



1 Purpose: In the nature of a substitute.

2  
3

4 S. 3348

5 To amend the Harmful Algal Blooms and Hypoxia Research and  
6 Control Act of 1998 to address harmful algal blooms, and for  
7 other purposes.

8 Referred to the Committee on \_\_\_\_\_ and ordered to be  
9 printed

10 Ordered to lie on the table and to be printed

11 AMENDMENT IN THE NATURE OF A SUBSTITUTE INTENDED TO BE  
12 PROPOSED BY MR. SULLIVAN

13 Viz:

14 Strike all after the enacting clause and insert the following:

15 **SECTION 1. SHORT TITLE.**

16 This Act may be cited as the "Harmful Algal Bloom and Hypoxia Research and Control  
17 Amendments Act of 2024".

18 **SEC. 2. AMENDMENTS TO THE HARMFUL ALGAL  
19 BLOOMS AND HYPOXIA RESEARCH AND CONTROL  
20 ACT OF 1998.**

21 (a) Assessments.—

22 (1) IN GENERAL.—Section 603 of the Harmful Algal Blooms and Hypoxia Research and  
23 Control Act of 1998 (33 U.S.C. 4001) is amended—

24 (A) in the section heading, by striking "assessments" and inserting "task force,  
25 assessments, and action strategy";

26 (B) in subsection (a)—

27 (i) by redesignating paragraphs (13) and (14) as paragraphs (14) and (15),  
28 respectively; and

29 (ii) by inserting after paragraph (12) the following:

30 "(13) the Department of Energy;";

31 (C) by striking subsections (b), (c), (d), (e), (g), (h), and (i) and redesignating  
32 subsection (f) as subsection (b);

1 (D) in subsection (b), as so redesignated—

2 (i) in paragraph (1), in the first sentence, by striking “coastal waters including  
3 the Great Lakes” and inserting “marine, estuarine, and freshwater systems”; and

4 (ii) in paragraph (2)—

5 (I) by amending subparagraph (A) to read as follows:

6 “(A) examine—

7 “(i) the causes and ecological consequences of hypoxia on marine and aquatic  
8 species in their natural environments; and

9 “(ii) the socio-cultural or economic costs of hypoxia, including impacts on food  
10 safety and security;”;

11 (II) by redesignating subparagraphs (B), (C), and (D) as subparagraphs  
12 (D), (E), and (F), respectively;

13 (III) by inserting after subparagraph (A) the following:

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

15 “(C) evaluate alternatives for reducing, mitigating, and controlling hypoxia and its  
16 environmental impacts;”;

17 (IV) in subparagraph (D), as redesignated by subclause (II), by inserting “,  
18 social,” after “ecological”; and

19 (V) in subparagraph (E), as redesignated by subclause (II), by striking  
20 “hypoxia modeling and monitoring data” and inserting “hypoxia modeling,  
21 forecasting, and monitoring and observation data”; and

22 (E) by adding at the end the following:

23 “(c) Action Strategy and Scientific Assessment for Marine and Freshwater Harmful Algal  
24 Blooms.—

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

28 “(2) ELEMENTS.—Each Action Strategy shall—

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

31 “(i) in the Great Lakes;

32 “(ii) in the upper reaches of estuaries;

33 “(iii) in freshwater lakes and rivers;

34 “(iv) in coastal and marine waters; and

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

36 “(B) examine the causes, ecological consequences, and economic or socio-cultural

1 impacts, including food safety and security, of harmful algal blooms;

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

3 “(D) examine potential methods to prevent, control, and mitigate harmful algal  
4 blooms and the potential ecological, social, cultural, and economic costs and benefits  
5 of such methods;

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

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

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

14 “(H) include regional chapters relating to the requirements described in this  
15 paragraph in order to highlight geographically and ecologically diverse locations with  
16 significant ecological, social, cultural, and economic impacts from harmful algal  
17 blooms.

18 “(d) Consultation.—In carrying out subsections (b) and (c), the Task Force shall consult  
19 with—

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

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

23 (2) CLERICAL AMENDMENT.—The table of contents in section 2 of the Coast Guard  
24 Authorization Act of 1998 (Public Law 105–383; 112 Stat. 3412; 136 Stat. 1268) is  
25 amended by striking the item relating to section 603 and inserting the following:

26 “Sec.603.Task Force, assessments, and Action Strategy.”.

27 (3) CONFORMING AMENDMENT.—Section 102 of the Harmful Algal Bloom and Hypoxia  
28 Amendments Act of 2004 (33 U.S.C. 4001a) is amended by striking “In developing” and all  
29 that follows through “management.”.

30 (b) National Harmful Algal Bloom and Hypoxia Program.—Section 603A of the Harmful  
31 Algal Blooms and Hypoxia Research and Control Act of 1998 (33 U.S.C. 4002) is amended—

32 (1) in subsection (a)—

33 (A) in paragraph (1)—

34 (i) by striking “predicting,” and inserting “monitoring, observing, forecasting.”;  
35 and

36 (ii) by striking “and” after the semicolon; and

37 (B) by striking paragraph (2) and inserting the following:

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

1 “(3) the Action Strategy.”;

2 (2) in subsection (c)—

3 (A) in paragraph (3), by striking “ocean and Great Lakes science and management  
4 programs and centers” and inserting “programs and centers relating to the science and  
5 management of marine, estuarine, and freshwater systems”; and

6 (B) in paragraph (5), by inserting “while recognizing each agency is acting under its  
7 own independent mission and authority” before the semicolon;

8 (3) in subsection (d), by striking “Except as provided in subsection (h), the” and inserting  
9 “The”;

10 (4) in subsection (e)—

11 (A) in the matter preceding paragraph (1), by inserting “(or the Administrator, as  
12 provided under subsection (g))” after “Under Secretary”;

13 (B) by amending paragraph (2) to read as follows:

14 “(2) examine, in collaboration with State and local entities, Indian tribes, Tribal  
15 organizations, and Native Hawaiian organizations, including island communities, low-  
16 population rural communities, subsistence communities, fisheries, and recreation industries  
17 that are most dependent on coastal and water resources that may be impacted by marine and  
18 freshwater harmful algal blooms and hypoxia, the causes, ecological consequences, cultural  
19 impacts, and social and economic costs of harmful algal blooms and hypoxia;”;

20 (C) in paragraph (3)—

21 (i) in subparagraph (B), by inserting “, including the annual Gulf of Mexico  
22 hypoxia zone mapping cruise” after “Program”;

23 (ii) in subparagraph (C), by striking “and” after the semicolon; and

24 (iii) by adding at the end the following:

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

28 “(F) to examine the effects of other environmental stressors on harmful algal blooms  
29 and hypoxia;

30 “(G) to assess the combined effects of harmful algal blooms, hypoxia, and other  
31 environmental stressors on marine, freshwater, or estuarine ecosystems and living  
32 resources;

33 “(H) to evaluate adaptation and mitigation strategies to address the impacts of  
34 harmful algal blooms and hypoxia; and

35 “(I) to support seafood mariculture and to expand access to testing for harmful algal  
36 bloom toxins, including for subsistence and recreational harvesters, through innovative  
37 methods that increase the efficiency and effectiveness of such testing in rural and  
38 remote areas;”;

39 (D) in paragraph (4), by striking “agencies” and inserting “entities, regional coastal

1 observing systems (as defined in section 12303 of the Integrated Coastal and Ocean  
2 Observation System Act of 2009 (33 U.S.C. 3602)),”;

3 (E) in paragraph (6), by inserting “and communities” after “ecosystems”;

4 (F) by redesignating paragraphs (7), (8), (9), (10), and (11) as paragraphs (8), (9),  
5 (10), (12), and (13), respectively;

6 (G) by inserting after paragraph (6) the following:

7 “(7) support sustained observations, including through the funding described in paragraph  
8 (3), to provide State and local entities, Indian tribes, Tribal organizations, Native Hawaiian  
9 organizations, and other entities access to real-time or near real-time observation data for  
10 decision-making to protect human and ecological health and local economies;”;

11 (H) in paragraph (9), as redesignated by subparagraph (F), by inserting “and Indian  
12 tribes” after “managers”;

13 (I) in paragraph (10), as redesignated by subparagraph (F), in subparagraph (A), by  
14 striking “, tribal, and local stakeholders” and inserting “and local stakeholders and  
15 Indian tribes, Tribal organizations, and Native Hawaiian organizations”; and

16 (J) by inserting after paragraph (10), as redesignated by subparagraph (F), the  
17 following:

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

21 (5) by amending subsections (f), (g), and (h) to read as follows:

22 “(f) Cooperation and Coordination.—The Under Secretary shall—

23 “(1) work cooperatively with and avoid duplication of effort of other agencies on the  
24 Task Force and States, Indian tribes, Tribal organizations, Native Hawaiian organizations,  
25 and nongovernmental organizations concerned with marine and freshwater issues; and

26 “(2) coordinate harmful algal bloom and hypoxia and related activities and research with  
27 those entities.

28 “(g) Freshwater and Estuarine Program Duties.—The Administrator, in coordination with the  
29 Task Force, shall—

30 “(1) carry out the duties under the Administrator’s purview under subsection (e) for  
31 freshwater aspects of the Program through the activities required under section 603C; and

32 “(2) coordinate with the Under Secretary on estuarine aspects of the Program through the  
33 activities required under this section.

34 “(h) Anti-Deficiency Act Applied to Harmful Algal Bloom Services.—Any services accepted  
35 by an officer or employee of the United States Government under this title relating to the  
36 development and dissemination of forecasts and bulletins through the Harmful Algal Bloom  
37 Operational Forecast System of the National Centers for Coastal Ocean Science and the National  
38 Oceanic and Atmospheric Administration shall be considered, for purposes of section 1342 of  
39 title 31, United States Code, services for an emergency involving the safety of human life or the  
40 protection of property. Such consideration shall apply only to services performed for areas with

1 active harmful algal blooms during any lapse in appropriations beginning on or after the date of  
2 the enactment of the Harmful Algal Bloom and Hypoxia Research and Control Amendments Act  
3 of 2024.”; and

4 (6) by striking subsection (i).

5 (c) National Oceanic and Atmospheric Administration Activities.—

6 (1) IN GENERAL.—Section 603B of the Harmful Algal Blooms and Hypoxia Research and  
7 Control Act of 1998 (33 U.S.C. 4003) is amended to read as follows:

8 **“SEC. 603B. NATIONAL OCEANIC AND ATMOSPHERIC**  
9 **ADMINISTRATION ACTIVITIES.**

10 “(a) In General.—The Under Secretary shall—

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

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

16 “(3) maintain and enhance the funding described in section 603A(e)(3) relating to  
17 harmful algal blooms and hypoxia;

18 “(4) enhance communication and coordination among Federal agencies carrying out  
19 activities and research relating to marine and freshwater harmful algal bloom and hypoxia;

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

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

23 “(b) Integrated Coastal and Ocean Observation System.—The collection of monitoring and  
24 observing data under this section shall comply with all data standards and protocols developed  
25 pursuant to the Integrated Coastal and Ocean Observation System Act of 2009 (33 U.S.C. 3601  
26 et seq.). Such data shall be made available through the National Integrated Coastal and Ocean  
27 Observation System established under section 12304 of that Act (33 U.S.C. 3603).”.

28 (2) CLERICAL AMENDMENT.—The table of contents in section 2 of the Coast Guard  
29 Authorization Act of 1998 (Public Law 105–383; 112 Stat. 3412; 136 Stat. 1268) is  
30 amended by striking the item relating to section 603B and inserting the following:

31 “Sec.603B.National Oceanic and Atmospheric Administration activities.”.

32 (d) Environmental Protection Agency Activities.—

33 (1) IN GENERAL.—The Harmful Algal Bloom and Hypoxia Research and Control Act of  
34 1998 is amended by inserting after section 603B (33 U.S.C. 4003) the following:

35 **“SEC. 603C. ENVIRONMENTAL PROTECTION AGENCY**  
36 **ACTIVITIES.**

37 “(a) In General.—The Administrator shall—

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

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

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

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

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

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

18 (2) CLERICAL AMENDMENT.—The table of contents in section 2 of the Coast Guard  
19 Authorization Act of 1998 (Public Law 105–383; 112 Stat. 3412; 136 Stat. 1268) is  
20 amended by inserting after the item relating to section 603B the following:

21 “Sec.603C.Environmental Protection Agency activities.”

22 (e) National Harmful Algal Bloom and Hypoxia Observing Network.—

23 (1) IN GENERAL.—Section 606 of the Harmful Algal Blooms and Hypoxia Research and  
24 Control Act of 1998 (33 U.S.C. 4005) is amended to read as follows:

25 **“SEC. 606. NATIONAL HARMFUL ALGAL BLOOM**  
26 **OBSERVING NETWORK.**

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

34 “(b) Coordination and Data Assembly.—In carrying out subsection (a), the Program Office of  
35 the Integrated Ocean Observing System shall—

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

38 “(2) establish a center for the assembly of data on harmful algal blooms to integrate,  
39 disseminate, and provide a central architecture to support ecological forecasting; and

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

3 (2) CLERICAL AMENDMENT.—The table of contents in section 2 of the Coast Guard  
4 Authorization Act of 1998 (Public Law 105–383; 112 Stat. 3412; 136 Stat. 1268) is  
5 amended by striking the item relating to section 606 and inserting the following:

6 “Sec.606.National harmful algal bloom observing network.”

7 (f) National-level Incubator Program.—

8 (1) IN GENERAL.—The Harmful Algal Blooms and Hypoxia Research and Control Act of  
9 1998 is amended by inserting after section 606 (33 U.S.C. 4005) the following:

10 **“SEC. 606A. NATIONAL-LEVEL INCUBATOR PROGRAM.**

11 “(a) In General.—The Under Secretary, in collaboration with the Administrator and research  
12 universities and institutions, shall establish a national-level incubator program (in this section  
13 referred to as the ‘program’) to increase the number of strategies, technologies, and measures  
14 available to prevent, mitigate, and control harmful algal blooms.

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

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

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

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

28 “(1) protect key habitats for fish and wildlife;

29 “(2) maintain biodiversity;

30 “(3) protect public health;

31 “(4) protect coastal resources of national, historical, and cultural significance; or

32 “(5) benefit low-income communities, Indian tribes, and rural communities.”

33 (2) CLERICAL AMENDMENT.—The table of contents in section 2 of the Coast Guard  
34 Authorization Act of 1998 (Public Law 105–383; 112 Stat. 3412; 136 Stat. 1268) is  
35 amended by inserting after the item relating to section 606 the following:

36 “Sec.606A.National-level incubator program.”

37 (g) Definitions.—Section 609 of the Harmful Algal Blooms and Hypoxia Research and  
38 Control Act of 1998 (33 U.S.C. 4008) is amended—



1 (1) in paragraph (1), by striking “means the comprehensive research plan and action  
2 strategy established under section 603B” and inserting “means the action strategy for  
3 harmful algal blooms in the United States most recently submitted under section 603(c)”;

4 (2) by amending paragraph (3) to read as follows:

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

11 (3) by striking paragraph (9);

12 (4) by redesignating paragraphs (4), (5), (6), (7), and (8) as paragraphs (5), (8), (9), (11),  
13 and (13), respectively;

14 (5) by inserting after paragraph (3) the following:

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

18 (6) in paragraph (5), as redesignated by paragraph (4)—

19 (A) by striking “aquatic” and inserting “marine or freshwater”; and

20 (B) by striking “resident” and inserting “marine or freshwater”;

21 (7) by inserting after paragraph (5), as redesignated by paragraph (4), the following:

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

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

28 (8) by inserting after paragraph (9), as redesignated by paragraph (4), the following:

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

33 (9) by inserting after paragraph (11), as redesignated by paragraph (4), the following:

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

37 (h) Authorization of Appropriations.—Section 610 of the Harmful Algal Blooms and Hypoxia  
38 Research and Control Act of 1998 (33 U.S.C. 4009) is amended—

39 (1) by amending subsection (a) to read as follows:

1 “(a) In General.—There is authorized to be appropriated to carry out this title, for each of  
2 fiscal years 2025 through 2029—

3 “(1) \$19,500,000 to the Under Secretary; and

4 “(2) \$8,000,000 to the Administrator.”; and

5 (2) by adding at the end the following:

6 “(c) Transfer Authority.—The Under Secretary or the Administrator may make a direct non-  
7 expenditure transfer of funds authorized to be appropriated pursuant to subsection (a) to the head  
8 of any Federal department or agency, with the concurrence of such head, to carry out, as  
9 appropriate, relevant provisions of this title and section 9(g) of the National Integrated Drought  
10 Information System Reauthorization Act of 2018 (33 U.S.C. 4010(g)).”.

### 11 SEC. 3. OTHER HARMFUL ALGAL BLOOM MATTERS.

12 (a) Harmful Algal Bloom or Hypoxia Event of National Significance.—Section 9(g) of the  
13 National Integrated Drought Information System Reauthorization Act of 2018 (33 U.S.C.  
14 4010(g)) is amended—

15 (1) in paragraph (1)—

16 (A) in subparagraph (B), by adding at the end the following new sentence: “The  
17 appropriate Federal official may waive the non-Federal share requirements of the  
18 preceding sentence if such official determines no reasonable means are available  
19 through which the recipient of the Federal share can meet the non-Federal share  
20 requirement.”; and

21 (B) by adding at the end the following:

22 “(D) CONTRACT, COOPERATIVE AGREEMENT, AND GRANT AUTHORITY.—The  
23 appropriate Federal official may enter into contracts, cooperative agreements, and  
24 grants with States, Indian Tribes, Tribal organizations, Native Hawaiian organizations,  
25 local governments, or other entities to pay for or reimburse costs incurred by such  
26 entities for the purposes of supporting the determination of, and assessing the  
27 environmental, economic, social, subsistence use, and public health effects of, a  
28 harmful algal bloom or hypoxia event of national significance.”;

29 (2) in paragraph (2)—

30 (A) in subparagraph (A), by inserting “a leadership official of an affected Indian  
31 Tribe, the executive official of the District of Columbia, or the executive official of an  
32 affected territory or possession of the United States,” after “State,”; and

33 (B) in subparagraph (B), by striking “consider” and all that follows through  
34 “boundary.” and inserting “consider factors such as—

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

38 “(I) data on shellfish or water quality obtained through sampling  
39 programs, including baseline data, and regulatory or advisory thresholds

1 established to explain management actions related to the event;

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

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

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

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

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

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

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

17 “(I) increases in public health expenditures;

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

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

23 “(IV) impacts to subsistence resources, including nutritional, cultural, and  
24 economic effects on subsistence communities;

25 “(iii) the relative magnitude of those impacts in relation to past occurrences of  
26 harmful algal bloom or hypoxia events that occur on a recurrent or annual basis;  
27 and

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

31 (3) in paragraph (3), by adding at the end the following:

32 “(D) INDIAN TRIBE.—The term ‘Indian Tribe’ has the meaning given that term in  
33 section 4 of the Indian Self-Determination and Education Assistance Act (25 U.S.C.  
34 5304).

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

39 “(F) TRIBAL ORGANIZATION.—The term ‘Tribal organization’ has the meaning given

1 that term in section 4 of the Indian Self-Determination and Education Assistance Act  
2 (25 U.S.C. 5304).”; and

3 (4) by adding at the end the following:

4 “(4) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to  
5 carry out this subsection \$2,000,000 for each of fiscal years 2025 through 2029, to remain  
6 available until expended.”.

7 (b) Protect Families From Toxic Algal Blooms.—Section 128 of the Water Resources  
8 Development Act of 2020 (33 U.S.C. 610 note; division AA of Public Law 116–260) is  
9 amended—

10 (1) by redesignating subsection (e) as subsection (f); and

11 (2) by inserting after subsection (d) the following:

12 “(e) Harmful Algal Bloom Technologies.—In carrying out the demonstration program under  
13 subsection (a), the Secretary may enter into agreements with water and irrigation districts located  
14 in the focus areas described in subsections (c) and (d) for the use or purchase of any new  
15 technologies developed under the demonstration program to expedite the prevention or removal  
16 of harmful algal blooms in those areas.”.