

Tab 3: Hauling and Storing Boats _____ 39

Bilge Cleaning _____ 41

Pressure Washing _____ 43

Winterizing Vessels _____ 45

Boat Disposal _____ 46

Bilge Cleaning

Potential Environmental Impacts:

Bilge water can commonly contain oil, fuel, antifreeze, and other contaminants. Even small amounts of such materials introduced into the marina environment can cause environmental problems, especially if they persist. Although some oil that spills into the water evaporates, petroleum hydrocarbons can remain suspended in the water column, concentrate on the surface, or settle to the bottom. Oil sheens can block necessary oxygen and light from moving through the surface of the water. According to the EPA, the hydrocarbons in oil harm juvenile fish, upset fish reproduction, and interfere with the growth and reproduction of bottom-dwelling organisms. Additionally, the risk of fines and the possibility of contaminated sediments may make future dredging operations more difficult.

Legal Requirements:

Do not discharge oily bilge water	<input type="checkbox"/> Oily bilge water must not be allowed to enter the waters of the state [DHEC R.61-79.262.11]. <input type="checkbox"/> If oily bilge water cannot be sufficiently cleaned for legal discharge, make arrangements with a waste hauler to properly dispose of the bilge water.
Report oily bilge discharge as spill	<input type="checkbox"/> Any spill or release of petroleum that results in a sheen on the waters of the state or threatens the waters of the state to include groundwater must be reported immediately to the: <ol style="list-style-type: none"> 1. SCDHEC Emergency Response Section and 2. National Response Center [Section 311 of the Clean Water Act; 33 USC 1321].
Dispersants	<input type="checkbox"/> The use of dispersants, such as dishwashing soaps or detergents, on oil or fuel spills or sheen of any size is prohibited in most circumstances [40 CFR 110.4; DHEC R.61-79.262.11]. Dispersants may only be used with permission from federal or state authorities, and only in rare instances.

Best Management Practices:

Before pumping	<input type="checkbox"/> Before pumping out a bilge, visually inspect the bilge water to determine whether there is a visible sheen of oil. <input type="checkbox"/> Use oil absorbent materials to remove oil before pumping a bilge. <input type="checkbox"/> Use an oil/water separator to remove oil from bilge water. <input type="checkbox"/> Don't use soaps and detergents to clean up oily bilge water.
Require bilge pad use	<input type="checkbox"/> Require the use of bilge pads to help keep bilge water discharge clean. Have bilge pads on hand for sale to marina patrons, or direct your tenants to a marine supply store in your area.
Pumping to sanitary sewer	<input type="checkbox"/> Some pump-out stations may allow bilge water to be pumped out to the sanitary sewer after the oil has been physically removed. Prior approval of the local sanitary sewer authority is required. Large municipal sewer systems often have sophisticated requirements.

Train employees	<input type="checkbox"/> Train employees and contractors on bilge cleaning best management practices.
Educate customers	<input type="checkbox"/> Educate customers to keep their engines properly maintained, to continually check and fix all leaks, and to keep an absorbent pad or pillow in the bilge to absorb small drips and spills.

Relevant Sections and Appendices:

- ⇒ Appendix C for used oil management.
- ⇒ Appendix E for state and federal spill reporting requirements.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.

Pressure Washing

Potential Environmental Impacts:

When the marine organisms that accumulate on the bottom of a vessel are removed, fragments of bottom paint and hull materials are often chipped off in the process. In a concentrated form, these untreated particles can have localized water quality impacts. Pressure washing in particular removes antifouling paint from boat bottoms, which can get washed into the marina basin. Sediments contaminated with copper or other toxic ingredients in antifouling paints can result in future problems and expenses for the marina operator when faced with dredge material disposal.

Legal Requirements:

Paint chip and sludge disposal	<input type="checkbox"/> After pressure washing, the paint chips and sludge in holding tanks or treatment units is a special waste that can only be disposed of at an approved facility [DHEC R. 61-107.258].
NPDES wash water permit	<input type="checkbox"/> For additional information, contact your local SCDHEC office.

Best Management Practices:

Use low pressure water	<input type="checkbox"/> Encourage boat washing with low-pressure water only. Where practical, use a regular garden-type hose and a soft cloth.
Don't use chemicals	<input type="checkbox"/> Do not use soaps, solvents, and other chemicals. This allows more options for reuse or discharge of treated wash water and protects water quality.
Collect and treat wash water	<input type="checkbox"/> Collect and treat wash water. The following are options for collection and treatment: <ol style="list-style-type: none"> 1. Wastewater from the washing operation can be collected and reused through a closed loop pressure wash system, or can be used after treatment to irrigate landscaped portions of the marina. 2. Collect all of the wash water, treat it, and discharge to sanitary sewer or store for hauling to a sewage treatment plant. Discharge to the sanitary sewer or on-site septic system requires approval. 3. Pressure wash water can also be directed to a holding or settling tank for treatment. If the wastewater does not contain chemical additives, it may be diverted into wet pond detention basins, vegetated buffers, or swales. 4. If none of the above-mentioned practices is feasible and the only apparent option is to discharge pressure washing wastewater to a surface water or storm drain, wash water should be treated prior to discharge. Options for treatment include filtering the wash water through catch basin inserts that will separate out debris, paint chips, and sediment. The use of filter fabric, oil/water separators, or sand filters should also be considered.

<p><u>Alternatives:</u> Wash over permeable surface with filter fabric</p> <p>Wash away from waterbody</p>	<p><input type="checkbox"/> If collecting and treating wash water is not feasible:</p> <ol style="list-style-type: none"> 1. Wash boats on a level permeable surface (lawn, crushed stone, or sand) so that the wash water can infiltrate into the ground, if there is no drinking water well on the property. 2. Place filter fabric over the permeable surface to collect solids and sediments. <p>A hazardous waste determination should be conducted on collected pressure wash wastewater to establish whether or not disposal of the collected material is subject to hazardous waste regulations [40 CFR 262.11].</p> <ol style="list-style-type: none"> 3. To ensure that the wash water has enough time to settle into the ground, pressure wash boats as far away as possible from the water, preferably over a grassed or otherwise vegetated area. Add a row of hay bales between the water's edge and the pressure washing operation. 4. If it is not possible to wash boats over a permeable surface, pump the wash water to a permeable surface for infiltration.
<p>If well nearby</p>	<p><input type="checkbox"/> If there is a well nearby, pressure wash boats on an impervious surface as far as possible from the well, and treat the wash water to collect solids and sediments before discharge, preferably to the sanitary sewer.</p>
<p>Contain chemical discharges</p>	<p><input type="checkbox"/> If chemical additives, such as solvents or degreasers, are used, the pressure washing must be conducted in self-contained systems that prevent any discharge to storm drains.</p>
<p>Minimize water use</p>	<p><input type="checkbox"/> Minimize the amount of water used when boats are pressure washed out of the water. For example, wash the hull above the waterline by hand.</p>
<p>Prohibit in-water bottom cleaning</p>	<p><input type="checkbox"/> Prohibit in-water bottom cleaning or hull scraping or any process that occurs underwater which removes antifouling paint from the boat hull. This practice makes it impossible to treat what is cleaned from the boat bottom.</p>

Relevant Sections and Appendices:

- ⇒ Appendix B for hazardous waste management information.
- ⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
- ⇒ Hazardous Waste section.

Winterizing Vessels

Potential Environmental Impacts:

The activity of preparing a vessel for winter storage may contribute to non-point source pollution through the use of heavy equipment (fork lifts, cranes and travel lifts) as well as through various storage procedures (use of antifreeze and battery storage).

Legal Requirements:

See other sections	<input type="checkbox"/> Please see sections referenced below for legal requirements for specific winterizing activities.
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Best Management Practices:

Antifreeze	<input type="checkbox"/> Use propylene glycol antifreeze (usually pink), which is less toxic than ethylene glycol (usually green), to winterize all systems except “closed” or freshwater cooling systems. <input type="checkbox"/> Re-use or recycle antifreeze. Store spent antifreeze in a container clearly marked “Spent Antifreeze Only.”
Bilges	<input type="checkbox"/> Inspect and clean bilges prior to extended vessel storage. Clean all water, oil, or foreign materials from the bilge using absorbent material.
Do not use toxic cleaners	<input type="checkbox"/> Avoid the use of heavy-duty detergents containing ammonia, sodium hypochlorite, chlorinated solvents, petroleum distillates, acids, or lye.
Use dry rack storage	<input type="checkbox"/> Encourage use of state-of-the-art dry rack storage facilities. They minimize the need for more intensive forms of hull maintenance. <input type="checkbox"/> Prior to lowering a vertical lift or marine railway, clean up the device to prevent contamination of the receiving waters from oil or any hazardous substance.
Gasoline	<input type="checkbox"/> To reduce waste from contaminated gasoline in fuel tanks, store boat motors according to manufacturers’ guidelines. <input type="checkbox"/> Top off the tanks if the boat is stored in water, or empty and purge the tank if stored on land. Topping off tanks in the summer can result in spills due to fuel expansion. Top off in the summer just when you are taking her out.

Relevant Sections and Appendices:

- ⇒ Appendix C for used oil and antifreeze management.
- ⇒ Antifreeze section.
- ⇒ Bilge Cleaning section.
- ⇒ Pressure Washing section.
- ⇒ Decommissioning Engines section.
- ⇒ Oil section.
- ⇒ Battery Replacement section.

Boat Disposal

Potential Environmental Impacts:

Sunken or abandoned vessels can pose environmental and safety risks by leaking oil and fuel in a concentrated area. They can also cause navigational and safety hazards. If boats are properly disposed of before they become unseaworthy, the chances that the vessel will become an environmental risk are reduced.

Legal Requirements:

Boat Disposal	<input type="checkbox"/> There are no legal requirements specifically for boat disposal.
Boat Abandonment	<input type="checkbox"/> The following government agencies possess removal requirements of abandoned vessels based upon location and potential for pollution. SCDHEC-OCRM, SCDNR, U. S. Corps of Engineers, U. S. Coast Guard and FEMA.

Best Management Practices:

Abandoned boats	<input type="checkbox"/> Report the abandonment of a vessel to the proper authorities and implement measures to secure, possess and remove the vessel to highground as prescribed by maritime law. Reduce the vessel to manageable pieces and properly dispose in an approved solid waste facility. Authority jurisdictions can be viewed at www.scdhec.gov/environment/ocrm/vessel_removal.htm
Boat fuel	<input type="checkbox"/> Empty the boat's fuel tanks and reuse or dispose of used gasoline as hazardous waste.
Remove and recycle	<input type="checkbox"/> Remove and recycle the following boat parts and fluid: <ol style="list-style-type: none"> 1. Used oil 2. Used antifreeze 3. Boat engine (recycle as scrap metal) 4. Any metal with reuse value, such as lead, zinc, aluminum 5. Refrigerants
Mercury parts	<input type="checkbox"/> Remove all mercury-containing devices (i.e., some electronic equipment, bilge pump switches, old ship's barometers) and handle as hazardous waste. If removed by the boater, the mercury containing devices can be managed as household hazardous waste.
Hull pieces	<input type="checkbox"/> Reduce the size of the hull into smaller pieces as directed by the solid waste facility. The smaller the pieces, the easier it is for the facility to take.

Relevant Sections and Appendices:

- ⇒ Appendix B for hazardous waste management information.
- ⇒ Hazardous Waste section.