

AMENDMENT TO RULES COMMITTEE PRINT 117-

31

OFFERED BY MS. BONAMICI OF OREGON

Page 641, after line 22, insert the following:

1 **Subtitle G—Coastal and Ocean**
2 **Acidification Stressors and**
3 **Threats Research**

4 **SECTION 10671. SHORT TITLE.**

5 this subtitle may be cited as the “Coastal and Ocean
6 Acidification Stressors and Threats Research Act of
7 2021” or the “COAST Research Act of 2021”.

8 **SEC. 10672. PURPOSES.**

9 (a) IN GENERAL.—Section 12402(a) of the Federal
10 Ocean Acidification Research and Monitoring Act of 2009
11 (33 U.S.C. 3701(a)) is amended—

12 (1) in paragraph (1)—

13 (A) in the matter preceding subparagraph
14 (A), by striking “development and coordina-
15 tion” and inserting “coordination and imple-
16 mentation”;

17 (B) in subparagraph (A), by striking
18 “acidification on marine organisms” and insert-

1 ing “acidification and coastal acidification on
2 marine organisms”; and

3 (C) in subparagraph (B), by striking “es-
4 tablish” and all that follows through the semi-
5 colon and inserting “maintain and advise an
6 interagency research, monitoring, and public
7 outreach program on ocean acidification and
8 coastal acidification;”;

9 (2) in paragraph (2), by striking “establis-
10 ment” and inserting “maintenance”;

11 (3) in paragraph (3), by inserting “and coastal
12 acidification” after “ocean acidification”; and

13 (4) in paragraph (4), by inserting “and coastal
14 acidification that take into account other environ-
15 mental and anthropogenic stressors” after “ocean
16 acidification”.

17 (b) TECHNICAL AND CONFORMING AMENDMENT.—
18 Section 12402 of the Federal Ocean Acidification Re-
19 search and Monitoring Act of 2009 (33 U.S.C. 3701(a))
20 is amended by striking “(a) PURPOSES.—”.

21 **SEC. 10673. DEFINITIONS.**

22 Section 12403 of the Federal Ocean Acidification Re-
23 search and Monitoring Act of 2009 (33 U.S.C. 3702) is
24 amended—

1 (1) in paragraph (1), by striking “of the
2 Earth’s oceans” and all that follows before the pe-
3 riod at the end and inserting “and changes in the
4 water chemistry of the Earth’s oceans, coastal estu-
5 aries, and waterways caused by carbon dioxide from
6 the atmosphere and the breakdown of organic mat-
7 ter”;

8 (2) in paragraph (3), by striking “Joint Sub-
9 committee on Ocean Science and Technology of the
10 National Science and Technology Council” and in-
11 serting “National Science and Technology Council
12 Subcommittee on Ocean Science and Technology”;

13 (3) by redesignating paragraphs (1), (2), and
14 (3) as paragraphs (2), (3), and (4), respectively;

15 (4) by inserting before paragraph (2), as so re-
16 designated, the following new paragraph:

17 “(1) COASTAL ACIDIFICATION.—The term
18 ‘coastal acidification’ means the combined decrease
19 in pH and changes in the water chemistry of coastal
20 oceans, estuaries, and other bodies of water from
21 chemical inputs (including carbon dioxide from the
22 atmosphere), freshwater inputs, and excess nutrient
23 run-off from land and coastal atmospheric pollution
24 that result in processes that release carbon dioxide,

1 acidic nitrogen, and sulfur compounds as byproducts
2 which end up in coastal waters.”; and

3 (5) by adding at the end the following new
4 paragraph:

5 “(5) STATE.—The term ‘State’ means each
6 State of the United States, the District of Columbia,
7 the Commonwealth of Puerto Rico, American
8 Samoa, Guam, the Commonwealth of the Northern
9 Mariana Islands, the Virgin Islands of the United
10 States, and any other territory or possession of the
11 United States.”.

12 **SEC. 10674. INTERAGENCY WORKING GROUP.**

13 Section 12404 of the Federal Ocean Acidification Re-
14 search and Monitoring Act of 2009 (33 U.S.C. 3703) is
15 amended—

16 (1) in the heading, by striking “**SUB-**
17 **COMMITTEE**” and inserting “**WORKING GROUP**”;

18 (2) in subsection (a)—

19 (A) in paragraph (1), by striking “Joint
20 Subcommittee on Ocean Science and Tech-
21 nology of the National Science and Technology
22 Council shall coordinate Federal activities on
23 ocean acidification and establish” and insert
24 “Subcommittee shall establish and maintain”;

1 (B) in paragraph (2), by striking “Wildlife
2 Service,” and inserting “Wildlife Service, the
3 Bureau of Ocean Energy Management, the En-
4 vironmental Protection Agency, the Department
5 of Agriculture, the Department of State, the
6 Department of Energy, the Department of the
7 Navy, the National Park Service, the Bureau of
8 Indian Affairs, the National Institute of Stand-
9 ards and Technology, the Smithsonian Institu-
10 tion,”; and

11 (C) in paragraph (3), in the heading, by
12 striking “CHAIRMAN” and inserting “CHAIR”;
13 (3) in subsection (b)—

14 (A) in paragraph (1), by inserting “, in-
15 cluding the efforts of the National Oceanic and
16 Atmospheric Administration to facilitate such
17 implementation” after “of the plan”;

18 (B) in paragraph (2)—

19 (i) in subparagraph (A), by inserting
20 “and coastal acidification” after “ocean
21 acidification”; and

22 (ii) in subparagraph (B), by inserting
23 “and coastal acidification” after “ocean
24 acidification”;

1 (C) in paragraph (4), by striking “; and”
2 and inserting a semicolon;

3 (D) in paragraph (5)—

4 (i) by striking “developed” and insert-
5 ing “and coastal acidification developed”;
6 and

7 (ii) by striking the period at the end
8 and inserting “and coastal acidification;
9 and”; and

10 (E) by adding at the end the following new
11 paragraph:

12 “(6) ensure that each of the Federal agencies
13 represented on the interagency working group—

14 “(A) participates in the Ocean Acidifica-
15 tion Information Exchange established under
16 paragraph (5); and

17 “(B) delivers data and information to sup-
18 port the data archive system established under
19 section 12406(d).”;

20 (4) in subsection (c), in paragraph (2)—

21 (A) by inserting “, and to the Office of
22 Management and Budget,” after “House of
23 Representatives”; and

1 (B) in subparagraph (B), by striking “the
2 interagency research” and inserting “inter-
3 agency strategic research”;

4 (5) by redesignating subsection (c) as sub-
5 section (d); and

6 (6) by inserting after subsection (b) the fol-
7 lowing:

8 “(c) ADVISORY BOARD.—

9 “(1) ESTABLISHMENT.—The Chair of the Sub-
10 committee shall establish an Ocean Acidification Ad-
11 visory Board.

12 “(2) DUTIES.—The Advisory Board shall—

13 “(A) not later than 180 days before the
14 Subcommittee submits the most recent report
15 under subsection (d)(2)—

16 “(i) review such report;

17 “(ii) submit an analysis of such report
18 to the Subcommittee for consideration in
19 the final report submitted under subsection
20 (d)(2); and

21 “(iii) concurrently with the Sub-
22 committee’s final submission of the report
23 under subsection (d)(2), the Advisory
24 Board shall submit a copy of the analysis
25 provided to the Subcommittee to the Com-

1 committee on Commerce, Science, and Trans-
2 portation of the Senate, the Committee on
3 Science, Space, and Technology of the
4 House of Representatives, and the Com-
5 mittee on Natural Resources of the House
6 of Representatives;

7 “(B) not later than 180 days before the
8 Subcommittee submits the most recent strategic
9 research plan under subsection (d)(3) to Con-
10 gress—

11 “(i) review such plan;

12 “(ii) submit an analysis of such plan
13 and the implementation thereof to the Sub-
14 committee for consideration in the final
15 strategic research plan submitted under
16 subsection (d)(3); and

17 “(iii) concurrently with the Sub-
18 committee’s final submission of the stra-
19 tegic research plan under subsection
20 (d)(3), the Advisory Board shall submit a
21 copy of the analysis provided to the Sub-
22 committee to the Committee on Commerce,
23 Science, and Transportation of the Senate,
24 the Committee on Science, Space, and
25 Technology of the House of Representa-

1 tives, and the Committee on Natural Re-
2 sources of the House of Representatives;

3 “(C) provide ongoing advice to the Sub-
4 committee and the interagency working group
5 on matters related to Federal activities on
6 ocean acidification and coastal acidification;

7 “(D) advise the Subcommittee and the
8 interagency working group on—

9 “(i) efforts to coordinate research and
10 monitoring activities related to ocean acidi-
11 fication and coastal acidification; and

12 “(ii) the best practices for the stand-
13 ards developed for data archiving under
14 section 12406(e);

15 “(E) publish in the Federal Register a
16 charter;

17 “(F) provide the Library of Congress
18 with—

19 “(i) the charter described in subpara-
20 graph (E);

21 “(ii) any schedules and minutes for
22 meetings of the Advisory Board;

23 “(iii) any documents that are ap-
24 proved by the Advisory Board; and

1 “(iv) any reports and analysis pre-
2 pared by the Advisory Board; and

3 “(G) establish a publicly accessible web
4 page on the website of the National Oceanic
5 and Atmospheric Administration, that contains
6 the information described in clauses (i) through
7 (iv) of subparagraph (F).

8 “(3) MEMBERSHIP.—The Advisory Board shall
9 consist of 24 members as follows:

10 “(A) Two representatives of the shellfish
11 and crab industry.

12 “(B) One representative of the finfish in-
13 dustry.

14 “(C) One representative of seafood proc-
15 essors.

16 “(D) Three representatives from academia,
17 including both natural and social sciences.

18 “(E) One representative of recreational
19 fishing.

20 “(F) One representative of a relevant non-
21 governmental organization.

22 “(G) Six representatives from relevant
23 State, local, and Tribal governments.

24 “(H) One representative from the Alaska
25 Ocean Acidification Network or a subsequent

1 entity that represents the same geographical re-
2 gion and has a similar purpose.

3 “(I) One representative from the California
4 Current Acidification Network or a subsequent
5 entity that represents the same geographical re-
6 gion and has a similar purpose.

7 “(J) One representative from the North-
8 east Coastal Acidification Network or a subse-
9 quent entity that represents the same geo-
10 graphical region and has a similar purpose.

11 “(K) One representative from the South-
12 east Coastal Acidification Network or a subse-
13 quent entity that represents the same geo-
14 graphical region and has a similar purpose.

15 “(L) One representative from the Gulf of
16 Mexico Coastal Acidification Network or a sub-
17 sequent entity that represents the same geo-
18 graphical region and has a similar purpose.

19 “(M) One representative from the Mid-At-
20 lantic Coastal Acidification Network or a subse-
21 quent entity that represents the same geo-
22 graphical region and has a similar purpose.

23 “(N) One representative from the Pacific
24 Islands Ocean Observing System or a subse-
25 quent entity that represents the island terri-

1 tories and possessions of the United States in
2 the Pacific Ocean, and the State of Hawaii and
3 has a similar purpose.

4 “(O) One representative from the Carib-
5 bean Regional Association for Coastal Ocean
6 Observing or a subsequent entity that rep-
7 resents Puerto Rico and the United States Vir-
8 gin Islands and has a similar purpose.

9 “(P) One representative from the National
10 Oceanic and Atmospheric Administration shall
11 serve as an ex-officio member of the Advisory
12 Board without a vote.

13 “(4) APPOINTMENT OF MEMBERS.—The Chair
14 of the Subcommittee shall—

15 “(A) appoint members to the Advisory
16 Board (taking into account the geographical in-
17 terests of each individual to be appointed as a
18 member of the Advisory Board to ensure that
19 an appropriate balance of geographical interests
20 are represented by the members of the Advisory
21 Board) who—

22 “(i) represent the interest group for
23 which each seat is designated;

24 “(ii) demonstrate expertise on ocean
25 acidification or coastal acidification and its

1 scientific, economic, industry, cultural, and
2 community impacts; and

3 “(iii) have a record of distinguished
4 service with respect to ocean acidification
5 or coastal acidification, and such impacts;

6 “(B) give consideration to nominations and
7 recommendations from the members of the
8 interagency working group and the public for
9 such appointments; and

10 “(C) ensure that an appropriate balance of
11 scientific, industry, and geographical interests
12 are represented by the members of the Advisory
13 Board.

14 “(5) TERM OF MEMBERSHIP.—Each member of
15 the Advisory Board—

16 “(A) shall be appointed for a 5-year term;
17 and

18 “(B) may be appointed to more than one
19 term.

20 “(6) CHAIR.—The Chair of the Subcommittee
21 shall appoint one member of the Advisory Board to
22 serve as the Chair of the Advisory Board.

23 “(7) MEETINGS.—Not less than once each cal-
24 endar year, the Advisory Board shall meet at such
25 times and places as may be designated by the Chair

1 of the Advisory Board, in consultation with the
2 Chair of the Subcommittee and the Chair of the
3 interagency working group.

4 “(8) BRIEFING.—The Chair of the Advisory
5 Board shall brief the Subcommittee and the inter-
6 agency working group on the progress of the Advi-
7 sory Board as necessary or at the request of the
8 Subcommittee.

9 “(9) FEDERAL ADVISORY COMMITTEE ACT.—
10 Section 14 of the Federal Advisory Committee Act
11 shall not apply to the Advisory Board.”

12 **SEC. 10675. STRATEGIC RESEARCH PLAN.**

13 Section 12405 of the Federal Ocean Acidification Re-
14 search and Monitoring Act of 2009 (33 U.S.C. 3704) is
15 amended—

16 (1) in subsection (a)—

17 (A) by striking “acidification” each place it
18 appears and inserting “acidification and coastal
19 acidification”;

20 (B) in the first sentence—

21 (i) by inserting “, and not later than
22 every 5 years thereafter” after “the date of
23 enactment of this Act”;

24 (ii) by inserting “address the socio-
25 economic impacts of ocean acidification

1 and coastal acidification and to” after
2 “mitigation strategies to”; and

3 (iii) by striking “marine ecosystems”
4 each place it appears and inserting “eco-
5 systems”; and

6 (C) in the second sentence, by inserting
7 “and recommendations made by the Advisory
8 Board in the review of the plan required under
9 section 12404(c)(2)(B)(i)” after “subsection
10 (d)”;

11 (2) in subsection (b)—

12 (A) in paragraph (1), by inserting “and so-
13 cial sciences” after “among the ocean sciences”;

14 (B) in paragraph (2)—

15 (i) in subparagraph (A), by striking
16 “impacts” and inserting “impacts, includ-
17 ing trends of changes in ocean chemistry,”;

18 (ii) in subparagraph (B)—

19 (I) by striking “improve the abil-
20 ity to assess the” and inserting “as-
21 sess the short-term and long-term”;
22 and

23 (II) by striking “; and” at the
24 end and inserting a semicolon;

1 (iii) by amending subparagraph (C) to
2 read as follows:

3 “(C) provide information for the—

4 “(i) development of adaptation and
5 mitigation strategies to address the socio-
6 economic impacts of ocean acidification
7 and coastal acidification;

8 “(ii) conservation of marine organisms
9 and ecosystems;

10 “(iii) assessment of the effectiveness
11 of such adaptation and mitigation strate-
12 gies; and”;

13 (iv) by adding at the end the following
14 new subparagraph:

15 “(D) improve research on—

16 “(i) ocean acidification and coastal
17 acidification;

18 “(ii) the interactions between and ef-
19 fects of multiple combined stressors includ-
20 ing changes in water chemistry, changes in
21 sediment delivery, hypoxia, and harmful
22 algal blooms, on ocean acidification and
23 coastal acidification; and

1 “(iii) the effect of environmental
2 stressors on marine resources and eco-
3 systems;”;

4 (C) in paragraph (3)—

5 (i) in subparagraph (F), by striking
6 “database development” and inserting
7 “data management”;

8 (ii) in subparagraph (H) by striking
9 “and” at the end; and

10 (iii) by adding at the end the fol-
11 lowing new subparagraphs:

12 “(J) assessment of adaptation and mitiga-
13 tion strategies; and

14 “(K) education and outreach activities;”;

15 (D) in paragraph (4), by striking “set
16 forth” and inserting “ensure an appropriate
17 balance of contribution in establishing”;

18 (E) in paragraph (5), by striking “reports”
19 and inserting “the best available peer-reviewed
20 scientific reports”;

21 (F) in paragraph (6)—

22 (i) by inserting “and coastal acidifica-
23 tion” after “ocean acidification”; and

24 (ii) by striking “of the United States”
25 and inserting “within the United States”;

1 (G) in paragraph (7), by striking “outline
2 budget requirements” and inserting “estimate
3 costs associated for full implementation of each
4 element of the plan by fiscal year”;

5 (H) in paragraph (8)—

6 (i) by inserting “and coastal acidifica-
7 tion” after “ocean acidification” each place
8 it appears;

9 (ii) by striking “its” and inserting
10 “their”; and

11 (iii) by striking “; and” at the end
12 and inserting a semicolon;

13 (I) in paragraph (9), by striking the period
14 at the end and inserting “; and”; and

15 (J) by adding at the end the following new
16 paragraph:

17 “(11) describe monitoring needs necessary to
18 support potentially affected industry members,
19 coastal stakeholders, fishery management councils
20 and commissions, non-Federal resource managers,
21 and scientific experts on decision-making and adap-
22 tation related to ocean acidification and coastal
23 acidification.”;

24 (3) in subsection (c)—

1 (A) in paragraph (1)(C), by striking “sur-
2 face”;

3 (B) in paragraph (2), by inserting “and
4 coastal acidification” after “ocean acidification”
5 each place it appears;

6 (C) in paragraph (3)—

7 (i) by striking “input, and” and in-
8 serting “inputs,”;

9 (ii) by inserting “, marine food webs,”
10 after “marine ecosystems”; and

11 (iii) by inserting “, and modeling that
12 supports fisheries management” after
13 “marine organisms”;

14 (D) in paragraph (5), by inserting “and
15 coastal acidification” after “ocean acidifica-
16 tion”; and

17 (E) by adding at the end the following new
18 paragraph:

19 “(8) Research to understand related and cumu-
20 lative stressors and other biogeochemical processes
21 occurring in conjunction with ocean acidification and
22 coastal acidification.”; and

23 (4) by striking subsection (e) and inserting the
24 following:

1 “(e) **ADVISORY BOARD EVALUATION.**—Not later
2 than 180 days before a plan is submitted to Congress, the
3 Subcommittee shall provide the Advisory Board estab-
4 lished under section 12404(c) a copy of the plan for pur-
5 poses of review under paragraph (2)(B)(i) of such section.

6 “(f) **PUBLICATION AND PUBLIC COMMENT.**—Not
7 later than 90 days before the strategic research plan, or
8 any revision thereof, is submitted to Congress, the Sub-
9 committee shall publish the plan in the Federal Register
10 and provide an opportunity for submission of public com-
11 ments for a period of not less than 60 days.”.

12 **SEC. 10676. NOAA OCEAN ACIDIFICATION ACTIVITIES.**

13 Section 12406 of the Federal Ocean Acidification Re-
14 search and Monitoring Act of 2009 (33 U.S.C. 3705) is
15 amended—

16 (1) in subsection (a)—

17 (A) in the matter preceding paragraph (1),
18 by inserting “coordination,” after “research,
19 monitoring,”;

20 (B) in paragraph (1)—

21 (i) in subparagraph (B)—

22 (I) by inserting “including the
23 Integrated Ocean Observing System
24 and the ocean observing assets of
25 other Federal, State, and Tribal agen-

1 cies,” after “ocean observing assets,”;
2 and

3 (II) by inserting “and agency
4 and department missions, prioritizing
5 the location of monitoring instru-
6 ments, assets, and projects to maxi-
7 mize the efficiency of resources and to
8 optimize understanding of socio-
9 economic impacts and ecosystem
10 health” after “research program”;

11 (ii) in subparagraph (C)—

12 (I) by striking “adaptation” and
13 inserting “adaptation and mitigation”;
14 and

15 (II) by inserting “and supporting
16 socioeconomically vulnerable States,
17 local governments, Tribes, commu-
18 nities, and industries through tech-
19 nical assistance and mitigation strate-
20 gies” after “marine ecosystems”;

21 (iii) in subparagraph (E), by striking
22 “its impacts” and inserting “their respec-
23 tive impacts”;

24 (iv) in subparagraph (F), by striking
25 “monitoring and impacts research” and in-

1 serting “research, monitoring, and adapta-
2 tion and mitigation strategies”; and

3 (v) by adding at the end the following
4 new subparagraph:

5 “(G) research to improve understanding of
6 the effect of—

7 “(i) other environmental stressors on
8 ocean acidification and coastal acidifica-
9 tion;

10 “(ii) multiple environmental stressors
11 on living marine resources and coastal eco-
12 systems; and

13 “(iii) adaptation and mitigation strat-
14 egies to address the socioeconomic impacts
15 of ocean acidification and coastal acidifica-
16 tion.”;

17 (C) in paragraph (2), by striking “critical
18 research projects that explore” and inserting
19 “critical research, education, and outreach
20 projects that explore and communicate”; and

21 (D) in paragraphs (1) and (2), by striking
22 “acidification” each place it appears and insert-
23 ing “acidification and coastal acidification”;
24 and

1 (2) by adding at the end the following new sub-
2 sections:

3 “(c) RELATIONSHIP TO INTERAGENCY WORKING
4 GROUP.—The National Oceanic and Atmospheric Admin-
5 istration shall serve as the lead Federal agency responsible
6 for coordinating the Federal response to ocean acidifica-
7 tion and coastal acidification, by—

8 “(1) leading the interagency working group in
9 implementing the strategic research plan under sec-
10 tion 12405;

11 “(2) coordinating monitoring and research ef-
12 forts among Federal agencies in cooperation with
13 State, local, and Tribal government and inter-
14 national partners;

15 “(3) maintaining an Ocean Acidification Infor-
16 mation Exchange described under section
17 12404(b)(5) to allow for information to be electroni-
18 cally accessible, including information—

19 “(A) on ocean acidification developed
20 through or used by the ocean acidification pro-
21 gram described under section 12406(a); or

22 “(B) that would be useful to State govern-
23 ments, local governments, Tribal governments,
24 resource managers, policymakers, researchers,
25 and other stakeholders in mitigating or adapt-

1 ing to the impacts of ocean acidification and
2 coastal acidification; and

3 “(4) establishing and maintaining the data ar-
4 chive system under subsection (d).

5 “(d) DATA ARCHIVE SYSTEM.—

6 “(1) MANAGEMENT.—The Secretary, in coordi-
7 nation with members of the interagency working
8 group, shall provide for the long-term stewardship
9 of, and access to, data relating to ocean acidification
10 and coastal acidification by establishing and main-
11 taining a data archive system that the National Cen-
12 ter for Environmental Information uses to process,
13 store, archive, provide access to, and incorporate to
14 the extent possible, such data collected—

15 “(A) through relevant federally-funded re-
16 search; and

17 “(B) by a Federal agency, State agency,
18 local agency, Tribe, academic scientist, citizen
19 scientist, or industry organization.

20 “(2) EXISTING GLOBAL OR NATIONAL DATA AS-
21 SETS.—In establishing and maintaining the data ar-
22 chive system under paragraph (1), the Secretary
23 shall ensure that existing global or national data as-
24 sets (including the data assets maintained by the
25 National Centers for Environmental Information,

1 the Integrated Ocean Observing System, and other
2 existing data systems within Federal agencies) are
3 incorporated to the greatest extent possible.

4 “(e) STANDARDS, PROTOCOLS, AND PROCEDURES.—
5 With respect to the data described in subsection (d), the
6 Secretary, in coordination with members of the inter-
7 agency working group, shall establish and revise as nec-
8 essary the standards, protocols, or procedures for—

9 “(1) processing, storing, archiving, and pro-
10 viding access to such data;

11 “(2) the interoperability and intercalibration of
12 such data;

13 “(3) the collection of any metadata underlying
14 such data; and

15 “(4) sharing such data with State, local, and
16 Tribal government programs, potentially affected in-
17 dustry members, coastal stakeholders, fishery man-
18 agement councils and commissions, non-Federal re-
19 source managers, and academia.

20 “(f) DISSEMINATION OF OCEAN ACIDIFICATION
21 DATA AND COASTAL ACIDIFICATION DATA.—The Sec-
22 retary, in coordination with members of the interagency
23 working group, shall disseminate the data described under
24 subsection (d) to the greatest extent practicable by sharing
25 such data on full and open access exchanges.

1 “(g) REQUIREMENT.—Recipients of grants from the
2 National Oceanic and Atmospheric Administration under
3 this subtitle that collect data described under subsection
4 (d) shall—

5 “(1) collect such data in accordance with the
6 standards, protocols, or procedures established pur-
7 suant to subsection (e); and

8 “(2) submit such data to the data archive sys-
9 tem under subsection (d) after publication, in ac-
10 cordance with any rules promulgated by the Sec-
11 retary.”.

12 **SEC. 10677. NSF OCEAN ACIDIFICATION ACTIVITIES.**

13 Section 12407 of the Federal Ocean Acidification Re-
14 search and Monitoring Act of 2009 (33 U.S.C. 3706) is
15 amended—

16 (1) by striking “ocean acidification” each place
17 it appears and inserting “ocean acidification and
18 coastal acidification”;

19 (2) in subsection (a)—

20 (A) in the matter preceding paragraph (1),
21 by striking “its impacts” and inserting “their
22 respective impacts”;

23 (B) in paragraph (3), by striking “and its
24 impacts” and inserting “and their respective
25 impacts”;

1 (C) in paragraph (4), by striking the pe-
2 riod at the end and inserting “; and”; and

3 (D) by adding at the end the following new
4 paragraph:

5 “(5) adaptation and mitigation strategies to ad-
6 dress socioeconomic effects of ocean acidification and
7 coastal acidification.”; and

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

9 “(d) REQUIREMENT.—Recipients of grants from the
10 National Science Foundation under this subtitle that col-
11 lect data described under section 12406(d) shall—

12 “(1) collect data in accordance with the stand-
13 ards, protocols, or procedures established pursuant
14 to section 12406(e); and

15 “(2) submit such data to the Director and the
16 Secretary after publication, in accordance with any
17 rules promulgated by the Director or the Sec-
18 retary.”.

19 **SEC. 10678. NASA OCEAN ACIDIFICATION ACTIVITIES.**

20 Section 12408 of the Federal Ocean Acidification Re-
21 search and Monitoring Act of 2009 (33 U.S.C. 3707) is
22 amended—

23 (1) by striking “ocean acidification” each place
24 it appears and inserting “ocean acidification and
25 coastal acidification”;

1 (2) in subsection (a), by striking “its impacts”
2 and inserting “their respective impacts”; and

3 (3) by adding at the end the following new sub-
4 section:

5 “(d) **REQUIREMENT.**—Researchers from the National
6 Aeronautics and Space Administration under this subtitle
7 that collect data described under section 12406(d) shall—

8 “(1) collect such data in accordance with the
9 standards, protocols, or procedures established pur-
10 suant to section 12406(e); and

11 “(2) submit such data to the Administrator and
12 the Secretary, in accordance with any rules promul-
13 gated by the Administrator or the Secretary.”.

14 **SEC. 10679. AUTHORIZATION OF APPROPRIATIONS.**

15 Section 12409 of the Federal Ocean Acidification Re-
16 search and Monitoring Act of 2009 (33 U.S.C. 3708) is
17 amended—

18 (1) in subsection (a), by striking “subtitle—”
19 and all that follows through paragraph (4) and in-
20 serting the following: “subtitle—

21 “(1) \$30,500,000 for fiscal year 2022;

22 “(2) \$35,000,000 for fiscal year 2023;

23 “(3) \$40,000,000 for fiscal year 2024;

24 “(4) \$45,000,000 for fiscal year 2025; and

25 “(5) \$50,000,000 for fiscal year 2026.”; and

1 (2) in subsection (b), by striking “subtitle—”
2 and all that follows through paragraph (4) and in-
3 serting the following: “subtitle \$20,000,000 for each
4 of the fiscal years 2022 through 2026.”.

