

Suspend the Rules and Pass the Bill, S. 914, With an Amendment

(The amendment strikes all after the enacting clause and inserts a new text)

116TH CONGRESS
2^D SESSION

S. 914

AN ACT

To reauthorize the Integrated Coastal and Ocean Observation System Act of 2009, to clarify the authority of the Administrator of the National Oceanic and Atmospheric Administration with respect to post-storm assessments, and to require the establishment of a National Water Center, 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,*

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

4 (a) **SHORT TITLE.**—This Act may be cited as the
5 “Coordinated Ocean Observations and Research Act of
6 2020”.

7 (b) **TABLE OF CONTENTS.**—The table of contents for
8 this Act is as follows:

Sec. 1. Short title; table of contents.

**TITLE I—REAUTHORIZATION OF INTEGRATED COASTAL AND
OCEAN OBSERVATION SYSTEM ACT OF 2009**

Sec. 101. Purposes.

Sec. 102. Definitions.

Sec. 103. Integrated Coastal and Ocean Observation System.

- Sec. 104. Financing and agreements.
- Sec. 105. Reports to Congress.
- Sec. 106. Public-private use policy.
- Sec. 107. Repeal of independent cost estimate.
- Sec. 108. Authorization of appropriations.
- Sec. 109. Reports and research plans.
- Sec. 110. Strategic research plan.
- Sec. 111. Stakeholder input on monitoring.
- Sec. 112. Research activities.

TITLE II—NAMED STORM EVENT MODEL AND POST-STORM
ASSESSMENTS

- Sec. 201. Named Storm Event Model and post-storm assessments.

TITLE III—WATER PREDICTION AND FORECASTING

- Sec. 301. Water prediction and forecasting.

1 **TITLE I—REAUTHORIZATION OF**
2 **INTEGRATED COASTAL AND**
3 **OCEAN OBSERVATION SYS-**
4 **TEM ACT OF 2009**

5 **SEC. 101. PURPOSES.**

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

9 **“SEC. 12302. PURPOSES.**

10 “The purposes of this subtitle are—

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

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

9 “(A) to the public;

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

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

22 “(D) to provide easy access to ocean,
23 coastal, and Great Lakes data and promote
24 data sharing between Federal and non-Federal
25 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 to ensure the Nation can respond to op-
6 portunities to enhance food, economic, and na-
7 tional security; and

8 “(F) to monitor and model changes in the
9 oceans and Great Lakes, including with respect
10 to chemistry, harmful algal blooms, hypoxia,
11 water levels, and other phenomena;

12 “(2) to improve the Nation’s capability to meas-
13 ure, track, observe, understand, and predict events
14 related directly and indirectly to weather and cli-
15 mate, natural climate variability, and interactions
16 between the oceanic and atmospheric environments,
17 including the Great Lakes;

18 “(3) to sustain, upgrade, and modernize the
19 Nation’s ocean and Great Lakes observing infra-
20 structure to detect changes and ensure delivery of
21 reliable and timely information; and

22 “(4) to authorize activities—

23 “(A) to promote basic and applied research
24 to develop, test, and deploy innovations and im-
25 provements in coastal and ocean observation

1 technologies, including advanced observing tech-
2 nologies such as unmanned maritime systems
3 needed to address critical data gaps, modeling
4 systems, other scientific and technological capa-
5 bilities to improve the understanding of weather
6 and climate, ocean-atmosphere dynamics, global
7 climate change, and the physical, chemical, and
8 biological dynamics of the ocean, coastal, and
9 Great Lakes environments; and
10 “(B) to conserve healthy and restore de-
11 graded coastal ecosystems.”.

12 **SEC. 102. DEFINITIONS.**

13 Section 12303 of the Integrated Coastal and Ocean
14 Observation System Act of 2009 (33 U.S.C. 3602) is
15 amended—

16 (1) in paragraph (2), by striking “section
17 7902” and inserting “section 8932”;

18 (2) in paragraph (5), by striking “integrated
19 into the System and are managed through States,
20 regional organizations, universities, nongovernmental
21 organizations, or the private sector” and inserting
22 “managed through States, regional organizations,
23 universities, nongovernmental organizations, or the
24 private sector and integrated into the System by a
25 regional coastal observing system, the National Oce-

1 anic and Atmospheric Administration, or the agen-
2 cies participating in the Interagency Ocean Observa-
3 tion Committee”;

4 (3) by amending paragraph (6) to read as fol-
5 lows:

6 “(6) REGIONAL COASTAL OBSERVING SYS-
7 TEM.—The term ‘regional coastal observing system’
8 means an organizational body that is certified or es-
9 tablished by contract or memorandum by the lead
10 Federal agency designated in section 12304(e)(3)
11 and coordinates State, Federal, local, tribal, and pri-
12 vate interests at a regional level with the responsi-
13 bility of engaging the private and public sectors in
14 designing, operating, and improving regional coastal
15 observing systems in order to ensure the provision of
16 data and information that meet the needs of user
17 groups from the respective regions.”; and

18 (4) in paragraph (7), by striking “National
19 Oceanic and Atmospheric Administration” and in-
20 serting “Administrator”.

21 **SEC. 103. INTEGRATED COASTAL AND OCEAN OBSERVA-**
22 **TION SYSTEM.**

23 (a) SYSTEM ELEMENTS.—

24 (1) IN GENERAL.—Section 12304(b) of the In-
25 tegrated Coastal and Ocean Observation System Act

1 of 2009 (33 U.S.C. 3603(b)) is amended by striking
2 paragraph (1) and inserting the following:

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

6 “(A) Federal assets to fulfill national and
7 international observation missions and prior-
8 ities;

9 “(B) non-Federal assets, including a net-
10 work of regional coastal observing systems iden-
11 tified under subsection (c)(4), to fulfill regional
12 and national observation missions and prior-
13 ities;

14 “(C) observing, modeling, data manage-
15 ment, and communication systems for the time-
16 ly integration and dissemination of data and in-
17 formation products from the System, including
18 reviews of data collection procedures across re-
19 gions and programs to make recommendations
20 for data collection standards across the System
21 to meet national ocean, coastal, and Great
22 Lakes observation, applied research, and weath-
23 er forecasting needs;

24 “(D) a product development system to
25 transform observations into products in a for-

1 mat that may be readily used and understood;
2 and

3 “(E) a research and development program
4 conducted under the guidance of the Council,
5 consisting of—

6 “(i) basic and applied research and
7 technology development—

8 “(I) to improve understanding of
9 coastal and ocean systems and their
10 relationships to human activities; and

11 “(II) to ensure improvement of
12 operational assets and products, in-
13 cluding related infrastructure, observ-
14 ing technologies such as unmanned
15 maritime systems, and information
16 and data processing and management
17 technologies;

18 “(ii) an advanced observing tech-
19 nology development program to fill gaps in
20 technology;

21 “(iii) large scale computing resources
22 and research to advance modeling of ocean,
23 coastal, and Great Lakes processes;

1 “(iv) models to improve regional
2 weather forecasting capabilities and re-
3 gional weather forecasting products; and

4 “(v) reviews of data collection proce-
5 dures across regions and programs to
6 make recommendations for data collection
7 standards across the System to meet na-
8 tional ocean, coastal, and Great Lakes ob-
9 servation, applied research, and weather
10 forecasting needs.”.

11 (2) AVAILABILITY OF DATA.—Section
12 12304(b)(3) of such Act (33 U.S.C. 3603(b)(3)) is
13 amended by inserting “for research and for use in
14 the development of products to address societal
15 needs” before the period at the end.

16 (b) POLICY OVERSIGHT, ADMINISTRATION, AND RE-
17 GIONAL COORDINATION.—Section 12304(c) of the Inte-
18 grated Coastal and Ocean Observation System Act of
19 2009 (33 U.S.C. 3603(c)) is amended by striking para-
20 graphs (2), (3), and (4), and inserting the following:

21 “(2) INTERAGENCY OCEAN OBSERVATION COM-
22 MITTEE.—

23 “(A) ESTABLISHMENT.—The Council shall
24 establish or designate a committee, which shall

1 be known as the ‘Interagency Ocean Observa-
2 tion Committee’.

3 “(B) DUTIES.—The Interagency Ocean
4 Observation Committee shall—

5 “(i) prepare annual and long-term
6 plans for consideration and approval by the
7 Council for the integrated design, oper-
8 ation, maintenance, enhancement, and ex-
9 pansion of the System to meet the objec-
10 tives of this subtitle and the System Plan;

11 “(ii) develop and transmit to Con-
12 gress, along with the budget submitted by
13 the President to Congress pursuant to sec-
14 tion 1105(a) of title 31, United States
15 Code, an annual coordinated, comprehen-
16 sive budget—

17 “(I) to operate all elements of
18 the System identified in subsection
19 (b); and

20 “(II) to ensure continuity of data
21 streams from Federal and non-Fed-
22 eral assets;

23 “(iii) establish requirements for obser-
24 vation data variables to be gathered by
25 both Federal and non-Federal assets and

1 identify, in consultation with regional
2 coastal observing systems, priorities for
3 System observations;

4 “(iv) establish and define protocols
5 and standards for System data processing,
6 management, collection, configuration
7 standards, formats, and communication for
8 new and existing assets throughout the
9 System network;

10 “(v) develop contract requirements for
11 each regional coastal observing system—

12 “(I) to establish eligibility for in-
13 tegration into the System;

14 “(II) to ensure compliance with
15 all applicable standards and protocols
16 established by the Council; and

17 “(III) to ensure that regional ob-
18 servations are integrated into the Sys-
19 tem on a sustained basis;

20 “(vi) identify gaps in observation cov-
21 erage or needs for capital improvements of
22 both Federal assets and non-Federal as-
23 sets;

24 “(vii) subject to the availability of ap-
25 propriations, establish through 1 or more

1 Federal agencies participating in the Inter-
2 agency Ocean Observation Committee, in
3 consultation with the System advisory com-
4 mittee established under subsection (d), a
5 competitive matching grant or other pro-
6 grams—

7 “(I) to promote intramural and
8 extramural research and development
9 of new, innovative, and emerging ob-
10 servation technologies including test-
11 ing and field trials; and

12 “(II) to facilitate the migration
13 of new, innovative, and emerging sci-
14 entific and technological advances
15 from research and development to
16 operational deployment;

17 “(viii) periodically—

18 “(I) review the System Plan; and

19 “(II) submit to the Council such
20 recommendations as the Interagency
21 Ocean Observation Committee may
22 have for improvements to the System
23 Plan;

1 “(ix) ensure collaboration among Fed-
2 eral agencies participating in the Inter-
3 agency Ocean Observation Committee; and

4 “(x) perform such additional duties as
5 the Council may delegate.

6 “(3) LEAD FEDERAL AGENCY.—

7 “(A) IN GENERAL.—The National Oceanic
8 and Atmospheric Administration shall function
9 as the lead Federal agency for the implementa-
10 tion and administration of the System.

11 “(B) CONSULTATION REQUIRED.—In car-
12 rying out this paragraph, the Administrator
13 shall consult with the Council, the Interagency
14 Ocean Observation Committee, other Federal
15 agencies that maintain portions of the System,
16 and the regional coastal observing systems.

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

19 “(i) establish and operate an Inte-
20 grated Ocean Observing System Program
21 Office within the National Oceanic and At-
22 mospheric Administration that—

23 “(I) utilizes, to the extent nec-
24 essary, personnel from Federal agen-

1 cies participating in the Interagency
2 Ocean Observation Committee; and

3 “**(II)** oversees daily operations
4 and coordination of the System;

5 “(i) implement policies, protocols,
6 and standards approved by the Council
7 and delegated by the Interagency Ocean
8 Observation Committee;

9 “(iii) promulgate program guide-
10 lines—

11 “(I) to certify and integrate re-
12 gional associations into the System;
13 and

14 “(II) to provide regional coastal
15 and ocean observation data that meet
16 the needs of user groups from the re-
17 spective regions;

18 “(iv) have the authority to enter into
19 and oversee contracts, leases, grants, or co-
20 operative agreements with non-Federal as-
21 sets, including regional coastal observing
22 systems, to support the purposes of this
23 subtitle on such terms as the Adminis-
24 trator deems appropriate;

1 “(v) implement and maintain a merit-
2 based, competitive funding process to sup-
3 port non-Federal assets, including the de-
4 velopment and maintenance of a national
5 network of regional coastal observing sys-
6 tems, and develop and implement a process
7 for the periodic review and evaluation of
8 the regional associations;

9 “(vi) provide opportunities for com-
10 petitive contracts and grants for dem-
11 onstration projects to design, develop, inte-
12 grate, deploy, maintain, and support com-
13 ponents of the System;

14 “(vii) establish and maintain efficient
15 and effective administrative procedures for
16 the timely allocation of funds among con-
17 tractors, grantees, and non-Federal assets,
18 including regional coastal observing sys-
19 tems;

20 “(viii) develop and implement a proc-
21 ess for the periodic review and evaluation
22 of the regional coastal observing systems;

23 “(ix) formulate an annual process by
24 which gaps in observation coverage or
25 needs for capital improvements of Federal

1 assets and non-Federal assets of the Sys-
2 tem are—

3 “(I) identified by the regional as-
4 sociations described in the System
5 Plan, the Administrator, or other
6 members of the System; and

7 “(II) submitted to the Inter-
8 agency Ocean Observation Committee;

9 “(x) develop and be responsible for a
10 data management and communication sys-
11 tem, in accordance with standards and
12 protocols established by the Interagency
13 Ocean Observation Committee, by which
14 all data collected by the System regarding
15 ocean and coastal waters of the United
16 States including the Great Lakes, are proc-
17 essed, stored, integrated, and made avail-
18 able to all end-user communities;

19 “(xi) not less frequently than once
20 each year, submit to the Interagency
21 Ocean Observation Committee a report on
22 the accomplishments, operational needs,
23 and performance of the System to con-
24 tribute to the annual and long-term plans
25 prepared pursuant to paragraph (2)(B)(i);

1 “(xii) develop and periodically update
2 a plan to efficiently integrate into the Sys-
3 tem new, innovative, or emerging tech-
4 nologies that have been demonstrated to be
5 useful to the System and which will fulfill
6 the purposes of this subtitle and the Sys-
7 tem Plan; and

8 “(xiii) work with users and regional
9 associations to develop products to enable
10 real-time data sharing for decision makers,
11 including with respect to weather fore-
12 casting and modeling, search and rescue
13 operations, corrosive seawater forecasts,
14 water quality monitoring and communica-
15 tion, and harmful algal bloom forecasting.

16 “(4) REGIONAL COASTAL OBSERVING SYS-
17 TEMS.—

18 “(A) IN GENERAL.—A regional coastal ob-
19 serving system described in the System Plan as
20 a regional association may not be certified or
21 established under this subtitle unless it—

22 “(i) has been or shall be certified or
23 established by contract or agreement by
24 the Administrator;

25 “(ii) meets—

1 “(I) the certification standards
2 and compliance procedure guidelines
3 issued by the Administrator; and

4 “(II) the information needs of
5 user groups in the region while adher-
6 ing to national standards;

7 “(iii) demonstrates an organizational
8 structure, that under funding limitations is
9 capable of—

10 “(I) gathering required System
11 observation data;

12 “(II) supporting and integrating
13 all aspects of coastal and ocean ob-
14 serving and information programs
15 within a region; and

16 “(III) reflecting the needs of
17 State, local, and tribal governments,
18 commercial interests, and other users
19 and beneficiaries of the System and
20 other requirements specified under
21 this subtitle and the System Plan;

22 “(iv) identifies—

23 “(I) gaps in observation coverage
24 needs for capital improvements of

1 Federal assets and non-Federal assets
2 of the System; and

3 “(II) other recommendations to
4 assist in the development of the an-
5 nual and long-term plans prepared
6 pursuant to paragraph (2)(B)(i) and
7 transmits such information to the
8 Interagency Ocean Observation Com-
9 mittee through the Program Office es-
10 tablished under paragraph (3)(C)(i);

11 “(v) develops and operates under a
12 strategic plan that will ensure the efficient
13 and effective administration of programs
14 and assets to support daily data observa-
15 tions for integration into the System, pur-
16 suant to the standards approved by the
17 Council;

18 “(vi) works cooperatively with govern-
19 mental and nongovernmental entities at all
20 levels to identify and provide information
21 products of the System for multiple users
22 within the service area of the regional
23 coastal observing system; and

24 “(vii) complies with all financial over-
25 sight requirements established by the Ad-

1 administrator, including requirements relat-
2 ing to audits.

3 “(B) PARTICIPATION.—For the purposes
4 of this subtitle, employees of Federal agencies
5 are permitted to be members of the governing
6 body for the regional coastal observing systems
7 and may participate in the functions of the re-
8 gional coastal observing systems.”.

9 (c) SYSTEM ADVISORY COMMITTEE.—Section
10 12304(d) of the Integrated Coastal and Ocean Observa-
11 tion System Act of 2009 (33 U.S.C. 3603(d)) is amend-
12 ed—

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

16 (2) in paragraph (2)—

17 (A) in subparagraph (A), by inserting “,
18 data sharing,” after “data management”;

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

21 (C) by striking subparagraph (D) and in-
22 serting the following:

23 “(D) additional priorities, including—

24 “(i) a national surface current map-
25 ping network designed to improve fine

1 scale sea surface mapping using high fre-
2 quency radar technology and other emerg-
3 ing technologies to address national prior-
4 ities, including Coast Guard search and
5 rescue operation planning and harmful
6 algal bloom forecasting and detection
7 that—

8 “(I) is comprised of existing high
9 frequency radar and other sea surface
10 current mapping infrastructure oper-
11 ated by national programs and re-
12 gional coastal observing systems;

13 “(II) incorporates new high fre-
14 quency radar assets or other fine scale
15 sea surface mapping technology as-
16 sets, and other assets needed to fill
17 gaps in coverage on United States
18 coastlines; and

19 “(III) follows a deployment plan
20 that prioritizes closing gaps in high
21 frequency radar infrastructure in the
22 United States, starting with areas
23 demonstrating significant sea surface
24 current data needs, especially in areas
25 where additional data will improve

1 Coast Guard search and rescue mod-
2 els;

3 “(ii) fleet acquisition for unmanned
4 maritime systems for deployment and data
5 integration to fulfill the purposes of this
6 subtitle;

7 “(iii) an integrative survey program
8 for application of unmanned maritime sys-
9 tems to the real-time or near real-time col-
10 lection and transmission of sea floor, water
11 column, and sea surface data on biology,
12 chemistry, geology, physics, and hydrog-
13 raphy;

14 “(iv) remote sensing and data assimi-
15 lation to develop new analytical methodolo-
16 gies to assimilate data from the System
17 into hydrodynamic models;

18 “(v) integrated, multi-State moni-
19 toring to assess sources, movement, and
20 fate of sediments in coastal regions;

21 “(vi) a multi-region marine sound
22 monitoring system to be—

23 “(I) planned in consultation with
24 the Interagency Ocean Observation
25 Committee, the National Oceanic and

1 Atmospheric Administration, the De-
2 partment of the Navy, and academic
3 research institutions; and

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

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

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

16 (E) in paragraph (4)—

17 (i) in subparagraph (A), by striking
18 “and the Interagency Ocean Observing
19 Committee”; and

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

22 (d) CIVIL LIABILITY.—Section 12304(e) of the Inte-
23 grated Coastal and Ocean Observation System Act of
24 2009 (33 U.S.C. 3603(e)) is amended—

1 (1) by striking “information coordination enti-
2 ty” each place it appears and inserting “coastal ob-
3 serving system”; and

4 (2) by striking “contract, lease, grant, or coop-
5 erative agreement under subsection (c)(3)(D)” and
6 inserting “a memorandum of agreement of certifi-
7 cation under subsection (c)(3)(C)(iii)”.

8 (e) CONFORMING AMENDMENTS.—The Integrated
9 Coastal and Ocean Observation System Act of 2009 (33
10 U.S.C. 3601 et seq.) is amended by striking “regional in-
11 formation coordination entities” each place it appears and
12 inserting “regional coastal observing systems”.

13 **SEC. 104. FINANCING AND AGREEMENTS.**

14 Section 12305(a) of the Integrated Coastal and
15 Ocean Observation System Act of 2009 (33 U.S.C.
16 3604(a)) is amended to read as follows:

17 “(a) IN GENERAL.—The Secretary of Commerce may
18 execute an agreement, on a reimbursable or nonreimburs-
19 able basis, with any State or subdivision thereof, any Fed-
20 eral agency, any public or private organization, or any in-
21 dividual to carry out activities under this subtitle.”.

22 **SEC. 105. REPORTS TO CONGRESS.**

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

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

2 “(a) REQUIREMENT.—Not later than March 30,
3 2022, and every 5 years thereafter, the Administrator
4 shall prepare, and the President acting through the Coun-
5 cil shall approve and transmit to Congress, a report on
6 progress made in implementing this subtitle.

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

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

11 “(2) an evaluation of the effectiveness of the
12 System, including an evaluation of progress made by
13 the Council to achieve the goals identified under the
14 System Plan;

15 “(3) the identification of Federal and non-Fed-
16 eral assets as determined by the Council that have
17 been integrated into the System, including assets es-
18 sential to the gathering of required observation data
19 variables necessary to meet the respective missions
20 of Council agencies;

21 “(4) a review of procurements, planned or initi-
22 ated, by each department or agency represented on
23 the Council to enhance, expand, or modernize the
24 observation capabilities and data products provided
25 by the System, including data management and
26 communication subsystems;

1 “(5) a summary of the existing gaps in observa-
2 tion infrastructure and monitoring data collection,
3 including—

4 “(A) priorities considered by the System
5 advisory committee;

6 “(B) the national sea surface current map-
7 ping network;

8 “(C) coastal buoys;

9 “(D) ocean chemistry monitoring;

10 “(E) marine sound monitoring; and

11 “(F) unmanned maritime systems tech-
12 nology gaps;

13 “(6) an assessment regarding activities to inte-
14 grate Federal and non-Federal assets, nationally and
15 on the regional level, and discussion of the perform-
16 ance and effectiveness of regional coastal observing
17 systems to coordinate regional observation oper-
18 ations;

19 “(7) a description of benefits of the program to
20 users of data products resulting from the System
21 (including the general public, industries, scientists,
22 resource managers, emergency responders, policy
23 makers, and educators);

24 “(8) recommendations, if any, concerning—

25 “(A) modifications to the System; and

1 “(B) funding levels for the System in sub-
2 sequent fiscal years; and

3 “(9) the results of a periodic external inde-
4 pendent programmatic audit of the System.”.

5 **SEC. 106. PUBLIC-PRIVATE USE POLICY.**

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

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

10 “The Council shall maintain a policy that defines
11 processes for making decisions about the roles of the Fed-
12 eral Government, the States, regional coastal observing
13 systems, the academic community, and the private sector
14 in providing to end-user communities environmental infor-
15 mation, products, technologies, and services related to the
16 System. The Administrator shall ensure that the National
17 Oceanic and Atmospheric Administration adheres to the
18 decision making process developed by the Council regard-
19 ing the roles of the Federal Government, the States, the
20 regional coastal observing systems, the academic commu-
21 nity, and the private sector in providing end-user commu-
22 nities environmental information, data products, tech-
23 nologies, and services related to the System.”.

1 **SEC. 107. REPEAL OF INDEPENDENT COST ESTIMATE.**

2 (a) IN GENERAL.—The Integrated Coastal and
3 Ocean Observation System Act of 2009 (33 U.S.C. 3601
4 et seq.) is amended by striking section 12309 (33 U.S.C.
5 3608).

6 (b) TABLE OF CONTENTS AMENDMENT.—The table
7 of contents in section 1(b) of the Omnibus Public Land
8 Management Act of 2009 (Public Law 111–11; 123 Stat.
9 991) is amended by striking the item related to section
10 12309.

11 **SEC. 108. AUTHORIZATION OF APPROPRIATIONS.**

12 Section 12311 of the Integrated Coastal and Ocean
13 Observation System Act of 2009 (33 U.S.C. 3610) is
14 amended to read as follows:

15 **“SEC. 12311. AUTHORIZATION OF APPROPRIATIONS.**

16 “There are authorized to be appropriated to the Sec-
17 retary of Commerce to support the integrated oceans ob-
18 servations under this subtitle—

19 “(1) \$48,000,000 for fiscal year 2021;

20 “(2) \$50,000,000 for fiscal year 2022;

21 “(3) \$52,000,000 for fiscal year 2023;

22 “(4) \$54,000,000 for fiscal year 2024; and

23 “(5) \$56,000,000 for fiscal year 2025.”.

1 **SEC. 109. REPORTS AND RESEARCH PLANS.**

2 Section 12404(c) of the Federal Ocean Acidification
3 Research And Monitoring Act of 2009 (33 U.S.C.
4 3703(c)) is amended by adding at the end the following:

5 “(4) ECONOMIC VULNERABILITY REPORT.—

6 “(A) IN GENERAL.—Not later than 2 years
7 after the date of the enactment of the Coordi-
8 nated Ocean Observations and Research Act of
9 2020, and every 6 years thereafter, the Sub-
10 committee shall transmit to the appropriate
11 committees of Congress a report that—

12 “(i) is named the ‘Ocean Chemistry
13 Coastal Community Vulnerability Assess-
14 ment’;

15 “(ii) identifies gaps in ocean acidifica-
16 tion monitoring by public, academic, and
17 private assets in the network of regional
18 coastal observing systems;

19 “(iii) identifies geographic areas which
20 have gaps in ocean acidification research;

21 “(iv) identifies United States coastal
22 communities, including island communities,
23 fishing communities, low-population rural
24 communities, tribal and subsistence com-
25 munities, and island communities, that
26 may be impacted by ocean acidification;

1 “(v) identifies impacts of changing
2 ocean carbonate chemistry on the commu-
3 nities described in clause (iv), including
4 impacts from changes in ocean and coastal
5 marine resources that are not managed by
6 the Federal Government;

7 “(vi) identifies gaps in understanding
8 of the impacts of ocean acidification on
9 economically or commercially important
10 species, particularly those which support
11 United States commercial, recreational,
12 and tribal fisheries and aquaculture;

13 “(vii) identifies habitats that may be
14 particularly vulnerable to corrosive sea
15 water, including areas experiencing mul-
16 tiple stressors such as hypoxia, sedimenta-
17 tion, and harmful algal blooms;

18 “(viii) identifies areas in which exist-
19 ing National Integrated Coastal and Ocean
20 Observation System assets, including un-
21 manned maritime systems, may be lever-
22 aged as platforms for the deployment of
23 new sensors or other applicable observing
24 technologies;

1 “(ix) is written in collaboration with
2 Federal agencies responsible for carrying
3 out this subtitle, including representatives
4 of—

5 “(I) the National Marine Fish-
6 eries Service and the Office for Coast-
7 al Management of the National Oce-
8 anic and Atmospheric Administration;

9 “(II) regional coastal observing
10 systems established under section
11 12304(c)(4);

12 “(III) regional ocean acidification
13 networks; and

14 “(IV) sea grant programs (as de-
15 fined in section 203 of the National
16 Sea Grant College Program Act (33
17 U.S.C. 1122)); and

18 “(x) is written in consultation with ex-
19 perts, including subsistence users, aca-
20 demia, and stakeholders familiar with the
21 economic, social, ecological, geographic,
22 and resource concerns of coastal commu-
23 nities in the United States.

24 “(B) FORM OF REPORT.—

1 “(i) INITIAL REPORT.—The initial re-
2 port required under subparagraph (A)
3 shall include the information described in
4 clauses (i) through (viii) of that subpara-
5 graph on a national level.

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

9 “(I) may describe the informa-
10 tion described in clauses (i) through
11 (viii) of that subparagraph on a na-
12 tional level; or

13 “(II) may consist of separate re-
14 ports for each region of the National
15 Oceanic and Atmospheric Administra-
16 tion.

17 “(iii) REGIONAL REPORTS.—If the
18 Subcommittee opts to prepare a report re-
19 quired under subparagraph (A) as separate
20 regional reports under clause (ii)(II), the
21 Subcommittee shall submit a report for
22 each region of the National Oceanic and
23 Atmospheric Administration not less fre-
24 quently than once during each 6-year re-
25 porting period.

1 “(C) APPROPRIATE COMMITTEES OF CON-
2 GRESS DEFINED.—In this paragraph and in
3 paragraph (5), the term ‘appropriate commit-
4 tees of Congress’ means the Committee on
5 Commerce, Science, and Transportation of the
6 Senate, the Committee on Science, Space, and
7 Technology of the House of Representatives,
8 and the Committee on Natural Resources of the
9 House of Representatives.

10 “(5) MONITORING PRIORITIZATION PLAN.—Not
11 later than 180 days after the date of the submission
12 of the initial report under paragraph (4)(A), the
13 Subcommittee shall transmit to the appropriate com-
14 mittees of Congress a report that develops a plan to
15 deploy new sensors or other applicable observing
16 technologies such as unmanned maritime systems—

17 “(A) based on such initial report;

18 “(B) prioritized by—

19 “(i) the threat to coastal economies
20 and ecosystems;

21 “(ii) gaps in data; and

22 “(iii) research needs; and

23 “(C) that leverage existing platforms,
24 where possible.”.

1 **SEC. 110. STRATEGIC RESEARCH PLAN.**

2 (a) CONTENTS.—Section 12405(b) of the Federal
3 Ocean Acidification Research And Monitoring Act of 2009
4 (33 U.S.C. 3704(b)) is amended—

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

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

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

10 “(10) make recommendations for research to be
11 conducted, including in the social sciences and eco-
12 nomics, to address the key knowledge gaps identified
13 in the Ocean Chemistry Coastal Community Vulner-
14 ability Assessment conducted under section
15 12404(c)(4).”.

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

20 “(6) Research to understand the combined im-
21 pact of changes in ocean chemistry and other
22 stressors, including sediment delivery, hypoxia, and
23 harmful algal blooms, on each other and on living
24 marine resources, including aquaculture and coastal
25 ecosystems.

1 “(7) Applied research to identify adaptation
2 strategies for species impacted by changes in ocean
3 chemistry including vegetation-based systems, shell
4 recycling, species and genetic diversity, applied tech-
5 nologies, aquaculture methodologies, and manage-
6 ment recommendations.”.

7 (c) PARTICIPATION.—Section 12405(e) of the Fed-
8 eral Ocean Acidification Research And Monitoring Act of
9 2009 (33 U.S.C. 3704(e)) is amended in the first sentence
10 by inserting “, tribal governments, and subsistence users”
11 after “groups”.

12 (d) REVISED STRATEGIC RESEARCH PLAN.—Not
13 later than one year after the date of the enactment of this
14 Act, the Joint Subcommittee on Ocean Science and Tech-
15 nology of the National Science and Technology Council
16 shall submit to Congress a revised strategic research plan
17 under section 12405 of the Federal Ocean Acidification
18 Research And Monitoring Act of 2009 (33 U.S.C. 3704)
19 that includes the matters required by the amendments
20 made by this section.

21 **SEC. 111. STAKEHOLDER INPUT ON MONITORING.**

22 Section 12406(a) of the Federal Ocean Acidification
23 Research And Monitoring Act of 2009 (33 U.S.C.
24 3705(a)) is amended—

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

3 (2) in paragraph (3), by striking the period at
4 the end and inserting “; and”; and

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

6 “(4) includes an ongoing mechanism that allows
7 industry members, coastal stakeholders, fishery
8 management councils and commissions, non-Federal
9 resource managers, community acidification net-
10 works, indigenous knowledge groups, and scientific
11 experts to provide input on monitoring needs that
12 are necessary to support on the ground manage-
13 ment, decision making, and adaptation related to
14 ocean acidification and its impacts.”.

15 **SEC. 112. RESEARCH ACTIVITIES.**

16 Section 12407(a) of the Federal Ocean Acidification
17 Research And Monitoring Act of 2009 (33 U.S.C.
18 3706(a)) is amended to read as follows:

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

1 “(1) impacts on marine organisms, including
2 species cultured for aquaculture, and marine eco-
3 systems;

4 “(2) impacts on ocean, coastal, and estuarine
5 biogeochemistry;

6 “(3) the development of methodologies and
7 technologies to evaluate ocean acidification and its
8 impacts; and

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

13 **TITLE II—NAMED STORM EVENT**
14 **MODEL AND POST-STORM AS-**
15 **SESSMENTS**

16 **SEC. 201. NAMED STORM EVENT MODEL AND POST-STORM**
17 **ASSESSMENTS.**

18 (a) AMENDMENTS TO THE OMNIBUS PUBLIC LAND
19 MANAGEMENT ACT OF 2009.—Section 12312 of the Om-
20 nibus Public Land Management Act of 2009 (33 U.S.C.
21 3611) is amended—

22 (1) in subsection (a)—

23 (A) in paragraph (2), by striking the pe-
24 riod at the end and inserting the following: “,
25 except that the term shall not apply with re-

1 spect to a State or territory that has an oper-
2 ational wind and flood loss allocation system.”;

3 (B) in paragraph (6), by inserting “sus-
4 tained” before “winds”; and

5 (C) in paragraph (7), by striking “that
6 threaten any portion of a coastal State” and in-
7 serting “for which post-storm assessments are
8 conducted”;

9 (2) in subsection (b)—

10 (A) in paragraph (1)—

11 (i) in subparagraph (A)—

12 (I) by striking “540 days after
13 the date of the enactment of the Con-
14 sumer Option for an Alternative Sys-
15 tem to Allocate Losses Act of 2012”
16 and inserting “December 31, 2020”;
17 and

18 (II) by striking “by regulation”;

19 (ii) in subparagraph (B), by striking
20 “every” and inserting “an”; and

21 (iii) by adding at the end the fol-
22 lowing:

23 “(C) PUBLIC REVIEW.—The Administrator
24 shall seek input and suggestions from the public
25 before the Named Storm Event Model, or any

1 modification to the Named Storm Event Model,
2 takes effect.”; and

3 (B) in paragraph (2)—

4 (i) by redesignating subparagraphs
5 (B) and (C) as subparagraphs (D) and
6 (E), respectively;

7 (ii) by inserting after subparagraph
8 (A) the following:

9 “(B) DATA COLLECTION.—

10 “(i) IN GENERAL.—Upon identifica-
11 tion of a named storm under subparagraph
12 (A), and pursuant to the protocol estab-
13 lished under subsection (c), the Adminis-
14 trator may deploy sensors to enhance the
15 collection of covered data in the areas in
16 coastal States that the Administrator de-
17 termines are at the highest risk of experi-
18 encing geophysical events that would cause
19 indeterminate losses.

20 “(ii) RULE OF CONSTRUCTION.—If
21 the Administrator takes action under
22 clause (i), that action may not be con-
23 strued as indicating that a post-storm as-
24 sessment will be developed for any coastal
25 State in which that action is taken.

1 “(C) IDENTIFICATION OF INDETERMINATE
2 LOSSES IN COASTAL STATES.—Not later than
3 30 days after the first date on which sustained
4 winds of not less than 39 miles per hour are
5 measured in a coastal State during a named
6 storm identified under subparagraph (A), the
7 Secretary of Homeland Security shall notify the
8 Administrator with respect to the existence of
9 any indeterminate losses in that coastal State
10 resulting from that named storm.”;

11 (iii) in subparagraph (D), as so reded-
12 ignated—

13 (I) by striking “identification of
14 a named storm under subparagraph
15 (A)” and inserting “confirmation of
16 indeterminate losses identified under
17 subparagraph (C) with respect to a
18 named storm”; and

19 (II) by striking “assessment for
20 such named storm” and inserting “as-
21 sessment for each coastal State that
22 suffered such indeterminate losses as
23 a result of the named storm”;

24 (iv) in subparagraph (E), as so reded-
25 ignated—

1 (I) by striking “an identification
2 of a named storm is made under sub-
3 paragraph (A)” and inserting “any in-
4 determinate losses are identified
5 under subparagraph (C)”;

6 (II) by striking “for such storm
7 under subparagraph (B)” and insert-
8 ing “under subparagraph (D) for any
9 coastal State that suffered such inde-
10 terminate losses”; and

11 (v) by adding at the end the following:

12 “(F) SEPARATE POST-STORM ASSESS-
13 MENTS FOR A SINGLE NAMED STORM.—

14 “(i) IN GENERAL.—The Administrator
15 may conduct a separate post-storm assess-
16 ment for each coastal State in which inde-
17 terminate losses are identified under sub-
18 paragraph (C).

19 “(ii) TIMELINE.—If the Administrator
20 conducts a separate post-storm assessment
21 under clause (i), the Administrator shall
22 complete the assessment based on the
23 dates of actions that the Administrator
24 takes under subparagraph (D).”;

25 (3) in subsection (c)—

1 (A) in paragraph (1), by striking “540
2 days after the date of the enactment of the
3 Consumer Option for an Alternative System to
4 Allocate Losses Act of 2012” and inserting
5 “December 31, 2020”;

6 (B) in paragraph (2), by inserting “, in the
7 discretion of the Administrator,” after “of sen-
8 sors as may”; and

9 (C) in paragraph (4)(B), by inserting “and
10 expend” after “receive”.

11 (b) AMENDMENTS TO THE NATIONAL FLOOD INSUR-
12 ANCE ACT OF 1968.—Section 1337 of the National Flood
13 Insurance Act of 1968 (42 U.S.C. 4057) is amended—

14 (1) in subsection (a)—

15 (A) in paragraph (3), by striking the pe-
16 riod at the end and inserting the following: “,
17 except that the term shall not apply with re-
18 spect to a State or territory that has an oper-
19 ational wind and flood loss allocation system.”;
20 and

21 (B) in paragraph (5), by inserting “sus-
22 tained” after “maximum”;

23 (2) in subsection (b)—

1 (A) in paragraph (1), by striking “estab-
2 lish by rule” and inserting “publish for com-
3 ment in the Federal Register”; and

4 (B) in paragraph (2)(B), by inserting after
5 “Elevation Certificate” the following: “, or
6 other data or information used to determine a
7 property’s current risk of flood, as determined
8 by the Administrator.”;

9 (3) in subsection (c)(3)(A)(i), by striking “the
10 issuance of the rule establishing the COASTAL For-
11 mula” and inserting “publication of the COASTAL
12 Formula in the Federal Register as required by sub-
13 section (b)(1)”;

14 (4) in subsection (d), by striking “section
15 12312(b)(2)(C)” and inserting “section
16 12312(b)(2)(E)”;

17 (5) in subsection (h)—

18 (A) by inserting “that issues a standard
19 flood insurance policy under the national flood
20 insurance program” after “company”; and

21 (B) by striking “or the COASTAL For-
22 mula” and inserting “, the COASTAL For-
23 mula, or any other loss allocation or post-storm
24 assessment arising under the laws or ordinances
25 of any State”;

1 (6) in subsection (i), by striking “after the date
2 on which the Administrator issues the rule estab-
3 lishing the COASTAL Formula under subsection
4 (b)” and inserting “60 days after publication of the
5 COASTAL Formula in the Federal Register as re-
6 quired by subsection (b)(1)”; and

7 (7) by adding at the end the following:

8 “(k) RULE OF CONSTRUCTION.—Nothing in this sec-
9 tion shall be construed to create a cause of action under
10 this Act.”.

11 **TITLE III—WATER PREDICTION** 12 **AND FORECASTING**

13 **SEC. 301. WATER PREDICTION AND FORECASTING.**

14 (a) NATIONAL WATER CENTER.—

15 (1) ESTABLISHMENT.—

16 (A) IN GENERAL.—The Under Secretary of
17 Commerce for Oceans and Atmosphere shall es-
18 tablish a center—

19 (i) to serve as the research and oper-
20 ational center of excellence for hydrologic
21 analyses, forecasting, and related decision
22 support services within the National Oce-
23 anic and Atmospheric Administration and
24 the National Weather Service; and

1 (ii) to facilitate collaboration across
2 Federal and State departments and agen-
3 cies, academia, and the private sector on
4 matters relating to water resources.

5 (B) DESIGNATION.—The center estab-
6 lished under subparagraph (A) shall be known
7 as the “National Water Center”.

8 (2) FUNCTIONS.—The functions of the National
9 Water Center shall include the following:

10 (A) Improving understanding of water re-
11 sources, stakeholder needs regarding water re-
12 sources, and identifying science and services
13 gaps relating to water resources.

14 (B) Developing and implementing ad-
15 vanced water resources modeling capabilities.

16 (C) Facilitating the transition of hydro-
17 logic research into operations.

18 (D) Delivering analyses, forecasts, and in-
19 undation information and guidance for all hy-
20 drologic events in the United States, including
21 flash flooding, riverine flooding, and water re-
22 sources outlooks.

23 (E) In coordination with warning coordina-
24 tion meteorologists, providing decision-support

1 services to inform emergency management and
2 water resources decisions.

3 (b) NATIONAL INSTRUCTIONS.—

4 (1) IN GENERAL.—Not later than one year
5 after the date of the enactment of this Act, the
6 Under Secretary, acting through the Director of the
7 National Weather Service, shall make public an op-
8 erations and services policy directive for the Na-
9 tional Water Center.

10 (2) CONTENTS.—The directive required by
11 paragraph (1) shall include national instructions to
12 perform the functions of the National Water Center,
13 including the following:

14 (A) Operational staff responsibilities.

15 (B) Guidelines for content, format, and
16 provision of hydrologic and inundation products
17 developed by the National Water Center.

18 (C) Procedures for cooperation and coordi-
19 nation between the National Water Center, the
20 National Weather Service National Centers for
21 Environmental Prediction, National Weather
22 Service River Forecast Centers, and National
23 Weather Service Weather Forecast Offices.

1 (c) TOTAL WATER PREDICTION.—The Under Sec-
2 retary, acting through the Director of the Office of Water
3 Prediction of the National Weather Service, shall—

4 (1) initiate and lead research and development
5 activities to develop operational water resource pre-
6 diction and related decision support products;

7 (2) collaborate with, and provide decision sup-
8 port regarding total water prediction to—

9 (A) the relevant Federal agencies rep-
10 resented on the National Science and Tech-
11 nology Council, Committee on Environment,
12 Natural Resources, and Sustainability and the
13 Subcommittee on Disaster Reduction;

14 (B) State water resource agencies; and

15 (C) State and local emergency manage-
16 ment agencies; and

17 (3) in carrying out the responsibilities described
18 in paragraphs (1) and (2), collaboratively develop
19 capabilities necessary for total water predictive ca-
20 pacity, including observations, modeling, data man-
21 agement, supercomputing, social science, and com-
22 munications.

23 (d) AUTHORIZATION OF APPROPRIATIONS.—There
24 are authorized to be appropriated to carry out the activi-
25 ties under this section amounts as follows:

1 (1) \$44,500,000 for fiscal year 2021.

2 (2) \$45,000,000 for fiscal year 2022.

3 (3) \$45,500,000 for fiscal year 2023.

4 (4) \$46,000,000 for fiscal year 2024.

5 (e) DERIVATION OF FUNDS.—Funds to carry out this
6 section shall be derived from amounts authorized to be ap-
7 propriated to the National Weather Service and the Na-
8 tional Ocean Service that are enacted after the date of
9 the enactment of this Act.

Passed the Senate July 30, 2020.

Attest:

Secretary.

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116TH CONGRESS
2^D SESSION
S. 914

AN ACT

To reauthorize the Integrated Coastal and Ocean Observation System Act of 2009, to clarify the authority of the Administrator of the National Oceanic and Atmospheric Administration with respect to post-storm assessments, and to require the establishment of a National Water Center, and for other purposes.