

POLLUTION PREVENTION AND BEST MANAGEMENT PRACTICES FOR MARINE FACILITIES (BMPM)

- [Introduction](#)
- [Discharge of Sewage from Vessels](#)
- [Bilge Water](#)
- [Pumpout Facility](#)
- [Petroleum and Related Products Storage and Handling](#)
- [A. Waste Oil](#)
- [B. New Oil](#)
- [C. Anti-Freeze Engine Coolant](#)
- [D. Waste Gasoline](#)
- [E. Paints, and Waste Diesel, Kerosene, Mineral Spirits](#)
- [F. Underground Storage Tanks](#)
- [Spills](#)
- [A. Oil spills on land](#)
- [B. Fuel spills on land](#)
- [C. Spills on water](#)
- [D. Grease](#)
- [E. Oil or fuel filters](#)
- [Fueling Operations](#)
- [A. Stationary Operations](#)
- [B. Mobile Fueling Operations](#)
- [Used Lead-Acid Batteries](#)
- [Washing by Hand Above Water Line](#)
- [Steam Cleaning](#)
- [Pressure Cleaning](#)
- [Bottom Paint Removal](#)
- [A. Wet](#)
- [B. Dry](#)
- [C. Sand blasting](#)
- [Sanding Hull or Topsides](#)
- [Spray Painting](#)
- [Engine and Parts Storage](#)
- [Engine Parts Washing](#)
- [Disposal of Solid Waste](#)
- [U.S. Coast Guard MARPOL](#)

- [Manatee Protection](#)
- [Hurricane Preparedness Plan](#)
- [Tenant Notification by Facility Owner 10](#)

INTRODUCTION

Historically, boat repair and maintenance activities at marine facilities located in Broward County have been conducted outdoors on the waterfront. In many cases, these practices have contributed to the discharge of wastes and contaminants to the surface and ground waters of Broward County and have resulted in subsequent environmental impacts. Wastes generated by boatyard activities typically include such items as: abrasive grits, spent solvents, waste oils, washwater, paint overspray, cleaning fluids, anti-corrosive compounds, paint chips and scrap metal.

In 1991, the Broward County Department of Natural Resource Protection (DNRP) initiated a joint party cooperative compliance program with an overall objective of preventing pollutants generated at marine facilities from entering the waterways. Another prime goal of the BMPM was to streamline the environmental permitting or licensing process for the industry and to consolidate local environmental regulations into an understandable and workable document. The program was initiated by involving interested parties, including individual representatives of the industry and the Marine Industries Association of South Florida (the trade association which represents the marine industry), in the development and implementation phases of the Best Management Practices for Marina's (BMPM).

The program began with the formation of a DNRP technical team to assess the environmental impacts resulting from marine industry practices and to review marina operational practices. This team working closely with industry representatives developed specific requirements and goals for incorporation into everyday operational practices at all marinas.

These everyday practices which generate pollutants include such activities as painting, pressure washing, hydro blasting, mechanical work on engines, hazardous material use and storage, bilge cleaning, welding, grinding, waxing and cleaning. Specific guidelines were developed and incorporated within the BMPM to encourage the elimination of hazardous material and wastewater discharges into the waterways, soil and air of Broward County.

The OVERALL GOAL of this document is to DEVELOP A POLLUTION PREVENTION AND BEST MANAGEMENT PRACTICE FOR MARINE FACILITIES OPERATING IN BROWARD COUNTY WHICH FACILITATES COMPLIANCE WITH APPLICABLE ENVIRONMENTAL REGULATIONS, MINIMIZES WASTES, AND FOSTERS A POLLUTION PREVENTION ATTITUDE WITHIN INDUSTRY.

This document has been developed in a cooperative effort with the marine industries of Broward County to insure that it accomplishes the Department's objectives and at the same time is implementable and

free of any undue technological or economic burdens. The industry's hands on involvement and active participation in the development process has aided in the formulation of a BMPM that serves the needs and expectations of all affected parties.

The Pollution Prevention Act of 1990 established a clear national policy that pollution should be prevented or reduced at the source whenever possible. The Environmental Protection Agency (EPA) defines pollution prevention as "any effort to reduce the quantity of industrial, hazardous, or toxic waste through changes in the waste generation or production process at the source." This includes all pollution, hazardous and non-hazardous, regulated and unregulated, across all media and from all sources.

Complying with environmental regulations and incorporating pollution prevention techniques are complementary activities. Many pollution prevention practices are low-cost, low-risk alternatives to hazardous waste disposal. Most of the approaches do not require a great deal of sophisticated technology. Many facilities may already be incorporating pollution prevention practices in their facility without realizing it.

The Best Management Practices which follow shall apply to all "marine facilities" defined as:

1. All recreational boat docking facilities with ten or more boat slips;
2. All boat storage facilities with ten or more storage spaces;
3. All commercial boat docking facilities.

Activity or Product

Discharge of Sewage from Vessels (excludes "Gray" water), Marine facility operator shall advise all tenants of the following:

- A. It is illegal to discharge raw or untreated sewage into the waters of Broward County and such acts are punishable by fines of up to \$15,000 per day; and
- B. The location of the nearest public sewage pumpout facilities; and
- C. All permanently installed sewage systems on vessels must be either approved Type I or II Marine Sanitation Devices or must be locked off while the vessel is docked.

Marine facility operators shall require all tenants to certify their knowledge and acceptance of these provisions in writing before providing dockage and shall further disallow dockage to any vessel which the marine facility operator knows or has reason to know is discharging sewage in violation of this section.

Bilge Water: Bilge water and "gray" water that is not contaminated by oil, fuel or other regulated

contaminants may be discharged onto surface waters or on land. Federal, state and local regulations prohibit the discharge of bilge water and "gray" water that is contaminated by oil, fuel or other regulated contaminants. Boat owners shall be liable for complying with these regulations and marine facilities shall inform facility users of these regulations. Marine facilities shall have supplies and equipment accessible to remove oil and fuel from bilge water so that it may be disposed of legally. These shall include petroleum adsorbents and a written action plan to deal with significant quantities of oil, fuel or other regulated contaminants. "Gray" water shall mean waste water from galley operations (dish washing) and from hand basins and showers.

Pumpout Facility: All marine facilities which have live-aboard vessels shall:

- 1) have a fixed or portable sewage pumpout system facility approved by DNRP which shall be maintained in operating condition and shall have appropriate signage; or
- 2) maintain an agreement with a mobile waste hauler who is obligated to remove sewage from all live aboard vessels on a regular basis; or
- 3) be located within one-half mile of a municipal pumpout facility or private pumpout facility which is obligated to provide pumpout services to tenants of the marine facility and about which the tenants of the marine facility have been notified.

For purposes of this section, "live aboard" shall be defined as any vessel stored in the water and used primarily as a residence. This term shall not encompass those vessels which accommodate persons for 72 hours or less.

Petroleum and Related Products Storage and Handling:

Petroleum products shall not be discharged into a storm drain, sanitary sewer or onto the open ground or surface waters. Care must be taken in handling these products and spills cleaned up promptly at the time detected. All marine facilities shall maintain a supply of petroleum absorbent material and "spill-dry" in a readily accessible location. In addition, all marine facilities must have a written Spill Prevention and Contingency Plan to deal with petroleum product spills. All spills greater than 10 gallons or 80 pounds shall be reported to Broward County Broward County Department of Natural Resource Protection. All storage containers must be surrounded by secondary containment, preferably covered and isolated from weather elements, which consists of an impermeable membrane or structure in which tanks or containers are placed. All materials in secondary containment shall be compatible. [Broward County Code Chapter 27-356]

A. Waste Oil: This includes waste engine oil, transmission fluid, hydraulic oil, gear oil. Waste oil must be stored in a non-leaking container clearly marked "waste oil" on an impermeable surface, and covered in a manner that will prevent rain water from entering the container. Oil spills must be prevented from leaving the area by means of a berm or retaining structure. Waste oil must be removed from the site by a

waste transporter permitted to handle this waste produce and records must be retained for inspection. [Broward County Code Chapter 27-356]

B. New Oil: This includes new engine oil, transmission fluid, hydraulic oil, gear oil. These petroleum products must be kept in non-leaking containers on an impermeable surface and covered in a manner that will prevent rain water from entering the container. Leaking containers must be emptied promptly upon detection, either by transferring the product to a non-leaking container or by disposing of it in the "waste oil" container. [Broward County Code Chapter 27-356]

C. Anti-Freeze Engine Coolant: Anti-freeze engine coolant, when drained from an engine, must be stored in a clearly marked container on an impervious surface, under cover. It cannot be disposed of down a storm drain or in a septic system. Disposal to a sewer connected to a POTW must be permitted by the POTW owner. Or, it must be removed from the site by a waste transporter permitted to handle this waste product and records must be retained for inspection. [Broward County Code Chapter 27-356]

D. Waste Gasoline: Must be stored in a non-leaking container, on an impermeable surface and covered to prevent rain water from entering the container. The container must be clearly labeled "waste gasoline" and the storage location must conform to local Fire Codes. Whenever possible, waste gasoline shall be filtered and used as a fuel. Waste gasoline shall not be discharged to the ground, storm sewers or to surface waters of Broward County. Waste gasoline must be removed from the site by a waste transporter permitted to handle this waste product and records must be retained for inspection. [Broward County Code Chapter 27-356]

E. Paints, and Waste Diesel, Kerosene, Mineral Spirits: These products must be stored in non-leaking containers on an impermeable surface, and covered to prevent rain water from entering the container. Each container must be clearly labeled with its contents. The storage locations shall conform to local Fire Codes and to Chapter 27 of Broward County Regulations. The disposal of waste products must be by a waste transporter permitted to handle such wastes, and records must be retained for inspection. Waste petroleum products or paints shall not be discharged to the ground, storm sewers, septic systems, POTW's or to the surface waters of Broward County. [Broward County Code Chapter 27-356]

F. Underground Storage Tanks: Storage tanks are regulated by Broward County Code Chapter 27 and may require a separate storage tank license. Information can be obtained from the DNRP Storage Tank Section.

Spills:

Spills greater than 10 gallons or 80 pounds shall be reported to Broward County Department of Natural Resource Protection at (954)519-1499. Remediation of contaminated areas may required a permit from DNRP in accordance with the requirements of Broward County Code Chapter 27-356.

A. Oil spills on land: Oil spills shall be collected and put into the waste container. Oil residues may be

absorbed with "spill-dry" or a similar product and shall be disposed of by a waste transporter permitted to handle such wastes and records must be retained for inspection.

B. Fuel spills on land: Spilled diesel fuel shall be collected and placed in the waste container. Uncollectible residual amounts may be absorbed. Using "spill-dry" or other petroleum absorbent materials and shall be disposed of by a waste transporter permitted to handle such wastes, and records must be retained for inspection.

Spilled gasoline shall be collected and placed in the waste container. Residues remaining on the ground may be absorbed with "spill dry" or absorbent pads, but the absorbent material must be thoroughly aerated before disposing with the regular trash to remove gasoline vapors.

C. Spills on water: There shall be kept on hand a floating containment boom large enough to enclose the area of surface water where a spill may reasonable occur, but with a minimum length of forty (40) feet. Petroleum absorbent materials shall also be kept available to absorb spills on the surface water. Reporting requirements for fuel spills shall be followed as per Coast Guard, (954) 927-1611 and DNRP, (954)519-1499 regulations. Staff at fueling facilities shall have proper training in the deployment of fuel spill equipment and materials.

D. Grease: Spilled or waste grease shall be collected and put into the waste oil container. Residues remaining on the ground may be absorbed with "spill-dry" or a similar product and disposed of with the regular trash.

E. Oil or fuel filters: Oil or fuel filters must be crushed and drained before disposal by placing the filter in a funnel over the appropriate waste collection container to allow the excess petroleum product to drain into the container. Drained filters must be collected and recycled.

Fueling Operations:

It is the responsibility of the marine facility to properly supervise the fueling operations.

A. Stationary Operations: Fuel nozzles must have automatic back pressure shut-offs and must not have a holding clip to keep the nozzle open (i.e., the nozzle shall only be held open by hand). In the immediate vicinity of the dispenser, there must be petroleum absorbent pads readily accessible in the event of a small spill. If fuel accidentally spills in the water or onto the ground, the person fueling the boat shall use the absorbent pads to remove the fuel from the water surface or from the ground. These absorbent pads shall be dried in the open air under sunlight and may then be disposed of.

B. Mobile Fueling Operations: Mobile fueling operations at any facility shall be the joint responsibility of the marine facility, the tank truck operator and the vessel owner. Extreme caution must be taken to prevent spills from occurring.

Used Lead-Acid Batteries:

These must be stored on an impervious surface, under cover, and sent to or picked up by an approved recycler. Records must be retained for inspection.

Washing by Hand Above Water Line:

Detergents and cleaning compounds used for washing boats shall be biodegradable and amounts shall be kept to a minimum. The waste water generated by low pressure boat washing, including initial rinse off of boats kept primarily in dry storage, which contains no bottom paint, shall not be considered an industrial discharge or "hazardous waste" as defined in Chapter 27-352.

Steam Cleaning:

Must be done on an impervious area designed to collect and contain the cleaning effluent. Discharges to surface waters is prohibited.

A. If detergents or solvents are not used, a properly sized grease trap/oil and water separator connected to a sanitary sewer must provide adequate treatment to allow the effluent to meet sewer standards.

B. If detergents or solvents are used, the oil and grease are emulsified and a grease trap would no longer function properly. In these cases, treatment or recycling systems must be used. This water shall be considered industrial waste water and discharge to septic systems is prohibited. If sanitary sewers are not available, waste water must be hauled by a DNRP licensed hauler.

C. No domestic waste water, industrial waste water, or other waste water shall be discharged into any sewer designated to carry storm water, nor shall storm water be discharged into a sewer designed to carry domestic waste water. No industrial waste water shall be discharged to sewers without prior approval from the POTW owner and/or governing municipality.

Pressure Cleaning:

The use of high pressure water cleaning equipment for the initial rinse-off of a vessel hauled from the water is acceptable.

This process shall be restricted to an area with an impermeable surface (such as sealed asphalt or sealed concrete) and with a berm or pitch which allows the waste water to be contained and collected. Waste water from pressure cleaning may not be discharged to septic tank or surface waters. Waste water may be disposed by sanitary sewer provided the waste water meets the standards for sanitary sewer disposal. Tanks used to collect waste water and remove solids shall be considered process tanks. Paint solids constituents classified as hazardous must be removed by a licensed hauler. [Broward County Code Chapter 27-356]

Bottom Paint Removal:

Boat bottom paints contain metal compounds that are toxic to marine life and the removal of these paints from the bottom of a boat produces a waste product which degrades the environment. Discharges to surface waters is prohibited.

Paints containing tin compounds are regulated by the EPA and these paints may be applied or removed only by persons or organizations licensed by the EPA. The EPA regulations regarding storage, application, disposal of paint containers and paint residues, sanding dust, etc. are incorporated herein by reference.

Bottom paint shall be removed as follows:

A. Wet: Removing bottom paint by high pressure water or with a low pressure hose and a scrubber or scraper produces an "industrial waste water" as defined in Chapter 27. As a result, this activity must be conducted over an impermeable surface such as sealed asphalt or cement (not over open ground) with a retaining berm so that the waste water can be contained. This waste water may be recycled or disposed of, but prior to disposal, it must be treated so as to reduce the levels of concentrations of heavy metals (principally copper) and meet the standards for disposal in sanitary sewers, as defined in Chapter 27. Paint solids shall be collected and disposed of properly.

B. Dry: Removing bottom paint by dry sanding (either by hand or with power tools) produces a sanding dust containing potentially hazardous metals (principally copper). This sanding must be done over an impervious surface such as asphalt, cement, or a material such as canvas, plastic, etc. (not over open ground) and there must be a berm or retaining wall surrounding the area so that the sanding dust can be swept or vacuumed and disposed of properly.

C. Sand blasting: should be confined where possible pursuant to FAC 17-2.610(3)(c)7, "Unconfined Emissions of Particulate Matter, Reasonable Precautions." Wet sand blasting shall be subject to the same provisions as other wet paint removal operations.

Paint chips, sanding debris and other solids which are hazardous must be removed by a licensed hauler.

Sanding Hull or Topsides:

The sanding dust generated by this activity shall be collected and disposed of properly and may not be intentionally discharged into a storm drain or onto surface waters. Sand blasting should be confined where possible (Florida Administrative Code Rule 17- 2.610(3)(3)7, Unconfined Emissions of Particulate Matter, Reasonable Precautions). Wet sand blasting shall be subject to the same provisions as other wet paint removal operations.

A. Where sanding is conducted on land, reasonable precautions shall include laying drop cloths beneath the area being sanded and collecting the debris for proper disposal.

B. Where sanding is conducted in the water, reasonable precautions shall include surrounding the immediate area with floating booms and removing the debris with a skimmer to the greatest extent practicable.

Spray Painting:

All spray painting operations shall be performed in compliance with Broward County Code of Ordinances, Section 27-173 (d) Objectionable Odor, and (e) Volatile Organic Compounds (VOC) Emissions or Organic Solvent Emissions. This involves good work practices such as:

- Store waste paint and solvent only in covered containers to prevent evaporation to the atmosphere;
- Direct solvent from cleaning spray equipment into containers to prevent evaporation to the atmosphere;
- Whenever possible use solvents with low volatility and coatings with low VOC content; and
- Use coatings application technic to allow or high transfer efficiency.

In addition, at all facilities where more than 2.5 gallons of coatings are sprayed in a five-day week, the paint spray operation shall be performed in compliance with Broward County Code of Ordinances, Section 27-173(f), Table II which requires an appropriately enclosed area.

A. Spray painting on land must occur over an impermeable surface and in such a manner that overspray does not fall on open ground or surface waters. A boom must be available to contain any overspray on surface waters. Overspray on water must be removed immediately from the surface of the water.

B. Spray painting over water: Area must be boomed such that all overspray can be collected via skimming or other effective method.

Engine and Parts Storage:

Engines and engine parts must be stored on a covered, impervious surface such as sealed asphalt or cement. Care must be taken to prevent oil and grease from leaking onto the open ground.

Engine Parts Washing:

Parts washing may not be done over open ground. Parts washing must be done in a container or parts washer. The parts must be rinsed or air dried over the parts cleaning container. The dirty parts washing fluid must be recycled or disposed of by a licensed waste hauler.

Disposal of Solid Waste:

All facilities shall provide an adequate number of leak proof containers for the disposal of solid waste and garbage. All marine facilities shall post a minimum of two (2) signs prominently placed to educate the public to keep trash from entering the water.

U.S. Coast Guard MARPOL (Marine Pollution) Regulations:

These regulations can be obtained by contacting the U.S. Coast Guard at (954) 536-5693.

Manatee Protection:

All marine facilities shall post a minimum of two(2) "Manatee Caution" signs within their facility. Said signs shall be visible to vessels as they enter and exit the facility. In addition, all facilities shall provide vessel owners written manatee information every November.

Hurricane Preparedness Plan:

All marine facilities shall prepare a written hurricane preparedness plan for their facility and provide a copy to all vessel owners using the facility during hurricane season.

Tenant Notification by Facility Owner:

All marine facilities shall make their tenants aware of the applicable requirements set out by these Best Management Practices and tenant's responsibility for tenant's infractions. Except as otherwise noted in these Practices, this notification may take the form of a sign, easily readable and posted at a conspicuous common area of the facility, which contains the following information:

The facility owners and operators are committed to the preservation of the local water, land and air quality and comply with the requirements of the Broward County Best Management Practices for Marine Facilities.

Sound environmental practices require that all Tenants obey the following rules:

1. No raw sewage or oil-contaminated bilge water may be discharged into the water.
2. All hazardous chemicals, including waste oil, engine coolant, hydraulic fluid, gasoline, diesel, paint, mineral spirits may only be disposed of in the marked barrels/containers located .
3. All spills of gas, diesel, oil or other hazardous materials must be reported immediately to the facility operator.
4. Boats may only be washed with biodegradable soaps and the amount of soap used must be kept to a minimum.

5. Removed paint chips must be captured and taken to the marked barrels located. If more than a small area is being sanded, sanding debris must also be captured by tarps or booms and thrown in the trash. This debris may not be allowed to enter the water or the ground and may not be left where it might be exposed to rainwater.

Violations of these rules should be reported to the Department Broward County of Natural Resource Protection (DNRP) at (954)519-1499. Violators will be subject to heavy fines.

[Back to Technical Bulletin No. 94-04 for a concise summary of this BMP](#)

[Back to Best Management Practices](#)