Financial Impact of Regionalization

John Covington
Senior Financial Analyst
Water Infrastructure and Resiliency Finance Center
Regionalization

Asset Management

Controlling Expenses
The United States has approximately 50,000 community water systems (CWSs)

- 8.7 percent of the systems serve 84.8 percent of the population
- 91 percent of all CWSs serve 10,000 persons or less
- 81.3 percent of CWSs serve fewer than 3,300 people
- Half of all CWSs (54.5 percent) serve fewer than 500 people
- 24 percent of all CWSs serve 100 persons or less

There are approximately 14,500 permitted wastewater systems in the U.S.
Small Systems

26 percent of systems with a service population under 500 have violations, compared to 17 percent of systems with a service population over 100,000

Do not normally have the capital reserves or other resources of a large system to address problems

For a system of less than 100 residential connections, the cost per connection for outstanding capital needs can top $19,000

For systems of 3,300 to 10,000 residential connections the cost per connection is can be over $4,000
The median annual revenue of systems serving fewer than 500 people is about $25,000.

Many systems exist in communities that face challenges of low income, high unemployment and loss of population — all characteristics associated with non-sustainable systems.
Indiana

Possible Operating Expenses
• Personnel
• Purchased Water
• Utilities
• Repairs/Maintenance
• Supplies
• Admin/Insurance
• Miscellaneous
Small System Rates

Group A utilities with water sales of more than 75 MGD
Group B utilities with water sales of between 20 and 75 MGD
Group C utilities with water sales of up to 20 MGD.

Group C utilities pay the highest percentage of their income for water bills

Almost 15 percent of the Group C utilities already exceed, or are more than 75 percent of the way to, the EPA’s 2 percent affordability threshold

None of the Group A systems and only 1 percent of the Group B systems are this close to the threshold

Many communities have pockets of low-income populations

Utilities want rates to reflect the cost of providing service to the whole community

These programs help utilities be fiscally sustainable and able to take out loans/finance infrastructure projects
Alabama

Focused regionalization efforts on water systems with health based violations
Data shows major health-based drinking water violations across U.S. Water & Waste Digest
Kentucky


Pike County had 189 Public Water Systems in 1974 compared to 3 today.
Benefits of Regionalization in Kentucky

All systems have GPS Maps

All systems have a capital improvement plan

Fewer very small systems

Local, regional and statewide planning
Houston Texas Municipal Utility Districts (MUDs)

- City of Houston
- 4 Regional Water Authorities
- 945 MUDs
Funding Sources

EPA Clean Water and Drinking Water State Revolving Funds
USDA Rural Development
HUD Community Development Block Grant
Economic Development
State Funded Programs
Municipal Bonds
Local Funds
You Need Capacity to Borrow

Technical
Managerial
Financial
**Technical capacity improvements** can include increasing access to higher quality/quantity source water; sharing, upgrading, or building new infrastructure; developing more efficient treatment technologies; and opening access to a certified operator and additional expertise.

**Managerial capacity improvements** can include increasing expertise in water system planning/operations and enhancing systems’ financial, accounting, and asset management practices.

**Financial capacity improvements** can include reducing costs, achieving greater economies of scale through shared services, and increasing a system’s access to funds through new partnerships. In addition, systems that consider consolidation or restructuring may receive preferential treatment in loan or grant programs (e.g., higher priority for DWSRF loans).
Asset Management

Where are my assets

What are my most critical assets

What is the current state of my assets

When will I have to repair or replace my assets

How will I pay for maintaining my assets
Reduce Expenses & Economies of Scale
Water Loss Control

System-wide water loss accounting

Leak detection and repair

Pricing that encourages consumer water conservation

https://www.epa.gov/sustainable-water-infrastructure/water-efficiency-water-suppliers
For many municipal governments, drinking water and wastewater plants typically are the largest energy consumers, often accounting for 30 to 40 percent of total energy consumed. Overall, drinking water and wastewater systems account for approximately 2 percent of energy use in the United States.

As much as 40 percent of operating costs for drinking water systems can be for energy.

By incorporating energy efficiency practices into their water and wastewater plants, municipalities and utilities can save 15 to 30 percent, saving thousands of dollars with payback periods of only a few months to a few years.
Marketing

Selling Your System
Half of all CWSs (54.5 percent) serve fewer than 500 people

Again, the median annual revenue of systems serving fewer than 500 people is about $25,000
Asset Management
Affordable Rates
Customer Assistance Programs
Reduce Expenses
Marketing Selling Your System
Identify and evaluate the various financing options and other incentives developed to underwrite regionalization or consolidation.

Investigate the value of shared governance or alternative governance strategies as effective tools to address infrastructure replacement, deferred maintenance and technology solutions.

Examine different governance models (public or private) and how they can be used to improve system management including centralized management of dispersed systems and decentralized systems.

Through examples, highlight potential benefits and/or disadvantages of shared governance or alternative governance strategies to drinking water and wastewater utilities of increased operational efficiencies in reducing cost, maintaining rates and increasing funds available for capital projects.
EPA Environmental Finance Advisory Board

Alternative Regional / Consolidated Models
  Public Authority
  Municipal (Wholesale & Retail) Services & Cooperation
  Public Utility Participation and Partnerships
  Rural cooperatives
  Intra-system cooperation / joint action
  Regional Asset (Conduit) Financing
  International

Conclusions and Recommendations
Increasing Transfer of Responsibility

Water system partnerships encompass a range of opportunities for systems to work together in order to sustainably provide drinking water services.

Creation of a new entity by several systems that continue to exist as independent entities.

**Joint Power Agency**
- Shared system management
- Shared operators
- Shared source water

**Ownership Transfer**
- Takeover by existing or newly created entity.
  - Examples
    - Acquisition and physical interconnection
    - Acquisition and satellite management
    - Transfer of privately-owned system to new or existing public entity

**Informal Cooperation**
- Work with other systems, but without contractual obligations.
  - Examples
    - Sharing equipment
    - Sharing bulk supply purchases
    - Mutual aid arrangements

**Contractual Assistance**
- Requires a contract, but contract is under system’s control.
  - Examples
    - O&M
    - Engineering
    - Purchasing water
Partnership Benefits

For the system:
- Economies of scale
- Long-term savings
- Improved customer service
- Planning for future operations
- Increase technical, financial, and/or managerial capacity

For the state program:
- Improved compliance
- Potential reduction in number of regulated systems
- Resource savings
- Improved customer relations

For the customer:
- Improved water quality
- Reduced long-term cost/lower water bills
- Increased reliability of supply
Challenges to Partnership Development

Starting the process can be intimidating
Funding and regulatory challenges
Timeframe for establishing partnerships
Unknown process/unique challenges for each system
EPA Water System Partnership Resources

Webinars

Case Studies

https://www.epa.gov/sustainable-water-infrastructure/water-system-partnerships
State Programs and Policies Supporting Cooperative Approaches for Drinking Water Systems

https://www.epa.gov/dwcapacity/state-programs-and-policies-supporting-cooperative-approaches-drinking-water-systems