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119TH CONGRESS }
1st Session

SENATE

{ REPORT
119-34

HARMFUL ALGAL BLOOM AND HYPOXIA RE-
SEARCH AND CONTROL AMENDMENTS
ACT OF 2025

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION

ON

S. 93



JULY 1 (legislative day, JUNE 30), 2025.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED NINETEENTH CONGRESS

FIRST SESSION

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JULY 1 (legislative day, JUNE 30), 2025.—Ordered to be printed

Mr. CRUZ, from the Committee on Commerce, Science, and
Transportation, submitted the following

R E P O R T

[To accompany S. 93]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 93) to amend the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998 to address harmful algal blooms, and for other purposes, having considered the same, reports favorably thereon without amendment and an amendment to the title and recommends that the bill do pass.¹

PURPOSE OF THE BILL

The purpose of S. 93, the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2025, is to amend the Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA) of 1998² to address harmful algal blooms, and for other purposes.

BACKGROUND AND NEEDS

Harmful algal blooms (HABs) occur when environmental conditions promote the rapid growth of large numbers of single-celled marine algae, either microscopic or macroscopic phytoplankton. Excess nutrient inputs, changes in temperature or amounts of light, and turbulence in the water column are all known to influence the outbreak of algal blooms. Human influences can exacerbate algal blooms by increasing nutrient availability via agricultural and mu-

¹At the markup, S. 93 was ordered to be reported without amendment, but post-markup, a technical amendment to the title required the bill to be reported favorably with an amendment.

²Public Law 105–383.

nicipal runoff and transporting exotic species into an area.³ These blooms often discolor the water and result in red tides or brown tides. HABs occur when some or all the phytoplankton in the bloom produce toxins harmful to humans, fish, invertebrates, and other marine organisms. In addition to producing toxins, HABs may have negative impacts such as clogging or lacerating fish's gills, or blocking the sunlight available to aquatic plants beneath the bloom.

HABs can also rapidly deplete oxygen, known as hypoxia, killing fish and other marine animals and plants. In aquatic systems, hypoxia refers to a situation where the concentration of dissolved oxygen is reduced to less than two to three parts per million.⁴ Hypoxic areas, sometimes called dead zones, frequently occur in coastal and estuarine areas where rivers bring freshwater to the ocean. As nutrient-rich waters are brought from freshwater systems, these excess nutrients stimulate the rapid growth of algae. The algae begin to die when this explosive growth has consumed all available nutrients. As the dead algae sink to the seafloor, they decompose, aided by oxygen-consuming bacteria. As these bacteria consume most of the available oxygen, a dead zone develops. Animals that can swim away are less affected by these dead zones; however, slow-moving fauna, such as shellfish, are particularly susceptible to hypoxia. Just one HAB event can cost local economies tens of millions of dollars.⁵

SUMMARY OF PROVISIONS

S. 93 would do the following:

- Reauthorize HABHRCA through 2030.
- Expand harmful algal bloom assessments to include all water bodies that contain HABs.
- Codify the National Harmful Algal Bloom Observing Network.
- Expand the definition of the term “harmful algal bloom”.
- Increase the authorized appropriation from \$20.5 million to \$27.5 million. Of these sums, \$19.5 million would be authorized for the National Oceanic and Atmospheric Administration (NOAA), and \$8 million would be authorized for the Environmental Protection Agency (EPA).

LEGISLATIVE HISTORY

S. 93, the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2025, was introduced on January 14, 2025, by Senator Sullivan (for himself and Senators Baldwin, Collins, Cornyn, Merkley, Peters, and Whitehouse) and was referred to the Committee on Commerce, Science, and Transportation of the Senate. Senators Murkowski, Coons, Padilla, Cassidy, Wicker, Moreno, Schiff, and King are additional cosponsors. On February 5, 2025, the Committee met in open Executive Session and, by voice vote, ordered S. 93 reported favorably without amendment. After the

³“Harmful Algal Blooms,” National Oceanic and Atmospheric Administration (<https://oceanservice.noaa.gov/hazards/hab/>).

⁴“Hypoxia 101,” Mississippi River/Gulf of Mexico Hypoxia Task Force (<https://www.epa.gov/ms-htf/hypoxia-101>).

⁵“Assessing Environmental and Economic Impacts,” National Centers for Coastal Ocean Science, National Oceanic and Atmospheric Administration (<https://coastalscience.noaa.gov/science-areas/habs/assessing-environmental-and-economic-impacts/>).

markup, the bill had a technical amendment to the title which required S. 93 to be reported favorably with an amendment.

118th Congress

S. 3348, the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2024, was introduced on November 27, 2023, by Senator Sullivan (for himself and Senator Baldwin) and was referred to the Committee on Commerce, Science, and Transportation of the Senate. It was cosponsored by Senators Blumenthal, King, Peters, Murkowski, Kennedy, Merkley, Wicker, Collins, Padilla, Butler, Whitehouse, Cassidy, Cornyn, and Coons. On July 31, 2024, the Committee met in open Executive Session and, by voice vote, ordered S. 3348 reported favorably with an amendment (in the nature of a substitute).

105th Congress to 115th Congress

The original Harmful Algal Bloom and Hypoxia Research and Control Act of 1998⁶ was introduced in November 1997 by Senator Olympia Snowe. It was further amended and reauthorized by the Harmful Algal Bloom and Hypoxia Amendments Act of 2004,⁷ the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2014,⁸ and the National Integrated Drought Information System Reauthorization Act of 2018.⁹

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

S. 93, Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2025				
As ordered reported by the Senate Committee on Commerce, Science, and Transportation on February 5, 2025				
By Fiscal Year, Millions of Dollars		2025	2025-2030	2025-2035
Direct Spending (Outlays)		0	0	0
Revenues		0	0	0
Increase or Decrease (-) in the Deficit		0	0	0
Spending Subject to Appropriation (Outlays)		0	130	147
Increases <i>net direct spending</i> in any of the four consecutive 10-year periods beginning in 2036?	No	Statutory pay-as-you-go procedures apply?		
		No		
		Mandate Effects		
Increases <i>on-budget deficits</i> in any of the four consecutive 10-year periods beginning in 2036?	No	Contains intergovernmental mandate?		
		No		
		Contains private-sector mandate?		
		No		

⁶Public Law 105–383.

⁷Public Law 108–456.

⁸Public Law 113–124.

⁹Public Law 115–423.

S. 93 would reauthorize and expand activities administered by the National Oceanic and Atmospheric Administration and the Environmental Protection Agency related to research, observation, and control of harmful algal blooms and hypoxia. Harmful blooms occur when colonies of algae grow uncontrollably and become toxic, which also may lead to reduced oxygen (or hypoxia) in the water. The bill would authorize the appropriation of \$27.5 million annually from 2026 through 2030 for those purposes, which includes expanding the membership and activities of an existing interagency task force and establishing a new program to create technologies to mitigate and control harmful algal blooms. In 2024, those agencies allocated \$40 million for activities to mitigate harmful algal blooms.

The bill also would authorize the appropriation of \$2 million each year over the 2026–2030 period to address harmful blooms and hypoxia events that would have a significant detrimental effect on the environment, economy, or public health of a state.

CBO estimates that the bill will be enacted in 2025 and that the authorized amounts will be provided in each year. On that basis and using the spending patterns for similar activities, CBO estimates that implementing the bill would cost \$130 million over the 2025–2030 period and \$17 million after 2030.

The costs of the legislation, detailed in Table 1, fall within budget function 300 (natural resources and environment).

TABLE 1.—ESTIMATED INCREASES IN SPENDING SUBJECT TO APPROPRIATION UNDER S. 93

	By fiscal year, millions of dollars—						
	2025	2026	2027	2028	2029	2030	2025– 2030
Authorization	0	30	30	30	30	30	150
Estimated Outlays	0	18	25	29	29	29	130

The CBO staff contact for this estimate is Aurora Swanson. The estimate was reviewed by H. Samuel Papenfuss, Deputy Director of Budget Analysis.

PHILLIP L. SWAGEL,
Director, Congressional Budget Office.

REGULATORY IMPACT STATEMENT

Because S. 93 does not create any new programs, the legislation will have no additional regulatory impact, and will result in no additional reporting requirements. The legislation will have no further effect on the number or types of individuals and businesses regulated, the economic impact of such regulation, the personal privacy of affected individuals, or the paperwork required from such individuals and businesses.

CONGRESSIONALLY DIRECTED SPENDING

In compliance with paragraph 4(b) of rule XLIV of the Standing Rules of the Senate, the Committee provides that no provisions contained in the bill, as reported, meet the definition of congressionally directed spending items under the rule.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title.

This section would provide that the bill may be cited as the “Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2025”.

Section 2. Amendments to the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998.

This section would add the Department of Energy to the Inter-Agency Task Force on Harmful Algal Blooms and Hypoxia (Task Force) and require the Task Force to expand HAB and hypoxia assessments. Task Force hypoxia assessments would be broadened to include food safety and security, environmental stressors, and evaluations of methods to reduce, mitigate, and control hypoxia and its environmental impacts. This section also would eliminate outdated reports, reduce regional HAB reports, and require a national action strategy for HABs with regional chapters. The Task Force would consult with relevant entities, including Indian tribes.

This section would update the national harmful algal bloom and hypoxia program to cover all water bodies and expand its duties regarding grant funding for new projects.

This section would describe NOAA’s authorities and duties regarding HABs and require that all data follow the standards and protocols outlined in the Integrated Coastal and Ocean Observation System Act of 2009¹⁰ and be available in the National Integrated Coastal and Ocean Observation System.

This section would codify the EPA’s duties in coordination with NOAA and the National HAB Observing Network. It would require NOAA to work with the EPA and research universities to establish a national incubator program to develop prevention strategies and control technologies for HABs. NOAA would provide merit-based funding through existing grant programs and create a framework for assessing and prioritizing prevention strategies.

This section would expand the definition of HAB to include macroalgae and cyanobacteria, remove the definition of U.S. coastal waters, and add the definitions for the terms “harmful algal bloom and hypoxia event”, “Indian tribe”, “Native Hawaiian organization”, “subsistence use”, and “Tribal organization”. It would authorize \$19.5 million for NOAA and \$8 million for EPA for fiscal years 2026 through 2030 and allow fund transfers between agencies to assist with HAB and hypoxia events.

Section 3. Other harmful algal bloom and hypoxia matters.

This section would allow NOAA to enter into agreements and grants with State and local entities and/or Indian tribes to fund relief efforts for harmful algal bloom or hypoxia events of national significance. It would allow the appropriate Federal official to waive non-Federal share requirements in certain circumstances. This section would update the considerations for determining whether a hypoxia or HAB event is an event of national significance. It would add definitions for the terms “Indian tribe”, “Native Hawaiian organization”, “subsistence use”, and “Tribal organiza-

¹⁰ Public Law 111–11.

tion”. It would authorize appropriations of \$2 million for fiscal years 2026 through 2029 for NOAA’s response to HABs of national significance.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in *italic*, existing law in which no change is proposed is shown in roman):

HARMFUL ALGAL BLOOM AND HYPOXIA AMENDMENTS ACT OF 2004

* * * * *

[33 U.S.C. 4001a]

SEC. 102. RETENTION OF TASK FORCE.

Section 603 of the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998 (16 U.S.C. 1451 nt) is amended by striking subsection (e). [In developing the assessments, reports, and plans under the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998, the Task Force shall consult with the coastal States, Indian tribes, local governments, appropriate industries (including fisheries, agriculture, and fertilizer), academic institutions, and nongovernmental organizations with expertise in coastal zone science and management.]

* * * * *

HARMFUL ALGAL BLOOM AND HYPOXIA RESEARCH AND CONTROL ACT OF 1998

* * * * *

[33 U.S.C. 4001]

SEC. 603. [ASSESSMENTS] TASK FORCE, ASSESSMENTS, AND ACTION STRATEGY.

(a) ESTABLISHMENT OF INTER-AGENCY TASK FORCE.—The President, through the Committee on Environment and Natural Resources of the National Science and Technology Council, shall establish an Inter-Agency Task Force on Harmful Algal Blooms and Hypoxia. The Task Force shall consist of a representative from—

- (1) the Department of Commerce (who shall serve as Chairman of the Task Force);
- (2) the Environmental Protection Agency;
- (3) the Department of Agriculture;
- (4) the Department of the Interior;
- (5) the Department of the Navy;
- (6) the Department of Health and Human Services;
- (7) the National Science Foundation;
- (8) the National Aeronautics and Space Administration;
- (9) the Food and Drug Administration;
- (10) the Office of Science and Technology Policy;

- (11) the Council on Environmental Quality;
- (12) the Centers for Disease Control and Prevention;
- (13) *the Department of Energy*;
- [(13)](14) the Army Corps of Engineers; and
- [(14)](15) other Federal agencies as the President considers appropriate.

[(b) ASSESSMENT OF HARMFUL ALGAL BLOOMS.—

[(1) Not later than 12 months after the date of the enactment of this title, the Task Force, in cooperation with the coastal States, Indian tribes, and local governments, industry (including agricultural organizations), academic institutions, and non-governmental organizations with expertise in coastal zone management, shall complete and submit to the Congress an assessment which examines the ecological and economic consequences of harmful algal blooms, alternatives for reducing, mitigating, and controlling harmful algal blooms, and the social and economic costs and benefits of such alternatives.

[(2) The assessment shall—

[(A) identify alternatives for preventing unnecessary duplication of effort among Federal agencies and departments with respect to harmful algal blooms; and

[(B) provide for Federal cooperation and coordination with and assistance to the coastal States, Indian tribes, and local governments in the prevention, reduction, management, mitigation, and control of harmful algal blooms and their environmental and public health impacts.

[(c) ASSESSMENT OF HYPOXIA.—

[(1) Not later than 12 months after the date of the enactment of this title, the Task Force, in cooperation with the States, Indian tribes, local governments, industry, agricultural, academic institutions, and non-governmental organizations with expertise in watershed and coastal zone management, shall complete and submit to the Congress an assessment which examines the ecological and economic consequences of hypoxia in United States coastal waters, alternatives for reducing, mitigating, and controlling hypoxia, and the social and economic costs and benefits of such alternatives.

[(2) The assessment shall—

[(A) establish needs, priorities, and guidelines for a peer-reviewed, inter-agency research program on the causes, characteristics, and impacts of hypoxia;

[(B) identify alternatives for preventing unnecessary duplication of effort among Federal agencies and departments with respect to hypoxia; and

[(C) provide for Federal cooperation and coordination with and assistance to the States, Indian tribes, and local governments in the prevention, reduction, management, mitigation, and control of hypoxia and its environmental impacts.

[(d) REPORT TO CONGRESS ON HARMFUL ALGAL BLOOM IMPACTS.—

[(1) DEVELOPMENT.—Not later than 12 months after the date of enactment of the Harmful Algal Bloom and Hypoxia Amendments Act of 2004, the President, in consultation with the chief executive officers of the States, shall develop and submit to the

Congress a report that describes and evaluates the effectiveness of measures described in paragraph (2) that may be utilized to protect environmental and public health from impacts of harmful algal blooms. In developing the report, the President shall consult with the Task Force, the coastal States, Indian tribes, local governments, appropriate industries (including fisheries, agriculture, and fertilizer), academic institutions, and nongovernmental organizations with expertise in coastal zone science and management, and also consider the scientific assessments developed under this Act.

[(2) REQUIREMENTS.—The report shall—

[(A) review techniques for prediction of the onset, course, and impacts of harmful algal blooms including evaluation of their accuracy and utility in protecting environmental and public health and provisions for their development;

[(B) identify innovative research and development methods for the prevention, control, and mitigation of harmful algal blooms and provisions for their development; and

[(C) include incentive-based partnership approaches regarding subparagraphs (A) and (B) where practicable.

[(3) PUBLICATION AND OPPORTUNITY FOR COMMENT.—At least 90 days before submitting the report to the Congress, the President shall cause a summary of the proposed plan to be published in the Federal Register for a public comment period of not less than 60 days.

[(4) FEDERAL ASSISTANCE.—The Secretary of Commerce, in coordination with the Task Force and to the extent of funds available, shall provide for Federal cooperation with and assistance to the coastal States, Indian tribes, and local governments regarding the measures described in paragraph (2), as requested.

[(e) LOCAL AND REGIONAL SCIENTIFIC ASSESSMENTS.—

[(1) IN GENERAL.—The Secretary of Commerce, in coordination with the Task Force and appropriate State, Indian tribe, and local governments, to the extent of funds available, shall provide for local and regional scientific assessments of hypoxia and harmful algal blooms, as requested by States, Indian tribes, and local governments, or for affected areas as identified by the Secretary. If the Secretary receives multiple requests, the Secretary shall ensure, to the extent practicable, that assessments under this subsection cover geographically and ecologically diverse locations with significant ecological and economic impacts from hypoxia or harmful algal blooms. The Secretary shall establish a procedure for reviewing requests for local and regional assessments. The Secretary shall ensure, through consultation with Sea Grant Programs, that the findings of the assessments are communicated to the appropriate State, Indian tribe, and local governments, and to the general public.

[(2) PURPOSE.—Local and regional assessments shall examine—

[(A) the causes and ecological consequences, and the economic cost, of hypoxia or harmful algal blooms in that area;

[(B)] potential methods to prevent, control, and mitigate hypoxia or harmful algal blooms in that area and the potential ecological and economic costs and benefits of such methods; and

[(C)] other topics the Task Force considers appropriate.】

[(f)](b) SCIENTIFIC ASSESSMENTS OF HYPOXIA.—(1) Not less than once every 5 years the Task Force shall complete and submit to the Congress a scientific assessment of hypoxia in United States [coastal waters including the Great Lakes] *marine, estuarine, and freshwater systems*. The first such assessment shall be completed not less than 24 months after the date of enactment of the Harmful Algal Bloom and Hypoxia Amendments Act of 2004.

(2) The assessments under this subsection shall—

[(A)] examine the causes and ecological consequences, and the economic costs, of hypoxia;】

(A) *examine—*

(i) *the causes and ecological consequences of hypoxia on marine and aquatic species in their environments; and*

(ii) *the costs of hypoxia, including impacts on food safety and security;*

(B) *examine the effect of other environmental stressors on hypoxia;*

(C) *evaluate alternatives for reducing, mitigating, and controlling hypoxia and its environmental impacts;*

[(B)](D) describe the potential ecological and economic costs and benefits of possible policy and management actions for preventing, controlling, and mitigating hypoxia;

[(C)](E) evaluate progress made by, and the needs of, Federal research programs on the causes, characteristics, and impacts of hypoxia, including recommendations of how to eliminate significant gaps in [hypoxia modeling and monitoring data] *hypoxia modeling, forecasting, and monitoring and observation data*; and

[(D)](F) identify ways to improve coordination and to prevent unnecessary duplication of effort among Federal agencies and departments with respect to research on hypoxia.

[(g)] SCIENTIFIC ASSESSMENTS OF MARINE AND FRESHWATER HARMFUL ALGAL BLOOMS.—Not less than once every 5 years the Task Force shall complete and submit to Congress a scientific assessment of harmful algal blooms in United States coastal waters and freshwater systems. Each assessment shall examine both marine and freshwater harmful algal blooms, including those in the Great Lakes and upper reaches of estuaries, those in freshwater lakes and rivers, and those that originate in freshwater lakes or rivers and migrate to coastal waters.

[(h)] NATIONAL SCIENTIFIC RESEARCH, DEVELOPMENT, DEMONSTRATION, AND TECHNOLOGY TRANSFER PLAN ON REDUCING IMPACTS FROM HARMFUL ALGAL BLOOMS.—(1) Not later than 12 months after the date of enactment of the Harmful Algal Bloom and Hypoxia Amendments Act of 2004, the Task Force shall develop and submit to Congress a plan providing for a comprehensive and coordinated national research program to develop and demonstrate prevention, control, and mitigation methods to reduce the

impacts of harmful algal blooms on coastal ecosystems (including the Great Lakes), public health, and the economy.

[(2) The plan shall—

[(A) establish priorities and guidelines for a competitive, peer reviewed, merit based interagency research, development, demonstration, and technology transfer program on methods for the prevention, control, and mitigation of harmful algal blooms;

[(B) identify ways to improve coordination and to prevent unnecessary duplication of effort among Federal agencies and departments with respect to the actions described in paragraph (1); and

[(C) include to the maximum extent practicable diverse institutions, including Historically Black Colleges and Universities and those serving large proportions of Hispanics, Native Americans, Asian Pacific Americans, and other underrepresented populations.

[(3) The Secretary of Commerce, in conjunction with other appropriate Federal agencies, shall establish a research, development, demonstration, and technology transfer program that meets the priorities and guidelines established under paragraph (2)(A). The Secretary shall ensure, through consultation with Sea Grant Programs, that the results and findings of the program are communicated to State, Indian tribe, and local governments, and to the general public.

[(i) REPORT.—Not later than 2 years after the date the Action Strategy is submitted under section 603B, the Under Secretary shall submit a report to Congress that describes—

[(1) the proceedings of the annual Task Force meetings;

[(2) the activities carried out under the Program, including the regional and subregional parts of the Action Strategy;

[(3) the budget related to the activities under paragraph (2);

[(4) the progress made on implementing the Action Strategy; and

[(5) any need to revise or terminate research and activities under the Program.]

(c) ACTION STRATEGY AND SCIENTIFIC ASSESSMENT FOR MARINE AND FRESHWATER HARMFUL ALGAL BLOOMS.—

(1) IN GENERAL.—Not less frequently than once every 5 years, the Task Force shall complete and submit to Congress an action strategy for harmful algal blooms in the United States.

(2) ELEMENTS.—Each Action Strategy shall—

(A) examine, and include a scientific assessment of, marine and freshwater harmful algal blooms, including such blooms—

(i) in the Great Lakes;

(ii) in the upper reaches of estuaries;

(iii) in freshwater lakes and rivers;

(iv) in coastal and marine waters; and

(v) that originate in freshwater lakes or rivers and migrate to coastal waters;

(B) examine the causes, ecological consequences or physiological consequences on wildlife function, and economic or cultural impacts, including food safety and security and subsistence use, of harmful algal blooms;

(C) *examine the effect of other environmental stressors on harmful algal blooms;*

(D) *examine potential methods to prevent, control, and mitigate harmful algal blooms and the potential ecological, subsistence use, and economic costs and benefits of such methods;*

(E) *identify priorities for research needed to advance techniques and technologies to detect, predict, monitor, respond to, and minimize the occurrence, duration, and severity of harmful algal blooms, including recommendations to eliminate significant gaps in harmful algal bloom forecasting, monitoring, and observation data;*

(F) *evaluate progress made by, and the needs of, activities and actions of the Task Force to prevent, control, and mitigate harmful algal blooms;*

(G) *identify ways to improve coordination and prevent unnecessary duplication of effort among Federal agencies with respect to research on harmful algal blooms; and*

(H) *include regional chapters relating to the requirements described in this paragraph in order to highlight geographically and ecologically diverse locations with significant ecological, subsistence use, cultural, and economic impacts from harmful algal blooms.*

(d) *CONSULTATION.—In carrying out subsections (b) and (c), the Task Force shall consult with—*

(1) States, Indian tribes, and local governments; and

(2) appropriate industries (including fisheries, agriculture, and fertilizer), academic institutions, and nongovernmental organizations with relevant expertise.

[33 U.S.C. 4002]

SEC. 603A. NATIONAL HARMFUL ALGAL BLOOM AND HYPOXIA PROGRAM.

(a) **ESTABLISHMENT.**—Not later than 1 year after the date of enactment of the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2014, the Under Secretary, acting through the Task Force, shall maintain and enhance a national harmful algal bloom and hypoxia program, including—

(1) a statement of objectives, including understanding, detecting, **predicting,** *monitoring, observing, forecasting,* controlling, mitigating, and responding to marine and freshwater harmful algal bloom and hypoxia events; **and**

[(2) the comprehensive research plan and action strategy under section 603B.]

(2) the scientific assessment submitted under section 603(b); and

(3) the Action Strategy.

(b) **PERIODIC REVISION.**—The Task Force shall periodically review and revise the Program, as necessary.

(c) **TASK FORCE FUNCTIONS.**—The Task Force shall—

(1) coordinate interagency review of the objectives and activities of the Program;

(2) expedite the interagency review process by ensuring timely review and dispersal of required reports and assessments under this title;

(3) support the implementation of the Action Strategy, including the coordination and integration of the research of all Federal programs, including ~~ocean and Great Lakes science and management programs and centers~~ *programs and centers relating to the science and management of marine, estuarine, and freshwater systems*, that address the chemical, biological, and physical components of marine and freshwater harmful algal blooms and hypoxia;

(4) support the development of institutional mechanisms and financial instruments to further the objectives and activities of the Program;

(5) review the Program's distribution of Federal funding to address the objectives and activities of the Program *while recognizing each agency is acting under its own independent mission and authority*;

(6) promote the development of new technologies for predicting, monitoring, and mitigating harmful algal bloom and hypoxia conditions; and

(7) establish such interagency working groups as it considers necessary.

(d) LEAD FEDERAL AGENCY.—~~Except as provided in subsection (h), the~~ *The National Oceanic and Atmospheric Administration* shall have primary responsibility for administering the Program.

(e) PROGRAM DUTIES.—In administering the Program, the Under Secretary shall—

(1) promote the Program, including to local and regional stakeholders through the establishment and maintenance of a publicly accessible Internet website that provides information as to Program activities completed under this section;

~~[(2) prepare work and spending plans for implementing the research and activities identified under the Action Strategy;]~~

(2) examine the causes, ecological consequences, and costs of harmful algal blooms and hypoxia;

(3) consult with entities that are most dependent on coastal and water resources that may be impacted by marine and freshwater harmful algal blooms and hypoxia, including—

(A) State and local entities;

(B) Indian tribes, Tribal organizations, and Native Hawaiians organizations;

(C) island communities;

(D) low-population rural communities;

(E) subsistence communities; and

(F) fisheries and recreation industries;

~~[(3)](4) administer peer-reviewed, merit-based, competitive grant funding—~~

(A) to maintain and enhance baseline monitoring programs established by the Program;

(B) to support the projects maintained and established by the Program, including the annual Gulf of Mexico hypoxia zone mapping cruise;

(C) to address the research and management needs and priorities identified in the Action Strategy; [and]

(D) to accelerate the utilization of effective methods of intervention and mitigation to reduce the frequency, sever-

ity, and impacts of harmful algal bloom and hypoxia events;

(E) *to identify opportunities to improve monitoring of harmful algal blooms and hypoxia, with a particular focus on waters that may affect fisheries, public health, or subsistence harvest;*

(F) *to evaluate adaptation and mitigation strategies to address the impacts of harmful algal blooms and hypoxia;*

(G) *to support the resilience of the seafood industry to harmful algal blooms and to expand access to testing for harmful algal bloom toxins, including for subsistence and recreational harvesters, through innovative methods that increase the efficiency and effectiveness of such testing in rural and remote areas;*

(H) *to support sustained observations to provide State and local entities, Indian tribes, and other entities access to real-time or near real-time observations data for decision making to protect human and ecological health and local economies; and*

(I) *to assess the combined effects of harmful algal blooms, hypoxia, and stressors such as runoff and infrastructure changes on marine, freshwater, or estuarine ecosystems and living resources;*

[(4)](5) coordinate with, and work cooperatively to provide technical assistance to, regional, State, tribal, and local government [agencies] *entities, regional coastal observing systems (as defined in section 12303 of the Integrated Coastal and Ocean Observation System Act of 2009 (33 U.S.C. 3602)), and programs that address marine and freshwater harmful algal blooms and hypoxia;*

[(5)](6) coordinate with the Secretary of State to support international efforts on marine and freshwater harmful algal bloom and hypoxia information sharing, research, prediction, mitigation, control, and response activities;

[(6)](7) identify additional research, development, and demonstration needs and priorities relating to monitoring, prevention, control, mitigation, and response to marine and freshwater harmful algal blooms and hypoxia, including methods and technologies to protect the ecosystems *and communities* affected by marine and freshwater harmful algal blooms and hypoxia;

[(7)](8) integrate, coordinate, and augment existing education and extension programs to improve public understanding and awareness of the causes, impacts, intervention, and mitigation efforts for marine and freshwater harmful algal blooms and hypoxia;

[(8)](9) facilitate and provide resources to train State and local coastal and water resource managers *and Indian tribes* in the methods and technologies for monitoring, preventing, controlling, and mitigating marine and freshwater harmful algal blooms and hypoxia;

[(9)](10) support regional efforts to control and mitigate outbreaks through—

(A) communication of the contents of the Action Strategy and maintenance of online data portals for other informa-

tion about harmful algal blooms and hypoxia to State[, tribal, and local stakeholders] *and local stakeholders and Indian tribes, Tribal organizations, and Native Hawaiian organizations*; and

(B) overseeing the development, review, and periodic updating of the Action Strategy;

(11) *expand access to testing for harmful algal bloom toxins, including for subsistence and recreational harvesters, through innovative methods that increase the efficiency and effectiveness of such testing in rural and remote areas*;

[(10)](12) convene at least 1 meeting of the Task Force each year; and

[(11)](13) perform such other tasks as may be delegated by the Task Force.

[(f) NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION ACTIVITIES.—The Under Secretary shall—

[(1) maintain and enhance the existing competitive programs at the National Oceanic and Atmospheric Administration relating to harmful algal blooms and hypoxia;

[(2) carry out marine and Great Lakes harmful algal bloom and hypoxia events response activities;

[(3) develop and enhance, including with respect to infrastructure, which shall include unmanned systems, as necessary, critical observations, monitoring, modeling, data management, information dissemination, and operational forecasts relevant to harmful algal blooms and hypoxia events;

[(4) enhance communication and coordination among Federal agencies carrying out marine and freshwater harmful algal bloom and hypoxia activities and research;

[(5) to the greatest extent practicable, leverage existing resources and expertise available from local research universities and institutions;

[(6) increase the availability to appropriate public and private entities of—

[(A) analytical facilities and technologies;

[(B) operational forecasts; and

[(C) reference and research materials;

[(7) use cost effective methods in carrying out this Act; and

[(8) develop contingency plans for the long-term monitoring of hypoxia.]

(f) *COOPERATION; DUPLICATION OF EFFORT.—The Under Secretary shall work cooperatively with and avoid duplication of effort of other agencies on the Task Force and States, Indian tribes, Tribal organizations, Native Hawaiian organizations, and nongovernmental organizations concerned with marine and freshwater issues.*

[(g) COOPERATIVE EFFORTS.—The Under Secretary shall work cooperatively and avoid duplication of effort with other offices, centers, and programs within the National Oceanic and Atmospheric Administration, other agencies on the Task Force, and States, tribes, and nongovernmental organizations concerned with marine and freshwater issues to coordinate harmful algal bloom and hypoxia (and related) activities and research.

[(h) FRESHWATER.—With respect to the freshwater aspects of the Program, the Administrator, through the Task Force, shall carry

out the duties otherwise assigned to the Under Secretary under this section, except the activities described in subsection (f).

[(1) Participation.—The Administrator’s participation under this section shall include—

[(A) research on the ecology and impacts of freshwater harmful algal blooms; and

[(B) forecasting and monitoring of and event response to freshwater harmful algal blooms in lakes, rivers, estuaries (including their tributaries), and reservoirs.

[(2) NONDUPLICATION.—The Administrator shall ensure that activities carried out under this title focus on new approaches to addressing freshwater harmful algal blooms and are not duplicative of existing research and development programs authorized by this title or any other law.

[(i) INTEGRATED COASTAL AND OCEAN OBSERVATION SYSTEM.—The collection of monitoring and observation data under this title shall comply with all data standards and protocols developed pursuant to the Integrated Coastal and Ocean Observation System Act of 2009 (33 U.S.C. 3601 et seq.). Such data shall be made available through the system established under that Act.]

[33 U.S.C. 4003]

[SEC. 603B. COMPREHENSIVE RESEARCH PLAN AND ACTION STRATEGY

[(a) IN GENERAL.—Not later than 1 year after the date of enactment of the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2014, the Under Secretary, through the Task Force, shall develop and submit to Congress a comprehensive research plan and action strategy to address marine and freshwater harmful algal blooms and hypoxia. The Action Strategy shall identify—

[(1) the specific activities to be carried out by the Program and the timeline for carrying out those activities;

[(2) the roles and responsibilities of each Federal agency in the Task Force in carrying out the activities under paragraph (1); and

[(3) the appropriate regions and subregions requiring specific research and activities to address harmful algal blooms and hypoxia.

[(b) REGIONAL FOCUS.—The regional and subregional parts of the Action Strategy shall identify—

[(1) regional priorities for ecological, economic, and social research on issues related to the impacts of harmful algal blooms and hypoxia;

[(2) research, development, and demonstration activities needed to develop and advance technologies and techniques for minimizing the occurrence of harmful algal blooms and hypoxia and improving capabilities to detect, predict, monitor, control, mitigate, respond to, and remediate harmful algal blooms and hypoxia;

[(3) ways to reduce the duration and intensity of harmful algal blooms and hypoxia, including deployment of response technologies in a timely manner;

[(4) research and methods to address human health dimensions of harmful algal blooms and hypoxia;

[(5) mechanisms, including the potential costs and benefits of those mechanisms, to protect ecosystems that may be or have been affected by harmful algal bloom and hypoxia events;

[(6) mechanisms by which data, information, and products may be transferred between the Program and the State, tribal, and local governments and research entities;

[(7) communication and information dissemination methods that State, tribal, and local governments may undertake to educate and inform the public concerning harmful algal blooms and hypoxia; and

[(8) roles that Federal agencies may have to assist in the implementation of the Action Strategy, including efforts to support local and regional scientific assessments under section 603(e).

[(c) UTILIZING AVAILABLE STUDIES AND INFORMATION.—In developing the Action Strategy, the Under Secretary shall utilize existing research, assessments, reports, and program activities, including—

[(1) those carried out under existing law; and

[(2) other relevant peer-reviewed and published sources.

[(d) DEVELOPMENT OF THE ACTION STRATEGY.—In developing the Action Strategy, the Under Secretary shall, as appropriate—

[(1) coordinate with—

[(A) State coastal management and planning officials;

[(B) tribal resource management officials; and

[(C) water management and watershed officials from both coastal States and noncoastal States with water sources that drain into water bodies affected by harmful algal blooms and hypoxia; and

[(2) consult with—

[(A) public health officials;

[(B) emergency management officials;

[(C) science and technology development institutions;

[(D) economists;

[(E) industries and businesses affected by marine and freshwater harmful algal blooms and hypoxia;

[(F) scientists with expertise concerning harmful algal blooms or hypoxia from academic or research institutions; and

[(G) other stakeholders.

[(e) FEDERAL REGISTER.—The Under Secretary shall publish the Action Strategy in the Federal Register.

[(f) PERIODIC REVISION.—The Under Secretary, in coordination and consultation with the individuals and entities under subsection (d), shall periodically review and revise the Action Strategy prepared under this section, as necessary.】

SEC. 603B. NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION ACTIVITIES.

(a) *IN GENERAL.—The Under Secretary shall—*

(1) *carry out response activities for marine, coastal, and Great Lakes harmful algal bloom and hypoxia events;*

(2) *develop and enhance operational harmful algal bloom observing and forecasting programs, including operational observations and forecasting, monitoring, modeling, data management, and information dissemination;*

(3) *develop forecast modeling that includes the effect of hurricanes and other weather events on the resuspension of bioavailable nutrients in sediments and related interactions with harmful algal blooms;*

(4) *enhance communication and coordination among Federal agencies carrying out activities and research relating to marine and freshwater harmful algal blooms and hypoxia;*

(5) *leverage existing resources and expertise available from local research universities and institutions; and*

(6) *use cost effective methods in carrying out this section.*

(b) **INTEGRATED COASTAL AND OCEAN OBSERVATION SYSTEM.**—*The collection of monitoring and observing data under this section shall comply with all data standards and protocols developed pursuant to the Integrated Coastal and Ocean Observation System Act of 2009 (33 U.S.C. 3601 et seq.). Such data shall be made available through the National Integrated Coastal and Ocean Observation System established under section 12304 of that Act (33 U.S.C. 3603).*

SEC. 603C. ENVIRONMENTAL PROTECTION AGENCY ACTIVITIES.

(a) **IN GENERAL.**—*The Administrator shall—*

(1) *carry out research on the ecology and human health impacts of freshwater harmful algal blooms and hypoxia events;*

(2) *develop and enhance operational freshwater harmful algal bloom monitoring, observing, and forecasting programs in lakes, rivers, and reservoirs, and coordinate with the National Oceanic and Atmospheric Administration on such programs in the Great Lakes and estuaries (including tributaries thereof), including operational observations and forecasting, monitoring, modeling, data management, and information dissemination, to support event response, prioritization, prevention, adaptation, and mitigation activities;*

(3) *enhance communication and coordination among Federal agencies carrying out freshwater harmful algal bloom and hypoxia activities and research;*

(4) *to the greatest extent practicable, leverage existing resources and expertise available from Federal and State partners and local research universities and institutions; and*

(5) *use cost-effective methods in carrying out this section.*

(b) **NONDUPLICATION.**—*The Administrator shall ensure that activities carried out under subsection (a) focus on new approaches to addressing freshwater harmful algal blooms and are not duplicative of existing research and development programs authorized by this title or any other law.*

* * * * *

[33 U.S.C. 4005]

[SEC. 606. GREAT LAKES HYPOXIA AND HARMFUL ALGAL BLOOMS.

[(a) INTEGRATED ASSESSMENT.—Not later than 18 months after the date of enactment of the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2014, the Task Force, in accordance with the authority under section 603, shall complete and submit to the Congress and the President an integrated assessment that examines the causes, consequences, and approaches to reduce hypoxia and harmful algal blooms in the Great Lakes, including

the status of and gaps within current research, monitoring, management, prevention, response, and control activities by—

- [(1) Federal agencies;
- [(2) State agencies;
- [(3) regional research consortia;
- [(4) academia;
- [(5) private industry; and
- [(6) nongovernmental organizations.

[(b) PLAN.—

[(1) IN GENERAL.—Not later than 2 years after the date of enactment of the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act of 2014, the Task Force shall develop and submit to the Congress a plan, based on the integrated assessment under subsection (a), for reducing, mitigating, and controlling hypoxia and harmful algal blooms in the Great Lakes.

[(2) CONTENTS.—The plan shall—

[(A) address the monitoring needs identified in the integrated assessment under subsection (a);

[(B) develop a timeline and budgetary requirements for deployment of future assets;

[(C) identify requirements for the development and verification of Great Lakes hypoxia and harmful algal bloom models, including—

[(i) all assumptions built into the models; and

[(ii) data quality methods used to ensure the best available data are utilized; and

[(D) describe efforts to improve the assessment of the impacts of hypoxia and harmful algal blooms by—

[(i) characterizing current and past biological conditions in ecosystems affected by hypoxia and harmful algal blooms; and

[(ii) quantifying effects, including economic effects, at the population and community levels.

[(3) REQUIREMENTS.—In developing the plan, the Task Force shall—

[(A) coordinate with State and local governments;

[(B) consult with representatives from academic, agricultural, industry, and other stakeholder groups, including relevant Canadian agencies;

[(C) ensure that the plan complements and does not duplicate activities conducted by other Federal or State agencies;

[(D) identify critical research for reducing, mitigating, and controlling hypoxia events and their effects;

[(E) evaluate cost-effective, incentive-based partnership approaches;

[(F) ensure that the plan is technically sound and cost effective;

[(G) utilize existing research, assessments, reports, and program activities;

[(H) publish a summary of the proposed plan in the Federal Register at least 180 days prior to submitting the completed plan to Congress; and

[(I) after submitting the completed plan to Congress, provide biennial progress reports on the activities toward achieving the objectives of the plan.]

SEC. 606. NATIONAL HARMFUL ALGAL BLOOM OBSERVING NETWORK.

(a) *IN GENERAL.*—The Under Secretary, acting through the National Centers for Coastal Ocean Science and the Integrated Ocean Observing System of the National Oceanic and Atmospheric Administration, shall integrate Federal, State, regional, and local observing capabilities to establish a national network of observing systems for the monitoring, detection, and forecasting of harmful algal blooms by leveraging the capacity of regional associations of the Integrated Ocean Observing System, including through the incorporation of emerging technologies and new data integration methods.

(b) *COORDINATION AND DATA ASSEMBLY.*—In carrying out subsection (a), the Program Office of the Integrated Ocean Observing System shall—

(1) coordinate with the National Centers for Coastal Ocean Science regarding observations, data integration, and information dissemination;

(2) organize, integrate, disseminate, and provide a central architecture to support ecological forecasting of harmful algal blooms; and

(3) coordinate with the Water Quality Portal to store and serve discrete data related to the monitoring of freshwater, estuarine, and coastal harmful algal blooms.

SEC. 606A. NATIONAL-LEVEL INCUBATOR PROGRAM.

(a) *IN GENERAL.*—The Under Secretary, in collaboration with the Administrator and research universities and institutions, shall establish a national-level incubator program (in this section referred to as the “program”) to increase the number of strategies, technologies, and measures available to prevent, mitigate, and control harmful algal blooms.

(b) *FRAMEWORK.*—The program shall establish a framework for preliminary assessments of novel strategies, technologies, and measures to prevent, mitigate, and control harmful algal blooms in order to determine the potential effectiveness and scalability of such technologies.

(c) *FUNDING.*—The program shall provide merit-based funding, using amounts otherwise available to the Under Secretary for the award of grants, for strategies, technologies, and measures that eliminate or reduce, through biological, chemical, or physical means, the levels of harmful algae and associated toxins resulting from harmful algal blooms.

(d) *DATABASE.*—The program shall include a database for cataloging the licensing and permitting requirements, economic costs, feasibility, effectiveness, and scalability of novel and established strategies, technologies, and measures to prevent, mitigate, and control harmful algal blooms.

(e) *PRIORITIZATION.*—In carrying out the program, the Under Secretary shall prioritize proposed strategies, technologies, and measures that would, to the maximum extent practicable—

(1) protect key habitats for fish and wildlife;

(2) maintain biodiversity;

(3) protect public health;

- (4) *protect coastal resources of national, historical, and cultural significance; or*
 (5) *benefit low-income communities, Indian tribes, and rural communities.*

* * * * *

[33 U.S.C. 4008]

SEC. 609. DEFINITIONS.

In this title:

(1) **ACTION STRATEGY.**—The term “Action Strategy” [means the comprehensive research plan and action strategy established under section 603B] *means the action strategy for harmful algal blooms in the United States most recently submitted under section 603(c).*

(2) **ADMINISTRATOR.**—The term “Administrator” means the Administrator of the Environmental Protection Agency.

[(3) **HARMFUL ALGAL BLOOM.**—The term “harmful algal bloom” means marine and freshwater phytoplankton that proliferate to high concentrations, resulting in nuisance conditions or harmful impacts on marine and aquatic ecosystems, coastal communities, and human health through the production of toxic compounds or other biological, chemical, and physical impacts of the algae outbreak.]

(3) **HARMFUL ALGAL BLOOM.**—*The term “harmful algal bloom” means a high concentration of marine or freshwater algae (including diatoms), macroalgae (including Sargassum), or cyanobacteria resulting in nuisance conditions or harmful impacts on marine and freshwater ecosystems, subsistence resources, communities, or human health through the production of toxic compounds or other biological, chemical, or physical impacts of the bloom.*

(4) **HARMFUL ALGAL BLOOM AND HYPOXIA EVENT.**—*The term “harmful algal bloom and hypoxia event” means the occurrence of a harmful algal bloom or hypoxia as a result of a natural, anthropogenic, or undetermined cause.*

[(4)](5) **HYPOXIA.**—The term “hypoxia” means a condition where low dissolved oxygen in [aquatic] *marine or freshwater* systems causes stress or death to [resident] *marine or freshwater* organisms.

(6) **INDIAN TRIBE.**—*The term “Indian tribe” has the meaning given that term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5304).*

(7) **NATIVE HAWAIIAN ORGANIZATION.**—*The term “Native Hawaiian organization” has the meaning given that term in section 6207 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7517) and includes the Department of Hawaiian Home Lands and the Office of Hawaiian Affairs.*

[(5)](8) **PROGRAM.**—The term “Program” means the national harmful algal bloom and hypoxia program established under section 603A.

[(6)](9) **STATE.**—The term “State” means each of the several States of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands,

any other territory or possession of the United States, and any Indian tribe.

(10) *SUBSISTENCE USE.*—The term “subsistence use” means the customary and traditional use of fish, wildlife, or other freshwater, coastal, or marine resources by any individual or community to meet personal or family needs, including essential economic, nutritional, or cultural applications.

[(7)](11) *TASK FORCE.*—The term “Task Force” means the Inter-Agency Task Force on Harmful Algal Blooms and Hypoxia under section 603(a).

(12) *TRIBAL ORGANIZATION.*—The term “Tribal organization” has the meaning given that term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5304).

[(8)](13) *UNDER SECRETARY.*—The term “Under Secretary” means the Under Secretary of Commerce for Oceans and Atmosphere.

[(9)] *UNITED STATES COASTAL WATERS.*—The term “United States coastal waters” includes the Great Lakes.】

[33 U.S.C. 4009]

SEC. 610. AUTHORIZATION OF APPROPRIATIONS.

[(a)] *IN GENERAL.*—There is authorized to be appropriated to the Under Secretary to carry out sections 603A and 603B \$20,500,000 for each of fiscal years 2014 through 2018, and \$20,500,000 for each of fiscal years 2019 through 2023.】

(a) *IN GENERAL.*—There is authorized to be appropriated to carry out this title, for each of fiscal years 2026 through 2030—

(1) \$19,500,000 to the Under Secretary; and

(2) \$8,000,000 to the Administrator.

(b) *EXTRAMURAL RESEARCH ACTIVITIES.*—The Under Secretary shall ensure that a substantial portion of funds appropriated pursuant to subsection (a) that are used for research purposes are allocated to extramural research activities. For each fiscal year, the Under Secretary shall publish a list of all grant recipients and the amounts for all of the funds allocated for research purposes, specifying those allocated for extramural research activities.

(c) *TRANSFER AUTHORITY.*—As specifically provided in advance in appropriations Acts, the Under Secretary or the Administrator may transfer funds made available to carry out this title to the head of any Federal department or agency, with the concurrence of such head, to carry out, as appropriate, relevant provisions of this title and section 9(g) of the National Integrated Drought Information System Reauthorization Act of 2018 (33 U.S.C. 4010).

* * * * *

NATIONAL INTEGRATED DROUGHT INFORMATION SYSTEM REAUTHORIZATION ACT OF 2018

* * * * *

[33 U.S.C. 4001 note]

SEC. 9. HARMFUL ALGAL BLOOM AND HYPOXIA RESEARCH AND CONTROL.

- (a) * * *
- (b) * * *
- (c) * * *
- (d) * * *
- (e) * * *
- (f) * * *

[33 U.S.C. 4010]

(g) **HYPOXIA OR HARMFUL ALGAL BLOOM OF NATIONAL SIGNIFICANCE.**—

(1) RELIEF.—

(A) **IN GENERAL.**—Upon a determination under paragraph (2) that there is an event of national significance, the appropriate Federal official is authorized to make sums available to the affected State or local government for the purposes of assessing and mitigating the detrimental environmental, economic, subsistence use, and public health effects of the event of national significance.

(B) **FEDERAL SHARE.**—The Federal share of the cost of any activity carried out under this paragraph for the purposes described in subparagraph (A) may not exceed 50 percent of the cost of that activity. *The appropriate Federal official may waive the non-Federal share requirements of the preceding sentence if such official determines no reasonable means are available through which the recipient of the Federal share can meet the non-Federal share requirement.*

(C) **DONATIONS.**—Notwithstanding any other provision of law, an appropriate Federal official may accept donations of funds, services, facilities, materials, or equipment that the appropriate Federal official considers necessary for the purposes described in subparagraph (A). Any funds donated to an appropriate Federal official under this paragraph may be expended without further appropriation and without fiscal year limitation.

(D) **CONTRACT, COOPERATIVE AGREEMENT, AND GRANT AUTHORITY.**—*The appropriate Federal official may enter into contracts, cooperative agreements, and grants with States, Indian Tribes, Tribal organizations, Native Hawaiian organizations, local governments, or other entities to pay for or reimburse costs incurred by such entities for the purposes of supporting the determination of, and assessing the environmental, economic, subsistence use, and public health effects of, an event of national significance.*

(2) DETERMINATIONS.—

(A) **IN GENERAL.**—At the discretion of an appropriate Federal official, or at the request of the Governor of an affected State, *a leadership official of an affected Indian Tribe, the executive official of the District of Columbia, or the executive official of an affected territory or possession of the United States*, an appropriate Federal official shall determine whether a hypoxia or harmful algal bloom event is an event of national significance.

(B) CONSIDERATIONS.—In making a determination under subparagraph (A), the appropriate Federal official shall **【consider the toxicity of the harmful algal bloom, the severity of the hypoxia, its potential to spread, the economic impact, the relative size in relation to the past 5 occurrences of harmful algal blooms or hypoxia events that occur on a recurrent or annual basis, and the geographic scope, including the potential to affect several municipalities, to affect more than 1 State, or to cross an international boundary.】** *consider factors such as—*

(i) the risk to public health and the potential severity of the detrimental environmental effects of the hypoxia or harmful algal bloom event, as indicated by—

(I) data on shellfish or water quality obtained through sampling programs, including baseline data, and regulatory or advisory thresholds established to explain management actions related to the event;

(II) toxin levels in fish, marine mammals, seabirds, shellfish, or water during the event;

(III) toxic aerosols produced during the event, including potential human exposures to toxic aerosols;

(IV) reports of human or animal illnesses or mortalities during the event;

(V) any closures of fishing or shellfish harvesting locations or recreational public waters, including beaches, during the event;

(VI) the duration and spatial extent of the event;
or

(VII) impacts to habitats or ecosystems associated with the event;

(ii) the potential economic, food safety and security, and subsistence impacts associated with the hypoxia or harmful algal bloom event, including to fisheries and aquaculture, recreation and tourism, monitoring and management, resource use, and event response activities, assessed in comparison with historical data from when a State or region did not experience such an event, as possible, as indicated by—

(I) increases in public health expenditures;

(II) losses to commercial fisheries and aquaculture industries, recreation and tourism, real estate, and other impacted industries or businesses;

(III) increases in monitoring and management expenditures, including costs incurred for event response and clean-up (such as for beach clean-up following an influx of biomass or a fish-kill) by public or private sectors; or

(IV) impacts to subsistence resources, including nutritional, resource use, and economic effects on subsistence communities;

(iii) the relative magnitude of those impacts in relation to past occurrences of hypoxia or harmful algal

bloom events that occur on a recurrent or annual basis; and

(iv) the geographic scope of the hypoxia or harmful algal bloom event, including the potential of the event to affect several municipalities, to affect more than 1 State, or to cross an international boundary.

(3) DEFINITIONS.—In this subsection:

(A) APPROPRIATE FEDERAL OFFICIAL.—The term “appropriate Federal official” means—

(i) in the case of a marine or coastal hypoxia or harmful algal bloom event, the Under Secretary of Commerce for Oceans and Atmosphere; and

(ii) in the case of a freshwater hypoxia or harmful algal bloom event, the Administrator of the Environmental Protection Agency.

(B) EVENT OF NATIONAL SIGNIFICANCE.—The term “event of national significance” means a hypoxia or harmful algal bloom event that has had or will likely have a significant detrimental environmental, economic, subsistence use, or public health impact on an affected State.

(C) HYPOXIA OR HARMFUL ALGAL BLOOM EVENT.—The term “hypoxia or harmful algal bloom event” means the occurrence of hypoxia or a harmful algal bloom as a result of a natural, anthropogenic, or undetermined cause.

(D) INDIAN TRIBE.—The term “Indian Tribe” has the meaning given that term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5304).

(E) NATIVE HAWAIIAN ORGANIZATION.—The term “Native Hawaiian organization” has the meaning given that term in section 6207 of the Elementary and Secondary Education Act of 1965 (20 U.S.C. 7517) and includes the Department of Hawaiian Home Lands and the Office of Hawaiian Affairs.

(F) SUBSISTENCE USE.—The term “subsistence use” means the customary and traditional use of fish, wildlife, or other freshwater, coastal, or marine resources by any individual or community to meet personal or family needs, including essential economic, nutritional, or cultural applications.

(G) TRIBAL ORGANIZATION.—The term “Tribal organization” has the meaning given that term in section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C. 5304).

(4) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to carry out this subsection \$2,000,000 for each of fiscal years 2026 through 2030, to remain available until expended.

(h) * * *