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1ST SESSION

# H. R. 631

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IN THE SENATE OF THE UNITED STATES

FEBRUARY 12, 2009

Received; read twice and referred to the Committee on Environment and  
Public Works

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## AN ACT

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,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Water Use Efficiency  
3 and Conservation Research Act”.

4 **SEC. 2. FINDINGS.**

5 Congress finds the following:

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

14 (2) Thirty-six States are anticipating local, re-  
15 gional, or statewide water shortages by 2013. In ad-  
16 dition, climate change related effects are expected to  
17 exacerbate already scarce water resources in many  
18 areas of the country.

19 (3) The Intergovernmental Panel on Climate  
20 Change’s 2007 assessment states that water stored  
21 in glaciers and snow cover is projected to decline, re-  
22 ducing water availability to one-sixth of the world’s  
23 population that relies upon meltwater from major  
24 mountain ranges. The Intergovernmental Panel on  
25 Climate Change also predicts droughts will become

1 more severe and longer lasting in a number of re-  
2 gions.

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

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

20 (6) The WaterSense program has developed a  
21 network of partners, and therefore can disseminate  
22 the results of research on technologies and processes  
23 that 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 Protec-  
4 tion Agency (in this Act referred to as the “Assistant Ad-  
5 ministrator”) shall establish a research and development  
6 program consistent with the plan developed under section  
7 4 that promotes water use efficiency and conservation, in-  
8 cluding—

9 (1) technologies and processes that enable the  
10 collection, storage, treatment, and reuse of rain-  
11 water, stormwater, and greywater;

12 (2) water storage and distribution systems;

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

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

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

20 (1) research needs identified by water resource  
21 managers, State and local governments, and other  
22 interested parties; and

23 (2) technologies and processes likely to achieve  
24 the greatest increases in water use efficiency and  
25 conservation.

1 (c) MINORITY SERVING INSTITUTIONS.—In the exe-  
2 cution of this program, the Assistant Administrator may  
3 award extramural grants to institutions of higher edu-  
4 cation and shall encourage participation by Minority Serv-  
5 ing Institutions.

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

7 (a) IN GENERAL.—The Assistant Administrator shall  
8 coordinate the development of a strategic research plan  
9 (in this Act referred to as the “plan”) for the water use  
10 efficiency and conservation research and development pro-  
11 gram established in section 3 with all other Environmental  
12 Protection Agency research and development strategic  
13 plans.

14 (b) PLAN CONTENTS.—The plan shall—

15 (1) outline research goals and priorities for a  
16 water use efficiency and conservation research agen-  
17 da, including—

18 (A) developing innovative water supply-en-  
19 hancing processes and technologies; and

20 (B) improving existing processes and tech-  
21 nologies, including wastewater treatment, desa-  
22 linization, and groundwater recharge and recov-  
23 ery schemes;

24 (2) identify current Federal research efforts on  
25 water that are directed toward meeting the goals of

1 improving water use efficiency, water conservation,  
2 or expanding water supply and describe how such ef-  
3 forts are coordinated with the program established  
4 in section 3 in order to leverage resources and avoid  
5 duplication; and

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

11 (c) SCIENCE ADVISORY BOARD REVIEW.—The As-  
12 sistant Administrator shall submit the plan to the Science  
13 Advisory Board of the Environmental Protection Agency  
14 for review.

15 (d) REVISION.—The plan shall be revised and amend-  
16 ed as needed to reflect current scientific findings and na-  
17 tional research priorities.

18 **SEC. 5. TECHNOLOGY TRANSFER.**

19 The Assistant Administrator, building on the results  
20 of the activities of the program established under section  
21 3, shall—

22 (1) facilitate the adoption of technology and  
23 processes to promote water use efficiency and con-  
24 servation; and

1           (2) collect and disseminate information, includ-  
2           ing the establishment of a publicly accessible clear-  
3           inghouse, on technologies and processes to promote  
4           water use efficiency and conservation, including in-  
5           formation on—

6                   (A) incentives and impediments to develop-  
7                   ment and commercialization;

8                   (B) best practices; and

9                   (C) anticipated increases in water use effi-  
10                  ciency and conservation resulting from the im-  
11                  plementation of specific technologies and proc-  
12                  esses.

13 **SEC. 6. ADVANCED WATER EFFICIENCY DEVELOPMENT**  
14 **PROJECTS.**

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

22           (b) CRITERIA.—Of the 4 projects described in sub-  
23           section (a), at least 1 shall be for a residential building  
24           and at least 1 shall be for a commercial building.

1 (c) PUBLIC AVAILABILITY.—The designs of buildings  
2 with respect to which funding is provided under subsection  
3 (a) shall be made available to the public, and such build-  
4 ings shall be accessible to the public for tours and edu-  
5 cational purposes.

6 **SEC. 7. REPORT.**

7 Not later than 18 months after the date of enactment  
8 of this Act, and once every 2 years thereafter, the Assist-  
9 ant Administrator shall transmit to Congress a report  
10 which details the progress being made by the Environ-  
11 mental Protection Agency with regard to—

12 (1) water use efficiency and conservation re-  
13 search projects initiated by the Agency;

14 (2) development projects initiated by the Agen-  
15 cy;

16 (3) outreach and communication activities con-  
17 ducted by the Agency concerning water use effi-  
18 ciency and conservation; and

19 (4) development and implementation of the  
20 plan.

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

22 (a) STUDY.—

23 (1) REQUIREMENT.—The Administrator of the  
24 Environmental Protection Agency shall enter into an  
25 arrangement with the National Academy of Sciences

1 to complete a study of low impact and soft path  
2 strategies for management of water supply, waste-  
3 water, and stormwater.

4 (2) CONTENTS.—The study shall—

5 (A) examine and compare the state of re-  
6 search, technology development, and emerging  
7 practices in other developed and developing  
8 countries with those in the United States;

9 (B) identify and evaluate relevant system  
10 approaches for comprehensive water manage-  
11 ment, including the interrelationship of water  
12 systems with other major systems such as en-  
13 ergy and transportation;

14 (C) identify priority research and develop-  
15 ment needs; and

16 (D) assess implementation needs and bar-  
17 riers.

18 (b) REPORT.—Not later than 2 years after the date  
19 of enactment of this Act, the Administrator of the Envi-  
20 ronmental Protection Agency shall transmit to the Com-  
21 mittee on Science and Technology of the House of Rep-  
22 resentatives and the Committee on Environment and Pub-  
23 lic Works of the Senate a report on the key findings of  
24 the study conducted under subsection (a). The report shall  
25 evaluate challenges and opportunities and serve as a prac-

1 tical reference for water managers, planners, developers,  
2 scientists, engineers, non-governmental organizations,  
3 Federal agencies, and regulators by recommending innova-  
4 tive and integrated solutions.

5 (c) DEFINITIONS.—For purposes of this section—

6 (1) the term “low impact” means a strategy  
7 that manages rainfall at the source using uniformly  
8 distributed decentralized micro-scale controls to  
9 mimic a site’s predevelopment hydrology by using  
10 design techniques that infiltrate, filter, store, evapo-  
11 rate, and detain runoff close to its source; and

12 (2) the term “soft path” means a general  
13 framework that encompasses—

14 (A) increased efficiency of water use;

15 (B) integration of water supply, waste-  
16 water treatment, and stormwater management  
17 systems; and

18 (C) protection, restoration, and effective  
19 use of the natural capacities of ecosystems to  
20 provide clean water.

21 (d) AUTHORIZATION OF APPROPRIATIONS.—There  
22 are authorized to be appropriated to the Administrator of  
23 the Environmental Protection Agency for carrying out this  
24 section \$1,000,000 for fiscal year 2010.

