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New Efforts at Developing National Water Security Standards

By Wes Strickland

Following the terrorist attacks of September 11, 2001, drinking water, wastewater and stormwater systems in the United States have increased their efforts at securing vital facilities against threats of destruction or contamination. This article addresses the problem of the lack of standards for security and one recent process begun for the purpose of developing standards.

The Problem of Standards

Water system security has been addressed specifically in only one federal law, the Public Health Security and Bioterrorism Preparedness and Response Act of 2002 (Public Law 107-188). That Act required all community drinking water systems serving more than 3,300 people to prepare vulnerability assessments and emergency response plans to be implemented in the event of a water security emergency. The Act did not, however, mandate any specific security measures to be taken by water systems.

After passage of the Act, water systems around the country began assessing the vulnerability of their facilities and making improvements to plug any gaps that they found. Various checklists of required security measures appeared, authored by a number of interested parties, but there was no standard for determining which measures were truly necessary. While guidance was provided by the U.S. Environmental Protection Agency (EPA) through several publications, that guidance does not have the force of official regulations.

Given the shortage of funds for capital expenditures in the current financial situation for water systems in the United States, security measures have had to compete with other infrastructure needs. Initially, water systems diverted capital funds away from other planned infrastructure projects to meet what were perceived to be immediate security needs, but as the most obvious needs have been met and water supply and quality issues have also demanded renewed attention, capital expenditures have once again shifted away from water security. This phenomenon has been documented in California through a survey conducted over each of the past several years by the consulting firm EIP Associate

The dilemma facing water systems after the passage of several years has been to balance between water security projects and other capital or management projects that are also crucial to public health and welfare. Accordingly, there has been ambivalence about the adoption of national or state-specific standards for water security measures. Uniform standards might help systems

identify the relative importance of various security measures, but also might create undue emphasis on those security measures at the expense of other projects that system managers may determine are ultimately more important to be implemented with limited funds.

So far, EPA has refrained from adopting any specific water security guidelines, other than those related to vulnerability assessments. At least some water systems have approved of that approach. The absence of rigid standards allows local water system managers, who are in the best position to judge their facility needs, to determine on their own how capital funds should be spent to serve the public interest.

On the other hand, this lack of standards also affects water systems' exposure to lawsuits should an unfortunate incident of purposeful contamination or infrastructure destruction take place. Without standards, water systems do not have an established list of reasonable actions to for comparison against. Standards could define minimum actions that systems must perform to avoid liability in a claim brought by an injured party. Further, an insurer could look at compliance with the standards and therefore have a true basis for insuring a system for security risks at the lowest cost possible.

Proposed Standards

In order to fill the void in security standards, the American Society of Civil Engineers (ASCE), the American Water Works Association (AWWA) and the Water Environment Federation (WEF) are combining their efforts to prepare voluntary guidelines for physical security measures, with financial assistance from the EPA. These efforts resulted in the publication in December 2004 of three security-related documents: *Interim Voluntary Security Guidance For Water Utilities*, *Interim Voluntary Security Guidance For Wastewater/Stormwater Utilities* and *Interim Voluntary Guidelines for Designing an Online Contaminant Monitoring System*.

On April 1, 2005, ASCE, AWWA and WEF issued a request for proposals seeking assistance from a contractor with development of additional voluntary consensus standards. The standards will be developed under the process established by the American National Standards Institute (ANSI) and will be classified as Draft American National Standards for Trial Use. The Draft Standards will initially be based on the three guidance documents, with separate standards for drinking water, wastewater/stormwater, and online contaminant monitoring systems.

The current schedule includes commencement of the project in early June. First drafts of the standards would be prepared by December 1, 2005, with delivery of the final standards to ASCE by August 31, 2006. The standards would then be submitted to the EPA by September 30, 2006. If the Draft Standards were accepted by the EPA, they would be submitted to ANSI for publication.

Following publication by ANSI, the Draft Standards would be officially recognized for a trial period of 24 months. The draft would include information on how to file suggestions for revision, and, based on the comments received, after the trial period ANSI could certify the document as a final American National Standard. Under the current schedule, the adoption of final ANSI standards would likely occur during the fourth quarter of 2008 or first quarter of 2009.

Based on the standards-setting process established by ANSI, all interested parties should seek to participate in this effort at the earliest possible opportunity. Failure to participate in the process for

development of the standard by the ASCE, AWWA and WEF would result in an interested party being barred from challenging the standards before ANSI at a later time.

Conclusion

While some drinking water, wastewater and stormwater systems would prefer not to have any national security standards, there is now a process in place to develop national standards under ANSI. While the resulting standards would be voluntary and created by the industry rather than government regulations, those standards could become *de facto* rules for the water industry, through being required by insurers and lenders and possibly being incorporated into the legal negligence liability standard in the event of a security breach.

Water system managers can prepare their organizations for the proposed standards by reviewing the guidance documents that have already been published. In order to protect themselves for the future, managers should consider providing comments on any changes that they believe should be made to the contents of the guidance documents as part of the process for creating the Draft Standards. Even if there are not any specific concerns at this time, water system managers would be well advised to monitor this standards-setting process.

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