

# Report for Congress

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## **Safeguarding the Nation's Drinking Water: EPA and Congressional Actions**

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# Safeguarding the Nation's Drinking Water: EPA and Congressional Actions

## Summary

The events of September 11 raised concerns about the security of the nation's drinking water supplies and their vulnerability to attack. Issues include the readiness of water utilities to prevent and respond to attacks on water systems, steps that can be taken to improve preparedness and response capabilities, and the availability of resources to help utilities enhance drinking water security.

After a presidential commission on critical infrastructure protection identified vulnerabilities in the drinking water sector in 1997, the Environmental Protection Agency (EPA), along with other federal agencies, water utilities, and state and local governments, began taking steps to improve the security of water systems, although these efforts generally were not targeted to current concerns over terrorism. For several years, EPA has provided some research, information, and technical and financial assistance to improve preparedness and increase the security of drinking water systems and supplies. Some of these activities began pursuant to the 1998 Presidential Decision Directive (PDD) 63 on protecting the nation's critical infrastructure, but PDD-63 efforts were focused almost entirely on computer security issues. Since September 11; however, EPA has substantially broadened and expedited its efforts to help drinking water utilities safeguard facilities and supplies from terrorist or other threats.

Congress has taken significant steps to improve security in the water sector since September 11. In the emergency supplemental appropriations for FY2002 (P.L. 107-117, H.R.3338), Congress provided EPA with \$175.6 million for several counter-terrorism activities, including enhancing drinking water security. Of this amount, EPA is using \$89 million to reduce the vulnerability of public water systems to terrorist attacks and to enhance their security and their ability to respond to emergency situations.

In May, the House and Senate approved broad bioterrorism legislation (H.R. 3448, H.Rept. 107-481) which includes funding for drinking water utilities to: assess their vulnerability to terrorist attack, prepare emergency preparedness and response plans, and make basic security improvements. The legislation also provides for research on threats to water safety and infrastructure security, and authorizes funding for EPA to make emergency assistance grants to states and public water systems. On June 12, the President signed H.R. 3448 into law (P.L. 107-188).

In June, the President proposed to establish a Department of Homeland Security that, among other things, would be responsible for comprehensively evaluating the vulnerabilities of critical infrastructures, including water systems. The House and Senate have responded with their own versions of implementing legislation; the House has passed H.R. 5005, and the Senate Committee on Governmental Affairs has endorsed an amended version of S. 2452. Other pending legislation would provide financial assistance to water utilities for making security improvements, require utilities to assess and reduce vulnerabilities, and establish new water security research programs. This report will be updated to reflect further developments.

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# Safeguarding the Nation's Drinking Water: EPA and Congressional Actions

## Introduction

Ensuring the security of the nations' drinking water supplies poses a substantial challenge, partly because the number of water systems is very large and also because the responsibility for protecting drinking water safety is shared among federal, state and local governments and utilities. Nationwide, there are approximately 168,000 public water systems, and these systems range greatly in size, serving from as few as 25 persons to more than 1 million persons. Nearly 140,000 of these water systems serve 500 people or fewer; another 360 systems serve more than 100,000 people and provide water to nearly half of the total population served. Because water supplies directly affect many activities (from drinking water to fighting fires), their disruption could have significant impacts.

A 1996 executive order on critical infrastructure protection (E. O. 13010), included water supply systems as one of 8 national infrastructures vital to the security of the United States. In 1997, the President's Commission on Critical Infrastructure Protection (established by the executive order) issued a report on the vulnerabilities of these categories of infrastructures and strategies for protecting them. The Commission identified three attributes crucial to water supply users: water must be available on demand, it must be delivered at sufficient pressure, and it must be safe for use. The Commission concluded that actions affecting any of these factors could be debilitating for the infrastructure.<sup>1</sup>

Major threats to water supplies identified in the report include: physical destruction of facilities or distribution systems, biological or chemical contamination of supplies, and cyber attacks. The Commission concluded that water supplies had inadequate protection against the threat of chemical or biological contamination, and that technology was insufficient to allow detection, identification, measurement, and treatment of highly toxic, waterborne contaminants. Water utilities were also found to be vulnerable to cyber attacks as they rely increasingly on computers to control water flow and pressure.<sup>2</sup> The Commission determined that information sharing was the most immediate need, and that warning and analytical capabilities and research and development were all insufficient. (For a broader review of water sector security

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<sup>1</sup>The President's Commission on Critical Infrastructure Protection. *Critical Foundations: Protecting America's Infrastructures. Report of the President's Commission on Critical Infrastructure Protection*. Appendix A, Sector Summary Reports. October 1997. A-45.

<sup>2</sup>Steps taken by water utilities, typically larger utilities, to avoid Y2K problems have enhanced computer system security from certain types of attacks. For more information on this security issue, see CRS Report RL31534, *Critical Infrastructure Remote Control Systems and the Terrorist Threat*.

issues (including wastewater facilities and dams), see CRS Report RS21026, *Terrorism and Security Issues Facing the Water Infrastructure Sector.*)

In response to these findings and other developments, President Clinton issued Presidential Decision Directive (PDD) 63 on critical infrastructure protection in 1998.<sup>3</sup> Under this directive, a public/private partnership was established to put in place prevention, response, and recovery measures to ensure the security of the nation's critical infrastructures against criminal or terrorist attacks. PDD-63 designated EPA as the lead federal agency for the water supply sector. EPA appointed the Association of Metropolitan Water Agencies (AMWA) to coordinate the water sector. Before September 11, however, the focus of the PDD-63 efforts for all critical infrastructure sectors was on cyber security. Subsequently, efforts to protect the nation's critical infrastructures have been broadened and accelerated.<sup>4</sup>

## EPA Efforts to Protect Drinking Water

EPA believes that the threat of public harm from an attack on the nation's water supplies is small; nonetheless, the Agency has set a goal to ensure that water utilities in all communities (1) have access to scientific information and expertise, (2) assess their vulnerability to a terrorist attack, (3) improve security, and (4) know the immediate steps to take should an attack occur.<sup>5</sup>

For several years, but most substantially since September 11, EPA has been working with state and local governments, the drinking water industry, and other federal agencies to improve preparedness and increase the security of water supplies. Security-related activities fall into 5 general categories including: developing vulnerability assessment tools, identifying actions to minimize vulnerabilities, revising and enhancing existing emergency operations plans, establishing an information center on drinking water alerts or incidents, and supporting research on biological and chemical contaminants considered to be potential weapons of mass destruction. Several key government and private sector projects are described below.

**Information Sharing.** One goal of PDD-63 in 1998 was to establish an Information Sharing and Analysis Center (ISAC) for each critical infrastructure sector within 5 years. With assistance from EPA and the Federal Bureau of Investigation (FBI), the Association of Metropolitan Water Agencies is leading the effort to develop and implement a secure Water ISAC. The Water ISAC will provide a Web-based communication system that can be used to: (1) disseminate early warnings and alerts regarding threats against the physical and cyber systems of drinking water and wastewater facilities; (2) allow water utilities to share with each other information on security incidents; and (3) provide an opportunity for utilities to have security

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<sup>3</sup>See: [<http://www.ciao.gov/resource/directive.html>]

<sup>4</sup>For more information on PPD-63 and more recent developments, see CRS Report RL30153, *Critical infrastructures: Background, Policy, and Implementation.*

<sup>5</sup>U.S. Environmental Protection Agency. *EPA Actions to Safeguard the Nation's Drinking Water Supplies.* October 2001. See: [<http://www.epa.gov/safewater/security/index.html>].

incidents analyzed by counter-terrorism experts.<sup>6</sup> Although PDD-63 called for the completion of the Water ISAC in May 2003, EPA expects that it may be operating this year. In the interim, an unsecured communication system is in place.

Among other initiatives to provide information to utilities, notices have been distributed to utilities and local law enforcement officials on measures that could be taken immediately to improve security. EPA has sent several notices to utilities outlining available resources and providing advice on monitoring and treatment. Also, names of individuals who are on the FBI's watch lists were sent to utilities.

**Vulnerability Assessment Tools and Training.** Among water utilities, concerns over the security of facilities and supplies had been increasing in recent years. In response to these growing concerns, the American Water Works Association Research Foundation (AWWARF) initiated a project in June 2000 with the Department of Energy's Sandia National Laboratories to develop a vulnerability assessment methodology for utilities to use to assess vulnerabilities and develop plans to minimize identified risks. The original deadline for completing the vulnerability assessment methodology was Spring 2002; however, after the attacks of September 11, the project was expedited and completed in November 2001.

With EPA support, the American Water Works Association (AWWA) has offered workshops and training for water utilities on a wide range of security topics, including risk and vulnerability assessment, emergency response plans, and risk communication. Most notably, the AWWA, has been offering workshops based on the vulnerability assessment methodology developed by Sandia National Laboratories for AWWARF. With this training, many large drinking water utilities have acquired tools to evaluate their security and improve the preparedness of their water systems against intentional acts or emergency events.<sup>7</sup>

EPA is using funds provided in the FY2002 emergency supplemental appropriations (P.L. 107-117) to provide vulnerability assessment training to many more utilities this year. Training initially is being directed to the approximately 360 community water systems that serve 100,000 or more people. EPA's goal is, that by the end of FY2002, most of these large systems will have completed their assessments and will have begun taking remedial action and enhancing their emergency response plans. Under the new Bioterrorism Act (P.L. 107-188), large community water systems are required to complete vulnerability assessments by March 31, 2003. (See discussion in funding and congressional sections below.)

EPA has also worked with states, tribes, and utility organizations to provide technical assistance to utilities on security matters. In April 2002, EPA issued model emergency response guidelines to provide uniform response, recovery and remediation guidance for water utility actions in response to man-made or technological emergencies. In addition to describing minimum actions that EPA recommends be carried out by water utilities for various described events, the

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<sup>6</sup>For further information on the Water ISAC, see [<http://www.amwa.net/isac/index.html>].

<sup>7</sup>For more information, see the American Water Works Association Research Foundation website: [<http://www.awwarf.com/press/security.pdf>].

guidance document also identifies federal responsibilities and capabilities that can support local response efforts.<sup>8</sup>

**Research.** EPA, is working with the Department of Defense (DOD), the Centers for Disease Control and Prevention, the FBI, and the Food and Drug Administration to develop information for the Homeland Security Office on biological, chemical, and radiological contaminants, and how to respond to their presence in drinking water. This information is intended to expand the state of knowledge on: technologies to detect contaminants, monitoring protocols and techniques, and treatment effectiveness.

EPA-supported research projects that are expected to provide information this year include research on “river spill” and “pipeline” models to determine the fate and transport of contaminants within rivers and streams and within water treatment plants and distribution systems, and research to develop biodetectors for detecting and quantifying biological contaminants in drinking water supplies.<sup>9</sup>

**Funding Security Improvements.** In the emergency supplemental appropriations for FY2002 (P.L. 107-117), enacted January 10, 2002, Congress provided EPA with \$175.6 million for responding to the September 11 attacks and to support counter-terrorism activities. As discussed in greater detail in the section on Congressional actions, conferees specified that \$90.3 million is intended to be used for several purposes, including performing drinking water vulnerability assessments. Another \$5 million is for state grants for counter-terrorism coordinators to work with EPA and water utilities in assessing drinking water safety.

EPA’s FY2003 budget request outlined the Agency’s plans to invest in FY2002 \$88.8 million of the amount provided in the emergency supplemental appropriation to support security enhancements at the nation’s drinking water systems. Of this amount, EPA planned to allocate about \$80 million to: (1) direct grants to the largest drinking water systems to conduct vulnerability assessments and enhance emergency response plans; (2) provide technical assistance on vulnerability assessments and emergency response plans to small and medium drinking water systems; and (3) further refine security-related detection, monitoring, and treatment tools. EPA planned to expend another \$4 million to: accelerate the development and testing of counter-terrorism tools; support training for the development of vulnerability assessments; provide technical assistance; and conduct, test, and implement research on redesign and detection for collection and treatment systems. EPA also planned to develop tools and training for medium and small drinking water systems to assess vulnerabilities and develop appropriate emergency response plans. Additionally, EPA

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<sup>8</sup>U.S. Environmental Protection Agency. *Guidance for Water Utility Response, Recovery & Remediation Actions for Man-Made and/or Technological Emergencies*. EPA 810-R-02-001. April 2002. Available at: [<http://www.epa.gov/safewater/security>].

<sup>9</sup>Statement of Marianne Horinko, Assistant Administrator, Office of Solid Waste and Emergency Response, U.S. Environmental Protection Agency, before the Subcommittee on Water Resources and Environment of the Committee on Transportation and Infrastructure. October 10, 2001.

is providing \$5 million to the states to support homeland security coordination work involving EPA and drinking water utilities.<sup>10</sup>

The emergency supplemental appropriation also provided funds for research and development activities related to homeland security. EPA planned to use some of these resources to evaluate the performance of drinking water treatment systems for their ability to remove and inactivate biological and chemical warfare agents.

In June, EPA began awarding water security grants as part of \$53 million the Agency is making available for large community water systems (i.e., systems serving more than 100,000 individuals). The Agency accepted grant applications from large *publicly* owned community water systems through August 9, 2002, and will accept applications from *privately* owned community water systems until August 30, 2002. The value of each grant will not exceed \$115,000. Water utilities may use these grants for vulnerability assessments and other security planning. According to EPA,

grant monies may be used to develop a vulnerability assessment, emergency response/operating plan, security enhancement plans and designs, or a combination of the efforts. Utilities may use grant funds for in-house or contractor support, assuming demonstration of qualifications. ... Funds awarded under this program may not be used for physical improvements.<sup>11</sup>

Although these grants are being made only to large systems, EPA has been working with states and utilities to determine the best ways to meet the security needs of small and medium-sized drinking water systems. According to EPA, a significant portion of the FY2002 funding was being used to provide training, and to develop and distribute tools and technical assistance to these systems. Toward that end, in June, EPA, in collaboration with states and the National Rural Water Association, published a security vulnerability self-assessment guide for small drinking water systems (serving fewer than 3,300 people). In July, EPA issued a water security strategy for systems serving fewer than 100,000 persons.<sup>12</sup>

For FY2003, EPA has requested \$16.9 million to conduct additional drinking water vulnerability assessments for small and medium-sized systems, and \$5 million in grants to states to support homeland security coordination.

In addition to the above resources, EPA has identified numerous security measures that are eligible for funding through the Drinking Water State Revolving Fund (DWSRF) program.<sup>13</sup> Examples of eligible measures include vulnerability

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<sup>10</sup>Environmental Protection Agency. *FY2003 Annual Performance Plan and Congressional Justification*. Special Analyses: Homeland Security, p. SA-15, SA-16.

<sup>11</sup>For a list of communities that have received grants, see *Large Drinking Water Utilities Awarded Security Grants* at: [[http://www.epa.gov/safewater/security/large\\_grants/list.html](http://www.epa.gov/safewater/security/large_grants/list.html)].

<sup>12</sup>Water Security Strategy for Systems Serving Populations Less Than 100,000/15 MGD or Less (for drinking water utilities and for wastewater utilities treating 1,500 million gallons per day (MGD) or less). Available at: [<http://www.epa.gov/safewater/security>]

<sup>13</sup>For more information, see EPA fact sheet, *Use of the Drinking Water State Revolving Fund* (continued...)

assessments, contingency plans, and various facility improvements. Congress approved \$850 million for this program for FY2002. However, it is uncertain how readily funds might become available for security measures, as the key purpose of the DWSRF is to facilitate compliance with federal drinking water regulations, and because it can take years for a public water system to receive funding through this infrastructure program.<sup>14 15</sup>

## **Congressional Actions to Enhance Drinking Water Security**

Congress has held multiple hearings to examine security issues facing the water infrastructure sector and has acted on several bills to improve drinking water security. The bills range from requiring utilities to assess and reduce vulnerabilities, to providing assistance to utilities for security enhancements, to establishing research programs to improve utilities' ability to prevent, mitigate, and respond to attacks. Selected bills are discussed below. (Table 1 on page 8 outlines drinking water security provisions in enacted bills and pending legislation in the 107<sup>th</sup> Congress.)

The emergency supplemental appropriations for FY2002 (P.L. 107-117, H.R. 3338) provided EPA with \$175.6 million for emergency expenses to respond to the September 11 attacks and to support counter-terrorism activities. The accompanying conference report, H.Rept. 107-350, specifies that \$90.3 million is intended to be used to improve security at EPA laboratories, to perform drinking water vulnerability assessments, and for anthrax decontamination activities. Another \$5 million is for state grants for counter-terrorism coordinators to work with EPA and water utilities in assessing drinking water safety. As noted, EPA has initiated a grant program for large water systems for vulnerability assessments and other security planning.

On June 12, the President signed into law the *Public Health Security and Bioterrorism Preparedness and Response Act of 2002* (P.L. 107-188, H.Rept. 107-481). The House-passed version of the bill contained drinking water security

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<sup>13</sup>(...continued)

(*DWSRF*) to Implement Security Measures at Public Water Systems. EPA 816-F-02-040. November 2001. Available at: [<http://www.epa.gov/safewater/dwsrf/security-fs.pdf>].

<sup>14</sup>For information on the DWSRF program, see CRS Report 97-677, *Safe Drinking Water Act: State Revolving Fund Program*.

<sup>15</sup>Another potential source of funding for community water systems to enhance security may be through the U.S. Department of Agriculture, Rural Utility Service (RUS), Water and Environmental Programs. These programs provide grants, loans, and loan guarantees for water and waste disposal projects (i.e., drinking water, sanitary sewer, solid waste, and storm drainage facilities) for communities of 10,000 or fewer individuals. According to RUS officials, funds provided for community water system projects could be used to improve the security of those systems. For FY2002, the RUS has available for the Water and Environmental Programs approximately \$586 million for grants, \$836 million in direct loan authority, and \$75 million in guaranteed loan authority. In addition to these funds, Congress provided in the 2002 Farm Bill (P.L. 107-171) \$360 million to fund water and waste disposal applications that were pending on the date of Farm Bill's enactment, May 13, 2002. The entire amount is mandatory funding that does not require an appropriation, and it is to remain available until expended.

provisions, and the final act expanded on these provisions, including elements of Senate bills on water security research and preparedness.

Title IV of the Bioterrorism Act amends the Safe Drinking Water Act (SDWA) to require each community water system serving more than 3,300 individuals to conduct an assessment of the system's vulnerability to terrorist attacks or other intentional acts to disrupt the provision of a safe and reliable drinking water supply. The law establishes deadlines, based on system size, for community water systems to certify to EPA that they have conducted a vulnerability assessment and to submit to EPA a copy of the assessment. Certifications and submissions must be made before:

- ! March 31, 2003 by systems serving 100,000 or more persons;
- ! December 31, 2003 by systems serving 50,000 or more but fewer than 100,000 persons; and
- ! June 30, 2004 by systems serving more than 3,300 but fewer than 50,000 persons.

The Act exempts the contents of the vulnerability assessments from disclosure under the Freedom of Information Act (except for information contained in the certification identifying the system and the date of the certification). The law requires EPA to develop protocols to protect the assessments from unauthorized disclosure, and provides for civil and criminal penalties for inappropriate disclosure of information by government officials.

Additionally, the Bioterrorism Act requires each community water system serving more than 3,300 individuals to prepare or revise an emergency response plan incorporating the results of the vulnerability assessment. EPA is required to provide guidance to smaller systems on how to conduct vulnerability assessments, prepare emergency response plans, and address threats.

The Act authorizes \$160 million for FY2002 to provide financial assistance to community water systems to conduct vulnerability assessments, to prepare response plans, and for expenses and contracts to address basic security enhancements and significant threats. (Security enhancements may include purchase and installation of intruder detection equipment and lighting, enhancing security of automated systems, personnel training and security screening of employees or contractors, etc. Funding may not be used for personnel costs, plant operations, monitoring or maintenance.)

Also for this fiscal year, the Act authorizes \$35 million for EPA to make grants to states and water systems to assist in responding to emergency situations, and \$15 million for EPA to review methods by which terrorists or others could disrupt the provision of safe water supplies, and methods for preventing, detecting, and responding to such disruptions.<sup>16</sup>

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<sup>16</sup>For a detailed discussion of the entire Act and a chronology of bioterrorism hearings, see CRS Report RL31263, *Bioterrorism: Legislation to Improve Public Health Preparedness and Response Capacity*.

The House and Senate have acted on several other bills focused specifically on water security. Senate-passed S. 1608 (S.Rept. 107-119) directs EPA to provide funds to states to use in awarding grants to drinking water and wastewater facilities to meet immediate security needs (several of the specified activities have been incorporated into the Bioterrorism Act). Two other bills address concerns over gaps in water security research: House-passed H.R. 3178; and S. 1593, reported by the Senate Environment and Public Works Committee (S.Rept. 107-118). These similar bills establish grant programs to support research and development projects for the security of drinking water and wastewater infrastructure.<sup>17</sup> Elements of these bills also are contained in P.L. 107-188.

On August 2, 2002, President Bush signed into law the *2002 Supplemental Appropriations Act for Further Recovery From and Response to Terrorist Attacks on the United States* (P.L. 107-206, H.R. 4775), a \$28.9 billion emergency supplemental spending bill. The conference agreement to H.R. 4775 (H.Rept. 107-593) included \$50 million to EPA for security vulnerability assessments of small and medium sized drinking water systems. It also included \$20 million for the U.S. Department of Agriculture (USDA) for emergency grants and loans, with up to \$5 million for contracting with qualified organizations to conduct vulnerability assessments for rural community water systems. However, the law stipulated that \$5.1 billion provided in the bill, including this EPA and USDA funding, would be available contingent upon the declaration of a budget emergency by the President. The President had not requested this funding and had until September 4<sup>th</sup> to do so, or the funding would no longer be available. On August 13, the President announced that he will not release the \$5.1 billion contingency fund, which is intended for a wide variety of purposes, including homeland security. (For FY2003, the Administration has requested \$17 million for EPA for vulnerability assessments for small and medium-sized systems, and \$5 million in grants to states to support homeland security coordination.)

## Department of Homeland Security Proposal

The Department of Homeland Security proposal announced by the Bush Administration on June 6, 2002<sup>18</sup> envisions a Department that would be responsible for “comprehensively evaluating the vulnerabilities of America’s critical infrastructure,” including water systems. Under “Critical Infrastructure Protection,” the proposal discusses a national effort to secure America’s critical infrastructure sectors by building and maintaining a “comprehensive assessment” of these sectors. According to the proposal, the Department would analyze threats, direct or coordinate action to protect vulnerable systems, and would “establish policy for standardized, tiered protective measures tailored to the target and rapidly adjusted to the threat.”

House and the Senate bills to establish a Department of Homeland Security build on the President’s proposal regarding critical infrastructure vulnerability assessment

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<sup>17</sup>For a broad discussion of security-related water research issues and needs, see: *H.R. 3178 and the Development of Anti-Terrorism Tools for Water Infrastructure*. Hearing before the Committee on Science, House of Representatives, 107<sup>th</sup> Congress, 1<sup>st</sup> session. Serial No. 107-29. 2001. Available at: [<http://www.house.gov/science>].

<sup>18</sup>[<http://www.whitehouse.gov/deptofhomeland/sect1.html>].

and protection. The House passed H.R. 5005, on July 26, and the Senate Committee on Governmental Affairs endorsed S. 2452, as amended by the Committee on July 24 and 25. Neither bill appears to envision transferring EPA water security functions to a new Homeland Security Department. Both bills would include in the Department an office headed by an under secretary for infrastructure protection with responsibilities for analyzing and integrating information to assess the vulnerabilities of critical infrastructures, developing a comprehensive national plan for securing key resources and critical infrastructure, coordinating with other agencies regarding infrastructure security, etc. Under S. 2452, , a Directorate of Critical Infrastructure Protection also would be responsible for “establishing specialized research and analysis units for the purpose of processing intelligence to identify vulnerabilities and protective measures” in various sectors, including water storage, production and distribution. H.R. 5005 does not explicitly mention water supplies, but has many similarities in its provisions addressing critical infrastructures. (For more information, see CRS Report RL31513, *Homeland Security: Side-by-Side Comparison of H.R. 5005 and S. 2452, 107<sup>th</sup> Congress.*)

**Table 1. Drinking Water Security Legislation in the 107<sup>th</sup> Congress**

Bill	Key Provisions	Funding	Status
H.R. 3448 (Title IV)	<p><b>Public Health Security and Bioterrorism Preparedness and Response Act of 2002.</b> Title IV of this comprehensive bioterrorism legislation amends the Safe Drinking Water Act to require community water systems serving more than 3,300 individuals to conduct vulnerability assessments and to prepare emergency response plans. Utilities must submit assessments to EPA; the information they contain is not subject to the Freedom of Information Act. Authorizes EPA, in coordination with state and local governments, to provide financial assistance to these systems for conducting assessments and preparing response plans, and for expenses to address basic security enhancements and significant threats. EPA must provide guidance for smaller systems on how to conduct vulnerability assessments, prepare response plans, and address threats to water supplies. \$5 million of the funds made available may be used to make grants to systems to assist in responding to any vulnerability that EPA determines presents an urgent security need; another \$5 million may be used for security activities for systems serving fewer than 3,300 persons.</p> <p>Authorizes EPA to provide technical assistance and to make grants to states and public water systems to assist in responding to and alleviating emergency situations.</p> <p>Directs EPA, with the Centers for Disease Control, to review (directly or through contracts or cooperative agreements) methods and means to prevent, detect and respond to the intentional introduction of chemical, biological or radiological contaminants into community water systems and source waters. The review must include methods and means to detect contaminants, to provide sufficient notice of contamination, to prevent the flow of contaminated drinking water, to negate or mitigate adverse effects on public health, to develop educational and awareness programs for community water systems, and to conduct biomedical research. Requires EPA to share the information developed, as appropriate, through the Water Information Sharing and Analysis Center (ISAC). EPA also must, in coordination with other federal departments and agencies, review methods and means by which terrorists or others could disrupt the supply of safe drinking water or render a public water supply unsafe, including methods and means by which water systems could be destroyed, impaired, or made subject to cross-contamination, or by which information systems, including process controls and computer systems could be disrupted. EPA must also review methods and means to reasonably protect systems from attacks, and to provide alternative drinking water supplies.</p>	<p>\$160 million for FY2002, and such sums as may be necessary for FY2003-FY2005 for these activities</p> <p>\$35 million for FY2002 and such sums as necessary thereafter</p> <p>\$15 million for FY2002 and such sums as necessary for FY2003-FY2005</p>	<p><b>Enacted</b> P.L. 107-188, H.Rept. 107-481</p>

Bill	Key Provisions	Funding	Status
H.R. 3448 (cont'd.)	Specifies that EPA's emergency powers under SDWA include authority to act when there is a threatened or potential terrorist attack or other intentional act to disrupt a water supply. Increases criminal and civil penalties for tampering, or threatening to tamper, with public water supplies.		
H.R. 3338 (Div. B)	<p><b>Emergency Supplemental Appropriations for FY2002.</b> Division B authorizes appropriations to EPA for emergency expenses to respond to 9/11 attacks and to support counter-terrorism activities, including:</p> <p><i>Science and Technology Account:</i> to assess and improve building security at EPA laboratory sites, to perform drinking water vulnerability assessments, and for anthrax decontamination.</p> <p><i>State and Tribal Assistance Grants:</i> for counter-terrorism coordinators to work with EPA and water utilities in assessing drinking water safety.</p> <p><i>Environmental Programs and Management Account:</i> for planning manuals for wastewater treatment plants, anthrax decontamination, personnel, etc.</p> <p><i>Hazardous Substance Superfund Account:</i> for a West Coast "Immediate Response Team, anthrax cleanup and reimbursement, personnel, etc.</p>	<p>\$175.6 million for FY2002 including:</p> <p>\$90.3 million</p> <p>\$5 million</p> <p>\$39 million</p> <p>\$41.3 million</p>	<p><b>Enacted</b> P.L. 107-117, H.Rept. 107-350</p>
H.R. 3178 (Similar to S. 1593)	<p><b>The Water Infrastructure Security and Research Development Act</b> directs EPA to establish a grant program for research, development, and demonstration activities to improve technologies and related processes for security of water supply systems and municipal wastewater treatment facilities. Requires EPA to make grants to, or enter into agreements with, research organizations to be used for: (1) research on technologies and processes for vulnerability assessment, and protection of physical assets and information systems; (3) dissemination of research results to facility managers and the public; (4) research or development of real-time monitoring systems to protect against chemical, biological, and radiological attacks, etc.</p>	<p>\$12 million for each of FY2002-FY2006</p>	<p>Passed by the House on 12/18/01; <b>Placed on Senate Legislative Calendar</b> 12/19/01.</p>
H.R. 3227	Amends the Safe Drinking Water Act to direct EPA to make grants to organizations, or enter into contracts with any person, to conduct research on methods to combat biological contamination of public water supplies.	Authorizes such sums as may be necessary.	Introduced 11/1/01; referred to House Science Committee

Bill	Key Provisions	Funding	Status
H.R. 3255 (Title II)	<b>The Bioterrorism Protection Act of 2001.</b> Title II of this extensive security bill addresses water security and requires EPA: (1) to undertake vulnerability assessments for public water systems and wastewater facilities; (2) to review emergency response plans and operations of public water systems to ensure that plans account for possible chemical, biological or radiological attacks; (3) to provide financial and technical assistance to systems that lack adequate response plans; (4) to provide, in coordination with the Office of Homeland Security, assistance to water systems to make critically-important basic security enhancements; (5) to assist water systems to prevent electronic attacks on information systems at facilities. Directs EPA, in consultation with DOE, to conduct research and development of technology to monitor and detect chemical, biological and radiological contamination of drinking water systems.	For FY2002: \$66 million for vulnerability assessments; \$55 million for emergency response plans; \$3 million for R&D; \$60 million for basic security enhancements; \$80 million for electronic security	Introduced 11/8/01; referred to 9 committees.
S. 1593 (Similar to H.R. 3178)	<b>The Water Infrastructure Security and Research Development Act</b> directs EPA to establish a grants program and to enter into cooperative agreements with research institutions to improve the protection and security of public water supply systems and municipal wastewater treatment facilities. Eligible projects: (1) assess security issues by conducting assessments of security issues and developing vulnerability assessment tools for systems to identify physical and cyber vulnerabilities; (2) protect water systems by developing technologies, processes, guidelines, standards and real-time monitoring systems, and educational programs; (3) develop technologies and processes for mitigating and responding to contamination of water supplies; (4) implement Presidential Decision Directive by operating/refining the Information Sharing and Analysis Center (ISAC); and (5) test new technologies and processes. (This bill also includes \$20 million for each of FY2002 and FY2003 to assist small public water systems in complying with requirements regarding arsenic in drinking water.)	\$12 million for each of FY2002- FY2007	Reported by Senate Environment and Public Works Committee 12/10/01; <b>Placed on the Senate Legislative Calendar.</b>
S. 1608	Directs EPA to establish a program to allocate funds to states for use in awarding grants to drinking water and wastewater facilities for projects and activities to address immediate security needs. (Many of the specified activities have been included in H.R. 3448.)	\$50 million for year in which bill is enacted.	<b>Passed by Senate</b> 12/20/01.
S. 1737	<b>The Homeland Security Block Grant Act</b> authorizes the Attorney General to make homeland security block grants to state and local governments and Indian tribes for a range of security-enhancing activities (e.g., funding law enforcement and improving cyber and infrastructure security).	\$3 billion for FY2002, and such additional sums as are authorized thereafter	Introduced 11/28/01; referred to Senate Judiciary Committee.

Bill	Key Provisions	Funding	Status
S. 2077	<b>The Securing Our States Act of 2002</b> directs the Director of Federal Emergency Management Agency (FEMA) to make grants to states to improve public safety in order to prepare for and respond to terrorist threats. Grants may be used for various specified purposes, including improving protection of critical infrastructure which includes water treatment plants, distribution systems, and other water infrastructure.	\$4 billion for FY2003, and such as necessary for each fiscal year thereafter.	Introduced 4/9/02; referred to Senate Environment and Public Works Committee.
S. 2599	<b>The Water Supply Technology Act of 2002</b> establishes a Water Supply Technologies Program within the Office of Energy Efficiency and Renewable Energy of the Department of Energy (DOE). Directs the Secretary to carry out research and development programs on water supply security, arsenic removal, desalination, water and energy sustainability. Directs DOE to offer to enter into contract with the American Water Works Association Research Foundation to carry out the water supply security research program. Requires the program to include research on developing cost-effective monitoring technologies for chemical and biological threats, and methodologies to enable monitoring data to be applied rapidly to decision making.	\$25 million for FY2003, of which \$4 million is for water security research program, and such sums as are necessary for each fiscal year thereafter.	Introduced 6/6/02; referred to the Senate Environment and Public Works Committee.