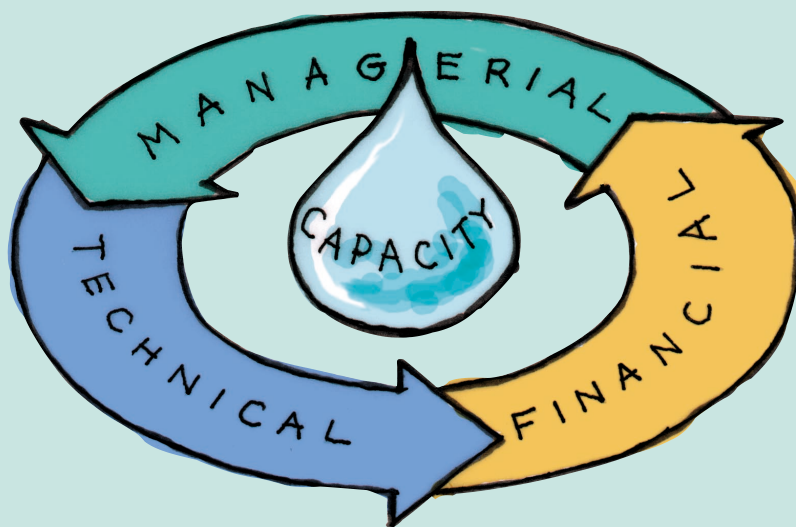




# Building Water System Capacity: A Guide For Tribal Administrators

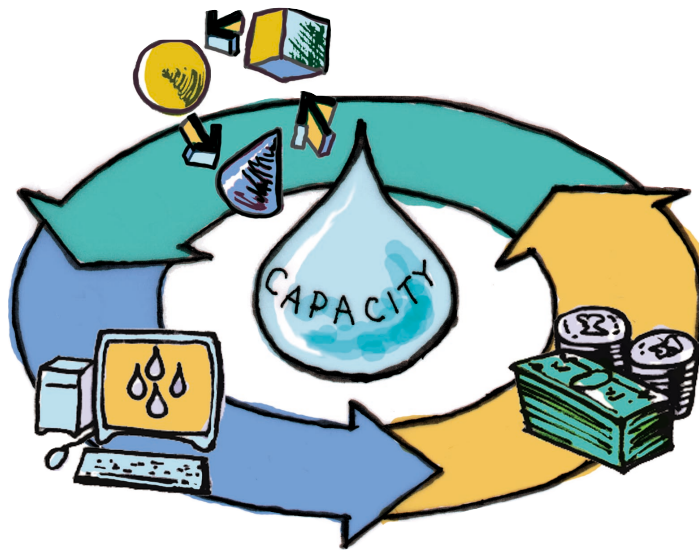


## Capacity Development:

*The process through which drinking water systems acquire and maintain the technical, managerial, and financial capabilities to consistently provide safe drinking water.*

# What Is Capacity Development?

- **Capacity**—means a system has the technical, managerial, and financial capabilities to consistently deliver safe and adequate water.
- **Capacity development**—refers to an increase in a system's ability to provide safe and reliable drinking water to its customers.
- **Capacity development**—is an on-going process of trying to find more efficient ways of running and operating a system while planning for the long-term.

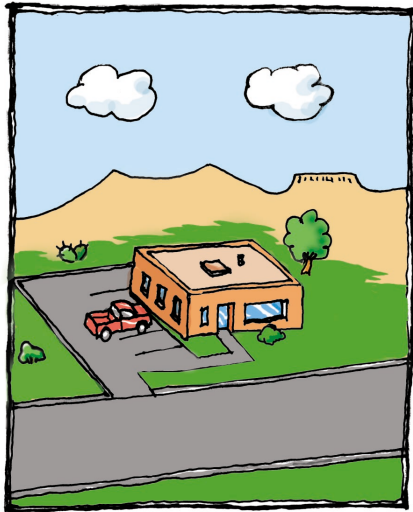


## **Capacity development has three interrelated components:**

- ✓ **Technical capacity** is the physical and operational ability of a water system to meet Safe Drinking Water Act (SDWA) requirements. It refers to the physical, or **infrastructure** components of the water system, including the characteristics of the **source water**, the adequacy of treatment, and the condition of the pump, treatment, storage, and distribution systems. Technical capacity also refers to the **technical knowledge and capability** of system personnel to properly operate and maintain the system.
- ✓ **Managerial capacity** is the ability of the system to conduct its affairs in a manner which allows it to achieve and maintain compliance with SDWA requirements. It refers to the overall organizational structure of the system. A system with adequate managerial capacity has a clearly identified **owner who is accountable** for the system. The **staffing and organization** of the system allows the efficient use of human resources and assigns clear authorities and responsibilities between the Tribal Council or Chairman, managers, operators and customers. Further, the system enjoys **effective linkages** to people and organizations that can provide help in case of need.
- ✓ **Financial capacity** means the system has the ability to acquire and manage sufficient funds to achieve and maintain compliance with SDWA requirements. A system with adequate financial capacity will have the **revenue sufficiency** to cover all costs—even if there is no charge for water—and will invest in infrastructure replacement. It will have the **credit worthiness** to allow the system to borrow money, and will use established **fiscal management and controls** to keep track of payments and receipts.

# Building Capacity

## *Administration*



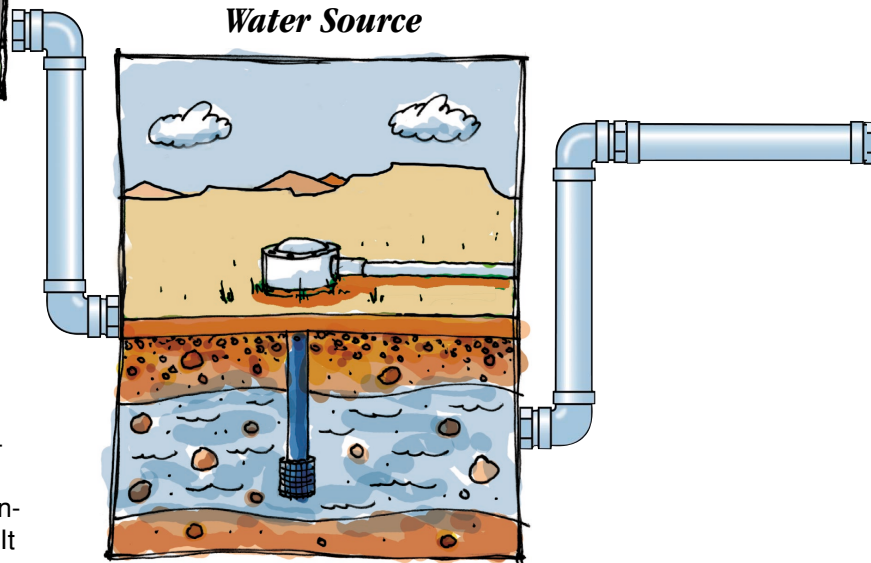
## *Fiscal Management and Controls and Credit Worthiness*

Sound financial management allows a system to maintain efficient and effective water system operations. Adequate fiscal controls, such as following established accounting principals, will help with budgeting, financial planning, and revenue management. It is also important for systems to establish a good credit history. A system that is credit worthy will be able to borrow money for unexpected repairs, replacements, or other costs.

## *Ownership Accountability*

Clear identification of system owners and operators—whether tribal, IHS or private—and their roles and responsibilities can help prevent confusion, mistakes, and misunderstandings in the daily operation and management of the system. The accountability of the owner is essential for a water system to conduct its affairs effectively.

## *Water Source*



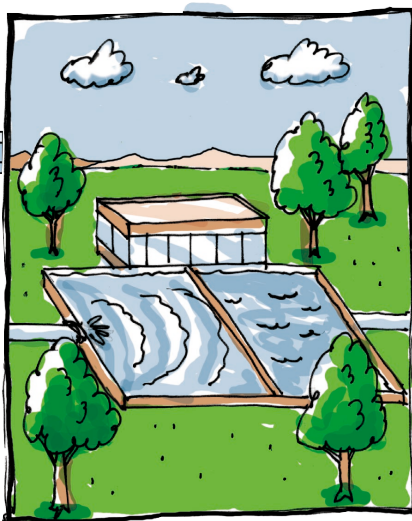
## *Source Water*

Systems must have a safe, reliable, and protected source of supply to conform with drinking water regulations over the long term. Systems should locate and use high-quality sources whenever possible, protect them from potential contamination, and determine whether they can supply a sufficient quantity of water on an on-going basis.

## Staffing and Organization

Water system staff must know how to manage effectively all aspects of a water system. Managers must understand the system's operation, know about regulatory requirements, and oversee compliance activities in order for the system to provide safe and reliable drinking water. The staff must be organized in a way to ensure efficient operation of the system. There must be clear duties and responsibilities assigned to each manager and operator to prevent duplication of effort and tasks failing to be completed. It is also critical that system personnel have the proper licenses and certifications to legally run the water system.

### Treatment



## Technical Knowledge

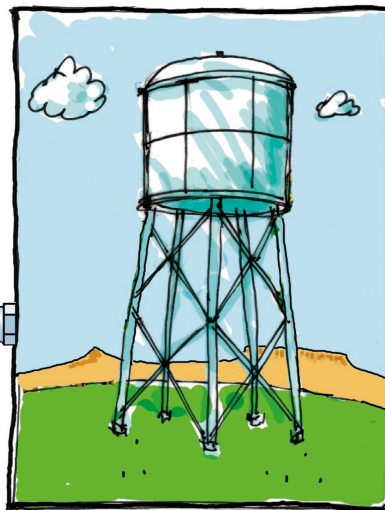
On-going training and education are important to ensure that managers and operators stay current on all water system requirements and can effectively implement these requirements to provide safe drinking water to their customers. System operators should be knowledgeable of all the relevant contaminants and treatment techniques for their systems, and should have

the proper certification to operate their utility. Further, the system should have an operation and maintenance program, along with proper emergency response procedures, to prevent deterioration of the system and protect their customers' health in times of crisis.

## Infrastructure

System infrastructure needs to be repaired and replaced as it ages. Failure to replace deteriorating system components or facilities can threaten the quality and safety of the water supply and pose a risk to public health. Treatment must be sufficient to remove the contaminants found in a system's source water. Water storage tanks must be

### Storage

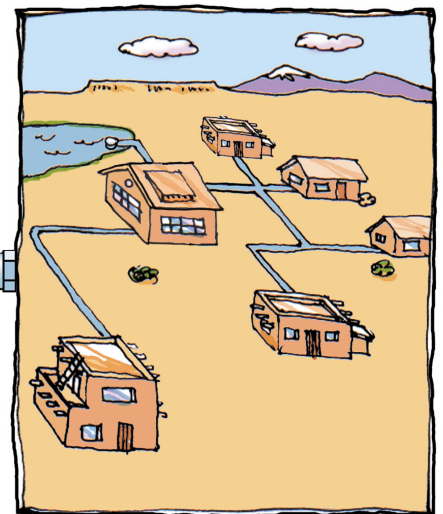


maintained in good condition to prevent contaminants such as dirt, birds, and small animals from entering the system. It is also important to keep the distribution lines in good condition to prevent contamination through leaks or breaks. By planning for future needs, the system can reduce the possibility of facing unexpected costs that the system cannot afford.

## Revenue Efficiency

A positive net income (i.e. having enough revenue to cover all costs) is a good indicator of financial capacity. To develop and maintain a positive net income, systems may need to increase revenues, reduce costs, or both.

### Distribution



## Effective Linkages

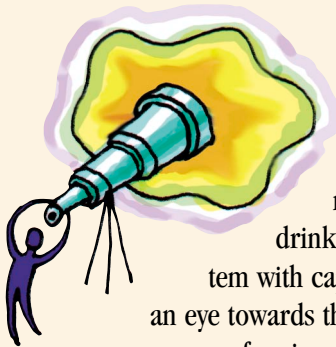
Water systems need to interact regularly with their customers and regulators. System personnel also need to know where to get technical or financial help. Building relationships with assistance providers, regulators, and water users will increase a system's ability to solve problems as they occur. Informed customers can become the best support of a public water system.

# Why Capacity Development Should Be Important To Tribal Drinking Water Systems



## ***Public Health Protection***

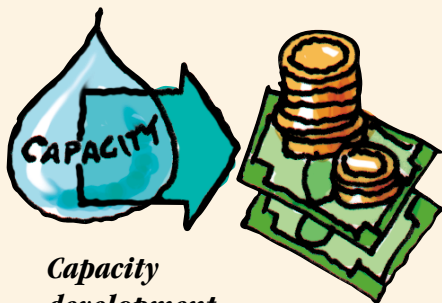
Customers rely on their water system to provide safe water for drinking, bathing, cleaning, and cooking. A poorly operated system, or a system with physical deficiencies, may allow bacteria, viruses, or chemicals to enter. This may cause serious health problems for customers. A system that achieves and maintains capacity will be better able to protect public health by keeping problems from turning into public health hazards and responding quickly and effectively to emergencies. Also, a system with capacity will be able to comply with the drinking water regulations, protecting public health by consistently providing safe drinking water.



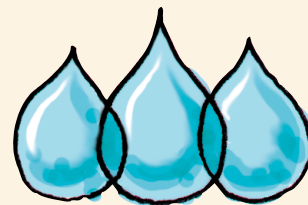
***The focus is on the future.*** Capacity development represents an opportunity for Tribes to head in a new direction to improve Tribal drinking water systems. A water system with capacity solves today's issues with an eye towards the future, thereby reducing the occurrence of serious problems.



***Tribes stand to gain more control of their water programs.*** Through capacity development, Tribes can gain more control over their drinking water. By developing their capacity, Tribes can obtain the necessary resources to manage and operate water systems effectively, thereby preparing them to assume administrative and supervisory responsibilities similar to those of state programs.



***Capacity development increases funding opportunities.*** Systems with capacity may be eligible for low-or no-cost loans from the state in which the system is located, or for direct grants from their EPA regional office and other federal programs.



***Capacity development promotes dependable operation of the system.*** Systems with adequate capacity are better able to handle emergencies and unexpected costs, and are able to consistently supply safe and adequate drinking water.

# For More Information, Contact:

## **U.S. EPA Headquarters**

---

American Indian Environmental Office      (202) 260-7939      <http://www.epa.gov/indian/>  
Office of Ground Water & Drinking Water      (202) 564-3750      <http://www.epa.gov/safewater/>

**Safe Drinking Water Hotline: 1-800-426-4791 or e-mail: [hotline-sdwa@epa.gov](mailto:hotline-sdwa@epa.gov)**

## **U.S. EPA Regional Tribal Capacity Development Coordinators**

---

Region 1      (617) 918-1111      <http://www.epa.gov/region01/eco/drinkwater/index.html>  
Region 2      (212) 637-3600      <http://www.epa.gov/region02/nations/indian1.htm>  
Region 4      (404) 562-9900      <http://www.epa.gov/region4/ead/GovPartners/tribal.htm>  
Region 5      (312) 353-2000      <http://www.epa.gov/r5water/sdw/dwwedo4.htm>  
Region 6      (214) 665-6444      <http://www.epa.gov/region06/6xa/tribal.htm>  
Region 7      (913) 551-7030      <http://www.epa.gov/region07/programs/wwwpd/dwgwhome/dwgw.html>  
Region 8      (303) 312-6312      <http://www.epa.gov/region08/tribes>  
Region 9      (415) 744-1500      [http://www.epa.gov/region09/cross\\_pr/indian/index.html](http://www.epa.gov/region09/cross_pr/indian/index.html)  
Region 10      (206) 553-1200      <http://yosemite.epa.gov/r10/tribal.NSF/webpage/tribal+office+homepage?opendocument>

## **Additional Contacts**

---

Administration of Native Americans      (202) 690-7776      <http://www.acf.dhhs.gov/programs/ana/>  
Bureau of Indian Affairs      (202) 208-3710      <http://www.doi.gov/bureau-indian-affairs.html>  
Bureau of Reclamation      (202) 513-0615      <http://www.usbr.gov/main/programs/native-am.html>  
Indian Health Service      (301) 443-3593      <http://www.ihs.gov/>  
National Rural Water Association      (800) 332-8715      <http://www.nrwa.org/>  
Rural Community Assistance Program      (202) 408-1273      <http://www.rcap.org>  
Rural Utilities Services      (202) 720-9540      <http://www.rurdev.usda.gov/rus/index.html>