

110TH CONGRESS
2D SESSION

H. R. 6297

To enhance the ability of drinking water utilities in the United States to develop and implement climate change adaptation programs and policies, and for other purposes.

IN THE HOUSE OF REPRESENTATIVES

JUNE 18, 2008

Ms. DEGETTE introduced the following bill; which was referred to the Committee on Science and Technology

A BILL

To enhance the ability of drinking water utilities in the United States to develop and implement climate change adaptation programs and policies, and for other purposes.

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 “Climate Change Drink-
5 ing Water Adaptation Research Act.”.

6 **SEC. 2. FINDINGS.**

7 Congress finds that—

1 (1) the consensus among climate scientists is
2 overwhelming that climate change is occurring more
3 rapidly than can be attributed to natural causes, and
4 that significant impacts to the water supply are al-
5 ready occurring;

6 (2) among the first and most critical of those
7 impacts will be change to patterns of precipitation
8 around the world, which will affect water availability
9 for the most basic drinking water and domestic
10 water needs of populations in many areas of the
11 United States;

12 (3) drinking water utilities throughout the
13 United States, as well as those in Europe, Australia,
14 and Asia, are concerned that extended changes in
15 precipitation will lead to extended droughts;

16 (4) supplying water is highly energy-intensive
17 and will become more so as climate change forces
18 more utilities to turn to alternative supplies;

19 (5) energy production consumes a significant
20 percentage of the fresh water resources of the
21 United States;

22 (6) since 2003, the drinking water industry of
23 the United States has sponsored, through a non-
24 profit water research foundation, various studies to

1 assess the impacts of climate change on drinking
2 water supplies;

3 (7) those studies demonstrate the need for a
4 comprehensive program of research into the full
5 range of impacts on drinking water utilities, includ-
6 ing impacts on water supplies, facilities, and cus-
7 tomers;

8 (8) that nonprofit water research foundation is
9 also coordinating internationally with other drinking
10 water utilities on shared research projects and has
11 hosted international workshops with counterpart Eu-
12 ropean and Asian water research organizations to
13 develop a unified research agenda for applied re-
14 search on adaptive strategies to address climate
15 change impacts;

16 (9) research data in existence as of the date of
17 enactment of this Act—

18 (A) summarize the best available scientific
19 evidence on climate change;

20 (B) identify the implications of climate
21 change for the water cycle and the availability
22 and quality of water resources; and

23 (C) provide general guidance on planning
24 and adaptation strategies for water utilities;
25 and

1 (iii) increasing ranges of pathogens,
2 algae, and nuisance organisms resulting
3 from warmer temperatures; and

4 (B) on mitigating increasing damage to
5 watersheds and water quality by evaluating ex-
6 treme events, such as wildfires and hurricanes,
7 to learn and develop management approaches to
8 mitigate—

9 (i) permanent watershed damage;

10 (ii) quality and yield impacts on
11 source waters; and

12 (iii) increased costs of water treat-
13 ment;

14 (2) impacts on groundwater supplies from car-
15 bon sequestration, including research to evaluate po-
16 tential water quality consequences of carbon seques-
17 tration in various regional aquifers, soil conditions,
18 and mineral deposits;

19 (3) water quantity impacts and solutions, in-
20 cluding research—

21 (A) to evaluate climate change impacts on
22 water resources throughout hydrological basins
23 of the United States;

24 (B) to improve the accuracy and resolution
25 of climate change models at a regional level;

1 (C) to identify and explore options for in-
2 creasing conjunctive use of aboveground and
3 underground storage of water; and

4 (D) to optimize operation of existing and
5 new reservoirs in diminished and erratic periods
6 of precipitation and runoff;

7 (4) infrastructure impacts and solutions for
8 water treatment facilities and underground pipelines,
9 including research—

10 (A) to evaluate and mitigate the impacts of
11 sea level rise on—

12 (i) near-shore facilities;

13 (ii) soil drying and subsidence; and

14 (iii) reduced flows in water and waste-
15 water pipelines; and

16 (B) on ways of increasing the resilience of
17 existing infrastructure and development of new
18 design standards for future infrastructure;

19 (5) desalination, water reuse, and alternative
20 supply technologies, including research—

21 (A) to improve and optimize existing mem-
22 brane technologies, and to identify and develop
23 breakthrough technologies, to enable the use of
24 seawater, brackish groundwater, treated waste-
25 water, and other impaired sources;

1 (B) into new sources of water through
2 more cost-effective water treatment practices in
3 recycling and desalination; and

4 (C) to improve technologies for use in—

5 (i) managing and minimizing the vol-
6 ume of desalination and reuse concentrate
7 streams; and

8 (ii) minimizing the environmental im-
9 pacts of seawater intake at desalination fa-
10 cilities;

11 (6) energy efficiency and greenhouse gas mini-
12 mization, including research—

13 (A) on optimizing the energy efficiency of
14 water supply and improving water efficiency in
15 energy production; and

16 (B) to identify and develop renewable, car-
17 bon-neutral energy options for the water supply
18 industry;

19 (7) regional and hydrological basin cooperative
20 water management solutions, including research
21 into—

22 (A) institutional mechanisms for greater
23 regional cooperation and use of water ex-
24 changes, banking, and transfers; and

1 (B) the economic benefits of sharing risks
2 of shortage across wider areas;

3 (8) utility management, decision support sys-
4 tems, and water management models, including re-
5 search—

6 (A) into improved decision support systems
7 and modeling tools for use by water utility
8 managers to assist with increased water supply
9 uncertainty and adaptation strategies posed by
10 climate change;

11 (B) to provide financial tools, including
12 new rate structures, to manage financial re-
13 sources and investments, because increased con-
14 servation practices may diminish revenue and
15 increase investments in infrastructure; and

16 (C) to develop improved systems and mod-
17 els for use in evaluating—

18 (i) successful alternative methods for
19 conservation and demand management;
20 and

21 (ii) climate change impacts on
22 groundwater resources;

23 (9) reducing greenhouse gas emissions and en-
24 ergy demand management, including research to im-
25 prove energy efficiency in water collection, produc-

1 tion, transmission, treatment, distribution, and dis-
2 posal to provide more sustainability and means to
3 assist drinking water utilities in reducing the pro-
4 duction of greenhouse gas emissions in the collec-
5 tion, production, transmission, treatment, distribu-
6 tion, and disposal of drinking water;

7 (10) water conservation and demand manage-
8 ment, including research—

9 (A) to develop strategic approaches to
10 water demand management that offer the low-
11 est-cost, noninfrastructural options to serve
12 growing populations or manage declining sup-
13 plies, primarily through—

14 (i) efficiencies in water use and re-
15 allocation of the saved water;

16 (ii) demand management tools;

17 (iii) economic incentives; and

18 (iv) water-saving technologies; and

19 (B) into efficiencies in water management
20 through integrated water resource management
21 that incorporates—

22 (i) supply-side and demand-side proc-
23 esses;

24 (ii) continuous adaptive management;

25 and

1 (iii) the inclusion of stakeholders in
2 decisionmaking processes; and

3 (11) communications, education, and public ac-
4 ceptance, including research—

5 (A) into improved strategies and ap-
6 proaches for communicating with customers, de-
7 cisionmakers, and other stakeholders about the
8 implications of climate change on water supply;
9 and

10 (B) to develop effective communication ap-
11 proaches to gain—

12 (i) public acceptance of alternative
13 water supplies and new policies and prac-
14 tices, including conservation and demand
15 management; and

16 (ii) public recognition and acceptance
17 of increased costs.

18 (c) AUTHORIZATION OF APPROPRIATIONS.—There is
19 authorized to be appropriated to carry out this section
20 \$25,000,000 for each of fiscal years 2009 through 2019.

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