

**Calendar No. 792**

108TH CONGRESS }  
2d Session }

SENATE

{ REPORT  
{ 108-401

**MARINE DEBRIS RESEARCH AND  
REDUCTION ACT**

---

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND  
TRANSPORTATION

ON

S. 2488



OCTOBER 11, 2004.—Ordered to be printed

---

U.S. GOVERNMENT PRINTING OFFICE  
WASHINGTON :

SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

ONE HUNDRED EIGHTH CONGRESS

SECOND SESSION

JOHN McCAIN, Arizona, *Chairman*

TED STEVENS, Alaska	ERNEST F. HOLLINGS, South Carolina
CONRAD BURNS, Montana	DANIEL K. INOUE, Hawaii
TRENT LOTT, Mississippi	JOHN D. ROCKEFELLER IV, West Virginia
KAY BAILEY HUTCHISON, Texas	JOHN F. KERRY, Massachusetts
OLYMPIA J. SNOWE, Maine	JOHN B. BREAUX, Louisiana
SAM BROWNBACK, Kansas	BYRON L. DORGAN, North Dakota
GORDON SMITH, Oregon	RON WYDEN, Oregon
PETER G. FITZGERALD, Illinois	BARBARA BOXER, California
JOHN ENSIGN, Nevada	BILL NELSON, Florida
GEORGE ALLEN, Virginia	MARIA CANTWELL, Washington
JOHN E. SUNUNU, New Hampshire	FRANK LAUTENBERG, New Jersey

JEANNE BUMPUS, *Staff Director and General Counsel*

ROB FREEMAN, *Deputy Staff Director*

ROBERT W. CHAMBERLIN, *Chief Counsel*

KEVIN D. KAYES, *Democratic Staff Director and Chief Counsel*

## Calendar No. 792

108TH CONGRESS }  
2d Session }

SENATE

{ REPORT  
{ 108-401

---

---

### MARINE DEBRIS RESEARCH AND REDUCTION 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. 2488]

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 2488) to establish a program within the National Oceanic and Atmospheric Administration and the United States Coast Guard to help identify, assess, reduce, and prevent marine debris and its adverse impacts on the marine environment and navigation safety, in coordination with non-Federal entities, and for other purposes”, having considered the same, reports favorably thereon without amendment and recommends that the bill do pass.

#### PURPOSE OF THE BILL

The purpose of S. 2488, the Marine Debris Research and Reduction Act, is to establish programs within NOAA and the Coast Guard to “identify, assess, reduce and prevent marine debris and its adverse impacts on the marine environment and navigation safety” and establish an Interagency Committee on Marine Debris responsible for coordinating Federal efforts on this issue. The bill would authorize appropriations for fiscal year 2005 for NOAA (\$10,000,000) and the Coast Guard (\$5,000,000) to carry out this program.

#### BACKGROUND AND NEEDS

Each year, millions of marine mammals, sea turtles, fish, and seabirds become entangled in marine debris or ingest plastics which they have mistaken for food. It is estimated that 1,267 different marine species have been reported entangled in or having ingested marine debris. The plastic constricts their movements or

kills the animals through starvation, exhaustion, or infection from deep wounds caused by the tightening of tangled material. The animals may starve to death, because the plastic clogs their intestines, preventing them from obtaining vital nutrients. Toxic substances present in plastics can also cause death or reproductive failure.

Humans can also be directly affected by marine debris. Swimmers and divers can become entangled in abandoned netting and fishing lines. Beach users can be injured by stepping on broken glass, cans, needles, or other litter. Floating debris is visually unappealing and can result in lost tourism revenues. Furthermore, marine debris acts as a navigational hazard to fishing and recreational boats by entangling propellers and clogging cooling water intake valves.

Land-based sources cause 80 percent of the marine debris found on our beaches and waters. The second source of marine debris derives from ocean-based sources, including lost or abandoned fishing gear, galley waste, and other trash from ships and offshore oil and gas exploration and production facilities. In Hawaii, the impacts of marine debris are particularly apparent because of the convergence caused by the North Pacific Tropical High. Atmospheric forces cause ocean surface currents to converge on Hawaii, bringing with them the vast amount of debris floating throughout the Pacific. In 2003 alone, 122 tons of debris were removed from coral reefs in the Northwestern Hawaiian Islands.

The U.S. Commission on Ocean Policy (Commission) devoted an entire chapter to the problem of marine debris in its Final Report, released September 20, 2004. The Commission advocated strengthening interagency efforts and public-private partnerships to promote monitoring, prevention, reduction, and public awareness of marine debris and its impacts. It also recommended development of an international plan of action to target derelict fishing gear, which is a serious and persistent source of marine debris.

S. 2488, the Marine Debris Research and Reduction Act, addresses many of the marine debris recommendations of the Commission. It would establish a Marine Debris Prevention and Removal Program within NOAA to reduce and prevent adverse impacts of marine debris on the marine environment and navigational safety. The NOAA program would undertake marine debris mapping, identification, prevention, and removal efforts; public education and outreach efforts; and research and development of gear alternatives to reduce the threat to the marine environment and to enhance the tracking, recovery, and identification of lost gear.

The bill would also establish a marine debris grants program to States or other eligible groups to encourage cooperative approaches to address marine debris problems. The bill would establish a 50 percent non-federal match requirement, and allow for in kind contributions, including environmental mitigation funds provided under a consent decree (but not an administrative order). NOAA is also directed to maintain a Federal information clearinghouse on marine debris that will be available to researchers and other interested parties, which is intended to assist in identifying sources and devising prevention strategies.

In addition, the bill would direct the Coast Guard to improve its enforcement of MARPOL Annex V and the Act to Prevent Pollution from Ships (33 U.S.C. 1901 et seq.), which are designed to prevent

ship-based pollution from plastics and other garbage. Specific measures authorized include the development of regulations to require United States fishing vessels to report the loss and recovery of fishing gear, and regulations to ensure that ports and terminals have adequate waste receptacles and logging procedures for the proper disposal of plastics, as required by international and domestic law.

As recommended by the Commission, the bill would re-establish and strengthen the Interagency Committee on Marine Debris to reinvigorate marine debris research and activities among Federal agencies, in cooperation with non-governmental entities. The Committee would be required to prepare an Interagency Report on Marine Debris Impacts and Strategies within 12 months after the date of enactment as well as annual progress reports. The bill would also direct the Committee to develop a strategy to pursue international action to reduce the incidence of marine debris through the International Maritime Organization and other appropriate international and regional forums.

The bill would authorize appropriations for NOAA and the Coast Guard to carry out their programs in 2005.

#### SUMMARY OF PROVISIONS

##### LEGISLATIVE HISTORY

S. 2488 was introduced in the Senate on June 2, 2004, by Senator Inouye and referred to the Senate Committee on Commerce, Science, and Transportation. It is cosponsored by Senators Stevens, Hollings, and Cantwell.

On July 20, 2004, the bill was considered by the Committee in an open executive session. The Committee, without objection, ordered S. 2280 be reported subject to amendment. Due to the invocation of a Senate rule which prevented the consideration of amendments to this bill, a substitute amendment that Senator Inouye intended to offer in order to make technical corrections to the bill could not be considered by the committee.

Committee members understand that when S. 2488 proceeds to the Senate floor, technical changes from the substitute amendment would be offered. These technical changes include: expanding program scope to address the sources of marine debris; clarifying that any new Coast Guard regulations would focus on closing existing regulatory gaps for a range of vessel types, not just fishing vessels; adding the United States Fish and Wildlife Service and the Department of State to the Interagency Marine Debris Committee; requiring "marine debris" to be defined through regulation; and extending the authorization of appropriations through fiscal year 2009.

##### 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, September 24, 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 estimate of the costs of the mandates contained in S. 2488, the Marine Debris Research and Reduction Act. CBO transmitted the federal cost estimate for this bill to you on September 10, 2004.

If you wish further details on this statement, we will be pleased to provide them. The CBO staff contacts are Gregory Waring (for the state and local impact), and Karen Raupp (for the private-sector impact).

Sincerely,

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

Enclosure.

*S. 2488—Marine Debris Research and Reduction Act*

Summary: S. 2488 contains both intergovernmental and private-sector mandates as defined in the Unfunded Mandates Reform Act (UMRA) because it would impose requirements on all public and private owners and operators of port terminals and small commercial vessels. Because of uncertainty about how regulators would implement one of the mandates, CBO cannot determine the aggregate cost of private-sector mandates in the bill. Based on information from government and industry sources, CBO estimates that the aggregate cost of intergovernmental mandates in the bill would fall below the annual threshold (\$60 million in 2004, adjusted annually for inflation) established by the act.

Mandates Contained in the Bill: S. 2488 would impose requirements on all public and private owners and operators of port terminals. In addition, the bill would impose requirements on the owners and operators of small commercial vessels.

*Mandates on port terminals*

Port terminals are facilities within the waters of a port consisting of one or more docks. The bill would require operators of terminals to maintain on-site receptacles for receiving plastic waste from docked vessels. Terminal operators also would be required to maintain a log of waste received to help track and verify proper garbage disposal from vessels. Because port authorities include public and private-sector entities, such requirements would be both intergovernmental and private-sector mandates as defined in UMRA.

*Mandates on vessels*

S. 2488 also would broaden to smaller vessels two existing mandates that currently apply to large vessels. In addition, the bill would require certain small vessels to maintain receptacles on board for collecting solid waste. The bill would distinguish between

two categories of small vessels; commercial vessels that are less than 40 feet in length, and those weighing less than 400 gross tons.

Under current law, vessels 40 feet or longer are required to maintain a waste management plan. This requirement is a part of the regulations that implement Annex V of MARPOL, an international agreement governing the transportation of oil and noxious liquid and garbage disposal practices aimed at controlling levels of chemical and waste pollution of the oceans. The bill also would require certain smaller vessels—those shorter than 40 feet—to comply with these regulations; however the bill would authorize the U.S. Coast Guard (USCG) to take into account the potential economic impacts and technical feasibility of these requirements as it implements the regulations for smaller vessels.

Finally, the bill would expand to all vessels entering U.S. ports the current requirement that vessels weighing 400 hundred gross tons or greater keep records of the garbage that they dispose.

*Estimated direct costs of mandates*

*Are statutory thresholds exceeded?*

CBO is uncertain about how regulators would implement the mandate on terminal operators to provide receptacles for collecting plastics. Therefore, we cannot determine the aggregate cost of mandates in the bill. Depending on how the requirements are implemented, the costs to both private and public operators could vary greatly. Although the range of possible costs for private terminals is too broad to predict whether aggregate costs of private-sector mandates would exceed the annual threshold established by UMRA (\$120 million in 2004, adjusted annually for inflation), information from government and industry sources indicates that total costs for publicly operated terminals are likely to fall below the annual threshold for intergovernmental mandates (\$60 million in 2004, adjusted annually for inflation).

*Total direct costs of mandates*

The costs to comply with the mandate to provide waste receptacles for plastics would vary depending on the specific Coast Guard requirements (e.g., number of receptacles, location, frequency of disposal) that have yet to be finalized. Therefore, CBO cannot determine the total cost of complying with such requirements. Under current law, the owners and operators of the vessels that dock at ports generally pay businesses directly for the disposal of their solid wastes. Although the bill would require terminals to provide for some disposal, CBO expects that they would pass along the disposal costs to the vessels using their facilities. Because there are relatively few publicly operated terminals, CBO estimates that the cost for public ports to maintain plastic receptacles would not exceed \$25 million annually.

Industry sources CBO contacted estimate that it would take ports about one hour per day to maintain logs of the plastic waste they receive as required by the bill. Based on those data and other information about average wage rates, CBO estimates that such requirements would cost terminal operators a total of about \$20 million annually; private operators would bear about \$15 million of

the cost while public operators would bear about \$5 million annually.

Registration records from the USCG indicate that there are about 83,000 commercial ships less than 40 feet. According to industry experts, the cost per vessel of obtaining a waste management plan and familiarizing crew members with the plan would be small and amount to about \$120 per vessel on average. Assuming all commercial vessels less than 40 feet had to comply with the mandate, the cost to the private sector could amount to about \$10 million. The requirement to maintain shipboard receptacles for garbage collection would impose minimal costs on the vessels to which this would apply. Generally, vessels already maintain receptacles onboard to prevent garbage from littering the deck and compartments of the ship.

Finally, these USCG records list 98,580 commercial vessels weighing less than 400 gross tons; these vessels would face additional costs to keep records of garbage disposal. Based on information from the USCG and other government sources regarding estimated time for recordkeeping and average wages, CBO estimates that the cost to small commercial vessels to maintain disposal logs would amount to about \$60 million annually.

Previous CBO estimate: CBO's analysis of the federal costs of S. 2488 was transmitted on September 10, 2004.

Estimate prepared by: State and Local Impact: Gregory Waring and Private-Sector Impact: Karen Raupp.

Estimate approved by: Peter H. Fontaine, Deputy Assistant Director for Budget Analysis. Roger Hitchner, Assistant Director for Microeconomic and Financial Studies.

#### 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 establish programs within NOAA and the Coast Guard to identify, assess, reduce, and prevent marine debris and its adverse impacts on the marine environment and navigation safety. It would authorize the Coast Guard to develop regulations to reduce violations of MARPOL Annex V and the Act to Prevent Pollution from Ships (33 U.S.C. 1901 et seq.), ensuring that all United States ports and terminals maintain waste disposal receptacles and waste logging procedures and provide for log book comparison to determine compliance. The Coast Guard would also be authorized to develop regulations to require vessels to maintain waste disposal records, require fishing vessels to report the loss and recovery of fishing gear, and improve ship-board waste management, so individuals or businesses that generate waste on board ships could become subject to new regulations.

##### ECONOMIC IMPACT

Section 9 would authorize \$10,000,000 to be appropriated to the Secretary of Commerce and \$5,000,000 to be appropriated to the Secretary of the Department in which the Coast Guard is operating

for fiscal year 2005 to implement provisions of this bill. Both of these amounts have 10 percent administrative caps. These funding levels are modest and are not expected to have an inflationary impact on the Nation's economy.

#### PRIVACY

The Coast Guard regulations authorized in section 4 of the reported bill may lead to changes in the way ship-board waste information is collected and reported, but it is not expected to have any adverse impact on the personal privacy of individuals.

#### PAPERWORK

The Coast Guard regulations authorized in section 4 of the reported bill may lead to changes in the paperwork requirements for recording and reporting ship-board waste, including loss and recovery of fishing gear, in the private sector.

#### SECTION-BY-SECTION ANALYSIS

##### *Section 1. Short title*

Section 1 states that this may be cited as "Marine Debris Research and Reduction Act".

##### *Section 2. Findings and purposes*

Subsection (a) would convey the importance of the ocean environment and the fragility of ocean ecosystems and identify marine debris (particularly plastics) as a significant long-term threat. Subsection (b) states that a purpose of this Act is to establish programs within NOAA and the Coast Guard to "identify, assess, reduce, and prevent marine debris and its adverse impacts on the marine environment and navigation safety." Other purposes include increased Federal coordination, international cooperation, and better data management.

##### *Section 3. NOAA Marine Debris Prevention and Removal Program*

This section would establish a program within NOAA to reduce and prevent marine debris. Subsection (b)(1) would require the program to develop methods for tracking and predicting the movements of marine debris in United States navigable waters and the United States Exclusive Economic Zone and then removing it. Subsection (b)(2) would require NOAA to research fishing gear that will pose less threat to the marine environment, develop tracking devices for lost gear, and develop voluntary programs to reduce the loss or discarding of old gear. Under subsection (b)(3), NOAA would be responsible for educating stakeholders on marine debris.

Subsection (c) would authorize grants to meet the purposes of the Act. The bill would require a 50 percent match for grants (with a waiver provision) and involve a merit-based peer review process. Formation of grant guidelines would require consultation with various groups, including regional fishery management councils established under the Magnuson-Stevens Fishery Conservation and Management Act.

#### *Section 4. Coast Guard program*

Section 4 would require the Coast Guard to undertake measures to improve compliance with MARPOL Annex V and the Act to Prevent Pollution from Ships (33 U.S.C. 1901 et seq.). It would also require the Coast Guard to establish voluntary programs for reporting marine debris ship strikes and disposal violations, and for United States flag vessels to inform the Coast Guard of foreign ports that lack adequate garbage disposal facilities.

This section would further require the Coast Guard to promulgate regulations that would:

- Increase the presence of waste facilities at ports and docks (to comply with the above statutes).
- Require vessels entering United States ports to maintain records on the disposal of plastics and other garbage (records subject to Coast Guard inspection).
- Require United States fishing vessels to report loss/recovery of gear and require smaller vessels to comply with existing requirements to maintain on-board trash receptacles and a ship waste management plan (with due account given to economic impacts and feasibility).

#### *Section 5. Interagency coordination*

This section would establish an “Interagency Committee on Marine Debris” to coordinate Federal activities and cooperate with non-federal government entities in developing a comprehensive program of marine debris research and activities. Members would include: NOAA, the Coast Guard, the Environmental Protection Agency, the Navy, the Maritime Administration, National Aeronautics and Space Administration, the Marine Mammal Commission, and other interested agencies. Sections 5(c) and 5(d) would require Committee meetings twice annually as well as a report examining the impact of marine debris, potential solutions for those impacts, and the costs-benefits of those solutions. Section 5(d) would also require annual reports on progress made by the programs established in this Act and international partnership efforts.

#### *Section 6. International cooperation*

This section would require the Interagency Committee to pursue international action in reducing marine debris at international meetings and organizations. It includes a recommendation to make marine debris a part of international fishery and maritime agreements.

#### *Section 7. Federal Information Clearinghouse*

This section would establish within NOAA a clearinghouse to store marine debris data and information (including information useful in identifying fishing gear fragments), to be shared with researchers and other interested parties.

#### *Section 8. Definitions*

Section 8 defines, among other terms: (1) “Under Secretary”; (2) “Committee”; (3) “United States Exclusive Economic Zone”; (4) and “MARPOL”.

*Section 9. Authorization of appropriations*

For FY2005, the bill would authorize \$10,000,000 to the Secretary of Commerce and \$5,000,000 to the Secretary of the Department housing the Coast Guard (i.e., the Department of Homeland Security), with the stipulation that no more than 10 percent of either sum may be used for administrative costs.

## CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new material is printed in italic, existing law in which no change is proposed is shown in roman):

**MARINE PLASTIC POLLUTION RESEARCH AND  
CONTROL ACT OF 1987**

(33 U.S.C. 1914)

**TITLE 33—NAVIGATION AND NAVIGABLE  
WATERS**

**CHAPTER 33—PREVENTION OF POLLUTION FROM SHIPS**

**[SEC. 2003. COORDINATION.**

[33 U.S.C. 1914]

[(a) ESTABLISHMENT OF MARINE DEBRIS COORDINATING COMMITTEE.—The Secretary of Commerce shall establish a Marine Debris Coordinating Committee.

[(b) MEMBERSHIP.—The Committee shall include a senior official from—

[(1) the National Oceanic and Atmospheric Administration, who shall serve as the Chairperson of the Committee;

[(2) the Environmental Protection Agency;

[(3) the United States Coast Guard;

[(4) the United States Navy; and

[(5) such other Federal agencies that have an interest in ocean issues or water pollution prevention and control as the Secretary of Commerce determines appropriate.

[(c) MEETINGS.—The Committee shall meet at least twice a year to provide a forum to ensure the coordination of national and international research, monitoring, education, and regulatory actions addressing the persistent marine debris problem.

[(d) MONITORING.—The Secretary of Commerce, acting through the Administrator of the National Oceanic and Atmospheric Administration, in cooperation with the Administrator of the Environmental Protection Agency, shall utilize the marine debris data derived under title V of the Marine Protection, Research, and Sanctuaries Act of 1972 (33 U.S.C. 2801 et seq.) to assist—

[(1) the Committee in ensuring coordination of research, monitoring, education and regulatory actions; and

【(2) the United States Coast Guard in assessing the effectiveness of this Act and the Act to Prevent Pollution from Ships in ensuring compliance under section 2201.】

