## AMENDMENT IN THE NATURE OF A SUBSTITUTE TO H.R. 6235

## OFFERED BY MR. GRIJALVA OF ARIZONA

Strike all after the enacting clause and insert the following:

## SECTION 1. SHORT TITLE. This Act may be cited as the "Harmful Algal Bloom 2 3 and Hypoxia Research and Control Amendments Act of 2023". SEC. 2. AMENDMENTS TO HARMFUL ALGAL BLOOM AND 6 HYPOXIA RESEARCH AND CONTROL ACT OF 7 1998. 8 (a) Assessments.—Section 603 of the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998 (33 U.S.C. 4001) is amended— 10 11 (1) in subsection (a)— 12 (A) by renumbering paragraphs (13) and 13 (14) as (14) and (15); and 14 (B) by inserting after paragraph (12) the 15 following new paragraph: 16 "(13) the Department of Energy;";

1	(2) by striking subsections (b), (c), (d), (e), (h),
2	and (i) and redesignating subsections (f) and (g) as
3	subsections (b) and (c), respectively;
4	(3) in subsection (b), as so redesignated—
5	(A) in paragraph (1), by striking "coastal
6	waters including the Great Lakes" and insert-
7	ing "marine, estuarine, and freshwater sys-
8	tems"; and
9	(B) in paragraph (2)—
10	(i) by amending subparagraph (A) to
11	read as follows:
12	"(A) examine the causes and ecological con-
13	sequences of hypoxia on marine and aquatic species
14	in their natural environments, and socio-cultural or
15	economic costs of hypoxia, including impacts on food
16	safety and security;";
17	(ii) by redesignating subparagraphs
18	(B) through (D) as subparagraphs (D)
19	through (F), respectively;
20	(iii) by inserting after subparagraph
21	(A) the following new subparagraphs:
22	"(B) examine the effect of other environmental
23	stressors on hypoxia;

1	"(C) evaluate alternatives for reducing, miti-
2	gating, and controlling hypoxia and its environ-
3	mental impacts;";
4	(iv) in subparagraph (D), as so redes-
5	ignated, by inserting ", social," after "eco-
6	logical"; and
7	(v) in subparagraph (E), as so redes-
8	ignated, by striking "hypoxia modeling and
9	monitoring data" and inserting "hypoxia
10	modeling, forecasting, and monitoring and
11	observation data"; and
12	(4) in subsection (c), as so redesignated, to
13	read as follows:
14	"(c) Action Strategy and Scientific Assess-
15	MENT FOR MARINE AND FRESHWATER HARMFUL ALGAL
16	Blooms.—
17	"(1) Not less often than once every 5 years, the
18	Task Force shall complete and submit to Congress
19	an action strategy, including a scientific assessment,
20	of harmful algal blooms in the United States (in this
21	Act referred to as the 'Action Strategy'). Each such
22	Action Strategy, including scientific assessment,
23	shall examine both marine and freshwater harmful
24	algal blooms, including those in the Great Lakes and
25	upper reaches of estuaries, those in freshwater lakes

1	and rivers, and those that originate in freshwater
2	lakes or rivers and migrate to coastal waters.
3	"(2) Each Action Strategy under this sub-
4	section shall—
5	"(A) examine the causes and ecological
6	consequences, and the socio-cultural or eco-
7	nomic costs, including impacts food safety and
8	security, of harmful algal blooms;
9	"(B) examine the effect of other environ-
10	mental stressors on harmful algal blooms;
11	"(C) examine potential methods to prevent,
12	control, and mitigate harmful algal blooms and
13	the potential ecological, social, cultural, and
14	economic costs and benefits of such methods;
15	"(D) identify priorities for research needed
16	to advance techniques and technologies to de-
17	tect, predict, monitor, respond to, and minimize
18	the occurrence, duration, and severity of harm-
19	ful algal blooms, including recommendations to
20	eliminate significant gaps in harmful algal
21	bloom forecasting, monitoring, and observation
22	data;
23	"(E) evaluate progress made by, and the
24	needs of, Task Force activities and actions to

1	prevent, control, and mitigate harmful algal
2	blooms;
3	"(F) identify ways to improve coordination
4	and prevent unnecessary duplication of effort
5	among Federal departments and agencies with
6	respect to research on harmful algal blooms;
7	and
8	"(G) include regional chapters relating to
9	the requirements described in this paragraph in
10	order to highlight geographically and eco-
11	logically diverse locations with significant eco-
12	logical, social, cultural, and economic impacts
13	from harmful algal blooms.".
14	(b) Consultations.—Section 102 of the Harmful
15	Algal Bloom and Hypoxia Amendments Act of 2004 (33
16	U.S.C. 4001a) is amended—
17	(1) by striking "the coastal";
18	(2) by inserting "and" after "Indian tribes,";
19	(3) by inserting "and" after "local govern-
20	ments,"; and
21	(4) by striking "with expertise in coastal zone
22	science and management" and inserting "with rel-
23	evant expertise".
24	(c) National Harmful Algal Bloom and Hy-
25	POXIA PROGRAM.—Section 603A of the Harmful Algal

1	Bloom and Hypoxia Research and Control Act of 1998
2	(33 U.S.C. 4002) is amended—
3	(1) in subsection (a)—
4	(A) in paragraph (1)—
5	(i) by striking "predicting," and in-
6	serting "monitoring, observing, fore-
7	casting,"; and
8	(ii) by striking "and" after the semi-
9	colon;
10	(B) in paragraph (2)—
11	(i) by striking "comprehensive re-
12	search plan and action strategy under sec-
13	tion 603B" and inserting "the Action
14	Strategy, including scientific assessment,
15	under section 603(c)"; and
16	(ii) by striking the period and insert-
17	ing "; and; and
18	(C) by adding at the end the following new
19	paragraph:
20	"(3) the scientific assessment under section
21	603(b).";
22	(2) in subsection (c)—
23	(A) in paragraph (3), by striking "ocean
24	and Great Lakes" and inserting "marine, estu-
25	arine, and freshwater systems"; and

1	(B) in paragraph (5), by inserting "while
2	recognizing each agency is acting under its own
3	independent mission and authority" before the
4	semicolon;
5	(3) in subsection (d), by striking "Except as
6	provided in subsection (h), the" and inserting
7	"The";
8	(4) in subsection (e)—
9	(A) by amending paragraph (2) to read as
10	follows:
11	"(2) examine, in collaboration with State and
12	local entities and Indian Tribes, including island
13	communities, low-population rural communities, In-
14	digenous communities, subsistence communities,
15	fisheries, and recreation industries that are most de-
16	pendent on coastal and water resources that may be
17	impacted by marine and freshwater harmful algal
18	blooms and hypoxia, the causes, ecological con-
19	sequences, cultural impacts, and social and economic
20	costs of harmful algal blooms and hypoxia;";
21	(B) by striking paragraph (3);
22	(C) by redesignating paragraphs (4), (5),
23	and (6) as paragraphs (3), (4), and (5), respec-
24	tively;
25	(D) in paragraph (3), as so redesignated—

1	(i) by striking "to, regional" and in-
2	serting "to regional"; and
3	(ii) by striking "agencies" and insert-
4	ing "entities, and regional coastal observ-
5	ing systems (as such term is defined in
6	section 12330(6) of the Integrated Coastal
7	and Ocean Observation System Act of
8	2009 (33 U.S.C. 3602(6)))";
9	(E) in paragraph (5), as so redesignated,
10	by inserting "and communities" after "eco-
11	systems";
12	(F) by inserting after paragraph (5) the
13	following new paragraph:
14	"(6) support sustained observations, including
15	through peer-reviewed, merit-based, competitive
16	grant funding, to provide State and local entities,
17	Indian Tribes, and others access to real-time or near
18	real-time observation data for decision-making to
19	protect human and ecological health and local econo-
20	mies;";
21	(G) in paragraph (8), by striking "State
22	and local" and inserting "State, local, and Trib-
23	al"; and
24	(H) in paragraph (9)(A), by striking "trib-
25	al" and inserting "Tribal";

1	(5) by amending subsections (f) and (g) to read
2	as follows:
3	"(f) Cooperative Efforts.—The Under Secretary
4	shall work cooperatively with and avoid duplication of ef-
5	fort of other agencies on the Task Force, and with and
6	of States, Indian tribes, and nongovernmental organiza-
7	tions concerned with marine and freshwater issues, and
8	shall coordinate harmful algal bloom and hypoxia and re-
9	lated activities and research.
10	"(g) Freshwater and Estuarine Program Du-
11	TIES.—
12	"(1) In General.—The Administrator shall—
13	"(A) with respect to freshwater aspects of
14	the Program, in coordination with the Task
15	Force, carry out the duties under subsection (e)
16	through the activities required under section
17	603C; and
18	"(B) with respect to estuarine aspects of
19	the Program, coordinate with the Under Sec-
20	retary to carry out activities required under this
21	section.
22	"(2) Nonduplication.—The Administrator
23	shall ensure that activities carried out under this
24	subsection focus on new approaches to addressing
25	freshwater harmful algal blooms and are not dupli-

1	cative of existing research and development pro-
2	grams authorized under this Act or any other law."
3	and
4	(6) by amending subsection (h) to read as fol-
5	lows:
6	"(h) Anti-Deficiency Act Applied to Harmful
7	Algal Bloom Services.—Any services by an officer or
8	employee under this title relating to the immediate devel-
9	opment and dissemination of the Harmful Algal Bloom
10	Operational Forecast System of the National Centers for
11	Coastal Ocean Science and the National Oceanic and At-
12	mospheric Administration shall be considered, for pur-
13	poses of section 1342 of title 31, United States Code, serv-
14	ices for emergencies involving the safety of human life or
15	the protection of property. Such consideration shall only
16	apply to areas with active harmful algal blooms during any
17	lapse in appropriations beginning on or after the date of
18	the enactment of this subsection.".
19	(d) National Oceanic and Atmospheric Admin-
20	ISTRATION ACTIVITIES.—
21	(1) In General.—Section 603B of the Harm-
22	ful Algal Bloom and Hypoxia Research and Control
23	Act of 1998 (33 U.S.C. 4003) is amended to read
24	as follows:

1	"SEC. 603B. NATIONAL OCEANIC AND ATMOSPHERIC AD-
2	MINISTRATION ACTIVITIES.
3	"(a) In General.—The Under Secretary shall—
4	"(1) carry out marine, coastal, and Great
5	Lakes harmful algal bloom and hypoxia events re-
6	sponse activities;
7	"(2) develop and enhance operational harmful
8	algal bloom observing and forecasting programs, in-
9	cluding operational observations and forecasting,
10	monitoring, modeling, data management, and infor-
11	mation dissemination;
12	"(3) maintain and enhance peer-reviewed,
13	merit-based, competitive grant funding relating to
14	harmful algal blooms and hypoxia to—
15	"(A) maintain and enhance baseline moni-
16	toring programs established by the Program;
17	"(B) support the projects maintained and
18	established by the Program;
19	"(C) address the research and manage-
20	ment needs and priorities identified in the Ac-
21	tion Strategy under section 603(c);
22	"(D) accelerate the utilization of effective
23	methods of intervention and mitigation to re-
24	duce the frequency, severity, and impacts of
25	harmful algal bloom and hypoxia events;

1	"(E) identify opportunities to improve
2	monitoring of harmful algal bloom and hypoxia,
3	with a particular focus on coastal waters that
4	may affect fisheries, public health, or subsist-
5	ence harvest;
6	"(F) examine the effects of other environ-
7	mental stressors on harmful algal blooms and
8	hypoxia;
9	"(G) assess the effects of multiple environ-
10	mental stressors on living marine resources and
11	coastal ecosystems; and
12	"(H) evaluate adaptation and mitigation
13	strategies to address the impacts of harmful
14	algal blooms and hypoxia;
15	"(4) enhance communication and coordination
16	among Federal agencies carrying out marine and
17	freshwater harmful algal bloom and hypoxia activi-
18	ties and research;
19	"(5) to the greatest extent practicable, leverage
20	existing resources and expertise available from local
21	research universities and institutions; and
22	"(6) use cost effective methods in carrying out
23	this section.
24	"(b) Integrated Coastal and Ocean Observa-
25	TION SYSTEM.—The collection of monitoring and observ-

1	ing data under this section shall comply with all data
2	standards and protocols developed pursuant to the Inte-
3	grated Coastal and Ocean Observation System Act of
4	$2009\ (33\ \mathrm{U.S.C.}\ 3601$ et seq.). Such data shall be made
5	available through the system established under that Act.".
6	(2) CLERICAL AMENDMENT.—The table of con-
7	tents in section 2 of the Coast Guard Authorization
8	Act of 1998 (Public Law 105–383) is amended by
9	amending the item relating to section 603B to read
10	as follows:
	"Sec. 603B. National Oceanic and Atmospheric Administration activities.".
11	(e) Environmental Protection Agency Activi-
12	TIES.—
13	(1) IN GENERAL.—The Harmful Algal Bloom
14	and Hypoxia Research and Control Act of 1998 (33
15	U.S.C. 4001 et seq.) is amended by inserting after
16	section 603B of that Act (33 U.S.C. 4003), as
17	amended by subsection (d), the following new sec-
18	tion:
19	"SEC. 603C. ENVIRONMENTAL PROTECTION AGENCY AC-
20	TIVITIES.
21	"The Administrator shall—
22	"(1) carry out research on the ecology and
23	human health impacts of freshwater harmful algal
24	blooms:

1	"(2) develop and maintain forecasting and mon-
2	itoring of, and event response to, freshwater harmful
3	algal blooms in lakes, reservoirs, rivers, and estu-
4	aries (including tributaries thereof);
5	"(3) enhance communication and coordination
6	among Federal agencies carrying out freshwater
7	harmful algal bloom and hypoxia activities and re-
8	search;
9	"(4) to the greatest extent practicable, leverage
10	existing resources and expertise available from local
11	research universities and institutions; and
12	"(5) use cost effective methods in carrying out
13	this section.".
14	(2) CLERICAL AMENDMENT.—The table of con-
15	tents in section 2 of the Coast Guard Authorization
16	Act of 1998 (Public Law 105–383) is amended by
17	inserting after the item relating to section 603B, as
18	amended by subsection (e), the following new item:
	"Sec. 603C. Environmental Protection Agency activities.".
19	(f) National Harmful Algal Bloom and Hy-
20	POXIA OBSERVING NETWORK.—
21	(1) In general.—Section 606 of the Harmful
22	Algal Bloom and Hypoxia Research and Control Act
23	of 1998 (33 U.S.C. 4005) is amended to read as fol-
24	lows:

1	"SEC. 606. NATIONAL HARMFUL ALGAL BLOOM OBSERVING
2	NETWORK.
3	"(a) In General.—The Under Secretary, acting
4	through the National Centers for Coastal Ocean Science
5	(referred to in this section as 'NCCOS') and the Inte-
6	grated Ocean Observing System (referred to in this section
7	as 'IOOS') of the National Oceanic and Atmospheric Ad-
8	ministration, shall integrate Federal, State, regional, and
9	local observing capabilities to establish a national network
10	of harmful algal bloom observing systems for the moni-
11	toring, detection, and forecasting of harmful algal blooms
12	by leveraging the capacity of IOOS regional associations,
13	including through the incorporation of emerging tech-
14	nologies and new data integration methods, such as artifi-
15	cial intelligence.
16	"(b) Coordination.— In carrying out subsection
17	(a), the IOOS Program Office shall—
18	"(1) coordinate with NCCOS regarding obser-
19	vations, data integration, and information dissemi-
20	nation; and
21	"(2) establish a Harmful Algal Bloom Data As-
22	sembly Center to integrate, disseminate, and provide
23	a central architecture to support ecological fore-
24	casting.".
25	(2) CLERICAL AMENDMENT.—The table of con-
26	tents in section 2 of the Coast Guard Authorization

1	Act of 1998 (Public Law 105–383) is amended by
2	amending the item relating to section 606 to read as
3	follows:
	"Sec. 606. National harmful algal bloom observing network.".
4	(g) Definitions.—Section 609 of the Harmful Algal
5	Bloom and Hypoxia Research and Control Act of 1998
6	(33 U.S.C. 4008) is amended—
7	(1) in paragraph (1), by striking "means the
8	comprehensive research plan and action strategy es-
9	tablished under section 603B" and inserting "means
10	the action strategy, including scientific assessment,
11	for marine and freshwater harmful algal blooms es-
12	tablished under section 603(c)";
13	(2) in paragraph (3), to read as follows:
14	"(3) Appropriate federal official.—The
15	term 'appropriate Federal official' means—
16	"(A) in the case of marine systems or
17	Great Lakes hypoxia or harmful algal bloom
18	event, including those in estuarine areas, the
19	Under Secretary; and
20	"(B) in the case of a freshwater hypoxia or
21	harmful algal bloom event, the Administrator,
22	in consultation with the Under Secretary.";
23	(3) by striking paragraph (9);

1	(4) by redesignating paragraphs $(4)$ , $(5)$ , $(6)$ ,
2	(7), and (8) as paragraphs (6), (7), (8), (10), and
3	(11);
4	(5) by inserting after paragraph (3) the fol-
5	lowing new paragraphs:
6	"(4) Harmful algal bloom; Harmful
7	ALGAL BLOOM AND HYPOXIA EVENT.—
8	"(A) HARMFUL ALGAL BLOOM.—The term
9	'harmful algal bloom' means marine or fresh-
10	water algae or macroalgae, including
11	Sargassum, that proliferate to high concentra-
12	tions, resulting in nuisance conditions or harm-
13	ful impacts on marine and freshwater eco-
14	systems, communities, or human health through
15	the production of toxic compounds or other bio-
16	logical, chemical, or physical impacts of the
17	algae outbreak.
18	"(B) HARMFUL ALGAL BLOOM AND HY-
19	POXIA EVENT.—The term 'harmful algal bloom
20	and hypoxia event' means the occurrence of a
21	harmful algal bloom or hypoxia as a result of
22	a natural, anthropogenic, or undetermined
23	cause.
24	"(5) Harmful algal bloom or hypoxia
25	EVENT OF SIGNIFICANCE.—The term 'harmful algal

1	bloom or hypoxia event of significance' means a
2	harmful algal bloom or hypoxia event that has had
3	or will likely have significant detrimental environ-
4	mental, economic, social, subsistence use, or public
5	health impacts.";
6	(6) in paragraph (6), as so redesignated—
7	(A) by striking "aquatic" and inserting
8	"marine or freshwater"; and
9	(B) by striking "resident" and inserting
10	"marine or freshwater"; and
11	(7) by inserting after paragraph (8), as so re-
12	designated, the following new paragraph:
13	"(9) Subsistence use.—The term 'subsist-
14	ence use' means the customary and traditional use
15	of fish, wildlife, or other freshwater, coastal, or ma-
16	rine resources by any individual or community to
17	meet personal or family needs, including essential
18	economic, nutritional, or cultural applications.".
19	(h) AUTHORIZATION OF APPROPRIATIONS.—Section
20	610 of the Harmful Algal Bloom and Hypoxia Research
21	and Control Act of 1998 (33 U.S.C. 4009) is amended—
22	(1) in subsection (a), to read as follows:
23	"(a) In General.—There is authorized to be appro-
24	priated to the Under Secretary to carry out this title

\$27,500,000 for each of fiscal years 2024 through 2028."; and 2 3 (2) by adding at the end the following new sub-4 section: 5 "(c) Transfer Authority.—The Under Secretary is authorized to make a direct non-expenditure transfer of funds authorized to be appropriated pursuant to sub-8 section (a) 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.". 10 11 (i) National Level Incubator Program; Harm-FUL ALGAL BLOOM OR HYPOXIA EVENT OF SIGNIFI-12 13 CANCE.— 14 (1) In General.—The Harmful Algal Bloom 15 and Hypoxia Research and Control Act of 1998 (33) 16 U.S.C. 4001 et seq.) is amended by adding at the 17 end the following new section: 18 "SEC. 611. NATIONAL LEVEL INCUBATOR PROGRAM. 19 "(a) IN GENERAL.—The Under Secretary, in collaboration with research universities and institutions, shall es-20 21 tablish a national level incubator program to increase the 22 number of available control strategies and technologies re-23 lating to harmful algal blooms. Such incubator shall establish a framework for preliminary assessments of novel

harmful algal bloom prevention, mitigation, and control

1	technologies in order to determine the potential for effec-
2	tiveness and scalability.
3	"(b) Operation.—The incubator established under
4	subsection (a) shall provide merit-based funding for harm-
5	ful algal bloom control strategies and technologies that
6	eliminate or reduce through biological, chemical, or phys-
7	ical means the levels of harmful algae and associated tox-
8	ins.
9	"(c) Database.—The incubator established under
10	subsection (a) shall include a database to catalog the li-
11	censing and permitting requirements, economic costs, fea-
12	sibility, effectiveness, and scalability of both novel and es-
13	tablished prevention, control, and mitigation measures.
14	"(d) Prioritization.—In carrying out the incubator
15	established under subsection (a), the Under Secretary
16	shall prioritize proposed activities that would, to the max-
17	imum extent practicable—
18	"(1) protect key habitats for fish and wildlife;
19	"(2) maintain biodiversity;
20	"(3) protect public health;
21	"(4) protect coastal resources of national, his-
22	torical, and cultural significance; or
23	"(5) seek to partially or fully benefit commu-
24	nities of color, low-income communities, Indian

1	Tribes or Indigenous communities, and rural com-
2	munities.".
3	(2) CLERICAL AMENDMENT.—The table of con-
4	tents in section 2 of the Coast Guard Authorization
5	Act of 1998 (Public Law 105–383) is amended by
6	inserting after the item relating to section 610 the
7	following new item:
	"Sec. 611. National level incubator program.".
8	(j) Harmful Algal Bloom or Hypoxia Event of
9	SIGNIFICANCE.—Section 9(g) of the National Integrated
10	Drought Information System Reauthorization Act of 2018
11	(33 U.S.C. 4010(g)) is amended—
12	(1) in paragraph (1)—
13	(A) in subparagraph (B), by adding at the
14	end the following new sentence: "The appro-
15	priate Federal official may waive the non-Fed-
16	eral share requirements of this subsection if
17	such official determines no reasonable means
18	are available through which the recipient of the
19	Federal share can meet the non-Federal share
20	requirement."; and
21	(B) by adding at the end the following new
22	subparagraph:
23	"(D) Contract, grant, and coopera-
24	TIVE AGREEMENT AUTHORITY.—The Under
25	Secretary of Commerce for Oceans and Atmos-

1	phere may enter into agreements and grants
2	with States, Indian Tribes, local governments,
3	or other entities to pay for or reimburse costs
4	incurred for the purposes of supporting the de-
5	termination of and assessing the environmental,
6	economic, social, subsistence use, and public
7	health effects of a harmful algal bloom or hy-
8	poxia event of significance.";
9	(2) in paragraph (2)(A), by inserting ", leader-
10	ship official of an affected Indian Tribe, the execu-
11	tive official of the District of Columbia, or a terri-
12	tory or possession of the United States, including
13	Puerto Rico, the Virgin Islands, Guam, the Com-
14	monwealth of the Northern Mariana Islands, the
15	Trust Territories of the Pacific Islands, and Amer-
16	ican Samoa, if affected," after "State"; and
17	(3) by adding at the end the following new
18	paragraph:
19	"(4) Funding Authority.—To carry out this
20	subsection, notwithstanding any other provision of
21	law, there is authorized to be appropriated from the
22	amounts made available to the Under Secretary of
23	Commerce for Oceans and Atmosphere \$2,000,000,
24	to remain available until expended.".

1	(k) Protect Families From Toxic Algal
2	Blooms.—Section 128 of the Water Resources Develop-
3	ment Act of 2020 (33 U.S.C. 610 note) is amended—
4	(1) by redesignating subsection (e) as sub-
5	section (f); and
6	(2) by inserting after subsection (d) the fol-
7	lowing new subsection:
8	"(e) Harmful Algal Bloom Technologies.—In
9	carrying out the demonstration program under subsection
10	(a), the Secretary may enter into agreements with water
11	and irrigation districts located in the focus areas described
12	in subsections (c) and (d) for the use or sale of any new
13	technologies developed under the program to expedite the
14	removal of harmful algal blooms in such areas.".

