

108TH CONGRESS  
2D SESSION

# H. R. 4835

To establish a water supply enhancement demonstration program, including the demonstration of desalination, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JULY 14, 2004

Mr. POMBO (for himself, Mr. CALVERT, Mrs. WILSON of New Mexico, and Mr. PEARCE) introduced the following bill; which was referred to the Committee on Resources

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## A BILL

To establish a water supply enhancement demonstration program, including the demonstration of desalination, 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 “Quality Water Supply  
5 Enhancement Act”.

6 **SEC. 2. PURPOSES.**

7 The purposes of this Act are—

8 (1) to provide for the development of economi-  
9 cally viable advanced water supply enhancement

1 demonstration projects, including desalination, that  
2 would—

3 (A) substantially improve access to existing  
4 water supplies; and

5 (B) provide access to untapped water  
6 sources;

7 (2) to facilitate the widespread commercializa-  
8 tion of newly developed water supply for use in real-  
9 world applications;

10 (3) to provide objective analyses of water supply  
11 policies; and

12 (4) to facilitate collaboration among Federal  
13 agencies in the development of advanced water sup-  
14 ply demonstration projects, including desalination.

15 **SEC. 3. DEFINITIONS.**

16 In this Act:

17 (1) **ADVISORY PANEL.**—The term “Advisory  
18 Panel” means the Water Supply Advisory Panel es-  
19 tablished under section 5(a).

20 (2) **REGIONAL CENTER.**—The term “Regional  
21 Center” means the Regional Center referenced in  
22 the National Water Supply Technology Program  
23 White Paper, with a specific region of the nation  
24 and a specific water theme as designated under sec-  
25 tion 6(b).

1           (3) INSTITUTE.—The term “Institute” means  
2           the Water Supply Policy Institute designated by sec-  
3           tion 8(a).

4           (4) PROGRAM.—The term “program” means  
5           the water supply program established under section  
6           4(a).

7           (5) PROGRAM COORDINATOR.—The term “Pro-  
8           gram Coordinator” means the lead Facility as de-  
9           scribed in the National Water Supply Technology  
10          Program White Paper.

11          (6) SECRETARY.—The term “Secretary” means  
12          the Secretary of the Interior.

13          (7) WATER RESOURCE AGENCIES.—Federal  
14          agencies, as identified in the Interagency Consor-  
15          tium, developed by the Bureau of Reclamation, for  
16          Desalination and Membrane Separation.

17          (8) WATER SUPPLY ENHANCEMENT.—

18                (A) IN GENERAL.—The term “water sup-  
19                ply enhancement” means a demonstration  
20                project, including desalination, designed to im-  
21                prove water quality or make more efficient use  
22                of existing water sources.

23                (B) INCLUSIONS.—The term “water supply  
24                enhancement” includes demonstration projects  
25                for—

- 1 (i) reducing water consumption in the  
2 production or generation of energy;  
3 (ii) desalination and related con-  
4 centrate disposal;  
5 (iii) water reuse;  
6 (iv) contaminant removal;  
7 (v) agriculture, industrial, and munic-  
8 ipal efficiency; and  
9 (vi) water monitoring and systems  
10 analysis.

11 **SEC. 4. DESALINATION AND WATER SUPPLY ENHANCE-**  
12 **MENT DEMONSTRATION PROGRAM.**

13 (a) ESTABLISHMENT.—The Secretary shall, in co-  
14 ordination with the Water Resource Agencies, and the  
15 Program Coordinator, establish a desalination and ad-  
16 vanced water supply enhancement demonstration program  
17 and fund demonstration projects for the development and  
18 commercialization of, advanced water supply demonstra-  
19 tion projects, including desalination. The Secretary shall  
20 be responsible for coordinating the Water Resource Agen-  
21 cies activities authorized under this Act.

22 (b) PROGRAM COORDINATOR.—

23 (1) IN GENERAL.—The program shall be car-  
24 ried out by the Secretary, in coordination with the

1 Water Resources Agencies and the Program Coordi-  
2 nator.

3 (2) DUTIES.—In carrying out the program, the  
4 Program Coordinator, in consultation with the Sec-  
5 retary and Water Resource Agencies, shall—

6 (A) construct a facility at the office of the  
7 Program Coordinator for administering the pro-  
8 gram;

9 (B) establish budgetary and contracting  
10 procedures for the program;

11 (C) perform any administrative duties re-  
12 lating to the program;

13 (D) administer funds under section 7;

14 (E) conduct peer review of water supply  
15 enhancement demonstration proposals and re-  
16 search results;

17 (F) create a water supply enhancement  
18 demonstration roadmap to—

19 (i) identify the best water supply dem-  
20 onstration projects; and

21 (ii) make determinations about which  
22 water supply demonstration projects would  
23 most substantially improve the use of exist-  
24 ing water supplies;

1 (G) coordinate budgets for demonstration  
2 projects at Regional Centers;

3 (H) coordinate research carried out under  
4 the program;

5 (I) perform annual evaluations of dem-  
6 onstration projects and the progress made by  
7 Regional Centers;

8 (J) establish a water supply demonstration  
9 transfer program—

10 (i) to identify commercially promising  
11 water supply demonstration projects; and

12 (ii) to facilitate prototyping of, busi-  
13 ness planning for, regulatory acceptance  
14 of, and full commercialization of promising  
15 water supply demonstration projects  
16 through—

17 (I) project facilities;

18 (II) industry consortia; and

19 (III) collaboration with commer-  
20 cial financing organizations;

21 (K) establish procedures and criteria to pe-  
22 riodically assess Regional Centers under section  
23 6(f)(2);

24 (L) establish procedures for providing in-  
25 formation to the public on the results of dem-

1           onstration projects conducted under the pro-  
2           gram; and

3           (M) implement cross-cutting research to  
4           develop sensor and monitoring systems for  
5           water and energy efficiency and management.

6 **SEC. 5. WATER SUPPLY ADVISORY PANEL.**

7           (a) ESTABLISHMENT.—The Program Coordinator, in  
8           consultation with the Secretary, shall establish an advisory  
9           panel, to be known as the “Water Supply Advisory Panel”,  
10          to advise the Program with respect to—

11           (1) the direction of the program;

12           (2) reviewing the performance of any dem-  
13          onstration project carried out using amounts made  
14          available under the program;

15           (3) facilitating the commercialization of the  
16          water supply demonstration successes developed  
17          under the program; and

18           (4) evaluating water policy.

19          (b) MEMBERSHIP.—The Advisory Panel shall include  
20          members, with interest and expertise in water supply dem-  
21          onstration projects, that represent—

22           (1) industry;

23           (2) educational institutions;

24           (3) the Federal Government;

25           (4) nongovernmental organizations;

- 1           (5) international water technology institutions;  
2           and  
3           (6) the Regional Centers.

4 **SEC. 6. REGIONAL CENTERS IN WATER SUPPLY ENHANCE-**  
5 **MENT.**

6           (a) IN GENERAL.—A Regional Center shall partner  
7 with one or more universities from the region, that shall  
8 be eligible for funding under section 7(a) to conduct dem-  
9 onstration projects on specific advanced water supply en-  
10 hancement projects.

11          (b) INITIAL REGIONAL CENTERS.—The Regional  
12 Centers as identified in the National Water Supply Tech-  
13 nology Program White Paper, shall be grouped by region  
14 and theme, including, but not limited to the following:

15           (1) NORTHEAST REGION.—Reducing water  
16 quality impacts from power plant outfall and decen-  
17 tralized water treatment.

18           (2) CENTRAL ATLANTIC REGION.—Produced  
19 water purification and use for power production and  
20 water reuse for mega-cities.

21           (3) SOUTHEAST REGION.—Shallow aquifer con-  
22 junctive water use; energy reduction for sea water  
23 desalination and membrane demonstration project  
24 development.



1           (4) MIDWEST REGION.—Water efficiency in  
2           manufacturing and energy reduction in wastewater  
3           treatment.

4           (5) CENTRAL REGION.—Cogeneration of nu-  
5           clear power and water, energy systems for pumping  
6           irrigation and mining water reuse.

7           (6) WEST REGION.—Conjunctive management  
8           of hydropower and water; and watershed manage-  
9           ment.

10          (7) SOUTHWEST REGION.—Water for power  
11          production in arid environments; energy reduction  
12          and waste disposal for brackish desalination; high  
13          water and energy efficiency in arid agriculture; and  
14          transboundary water management.

15          (8) PACIFIC REGION.—Point of use technology  
16          to reduce water treatment and conveyance energy;  
17          co-located energy production and water treatment;  
18          and water reuse for agriculture.

19          (c) SELECTION OF UNIVERSITY PARTNERS.—In con-  
20          sultation with the Program Coordinator and the Advisory  
21          Panel, each Regional Center, within 6 months after the  
22          date of enactment of this Act, shall select a primary uni-  
23          versity partner and may nominate additional university  
24          partners.

1 (d) OPERATIONAL PROCEDURES.—Not later than 1  
2 year after the date of enactment of this Act, each Regional  
3 Center shall submit to the Program Coordinator oper-  
4 ational procedures for such Regional Center.

5 (e) ADDITIONAL REGIONAL CENTERS.—Subject to  
6 approval by the Advisory Panel, the Program Coordinator  
7 may, not sooner than 5 years after the date of enactment  
8 of this Act, designate not more than 4 additional Regional  
9 Centers if the Program Coordinator determines that there  
10 are additional water supply technologies that need to be  
11 researched.

12 (f) PERIOD OF DESIGNATION.—

13 (1) IN GENERAL.—A designation under sub-  
14 section (b), subsection (c), or subsection (d) shall be  
15 for a period of 5 years.

16 (2) ASSESSMENT.—A Regional Center shall be  
17 subject to periodic assessments in accordance with  
18 procedures and criteria established under section  
19 4(b)(2)(K).

20 (3) RENEWAL.—After the initial period under  
21 paragraph (1), a designation may be renewed for  
22 subsequent 5-year periods in accordance with proce-  
23 dures and criteria established under section  
24 4(b)(2)(K).

1           (4) PROBATION, TERMINATION, OR NON-  
2 RENEWAL.—

3           (A) IN GENERAL.—Based on a periodic as-  
4 sessment conducted under paragraph (2) and  
5 after review by the Secretary and Water Re-  
6 source Agencies, the Secretary may determine  
7 not to renew the designation of a Regional Cen-  
8 ter.

9           (B) TERMINATION.—In coordination with  
10 the Water Resources Agencies, the Secretary  
11 may terminate or choose not to renew the des-  
12 ignation of a Regional Center.

13       (g) EXECUTIVE DIRECTOR.—A Regional Center shall  
14 be administered by an executive director.

15       (h) PUBLICATION OF RESEARCH RESULTS.—A Re-  
16 gional Center shall periodically publish the results of any  
17 research carried out under the program in appropriate  
18 peer-reviewed journals.

19 **SEC. 7. PROGRAM FUNDING.**

20       (a) FUNDING TO REGIONAL CENTERS.—

21           (1) IN GENERAL.—The Program Coordinator,  
22 in coordination with the Secretary, and Water Re-  
23 source Agencies, shall provide funding to the Re-  
24 gional Center subject to the provisions of section  
25 10(b) to carry out demonstration projects identified

1 in section 6(b) in coordination with other Regional  
2 Centers without cost-share requirements.

3 (2) DISTRIBUTION.—Of the funds made avail-  
4 able to each Regional Center, 50 percent shall be  
5 distributed to regional university partners. Funds  
6 distributed to university partners within the region  
7 shall be distributed following a plan developed and  
8 included in the Regional Center’s operational proce-  
9 dures developed under section 6(d) without cost-  
10 share requirements.

11 (b) OPEN-CALL FUNDING.—

12 (1) IN GENERAL.—The Program Coordinator,  
13 in coordination with the Secretary, and Water Re-  
14 source Agencies, shall provide competitive funding  
15 mechanisms to eligible institutions and individuals  
16 for water supply demonstration projects.

17 (2) ELIGIBLE COLLABORATIVE INSTITU-  
18 TIONS.—Each of the following are eligible for fund-  
19 ing under paragraph (1):

20 (A) Nongovernmental organizations.

21 (B) Department of Energy National Lab-  
22 oratories.

23 (C) Private corporations.

24 (D) Industry consortia.

25 (E) Universities or university consortia.

1 (F) Any other entity with expertise in the  
2 conduct of research on water supply tech-  
3 nologies.

4 (G) International research consortia.

5 (3) DISTRIBUTION OF FUNDS.—Of the funds  
6 allotted for the program funding, the following per-  
7 centages and restrictions apply:

8 (A) NONGOVERNMENTAL ORGANIZA-  
9 TIONS.—No less than 15 percent and no more  
10 than 25 percent of the total funds shall be pro-  
11 vided as block funding to nongovernmental or-  
12 ganizations subject to a 50 percent nonprogram  
13 cost share that then may be redistributed by  
14 the nongovernmental organization along with  
15 non-program matching funds for individual  
16 projects.

17 (B) NATIONAL LABORATORIES.—No less  
18 than 20 percent and no more than 30 percent  
19 of the total funds shall be provided to support  
20 individual projects from Department of Energy  
21 National Laboratories without matching fund  
22 requirements.

23 (c) FEDERAL AGENCIES.—No less than 15 percent  
24 and no more than 25 percent of the total funds shall be  
25 provided to support individual projects that are rec-

1 ommended by at least one other Federal Agency that is  
2 providing at least a 50 percent funding match.

3 (d) OTHER ENTITIES.—The remainder of funds may  
4 be provided to support individual projects subject to a 25  
5 percent nonprogram cost share.

6 (e) TERM OF GRANT.—

7 (1) IN GENERAL.—Except as provided in para-  
8 graph (2), funds provided under this section shall be  
9 for a term of 2 years.

10 (2) RENEWAL.—The Program Coordinator, in  
11 consultation with the Secretary, and Water Resource  
12 Agencies, may renew demonstration project financ-  
13 ing for up to 2 additional years as appropriate.

14 (f) REPORTING.—Organizations receiving funding  
15 under this section shall report on a bi-annual basis the  
16 results and status of research projects undertaken with  
17 funds from this Act.

18 (g) TREATMENT OF FUNDS.—Amounts received  
19 under funding provided to a non-Federal entity by this  
20 program shall be considered to be non-Federal funds when  
21 used as matching funds by the non-Federal entity toward  
22 a Federal cost-shared project outside this program.

23 (h) CRITERIA.—The Program Coordinator, in coordi-  
24 nation with the Secretary, and Water Resource Agencies,  
25 shall establish criteria for the submission and review of

1 grant applications and the provision of funds under this  
2 section.

3 (i) **COST-SHARING REQUIREMENT.**—A National Lab-  
4 oratory that receives funding under this section shall not  
5 be subject to a cost-sharing requirement.

6 **SEC. 8. NATIONAL WATER SUPPLY POLICY INSTITUTE.**

7 (a) **DESIGNATION.**—The Utton Center at the Univer-  
8 sity of New Mexico Law School is designated as the Na-  
9 tional Water Policy Institute.

10 (b) **DUTIES.**—The Institute shall—

11 (1) perform objective research on relevant  
12 water, regulations, and policy pertinent to this Act;

13 (2) provide policy alternatives to increase na-  
14 tional and international water supplies;

15 (3) consult with the Regional Centers, industry,  
16 municipalities, nongovernmental organizations, other  
17 participants of the program, and any other inter-  
18 ested persons, with priority for consultation services  
19 to be given to participants in the program; and

20 (4) conduct an annual water policy seminar to  
21 provide information on demonstration projects car-  
22 ried out or funded by the Institute.

23 (c) **PARTNERSHIPS.**—The Institute may enter into  
24 partnerships with other institutions to assist in carrying  
25 out the duties of the Institute under subsection (b).

1 (d) EXECUTIVE DIRECTOR.—The Institute shall be  
2 administered by an executive director, subject to approval  
3 by the Program Coordinator.

4 **SEC. 9. REPORTS.**

5 (a) REPORTS TO PROGRAM COORDINATOR.—Any Re-  
6 gional Center, or collaborative institution that receives  
7 funding under section 7 shall submit to the Program Coor-  
8 dinator an annual report on activities carried out using  
9 amounts made available under this Act during the pre-  
10 ceding fiscal year.

11 (b) REPORT TO CONGRESS.—Not later than 3 fiscal  
12 years after the date of enactment of this Act and every  
13 5 years thereafter, the Program Coordinator shall submit  
14 to the Secretary, and other Water Resource Agencies, and  
15 Congress a report that describes the activities carried out  
16 under this Act.

17 **SEC. 10. AUTHORIZATION OF APPROPRIATIONS.**

18 (a) IN GENERAL.—There are authorized to be appro-  
19 priated to the Secretary, and Water Resource Agencies,  
20 for each of fiscal years 2005 through 2009—

21 (1) for the construction of a facility under sec-  
22 tion 4(b)(2)(A), \$20,000,000;

23 (2) for the administration of the program by  
24 the Program Coordinator and for administration of



1 the facility constructed under section 4(b)(2)(A),  
2 \$5,000,000;

3 (3) for demonstration projects carried out  
4 under the program, \$200,000,000; and

5 (4) for Regional Centers to administer funding  
6 and to update, maintain, and operate the facilities,  
7 as necessary, \$7,500,000.

8 (b) ALLOCATION.—Of amounts made available under  
9 subsection (a)(3) for a fiscal year—

10 (1) not more than the lesser of \$10,000,000 or  
11 5 percent shall be made available to each Regional  
12 Center designated by section 6(b) or under section  
13 6(e) as block funding following the funding proce-  
14 dures in section 7(a);

15 (2) not more than the lesser of \$10,000,000 or  
16 5 percent shall be made available for the Institute  
17 designated by section 8(a);

18 (3) at least 15 percent shall be made available  
19 for demonstration projects implemented under sec-  
20 tion 4(b)(2)(J); and

21 (4) at least 30 percent shall be made available  
22 for the open-call funding program described in sec-  
23 tion 7(b).

○