

Boat Topside Maintenance For Water Pollution Prevention

Water Quality Factsheet for Marina Operators and Boaters

California Coastal Commission's Water Quality Program

Revised Dec. 2019 by Vanessa Metz (original 2012 by Jack Gregg)

Note: This factsheet is a summary of information compiled by Coastal Water Quality Program staff. It is not a requirement by the Coastal Commission, and it may be superseded by site-specific information.

Water Quality Issue

Boat maintenance and cleaning activities may contribute to water pollution if inappropriate methods or materials are used. When boat cleaning and maintenance is conducted while the boat is in the water, precautions should be used to protect water quality. Pollution prevention for recreational boat cleaning and maintenance in marinas starts with two basic measures:

- **First**, wherever possible, boaters should select non-toxic, phosphate-free cleaning products that do not harm humans or aquatic life.
- **Second**, boaters and marina operators should implement protective practices to prevent cleaning products from entering the water.

Marinas and boatyards should also be designed and maintained so that pollutants discharged onshore are captured for proper treatment or disposal. Marinas or yacht clubs (hereafter "marinas"¹) may have designated areas onshore for cleaning and minor maintenance activities. Hauling a boat out of the water for cleaning and maintenance can prevent water pollution, but is not always feasible.

Without proper design and upkeep, pollutants from boat maintenance and cleaning on land may indirectly enter the water through surface runoff, wind, or underground seepage. Major repairs or maintenance activities should be restricted to boatyards, which have specialized equipment and use Best Management Practices (BMPs) to keep pollutants out of the water.

Choose Non-toxic, Phosphate-free, Biodegradable Cleaning Products

There are several non-toxic, phosphate-free, biodegradable alternatives to common cleaning products that boaters may use. Caustic cleaning chemicals (such as lye, bleach, and ammonia) and petroleum products should not be used where they can

¹ The term "marina" typically refers to a commercial facility with 10 or more slips, but most of the BMPs in this factsheet are also appropriate for smaller and non-commercial facilities.

enter the water. Simple alternative cleaning products such as baking soda, vinegar, lemon juice, and vegetable oils are less harmful.

However, these alternative products should be used sparingly, and discharges of these products into the water should be avoided because they may also adversely impact aquatic life. The [California Clean Marina Toolkit](#) (California Coastal Commission, 2004) and the [Pollution Prevention Toolkit for Maritime Industries](#) (San Francisco Department of Public Health, 2011) describe methods to implement pollution prevention strategies at marinas, including reducing the generation of hazardous waste.

Keep Cleaning Products Out of the Water

Pollution prevention can be accomplished by maintaining a physical barrier or containment system around the work area to control direct discharge, surface runoff, or wind dispersal of harmful chemicals into the water. Practices that marinas and boaters can implement to keep boat maintenance products and debris from entering the water include:

- Using drop clothes under work areas;
- Plugging any openings that drain to the water during maintenance;
- Vacuuming or sweeping loose debris (e.g., paint chips) for proper disposal;
- Following all legal requirements regarding management of oil, fuel, and sewage;
- Recycling applicable waste; and
- Discarding hazardous materials in proper receptacles.

Pollution Prevention during Boat Maintenance

Boaters can reduce adverse impacts to coastal waters by using appropriate methods during application and disposal of cleaning and maintenance products. Simple measures can be used to prevent cleaning products, fuel, lubricants and vessel wastes from entering the water. Preventative boat maintenance measures, such as regular engine inspection and repair, can help prevent leaks into the bilge. Facilities that provide specified maintenance locations on land should require practices that prevent pollutants from entering the water (e.g., require electric sanders to be equipped with a vacuum dust collector).

Whether or not the marina provides on-site collection facilities, boaters are responsible for proper disposal or recycling of hazardous materials and trash, including fish cleaning waste and pet waste. However, marinas are encouraged to provide on-site collection facilities in the form of separate waste collection containers for trash, recyclable materials, and hazardous materials. Examples of recycling and disposal services that marinas may provide include monofilament fishing line recycling, oil-absorbent exchange centers, used oil and oil filter collection services, and expired marine flares

disposal. If disposal facilities for hazardous materials are not provided, the marina should post visible signs directing boaters to local disposal facilities or services.

Suggested Marina Requirements for Water Pollution Prevention

Following are some suggested requirements to be added to marina mooring agreements, specifying the water pollution prevention responsibilities of marina operators and boat owners. These provisions are based, in part, on the criteria set forth by California's [Clean Marine Program](#). The Clean Marine Program sets standards for certified Clean Marinas to help protect water quality by implementing BMPs for marina operations, including boat maintenance and cleaning, waste management, storm water runoff, and petroleum containment.

Marina operators shall:

- Provide a copy of their water quality protection policies to all slip holders and contractors doing maintenance work at the marina.
- Require any subcontractors to sign a statement saying that they have read the marina's water quality protection policies, and will comply with these policies while working at the facility.
- Require that detergents and cleaning products used for washing boats are non-toxic, phosphate-free, and biodegradable, and that the amounts of these products used are kept to a minimum.
- Prohibit the use of detergents containing ammonia, sodium hypochlorite, chlorinated solvents, petroleum distillates, strong acids, or lye where these chemicals could be released to the water.
- Either prohibit onshore repair and maintenance activities, or only allow these activities to occur in clearly marked work areas designated for these purposes.
- Specify policies or rules for the amount and types of maintenance work allowed over water, and provide consequences for non-compliance.
- Prohibit the discharge of oily bilge water to marina waters, and shall recommend that boat owners use preventive engine maintenance, oil absorbents, bilge pump-out services, or steam cleaning services to prevent oily bilge water discharges.
- Prohibit maintenance work that could result in the discharge of debris (e.g., paint chips, wood coatings, treated wood preservatives, and plastic particles) into the water.
- Ensure that visitors, tenants, contractors, and other marina workers are informed about legal methods for disposal of waste, including maintenance debris, and that applicable disposal methods are used.

- Immediately investigate the source of any pollution or debris in the water, stop the discharge, and initiate cleanup or containment of the pollutant.
- Ensure that any onshore maintenance work allowed does not discharge pollutants into the water or leave debris in a location where it may be carried into the water.
- Prohibit unattended open containers of paint and other maintenance supplies on the docks.
- Enforce rules and regulations regarding boat maintenance while boats are in the slip.
- Prohibit, in writing, the use of detergents and emulsifiers for fuel spills. Discharge of bilge water containing petroleum products, other engine fluids, or contaminants to surface waters is illegal.
- Dispose of all wastes in accordance with all local, state, and federal laws and regulations.
- Prohibit vehicle or vessel washing and maintenance in parking lots, or provide specified boat rinsing locations equipped with a stormwater drainage system to manage the waste stream.
- Establish and enforce sewage management policies for boats used by live-a-boards.
- Provide clearly marked containers for trash, recyclables, and other wastes. These containers should be wind-, rain-, animal-, and leak-proof, located in convenient areas, sized to manage all waste streams at a normal volume, and regularly maintained to prevent overflowing.
- Implement a daily inspection routine to monitor over-the-water maintenance and cleaning activities, in-water hull cleaning, fuel facilities, and sewage services in the marina.
- Provide BMPs in writing to users of boat docks and end ties. Informative signs depicting BMPs for maintenance of boats and boating facilities should be posted conspicuously for tenants and visitors.
- Provide information to boat owners about the water quality benefits of non-toxic hull paints and hull cleaning BMPs, or recommend legal non-toxic hull paint to tenants when applicable.
- Make available equipment for onshore boat maintenance designed to prevent discharge of solid or liquid debris into the water. This type of equipment includes vacuum sanders with a bag attachment, and portable oil change equipment that prevents discharge of oil.
- Recommend the use of bilge pump-out facilities if the bilge requires extensive cleaning (e.g., due to spills or long-term accumulation of engine fuels, lubricants, or other liquid materials).

- Consider maintaining a list of contractors for boat maintenance and hull cleaning service that have demonstrated compliance with the marina’s water quality policies.
- Ensure that vessels dispose of any sewage at designated pump-out or dump station facilities. Signage should be posted informing boaters that it is illegal to dispose of sewage in marinas, and indicating the location of the nearest sewage pump-out or dump station facilities or services.
- Regularly inspect and maintain sewage facilities, and promptly correct leaks or damaged equipment that may potentially result in spills.
- Post signage identifying regulations pertaining to Marine Sanitation Devices on recreational vessels, and ensure compliance by tenants and visitors.

Additional Information

- ❖ [**The Boating Clean & Green Program**](#). This education and outreach program conducted by the California Division of Boating and Waterways and the California Coastal Commission promotes environmentally sound boating practices to marine businesses and boaters in California.
- ❖ [**The California Clean Marina Toolkit \(2004\)**](#). This guidance document prepared by the California Coastal Commission’s Boating Clean and Green Campaign was developed to help marina operators develop environmentally-friendly marina management and operation practices.
- ❖ [**EPA’s Marinas and Recreational Boating Program**](#). This program of the U.S Environmental Protection Agency provides factsheets, reports, and guidance documents on the control of pollution from marinas and recreational boating.
- ❖ [**California’s Clean Marine Program**](#). This marina facility stewardship and certification program was developed by marine industry volunteers to protect California’s waters from pollution.
- ❖ [**Pollution Prevention Toolkit for Maritime Industries \(2011\)**](#). This guidance document prepared by the San Francisco Department of Public Health describes methods to implement pollution prevention strategies at marinas.
- ❖ [**Dockwalker Program**](#). Led by the California Coastal Commission and the California Division of Boating and Waterways’ Boating Clean and Green Program, this is a volunteer education program to provide one-on-one outreach in local harbors to help boaters protect marina water quality.
- ❖ [**California’s Marinas and Recreational Boating Workgroup and Antifouling Strategy Sub-Workgroup**](#). These workgroups, coordinated by the California Coastal Commission and the California Department of Pesticide Regulation, provide an informative forum for agencies (state, federal, and local), marinas, and other organizations to address pollution related to marinas and recreational boating. The meeting schedule and informational materials are available on the webpage.