

Grumbles on water



By Benjamin H. Grumbles

Capacity Development

Do you have what it takes to run, maintain and sustain a drinking water system? It is a growing challenge, particularly if you are one of the 152,000 small public water systems serving 10,000 or fewer customers and representing more than 97% of the nation's small water systems.

Smaller systems often have more resource challenges than their larger counterparts. Many small systems were created when regulatory standards were less protective and demanding. These systems provided a quick and simple way for small communities and subdivisions to get drinking water. Today, challenges for small as well as large systems are daunting and usually include:

- The need to upgrade or replace aging infrastructure with inadequate funds;
- Availability of a properly trained and certified operator;
- Availability of an adequate and safe supply of source water;
- Protection of the water source;
- The public's increasing demands for lower service costs; and
- Establishment of more enhanced and protective regulatory requirements and rules.

Multiple Barrier Approach

The U.S. Environmental Protection Agency (EPA) responds to those needs on multiple fronts, but one of the most important is the National Capacity Development Program. The 1996 Safe Drinking Water Act (SDWA) amendments focused on preventing contamination through

the "multiple barrier approach." This approach sets up a series of preventative barriers rooted in sound technical and managerial concepts—source water protection, treatment, distribution system integrity and public information—to ensure a safe drinking water supply and guard against waterborne disease outbreaks.

The Capacity Development Program is a state-implemented program that assists drinking water systems in improving their finances, management, infrastructure and operations. These state- and federal-led efforts help systems provide safe drinking water consistently, reliably and cost-effectively, placing them securely on a path toward sustainability.

The essence of capacity development is to maintain technical, managerial and financial capacity and comply with the SDWA.

Technical capacity refers to the physical infrastructure of the water system, including the adequacy of the source water, infrastructure (source, treatment, storage and distribution) and the ability of system personnel to implement the requisite technical knowledge. Managerial capacity refers to the management structure of the water system, including ownership accountability, staffing and organization and effective linkages to customers and regulatory agencies. Financial capacity refers to the financial resources of the water system, including revenue sufficiency, credit worthiness and fiscal controls.

Strategic Plan

The EPA is committed to helping the Capacity Development Program succeed by measuring progress and demonstrating results. The agency recently released its National Capacity Development Strategic Plan to help determine the success of efforts targeted to assist small systems, complete with outputs and outcomes. Through proactive communication and outreach, in collaboration with states, partners and other stakeholders, the EPA seeks to implement innovative approaches and identify new technologies.

The strategic plan consists of three goals: maintain effective oversight of state capacity development programs; assist public drinking water systems with acquiring and maintaining technical, managerial and financial capacity; and elevate awareness of capacity development activities within the EPA's Sustainable Infrastructure Initiative.

The effective promotion of capacity development depends on the program being:

- Flexible, so that the EPA and states can maximize the use of available resources and capabilities to implement capacity development processes that meet the unique needs of each state;
- Proactive in identifying and targeting assistance to water systems most in need of improving their capabilities;
- Integrated, so the resources of all federal and state drinking water programs are considered;
- Accountable by demonstrating that capacity development helps water systems provide safe water to

customers; and

- Collaborative to the extent that all entities, agencies, groups and associations act together to support one another.

The EPA plans to use available information to identify trends and further target resources. It will update this strategy to incorporate new information and activities on an as-needed basis. In carrying out the strategy, the EPA is using the "plan-do-check-act" approach associated with environmental management systems and other adaptive management models.

The EPA has also developed a range of tools to help small water system operators and owners understand SDWA regulatory requirements and capacity-building concepts. Among these tools are the Simple Tools for Effective Performance guide series, the Best Practices Guide series and the Interactive Sampling Guide for Drinking Water System Operators. The EPA is also releasing the Check Up Program for Small Systems, a free, user-friendly asset management program that will help small utilities manage and finance existing and future water and wastewater infrastructure.

While the EPA's strategy and many of its tools focus on the issues associated with small water systems, it is important to understand that larger water systems will also benefit from a commitment to maintaining and enhancing their technical, managerial and financial capacity. As part of its sustainable infrastructure efforts, the agency has joined forces with six national associations to identify and promote attributes of effective utilities. A future article will highlight the attributes and tools being developed to encourage their adoption.

The EPA's capacity development and sustainable infrastructure efforts are focused on ensuring all water utilities are managed well today and prepared to operate sustainably into the future. The bottom line: Capacity development is the key to compliance and sustainability for water systems large and small, far and wide.

The strategic plan and other EPA tools for small drinking water systems are available at www.epa.gov/safewater/smallss/ssinfo.htm. The EPA's sustainable infrastructure efforts are described at www.epa.gov/waterinfrastructure/bettermanagement.html. **WWD**

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