

111TH CONGRESS  
1ST SESSION

# S. 171

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 tsunamis, 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.

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## 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

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## 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 tsunamis, 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 viability.  
3

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

8 (7) In 2003, the United States led more than  
9 50 nations in affirming the vital importance of timely, reliable, long-term global observations as a basis  
10 for sound decision-making, recognizing the contribution of observation systems to meet national, regional, and global needs, and calling for strengthened cooperation and coordination in establishing a  
11 Global Earth Observation System of Systems, of  
12 which an integrated coastal and ocean observing system is an essential part.  
13

14 (8) Protocols and reporting for observations, measurements, and other data collection for a coastal and ocean observing system should be standardized to facilitate data use and dissemination.  
15

16 (9) Key variables, including temperature, salinity, sea level, surface currents, ocean color, nutrients, 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-

ponents of an integrated coastal and ocean observing system and related research to develop early warning systems to more effectively predict and mitigate impacts of natural hazards, improve weather and climate forecasts, conserve healthy and restore degraded coastal ecosystems, and ensure usefulness of data and information for users; and

(4) establishment of a network of regional associations to operate and maintain regional coastal and ocean observing systems to ensure fulfillment of national objectives at regional scales and to address State and local needs for ocean information and data products.

### **SEC. 3. DEFINITIONS.**

In this Act:

(1) ADMINISTRATOR.—The term “Administrator” means Administrator of the National Oceanic and Atmospheric Administration.

(2) COUNCIL.—The term “Council” means the National Ocean Research Leadership Council established by section 7902 of title 10, United States Code.

(3) INTERAGENCY OCEAN OBSERVATION COMMITTEE.—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 aris-  
 4 ing from the dissemination and use of the data, in car-  
 5 rying out 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 Gov-  
 10 ernment.

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

13 The National Oceanic and Atmospheric Administra-  
 14 tion, 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 col-  
 18 lecting 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 sen-  
 23 sors for 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.

○