



# Capacity Development 101

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# The Value of the Capacity Development Program

- **Protect public health** by building the capacity of drinking water systems to achieve safe, reliable drinking water and long-term sustainability
- **Helps drinking water systems** through capacity building resources:
  - Developing guidance and tools
  - Outreach, training and technical assistance
  - Operator Certification establishes professional standards for operators, promotes compliance, provides training & certification, and encourages continuous learning

# EPA WaterTA Supports Communities to:



Visit  
[www.epa.gov/waterta](http://www.epa.gov/waterta) for  
more information



Identify water challenges



Plan for solutions



Increase community engagement



Improve compliance and access to safe  
and clean water services

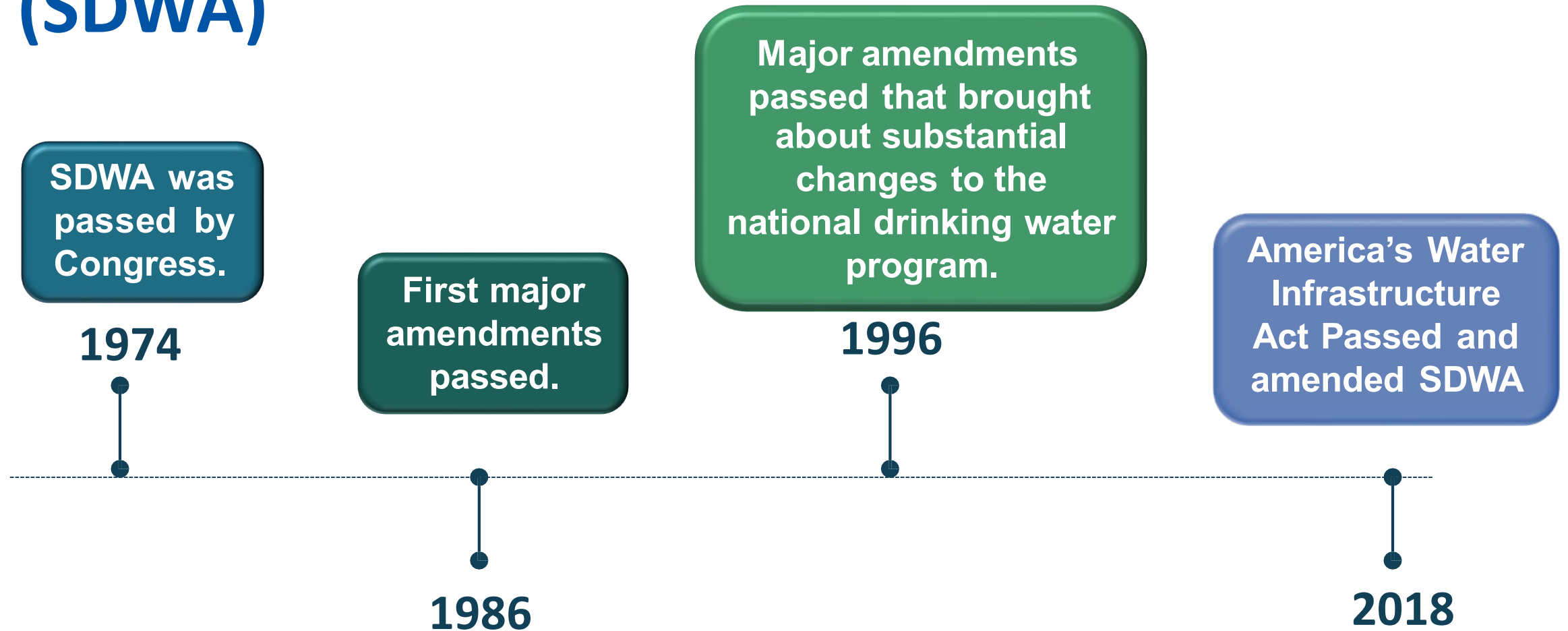


Build technical, financial, managerial capacity



Develop application materials to access  
water infrastructure funding

# History of the Safe Drinking Water Act (SDWA)



# EPA Celebrates Progress in Protecting America's Drinking Water



**40%**

Number of drinking water systems pre-1970 that failed to meet even the most basic standards

**92%**

Number of community water systems today that meet all health-based standards

## EPA has developed standards for more than 90 contaminants



including microorganisms, disinfectants, disinfection byproducts, inorganic and organic chemicals, and radionuclides



## Financing and funding support

**DWSRF: \$41 billion** for over **15,000** drinking water projects

**Public Water System Supervision Grants: \$2.3 billion**

**Technical Assistance Grants: \$162 million**

**WIIN grants: \$126 million**

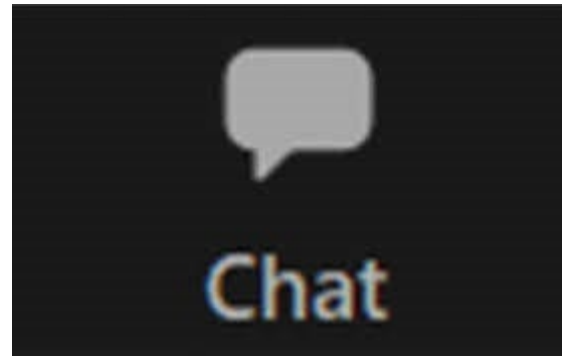


Progress for a Stronger Future

#EPAat50

# Let's give ourselves some kudos and share what are some things that your system is succeeding in?

Type in the chat box your success

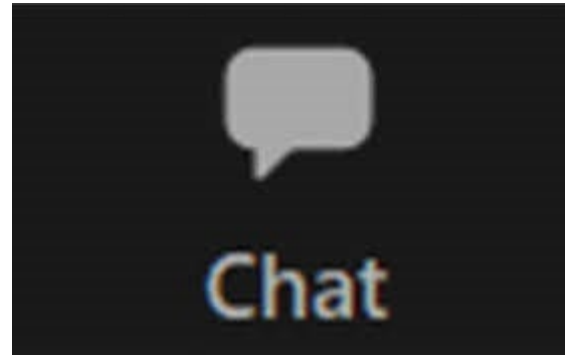


A construction site featuring large blue pipes and valves. Several workers wearing yellow hard hats and high-visibility vests are visible, working on the pipes. The background shows a dirt embankment with rebar structures. The scene is overlaid with a semi-transparent blue filter.

# Capacity Development


# What is Capacity to you?

Type in the chat box what you think capacity is






# Capacity By Definition

 ca·pac·i·ty  
/kəˈpæsədə/

*noun*

noun: **capacity**; plural noun: **capacities**

1. the maximum amount that something can contain.  
"the capacity of the freezer is 1.1 cubic feet"

Similar: [volume](#) [cubic measure](#) [size](#) [dimensions](#) [measurements](#) 

- fully occupying the available area or space.  
modifier noun: **capacity**  
"they played to a capacity crowd"
- the total cylinder volume that is swept by the pistons in an internal combustion engine.  
"the cubic capacity is 1171 cc"
- former term for capacitance.

2. the amount that something can produce.  
"the company aimed to double its electricity-generating capacity"
- the ability or power to do, experience, or understand something.  
"I was impressed by her **capacity** for hard work"

Similar: [ability](#) [power](#) [potential](#) [potentiality](#) [competence](#) [competency](#)

- a person's legal competence.  
"cases where a patient's testamentary capacity is in doubt"

3. a specified role or position.  
"I was engaged in a voluntary capacity"

Similar: [position](#) [post](#) [job](#) [office](#) [appointment](#) [role](#) [function](#)

# In Another Life: *Wildlife Conservation*

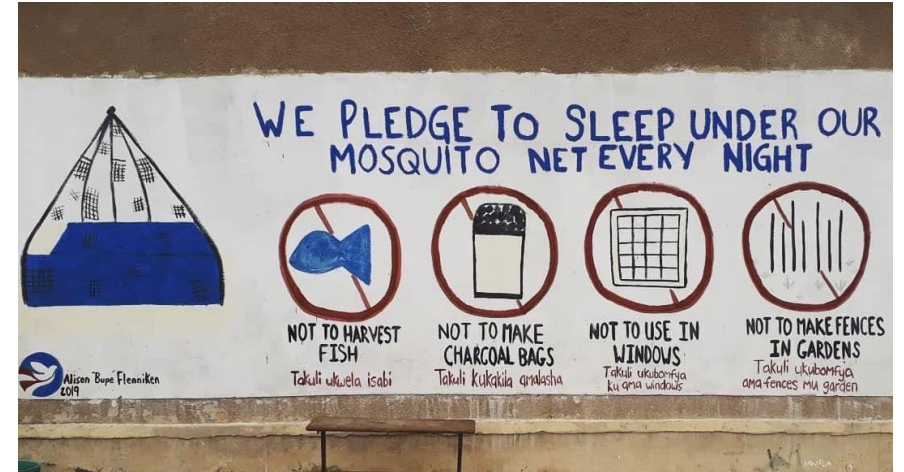


- Trash clean-ups, invasive species removal, habitat restoration improves native wildlife capability to survive and thrive
- Build capacity of communities understanding of conservation efforts and their benefits

# In Another Life: *Peace Corps Volunteer*



- Sustainable and alternative agriculture practices produces better yield and more income
- Utilizing community leaders for long-lasting change



# CAPACITY BUILDING



# What is Capacity to a Water System?

The ability to plan for, achieve, and maintain compliance with applicable drinking water standards

**Includes sufficient capabilities in 3 areas:**  
Technical (T), Managerial (M), Financial (F)



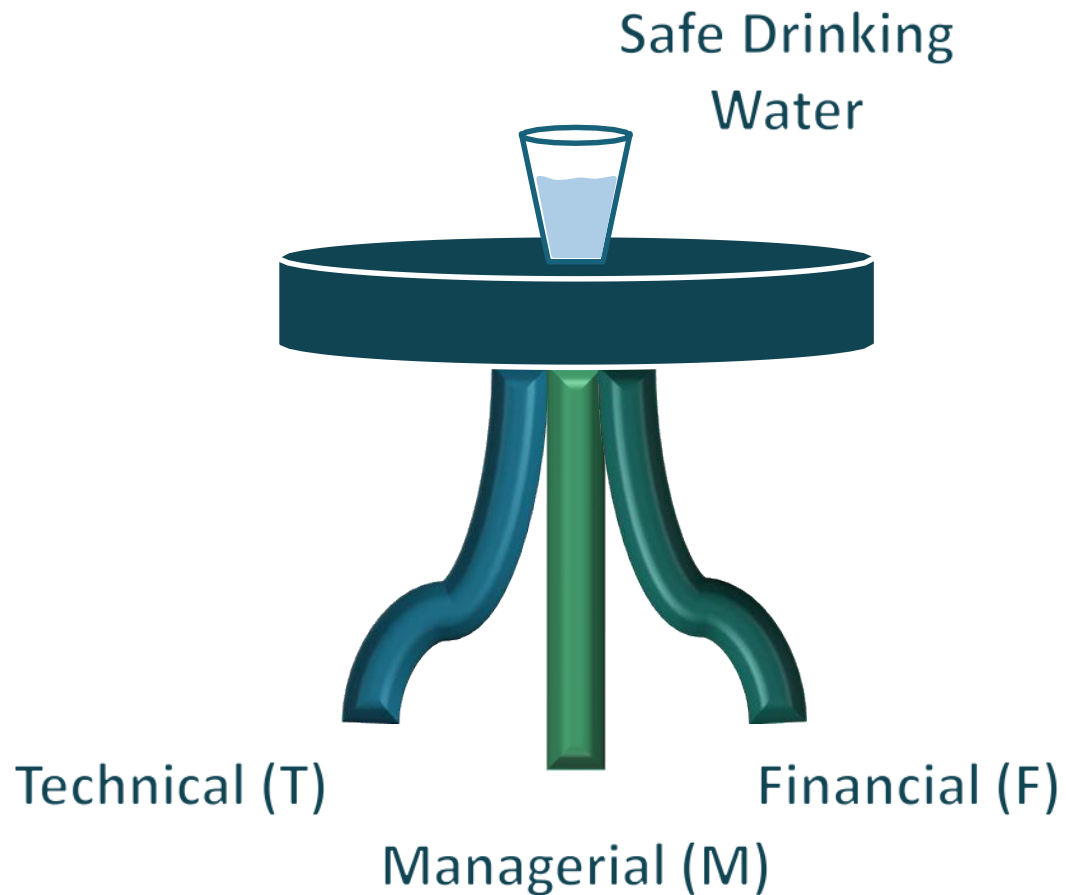
Safe Drinking  
Water



Technical (T)

Financial (F)

Managerial (M)



## **Technical Capacity:**

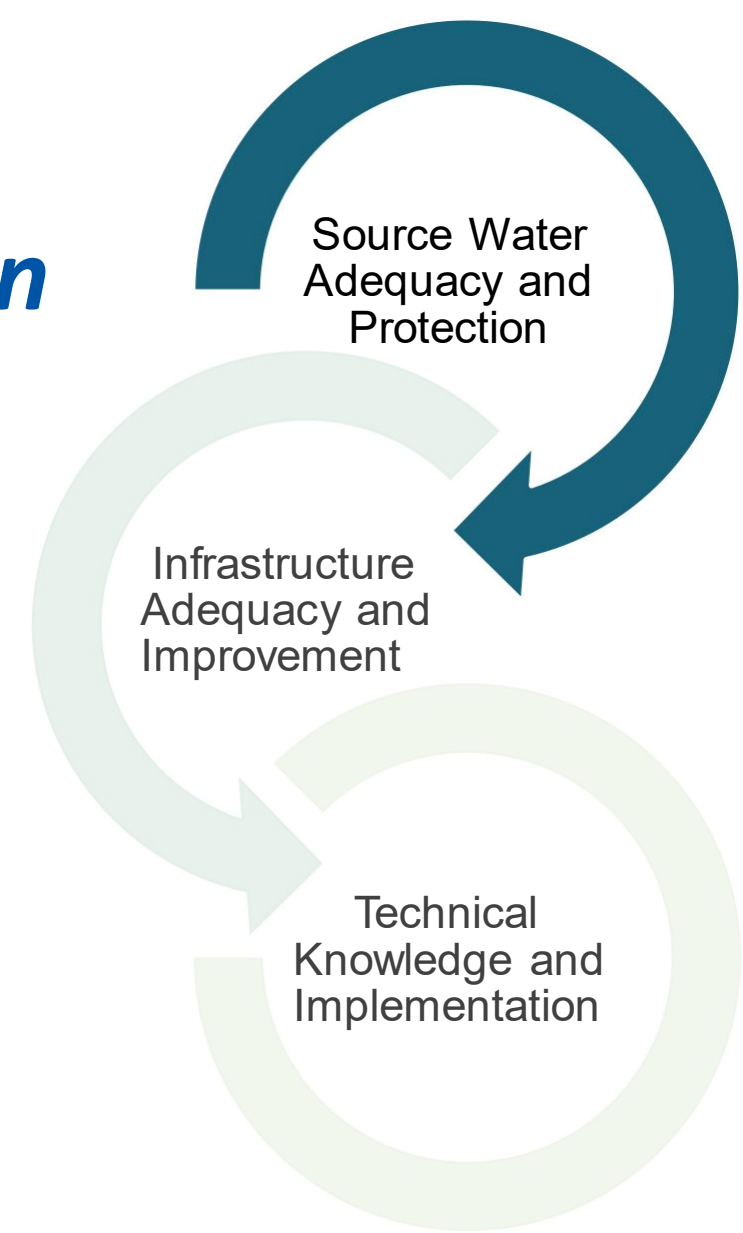
The physical and operational ability of a water system to meet SDWA requirements, including the adequacy of physical infrastructure and the technical knowledge and capability of personnel.

Maintaining high quality source water, replacing outdated infrastructure, and ensuring an operator is certified are all examples of technical capacity.

# Elements of Technical Capacity:

## *Source Water Adequacy & Protection*

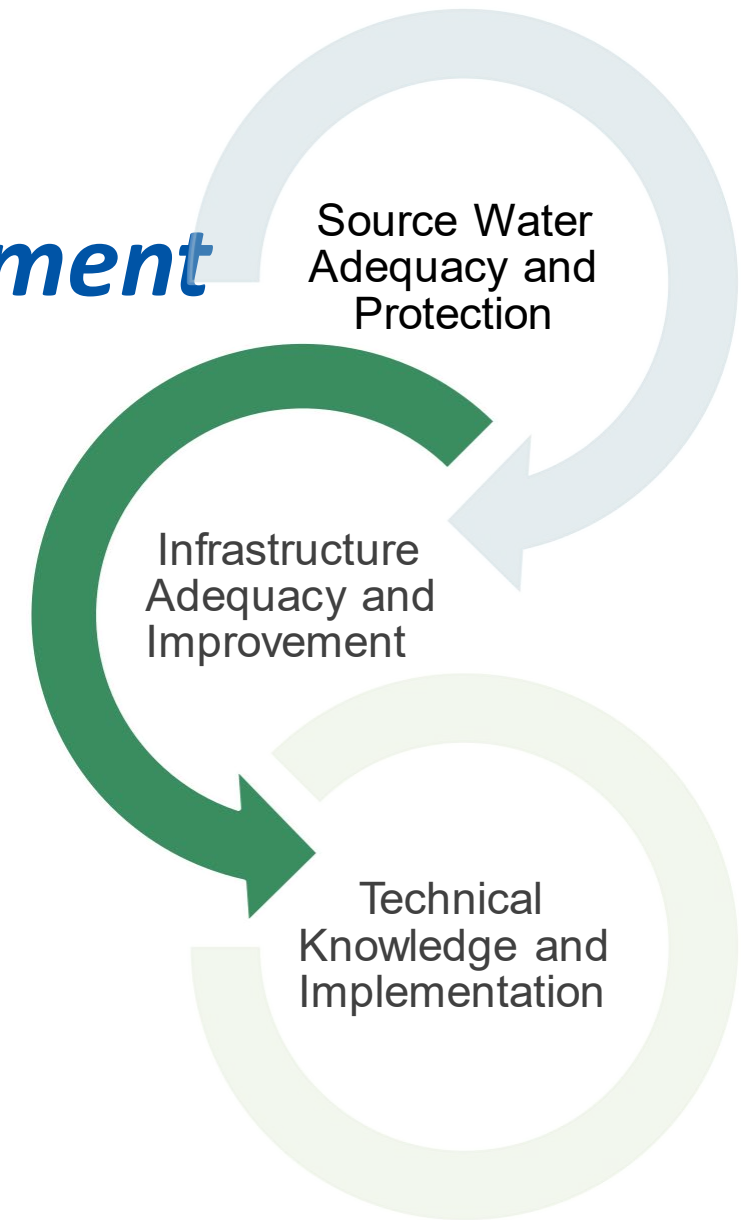
- Reliable source of drinking water
- High quality and adequately protected
- Safe yield to meet current and future demands
- Key attributes include water conservation and drought management





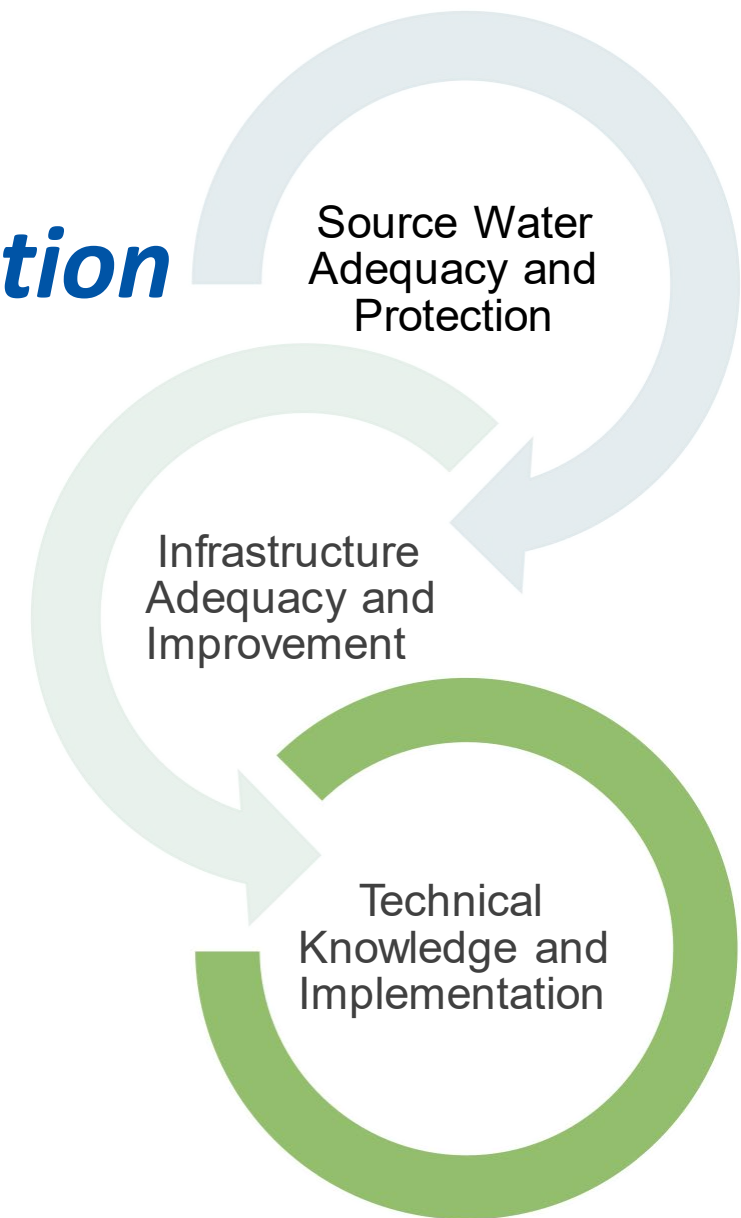
# Elements of Technical Capacity: *Infrastructure Adequacy & Improvement*

- Water meets SDWA standards
- Adequate infrastructure, from source of supply to treatment to distribution
- Planning to ensure timely infrastructure repairs and replacement



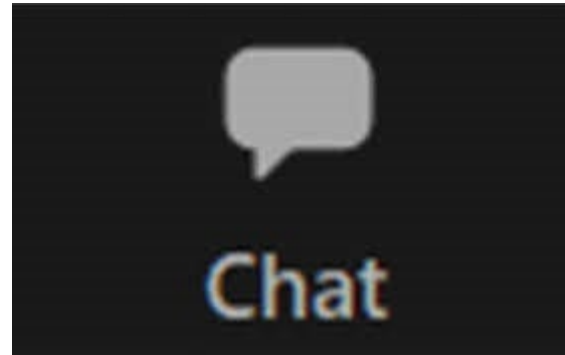
# Elements of Technical Capacity: *Technical Knowledge & Implementation*

- Operators have:
  - Appropriate certification
  - Sufficient technical knowledge and the ability to implement that knowledge
  - Understanding of systems' technical and operational characteristics
- System has effective Operation & Maintenance (O&M) strategies
- Emergency Response Planning and Risk Management



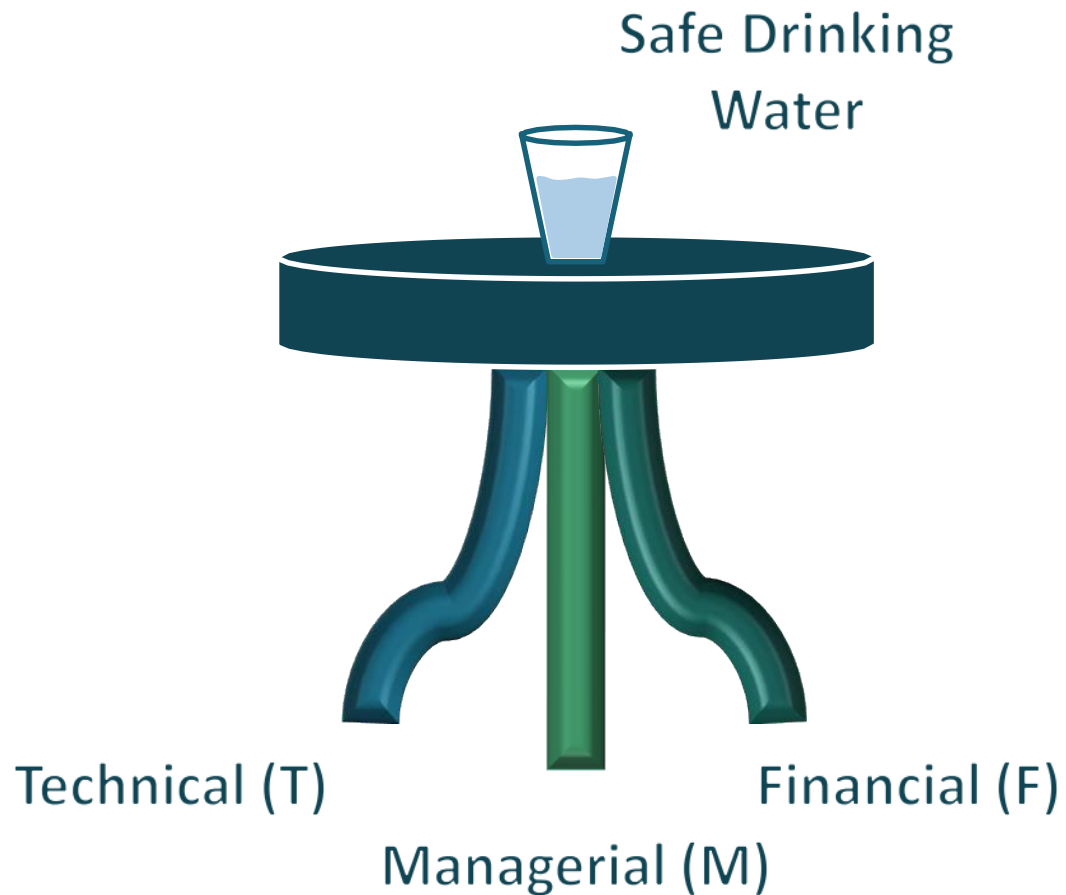
# If you were to give yourself a grade (0-100), how would you score your technical capacity?

Type in the chat box your score and reasoning



# Resources

- [Simple Tools for Effective Performance \(STEP\) Workbooks](#) – Series of workbooks designed to guide small systems on regulations
- [Emergency Response Plan Template for Drinking Water Utilities](#) – Utility personnel can access and modify an ERP template to meet their own system needs
- [Electronic Preventative Maintenance Logs](#) – Fillable PDF to record and plan regular maintenance duties ranging from daily to monthly tasks
- [Knowledge Retention Tools](#) – Operators can consolidate system information to help assist in the transition of new personnel



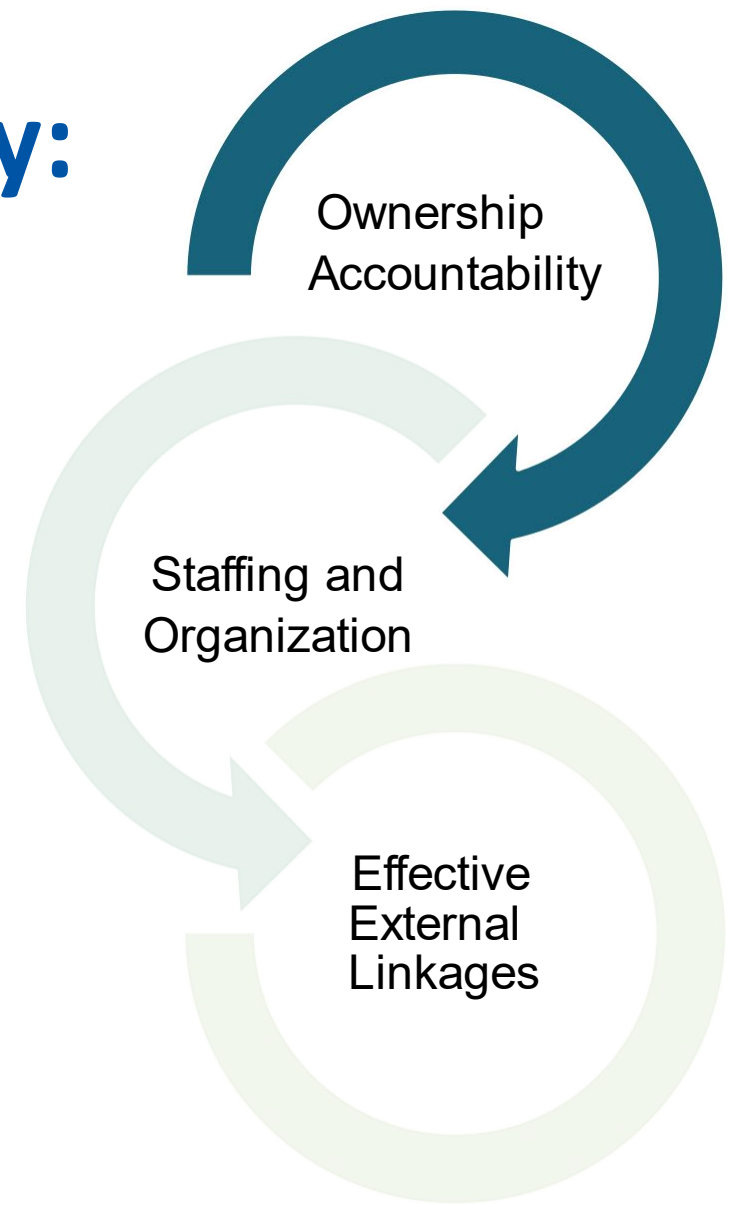
## Managerial Capacity:

The ability of a water system to conduct its affairs in a manner enabling the system to achieve and maintain compliance with SDWA requirements, including institutional and administrative capabilities.

Identifying system ownership, staffing the appropriate personnel, and communicating regularly with customers are all examples of managerial capacity.

# Elements of Managerial Capacity: *Ownership Accountability*

- Clear identification of system operators and managers
- Bylaws, ordinances, authority
- Key attributes include governing body transparency and accountability, as well as clear and well-communicated policies



# Elements of Managerial Capacity: *Staffing & Organization*

- Proper organization and staff with adequate expertise that:
  - Understand regulatory requirements
  - Obtain appropriate licenses and certifications
- Clearly defined roles and responsibilities of personnel
- Succession Planning and Workforce Development



# Elements of Managerial Capacity: *Effective External Linkages*

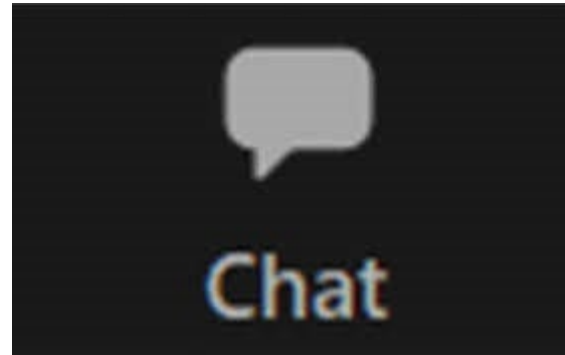
- Effective interaction with key stakeholders
- Awareness of available external resources and partnership opportunities
- Key attributes include customer engagement, planning and design, and communicating with regulators.





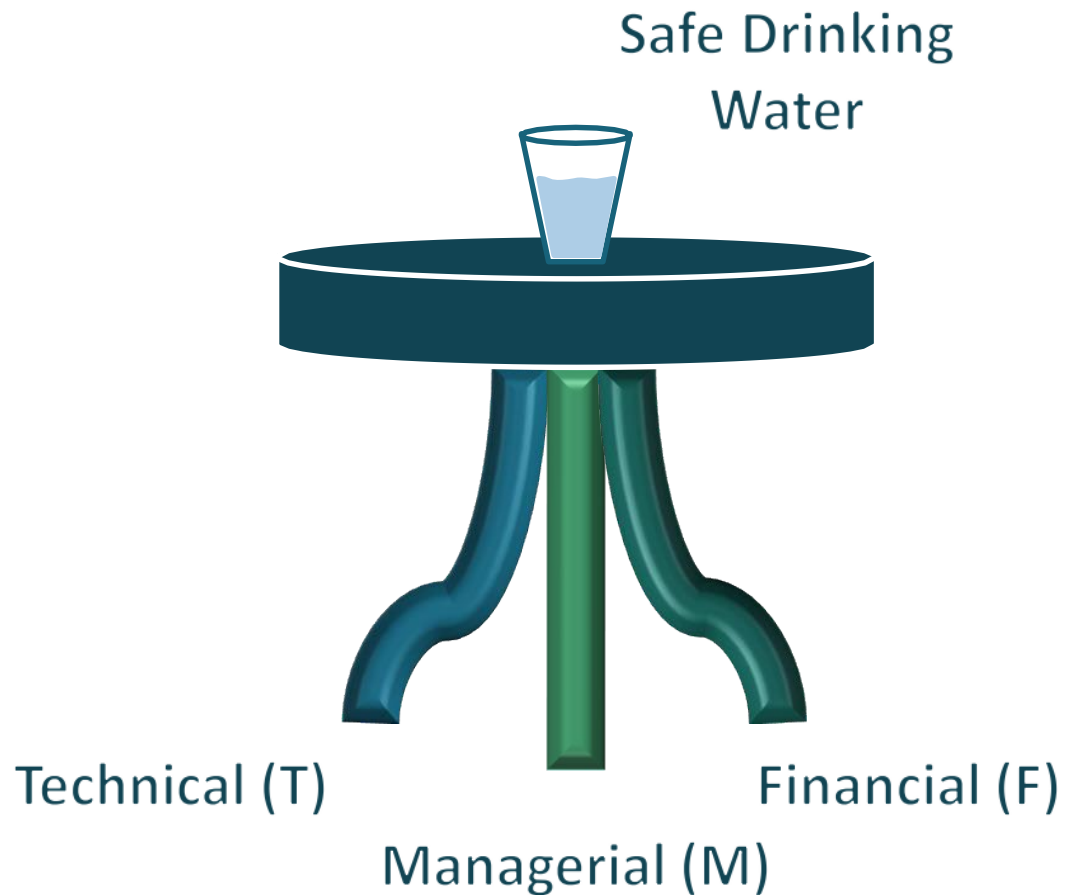
# If you were to give yourself a grade (0-100), how would you score your managerial capacity?

Type in the chat box your score and reasoning



# Resources

- [Simple Tools for Effective Performance \(STEP\) Workbooks](#) – Series of workbooks designed to guide small systems strategic planning and serving less than 3,000 people
- [Water System Partnership Implementation Tools](#) – Includes funding and planning resources
- [Water Operator Hiring and Contracting Guide](#) – Suggestions on how to find the right operator and assist with documenting expectations for operating the water system
- [Contact an EPA and State Coordinator](#)



### **Financial Capacity:**

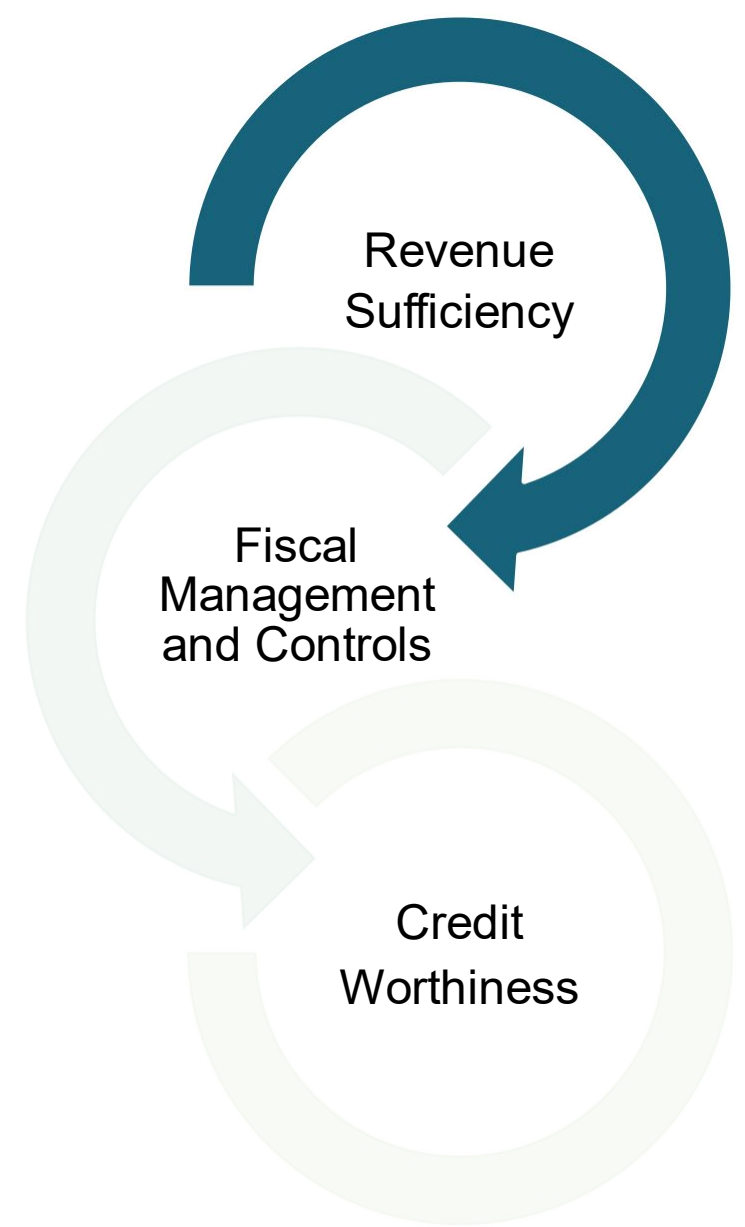
The ability of a water system to acquire and manage sufficient financial resources to allow the system to achieve and maintain compliance with SDWA requirements.

Ensuring revenues exceed costs, maintaining financial records, and establishing good credit are all examples of financial capacity.

# Elements of Financial Capacity:

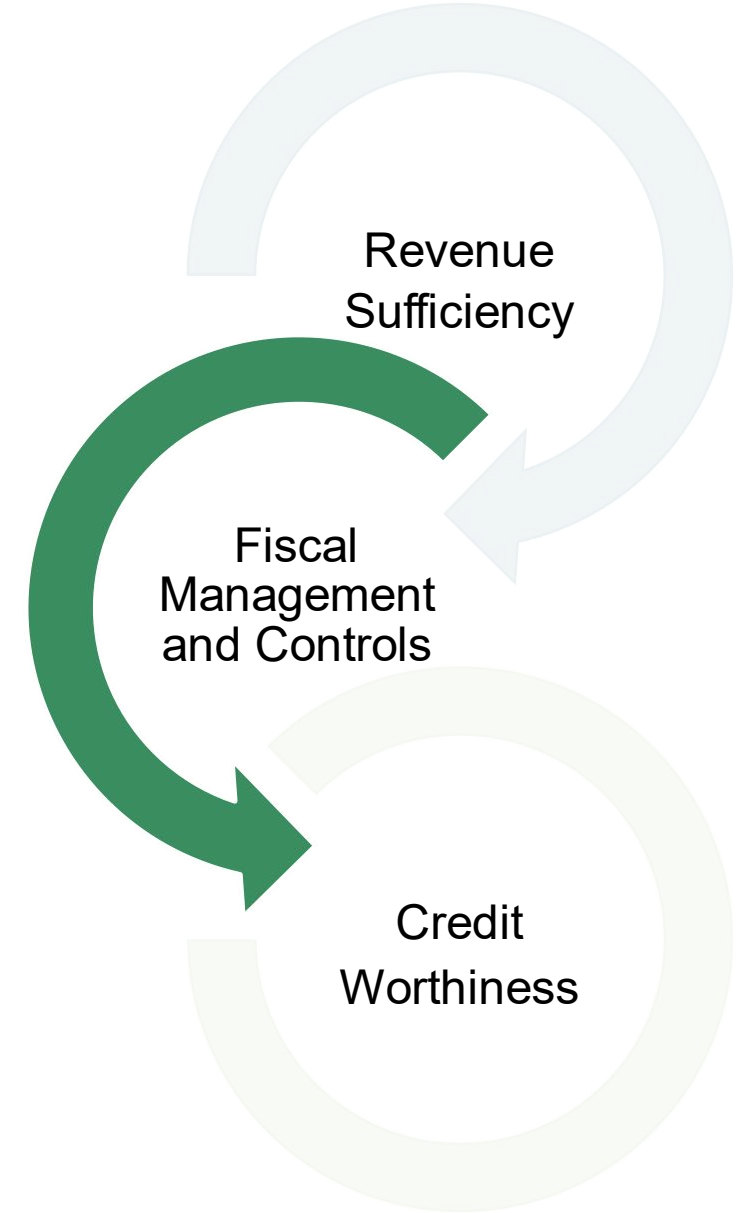
## *Revenue Sufficiency*

- Known/measurable costs and revenues
  - Revenue from water sales, fees, and subsidies
  - Costs from salaries, materials, and debt interests
- Adequate rate structure that are also affordable to customers



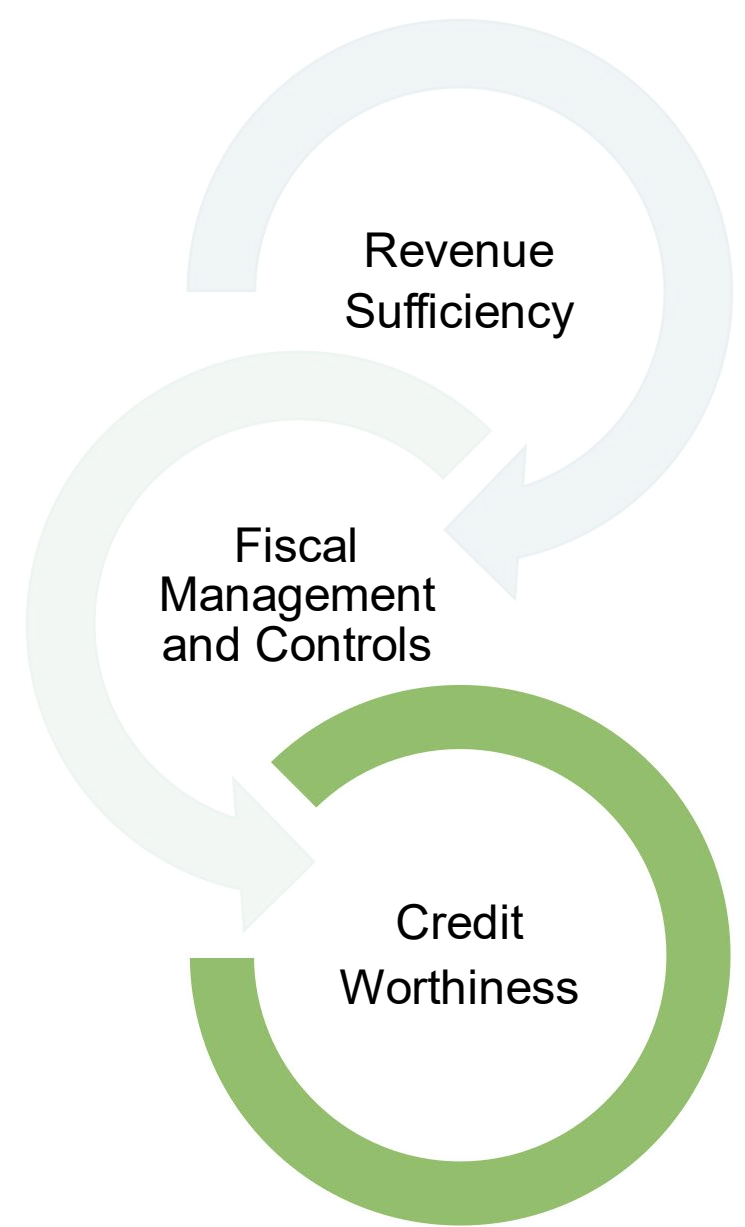
# Elements of Financial Capacity: *Fiscal Management & Controls*

- Sound financial management
  - Books and records maintained
  - Revenue management
  - Cash Reserves
- Long-term investment planning
  - Capital Improvement Plans (CIPs)
  - Conditions of assets
  - Meeting current and future demand



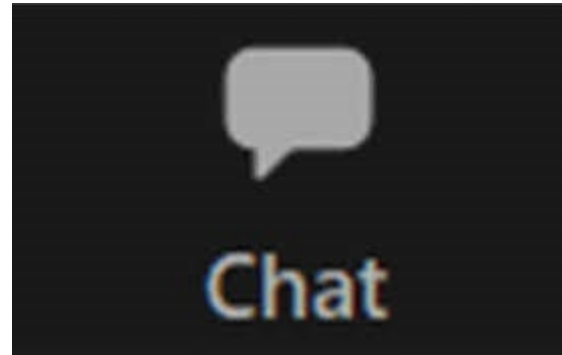
# Elements of Financial Capacity: *Credit Worthiness*

- Financial health measured through indicators, ratios, and ratings
- Credit record
- Access to capital (private or public means)
- Assurance of repayment
- Insurance for the “just in case”



# If you were to give yourself a grade (0-100), how would you score your financial capacity?

Type in the chat box your score and reasoning



# Resources

- [Simple Tools for Effective Performance \(STEP\) Workbooks](#) – Series of workbooks designed to guide small systems on setting rates and asset management
- [Water Finance Clearinghouse](#) – Explore funds available by state and specific water challenges
- [Water Efficiency Resources for Small PWSs](#) – Guides on water audits and how to mitigate water loss/non-revenue water in the distribution systems
- [Addressing Water Affordability with Drinking Water State Revolving Funds](#) – How SRF funding can provide cost-saving opportunities for communities



# Benefits of Capacity Development



**Decreased Need For  
Direct Technical  
Assistance**



**Improved  
Compliance**



**Better Prepared And  
Positioned To Respond To  
New Regulations And Any  
Type Of Emergency**

# RESULTS

An iceberg floating in the ocean. The tip of the iceberg is above the water surface, and the much larger, submerged part is below. The water is a clear blue, and the sky is light blue with some clouds. The iceberg is white and blue, with a jagged peak.

- Compliance with NPDWRs
- Level of Customer Service
- Condition and Reliability of Drinking Water
- Ability to “Bounce Back”

# STRATEGY

- Treatment and O&M Practices
- Asset Management and Capital Improvement Planning
- Operator Certification
- Revenue Management
- Addressing Sanitary Surveys Deficiencies
- Water System Partnerships
- Workforce Development
- Loan/Grant Management
- Source Water Protection
- Emergency Response
- Technical Assistance
- And So On...

# Where to Start?

- Identify your strengths and challenges
  - [WY's Capacity Assessment Worksheet](#)
- Work with staff and decision makers to identify areas of improvement and plan goals for future projects
- Work with the State Coordinators and TA providers for assistance
  - [WaterTA Request Form](#)



**Thank you!**

***Alison Flenniken, National Capacity Development Coordinator***  
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**For more guidance and resources, please visit our website:**  
**[www.epa.gov/dwcapacity](http://www.epa.gov/dwcapacity)**