



Smart Management for
Small Water Systems

Water System Management and Finance for Decision-Makers

Bowling Green, KY
November 12, 2019



UNC
ENVIRONMENTAL
FINANCE CENTER



NADO
NATIONAL ASSOCIATION OF DEVELOPMENT ORGANIZATIONS
RESEARCH FOUNDATION



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Housekeeping



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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.
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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.

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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>



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 Small Systems Program Team

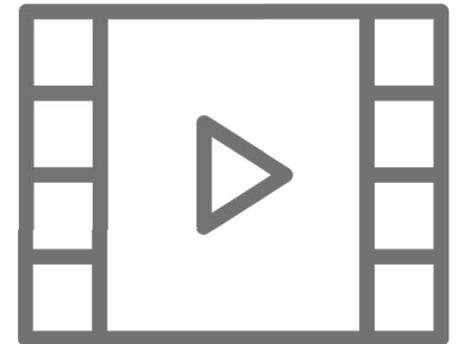
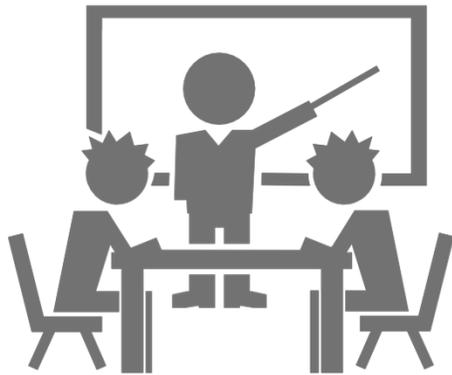
- Environmental Finance Center at The University of North Carolina at Chapel Hill
- Southwest Environmental Finance Center at the University of New Mexico
- Syracuse University Environmental Finance Center
- Environmental Finance Center at Wichita State University
- EFC West
- Environmental Finance Center 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 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. What is your system's biggest issue?
5. What motivates you to serve?
6. And most importantly, why are you here?



Workshop Objectives

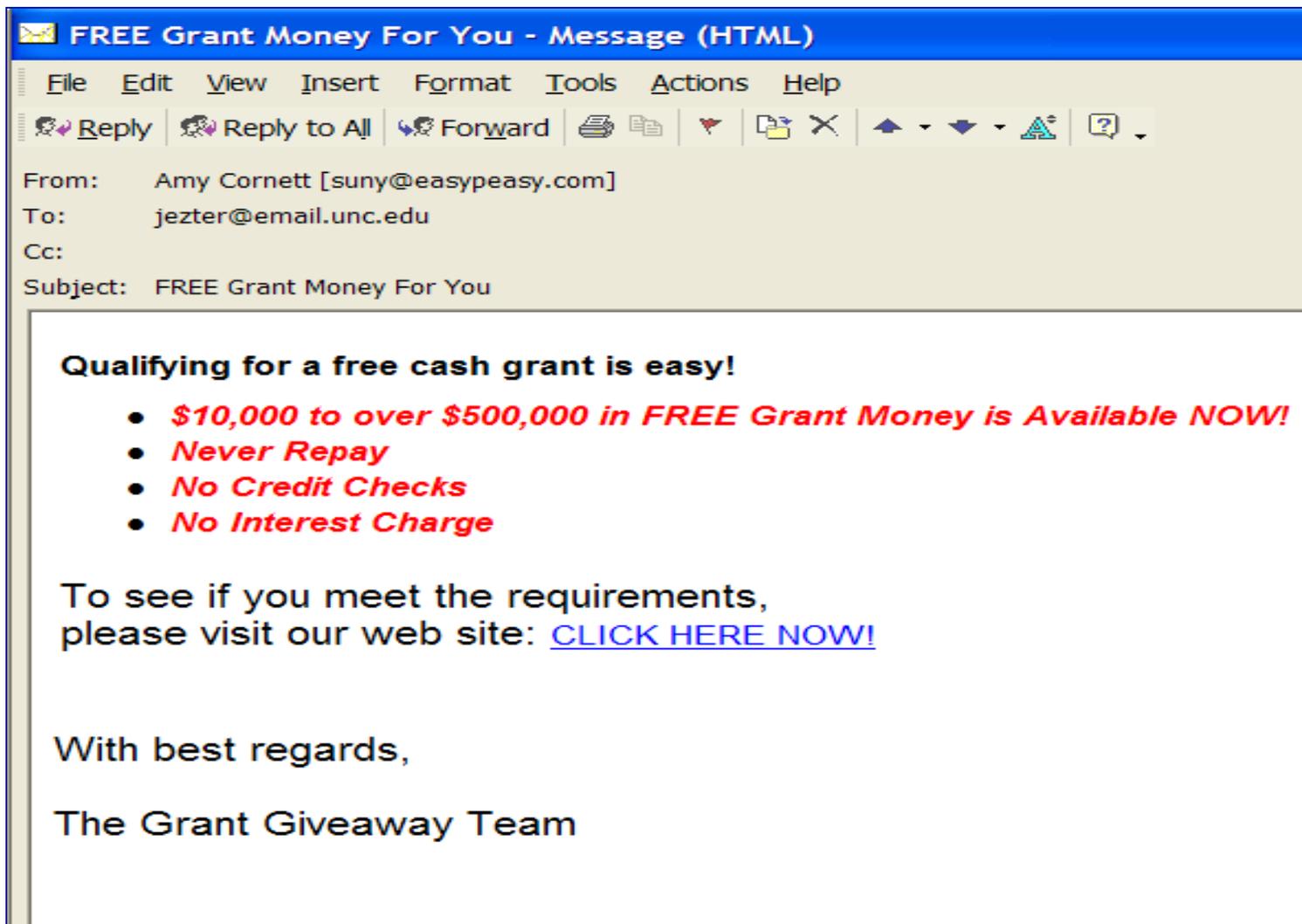
- Understand your responsibilities
- Learn management best practices
- Learn about available resources and avenues to address challenges
- Provide forum for sharing finance and management perspectives, ideas, and experiences



Agenda

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

Topics Not Covered



FREE Grant Money For You - Message (HTML)

File Edit View Insert Format Tools Actions Help

Reply Reply to All Forward

From: Amy Cornett [suny@easypeasy.com]
To: jezter@email.unc.edu
Cc:
Subject: FREE Grant Money For You

Qualifying for a free cash grant is easy!

- ***\$10,000 to over \$500,000 in FREE Grant Money is Available NOW!***
- ***Never Repay***
- ***No Credit Checks***
- ***No Interest Charge***

To see if you meet the requirements,
please visit our web site: [CLICK HERE NOW!](#)

With best regards,

The Grant Giveaway Team



What Is A Water System?

Austin Thompson

Environmental Finance Center

The University of North Carolina at Chapel Hill

919-962-5795

Thompson@sog.unc.edu



Session Objectives

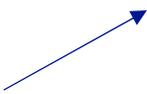
- What your water system does
- Your water system as a financial entity
- Regulatory framework



Let's Start With the Basics

- What is a water system?
 - EPA defines it as:
 - *A public water system provides water for human consumption through pipes or other constructed conveyances to **at least 15 service connections or serves an average of at least 25 people for at least 60 days a year.** A public water system may be publicly or privately owned.*
 - EPA has defined three types of public water systems:
 - **Community Water System (CWS):** A public water system that supplies water to the same population year-round.
 - **Non-Transient Non-Community Water System (NTNCWS):** A public water system that regularly supplies water to at least 25 of the same people at least six months per year.
 - **Transient Non-Community Water System (TNCWS):** A public water system that provides water in a place where people do not remain for long periods of time.

Examples?





Let's Start With the Basics

- What does your water system do?

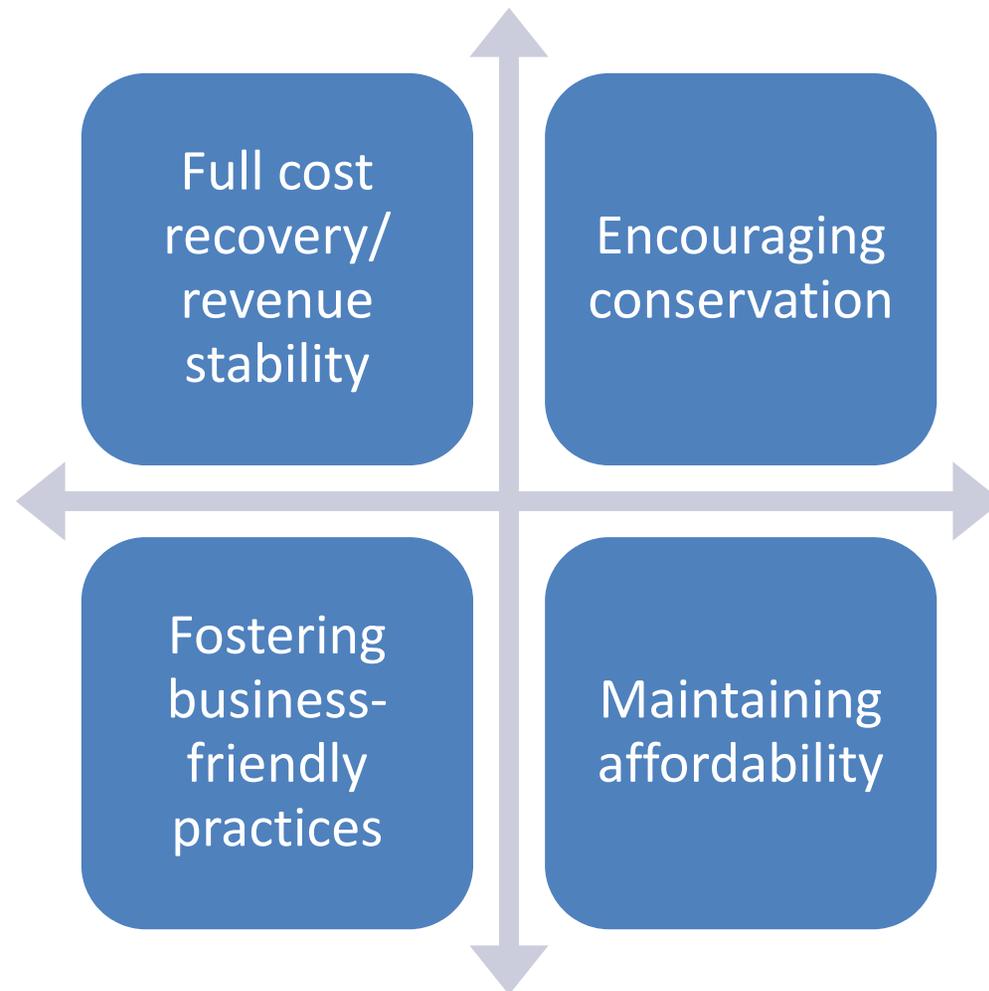


Water Systems Serve Multiple Purposes Sometimes Those Purposes Conflict

- 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.



Water System Objectives





But more generally...

We need water to live



Water systems mean...





Despite the dire need for water, our water systems have big financial challenges.

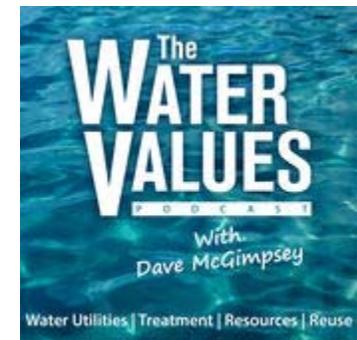
Let's hear from an expert



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>





To put it more bluntly...



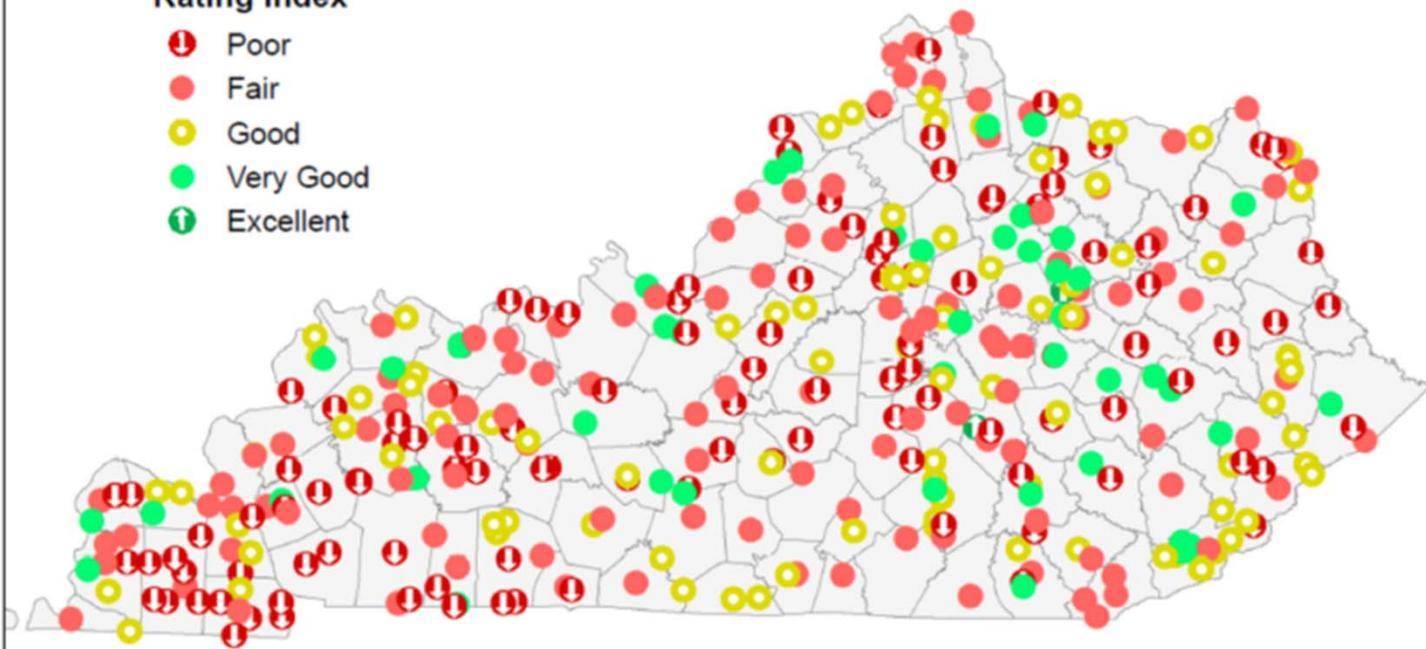


What are the local needs?

Drinking Water: Rating Index Infrastructure Age

Drinking Water
Infrastructure Age
Rating Index

- 🔴 Poor
- 🟠 Fair
- 🟡 Good
- 🟢 Very Good
- 🟩 Excellent



Source: Energy and Environment Cabinet



What are the local needs?

Kentucky Needs **\$15 Billion** in Additional Water Infrastructure

The Kentucky Energy and Environment Cabinet has sounded an alarm about the state of the state's water infrastructure.

August 10, 2018, 7am PDT | James Brasuell | [@CasualBrasuell](#)

<https://www.planetizen.com/news/2018/08/100029-kentucky-needs-15-billion-additional-water-infrastructure>

ENVIRONMENT May 13, 2019

Kentucky will receive more than **\$38 million** from the Environmental Protection Agency to improve the commonwealth's ailing water infrastructure.

<https://wfpl.org/epa-announces-38-million-for-kentucky-drinking-water-infrastructure/>

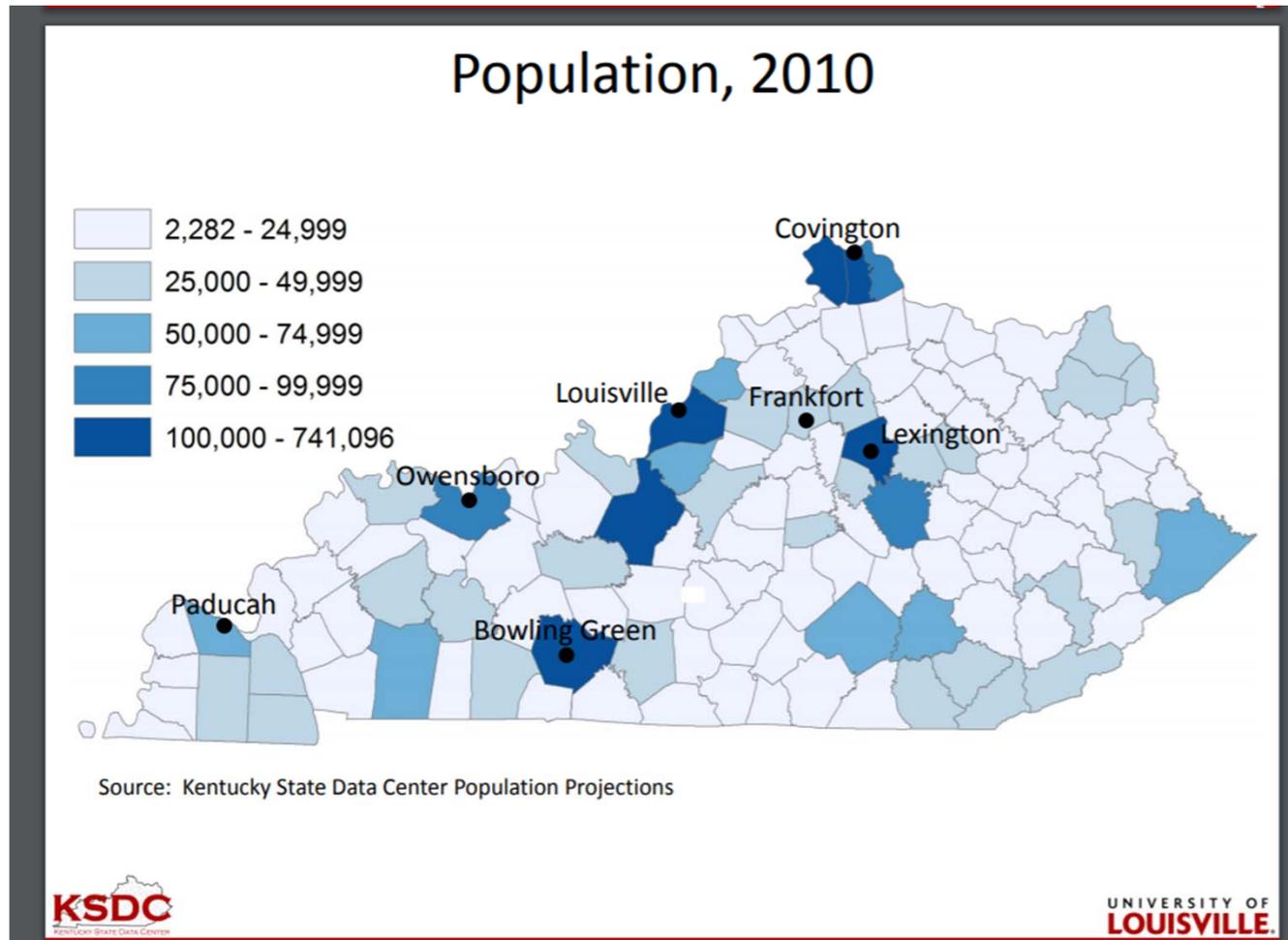


What are the local challenges?



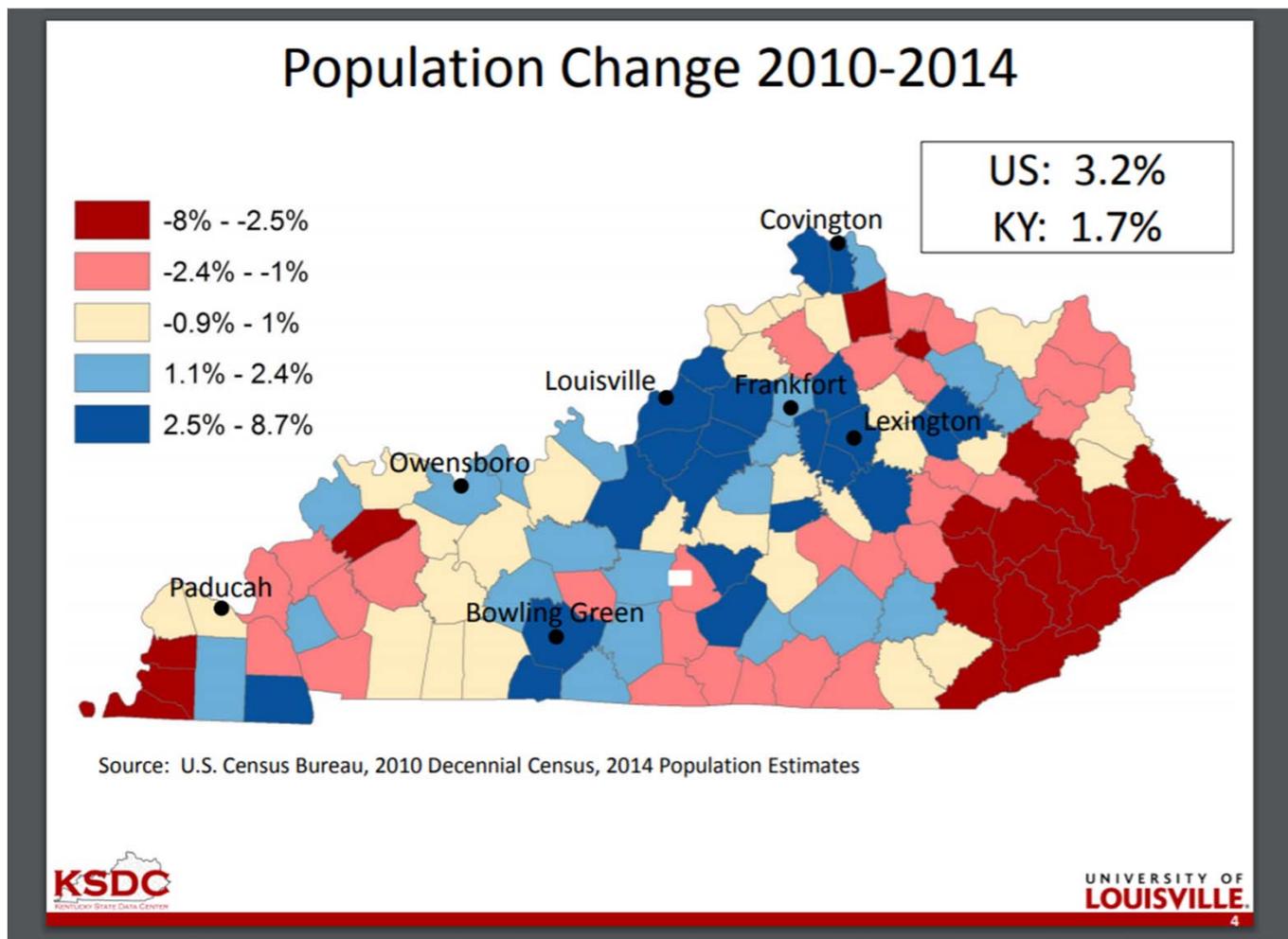


What are the local challenges?



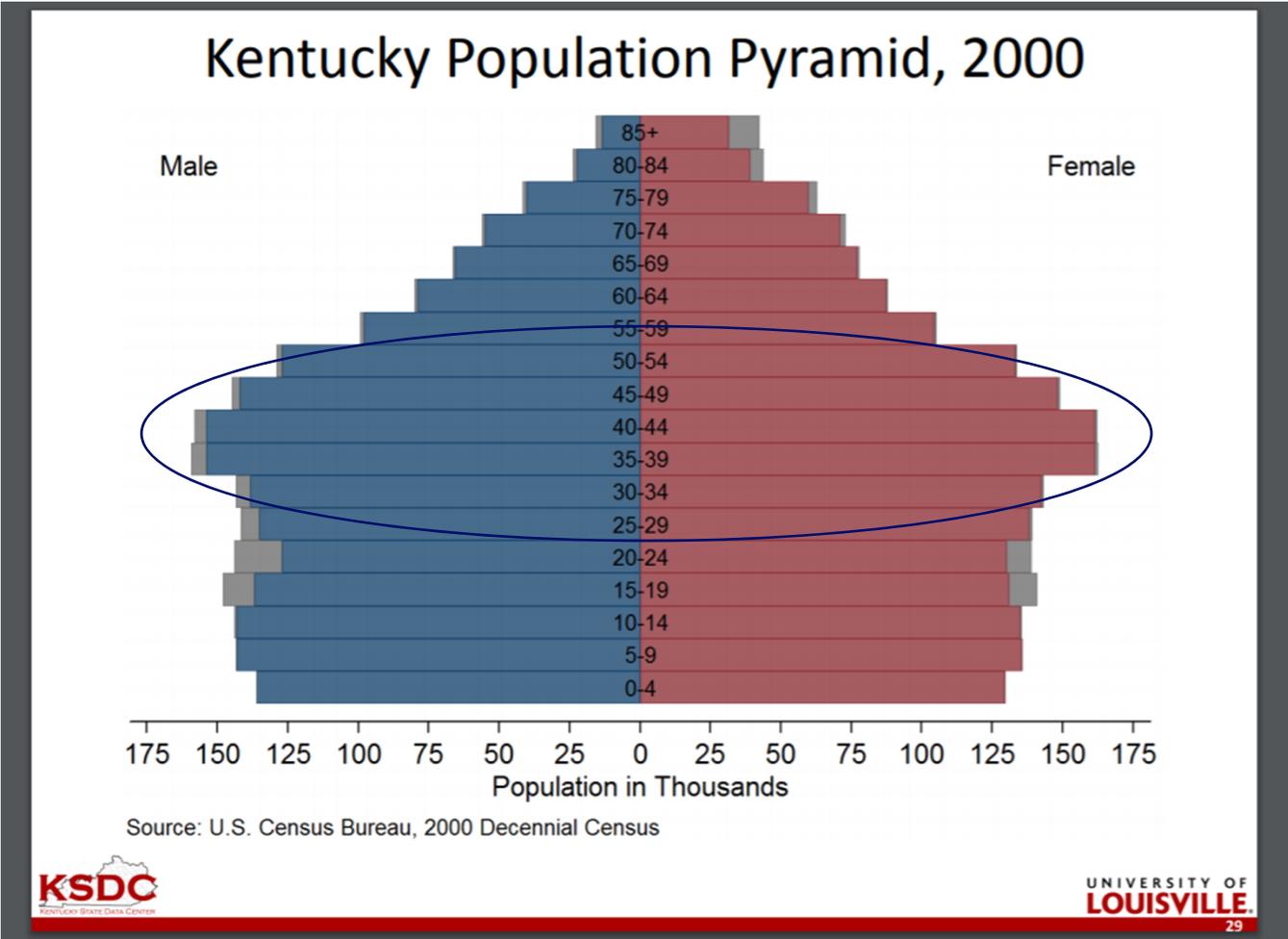


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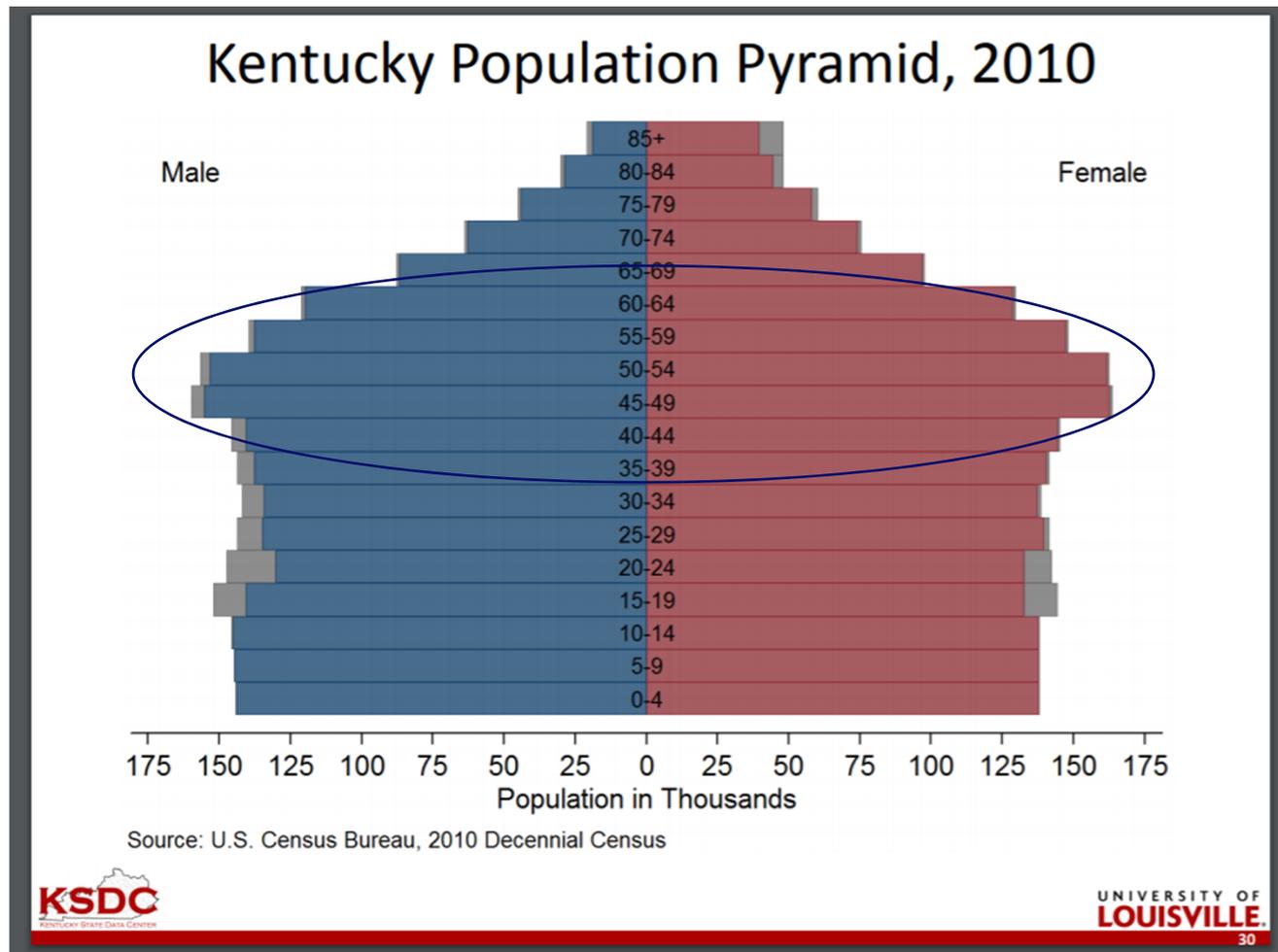


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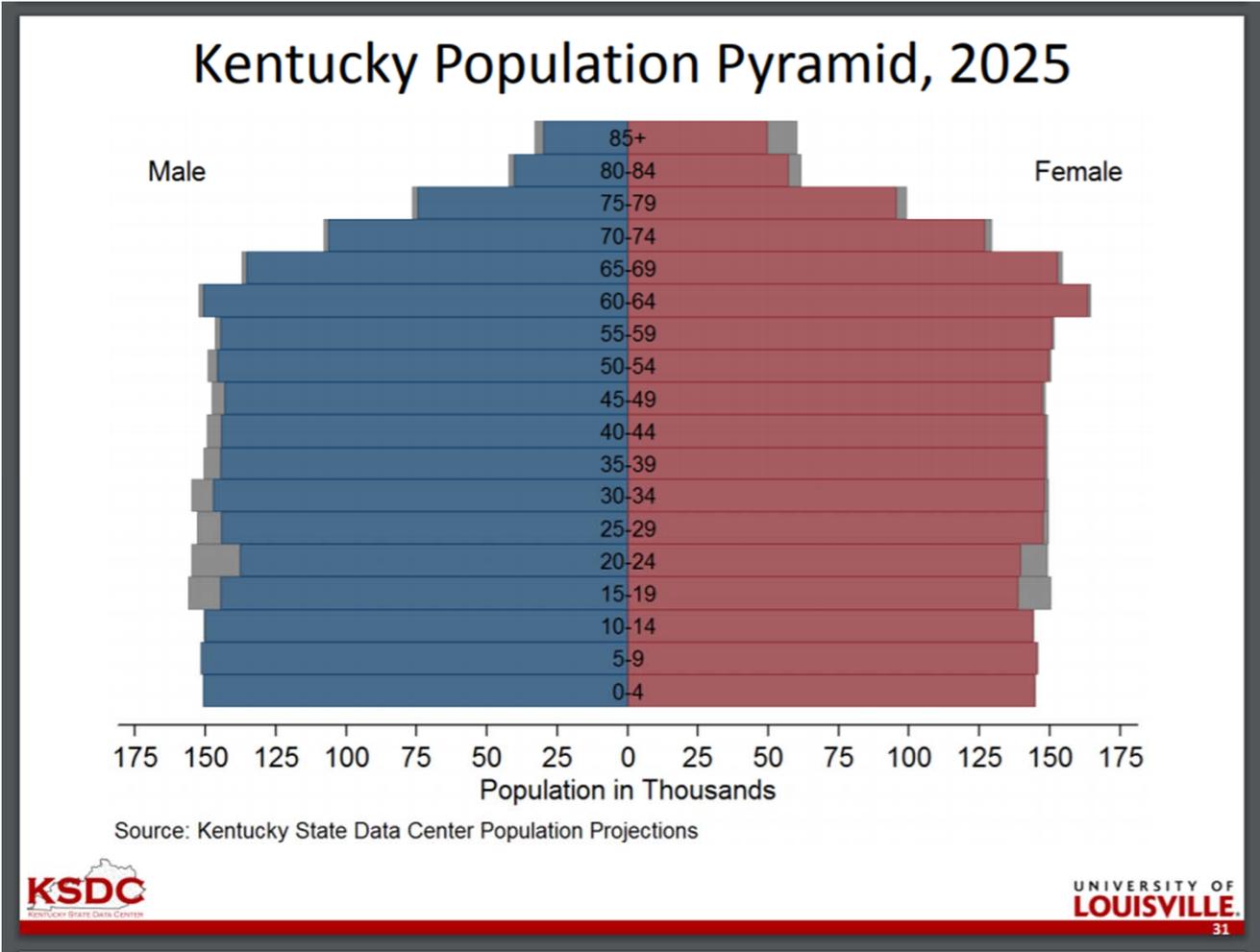


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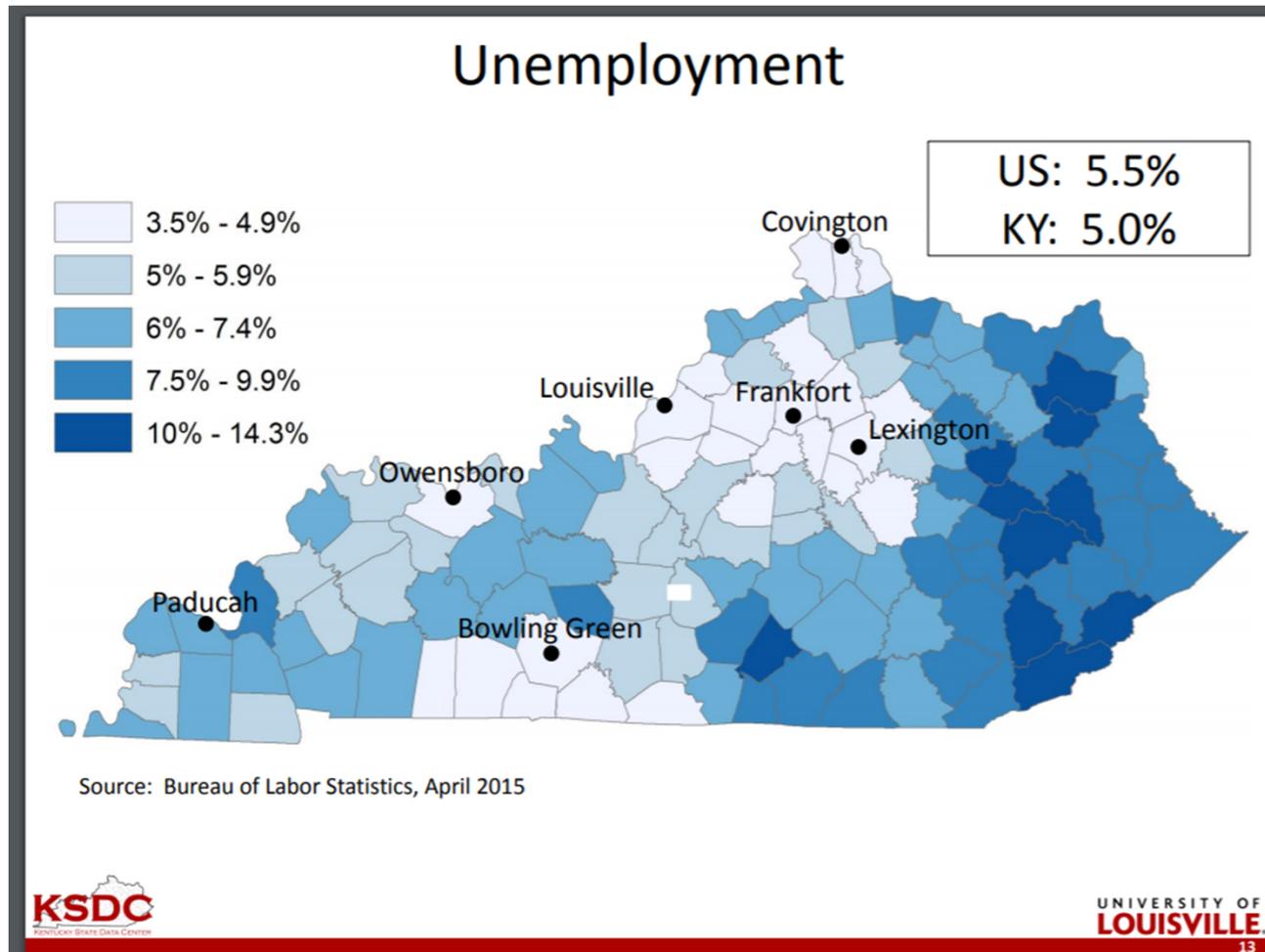


What are the local challenges?





What are the local challenges?





How can we address these challenges?

- Work to reduce costs
 - Partner
 - Innovate
- Look to other funding sources
 - ★ • Rates/Reserves
 - Loans/debt
 - Other grant programs

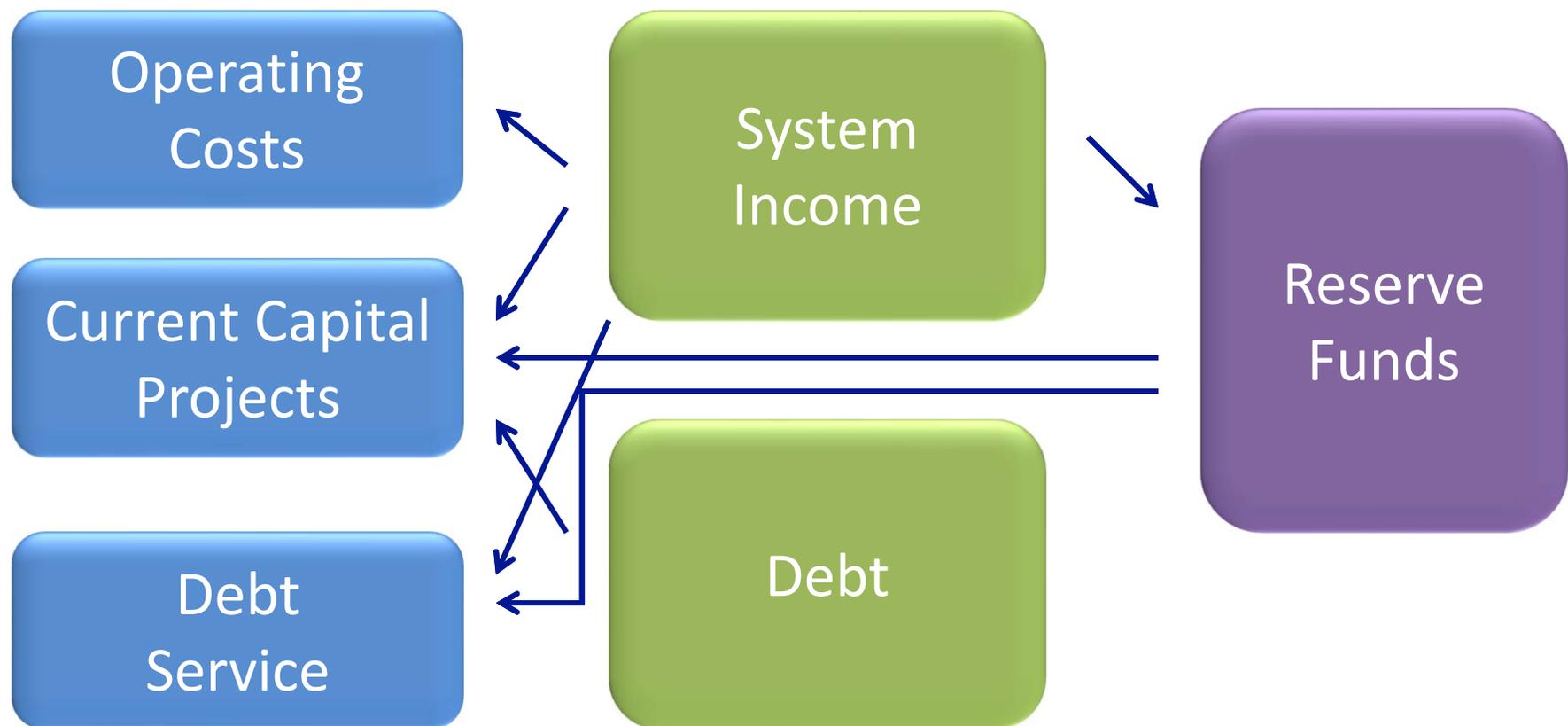


Water Systems as Financial Entities





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?



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

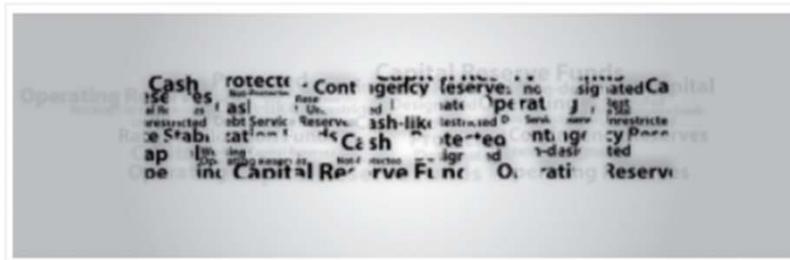
Right-sizing Reserve Funds

FEBRUARY 12, 2013 / JEFFREY HUGHES / 1 COMMENT



Jeff Hughes is the Director of the Environmental Finance Center.

“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.



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

Sea

SUBS

Sign U

TOPIC

Drinki

Energ

Finan

Gener

Smart

System

Waste

Water



Transfers between General Fund and Enterprise Fund

- OK if paying for services rendered
- Not OK if just moving money between the two funds when one falls short (i.e. subsidizing)



Quick Overview of the Regulatory Framework



EPA, and Your Primacy Agency



DRINKING WATER
DIVISION OF WATER



Regulatory Framework

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



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://eec.ky.gov/Environmental-Protection/Water/Drinking/DWProfessionals/Pages/Compliance.aspx>

**COMPLIANCE
REGULATIONS AND RULES**

[Home](#) / [Environmental Protection](#) / [Water](#) / [Drinking Water](#) / [Information for Water Treatment Profes](#)

Regulations

Public water supply regulations (unofficial) are located in [401 KAR](#) Chapter 8. The official versions are contained in the Kentucky Administrative Regulations Service and in the monthly Administrative Register of Kentucky. For information on how to subscribe to these publications, contact the

Administrative Register of Kentucky, 1500 5th Avenue, Louisville, KY 40202, 502-564-1511



<https://apps.legislature.ky.gov/law/kar/TITLE401.HTM>

Kentucky Administrative Regulations

TITLE 401

ENERGY AND ENVIRONMENT CABINET - DEPARTMENT FOR ENVIRONMENTAL PROTECTION

This page was produced on 11/7/2019 at 4:14:16 PM [EST]

Chapter 8 Public Water Supply



The KPSC



Kentucky Public Service Commission

<https://psc.ky.gov/Home/About#AbtComm>

- What is the PSC?
 - “The Commission, created by the Acts of the 1934 General Assembly, the current version of which forms Chapter 278 of the Kentucky Revised Statutes (KRS), performs its regulatory functions through issuance of written orders, following adjudicative and rulemaking procedures outlined in Chapter 278”



The KPSC



Kentucky Public Service Commission

<https://psc.ky.gov/Home/About#AbtComm>

- What is the PSC?
 - “The mission of the Kentucky Public Service Commission is to foster the provision of safe and reliable service at a reasonable price to the customers of jurisdictional utilities while providing for the financial stability of those utilities by setting fair and just rates, and supporting their operational competence by overseeing regulated activities.”



The KPSC



Kentucky Public Service Commission

<https://www.klc.org/UserFiles/files/PSCFrequentlyAskedQuestions.pdf>

- Who is regulated?
 - [KRS 278.010\(3\) d](#)
 - “Generally, water districts, water associations, and private corporations that provide water service...to the public for compensation are public utilities.”
 - “The KPSC regulates only the rates and service aspects of a municipal utility’s provision of wholesale utility service to a public utility. “



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, and in the case of the KPSC, related to fair rates
- You are in charge of the essential product to life—you have an amazing responsibility