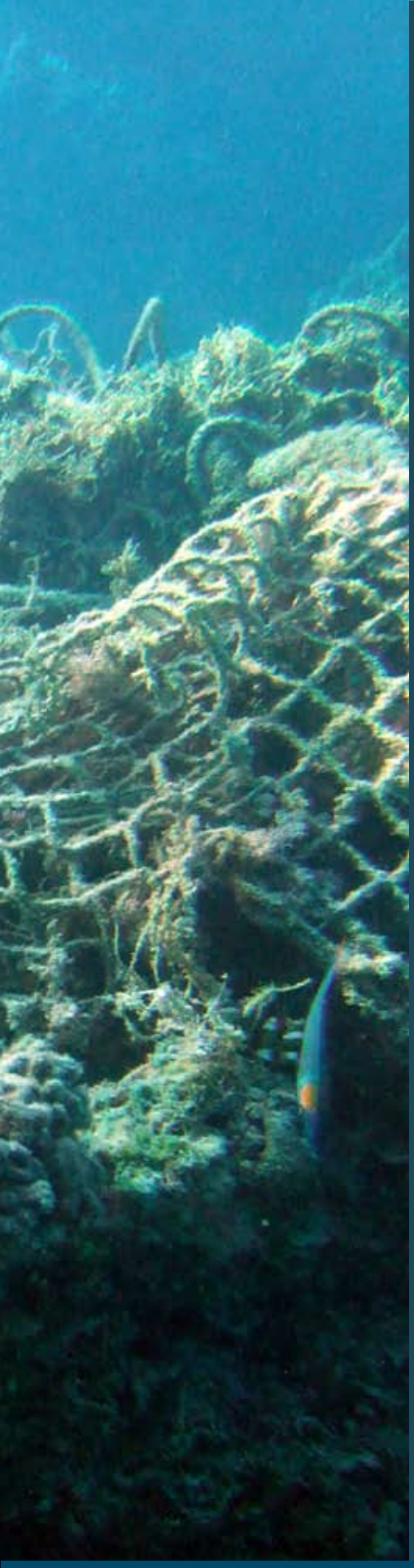
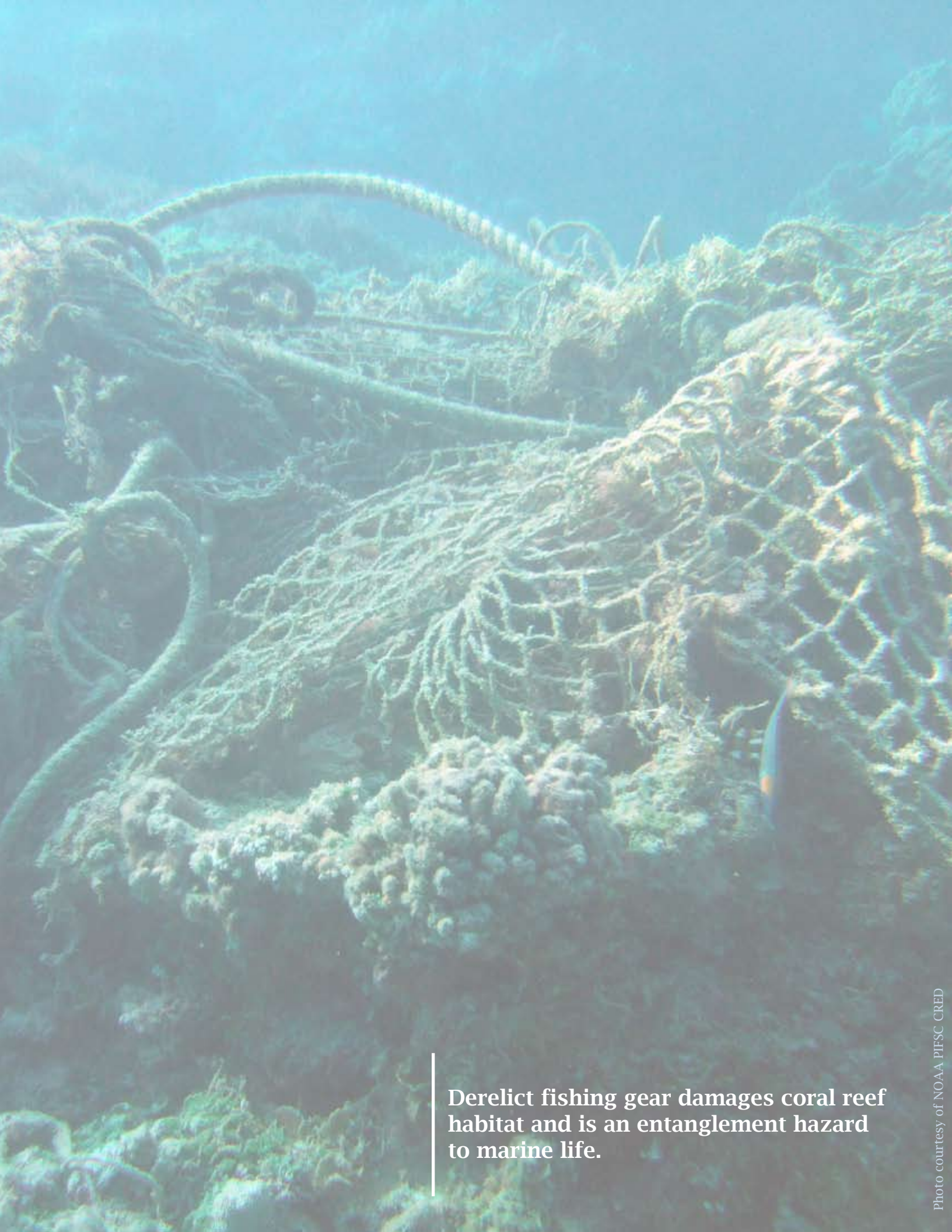


2008-2009 Progress Report on the Implementation of the MARINE DEBRIS RESEARCH, PREVENTION, AND REDUCTION ACT

Interagency Marine Debris Coordinating Committee

March 2010

Congressional Report requirement as stated in Marine Debris Research, Prevention, and Reduction Act, 33 U.S.C. 1954.



Derelict fishing gear damages coral reef habitat and is an entanglement hazard to marine life.

Photo courtesy of NOAA PIFSC CRED

This Congressional Report was developed by the Interagency Marine Debris Coordinating Committee and produced by the National Oceanic and Atmospheric Administration (NOAA), U.S. Department of Commerce to fulfill requirements of the Marine Debris Research, Prevention and Reduction Act, 33 U.S.C. 1954.

March 2010

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For information or copies, please contact:
NOAA Marine Debris Program
Office of Response and Restoration
National Ocean Service
1305 East West Highway
Silver Spring, MD 20910
301-713-2989
www.marinedebris.noaa.gov

INTERAGENCY MARINE DEBRIS COORDINATING COMMITTEE

Chair, Department of Commerce, National Oceanic and Atmospheric Administration
Vice-Chair, Environmental Protection Agency

Department of Defense, Navy

Department of Homeland Security, Coast Guard

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Department of the Interior, Minerals Management Service

Department of Justice, Environment and Natural Resources Division

Department of State, Office of Marine Conservation

Marine Mammal Commission

United States Army Corps of Engineers

Coastal America, *Ex Officio*

COMMITTEE MEMBERS

Holly Bamford, Ph.D.
IMDCC Chair
Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service

Katherine Weiler
IMDCC Vice-Chair
Environmental Protection Agency
Office of Water
Oceans and Coastal Protection Division

FEDERAL DEPARTMENT AND AGENCY MEMBERS

Sarah Morison
Department of Commerce
National Oceanic and Atmospheric Administration

Mike Pletke
Department of Defense
Navy

David Major
Department of Homeland Security
Coast Guard

Andrew Gude
Department of the Interior
Fish and Wildlife Service

Richard Clingan
Department of the Interior
Minerals Management Service

Mary Boatman (Alternate)
Department of the Interior
Minerals Management Service

Megan Forbes
IMDCC Executive Secretary
Department of Commerce
National Oceanic and Atmospheric Administration

Bradford McLane
Department of Justice
Environment and Natural Resources Division

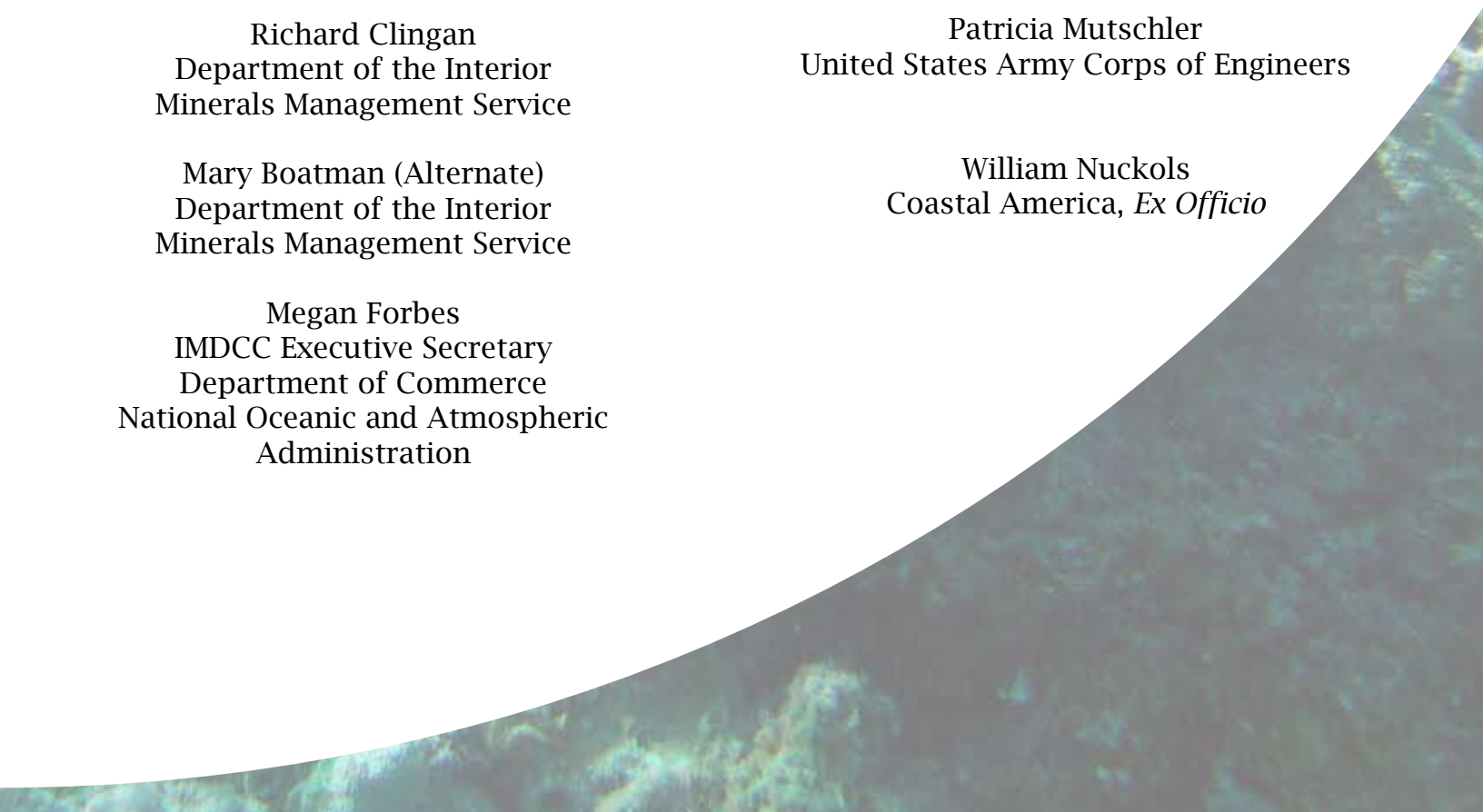
Holly Koehler
Department of State
Office of Marine Conservation

Ashley Greene
Environmental Protection Agency
Office of Water

Mike Simpkins
Marine Mammal Commission

Patricia Mutschler
United States Army Corps of Engineers

William Nuckols
Coastal America, *Ex Officio*



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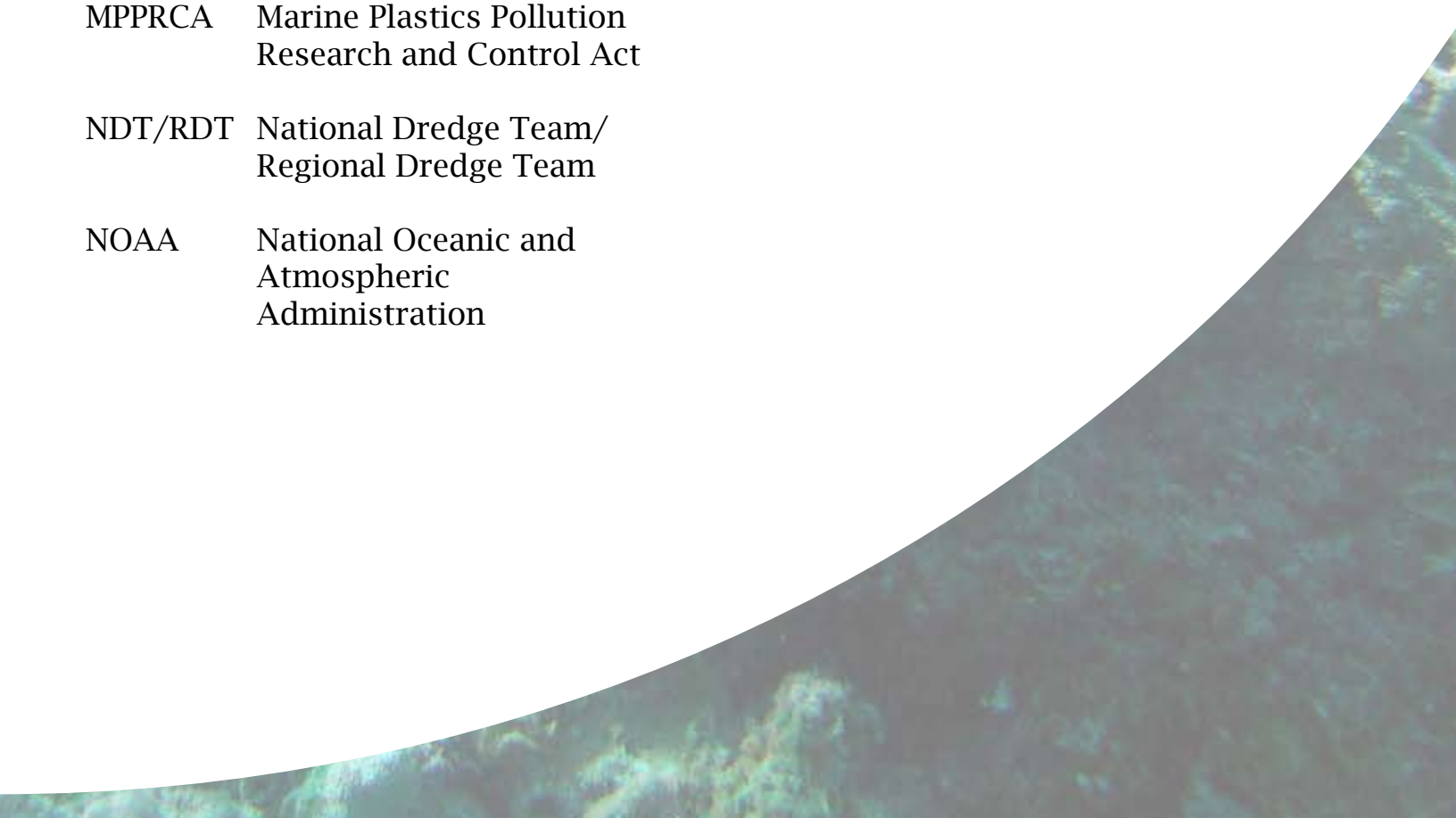
We would also like to acknowledge the Subcommittee on Integrated Management of Ocean Resources for their review and approval of this document.

Tables

Acronyms

APPS	Act to Prevent Pollution from Ships
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
COA	Certificate of Adequacy
CWA	Clean Water Act
DFG	Derelict Fishing Gear
DOC	Department of Commerce
DOD	Department of Defense
DOI	Department of the Interior
DOJ	Department of Justice
DOS	Department of State
ENRD	DOJ Environment and Natural Resources Division
EPA	U.S. Environmental Protection Agency
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
FfE	Fishing for Energy
FWS	U.S. Fish and Wildlife Service
IAA	Inter-agency Agreement
ICC	International Coastal Cleanup
IMDCC	Interagency Marine Debris Coordinating Committee
IMO	International Maritime Organization
ISO	International Organization for Standardization
MA	Mission Assignment
MARPOL	International Convention for the Prevention of Pollution from Ships

MDP	NOAA Marine Debris Program
MDRPRA	Marine Debris Research, Prevention, and Reduction Act
MEPC	Marine Environment Protection Committee
MISLE	Marine Information for Safety and Law Enforcement
MMC	Marine Mammal Commission
MMS	Minerals Management Service
MOU	Memorandum of Understanding
MPPRCA	Marine Plastics Pollution Research and Control Act
NDT/RDT	National Dredge Team/ Regional Dredge Team
NOAA	National Oceanic and Atmospheric Administration
NRF	National Response Framework
NRP	National Response Plan
NWR	National Wildlife Refuge
NWRS	National Wildlife Refuge System
NWSC	Northwest Straits Commission
ORR	NOAA Office of Response and Restoration
STX	STX Pan Ocean Co., Ltd.
USACE	U.S. Army Corps of Engineers



Marine debris, from both land- and ocean-based sources, is not only an eyesore on beaches, but can also impact the economy and human health and safety.

Photo NOAA Marine Debris Program

Contents

1.0 Executive Summary

This Interagency Marine Debris Coordinating Committee (IMDCC) progress report provides an update on the activities Federal agencies have undertaken between June 2008 and December 2009 to address marine debris, as mandated by the Marine Debris Research, Prevention, and Reduction Act (MDRPRA; 33 U.S.C. 1951 et seq.). This is the first progress report since the publication of the Interagency Report on Marine Debris Sources, Impacts, Strategies, and Recommendations (Interagency Report), submitted to Congress in August 2008. The Interagency Report provided a detailed review of the problems associated with marine debris and laid out 25 recommendations intended to guide the Federal Government's strategies with respect to the problems of persistent marine debris. This progress report follows the outline of information requested in the MDRPRA, section 5(c)(2).

Section 2 provides a brief overview of marine debris and its impacts, the history of the IMDCC, and the mandated purpose of this progress report.

Section 3 provides a review of multi-agency and individual agency activities from the nine agencies currently on the IMDCC, with each activity associated with a recommendation from the Interagency Report.

Section 4 provides an update on the status of the Federal Information Clearinghouse, currently in development within the National Oceanic and Atmospheric Administration.

Section 5 is a review of the entire NOAA Marine Debris Program, which was chartered in the MDRPRA, from June 2005 to December 2009.

Section 6 is a review of Coast Guard activities pertaining to marine debris, from 2007 to 2009.

Section 7 summarizes Federal agency spending on marine debris activities for FY2008 and FY2009. This section also addresses the means by which IMDCC priorities are determined.

The appendices contain more specific information on agency outputs, outcomes, mandates, and acronyms.

2.0 Introduction

2.1 Overview of Issue

Marine debris is a pervasive problem along shorelines and in coastal waters, estuaries, and oceans throughout the world. For purposes of the Marine Debris Research, Prevention, and Reduction Act (MDRPRA) only, marine debris is defined as any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes. Marine debris can kill or injure marine and coastal wildlife; degrade habitats; interfere with navigation safety; cause economic loss to maritime industries, fishing, and coastal communities; and negatively impact human health. These adverse impacts have been documented all over the world. Fishing gear, medical equipment, food packaging, beverage containers, and other man-made persistent objects are elements of our daily lives. However, when these same objects are abandoned or disposed of improperly, they may enter the marine environment and become marine debris. As production and use of these objects increases globally, the challenge of containing and properly managing them becomes ever greater.

The significant economic, ecological, and human health and safety impacts described above vary in scope and intensity based on the type of debris (e.g., plastic bags, miscellaneous plastics, derelict fishing gear, or shipping containers), its location (e.g., floating in shipping lanes or resting on sensitive habitats like coral reefs), and its condition. Direct economic effects from marine debris can be measured through different sectors, including analysis of impacts on tourism, losses in catch revenues, loss of fishing gear, damaged vessels, and human injuries. For example, medical debris washing on shore in New Jersey in 1988 resulted in loss of tourism income estimated between $700 million and $3 billion (in 2008 US$). Marine debris can also cause adverse impacts on aquatic ecosystems, such as coral reefs, wetlands, fish habitats, beaches, and migratory species' breeding grounds and pathways. These ecological impacts can affect species directly, through entanglement or smothering of species, or indirectly, through changes to habitat. In a study of endangered green sea turtles, 23 of 38 stranded animals were shown to have ingested anthropogenic debris, which is often mistaken for food. Additionally, marine debris can endanger human health and safety both through direct contact, such as stepping on a broken bottle or a syringe at the beach, or indirectly when marine debris like fishing nets and lines impacts vessel movement and navigation. Economic estimates of these impacts have not been attempted.

Marine debris originates from both land-based and ocean-based sources (Table 1). People and their actions, whether intentional or accidental, are the source of most marine debris. For this reason, it is important to identify and target both the origin of the debris and the types of activities that generate and convey marine debris.

Table 1. Potential Sources of Marine Debris**.**

Land-based Sources of Marine Debris	Ocean-based Sources of Marine Debris
• Municipal landfills • Transport of litter and waste (on land or on waterways) • Stormwater discharge • Industrial and manufacturing activities • Litter and waste generated in coastal and inland zones from improper waste management • Natural events	• Merchant shipping, ferries, and cruise liners • Fishing vessels • Public vessels • Private vessels • Offshore oil and gas platforms and drilling rigs • Aquaculture installations • Natural events

The problem of marine debris must be dealt with using a comprehensive approach that is local in scale, global in scope, and directed at source prevention. In many ways, marine debris is the result of the larger societal problems involving a lack of knowledge regarding the impacts of marine debris and appropriate disposal practices, a lack of interest in following the appropriate practices, or an inability to follow appropriate practices if infrastructure is missing or costs are too high. Moreover, any successful solution requires a mobilization of public- and private-sector actions resulting in a change in attitudes and practices that will prevent marine debris at its source, along with response, research, and coordination components to address the inevitable continued presence of debris in the environment.

2.2 Interagency Marine Debris Coordinating Committee Overview and History

Numerous programs have been created to address various aspects of the marine debris problem since the 1970s; however, the Federal Government did not attempt a holistic approach until the 1980s. During the late 1980s, efforts to increase coordination among stakeholder agencies included the creation of the Interagency Task Force on Persistent Marine Debris, the release of the Task Force's report on marine debris (1988 Report of the Interagency Task Force on Persistent Marine Debris), and the passing of the Marine Plastic Pollution Research and Control Act (MPPRCA). The MPPRCA created a Marine Debris Coordinating Committee, which met sporadically over the years as agencies moved forward to implement the Task Force report. Federal agencies have implemented some of the report's recommendations for additional marine debris research, monitoring, and removal as well as fostering stewardship of the ocean. Although individual agencies created and continued programs to address marine debris, the Committee did not maintain a coordinated interagency approach to address marine debris prevention; instead, interagency workgroups met periodically to discuss domestic and international activities for marine debris. In 2004, the Marine Debris Coordinating Committee was re-established through the Ocean Action Plan and renamed the Interagency Marine Debris Coordinating Committee (IMDCC). Coordination among Federal agencies became more consistent once again, and the IMDCC's mandate was codified through the passage in 2006 of the MDRPRA.

The role of the IMDCC is to consider and address any abandoned or uncontrolled solid material that is introduced into the ocean and coastal environment or the Great Lakes and poses a potential adverse impact to the environment, human health, safety, the economy, and other resources. (The IMDCC uses a different definition of marine debris than that promulgated by NOAA and the Coast Guard.) The objective of the IMDCC is to coordinate a comprehensive program of marine debris research, prevention, reduction, and removal activities among Federal agencies, in cooperation and coordination with nongovernmental organizations, industries, universities, research institutions, states, tribal governments, and other nations, as appropriate. The IMDCC provides the mechanism to ensure that these agencies increase their coordination to address marine debris. In addition, Federal agencies within the IMDCC continue to address aspects of marine debris pertinent to each agency's mandates and capabilities (see Table B.1 in Appendix B). For specific agency mandates see Appendix C.

The MDRPRA established reporting requirements for the IMDCC that included submitting a report to Congress on marine debris impacts and strategies in August 2008, followed by progress reports to Congress every two years on the implementation status of the strategies and recommendations presented in that report. The 2008 IMDCC Report to Congress laid out a comprehensive strategy to address marine debris. The strategy relied on a coordinated approach among existing and new partners to support prevention, response, research and development, and other coordinated marine debris activities. In the 2008 report, the IMDCC described the sources and impacts of marine debris, as well as the challenges associated with their characterization. The report also discussed the activities to address marine debris that had occurred over the past 20 years, including activities recommended in the report of the 1988 Interagency Task Force on Persistent Marine Debris. Finally, the 2008 IMDCC Report to Congress included 25 recommendations aimed at guiding the Federal Government's strategies for marine debris. These recommendations were intended to be broad in scope, address the different agencies' mandates and policies associated with debris issues, and promote collaboration among Federal agencies and partners. They were organized around four themes encompassing several topic areas: (1) marine debris prevention through education and outreach, legislation/regulation/policy, and incentive programs; (2) response to debris already in the environment through enforcement and cleanups; (3) research and technology development to assess next steps, address gaps, reduce or prevent material from entering the marine system, and mitigate impacts; and (4) cross-theme efforts that foster coordination.

2.3 Charge to the Interagency Marine Debris Coordinating Committee for Progress Reporting

The IMDCC was charged by the MDRPRA to submit progress reports to Congress, designed to evaluate United States and international progress in accomplishing the purpose of the MDRPRA, no later than three years after the date of the enactment of the MDRPRA, and biennially thereafter. The MDRPRA requires the progress reports to include the following items:

- The status of implementation of any recommendations and strategies of the Committee and analysis of their effectiveness;
- A summary of the marine debris inventory maintained by the National Oceanic and Atmospheric Administration (NOAA);

- A review of the NOAA program authorized by section 3 of the MDRPRA, including projects funded and accomplishments relating to reduction and prevention of marine debris;
- A review of Coast Guard programs and accomplishments relating to marine debris removal, including enforcement and compliance with the International Convention on the Prevention of Pollution from Ships (MARPOL) requirements; and
- Estimated Federal and non-Federal funding provided for marine debris and recommendations for priority funding needs.

This progress report provides an overview of IMDCC actions, multi-agency initiatives, and individual agency activities that support the recommendations outlined in the 2008 report.

The NOAA Marine Debris Program (MDP) was formalized by the MDRPRA, which set specific activities and debris types to be addressed. Section 5 of this report outlines the activities and focus areas of the MDP from 2005 through 2009.

In fulfillment of the Coast Guard's responsibilities under the Act to Prevent Pollution from Ships (33 U.S.C. 1901-1915 (1996); APPS) and the mandate of the MDRPRA, the Coast Guard works to implement MARPOL, ensure compliance among the regulated community, and take action against violations. The Coast Guard helps to reduce the amount of debris in the environment through its traditional, pollution-risk-removal mission and its assistance to interagency partners; in addition to its operational activities, the Coast Guard works diligently to promote international action against marine debris and marine debris awareness among the regulated public. Section 6 discussed the Coast Guard’s activities in these areas.

Federal agency funding is identified in Section 7. This section also describes the means by which the IMDCC sets annual priorities and highlights the Committee’s coordination role among agencies with differing mandates.

3.0 Implementation Status of 2008 Recommendations

In its 2008 Report to Congress, the IMDCC presented 25 recommendations (Appendix A) intended to guide the Federal Government’s strategies with respect to the problems of marine debris. These broadly scoped recommendations were intended to be undertaken both individually by agencies and collaboratively through the IMDCC. The recommendations were organized around four themes: (1) prevention, (2) response to debris already in the marine environment, (3) research and development, and (4) cross-theme efforts to foster coordination.

Federal agencies of the IMDCC are involved, both independently and collaboratively, in a range of diverse projects addressing the four themes of the 2008 report. For the purpose of this report, however, a brief overview of the priority themes and projects of the IMDCC and each agency over the last 18 months (June 2008 to December 2009) is provided. This progress report on the status of implementing the 2008 recommendations includes descriptions of activities undertaken by the IMDCC itself, through multi-agency cooperative initiatives, and by individual agencies.

3.1 Interagency Marine Debris Coordinating Committee

The IMDCC continued to coordinate a comprehensive program of marine debris activities through its member agencies. Quarterly IMDCC meetings were held to strengthen

collaboration and coordination among the Federal agencies. Following the completion of the 2008 report, the IMDCC undertook an inventory of Federal activities that implement the recommendations in the 2008 report. This inventory supported the IMDCC's effort to develop an action plan for 2009. For this action plan, the IMDCC identified four recommendations to implement as priority activities to address gaps in the knowledge of or coordination on marine debris.

The four recommendations being implemented as priority activities by the IMDCC incorporate the prevention, research, and coordination themes. First, the IMDCC is undertaking an initial review of marine debris–related authorities and policies at the state, local, and tribal levels as a first step to convening a correspondence group composed of representatives from agencies at those levels [Recommendation 2.3].[1] Second, the IMDCC worked to convene a special session on research related to marine debris and coral reefs at the U.S. Coral Reef Task Force meeting in November 2009 [Recommendation 6.3]. Third, the IMDCC coordinated two sessions on marine debris at the 2009 Coastal Zone Conference to encourage information exchange [Recommendation 8.1]. Finally, the IMDCC continues to serve as a central point for coordinating Federal efforts to develop new policies, strengthen existing policies, and identify new research topics or projects [Recommendation 8.3].

3.2 Multiple-agency Initiatives

In addition to the IMDCC efforts described above and the individual-agency efforts described below, there have been a number of multi-agency initiatives over the last 18 months. These initiatives have focused on the themes of prevention, response to debris already in the marine environment, and fostering coordination.

NOAA, the U.S. Environmental Protection Agency (EPA), and the U.S. Fish and Wildlife Service (FWS) have participated in the Ocean Conservancy's International Coastal Cleanup (ICC) and the American Chemistry Council's Marine Debris Solutions Advisory Group. Both of these efforts support prevention of marine debris by educating the general public on behavioral changes that can reduce the amount of litter becoming marine debris [Recommendation 1.2]. For the ICC, this outreach is organized around an annual cleanup that occurs on the third Saturday of September [Recommendation 1.3]. The Marine Debris Solutions Advisory Group supported the American Chemistry Council's efforts to develop a nationwide anti-litter campaign that would result in reduced marine debris.

NOAA, the Department of the Interior (DOI), and the Marine Mammal Commission (MMC) jointly supported the Oceans Awareness campaign (later changed to the Keep Oceans Clean Alliance) which is another public awareness campaign aimed at prevention [Recommendation 1.2]. This campaign included public service announcements about marine debris and educational DVD inserts distributed through the release of Disney's *Little Mermaid* prequel.

Continuing an effort that has gone on for over a decade, NOAA, FWS, and Coast Guard removed derelict fishing nets from the Papahānaumokuākea Marine National Monument in 2008 and 2009. Over 671 metric tons of derelict nets have been removed from coral habitat and shorelines since 1995 and 130 metric tons were removed during this report period.

[1] In the 2008 Report to Congress, recommendations were numbered beginning with a "6," as they were found in Section 6 of the report. However, to avoid confusion, the Section 6 reference has been removed from the beginning of the recommendation number. A full list of the recommendations can be found in Appendix A.

In 2006, the International Maritime Organization's (IMO) Marine Environment Protection Committee (MEPC) formed a correspondence group to review and prepare an initial draft of amendments to Annex V to MARPOL. Coast Guard and NOAA co-chair, with participation by EPA, Department of State, FWS, Department of Justice, Department of Defense, and Minerals Management Service, the U.S. interagency working group that provided input to the MEPC correspondence group. MARPOL Annex V addresses the discharge of garbage generated during the normal operation of ships. Although several issues are under discussion, perhaps the most far-reaching of all is a proposal to consider changing the Annex V from its current structure, which is generally based on a prohibition of a few types of garbage (e.g., plastics) and allowing discharges of other garbage types based on distance from shore, to a structure with a general prohibition on the discharge of garbage with a list of items that are excepted from that prohibition and allowed to be discharged. Since the precise details of this new structure have not been discussed or formulated in any detail, the U.S. interagency working group has been cautious in its approach to it. The discussions are ongoing and it is possible that a working group on Annex V amendments may be formed at MEPC in 2010.

In another IMO effort to address issues related to marine debris, the EPA and Coast Guard co-chaired an interagency working group that provided input for revisions to guidance on spoilt cargo management as part of a joint MEPC–London Convention Correspondence Group.

3.2.1 Environmental Protection Agency (EPA)

EPA has a unique capacity, as a national regulatory agency with 10 regional offices and programs ranging from ocean and coastal protection to solid waste and stormwater management, to address marine debris at the source, as it moves through the watershed, and as it settles in the marine environment. Recognizing the role EPA programs and mandates play throughout the marine debris pathway, EPA identified prevention as the primary theme for its Marine Debris Prevention Program. EPA focused on maximizing the agency's ability to fulfill both regulatory and non-regulatory mandates for marine debris prevention through its Offices of (1) Resource Conservation and Recovery, (2) Wastewater Management, (3) Pollution Prevention and Toxics, and (4) Wetlands, Oceans, and Watersheds [Recommendation 2.2]. This included holding an EPA-wide Marine Debris Prevention Summit to strengthen agency efforts to address marine debris and undertaking an inventory of all EPA efforts, regulatory and voluntary, that support marine debris prevention. EPA promoted prevention, both internally and externally, through various education and outreach efforts [Recommendations 1.1, 1.2, and 1.3]. Activities included promoting recycling of plastic bags and other materials within EPA as a way to prevent marine debris, supporting public awareness campaigns and improving external outreach, and partnering with other organizations to promote events such as the International Coastal Cleanup. In addition to prioritizing prevention, EPA supported research efforts by developing a white paper to assess the methodologies used in the National Marine Debris Monitoring Program [Recommendation 6.2] and exploring the development of a standardized marine debris monitoring protocol for use on EPA's Ocean Survey Vessel *Bold.* Finally, response to debris already in the marine environment was promoted by several of EPA's regional offices, which coordinated response activities ranging from implementing a Floatables Action Plan [Recommendation 5.1] to removing derelict crab traps and pilings to cleaning up disaster debris [Recommendation 5.3]. For more information on EPA's Marine Debris Prevention Program, see www.epa.gov/owow/oceans/debris/.

3.2.2 Department of Commerce – National Oceanic and Atmospheric Administration (NOAA)

NOAA has taken a lead role in conducting marine debris research, assessment, and education and outreach activities. It has provided support for external entities to complement this work through grants and contracts and has focused particular effort on enhancing regional partnerships, holding workshops on technical marine debris activities to enhance collaboration and communication among stakeholders, improving education and outreach to inspire behavior change, and expanding research on the impacts of derelict fishing gear.

A thorough overview of NOAA's marine debris activities can be found on its website, marinedebris.noaa.gov, which received over 1,200,000 hits between June 2008 and June 2009. A large part of the website is dedicated to prevention techniques for different marine user groups. Recent NOAA prevention activities include an expanded partnership with the BoatU.S. Foundation, through which over 750 monofilament recycling bins have been made available across the nation for recreational fishermen to properly dispose of used fishing line. The Fishing for Energy (FfE) partnership of NOAA, Covanta Energy, the National Fish and Wildlife Foundation, and Schnitzer Steel provides East Coast and Oregon commercial fishermen free locations for the disposal of old fishing gear, which is then converted into energy [Recommendation 3.2]. In some locations, FfE also supports locally led removal activities.

NOAA also supported debris removal through partnerships with states and nongovernmental organizations to leverage resources and local knowledge [Recommendation 5.3]. Between 2005 and 2008, almost 1,500 metric tons of marine debris were removed.

Research and development received increased attention, particularly the standardization of methodologies. Standardized monitoring protocols were developed for marine debris found on shorelines and in the water column. These protocols will facilitate long-term, statistically valid marine debris monitoring. A multi-year research project was started with the University of Washington Tacoma to develop protocols for collecting, sorting, and analyzing water and sediment for marine microplastics [Recommendations 6.1 and 6.2]. These protocols will be tested at other laboratories to ensure that future projects studying the abundance and contaminant transport of marine microplastics are valid and use comparable methods.

NOAA held eight workshops between June 2008 and December 2009 to foster coordination [Recommendation 8.1]. These workshops focused on several topics, including microplastics, abandoned vessels, strategic planning in Hawaii, detecting and assessing the impact of derelict pots, and at-sea detection of derelict fishing gear in the Pacific. These workshops varied in intent, from assessing the state of knowledge in a field, to sharing best practices, to identifying and implementing new activities. Each workshop brought together relevant local, state, national, or international experts and produced proceedings documents. The proceedings were distributed to interested parties and will be made available through the Information Clearinghouse mandated by the MDRPRA.

NOAA has established a partnership with the Republic of Korea to exchange information and ideas on marine debris, particularly derelict fishing gear. In other venues internationally, NOAA continues to raise the issue of marine debris and derelict fishing gear, to encourage discussion and implementation of solutions at the international level. NOAA established a Marine Debris International Committee in 2007 and approved an action plan in July 2008.

3.2.3 Department of Defense – U.S. Army Corps of Engineers (USACE)

In support of 2008 Recommendation 8.1, USACE participated in a NOAA-hosted Abandoned and Derelict Vessels Workshop for States in Miami, Florida. Other Federal agencies attending were the Coast Guard, FEMA, and FWS. The first four agencies, NOAA, USACE, Coast Guard, and FEMA, formed a federal panel, sharing their individual and unique authorities and responsibilities for marine debris (in the form of abandoned and derelict vessels) location, response, and removal. A number of states have ongoing programs and were able to share their successes and cautions with those states that do not have programs and are seeking to improve the marine environment within their jurisdictions. The candid interaction and communication among the states and with the Federal agencies involved was judged by all attendees to be a significant improvement in communication and cooperation. Having active Points of Contact within each state and Federal agency is a major step forward.

Following Hurricane Katrina in 2005, significant progress was made in determining Federal roles and responsibilities with regard to assisting states with the management of waterway debris. FEMA has recently drafted a "Disaster Assistance Policy: Debris Removal from Waterways" to articulate the types of Federal assistance that may be available following a disaster. The policy provides an overview of USACE and Coast Guard authorities for the removal of waterway debris and/or obstructions and provides guidance regarding the assistance that could potentially be provided by FEMA under the Robert T. Stafford Act. Also, in January 2008, the National Response Framework was released and includes an updated "Public Works and Engineering Annex" with information on Federal capabilities for providing waterway debris management assistance.

3.2.4 Department of Defense – Navy

The United States Navy operates globally, and its Sailors spend significant amounts of time on, under, and over the surface of the Earth's oceans. Navy personnel have a deep concern for the health and sustainability of the marine environment and seek better, more effective ways to prevent harm to their "second home," in addition to helping to respond to existing problems. To reflect this mindset, Navy has focused its efforts at the organizational level on implementing means of preventing marine debris from entering the oceans [Recommendation 1.1]. At the local level, Navy has partnered with state and local authorities to assist in the removal of objects dumped into ocean waters [Recommendations 5.3 and 8.4]. Navy recently completed installation of plastic waste management equipment on all its submarines and is well on its way to installing upgraded plastic waste processing equipment on its entire surface fleet, which has had plastic waste processing equipment installed since 1998 [Recommendation 7.2]. In the past 18 months active duty and Navy Reserve personnel also partnered with civilian agencies using the Innovative Readiness Training program to provide assistance in removing debris such as derelict fishing gear and discarded tires from Honolulu Harbor, Puget Sound, and other locations [Recommendation 5.1].

3.2.5 Department of Homeland Security – Coast Guard

The United States Coast Guard activities focused on prevention of marine debris deposition and response to debris already in the marine environment through compliance,

enforcement, and cleanups. The Coast Guard works with the international community through the IMO and the International Organization for Standardization (ISO); it also reaches out to the American public through the Sea Partners program. Coast Guard activities are described in more detail in Section 6 of this report.

To ensure compliance with MARPOL, APPS, and associated regulations, Marine Inspectors inspect U.S. commercial vessels annually and examine foreign vessels through the Coast Guard's Port State Control program. From 2008 to August 14, 2009, the Coast Guard performed MARPOL Annex V examinations onboard over 15,730 U.S. commercial vessels and over 21,800 foreign commercial vessels [Recommendation 2.2]. The Coast Guard ensures domestic alignment with MARPOL Annex V through the certification of facilities under the Certificate of Adequacy process (as of July 2009, the Coast Guard certifies 2,240 MARPOL Annex V facilities), annual facility inspections (17,657 as of July 2009), and harbor patrol spot checks [Recommendation 2.2]. The Coast Guard has increased the number of facility inspections; despite an increase in the number of waterfront facilities since 2006, there has been a decrease in facility pollution incidents. Section 6 of this report documents other achievements of the facility compliance program.

When vessels or facilities are found to be non-compliant, the Coast Guard pursues various enforcement actions, as appropriate, including written warnings, monetary civil penalties, actions against mariner credentials, and criminal penalties. Between 2008 and 2009, Coast Guard undertook both criminal and civil enforcement actions for incidents of non-compliance. Non-compliance detected by the Coast Guard included falsification of oil and garbage record books and failure to record discharges. As a result of these actions, the Federal government was able to secure guilty pleas and the imposition of penalties; more information is located in Section 6.

To provide a superior level of environmental protection, the Coast Guard works to improve the international agreements and implementing laws and regulations that it enforces. As described in more depth in the multiple-agency initiatives section (3.2) above, the Coast Guard has co-chaired the U.S. interagency working group that provided input to the MEPC Correspondence Group for the preparation of the report on the review of MARPOL Annex V. Additionally, the Coast Guard has coordinated, since June 2008, the IMO's Flag State Implementation subcommittee correspondence group working on reception facility adequacy issues and has recommended the use of the recently approved Advance Notice and Waste Receipt Formats as well as proposed the adoption of a user guide for ships and reception facilities to better manage ships' waste, including MARPOL Annex V wastes. The Coast Guard has also conducted MARPOL public meetings aimed at soliciting comment from stakeholders on improving MARPOL reception facilities at U.S. ports and has proposed a project to gather information on amounts, capacities, and costs for disposing of MARPOL wastes at port reception facilities [Recommendations 2.2 and 8.2].

The Coast Guard continued its involvement in debris removal efforts, including the work performed in support of the Papahānaumokuākea Marine National Monument partnership [Recommendations 5.3 and 1.2]. During the joint-agency effort in the Papahānaumokuākea Marine National Monument, (described in more depth in the multiple-agency initiatives section above, Section 3.2), the Coast Guard conducted three debris removal missions in the Papahānaumokuākea Marine National Monument, resulting in the removal of 64 metric tons of debris. This year, the Coast Guard has tripled the vessel hours allotted to District 14 (Hawaii) for

the Marine Environmental Protection mission. Coast Guard statutory removal missions and other interagency debris removal missions are noted in Section 6.

3.2.6 Department of the Interior – Fish and Wildlife Service (FWS)

FWS focused its marine debris reduction, prevention, and cleanup activities primarily around its 180 ocean and coastal National Wildlife Refuges (NWRs) that have the staff and volunteer capacity to address pervasive marine debris issues. The NWR System (NWRS) has locations in every state and territory and in U.S. possessions and works to contain, clean up, restore, and mitigate effects of existing marine debris as well as sources of marine debris and other improperly disposed of waste. NWRS priority activities focus on the four Report to Congress recommendation themes, primarily through volunteer-driven marine debris cleanup, research, and response to marine debris along coasts, watersheds, and nearshore waters. The NWRS's national activities directly implement the 2008 recommendations through the following activities: distributing educational materials and supporting public awareness campaigns [Recommendations 1.1 and 1.2]; engaging with partners [Recommendations 1.3, 5.3, and 8.4]; sponsoring marine debris research and monitoring and sharing research findings [Recommendations 6.1 and 6.3]; and fostering exchange of information [Recommendation 8.1].

While many NWRs took part in structured, unstructured, and routine marine debris prevention and response activities, the NWR efforts are showcased at Midway Atoll NWR in the Papahānaumokuākea Marine National Monument. Private, volunteer, and Federal partners at Midway Atoll NWR developed a statistically sound and biologically relevant marine debris monitoring protocol that will serve as the basis for a long-term monitoring program. It is based on the standards of the National Marine Debris Monitoring Program and has four components: scientific research, volunteer training, debris removal/disposal, and education [Recommendation 6.1]. Its primary goal will be to characterize and quantify marine debris forms, sources, amounts, and temporal patterns in the Papahānaumokuākea Marine National Monument, and contribute to the scientific community's understanding of how to design marine debris monitoring protocols for coastal ecosystems. Additionally, a removal and disposal plan for Midway Atoll NWR and the Papahānaumokuākea Marine National Monument will be developed to counter the tens of tons of marine debris that annually wash up on their shores and reefs of the.

3.2.7 Department of the Interior – Minerals Management Service (MMS)

MMS continued to focus on marine debris prevention and response as a part of mission-oriented responsibilities. Under prevention activities, MMS's Alternative Energy Program issued a final rule for Renewable Energy and Alternate Uses of Existing Facilities on the Outer Continental Shelf. The rule includes a general prohibition on the discharge of pollutants, including marine trash and debris, into the ocean environment and a requirement to decommission and remove structures and equipment that could become marine debris [Recommendation 2.2]. MMS inspects facilities under its jurisdiction and enforces its regulations through written warnings, component and facility shut-ins, a Civil and Criminal Penalties Program, and by other means. MMS's regional and district offices continued to enforce compliance with MMS marine debris–related pollution regulations [Recommendations 2.2, 4.1, 4.2, and 8.4]. The MMS Gulf of Mexico Region worked closely with industry on marine debris–related projects to (1) assess best practices for preventing marine debris, (2) share information to

minimize marine debris, (3) leverage stakeholders' participation in marine debris prevention efforts, and (4) develop marine debris awareness videos and web-based training modules to educate oilfield personnel and the public [Recommendations 1.2 and 8.4]. MMS also continued working with industry to conduct research and revise structural design standards and recommended practices to increase platform survivability and improve rig station keeping during hurricanes; these documents and revisions are being incorporated into regulations. The resulting technological improvements and regulatory revisions should help to reduce the threat of marine debris from regulated sources [Recommendations 2.2, 4.1, and 7.1].

Along with prevention, MMS's regional and district offices focused on response to marine debris in the environment through cleanup activities ranging from removal of obstructions on the seafloor to the decommissioning and removal (or reefing) of hurricane-destroyed and end-of-life facilities. MMS regulations and notices require operators to address and remove structures, equipment, and obstructions on leases and within easements and rights-of-way following cessation of operations or prior to relinquishment. Of the 174 platforms destroyed by five major hurricanes since 2004, MMS has approved decommissioning plans for 96 platforms, while industry has removed (or reefed) 46 structures and is working towards decommissioning and removing the remaining structures with approved plans [Recommendations 2.2 and 5.1].

3.2.8 Department of Justice (DOJ)

DOJ has continued to address the problem of marine debris through judicial civil and criminal enforcement of environmental violations leading to marine debris. Agencies such as EPA, NOAA, and the Coast Guard refer cases to DOJ, where they are handled by the Environment and Natural Resources Division (ENRD) working with the U.S. Attorneys' offices [Recommendation 4.2].

For example, in June 2009, ENRD brought a civil suit on behalf of NOAA seeking compensation for natural resources damages resulting from the placement of hundreds of artificial lobster habitats, or casitas, by defendants David Dreifort and Denise Dreifort, in the Florida Keys National Marine Sanctuary. In settling this case, the Dreiforts agreed to use their best efforts to market and sell two of their residential properties, and pay the net proceeds of these sales to the United States, up to a maximum of $1.1 million, to cover damages and response costs.

Similarly, in October 2008, STX Pan Ocean Co., Ltd. (STX), pleaded guilty to violating the APPS by knowingly failing to maintain an accurate Garbage Record Book. The inaccuracy was a failure to record a dumping incident during which approximately six 55-gallon drums, 30 plastic-lined rice sacks, and approximately 200 garbage bags containing contaminated grain were thrown into the ocean from the M/V *Pan Voyager*, a vessel owned and operated by STX. As part of the plea agreement with the U.S. Attorney's Office for the Western District of Washington, the charged company agreed to pay a $500,000 fine and make a $250,000 community service payment to the FWS for use in projects to restore Puget Sound. Two senior officers of the M/V *Pan Voyager* also pleaded guilty to misprision of a felony for failing to notify Coast Guard inspectors of the false record book and were each sentenced to serve a one-year term of probation and payment of a $2,500 fine. In addition, the captain of the M/V *Pan Voyager* was sentenced to serve two months' home confinement, followed by two years' supervised release, for knowingly failing to maintain an accurate record book.

Finally, DOJ enforcement of pollution laws such as the Resource Conservation and Recovery Act and the Clean Water Act, in addition to ocean dumping and natural resource damage provisions, addresses the problem of marine debris by targeting pollution that, while not directly released into the ocean, may migrate downstream and eventually contribute to such debris.

3.2.9 Department of State (DOS)

In DOS, the Office of Ocean and Polar Affairs and the Office of Marine Conservation work to address marine debris issues of an international or transboundary scope and to raise awareness of these issues within the international community. Among the forums where DOS has been active on these issues are the MARPOL Annex V discussions and, in concert with NOAA, various regional fisheries management organizations that address concerns regarding derelict fishing gear and related issues. In addition to fostering coordination on international activities, the DOS worked with the Gulf and Caribbean Fisheries Institute to assess opinions on abandoned, lost, or discarded fishing gear in the Caribbean. The results of this assessment will be shared with relevant stakeholders, including the IMDCC.

3.2.10 Marine Mammal Commission (MMC)

The Marine Mammal Commission focused attention on improving coordination of marine debris cleanup and disentanglement work to reduce mortality and injury of Hawaiian monk seals. Entanglement in derelict fishing nets in the Northwestern Hawaiian Islands is one of four major threats identified in the Revised Recovery Plan for Hawaiian Monk Seals, and to focus limited agency resources most effectively, MMC recommended that the National Marine Fisheries Service convene a meeting of high-level officials from those partner agencies participating in monk seal recovery to identify actions each agency could pursue to increase recovery efforts, including reduction of entanglement risks. Based on that recommendation, MMC is working with National Marine Fisheries Service, National Ocean Service, FWS, Coast Guard, National Park Service, and Hawaii Department of Land and Natural Resources to develop an interagency memorandum of agreement outlining responsibilities and actions each agency will take to implement and strengthen joint recovery work for reducing marine debris entanglement risks and other major recovery threats [Recommendation 2.2]. MMC also responds to requests from researchers, the public, and the media on the impacts of marine debris on marine life, particularly marine mammals.

4.0 NOAA Summary of Marine Debris Inventory

In the MDRPRA (33 U.S.C. 1955), NOAA was charged with maintaining a “Federal information clearinghouse on marine debris that will be available to researchers and other interested person to improve marine debris source identification, data sharing, and monitoring efforts through collaborative research and open sharing of data . . .” Before maintenance can begin, the clearinghouse must be created. The MDP has undertaken the development of this clearinghouse, designed to function as a central point of access for information on marine debris for researchers and coastal managers. Over the past year, extensive research has been conducted

into the many aspects of creating a useable and complete clearinghouse and database. Areas investigated include the following:

- User groups
- Content
- Structure
- IT requirements
- Security
- Metadata

The structural and aesthetic design of the clearinghouse are being refined to integrate additional content and functions. Once research is complete, and content and structure have been finalized, the MDP will begin to build the clearinghouse.

5.0 The NOAA Marine Debris Program, June 2005 to December 2009

The NOAA Marine Debris Program (MDP) was formally created in 2006, with President George W. Bush's signing of the MDRPRA. However, as funding had first been received in 2005, work to create the MDP began that summer. The mission of the MDP is to investigate and solve the problems that stem from marine debris through research, prevention, and reduction activities, in order to protect and conserve our nation's marine environment and ensure navigation safety. The MDP conducts reduction, prevention, and research activities, as well as supporting grants, partnerships, and contracts to address marine debris. As this is the first Report to Congress on MDP activities, it covers the life of the MDP from 2005 to 2009.

Since 2005 the MDP has funded over 150 projects internally and with external organizations, held 14 regional, national, and international workshops and meetings, and has coordinated the development of NOAA positions on a variety of issues related to marine debris. The MDP has positioned itself as a leader on marine debris issues within NOAA and the Federal community, including co-chairing the Federal Interagency Marine Debris Coordinating Committee.

5.1 Program Administration and Structure

The MDP is housed within the National Ocean Service (NOS), Office of Response and Restoration (ORR), which has received line-item funding for marine debris since 2005. In 2009, the Marine Debris Program became a division within ORR. Though part of ORR, the MDP draws on the expertise of the myriad NOAA offices that have an interest in addressing marine debris, including the NOS Offices of Ocean and Coastal Resource Management and of National Marine Sanctuaries; the National Marine Fisheries Service (NMFS) Offices of Protected Resources, Sustainable Fisheries, and Habitat Conservation and regional fisheries science centers; and the NOAA Chesapeake Bay Office.

In accordance with the Act, the MDP conducts research, prevention, and removal projects and outreach and education activities, which are implemented by NOAA itself or through grants, contracts, and cooperative agreements. The MDP has stationed staff in several locations around the country to manage, support, and coordinate marine debris activities to ensure outcomes are in line with NOAA needs, the MDP strategic plan, and the requirements of the MDRPRA. Regional staff work closely with local and state agencies, other NOAA offices and Federal agencies,

nongovernmental organizations, academia, private industry, and the interested public to identify key marine debris issues and then facilitate addressing them. This may occur through workshops, cleanup events, outreach events, or regular coordination meetings.

Fiscal year 2009 was the first year in which funds were requested in the President's Budget ($4 million). In previous years Congressionally directed funds were provided for the program (FY2005 through FY2008). The FY2009 enacted level for the program was $4 million and the FY2010 President's Request continues the $4 million request for the program. The bulk of funds each year are used to support research, assessment, removal, and outreach projects, both by NOAA and in partnership with external organizations.

Also in 2009, the MDP completed its first 10-year Strategic Plan (2009–2019). This plan identifies the six goals of the NOAA Marine Debris Program:

1. Lead in the field of marine debris.
2. Facilitate, support, and conduct research and assessment of marine debris.
3. Prevent and reduce the occurrence and impacts of marine debris.
4. Develop, use, and disseminate tools and products to improve efforts to address marine debris.
5. Encourage changes in behavior to address marine debris.
6. Develop and administer a dynamic workforce and program that support the MDP's mission and goals.

An overall MDP performance measure has been developed, based on this plan, to track the MDP's success in addressing marine debris: Decrease marine debris impacts by X% on priority oceanic and coastal functions by 2020. The MDP is currently defining its business case and conducting research to determine the target of the X% variable.

Though the target for this measure will only be achieved incrementally over many years, shorter-term measures have also been developed to guide activities and evaluate the more immediate successes of the MDP.

In addition to holding workshops, coordinating activities, and working directly with partners, the MDP has also developed two funding opportunities for non-Federal entities to conduct removal, research, and prevention activities. The first funding opportunity, the Community-based Marine Debris Removal Project Grants opportunity, is administered by the NOAA Restoration Center, in cooperation with the MDP. These projects focus on marine debris removal, education, outreach, and engaging the public through cleanup opportunities. From 2005 to 2009, 49 projects have been funded through this opportunity for over $4 million; the projects have leveraged over $5 million in match from non-Federal sources.

The second funding opportunity is through the National Fish and Wildlife Foundation's Marine Debris Research and Technology Grants program. This program, with funding from MDP, funded 37 projects between 2005 and 2009, focusing on projects involving fishermen, ports, and marinas, expanding efforts to address derelict fishing gear, and research. Just over $2.3 million from NOAA has leverage over $2.9 million in match from non-Federal sources.

Finally, to provide information to a wide variety of audiences, the MDP has developed an extensive website, marinedebris.noaa.gov, which receives over 140,000 hits a month. Available on the site are a range of materials for students, the general public, and ocean users, including recreational and commercial fishermen and boaters. A weekly newsletter is also sent by email to over 300 subscribers highlighting recent activities, project updates, and news stories about marine debris. Individuals can sign up for the newsletter via the MDP website.

5.2 Program Activities

5.2.1 Research, Assessment, and Understanding

The MDRPRA charges the MDP with conducting research on both marine debris in general and derelict fishing gear (DFG) in particular. To understand the current state of knowledge of marine debris, in 2005 the MDP reviewed existing scientific and "grey" literature. Though some of the information was decades old, it demonstrated both an understanding that DFG poses an extreme threat to living marine resources and that quantitative research is still needed on the impacts of all types of marine debris to living marine resources and navigation safety.

The first research projects funded by the MDP were on the impacts of DFG in Chesapeake Bay and Puget Sound. In Chesapeake Bay, the MDP was able to leverage the extensive resources of the NOAA Chesapeake Bay Office, whose researchers had noticed a large number of derelict blue crab pots during habitat mapping activities. The first project, to estimate the number of derelict crab pots in the Bay, led to a multi-year project and partnership with the Virginia Institute of Marine Science, which has quantified both lost gear and the impacts of lost gear on the crab population and fishermen's livelihoods. Follow-on research is investigating how to construct a crab pot with a biodegradable panel that will render the pot unfishable after a certain amount of time in the water. Commercial and recreational fishermen are being brought in at the beginning of this research to ensure buy-in and encourage the acceptance of these new "green" pots once the research is complete.

In Puget Sound, the Northwest Straits Commission (NWSC) had already been engaged in DFG removal for several years before the MDP was established. But with MDP support, the NWSC expanded beyond removal to also conduct research into the biological impact of derelict nets. Their findings demonstrated the "take" of animals by derelict nets is much higher than originally suspected because animals caught are quickly reduced to bones and fall out of the nets. By using derelict nets that had known loss dates, which allowed estimation of residence time, and collecting the bones under the net, a much more accurate impact assessment was done and is now available to other researchers studying the impacts of DFG to their species of interest. This project spanned several years, and a similar one focused on assessing the impacts of derelict Dungeness crab pots was also recently completed.

In 2008, the MDP and NOAA Fisheries Observer Program began a collaboration in the Hawaii longline fishery to determine how often fishing vessels encounter marine debris in ways that impact their fishing effort. After successfully testing methodology, the partners are now working together to expand the project to other fisheries. Using data from these encounters, the MDP will be able to estimate the economic impact of marine debris to fishermen and potentially what kind of marine debris is the most damaging to them.

Individual research projects funded through grant programs provided site-specific data on marine debris impacts in several national marine sanctuaries, including Gray's Reef, Flower Garden Banks, Cordell Bank, and the Papahānaumokuākea Marine National Monument. Several projects focusing on plastics in the North Pacific, studying both quantity and seabird impacts, have also been funded but results are not yet available.

In 2008, the MDP reviewed all the research projects it had funded to date and realized that while answers had been found for several discrete questions in discrete areas, larger key

marine debris–related questions had yet to be answered. Therefore, in 2009, research projects were chosen focusing on one DFG type: derelict pots (crab, lobster, fish). Projects are focused on assessing both the total number of derelict pots and the impacts of these pots to habitat and species (target and non-target). Projects chosen in 2009—in Florida, the U.S. Virgin Islands, Alaska, North Carolina, and Massachusetts—in addition to projects completed previously, including in Chesapeake Bay, Puget Sound, and off North Carolina, will allow researchers, supported by the MDP, to publish findings on the impact of derelict pots throughout U.S. waters and draw conclusions that can benefit other areas not directly studied. These projects will continue in 2010. A new research question will be chosen to direct projects selected for funding in FY2011.

5.2.2 Removal and Recycling

Before the MDP was founded in 2005, NOAA removal activities focused on the Northwestern Hawaiian Islands (site of the Papahānaumokuākea Marine National Monument), because of the impact to the critically endangered Hawaiian monk seal and coral reefs, and on South Carolina and Puget Sound, where removal of abandoned vessels and derelict fishing gear, respectively, was achieved through Congressionally directed funding. After funding was received from Congress for the MDP, removal efforts were expanded from the Northwestern Hawaiian Islands to include the Main Hawaiian Islands, and removal projects throughout the country were encouraged through the competitive NOAA Restoration Center grant program described above. Removal projects, focusing on large debris that is difficult for communities to remove on their own (and including derelict fishing gear), have taken place in 14 states and territories. Between 2005 and 2009, almost 1,500 metric tons of marine debris was removed with MDP funding.

Though in most areas collected debris is taken to landfills, the derelict fishing nets recovered from throughout the Hawaiian Islands are converted into energy at a power plant that can safely burn marine debris, through an 11-member public-private partnership called “Nets to Energy.” This idea was brought to the mainland, where the “Fishing for Energy” partnership now has relationships with 13 ports in New England, New York, New Jersey, and Oregon. Both partnerships provide fishermen a no-cost, convenient location to dispose of fishing gear. Though not all the gear recovered at the mainland locations was derelict, the project partners are filling a gap identified by fishermen that was inhibiting the efficient disposal of old gear. Nets to Energy has converted over 685 metric tons of nets so far, and Fishing for Energy has recycled over 240 metric tons.

5.2.3 Prevention, Education, and Outreach

The MDP’s prevention efforts have mainly centered on the development and dissemination of education and outreach materials and resources. These have been made available on the MDP website, marinedebris.noaa.gov, as well as at community events and conferences. These materials are free, downloadable from the website, and applicable to both traditional and non-traditional education. Materials include everything from a marine debris curriculum for grades K-12 to an educational poster for boaters on what can be legally disposed of at sea. The MDP has two dedicated coordinators focused specifically on these activities, one located in Silver Spring, Maryland, and the other in Honolulu, Hawaii.

The focus of the MDP outreach and communication efforts is to communicate to both internal and external audiences to achieve the following objectives:

1. Improve internal and external awareness and understanding of marine debris issues to foster stewardship of our oceans and coastal waterways.
2. Improve awareness and understanding of the MDP, its mission, and its activities both within NOAA and to the general public.
3. Raise awareness of marine debris issues among national and regional policy makers.
4. Raise awareness and understanding of the MDP, its mission, and project activities specifically among national and regional policy makers.
5. Become a widely trusted resource for marine debris information nationally and internationally.

In 2005 and again in 2007, the MDP expanded its outreach efforts by entering into a partnership with NOAA Fisheries and The Walt Disney Company, along with the Ad Council, National Marine Sanctuary Foundation, DOI, and Environmental Defense, to enhance the Keep Oceans Clean Alliance through the release of two movies, a re-release of the popular Disney movie *The Little Mermaid* and its prequel, *The Little Mermaid: Ariel's Beginnings*. The project utilized the characters of each movie to provide a central focus on the importance of keeping our oceans clean by putting trash in its proper place, using reusable items, and recycling. The campaigns employed DVD inserts with specially produced educational information, billboards, radio and television public service announcements, and an updated website and web-based video game (www.keepoceansclean.org/).

In 2009, the MDP expanded its resources to include a larger array of multimedia tools as well as new educational materials. In addition to traditional and targeted audience-specific products, the MDP has created five new videos, two video public service announcements, and an audio podcast available for download from the website. These videos are tailored to different user groups and cover a wide range of topics on the subject of marine debris. The MDP has also created a blog dedicated solely to marine debris issues to further expand this campaign effort. Additionally, in response to the public's interest in and media's attention to marine debris hot topics such as the "Great Pacific Garbage Patch" and plastics as marine debris, the MDP worked with researchers and experts in these areas to create a resource for accurate, up-to-date information on these topics. The information can be found on the website at marinedebris.noaa.gov/info/.

5.2.4 Workshops and Conferences

Workshops are a significant method through which NOAA is able to gather and disseminate research results and new information; identify marine debris issues; facilitate networking within the marine debris community within a state, region or nation; and encourage and support actions to address marine debris. The MDP has held several workshops since 2005. One of the first of these brought together the new program's staff with key internal and external constituents. This workshop provided the background necessary for the MDP to set its course of action for the first two years. The workshop accomplished a review of old NOAA materials, research, and related information, established the two grant opportunities, and identified potential partners.

In 2008, the MDP began hosting workshops focusing on a range of topics. At the highest overview level, the MDP Information Forum in April 2008 brought in MDP-funded researchers from around the country to share their results on marine debris topics from survey methodology to removal techniques. Workshops on more focused topics included:

- Reviewing the state of knowledge on the environmental impacts of microplastics with participants from the U.S., Europe, Asia, and Australia (September 2008, Tacoma, WA);
- Developing a strategy for improving our capability to detect derelict fishing gear at sea (December 2008, Honolulu, HI);
- Developing a methodology for detecting and assessing derelict crab pots in shallow and deep water (June 2009, Silver Spring, MD); and
- Facilitating state response to abandoned and derelict vessels (September 2009, Miami, FL)

A series of seven workshops in Hawaii culminated in a state-wide Hawaii Marine Debris Action Plan, creating a framework of results-oriented strategies needed to reduce marine debris impacts across the state. In early 2010, a final meeting will introduce the plan to Federal, state, and local leadership to garner support needed to implement the plan.

In September 2009, the MDP conducted a workshop to summarize the Gulf of Mexico Marine Debris Project. The workshop focused on lessons learned and recommendations for addressing a future large-scale dispersion of marine debris, similar to the massive debris dispersion inflicted by Hurricanes Katrina and Rita. The workshop, conducted in collaboration with Louisiana Sea Grant, generated proceedings that are available on the project's website gulfofmexico.marinedebris.noaa.gov/

Workshops that the MDP has supported but not organized include:

- Alaska Workshop on Marine Debris (February 2008);
- Environmental Response Data Collection Standard Workshop (September 2007);
- Marine Debris Solutions Workshop (November 2007);
- New England Derelict Fishing Gear Workshop (November 2008); and
- Potomac Trash Summit (2007, 2008, 2009).

In 2009, the MDP also began planning the next international conference on marine debris. Four international marine debris conferences have been held since 1984. The last major conference was held in 2000. The MDP has stepped forward to lead the development of the next one, tentatively scheduled for late 2010 or early 2011. Other countries and international organizations have already expressed interest in participating.

The MDP has organized and chaired sessions on marine debris at the following scientific conferences: Coastal Zone 2007 (technical session and café conversation), Pacific Congress on Marine Science and Technology 2007, Coastal Zone 2009 (two sessions, one in conjunction with EPA), and the 2009 Hawaii Conservation Conference.

5.2.5 Partnerships

Marine debris is a global issue, but priorities in addressing it vary widely across the world, nation, regions, states, and communities. Understanding these differences, the MDP engages in partnerships at different levels and with different entities to ensure that efforts in a

particular area are carried out at the most effective level. Many of these partnerships are mentioned in previous sections, but additional ones are discussed below.

Internationally, an ongoing project with the Republic of Korea has led to an exchange of ideas on topics such as engaging fishermen in removal activities, assessing the impacts of marine debris to the shipping and fishing communities, and outreach techniques. Discussion takes place both over email and in person. The MDP has a less formal relationship with Australia, where marine debris is also an important issue, hosting visitors and exchanging current research results and related information.

Nationally, partnerships with Ocean Conservancy and the National Marine Sanctuary Foundation have supported activities across the country. The MDP supports Ocean Conservancy's International Coastal Cleanup (ICC) with both funding and volunteers, as well its annual ICC Conference for state and country coordinators and the development of an online marine debris reporting database. The National Marine Sanctuary Foundation and the MDP have jointly partnered with National Geographic (2006) and Disney (2007) to develop outreach and education materials that are distributed across the country in magazines, with movies, and on billboards.

The Fishing for Energy project, also mentioned in the Removal and Recycling section (5.3.2), is another national partnership, composed of the MDP, National Fish and Wildlife Foundation, Covanta Energy, and Schnitzer Steel Industries, Inc. This partnership focuses on providing ports and fishermen with free disposal facilities, collection, and transport to suitable power plants for old and derelict fishing gear. Working together, the partners identify fishing ports across the country that have a sizable fishing fleet and may need disposal options, determine if their location makes them eligible, and then reach out to form the partnership. U.S. ports can also nominate themselves to become involved. Related port overhead costs for this partnership are low, and the partners recently established a grant opportunity to help ports and their partners expand their outreach, education, and other project-related activities.

At the regional level, the Gulf of Mexico Marine Debris Project (August 2006 to November 2009) was a special activity within the MDP aimed at addressing the impacts of Hurricanes Katrina and Rita through the cooperation of NOAA, the U.S. Coast Guard, Alabama, Mississippi, Louisiana, and the Federal Emergency Management Agency. Within NOAA, the project was a partnership between the MDP and NOAA Office of Coast Survey, supported with a total of $44 million in supplemental appropriations provided in FY2006 and FY2007 to address the impacts of Hurricanes Katrina and Rita. Designed to survey and map marine debris to assist with restoration of fishing grounds and ensure safe boating, the project surveyed over 1,550 square nautical miles from Mobile Bay, Alabama, to the Louisiana-Texas border; located over 7,000 debris items in offshore fishing and shrimping grounds impacted by Hurricanes Katrina and Rita; and conducted extensive outreach to inform fishermen, boaters, and the public of its efforts and products. The project's marine debris information is used by the Federal Emergency Management Agency and U.S. Coast Guard, in coordination with the states, to target the removal of hazardous debris. In July 2009, the project received an EPA Gulf Guardian Award for its work and partnerships in the region.

Also regionally, the West Coast Governors' Agreement highlighted marine debris as one of the issues affecting the health of their marine environment and the people whose lives depend on the ocean. The MDP is serving as vice-chair of the marine debris action team, helping to write and coordinate the team's action plan and gather support for its implementation.

As mentioned in the Workshops and Conferences section (5.3.4), the MDP has taken the lead in Hawaii to coordinate partners in developing a statewide action plan to address marine debris. Hawaii's geographic position has the unfortunate distinction as a hotspot for the aggregation of marine debris. Many years of Federal and state efforts to address marine debris threats to the endangered Hawaiian monk seal have been supplemented by a variety of debris research, removal, prevention, and outreach activities undertaken by public and private sector organizations. The MDP coordinated meetings attended by 78 individuals representing over 40 organizations. This plan, the first of its kind in the nation, will coordinate and guide investment in activities to reduce the impacts of marine debris across the entire Hawaiian archipelago.

Also in Hawaii is the Nets to Energy project, which provided the idea for the Fishing for Energy partnership described above. Started in 2002 as a way to dispose of nets collected in the Papahānaumokuākea Marine National Monument, this project's 11 partners also provide a free and convenient place for fishermen to dispose of old and derelict fishing gear. This partnership takes in all the derelict gear pulled from the Papahānaumokuākea Marine National Monument during its annual cleanup and gear collected during cleanups in the main Hawaiian Islands.

Partnerships at the more local level include the following:

- Extensive work with the NWSC in the Puget Sound to understand the impacts of derelict fishing gear to target and non-target species as described in the Research, Assessment, and Understanding section (5.3.1).
- Partnership with Stellwagen Alive! in Massachusetts to support working with the Commonwealth and fishermen to allow derelict fishing gear to be recovered during planned cleanup events.
- Cooperation with the Marine Conservation Alliance Foundation, funded by Congressional direction, to begin to understand the amount and sources of derelict fishing gear in Alaska.

6.0 Review of Coast Guard Program

Since the filing of its last report with Congress on the status of Coast Guard marine debris activities in early 2007, the Coast Guard has continued to play an important role in the prevention and reduction of marine debris. Here, the Coast Guard discusses the programs carried out between 2007 and 2009 which reflect its sustained commitment to the solution of this persistent problem.

The Coast Guard combats sea-sourced marine debris by enforcing the vessel-generated waste provisions of MARPOL, APPS, and the regulations issued thereunder. The period between 2007 and 2009 saw significant development of the Coast Guard waste reception facilities program. Through the continuance of its port state and domestic inspection programs, the Coast Guard ensured adherence to the discharge requirements of APPS and worked toward the successful prosecution of those who did not adhere to those requirements.

Where the Coast Guard has statutory authority, Coast Guard Captains of the Port may remove vessels which pose a unique pollution risk. In furtherance of its commitment to environmental stewardship, the Coast Guard assists its interagency partners in the removal and identification of marine debris in areas of particular ecological concern.

In addition to its operational activities, the Coast Guard works diligently to promote international action against marine debris. On behalf of the United States and, in cooperation with its co-chair (NOAA), the federal interagency working group on Annex V, the Coast Guard

provides important leadership at the IMO. Outside of the regulatory context, the Coast Guard cooperated with international counterparts to develop industry-wide, ship-generated garbage standards.

The period between 2007 and 2009 saw the achievement of two additional key MDRPRA goals: NOAA/ Coast Guard joint regulation for the definition of the term "marine debris" and Coast Guard sponsorship of the National Research Council report *Tackling Marine Debris in the 21st Century*.

The Coast Guard continues to educate boaters and mariners about the environmental and legal consequences of marine debris deposition. The Coast Guard also promotes marine debris awareness among the regulated public through its Sea Partners outreach program.
Taken together, the Coast Guard's anti–marine debris activities are an essential part of the Federal government's effort to combat the pervasive problem of marine debris.

6.1 Compliance and Enforcement

6.1.1 Ship-Generated Garbage: Waste Reception Facilities

The Coast Guard maintains a robust compliance program to ensure the adequacy of waste reception facilities in U.S. ports and terminals and their ability to receive MARPOL Annex V wastes from oceangoing ships. These efforts contribute to the reduction of ship-sourced pollution, which is responsible for a portion of the marine debris in the oceans. The Coast Guard verifies that domestic waterfront facilities maintain the capability of receiving garbage and wastes from oceangoing ships through its Certificate of Adequacy (COA) program. The Coast Guard continues to monitor compliance through annual facility inspections and harbor and port spot checks. Criteria for determining the adequacy of garbage reception facilities and their compliance with MARPOL Annex V can be found in 33 CFR § 158.400.

Through the Marine Information for Safety and Law Enforcement (MISLE) reporting system, the Coast Guard is able to track facility inspection activity levels. Since 2006, the Coast Guard has improved its ability to gather specific information on MARPOL reception facilities, including information relating to inspections, deficiencies, investigations, and pollution incidents directly connected to MARPOL Annex V waste streams.

The 2007-2008 period has shown an increase in the number of facilities and facility inspections. Despite the increase in number of facilities, the number of reported pollution incidents has decreased during this time period. From the 2006 facility inspection baseline, reports from MISLE show that the Coast Guard facility inspections increased by 17% in 2007 and 26% in 2008; these facility inspections included compliance checks on safety- and security-related requirements, as well as MARPOL V requirements. The number of MARPOL Annex V targeted inspections also rose by an average of 40% during the two-year period. Despite the 4% increase in the number of waterfront facilities since 2006, there was a 6% decrease in pollution incidents from 2006 to 2007, and a 9% decrease in the number of pollution incidents from 2006 to 2008.[2]

The Coast Guard continues its work to improve reception facilities. In 2008, the Coast Guard began work with the Chemical Transportation Advisory Committee Sub-committee on MARPOL in an effort to improve its COA program for certifying port/terminal reception facilities. The Coast Guard has issued updated guidance to field inspectors and investigators in

[2] Data includes all pollution incidents, including those related to compliance with Annex V.

the form of a MARPOL "job aid" (Appendix D) to further improve the effectiveness and thoroughness of the facility inspections. When allegations of inadequate reception facilities are received, the Coast Guard performs thorough investigations to ensure that each identified facility is in compliance with the regulations or is taking corrective action to come back into compliance.

6.1.2 Ship-Generated Garbage: Shipboard Compliance and Enforcement

The Coast Guard ensures compliance with U.S. regulations related to marine environmental protection through inspections and boardings. In fulfillment of MARPOL Annex V obligations, the Coast Guard inspects U.S. commercial vessels annually and examines foreign vessels through the port state control program. For recreational and commercial fishing vessels that are not required by law to be inspected, boardings (such as domestic fisheries protection activities, marine sanctuaries protection activities, and random "at sea" boardings) allow the Coast Guard to verify environmental compliance. In 2007, the Coast Guard performed MARPOL V examinations on more than 8,837 U.S. commercial vessels and more than 10,423 foreign commercial vessels; 2008 inspections included 8,793 U.S. commercial vessels and more than 11,500 foreign commercial vessels. In 2007 and 2008, the Coast Guard conducted more than 165,200 enforcement boardings.

The Coast Guard assisted in the successful prosecution of two major illegal discharge cases. Coast Guard investigators detected falsifications of oil and garbage record books aboard the M/V *Ocean Jade*. STX Pan Ocean Co. Ltd. (STX) (operator of the M/V *Ocean Jade*) pleaded guilty to four felony offenses on April 24, 2009, including conspiracy, falsifying records, and making false statements, all of which were committed by crew members aboard the M/V *Ocean Jade* from July to October 2008. STX paid $2.2 million in penalties and will serve four years of probation for conspiring to falsify and falsifying environmental compliance records. The court also ordered STX to implement a detailed environmental compliance plan, including the monitoring of its fleet-wide operations for the next four years and the provision of training for crew members. STX also pleaded guilty to violating APPS by knowingly failing to maintain an accurate garbage record book on board the M/V *Pan Voyager* (another vessel owned and operated by the company). The company failed to record the disposal of six 55-gallon drums, 30 plastic-lined rice sacks, and approximately 200 garbage bags containing oil-contaminated grain. Two senior officers pleaded guilty of failing to notify Coast Guard inspectors of the false document. The shipping line paid a $500,000 fine and made a $250,000 community service payment. The company agreed to a stringent environmental compliance plan with outside auditing.

Additionally, the Coast Guard may proffer suspension and revocation charges against U.S. merchant mariners' credentials for willful or negligent acts. Appendix E provides data on the number and type of MARPOL Annex V sanctions processed by the Coast Guard since 1991.

6.2 Debris Removal

6.2.1 Statutory Activities

The Coast Guard's primary responsibility for the removal of abandoned and derelict vessels on or adjacent to the navigable waters of the United States pertains to the prevention and mitigation of pollution related incidents. This includes not only the dumping or discharge of oil

and hazardous substances, but also cases which pose a substantial threat of discharge. The Coast Guard's authority for responding to these incidents falls mainly under two statutes: the CWA for oil and the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) for other hazardous substances not covered under the CWA. Under each of these authorities, the Coast Guard must determine that 1) the vessels are discharging substances or pose a substantial threat to discharge, 2) the responsible party is not mitigating or removing the pollution threat as required by law, and 3) the removal of a vessel is the best option to mitigate the incident. If the pollution can be mitigated from the vessel without its removal or destruction, this will be the primary option. The Coast Guard also has authority under the Abandoned Barge Act to remove abandoned barges under certain circumstances. When deciding upon the appropriateness of removal in the case of abandoned barges or other vessels, the threat of continued dumping is also considered. When a vessel could remain a possible location for continued dumping of oil or hazardous material, and additional damage to the environment and/or costs for cleanup would be incurred, vessel removal may be the most appropriate option.

In cases where vessels do not pose a pollution threat, the Coast Guard coordinates with the USACE, NOAA, and state and local program managers to resolve and mitigate the incident. These often involve cases where vessels pose a threat to navigation, obstruct a navigable channel, or endanger protected or sensitive habitat. State authority is typically acted upon when neither Coast Guard nor USACE has authority, i.e., when a vessel is not located in a navigable waterway, does not pose a pollution threat, or is a barge less than 100 GT. When state authority is acted upon, local Coast Guard officials will monitor the status of the vessel and provide expertise to state and local officials to coordinate procedures for removal. The Coast Guard also participated in a NOAA-led abandoned and derelict vessel workshop to discuss vessel removal with state project managers.

6.2.2 Marine Debris Removal Associated with Hurricanes Katrina and Rita

Coast Guard operations in support of the 2005 Hurricanes Katrina and Rita marine debris removal efforts were conducted in four states under the auspices of the National Response Plan (NRP) (after January, 2008, the NRP was replaced by the National Response Framework (NRF)); these activities continued into 2009 and have the potential to continue into 2010.

The normal NRF Emergency Support Function (ESF) for "Salvage and Debris Removal" is ESF-3, Public Works and Engineering. The lead agency for that type of support, if requested by an applicant in accordance with the required Presidential Emergency Declaration, is the USACE. In this specific instance, given the scope and effect of Katrina and the combined effect of Rita and Katrina (and, later, Wilma), USACE focused its disaster response and recovery efforts on its primary missions of navigation, flood risk reduction, and ESF-3 response and recovery activities. It utilized its resources to remove sunken vessels and other obstructions from or immediately adjacent to federally maintained navigation channels and to restore flood risk reduction features such as levees, floodwalls, and high-capacity, reliable pumping stations. Many of the marine debris removals overseen by Coast Guard after the 2005 hurricanes were outside authorized Federal navigation channels and were not impacting commercial navigation. This type of marine (wet) debris has since been discussed and considered as USACE, FEMA, Coast Guard, and other agencies refined eligibility criteria for Federal assistance under ESF-3. USACE can now address marine debris (wet debris) outside of an authorized Federal navigation channel if a Presidential Disaster Declaration is made (under the Stafford Act) and FEMA determines

that the wet debris needs to be removed from a channel or waterways it deems critical to local or regional area recovery. FEMA can give USACE the mission and funding to effect necessary wet debris removal.

The term "marine debris" was redefined multiple times by the various individual state Mission Assignment (MA) writers and the individual project managers during the course of the work.[3] Eventually, the mission was assigned to the Coast Guard in September of 2005 as ESF-"Other" and related task orders. The Coast Guard removed vessels and other debris from various waterways and the Gulf of Mexico in four states.[4] Two states, Texas and Alabama, had lesser amounts of debris and funds expended for these activities. Mississippi and Louisiana had significant amounts of debris removed. Of those two, Louisiana was a significantly larger task; additionally, it presented substantial logistical and regulatory complications.

Initially, costs were covered directly by funds obligated under the actual ESF-"Other" MA. Later, FEMA substituted various Inter-agency Agreements (IAAs) for the MAs in order to facilitate FEMA funding policy, but there is no substantive difference as it relates to the intention of this report, and the operations delineated below depict both MA- and IAA-funded activities.

It is important to remember that these activities are initially cash-flowed using Coast Guard funds. Bills for removal of "authorized" debris and related costs were then submitted to FEMA for reimbursement; accordingly, documentation of Coast Guard "authorized" costs was and is of significant concern to Coast Guard budget personnel.

There were three debris removal categories under these projects:

1) vessels (inland) of all sizes and types, from large steel barges to small recreational vessels;
2) trees, white goods (including household appliances), and construction/demolition debris such as houses, docks and other structures which were blown into the waterways (inland); and,
3) materials of types 1 and 2 located in the waters of the Gulf of Mexico.

6.2.2.1 Removal Operations–Louisiana

Removal operations in Louisiana consisted of the survey of 267 different waterways. Most waterways had both a surface survey by vessel with a multi-agency survey team and a sub-surface sonar survey. The initial mission included survey and removal of vessels and non-vessel debris in 11 parishes. A total of 168,000 cubic yards of non-vessel debris was removed from those waterways during the first three phases of the removal operation. The current and final phase consists of the same type of work but adds 12 parishes to the area of work. Together, the 23 parishes undergoing Phase 4 work span from the Mississippi border to the Texas border. The total mileage of surveyed waterways to date is 1,807 miles.

During each phase, vessel removal was accomplished in the following stages: 1) the removal of large heavy vessels in major commercial waterways, 2) the removal of smaller vessels which were still large enough to have hazardous materials such as internal engines or fuel tanks, and 3) the removal of very small, primarily recreational vessels with a low probability of

[3] It is important to note that use of the term marine debris is not synonymous with the NOAA-USCG rule promulgated 3 September 2009 defining marine debris; however, because marine debris is defined in that regulation as "For the purposes of the Marine Debris Research Prevention and Reduction Act only," use of a different definition is appropriate in both contexts.

[4] No operations relating to 2008 Hurricane Gustav or Ike are addressed in the Coast Guard section of this report.

having hazardous materials. A total of 4,061 vessels were surveyed and tracked by the Coast Guard. Of those, 1,627 have been or will be removed and destroyed or returned to their owners.

During the early stages of the response, the Coast Guard removed 59 vessels and/or debris piles directly from levees the USACE was repairing. These removals were paid for by the USACE in accordance with a Memorandum of Understanding (MOU) between the USACE and the Coast Guard created for that purpose. The Coast Guard performed this mission concurrently with its other missions because all of the available salvage assets were under contract to the Coast Guard and because the USACE focused its disaster response and recovery efforts on its primary missions of navigation, flood risk reduction, and ESF-3 response and recovery activities (as discussed in Section 6.2.2 above).

In FY2006 and FY2007, NOAA received two supplemental appropriations to conduct sonar surveys off the coasts of Mississippi, Louisiana, and Alabama to identify marine debris for removal in the nearshore areas. The session law language accompanying the Louisiana supplemental (FY2007) instructed NOAA to coordinate removal of any targets located in the offshore areas of Louisiana with the Coast Guard marine debris removal operations. Those surveys, which extend from the shoreline of Louisiana (depth of 4 feet) out to the designated state line (approximately 4 miles offshore) concluded on September 30, 2009. Teams made up of FEMA, NOAA, and Coast Guard will develop removal lists of "eligible" targets offshore and develop and administer a contract for the removal of those targets. Through 24 August 2009, the total expended by the Coast Guard from all accounts for Louisiana marine debris removal is $180,761,815 (3 MAs and 5 IAAs).[5]

There are four removal contracts yet to be awarded, and there is an unobligated balance remaining in the final IAA of $15,353,565. The award of these contracts is imminent. All Coast Guard removal operations in support of the 2005 hurricanes will be completed within 120 days of the award of the largest of these four contracts.

6.2.2.2 Removal Operations–Mississippi

Removal operations in Mississippi followed the same essential paradigm as in Louisiana with the following notable exceptions:

- All offshore removals were completed during their initial phases. All removal operations were essentially concluded during the spring/summer of 2008.
- Because of the proximity of construction on or near the beach along the Mississippi coast, the non-vessel debris total was significantly higher than in Louisiana, but the removal was logistically easier than removal from remote bayous.

A total of 384,000 cubic yards of non-vessel debris was removed in Mississippi. Mississippi operations were confined to the three coastal counties. A total of 503 vessels were surveyed in Mississippi. Of that total, 130 were "worked." Twenty-four vessels had only the hazardous materials removed (fuel, oil, and batteries), and those operations were funded through ESF-10. Sixty-one vessels were removed and returned to their owners, and 45 vessels were

[5] These costs do not include any funds expended for "Marine Debris" removal conducted under ESF-10, nor do they include the USACE removals covered by an MOU with the USACE.

destroyed. The total expended from all accounts for Mississippi "marine debris" removal is $51,887,537 (1 MA and 1 IAA).[6]

6.2.3 Interagency Work in the Papahānaumokuākea Marine National Monument

The Coast Guard continued its support of the marine debris removal partnership in the PMNM. In 2008 and 2009, Coast Guard buoy tenders and crews from District 14 (D-14) supported a total of three dedicated trips to retrieve derelict fishing gear in the Papahānaumokuākea Marine National Monument chain. In the summer of 2008, Coast Guard Cutter (CGC) *Walnut*, a 225-foot buoy tender home-ported in Honolulu, partnered with NOAA and the University of Hawaii during the 18-day multi-agency removal effort. CGC *Walnut* conducted marine debris removal operations at Maro Reef, Kure Atoll, and Midway Island and retrieved more than 28 tons of marine debris; the crew returned the collected marine debris to Oahu's Schnitzer Steel, which then processed and delivered it to H-Power on Oahu for conversion into island electricity. In the fall of 2008, CGC *Kukui*, also home-ported in Honolulu, removed four tons of nets and other debris from Kure Atoll in the Papahānaumokuākea Marine National Monument. The net retrieval mission performed by CGC *Kukui* crewmembers was in conjunction with State of Hawaii Department of Land and Natural Resources and National Marine Fisheries Service personnel. In July 2009, CGC *Walnut* teamed up with NOAA and the U.S. Army's 7th Engineer Diving Team to remove more than 32 tons of derelict fishing nets and other refuse from the coral reefs in the PMNM. The Coast Guard facilitated this cleanup by entering into an MOU with the U.S. Army's 7th Engineer Diving Team for the conduct of joint diving and marine debris removal operations in the Papahānaumokuākea Marine National Monument.

6.2.4 Interagency Work with the Army Corps of Engineers

The Coast Guard and USACE continue to work closely at the national and local levels coordinating the removal of marine debris. Coordination among the agencies is essential to ensure maritime mobility and safety is maintained throughout our nation's waterways. The USACE has the primary responsibility for removing wrecks and other obstructions from the navigable waters of the United States. While the Coast Guard may assist with this effort, and may take the lead when oil or hazardous material is involved, its primary responsibility is to ensure the proper navigational marking of the wreck or obstruction. As a member of the National Dredge/Regional Dredge Team (NDT/RDT), the Coast Guard is working with the USACE to consider development of a protocol for spill response/post–marine casualty dredging operations. The goal of the proposed protocol is to establish post-casualty dredging procedures in potentially contaminated areas, develop joint agency agreements, determine a range of contaminant sources and contents, and institute post-cleanup and long-term monitoring in order to study effects on the environment. The NDT plans to continue addressing this proposed protocol.

6.2.5 Interagency Work with the Department of Defense Dive Programs

[6] These costs do not include any funds expended for "Marine Debris" removal conducted under ESF-10, nor do they include the USACE removals covered by an MOU with the USACE.

In 2007, 11 Coast Guard divers from four separate Coast Guard Marine Safety and Security Teams participated in the removal of marine debris off the coast of Ft. Lauderdale, Florida. In conjunction with their fellow divers from the Navy and Army, Coast Guard divers worked to remove parts of a failed artificial reef that poses a unique threat to the marine environment. In 2009, the Coast Guard participants received an award from the Principal Deputy Assistant Secretary of Defense for Reserve Affairs.

6.2.6 Interagency Work with NOAA for Marine Debris Tracking

On an informal basis, Coast Guard District 17 (D-17) is providing assistance to NOAA by carrying ghostnet tracking buoys aboard Coast Guard vessels conducting High Seas Driftnet Enforcement patrols. The goal is to attach buoys to derelict nets encountered during patrols. The information collected from the buoys will allow researchers to both track the particular nets in order to facilitate future removal and improve debris transport models. Improved net tracking will assist in the removal of derelict nets before they threaten sensitive habitat or enter busy traffic lanes.

6.3 International Activities

At the IMO, the Coast Guard plays an important role in the promotion and maintenance of stringent international environmental standards. The IMO is the lead international organization for the development of the regulatory framework for the shipping industry. Its multinational decisions form the basis of member-state marine pollution enforcement regimes, including port state inspections, self-reporting, and recordkeeping. As head of the U.S. delegation, the Coast Guard works to advance a number of key environmental interests at meetings of the IMO's Marine Environment Protection Committee. The Coast Guard and NOAA serve as co-chairs for the U.S. interagency group responsible for the review of MARPOL Annex V and the drafting of amendments for its potential revision.

Through its Request for Comments (FR 74-39334) the Coast Guard is seeking comments from the public on the effects of implementing the special area discharge standards on vessel and reception facility operations when the Wider Caribbean Region special area comes into effect. It is also seeking recommendations from the public on how to efficiently transition from the current standards regulating garbage discharges to the special area discharge standards.

The Coast Guard has also actively participated in the development of the ISO standards for reception facilities and handling of ships' waste.

6.4 Other MDRPRA Activities

The Coast Guard and NOAA jointly promulgated the definition of "marine debris," in fulfillment of our obligation under the MDRPRA. Marine debris is defined as follows: "for the purposes of the Marine Debris Research, Prevention, and Reduction Act (33 U.S.C. 1951–1958 (2006)) only, marine debris is defined as any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes." In addition, the Coast Guard sponsored a National Research Council report titled *Tackling Marine Debris in the 21st Century*.

6.5 Outreach

The Sea Partners Campaign is an environmental education and outreach program focused on developing community awareness of maritime pollution issues and improving compliance with marine environmental protection laws and regulations.

Sea Partners has educated hundreds of thousands of children; it traditionally focused on elementary school–aged children. In FY2008, new materials were developed suitable for middle and high school audiences, which will permit the program to maintain a presence in schools through every grade level. Additionally, Sea Partners (in conjunction with the Coast Guard Auxiliary) has been correlating marine debris, oil spill, and invasive species subject matter with the national education standards. By having program materials correlated with the national education standards, teachers will be able to dedicate more classroom time to Sea Partners.

Sea Partners continued in its effort to reach out to the maritime industry in FY2008. The program continued to spread the Sea Partners message through the following activities: appearances at boat shows, distribution of MARPOL placards to merchant mariners, distribution of placards with anti-pollution messages to marinas and boating communities, outreach to marina owners and operators and engaging them in the Clean Marina program, and outreach to local marine supply retailers.

Volunteer hours have been reported through the Auxiliary database. In 2007, Sea Partners provided 5,625 hours of work (including outreach initiatives, Coast Guard interface with “clean marina” programs, national debris monitoring support, and waterways pollution detection and monitoring). In 2008, 4,427 hours were spent in outreach efforts, and thus far in 2009, the Coast Guard has spent 3,293 hours in community outreach

7.0 Funding and Recommendations

Section 5(c)(2)(E) of the MDRPRA requests an estimate of Federal funds spent on marine debris activities, as well as an estimate of non-Federal funding related to marine debris. The IMDCC has interpreted the requested non-Federal funding to be the required non-Federal match associated with the grants program outlined in Section 3(c)(2)(A) established under NOAA. Consistent with the timeframe of this report, the Federal agencies on the IMDCC provided the following information for fiscal years 2008 and 2009.

Please note that many federal agencies conduct daily activities within multiple programs, offices, and projects that are indirectly related to marine debris efforts. They do not receive funding specific to marine debris in their annual appropriations but instead receive funding by missions or programs. This made it difficult to extract the exact funding amount related to marine debris within these integrated actions. Therefore, the exact amount of effort being expended to address marine debris could be higher or lower than the amounts reported here due to these integrated activities.

Table 2: FY2008 to FY2009 IMDCC Agency Funding

AGENCY	FY2008	FY2008 non-Federal Match	FY2009	FY2009 non-Federal Match	General Activity Description	Budget Line
DOC/NOAA	$5,733,272	$2,241,858	$11,843,284	$3,039,890	research, removal, outreach and education, coordination, prevention, database development, partnerships, grants, contracts	Marine Debris, Coral Reef Conservation, National Marine Sanctuaries, ARRA, Habitat Restoration, Office of Marine and Aviation Operations
DOD Navy USACE Air Force	 $5,300,000 $11,900,000 $5,200,000		 $5,700,000 $10,800,000 $12,700,000		 Navy: upgrades and maintenance of solid waste equipment on ships. Drift and debris removal Air Force: relocation of Alaskan near-ocean landfills farther inland.	 Debris Removal
DHS/USCG	<$180,481,000		<$201,857,000*		See Section 6 for a comprehensive discussion of Coast Guard activities.	Marine Environmental Protection
DOI FWS MMS	 $1,900,000 $50,000 + routine regulatory activities	 $325,000	 $1,850,000 Routine regulatory activities		 FWS volunteer and staff programs: research, removal, outreach/ education, coordination, prevention, database development, partnerships. MMS regulatory programs prevent and respond to marine debris at regulated facilities/operations on the OCS.	 Wildlife and Habitat Management Midway Atoll Marine Debris Research and Cleanup Project
DOJ	Unable to provide a budget based on subject matter.					
DOS	$150,000		$60,000			
EPA	<$100,000		$100,000		monitoring and development of tools to assist other EPA programs to control marine debris sources; comprise agency's explicit support for addressing marine debris	Marine Pollution
MMC	$0		$0			

* In order to display budget allocation by Mission-Program, Coast Guard uses an activity-based cost model that averages past expenditures to forecast future spending. Fiscal year 2009 enacted budget authority for the Marine Environmental Protection mission-program contributes in-part to marine debris activities in this table. Marine Environmental Protection Activities include enforcement of pollution protection regulations and marine pollution response, recovery and investigation.

Section 5(c)(2)(E) also requests the IMDCC provide recommendations for priority funding needs. Each year, the IMDCC sets priority activities for the Committee based on emerging issues, research results, and the priorities of the Administration and individual agencies. In the 2008 Recommendations to Congress report, the IMDCC set four theme areas in which to work: (1) marine debris prevention, (2) response to marine debris in the environment, (3) research and development, and (4) cross-theme issues. The IMDCC reviewed this list in 2009 and intends to continue to focus on these areas in 2010, although individual agency priorities may focus on some subset of these themes depending on individual agency missions, authorities, and responsibilities. The primary purpose of the IMDCC is to serve a coordination role, ensuring as agencies move forward with their own priorities and partnering where appropriate that available resources are used in the most cost-effective manner possible. Accordingly, the IMDCC seeks to ensure that:

- Effort and resources are not duplicated on the same projects,
- Resources are leveraged where possible,
- Project results and information are shared across agencies, and
- Effective and efficient activities are supported.

Appendices

A. 2008 Recommendations

B. Overview of the Interagency Marine Debris Coordinating Committee

C. Federal Authorities by Agency

D. USCG MARPOL Reception Facility Inspection/Investigation Job Aid

E. USCG MARPOL Annex V Violation Cases

Appendix A. 2008 Recommendations

The following recommendations are from the 2008 IMDCC Report to Congress (National Oceanic and Atmospheric Administration. *2008 Interagency Report on Marine Debris Sources, Impacts, Strategies & Recommendations*. Silver Spring, MD. 62pp.).

MARINE DEBRIS PREVENTION

1. Education and Outreach

   1.1: Federal agencies should demonstrate leadership by distributing educational materials to personnel on the sources and impacts of marine debris as well as methods for prevention, with the goal of reducing the federal contribution to marine debris.

   1.2: Federal agencies should support public awareness campaigns by providing technical expertise and educational materials and by encouraging private sector participation, when appropriate. These campaigns may target specific threats and audiences to address the diversity of the marine debris issue.

   1.3: Federal agencies should engage and partner with state, local, tribal and nongovernmental entities to support coordinated events, such as Earth Day, the International Coastal Cleanup, and other activities that have relevance to marine debris. These events should include nationwide educational and media outreach efforts to enhance awareness of sources and impacts of marine debris and to provide recommendations regarding specific actions that can be taken to prevent or reduce marine debris.

2. Legislation / Regulation / Policy

   2.1: The IMDCC should review the findings from the National Academy of Sciences (NAS) study that will assess the effectiveness of international and national measures to prevent and reduce marine debris and its impacts, and federal agencies should take action, as appropriate.

   2.2: Federal agencies should seek ways to strengthen and enhance their ability to fulfill both regulatory and non-regulatory mandates for marine debris prevention, where appropriate. Table 2, which lists federal marine debris related authorities, may be used for review and assessment of existing authorities.

   2.3: The IMDCC should coordinate a correspondence group of state, local, and tribal governments to determine the marine debris–related authorities and policies at those levels, including both those that address land-based sources of marine debris and those that address ocean-based sources. The correspondence group will be an important component in the IMDCC's gap analysis of regulatory and non-regulatory authorities that can be used to promote marine debris prevention.

2.4: Federal agencies, coordinating through the IMDCC, should review existing international policies and strategies regarding marine debris from both land-based and ocean-based sources, and develop a white paper outlining possible policies or actions for consideration by the United States.

3. Incentive Programs

3.1: Federal agencies should support voluntary, incentive-based programs that encourage communities to adopt environmentally responsible practices. Examples may include Heal the Bay's "A Day Without a Bag" Program (a southern California non-profit organization) and the Clean Marina Program, an initiative involving federal agencies and state governments.

3.2: Federal agencies should work with state, local, tribal, and nongovernmental entities to develop efficient recycling incentive programs for municipalities or appropriate venues.

3.3: Federal agencies, where appropriate, should evaluate methods by which users of products that contribute significantly to marine debris can be given an incentive to select environmentally friendly alternatives or improve use of recycling infrastructure. Such incentive programs or pilot projects should include regular monitoring and evaluation of their effectiveness.

RESPONSE TO DEBRIS ALREADY IN THE ENVIRONMENT

4. Enforcement

4.1: Federal agencies should continue to review enforcement authorities regarding marine debris and items that may become marine debris, enhance the effective use of those authorities as needed and appropriate, and ensure a coordinated approach to enforcement of relevant authorities.

4.2: In appropriate cases, federal agencies should refer violations of federal law, such as the Act to Prevent Pollution from Ships, Clean Water Act, and Ocean Dumping Act, to the Environment and Natural Resources Division of the U.S. Department of Justice for civil or criminal enforcement action.

5. Cleanups

5.1: Federal agencies should work together and contribute to coordinated removal efforts of marine debris and items that can become marine debris in areas under federal jurisdiction, with priority given to heavily impacted areas.

5.2: Federal agencies should examine how existing programs can be targeted to support difficult marine debris removal efforts.

5.3: Federal agencies should partner with state, local, tribal, and nongovernmental entities to continue to support and conduct cleanup efforts.

RESEARCH AND DEVELOPMENT

6. Research

6.1: Federal agencies, coordinating through the IMDCC, should sponsor and conduct research to characterize the nature of marine debris and further investigate reducing, mitigating, preventing, and controlling marine debris and assessing its impacts, with a particular focus on developing cost-benefit analyses for these actions.

6.2: Federal agencies, cooperating through the IMDCC, should improve efforts to monitor marine debris, including shoreline, floating, and submerged debris, using lessons learned from previous federally funded monitoring efforts.

6.3: The IMDCC should convene a special session at least once a year to share and discuss the latest research findings on marine debris, with summaries and identified gaps to be passed to the Subcommittee on Integrated Management of Ocean Resources (SIMOR) and the Joint Subcommittee on Ocean Science and Technology (JSOST).

6.4: Federal agencies, coordinating through the IMDCC, should sponsor and conduct research regarding the attitudes and practices of users of products that contribute to marine debris. In particular, such research should (a) investigate the willingness to alter attitudes and practices in a manner that would reduce marine debris; (b) identify preferences with regard to potential incentive programs and which types of incentives are most likely to produce positive responses; and (c) develop and test incentive programs intended to alter attitudes and/or practices among users of products that contribute to marine debris.

7. Technology Development

7.1: Federal agencies should partner with state, local, tribal, and nongovernmental entities to encourage the development of specific technologies that could prevent or reduce the amount of debris entering the marine environment or that could mitigate the impacts of marine debris on navigation, human health and safety, the economy, habitats, and species.

7.2: Federal agencies should support research, technology development, and use of materials that will not persist in the marine environment.

CROSS-THEME

8. Fostering Coordination

8.1: Federal agencies should help sponsor and participate in workshops, conferences, and lectures that address issues related to marine debris and sources of marine debris to encourage the exchange of information that can inform the development of guidelines and implementation of actions to mitigate marine debris impacts.

8.2: Federal agencies should participate in ongoing international activities to mitigate the impacts and reduce the amount of marine debris. Federal agencies also should support efforts to increase the awareness of such international marine debris efforts and encourage participation of other nations and international organizations in those efforts, as well as consider options for new international activities and initiatives to mitigate the impacts and reduce the amount of marine debris.

8.3: The IMDCC should serve as a central point for coordination of federal efforts to develop new policies, strengthen existing policies, identify new research topics or projects, and address requests from Congress for specific information or actions related to marine debris.

8.4: Federal agencies should pursue partnerships, as appropriate, with nongovernmental entities to develop, promote, and implement strategies for preventing, reducing, or mitigating the impacts of marine debris.

Appendix B. Overview of the Interagency Marine Debris Coordinating Committee

Table B.1 shows the overall drivers for federal agencies to address marine debris and lists, in a concise format, the related activities and outputs of each agency that sits on the IMDCC. The IMDCC's outcomes are also included.

Table B.1. Overview of the Interagency Marine Debris Coordinating Committee

DRIVERS	ACTIVITIES	OUTPUTS	OUTCOMES
Statutory and Regulatory **Public Interest (e.g., news stories on Pacific Trash Gyre)** **Concern for ecological, human health and safety, economic, and social impacts**	***Environmental Protection Agency*** MPPRCA, MPRSA, SPA, CWA, RCRA, PPA *Address land- and ocean-based sources through solid waste, stormwater, non-point source, and ocean regulations, voluntary programs, and outreach.*	***Environmental Protection Agency*** • Publications (BMPs, factsheets, reports) for municipal, industrial, and general audiences on solid waste, stormwater, and marine debris • Non-point source and marine debris prevention toolboxes • Research on marine debris found on beaches and in ocean	**Increased understanding of sources, impacts, and mitigation effort related to marine debris** **Improved public awareness of the marine debris impacts and actions that can and should be taken to reduce marine debris pollution** **Decreased amount of material becoming marine debris** **Stronger protection of marine environment from pollution and marine debris** **Increased international coordination to manage marine debris** **Cleaner oceans, coasts, and waterways**
	Department of Commerce – National Oceanic and Atmospheric Administration MDRPRA, MPPRCA, MSRA, CZMA, ESA, MMPA, DAA, NMSA, CRCA *Address marine debris through mapping, identification, impact assessment, removal and prevention, focusing on living marine resources and navigation. Reduce and prevent loss of fishing gear. Public outreach and education.*	***Department of Commerce - National Oceanic and Atmospheric Administration*** • Federal Information Clearinghouse • Research and assessment of marine debris impacts to living marine resources • Topic-specific workshops for marine debris researchers and practitioners • Nets to Energy and Fishing for Energy partnerships • Over 150 grants and contracts since 2005	
	Department of Defense **U.S. Army Corps of Engineers** RHA, FCA *Obstructions in navigable waterways.* **Navy** *Compliance with APPS for solid waste management and disposal of plastics from vessels. Preparation of vessels used as artificial reefs in accordance with Nat'l BMPs.*	***Department of Defense*** **U.S. Army Corps of Engineers** • Report on obstructions removed from navigable waterways **Navy** • Monitoring reports on vessels cleaned for reefing • Final report on vessel to reef projects	
	Department of Homeland Security - Coast Guard MPPRCA, APPS, DAA, SPA, MDRPRA *Compliance and enforcement for ship-generated garbage.*	***Department of Homeland Security – Coast Guard*** • Certification of adequacy for port and waterfront facilities • Inspections aboard vessels to ensure compliance with ship-generated garbage regulations • Detection and investigation of ship-generated garbage violations • Annex V revisions	
	Department of the Interior **Fish and Wildlife Service** ESA, MMPA, DAA, NWRSA and NWRSIA, AFCA *Cleanup of shoreline/nearshore habitats. Impacts on fish/wildlife resources and habitats. Management of National Wildlife Refuge and National Monuments.* **Minerals Management Service** OCSLAA, OPA, EPAct *Address marine debris from regulated facilities and operations through regulations, compliance, enforcement, voluntary programs, and partnerships with the offshore industry.*	***Department of Interior*** **Fish and Wildlife Service** • Reports on cleanups • ESA reports and mitigation action plans • Reports on refuge status and conditions **Minerals Management Service** • Issuance/enforcement of pollution prevention and control regulations through warnings, fines, and facility/component shut-ins • Site cleanup/removal or reefing of hurricane destroyed/end-of-life platforms • Industry structural design standards/recommended practices revisions, and incorporation of revisions into notices/regulations, to improve rig station keeping and ensure platform survivability during hurricanes	
	Department of Justice *Judicial enforcement of environmental violation.*	***Department of Justice*** • Fines and other penalties for marine debris/garbage violations	
	Department of State *MARPOL Annex V and other relevant international agreements. Assistance to other countries on controlling land-based sources of pollution and derelict fishing gear.*	***Department of State*** • Annex V revisions • Assistance to other countries on controlling land-based sources of pollution	
	Marine Mammal Commission MMPA *Research and recommendations on impacts to marine mammals.*	***Marine Mammal Commission*** • Related research and management publications • Recommendations to Federal agencies on protecting/conserving marine mammals • Distribution of information on biological impacts of marine debris	

Table B.2. IMDCC Overview Acronyms

AFCA	Anadromous Fish Conservation Act
APPS	Act to Prevention Pollution from Ships
CRCA	Coral Reef Conservation Act of 2000
CWA	Clean Water Act
CZMA	Coastal Zone Management Act of 1972
DAA	Driftnet Act Amendments of 1990
EPAct	Energy Policy Act of 2005
ESA	Endangered Species Act of 1973
FCA	Flood Control Act of 1954
MDRPRA	Marine Debris Research, Prevention, and Reduction Act
MMPA	Marine Mammal Protection Act
MPPRCA	Marine Plastic Pollution Research and Control Act of 1987
MPRSA	Marine Protection, Research, and Sanctuaries Act of 1972
MSRA	Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006
NMSA	National Marine Sanctuaries Act
NWRSA	National Wildlife Refuge System Act of 1966
NWRSIA	National Wildlife Refuge System Improvement Act of 1997
OCSLAA	Outer Continental Shelf Lands Act and Amendments
OPA	Oil Pollution Act of 1990
PPA	Pollution Prevention Act of 1990
RCRA	Resource Conservation and Recovery Act
RHA	Rivers and Harbors Act of 1899
SPA	Shore Protection Act

Appendix C. Federal Authorities by Agency

Table C.1. Federal Authorities by Agency. Authorities listed are those that (1) explicitly mention marine debris in their authority; (2) address sources and items that may become marine debris (e.g., plastic, fishing gear, garbage); or (3) address entities that may be impacted by marine debris. An X in the last column indicates that the legislation has a regulatory component.

Authority	Explicitly mentions marine debris	Addresses sources and items that may become marine debris	Addresses entities that may be impacted by marine debris	Regulatory
Marine Debris Research, Prevention, and Reduction Act, 33 U.S.C. 1951 et seq.	NOAA, USCG			
Coral Reef Conservation Act of 2000, 16 U.S.C. 6406(b)(3)	NOAA			
Coastal Zone Management Act of 1972, 16 U.S.C. 1456(b)	NOAA			
Marine Plastic Pollution Research and Control Act 33 U.S.C. 1914-1915	EPA, NOAA	EPA, NOAA, USCG		
Driftnet Act Amendments of 1990, 16 U.S.C. 1826		NOAA, FWS, DOS		X
Marine Protection, Research and Sanctuaries Act, 33 U.S.C. 1401–1445 (Ocean Dumping Act) Title I & II		EPA		X
Shore Protection Act, 33 U.S.C. 2603		EPA, USCG		X
Clean Water Act, 33 U.S.C. 1346(f), 1342, 1329		EPA		X
Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1801 et seq.		NOAA		X
Resource Conservation and Recovery Act, 42 U.S.C. 6901 et seq.		EPA		
Pollution Prevention Act of 1990, 42 U.S.C. 13101–13109 et seq.		EPA		
Act to Prevent Pollution from Ships (APPS), 33 U.S.C. 1901 et seq. as amended by the Marine Plastic Pollution Research		USCG		X

Authority	Explicitly mentions marine debris	Addresses sources and items that may become marine debris	Addresses entities that may be impacted by marine debris	Regulatory
and Control Act				
Rivers and Harbors Act of 1899, 33 U.S.C. 407, 409, 414, 415		USACE		X
Amended Section 2 of the Flood Control Act of 1954, Sec. 208		USACE		
An Act authorizing the construction, repair, and preservation of certain public works on rivers and harbors for navigation, and flood control, and for other purposes. P.L. 94-587, Sec. 202		USACE		X
OCS Lands Act, 43 U.S.C. 1331 et seq. and Amendments 43 U.S.C. 1801 et seq.		MMS		X
Oil Pollution Act of 1990, 33 U.S.C. 2701 et seq. and E.O. 12777		MMS		X
Energy Policy Act of 2005, 42 U.S.C. 15801 et seq.		MMS		X
National Marine Sanctuaries Act, 16 U.S.C. 1431 et seq.		NOAA	NOAA	X
National Wildlife Refuge System Administration Act of 1966 & National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. 668dd			FWS	
Anadromous Fish Conservation Act, 16 U.S.C. 757a et seq.			FWS	
Endangered Species Act of 1973, 16 U.S.C. 1531 et seq.			NOAA, FWS	X
Marine Mammal Protection Act, 16 U.S.C. 1402			NOAA, MMC, FWS	X

Appendix D. USCG MARPOL Reception Facility Inspection/Investigation Job Aid

U.S. COAST GUARD

Homeland Security

MARPOL RECEPTION FACILITY

INSPECTION / INVESTIGATION

JOB AID

Facility Name: ***FIN:***

Activity Number: ***Date:***

MARPOL Annex: *(circle ones that apply)* **I – Oil** **II - NLS** **V - Garbage**

CG Inspector: ***CG Inspector:***

Guidance for completing the MARPOL Reception Facility Inspection / Investigation Job Aid – Coast Guard facility inspectors shall complete the job aid by verifying the contents within are in line with the requirements as per **33 CFR 158** (NVIC 03-06, Enclosure (6) & CIM 16450.29). Each inspected item contained in the checklist must be notated as one of the following:

YES – *Item meets requirements of this job aid and referenced regulations.*
NO – *Item does not meet requirements of this job aid and referenced regulations or is missing altogether.*
N/A – *Item does not apply to this facility.*

List of Acronyms

APHIS	Animal Plant Health Inspection Service
BCH	Bulk Chemical Code
COA	Certificate of Adequacy
CoC	Chain-of-Command
COTP	Captain of the Port
DOI	Declaration of Inspection
DWT	Dead Weight Tons
EPA	Environmental Protection Agency
FRP	Facility Response Plan
IBC	International Bulk Chemical Code
L/O	Lube Oil
LOA	Letter of Approval
MARPOL	International Convention for the Prevention of Pollution from Ships
MISLE	Marine Information for Safety and Law Enforcement
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MT	Metric Tons
NLS	Noxious Liquid Substances
NVIC	Navigation & Vessel Inspection Circular
OpsMan	Operations Manual
PIC	Person-in-Charge
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act

Table of Contents

MARPOL RECEPTION FACILITY

Inspection Summary

Task 1.0 Administrative Items

1.1 Schedule Inspection ____ ____ ____

1.2 Review Files

(a) Applicability of regulations ____ ____ ____

(b) History of deficiencies ____ ____ ____

(c) MISLE records ____ ____ ____

(d) Changes since last exam ____ ____ ____

1.3 Review / Verify

(a) Alternatives / Exemptions (if applicable) (33 CFR 154.107 & 108) ____ ____ ____

(b) Operations Manual (154 Subpart B) ____ ____ ____

(c) Response Plans (154 Subpart F) ____ ____ ____

1.4 Prepare Inspection Plan

(a) Generate Facility Inspection Activity in MISLE; and select appropriate MARPOL Annex (I, II, or V) under Sub-Activity type ____ ____ ____

(b) Review safe work practices for facility ____ ____ ____

(c) Prior to departing for the Facility: Conduct safety brief & have appropriate PPE ready ____ ____ ____

Task 2.0 Pre-Inspection Items - *General Requirements (all)*

2.1 Applicability (158.110 & 158.133)

(a) Oil ____ ____ ____

(b) NLS ____ ____ ____

(c) Garbage ____ ____ ____

2.2 COA's Required (158.135)

(a) Oil ____ ____ ____

(b) NLS ____ ____ ____

(c) Garbage ____ ____ ____

2.3 Application for COA (158.140)

(a) Oil Date: _____ ____ ____ ____

(b) NLS Date: _____ ____ ____ ____

(c) Garbage Date: _____ ____ ____ ____

2.4 Waivers and Alternatives (if applicable.) (158.150)

(a) Letter of application Date: _____ ____ ____ ____

(b) COTP waiver letter Date: _____ ____ ____ ____

		Y	N	NA
2.5	**Issuance & Termination of COA (158.160 & 158.170)**			
	(a) COTP (in consult with EPA) issues approved COA – which is valid for 5 years unless; **(33 USC 1905)** Date: _____	____	____	____
	(b) COTP denies the application in writing: Date: _____	____	____	____
	(c) Each COA remains valid until it's expiration date- unless is: Suspended; Revoked; or No longer applicable.	____	____	____
2.6	**Reception Facility Operation (158.163)**			
	(a) Full Compliance	____	____	____
	(b) Copy of COA must be: (1) At port or terminal	____	____	____
	(2) Available for inspection	____	____	____
	(3) Attached to Operations Manual	____	____	____
2.7	**COA Change of Information (158.165)**			
	(a) Notification in writing & within proper time frames	____	____	____
	(b) Copy of notification maintained at port or terminal until corrected COA issued	____	____	____

Task 3.0 Inspection Items - *Oily Mixtures & Residues (Annex I)*

3.1	**General (158.200)**			
	(a) Holds all required local, state, and Federal permits. These may include one or more of the following:	____	____	____
	1) RCRA Subtitle C Hazardous Waste Permit – 40 CFR 270 (issued by EPA or authorized state agency)	____	____	____
	2) State Solid Waste Management Permit (requirements and format vary)	____	____	____
	3) NPDES permit for storm water discharge/runoff (issued by EPA or authorized state agency)	____	____	____
	4) Local siting permit (requirements and format vary)	____	____	____
	5) Federal Hazmat Transportation permit – 49 CFR 105-180 (permit required only for exceptions to regulations)	____	____	____
	(b) Notice received within 24 hours	____	____	____
	(c) Complete transfer of oily ballast water in less than 10 hours	____	____	____
	(d) Complete transfer of other oily mixtures in less than 4 hours	____	____	____
	(e) Exception for ship repair yards before the ship departs	____	____	____
	Note: *Review COA Form A (Oily Mixture)*			
3.2	**Crude Oil (158.210)**			
	Capacities:			
	(a) Sludge from fuel and L/O processing: _____ (10 metric tons)	____	____	____

	Y	N	NA
(b) Oily bilge water: _____ (10 metric tons (MT) or 2 MT multiplied by the daily vessel average, whichever quantity is greater)	____	____	____
(c) Oily ballast: _____ (30% DWT)	____	____	____

3.3 Oil other than Crude or Bunkers (> 1000 MT) (158.220)

Capacities:

Sludge from fuel & L/O processing: _____(10 metric tons)	____	____	____
(a) Oily bilge water: _____ (10 metric tons (MT) or 2 MT multiplied by the daily vessel average, whichever quantity is greater)	____	____	____
(b) Oily ballast: _____ (30% DWT)	____	____	____
(c) Cargo residue: _____ (.2% of total cargo)	____	____	____

3.4 Barge Terminals and Others (158.230)

Capacities:

(a) Sludge capacities: _____ (10 metric tons)	____	____	____
(b) Oily bilge water capacities: _____ (10 metric tons)	____	____	____

3.5 Ship Repair Yards (158.240)

Capacities:

(a) Ballast water from Bunker & Tanks / Tank washings: _____ (8% of bunker capacity)	____	____	____
(b) Oily solids: _____ (.1% DWT)	____	____	____
(c) Oily ballast: _____(no less than1500 metric tons or 4.5% DWT)	____	____	____
(d) Solid oil cargo residue: _____	____	____	____
(e) Liquid cargo residue: Crude - not less than 1% Black - not less than .5% White - not less than .2%	____	____	____

Task 4.0 Inspection Items - *Noxious Liquid Substances (Annex II)*

4.1 General (158.310)

(a) Holds all required local, state and Federal permits. These may include one or more of the following:	____	____	____
1) RCRA Subtitle C Hazardous Waste permit – 40 CFR 270 (issued by EPA or authorized state agency)	____	____	____
2) State Solid Waste Management Permit (requirements and format vary)	____	____	____
3) NPDES permit for storm water discharge/runoff (issued by EPA or authorized state agency)	____	____	____
4) Local siting permit (requirements and format vary)	____	____	____

	Y	N	NA
5) Federal Hazmat Transportation permit – 49 CFR 105-180 (permit required only for exceptions to regulations)	____	____	____
(b) Notice received within 24 hours	____	____	____
(c) Complete transfer of NLS residue within 10 hours	____	____	____
(d) Exception for ship repair yards before the ship departs			
Note: *Review COA Form B (NLS)*	____	____	____
4.2 Capacity & Exceptions (158.320)			
**** NOTE:** *Review* Enclosure (6) to NVIC 03-06, "Guidance on MARPOL Annex II Reception Facilities"			
(a) Facilities accepting cargo should use the following to determine adequate capacity:			
(i) Receiving category X cargoes:			
(1) Category X solidifying / high-viscosity - 75 cubic meters (19,810 gallons) _____	____	____	____
(2) Other category X cargoes - 50 cubic meters (13,210 gallons) _____	____	____	____
(ii) Receiving solidifying / high-viscosity category Y cargoes - 50 cubic meters (13,210 gallons) _____	____	____	____
(d) Ship repair yard capacity: _____	____	____	____
4.3 Equipment at Ports and Terminals (158.330)			
(a) Capable of receiving ***only*** category Y or Z cargoes during stripping operations at an average flow rate of - 6 cubic meters (1584 gallons) per hour without the backpressure at the ship's manifold exceeding 101.6 kPa (14.7 pounds per square inch gauge) pressure; and	____	____	____
(b) Instruction manual that lists the equipment and procedures for meeting part 158.330(a). The manual may be made part of the OpsMan that is required under 33 CFR 154.300.	____	____	____
Task 5.0 Inspection Items - *Garbage (Annex V)*			
5.1 General (158.410)			
(a) Receive within 24 hours of notice (APHIS regulated garbage) -- unless it only receives ships that:	____	____	____
1) Operate exclusively within navigable waters of U.S.			
2) Operate exclusively between ports/terminals in the continental U.S.			
3) Operate exclusively between continental U.S. ports/terminals and Canadian ports/terminals			
(b) Receive medical waste or hazardous waste, or provide list of alternative transporters.	____	____	____
(c) Does not interfere with terminal operations.	____	____	____
(d) Conveniently located.	____	____	____
(e) Garbage cannot enter water.	____	____	____

	Y	N	NA
(f) Holds all required local, state, and Federal permits. These may include one or more of the following:			
1) RCRA Subtitle C Hazardous Waste permit – 40 CFR 270 (issued by EPA or authorized state agency)	____	____	____
2) APHIS regulated garbage per 33 CFR 158.410(a)(1)			
-- Approval letter from USDA Administrator or delegated authority (APHIS Executive Director)	____	____	____
-- Compliance Agreement			
3) State Solid Waste Management Permit (requirements and format vary)	____	____	____
4) NPDES permit for storm water discharge/runoff (issued by EPA or authorized state agency)	____	____	____
5) Local siting permit (requirements and format vary)	____	____	____
6) Federal Hazmat Transportation permit – 49 CFR 105-180 (permit required only for exceptions to regulations)	____	____	____

* ***Exception:*** A reception facility for a ship repair yard does not have to meet the requirement of 158.410(a)(1), if it has the capability of handling the transfer of garbage from a ship before it departs the yard.

Note: *Review COA Form C (Garbage)*

5.2 Capacity and Exceptions (158.420)

Reception facilities that are capable of receiving all garbage from a ship that desires to discharge, e***xcept***:			
(a) Large quantities of spoiled or damaged cargoes not usually discharged by a ship; or	____	____	____
(b) Garbage from ships not having commercial transactions with that port or terminal.	____	____	____

Task 6.0 Complete Administrative Items

6.1 Verify the following:

(a) COA for any COA Change of Information	____	____	____
(b) MOU / MOA / Agency Agreements / Contracts	____	____	____
(c) COTP Letter or Alternative Letter – Date: _____	____	____	____
(d) Operations Manual	____	____	____
(e) PIC Contact information is current and correct	____	____	____
(f) Facility Waste Management Plan available	____	____	____
(g) Waste Reception Facility Signage (if required) is in place	____	____	____

6.2 Examine the following:

(a) All required local / state / federal waste disposal permits	____	____	____
(b) Copies of signed DOI's, waste manifests, transfer logs	____	____	____
(c) Verify a tracking system is in place and that capacity & time criteria are being met	____	____	____
(d) The facility's waste stream logs (for wastes from vessels)	____	____	____

	Y	N	NA
6.3 Verify the following:			
(a) Maintenance, test records and permits are current/in place for on-site disposal equipment	____	____	____
(b) Facility personnel training records are up to date (IAW local, state, and federal regulations on worker safety & health in regard to waste handling operations at facility)	____	____	____
(c) Waste disposal subcontractor meets all permitting requirements with no exceptions	____	____	____

Task 7.0 Investigation / Enforcement Items *(if warranted)*

7.1 Administrative Items:			
Open a MISLE Activity associated with the Facility MARPOL Investigation / Enforcement actions taken.	____	____	____
7.2 COTP to conduct investigation when:			
(a) The facility failed to provide adequate reception of MARPOL wastes for any reason.	____	____	____
(b) The results of a Facility Inspection indicate discrepancies in the following:			
1) Facility waste stream logs (for waste streams from vessels)	____	____	____
2) Uniform Hazardous Waste Manifests	____	____	____
3) DOI's required to be completed for transfers of liquid waste	____	____	____
(c) Inadequacies at reception facilities are reported by Masters, Owners or Operators of vessels IAW 33 CFR 158.167 such as:			
1) Time delays (not providing reception facilities w/in 24 hrs of a vessel's request)	____	____	____
2) Arrangements (not allowing simultaneous transfer of cargo while offloading MARPOL regulated wastes)	____	____	____
3) High costs (unreasonable rates based on local market conditions)	____	____	____

****** A report of inadequacy is received by the IMO that is made by a foreign flag vessel either directly, from the Flag State Administration, or through an agent or industry association.

(Note: HQ monitors IMO Reports of Inadequacy at reception facilities and will pass information to COTP / Investigators through the CoC).

This list is not all inclusive, and other discrepancies may result in cause to conduct an investigation

	Y	N	NA

7.3 Conduct of MARPOL Investigation:

(a) Investigators should attempt to determine the following information regarding the Port/Terminal and the vessel:

Note: *Investigators should be discreet so as not to alert the port or terminal to the name of party making the allegation prior to making any determination regarding the report of inadequacy.*

1) Name and Flag of Vessel making the report ____ ____ ____
2) Date of occurrence ____ ____ ____
3) Name and Location of the Port ____ ____ ____
4) COTP Contact Info ____ ____ ____
5) Time of Arrival of Vessel at the Port/Pier/Terminal ____ ____ ____
6) Time that MARPOL Services were requested ____ ____ ____
7) Name of the Terminal/Pier Operator and POC information ____ ____ ____
8) Name of reception facility operator in the case of a sub-contractor for mobile waste reception services provided by a third party such as a truck or barge ____ ____ ____

(b) Investigators should review and/or obtain copies, if required, of the following types of documentary evidence:

1) OPS Plan (as submitted with COA Application) ____ ____ ____
2) Copy of Arrival Notice/Request for MARPOL services showing date/time of request for services ____ ____ ____
3) Copy of Receipt for MARPOL services showing date/time of services and amount/type of discharge ____ ____ ____
4) Copy of DOI for transfer of liquid wastes showing date/time of transfer (including type, start-stop times, and volume) ____ ____ ____
5) Copy of Hazmat Manifest, if required and as generated by facility or sub-contractor accepting MARPOL wastes for transport and /or disposal ____ ____ ____
6) Review of required local, state and Federal permits:

--RCRA permitting and record keeping (Generally found under; 40 CFR 260-262, 264-265, 270 & 273) is administered by EPA regional and State offices. COA holders at US ports are required to hold permits as generators of wastes collected from ships and stored, transported or disposed of. ____ ____ ____

--Investigators should examine permits as applicable ____ ____ ____

--RCRA permit holders are required to generate a Uniform Waste Manifest indicating the source, type, amount and disposition along with other information, of such wastes that are stored, transferred, and or disposed of. Relevant copies of such manifest should be made available to investigators. Two types of Uniform Waste Manifests are for Hazardous Waste and for Non-Hazardous Waste and

		Y	N	NA
	should cover all shipboard generated wastes discharged to reception facilities.	____	____	____
	--Sub-contractors who hold a COA and service multiple port facilities must also comply with all permit requirements.	____	____	____
	--Mobile facilities, barges, trucking waste haulers must also meet all requirements.	____	____	____
7.4	**Enforcement Process:** ***(if warranted)***			
	(a) Letter of Warning	____	____	____
	(b) Notice of Violation (CIM 5582.1 series)	____	____	____
	(c) Suspension of COA (maybe considered for egregious offenses) **(158.170)**	____	____	____
	(d) Document results, include corrective actions taken, and forward via memo thru CoC, to Commandant (CG-5442)	____	____	____
Task 8.0	**Complete Inspection / Investigation**			
8.1	**Complete inspection results prior to leaving the facility to include:**			
	(a) Inspection report	____	____	____
	(b) Review the report with facility representatives	____	____	____
	(c) Explain inspection results/discrepancies	____	____	____
	(d) Discuss possible enforcement options (if necessary)	____	____	____
	(e) Obtain signatures of representative	____	____	____
Task 9.0	**Complete Post-Inspection / Investigation Items**			
9.1	**Complete all required MISLE entries (per unit policy):**			
	(a) Ensure validity of data entered into MISLE	____	____	____
	(b) Ensure appropriate MARPOL Annex is selected as well	____	____	____
9.2	**Initiate enforcement actions (if necessary).**	____	____	____
9.3	**Complete the physical Information survey.**	____	____	____
9.4	**Schedule re-inspection (if necessary).**	____	____	____
9.5	**Update facility file.**	____	____	____

Inspection Summary

Discrepancy Description	*Cite*	*Corrective Action*	*Due Date*

Comments:

USCG Inspector

(Printed name & title)

(Signature)

(USCG Unit)

Facility Officer

(Printed name & title)

(Signature)

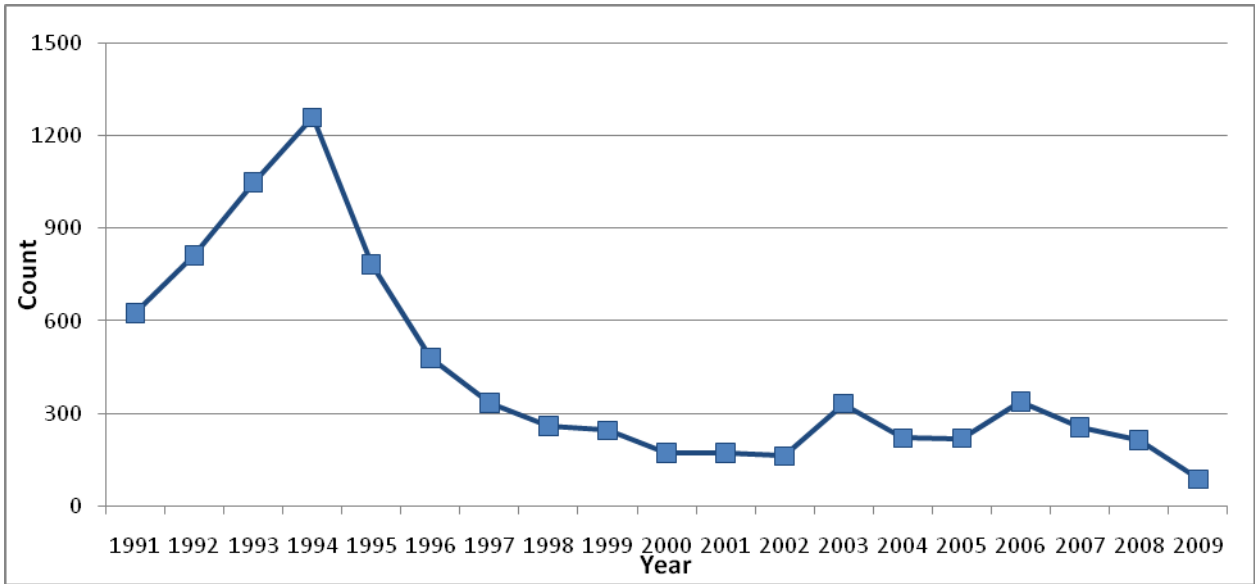
(Date signed)

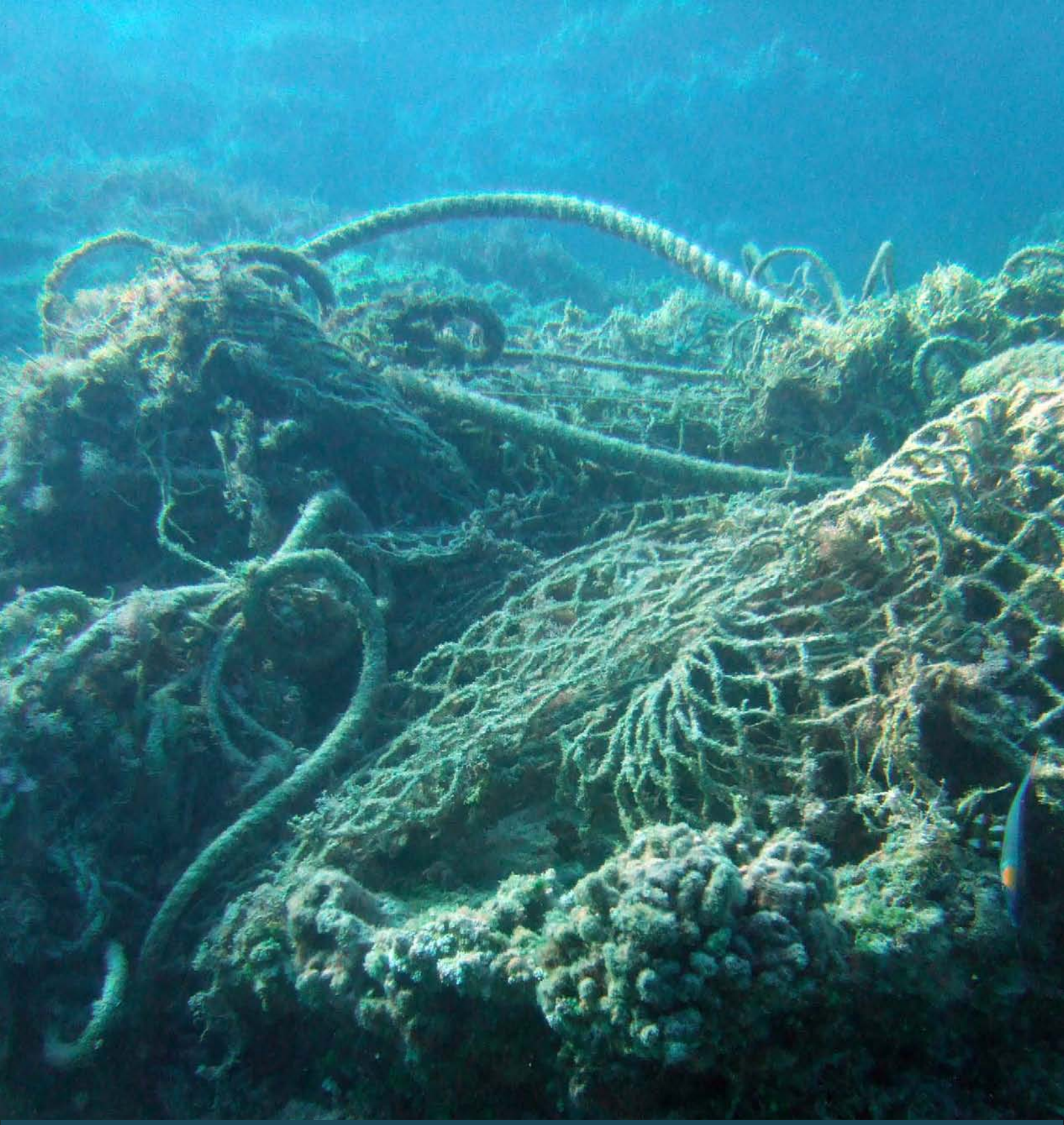
Appendix E. USCG MARPOL Annex V Violation Cases

Table E.1. MARPOL Annex V (33 CFR 151.51 – 151.75): Violation Cases Pursued by the U.S. Coast Guard by Year (all vessels)

Cite	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total
33CFR151.53 - Special Areas											1									1
33CFR151.55 - Recordkeeping	3	2	1	49	17	2	5	4	1		1				2	1	1	1	1	91
33CFR151.57 - Management Plans	269	322	396	407	220	160	99	72	64	51	67	55	90	83	65	112	66	56	24	2678
33CFR151.59 - Placards	302	318	410	632	440	245	198	162	156	98	96	100	233	130	146	219	178	150	59	4272
33CFR151.63 - Shipboard Control	16	27	35	35	28	4	4	6	2	1	2	3	1			1				165
33CFR151.63(a) - Person in Charge												2	3	1	4	1				11
33CFR151.65 - Reporting		1	1																	2
33CFR151.66 - Operating Regs	11	18	28	16	19	7	3	1	4	10	2				1	2	5	4	1	132
33CFR151.67 - Discharge of Plastic	25	115	173	118	58	60	24	10	18	11	3	2	4	5	1	1	3	1	2	634
33CFR151.69 - Outside Spcl Areas		8	6	1	1	1	1	2		1						2				23
33CFR151.71 - Within Spcl Areas								1						1			1	1		4
33CFR151.73 - Disch from Platforms					1															1
33CFR151.75 - Grinders				1																1
Total	626	811	1050	1259	784	479	334	258	245	172	172	162	331	220	219	339	254	213	87	8015

Table E.2. MARPOL Annex V Violation Citations.





Gary Locke
Secretary, U.S. of Commerce

Jane Lubchenco, PhD
Under Secretary for Oceans and Atmosphere and NOAA Administrator

David Kennedy
Acting Assistant Administrator, Ocean Services and Coastal Zone Management
NOAA Ocean Service