



Smart Management for
Small Water Systems

Financial Resiliency for Small Water Systems

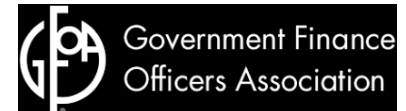
Spanish Fort, AL
December 6, 2018



UNC
ENVIRONMENTAL
FINANCE CENTER



NADO
NATIONAL ASSOCIATION OF DEVELOPMENT ORGANIZATIONS
RESEARCH FOUNDATION



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Housekeeping



CEU Certificates

If you need a CEU certificate, you will need to confirm the following on the roster today before you leave:

- Is your name spelled correctly?
- Did you provide an email address UNIQUE TO YOU? A unique email address is required to receive your certificate.
- Did you mark the checkbox that you need a certificate?

Within 30 days of the training, you will receive an email with instructions to print your certificate. Emails from EFCN may be blocked or go to your Junk mail. To avoid this issue, add Smallsystem@syr.edu to your email Contacts or check your Junk mail frequently.

EFCN will apply to the water operator state licensing agency for CEU preapproval when applicable. You may be awarded CEUs by your agency. It is your responsibility to confirm with the agency that training meets relevancy criteria established for your license type as some agencies may not apply CEUs to your license if the training topic is not relevant to your position.

EFCN follows the IACET Standard of CEU calculation.

0.1 CEU = 1 Contact Hour or 1 Professional Development Hour

Questions? Please contact Smallsystem@syr.edu

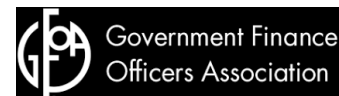


Environmental Finance Center Network (EFCN)

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.

Small Systems Program Team

- Environmental Finance Center at The University of North Carolina at Chapel Hill
- Southwest Environmental Finance Center at the University of New Mexico
- Syracuse University Environmental Finance Center
- Environmental Finance Center at Wichita State University
- EFC West
- Environmental Finance Center at the University of Maryland
- New England Environmental Finance Center at the University of Southern Maine
- Great Lakes Environmental Infrastructure Center
- Government Finance Officers Association (GFOA)
- National Association of Development Organizations (NADO)

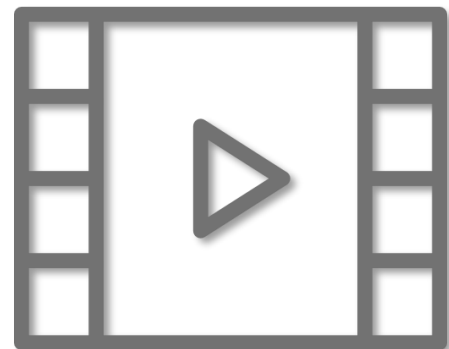
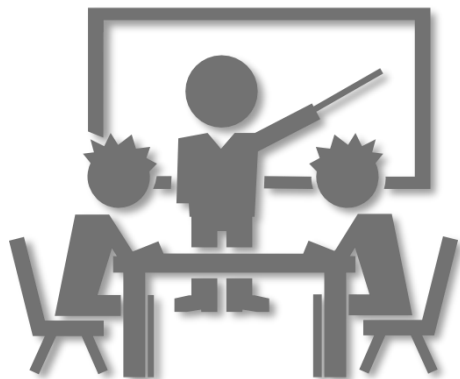




Smart Management for
Small Water Systems

Smart Management for Small Water Systems Program

FREE



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

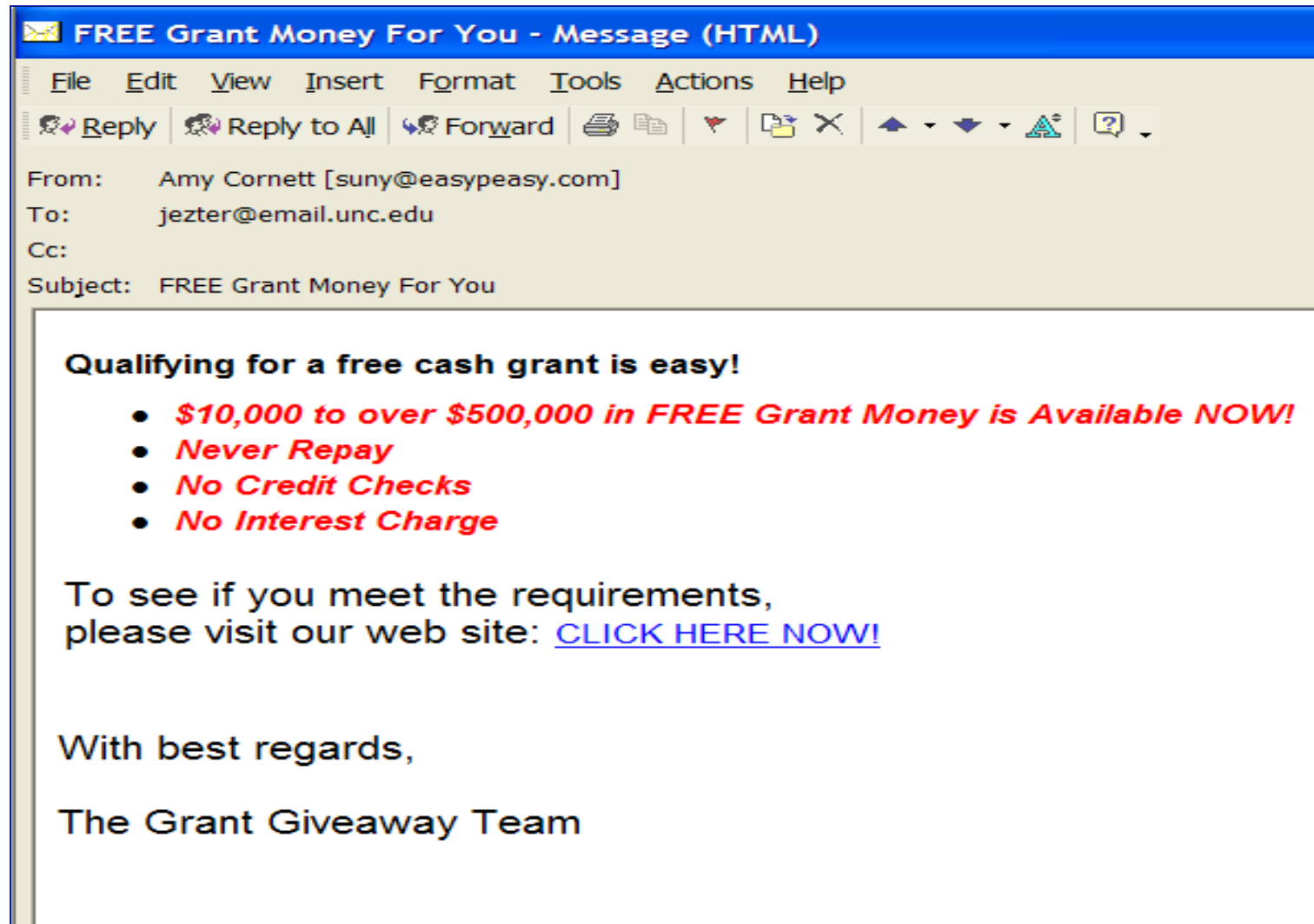
- Understand how your system is doing financially
- Learn how to plan for and finance your water system now and into the future
- Provide forum for sharing finance and management perspectives, ideas, and experiences



Agenda

- Infrastructure Funding Programs
- Water Finance 101
- Assessing Financial Condition
- Long Term System Planning
- Revenues and Rate Design

Topics Not Covered



Infrastructure Funding Programs



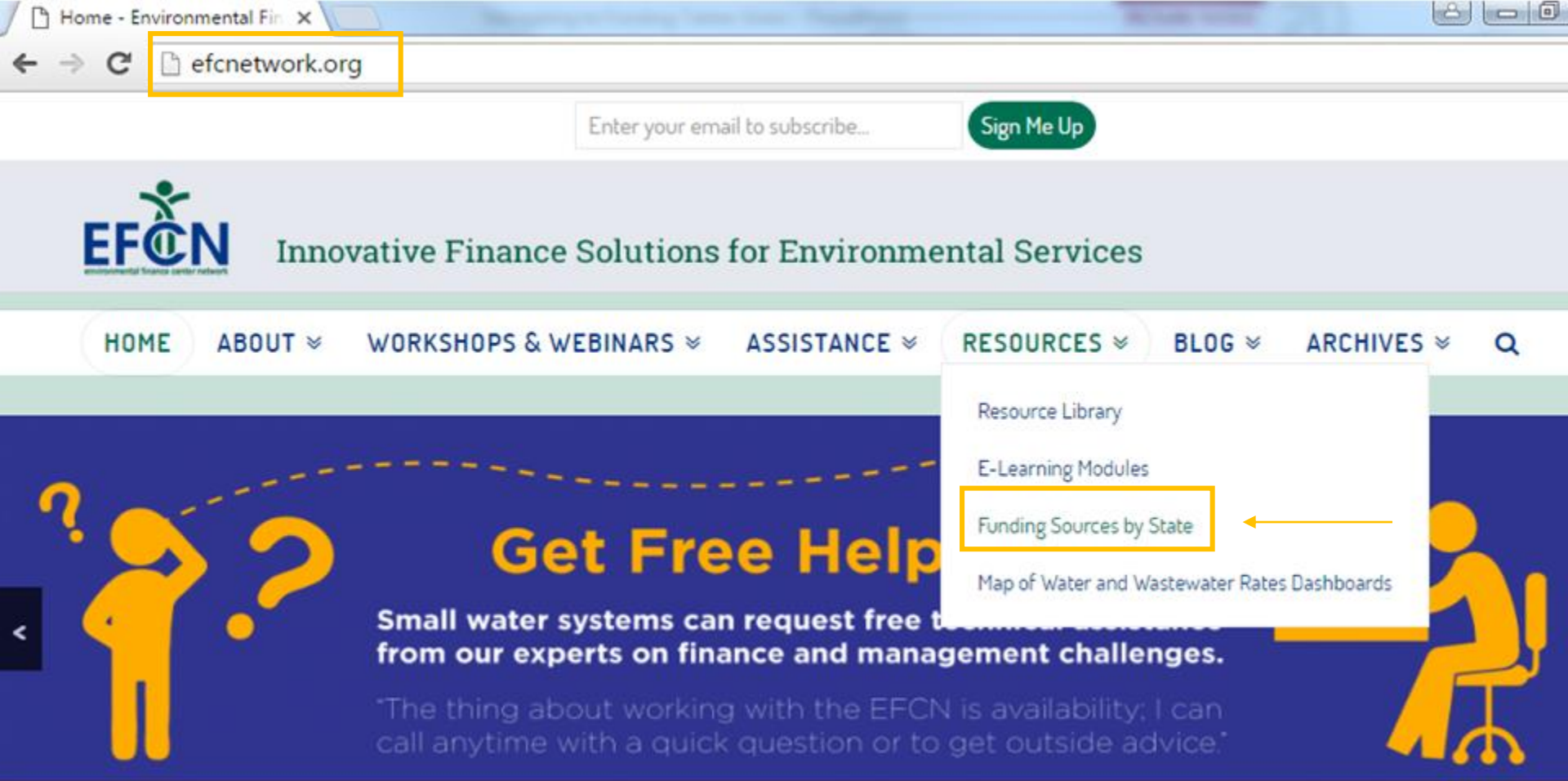
40 Years



COBANK™

Building Better Neighborhood





Navigating to Funding Tables

Step 1: efcnetwork.org

Step 2: Select "Funding Sources by State or Territory" under the Resources Tab

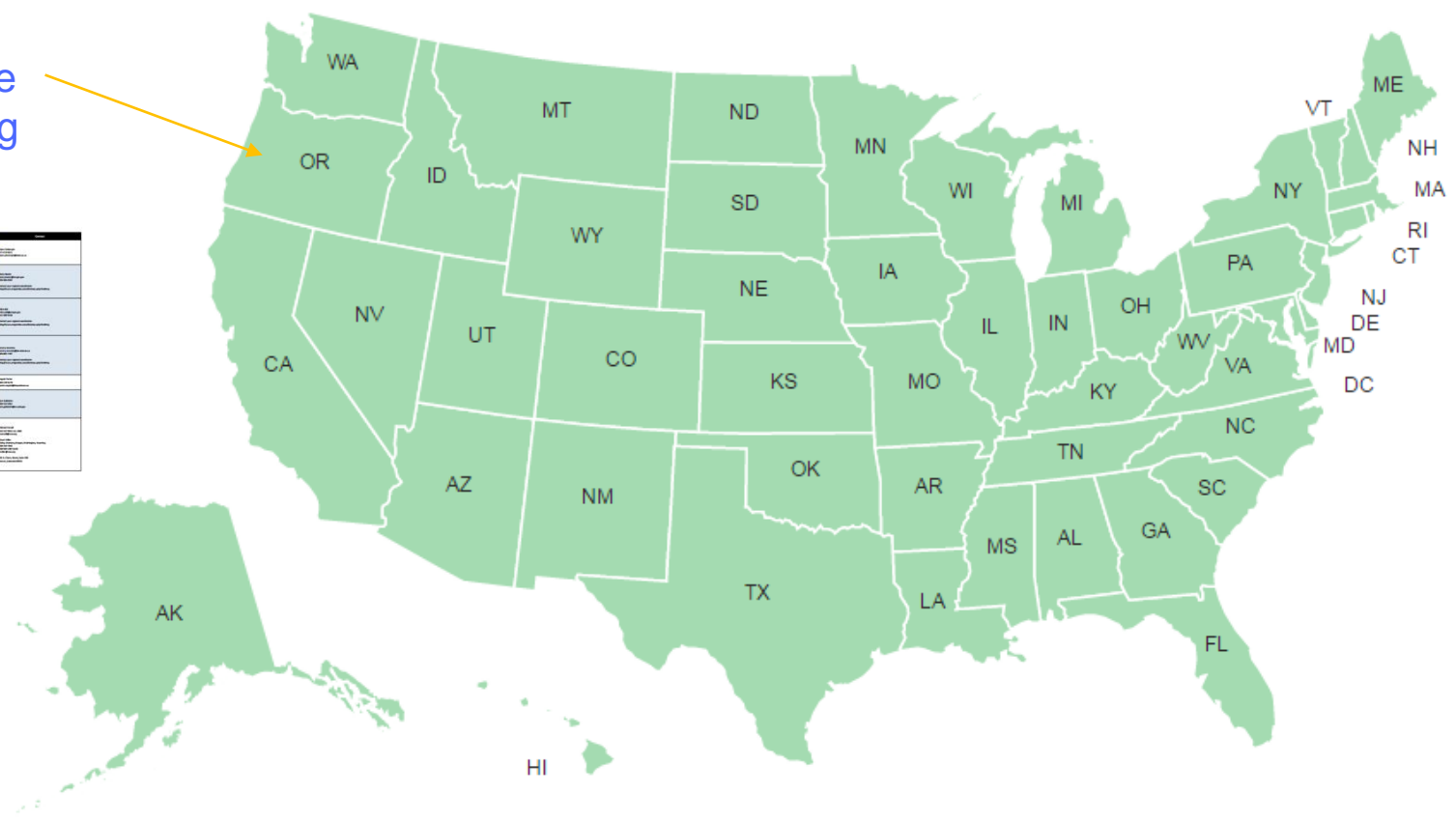
Funding Sources by State

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.

| State | Funding Source | Link |
|-------|--|----------------------|
| AK | Alaska Department of Education | Link |
| AK | Alaska Department of Health | Link |
| AK | Alaska Department of Social Services | Link |
| AK | Alaska Department of Transportation | Link |
| AK | Alaska Department of Wildlife | Link |
| AK | Alaska Department of Labor | Link |
| AK | Alaska Department of Corrections | Link |
| AK | Alaska Department of Community Development | Link |
| AK | Alaska Department of Natural Resources | Link |
| AK | Alaska Department of Public Safety | Link |
| AK | Alaska Department of Veterans Affairs | Link |
| AK | Alaska Department of Education and Early Childhood Development | Link |
| AK | Alaska Department of Health and Social Services | Link |
| AK | Alaska Department of Transportation and Public Facilities | Link |
| AK | Alaska Department of Wildlife and Trophics | Link |
| AK | Alaska Department of Labor and Workforce Development | Link |
| AK | Alaska Department of Corrections and Probation | Link |
| AK | Alaska Department of Community Development and Planning | Link |
| AK | Alaska Department of Natural Resources and Conservation | Link |
| AK | Alaska Department of Public Safety and Security | Link |
| AK | Alaska Department of Veterans Affairs and Military Affairs | Link |
| AK | Alaska Department of Education and Early Childhood Development | Link |
| AK | Alaska Department of Health and Social Services | Link |
| AK | Alaska Department of Transportation and Public Facilities | Link |
| AK | Alaska Department of Wildlife and Trophics | Link |
| AK | Alaska Department of Labor and Workforce Development | Link |
| AK | Alaska Department of Corrections and Probation | Link |
| AK | Alaska Department of Community Development and Planning | Link |
| AK | Alaska Department of Natural Resources and Conservation | Link |
| AK | Alaska Department of Public Safety and Security | Link |
| AK | Alaska Department of Veterans Affairs and Military Affairs | Link |



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Map Search



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

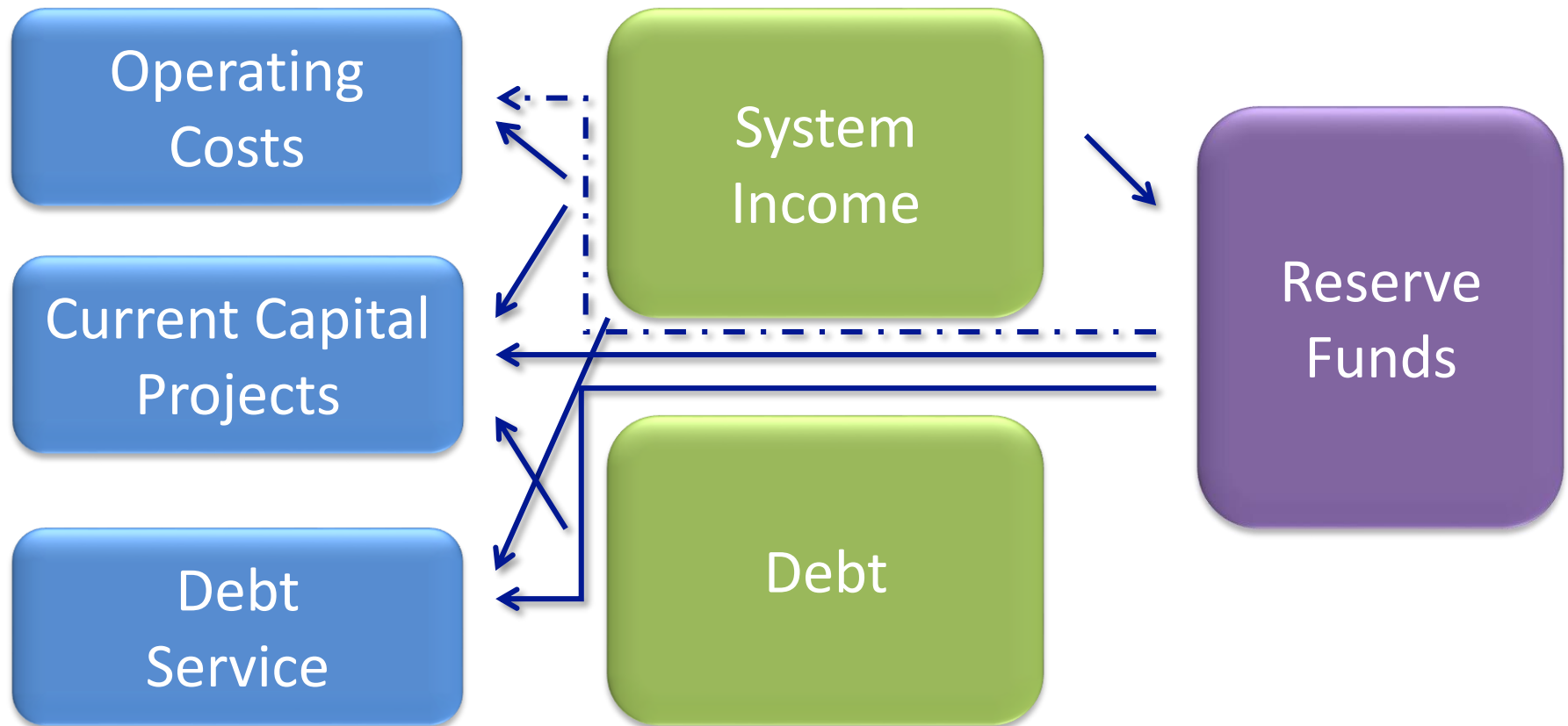
- Learn how to think about your water system as a financial entity
- Understand some basic financial facts about water systems across the country



Let's Start With the Basics

- What does your water system do?

Water 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



Let's Make a List of Costs!

Now circle all of the costs that don't change based on the amount of water that you treat and sell

What percentage are circled?

A blue-tinted photograph of industrial machinery, possibly a water treatment plant, featuring large pipes and mechanical components.

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?

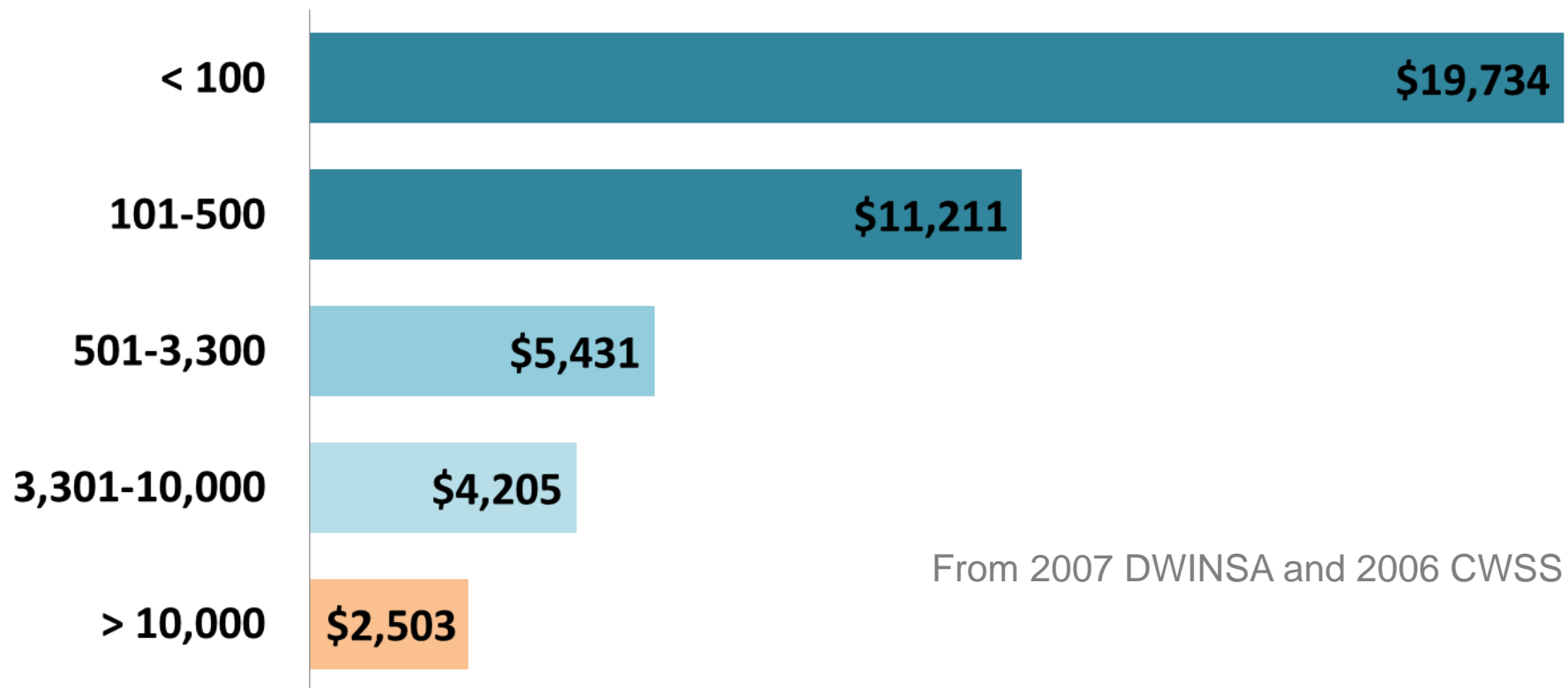


Why does system size matter?

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