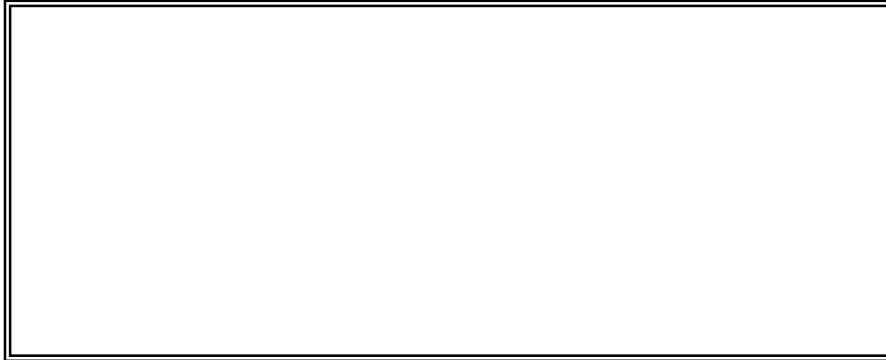


CHAPTER 6



ENVIRONMENTAL PROTECTION

Aquatic Nuisance Species (ANS)

The spread of invasive species, also known as Aquatic Nuisance Species by recreational boaters, is an increasing concern across the country. Invasive species often compete with native species causing damage to the natural resource and depleting fish stocks. Milfoil, zebra mussels and other ANS are being increasingly regulated by states to prevent their spread, with specific regional, state and local laws. You should be aware of your state laws concerning ANS and do everything you can to help prevent the spread of ANS by observing the following procedures:

- Clean all mud and aquatic plants from your boat, motor and trailer before leaving the boat ramp at a waterway.

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- Drain your boat by emptying your live well and bilge before transporting it to a new boating location.
- Use a mild bleach and water combination to disinfect your boat.
- If possible, allow your boat to completely dry for at least twenty-four (24) hours before transporting it to a new boating location.

Disposal of Toxic Substances

Oil Pollution

Both state and federal laws prohibit boaters from releasing oil or hazardous materials into or upon the navigable waters of the United States. The United States Federal Water Pollution Control Act stipulates that vessels 26 feet in length and over must display a placard at least five by eight inches, made of durable material, fixed in a conspicuous place in the machinery spaces, or at the bilge pump control station stating the following:



DISCHARGE OF OIL PROHIBITED

The Federal Water Pollution Control Act

prohibits the discharge of oil or oily waste into or upon the navigable waters of the United States, or the waters of the contiguous zone, or which may affect natural resources belonging to, appertaining to, or under the exclusive management authority of the United States, if such discharge causes a film or discoloration of the surface of the water or causes a sludge or emulsion beneath the surface of the water. Violators are subject to substantial civil penalties and/or criminal sanctions, including fines and imprisonment.



Report all discharges to the
National Response Center at 1-800-424-8802
or to your local U.S. Coast Guard office
by phone or VHF radio, Channel 16
U.S. COAST GUARD FISHING VESSEL SAFETY

Any release of this type of material will cause sheen upon the water that can be damaging to the environment. All boats with engines that use gasoline, diesel or an oil and gasoline mixture to

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operate should carry oil and fuel absorption equipment. In the event of a discharge, the used absorption material must be properly disposed of on land.

One of the areas on a boat that is the most susceptible to trapping oil and fuel products is the bilge area. The bilge area is located in the lowest part of the boat's hull and collects water and other liquids.



When the liquids in the bilge area reach a certain height, a float switch activates a bilge pump, which pumps the liquid overboard. If the bilge pump does not work, the boat could fill up with water and sink. Due to the close proximity to the engine area, bilge liquids can easily become contaminated with products leaking from the engine. Like routine maintenance performed on automobile engines to prevent grease and oil from leaking onto the ground, boat engines must also be regularly maintained to prevent oil, grease and petroleum products from leaking into bilges.

In the event that sheen is observed on the bilge water, do not pump the water overboard. Absorption material should be placed in the bilge area to capture the floating product before the water is pumped overboard. This material, which is sold in both sponge and solid forms, should be stowed safely until you reach shore at which point it should be discarded in compliance with local and state laws. No person may intentionally drain oil or oily waste from any source into the bilge of any boat. Non-compliance with these regulations results in severe fines and penalties being administered by the state. By taking the proper precautions through engine maintenance and the use of absorption materials in bilges, we can ensure that our waterways remain free of pollutants.

The fuel that powers our voyage can cause pollution

If it is possible, try to fuel away from the water. Fuel and oils, also known as petroleum products, can cause pollution to the environment if not handled properly. Petroleum products



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contain hydrocarbons, and in some cases heavy metals, which are poisonous to aquatic life even in very small quantities. Petroleum products float on the top of the water and even the smallest drop will spread quickly when spilled into the water, especially when a strong wind or tidal current is present. It is also important that you follow the proper fueling instructions described in Chapter 3 in order to ensure that fuel does not leak into your bilge.

Cleaning Products

It is also important for boaters to be aware that many cleaning products used on boats have additives that are toxic to the environment. Protect your waterways by using all of the cleaning product rather than dumping extra product overboard. Make sure that you are using the cleaning product for the proper use by reading the directions on the label. Save empty containers and properly dispose of them on land rather than throwing them overboard. Individual states may have different regulations concerning proper disposal of cleaning products including fines for non-compliance. Be sure to check with your applicable state agency to ensure you are following the appropriate laws.

Proper Garbage Disposal

The Refuse Act of 1899 prohibits the throwing, discharging or depositing of any refuse matter of any kind (including human waste, garbage, oil and other liquid pollutants) into the waters of the United States. It is illegal to dump garbage into navigable waters of the United States. In addition the Act to Prevent Pollution from Ships (MARPOL ANNEX V) places limitations on the discharge of garbage from vessels. Types of garbage prohibited include: plastic, rope, floating material, food waste, paper, rags, glass, metal and bottles.

Garbage Type	Discharge
Plastics - including synthetic ropes, fishing nets and plastic bags	Prohibited in all areas
Floating dunnage, lining and packing materials	Prohibited less than 25 miles from nearest land
Food waste, paper, rags, glass, metal, bottles, crockery and similar refuse	Prohibited less than 12 miles from nearest land
Comminuted or ground food waste, paper rags, glass, etc.	Prohibited less than 3 miles from nearest land

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United States boats 26 feet or longer must display in a prominent location, a durable *Garbage Disposal* placard at least four by nine inches notifying the crew and passengers of the discharge restrictions. Oceangoing vessels of 40 feet or longer, which are engaged in commerce or are equipped with a galley and berthing area, must have a written Waste Management Plan describing the procedures for collecting, processing, storing and discharging garbage, and designating a person in charge of carrying out the plan.

Although the dumping of garbage is prohibited, trash often accumulates on beaches and at the shorelines of waterways. As a proactive response to this type of pollution, many state marine trade associations sponsor Waterway Cleanups. The Cleanup brings people together to pick up the trash discarded in our waterways. These items pose a hazard to the aquatic environment and will remain in the environment for many years unless picked up by caring individuals.

Discarded items such as those listed below will sometimes even release chemicals that are harmful to living creatures. Garbage can also cause other types of problems. For example, birds eat cigarette butts, plastic pellets and polystyrene foam pieces, and they can be entangled in fishing line. To prevent endangering our waterways and aquatic wildlife, never throw your trash overboard. Except for what you consumed, always bring back to shore everything that you took aboard. Individual states may have different regulations concerning proper garbage disposal. Be sure to check with your applicable state agency to ensure you are following the appropriate laws.

Degradation Rates

Item	Rate
Aluminum can	200-500 years
Plastic 6-pack ring	450 years
Cotton rag	1-5 months
Plastic bottle	Over 500 years
Cotton rope	3-14 months
Wool sock	1 year
Paper bag	2-4 weeks

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Proper Waste Disposal

Human waste should not be dumped into the water. Boats that are equipped with marine toilets or heads must have a system to manage their sewage. Federal law states that dumping untreated sewage, even if it has been treated with a deodorant product, into any inland waters or the water within three (3) miles from shore along the Pacific and Atlantic coasts, within nine (9) miles of the shore along the Gulf of Mexico or navigable rivers is illegal and can cause serious health consequences.

According to the U.S. Coast Guard (USCG), boaters have three options to assist them in treating their waste. These options are referred to as Marine Sanitation Devices (MSDs). MSDs are devices attached to marine toilets that either treat the raw sewage to an affluent level acceptable discharge or contains the raw sewage until it can be pumped out at a sewage pump out facility.

1. A Type I MSD today uses several technologies that breaks waste matter down to destroy all harmful bacteria. Some actually kill viruses and use no harsh chemical additives.
2. A Type II MSD also breaks down waste but to a finer degree and disinfects waste as well. These devices are for bigger boats over 65 ft.
3. A Type III MSD is generally described as a “Holding Tank”.

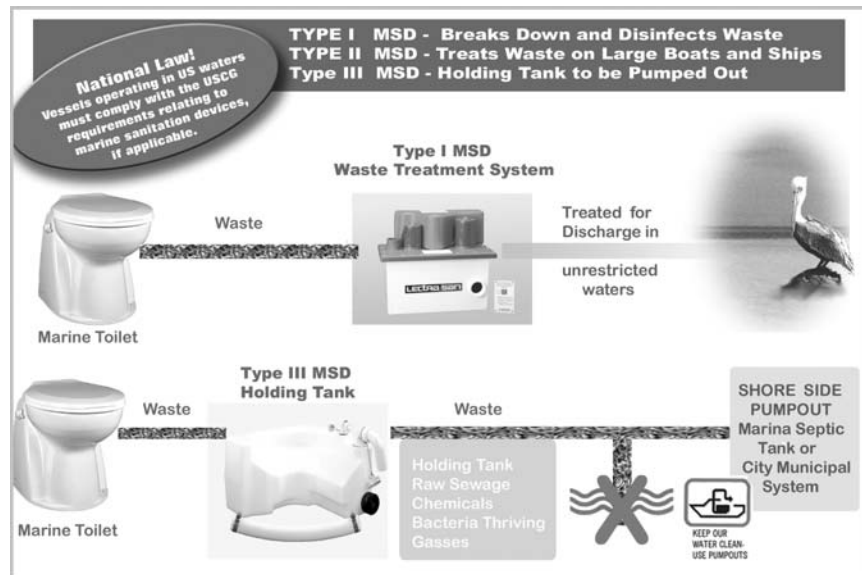
When you are using a Type I or II MSD, you must make sure that when discharging your treated sewage, you are doing so in a legal manner. In addition to the federal regulations regarding appropriate release of treated sewage, states often have areas denoted as no-discharge zones where it is illegal to release any type of sewage, treated or otherwise. Be sure to check with your local authority before discharging in order to ensure that you are following the state’s regulations.

Boaters who use USCG approved Type III holding tanks are encouraged to use pump outs and not bypass the holding tank. If you have a holding tank that is equipped with a “Y” valve, it must be secured in the closed position by using a padlock, non-

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releasable wire tie or removing the valve handle whenever you are operating your vessel in U.S. waters. To encourage boaters to avoid dumping sewage offshore, Congress passed the Clean Vessel Act in 1992. This Act established a federal grant program to increase the number of available pump-out and portable toilet dump stations as an alternative to overboard disposal of recreational boater sewage. As a result, all recreational vessels must have access to pump-out stations funded under the Clean Vessel Act. Check your nautical charts for the pump-out location nearest you.

Preserving our coastal water quality is essential to maintaining a healthy thriving aquatic ecosystem. Raw or poorly treated sewage can spread disease, contaminate shellfish and lower oxygen concentrations in the water. Using Marine Sanitation Devices and pump out facilities contributes to a cleaner, safer environment for our boating enjoyment.



Graphic provided by Dale and Dawn Weatherstone of Raritan Engineering