

Marina Operations

Materials, supplies, vehicles and equipment stored outdoors and exposed to rain and runoff can result in storm water pollution. It is not always feasible to store everything indoors or under cover, so marinas and residents must take steps to reduce contaminants from these types of storages to the maximum extent practicable. Steps to accomplish this include keeping these items in designated areas that are paved to allow for periodic sweeping, sloped or bermed to limit run-off, and located away from water bodies and/or storm drains.

Spills while fueling and conducting day to day activities can be minimized by providing staff training and boater education of Best Management Practices.

Mandatory

Requires that all fueling occurs at designated fuel station/area

- Tip: No fueling in the boat slip, parking area or boat launch area.

Prohibit unattended, open containers of paints and other maintenance supplies on the dock.

- Tip: Keep all open containers, even while in use on the boat or on land in a secondary containment.

Store liquid marina supplies indoors or in covered, watertight containers.

- Tip: Household hazardous materials must be stored in leak proof, closed and labeled containers in a covered area, and maintenance and inspection of all storage containers and storage areas need to be conducted on a routine basis.
- Tip: All materials used on the day to day basis should be stored indoors or in covered containers to reduce the possibility of pollution.

Use absorbent materials or other environmentally friendly methods to clean liquid spills. Do not rinse spills into the water.

- Tip: Keep an oil spill response kit in a handy location near areas where oily spill may occur. The kit should contain oil absorbent socks to contain the spill and oil absorbent mat pads as well as disposable bags and ties.
- Tip: Keep absorbent materials handy to clean non oil based solvents and other liquids.

Require boaters to practice pollution prevention as a condition of their contract.

- Provide boaters with a list of rules and regulations to prevent pollution. Include helpful tips for a variety of practices, such as how to deal with oil and fuel spills, how and where to

dispose of wastes and materials, proper boat cleaning procedures, etc. Include any tools or services that you provide to help them, such as oil/fuel absorbent pads, pet waste bags, etc. Click for an [example of Boater Best Management Practices to prevent pollution](#).

- Tip: See “Boat Cleaning and Maintenance” (section 2) for more tips.
- Tip: Click for [Proper Fueling Instructions](#).

Maintain employee training records.

- Maintain a log of training with date, attendees and procedure or training performed.
- Click for an example [Employee Training Log](#).

Require immediate cleanup of oil, chemical, pesticide, fertilizer and soil spills.

- Oil, chemicals and pesticides can be toxic to aquatic organisms, and fertilizer and soil can cause nutrient (algae causing) pollution. Take a survey of these types of items and be prepared to clean them up should a spill occur. Clean-up kits and materials should be readily available and staff should be aware of their locations.

Educate Customers of Top 10 Best Management Practices.

- Click [HERE](#) for the Top 10 BMP list

Additional

Require that pets are not allowed to run unleashed in the marina.

- It is difficult to control or know where pet waste occurs if pets are running loose.

Require pet owners to clean up after their pets.

- Pet waste can runoff into the water and cause bacterial pollution including dangerous e-coli. Pet waste also contributes to excess nutrients in the water, which promotes algae growth.

Supply disposal bags for pet owners.

- There are a variety of companies who offer pet waste disposal kits. Several are available on-line.

Train staff on stormwater pollution prevention.

- Click to access EPA information on [Stormwater Runoff Management](#).
- Maintain training logs with name, date and practice covered. Include training on proper cleaning and maintenance.

Incorporate BMP land use and maintain shoreline vegetation.

- Tip: Plant grass between impervious area and the shoreline.

- Incorporate grassed swales, porous pavement, buffer area and catch basins where feasible.
- Click for more information on [BMP Land Use](#).

Use native plants and mulch in vegetated area.

- Be sure to choose types of plants that are appropriate for the conditions where they are planted. Native plants can tolerate local weather conditions much better than annuals. Native plants have much deeper root systems and do a better job of absorbing excess nutrients and potential toxins. Their deeper root systems also make them less susceptible to washing out and help hold the soil together therefore reducing sediment loss and erosion.
- Mulching plants helps them tolerate dry conditions better.

Provide covered trash and recycling bins for customers and visiting boaters.

- Covered trash receptacles do not fill up with water when it rains, do not lose their contents to strong winds, and are less likely to be invaded by scavenging mammals and birds. A loose cover also acts as an indicator that a receptacle is full. The best overfill prevention is frequent emptying by marina staff.
- Recycling of nonhazardous solid waste such as scrap metal, plastic, aluminum, glass, wood pallets, alkaline batteries, paper, fishing line and nets, and cardboard is recommended wherever feasible.
- Recyclable hazardous solid waste such as used lead-acid batteries and used oil filters, should be stored on an impervious surface, under cover, and sent to or picked up by an approved recyclable materials handler.

Berm off trash and recycling areas to prevent leaks from entering the waters.

- Runoff from trash and recycle bins can contain a variety of pollutants. Even in covered bins liquids can leak through and end up in the water. Adding a Berm or retaining wall helps filter and slow down this potential runoff.

Have a predetermined procedure for approaching polluters.

- Always approach them in a friendly and helpful manner. Offer assistance rather than condemning bad behavior.
- Have written rules about pollution that you can provide to them. Offer information and resources for a better way to deal with the issue. This is a perfect opportunity to offer personal service, education and relationship building.

Stock non-toxic cleaning products, bilge pads, and other eco-friendly items in store and showcase them prominently.

- “Nontoxic” and “phosphate-free” cleaners are available and friendlier to the environment than products with toxic components.

- Products that carry safety warnings about the harm they can cause to people can harm the environment as well.
- Although “biodegradable” sounds good, it does not mean that a product is nontoxic. Biodegradable products are those which can be broken down by bacteria, other organisms, or natural processes. The degradation of “biodegradable” products in water uses dissolved oxygen, and therefore these products can lower dissolved oxygen levels.

Provide free absorbent pads for boaters to use in case of spill.

- Oil-Only Absorbent Pads are designed to control and clean up spills in small areas. They repel water and absorb only petroleum-based fluids to ensure efficiency in your cleanup operation. Oil-Only Pads can be used indoors around machinery to catch leaks, drips and spills or use them outdoors to soak up oil sheens off the surface of water.

Use alternative to coal tar sealant in parking lot or paved areas.

- Coal-tar based sealers contain a large amount of polycyclic aromatic hydrocarbons, also called PAHs. Some PAHs are carcinogenic and can harm aquatic organisms. These chemicals wash off during rain events and enter the water. Some studies show that PAHs may elevate the risk of cancer in humans.
- Click for [Choosing Alternatives to Coal Tar Sealants](#)
- Untreated asphalt is the most environmentally friendly alternative, but there are certain variables that you need to get right with asphalt-based sealant. Choose a company with expertise and experience in asphalt based sealant application and get informed. There are some sealants on the market which do not contain PAHs. They may contain other dangerous chemicals and should be studied and used with caution in a marina environment where runoff into the lake is immediate and unavoidable.
- Tip: A vegetative buffer between the parking area and the lake helps to filter some of the toxins.

Clean parking lots using dry methods or methods in which wash water is recovered.

- Routine sweeping and collection of debris is the best way to clean parking and other paved areas. If impervious areas are washed with water the debris will runoff into the water.

Provides Boater and Staff Education for:

Proper storage and disposal of materials

- Boaters must properly manage and dispose of all wastes and materials. (Where are your trash receptacles? How do you want boaters to handle their household hazardous waste? Do you offer recycling?)

Emergency Spill Response

- Boaters should report oil and fuel spills to the marina office immediately. (Do you provide absorbent materials and containment booms for boaters? Are they available on the docks or fueling area?)

Household Hazardous Waste disposal site locations

- Do you have onsite collection sites for household hazardous waste? If not, where is the nearest appropriate site to your marina?

Proper fueling procedures

- Click for information on basic [Proper Fueling Procedures](#).
- Click for a list of [Boater Best Management Practices for Petroleum Containment](#)