

Calendar No. 793

108TH CONGRESS }
2d Session }

SENATE

{ REPORT
{ 108-402

**OCEAN AND COASTAL MAPPING
INTEGRATION ACT**

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION

ON

S. 2489



OCTOBER 11, 2004.—Ordered to be printed

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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED EIGHTH CONGRESS

SECOND SESSION

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OCEAN AND COASTAL MAPPING INTEGRATION ACT

OCTOBER 11, 2004.—Ordered to be printed

Mr. MCCAIN, from the Committee on Commerce, Science, and
Transportation, submitted the following

R E P O R T

[To accompany S. 2489]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 2489) “A Bill To establish a program within the National Oceanic and Atmospheric Administration to integrate Federal coastal and ocean mapping activities”, having considered the same, reports favorably thereon with an amendment (in the nature of a substitute) and recommends that the bill (as amended) do pass.

PURPOSE OF THE BILL

S. 2489, as reported, would establish within the National Oceanic and Atmospheric Administration (NOAA) a comprehensive Federal ocean and coastal mapping program for the United States Exclusive Economic Zone (EEZ) that will support better conservation and management of marine resources; improve decision in the siting of ocean observing platforms; advance coastal and ocean science and the development of ocean exploration technology; and support vessel safety.

BACKGROUND AND NEEDS

The jurisdiction of the United States extends 200 miles beyond its coastline and includes the United States Territorial Sea and the EEZ. Nearly ninety percent of this area remains unmapped by modern technologies. Improved mapping technology is necessary for a number of reasons. The United States marine transportation system is expected to grow exponentially over the next twenty years and a backlog of required surveys is developing. According to NOAA’s Office of Coast Survey, approximately 35,000 square nau-

tical miles of navigationally significant United States waters have been designated as critical areas requiring updated information on depth and obstructions. Improved mapping of these waters will help to minimize shipping accidents, as well as help support the national security missions of the United States Navy and United States Coast Guard. The U.S. Commission on Ocean Policy estimates that there are potentially \$1.3 trillion in resources in the form of oil, minerals, and sedentary species which could be available under United Nations Convention on the Law of the Sea provisions concerning extensions of the continental shelf. Improved data and maps of the resources available on the continental shelf could support the United States in asserting jurisdictional claims to its continental shelf if it accedes to the United Nations Convention on the Law of the Sea.

Currently at least 10 Federal agencies (including NOAA, the Environmental Protection Agency, the Minerals Management Service, the United States Army Corps of Engineers, United States Coast Guard, United States Fish and Wildlife Service, the National Science Foundation, the United States Navy, and the United States Geological Survey), in addition to coastal State and local agencies, academic institutions, and private companies, share the expensive and time-consuming responsibility of mapping, charting, and assessing living and non-living resources in United States waters. This creates a significant amount of overlap where different parties perform repeated surveys of the same area for different purposes. It also prevents the integration of these surveys since they differ from each other in terms of scale, resolution, projection, and reference frames. To complicate matters further, the coastal zone has the unique issue of the land-sea interface, or shoreline position, which requires seamless joining of onshore topographic maps with offshore bathymetric maps.

The U.S. Commission on Ocean Policy recommends that many of the existing Federal mapping activities should be consolidated and coordinated to increase efficiency and help ensure that all necessary surveys are conducted. The Commission recommends that NOAA, which already has the responsibility of collecting hydrographic and bathymetric data and creating navigational charts for safe and efficient maritime commerce, be the lead agency in the United States' ocean and coastal mapping and charting efforts. In addition to the U.S. Commission on Ocean Policy, the National Research Council (NRC) released a study in 2004 entitled "A Geospatial Framework for the Coastal Zone", which details the national needs for coastal mapping and charting. The report was requested by NOAA, the United States Geological Survey, and the Environmental Protection Agency. The NRC identified the same problems with the Nation's ocean and coastal mapping efforts as the U.S. Commission on Ocean Policy, and it stated that coordination and communication among Federal agencies was necessary, as was the integration of mapping efforts.

SUMMARY OF PROVISIONS

S. 2489, the Ocean and Coastal Mapping Integration Act, would direct NOAA to coordinate a comprehensive Federal ocean and coastal mapping program that enhances conservation and management of ocean and coastal resources, and to conduct the following

activities: identify and coordinate Federal shoreline, ocean, and coastal mapping activities; build expertise in mapping technologies; set standards and protocols for testing and transferring new technologies to the private sector; and archive and distribute data and specific data products for the benefit of multiple users. Ocean and coastal mapping activities covered under the bill would include the suite of activities already conducted: mapping, data processing, management, and archiving. Mapping activities are intended to include the areas and resources of outer continental shelf and inshore areas—extending from coastal State waters to the territorial sea and the EEZ, to areas of the outer continental shelf beyond the EEZ.

The bill also would establish an Interagency Committee on Ocean and Coastal Mapping composed of high-ranking officials in Federal agencies engaged in ocean and coastal mapping, with the NOAA representative acting as chair of the committee. This committee would be required to meet on a quarterly basis, and to submit a report to Congress within 18 months after enactment of this bill, detailing ocean and coastal mapping plans, efforts, and needs. Together with this committee, the Administrator of NOAA would be required to submit a plan to Congress setting forth a NOAA Integrated Mapping Initiative. This plan would be due six months from the date of enactment of this bill.

Authorization levels of \$20 million for FY 2005, \$26 million for FY 2006, \$32 million for FY 2007, \$38 million for FY 2008, and \$45 million annually for FY 2009 through FY 2012 would be provided for NOAA to carry out the purposes of this act. In addition, the heads of Department of Defense, Department of the Interior, Department of Homeland Security, the Environmental Protection Agency, and the National Aeronautics and Space Administration, may make available up to \$10 million per fiscal year for interagency mapping activities.

Changes made to the bill at the executive session relate primarily to technical changes. Specifically, the bill was amended: (1) to read “ocean and coastal mapping” in all places which read “coastal and ocean mapping”; (2) to address concerns regarding the likelihood of interagency cooperation; (3) to clarify that the bill authorizes three joint ocean and coastal mapping centers, one of which may be a joint hydrographic center; (4) to clarify the priorities of Federal and federally funded mapping activities; and (5) to clarify cooperation and coordination with the private sector, academia, and international mapping activities.

LEGISLATIVE HISTORY

On June 2, 2004, Senator Inouye introduced S. 2489, the Coastal and Ocean Mapping Integration Act of 2004, a bill to establish a comprehensive Federal coastal and ocean seafloor mapping program within NOAA. The bill, cosponsored by Senators Stevens, Hollings, Gregg, Snowe, Lott, Breaux, Lautenberg, and Akaka, was referred to the Senate Committee on Commerce, Science, and Transportation.

On September 22, 2004, the Committee considered a manager’s amendment in the nature of a substitute at the executive session that makes technical changes to the bill as introduced. At this executive session, the Commerce Committee ordered S. 2489 to be re-

ported favorably with an amendment in the nature of a substitute offered by Senator Breaux on behalf of Senator Inouye.

ESTIMATED COSTS

In accordance with paragraph 11(a) of rule XXVI of the Standing Rules of the Senate and section 403 of the Congressional Budget Act of 1974, the Committee provides the following cost estimate, prepared by the Congressional Budget Office:

U.S. CONGRESS,
CONGRESSIONAL BUDGET OFFICE,
Washington, DC, October 6, 2004.

Hon. JOHN MCCAIN,
*Chairman, Committee on Commerce, Science, and Transportation,
U.S. Senate, Washington, DC.*

DEAR MR. CHAIRMAN: The Congressional Budget Office has prepared the enclosed cost estimate for S. 2489, the Ocean and Coastal Mapping Integration Act.

If you wish further details on this estimate, we will be pleased to provide them. The CBO staff contact is Deborah Reis.

Sincerely,

ELIZABETH M. ROBINSON
(For Douglas Holtz-Eakin, Director).

Enclosure.

S. 2489—Ocean and Coastal Mapping Integration Act

Summary: S. 2489 would direct the National Oceanic and Atmospheric Administration (NOAA) to establish an integrated mapping program encompassing the Great Lakes, coastal state waters, territorial sea, exclusive economic zone and continental shelf of the United States. The bill also would establish an interagency committee to coordinate federal mapping of ocean and coastal areas, require an integrated mapping plan to identify and describe all mapping programs, and authorize up to three joint centers for ocean and coastal mapping to be located at colleges or universities. For these purposes, the bill would authorize the appropriation of a total of \$296 million over the 2005–2012 period.

Assuming appropriation of the amounts authorized by the bill, CBO estimates that the federal government would spend \$7 million in fiscal year 2005 and \$116 million over the 2005–2009 period to implement the legislation. The remaining \$179 million authorized would be spent after 2009, including \$135 million authorized to be appropriated between 2010 and 2012. Enacting S. 2489 would not affect revenues or direct spending.

This legislation contains no intergovernmental or private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) and would impose no costs on state, local, or tribal governments.

Estimated cost to the Federal Government: S. 2489 would authorize the appropriation of between \$20 million and \$45 million a year for each of fiscal years 2005 through 2012 for the new ocean and coastal mapping initiative. Of these amounts, between \$10 million and \$15 million a year would be available for research and other mapping programs to be carried out at the new ocean and

coastal mapping centers. The estimated budgetary impact of S. 2489 is shown in the following table. The costs of this legislation fall within budget function 300 (natural resources and environment). For this estimate, CBO assumes that the full amounts authorized by the bill will be appropriated for each year and that outlays will follow historical spending patterns for similar NOAA programs.

	By fiscal year, in millions of dollars—				
	2005	2006	2007	2008	2009
CHANGES IN SPENDING SUBJECT TO APPROPRIATION					
Authorization Level ¹	20	26	32	38	45
Estimated Outlays	7	15	25	32	38

¹ Additional amounts, totaling \$135 million, would be authorized for appropriation over the 2010–2012 period.

Intergovernmental and private-sector impact: S. 2489 contains no intergovernmental or private-sector mandates as defined in UMRA and would impose no costs on state, local, or tribal governments.

Estimate prepared by: Federal Costs: Deborah Reis; Impact on State, Local, and Tribal Governments: Gregory Waring; and Impact on the Private Sector: Karen Raupp.

Estimate approved by: Peter H. Fontaine, Deputy Assistant Director for Budget Analysis.

REGULATORY IMPACT STATEMENT

In accordance with paragraph 11(b) of rule XXVI of the Standing Rules of the Senate, the Committee provides the following evaluation of the regulatory impact of the legislation, as reported:

NUMBER OF PERSONS COVERED

The reported bill would direct NOAA to coordinate a comprehensive Federal ocean and coastal mapping program that enhances conservation and management of ocean and coastal resources. It would not authorize any new regulations and therefore would not subject any individuals or businesses to new regulations.

ECONOMIC IMPACT

The bill would provide authorization levels of \$20 million for FY 2005, \$26 million for FY 2006, \$32 million for FY 2007, \$38 million for FY 2008, and \$45 million annually for FY 2009 through FY 2012 for NOAA to carry out the purposes of this Act. These funding levels are not expected to have an inflationary impact on the Nation's economy.

PRIVACY

This legislation would not have an adverse impact on the personal privacy of the individuals that will be impacted by this legislation.

PAPERWORK

The reported bill would not increase paperwork requirements for the private sector. Those non-governmental partners that are interested in working with the Interagency Committee on Ocean and Coastal Mapping established in section 3 would likely increase

their communications, data management, and technical expertise capacity related to ocean mapping.

SECTION-BY-SECTION ANALYSIS

Sec. 1. Short title

Section 1 provides the short title of the bill.

Sec. 2. Integrated ocean and coastal mapping program

Subsection (a) would direct the Administrator of NOAA to develop, in coordination with the Interagency Committee on Ocean and Coastal Mapping, a coordinated and comprehensive Federal ocean and coastal mapping program that enhances the conservation and management of coastal and ocean resources.

Subsection (b) would direct NOAA, working with the Committee, to conduct the following activities in developing the program, including: identify and coordinate Federal shoreline, ocean, and coastal mapping activities; promote cost-effective, cooperative mapping efforts among all Federal agencies conducting ocean and coastal mapping activities; build expertise in mapping technologies; set standards and protocols for testing and transferring new technologies to the private sector; archive and distribute data and specific data products for the benefit of multiple users; develop specific data presentation standards for use by Federal, State, and other entities; and identify the procedures to be used for coordinating Federal data with State and local government programs.

Sec. 3. Interagency Committee on Ocean and Coastal Mapping

Subsection (a) would establish an Interagency Committee on Ocean and Coastal Mapping.

Subsection (b) would require that the Committee be comprised of high-ranking officials from Federal agencies engaged in coastal or ocean mapping.

Subsection (c) would provide that the NOAA representative would chair the committee.

Subsection (d) would require the Committee to meet on a quarterly basis, but permit Subcommittee or working group meetings to meet as often as needed.

Subsection (e) would require the Committee to coordinate activities with other Federal efforts, international mapping activities, States, and user groups.

Sec. 4. NOAA integrated mapping initiative

Subsection (a) would require the Administrator of NOAA, working in consultation with the Interagency Committee on Ocean and Coastal Mapping, to submit a plan to Congress setting forth a NOAA Integrated Mapping Initiative. The plan would be due 6 months from the date of enactment.

Subsection (b) would require the NOAA plan to include: a description of all NOAA mapping programs; geographic priorities and metadata standards for those programs; encouragement for the development of new ocean and coastal mapping technologies; a section on existing and emerging technology; resource requirements for the integrated mapping initiative; the designation of centers or repositories within NOAA for managing data collection, processing,

archiving, and distribution; and a timetable for implementation of the plan.

Subsection (c) would authorize the Administration to operate and maintain up to three joint ocean and coastal mapping centers, including a joint hydrographic center, which shall be co-located with colleges or universities. The centers would serve as hydrographic centers of excellence and carry out research and development of new technologies, mapping of the United States outer continental shelf, certain types of data processing, testing of new applications for remote sensing technologies, and graduate education programs in the hydrographic sciences for NOAA Commissioned Officer Corps and civilian personnel.

Sec. 5. Interagency program reporting

This section would require the Interagency Committee on Ocean and Coastal Mapping to submit a report to Congress within 18 months after enactment of the Act. The report would: (1) inventory Federal ocean and coastal survey data within the territorial seas and EEZ; (2) identify priority areas in need of re-surveying with present technologies; (3) include a resource plan that identifies when priority areas in need of modern surveys can be accomplished; (4) describe the status of efforts to produce integrated digital maps of coastal and ocean areas; (5) describe products resulting from coordinated mapping efforts that improve public understanding of the oceans and coasts; (6) document minimum and desired standards for data acquisition and metadata; (7) describe the status of Federal efforts to leverage mapping technologies, share expertise, coordinate mapping activities, and exchange data; (8) provide resource and technology requirements for carrying out the goals of the program; (9) describe efforts to declassify data gathered by the Department of Defense; (10) provide a resource plan for a digital coast integrated mapping pilot project in the northern Gulf of Mexico that would involve the leveraging of public and private mapping data and resources; and (11) describe the status of efforts to coordinate Federal programs with State and local programs.

Section 6. Authorization of appropriations

Subsection (a) would authorize, in addition to amounts authorized under the Hydrographic Services Improvement Act of 1998, appropriations to NOAA to carry out the purposes of the Act. Appropriations would be authorized in increments, beginning with \$20 million in FY 2005 and ending with \$45 million for each of FY 2009–2012.

Subsection (b) would provide that, of the amounts authorized under subsection (a), the portion to be authorized for the joint hydrographic centers described in section 4(c) is \$10 million in FY 2005, increasing by \$1 million per fiscal year to \$15 million for each of FY 2009–2012.

Subsection (c) would provide that the heads of Department of Defense, Department of Interior, Department of Homeland Security, the Environmental Protection Agency, and the National Aeronautics and Space Administration, may make available up to \$10 million per fiscal year for interagency mapping activities.

Sec. 7. Definitions

This section would define key terms applicable to the bill, including “Exclusive Economic Zone” and “Ocean and Coastal Mapping”.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee states that the bill as reported would make no change to existing law.

