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Clean Boating Tips

Background
Clean Boating includes all aspects of boat maintenance, operation, and housekeeping. Recreational boaters and marinas can have a harmful effect on the quality of coastal waters and on the balance of an aquatic ecosystem through a variety of activities. These activities include fuel spills, vessel cleaning, fish waste disposal, vessel sewage discharge, sanding and painting activities, and transportation of aquatic nuisance species.

Bilge, Fueling, and Spill Response

Figure 1. Fuel Sheen. Photograph courtesy of © The Standard Times

It is not uncommon to see a small fuel sheen on the waters surface near boats (Figure 1). Although it may only be a tiny amount from some boats, the cumulative impacts can be damaging. Once in the marine environment, oils and fuels have a tendency to accumulate in bottom sediments and concentrate in marine organisms. These harmful substances commonly enter the marine environment through bilge pumping, fueling, and improper response to spills. You can play an important role in protecting water quality by following the simple tips listed below.

BOATER TIPS:
Bilge Pumping

- Prior to pumping, inspect the bilge to ensure that no fuel or oil has been spilled.
- Do not discharge bilge water if there is a sheen to it.

- The best technique for dealing with oil in the bilge is to continually check and fix all leaks.
- Petroleum absorbent materials, such as bilge pillows and engine pan pads, are very effective at removing oils from bilge water.
- As a further preventative measure, oil/water separators can be installed in bilge pump discharge lines.
- If dirty bilge water cannot be sufficiently cleaned to allow legal discharge, make arrangements with a marina capable of properly disposing of tainted water.

Fueling

- Prevent fuel from falling into the water during fueling.
- Don't just top off the tanks, know the capacities of your fuel tanks prior to filling.
- Place an absorbent pad or container under the fuel vent to collect accidental overflow.
- Listen to the filler pipe to anticipate when the tank is full and to avoid back-splash.
- Stop pumping at the first sign of fuel escape.
- To prevent spillage from tank vents, install a fuel/air separator or an air whistle in your tank's vent line.

Spill Response

- Stop the source of the spill first.
- Then focus on containing it, preferably with booms.
- When a spill does occur, it should be reported immediately - federal law requires it.
- Do not use emulsifiers or dispersants (soaps) to treat a spill, this is prohibited by federal law.
- For small spill cleanup, cover the spill with absorbent materials.
- When clean up is complete, properly dispose of used spill response materials.

Vessel Cleaning

Many cleaning products are toxic, non-biodegradable, and contain chemicals that can harm aquatic organisms. In addition, many cleaners are phosphate-based, and may therefore contribute to algal blooms, low dissolved oxygen levels, foul odors, and even fish kills (Figure 2).

Figure 2. Blue-Green Algae Bloom. Photo provided by Bob Wellington of the Erie County Heath Department

Boater Tips:

- Minimize the use of soaps and detergents by washing your vessel more frequently with plain water.
- Do not use cleaners that contain ammonia, sodium, chlorinated solvents, petroleum distillates, or lye.
- Buy and use only nontoxic, phosphate-free, biodegradable cleaners.
- Substitute chemical cleansers with natural ones, such as vinegar, citric juices, borax, and baking soda.
- Use hose nozzles that shut off when released to conserve water and reduce the runoff from boat washing.
- Do not clean the bottom of your vessel by scraping or scrubbing it while it is still in the water.

Fish Waste

As opposed to many cleaning products, fish wastes are absolutely biodegradable and can be eaten by other fish, birds, and marine animals. But when many fish are cleaned and the waste discarded into the same water area on the same day, such as at fishing tournaments, there can be a real disposal problem. Too much deteriorating fish waste in a small area of water is unsightly and can also result in extremely foul odors and decreased dissolved oxygen levels in the water column (Figure 3).

Figure 3. Fish Disposal. Photo taken by Robert Visser of © Greenpeace, Inc.

Boater Tips:

- Do not dispose of fish wastes in marina basins.
- Many marinas have designated fish-cleaning stations with cutting tables, wash down basins, and covered trash containers or composting programs. Check with your marina.
- Reuse fish wastes as bait and/or chum on your next fishing trip.
- When no such options exist, bag fish waste and dispose of it in the trash.

Vessel Sewage

Vessel sewage is a problem when discharged into the water without proper pretreatment. Pathogens in untreated sewage increase the potential for human illness and the possibility of additional shellfish bed and swimming area closures. Added nutrients can also accelerate oxygen depletion in the water column by stimulating uncontrolled plant growth, called eutrophication, which can contribute to algal blooms, foul odors, and fish kills (Figure 4). This problem becomes more significant in enclosed harbors where boaters concentrate to anchor, swim, and fish.

Figure 4 . Fish Kill. Photo courtesy of Cornell Cooperative Extension Web site

Boater Tips:

- Always remember that it is illegal to discharge raw sewage from a vessel into U.S. waters.
- Pump-out facilities should be used to dispose of stored waste whenever possible. They are fast, clean, and inexpensive. New navigation charts and cruising guides now list the locations of operating pump-out stations.
- Marine sanitation devices (MSDs) must be maintained to operate properly. Keep

your disinfectant tank full, use biodegradable treatment chemicals, and follow the manufacturer's suggested maintenance program.

- Do not dispose of fats, solvents, oils, emulsifiers, disinfectants, paints, poisons, phosphates, diapers, and other similar products in MSDs.
- Whenever possible, use land-based rest rooms rather than onboard ones.

Sanding and Painting Activities

Sanding and painting can be messy tasks. And if certain precautions are not taken, these tasks can also create a mess for the environment. Most of these paints are made with toxic chemicals designed to leach out and prevent bottom growth on the hull. When concentrated amounts of these materials are allowed to escape from hull maintenance and repair areas, there is a potential for environmental harm. Materials, such as solvents, thinners, and brush cleaners, often used in sanding and painting, can also harm the environment if improperly handled. These materials contain cancer-causing agents and have a tendency to sink in the water column, compromising water quality and damaging marine life and the marine environment.

Boater Tips:

- When working in marinas, use designated sanding and painting areas. Check with the marina manager for the location and proper use of these areas.
- Work indoors or under cover whenever wind can potentially blow dust and paint into the open air.
- Use environmentally friendly tools, such as vacuum sanders and grinders, to collect and trap dust. Some marinas have this equipment for rent, check with the manager.
- Clean up all debris, trash, sanding dust, and paint chips immediately following any maintenance or repair activity.
- Use a drop cloth beneath the hull to catch sanding dust and paint drops when working over unpaved surfaces.
- When sanding or grinding hulls over a paved surface, vacuuming or sweeping loose paint particles is the preferred cleanup method. Do not hose the debris away.
- Buy paints, varnishes, solvents, and thinners in sizes that can be used within one year to avoid having to dispose of stale products.
- When possible, use water-based paints and solvents.
- Switch to longer lasting, harder, or non-toxic antifouling paint.
- Paints, solvents, and reducers should be mixed far from the water's edge and transferred to work areas in tightly covered containers of one gallon or less.
- Keep in mind that solvents and thinners can be used more than once by allowing the solids to settle out and draining the clean product off the top.
- Let small quantities of unusable solvents evaporate by brushing them onto an old board.
- Thoroughly dry all paint cans before disposing of them in the trash.
- When in doubt about proper disposal practices, check with your marina or local municipality.

Transportation of Aquatic Nuisance Species

Aquatic nuisance species are organisms introduced into habitats where they are not native. These species ("biological contaminants") serve as agents of habitat alteration and degradation, and are responsible for biological diversity loss throughout the world. Introducing species accidentally or intentionally from one habitat into another can pose as a serious risk to the "contaminated" ecosystem. Freed from predators, parasites, pathogens, and competitors that have kept their numbers in check, species introduced into new habitats often overrun their new home and crowd out native species. In the presence of enough food and a favorable environment, their numbers will explode. Once established, aquatic nuisance species rarely can be eliminated. As a boater, there are several steps you can take to help stop the spread of these aquatic invaders.

Boater Tips:

- Inspect your boat and trailer. Remove aquatic plants and animals from all parts of your boat, trailer, and accessory equipment. Make sure to dispose of this material in the garbage either at home or at a handy garbage can near the water access area.
- Drain your boat including the bilges, live wells, and other containers before leaving the water access area.
- Do not transfer water from one water body to another or release live bait or aquarium pets into any waters.
- Wash your boat and trailer thoroughly with tap water when you get home. Make sure to flush water through your motor's cooling system, live wells, and other areas that hold water.
- Allow your boat to dry for a minimum of three days in a sunny location before transferring it into a new water body.

Information for this fact sheet was adapted from a variety of sources, including:

- Rhode Island Sea Grant
- Minnesota Sea Grant

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