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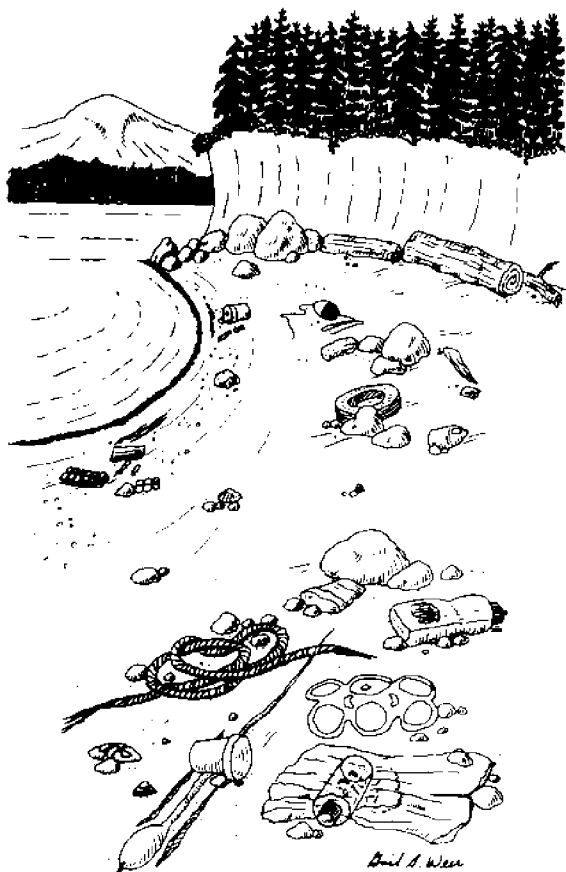


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Marine Debris: How Recreational Boaters Can Help Solve a Serious Problem

MARINE DEBRIS SERIES



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Marine Advisory Services
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Recreational boaters and others who use and enjoy our marine waters are faced today with a very serious problem—waste disposal. Most people are aware of waste disposal problems on land, but not everyone knows that there is also a growing crisis at sea. More than 14 billion pounds of crew wastes, gear, and cargo are lost or dumped into the oceans every year from vessels involved in recreational boating, commercial fishing, merchant shipping, passenger service, and other marine-related activities.

Because the problem has reached such enormous proportions, laws have been enacted to prohibit the disposal of plastics, boat garbage, oil, hazardous materials, and sewage into marine waters. This publication focuses on the issue of wastes in the marine environment—where they come from, what damage they cause, and how the problem can be reduced.

Plastics in the Marine Environment

Many plastic items are ideal for use on boats. They are lightweight, strong, and durable. Virtually every boat has lines, rope, straps, sheeting, food packaging, kitchenware, fishing gear, and other items made from some kind of plastic. Yet plastic is one of the major offenders in the problem of marine debris.

Threat to Marine Life

Plastic debris causes problems for marine life in several ways. First, some animals such as fish, whales, porpoises, seabirds, and turtles may mistake plastics for food. If items like plastic bags, pieces of styrofoam, plastic bottle caps, and cigarette lighters are swallowed, they can cause death through blocked passages, ulcerations, toxic accumulation, and starvation.

A second major problem is entanglement. Discarded or lost fishing gear, six pack rings, and

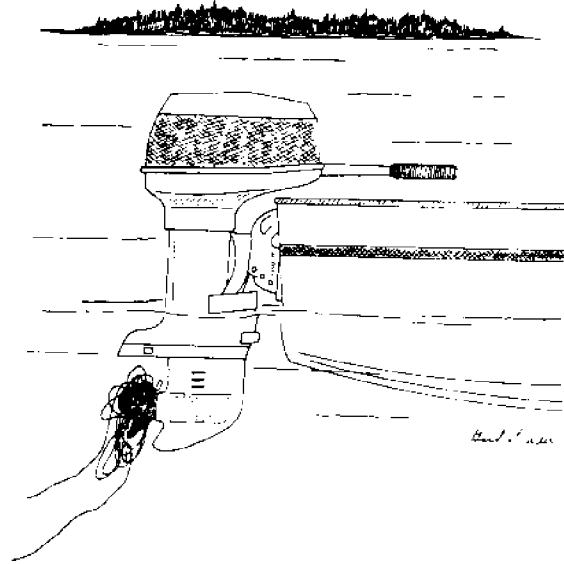


strapping bands have all been found to entangle fish, seabirds, marine mammals, and crabs—usually resulting in starvation or drowning.

Lost gear can also cause problems. An abandoned crab pot, for example, can continue to catch crabs until its degradable panel rots (a process that takes about 6 months). Fishing line can ball up and become a deadly snare for fish, crabs, and seabirds, both at sea and on shore. When living marine resources are killed needlessly by lost or abandoned gear, we are all the losers.

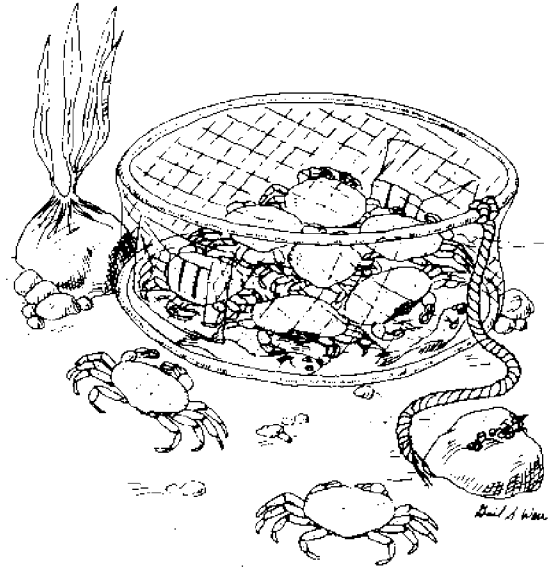
Safety Risks for Vessels and Crew

An encounter with debris at sea can be dangerous for people. Numerous boats have become disabled when floating plastic items such as line and net scraps have fouled propellers and clogged water intake valves. If such incidents occur where no help is available, the results could be disastrous.



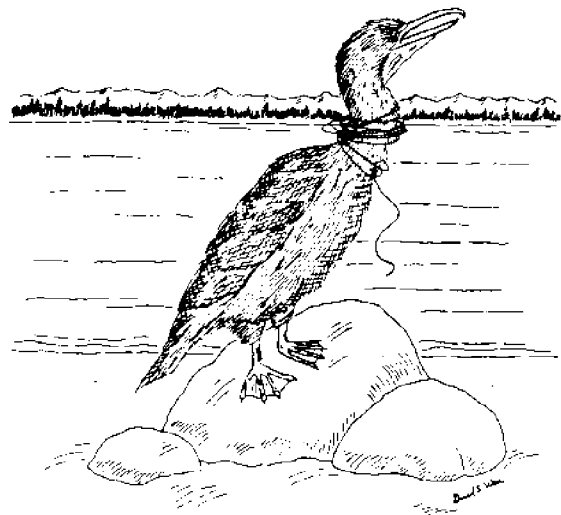
Economic Losses

Marine debris can cost boaters money in the form of repair bills for propeller damage and burned-out pumps, as well as charges for divers and dry-docking. A survey at a recent Fish Expo indicated that more than half of the commercial fishermen questioned had suffered damage from marine debris, with the average cost of repair exceeding \$1,900.



Aesthetic Impacts

There is nothing attractive about a beach or a bay littered with plastic bottles, scraps of net, rusty cans, food remnants, styrofoam cups, and other bits of debris. Yet such sights are becoming commonplace. Recent surveys of beaches in Washington, Oregon, Texas, and even remote areas of Alaska and the Antarctic have shown that plastics and other kinds of debris are washing up on shore in great quantities. Because plastic is long-lasting, such trash is destined to be an eyesore for years. Some states have initiated beach clean-up projects to attack the problem. In Washington, for example, the Adopt-A-Beach Program is organizing clean-ups on a county by county basis. (For more information, call (206) 296-6544 in Seattle.)





Efforts to Reduce the Problem

On December 31, 1988, the Marine Plastic Pollution Research and Control Act (MPPRCA) went into effect to help reduce the problems caused by marine plastics. It prohibits the dumping of plastic trash anywhere in the ocean and the disposal of unprocessed garbage within 12 miles of shore. The major provisions of this act are summarized below.

Table 1. Major provisions of MPPRCA relating to the Pacific Coast and Alaska

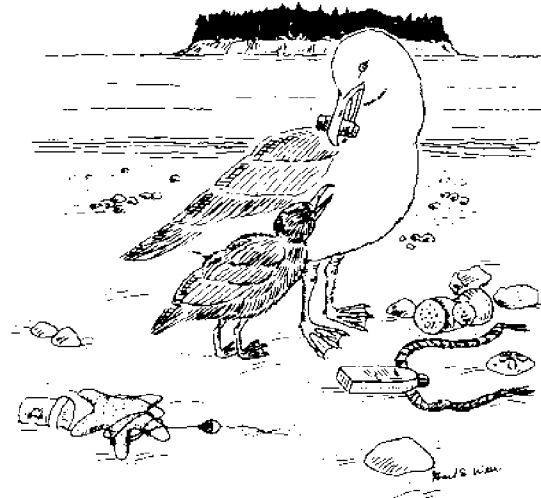
<i>Garbage Type</i>	<i>Disposal Method</i>
Plastics—includes synthetic ropes, fishing nets, and plastic bags	Water disposal prohibited
Floating strapping, lining and packing material	Water disposal prohibited within 25 miles of nearest land
Paper, rags, glass, metal, bottles, crockery, and similar refuse	Water disposal prohibited less than 12 miles from nearest land.
Paper, rags, glass, etc. ground or pulverized to less than 25 mm	Water disposal prohibited less than 3 miles from nearest land
Food waste not ground	Water disposal prohibited less than 12 miles from nearest land
Food waste ground to less than 25 mm	Water disposal prohibited less than 3 miles from nearest land
Mixed refuse	Disposal reflects the requirements of the most stringent components of the mix

In addition to adhering to the provisions of this new law, you can help by following the suggestions listed at the end of this publication under the section What You Can Do to Help.

Other Wastes

Plastics, of course, do not create the only problem. Other wastes, if not disposed of properly, can harm the natural resources that you as a boater

want to enjoy. Because the following information is general, you should check with local officials in your home port for current disposal information.



Boat Garbage

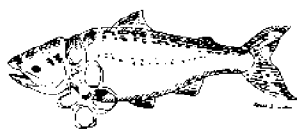
Non-plastic boat garbage, such as food wastes and paper, should be disposed of properly on land. The table at the left explains what materials may be legally disposed of in marine waters.

Waste Oil

Waste engine oil should be returned to an oil recycling center. Many harbors and gas stations offer this service. In Washington State, contact the Oil Recycling Hotline at 1-800-RECYCLE for the location of the facility nearest you. Never mix anything with used engine oil because the resulting compound is considered a hazardous waste and it is extremely expensive to dispose of properly and legally.

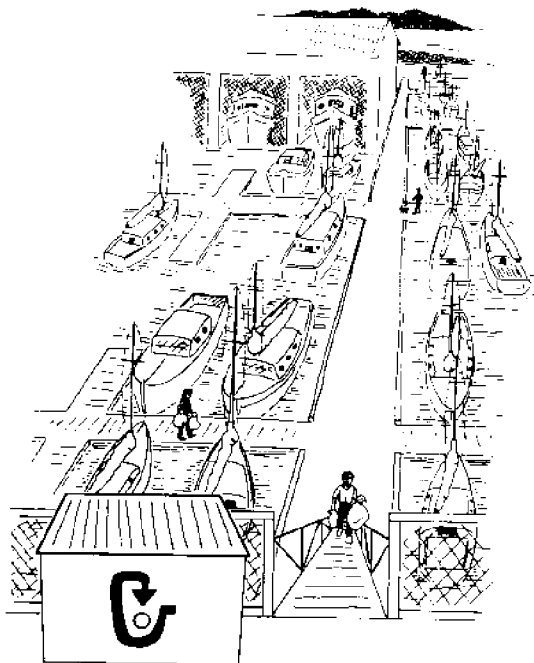
Hazardous Materials

Many materials used on board recreational boats are considered hazardous materials and need to be disposed of properly. Such materials include degreasers, acids, paint, paint thinners, fuel, and anti-freeze. Never dump these materials overboard or place them in a dumpster. For information about their proper disposal, contact the Hazard Hotline at 1-800-633-7585.



Sewage

Boats should have working marine sanitation devices. You should locate the pump-out facility available at your home port. In addition, you may contact the Boater Environmental Education Program in Olympia at (206) 586-8592 for a free map of pump-out facilities in the Puget Sound area.



What You Can Do to Help

If you are interested in sports fishing, you should be concerned about the fish, crabs, and other marine life being killed by marine debris. If you are interested in marine mammals and seabird populations, you should be concerned about the effects of marine debris on these animals. If you are worried about safety, you should be concerned about vessel encounters with debris. If you are interested in preserving pristine views in the boating areas you visit, you should be concerned about the visual impact that marine debris has. In short, every boater has a stake in the clean-up of marine debris. Here are some suggestions to help you be part of the solution:

- **Stow your trash on board in a secure place** where it won't accidentally blow or wash overboard. Bring it back to port for safe disposal.
- **Make sure that all pieces of fishing line and other gear make it back to port** with you.
- **Retrieve marine debris you see**, if practical, and bring it back to port.
- **Use bulk containers** to reduce the amount of plastic wrapping on food items.
- **Consider installation of a trash compactor** if your vessel has the space.
- **Encourage the use of paper and glass utensils** instead of styrofoam ones.
- **Get involved and encourage other people** to help solve the marine debris problem.

About the Authors:

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Washington Sea Grant has also produced several other brochures in its Marine Debris Series, as well as a poster depicting an octopus working to help clean up plastic debris in the ocean. For more information on obtaining copies of these brochures and/or the poster, contact one of the addresses below.

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