

## Union Calendar No. 519

110<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

# H. R. 3957

[Report No. 110-802]

To increase research, development, education, and technology transfer activities related to water use efficiency and conservation technologies and practices at the Environmental Protection Agency.

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### IN THE HOUSE OF REPRESENTATIVES

OCTOBER 24, 2007

Mr. MATHESON introduced the following bill; which was referred to the Committee on Science and Technology

JULY 30, 2008

Additional sponsors: Ms. GIFFORDS and Ms. EDDIE BERNICE JOHNSON of Texas

JULY 30, 2008

Reported with an amendment, referred to the House Calendar, and ordered to be printed

[Strike out all after the enacting clause and insert the part printed in italic]

[For text of introduced bill, see copy of bill as introduced on October 24, 2007]

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## A BILL

To increase research, development, education, and technology transfer activities related to water use efficiency and conservation technologies and practices at the Environmental Protection Agency.

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 “Water Use Efficiency*  
5 *and Conservation Research Act”.*

6 **SEC. 2. FINDINGS.**

7 *Congress finds the following:*

8 *(1) Between 1950 and 2000, the United States*  
9 *population increased nearly 90 percent. In that same*  
10 *period, public demand for water increased 209 per-*  
11 *cent. Americans now use an average of 100 gallons of*  
12 *water per person each day. This increased demand*  
13 *has put additional stress on water supplies and dis-*  
14 *tribution systems, threatening both human health and*  
15 *the environment.*

16 *(2) Thirty-six States are anticipating local, re-*  
17 *gional, or statewide water shortages by 2013. In addi-*  
18 *tion, climate change related effects are expected to ex-*  
19 *acerbate already scarce water resources in many*  
20 *areas of the country.*

21 *(3) The Intergovernmental Panel on Climate*  
22 *Change’s 2007 assessment states that water stored in*  
23 *glaciers and snow cover is projected to decline, reduc-*  
24 *ing water availability to one-sixth of the world’s pop-*  
25 *ulation that relies upon meltwater from major moun-*

1        *tain ranges. The Intergovernmental Panel on Climate*  
2        *Change also predicts droughts will become more severe*  
3        *and longer lasting in a number of regions.*

4            *(4) Water conservation should be a national goal*  
5        *and the Environmental Protection Agency should*  
6        *work with nongovernmental partners to achieve that*  
7        *goal. The Environmental Protection Agency should*  
8        *support the research, development, and dissemination*  
9        *of technologies and processes that will achieve greater*  
10       *water use efficiency.*

11           *(5) WaterSense is a voluntary public-private*  
12       *partnership program established by the Environ-*  
13       *mental Protection Agency to promote water efficiency*  
14       *by helping consumers identify water-efficient products*  
15       *and practices. The Environmental Protection Agency*  
16       *estimates that if all United States households in-*  
17       *stalled water-efficient appliances, the country would*  
18       *save more than 3,000,000,000,000 gallons of water*  
19       *and more than \$17,000,000,000 per year.*

20           *(6) The WaterSense program has developed a*  
21       *network of partners, and therefore can disseminate the*  
22       *results of research on technologies and processes that*  
23       *achieve greater water use efficiency.*

1 **SEC. 3. RESEARCH PROGRAM.**

2 (a) *IN GENERAL.*—*The Assistant Administrator for*  
3 *Research and Development of the Environmental Protection*  
4 *Agency (in this Act referred to as the “Assistant Adminis-*  
5 *trator”)* shall establish a research and development program  
6 *consistent with the plan developed under section 4 that pro-*  
7 *motes water use efficiency and conservation, including—*

8 (1) *technologies and processes that enable the col-*  
9 *lection, storage, treatment, and reuse of rainwater,*  
10 *stormwater, and greywater;*

11 (2) *water storage and distribution systems;*

12 (3) *behavioral, social, and economic barriers to*  
13 *achieving greater water use efficiency; and*

14 (4) *use of watershed planning directed toward*  
15 *water quality, conservation, and supply.*

16 (b) *CONSIDERATIONS.*—*In planning and imple-*  
17 *menting the program, the Assistant Administrator shall*  
18 *consider—*

19 (1) *research needs identified by water resource*  
20 *managers, State and local governments, and other in-*  
21 *terested parties; and*

22 (2) *technologies and processes likely to achieve*  
23 *the greatest increases in water use efficiency and con-*  
24 *servation.*

25 (c) *MINORITY SERVING INSTITUTIONS.*—*In the execu-*  
26 *tion of this program, the Assistant Administrator may*

1 *award extramural grants to institutions of higher education*  
2 *and shall encourage participation by Minority Serving In-*  
3 *stitutions.*

4 **SEC. 4. STRATEGIC RESEARCH PLAN.**

5 (a) *IN GENERAL.*—*The Assistant Administrator shall*  
6 *coordinate the development of a strategic research plan (in*  
7 *this Act referred to as the “plan”) for the water use effi-*  
8 *ciency and conservation research and development program*  
9 *established in section 3 with all other Environmental Pro-*  
10 *tection Agency research and development strategic plans.*

11 (b) *PLAN CONTENTS.*—*The plan shall—*

12 (1) *outline research goals and priorities for a*  
13 *water use efficiency and conservation research agen-*  
14 *da, including—*

15 (A) *developing innovative water supply-en-*  
16 *hancing processes and technologies; and*

17 (B) *improving existing processes and tech-*  
18 *nologies, including wastewater treatment, desa-*  
19 *linization, and groundwater recharge and recov-*  
20 *ery schemes;*

21 (2) *identify current Federal research efforts on*  
22 *water that are directed toward meeting the goals of*  
23 *improving water use efficiency, water conservation, or*  
24 *expanding water supply and describe how such efforts*  
25 *are coordinated with the program established in sec-*

1        *tion 3 in order to leverage resources and avoid dupli-*  
2        *cation; and*

3            *(3) consider and utilize, as appropriate, rec-*  
4        *ommendations in reports and studies conducted by*  
5        *Federal agencies, the National Research Council, the*  
6        *National Science and Technology Council, or other*  
7        *entities in the development of the plan.*

8        *(c) SCIENCE ADVISORY BOARD REVIEW.—The Assist-*  
9        *ant Administrator shall submit the plan to the Science Ad-*  
10       *visory Board of the Environmental Protection Agency for*  
11       *review.*

12       *(d) REVISION.—The plan shall be revised and amended*  
13       *as needed to reflect current scientific findings and national*  
14       *research priorities.*

15       **SEC. 5. TECHNOLOGY TRANSFER.**

16       *The Assistant Administrator, building on the results*  
17       *of the activities of the program established under section*  
18       *3, shall—*

19            *(1) facilitate the adoption of technology and*  
20        *processes to promote water use efficiency and con-*  
21        *servation; and*

22            *(2) collect and disseminate information, includ-*  
23        *ing the establishment of a publicly-accessible clearing-*  
24        *house, on technologies and processes to promote water*

1        *use efficiency and conservation, including informa-*  
2        *tion on—*

3                *(A) incentives and impediments to develop-*  
4                *ment and commercialization;*

5                *(B) best practices; and*

6                *(C) anticipated increases in water use effi-*  
7                *ciency and conservation resulting from the im-*  
8                *plementation of specific technologies and proc-*  
9                *esses.*

10 **SEC. 6. ADVANCED WATER EFFICIENCY DEVELOPMENT**  
11                **PROJECTS.**

12        *(a) IN GENERAL.—As part of the program under sec-*  
13        *tion 3, the Assistant Administrator shall carry out at least*  
14        *4 projects under which the funding is provided for the incor-*  
15        *poration into a building of the latest water use efficiency*  
16        *and conservation technologies and designs. Funding for*  
17        *each project shall be provided only to cover incremental*  
18        *costs of water-use efficiency and conservation technologies.*

19        *(b) CRITERIA.—Of the 4 projects described in sub-*  
20        *section (a), at least 1 shall be for a residential building*  
21        *and at least 1 shall be for a commercial building.*

22        *(c) PUBLIC AVAILABILITY.—The designs of buildings*  
23        *with respect to which funding is provided under subsection*  
24        *(a) shall be made available to the public, and such buildings*

1 *shall be accessible to the public for tours and educational*  
2 *purposes.*

3 **SEC. 7. REPORT.**

4 *Not later than 18 months after the date of enactment*  
5 *of this Act, and once every 2 years thereafter, the Assistant*  
6 *Administrator shall transmit to Congress a report which*  
7 *details the progress being made by the Environmental Pro-*  
8 *tection Agency with regard to—*

9 *(1) water use efficiency and conservation re-*  
10 *search projects initiated by the Agency;*

11 *(2) development projects initiated by the Agency;*

12 *(3) outreach and communication activities con-*  
13 *ducted by the Agency concerning water use efficiency*  
14 *and conservation; and*

15 *(4) development and implementation of the plan.*

16 **SEC. 8. WATER MANAGEMENT STUDY AND REPORT.**

17 *(a) STUDY.—*

18 *(1) REQUIREMENT.—The Administrator of the*  
19 *Environmental Protection Agency shall enter into an*  
20 *arrangement with the National Academy of Sciences*  
21 *to complete a study of low impact and soft path strat-*  
22 *egies for management of water supply, wastewater,*  
23 *and stormwater.*

24 *(2) CONTENTS.—The study shall—*



1           (A) examine and compare the state of re-  
2 search, technology development, and emerging  
3 practices in other developed and developing  
4 countries with those in the United States;

5           (B) identify and evaluate relevant system  
6 approaches for comprehensive water manage-  
7 ment, including the interrelationship of water  
8 systems with other major systems such as energy  
9 and transportation;

10          (C) identify priority research and develop-  
11 ment needs; and

12          (D) assess implementation needs and bar-  
13 riers.

14          (b) *REPORT.*—Not later than 2 years after the date  
15 of enactment of this Act, the Administrator of the Environ-  
16 mental Protection Agency shall transmit to the Committee  
17 on Science and Technology of the House of Representatives  
18 and the Committee on Environment and Public Works of  
19 the Senate a report on the key findings of the study con-  
20 ducted under subsection (a). The report shall evaluate chal-  
21 lenges and opportunities and serve as a practical reference  
22 for water managers, planners, developers, scientists, engi-  
23 neers, non-governmental organizations, federal agencies,  
24 and regulators by recommending innovative and integrated  
25 solutions.

1       (c) *DEFINITIONS.*—*For purposes of this section—*

2               (1) *the term “low impact” means a strategy that*  
3 *manages rainfall at the source using uniformly dis-*  
4 *tributed decentralized micro-scale controls to mimic a*  
5 *site’s predevelopment hydrology by using design tech-*  
6 *niques that infiltrate, filter, store, evaporate, and de-*  
7 *tain runoff close to its source; and*

8               (2) *the term “soft path” means a general frame-*  
9 *work that encompasses—*

10                       (A) *increased efficiency of water use;*

11                       (B) *integration of water supply, wastewater*  
12 *treatment, and stormwater management systems;*  
13 *and*

14                       (C) *protection, restoration, and effective use*  
15 *of the natural capacities of ecosystems to provide*  
16 *clean water.*

17       (d) *AUTHORIZATION OF APPROPRIATIONS.*—*There are*  
18 *authorized to be appropriated to the Administrator of the*  
19 *Environmental Protection Agency for carrying out this sec-*  
20 *tion \$1,000,000 for fiscal year 2009.*

21 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

22       *There are authorized to be appropriated to the Assist-*  
23 *ant Administrator for carrying out this Act \$20,000,000*  
24 *for each of the fiscal years 2009 through 2013.*



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