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[Report No. 108–171]

To develop a system that provides for ocean and coastal observations, to implement a research and development program to enhance security at United States ports, to implement a data and information system required by all components of an integrated ocean observing system and related research, and for other purposes.

IN THE SENATE OF THE UNITED STATES

JULY 14, 2003

Ms. SNOWE (for herself, Mr. KERRY, Mr. MCCAIN, Mr. HOLLINGS, Mr. INOUE, Mr. BREAUX, Ms. COLLINS, Mr. LOTT, and Mrs. BOXER) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

OCTOBER 23, 2003

Reported by Mr. MCCAIN, with an amendment

[Strike all after the enacting clause and insert the part printed in italic]

A BILL

To develop a system that provides for ocean and coastal observations, to implement a research and development program to enhance security at United States ports, to implement a data and information system required by all components of an integrated ocean observing system and related research, 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.**

4 This Act may be cited as the “Ocean Observation and
5 Coastal Systems Act”.

6 **SEC. 2. FINDINGS AND PURPOSES.**

7 ~~(a) FINDINGS.—~~The Congress finds the following:

8 (1) The 95,000-mile coastline of the United
9 States is vital to the Nation’s homeland security;
10 transportation, trade, environmental and human
11 health, recreation and tourism, food production, sci-
12 entific research and education, historical and cul-
13 tural heritage, and energy production.

14 (2) More than half the Nation’s population lives
15 and works in coastal communities that together
16 make up 11 percent of its land and its most eco-
17 logically and economically important regions, sup-
18 porting approximately 190 sea ports, containing
19 most of our largest cities, and providing access to
20 coastal waters rich in natural resources.

21 (3) More than 95 percent of the Nation’s trade
22 moves by sea and nearly half of all goods, including
23 energy products, carried in maritime commerce are
24 hazardous materials.

1 (4) The rich biodiversity of marine organisms
2 provides society with essential food resources, a
3 promising source of marine products with commer-
4 cial and medical potential, and an important con-
5 tribution to the national economy.

6 (5) The oceans drive climate and weather fac-
7 tors causing severe weather events and threatening
8 the health of coastal ecosystems and communities by
9 creating or affecting both natural and man-made
10 coastal hazards such as hurricanes, tsunamis, ero-
11 sion, oil spills, harmful algal blooms, and pollution,
12 which can pose threats to human health.

13 (6) Each year, the United States Coast Guard
14 relies on ocean information to save 4,380 people,
15 conducts over 65,000 rescue missions, and carries
16 out more than 11,680 environmental cleanups and
17 responses to pollution.

18 (7) Safeguarding homeland security requires
19 improved monitoring of the Nation's ports and
20 coastline, including the ability to track vessels and
21 to provide rapid response teams with real-time envi-
22 ronmental conditions necessary for their work.

23 (8) Advances in ocean technologies and sci-
24 entific understanding have made possible long-term

1 and continuous observation from space and in situ
2 of ocean characteristics and conditions.

3 (9) Many elements of an ocean and coastal ob-
4 serving system are in place, though in a patchwork
5 manner that is fragmented, intermittent, incomplete,
6 and not integrated.

7 (10) Important coastal uses, such as tourism,
8 recreation, and fishing, require assurance of healthy
9 coastal waters, and while the interagency National
10 Coast Condition Report provides an annual assess-
11 ment of the status and quality of coastal waters,
12 substantial data gaps exist that could be reduced
13 through measurement of coastal quality through a
14 coordinated observing system that incorporates Fed-
15 eral, State, and local monitoring programs.

16 (11) National investment in a sustained and in-
17 tegrated ocean and coastal observing system and in
18 coordinated programs of research would assist this
19 Nation and the world in understanding the oceans
20 and the global climate system, strengthen homeland
21 security, improve weather and climate forecasts,
22 strengthen management of marine resources, im-
23 prove the safety and efficiency of maritime oper-
24 ations, and mitigate coastal hazards.

1 (b) PURPOSES.—The purposes of this Act are to pro-
 2 vide for—

3 (1) development and maintenance of an inte-
 4 grated system that provides for sustained ocean and
 5 coastal observations from in situ, remote, and vessel
 6 platforms, and that promotes the national goals of
 7 assuring national security, advancing economic de-
 8 velopment, conserving living marine resources, pro-
 9 tecting quality of life and the marine environment,
 10 and strengthening science education and commu-
 11 nication through improved knowledge of the ocean;

12 (2) implementation of a research and develop-
 13 ment program to enhance security at United States
 14 ports and minimize security risks; and

15 (3) implementation of a data and information
 16 system required by all components of an integrated
 17 ocean and coastal observing system and related re-
 18 search.

19 **SEC. 3. INTEGRATED OCEAN AND COASTAL OBSERVING**
 20 **SYSTEM.**

21 (a) ESTABLISHMENT.—The President, through the
 22 National Ocean Research Leadership Council, established
 23 by section 7902(a) of title 10, United States Code, (here-
 24 inafter referred to as the “Council”), shall establish and
 25 maintain an integrated system of marine monitoring, data

1 communication and management, data analysis, and re-
2 search designed to provide data and information for the
3 rapid and timely detection and prediction of changes oc-
4 ccurring in the marine environment that impact the Na-
5 tion's social, economic, and ecological systems. Such an
6 integrated ocean and coastal observing system shall pro-
7 vide for long-term and continuous observations of the
8 oceans and coasts for the following purposes:

9 (1) Strengthening homeland security.

10 (2) Improving weather forecasts and public
11 warnings of natural disasters and coastal hazards
12 and mitigating such disasters and hazards.

13 (3) Understanding, assessing, and responding
14 to human-induced and natural processes of global
15 change.

16 (4) Enhancing the safety and efficiency of ma-
17 rine operations.

18 (5) Supporting efforts to protect, maintain, and
19 restore the health of and manage coastal and marine
20 ecosystems and living resources.

21 (6) Enhancing public health.

22 (7) Monitoring and evaluating the effectiveness
23 of ocean and coastal environmental policies.

1 (8) Conducting focused research to enhance the
2 national understanding of coastal and global ocean
3 systems.

4 (9) Providing information that contributes to
5 public awareness of the condition and importance of
6 the oceans.

7 (b) COUNCIL FUNCTIONS.—In carrying out respon-
8 sibilities under this section, the Council shall—

9 (1) serve as the lead entity providing oversight
10 of Federal ocean and coastal observing requirements
11 and activities;

12 (2) adopt and maintain plans for the design,
13 operation, and improvement of such system;

14 (3) establish an interagency planning office to
15 carry out the duties described in subsection (c);

16 (4) coordinate and administer a program of re-
17 search and development under the National Oceano-
18 graphic Partnership Program (10 U.S.C. 7901) to
19 support the operation of an integrated ocean and
20 coastal observing system and advance the under-
21 standing of the oceans;

22 (5) establish a joint operations center to be
23 maintained by the Administrator of the National
24 Oceanic and Atmospheric Administration, in con-
25 sultation with other Federal agencies; and

1 (6) provide, as appropriate, support for and
2 representation on United States delegations to inter-
3 national meetings on ocean and coastal observing
4 programs and in consultation with the Secretary of
5 State to coordinate relevant Federal activities with
6 those of other nations.

7 (c) INTERAGENCY PROGRAM OFFICE.—There is es-
8 tablished under the Council an interagency planning of-
9 fice. It shall—

10 (1) promote collaboration among agencies;

11 (2) promote collaboration among regional coast-
12 al observing systems established pursuant to sub-
13 section (f);

14 (3) prepare annual and long-term plans for con-
15 sideration by the Council for the design and imple-
16 mentation of an integrated ocean and coastal observ-
17 ing system, including the regional coastal observing
18 systems and taking into account the science and
19 technology advances considered ready for operational
20 status;

21 (4) provide information for the development of
22 agency budgets;

23 (5) identify requirements for a common set of
24 measurements to be collected and distributed;

1 (6) establish standards and protocols for quality
2 control and data management and communications;
3 in consultation with the Joint Operations Center es-
4 tablished pursuant to subsection (d);

5 (7) work with regional coastal observing enti-
6 ties, the National Sea Grant College Program, and
7 other bodies as needed to assess user needs, develop
8 data products, make effective use of existing capa-
9 bilities, and incorporate new technologies, as appro-
10 prium; and

11 (8) coordinate program planning and implemen-
12 tation.

13 (d) JOINT OPERATIONS CENTER.—The Adminis-
14 trator of the National Oceanic and Atmospheric Adminis-
15 tration, in consultation with the Oceanographer of the
16 Navy, the Administrator of the National Aeronautics and
17 Space Administration, the Director of the National
18 Science Foundation, the Commandant of the Coast Guard,
19 the Under Secretary for Science and Technology of the
20 Department of Homeland Security, and any other member
21 of the National Ocean Research Leadership Council as the
22 Council may, by memorandum of agreement, select—

23 (1) shall report to the National Ocean Research
24 Leadership Council;

1 (2) shall maintain a joint operations center that
2 reports to the Council; and

3 ~~(3)~~ is authorized, without limitation—

4 (A) to acquire, integrate, and deploy re-
5 quired technologies and provide support for an
6 ocean and coastal observing system based on
7 annual long-term plans developed by the inter-
8 agency planning office;

9 (B) to implement standards and protocols
10 developed in consultation with the interagency
11 planning office for—

12 (i) network operations and data ac-
13 cess;

14 (ii) quality control and assessment of
15 data and design;

16 (iii) data access and management, in-
17 cluding data transfer protocols and
18 archiving;

19 (iv) testing and employment of fore-
20 cast models for ocean conditions; and

21 (v) system products;

22 (C) to migrate science and technology ad-
23 vancements from research and development to
24 operational deployment based on the annual

1 and long-term plans of the interagency program
2 office;

3 (D) to integrate and extend existing pro-
4 grams into an operating coastal and ocean and
5 coastal observing system based on the annual
6 and long-term plans of the interagency program
7 office;

8 (E) to coordinate the data communication
9 and management system;

10 (F) to provide products and services as
11 specified by national, regional, and international
12 users;

13 (G) to certify that regional coastal observ-
14 ing systems meet the standards established in
15 subsection (f) and to ensure a periodic process
16 for review and recertification of the regional
17 coastal observing systems; and

18 (H) to implement standards to ensure
19 compatibility and interoperability among exist-
20 ing and planned system components.

21 (c) SYSTEM ELEMENTS.—

22 (1) IN GENERAL.—The integrated ocean and
23 coastal observing system shall consist of the fol-
24 lowing closely linked components:

1 (A) A global ocean system to make obser-
2 vations in all oceans (including chemical, phys-
3 ical, and biological observations) for the pur-
4 pose of documenting, at a minimum, long-term
5 trends in sea level change, ocean carbon sources
6 and sinks, and heat uptake and release by the
7 ocean; and to monitor ocean locations for signs
8 of abrupt or long-term changes in ocean circula-
9 tion leading to changes in climate.

10 (B) The national network of observations
11 and data management that establishes reference
12 and sentinel stations; links the global ocean sys-
13 tem to local and regional observations; and pro-
14 vides data and information required by multiple
15 regions.

16 (C) Regional coastal observing systems
17 that provide information through the national
18 network and detect and predict conditions and
19 events on a regional scale through the measure-
20 ment and dissemination of a common set of
21 ocean and coastal observations and related
22 products in a uniform manner and according to
23 sound scientific practice using national stand-
24 ards and protocols.

1 (2) SUBSYSTEM LINKAGE.—The integrated
 2 ocean and coastal observing system shall link 3 sub-
 3 systems for rapid access to data and information:

4 (A) An observing subsystem to measure,
 5 manage, and serve a common set of chemical,
 6 physical, geological, and biological variables re-
 7 quired to achieve the purpose of this Act on
 8 time scales required by users of the system:

9 (B) An ocean data management and as-
 10 simulation subsystem that provides for organiza-
 11 tion, cataloging, and dissemination of data and
 12 information to ensure full use and long term ar-
 13 chival:

14 (C) A data analysis and applications sub-
 15 system to translate data into products and serv-
 16 ices in response to user needs and require-
 17 ments:

18 (3) RESEARCH AND DEVELOPMENT.—A re-
 19 search and development program for the integrated
 20 ocean and coastal observing system shall be con-
 21 ducted under the National Oceanographic Partner-
 22 ship Program and shall consist of the following ele-
 23 ments:

24 (A) Coastal, relocatable, and cabled sea
 25 floor observatories:

1 (B) Focused research projects to improve
2 understanding of the relationship between the
3 oceans and human activities.

4 (C) Applied research to develop new ob-
5 serving technologies and techniques, including
6 data management and dissemination.

7 (D) Large scale computing resources and
8 research to improve ocean processes modeling.

9 (E) Programs to improve public education
10 and awareness of the marine environment and
11 its goods and services.

12 (f) REGIONAL COASTAL OBSERVING SYSTEMS.—The
13 Administrator of the National Oceanic and Atmospheric
14 Administration, through the Joint Operations Center,
15 shall work with representatives of entities in each region
16 that provide ocean data and information to users to form
17 regional associations. The regional associations shall be re-
18 sponsible for the development and operation of observing
19 systems in the coastal regions extending to the seaward
20 boundary of the United States Exclusive Economic Zone,
21 including the Great Lakes. Participation in a regional as-
22 sociation may consist of legal entities including, research
23 institutions, institutions of higher learning, for-profit cor-
24 porations, non-profit corporations, State, local, and re-

1 gional agencies, and consortia of 2 or more such institu-
2 tions or organizations that—

3 (1) have demonstrated an organizational struc-
4 ture capable of supporting and integrating all as-
5 pects of a coastal ocean observing system within a
6 region or subregion;

7 (2) have prepared an acceptable business plan
8 including research components and gained docu-
9 mented acceptance of its intended regional or sub-re-
10 gional jurisdiction by users and other parties of in-
11 terest within the region or sub-region with the objec-
12 tives of—

13 (A) delivering an integrated and sustained
14 system that meets national goals;

15 (B) incorporating into the system existing
16 and appropriate regional observations collected
17 by Federal, State, regional, or local agencies;

18 (C) responding to the needs of the users,
19 including the public, within the region;

20 (D) maintaining sustained, 24-hour-a-day
21 operations and disseminating observations in a
22 manner that is routine, predictable and, if nec-
23 essary, in real-time or near real-time;

24 (E) providing services that include the col-
25 lection and dissemination of data and data

1 management for timely access to data and in-
 2 formation;

3 (F) creating appropriate products that are
 4 delivered in a timely fashion to the public and
 5 others who use, or are affected by, the oceans;

6 (G) providing free and open access to the
 7 data collected with financial assistance under
 8 this Act; and

9 (H) adhering to national standards and
 10 protocols to ensure that data and related prod-
 11 ucts can be fully exchanged among all of the re-
 12 gional coastal systems and will be accessible to
 13 any user in any part of the nation.

14 (3) For purposes of determining the civil liabil-
 15 ity under section 2671 of title 28, United States
 16 Code, any regional observing system and any em-
 17 ployee thereof that is designated part of a regional
 18 association under this subsection shall be deemed to
 19 be an instrumentality of the United States with re-
 20 spect to any act or omission committed by any such
 21 system or any employee thereof in fulfilling the pur-
 22 poses of this Act.

23 (g) PILOT PROJECTS.—

24 (1) IN GENERAL.—The Administrator, in con-
 25 sultation with the interagency planning office, shall

1 initiate pilot projects through the National Oceano-
 2 graphic Partnership Program. A pilot project is an
 3 organized, planned set of activities designed to pro-
 4 vide an evaluation of technology, methods, or con-
 5 cepts within a defined schedule and having the goal
 6 of advancing the development of the sustained, inte-
 7 grated ocean observing system. The pilot projects
 8 will—

9 (A) develop protocols for coordinated im-
 10 plementation of the full system;

11 (B) design and implement regional coastal
 12 ocean observing systems;

13 (C) establish mechanisms for the exchange
 14 of data between and among regions and Federal
 15 agencies;

16 (D) specify products and services and re-
 17 lated requirements for observations, data man-
 18 agement, and analysis in collaboration with user
 19 groups; and

20 (E) develop and test new technologies and
 21 techniques to improve all three subsystems to
 22 more effectively meet the needs of users of the
 23 system.

24 ~~(2) INFRASTRUCTURE CAPITAL PROJECTS.—~~

25 The pilot projects shall include one or more projects

1 to capitalize the infrastructure for the collection;
 2 management, analysis, and distribution of data and
 3 one or more projects where the basic infrastructure
 4 and institutional mechanisms already exist for ongoing coastal observations; to fund the operations necessary for the collection of the common set of observations approved by the interagency planning office.

8 **SEC. 4. INTERAGENCY FINANCING.**

9 The departments and agencies represented on the
 10 Council are authorized to participate in interagency financing and share, transfer, receive and spend funds appropriated to any member of the Council for the purposes
 11 of carrying out any administrative or programmatic
 12 project or activity under this Act or under the National
 13 Oceanographic Partnership Program (10 U.S.C. 7901),
 14 including support for a common infrastructure and system
 15 integration for an ocean and coastal observing system.
 16 Funds may be transferred among such departments and
 17 agencies through an appropriate instrument that specifies
 18 the goods, services, or space being acquired from another
 19 Council member and the costs of the same.

22 **SEC. 5. AUTHORIZATION OF APPROPRIATIONS.**

23 (a) OBSERVING SYSTEM AUTHORIZATION.—For development and implementation of an integrated ocean and
 24 coastal observing system under section 3, including finan-

1 cial assistance to regional coastal ocean observing systems
 2 and in addition to any amounts previously authorized,
 3 there are authorized to be appropriated to—

4 (1) the National Oceanic and Atmospheric Ad-
 5 ministration, \$83,000,000 in fiscal year 2004,
 6 \$87,250,000 in fiscal year 2005, \$91,500,000 in fis-
 7 cal year 2006, \$96,000,000 in fiscal year 2007, and
 8 \$100,000,000 in fiscal year 2008;

9 (2) the National Science Foundation,
 10 \$25,000,000 in fiscal year 2004, \$26,250,000 in fis-
 11 cal year 2005, \$27,500,000 in fiscal year 2006,
 12 \$29,000,000 in fiscal year 2007, and \$30,500,000 in
 13 fiscal year 2008;

14 (3) the National Aeronautics and Space Admin-
 15 istration, \$30,000,000 in fiscal year 2004,
 16 \$31,500,000 in fiscal year 2005, \$33,000,000 in fis-
 17 cal year 2006, and \$34,750,000 in each of fiscal
 18 years 2007 and 2008;

19 (4) the United States Coast Guard, \$8,000,000
 20 in fiscal year 2004, \$8,400,000 in fiscal year 2005,
 21 \$9,700,000 in fiscal year 2006, \$9,500,000 in fiscal
 22 year 2007, and \$9,750,000 in fiscal year 2008;

23 (5) the Office of Naval Research, \$25,000,000
 24 in fiscal year 2004, \$26,250,000 in fiscal year 2005,

1 \$27,500,000 in fiscal year 2006, \$29,000,000 in fis-
 2 cal year 2007, and \$30,500,000 in fiscal year 2008;

3 (6) the Office of the Oceanographer of the
 4 Navy, \$30,000,000 in fiscal year 2004, \$31,500,000
 5 in fiscal year 2005, \$33,000,000 in fiscal year 2006,
 6 \$34,750,000 in fiscal year 2007, and \$36,500,000 in
 7 fiscal year 2008; and

8 (7) other Federal agencies with operational
 9 coastal or ocean monitoring systems or which pro-
 10 vide funds to States for such systems, \$15,000,000
 11 in each of fiscal years 2004 through 2008.

12 (b) REGIONAL COASTAL OBSERVING SYSTEMS.—The
 13 Administrator of the National Oceanic and Atmospheric
 14 Administration shall make at least 51 percent of the funds
 15 appropriated pursuant to subsection (a)(1) available as
 16 grants for the development and implementation of the re-
 17 gional coastal observing systems based on the plans adopt-
 18 ed by the Council and may be used to leverage non-Fed-
 19 eral funds.

20 (c) AVAILABILITY.—Sums authorized to be appro-
 21 priated by this section shall remain available until ex-
 22 pend.

23 **SECTION 1. SHORT TITLE.**

24 *This Act may be cited as the “Ocean and Coastal Ob-*
 25 *servation Systems Act”.*

1 **SEC. 2. FINDINGS AND PURPOSES.**

2 (a) *FINDINGS.*—*The Congress finds the following:*

3 (1) *The 95,000-mile coastline of the United*
4 *States is vital to the Nation's homeland security,*
5 *transportation, trade, environmental and human*
6 *health, recreation and tourism, food production, sci-*
7 *entific research and education, historical and cultural*
8 *heritage, and energy production.*

9 (2) *More than half the Nation's population lives*
10 *and works in coastal communities that together make*
11 *up 11 percent of its land and its most ecologically*
12 *and economically important regions, supporting ap-*
13 *proximately 190 sea ports, containing most of our*
14 *largest cities, and providing access to coastal waters*
15 *rich in natural resources.*

16 (3) *More than 95 percent of the Nation's trade*
17 *moves by sea and nearly half of all goods, including*
18 *energy products, carried in maritime commerce are*
19 *hazardous materials.*

20 (4) *The rich biodiversity of marine organisms*
21 *provides society with essential food resources, a prom-*
22 *ising source of marine products with commercial and*
23 *medical potential, and an important contribution to*
24 *the national economy.*

25 (5) *The oceans drive climate and weather factors*
26 *causing severe weather events and threatening the*

1 *health of coastal ecosystems and communities by cre-*
 2 *ating or affecting both natural and man-made coastal*
 3 *hazards such as hurricanes, tsunamis, erosion, oil*
 4 *spills, harmful algal blooms, hypoxia, and pollution,*
 5 *which can pose threats to human health.*

6 *(6) Each year, the United States Coast Guard*
 7 *relies on ocean information to save 4,380 people, con-*
 8 *ducts over 65,000 rescue missions, and carries out*
 9 *more than 11,680 environmental cleanups and re-*
 10 *sponses to pollution.*

11 *(7) Safeguarding homeland security requires im-*
 12 *proved monitoring of the Nation's ports and coastline,*
 13 *including the ability to track vessels and to provide*
 14 *rapid response teams with real-time environmental*
 15 *conditions necessary for their work.*

16 *(8) Advances in ocean technologies and scientific*
 17 *understanding have made possible long-term and con-*
 18 *tinuous observation from space and in situ of ocean*
 19 *characteristics and conditions.*

20 *(9) Many elements of an ocean and coastal ob-*
 21 *serving system are in place, though in a patchwork*
 22 *manner that is fragmented, intermittent, incomplete,*
 23 *and not integrated.*

24 *(10) Important coastal uses, such as tourism,*
 25 *recreation, and fishing, require assurance of healthy*

1 *coastal waters, and while the interagency National*
 2 *Coast Condition Report provides an annual assess-*
 3 *ment of the status and quality of coastal waters, sub-*
 4 *stantial data gaps exist that could be reduced through*
 5 *measurement of coastal quality through a coordinated*
 6 *observing system that incorporates Federal, State,*
 7 *and local monitoring programs.*

8 *(11) National investment in a sustained and in-*
 9 *tegrated ocean and coastal observing system and in*
 10 *coordinated programs of research would assist this*
 11 *Nation and the world in understanding the oceans*
 12 *and the global climate system, strengthen homeland*
 13 *security, improve weather and climate forecasts,*
 14 *strengthen management of marine resources, improve*
 15 *the safety and efficiency of maritime operations, and*
 16 *mitigate coastal hazards.*

17 *(b) PURPOSES.—The purposes of this Act are to pro-*
 18 *vide for—*

19 *(1) development and maintenance of an inte-*
 20 *grated system that provides for sustained ocean and*
 21 *coastal observations from in situ, remote, and vessel*
 22 *platforms, and that promotes the national goals of as-*
 23 *suming national security, advancing economic develop-*
 24 *ment, conserving living marine resources, protecting*
 25 *quality of life and the marine environment, and*

1 *strengthening science education and communication*
 2 *through improved knowledge of the ocean;*

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 4 *ment program to enhance security at United States*
 5 *ports and minimize security risks; and*

6 *(3) implementation of a data and information*
 7 *system required by all components of an integrated*
 8 *ocean and coastal observing system and related re-*
 9 *search.*

10 **SEC. 3. INTEGRATED OCEAN AND COASTAL OBSERVING**
 11 **SYSTEM.**

12 *(a) ESTABLISHMENT.—The President, through the Na-*
 13 *tional Ocean Research Leadership Council, established by*
 14 *section 7902(a) of title 10, United States Code, (hereinafter*
 15 *referred to as the “Council”), shall establish and maintain*
 16 *an integrated system of marine monitoring, data commu-*
 17 *nication and management, data analysis, and research de-*
 18 *signed to provide data and information for the rapid and*
 19 *timely detection and prediction of changes occurring in the*
 20 *marine environment that impact the Nation’s social, eco-*
 21 *nomic, and ecological systems. Such an integrated ocean*
 22 *and coastal observing system shall provide for long-term*
 23 *and continuous observations of the oceans and coasts for*
 24 *the following purposes:*

25 *(1) Strengthening homeland security.*

1 (2) *Improving weather forecasts and public*
 2 *warnings of natural disasters and coastal hazards*
 3 *and mitigating such disasters and hazards.*

4 (3) *Understanding, assessing, and responding to*
 5 *human-induced and natural processes of global*
 6 *change.*

7 (4) *Enhancing the safety and efficiency of ma-*
 8 *rine operations.*

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 10 *restore the health of and manage coastal and marine*
 11 *ecosystems and living resources.*

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 14 *of ocean and coastal environmental policies.*

15 (8) *Conducting focused research to enhance the*
 16 *national understanding of coastal and global ocean*
 17 *systems.*

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 19 *public awareness of the condition and importance of*
 20 *the oceans.*

21 (b) *COUNCIL FUNCTIONS.—In carrying out respon-*
 22 *sibilities under this section, the Council shall—*

23 (1) *serve as the lead entity providing oversight*
 24 *of Federal ocean and coastal observing requirements*
 25 *and activities;*

1 (2) *adopt and maintain plans for the design, op-*
 2 *eration, and improvement of such system;*

3 (3) *establish an interagency planning office to*
 4 *carry out the duties described in subsection (c);*

5 (4) *coordinate and administer a program of re-*
 6 *search and development under the National Oceano-*
 7 *graphic Partnership Program (10 U.S.C. 7901) to*
 8 *support the operation of an integrated ocean and*
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 12 *maintained by the Administrator of the National Oce-*
 13 *anic and Atmospheric Administration, in consulta-*
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 16 *resentation on United States delegations to inter-*
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3 *(f);*

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8 *systems and taking into account the science and tech-*
9 *nology advances considered ready for operational sta-*
10 *tus;*

11 (4) *provide information for the development of*
12 *agency budgets;*

13 (5) *identify requirements for a common set of*
14 *measurements to be collected and distributed;*

15 (6) *establish standards and protocols for quality*
16 *control and data management and communications,*
17 *in consultation with the Joint Operations Center es-*
18 *tablished pursuant to subsection (d);*

19 (7) *work with regional coastal observing entities,*
20 *the National Sea Grant College Program, and other*
21 *bodies as needed to assess user needs, develop data*
22 *products, make effective use of existing capabilities,*
23 *and incorporate new technologies, as appropriate;*
24 *and*

1 (8) *coordinate program planning and implemen-*
 2 *tation.*

3 (d) *JOINT OPERATIONS CENTER.*—*The Administrator*
 4 *of the National Oceanic and Atmospheric Administration,*
 5 *in consultation with the Oceanographer of the Navy, the*
 6 *Administrator of the National Aeronautics and Space Ad-*
 7 *ministration, the Director of the National Science Founda-*
 8 *tion, the Commandant of the Coast Guard, the Under Sec-*
 9 *retary for Science and Technology of the Department of*
 10 *Homeland Security, and any other member of the Council*
 11 *as the Council may, by memorandum of agreement, select—*

12 (1) *shall operate and maintain a joint oper-*
 13 *ations center that reports to the Council; and*

14 (2) *is authorized—*

15 (A) *to acquire, integrate, and deploy re-*
 16 *quired technologies and provide support for an*
 17 *ocean and coastal observing system based on an-*
 18 *nual long-term plans developed by the inter-*
 19 *agency planning office;*

20 (B) *to implement standards and protocols*
 21 *developed in consultation with the interagency*
 22 *planning office for—*

23 (i) *network operations and data access;*

24 (ii) *quality control and assessment of*
 25 *data and design;*

1 (iii) data access and management, in-
 2 cluding data transfer protocols and
 3 archiving;

4 (iv) testing and employment of forecast
 5 models for ocean conditions; and

6 (v) system products;

7 (C) to migrate science and technology ad-
 8 vancements from research and development to
 9 operational deployment based on the annual and
 10 long-term plans of the interagency program of-
 11 fice;

12 (D) to integrate and extend existing pro-
 13 grams into an operating ocean and coastal ob-
 14 serving system based on the annual and long-
 15 term plans of the interagency program office;

16 (E) to coordinate the data communication
 17 and management system;

18 (F) to provide products and services as
 19 specified by national, regional, and inter-
 20 national users;

21 (G) to certify that regional coastal observing
 22 systems meet the standards established in sub-
 23 section (f) and to ensure a periodic process for
 24 review and recertification of the regional coastal
 25 observing systems; and

1 (H) to implement standards to ensure com-
 2 patibility and interoperability among existing
 3 and planned system components.

4 (e) *SYSTEM ELEMENTS.*—

5 (1) *IN GENERAL.*—The integrated ocean and
 6 coastal observing system shall consist of the following
 7 closely linked components:

8 (A) A global ocean system to make observa-
 9 tions in all oceans (including chemical, physical,
 10 and biological observations) for the purpose of
 11 documenting, at a minimum, long-term trends
 12 in sea level change, ocean carbon sources and
 13 sinks, and heat uptake and release by the ocean;
 14 and to monitor ocean locations for signs of ab-
 15 rupt or long-term changes in ocean circulation
 16 leading to changes in climate.

17 (B) The national network of observations
 18 and data management that establishes reference
 19 and sentinel stations, links the global ocean sys-
 20 tem to local and regional observations, and pro-
 21 vides data and information required by multiple
 22 regions.

23 (C) Regional coastal observing systems that
 24 provide information through the national net-
 25 work and detect and predict conditions and

1 *events on a regional scale through the measure-*
 2 *ment and dissemination of a common set of*
 3 *ocean and coastal observations and related prod-*
 4 *ucts in a uniform manner and according to*
 5 *sound scientific practice using national stand-*
 6 *ards and protocols.*

7 (2) *SUBSYSTEM LINKAGE.*—*The integrated ocean*
 8 *and coastal observing system shall link 3 subsystems*
 9 *for rapid access to data and information:*

10 (A) *An observing subsystem to measure,*
 11 *manage, and serve a common set of chemical,*
 12 *physical, geological, and biological variables re-*
 13 *quired to achieve the purpose of this Act on time*
 14 *scales required by users of the system.*

15 (B) *An ocean and coastal data management*
 16 *and assimilation subsystem that provides for or-*
 17 *ganization, cataloging, and dissemination of*
 18 *data and information to ensure full use and long*
 19 *term archival.*

20 (C) *A data analysis and applications sub-*
 21 *system to translate data into products and serv-*
 22 *ices in response to user needs and requirements.*

23 (3) *INTEGRATION OF EXISTING CENTERS.*—*The*
 24 *integrated ocean and coastal observing system shall*
 25 *integrate the capabilities of the Coast Services Center*

1 *and the National Coastal Data Development Center of*
 2 *the National Oceanic and Atmospheric Administra-*
 3 *tion, and other appropriate centers.*

4 (4) *RESEARCH AND DEVELOPMENT.*—*A research*
 5 *and development program for the integrated ocean*
 6 *and coastal observing system shall be conducted under*
 7 *the National Oceanographic Partnership Program*
 8 *and shall consist of the following elements:*

9 (A) *Coastal, relocatable, and cabled sea floor*
 10 *observatories.*

11 (B) *Focused research projects to improve*
 12 *understanding of the relationship between the*
 13 *oceans and human activities.*

14 (C) *Applied research to develop new observ-*
 15 *ing technologies and techniques, including data*
 16 *management and dissemination.*

17 (D) *Large scale computing resources and re-*
 18 *search to improve ocean processes modeling.*

19 (E) *Programs to improve public education*
 20 *and awareness of the marine environment and*
 21 *its goods and services.*

22 (f) *REGIONAL COASTAL OBSERVING SYSTEMS.*—*The*
 23 *Administrator of the National Oceanic and Atmospheric*
 24 *Administration, through the Joint Operations Center, shall*
 25 *work with representatives of entities in each region that*

1 *provide ocean data and information to users to form re-*
 2 *gional associations. The regional associations shall be re-*
 3 *sponsible for the development and operation of observing*
 4 *systems in the coastal regions extending to the seaward*
 5 *boundary of the United States Exclusive Economic Zone,*
 6 *including the Great Lakes. Participation in a regional asso-*
 7 *ciation may consist of legal entities including, research in-*
 8 *stitutions, institutions of higher learning, for-profit cor-*
 9 *porations, non-profit corporations, State, local, and re-*
 10 *gional agencies, and consortia of 2 or more such institutions*
 11 *or organizations that—*

12 (1) *have demonstrated an organizational struc-*
 13 *ture capable of supporting and integrating all aspects*
 14 *of a coastal ocean observing system within a region*
 15 *or subregion;*

16 (2) *have prepared an acceptable business plan*
 17 *including research components and gained docu-*
 18 *mented acceptance of its intended regional or sub-re-*
 19 *gional jurisdiction by users and other parties of inter-*
 20 *est within the region or sub-region with the objectives*
 21 *of—*

22 (A) *delivering an integrated and sustained*
 23 *system that meets national goals;*

1 (B) incorporating into the system existing
2 and appropriate regional observations collected
3 by Federal, State, regional, or local agencies;

4 (C) responding to the needs of the users, in-
5 cluding the public, within the region;

6 (D) maintaining sustained, 24-hour-a-day
7 operations and disseminating observations in a
8 manner that is routine, predictable and, if nec-
9 essary, in real-time or near real-time;

10 (E) providing services that include the col-
11 lection and dissemination of data and data
12 management for timely access to data and infor-
13 mation;

14 (F) creating appropriate products that are
15 delivered in a timely fashion to the public and
16 others who use, or are affected by, the oceans;

17 (G) providing free and open access to the
18 data collected with financial assistance under
19 this Act; and

20 (H) adhering to national standards and
21 protocols to ensure that data and related prod-
22 ucts can be fully exchanged among all of the re-
23 gional coastal systems and will be accessible to
24 any user in any part of the nation.

1 (3) *For purposes of determining the civil liability*
 2 *under section 2671 of title 28, United States Code,*
 3 *any regional observing system and any employee*
 4 *thereof that is designated part of a regional associa-*
 5 *tion under this subsection shall be deemed to be an*
 6 *instrumentality of the United States with respect to*
 7 *any act or omission committed by any such system*
 8 *or any employee thereof in fulfilling the purposes of*
 9 *this Act.*

10 (g) *PILOT PROJECTS.*—

11 (1) *IN GENERAL.*—*The Administrator, in con-*
 12 *sultation with the interagency planning office, shall*
 13 *initiate pilot projects through the National Oceano-*
 14 *graphic Partnership Program. A pilot project is an*
 15 *organized, planned set of activities designed to pro-*
 16 *vide an evaluation of technology, methods, or concepts*
 17 *within a defined schedule and having the goal of ad-*
 18 *vancing the development of the sustained, integrated*
 19 *ocean observing system. The pilot projects will—*

20 (A) *develop protocols for coordinated imple-*
 21 *mentation of the full system;*

22 (B) *design and implement regional coastal*
 23 *ocean observing systems;*

1 (C) establish mechanisms for the exchange of
 2 data between and among regions and Federal
 3 agencies;

4 (D) specify products and services and re-
 5 lated requirements for observations, data man-
 6 agement, and analysis in collaboration with user
 7 groups; and

8 (E) develop and test new technologies and
 9 techniques to improve all three subsystems to
 10 more effectively meet the needs of users of the sys-
 11 tem.

12 (2) *INFRASTRUCTURE CAPITAL PROJECTS.*—The
 13 pilot projects shall include one or more projects to
 14 capitalize the infrastructure for the collection, man-
 15 agement, analysis, and distribution of data and one
 16 or more projects where the basic infrastructure and
 17 institutional mechanisms already exist for ongoing
 18 coastal observations, to fund the operations necessary
 19 for the collection of the common set of observations
 20 approved by the interagency planning office.

21 **SEC. 4. INTERAGENCY FINANCING.**

22 The departments and agencies represented on the
 23 Council are authorized to participate in interagency fi-
 24 nancing and share, transfer, receive and spend funds appro-
 25 priated to any member of the Council for the purposes of

1 *carrying out any administrative or programmatic project*
 2 *or activity under this Act or under the National Oceano-*
 3 *graphic Partnership Program (10 U.S.C. 7901), including*
 4 *support for a common infrastructure and system integra-*
 5 *tion for an ocean and coastal observing system. Funds may*
 6 *be transferred among such departments and agencies*
 7 *through an appropriate instrument that specifies the goods,*
 8 *services, or space being acquired from another Council*
 9 *member and the costs of the same.*

10 **SEC. 5. AUTHORIZATION OF APPROPRIATIONS.**

11 *(a) OBSERVING SYSTEM AUTHORIZATION.—For devel-*
 12 *opment and implementation of an integrated ocean and*
 13 *coastal observing system under section 3, including finan-*
 14 *cial assistance to regional coastal ocean observing systems*
 15 *and in addition to any amounts previously authorized,*
 16 *there are authorized to be appropriated to—*

17 *(1) the National Oceanic and Atmospheric Ad-*
 18 *ministration, \$83,000,000 in fiscal year 2004,*
 19 *\$87,250,000 in fiscal year 2005, \$91,500,000 in fiscal*
 20 *year 2006, \$96,000,000 in fiscal year 2007, and*
 21 *\$100,000,000 in fiscal year 2008;*

22 *(2) the National Science Foundation,*
 23 *\$25,000,000 in fiscal year 2004, \$26,250,000 in fiscal*
 24 *year 2005, \$27,500,000 in fiscal year 2006,*

1 \$29,000,000 in fiscal year 2007, and \$30,500,000 in
2 fiscal year 2008;

3 (3) the National Aeronautics and Space Admin-
4 istration, \$30,000,000 in fiscal year 2004,
5 \$31,500,000 in fiscal year 2005, \$33,000,000 in fiscal
6 year 2006, and \$34,750,000 in each of fiscal years
7 2007 and 2008;

8 (4) the United States Coast Guard, \$8,000,000
9 in fiscal year 2004, \$8,400,000 in fiscal year 2005,
10 \$9,700,000 in fiscal year 2006, \$9,500,000 in fiscal
11 year 2007, and \$9,750,000 in fiscal year 2008;

12 (5) the Office of Naval Research, \$25,000,000 in
13 fiscal year 2004, \$26,250,000 in fiscal year 2005,
14 \$27,500,000 in fiscal year 2006, \$29,000,000 in fiscal
15 year 2007, and \$30,500,000 in fiscal year 2008;

16 (6) the Office of the Oceanographer of the Navy,
17 \$30,000,000 in fiscal year 2004, \$31,500,000 in fiscal
18 year 2005, \$33,000,000 in fiscal year 2006,
19 \$34,750,000 in fiscal year 2007, and \$36,500,000 in
20 fiscal year 2008; and

21 (7) other Federal agencies with operational
22 coastal or ocean monitoring systems or which provide
23 funds to States for such systems, \$15,000,000 in each
24 of fiscal years 2004 through 2008.

1 (b) *REGIONAL COASTAL OBSERVING SYSTEMS.*—The
2 Administrator of the National Oceanic and Atmospheric
3 Administration shall make at least 51 percent of the funds
4 appropriated pursuant to subsection (a)(1) available as
5 grants for the development and implementation of the re-
6 gional coastal observing systems based on the plans adopted
7 by the Council and may be used to leverage non-Federal
8 funds.

9 (c) *HIGH-FREQUENCY SURFACE WAVE RADAR.*—The
10 Administrator of the National Oceanic and Atmospheric
11 Administration may make available \$3,000,000 of the funds
12 appropriated pursuant to subsection (a)(1) for fiscal year
13 2004 to demonstrate the capabilities of shore-based high-fre-
14 quency surface wave radar to measure real-time wave
15 height, wave velocity, wave period, tidal velocity, and wind
16 speed within and beyond the Exclusive Economic Zone of
17 the United States.

18 (d) *AVAILABILITY.*—Sums authorized to be appro-
19 priated by this section shall remain available until ex-
20 pended.

Calendar No. 319

108TH CONGRESS
1ST SESSION

S. 1400

[Report No. 108-171]

A BILL

To develop a system that provides for ocean and coastal observations, to implement a research and development program to enhance security at United States ports, to implement a data and information system required by all components of an integrated ocean observing system and related research, and for other purposes.

OCTOBER 23, 2003

Reported with an amendment