

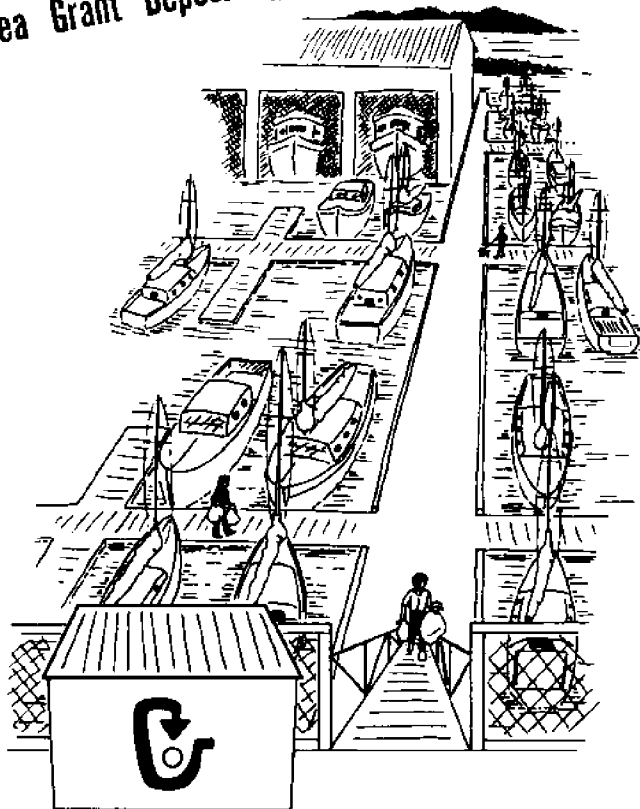
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Getting a Grip on Marine Debris *at Squalicum Harbor*

MARINE DEBRIS SERIES

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Patti Mullin and Jim Humphreys

Bellingham's Squalicum Harbor, with its year-round fleet of more than sixteen hundred recreational and commercial fishing boats, is the second largest marina in Puget Sound. Like most other marinas, however, it has a problem with the proper disposal of plastic and other wastes that are generated by this fleet.

The Washington Sea Grant Program and the Port of Bellingham have been working together to help alleviate the situation at Squalicum Harbor by improving the waste collection facilities and by educating the boaters and commercial fishermen who use the harbor.

Plastics—A Growing Problem

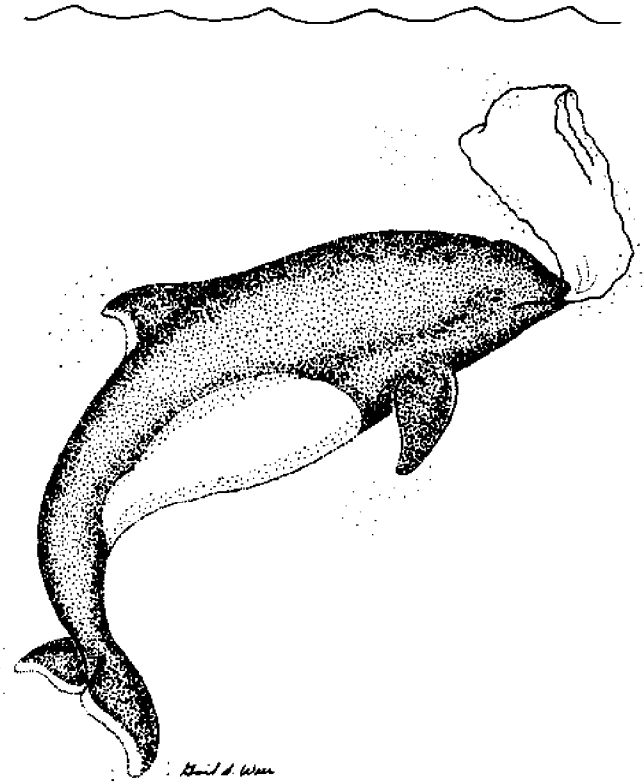
People who spend time on and around the water know how useful plastic products can be. Because these products are lightweight, strong, and durable, they have replaced many natural materials that are bulky or that quickly begin to break down when exposed to the elements.

Many of these plastic items end up as litter, however, and the very qualities that make them desirable on a boat are the same ones that cause problems in the marine environment. Plastic litter not only looks ugly on the beaches, but it also threatens many different populations of fish, crabs, birds, and marine mammals. Furthermore, when boats encounter plastic trash, costly and unsafe conditions can result.

An estimated seven million tons of garbage are dumped into the oceans every year, and because some plastics can last for many, many years, plastic marine debris is accumulating at an alarming rate. Studies show that *all* areas of the North Pacific are now contaminated with plastic litter.

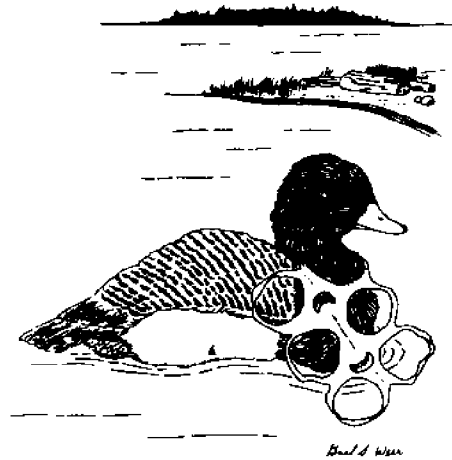
Impacts on Marine Life

Marine life is simply not adapting to plastics in the marine environment. Recent research indicates that plastics are responsible for the deaths of whales, seals, sea lions, porpoises, sea turtles, sea birds, shellfish, and fish. Some of these animals are dying in large numbers, and plastic debris is thought to be the major cause.



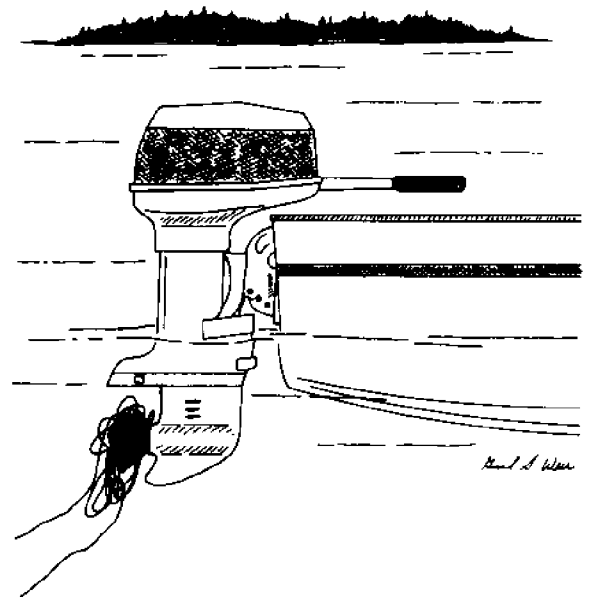
Many types of marine life mistake plastic items for food. Whales, porpoises, and sea turtles have been found dead with their stomachs containing plastic bags and sheeting. Fifty species of sea birds are known to eat plastic, and worse yet, many have been observed feeding it to their young. Once swallowed, plastics can cause death through blocked passages, ulcerations, toxic accumulations, starvation, and strangulation.

In addition, monofilament fishing line, net scrap, lost fishing gear, cargo strapping bands, six-pack rings, and certain other plastic items can entangle an animal, often resulting in strangulation, starvation, or drowning.



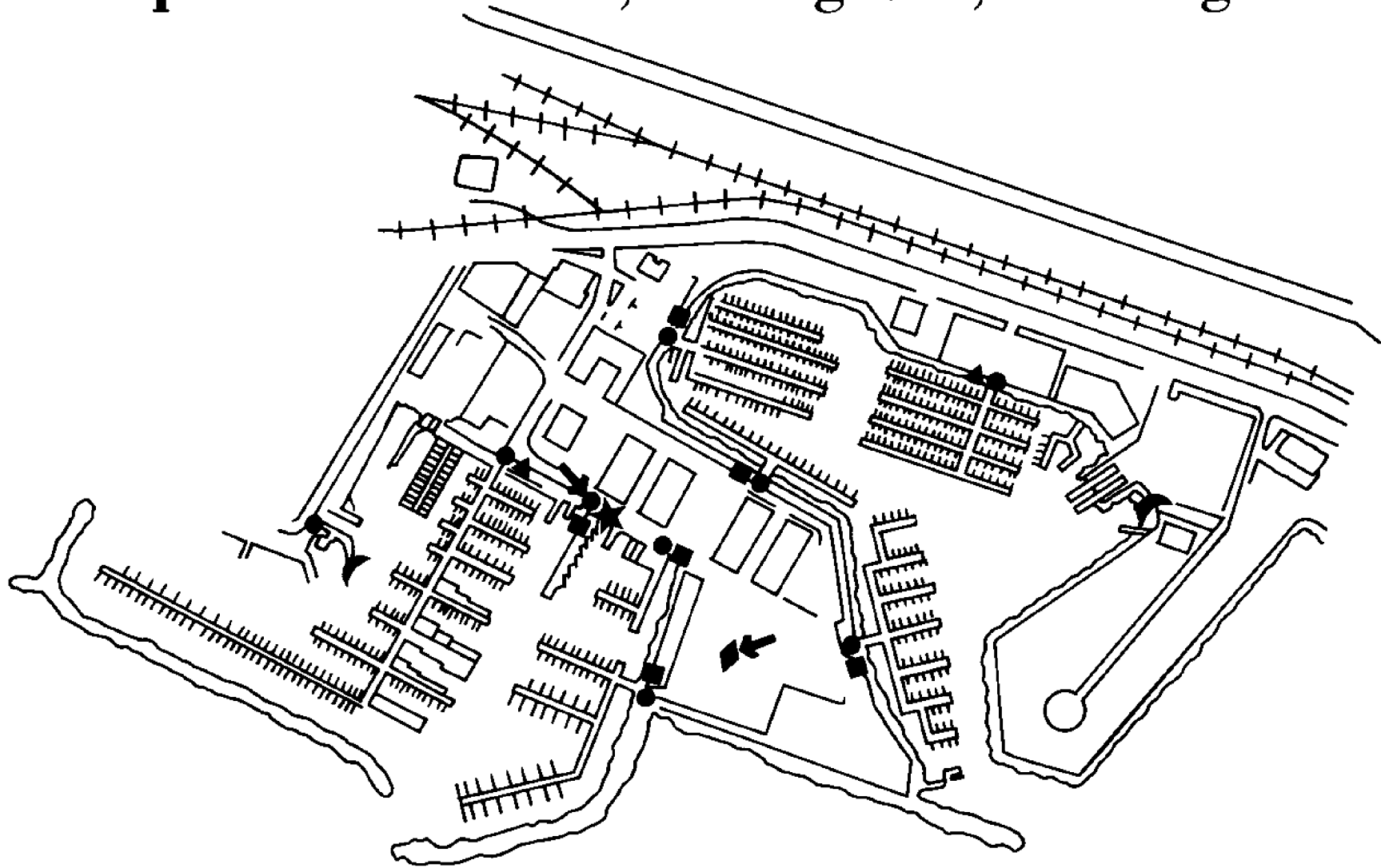
Safety Risks to People

Plastic marine debris is also a risk to the safety of people on boats. A vessel can become disabled when floating plastic items foul its propeller or clog its cool-water intakes. Overheated engines, burned-out motors, and loss of steering can be costly and dangerous. If the impairment occurs during bad weather, the result could be fatal.



This pamphlet and poster are made available through the Public Involvement and Education Project financed by proceeds from the Washington State Centennial Clean Water Fund and administered by the Puget Sound Water Quality Authority. Additional funding was provided by grant number NA86AA-D-SG044, project A/FP-7 (Marine Advisory Services) from the National Oceanic and Atmospheric Administration to the Washington Sea Grant Program.

Squalicum Harbor, Bellingham, Washington



● Plastics and Boat Garbage

➔ Nets

■ Cardboard

★ Waste Oil

Recyclables

▲ Aluminum

☾ Pumpout Facilities

Waste Disposal Sites

● **Plastics and Boat Garbage**

Dispose of plastics (except nets) and boat-generated garbage in the dumpsters that are located at the top of each ramp.

Recyclables

■ Cardboard recycling location. Break down cardboard boxes to save space.

▲ Aluminum recycling site.

◆ A site for the disposal and salvage of scrap wood, scrap metal and the like is under construction.

➔ **Nets**

Nets and net scraps should be disposed of only in the large dumpster by the sawtooth dock or at the scrap net and line site.

★ **Waste Oil**

Please use the waste oil disposal station and not the dumpsters for disposing of used oil. Oil deposited in dumpsters can leak out and end up in the bay. It can also cause other cleanup and disposal problems, the cost of which gets passed along to harbor patrons.

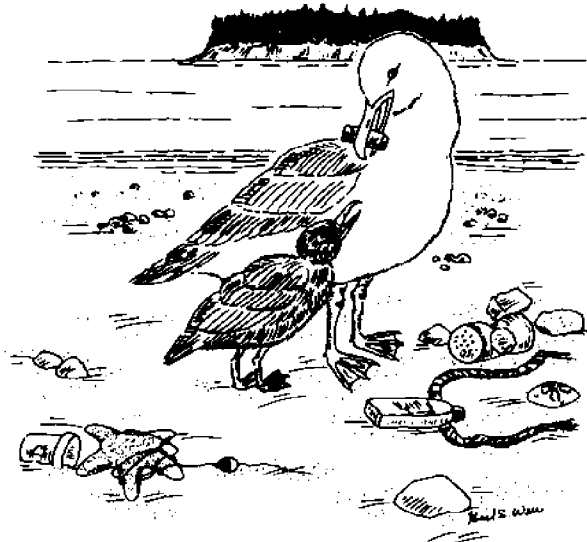
☾ **Pumpout Facilities**

Sewage tanks should be pumped out at one of the two designated facilities shown on the map.

Hazardous Materials

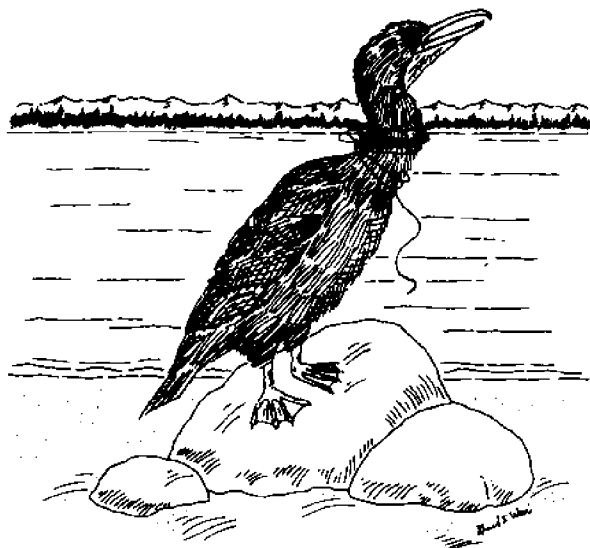
Hazardous materials should not be disposed of in either the dumpsters or the waste oil collection station. Examples of such materials are: diesel fuel, gasoline, antifreeze, boat batteries, paints, turpentine, varnish, wood preservatives, products containing lye, acids, and degreasers. If you have questions about whether certain materials are considered hazardous and/or where to dispose of them, call the Bellingham-Whatcom County District Department of Public Health. Bellingham residents call 676-6724. Whatcom County residents call 384-1565 (8:30 a.m. to 5:00 p.m.).





Efforts to Solve the Problem

Because plastic marine debris has become so widespread, legislation has been enacted to help reduce the problem. The Marine Plastic Pollution Research and Control Act of 1987, which became effective December 31, 1988, prohibits all United States watercraft from dumping plastic trash anywhere in the ocean and severely restricts the dumping of other types of ship-generated garbage. Foreign vessels face the same dumping restrictions while in U.S. waters (within 200 miles of our coastline).



What You Can Do

Government policies are helpful, but what you choose to do as an individual will make the real difference. You can help by following these steps:

- 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.
- 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.
- Install a trash compactor, if your vessel has the space.
- Encourage the use of paper or reusable glass cups and utensils instead of styrofoam ones.
- Get involved and encourage other people to help solve the marine debris problem too.
- Use the enclosed poster to remind you of where to dispose of your debris.

About the Authors:

Jim Humphreys is a marine field agent with Washington Sea Grant Marine Advisory Services. He works out of the Bellingham office conducting workshops and classes and working with individuals and groups on marine-related problems.

Patti Mullin is assigned to the Marine Debris Project being conducted in Sea Grant's North Sound Office.

Washington Sea Grant's North Sound office in Bellingham is conducting an educational demonstration project at Squaticum Harbor to help reduce the amount of marine debris in that area.

For other materials produced under this project, contact:

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