



4.10 Hazardous Materials and Hazardous Waste Management

Hazardous materials — gasoline, oil, paints, and solvents — are used in a variety of marina activities and services, and must be managed carefully. This section discusses the requirements for hazardous materials management and hazardous waste disposal, and describes BMPs available to help the marina meet those requirements and reduce impacts on coastal waters.

LEGAL REQUIREMENTS

The following laws apply to hazardous materials and waste management. Please read the summary of these regulatory programs in Chapter 6.

- Massachusetts Hazardous Waste Regulations
- Massachusetts Waterways Regulations

Best Management Practices

Planning, Training, and Spill Coordination

Gasoline, solvents, and paints can be dangerous substances if mishandled. Marina owners and their employees should understand the risks associated with handling hazardous materials, and know who to contact in case there is a spill.

- ▶ **Provide Employee Training:** Train employees on proper handling, storage, transfer, and disposal practices for hazardous materials and hazardous waste. Arrange a training session with your hazardous waste hauler.
- ▶ **Coordinate with Town Safety Departments:** Ensure that local response officials, particularly the fire department, are familiar with the location and character of hazardous materials stored on site (required by law). Call the municipal fire department and arrange to have them visit the facility to inspect storage areas. Provide them with a list of chemicals stored at the facility and a plan of the site showing storage locations.
- ▷ **Establish a Facility Hazardous Waste Plan:** Develop a plan that includes information about hazardous materials used and waste generated at the marina. The plan should include the following information: type of waste accepted; details about the storage area and design requirements (for example containment and security); who is responsible for the area; who should be contacted when waste needs to be disposed; contact information for the waste hauler; training procedures for staff; schedules for staff training and storage area inspections, and other relevant information.

- ▷ **Understand Chemical Type and Hazard Degree:** For each hazardous material used, be aware of the chemical type (toxic, ignitable, reactive, and/or corrosive) and hazard posed (high or low hazard on a relative scale). Seek out less hazardous alternatives to any product or practice that generates significant amounts or highly hazardous wastes. Contact the Massachusetts Office of Technical Assistance at (617) 626-1060 for more information.
- ▷ **Use Signs:** Post signs that locate hazardous waste disposal, recycling, and reuse areas. Also post a list of products that must be disposed of as hazardous waste. The sign should have customers direct all questions to the marina office.

LOCAL EXAMPLE

Hawthorne Cove Marina in Salem has made a special effort to collect and recycle hazardous waste including used oil and batteries. It has a waste center available to all marina users to dispose of hazardous waste, which is contained in 35-gallon drums within a secondary containment system. The waste is then removed and recycled by a certified company. Call Russ Vickers at (978) 740-9890 for more information.

Handling

Employees regularly handle hazardous materials and hazardous waste at the marina when providing services to boaters. Appropriate handling procedures are described for specific activities that use hazardous materials, such as paints (Section 4.1) and fueling (Section 4.5). Additional precautions must be taken when handling hazardous wastes while preparing them for off-site disposal.

- ▶ **Limit Hazardous Liquid Transportation:** If you are a Very Small Quantity Generator and transport waste off-site, you can move no more than a total of 55 gallons at one time. This precaution will limit the size of an unexpected spill.
- ▷ **Use Material Safety Data Sheets (MSDSs):** Make certain that all materials are used strictly according to manufacturers' instructions. Consult the MSDSs for proper handling of the products and disposal of the hazardous waste.
- ▷ **Proper Handling of Liquids:** Use funnels when transferring liquids to prevent spills. Check with your waste hauler or recycling contractor to see what liquids can or cannot be mixed. Inappropriately mixing liquids will greatly increase your disposal costs and can be dangerous.

Storage and Disposal

Hazardous materials and hazardous waste must be temporarily stored at the marina either prior to use or off-site disposal. Set up a system whereby all hazardous waste generated at the facility is controlled and stored in a secure central location, then contact a waste hauler or hazardous waste collection company to arrange a pickup service.

Hazard Alert

If your facility collects more than half of a 55-gallon drum of hazardous waste in any month, you are considered a "Small Quantity Generator." Refer to Chapter 6 to learn more about the regulatory requirements for storing hazardous waste.

For More Info

Hazardous Waste Collection Companies are listed on Massachusetts Department of Environmental Protection's website at www.state.ma.us/dep/bwp/dhm/files/trnsalph.pdf. Some local companies are listed in Appendix C.

Hazard Alert

All on-site recycling by small and large quantity generators of used oil and/or hazardous waste must receive a permit from the Massachusetts Department of Environmental Protection. See the discussion of the Massachusetts Hazardous Waste Regulations in Chapter 6 for more information.

- ▶ **Proper Hazardous Materials and Waste Storage:** Hazardous materials and waste should be stored in closed containers inside a building and on impervious surfaces (such as asphalt or concrete), as far from the water as possible. If storage cannot be provided inside, then secondary containment, such as a berm or large container, must be used around all containers to prevent spills from spreading in case the container leaks. Secondary containment should be designed with sufficient volume to hold 110 percent of the maximum volume of the container. Storage areas should be close to maintenance areas to decrease the distance necessary for transfer, but away from any potential fire source.
- ▶ **Container Labeling:** All containers must be labeled with information that includes what is inside the container and when the waste was generated.
- ▶ **Regularly Inspect and Maintain Storage Areas:** Regularly inspect storage areas to check for leaky containers. Have appropriate spill containment and clean-up equipment, such as absorbent materials and booms, available and easily accessible. Staff should always inspect the contents of the waste before accepting it for recycling. After verifying the liquid received, they should double check the receiving tank before emptying the accepted container.
- ▶ **Secure the Hazardous Waste Storage Area:** Ensure that your hazardous waste storage areas are secure. Prevent access to these areas by untrained employees or customers. If possible, have trained staff transfer hazardous wastes from generation sites (boats, repair shop, etc.) to storage areas. Secure the liquid recycling area (perhaps inside a locked shed) to prevent inadvertent mixing. Create a well-marked drop-off point where boaters can leave waste containers so that they can be later dumped into the proper drum by facility staff.
- ▶ **Minimize On-Site Hazardous Material and Waste Storage:** Keep the total volume of hazardous material and waste stored to a minimum. Keep a record of material and waste on-site and dates of storage. Employ a “first-in, first-out” system. Since hazardous material and waste can degrade over time, this will help you get rid of the substances that can become long-term problems.

Reuse and Recycling

Reusing and recycling hazardous waste reduces disposal costs and purchasing costs of new products. The following steps will help you establish a successful hazardous waste recycling program.

- ▶ **Properly Collect Wastes:** Collect the following waste products from customers for reuse and recycling: engine oil, antifreeze, paints and solvents, varnishes, pesticides, and transmission fluid. Waste should always be transferred through a funnel to reduce spills. The funnel should be attached so that it is stable and should be large enough to hold oil cans and filters so that they can sit on the funnel and drain. Ask your waste hauler about recycling options or call a recycling company (see DEP website address listed under information sources).

- ▷ **Maintain a Product Exchange Area:** Establish a hazardous material exchange area where customers can drop-off unused paint, varnish, oil, and other materials for other customers to use. Used solvents and paint thinners can be contained and reused after the solids have settled out (the solids must be disposed of as hazardous waste). Allow the solvents to stand for several days to induce the solids to settle.
- ▷ **Require Recycling in Contracts:** Make recycling a requirement under customer and outside contractor contracts. See Chapter 3 for more information on customer contracts.
- ▷ **Drain Fluids:** Fluids must be completely drained from engine parts that are to be disposed. For example, oil filters should be left to drip dry for 12 hours to ensure that no liquid oil is disposed of as solid waste. Drained oil filters can then go in with regular trash or to a filter recycler off-site.
- ▷ **Used Oil Burner:** Consider purchasing a waste oil burner as a winter heating source. Containers for collecting used oil must be marked “Regulated Recyclable Material — Used Oil — Toxic.” There is one limitation about the oil source: all waste oil for heating shall only be collected from the marina’s own customers and engine repairs, with none coming from off-site non-business sources. Burning used oil at your marina in the winter can save you money on winter heating costs and used oil disposal, particularly for marinas and boat shops that are active year-round. You will need to receive approval from your local fire department and there may be other regulatory implications for small marinas. Call the DEP Waste Oil Compliance Hotline at (617) 556-1022.

LOCAL EXAMPLE

Hyannis Marine has one waste oil heater and the owners are considering purchasing a second one because it has worked so well for them. In order to comply with the necessary regulations for the waste oil heater, Hyannis Marine installed double walled underground tanks. Hyannis Marine filters the oil using a Racor™ filter before it is burned and is able to store 4 to 5 thousand gallons of oil in compliance with all regulations. Call Dan Carlin at Hyannis Marine to find out more details (508) 775-5662.

Useful Contacts

1. The 1999 Massachusetts Private Hauler Directory is available from the DEP website at www.state.ma.us/dep/recycle/files/haulers.pdf.
2. Massachusetts Office of Technical Assistance can provide information and technical assistance to marinas looking to reduce their hazardous waste generation. Call (617) 626-1060 for more information.
3. Massachusetts Department of Environmental Protection, Recycling Services — Call DEP at (617) 556-1021 for information about starting and managing a recycling program.



Waste oil burner manufactured by Clean Burn, Inc.

Harzard Alert

Under the Massachusetts Hazardous Waste Regulations, waste oil that is burned on-site is classified as a Regulated Recyclable Material. When waste oil is placed in a drum to be shipped for off-site disposal, it is classified as hazardous waste. Read about the Massachusetts Hazardous Waste Regulations in Chapter 6.



HAZARDOUS MATERIALS AND WASTE MANAGEMENT

Complete this checklist if your facility generates hazardous waste.

Activities that occur at the facility: Hazardous Material/Waste Storage
 Hazardous Material/Waste Generation Hazardous Waste Recycling

Check either the “Yes” or “No” column to indicate if you are using each of the BMPs listed below. If the BMP does not apply (you are using a different BMP or the activity does not occur at your marina), put “NA” in the “Yes” column. In the “Action” box, list the next steps for all BMPs where you have checked the “No” column.

BMP	YES/NA	NO	Refer to Page	Action
*Provide Employee Training			4-53	
*Coordinate with Town Safety Departments			4-53	
Establish Facility Hazardous Waste Plan			4-53	
Understand Chemical Type and Hazard Degree			4-54	
Use Signs			4-54	
*Limit Hazardous Liquid Transportation			4-54	
Use MSDSs			4-54	
Proper Handling of Liquids			4-54	
*Proper Hazardous Materials and Waste Storage			4-55	
*Container Labeling			4-55	
*Regularly Inspect and Maintain Storage Areas			4-55	
Secure the Hazardous Waste Storage Area			4-55	
Minimize On-Site Hazardous Material Storage			4-55	
Properly Collect Waste			4-55	
Maintain a Product Exchange Area			4-56	

BMP	YES/NA	NO	Refer to Page	Action
Require Recycling in Contracts			4-56	
Drain Fluids			4-56	
Used Oil Burner			4-56	

***BMP will assist with regulatory compliance.**

NOTES:
