

115TH CONGRESS
2D SESSION

S. 1425

IN THE HOUSE OF REPRESENTATIVES

JANUARY 9, 2018

Referred to the Committee on Science, Space, and Technology, and in addition to the Committee on Natural Resources, for a period to be subsequently determined by the Speaker, in each case for consideration of such provisions as fall within the jurisdiction of the committee concerned

AN ACT

To reauthorize the Integrated Coastal and Ocean Observation System Act of 2009, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

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

2 (a) SHORT TITLE.—This Act may be cited as the
3 “Coordinated Ocean Monitoring and Research Act”.

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

- Sec. 1. Short title; table of contents.
- Sec. 2. Purposes.
- Sec. 3. Definitions.
- Sec. 4. Integrated Coastal and Ocean Observation System.
- Sec. 5. Financing and agreements.
- Sec. 6. Reports to Congress.
- Sec. 7. Public-private use policy.
- Sec. 8. Repeal of independent cost estimate.
- Sec. 9. Authorization of appropriations.
- Sec. 10. Reports and research plans.
- Sec. 11. Strategic research plan.
- Sec. 12. Stakeholder input on monitoring.
- Sec. 13. Research activities.

6 **SEC. 2. PURPOSES.**

7 Section 12302 of the Integrated Coastal and Ocean
8 Observation System Act of 2009 (33 U.S.C. 3601) is
9 amended to read as follows:

10 **“SEC. 12302. PURPOSES.**

11 “The purposes of this subtitle are—

12 “(1) to establish and sustain a national inte-
13 grated System of ocean, coastal, and Great Lakes
14 observing systems, comprised of Federal and non-
15 Federal components coordinated at the national level
16 by the Council and at the regional level by a network
17 of regional coastal observing systems, and that in-
18 cludes in situ, remote, and other coastal and ocean
19 observation and modeling capabilities, technologies,

1 data management systems, communication systems,
2 and product development systems, and is designed to
3 address regional and national needs for ocean and
4 coastal information, to gather specific data on key
5 coastal, ocean, and Great Lakes variables, and to en-
6 sure timely and sustained dissemination and avail-
7 ability of these data—

8 “(A) to the public;

9 “(B) to support national defense, search
10 and rescue operations, marine commerce, navi-
11 gation safety, weather, climate, and marine
12 forecasting, energy siting and production, eco-
13 nomic development, ecosystem-based marine,
14 coastal, and Great Lakes resource management,
15 public safety, and public outreach and edu-
16 cation;

17 “(C) to promote greater public awareness
18 and stewardship of the Nation’s ocean, coastal,
19 and Great Lakes resources and the general
20 public welfare;

21 “(D) to provide easy access to ocean,
22 coastal, and Great Lakes data and promote
23 data sharing between Federal and non-Federal
24 sources and promote public data sharing;

1 “(E) to enable advances in scientific un-
2 derstanding to support the sustainable use, con-
3 servation, management, and understanding of
4 healthy ocean, coastal, and Great Lakes re-
5 sources; and

6 “(F) to monitor and model changes in
7 ocean chemistry;

8 “(2) to improve the Nation’s capability to meas-
9 ure, track, observe, understand, and predict events
10 related directly and indirectly to weather and climate
11 change, natural climate variability, and interactions
12 between the oceanic and atmospheric environments,
13 including the Great Lakes; and

14 “(3) to authorize activities—

15 “(A) to promote basic and applied research
16 to develop, test, and deploy innovations and im-
17 provements in coastal and ocean observation
18 technologies, including advanced observing tech-
19 nologies needed to address critical data gaps,
20 modeling systems, other scientific and techno-
21 logical capabilities to improve the under-
22 standing of weather and climate, ocean-atmos-
23 phere dynamics, global climate change, and the
24 physical, chemical, and biological dynamics of

1 the ocean, coastal and Great Lakes environ-
2 ments; and

3 “(B) to conserve healthy and restore de-
4 graded coastal ecosystems.”.

5 **SEC. 3. DEFINITIONS.**

6 Section 12303 of the Integrated Coastal and Ocean
7 Observation System Act of 2009 (33 U.S.C. 3602) is
8 amended—

9 (1) in paragraph (5), by striking “integrated
10 into the System and are managed through States,
11 regional organizations, universities, nongovernmental
12 organizations, or the private sector” and inserting
13 “managed through States, regional organizations,
14 universities, nongovernmental organizations, or the
15 private sector and integrated into the system by the
16 regional coastal ocean observing system, the Na-
17 tional Oceanic and Atmospheric Administration, or
18 the agencies on the Interagency Ocean Observation
19 Committee”;

20 (2) by amending paragraph (6) to read as fol-
21 lows:

22 “(6) REGIONAL COASTAL OBSERVING SYS-
23 TEM.—The term ‘regional coastal observing system’
24 means an organizational body that is certified or es-
25 tablished by contract or memorandum by the lead

1 Federal agency designated in section 12304(c)(3)
 2 and coordinates State, Federal, local, tribal, and pri-
 3 vate interests at a regional level with the responsi-
 4 bility of engaging the private and public sectors in
 5 designing, operating, and improving regional coastal
 6 and ocean observing systems in order to ensure the
 7 provision of data and information that meet the
 8 needs of user groups from the respective regions.”;
 9 and

10 (3) in paragraph (7), by striking “National
 11 Oceanic and Atmospheric Administration” and in-
 12 serting “Administrator”.

13 **SEC. 4. INTEGRATED COASTAL AND OCEAN OBSERVATION**
 14 **SYSTEM.**

15 (a) SYSTEM ELEMENTS.—

16 (1) IN GENERAL.—Section 12304(b) of the In-
 17 tegrated Coastal and Ocean Observation System Act
 18 of 2009 (33 U.S.C. 3603(b)) is amended by striking
 19 paragraph (1) and inserting the following:

20 “(1) IN GENERAL.—In order to fulfill the pur-
 21 poses of this subtitle, the System shall be national
 22 in scope and consist of—

23 “(A) Federal assets to fulfill national and
 24 international observation missions and prior-
 25 ities;

1 “(B) non-Federal assets, including a net-
2 work of regional coastal observing systems iden-
3 tified under subsection (c)(4), to fulfill regional
4 and national observation missions and prior-
5 ities;

6 “(C) data management, communication,
7 and modeling systems for the timely integration
8 and dissemination of data and information
9 products from the System;

10 “(D) a product development system to
11 transform observations into products in a for-
12 mat that may be readily used and understood;
13 and

14 “(E) a research and development program
15 conducted under the guidance of the Council,
16 consisting of—

17 “(i) basic and applied research and
18 technology development—

19 “(I) to improve understanding of
20 coastal and ocean systems and their
21 relationships to human activities; and

22 “(II) to ensure improvement of
23 operational assets and products, in-
24 cluding related infrastructure, observ-
25 ing technologies, and information and

1 data processing and management
2 technologies;

3 “(ii) an advanced observing tech-
4 nology development program to fill gaps in
5 technology;

6 “(iii) large scale computing resources
7 and research to advance modeling of coast-
8 al, ocean, and Great Lakes processes;

9 “(iv) models to improve regional
10 weather forecasting capabilities and re-
11 gional weather forecasting products; and

12 “(v) reviews of data collection proce-
13 dures across regions and programs to
14 make recommendations for data collection
15 standards across the System to meet na-
16 tional ocean, coastal, and Great Lakes ob-
17 servation, applied research, and weather
18 forecasting needs.”.

19 (2) AVAILABILITY OF DATA.—Section
20 12304(b)(3) of such Act (33 U.S.C. 3603(b)(3)) is
21 amended by inserting “for research and for use in
22 the development of products to address societal
23 needs” before the period at the end.

1 (3) COORDINATION OF NON-FEDERAL AS-
 2 SETS.—Section 12304(b)(4) of such Act (33 U.S.C.
 3 3603(b)) is amended—

4 (A) in the paragraph heading, by striking
 5 “NON-FEDERAL” and inserting “COORDINA-
 6 TION OF NON-FEDERAL”; and

7 (B) by striking “or by” and inserting “,
 8 the regional coastal observing system, or”.

9 (b) POLICY OVERSIGHT, ADMINISTRATION, AND RE-
 10 GIONAL COORDINATION.—Section 12304(c) of the Inte-
 11 grated Coastal and Ocean Observation System Act of
 12 2009 (33 U.S.C. 3603(c)) is amended by striking para-
 13 graphs (2), (3), and (4), and inserting the following:

14 “(2) INTERAGENCY OCEAN OBSERVATION COM-
 15 MITTEE.—

16 “(A) ESTABLISHMENT.—The Council shall
 17 establish or designate a committee, which shall
 18 be known as the Interagency Ocean Observation
 19 Committee.

20 “(B) DUTIES.—The Interagency Ocean
 21 Observation Committee shall—

22 “(i) prepare annual and long-term
 23 plans for consideration and approval by the
 24 Council for the integrated design, oper-
 25 ation, maintenance, enhancement, and ex-

1 pansion of the System to meet the objec-
2 tives of this chapter and the System Plan;

3 “(ii) develop and transmit to Con-
4 gress, along with the budget submitted by
5 the President to Congress pursuant to sec-
6 tion 1105(a) of title 31, United States
7 Code, an annual coordinated, comprehen-
8 sive budget—

9 “(I) to operate all elements of
10 the System identified in subsection
11 (b); and

12 “(II) to ensure continuity of data
13 streams from Federal and non-Fed-
14 eral assets;

15 “(iii) establish requirements for obser-
16 vation data variables to be gathered by
17 both Federal and non-Federal assets and
18 identify, in consultation with regional in-
19 formation coordination entities, priorities
20 for System observations;

21 “(iv) establish and define protocols
22 and standards for System data processing,
23 management, collection, configuration
24 standards, formats, and communication for

1 new and existing assets throughout the In-
2 tegrated Ocean Observing System network;

3 “(v) develop contract requirements for
4 each regional coastal observing system—

5 “(I) to establish eligibility for in-
6 tegration into the System;

7 “(II) to ensure compliance with
8 all applicable standards and protocols
9 established by the Council; and

10 “(III) to ensure that regional ob-
11 servations are integrated into the Sys-
12 tem on a sustained basis;

13 “(vi) identify gaps in observation cov-
14 erage or needs for capital improvements of
15 both Federal assets and non-Federal as-
16 sets;

17 “(vii) subject to the availability of ap-
18 propriations, establish through 1 or more
19 participating Federal agencies, in consulta-
20 tion with the System advisory committee
21 established under subsection (d), a com-
22 petitive matching grant or other pro-
23 grams—

24 “(I) to promote intramural and
25 extramural research and development

1 of new, innovative, and emerging ob-
2 servation technologies including test-
3 ing and field trials; and

4 “(II) to facilitate the migration
5 of new, innovative, and emerging sci-
6 entific and technological advances
7 from research and development to
8 operational deployment;

9 “(viii) periodically—

10 “(I) review the System Plan; and

11 “(II) submit to the Council such
12 recommendations as the Interagency
13 Ocean Observation Committee may
14 have for improvements to the System
15 Plan;

16 “(ix) ensure collaboration among Fed-
17 eral agencies participating in the activities
18 of the Interagency Ocean Observation
19 Committee; and

20 “(x) perform such additional duties as
21 the Council may delegate.

22 “(3) LEAD FEDERAL AGENCY.—

23 “(A) IN GENERAL.—The National Oceanic
24 and Atmospheric Administration shall function

1 as the lead Federal agency for the implementa-
2 tion and administration of the System.

3 “(B) CONSULTATION REQUIRED.—In car-
4 rying out this paragraph, the Administrator
5 shall consult with the Council, the Interagency
6 Ocean Observation Committee, other Federal
7 agencies that maintain portions of the System,
8 and the regional coastal observing systems.

9 “(C) REQUIREMENTS.—In carrying out
10 this paragraph, the Administrator shall—

11 “(i) establish and operate an Inte-
12 grated Ocean Observing System Program
13 Office within the National Oceanic and At-
14 mospheric Administration—

15 “(I) that utilizes, to the extent
16 necessary, personnel from member
17 agencies participating on the Inter-
18 agency Ocean Observation Committee;
19 and

20 “(II) oversees daily operations
21 and coordination of the System;

22 “(ii) implement policies, protocols,
23 and standards approved by the Council
24 and delegated by the Interagency Ocean
25 Observation Committee;

1 “(iii) promulgate program guide-
2 lines—

3 “(I) to certify and integrate re-
4 gional associations into the System;
5 and

6 “(II) to provide regional coastal
7 and ocean observation data that meet
8 the needs of user groups from the re-
9 spective regions;

10 “(iv) have the authority to enter into
11 and oversee contracts, leases, grants, or co-
12 operative agreements with non-Federal as-
13 sets, including regional information coordi-
14 nation entities, to support the purposes of
15 this chapter on such terms as the Adminis-
16 trator deems appropriate;

17 “(v) implement and maintain a merit-
18 based, competitive funding process to sup-
19 port non-Federal assets, including the de-
20 velopment and maintenance of a network
21 of regional coastal observing systems, and
22 develop and implement a process for the
23 periodic review and evaluation of the re-
24 gional associations;

1 “(vi) provide opportunities for com-
2 petitive contracts and grants for dem-
3 onstration projects to design, develop, inte-
4 grate, deploy, maintain, and support com-
5 ponents of the System;

6 “(vii) establish and maintain efficient
7 and effective administrative procedures for
8 the timely allocation of funds among con-
9 tractors, grantees, and non-Federal assets,
10 including regional associations;

11 “(viii) develop and implement a proc-
12 ess for the periodic review and evaluation
13 of the regional coastal observing systems;

14 “(ix) formulate an annual process by
15 which gaps in observation coverage or
16 needs for capital improvements of Federal
17 assets and non-Federal assets of the Sys-
18 tem are—

19 “(I) identified by the regional as-
20 sociations described in the System
21 Plan, the Administrator, or other
22 members of the System; and

23 “(II) submitted to the Inter-
24 agency Ocean Observation Committee;

1 “(x) develop and be responsible for a
2 data management and communication sys-
3 tem, in accordance with standards and
4 protocols established by the Interagency
5 Ocean Observation Committee, by which
6 all data collected by the System regarding
7 ocean and coastal waters of the United
8 States including the Great Lakes, are proc-
9 essed, stored, integrated, and made avail-
10 able to all end-user communities;

11 “(xi) not less frequently than once
12 each year, submit to the Interagency
13 Ocean Observation Committee a report on
14 the accomplishments, operational needs,
15 and performance of the System to con-
16 tribute to the annual and long-term plans
17 prepared pursuant to paragraph (2)(B)(i);

18 “(xii) develop and periodically update
19 a plan to efficiently integrate into the Sys-
20 tem new, innovative, or emerging tech-
21 nologies that have been demonstrated to be
22 useful to the System and which will fulfill
23 the purposes of this chapter and the Sys-
24 tem Plan; and

1 “(xiii) work with users and Regional
 2 Associations to develop products to enable
 3 real-time data sharing for decision makers,
 4 including with respect to weather fore-
 5 casting and modeling, search and rescue
 6 operations, corrosive seawater forecasts,
 7 water quality monitoring and communica-
 8 tion, and harmful algal bloom forecasting.

9 “(4) REGIONAL COASTAL OBSERVING SYS-
 10 TEMS.—

11 “(A) IN GENERAL.—A regional coastal ob-
 12 serving system operated by a Regional Associa-
 13 tion described in the System Plan may not be
 14 certified or established under this subtitle un-
 15 less it—

16 “(i) has been or shall be certified or
 17 established by contract or agreement by
 18 the Administrator;

19 “(ii) meets—

20 “(I) the certification standards
 21 and compliance procedure guidelines
 22 issued by the Administrator; and

23 “(II) the information needs of
 24 user groups in the region while adher-
 25 ing to national standards;

1 “(iii) demonstrates an organizational
2 structure, that under funding limitations is
3 capable of—

4 “(I) gathering required System
5 observation data;

6 “(II) supporting and integrating
7 all aspects of coastal and ocean ob-
8 serving and information programs
9 within a region; and

10 “(III) reflecting the needs of
11 State, local, and tribal governments,
12 commercial interests, and other users
13 and beneficiaries of the System and
14 other requirements specified under
15 this subtitle and the System Plan;

16 “(iv) identifies—

17 “(I) gaps in observation coverage
18 needs for capital improvements of
19 Federal assets and non-Federal assets
20 of the System; and

21 “(II) other recommendations to
22 assist in the development of the an-
23 nual and long-term plans prepared
24 pursuant to paragraph (2)(B)(i) and
25 transmits such information to the

1 Interagency Ocean Observation Com-
2 mittee via the Program Office estab-
3 lished under paragraph (3)(C)(i);

4 “(v) develops and operates under a
5 strategic operational plan that will ensure
6 the efficient and effective administration of
7 programs and assets to support daily data
8 observations for integration into the Sys-
9 tem, pursuant to the standards approved
10 by the Council;

11 “(vi) works cooperatively with govern-
12 mental and nongovernmental entities at all
13 levels to identify and provide information
14 products of the System for multiple users
15 within the service area of the regional
16 coastal observing system; and

17 “(vii) complies with all financial over-
18 sight requirements established by the Ad-
19 ministrator, including requirements relat-
20 ing to audits.

21 “(B) PARTICIPATION.—For the purposes
22 of this title, employees of Federal agencies are
23 permitted to be members of the governing body
24 for the regional coastal observing systems and

1 may participate in the functions of the regional
2 information coordination entities.”.

3 (c) SYSTEM ADVISORY COMMITTEE.—Section
4 12304(d) of the Integrated Coastal and Ocean Observa-
5 tion System Act of 2009 (33 U.S.C. 3603(d)) is amend-
6 ed—

7 (1) in paragraph (1), by striking “or the Inter-
8 agency Ocean Observing Committee.” and inserting
9 “or the Council under this subtitle”; and

10 (2) in paragraph (2)—

11 (A) in subparagraph (A), by inserting “,
12 data sharing,” after “data management”;

13 (B) in subparagraph (C), by striking
14 “and” at the end; and

15 (C) by striking subparagraph (D) and in-
16 serting the following:

17 “(D) additional priorities, including—

18 “(i) a national surface current map-
19 ping network designed to improve fine
20 scale sea surface mapping using high fre-
21 quency radar technology and other emerg-
22 ing technologies to address national prior-
23 ities, including Coast Guard search and
24 rescue operation planning and harmful

1 algal bloom forecasting and detection
2 that—

3 “(I) is comprised of existing high
4 frequency radar and other sea surface
5 current mapping infrastructure oper-
6 ated by national programs and re-
7 gional associations;

8 “(II) incorporates new high fre-
9 quency radar assets or other fine scale
10 sea surface mapping technology as-
11 sets, and other assets needed to fill
12 gaps in coverage on United States
13 coastlines; and

14 “(III) follows a deployment plan
15 that prioritizes closing gaps in high
16 frequency radar infrastructure in the
17 United States, starting with areas
18 demonstrating significant sea surface
19 current data needs, especially in areas
20 where additional data will improve
21 Coast Guard search and rescue mod-
22 els;

23 “(ii) fleet acquisition for autonomous
24 underwater and surface vehicles for deploy-

1 ment and data integration to fulfill the
2 purposes of this Act;

3 “(iii) an integrative survey program
4 for application of manned and unmanned
5 vehicles to the real-time or near real-time
6 collection and transmission of sea floor,
7 water column, and sea surface data on bi-
8 ology, chemistry, geology, physics, and hy-
9 drography;

10 “(iv) remote sensing and data assimi-
11 lation to develop new analytical methodolo-
12 gies to assimilate data from the Integrated
13 Ocean Observing System into hydro-
14 dynamic models;

15 “(v) integrated, multi-State moni-
16 toring to assess sources, movement, and
17 fate of sediments in coastal regions;

18 “(vi) a multi-region marine sound
19 monitoring system to be—

20 “(I) planned in consultation with
21 the Interagency Ocean Observation
22 Committee, the National Oceanic and
23 Atmospheric Administration, the De-
24 partment of the Navy, and academic
25 research institutions; and

1 “(II) developed, installed, and op-
 2 erated in coordination with the Na-
 3 tional Oceanic and Atmospheric Ad-
 4 ministration, the Department of the
 5 Navy, and academic research institu-
 6 tions; and

7 “(E) any other purpose identified by the
 8 Administrator or the Council.”;

9 (D) in paragraph (3)(B), by inserting
 10 “The Administrator may stagger the terms of
 11 the System advisory committee members.” be-
 12 fore “Members”; and

13 (E) in paragraph (4)—

14 (i) in subparagraph (A), by striking
 15 “and the Interagency Ocean Observing
 16 Committee”; and

17 (ii) in subparagraph (C), by striking
 18 “Observing” and inserting “Observation”.

19 (d) CIVIL LIABILITY.—Section 12304(e) of the Inte-
 20 grated Coastal and Ocean Observation System Act of
 21 2009 (33 U.S.C. 3603(e)) is amended—

22 (1) by striking “information coordination enti-
 23 ty” and inserting “coastal observing system”; and

1 (2) by striking “non-Federal asset or regional
2 information coordination entity,” and inserting “re-
3 gional coastal observing system,”.

4 **SEC. 5. FINANCING AND AGREEMENTS.**

5 Section 12305(a) of the Integrated Coastal and
6 Ocean Observation System Act of 2009 (33 U.S.C.
7 3604(a)) is amended to read as follows:

8 “(a) IN GENERAL.—To carry out activities under this
9 subtitle, the Secretary of Commerce may execute an agree-
10 ment, on a reimbursable or nonreimbursable basis, with
11 any State or subdivision thereof, any Federal agency, any
12 public or private organization, or any individual to carry
13 out activities under this subtitle.”.

14 **SEC. 6. REPORTS TO CONGRESS.**

15 Section 12307 of the Integrated Coastal and Ocean
16 Observation System Act of 2009 (33 U.S.C. 3606) is
17 amended to read as follows:

18 **“SEC. 12307. REPORT TO CONGRESS.**

19 “(a) REQUIREMENT.—Not later than 2 years after
20 March 30, 2009, and every 3 years thereafter, the Admin-
21 istrator shall prepare, and the President acting through
22 the Council shall approve and transmit to the Congress,
23 a report on progress made in implementing this subtitle.

24 “(b) CONTENTS.—Each report required under sub-
25 section (a) shall include—

1 “(1) a description of activities carried out under
2 this subtitle and the System Plan;

3 “(2) an evaluation of the effectiveness of the
4 System, including an evaluation of progress made by
5 the Council to achieve the goals identified under the
6 System Plan;

7 “(3) the identification of Federal and non-Fed-
8 eral assets as determined by the Council that have
9 been integrated into the System, including assets es-
10 sential to the gathering of required observation data
11 variables necessary to meet the respective missions
12 of Council agencies;

13 “(4) a review of procurements, planned or initi-
14 ated, by each Council agency to enhance, expand, or
15 modernize the observation capabilities and data
16 products provided by the System, including data
17 management and communication subsystems;

18 “(5) a summary of the existing gaps in observa-
19 tion infrastructure and monitoring data collection,
20 including—

21 “(A) priorities considered by the System
22 advisory committee;

23 “(B) the national sea surface current map-
24 ping network;

25 “(C) coastal buoys;

- 1 “(D) ocean chemistry monitoring;
2 “(E) marine sound monitoring; and
3 “(F) autonomous underwater and surface
4 vehicle technology gaps;
5 “(6) an assessment regarding activities to inte-
6 grate Federal and non-Federal assets, nationally and
7 on the regional level, and discussion of the perform-
8 ance and effectiveness of regional information co-
9 ordination entities to coordinate regional observation
10 operations;
11 “(7) a description of benefits of the program to
12 users of data products resulting from the System
13 (including the general public, industries, scientists,
14 resource managers, emergency responders, policy
15 makers, and educators);
16 “(8) recommendations concerning—
17 “(A) modifications to the System; and
18 “(B) funding levels for the System in sub-
19 sequent fiscal years; and
20 “(9) the results of a periodic external inde-
21 pendent programmatic audit of the System.”.

22 **SEC. 7. PUBLIC-PRIVATE USE POLICY.**

23 Section 12308 of the Integrated Coastal and Ocean
24 Observation System Act of 2009 (33 U.S.C. 3607) is
25 amended to read as follows:

1 **“SEC. 12308. PUBLIC-PRIVATE USE POLICY.**

2 “The Council shall maintain a policy that defines
3 processes for making decisions about the roles of the Fed-
4 eral Government, the States, regional information coordi-
5 nation entities, the academic community, and the private
6 sector in providing to end-user communities environmental
7 information, products, technologies, and services related to
8 the System. The Administrator shall ensure that National
9 Oceanic and Atmospheric Administration adheres to the
10 decision making process developed by the Council regard-
11 ing the roles of the Federal Government, the States, the
12 regional coastal observing systems, the academic commu-
13 nities, and the private sector in providing the end-user
14 communities environmental information, data products,
15 technologies, and services related to the System.”.

16 **SEC. 8. REPEAL OF INDEPENDENT COST ESTIMATE.**

17 (a) IN GENERAL.—The Integrated Coastal and
18 Ocean Observation System Act of 2009 (33 U.S.C. 3601
19 et seq.) is amended by striking section 12309 (33 U.S.C.
20 3608).

21 (b) TABLE OF CONTENTS AMENDMENT.—The table
22 of contents in section 1(b) of the Omnibus Public Land
23 Management Act of 2009 (Public Law 111–11; 123 Stat.
24 991) is amended by striking the item related to section
25 12309.

1 **SEC. 9. AUTHORIZATION OF APPROPRIATIONS.**

2 There are authorized to be appropriated to the Sec-
3 retary of Commerce \$40,200,000, for each of the fiscal
4 years 2018 through 2021, which shall be used—

5 (1) to fulfill the purposes set forth in section
6 12302 of the Integrated Coastal and Ocean Observa-
7 tion System Act of 2009 (33 U.S.C. 3601); and

8 (2) to support activities identified in the annual
9 coordinated National Integrated Coastal and Ocean
10 Observation System budget developed by the Inter-
11 agency Ocean Observation Committee and submitted
12 to Congress.

13 **SEC. 10. REPORTS AND RESEARCH PLANS.**

14 Section 12404(c) of the Federal Ocean Acidification
15 Research And Monitoring Act of 2009 (33 U.S.C.
16 3703(c)) is amended by adding at the end the following:

17 “(4) ECONOMIC VULNERABILITY REPORT.—

18 “(A) IN GENERAL.—Not later than 2 years
19 after the date of the enactment of the Coordi-
20 nated Ocean Monitoring and Research Act, and
21 every 5 years thereafter, the Subcommittee
22 shall transmit to appropriate committees of
23 Congress a report that—

24 “(i) is named ‘The Ocean Chemistry
25 Coastal Community Vulnerability Assess-
26 ment’;

1 “(ii) identifies gaps in ocean acidifica-
2 tion monitoring by public, academic, and
3 private assets in the network of regional
4 coastal observing systems;

5 “(iii) identifies geographic areas which
6 have gaps in ocean acidification research;

7 “(iv) identifies United States coastal
8 communities, including fishing commu-
9 nities, low-population rural communities,
10 tribal and subsistence communities, and is-
11 land communities, that may be impacted
12 by ocean acidification;

13 “(v) identifies impacts of changing
14 ocean carbonate chemistry on the commu-
15 nities described in clause (iv), including
16 impacts from changes in ocean and coastal
17 marine resources that are not managed by
18 the Federal Government;

19 “(vi) identifies gaps in understanding
20 of the impacts of ocean acidification on
21 economically or commercially important
22 species, particularly those which support
23 United States commercial, recreational,
24 and tribal fisheries and aquaculture;

“(vii) identifies habitats that may be particularly vulnerable to corrosive sea water, including areas experiencing multiple stressors such as hypoxia, sedimentation, and harmful algal blooms;

“(viii) identifies areas in which existing Integrated Ocean Observing System assets, including buoys and gliders, may be leveraged as platforms for the deployment of new sensors or other applicable observing technologies; and

“(ix) is written in collaboration with the agencies responsible for carrying out this Act.

“(B) FORM OF REPORT.—

“(i) INITIAL REPORT.—The initial report required under subparagraph (A) shall include the information described in clauses (i) through (ix) on a national level.

“(ii) SUBSEQUENT REPORTS.—Each report required under subparagraph (A) after the initial report—

“(I) may describe the information described in clauses (i) through (ix) on a national level; or

1 “(II) may consist of separate re-
2 ports for each region of the National
3 Oceanic and Atmospheric Administra-
4 tion.

5 “(iii) REGIONAL REPORTS.—If the
6 Subcommittee opts to prepare a report re-
7 quired under subparagraph (A) as separate
8 regional reports under clause (ii)(II), the
9 Subcommittee shall submit a report for
10 each region of the National Oceanic and
11 Atmospheric Administration not less fre-
12 quently than once during each 5-year re-
13 porting period.

14 “(C) APPROPRIATE COMMITTEES OF CON-
15 GRESS DEFINED.—In this paragraph and in
16 paragraph (5), the term ‘appropriate commit-
17 tees of Congress’ means the Committee on
18 Commerce, Science, and Transportation of the
19 Senate, the Committee on Science, Space, and
20 Technology of the House of Representatives,
21 and the Committee on Natural Resources of the
22 House of Representatives.

23 “(5) MONITORING PRIORITIZATION PLAN.—Not
24 later than 180 days after the date of the submission
25 of the initial report under paragraph (4)(A), the

1 Subcommittee shall transmit to the appropriate com-
 2 mittees of Congress a report that develops a plan to
 3 deploy new sensors or other applicable observing
 4 technologies—

5 “(A) based on such initial report;

6 “(B) prioritized by—

7 “(i) the threat to coastal economies
 8 and ecosystems;

9 “(ii) gaps in data; and

10 “(iii) research needs; and

11 “(C) that leverage existing platforms,
 12 where possible.”.

13 **SEC. 11. STRATEGIC RESEARCH PLAN.**

14 (a) CONTENTS.—Section 12405(b) of the Federal
 15 Ocean Acidification Research And Monitoring Act of 2009
 16 (33 U.S.C. 3704(b)) is amended—

17 (1) in paragraph (8), by striking “and” at the
 18 end;

19 (2) in paragraph (9), by striking the period at
 20 the end and inserting “; and”; and

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

22 “(10) make recommendations for research to be
 23 conducted, including in the social sciences and eco-
 24 nomics, to address the key knowledge gaps identified

1 in the economic vulnerability report conducted under
2 section 12404(c)(4).”.

3 (b) PROGRAM ELEMENTS.—Section 12405(c) of the
4 Federal Ocean Acidification Research And Monitoring Act
5 of 2009 (33 U.S.C. 3704(c)) is amended by adding at the
6 end the following:

7 “(6) Research to understand combined effects
8 of changes in ocean chemistry, sediment delivery, hy-
9 poxia, and harmful algal blooms and the impact
10 these processes have on each other, and how these
11 multiple stressors impact living marine resources
12 and coastal ecosystems.

13 “(7) Applied research to identify adaptation
14 strategies for species impacted by changes in ocean
15 chemistry including vegetation-based systems, shell
16 recycling, species and genetic diversity, applied tech-
17 nologies, aquaculture methodologies, and manage-
18 ment recommendations.”.

19 **SEC. 12. STAKEHOLDER INPUT ON MONITORING.**

20 Section 12406(a) of the Federal Ocean Acidification
21 Research And Monitoring Act of 2009 (33 U.S.C.
22 3705(a)) is amended—

23 (1) in paragraph (2), by striking “and” at the
24 end;

1 (2) in paragraph (3), by striking the period at
2 the end and inserting a semicolon and “and”; and
3 (3) by adding at the end the following:

4 “(4) includes an ongoing mechanism that allows
5 potentially affected industry members, coastal stake-
6 holders, fishery management councils and commis-
7 sions, non-Federal resource managers, and scientific
8 experts to provide input on monitoring needs that
9 are necessary to support on the ground manage-
10 ment, decision making, and adaptation related to
11 ocean acidification.”.

12 **SEC. 13. RESEARCH ACTIVITIES.**

13 Section 12407(a) of the Federal Ocean Acidification
14 Research And Monitoring Act of 2009 (33 U.S.C.
15 3706(a)) is amended to read as follows:

16 “(a) RESEARCH ACTIVITIES.—The Director of the
17 National Science Foundation shall continue to carry out
18 research activities on ocean acidification which shall sup-
19 port competitive, merit-based, peer-reviewed proposals for
20 research, observatories and monitoring of ocean acidifica-
21 tion and its impacts, including—

22 “(1) impacts on marine organisms and marine
23 ecosystems;

24 “(2) impacts on ocean, coastal, and estuarine
25 biogeochemistry;

1 “(3) the development of methodologies and
2 technologies to evaluate ocean acidification and its
3 impacts; and

4 “(4) impacts of multiple stressors on eco-
5 systems exhibiting hypoxia, harmful algal blooms, or
6 sediment delivery, combined with changes in ocean
7 chemistry.”.

Passed the Senate January 8, 2018.

Attest:

JULIE E. ADAMS,

Secretary.