's hear from an expert



Dave McGimpsey interviews George Hawkins, former 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>

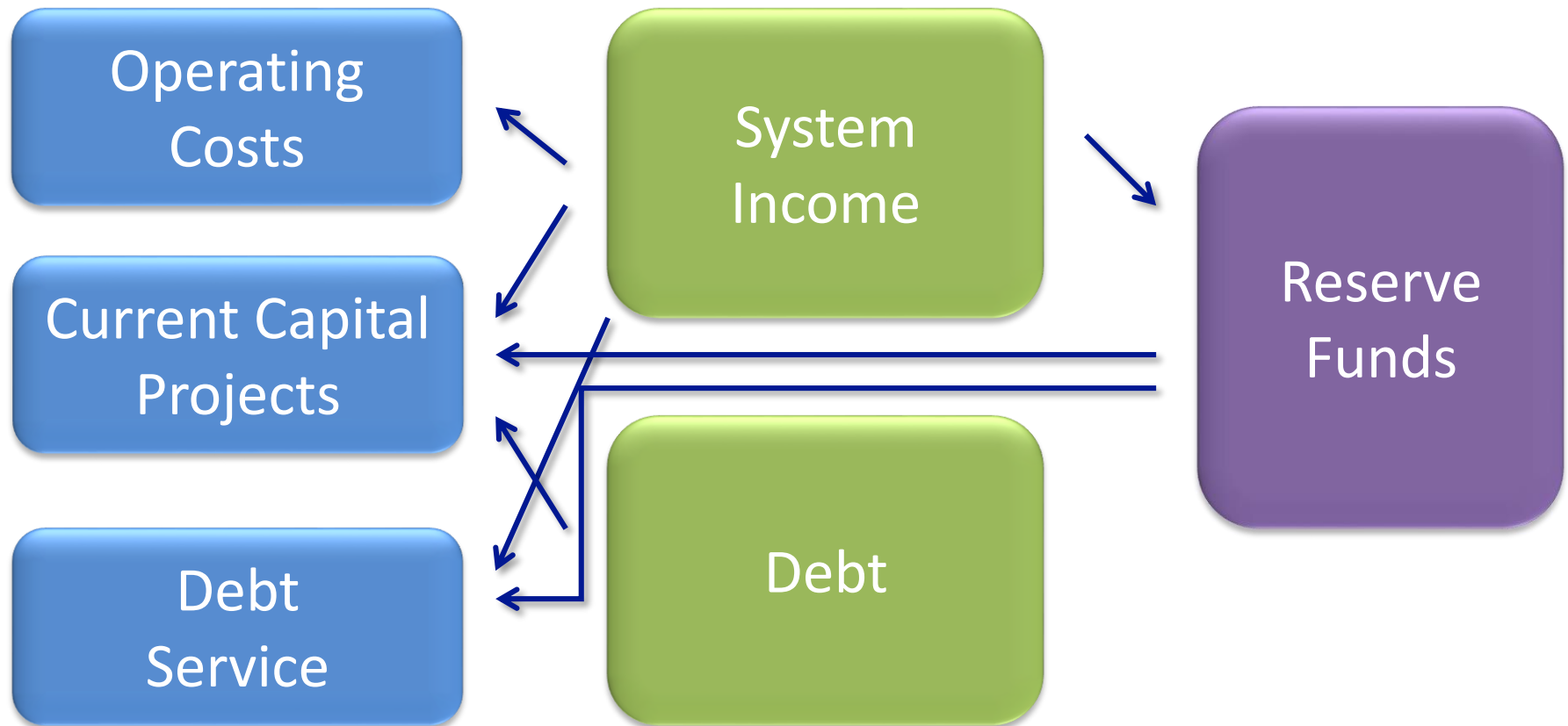




# Water Systems as Financial Entities



# Water System Finance Diagram





# 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?



## See

Print PDF

SUBS

“How much should our utility maintain in reserves?” This is one of the most common questions I get from utility managers during my finance courses. It is also one of the most difficult questions to answer. Just calculating how much a utility has in reserve and what it can be used for can be challenging given the diversity of labels and descriptions given to reserves.

## TOPIC

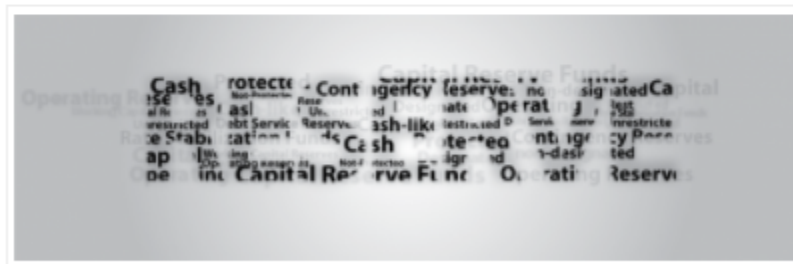
Drink

Energy

## Finan

Gener

Smart



Reserves can be held in working capital reserves, operating reserves, debt

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

# 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)





# Quick Overview of the Regulatory Framework



# 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**

# EPA, and Your Primacy Agency



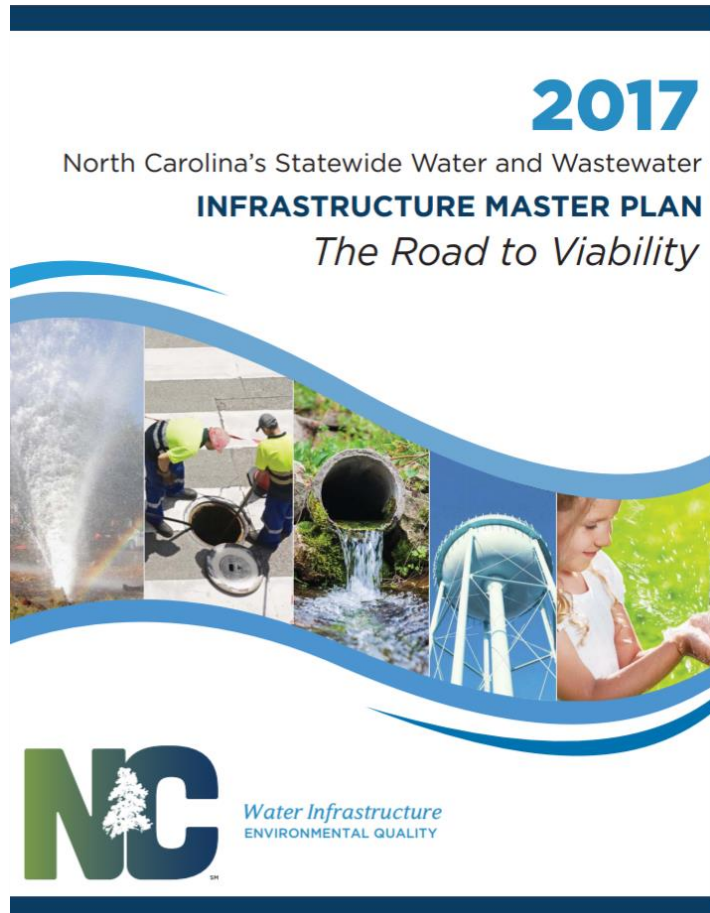
*Environmental  
Quality*



# Regulatory Framework

- You are responsible for public health
  - Safe Drinking Water Act
  - Revised Total Coliform Rule (TCR)
  - Groundwater Rule
- These are legally enforceable standards

# Master Plan for NC



Available at

<http://portal.ncdenr.org/web/wi/master-plan>

Is the State's roadmap for viable water and wastewater utilities that safeguard public health, protect the environment, support vibrant communities, and encourage economic development.

Covers:

- Infrastructure management
- Organizational management
- Financial management



Regulations go beyond just the environment and public health





# Regulatory Framework

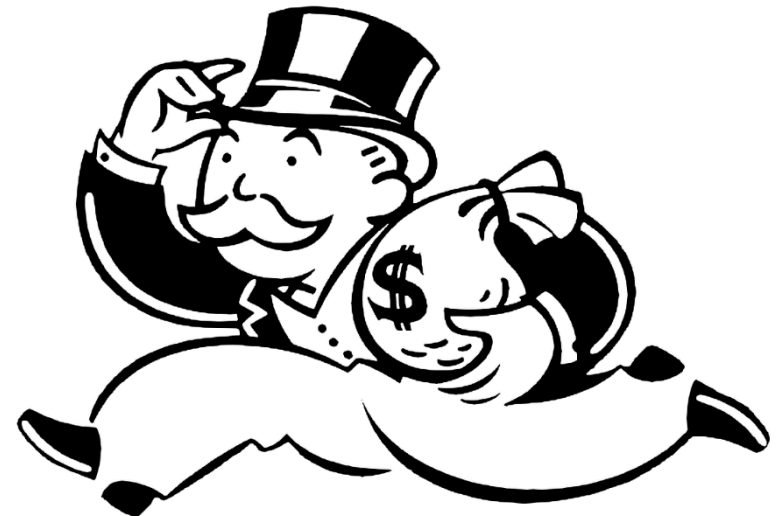
- You hire people—  
labor laws
- You use equipment—  
occupational safety  
laws



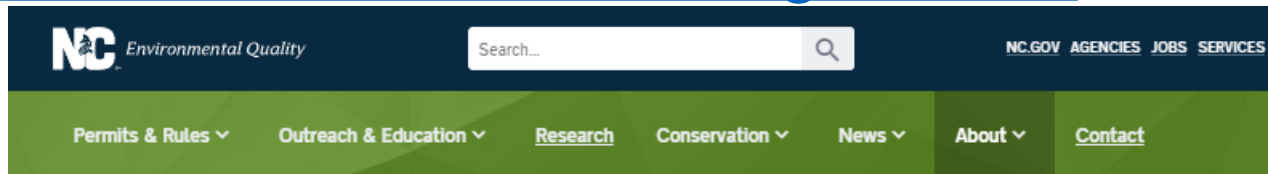


# Regulatory Framework

- You are governmental—  
information  
transparency
- You are a monopoly



# <https://deq.nc.gov/about/divisions/water-resources/water-resources-regulations>



[Home](#) » [About](#) » [Divisions](#) » [Water Resources](#) » Water Resources Regulations & Guidance

## Water Resources Regulations & Guidance

The N.C. Division of Water Resources operates under a variety of legislative mandates that include a wide range of activities. The duties of the Division include protecting streams from growth, evaluating water project impacts on the waters of the State, keeping records of water users in the State, providing technical assistance to water systems, and planning for development of water supplies. The N.C. statutory mandates have been organized according to function.

**Note:** The statutes linked here are published on the North Carolina General Assembly's website. Although every effort was made to ensure accuracy, these online statutes are not the official versions of the North Carolina General Statutes.

- [Databases](#)
- [Development](#)
- [Education](#)
- [Planning](#)
- [Regulation](#)
- [Rules, Regulations & General Statutes Specific to Public Water Systems](#)
- [Rules Governing Water Treatment Facility Operators](#)
- [Studies](#)

### Water Resources

[About Water Resources](#)

[Locations](#)

### Water Resources Regulations & Guidance

[DWR Classifications, standards  
and rule making](#)

[NC Administrative Code and  
Statutes](#)

[Proposed Rules Information &  
Tracking](#)

[401 & Buffer Permitting Statutes &  
Rules](#)

[Animal Feeding Operations Rules  
and Statutes](#)

[Groundwater Protection Rules and  
Statutes](#)

[Non-discharge Rules and Statutes](#)

[NRDES Regulations](#)



# Regulatory Framework

- How many of you like being regulated?
- Water systems are regulators, too!
  - You cut off customers who don't pay
  - You prevent people from tapping their well into the system



# Regulatory Framework

- Regulations are ultimately linked to public health
- You are in charge of the essential product to life—you have an amazing responsibility



# What Is A Water System?

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