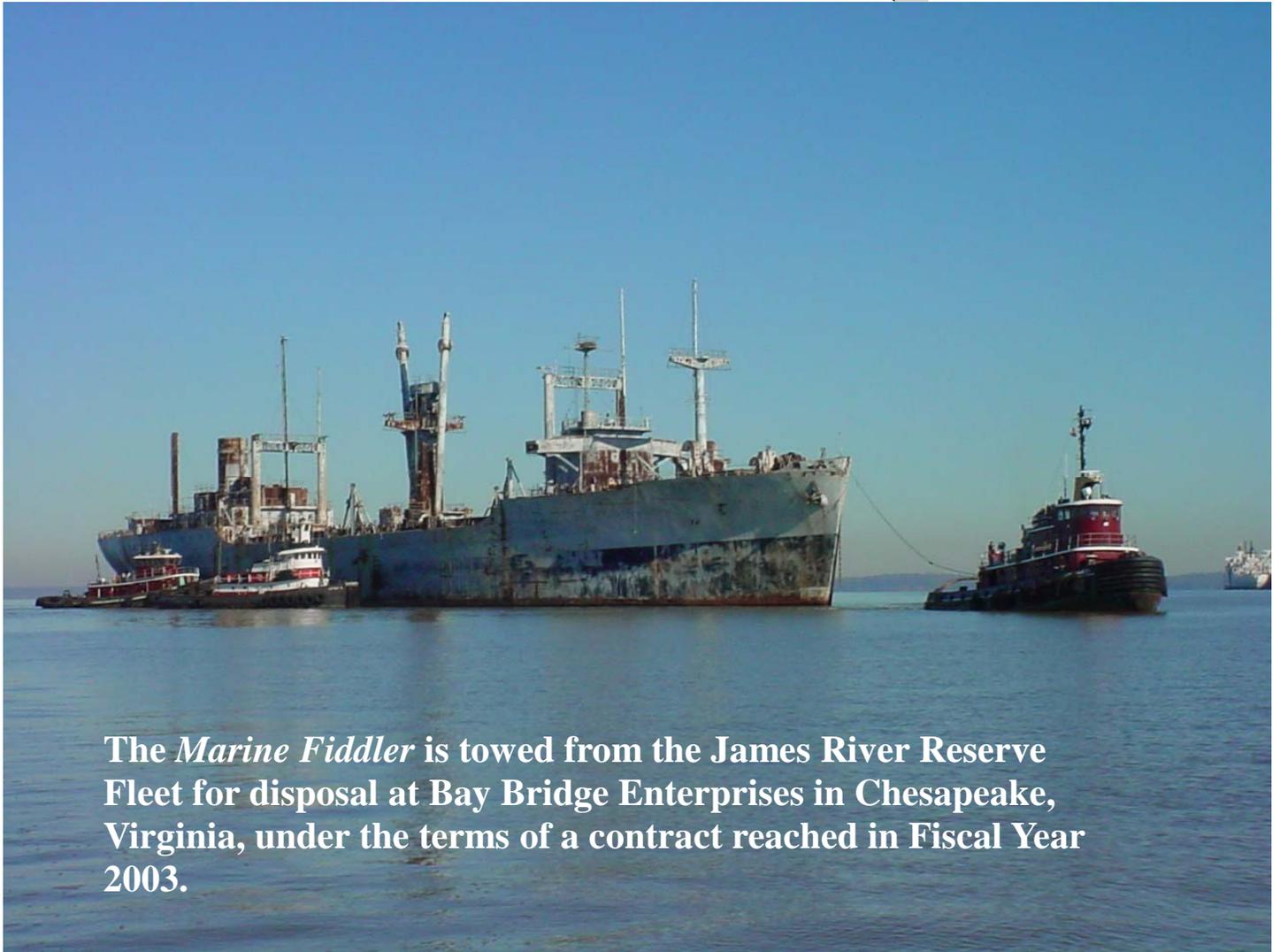


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# Environmental Stewardship



The *Marine Fiddler* is towed from the James River Reserve Fleet for disposal at Bay Bridge Enterprises in Chesapeake, Virginia, under the terms of a contract reached in Fiscal Year 2003.

*Department of Transportation Strategic Objective: Environmental Stewardship:  
Promote transportation solutions that enhance communities and protect the natural and  
built environment.*

*Maritime Administration Strategic Objective: Environment  
Promote maritime and intermodal transportation solutions that enhance environmental  
stewardship.*

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## SHIP DISPOSAL

The Maritime Administration (MARAD) serves as the U.S. government's disposal agent for obsolete merchant-type vessels of 1,500 gross tons or more, as well as for non-combatant ships that have served in military operations. In recent years, the options for domestic scrapping and disposal have been limited. Disposal by overseas scrapping was halted in 1994 due to the presence of hazardous substances such as asbestos and polychlorinated biphenyls (PCBs) on the ships. As a result, the backlog of ships in the National Defense Reserve Fleet (NDRF) awaiting disposal had increased to over 130 vessels by the beginning of Fiscal Year (FY) 2003.

In FY 2003, MARAD's Ship Disposal Program received a direct appropriation for the first time. A FY 2003 performance measure and goal for the Ship Disposal Program was the removal of four (4) obsolete, non-retention vessels from MARAD's NDRF sites. The actual number of vessels removed from the NDRF in 2003 was two; however, contracts were awarded for the disposal of 26 vessels in FY 2003. Most of the vessel removals resulting from the FY 2003 contract awards will take place in FY 2004.

A contract for 13 of the 26 ships awarded involved the export of ships for recycling in the United Kingdom (UK). This contract was challenged in a United States District Court by two environmental groups -- the Basel Action Network (BAN) and the Sierra Club. The challenge resulted in a temporary restraining order which allows the export of only four of the 13 ships, pending a full hearing scheduled to take place in FY 2004. This challenge has delayed the removal of nine high priority ships from the fleet site, and the ultimate ruling may have negative impact on MARAD's Ship Disposal

Program -- the ability to expedite the removal of aging high priority ships from fleet anchorages which are considered environmentally sensitive.

Despite the legal challenges and domestic industry opposition to the export of obsolete ships, an aggressive program pursuing all feasible disposal options continued in 2003. The 26 vessels awarded for disposal in 2003 are the most awarded since 1993, which reverses a trend of growth in the number of obsolete ships in MARAD's custody. MARAD's actions in 2003 have laid the foundation for cost-effective accelerated ship disposal through interagency initiatives. For the first time since 1994, the industry has responded to requests for innovative proposals and the export of obsolete ships.

Excluding the 26 ships involved in the FY 2003 contract awards, there is an existing backlog of 105 obsolete vessels awaiting disposal in MARAD's three fleet sites, with approximately 45 additional vessels projected to be added to MARAD's fleets over the next three years.

Also, in FY 2003, MARAD continued to pursue several initiatives to focus on cost-effective and environmentally sensitive disposal alternatives to domestic scrapping for obsolete vessels in the NDRF. Two initiatives involve multi-agency workgroups exploring the establishment of responsible measures/procedures that hopefully will lead to the export of ships for foreign recycling, and the development of national best-management practices for preparing ships for use as artificial reefs.

MARAD's Vessel Artificial Reefing Initiative, established in February 2002, is working with the Environmental Protection Agency and numerous other stakeholder agencies to develop best-management

practices, which are expected to be completed in FY 2004. MARAD is also working with Basel Convention countries, the International Maritime Organization, and the International Labor Organization to develop a worldwide program for environmentally responsible and sustainable ship disposal.

**FEATURE: Surviving Hurricane Isabel**

The environmental challenges involved in the custody of obsolete ships can be enormous. Ships awaiting disposal are exposed to the forces of nature, and are thus vulnerable to damage or deterioration, which may in turn result in a spill of fuel oil or other environmentally threatening substance.

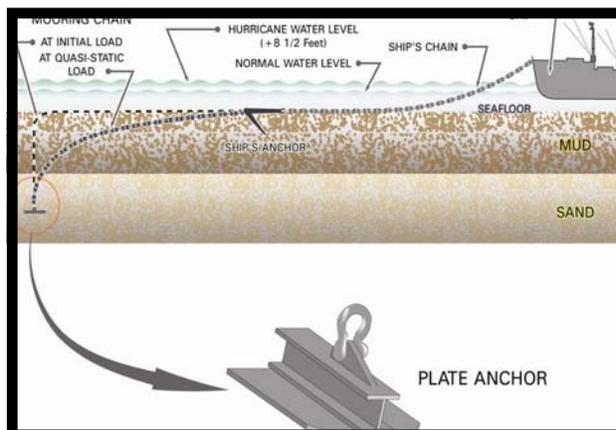
Few forces of nature are more powerful than a hurricane, and hurricanes and tropical storms pose an enormous threat to vulnerable ships. In September, 1999, Tropical Storm Floyd caused two thirds of the roughly 100 vessels moored at MARAD's James River Reserve Fleet (JRRF) to break their moorings and drag anchors. More than 65 MARAD vessels were scattered across the James River anchorage. (See Figure 1)

**Figure 1**



*James River Reserve Fleet after Hurricane Floyd, 1999.*

**Figure 2**



**Figure 3**



*James River Reserve Fleet after Hurricane Isabel, 2003.*

Although no oil leaked and no vessels were sunk in the main shipping channel as a result of Tropical Storm Floyd, MARAD saw the havoc Floyd wrought as a clear warning that environmental protective measures had to be instituted.

Since 1999, MARAD has worked with the U.S. Coast Guard and the Commonwealth of Virginia to put a detailed emergency response plan in place, and to improve the anchor system holding the ships in place. The challenge to any anchor system is that the bottom of the James River is composed of primarily loose silt and mud. Traditional ships' anchors, such as those of ships at the

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JRRF, were designed primarily for anchoring ships in sand or gravel which generate a higher holding power. As a result of research, MARAD entered into a multi-year interagency support agreement with the Naval Facilities and Engineering Command (NAVFAC) to design and install a high holding power "plate anchor" system at the JRRF to better withstand future hurricanes. (See Figures 1-3)

The new plate anchor system underwent a serious test on September 18, 2003, when Hurricane Isabel roared up the James River. Winds were estimated in excess of 85 MPH with an accompanying storm surge of more than 6 feet. This powerful storm caused widespread damage and flooding across the entire Hampton Roads area. A group of JRRF employees remained on station during the storm; in fact, several spent the night on a tugboat on the river. They provided instant assessments to the Region Office, which passed them on to MARAD headquarters.

The plate anchor system held firm. While there were several breaks of mooring wires, and several ships shifted positions within their nests, there was not the widespread disruption to the anchorage seen during Tropical Storm Floyd, which was a less powerful storm. There was no oil spilled, nor was there blockage of the shipping channel as a result of Hurricane Isabel.

There was significant flooding of the shore-side facilities, damage to the main pier and to the electrical power supply system, but the possible dangers to navigation and the environment were successfully avoided.

### **Ready Reserve Force (RRF) Environmental Program**

Although the "public vessel status" of the

Ready Reserve Force (RRF) exempts the ships from compliance with the Oil Pollution Act of 1990, MARAD takes its environmental stewardship role seriously, and maintains a United States Coast Guard approved Vessel Response Plan for all RRF tankers and a Shipboard Oil Pollution Emergency Plan for all RRF non-tankers. In addition, MARAD also maintains an Emergency Response Plan and Tactical Response Plan at the three National Defense Reserve Fleet (NDRF) sites.

MARAD pursues a very aggressive oil spill prevention and containment policy. This policy requires oil spill containment booms at all outport sites to be in place around each individual RRF vessel or nest of vessels whenever physically possible or otherwise positioned adjacent to the vessel and readily deployable if an oil spill occurs. MARAD has oil spill kits aboard all its vessels, although such kits are required only on tankers.

MARAD carries on a very proactive marine oil spill training program that includes a 24 hour "Initial Responder" training course that is mandatory for all staff appointed Qualified Individuals and the senior licensed ROS RRF crew members (Chief Mate, Chief Engineer and 1st Assistant Engineer). Soon we will provide the follow-up annual 8 hour refresher training to those who have been certified in the 24 hour training curriculum so that they continue to maintain their certification. The training is in complete compliance with OSHA statutory certification requirements.

### **Environment and Marine Transportation**

As maritime trade expands and increases the strain on the land transportation system, so will the potential impacts that maritime transportation has on the environment.

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demonstration in the critical areas of environmentally efficient marine propulsion systems. This important work has been carried on by significant funding and in-kind contributions from at least three dozen other partners from the federal, state and local governments, private sector and academia. In addition, MARAD is represented on the inter-agency DOT team exploring the potential of hydrogen as an alternative, clean fuel. Through these activities, MARAD is the recognized leader in the investigation, demonstration and promotion of energy efficient, propulsion systems.

*Dredging.* MARAD addresses dredging and dredged-material-management issues related to impacts to national ports and harbors through active participation on the National Dredging Team (NDT) and Regional Dredging Teams. The new Action Agenda for the NDT focuses on four main areas: beneficial uses of dredged material, sediment management, emerging issues, and strengthening regional teams. Federal agencies participating on the NDT are the Army Corps of Engineers, the Environmental Protection Agency, the National Oceanic and Atmospheric Administration, MARAD, the Fish and Wildlife Service, and the Coast Guard.

*Environmental Stewardship.* MARAD continues to protect the environment by ensuring that its facilities, ships, and programs are in compliance with environmental laws, regulations, orders, and treaties. This is accomplished by conducting internal environmental compliance audits of facilities and ships that enable the Agency to take significant steps toward improving facility and vessel environmental compliance, while enhancing environmental stewardship in our communities. Since 1992, MARAD has conducted two separate rounds of multi-media environmental compliance audits.

Deficiencies identified in the audits were budgeted and corrected. MARAD continued conducting of environmental audits with a third round of that began in FY 1999 and was completed in FY 2002. There were no deficiencies found at any of the MARAD facilities.

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As a result of these reviews, MARAD has dramatically increased facility compliance and its environmental stewardship initiatives. In all fleet facilities, the amounts of toxic chemicals were below EPA reporting thresholds. MARAD successfully completed several key environmental projects including aboveground and underground storage tank removal.

The MARAD-operated USMMA has dramatically increased its use of environmentally friendly landscaping in an effort to reduce runoff into the Long Island Sound. MARAD is actively reducing the use of selected hazardous substances at all facilities each year, so that by December 31, 2006, there will be an overall reduction of 50 percent.

This year, MARAD launched the pilot phase of a multi-year program to develop and integrate a robust environmental management system into its programs and activities. The pilot phase of the project will focus on MARAD fleet sites and EMS training for appropriate agency personnel. At the conclusion

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of the pilot phase of the project, MARAD will expand the application of EMS through other agency programs.