

Calendar No. 667105TH CONGRESS
2^D SESSION**S. 1480****[Report No. 105-357]**

To authorize appropriations for the National Oceanic and Atmospheric Administration to conduct research, monitoring, education and management activities for the prevention, reduction, and control of harmful algal blooms, including blooms of *Pfiesteria piscicida* and other aquatic toxins, hypoxia, and for other purposes.

IN THE SENATE OF THE UNITED STATES

NOVEMBER 8, 1997

Ms. SNOWE (for herself, Mr. BREAUX, Mrs. HUTCHISON, Ms. MIKULSKI, Mr. INOUE, Mr. AKAKA, Mr. ROTH, and Mr. ROBB) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

SEPTEMBER 30, 1998

Reported by Mr. MCCAIN, with an amendment

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

A BILL

To authorize appropriations for the National Oceanic and Atmospheric Administration to conduct research, monitoring, education and management activities for the prevention, reduction, and control of harmful algal blooms, including blooms of *Pfiesteria piscicida* and other aquatic toxins, hypoxia, 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 “Harmful Algal Bloom
5 Research and Control Act of 1997”.

6 **SEC. 2. FINDINGS**

7 The Congress finds that—

8 (1) the recent outbreak of the harmful microbe
9 *Pfiesteria piscicida* in the coastal waters of the
10 United States is one of a larger set of potentially
11 harmful algal blooms that appear to be increasing in
12 abundance and intensity in the Nation’s coastal wa-
13 ters;

14 (2) in recent years, harmful algal blooms have
15 resulted in massive fish kills, the deaths of numer-
16 ous endangered West Indian manatees, beach clo-
17 sures, and threats to public health and safety;

18 (3) other recent occurrences of harmful algal
19 blooms include red tides in the Gulf of Mexico and
20 the southeast, brown tides in New York and Texas,
21 and shellfish poisonings in the Gulf of Maine, the
22 Pacific northwest and the Gulf of Alaska;

23 (4) harmful algal blooms have been responsible
24 for an estimated \$1,000,000,000 in economic losses
25 during the past decade;

1 (5) harmful algal blooms are composed of natu-
2 rally occurring species that reproduce explosively
3 when the natural system is out of balance;

4 (6) under certain circumstances, harmful algal
5 blooms can lead directly to other damaging marine
6 conditions such as hypoxia, as has been found in the
7 Gulf of Mexico.

8 (7) factors thought to cause or contribute to
9 harmful algal blooms include excessive nutrients and
10 toxins from polluted runoff;

11 (8) there is a strong need for a national strat-
12 egy to identify better means of controlling polluted
13 runoff;

14 (9) the National Oceanic and Atmospheric Ad-
15 ministration (NOAA) in the Department of Com-
16 merce, through its ongoing research, grant, and
17 coastal resource management programs, possesses a
18 full range of capabilities necessary to support a near
19 and long-term comprehensive effort to control and
20 eradicate harmful algal blooms; and

21 (10) funding for NOAA's research and related
22 programs will aid in improving the Nation's under-
23 standing and capabilities for addressing the human
24 and environmental costs associated with harmful
25 algal blooms.

1 **SEC. 3. AUTHORIZATION OF APPROPRIATIONS FOR ALGAL**
2 **BLOOM ERADICATION AND CONTROL.**

3 There are authorized to be appropriated to the Sec-
4 retary of Commerce for activities related to the research,
5 eradication, and control of harmful algal blooms
6 \$22,000,000 in each of fiscal years 1998, 1999, and 2000,
7 to remain available until expended. Of such amounts for
8 each fiscal year—

9 (1) \$5,000,000 may be used to enable the Na-
10 tional Oceanic and Atmospheric Administration to
11 carry out research activities, including procurement
12 and maintenance of research facilities, of the Office
13 of Oceanic and Atmospheric Research, National Ma-
14 rine Fisheries Service, and the National Ocean Serv-
15 ice;

16 (2) \$10,500,000 may be used to carry out the
17 Ecology and Oceanography of Harmful Algal
18 Blooms (ECO-HAB) project and related research
19 under the Coastal Ocean Program established under
20 section 201(c) of Public Law 102-567;

21 (3) \$3,000,000 may be used for outreach, edu-
22 cation and advisory services administered by the Na-
23 tional Sea Grant Office established under subsection
24 204(a) of the National Sea Grant College Program
25 Act (33 U.S.C. 1123(a));

1 (4) \$5,500,000 may be used to carry out fed-
2 eral and state annual monitoring and analysis activi-
3 ties administered by the Office of Resource Con-
4 servaion and Assessment of the National Oceanic
5 and Atmospheric Administration; and

6 (5) \$8,000,000 may be used for grants under
7 sections 306, 306A and 310 of the Coastal Zone
8 Management Act of 1972 (16 U.S.C. 1455, 1455a
9 and 1456e).

10 **SECTION 1. SHORT TITLE.**

11 *This Act may be cited as the “Harmful Algal Bloom*
12 *and Hypoxia Research and Control Act of 1998”.*

13 **SEC. 2. FINDINGS.**

14 *The Congress finds that—*

15 (1) *the recent outbreak of the harmful microbe*
16 *Pfiesteria piscicida in the coastal waters of the*
17 *United States is one example of potentially harmful*
18 *algal blooms composed of naturally occurring species*
19 *that reproduce explosively and that are increasing in*
20 *frequency and intensity in the Nation’s coastal wa-*
21 *ters;*

22 (2) *other recent occurrences of harmful algal*
23 *blooms include red tides in the Gulf of Mexico and the*
24 *Southeast; brown tides in New York and Texas;*
25 *ciguatera fish poisoning in Hawaii, Florida, Puerto*

1 *Rico, and the U.S. Virgin Islands; and shellfish*
2 *poisonings in the Gulf of Maine, the Pacific North-*
3 *west, and the Gulf of Alaska;*

4 (3) *in recent years, harmful algal blooms have*
5 *resulted in massive fish kills, the deaths of numerous*
6 *endangered West Indian manatees, beach and shellfish*
7 *bed closures, threats to public health and safety, and*
8 *concern among the public about the safety of seafood;*

9 (4) *according to scientists, the factors causing or*
10 *contributing to harmful algal blooms may include ex-*
11 *cessive nutrients in coastal waters, other forms of pol-*
12 *lution, the transfer of harmful species through ship*
13 *ballast water, and ocean currents;*

14 (5) *harmful algal blooms have been responsible*
15 *for an estimated \$1,000,000,000 in economic losses*
16 *during the past decade;*

17 (6) *harmful algal blooms and blooms of non-toxic*
18 *algal species can also lead directly to other damaging*
19 *marine conditions such as hypoxia (reduced oxygen*
20 *concentrations), which are harmful or fatal to fish,*
21 *shellfish, and benthic organisms;*

22 (7) *according to the National Oceanic and At-*
23 *mospheric Administration in the Department of Com-*
24 *merce, 53 percent of U.S. estuaries experience hypoxia*
25 *for at least part of the year and a 7,000 square mile*

1 *area in the Gulf of Mexico off Louisiana and Texas*
2 *suffers from hypoxia, creating a massive “dead zone”*
3 *during much of the year where little or no marine life*
4 *exists;*

5 *(8) according to scientists, the primary factor*
6 *known to cause hypoxia is excessive nutrient loading*
7 *into coastal waters;*

8 *(9) there is a strong need to identify more work-*
9 *able and effective actions to reduce nutrient loadings*
10 *to coastal waters;*

11 *(10) the National Oceanic and Atmospheric Ad-*
12 *ministration, through its ongoing research, education,*
13 *grant, and coastal resource management programs,*
14 *possesses a full range of capabilities necessary to sup-*
15 *port a near and long-term comprehensive effort to*
16 *prevent, reduce, and control harmful algal blooms and*
17 *hypoxia;*

18 *(11) funding for the research and related pro-*
19 *grams of the National Oceanic and Atmospheric Ad-*
20 *ministration will aid in improving the Nation’s un-*
21 *derstanding and capabilities for addressing the*
22 *human and environmental costs associated with*
23 *harmful algal blooms and hypoxia; and*

24 *(12) other Federal agencies such as the Environ-*
25 *mental Protection Agency, the Department of Agri-*

1 *culture, and the National Science Foundation, along*
2 *with the States, Indian tribes, and local governments,*
3 *conduct important work related to the prevention, re-*
4 *duction, and control of harmful algal blooms and hy-*
5 *poxia.*

6 **SEC. 3. ACTION PLAN.**

7 (a) *ESTABLISHMENT OF INTER-AGENCY TASK*
8 *FORCE.—The President, through the Committee on Envi-*
9 *ronment and Natural Resources of the National Science and*
10 *Technology Council, shall establish an Inter-Agency Task*
11 *Force on Harmful Algal Blooms and Hypoxia (hereinafter*
12 *referred to as the “Task Force”). The Task Force shall con-*
13 *sist of the following representatives from—*

14 (1) *the Department of Commerce (who shall serve*
15 *as Chairman of the Task Force);*

16 (2) *the Environmental Protection Agency;*

17 (3) *the Department of Agriculture;*

18 (4) *the Department of the Interior;*

19 (5) *the Department of the Navy;*

20 (6) *the Department of Health and Human Serv-*
21 *ices;*

22 (7) *the National Science Foundation;*

23 (8) *the National Aeronautics and Space Admin-*
24 *istration;*

25 (9) *the Office of Science and Technology Policy;*

1 (10) *the Council on Environmental Quality; and*
2 (11) *such other Federal agencies as the President*
3 *considers appropriate.*

4 *(b) ACTION PLAN ON HARMFUL ALGAL BLOOMS.—*

5 (1) *Not later than 12 months after the date of*
6 *enactment of this Act, the Task Force, in consultation*
7 *with the coastal States, Indian tribes, and local gov-*
8 *ernments, industry, academic institutions, and non-*
9 *governmental organizations with expertise in coastal*
10 *zone management, shall develop an action plan pro-*
11 *viding for a comprehensive, coordinated, and timely*
12 *Federal response to harmful algal blooms.*

13 (2) *The action plan shall—*

14 (A) *consist of actions that each Federal de-*
15 *partment or agency represented on the Task*
16 *Force shall take to prevent, reduce, manage,*
17 *mitigate, and control harmful algal blooms and*
18 *their environmental and public health impacts;*

19 (B) *prevent unnecessary duplication of ef-*
20 *fort among Federal agencies and departments*
21 *with respect to the actions in subparagraph (A);*
22 *and*

23 (C) *provide for Federal cooperation and co-*
24 *ordination with and assistance to the coastal*
25 *States, Indian tribes, and local governments in*

1 *the prevention, reduction, management, mitiga-*
2 *tion, and control of harmful algal blooms and*
3 *their environmental and public health impacts.*

4 *(c) ACTION PLAN ON HYPOXIA.—*

5 *(1) Not later than 12 months after the date of*
6 *enactment of this Act, the Task Force, in consultation*
7 *with the States, Indian tribes, local governments, in-*
8 *dustry, agricultural, academic institutions, and non-*
9 *governmental organizations with expertise in water-*
10 *shed and coastal zone management, shall develop an*
11 *action plan providing for a comprehensive, coordi-*
12 *nated, and timely Federal response to hypoxia in*
13 *U.S. coastal waters.*

14 *(2) The action plan shall—*

15 *(A) establish needs, priorities, and guide-*
16 *lines for a peer-reviewed, inter-agency research*
17 *program on the causes, characteristics, and im-*
18 *pacts of hypoxia, and on actions that can be*
19 *taken to prevent, reduce, manage, mitigate, and*
20 *control hypoxia;*

21 *(B) identify actions that each Federal de-*
22 *partment or agency represented on the Task*
23 *Force shall take to prevent, reduce, manage,*
24 *mitigate, and control hypoxia and its environ-*
25 *mental impacts;*

1 (C) prevent unnecessary duplication of ef-
2 fort among Federal agencies and departments
3 with respect to the research and actions in sub-
4 paragraphs (A) and (B); and

5 (D) provide for Federal cooperation and co-
6 ordination with and assistance to the States, In-
7 dian tribes, and local governments in the preven-
8 tion, reduction, management, mitigation, and
9 control of hypoxia and its environmental im-
10 pacts.

11 (d) ANNUAL REPORTS.—Beginning 12 months after
12 the date the action plans in subsections (b) and (c) are pub-
13 lished, the Task Force shall submit 3 annual reports to the
14 Congress and the President which—

15 (1) describe the progress of the departments and
16 agencies represented on the Task Force in implement-
17 ing the actions contained in the action plans;

18 (2) assess the effectiveness of the action plans to
19 that date in preventing, reducing, managing, mitigat-
20 ing, and controlling harmful algal blooms and hy-
21 poxia;

22 (3) describe any changes to an action plan made
23 or proposed to improve the effectiveness of such plan;
24 and

1 (4) contain any other information the Task
2 Force may wish to include.

3 (e) *DISESTABLISHMENT OF TASK FORCE.*—The Presi-
4 dent may disestablish the Task Force after submission of
5 the third report in subsection (d).

6 **SEC. 4. NORTHERN GULF OF MEXICO HYPOXIA.**

7 (a) *ASSESSMENT REPORT.*—Not later than March 30,
8 1999, the Task Force shall complete and submit to Congress
9 and the President an integrated assessment of hypoxia in
10 the northern Gulf of Mexico that examines: the distribution,
11 dynamics, and causes; ecological and economic con-
12 sequences; sources and loads of nutrients transported by the
13 Mississippi River to the Gulf of Mexico; effects of reducing
14 nutrient loads; methods for reducing nutrient loads; and the
15 social and economic costs and benefits of such methods.

16 (b) *SUBMISSION OF A PLAN.*—No later than March 30,
17 2000, the President shall develop and submit to Congress
18 a plan, based on the integrated assessment submitted under
19 subsection (a), for reducing, mitigating, and controlling hy-
20 poxia in the northern Gulf of Mexico. In developing such
21 plan, the President shall consult with State, Indian tribe,
22 and local governments, academic, agricultural, industry,
23 and environmental groups and representatives. At least 90
24 days before the President submits such plan to the Congress,
25 a summary of the proposed plan shall be published in the

1 *Federal Register for a public comment period of not less*
2 *than 60 days.*

3 **SEC. 5. AUTHORIZATION OF APPROPRIATIONS.**

4 *There are authorized to be appropriated to the Sec-*
5 *retary of Commerce for research, education, and manage-*
6 *ment activities related to the prevention, reduction, and*
7 *control of harmful algal blooms and hypoxia, \$25.5 million*
8 *in each of fiscal years 1999, 2000, and 2001, to remain*
9 *available until expended. The Secretary shall consult with*
10 *the States on a regular basis regarding the development and*
11 *implementation of the activities authorized under this sec-*
12 *tion. Of such amounts for each fiscal year—*

13 *(1) \$5,000,000 may be used to enable the Na-*
14 *tional Oceanic and Atmospheric Administration to*
15 *carry out research and assessment activities, includ-*
16 *ing procurement of necessary research equipment, at*
17 *research laboratories of the National Ocean Service*
18 *and the National Marine Fisheries Service;*

19 *(2) \$7,000,000 may be used to carry out the*
20 *Ecology and Oceanography of Harmful Algal Blooms*
21 *(ECOHAB) project under the Coastal Ocean Program*
22 *established under section 201(c) of Public Law 102-*
23 *567;*

24 *(3) \$3,000,000 may be used by the National*
25 *Ocean Service of the National Oceanic and Atmos-*

1 *spheric Administration to carry out a peer-reviewed*
2 *research project on management measures that can be*
3 *taken to prevent, reduce, control, and mitigate harm-*
4 *ful algal blooms;*

5 *(4) \$5,500,000 may be used to carry out Federal*
6 *and State annual monitoring and analysis activities*
7 *for harmful algal blooms administered by the Na-*
8 *tional Ocean Service of the National Oceanic and At-*
9 *mospheric Administration;*

10 *(5) \$5,000,000 may be used for activities related*
11 *to research and monitoring on hypoxia by the Na-*
12 *tional Ocean Service and the Office of Oceanic and*
13 *Atmospheric Research of the National Oceanic and*
14 *Atmospheric Administration.*

15 **SEC. 6. AMENDMENT TO NATIONAL SEA GRANT COLLEGE**
16 **PROGRAM ACT.**

17 *Section 212(a) of the National Sea Grant College Pro-*
18 *gram Act (33 U.S.C. 1131(a)) is amended by striking para-*
19 *graph (2)(C) and inserting the following:*

20 *“(C) up to \$3,000,000 may be made avail-*
21 *able for competitive grants for university re-*
22 *search, education, training, and advisory serv-*
23 *ices on Pfiesteria piscicida and other harmful*
24 *algal blooms.”.*

1 **SEC. 7. AMENDMENT TO THE COASTAL ZONE MANAGEMENT**

2 **ACT.**

3 *Section 318(a) of the Coastal Zone Management Act*
4 *of 1972 (16 U.S.C. 1464 (a)) is amended—*

5 *(1) by striking “and” at the end of paragraph*
6 *(1);*

7 *(2) by striking “1999.” at the end of paragraph*
8 *(2) and inserting “1999; and”; and*

9 *(3) by adding at the end thereof the following:*

10 *“(3) up to \$2,000,000 for fiscal years 1999 and*
11 *2000 for technical assistance under section 310 to*
12 *support State implementation and analysis of the ef-*
13 *fectiveness of measures to prevent, reduce, mitigate, or*
14 *control harmful algal blooms and hypoxia.”.*

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[Report No. 105-3571]

A BILL

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