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To develop and maintain an integrated system of coastal and ocean observations for the Nation's coasts, oceans, and Great Lakes, to improve warnings of tsunami, hurricanes, El Niño events, and other natural hazards, to enhance homeland security, to support maritime operations, to improve management of coastal and marine resources, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JANUARY 8, 2009

Ms. SNOWE (for herself, Ms. CANTWELL, Mr. INOUE, Mr. ROCKEFELLER, Ms. LANDRIEU, Mr. KERRY, Mrs. BOXER, Mr. REED, Ms. COLLINS, and Mr. NELSON of Florida) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To develop and maintain an integrated system of coastal and ocean observations for the Nation's coasts, oceans, and Great Lakes, to improve warnings of tsunami, hurricanes, El Niño events, and other natural hazards, to enhance homeland security, to support maritime operations, to improve management of coastal and marine resources, 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.**

2 This Act may be cited as the “Coastal and Ocean
3 Observation System Act of 2009”.

4 **SEC. 2. FINDINGS AND PURPOSES.**

5 (a) FINDINGS.—Congress finds the following:

6 (1) The United States Commission on Ocean
7 Policy recommends a national commitment to a sus-
8 tained and integrated coastal and ocean observing
9 system and to coordinated research programs which
10 would provide vital information to assist the Nation
11 and the world in understanding, monitoring, and
12 predicting changes to the ocean and coastal re-
13 sources and the global climate system, enhancing
14 homeland security, improving weather and climate
15 forecasts, strengthening management and sustain-
16 able use of coastal and ocean resources, improving
17 the safety and efficiency of maritime operations, and
18 mitigating the impacts of marine hazards.

19 (2) The continuing and potentially devastating
20 threat posed by tsunami, hurricanes, storm surges,
21 and other marine hazards requires immediate imple-
22 mentation of strengthened observation and commu-
23 nications, and data management systems to provide
24 timely detection, assessment, and warnings and to
25 support response strategies for the millions of people

1 living in coastal regions of the United States and
2 throughout the world.

3 (3) Safeguarding homeland security, conducting
4 search and rescue operations, responding to natural
5 and manmade coastal hazards (such as oil spills and
6 harmful algal blooms), and managing fisheries and
7 other coastal activities each require improved under-
8 standing and monitoring of the Nation's waters,
9 coastlines, ecosystems, and resources, including the
10 ability to provide rapid response teams with real-
11 time environmental conditions necessary for their
12 work.

13 (4) The 95,000-mile coastline of the United
14 States, including the Great Lakes, is vital to the Na-
15 tion's prosperity, contributing over \$117 billion to
16 the national economy in 2000, supporting jobs for
17 more than 200 million Americans, handling \$700
18 billion in waterborne commerce, and supporting com-
19 mercial and sport fisheries valued at more than \$50
20 billion annually.

21 (5) Ensuring the effective implementation of
22 National and State programs to protect unique
23 coastal and ocean habitats, such as wetlands and
24 coral reefs, and living marine resources requires a
25 sustained program of research and monitoring to

1 understand these natural systems and detect
2 changes that could jeopardize their long term viabil-
3 ity.

4 (6) Many elements of a coastal and ocean ob-
5 serving system are in place, but require national in-
6 vestment, consolidation, completion, and integration
7 among international, Federal, regional, State, and
8 local elements.

9 (7) In 2003, the United States led more than
10 50 nations in affirming the vital importance of time-
11 ly, reliable, long-term global observations as a basis
12 for sound decision-making, recognizing the contribu-
13 tion of observation systems to meet national, re-
14 gional, and global needs, and calling for strength-
15 ened cooperation and coordination in establishing a
16 Global Earth Observation System of Systems, of
17 which an integrated coastal and ocean observing sys-
18 tem is an essential part.

19 (8) Protocols and reporting for observations,
20 measurements, and other data collection for a coast-
21 al and ocean observing system should be standard-
22 ized to facilitate data use and dissemination.

23 (9) Key variables, including temperature, salin-
24 ity, sea level, surface currents, ocean color, nutri-
25 ents, and variables, such as acidity, that may indi-

1 cate the occurrence and impacts of ocean acidifica-
2 tion, should be collected to address a variety of in-
3 formational needs.

4 (b) PURPOSES.—The purposes of this Act are to es-
5 tablish an integrated national system of ocean, coastal,
6 and Great Lakes observing systems to address regional
7 and national needs for ocean information and to provide
8 for—

9 (1) the planning, development, implementation,
10 and maintenance of an integrated coastal and ocean
11 observing system that provides data and information
12 to sustain and restore healthy marine, coastal, and
13 Great Lakes ecosystems and manage the resources
14 they support, aid marine navigation safety and na-
15 tional security, support economic development, en-
16 able advances in scientific understanding of the
17 oceans and the Great Lakes, and strengthen science
18 education and communication;

19 (2) implementation of research, development,
20 education, and outreach programs to improve under-
21 standing of the marine environment and achieve the
22 full national benefits of an integrated coastal and
23 ocean observing system;

24 (3) implementation of a data, information man-
25 agement, and modeling system required by all com-

1 ponents of an integrated coastal and ocean observing
2 system and related research to develop early warning
3 systems to more effectively predict and mitigate im-
4 pacts of natural hazards, improve weather and cli-
5 mate forecasts, conserve healthy and restore de-
6 graded coastal ecosystems, and ensure usefulness of
7 data and information for users; and

8 (4) establishment of a network of regional asso-
9 ciations to operate and maintain regional coastal
10 and ocean observing systems to ensure fulfillment of
11 national objectives at regional scales and to address
12 State and local needs for ocean information and
13 data products.

14 **SEC. 3. DEFINITIONS.**

15 In this Act:

16 (1) ADMINISTRATOR.—The term “Adminis-
17 trator” means Administrator of the National Oce-
18 anic and Atmospheric Administration.

19 (2) COUNCIL.—The term “Council” means the
20 National Ocean Research Leadership Council estab-
21 lished by section 7902 of title 10, United States
22 Code.

23 (3) INTERAGENCY OCEAN OBSERVATION COM-
24 MITTEE.—The term “Interagency Ocean Observa-

1 tion Committee” means the committee established
2 under section 4(d).

3 (4) NATIONAL OCEANOGRAPHIC PARTNERSHIP
4 PROGRAM.—The term “National Oceanographic
5 Partnership Program” means the program estab-
6 lished under section 7901 of title 10, United States
7 Code.

8 (5) OBSERVING SYSTEM.—The term “observing
9 system” means the integrated coastal, ocean, and
10 Great Lakes observing system to be established by
11 the Council under section 4(a).

12 (6) SECRETARY.—The term “Secretary” means
13 the Secretary of Commerce, acting through the Na-
14 tional Oceanic and Atmospheric Administration.

15 **SEC. 4. INTEGRATED COASTAL AND OCEAN OBSERVING**
16 **SYSTEM.**

17 (a) ESTABLISHMENT.—The President, acting
18 through the Council, shall establish and maintain an inte-
19 grated system of coastal and ocean observations, data
20 communication and management, analysis, modeling, re-
21 search, education, and outreach designed to understand
22 current conditions and provide data and information for
23 the timely detection and prediction of changes occurring
24 in the ocean, coastal and Great Lakes environments that
25 impact the Nation’s social, economic, and ecological sys-

1 tems. The observing system shall provide for long-term,
2 continuous and quality-controlled observations of the Na-
3 tion's coasts, oceans, and Great Lakes in order to—

4 (1) understand the effects of human activities
5 and natural variability on and improve the health of
6 the Nation's coasts, oceans, and Great Lakes;

7 (2) monitor key variables including tempera-
8 ture, salinity, sea level, surface currents, ocean color,
9 nutrients, and variables, such as acidity, that may
10 indicate the occurrence and impacts of ocean acidifi-
11 cation;

12 (3) measure, track, explain, and predict climatic
13 and environmental changes and protect human lives
14 and livelihoods from hazards such as tsunami, hurri-
15 canes, storm surges, coastal erosion, levy breaches,
16 and fluctuating water levels;

17 (4) supply critical information to marine-related
18 businesses such as marine transportation, aqua-
19 culture, fisheries, and offshore energy production
20 and aid marine navigation and safety;

21 (5) support national defense and homeland se-
22 curity efforts;

23 (6) support the sustainable use, conservation,
24 management, and enjoyment of healthy ocean, coast-
25 al, and Great Lakes resources, better understand the

1 interactions of ocean processes within the coastal
2 zone, and support implementation and refinement of
3 ecosystem-based management and restoration;

4 (7) support the protection of critical coastal
5 habitats, such as coral reefs and wetlands, and
6 unique ecosystems and resources;

7 (8) educate the public about the role and im-
8 portance of the oceans, coasts, and Great Lakes in
9 daily life; and

10 (9) support research and development to ensure
11 improvement to ocean, coastal, and Great Lakes ob-
12 servation measurements and to enhance under-
13 standing of the Nation's ocean, coastal, and Great
14 Lakes resources.

15 (b) SYSTEM ELEMENTS.—In order to fulfill the pur-
16 poses of this Act, the observing system shall consist of the
17 following program elements:

18 (1) A national program to fulfill national and
19 international observation priorities.

20 (2) A network of regional associations to man-
21 age the regional coastal and ocean observing and in-
22 formation programs that collect, measure, and dis-
23 seminate data and information products.

24 (3) Data management, communication, and
25 modeling systems for the timely integration and dis-

1 semination of data and information products from
2 the national and regional systems.

3 (4) A research and development program con-
4 ducted under the guidance of the Council, including
5 projects under the National Oceanographic Partner-
6 ship Program, consisting of the following:

7 (A) Basic research to advance knowledge
8 of coastal and ocean systems and ensure im-
9 provement of operational products, including re-
10 lated infrastructure, observing technology, and
11 information technology.

12 (B) Focused research and technology de-
13 velopment projects to improve understanding of
14 the relationship between the coasts and oceans
15 and human activities.

16 (C) Large scale computing resources and
17 research to advance modeling of coastal and
18 ocean processes.

19 (5) A coordinated outreach, education, and
20 training program that integrates and augments ex-
21 isting programs (such as the National Sea Grant
22 College Program, the Centers for Ocean Sciences
23 Education Excellence program, and the National Es-
24 tuarine Research Reserve System), to ensure the use
25 of data and information for improving public edu-

1 cation and awareness of the Nation's coastal and
2 ocean environment and building the technical exper-
3 tise required to operate and improve the observing
4 system.

5 (c) COUNCIL FUNCTIONS.—The Council shall serve
6 as the oversight body for the design and implementation
7 of all aspects of the observing system. In carrying out its
8 responsibilities under this section, the Council shall—

9 (1) adopt plans, budgets, and standards that
10 are developed and maintained by the Interagency
11 Ocean Observation Committee in consultation with
12 the regional associations;

13 (2) coordinate the observing system with other
14 earth observing activities including the Global Ocean
15 Observing System and the Global Earth Observing
16 System of Systems;

17 (3) coordinate and approve programs of intra-
18 mural and extramural research, technology develop-
19 ment, education, and outreach to support improve-
20 ments to and the operation of an integrated coastal
21 and ocean observing system and to advance the un-
22 derstanding of the oceans;

23 (4) promote development of technology and
24 methods for improving the observing system;

1 (5) support the development of institutional
2 mechanisms and financial instruments to further the
3 goals of the program and provide for the capitaliza-
4 tion of the required infrastructure;

5 (6) provide, as appropriate, support for and
6 representation on United States delegations to inter-
7 national meetings on coastal and ocean observing
8 programs, including those under the jurisdiction of
9 the International Joint Commission involving Cana-
10 dian waters; and

11 (7) in consultation with the Secretary of State,
12 support coordination of relevant Federal activities
13 with those of other nations.

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

16 (1) ESTABLISHMENT.—The Council shall estab-
17 lish an Interagency Ocean Observation Committee.

18 (2) RESPONSIBILITIES.—The Interagency
19 Ocean Observing Committee shall be responsible for
20 program planning and coordination of the implemen-
21 tation of the observing system.

22 (3) DUTIES.—The Interagency Ocean Observ-
23 ing Committee shall report to the Council and
24 shall—

1 (A) prepare annual and long-term plans
2 for consideration and approval by the Council
3 for the design and implementation of the ob-
4 serving system that promote collaboration
5 among Federal agencies and regional associa-
6 tions in developing global, national, and re-
7 gional observing systems, including identifica-
8 tion and refinement of a core set of variables to
9 be measured by all systems;

10 (B) coordinate the development of agency
11 and regional associations priorities and budgets
12 to implement, operate, and maintain the observ-
13 ing systems;

14 (C) establish and refine standards and pro-
15 tocols for data collection, management and
16 communications, including quality control
17 standards, in consultation with participating
18 Federal agencies and regional associations;

19 (D) establish a process for assuring com-
20 pliance for all participating entities with the
21 standards and protocols for data management
22 and communications, including quality control
23 standards;

24 (E) integrate, improve, and extend existing
25 programs and research projects, and ensure

1 that regional associations are integrated into
2 the operational observation system on a sus-
3 tained basis;

4 (F) provide for the migration of scientific
5 and technological advances from research and
6 development to operational deployment; and

7 (G) perform such duties as the Council
8 may delegate.

9 (4) IMPLEMENTATION.—There is established an
10 Interagency Program Coordinating Office. The Of-
11 fice shall be—

12 (A) located in, but is not an office of, the
13 Department of Commerce; and

14 (B) staffed by employees of agencies rep-
15 resented on the Interagency Ocean Observation
16 Committee, to facilitate the Interagency Ocean
17 Observation Committee’s responsibilities for
18 system implementation, budgeting, and admin-
19 istration.

20 (e) ROLE OF NOAA.—The National Oceanic and At-
21 mospheric Administration shall provide leadership for the
22 implementation and administration of the observing sys-
23 tem, in consultation with the Council, the Interagency
24 Ocean Observation Committee, other Federal agencies

1 that maintain portions of the observing system and the
2 regional associations, and shall—

3 (1) establish an Integrated Ocean Observing
4 Program Office to facilitate action under the Admin-
5 istration’s leadership;

6 (2) implement a merit-based funding process to
7 support the activities of regional associations;

8 (3) provide opportunities for competitive con-
9 tracts and grants to design, develop, integrate, de-
10 ploy, and support ocean observation system ele-
11 ments;

12 (4) have the authority to enter into and per-
13 form such contracts, leases, grants, or cooperative
14 agreements as may be necessary to carry out the
15 purposes of this Act and on such terms as the Ad-
16 ministrator deems appropriate;

17 (5) establish efficient and effective administra-
18 tive procedures for allocation of funds among con-
19 tractors, grantees, and regional associations in a
20 timely manner, and contingent on appropriations ac-
21 cording to the budget adopted by the Council;

22 (6) develop and implement a process for the
23 certification and assimilation into the national ocean
24 observations network of the regional associations
25 and their periodic review and recertification and cer-

1 tify regional associations that meet the requirements
2 of subsection (f); and

3 (7) develop a data management and commu-
4 nication system, in accordance with the established
5 standards and protocols, by which all data collected
6 by the observing system regarding coastal waters of
7 the United States are integrated and available.

8 (f) REGIONAL ASSOCIATIONS OF COASTAL AND
9 OCEAN OBSERVING SYSTEMS.—

10 (1) The Secretary shall initiate a rulemaking
11 proceeding to establish a process for the certification
12 of regional associations to be responsible for the de-
13 velopment and operation of regional coastal and
14 ocean observing systems to meet the information
15 needs of user groups in the region while adhering to
16 national standards. To be certified a regional asso-
17 ciation shall meet the certification standards devel-
18 oped by the Interagency Ocean Observing Com-
19 mittee in conjunction with the regional associations
20 and approved by the Council and shall—

21 (A) demonstrate an organizational struc-
22 ture capable of supporting and integrating all
23 aspects of coastal and ocean observing and in-
24 formation programs within a region and that
25 reflects broad representation from State and

1 local government, commercial interests, and
2 other users and beneficiaries of marine informa-
3 tion;

4 (B) operate under a strategic operations
5 and business plan that details the operation and
6 support of regional coastal and ocean observing
7 systems pursuant to the standards approved by
8 the Council; and

9 (C) work with governmental entities and
10 programs at all levels to identify and provide in-
11 formation products of the observing system for
12 multiple users in the region to advance outreach
13 and education, to improve coastal and fishery
14 management, safe and efficient marine naviga-
15 tion, weather and climate prediction, to enhance
16 preparation for hurricanes, tsunami, and other
17 natural hazards, and other appropriate activi-
18 ties.

19 (2) For the purposes of this Act, employees of
20 Federal agencies may participate in the functions of
21 the regional associations.

22 (g) CIVIL LIABILITY.—For purposes of section
23 1346(b)(1) and chapter 171 of title 28, United States
24 Code, the Suits in Admiralty Act (46 U.S.C. App. 741
25 et seq.), and the Public Vessels Act (46 U.S.C. App. 781

1 et seq.), any regional coastal and ocean observing system
2 that is a designated part of a regional association certified
3 under this section shall, with respect to tort liability arising
4 from the dissemination and use of the data, in carrying out
5 the purposes of this Act, be deemed to be part
6 of the National Oceanic and Atmospheric Administration,
7 and any employee of such system, while operating within
8 the scope of his or her employment in carrying out such
9 purposes, shall be deemed to be an employee of the Government.
10

11 **SEC. 5. PROCESS FOR TRANSITION FROM RESEARCH TO**
12 **OPERATION.**

13 The National Oceanic and Atmospheric Administration,
14 in consultation with the Council, shall formulate a
15 process by which—

16 (1) funding is made available for intramural
17 and extramural research on new technologies for collecting
18 data regarding coastal and ocean waters of
19 the United States;

20 (2) such technologies are tested including—

21 (A) accelerated research into biological and
22 chemical sensing techniques and satellite sensors for
23 collecting such data; and

24 (B) developing technologies to improve all
25 aspects of the observing system, especially the

1 timeliness and accuracy of its predictive models
2 and the usefulness of its information products;
3 and

4 (3) funding is made available and a plan is de-
5 veloped and executed to transition technology that
6 has been demonstrated to be useful for the observing
7 system is incorporated into use by the observing sys-
8 tem.

9 **SEC. 6. INTERAGENCY FINANCING.**

10 The departments and agencies represented on the
11 Council are authorized to participate in interagency fi-
12 nancing and share, transfer, receive, obligate, and expend
13 funds appropriated to any member of the Council for the
14 purposes of carrying out any administrative or pro-
15 grammatic project or activity under this Act or under the
16 National Oceanographic Partnership Program, including
17 support for the Interagency Oceans Observation Com-
18 mittee, a common infrastructure, and system integration
19 for a coastal and ocean observing system. Funds may be
20 transferred among such departments and agencies
21 through an appropriate instrument that specifies the
22 goods, services, or space being acquired from another
23 Council member and the costs of the same.

1 **SEC. 7. APPLICATION WITH OTHER LAWS.**

2 Nothing in this Act supersedes or limits the authority
3 of any agency to carry out its responsibilities and missions
4 under other laws.

5 **SEC. 8. AUTHORIZATION OF APPROPRIATIONS.**

6 There are authorized to be appropriated to the Na-
7 tional Oceanic and Atmospheric Administration for the
8 implementation of this Act, \$150,000,000 for each of fis-
9 cal years 2009 through 2011 and \$175,000,000 for each
10 of fiscal years 2012 and 2013. At least 50 percent of these
11 sums shall be allocated to the regional associations cer-
12 tified under section 4(f) for implementation of regional
13 coastal and ocean observing systems.

14 **SEC. 9. IMPLEMENTATION PLAN.**

15 Not later than 12 months after the date of the enact-
16 ment of this Act, the Secretary shall submit to the Con-
17 gress and the Council a plan for implementation of this
18 Act, including for—

19 (1) coordinating activities of the Secretary
20 under this Act with other Federal agencies; and

21 (2) distributing, to regional associations, funds
22 available to carry out this Act.

23 **SEC. 10. REPORT TO CONGRESS.**

24 (a) REQUIREMENT.—Not later than 2 years after the
25 date of the enactment of this Act and every 2 years there-
26 after, the Administrator shall prepare and the President

1 acting through the Council shall approve and transmit to
2 the Congress a report on progress made in implementing
3 this Act.

4 (b) CONTENTS.—The report shall include the fol-
5 lowing:

6 (1) A description of activities carried out under
7 the implementation plan and this Act.

8 (2) An evaluation of the effectiveness of the ob-
9 serving system.

10 (3) Benefits of the program to users of data
11 products resulting from the observing system (in-
12 cluding the general public, industry, scientists, re-
13 source managers, emergency responders, policy mak-
14 ers, and educators).

15 (4) Recommendations concerning—

16 (A) modifications to the observing system;

17 and

18 (B) funding levels for the observing system
19 in subsequent fiscal years.

20 (5) The results of a periodic external inde-
21 pendent programmatic audit of the observing sys-
22 tem.

○