

109TH CONGRESS  
2D SESSION

# S. 2920

To amend the Safe Drinking Water Act to eliminate security risks by replacing the use of extremely hazardous gaseous chemicals with inherently safer technologies.

---

IN THE SENATE OF THE UNITED STATES

MAY 22, 2006

Mr. REID (for Mr. BIDEN) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

---

## A BILL

To amend the Safe Drinking Water Act to eliminate security risks by replacing the use of extremely hazardous gaseous chemicals with inherently safer technologies.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Community Water  
5 Treatment Hazards Reduction Act of 2006”.

1 **SEC. 2. USE OF INHERENTLY SAFER TECHNOLOGIES AT**  
 2 **WATER FACILITIES.**

3 Part F of the Safe Drinking Water Act (42 U.S.C.  
 4 300j–21 et seq.) is amended by adding at the end the fol-  
 5 lowing:

6 **“SEC. 1466. USE OF INHERENTLY SAFER TECHNOLOGIES AT**  
 7 **WATER FACILITIES.**

8 “(a) DEFINITIONS.—In this section:

9 “(1) HARMFUL INTENTIONAL ACT.—The term  
 10 ‘harmful intentional act’ means a terrorist attack or  
 11 other intentional act carried out upon a water facil-  
 12 ity that is intended—

13 “(A) to substantially disrupt the ability of  
 14 the water facility to provide safe and reliable—

15 “(i) conveyance and treatment of  
 16 wastewater or drinking water;

17 “(ii) disposal of effluent; or

18 “(iii) storage of a potentially haz-  
 19 ardous chemical used to treat wastewater  
 20 or drinking water;

21 “(B) to damage critical infrastructure;

22 “(C) to have an adverse effect on the envi-  
 23 ronment; or

24 “(D) to otherwise pose a significant threat  
 25 to public health or safety.

1           “(2) INHERENTLY SAFER TECHNOLOGY.—The  
2           term ‘inherently safer technology’ means a tech-  
3           nology, product, raw material, or practice the use of  
4           which, as compared to the current use of tech-  
5           nologies, products, raw materials, or practices, sig-  
6           nificantly reduces or eliminates—

7                   “(A) the possibility of release of a sub-  
8                   stance of concern; and

9                   “(B) the hazards to public health and safe-  
10                  ty and the environment associated with the re-  
11                  lease or potential release of a substance of con-  
12                  cern.

13           “(3) SECRETARY.—The term ‘Secretary’ means  
14           the Secretary of Homeland Security (or a designee).

15           “(4) SUBSTANCE OF CONCERN.—

16                   “(A) IN GENERAL.—The term ‘substance  
17                  of concern’ means any chemical, toxin, or other  
18                  substance that, if transported or stored in a  
19                  sufficient quantity, would have a high likelihood  
20                  of causing casualties and economic damage if  
21                  released or otherwise successfully targeted by a  
22                  harmful intentional act, as determined by the  
23                  Administrator, in consultation with the Sec-  
24                  retary.

1           “(B) INCLUSIONS.—The term ‘substance  
2 of concern’ includes—

3           “(i) any substance included in Table 1  
4 or 2 contained in section 68.130 of title  
5 40, Code of Federal Regulations (or a suc-  
6 cessor regulation), published in accordance  
7 with section 112(r)(3) of the Clean Air Act  
8 (42 U.S.C. 7412(r)(3)); and

9           “(ii) any other highly hazardous gas-  
10 eous toxic material or substance that, if  
11 transported or stored in a sufficient quan-  
12 tity, could cause casualties or economic  
13 damage if released or otherwise success-  
14 fully targeted by a harmful intentional act,  
15 as determined by the Administrator, in  
16 consultation with the Secretary.

17           “(5) TREATMENT WORKS.—The term ‘treat-  
18 ment works’ has the meaning given the term in sec-  
19 tion 212 of the Federal Water Pollution Control Act  
20 (33 U.S.C. 1292).

21           “(6) VULNERABILITY ZONE.—The term ‘vulner-  
22 ability zone’ means, with respect to a substance of  
23 concern, the geographic area that would be affected  
24 by a worst-case release of the substance of concern,

1 as determined by the Administrator on the basis  
2 of—

3 “(A) an assessment that includes the infor-  
4 mation described in section 112(r)(7)(B)(ii)(I)  
5 of the Clean Air Act (42 U.S.C.  
6 7412(r)(7)(B)(ii)(I)); or

7 “(B) such other assessment or criteria as  
8 the Administrator determines to be appropriate.

9 “(7) WATER FACILITY.—The term ‘water facil-  
10 ity’ means a treatment works or public water system  
11 owned or operated by any person.

12 “(b) REGULATIONS.—

13 “(1) IN GENERAL.—Not later than 90 days  
14 after the date of enactment of this section, the Ad-  
15 ministrator, in consultation with the Secretary and  
16 other Federal, State, and local governmental enti-  
17 ties, security experts, owners and operators of water  
18 facilities, and other interested persons shall—

19 “(A) compile a list of all high-consequence  
20 water facilities, as determined in accordance  
21 with paragraph (2); and

22 “(B) notify each owner and operator of a  
23 water facility that is included on the list.

24 “(2) IDENTIFICATION OF HIGH-CONSEQUENCE  
25 WATER FACILITIES.—

1           “(A) IN GENERAL.—Subject to subpara-  
2 graph (B), in determining whether a water fa-  
3 cility is a high-consequence water facility, the  
4 Administrator shall consider—

5           “(i) the number of people located in  
6 the vulnerability zone of each substance of  
7 concern that could be released at the water  
8 facility;

9           “(ii) the critical infrastructure (such  
10 as health care, governmental, or industrial  
11 facilities or centers) served by the water  
12 facility;

13           “(iii) any use by the water facility of  
14 large quantities of 1 or more substances of  
15 concern; and

16           “(iv) the quantity and volume of an-  
17 nual shipments of substances of concern to  
18 or from the water facility.

19           “(B) TIERS OF FACILITIES.—

20           “(i) IN GENERAL.—Except as pro-  
21 vided in clauses (ii) through (iv), the Ad-  
22 ministrator shall classify high-consequence  
23 water facilities designated under this para-  
24 graph into 3 tiers, and give priority to or-  
25 ders issued for, actions taken by, and other

1 matters relating to the security of, high-  
2 consequence water facilities based on the  
3 tier classification of the high-consequence  
4 water facilities, as follows:

5 “(I) TIER 1 FACILITIES.—A Tier  
6 1 high-consequence water facility shall  
7 have a vulnerability zone that covers  
8 more than 100,000 individuals and  
9 shall be given the highest priority by  
10 the Administrator.

11 “(II) TIER 2 FACILITIES.—A  
12 Tier 2 high-consequence water facility  
13 shall have a vulnerability zone that  
14 covers more than 25,000, but not  
15 more than 100,000, individuals and  
16 shall be given the second-highest pri-  
17 ority by the Administrator.

18 “(III) TIER 3 FACILITIES.—A  
19 Tier 3 high-consequence water facility  
20 shall have a vulnerability zone that  
21 covers more than 10,000, but not  
22 more than 25,000, individuals and  
23 shall be given the third-highest pri-  
24 ority by the Administrator.

1           “(ii) MANDATORY DESIGNATION.—If  
 2           the vulnerability zone for a substance of  
 3           concern at a water facility contains more  
 4           than 10,000 individuals, the water facility  
 5           shall be—

6                       “(I) considered to be a high-con-  
 7                       sequence water facility; and

8                       “(II) classified by the Adminis-  
 9                       trator to an appropriate tier under  
 10                      clause (i).

11           “(iii) DISCRETIONARY CLASSIFICA-  
 12           TION.—A water facility with a vulnerability  
 13           zone that covers 10,000 or fewer individ-  
 14           uals may be designated as a high con-  
 15           sequence facility, on the request of the  
 16           owner or operator of a water facility, and  
 17           classified into a tier described in clause (i),  
 18           at the discretion of the Administrator.

19           “(iv) RECLASSIFICATION.—The Ad-  
 20           ministrator—

21                       “(I) may reclassify a high-con-  
 22                       sequence water facility into a tier with  
 23                       higher priority, as described in clause  
 24                       (i), based on an increase of population  
 25                       covered by the vulnerability zone or



any other appropriate factor, as determined by the Administrator; but

“(II) may not reclassify a high-consequence water facility into a tier with a lower priority, as described in clause (i), for any reason.

“(3) OPTIONS FEASIBILITY ASSESSMENT ON  
USE OF INHERENTLY SAFER TECHNOLOGY.—

“(A) IN GENERAL.—Not later than 90 days after the date on which the owner or operator of a high-consequence water facility receives notice under paragraph (1)(B), the owner or operator shall submit to the Administrator an options feasibility assessment that describes—

“(i) an estimate of the costs that would be directly incurred by the high-consequence water facility in transitioning from the use of the current technology used for 1 or more substances of concern to inherently safer technologies; and

“(ii) comparisons of the costs and benefits to transitioning between different inherently safer technologies, including the use of—

- 1 “(I) sodium hypochlorite;  
2 “(II) ultraviolet light;  
3 “(III) other inherently safer tech-  
4 nologies that are in use within the ap-  
5 plicable industry; or  
6 “(IV) any combination of the  
7 technologies described in subclauses  
8 (I) through (III).

9 “(B) CONSIDERATIONS IN DETERMINING  
10 ESTIMATED COSTS.—In estimating the transi-  
11 tion costs described in subparagraph (A)(i), an  
12 owner or operator of a high-consequence water  
13 facility shall consider—

14 “(i) the costs of capital upgrades to  
15 transition to the use of inherently safer  
16 technologies;

17 “(ii) anticipated increases in operating  
18 costs of the high-consequence water facil-  
19 ity;

20 “(iii) offsets that may be available to  
21 reduce or eliminate the transition costs,  
22 such as the savings that may be achieved  
23 by—

24 “(I) eliminating security needs  
25 (such as personnel and fencing);

1 “(II) complying with safety regu-  
2 lations;

3 “(III) complying with environ-  
4 mental regulations and permits;

5 “(IV) complying with fire code  
6 requirements;

7 “(V) providing personal protec-  
8 tive equipment;

9 “(VI) installing safety devices  
10 (such as alarms and scrubbers);

11 “(VII) purchasing and maintain-  
12 ing insurance coverage;

13 “(VIII) conducting appropriate  
14 emergency response and contingency  
15 planning;

16 “(IX) conducting employee back-  
17 ground checks; and

18 “(X) potential liability for per-  
19 sonal injury and damage to property;  
20 and

21 “(iv) the efficacy of each technology in  
22 treating or neutralizing biological or chem-  
23 ical agents that could be introduced into a  
24 drinking water supply by a terrorist or act  
25 of terrorism.

1           “(C) USE OF INHERENTLY SAFER TECH-  
2           NOLOGIES.—

3                   “(i) IN GENERAL.—Subject to clause  
4                   (ii), not later than 90 days after the date  
5                   of submission of the options feasibility as-  
6                   sessment required under this paragraph,  
7                   the owner or operator of a high-con-  
8                   sequence water facility, in consultation  
9                   with the Administrator, the Secretary, the  
10                  United States Chemical Safety and Hazard  
11                  Investigation Board, local officials, and  
12                  other interested parties, shall determine  
13                  which inherently safer technologies are to  
14                  be used by the high-consequence water fa-  
15                  cility.

16                  “(ii) CONSIDERATIONS.—In making  
17                  the determination under clause (i), an  
18                  owner or operator—

19                       “(I) may consider transition  
20                       costs estimated in the options feasi-  
21                       bility assessment of the owner or op-  
22                       erator (except that those transition  
23                       costs shall not be the sole basis for  
24                       the determination of the owner or op-  
25                       erator);

1 “(II) shall consider long-term se-  
2 curity enhancement of the high-con-  
3 sequence water facility;

4 “(III) shall consider comparable  
5 water facilities that have transitioned  
6 to inherently safer technologies; and

7 “(IV) shall consider the overall  
8 security impact of the determination,  
9 including on the production, proc-  
10 essing, and transportation of sub-  
11 stances of concern at other facilities.

12 “(c) ENFORCEMENT.—

13 “(1) IN GENERAL.—In accordance with the  
14 tiers and priority system established under sub-  
15 section (b)(2)(B), subject to paragraph (2), the Ad-  
16 ministrator—

17 “(A) shall prioritize the use of inherently  
18 safer technologies at high-consequence facilities  
19 listed under subsection (b)(1);

20 “(B) subject to the availability of grant  
21 funds under this section, not later than 90 days  
22 after the date on which the Administrator re-  
23 ceives an options feasibility assessment from an  
24 owner or operator of a high-consequence water  
25 facility under subsection (b)(3)(A), shall issue

1 an order requiring the high-consequence water  
2 facility to eliminate the use of 1 or more sub-  
3 stances of concern and adopt 1 or more inher-  
4 ently safer technologies; and

5 “(C) may seek enforcement of an order  
6 issued under paragraph (2) in the appropriate  
7 United States district court.

8 “(2) DE MINIMIS USE.—Nothing in this section  
9 prohibits the de minimis use of a substance of con-  
10 cern as a residual disinfectant.

11 “(d) GRANTS.—

12 “(1) IN GENERAL.—In accordance with the  
13 tiers and priority system established under sub-  
14 section (b)(2)(B), the Administrator shall provide  
15 grants to high-consequence facilities (including high-  
16 consequence facilities subject to an order issued  
17 under subsection (c)(1)(C) and water facilities de-  
18 scribed in paragraph (6)) for use in paying capital  
19 expenditures directly required to complete the transi-  
20 tion of the high-consequence water facility to the use  
21 of 1 or more inherently safer technologies.

22 “(2) APPLICATION.—A high-consequence water  
23 facility that seeks to receive a grant under this sub-  
24 section shall submit to the Administrator an applica-  
25 tion by such date, in such form, and containing such

1 information as the Administrator shall require, in-  
2 cluding information relating to the transfer to inher-  
3 ently safer technologies, and the proposed date of  
4 such a transfer, described in subsection (b)(3)(B).

5 “(3) DEADLINE FOR TRANSITION.—An owner  
6 or operator of a high-consequence water facility that  
7 is subject to an order under subsection (c)(1)(C) and  
8 that receives a grant under this subsection shall  
9 begin the transition to inherently safer technologies  
10 described in paragraph (1) not later than 90 days  
11 after the date of issuance of the order under sub-  
12 section (c)(1)(C).

13 “(4) FACILITY UPGRADES.—An owner or oper-  
14 ator of a high-consequence water facility—

15 “(A) may complete the transition to inher-  
16 ently safer technologies described in paragraph  
17 (1) within the scope of a greater facility up-  
18 grade; but

19 “(B) shall use amounts from a grant re-  
20 ceived under this subsection only for the capital  
21 expenditures directly relating to the transition  
22 to inherently safer technologies.

23 “(5) OPERATIONAL COSTS.—An owner or oper-  
24 ator of a high-consequence water facility that re-  
25 ceives a grant under this subsection may not use

1 funds from the grant to pay or offset any ongoing  
2 operational cost of the high-consequence water facil-  
3 ity.

4 “(6) OTHER REQUIREMENTS.—As a condition  
5 of receiving a grant under this subsection, the owner  
6 or operator of a high-consequence water facility  
7 shall—

8 “(A) upon receipt of a grant, track all cost  
9 savings resulting from the transition to inher-  
10 ently safer technologies, including those savings  
11 identified in subsection (b)(4)(B)(iii); and

12 “(B) for each fiscal year for which grant  
13 funds are received, return an amount to the Ad-  
14 ministrator equal to 50 percent of the savings  
15 achieved by the high-consequence water facility  
16 (but not to exceed the amount of grant funds  
17 received for the fiscal year) for use by the Ad-  
18 ministrator in facilitating the future transition  
19 of other high-consequence water facilities to the  
20 use of inherently safer technologies.

21 “(7) INTERIM TRANSITIONS.—A water facility  
22 that transitioned to the use of 1 or more inherently  
23 safer technologies after September 11, 2001, but be-  
24 fore the date of enactment of this section, and that  
25 qualifies as a high-consequence facility under sub-



1 section (b)(2), in accordance with any previous re-  
2 port submitted by the water facility under section  
3 112(r) of the Clean Air Act (42 U.S.C. 7412(r)) and  
4 as determined by the Administrator, shall be eligible  
5 to receive a grant under this subsection.

6 “(e) AUTHORIZATION OF APPROPRIATIONS.—There  
7 is authorized to be appropriated to carry out this section  
8 \$125,000,000 for each of fiscal years 2007 through  
9 2011.”.

○