

111TH CONGRESS  
1ST SESSION

# S. 174

To establish a coordinated and comprehensive Federal ocean and coastal mapping program.

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## IN THE SENATE OF THE UNITED STATES

JANUARY 8, 2009

Mr. INOUE (for himself, Mr. ROCKEFELLER, and Ms. SNOWE) 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 establish a coordinated and comprehensive Federal ocean and coastal mapping program.

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 and Coastal  
5 Mapping Integration Act”.

6       **SEC. 2. ESTABLISHMENT OF PROGRAM.**

7       (a) IN GENERAL.—The President, in coordination  
8 with the Interagency Committee on Ocean and Coastal  
9 Mapping and affected coastal states, shall establish a pro-  
10 gram to develop a coordinated and comprehensive Federal

1 ocean and coastal mapping plan for the Great Lakes and  
2 coastal state waters, the territorial sea, the exclusive eco-  
3 nomic zone, and the continental shelf of the United States  
4 that enhances ecosystem approaches in decision-making  
5 for conservation and management of marine resources and  
6 habitats, establishes research and mapping priorities, sup-  
7 ports the siting of research and other platforms, and ad-  
8 vances ocean and coastal science.

9 (b) MEMBERSHIP.—The Committee shall be com-  
10 prised of high-level representatives of the Department of  
11 Commerce, through the National Oceanic and Atmos-  
12 pheric Administration, the Department of the Interior, the  
13 National Science Foundation, the Department of Defense,  
14 the Environmental Protection Agency, the Department of  
15 Homeland Security, the National Aeronautics and Space  
16 Administration, and other appropriate Federal agencies  
17 involved in ocean and coastal mapping.

18 (c) PROGRAM PARAMETERS.—In developing such a  
19 program, the President, through the Committee, shall—

20 (1) identify all Federal and federally funded  
21 programs conducting shoreline delineation and ocean  
22 or coastal mapping, noting geographic coverage, fre-  
23 quency, spatial coverage, resolution, and subject  
24 matter focus of the data and location of data ar-  
25 chives;

1           (2) facilitate cost-effective, cooperative mapping  
2           efforts that incorporate policies for contracting with  
3           non-governmental entities among all Federal agen-  
4           cies conducting ocean and coastal mapping, by in-  
5           creasing data sharing, developing appropriate data  
6           acquisition and metadata standards, and facilitating  
7           the interoperability of in situ data collection systems,  
8           data processing, archiving, and distribution of data  
9           products;

10          (3) facilitate the adaptation of existing tech-  
11          nologies as well as foster expertise in new ocean and  
12          coastal mapping technologies, including through re-  
13          search, development, and training conducted among  
14          Federal agencies and in cooperation with non-gov-  
15          ernmental entities;

16          (4) develop standards and protocols for testing  
17          innovative experimental mapping technologies and  
18          transferring new technologies between the Federal  
19          Government, coastal state, and non-governmental  
20          entities;

21          (5) provide for the archiving, management, and  
22          distribution of data sets through a national registry  
23          as well as provide mapping products and services to  
24          the general public in service of statutory require-  
25          ments;

1           (6) develop data standards and protocols con-  
2           sistent with standards developed by the Federal Geo-  
3           graphic Data Committee for use by Federal, coastal  
4           state, and other entities in mapping and otherwise  
5           documenting locations of federally permitted activi-  
6           ties, living and nonliving coastal and marine re-  
7           sources, marine ecosystems, sensitive habitats, sub-  
8           merged cultural resources, undersea cables, offshore  
9           aquaculture projects, offshore energy projects, and  
10          any areas designated for purposes of environmental  
11          protection or conservation and management of living  
12          and nonliving coastal and marine resources;

13          (7) identify the procedures to be used for co-  
14          ordinating the collection and integration of Federal  
15          ocean and coastal mapping data with coastal state  
16          and local government programs;

17          (8) facilitate, to the extent practicable, the col-  
18          lection of real-time tide data and the development of  
19          hydrodynamic models for coastal areas to allow for  
20          the application of V-datum tools that will facilitate  
21          the seamless integration of onshore and offshore  
22          maps and charts;

23          (9) establish a plan for the acquisition and col-  
24          lection of ocean and coastal mapping data; and

1           (10) set forth a timetable for completion and  
2           implementation of the plan.

3   **SEC. 3. INTERAGENCY COMMITTEE ON OCEAN AND COAST-**  
4                   **AL MAPPING.**

5           (a) IN GENERAL.—The Administrator of the Na-  
6           tional Oceanic and Atmospheric Administration, within 30  
7           days after the date of enactment of this Act, shall convene  
8           or utilize an existing interagency committee on ocean and  
9           coastal mapping to implement section 2.

10          (b) MEMBERSHIP.—The committee shall be com-  
11          prised of senior representatives from Federal agencies  
12          with ocean and coastal mapping and surveying responsibil-  
13          ities. The representatives shall be high-ranking officials of  
14          their respective agencies or departments and, whenever  
15          possible, the head of the portion of the agency or depart-  
16          ment that is most relevant to the purposes of this Act.  
17          Membership shall include senior representatives from the  
18          National Oceanic and Atmospheric Administration, the  
19          Chief of Naval Operations, the United States Geological  
20          Survey, the Minerals Management Service, the National  
21          Science Foundation, the National Geospatial-Intelligence  
22          Agency, the United States Army Corps of Engineers, the  
23          Coast Guard, the Environmental Protection Agency, the  
24          Federal Emergency Management Agency, the National  
25          Aeronautics and Space Administration, and other appro-

1 piate Federal agencies involved in ocean and coastal map-  
2 ping.

3 (c) CO-CHAIRMEN.—The Committee shall be co-  
4 chaired by a representative of the Department of Com-  
5 merce and a representative of the Department of the Inte-  
6 rior.

7 (d) SUBCOMMITTEE.—The co-chairmen shall estab-  
8 lish a subcommittee to carry out the day-to-day work of  
9 the Committee, comprised of senior representatives of any  
10 member agency of the committee. Working groups may  
11 be formed by the full Committee to address issues of short  
12 duration. The subcommittee shall be chaired by the rep-  
13 resentative from the National Oceanic and Atmospheric  
14 Administration. The chairmen of the Committee may cre-  
15 ate such additional subcommittees and working groups as  
16 may be needed to carry out the work of Committee.

17 (e) MEETINGS.—The committee shall meet on a  
18 quarterly basis, but each subcommittee and each working  
19 group shall meet on an as-needed basis.

20 (f) COORDINATION.—The committee shall coordinate  
21 activities when appropriate, with—

22 (1) other Federal efforts, including the Digital  
23 Coast, Geospatial One-Stop, and the Federal Geo-  
24 graphic Data Committee;

25 (2) international mapping activities;

1 (3) coastal states;

2 (4) user groups through workshops and other  
3 appropriate mechanisms; and

4 (5) representatives of nongovernmental entities.

5 (g) ADVISORY PANEL.—The Administrator may con-  
6 vene an ocean and coastal mapping advisory panel con-  
7 sisting of representatives from nongovernmental entities  
8 to provide input regarding activities of the committee in  
9 consultation with the interagency committee.

10 **SEC. 4. BIENNIAL REPORTS.**

11 No later than 18 months after the date of enactment  
12 of this Act, and biennially thereafter, the co-chairmen of  
13 the Committee shall transmit to the Senate Committee on  
14 Commerce, Science, and Transportation, the Senate Com-  
15 mittee on Energy and Natural Resources, and the House  
16 of Representatives Committee on Natural Resources a re-  
17 port detailing progress made in implementing this Act, in-  
18 cluding—

19 (1) an inventory of ocean and coastal mapping  
20 data within the territorial sea and the exclusive eco-  
21 nomic zone and throughout the Continental Shelf of  
22 the United States, noting the age and source of the  
23 survey and the spatial resolution (metadata) of the  
24 data;

1           (2) identification of priority areas in need of  
2       survey coverage using present technologies;

3           (3) a resource plan that identifies when priority  
4       areas in need of modern ocean and coastal mapping  
5       surveys can be accomplished;

6           (4) the status of efforts to produce integrated  
7       digital maps of ocean and coastal areas;

8           (5) a description of any products resulting from  
9       coordinated mapping efforts under this Act that im-  
10      prove public understanding of the coasts and oceans,  
11      or regulatory decision-making;

12          (6) documentation of minimum and desired  
13      standards for data acquisition and integrated  
14      metadata;

15          (7) a statement of the status of Federal efforts  
16      to leverage mapping technologies, coordinate map-  
17      ping activities, share expertise, and exchange data;

18          (8) a statement of resource requirements for or-  
19      ganizations to meet the goals of the program, includ-  
20      ing technology needs for data acquisition, proc-  
21      essing, and distribution systems;

22          (9) a statement of the status of efforts to de-  
23      classify data gathered by the Navy, the National  
24      Geospatial-Intelligence Agency, and other agencies  
25      to the extent possible without jeopardizing national



1 security, and make it available to partner agencies  
2 and the public;

3 (10) a resource plan for a digital coast inte-  
4 grated mapping pilot project for the northern Gulf  
5 of Mexico that will—

6 (A) cover the area from the authorized  
7 coastal counties through the territorial sea;

8 (B) identify how such a pilot project will  
9 leverage public and private mapping data and  
10 resources, such as the United States Geological  
11 Survey National Map, to result in an oper-  
12 ational coastal change assessment program for  
13 the subregion;

14 (11) the status of efforts to coordinate Federal  
15 programs with coastal state and local government  
16 programs and leverage those programs;

17 (12) a description of efforts of Federal agencies  
18 to increase contracting with nongovernmental enti-  
19 ties; and

20 (13) an inventory and description of any new  
21 Federal or federally funded programs conducting  
22 shoreline delineation and ocean or coastal mapping  
23 since the previous reporting cycle.

1 **SEC. 5. PLAN.**

2 (a) IN GENERAL.—Not later than 6 months after the  
3 date of enactment of this Act, the Administrator, in con-  
4 sultation with the Committee, shall develop and submit to  
5 the Congress a plan for an integrated ocean and coastal  
6 mapping initiative within the National Oceanic and At-  
7 mospheric Administration.

8 (b) PLAN REQUIREMENTS.—The plan shall—

9 (1) identify and describe all ocean and coastal  
10 mapping programs within the agency, including  
11 those that conduct mapping or related activities in  
12 the course of existing missions, such as hydrographic  
13 surveys, ocean exploration projects, living marine re-  
14 source conservation and management programs,  
15 coastal zone management projects, and ocean and  
16 coastal observations and science projects;

17 (2) establish priority mapping programs and es-  
18 tablish and periodically update priorities for geo-  
19 graphic areas in surveying and mapping across all  
20 missions of the National Oceanic and Atmospheric  
21 Administration, as well as minimum data acquisition  
22 and metadata standards for those programs;

23 (3) encourage the development of innovative  
24 ocean and coastal mapping technologies and applica-  
25 tions, through research and development through co-  
26 operative or other agreements with joint or coopera-

1        tive research institutes or centers and with other  
2        nongovernmental entities;

3            (4) document available and developing tech-  
4        nologies, best practices in data processing and dis-  
5        tribution, and leveraging opportunities with other  
6        Federal agencies, coastal states, and nongovern-  
7        mental entities;

8            (5) identify training, technology, and other re-  
9        source requirements for enabling the National Oce-  
10      anic and Atmospheric Administration's programs,  
11      vessels, and aircraft to support a coordinated ocean  
12      and coastal mapping program;

13          (6) identify a centralized mechanism or office  
14      for coordinating data collection, processing,  
15      archiving, and dissemination activities of all such  
16      mapping programs within the National Oceanic and  
17      Atmospheric Administration that meets Federal  
18      mandates for data accuracy and accessibility and  
19      designate a repository that is responsible for  
20      archiving and managing the distribution of all ocean  
21      and coastal mapping data to simplify the provision  
22      of services to benefit Federal and coastal state pro-  
23      grams; and

24          (7) set forth a timetable for implementation  
25      and completion of the plan, including a schedule for

1 submission to the Congress of periodic progress re-  
2 ports and recommendations for integrating ap-  
3 proaches developed under the initiative into the  
4 interagency program.

5 (c) NOAA JOINT OCEAN AND COASTAL MAPPING  
6 CENTERS.—The Administrator may maintain and operate  
7 up to 3 joint ocean and coastal mapping centers, including  
8 a joint hydrographic center, which shall each be co-located  
9 with an institution of higher education. The centers shall  
10 serve as hydrographic centers of excellence and may con-  
11 duct activities necessary to carry out the purposes of this  
12 Act, including—

13 (1) research and development of innovative  
14 ocean and coastal mapping technologies, equipment,  
15 and data products;

16 (2) mapping of the United States Outer Conti-  
17 nental Shelf and other regions;

18 (3) data processing for nontraditional data and  
19 uses;

20 (4) advancing the use of remote sensing tech-  
21 nologies, for related issues, including mapping and  
22 assessment of essential fish habitat and of coral re-  
23 sources, ocean observations, and ocean exploration;  
24 and

1           (5) providing graduate education and training  
2       in ocean and coastal mapping sciences for members  
3       of the National Oceanic and Atmospheric Adminis-  
4       tration Commissioned Officer Corps, personnel of  
5       other agencies with ocean and coastal mapping pro-  
6       grams, and civilian personnel.

7       (d) NOAA REPORT.—The Administrator shall con-  
8       tinue developing a strategy for expanding contracting with  
9       nongovernmental entities to minimize duplication and take  
10      maximum advantage of nongovernmental capabilities in  
11      fulfilling the Administration’s mapping and charting re-  
12      sponsibilities. Within 120 days after the date of enactment  
13      of this Act, the Administrator shall transmit a report de-  
14      scribing the strategy developed under this subsection to  
15      the Senate Committee on Commerce, Science, and Trans-  
16      portation, the Senate Committee on Energy and Natural  
17      Resources, and the House of Representatives Committee  
18      on Natural Resources.

19   **SEC. 6. EFFECT ON OTHER LAWS.**

20       Nothing in this Act shall be construed to supersede  
21      or alter the existing authorities of any Federal agency with  
22      respect to ocean and coastal mapping.

23   **SEC. 7. AUTHORIZATION OF APPROPRIATIONS.**

24       (a) IN GENERAL.—In addition to the amounts au-  
25      thorized by section 306 of the Hydrographic Services Im-

1 provement Act of 1998 (33 U.S.C. 892d), there are au-  
 2 thorized to be appropriated to the Administrator to carry  
 3 out this Act—

- 4 (1) \$26,000,000 for fiscal year 2009;
- 5 (2) \$32,000,000 for fiscal year 2010;
- 6 (3) \$38,000,000 for fiscal year 2011; and
- 7 (4) \$45,000,000 for each of fiscal years 2012  
 8 through 2015.

9 (b) JOINT OCEAN AND COASTAL MAPPING CEN-  
 10 TERS.—Of the amounts appropriated pursuant to sub-  
 11 section (a), the following amounts shall be used to carry  
 12 out section 5(c) of this Act:

- 13 (1) \$11,000,000 for fiscal year 2009.
- 14 (2) \$12,000,000 for fiscal year 2010.
- 15 (3) \$13,000,000 for fiscal year 2011.
- 16 (4) \$15,000,000 for each of fiscal years 2012  
 17 through 2015.

18 (c) COOPERATIVE AGREEMENTS.—To carry out  
 19 interagency activities under section 3 of this Act, the head  
 20 of any department or agency may execute a cooperative  
 21 agreement with the Administrator, including those author-  
 22 ized by section 5 of the Act of August 6, 1947 (33 U.S.C.  
 23 883e).

24 **SEC. 8. DEFINITIONS.**

25 In this Act:

1           (1) ADMINISTRATOR.—The term “Adminis-  
2           trator” means the Administrator of the National  
3           Oceanic and Atmospheric Administration.

4           (2) COASTAL STATE.—The term “coastal state”  
5           has the meaning given that term by section 304(4)  
6           of the Coastal Zone Management Act of 1972 (16  
7           U.S.C. 1453(4)).

8           (3) COMMITTEE.—The term “Committee”  
9           means the Interagency Ocean and Coastal Mapping  
10          Committee described in section 3.

11          (4) EXCLUSIVE ECONOMIC ZONE.—The term  
12          “exclusive economic zone” means the exclusive eco-  
13          nomic zone of the United States established by Pres-  
14          idential Proclamation No. 5030, of March 10, 1983.

15          (5) OCEAN AND COASTAL MAPPING.—The term  
16          “ocean and coastal mapping” means the acquisition,  
17          processing, and management of physical, biological,  
18          geological, chemical, and archaeological characteris-  
19          tics and boundaries of ocean and coastal areas, re-  
20          sources, and sea beds through the use of acoustics,  
21          satellites, aerial photogrammetry, light and imaging,  
22          direct sampling, and other mapping technologies.

23          (6) TERRITORIAL SEA.—The term “territorial  
24          sea” means the belt of sea measured from the base-  
25          line of the United States determined in accordance

1 with international law, as set forth in Presidential  
2 Proclamation Number 5928, dated December 27,  
3 1988.

4 (7) NONGOVERNMENTAL ENTITIES.—The term  
5 “nongovernmental entities” includes nongovern-  
6 mental organizations, members of the academic com-  
7 munity, and private sector organizations that pro-  
8 vide products and services associated with meas-  
9 uring, locating, and preparing maps, charts, surveys,  
10 aerial photographs, satellite images, or other graphi-  
11 cal or digital presentations depicting natural or  
12 manmade physical features, phenomena, and legal  
13 boundaries of the Earth.

14 (8) OUTER CONTINENTAL SHELF.—The term  
15 “Outer Continental Shelf” means all submerged  
16 lands lying seaward and outside of lands beneath  
17 navigable waters (as that term is defined in section  
18 2 of the Submerged Lands Act (43 U.S.C. 1301)),  
19 and of which the subsoil and seabed appertain to the  
20 United States and are subject to its jurisdiction and  
21 control.

○