

**Calendar No. 271**

111<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

**S. 952**

**[Report No. 111–125]**

To develop and promote a comprehensive plan for a national strategy to address harmful algal blooms and hypoxia through baseline research, forecasting and monitoring, and mitigation and control while helping communities detect, control, and mitigate coastal and Great Lakes harmful algal blooms and hypoxia events.

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IN THE SENATE OF THE UNITED STATES

MAY 1, 2009

Ms. SNOWE (for herself, Mr. NELSON of Florida, Ms. CANTWELL, Mr. LEVIN, Mr. VITTER, Mr. CARDIN, Ms. LANDRIEU, Mrs. BOXER, Ms. COLLINS, Mr. KERRY, Mr. BEGICH, Mr. BURRIS, Mr. WHITEHOUSE, Ms. MIKULSKI, and Mr. FEINGOLD) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

FEBRUARY 4, 2010

Reported by Mr. ROCKEFELLER, with an amendment

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

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**A BILL**

To develop and promote a comprehensive plan for a national strategy to address harmful algal blooms and hypoxia through baseline research, forecasting and monitoring, and mitigation and control while helping communities

detect, control, and mitigate coastal and Great Lakes harmful algal blooms and hypoxia events.

**1 SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

**2 (a) SHORT TITLE.**—This Act may be cited as the  
**3 “Harmful Algal Blooms and Hypoxia Research and Con-**  
**4 trol Amendments Act of 2009”.**

**5 (b) TABLE OF CONTENTS.**—The table of contents for  
**6 this Act is as follows:**

- Sec. 1. Short title; table of contents.
- Sec. 2. Amendment of Harmful Algal Bloom and Hypoxia Research and Control Act of 1998.
- Sec. 3. Findings.
- Sec. 4. Purpose.
- Sec. 5. Interagency task force on harmful algal blooms and hypoxia.
- Sec. 6. National harmful algal bloom and hypoxia program.
- Sec. 7. Regional research and action plans.
- Sec. 8. Reporting.
- Sec. 9. Northern Gulf of Mexico Hypoxia.
- Sec. 10. Pilot program for freshwater harmful algal blooms and hypoxia.
- Sec. 11. Interagency financing.
- Sec. 12. Application with other laws.
- Sec. 13. Definitions.
- Sec. 14. Authorization of appropriations.

**7 SEC. 2. AMENDMENT OF HARMFUL ALGAL BLOOM AND HY-**  
**8 POXIA RESEARCH AND CONTROL ACT OF**  
**9 1998.**

**10** Except as otherwise expressly provided, whenever in  
**11** this title an amendment or repeal is expressed in terms  
**12** of an amendment to, or repeal of, a section or other provi-  
**13** sion, the reference shall be considered to be made to a  
**14** section or other provision of the Harmful Algal Bloom and  
**15** Hypoxia Research and Control Act of 1998 (~~16 U.S.C.~~  
**16** ~~1451~~ note).

1 **SEC. 3. FINDINGS.**

2 Section 602 is amended to read as follows:

3 **~~“SEC. 602. FINDINGS.~~**

4 The Congress finds the following:

5 “~~(1) Harmful algal blooms and hypoxia are in-~~  
6 ~~creasing in frequency and intensity in the Nation’s~~  
7 ~~coastal waters and Great Lakes and pose a threat~~  
8 ~~to the health of coastal and Great Lakes ecosystems,~~  
9 ~~are costly to coastal economies, and threaten the~~  
10 ~~safety of seafood and human health.~~

11 “~~(2) Excessive nutrients in coastal waters have~~  
12 ~~been linked to the increased intensity and frequency~~  
13 ~~of hypoxia and some harmful algal blooms and there~~  
14 ~~is a need to identify more workable and effective ac-~~  
15 ~~tions to reduce the negative impacts of harmful algal~~  
16 ~~blooms and hypoxia on coastal waters.~~

17 “~~(3) The National Oceanic and Atmospheric~~  
18 ~~Administration, through its ongoing research, moni-~~  
19 ~~toring, observing, education, grant, and coastal re-~~  
20 ~~source management programs and in collaboration~~  
21 ~~with the other Federal agencies, on the Interagency~~  
22 ~~Task Force, along with States, Indian tribes, and~~  
23 ~~local governments, possesses a full range of capabili-~~  
24 ~~ties necessary to support a near and long-term com-~~  
25 ~~prehensive effort to prevent, reduce, and control the~~

1 human and environmental costs of harmful algal  
2 blooms and hypoxia.

3 “(4) Harmful algal blooms and hypoxia can be  
4 triggered and exacerbated by increases in nutrient  
5 loading from point and non-point sources, much of  
6 which originates in upland areas and is delivered to  
7 marine and freshwater bodies via river discharge,  
8 thereby requiring integrated and landscape-level re-  
9 search and control strategies.

10 “(5) Harmful algal blooms and hypoxia affect  
11 many sectors of the coastal economy, including tour-  
12 ism, public health, and recreational and commercial  
13 fisheries; and according to a recent report produced  
14 by NOAA, the United States seafood and tourism  
15 industries suffer annual losses of \$82 million due to  
16 economic impacts of harmful algal blooms.

17 “(6) Global climate change and its effect on  
18 oceans and the Great Lakes may ultimately play a  
19 role in the increase or decrease of harmful algal  
20 bloom and hypoxic events.

21 “(7) Proliferations of harmful and nuisance  
22 algae can occur in all United States waters, includ-  
23 ing coastal areas and estuaries, the Great Lakes,  
24 and inland waterways, crossing political boundaries  
25 and necessitating regional coordination for research,

1 monitoring, mitigation, response, and prevention ef-  
 2 forts.

3 “(8) Following passage of the Harmful Algal  
 4 Bloom and Hypoxia Research and Control Act of  
 5 1998, federally funded and other research has led to  
 6 several technological advances, including remote  
 7 sensing, molecular and optical tools, satellite im-  
 8 agery, and coastal and ocean observing systems, that  
 9 provide data for forecast models, improve the moni-  
 10 toring and prediction of these events, and provide es-  
 11 sential decisionmaking tools for managers and stake-  
 12 holders.”.

13 **SEC. 4. PURPOSE.**

14 The Act is amended by inserting after section 602  
 15 the following:

16 **“SEC. 602A. PURPOSES.**

17 “The purposes of this Act are—

18 “(1) to provide for the development and coordi-  
 19 nation of a comprehensive and integrated national  
 20 program to address harmful algal blooms and hy-  
 21 poxia through baseline research, monitoring, preven-  
 22 tion, mitigation, and control;

23 “(2) to provide for the assessment of environ-  
 24 mental, socio-economic, and human health impacts  
 25 of harmful algal blooms and hypoxia on a regional

and national scale; and to integrate that assessment into marine and freshwater resource decisions; and  
~~“(3) to facilitate regional, State, and local efforts to develop and implement appropriate harmful algal bloom and hypoxia response plans, strategies, and tools including outreach programs and information dissemination mechanisms.”.~~

**SEC. 5. INTERAGENCY TASK FORCE ON HARMFUL ALGAL BLOOMS AND HYPOXIA.**

(a) **FEDERAL REPRESENTATIVES.**—Section 603(a) is amended—

(1) by striking “The Task Force shall consist of the following representatives from—” and inserting “The Task Force shall consist of representatives of the Office of the Secretary from each of the following departments and of the office of the head of each of the following Federal agencies.”;

(2) by striking “the” in paragraphs (1) through (11) and inserting “The”;

(3) by striking the semicolon in paragraphs (1) through (10) and inserting a period;

(4) by striking “Quality; and” in paragraph (11) and inserting “Quality.”; and

(5) by striking “such other” in paragraph (12) and inserting “Other”.

1       (b) STATE REPRESENTATIVES.—Section 603 is  
2 amended—

3           (1) by striking subsections (b) through (i); and

4           (2) by inserting after subsection (a) the fol-  
5 lowing:

6       “(b) STATE REPRESENTATIVES.—The Secretary  
7 shall establish criteria for determining appropriate States  
8 to serve on the Task Force and establish and implement  
9 a nominations process to select representatives from 2 ap-  
10 propriate States in different regions, on a rotating basis,  
11 to serve 2-year terms on the Task Force.”.

12 **SEC. 6. NATIONAL HARMFUL ALGAL BLOOM AND HYPOXIA**  
13 **PROGRAM.**

14       The Act is amended by inserting after section 603  
15 the following:

16 **“SEC. 603A. NATIONAL HARMFUL ALGAL BLOOM AND HY-**  
17 **POXIA PROGRAM.**

18       “(a) ESTABLISHMENT.—The President, acting  
19 through NOAA, shall establish and maintain a national  
20 program for integrating efforts to address harmful algal  
21 bloom and hypoxia research, monitoring, prediction, con-  
22 trol, mitigation, prevention, and outreach.

23       “(b) TASK FORCE FUNCTIONS.—The Task Force  
24 shall be the oversight body for the development and imple-

1 mentation of the national harmful algal bloom and hypoxia  
2 program and shall—

3 “(1) coordinate interagency review of plans and  
4 policies of the Program;

5 “(2) assess interagency work and spending  
6 plans for implementing the activities of the Pro-  
7 gram;

8 “(3) review the Program’s distribution of Fed-  
9 eral grants and funding to address research prior-  
10 ities;

11 “(4) support implementation of the actions and  
12 strategies identified in the regional research and ac-  
13 tion plans under subsection (d);

14 “(5) support the development of institutional  
15 mechanisms and financial instruments to further the  
16 goals of the program;

17 “(6) expedite the interagency review process  
18 and ensure timely review and dispersal of required  
19 reports and assessments under this Act; and

20 “(7) promote the development of new tech-  
21 nologies for predicting, monitoring, and mitigating  
22 harmful algal blooms and hypoxia conditions.

23 “(e) LEAD FEDERAL AGENCY.—NOAA shall be the  
24 lead Federal agency for implementing and administering  
25 the National Harmful Algal Bloom and Hypoxia Program.



1       “(d) RESPONSIBILITIES.—The Program shall—

2               “(1) promote a national strategy to help com-  
3       munities understand, detect, predict, control, and  
4       mitigate freshwater and marine harmful algal bloom  
5       and hypoxia events;

6               “(2) plan, coordinate, and implement the Na-  
7       tional Harmful Algal Bloom and Hypoxia Program;  
8       and

9               “(3) report to the Task Force via the Adminis-  
10      trator.

11      “(e) DUTIES.—

12              “(1) ADMINISTRATIVE DUTIES.—The Program  
13      shall—

14              “(A) prepare work and spending plans for  
15      implementing the activities of the Program and  
16      developing and implementing the Regional Re-  
17      search and Action Plans;

18              “(B) administer merit-based, competitive  
19      grant funding to support the projects main-  
20      tained and established by the Program, and to  
21      address the research and management needs  
22      and priorities identified in the Regional Re-  
23      search and Action Plans;

24              “(C) coordinate NOAA programs that ad-  
25      dress harmful algal blooms and hypoxia and

1 other ocean and Great Lakes science and man-  
2 agement programs and centers that address the  
3 chemical, biological, and physical components of  
4 harmful algal blooms and hypoxia;

5 “(D) coordinate and work cooperatively  
6 with other Federal, State, and local government  
7 agencies and programs that address harmful  
8 algal blooms and hypoxia;

9 “(E) coordinate with the State Department  
10 to support international efforts on harmful  
11 algal bloom and hypoxia information sharing,  
12 research, mitigation, and control;

13 “(F) coordinate an outreach, education,  
14 and training program that integrates and aug-  
15 ments existing programs to improve public edu-  
16 cation about and awareness of the causes, im-  
17 pacts, and mitigation efforts for harmful algal  
18 blooms and hypoxia;

19 “(G) facilitate and provide resources for  
20 training of State and local coastal and water re-  
21 source managers in the methods and tech-  
22 nologies for monitoring, controlling, and miti-  
23 gating harmful algal blooms and hypoxia;

24 “(H) support regional efforts to control  
25 and mitigate outbreaks through—

1 “(i) communication of the contents of  
2 the Regional Research and Action Plans  
3 and maintenance of online data portals for  
4 other information about harmful algal  
5 blooms and hypoxia to State and local  
6 stakeholders within the region for which  
7 each plan is developed; and

8 “(ii) overseeing the development, re-  
9 view, and periodic updating of Regional  
10 Research and Action Plans established  
11 under section 602C(b);

12 “(I) convene an annual meeting of the  
13 Task Force; and

14 “(J) perform such other tasks as may be  
15 delegated by the Task Force.

16 “(2) NOAA DUTIES.—NOAA shall maintain  
17 and enhance—

18 “(A) the Ecology and Oceanography of  
19 Harmful Algal Blooms Program;

20 “(B) the Monitoring and Event Response  
21 for Harmful Algal Blooms Program;

22 “(C) the Northern Gulf of Mexico Eco-  
23 systems and Hypoxia Assessment Program; and

24 “(D) the Coastal Hypoxia Research Pro-  
25 gram.

1           ~~“(3) PROGRAM DUTIES.—The Program shall—~~

2                   ~~“(A) establish—~~

3                           ~~“(i) a Mitigation and Control of~~  
4                           ~~Harmful Algal Blooms Program—~~

5                                   ~~“(I) to develop and promote~~  
6                                   ~~strategies for the prevention, mitiga-~~  
7                                   ~~tion, and control of harmful algal~~  
8                                   ~~blooms;~~

9                                   ~~“(II) to fund research that may~~  
10                                  ~~facilitate the prevention, mitigation,~~  
11                                  ~~and control of harmful algal blooms;~~  
12                                  ~~and~~

13                                  ~~“(III) to develop and dem-~~  
14                                  ~~onstrate technology that may mitigate~~  
15                                  ~~and control harmful algal blooms; and~~

16                                  ~~“(ii) other programs as necessary; and~~

17                                  ~~“(B) work cooperatively with other offices,~~  
18                                  ~~centers, and programs within NOAA and other~~  
19                                  ~~agencies represented on the Task Force, States,~~  
20                                  ~~and nongovernmental organizations concerned~~  
21                                  ~~with marine and aquatic issues to manage data,~~  
22                                  ~~products, and infrastructure, including—~~

23                                   ~~“(i) compiling, managing, and~~  
24                                   ~~archiving data from relevant programs in~~  
25                                   ~~Task Force member agencies;~~

1                   “(ii) creating data portals for general  
 2                   education and data dissemination on cen-  
 3                   tralized, publicly available databases; and  
 4                   “(iii) establishing communication  
 5                   routes for data, predictions, and manage-  
 6                   ment tools both to and from the regions,  
 7                   states, and local communities.”.

8 **SEC. 7. REGIONAL RESEARCH AND ACTION PLANS.**

9       The Act, as amended by section 6, is amended by in-  
 10       serting after section 602A the following:

11 **“SEC. 602B. REGIONAL RESEARCH AND ACTION PLANS.**

12       “(a) IN GENERAL.—The Program shall—

13               “(1) oversee the development and implementa-  
 14               tion of Regional Research and Action Plans; and

15               “(2) identify appropriate regions and sub-re-  
 16               gions to be addressed by each Regional Research  
 17               and Action Plan.

18       “(b) REGIONAL PANELS OF EXPERTS.—

19               “(1) IN GENERAL.—In accordance with the  
 20               schedule set forth in paragraph (2), the Program  
 21               shall convene a panel of experts for each region  
 22               identified under subsection (a)(2) from among—

23                   “(A) State coastal management and plan-  
 24                   ning officials;

1           ~~“(B) water management and watershed of-~~  
 2           ~~fcials from both coastal states and noncoastal~~  
 3           ~~states with water sources that drain into water~~  
 4           ~~bodies affected by harmful algal blooms and hy-~~  
 5           ~~poxia;~~

6           ~~“(C) public health officials;~~

7           ~~“(D) emergency management officials;~~

8           ~~“(E) nongovernmental organizations con-~~  
 9           ~~cerned with marine and aquatic issues;~~

10          ~~“(F) science and technology development~~  
 11          ~~institutions;~~

12          ~~“(G) economists;~~

13          ~~“(H) industries and businesses affected by~~  
 14          ~~coastal and freshwater harmful algal blooms~~  
 15          ~~and hypoxia;~~

16          ~~“(I) scientists, with expertise concerning~~  
 17          ~~harmful algal blooms or hypoxia, from academic~~  
 18          ~~or research institutions; and~~

19          ~~“(J) other stakeholders as appropriate.~~

20          ~~“(2) SCHEDULE.—The Program shall—~~

21           ~~“(A) convene panels in at least 1/3 of the~~  
 22           ~~regions within 9 months after the date of enact-~~  
 23           ~~ment of the Harmful Algal Blooms and Hy-~~  
 24           ~~poxia Research and Control Amendments Act of~~  
 25           ~~2009;~~

1           “(B) convene panels in at least  $\frac{2}{3}$  of the  
2           regions within 21 months after such date;

3           “(C) convene panels in the remaining re-  
4           gions within 33 months after such date; and

5           “(D) reconvene each panel at least every 5  
6           years after the date on which it was initially  
7           convened.

8           “(e) PLAN DEVELOPMENT.—Each regional panel of  
9           experts shall develop a Regional Research and Action Plan  
10          for its respective region and submit it to the Program for  
11          approval and to the Task Force. The Plan shall identify  
12          appropriate elements for the region, including—

13           “(1) baseline ecological, social, and economic re-  
14          search needed to understand the biological, physical,  
15          and chemical conditions that cause, exacerbate, and  
16          result from harmful algal blooms and hypoxia;

17           “(2) regional priorities for ecological and socio-  
18          economic research on issues related to, and impacts  
19          of, harmful algal blooms and hypoxia;

20           “(3) research needed to develop and advance  
21          technologies for improving capabilities to predict,  
22          monitor, prevent, control, and mitigate harmful algal  
23          blooms and hypoxia;

24           “(4) State and local government actions that  
25          may be implemented—

1           “(A) to support long-term monitoring ef-  
2           forts and emergency monitoring as needed;

3           “(B) to minimize the occurrence of harm-  
4           ful algal blooms and hypoxia;

5           “(C) to reduce the duration and intensity  
6           of harmful algal blooms and hypoxia in times of  
7           emergency;

8           “(D) to address human health dimensions  
9           of harmful algal blooms and hypoxia; and

10          “(E) to identify and protect vulnerable eco-  
11          systems that could be, or have been, affected by  
12          harmful algal blooms and hypoxia;

13          “(5) mechanisms by which data and products  
14          are transferred between the Program and State and  
15          local governments and research entities;

16          “(6) communication, outreach and information  
17          dissemination efforts that State and local govern-  
18          ments and nongovernmental organizations can un-  
19          dertake to educate and inform the public concerning  
20          harmful algal blooms and hypoxia and alternative  
21          coastal resource-utilization opportunities that are  
22          available; and

23          “(7) pilot projects, if appropriate, that may be  
24          implemented on local, State, and regional scales to



1 address the research priorities and response actions  
2 identified in the Plan.

3 “(d) ~~PLAN TIMELINES; UPDATES.~~—The Program  
4 shall ensure that Regional Research and Action Plans de-  
5 veloped under this section are—

6 “(1) completed and approved by the Program  
7 within 12 months after the date on which a regional  
8 panel is convened or reconvened under subsection  
9 (b)(2); and

10 “(2) updated no less frequently than once every  
11 5 years.

12 “(e) ~~FUNDING.~~—

13 “(1) ~~IN GENERAL.~~—Subject to available appro-  
14 priations, the Program shall make funding available  
15 to eligible organizations to implement the research,  
16 monitoring, forecasting, modeling, and response ac-  
17 tions included under each approved Regional Re-  
18 search and Action Plan. The Program shall select  
19 recipients through a merit-based, competitive process  
20 and seek to fund research proposals that most effec-  
21 tively align with the research priorities identified in  
22 the relevant Regional Research and Action Plan.

23 “(2) ~~APPLICATION; ASSURANCES.~~—Any organi-  
24 zation seeking funding under this subsection shall  
25 submit an application to the Program at such time;

1 in such form and manner, and containing such in-  
 2 formation and assurances as the Program may re-  
 3 quire. The Program shall require any organization  
 4 receiving funds under this subsection to utilize the  
 5 mechanisms described in subsection (c)(5) to ensure  
 6 the transfer of data and products developed under  
 7 the Plan.

8 “(3) ELIGIBLE ORGANIZATION.—In this sub-  
 9 section, the term ‘eligible organization’ means—

10 “(A) a nongovernmental researcher or or-  
 11 ganization; or

12 “(B) any other entity that applies for  
 13 funding to implement the State, local, and non-  
 14 governmental control, mitigation, and preven-  
 15 tion strategies identified in the relevant Re-  
 16 gional Research and Action Plan.

17 “(f) INTERMEDIATE REVIEWS.—If the Program de-  
 18 termines that an intermediate review is necessary to ad-  
 19 dress emergent needs in harmful algal blooms and hypoxia  
 20 under a Regional Research and Action Plan, it shall notify  
 21 the Task Force and reconvene the relevant regional panel  
 22 of experts for the purpose of revising the Regional Re-  
 23 search and Action Plan so as to address the emergent  
 24 threat or need.”.

1 **SEC. 8. REPORTING.**

2 Section 603, as amended by section 5, is amended  
3 by adding at the end thereof the following:

4 “(c) BIENNIAL REPORTS.—Every 2 years the Pro-  
5 gram shall prepare a report for the Senate Committee on  
6 Commerce, Science, and Transportation and the House of  
7 Representatives Committees on Science and Technology  
8 and on Natural Resources that describe—

9 “(1) activities, budgets, and progress on imple-  
10 menting the national harmful algal bloom and hy-  
11 poxia program;

12 “(2) the proceedings of the annual Task Force  
13 meetings; and

14 “(3) the status, activities, and funding for im-  
15 plementation of the Regional Research and Action  
16 Plans, including a description of research funded  
17 under the program and actions and outcomes of  
18 Plan response strategies carried out by States.

19 “(d) QUINQUENNIAL REPORTS.—Not less than once  
20 every 5 years after the date of enactment of the Harmful  
21 Algal Blooms and Hypoxia Research and Control Amend-  
22 ments Act of 2009, the Task Force shall complete and  
23 submit a report on harmful algal blooms and hypoxia in  
24 marine and freshwater systems to the Senate Committee  
25 on Commerce, Science, and Transportation and the House

1 of Representatives Committees on Science and Technology  
2 and on Natural Resources. The report shall—

3 “(1) evaluate the state of scientific knowledge  
4 of harmful algal blooms and hypoxia in marine and  
5 freshwater systems, including their causes and eco-  
6 logical consequences;

7 “(2) evaluate the social and economic impacts  
8 of harmful algal blooms and hypoxia, including their  
9 impacts on coastal communities, and review those  
10 communities’ efforts and associated economic costs  
11 related to event forecasting, planning, mitigation, re-  
12 sponse, and public outreach and education;

13 “(3) examine and evaluate the human health  
14 impacts of harmful algal blooms and hypoxia, includ-  
15 ing any gaps in existing research;

16 “(4) describe advances in capabilities for moni-  
17 toring, forecasting, modeling, control, mitigation,  
18 and prevention of harmful algal blooms and hypoxia,  
19 including techniques for, integrating landscape- and  
20 watershed-level water quality information into ma-  
21 rine and freshwater harmful algal bloom and hy-  
22 poxia prevention and mitigation strategies at Fed-  
23 eral and regional levels;

24 “(5) evaluate progress made by, and the needs  
25 of, Federal, regional, State, and local policies and

1 strategies for forecasting, planning, mitigating, pre-  
 2 venting, and responding to harmful algal blooms and  
 3 hypoxia, including the economic costs and benefits of  
 4 such policies and strategies;

5 “(6) make recommendations for integrating,  
 6 improving, and funding future Federal, regional,  
 7 State, and local policies and strategies for pre-  
 8 venting and mitigating the occurrence and impacts  
 9 of harmful algal blooms and hypoxia; and

10 “(7) describe communication, outreach, and  
 11 education efforts to raise public awareness of harm-  
 12 ful algal blooms and hypoxia, their impacts, and the  
 13 methods for mitigation and prevention.”

14 **SEC. 9. NORTHERN GULF OF MEXICO HYPOXIA.**

15 Section 604 is amended to read as follows:

16 **“SEC. 604. NORTHERN GULF OF MEXICO HYPOXIA.**

17 (a) TASK FORCE ANNUAL PROGRESS REPORTS.—  
 18 For each of the years from 2009 through 2013, the Mis-  
 19 sissippi River/Gulf of Mexico Watershed Nutrient Task  
 20 Force shall complete and submit to the Congress and the  
 21 President an annual report on the progress made by Task  
 22 Force-directed activities toward attainment of the Coastal  
 23 Goal of the Gulf Hypoxia Action Plan 2008.

24 (b) TASK FORCE 5-YEAR PROGRESS REPORT.—In  
 25 2013, that Task Force shall complete and submit to Con-

1 gress and the President a 5-year report on the progress  
 2 made by Task Force-directed activities toward attainment  
 3 of the Coastal Goal of the Gulf Hypoxia Action Plan 2008.  
 4 The report shall assess progress made toward nutrient  
 5 load reductions, the response of the hypoxic zone and  
 6 water quality throughout the Mississippi/Atchafalaya  
 7 River Basin, and the economic and social effects. The re-  
 8 port shall include an evaluation of how current policies  
 9 and programs affect management decisions, including  
 10 those made by municipalities and industrial and agricul-  
 11 tural producers, evaluate lessons learned, and recommend  
 12 appropriate actions to continue to implement or, if nec-  
 13 essary, revise this strategy.

14 **SEC. 10. PILOT PROGRAM FOR FRESHWATER HARMFUL**  
 15 **ALGAL BLOOMS AND HYPOXIA.**

16 The Act, as amended by section 7, is amended by in-  
 17 serting after section 603B the following:

18 **“SEC. 603C. PILOT PROGRAM FOR FRESHWATER HARMFUL**  
 19 **ALGAL BLOOMS AND HYPOXIA.**

20 “(a) PILOT PROGRAM.—The Secretary shall establish  
 21 a collaborative pilot program with the Environmental Pro-  
 22 tection Agency and other appropriate Federal agencies to  
 23 examine harmful algal blooms and hypoxia occurring in  
 24 freshwater systems, including the Great Lakes. The pilot  
 25 program shall—

1           “(1) assess the issues associated with, and im-  
 2           pacts of, harmful algal blooms and hypoxia in fresh-  
 3           water ecosystems;

4           “(2) research the efficacy of mitigation meas-  
 5           ures, including measures to reduce nutrient loading;  
 6           and

7           “(3) recommend potential management solu-  
 8           tions.

9           “(b) REPORT.—The Secretary of Commerce, in con-  
 10          sultation with other participating Federal agencies, shall  
 11          conduct an assessment of the effectiveness of the pilot pro-  
 12          gram in improving freshwater habitat quality and publish  
 13          a report, available to the public, of the results of the as-  
 14          sessment.”.

15       **SEC. 11. INTERAGENCY FINANCING.**

16          The Act is amended by inserting after section 604  
 17          the following:

18       **“SEC. 604A. INTERAGENCY FINANCING.**

19          “The departments and agencies represented on the  
 20          Task Force are authorized to participate in interagency  
 21          financing and share, transfer, receive, obligate, and ex-  
 22          pend funds appropriated to any member of the Task Force  
 23          for the purposes of carrying out any administrative or pro-  
 24          grammatic project or activity under this Act, including  
 25          support for the Program, a common infrastructure, infor-

1 mation sharing, and system integration for harmful algal  
 2 bloom and hypoxia research, monitoring, forecasting, pre-  
 3 vention, and control. Funds may be transferred among  
 4 such departments and agencies through an appropriate in-  
 5 strument that specifies the goods, services, or space being  
 6 acquired from another Task Force member and the costs  
 7 of the same.”.

8 **SEC. 12. APPLICATION WITH OTHER LAWS.**

9 The Act is amended by inserting after section 606  
 10 the following:

11 **“SEC. 607. EFFECT ON OTHER FEDERAL AUTHORITY.**

12 “Nothing in this title supersedes or limits the author-  
 13 ity of any agency to carry out its responsibilities and mis-  
 14 sions under other laws.”.

15 **SEC. 13. DEFINITIONS.**

16 (a) IN GENERAL.—The Act is amended by inserting  
 17 after section 605 the following:

18 **“SEC. 605A. DEFINITIONS.**

19 “In this Act:

20 “(1) ADMINISTRATOR.—The term ‘Adminis-  
 21 trator’ means the Administrator of the NOAA.

22 “(2) HARMFUL ALGAL BLOOM.—The term  
 23 ‘harmful algal bloom’ means marine and freshwater  
 24 phytoplankton that proliferate to high concentra-  
 25 tions, resulting in nuisance conditions or harmful



1 impacts on marine and aquatic ecosystems, coastal  
 2 communities, and human health through the produc-  
 3 tion of toxic compounds or other biological, chemical,  
 4 and physical impacts of the algae outbreak.

5 “(3) HYPOXIA.—The term ‘hypoxia’ means a  
 6 condition where low dissolved oxygen in aquatic sys-  
 7 tems causes stress or death to resident organisms.

8 “(4) NOAA.—The term ‘NOAA’ means the Na-  
 9 tional Oceanic and Atmospheric Administration.

10 “(5) PROGRAM.—The term ‘Program’ means  
 11 the Integrated Harmful Algal Bloom and Hypoxia  
 12 Program established under section 603A.

13 “(6) REGIONAL RESEARCH AND ACTION  
 14 PLAN.—The term ‘Regional Research and Action  
 15 Plan’ means a plan established under section 602B.

16 “(7) SECRETARY.—The term ‘Secretary’ means  
 17 the Secretary of Commerce, acting through  
 18 NOAA.”.

19 “(8) TASK FORCE.—The term ‘Task Force’  
 20 means the Interagency Task Force established by  
 21 section 603(a).

22 “(9) UNITED STATES COASTAL WATERS.—The  
 23 term ‘United States coastal waters’ includes the  
 24 Great Lakes.”.

1       (b) CONFORMING AMENDMENT.—Section 602(a) is  
 2 amended by striking “Hypoxia (hereinafter referred to as  
 3 the ‘Task force’).” and inserting “Hypoxia.”.

4 **SEC. 14. AUTHORIZATION OF APPROPRIATIONS.**

5       Section 605 is amended to read as follows:—

6 **“SEC. 605. AUTHORIZATION OF APPROPRIATIONS.**

7       “(a) IN GENERAL.—There are authorized to be ap-  
 8 propriated to NOAA to implement the Program under this  
 9 title \$40,000,000 for each of fiscal years 2010 through  
 10 2014, of which up to \$10,000,000 shall be allocated each  
 11 fiscal year to the creation of Regional Research and Action  
 12 Plans required by section 602B.

13       “(b) EXTRAMURAL RESEARCH ACTIVITIES.—The  
 14 Secretary shall ensure that a substantial portion of funds  
 15 appropriated pursuant to subsection (a) that are used for  
 16 research purposes are allocated to extramural research ac-  
 17 tivities.

18       “(c) PILOT PROGRAM.—In addition to any amounts  
 19 appropriated pursuant to subsection (a), there are author-  
 20 ized to be appropriated to NOAA such sums as may be  
 21 necessary to carry out the pilot program established under  
 22 section 603C.”.

1 **SECTION 1. SHORT TITLE; TABLE OF CONTENTS.**

2 (a) *SHORT TITLE.*—*This Act may be cited as the*  
 3 *“Harmful Algal Blooms and Hypoxia Research and Con-*  
 4 *trol Amendments Act of 2009”.*

5 (b) *TABLE OF CONTENTS.*—*The table of contents for*  
 6 *this Act is as follows:*

*Sec. 1. Short title; table of contents.*

*Sec. 2. Amendment of Harmful Algal Bloom and Hypoxia Research and Control*  
*Act of 1998.*

*Sec. 3. Findings.*

*Sec. 4. Purpose.*

*Sec. 5. Interagency task force on harmful algal blooms and hypoxia.*

*Sec. 6. National harmful algal bloom and hypoxia program.*

*Sec. 7. Regional research and action plans.*

*Sec. 8. Reporting.*

*Sec. 9. Northern Gulf of Mexico Hypoxia.*

*Sec. 10. Pilot program for freshwater harmful algal blooms and hypoxia.*

*Sec. 11. Interagency financing.*

*Sec. 12. Application with other laws.*

*Sec. 13. Definitions.*

*Sec. 14. Authorization of appropriations.*

7 **SEC. 2. AMENDMENT OF HARMFUL ALGAL BLOOM AND HY-**  
 8 **POXIA RESEARCH AND CONTROL ACT OF 1998.**

9 *Except as otherwise expressly provided, whenever in*  
 10 *this title an amendment or repeal is expressed in terms of*  
 11 *an amendment to, or repeal of, a section or other provision,*  
 12 *the reference shall be considered to be made to a section or*  
 13 *other provision of the Harmful Algal Bloom and Hypoxia*  
 14 *Research and Control Act of 1998 (16 U.S.C. 1451 note).*

15 **SEC. 3. FINDINGS.**

16 *Section 602 is amended to read as follows:*

17 **“SEC. 602. FINDINGS.**

18 *“The Congress finds the following:*

1           “(1) *Harmful algal blooms and hypoxia are in-*  
2           *creasing in frequency and intensity in the Nation’s*  
3           *coastal waters and Great Lakes and pose a threat to*  
4           *the health of coastal and Great Lakes ecosystems, are*  
5           *costly to coastal economies, and threaten the safety of*  
6           *seafood and human health.*

7           “(2) *Excessive nutrients in coastal waters have*  
8           *been linked to the increased intensity and frequency*  
9           *of hypoxia and some harmful algal blooms and there*  
10          *is a need to identify more workable and effective ac-*  
11          *tions to reduce the negative impacts of harmful algal*  
12          *blooms and hypoxia on coastal waters.*

13          “(3) *NOAA, through its ongoing research, moni-*  
14          *toring, observing, education, grant, and coastal re-*  
15          *source management programs and in collaboration*  
16          *with the other Federal agencies, on the Interagency*  
17          *Task Force, along with States, Indian tribes, and*  
18          *local governments, possesses capabilities necessary to*  
19          *support a near and long-term comprehensive effort to*  
20          *prevent, reduce, and control the human and environ-*  
21          *mental costs of harmful algal blooms and hypoxia.*

22          “(4) *Harmful algal blooms and hypoxia can be*  
23          *triggered and exacerbated by increases in nutrient*  
24          *loading from point and non-point sources, much of*  
25          *which originates in upland areas and is delivered to*

1     *marine and freshwater bodies via river discharge,*  
 2     *thereby requiring integrated and landscape-level re-*  
 3     *search and control strategies.*

4             *“(5) Harmful algal blooms and hypoxia affect*  
 5     *many sectors of the coastal economy, including tour-*  
 6     *ism, public health, and recreational and commercial*  
 7     *fisheries; and according to a recent report produced*  
 8     *by NOAA, the United States seafood and tourism in-*  
 9     *dustries suffer annual losses of \$82 million due to eco-*  
 10    *nomic impacts of harmful algal blooms.*

11            *“(6) Global climate change and its effect on*  
 12    *oceans and the Great Lakes may ultimately affect*  
 13    *harmful algal bloom and hypoxic events.*

14            *“(7) Proliferations of harmful and nuisance*  
 15    *algae can occur in all United States waters, including*  
 16    *coastal areas and estuaries, the Great Lakes, and in-*  
 17    *land waterways, crossing political boundaries and ne-*  
 18    *cessitating regional coordination for research, moni-*  
 19    *toring, mitigation, response, and prevention efforts.*

20            *“(8) Following passage of the Harmful Algal*  
 21    *Bloom and Hypoxia Research and Control Act of*  
 22    *1998, federally funded and other research has led to*  
 23    *several technological advances, including remote sens-*  
 24    *ing, molecular and optical tools, satellite imagery,*  
 25    *and coastal and ocean observing systems, that provide*

1        *data for forecast models, improve the monitoring and*  
 2        *prediction of these events, and provide essential deci-*  
 3        *sionmaking tools for managers and stakeholders.”.*

4    **SEC. 4. PURPOSES.**

5        *The Act is amended by inserting after section 602 the*  
 6        *following:*

7    **“SEC. 602A. PURPOSES.**

8        *“The purposes of this title are—*

9                *“(1) to provide for the development and coordi-*  
 10        *nation of a comprehensive and integrated national*  
 11        *program to address harmful algal blooms and hy-*  
 12        *poxia through baseline research, monitoring, preven-*  
 13        *tion, mitigation, and control;*

14                *“(2) to provide for the assessment of environ-*  
 15        *mental, socio-economic, and human health impacts of*  
 16        *harmful algal blooms and hypoxia on a regional and*  
 17        *national scale, and to integrate that assessment into*  
 18        *marine and freshwater resource decisions; and*

19                *“(3) to facilitate regional, State, tribal, and local*  
 20        *efforts to develop and implement appropriate harmful*  
 21        *algal bloom and hypoxia response plans, strategies,*  
 22        *and tools including outreach programs and informa-*  
 23        *tion dissemination mechanisms.”.*

1 **SEC. 5. INTERAGENCY TASK FORCE ON HARMFUL ALGAL**  
 2 **BLOOMS AND HYPOXIA.**

3 *Section 603(a) is amended—*

4 *(1) by striking “The Task Force shall consist of*  
 5 *the following representatives from—” and inserting*  
 6 *“The Task Force shall consist of representatives of the*  
 7 *Office of the Secretary from each of the following de-*  
 8 *partments and of the office of the head of each of the*  
 9 *following Federal agencies:”;*

10 *(2) by striking “the” in paragraphs (1) through*  
 11 *(11) and inserting “The”;*

12 *(3) by striking the semicolon in paragraphs (1)*  
 13 *through (10) and inserting a period;*

14 *(4) by striking “Quality; and” in paragraph*  
 15 *(11) and inserting “Quality.”;*

16 *(5) by redesignating paragraph (12) as para-*  
 17 *graph (13) and inserting after paragraph (11) the fol-*  
 18 *lowing;*

19 *“(12) The Centers for Disease Control.”; and*

20 *(6) by striking “such other” in paragraph (13),*  
 21 *as redesignated, and inserting “Other”.*

22 **SEC. 6. NATIONAL HARMFUL ALGAL BLOOM AND HYPOXIA**  
 23 **PROGRAM.**

24 *The Act is amended by inserting after section 603 the*  
 25 *following:*

1 **“SEC. 603A. NATIONAL HARMFUL ALGAL BLOOM AND HY-**  
 2 **POXIA PROGRAM.**

3 “(a) *ESTABLISHMENT.*—*The President, acting through*  
 4 *the Committee on Natural Resources of the National Science*  
 5 *and Technology Council, shall establish and maintain a na-*  
 6 *tional program for integrating efforts to address harmful*  
 7 *algal bloom and hypoxia research, monitoring, prediction,*  
 8 *control, mitigation, prevention, and outreach.*

9 “(b) *ACTION STRATEGY.*—

10 “(1) *IN GENERAL.*—*The Task Force shall develop*  
 11 *a national harmful algal blooms and hypoxia action*  
 12 *strategy that—*

13 “(A) *is consistent with the purposes of this*  
 14 *title;*

15 “(B) *includes a statement of goals and ob-*  
 16 *jectives; and*

17 “(C) *includes an implementation plan.*

18 “(2) *CONSULTATION.*—*In developing the action*  
 19 *strategy, the Task Force shall consult with the HABs*  
 20 *and Hypoxia Advisory Group.*

21 “(3) *PUBLICATION.*—*Within 12 months after the*  
 22 *date of enactment of the Harmful Algal Blooms and*  
 23 *Hypoxia Research and Control Amendments Act of*  
 24 *2009, the Task Force shall—*

25 “(A) *submit the action strategy to the Sen-*  
 26 *ate Committee on Commerce, Science, and*



1           *Transportation and the House of Representatives*  
 2           *Committees on Science and Technology and on*  
 3           *Natural Resources; and*

4                   “(B) publish the action strategy in the Fed-  
 5           *eral Register.*

6                   “(4) *PERIODIC REVISION.*—*The Task Force shall*  
 7           *periodically review and revise the strategy as nec-*  
 8           *essary.*

9                   “(c) *TASK FORCE FUNCTIONS.*—*The Task Force shall*  
 10          *be the oversight body for the development and implementa-*  
 11          *tion of the national harmful algal bloom and hypoxia pro-*  
 12          *gram and shall—*

13                   “(1) *coordinate interagency review of plans and*  
 14          *policies of the Program;*

15                   “(2) *assess interagency work and spending plans*  
 16          *for implementing the activities of the Program;*

17                   “(3) *review the Program’s distribution of Federal*  
 18          *grants and funding to address research priorities;*

19                   “(4) *support implementation of the actions and*  
 20          *strategies identified in the regional research and ac-*  
 21          *tion plans under subsection (d);*

22                   “(5) *support the development of institutional*  
 23          *mechanisms and financial instruments to further the*  
 24          *goals of the program;*

1           “(6) expedite the interagency review process and  
2           ensure timely review and dispersal of required reports  
3           and assessments under this title;

4           “(7) promote the development of new technologies  
5           for predicting, monitoring, and mitigating harmful  
6           algal blooms and hypoxia conditions; and

7           “(8) establish such interagency working groups  
8           as it deems necessary.

9           “(d) *ADVISORY COMMITTEE.*—

10           “(1) *IN GENERAL.*—The Task Force shall ap-  
11           point a general advisory committee—

12           “(A) consisting of not more than 20 indi-  
13           viduals who shall be representative of the various  
14           groups and regions concerned with harmful algal  
15           blooms and hypoxia, including representatives of  
16           nongovernmental organizations, States, tribes,  
17           and educational institutions; and

18           “(B) providing, to the maximum extent  
19           practicable, an equitable balance among such  
20           groups and regions.

21           “(2) *FUNCTION.*—The general advisory com-  
22           mittee shall provide recommendations to the Task  
23           Force on the development of the national action strat-  
24           egy, including goals and objectives and support for re-  
25           gional research and action plans.

1           “(3) *FACA NOT TO APPLY.*—*The Federal Advi-*  
 2           *sory Committee Act (5 U.S.C. App.) shall not apply*  
 3           *to the general advisory committee.*

4           “(e) *LEAD FEDERAL AGENCY.*—*NOAA shall be the*  
 5           *lead Federal agency for administering the National Harm-*  
 6           *ful Algal Bloom and Hypoxia Program.*

7           “(f) *PROGRAM RESPONSIBILITIES.*—*The Program*  
 8           *shall—*

9                 “(1) *promote a national strategy to help commu-*  
 10           *nities understand, detect, predict, control, and miti-*  
 11           *gate freshwater and marine harmful algal bloom and*  
 12           *hypoxia events;*

13                 “(2) *plan, coordinate, and implement the Na-*  
 14           *tional Harmful Algal Bloom and Hypoxia Program;*  
 15           *and*

16                 “(3) *report to the Task Force via the Adminis-*  
 17           *trator.*

18           “(g) *PROGRAM DUTIES.*—*The Program shall—*

19                 “(1) *prepare work and spending plans for imple-*  
 20           *menting the activities of the Program and developing*  
 21           *and implementing the Regional Research and Action*  
 22           *Plans;*

23                 “(2) *administer merit-based, competitive grant*  
 24           *funding to support the projects maintained and estab-*  
 25           *lished by the Program, and to address the research*

1       *and management needs and priorities identified in*  
2       *the Regional Research and Action Plans;*

3               “(3) coordinate interagency programs that ad-  
4       *dress harmful algal blooms and hypoxia and other*  
5       *ocean and Great Lakes science and management pro-*  
6       *grams and centers that address the chemical, biologi-*  
7       *cal, and physical components of harmful algal blooms*  
8       *and hypoxia;*

9               “(4) coordinate and work cooperatively with  
10       *other Federal, State, tribal, and local government*  
11       *agencies and programs that address harmful algal*  
12       *blooms and hypoxia;*

13               “(5) coordinate with the State Department to  
14       *support international efforts on harmful algal bloom*  
15       *and hypoxia information sharing, research, mitiga-*  
16       *tion, and control;*

17               “(6) coordinate an outreach, education, and  
18       *training program that integrates and augments exist-*  
19       *ing programs to improve public education about and*  
20       *awareness of the causes, impacts, and mitigation ef-*  
21       *forts for harmful algal blooms and hypoxia;*

22               “(7) facilitate and provide resources for training  
23       *of State, tribal, and local coastal and water resource*  
24       *managers in the methods and technologies for moni-*

1        *toring, controlling, and mitigating harmful algal*  
 2        *blooms and hypoxia;*

3                *“(8) support regional efforts to control and miti-*  
 4        *gate outbreaks through—*

5                *“(A) communication of the contents of the*  
 6        *Regional Research and Action Plans and main-*  
 7        *tenance of online data portals for other informa-*  
 8        *tion about harmful algal blooms and hypoxia to*  
 9        *State and local stakeholders within the region for*  
 10        *which each plan is developed; and*

11                *“(B) overseeing the development, review,*  
 12        *and periodic updating of Regional Research and*  
 13        *Action Plans established under section 602C(b);*

14                *“(9) convene at least 1 meeting of the Task Force*  
 15        *annually; and*

16                *“(10) perform such other tasks as may be*  
 17        *delegated by the Task Force.*

18        *“(h) NOAA DUTIES.—*

19                *“(1) EXISTING PROGRAMS.—NOAA shall main-*  
 20        *tain and enhance the following existing competitive*  
 21        *programs:*

22                *“(A) The Ecology and Oceanography of*  
 23        *Harmful Algal Blooms Program.*

24                *“(B) The Monitoring and Event Response*  
 25        *for Harmful Algal Blooms Program.*

1                   “(C) *The Northern Gulf of Mexico Eco-*  
2                   *systems and Hypoxia Assessment Program.*

3                   “(D) *The Coastal Hypoxia Research Pro-*  
4                   *gram.*

5                   “(E) *The Prevention, Control, and Mitiga-*  
6                   *tion of Harmful Algal Blooms Program.*

7                   “(2) *NEW PROGRAMS.—NOAA shall establish—*

8                   “(A) *an Event Response Program to coordi-*  
9                   *nate and enhance event response activities;*

10                  “(B) *an Infrastructure Program to develop*  
11                  *and enhance the critical observations, moni-*  
12                  *toring, modeling, data management, information*  
13                  *dissemination, and operational forecasts required*  
14                  *to meet the purposes of this title; and*

15                  “(C) *such other programs as may be nec-*  
16                  *essary.*

17                  “(3) *COOPERATIVE EFFORTS.—NOAA shall work*  
18                  *cooperatively with other offices, centers, and programs*  
19                  *within NOAA and other agencies represented on the*  
20                  *Task Force, States, tribes, and nongovernmental orga-*  
21                  *nizations concerned with marine and aquatic issues*  
22                  *to coordinate Harmful algal blooms and hypoxia and*  
23                  *related issues, including management of data, prod-*  
24                  *ucts, for—*

1           “(A) compiling, managing, and archiving  
2           data from relevant programs in Task Force  
3           member agencies;

4           “(B) creating data portals for general edu-  
5           cation and data dissemination on centralized,  
6           publicly available databases; and

7           “(C) establishing communication routes for  
8           data, predictions, and management tools both to  
9           and from the regions, States, and local commu-  
10          nities.”.

11 **SEC. 7. REGIONAL RESEARCH AND ACTION PLANS.**

12       *The Act, as amended by section 4, is amended by in-*  
13 *serting after section 602A the following:*

14 **“SEC. 602B. REGIONAL RESEARCH AND ACTION PLANS.**

15       “(a) *IN GENERAL.*—*The Program shall—*

16           “(1) *oversee the development and implementation*  
17 *of Regional Research and Action Plans; and*

18           “(2) *identify appropriate regions and sub-re-*  
19 *gions to be addressed by each Regional Research and*  
20 *Action Plan.*

21       “(b) *REGIONAL PANELS OF EXPERTS.*—

22           “(1) *IN GENERAL.*—*In accordance with the*  
23 *schedule set forth in paragraph (2), the Program shall*  
24 *convene a panel of experts for each region identified*  
25 *under subsection (a)(2) from among—*

1           “(A) State coastal management and plan-  
2           ning officials;

3           “(B) tribal resource management officials;

4           “(C) water management and watershed offi-  
5           cials from both coastal states and noncoastal  
6           states with water sources that drain into water  
7           bodies affected by harmful algal blooms and hy-  
8           poxia;

9           “(D) public health officials;

10          “(E) emergency management officials;

11          “(F) nongovernmental organizations con-  
12          cerned with marine and aquatic issues;

13          “(G) science and technology development in-  
14          stitutions;

15          “(H) economists;

16          “(I) industries and businesses affected by  
17          coastal and freshwater harmful algal blooms and  
18          hypoxia;

19          “(J) scientists, with expertise concerning  
20          harmful algal blooms or hypoxia, from academic  
21          or research institutions; and

22          “(K) other stakeholders as appropriate.

23          “(2) SCHEDULE.—The Program shall—

24                 “(A) convene panels in at least  $\frac{1}{3}$  of the re-  
25                 gions within 9 months after the date of enact-



1           *ment of the Harmful Algal Blooms and Hypoxia*  
 2           *Research and Control Amendments Act of 2009;*

3           “(B) convene panels in at least  $\frac{2}{3}$  of the re-  
 4           gions within 21 months after such date;

5           “(C) convene panels in the remaining re-  
 6           gions within 33 months after such date; and

7           “(D) reconvene each panel at least every 5  
 8           years after the date on which it was initially  
 9           convened.

10          “(c) *PLAN DEVELOPMENT.*—Each regional panel of ex-  
 11       perts shall develop a *Regional Research and Action Plan*  
 12       for its respective region and submit it to the *Task Force*  
 13       for approval. The Plan shall identify appropriate elements  
 14       for the region, including—

15               “(1) baseline ecological, social, and economic re-  
 16       search needed to understand the biological, physical,  
 17       and chemical conditions that cause, exacerbate, and  
 18       result from harmful algal blooms and hypoxia;

19               “(2) regional priorities for ecological and socio-  
 20       economic research on issues related to, and impacts  
 21       of, harmful algal blooms and hypoxia;

22               “(3) research needed to develop and advance  
 23       technologies for improving capabilities to predict,  
 24       monitor, prevent, control, and mitigate harmful algal  
 25       blooms and hypoxia;

1           “(4) State, tribal, and local government actions  
2           that may be implemented—

3                   “(A) to support long-term monitoring efforts  
4                   and emergency monitoring as needed;

5                   “(B) to minimize the occurrence of harmful  
6                   algal blooms and hypoxia;

7                   “(C) to reduce the duration and intensity of  
8                   harmful algal blooms and hypoxia in times of  
9                   emergency;

10                  “(D) to address human health dimensions of  
11                  harmful algal blooms and hypoxia; and

12                  “(E) to identify and protect vulnerable eco-  
13                  systems that could be, or have been, affected by  
14                  harmful algal blooms and hypoxia;

15                  “(5) mechanisms by which data and products  
16                  are transferred between the Program and State and  
17                  local governments and research entities;

18                  “(6) communication, outreach and information  
19                  dissemination efforts that State and local govern-  
20                  ments and nongovernmental organizations can under-  
21                  take to educate and inform the public concerning  
22                  harmful algal blooms and hypoxia and alternative  
23                  coastal resource-utilization opportunities that are  
24                  available; and

1           “(7) pilot projects, if appropriate, that may be  
 2           implemented on local, State, and regional scales to  
 3           address the research priorities and response actions  
 4           identified in the Plan.

5           “(d) *PLAN TIMELINES; UPDATES.*—The Program shall  
 6           ensure that Regional Research and Action Plans developed  
 7           under this section are—

8           “(1) completed and approved by the Program  
 9           within 12 months after the date on which a regional  
 10          panel is convened or reconvened under subsection  
 11          (b)(2); and

12          “(2) updated no less frequently than once every  
 13          5 years.

14          “(e) *FUNDING.*—

15          “(1) *IN GENERAL.*—Subject to available appro-  
 16          priations, the Program shall make funding available  
 17          to eligible organizations to implement the research,  
 18          monitoring, forecasting, modeling, and response ac-  
 19          tions included under each approved Regional Re-  
 20          search and Action Plan. The Program shall select re-  
 21          cipients through a merit-based, competitive process  
 22          and seek to fund research proposals that most effec-  
 23          tively align with the research priorities identified in  
 24          the relevant Regional Research and Action Plan.

1           “(2) *APPLICATION; ASSURANCES.*—Any organi-  
 2           zation seeking funding under this subsection shall  
 3           submit an application to the Program at such time,  
 4           in such form and manner, and containing such infor-  
 5           mation and assurances as the Program may require.  
 6           The Program shall require any organization receiving  
 7           funds under this subsection to utilize the mechanisms  
 8           described in subsection (c)(5) to ensure the transfer of  
 9           data and products developed under the Plan.

10           “(3) *ELIGIBLE ORGANIZATION.*—In this sub-  
 11           section, the term ‘eligible organization’ means—

12                   “(A) an institution of higher education,  
 13                   other non-profit organization, State, tribal, and  
 14                   local government, commercial organization, or  
 15                   Federal agency that meets the requirements of  
 16                   this section and such other requirements as are  
 17                   established by the Secretary; and

18                   “(B) with respect to nongovernmental orga-  
 19                   nizations, an organization that is subject to reg-  
 20                   ulations promulgated or guidelines issued to  
 21                   carry out this section, including United States  
 22                   audit requirements that are applicable to non-  
 23                   governmental organizations.

24           “(f) *INTERMEDIATE REVIEWS.*—If the Program deter-  
 25           mines that an intermediate review is necessary to address

1 *emergent needs in harmful algal blooms and hypoxia under*  
 2 *a Regional Research and Action Plan, it shall notify the*  
 3 *Task Force and reconvene the relevant regional panel of ex-*  
 4 *perts for the purpose of revising the Regional Research and*  
 5 *Action Plan so as to address the emergent threat or need.”.*

6 **SEC. 8. REPORTING.**

7 *Section 603 is amended by adding at the end thereof*  
 8 *the following:*

9 *“(j) BIENNIAL REPORTS.—Every 2 years the Program*  
 10 *shall prepare a report for the Senate Committee on Com-*  
 11 *merce, Science, and Transportation and the House of Rep-*  
 12 *resentatives Committees on Science and Technology and on*  
 13 *Natural Resources that describe—*

14 *“(1) activities, budgets, and progress on imple-*  
 15 *menting the national harmful algal bloom and hy-*  
 16 *poxia program;*

17 *“(2) the proceedings of the annual Task Force*  
 18 *meetings; and*

19 *“(3) the status, activities, and funding for imple-*  
 20 *mentation of the Regional Research and Action Plans,*  
 21 *including a description of research funded under the*  
 22 *program and actions and outcomes of Plan response*  
 23 *strategies carried out by States.*

24 *“(k) QUINQUENNIAL REPORTS.—Not less than once*  
 25 *every 5 years after the date of enactment of the Harmful*

1 *Algal Blooms and Hypoxia Research and Control Amend-*  
 2 *ments Act of 2009, the Task Force shall complete and sub-*  
 3 *mit a report on harmful algal blooms and hypoxia in ma-*  
 4 *rine and freshwater systems to the Senate Committee on*  
 5 *Commerce, Science, and Transportation and the House of*  
 6 *Representatives Committees on Science and Technology and*  
 7 *on Natural Resources. The report shall—*

8           “(1) *evaluate the state of scientific knowledge of*  
 9           *harmful algal blooms and hypoxia in marine and*  
 10          *freshwater systems, including their causes and eco-*  
 11          *logical consequences;*

12           “(2) *evaluate the social and economic impacts of*  
 13          *harmful algal blooms and hypoxia, including their*  
 14          *impacts on coastal communities, and review those*  
 15          *communities’ efforts and associated economic costs re-*  
 16          *lated to event forecasting, planning, mitigation, re-*  
 17          *sponse, and public outreach and education;*

18           “(3) *examine and evaluate the human health im-*  
 19          *pacts of harmful algal blooms and hypoxia, including*  
 20          *any gaps in existing research;*

21           “(4) *describe advances in capabilities for moni-*  
 22          *toring, forecasting, modeling, control, mitigation, and*  
 23          *prevention of harmful algal blooms and hypoxia, in-*  
 24          *cluding techniques for, integrating landscape- and*  
 25          *watershed-level water quality information into ma-*

1        *rine and freshwater harmful algal bloom and hypoxia*  
 2        *prevention and mitigation strategies at Federal and*  
 3        *regional levels;*

4                *“(5) evaluate progress made by, and the needs of,*  
 5        *Federal, regional, State, tribal, and local policies and*  
 6        *strategies for forecasting, planning, mitigating, pre-*  
 7        *venting, and responding to harmful algal blooms and*  
 8        *hypoxia, including the economic costs and benefits of*  
 9        *such policies and strategies;*

10                *“(6) make recommendations for integrating, im-*  
 11        *proving, and funding future Federal, regional, State,*  
 12        *tribal, and local policies and strategies for preventing*  
 13        *and mitigating the occurrence and impacts of harm-*  
 14        *ful algal blooms and hypoxia; and*

15                *“(7) describe communication, outreach, and edu-*  
 16        *cation efforts to raise public awareness of harmful*  
 17        *algal blooms and hypoxia, their impacts, and the*  
 18        *methods for mitigation and prevention.”.*

19    **SEC. 9. NORTHERN GULF OF MEXICO HYPOXIA.**

20        *Section 604 is amended to read as follows:*

21    **“SEC. 604. NORTHERN GULF OF MEXICO HYPOXIA.**

22        *“(a) TASK FORCE ANNUAL PROGRESS REPORTS.—For*  
 23        *each of the years from 2009 through 2013, the Mississippi*  
 24        *River/Gulf of Mexico Watershed Nutrient Task Force shall*  
 25        *complete and submit to the Congress and the President an*

1 *annual report on the progress made by Task Force-directed*  
 2 *activities toward attainment of the Coastal Goal of the Gulf*  
 3 *Hypoxia Action Plan 2008.*

4 “(b) *TASK FORCE 5-YEAR PROGRESS REPORT.*—*In*  
 5 *2013, that Task Force shall complete and submit to Con-*  
 6 *gress and the President a 5-year report on the progress*  
 7 *made by Task Force-directed activities toward attainment*  
 8 *of the Coastal Goal of the Gulf Hypoxia Action Plan 2008.*  
 9 *The report shall assess progress made toward nutrient load*  
 10 *reductions, the response of the hypoxic zone and water qual-*  
 11 *ity throughout the Mississippi/Atchafalaya River Basin,*  
 12 *and the economic and social effects. The report shall include*  
 13 *an evaluation of how current policies and programs affect*  
 14 *management decisions, including those made by munici-*  
 15 *palities and industrial and agricultural producers, evaluate*  
 16 *lessons learned, and recommend appropriate actions to con-*  
 17 *tinue to implement or, if necessary, revise this strategy.”.*

18 **SEC. 10. PILOT PROGRAM FOR FRESHWATER HARMFUL**

19 **ALGAL BLOOMS AND HYPOXIA.**

20 *The Act, as amended by section 6, is amended by in-*  
 21 *serting after section 603B the following:*

22 **“SEC. 603B. PILOT PROGRAM FOR FRESHWATER HARMFUL**

23 **ALGAL BLOOMS AND HYPOXIA.**

24 “(a) *PILOT PROGRAM.*—*The Task Force shall establish*  
 25 *a collaborative pilot program to examine harmful algal*



1 blooms and hypoxia occurring in freshwater systems, in-  
 2 cluding the Great Lakes. The pilot program shall—

3 “(1) assess the issues associated with, and im-  
 4 pacts of, harmful algal blooms and hypoxia in fresh-  
 5 water ecosystems;

6 “(2) research the efficacy of prevention, control,  
 7 and mitigation measures, including measures to re-  
 8 duce nutrient loading; and

9 “(3) recommend potential management solutions.

10 “(b) *REPORT.*—The Task Force, in consultation with  
 11 other participating Federal agencies, shall conduct an as-  
 12 sessment of the effectiveness of the pilot program in improv-  
 13 ing freshwater habitat quality and publish a report, avail-  
 14 able to the public, of the results of the assessment.”.

15 **SEC. 11. INTERAGENCY FINANCING.**

16 The Act is amended by inserting after section 604 the  
 17 following:

18 **“SEC. 604A. INTERAGENCY FINANCING.**

19 “The departments and agencies represented on the  
 20 Task Force are authorized to participate in interagency fi-  
 21 nancing and share, transfer, receive, obligate, and expend  
 22 funds appropriated to any member of the Task Force for  
 23 the purposes of carrying out any administrative or pro-  
 24 grammatic project or activity under this title, including  
 25 support for the Program, a common infrastructure, infor-

1 mation sharing, and system integration for harmful algal  
 2 bloom and hypoxia research, monitoring, forecasting, pre-  
 3 vention, and control. Funds may be transferred among such  
 4 departments and agencies through an appropriate instru-  
 5 ment that specifies the goods, services, or space being ac-  
 6 quired from another Task Force member and the costs of  
 7 the same. The amount of funds transferrable under this sec-  
 8 tion for any fiscal year may not exceed 5 percent of the  
 9 account from which such transfer is to be made.”.

10 **SEC. 12. APPLICATION WITH OTHER LAWS.**

11       *The Act is amended by inserting after section 606 the*  
 12 *following:*

13 **“SEC. 607. EFFECT ON OTHER FEDERAL AUTHORITY.**

14       *“Nothing in this title supersedes or limits the author-*  
 15 *ity of any agency to carry out its responsibilities and mis-*  
 16 *sions under other laws.”.*

17 **SEC. 13. DEFINITIONS.**

18       *(a) IN GENERAL.—The Act is amended by inserting*  
 19 *after section 605 the following:*

20 **“SEC. 605A. DEFINITIONS.**

21       *“In this title:*

22               *“(1) ADMINISTRATOR.—The term ‘Adminis-*  
 23 *trator’ means the Administrator of the NOAA.*

24               *“(2) HARMFUL ALGAL BLOOM.—The term ‘harm-*  
 25 *ful algal bloom’ means marine and freshwater*

1     *phytoplankton that proliferate to high concentrations,*  
 2     *resulting in nuisance conditions or harmful impacts*  
 3     *on marine and aquatic ecosystems, coastal commu-*  
 4     *nities, and human health through the production of*  
 5     *toxic compounds or other biological, chemical, and*  
 6     *physical impacts of the algae outbreak.*

7             “(3) *HYPOXIA.*—*The term ‘hypoxia’ means a*  
 8     *condition where low dissolved oxygen in aquatic sys-*  
 9     *tems causes stress or death to resident organisms.*

10            “(4) *NOAA.*—*The term ‘NOAA’ means the Na-*  
 11     *tional Oceanic and Atmospheric Administration.*

12            “(5) *PROGRAM.*—*The term ‘Program’ means the*  
 13     *Integrated Harmful Algal Bloom and Hypoxia Pro-*  
 14     *gram established under section 603A.*

15            “(6) *REGIONAL RESEARCH AND ACTION PLAN.*—  
 16     *The term ‘Regional Research and Action Plan’ means*  
 17     *a plan established under section 602B.*

18            “(7) *SECRETARY.*—*The term ‘Secretary’ means*  
 19     *the Secretary of Commerce, acting through NOAA.”.*

20            “(8) *TASK FORCE.*—*The term ‘Task Force’*  
 21     *means the Interagency Task Force established by sec-*  
 22     *tion 603(a).*

23            “(9) *UNITED STATES COASTAL WATERS.*—*The*  
 24     *term ‘United States coastal waters’ includes the Great*  
 25     *Lakes.”.*

1       (b) *CONFORMING AMENDMENT.*—Section 603(a) is  
 2       amended by striking “Hypoxia (hereinafter referred to as  
 3       the ‘Task force’).” and inserting “Hypoxia.”.

4       **SEC. 14. AUTHORIZATION OF APPROPRIATIONS.**

5       Section 605 is amended to read as follows:—

6       **“SEC. 605. AUTHORIZATION OF APPROPRIATIONS.**

7       “(a) *IN GENERAL.*—There are authorized to be appro-  
 8       priated to NOAA to implement the Program under this title  
 9       \$40,000,000 for each of fiscal years 2010 through 2014, of  
 10      which up to \$10,000,000 shall be allocated each fiscal year  
 11      to the creation of Regional Research and Action Plans re-  
 12      quired by section 602B.

13      “(b) *INTERAGENCY COORDINATION.*—The Adminis-  
 14      trator of NOAA, and the head of any Federal agency en-  
 15      gaged in interagency coordination activities under this  
 16      title, is authorized to use appropriated funds for such ac-  
 17      tivities.

18      “(c) *EXTRAMURAL RESEARCH ACTIVITIES.*—The Sec-  
 19      retary shall ensure that a substantial portion of funds ap-  
 20      propriated pursuant to subsection (a) that are used for re-  
 21      search purposes are allocated to extramural research activi-  
 22      ties.

23      “(d) *PILOT PROGRAM.*—In addition to any amounts  
 24      appropriated pursuant to subsection (a), there are author-  
 25      ized to be appropriated to NOAA such sums as may be nec-

1 *essary to carry out the pilot program established under sec-*  
2 *tion 603B.”.*

Calendar No. 271

11<sup>TH</sup> CONGRESS  
2<sup>D</sup> Session

**S. 952**

[Report No. 111-125]

**A BILL**

To develop and promote a comprehensive plan for a national strategy to address harmful algal blooms and hypoxia through baseline research, forecasting and monitoring, and mitigation and control while helping communities detect, control, and mitigate coastal and Great Lakes harmful algal blooms and hypoxia events.

FEBRUARY 4, 2010

Reported with an amendment