

111TH CONGRESS
1ST SESSION

H. R. 631

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

IN THE HOUSE OF REPRESENTATIVES

JANUARY 22, 2009

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

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:

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

9 (2) Thirty-six States are anticipating local, re-
10 gional, or statewide water shortages by 2013. In ad-
11 dition, climate change related effects are expected to
12 exacerbate already scarce water resources in many
13 areas of the country.

14 (3) The Intergovernmental Panel on Climate
15 Change's 2007 assessment states that water stored
16 in glaciers and snow cover is projected to decline, re-
17 ducing water availability to one-sixth of the world's
18 population that relies upon meltwater from major
19 mountain ranges. The Intergovernmental Panel on
20 Climate Change also predicts droughts will become
21 more severe and longer lasting in a number of re-
22 gions.

23 (4) Water conservation should be a national
24 goal and the Environmental Protection Agency
25 should work with nongovernmental partners to

1 achieve that goal. The Environmental Protection
2 Agency should support the research, development,
3 and dissemination of technologies and processes that
4 will achieve greater water use efficiency.

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

15 (6) The WaterSense program has developed a
16 network of partners, and therefore can disseminate
17 the results of research on technologies and processes
18 that achieve greater water use efficiency.

19 **SEC. 3. RESEARCH PROGRAM.**

20 (a) IN GENERAL.—The Assistant Administrator for
21 Research and Development of the Environmental Protec-
22 tion Agency (in this Act referred to as the “Assistant Ad-
23 ministrators”) shall establish a research and development
24 program consistent with the plan developed under section

1 4 that promotes water use efficiency and conservation, in-
2 cluding—

3 (1) technologies and processes that enable the
4 collection, storage, treatment, and reuse of rain-
5 water, stormwater, and greywater;

6 (2) water storage and distribution systems;

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

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

11 (b) CONSIDERATIONS.—In planning and imple-
12 menting the program, the Assistant Administrator shall
13 consider—

14 (1) research needs identified by water resource
15 managers, State and local governments, and other
16 interested parties; and

17 (2) technologies and processes likely to achieve
18 the greatest increases in water use efficiency and
19 conservation.

20 (c) MINORITY SERVING INSTITUTIONS.—In the exe-
21 cution of this program, the Assistant Administrator may
22 award extramural grants to institutions of higher edu-
23 cation and shall encourage participation by Minority Serv-
24 ing Institutions.

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

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

9 (b) PLAN CONTENTS.—The plan shall—

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

13 (A) developing innovative water supply-en-
14 hancing processes and technologies; and

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

19 (2) identify current Federal research efforts on
20 water that are directed toward meeting the goals of
21 improving water use efficiency, water conservation,
22 or expanding water supply and describe how such ef-
23 forts are coordinated with the program established
24 in section 3 in order to leverage resources and avoid
25 duplication; and

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

6 (c) SCIENCE ADVISORY BOARD REVIEW.—The As-
7 sistant Administrator shall submit the plan to the Science
8 Advisory Board of the Environmental Protection Agency
9 for review.

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

13 **SEC. 5. TECHNOLOGY TRANSFER.**

14 The Assistant Administrator, building on the results
15 of the activities of the program established under section
16 3, shall—

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

20 (2) collect and disseminate information, includ-
21 ing the establishment of a publicly accessible clear-
22 inghouse, on technologies and processes to promote
23 water use efficiency and conservation, including in-
24 formation on—

- 1 (A) incentives and impediments to develop-
2 ment and commercialization;
3 (B) best practices; and
4 (C) anticipated increases in water use effi-
5 ciency and conservation resulting from the im-
6 plementation of specific technologies and proc-
7 esses.

8 **SEC. 6. ADVANCED WATER EFFICIENCY DEVELOPMENT**
9 **PROJECTS.**

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

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

20 (c) PUBLIC AVAILABILITY.—The designs of buildings
21 with respect to which funding is provided under subsection
22 (a) shall be made available to the public, and such build-
23 ings shall be accessible to the public for tours and edu-
24 cational purposes.

1 **SEC. 7. REPORT.**

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

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

9 (2) development projects initiated by the Agen-
10 cy;

11 (3) outreach and communication activities con-
12 ducted by the Agency concerning water use effi-
13 ciency and conservation; and

14 (4) development and implementation of the
15 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
22 strategies for management of water supply, waste-
23 water, and stormwater.

24 (2) CONTENTS.—The study shall—

25 (A) examine and compare the state of re-
26 search, technology development, and emerging

1 practices in other developed and developing
2 countries with those in the United States;

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

8 (C) identify priority research and develop-
9 ment needs; and

10 (D) assess implementation needs and bar-
11 riers.

12 (b) REPORT.—Not later than 2 years after the date
13 of enactment of this Act, the Administrator of the Envi-
14 ronmental Protection Agency shall transmit to the Com-
15 mittee on Science and Technology of the House of Rep-
16 resentatives and the Committee on Environment and Pub-
17 lic Works of the Senate a report on the key findings of
18 the study conducted under subsection (a). The report shall
19 evaluate challenges and opportunities and serve as a prac-
20 tical reference for water managers, planners, developers,
21 scientists, engineers, non-governmental organizations,
22 Federal agencies, and regulators by recommending innova-
23 tive and integrated solutions.

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

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

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

9 (A) increased efficiency of water use;

10 (B) integration of water supply, waste-
11 water treatment, and stormwater management
12 systems; and

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

16 (d) **AUTHORIZATION OF APPROPRIATIONS.**—There
17 are authorized to be appropriated to the Administrator of
18 the Environmental Protection Agency for carrying out this
19 section \$1,000,000 for fiscal year 2010.

20 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

21 There are authorized to be appropriated to the As-
22 sistant Administrator for carrying out this Act
23 \$20,000,000 for each of the fiscal years 2010 through
24 2014.

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