How Are Standards Developed?  BY PAT KLINE

QUESTION: All that talk last month about changes in Standard C600 over the last 80 years made me wonder. What can you tell me about the process for developing a standard?

ANSWER: Over the years, I’ve spoken with a lot of people who have had very different opinions on how standards come about. Some people think that standards come down the mountain, unchanged from the words of the water treatment deities. Other people think that a coalition of manufacturers write the standards and that applicability is totally up to whatever the product of the month happens to be. Yet others think that standards must be generated by a group of turtles, sloths, and snails, because the process takes so long. Are any of these opinions close to reality?

WHAT IS A STANDARD?
Standards are minimum best practices representing a consensus of the water supply industry that a product described in a standard will provide satisfactory service when used in North America. Standards are different from specifications. As the name implies, specifications should include specifics for each application. Job-site conditions, water quality conditions, state and local regulations, and treatment processes and equipment can all affect how a particular product is used.

Many people think that standards are laws, but they aren’t. However, some regulatory bodies, such as cities, counties, or states, adopt AWWA standards as their local law, either with or without modification. That happens frequently in the case of the Disinfection of Facilities standards, for which committee I am staff liaison.

For instance, a few months ago a contractor called me and said he had disinfected a water main according to AWWA Standard C651-05. The city was complaining because he used a method that was against city regulations. After some research, I found that the contractor used the tablet method of disinfection. The city had adopted C651-05 as its standard method of disinfecting water mains, but with the tablet method of disinfection prohibited. The moral of the story? Know the applicable regulations before you perform a job.

WHO MAKES A STANDARD?
AWWA has seven councils to direct its activities, one of which is the Standards Council. Utility and government employees, manufacturers, and academics may all volunteer to serve on the Standards Council. However, the Standards Council can have only one “producer” member who is a manufacturer. All other Standards Council members are individuals who are classified as having a general interest—most likely government employees and academics—or are users, such as utility employees.

Anyone may propose a product for standardization, but a few constraints are imposed on each proposed standard:

- The standard must be within the scope of the AWWA Standards program.
- The water community must benefit from the standard.
- The product must have a 5-yr history of documented satisfactory use in an established water utility.
- The product that the standard describes must be available for purchase in North America.

If these parameters are met, the Standards Council may assign the development of the proposed standard to an existing standards committee or create a new standards committee to develop it.

Standards committee volunteers are AWWA’s unsung heroes. These people have experience pertinent to the standard they’re working on, and most of them are passionate about providing a meaningful, useful standard to assist their peers in selecting equipment or chemicals that perform as they should.

Standards committees must follow a strict minimum proportion of one-third producer members to two-thirds general interest and user members. There may be more general interest and user members than this on a standards committee, but not of producer members.

COMMITTEE WORK
In Tinker, Tailor, Soldier, Spy, John le Carré states, “A committee is an animal with four back legs.” For volunteers on standards committees, I’m sure this quote occasionally rings true. Consensus on a standard is difficult to achieve, yet required to pass a standard up to the council from the committee level. Getting a diverse group of individuals—who all bring their education, experience, and knowledge to the table—to agree to a written standard is an art. Some volunteers may have had a positive experience with a product, some may have had a negative experience, but both points of view are “true” to the respective individuals. I’m constantly in awe of committee chairs who are able to achieve consensus. It’s a skill that I’m still trying to master, but I’m learning from masters of negotiation.

A committee may divide into subcommittees or task groups to actually write a standard, or the committee may decide to write the standard. A standard is balloted to the full committee in writing. And, just as in the democratic process, every voting member of the committee has a right to have his or her opinion heard and considered by the entire committee. Usually initial conversations focus on areas of agreement, rather than differences. The areas of agreement become larger and larger as time passes, and areas of contention become smaller. Sometimes, the process may take only a few months. In other cases, it may take years before consensus is obtained. No matter how long it takes, after the committee achieves consensus, the standard is passed back to the Standards Council for review and balloting.
**NEXT STEPS**

The Standards Council will also vote on the standard, and it must achieve consensus. With this consensus, the standard passes to the AWWA Board and the American National Standards Institute and goes out for public comment. Comments at any level of this process must be considered. Occasionally, a comment may cause a standard to go all the way back down the chain to the committee for revision. However, the checks and balances built into the AWWA standards development process usually prevent this. The standard is then reviewed by the AWWA Publishing Department for continuity, grammar, etc., and is finally published as an official ANSI/AWWA Standard. AWWA standards are reviewed and revised every five years, at which time the entire process starts anew.

**JOIN THE TEAM**

AWWA standards cover a wide variety of chemicals and equipment. Are you using a product that you’re particularly passionate about, one which has no standard? You could become a member of an AWWA standards committee. We’re always eager for participation by people and utilities who actually use a product in question, and who have a good feel for its applicability in the field, as well as any limitations or real-world problems associated with the product’s use.

Although our standards committees generally meet face-to-face during ACE, which is in Atlanta this year, attendance isn’t mandatory. The standards committees for which I am staff liaison get much of their work done by e-mails and conference calls. Specifically, the standards committees on plastic valves, water meters, and fire hydrants would love to have more utility employees for members.

If you have an interest in these or other standards committees, you can e-mail me or call me, and I’ll be happy to direct you to the right person. I’m looking forward to hearing from you!

---

**RESOURCES**

AWWA standards provide minimum requirements for design, installation, performance, and manufacturing of products used in the water industry, including those under the categories listed. Standards can be purchased as a set on CD-ROM, as boxed sets according to category, or individually from the AWWA Bookstore, [www.awwa.org/bookstore](http://www.awwa.org/bookstore), 1.800.926.7337, or custsvc@awwa.org. Watch the *Journal AWWA* and the AWWA Web site for official notice of new standards or any status changes of existing standards.

- Groundwater and Wells
- Filtration
- Softening
- Disinfection Chemicals
- Coagulation

- Scale and Corrosion Control
- Taste and Odor Control
- Prophylaxis
- Ductile Iron Pipe & Fittings
- Steel Pipe
- Concrete Pipe
- Asbestos–Cement Pipe
- Valves and Hydrants
- Pipe Installation
- Disinfection of Facilities
- Meters
- Service Lines
- Plastic Pipe
- Storage
- Plant Equipment
- Utility Management