



Smart Management for
Small Water Systems

The Role of Asset Management in Rates and Finance of Small Drinking Water Systems

05/18/17| Dalton, GA

www.efcnetwork.org



UNC
ENVIRONMENTAL
FINANCE CENTER



American Water Works
Association

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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



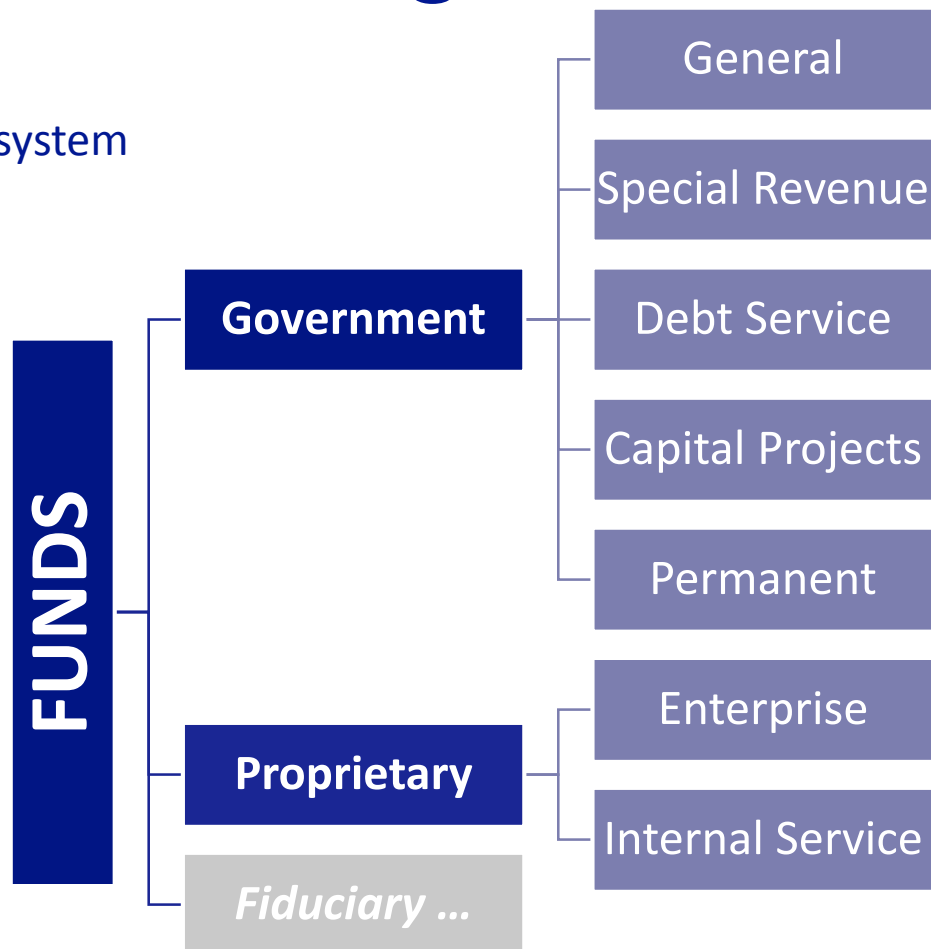
Fund Accounting

- 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

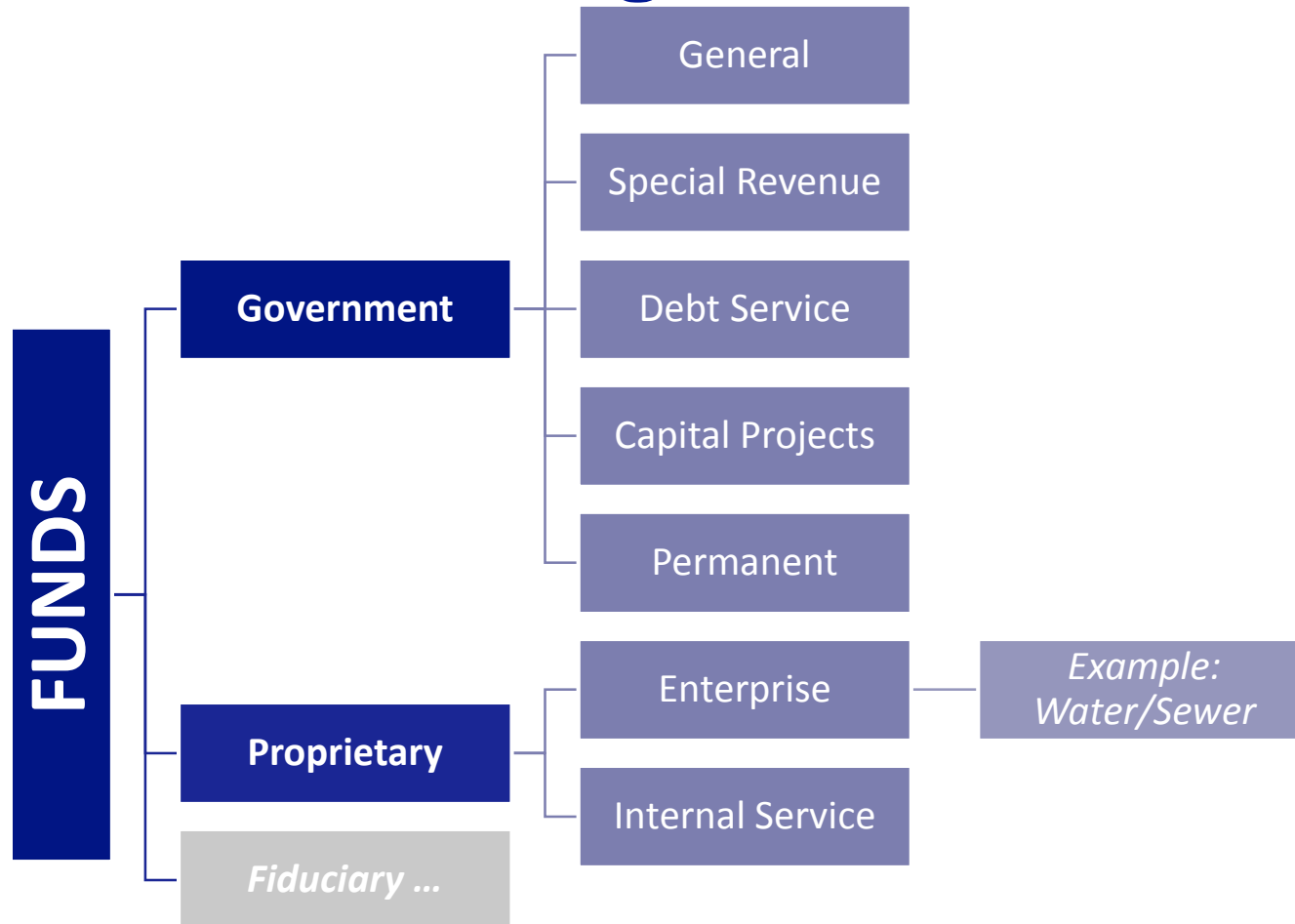


Fund Accounting

Where would water system fall?



Fund Accounting





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**



Let's Go Back to the Basics

- What does your water system do?

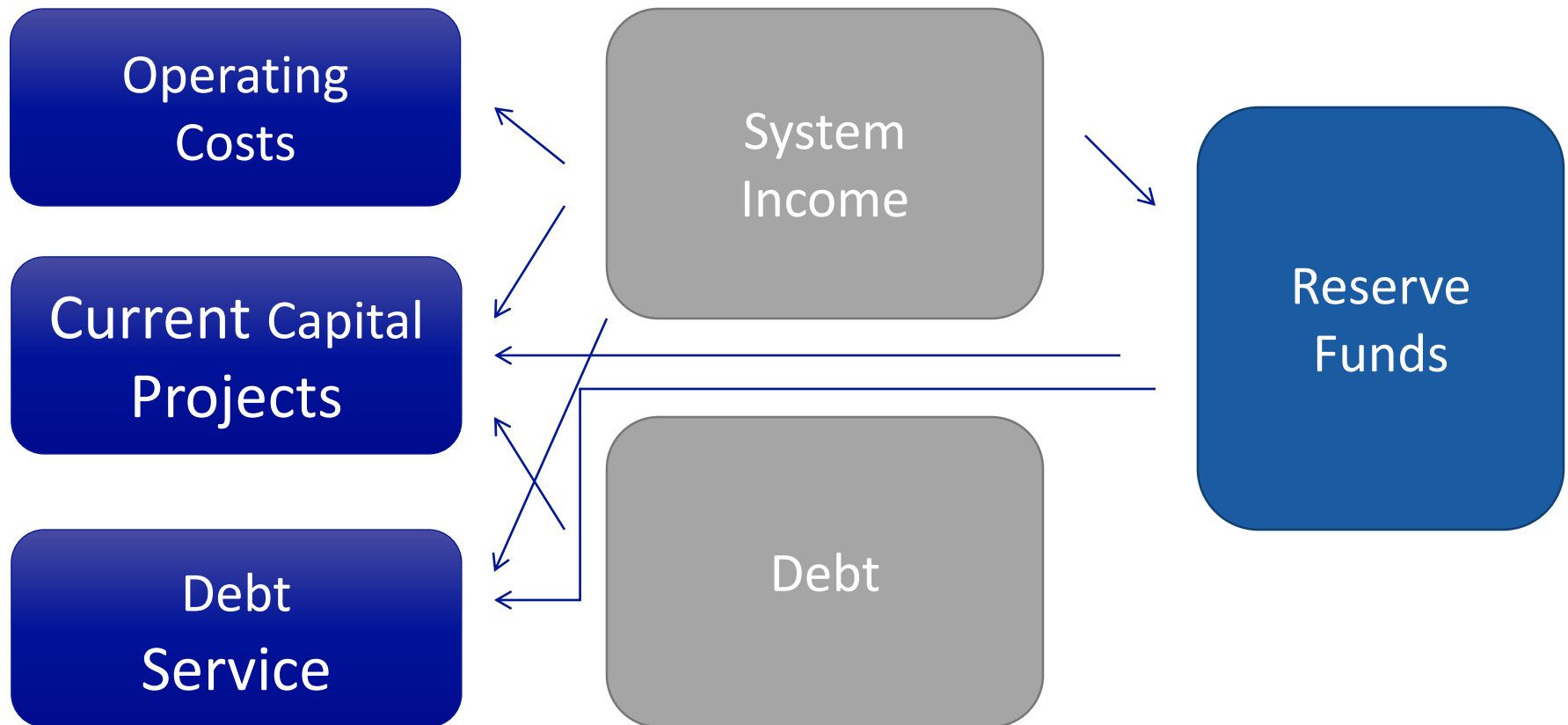


Water Systems Serve Multiple Purposes

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.

Water System Finance Diagram





“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 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

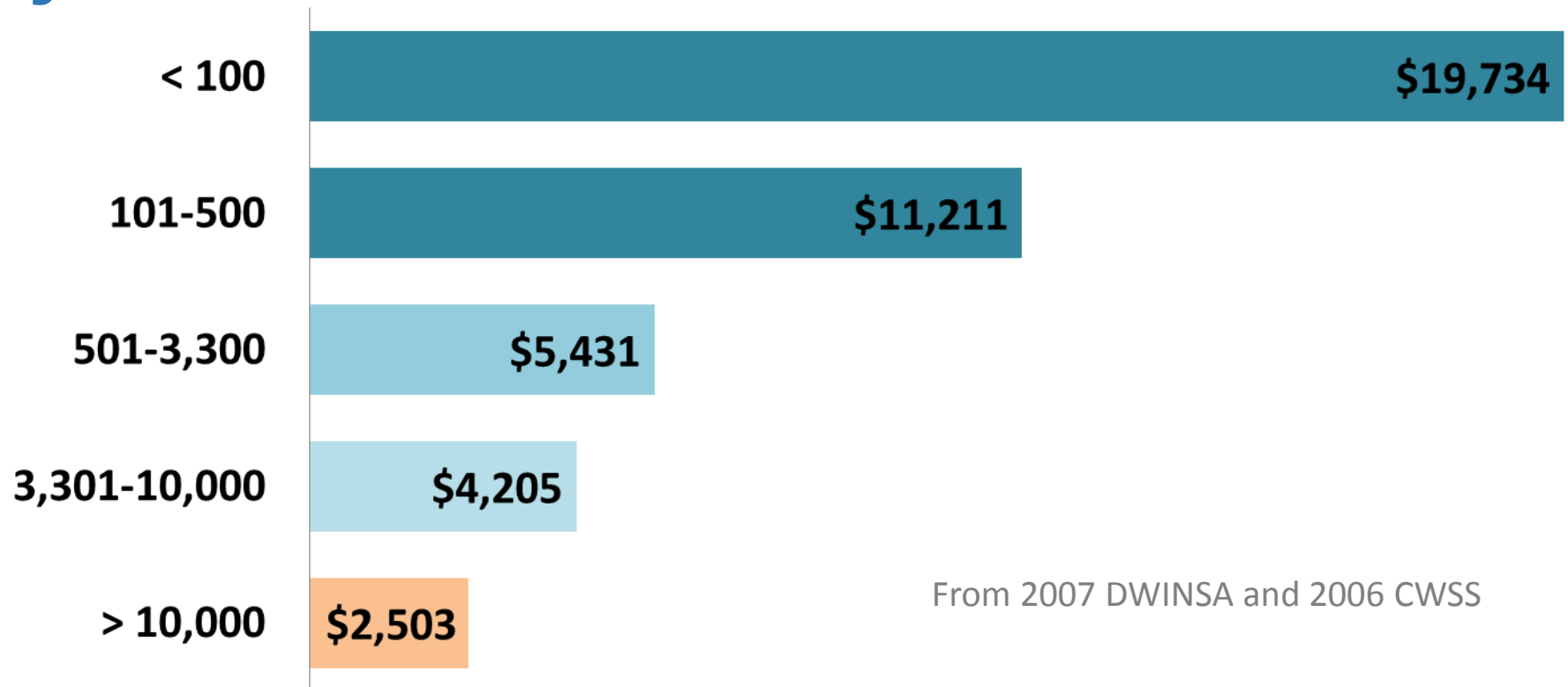


Why does system size matter?

**What's the issue with
small systems?**



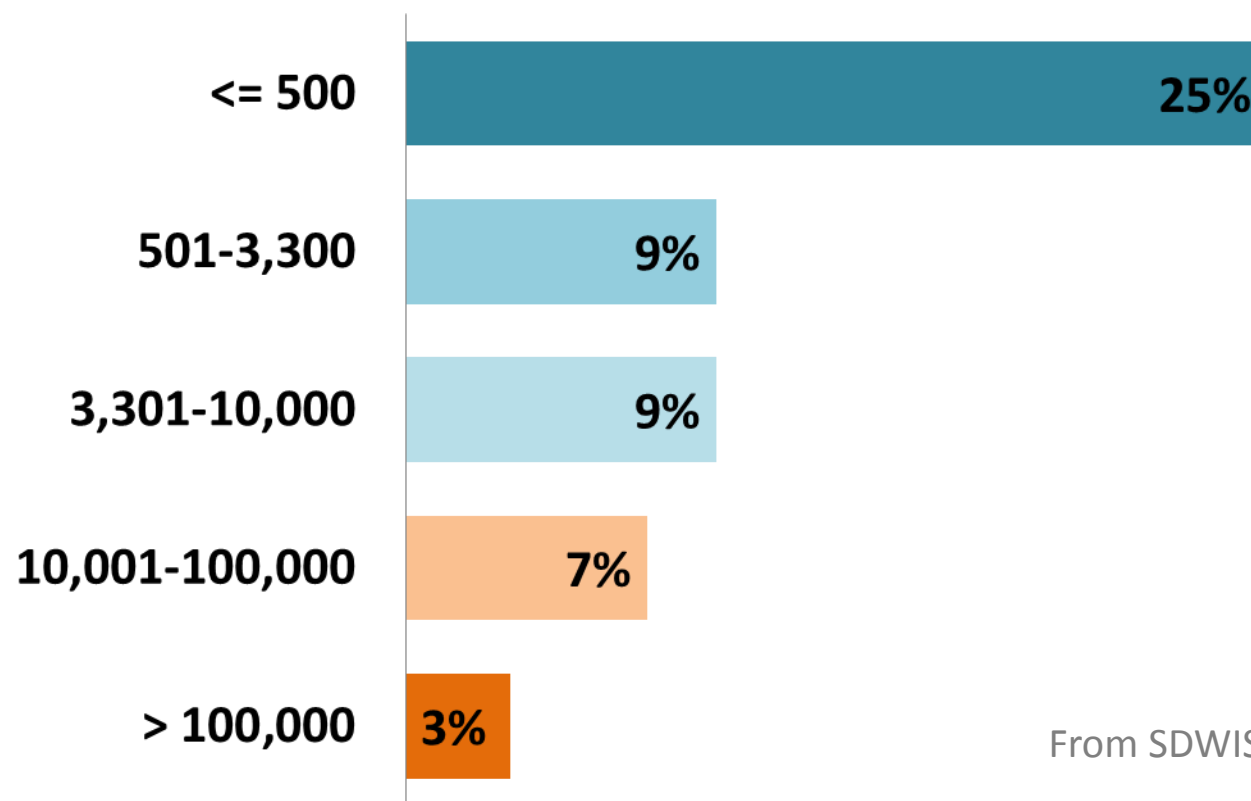
The Infrastructure Needs Per Residential Connection are Much Greater for Small Systems



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 ...

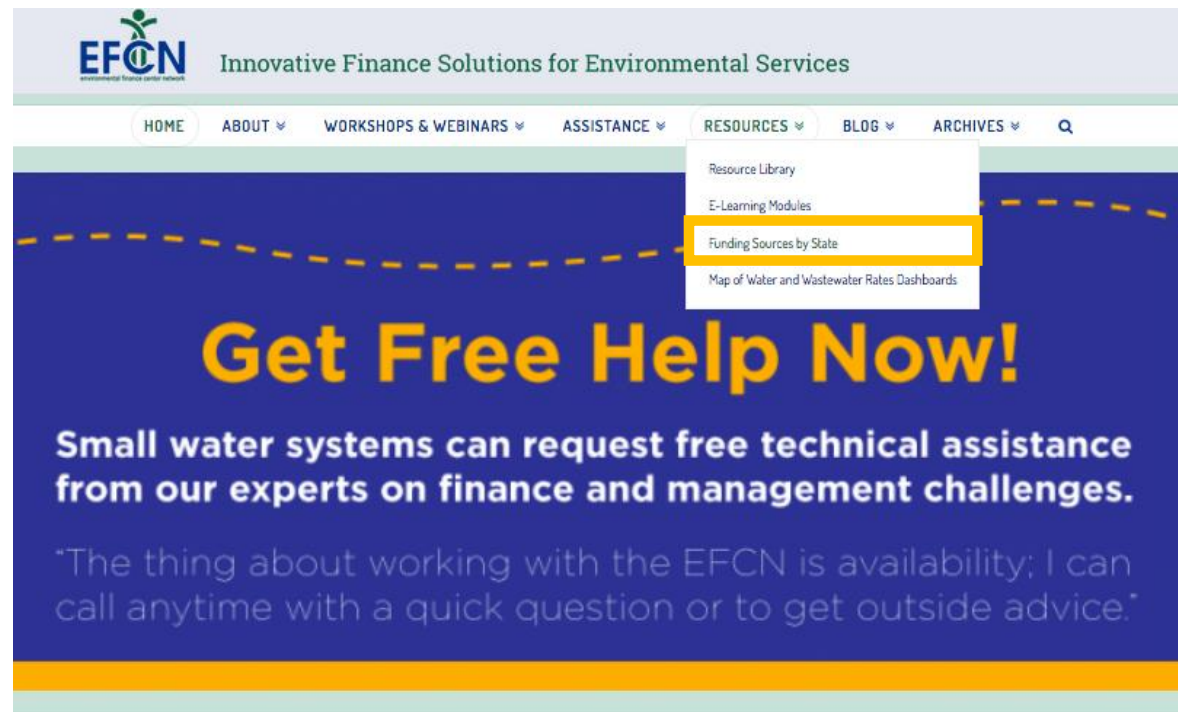
Presentation
from Funders



Where to find these funders after today's workshop?

Funding Tables By State

Select “Funding Sources by State” under the Resources Tab.

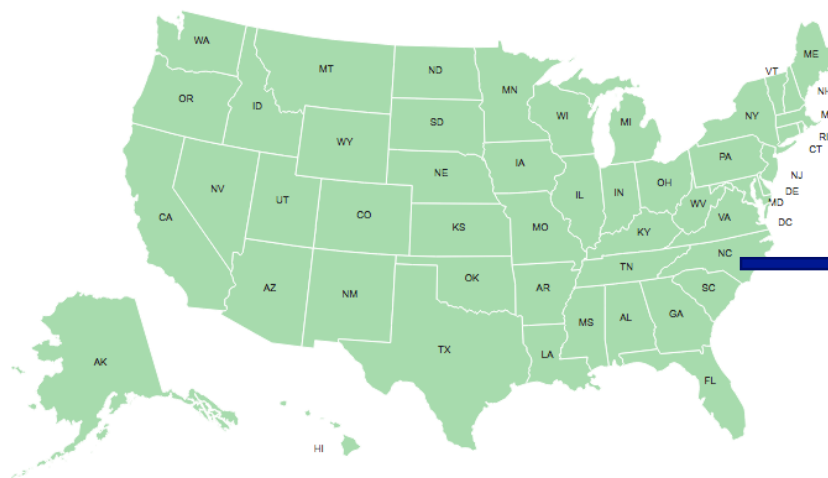




Funding Sources by State

Note: Some states may have additional resources listed below the map.

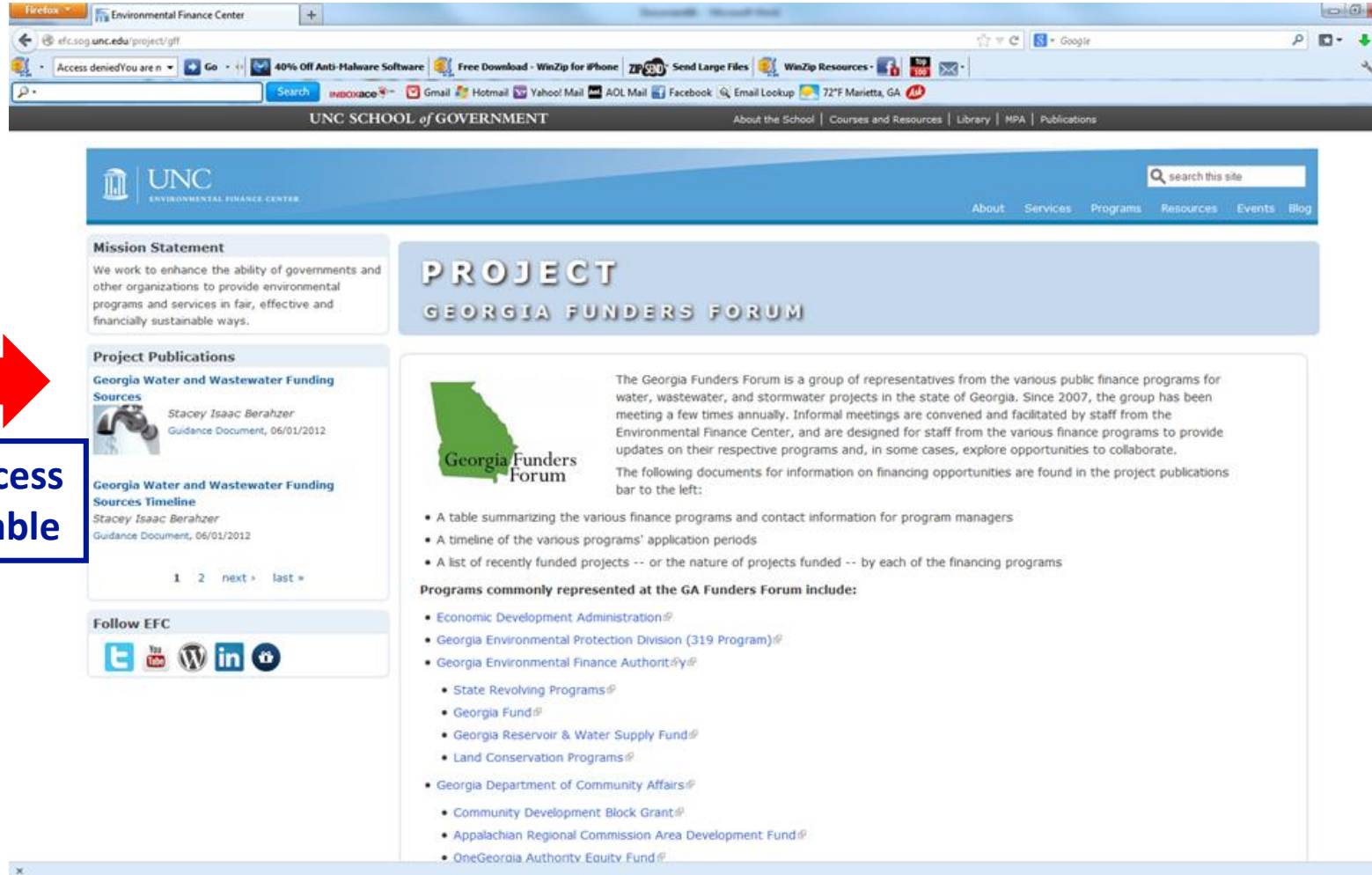
Click on the map below to view funding sources for each state:



Click on an individual state to view funding table.

Drinking Water and Wastewater Funding Sources Updated 10/20/2016					
Organization	Program/Project	Eligible uses of funds	Application date	Website	Contact
North Carolina	Drinking Water Infrastructure Grant	For the construction, reconstruction, or replacement of drinking water infrastructure, including but not limited to: treatment plants, distribution systems, storage tanks, and wells.	Open year-round	www.ncdhsr.org/programs/DrinkingWaterInfrastructureGrant	Drinking Water Infrastructure Grant
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<http://efc.sog.unc.edu/project/gff>



The screenshot shows a web browser displaying the Environmental Finance Center (EFC) website. The URL in the address bar is efc.sog.unc.edu/project/gff. The page features a blue header with the UNC logo and navigation links. The main content area is divided into two columns. The left column contains a 'Mission Statement', 'Project Publications' section with a link to 'Georgia Water and Wastewater Funding Sources', and social media links. The right column features a large section for the 'PROJECT GEORGIA FUNDERS FORUM' with a map of Georgia and a detailed description of the forum. A red arrow points to the 'Project Publications' link in the left column.

Click here to access the following table

Project Publications

Georgia Water and Wastewater Funding Sources

Stacey Isaac Berahzer
Guidance Document, 06/01/2012

Georgia Water and Wastewater Funding Sources Timeline

Stacey Isaac Berahzer
Guidance Document, 06/01/2012

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PROJECT GEORGIA FUNDERS FORUM

The Georgia Funders Forum is a group of representatives from the various public finance programs for water, wastewater, and stormwater projects in the state of Georgia. Since 2007, the group has been meeting a few times annually. Informal meetings are convened and facilitated by staff from the Environmental Finance Center, and are designed for staff from the various finance programs to provide updates on their respective programs and, in some cases, explore opportunities to collaborate. The following documents for information on financing opportunities are found in the project publications bar to the left:

- A table summarizing the various finance programs and contact information for program managers
- A timeline of the various programs' application periods
- A list of recently funded projects -- or the nature of projects funded -- by each of the financing programs

Programs commonly represented at the GA Funders Forum include:

- Economic Development Administration
- Georgia Environmental Protection Division (319 Program)
- Georgia Environmental Finance Authority
 - State Revolving Programs
 - Georgia Fund
 - Georgia Reservoir & Water Supply Fund
 - Land Conservation Programs
- Georgia Department of Community Affairs
 - Community Development Block Grant
 - Appalachian Regional Commission Area Development Fund
 - OneGeorgia Authority Equity Fund

Georgia Water and Wastewater Funding Sources

Compiled by UNC EFC, June 2010

Organization	Program (keywords)	Purpose or Use of Funds	Application Dates	Website	Contact
Georgia Department of Community Affairs	Community Development Block Grant Program (CDBG Annual Competition) (HUD Funds) <i>(water, sewer)</i>	To improve housing and economic & community development for low and moderate income communities.	Typically closes at the beginning of April of each year.	http://www.dca.state.ga.us/communities/CDBG/programs/CDBGregular.asp	Steed Robinson steed.robinson@dca.ga.gov (404) 679-3168 60 Executive Park South, NE Atlanta, GA 30329-2231
	Appalachian Regional Commission Area Development Fund <i>(water, sewer)</i>	To support the development and improvement of infrastructure, including water and sewer services, and the development and use of Internet access.	Closes at the beginning of April each year.	http://www.dca.state.ga.gov/economicdevelopment/programs/area-development-fund	James Thompson, ARC Office Director james.thompson@dca.ga.gov 404-679-1584 60 Executive Park South, N. E. Atlanta, GA 30329-2231
OneGeorgia Authority <i>(water, sewer)</i>	OneGeorgia Authority Equity Fund <i>(water, sewer)</i>	The program provides grants and loans to enhance infrastructure that creates jobs in rural areas.	Applications received year round.	http://www.onegeorgia.org/programs/equity	Nancy Cobb, Executive Director ncobb@onegeorgia.org 478-274-7734 1202-B Hillcrest Parkway Dublin, GA 31021
USDA Rural Development	Water and Wastewater Loans and Grants <i>(water, sewer)</i>	Funds are for eligible community water supply, sewer, storm sewer, and solid waste projects.	Applications received year round.	http://www.rurdev.usda.gov/ga/waste.htm	Jerry M. Thomas, Program Director jerry.thomas@ga.usda.gov 706-546-2171 355 East Hancock Avenue Athens, GA 30601-2768
	Emergency Community Water Assistance Grants <i>(water, sewer)</i>	Emergency Community Water Assistance Grants may be available to eligible rural communities in event of natural disaster or other events that cause significant damage to a water or sewer system.	Contact Georgia state office. Applications received year round.	http://www.rurdev.usda.gov/ga/	Jerry M. Thomas, Program Director jerry.thomas@ga.usda.gov 706-546-2171 355 East Hancock Avenue Athens, GA 30601-2768
	Very Low-Income Housing Repair Loans and Grants (Section 504) <i>(individual wells, rural)</i>	Rural Housing Programs-- 504 REPAIR LOANS AND GRANTS -- Single Family Housing makes loans and grants to provide rural residents with safe and affordable homes. Eligibility is based on adjusted household income, with loans available to low and very low income applicants.	Contact a local USDA Rural Development Office.	http://www.rurdev.usda.gov/GA/rh504.htm	Ed Peace ed.peace@ga.usda.gov 706-546-2169 Stephens Federal Building 355 East Hancock Avenue Athens, GA 30601-2768

Source: <http://efc.sog.unc.edu/project/gff>