

## Considerations Regarding the “Drinking Water System Security Act of 2009” (H.R. 3258)

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The Drinking Water System Security Act of 2009 (H.R. 3258) was introduced on July 20, 2009 by the chairman of the House Committee on Energy and Commerce. This bill amends Section 1433 of the Safe Drinking Water Act and requires the United States Environmental Protection Agency (EPA) to issue the following regulations:

- Establish risk-based performance standards for drinking water systems
- Establish requirements and deadlines for water systems, specifically including:
  - Conducting vulnerability assessments or, if the system already has a vulnerability assessment, revising it to be in accordance with this regulation
  - Updating the vulnerability assessment not less than every five years and promptly after any change at the system that would result in the reassignment of the system to a different risk-based tier
  - Developing, implementing and revising site security plans not less than every five years and promptly after a revision to the vulnerability assessment
  - Developing emergency response plans or revising existing plans to be in accordance with this regulation and revising the plan not less than every five years
  - Providing annual training to employees and contractor employees on implementing site security plans and emergency response plans

Water systems affected by this potential new regulation are community water systems serving a population greater than 3,300 or, at the discretion of the Administrator, where a security risk may exist.

The proposed bill states that the EPA Administrator shall consult with the Secretary of Homeland Security when designating substances of concern and establishing risk-based tiers. Baseline information will be developed by the administrator that will define which kinds of intentional acts are the most probable threats to drinking water systems.

Several grant programs are listed in the proposed bill, including Implementation Grants to States; Research, Training and Technical Assistance Grants; Preparation Grants; and Worker Training Grants.

For fiscal year 2011, Congress authorized a \$315 million appropriation to fund associated security activities. The funds will be appropriated as follows: \$30 million for administrative costs and \$125 million to implement methods to reduce the consequences of a chemical release from an intentional act, with priority given to those systems assigned to tier one or two systems.

Upon review of the proposed bill, there are several issues regarding the proposed legislation. A significant consideration for affected public water systems is specific information regarding the available funding for public water systems to comply with the proposed bill. Specifically, the requirement for a minimum of eight hours per year of training for all water sector employees and contractor employees represents a 0.4 percent increase in labor cost for the utility per employee (i.e., 8 hours per year/ 2080 work hours per year).

This represents only the lost work time for each employee and where they will not be available to complete other tasks. It does not include the cost of training, which by nature of the training will need to be facility-specific to be effective. Even if the EPA develops and provides the minimum training at no cost to the utility, the time lost will have cost implications to utility annual labor budgets.

More significant are the costs associated with the mandates to update, develop and maintain vulnerability assessments, site security plans and emergency response plans which do not appear to be fully funded under this legislation. Considering the current economic conditions, utility rate payers are very sensitive to rate increases. Utility managers must effectively communicate any reasons why retail water rates increase each year. A public relations strategy that describes costs associated with security measures is critical.

Another consideration for utilities with the proposed legislation regards the so-called “Required Methods,” which appears to authorize the EPA Administrator or delegated state authority to require the water systems implement specific operating methods. Challenges exist for utilities when the regulatory agency specifies means and methods since liability issues may arise through such specification.

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substances for which there are drinking water standards. This statute would provide a “Safe Harbor” from personal injury suits as long as the water complies with “the more stringent of the primary MCLs established either pursuant to the State Regulatory body, or the Federal Safe Drinking Water Act.” Several states have already made progress in this regard, including Ohio, Arizona and California.

The initial public interest created by the filing of these cases in California has subsided, and the attorneys who filed the original suits do not seem eager to file new suits. Nonetheless, the public still holds considerable concern over contaminants in drinking water. Fairly or not, the litigious nature of our society makes utility lawsuits inevitable. **NOW** is the time to attempt to get state statutes, regulations and other mechanisms changed to reflect a more logical respect for the integrity of the regulatory and public health processes. ❖

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This particular stipulation in the proposed legislation may result in unintended consequences.

The comments contained in this article are personal comments of practicing water professionals with over 35 years of combined experience. Both authors have prepared and implemented vulnerability assessments, emergency response plans and risk management plans for multiple utilities/facilities and believe that the comments expressed are representative of many water industry professionals. ❖

For more information on the Drinking Water System Security Act of 2009 (H.R. 3258), please visit [http://energycommerce.house.gov/Press\\_111/20090720/dwssa.pdf](http://energycommerce.house.gov/Press_111/20090720/dwssa.pdf)

## Blending of Desalinated Water: Possible Regulatory Implications

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In an age of diminishing water quality, desalinated water is becoming an increasingly important source of drinking water. When brackish water or sea water sources are treated by desalination, the product water oftentimes is blended with treated water drawn from a fresh water source. Yet the water quality of a desalinated saline source is fundamentally different than that of a conventionally-treated fresh water source. Blending two fundamentally different water qualities requires great care. If improperly done, significant water quality problems can occur, some with regulatory implications.

Desalinated brackish or sea water is typically higher in bromide and chloride and lower in mineral content and pH than conventionally-treated fresh water. These differences can impact a utility’s ability to comply with the Disinfectants/Disinfection Byproducts (DBPR), Lead and Copper or Total Coliform (TCR) Rules or Secondary Maximum Contaminant Levels (SMCL) for iron and manganese. The table (right) summarizes some of these impacts.

Typically, carefully planned studies, such as pipe loop corrosion studies, or DBP formation potential tests, are required to understand the complex chemical interactions in the blended water and between the blended water and components of the distribution system. ❖

### Characteristics of Desalinated Water and Their Regulatory Implications

Parameter	Characteristic of Desalinated Brackish/Seawater	Implication	Potential Regulatory Impact
Bromide	Typically higher than treated fresh water	Increased formation of brominated DBP species	Possible violation of DBPR
		Reduced stability of monochloramine residual	Possible loss of disinfectant
Chloride	Typically higher than treated fresh water	Possible increased corrosion rates	Possible Lead and Copper Rule violation
Mineral Content	Low, little alkalinity or hardness	Increased corrosion rates	Possible Lead and Copper Rule violation
		Potential for destabilization of pipe scale (Red Water)	Possible TCR violation; may exceed iron or manganese SMCL
pH	Typically low	Increased corrosion rates	Possible Lead and Copper Rule violation
		Potential for destabilization of pipe scale (Red Water)	Possible TCR violation; may exceed iron or manganese SMCL