Small Systems: Are They That Much Different Than the Big Ones?

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This month I would like to focus on a segment of the water community that may be underserved and under-appreciated. Community water systems have many different sizes and structures; they include mobile home parks, homeowners associations, and restaurants, as well as more traditional structures under both public and private ownership. A check of the EPA Office of Water website reveals that the largest segment of the drinking water community is the small system.

There are more than 155,000 public water systems in the United States and 97 percent of them are small. It may surprise you to know that this number continues to grow and has increased by 12 percent since the re-authorization of the Safe Drinking Water Act (SDWA) in 1996. The EPA defines a small system as one that has least 15 connections and serves greater than 25 people but less than 10,000. The Florida Department of Environmental Protection (FDEP) data indicate that Florida is very similar to the nation: of the 1687 statewide public water systems, 85.7 percent are less than 10,000. The Florida Section AWWA takes operator training classes in Florida in 2015 geared to small systems. Another way a small system can directly benefit from the work of WRF is to volunteer to participate in research by collecting samples of its water system or by sitting on a project advisory committee. Go to http://www.waterrf.org to learn more.

Operator certification is an important component in ensuring a well-run system and providing safe water. The duties of a licensed operator don’t change based on system size; the level of a license is determined by the complexity of the treatment process. Both small and large systems may have simple or complex treatment processes. All states are required to ensure that all community water systems and nontransient, noncommunity water systems have properly trained and certified operators. These operators must demonstrate that they have the knowledge, skills, ability, and good judgment to properly operate and maintain the treatment facilities and distribution systems.

A failure in a treatment process at a small system may affect fewer people, but all customers are affected more quickly than in a larger system where part of the system may be able to be isolated. There is often limited redundancy in small facilities, so a failure has dire consequences and may cause long-term impacts. In 2013, Scott Rubin, an attorney and consultant, evaluated SDWA violations and compared system size to the frequency and type of violation. He found that smaller water systems are no more likely than larger systems to violate health-related requirements. They may be more likely, however, to violate monitoring, reporting, and notification requirements (Rubin, 2013). This may be due to limited staff or limited understanding of the required frequency of monitoring, or what to do if something falls through the cracks.

The Florida Section AWWA takes operator training and support very seriously. Our Operator and Maintenance Council and Technical and Education Council are constantly reviewing and improving training opportunities for operators. Our on-demand training classes are held throughout the state, and even though they may held at a large utility, there are seats available for small system operators to join us.

Small systems may not have the financial resources to afford training for operators or managers, so AWWA, in conjunction with the Environmental Finance Center Network and the Rural Community Assistance Partnership, held two free training classes in Florida in 2015 geared toward small systems. We will be doing this again in 2016; plans are underway for the first session, which will be held in late February or early March. Watch for email notifications and advertising on the FSAWWA website (www.fasawwa.org). In addition, AWWA has free online training for small systems, including an outstanding course on the Revised Total Coliform Rule, which can be accessed at http://www.awwa.org/resources-tools/water-knowledge/small-systems/2015-small-systems-training.aspx.

Additional challenges faced by small systems include system capacity development and finances. The SDWA requires that utilities ensure technical, managerial, and financial capacity to comply with the regulations and provide safe water. The state, through FDEP, operates capacity development programs to help water systems improve their finances, management, and infrastructure to ensure a sustainable system for the future.

Even with trained and knowledgeable operators, some systems will not be able to maintain compliance if decision makers do not make funding available for infrastructure improvements and upgrades. They must understand and support their systems’ needs and effectively communicate with their owners, boards, and customers. Having good communication with customers can go a long way to garner support for rate increases that may be necessary to pay for treatment changes or infrastructure replacement in response to new regulations or system age. Small systems have fewer customers to pass on the costs to and repayment of debt is more difficult.

The states have revolving loan programs that are often funded through the passing down of federal funding. This provides another opportunity for small system owners and managers to participate with FSAWWA in the Utility Council and influence legislative and regulatory changes in Tallahassee. Costs to participate in the Utility Council are based on utility size. Contact Rob Teegarden, the council chair, at rteearden@ouc.com, or www.fasawwa.org to get more information.

Last, but certainly not least, are the customers of small utilities. Without customers we don’t have a mission. Customers of both large and small utilities have the same expectation that safe and clean drinking water will always be available, but that is only true if the system is properly operated, maintained, and funded, and therefore, sustainable.

Talking to our customers helps to keep the water safe through their compliance with backflow and cross connection programs, and when we need Continued on page 69