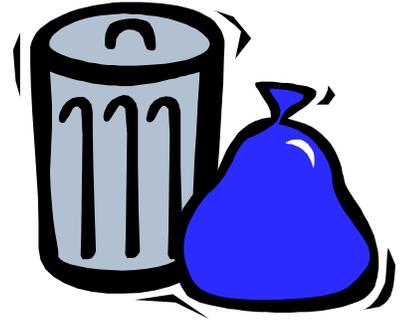


# WASTE MANAGEMENT



## **BENCHMARK**

Contain solid waste to the maximum extent possible with no visible escape of solid waste from the facility in an uncontrolled manner. Manage special and hazardous waste in compliance with all applicable laws.

## WASTE MANAGEMENT BMPS

Properly managing all wastes, trash and other solid wastes, special wastes and hazardous waste is one of the most important environmental jobs in a boatyard or marina management. Careful waste management will protect you from environmental violations as well as help keep your facility safe and appealing.

### Trash and Non-Hazardous Solid Waste

Provide trash receptacles in convenient locations and in adequate numbers to handle the amount of trash generated. All receptacles should:

- Be located conveniently.
- Have tight fitting lids that are kept closed.
- Be emptied on a regular basis before they overflow.
- Comply with any local ordinances.
- Have signs clearly listing rules and regulations for disposal, including what should NOT be put in the dumpster.
- Be inspected regularly by marina or boatyard personnel.
- Be secured to prevent tipping by wind or vandals.



Dumpsters  
Photo credit: Bunnell Marine  
Consulting

Some marinas regulate the accessibility of the collection facility by fencing it in to avoid problems with improper disposal. The area surrounding the solid waste collection facilities should be inspected at least daily by marina personnel and any errant waste discovered during this inspection should be cleaned up from the surrounding grounds. Any waste receptacles placed on docks or near the water's edge should be carefully



secured. Marina operators are responsible for the contents of their solid waste dumpsters, including the improper disposal of hazardous waste or waste oil.

Wood, demolition debris and waste fiberglass can normally be considered solid waste. Exceptions to this include asbestos contaminated waste, bad batches of fiberglass solvent/resin or the deliberate polymerization of waste materials (see regulatory reference at the end of this section).

### Recycling

Recycling materials saves money and resources and can reduce solid waste disposal costs. The easier and more convenient recycling is for boaters, the more cooperative they will be. Recycling centers should:

- Provide separate containers for glass, steel cans, aluminum, plastic, newspapers and office paper.



Recycling bins and signage  
Photo credit: Bunnell Marine Consulting

- Be located close to where the waste is generated (for example, locate a cardboard dumpster near shipping and receiving and bottle bins near picnic areas) or other convenient locations (for example near the land-side foot of the dock, and transient docks)
- Also be located near general refuse containers.
- Select recycling containers based on how they will be collected and sorted. Large recycling containers are difficult to empty and, because they will take longer to fill, should have lids to exclude rain and vermin.

### Shrink Wrap

Because of its volume, shrink wrap poses a unique recycling challenge. Contact your local solid waste facility and request that they support shrink wrap recycling. Alternately, contact some shrink wrap suppliers who may offer a recycling program for their product, or contact a plastics recycling company for service.

### Paint dust, chips or debris and non-liquid paint waste

Paint dust, chips, debris and waste paint contaminated equipment is special waste and in some cases, may be hazardous waste, and must not be disposed of in the normal garbage. Paint waste must be:



- Collected
- Securely stored in a covered and labeled special waste container.



- Tested
- Properly managed.



Representative composite samples must be tested by a qualified laboratory using the TCLP metals analysis (EPA Method 1311-610B or 7000) prior to disposal. If the results of the analysis indicate the waste is hazardous, then the waste must be managed and disposed of as a hazardous waste. If the results indicate it is non-hazardous, then the waste must be disposed of as a special waste.

Empty paint cans can be discarded as solid waste or recycled. Empty aerosol spray dispensers can be disposed as solid waste if they are truly empty (at atmospheric pressure with no remaining liquid). Aerosol cans that are still pressurized and contain liquid are hazardous waste. Spent painting equipment, rags or other debris may be flammable and can spontaneously ignite. Refer to page 4 for information on rag disposal.



Secondary containment  
Photo Credit: MEDEP

Refer to the list in the resource section for licensed special waste and hazardous waste transporters. Keep records that document the volumes of waste material generated on site and the level of toxins contained. (See also: Sand Blasting BMPs and Painting BMPs.) See also Page XX section 3 for guidance on managing special or hazardous waste.

#### Liquid Paint Wastes



Waste oil-based paints, shellacs, lacquers, urethanes, enamels, and paint thinners are hazardous waste, and must be labeled “hazardous waste”, stored, and managed as hazardous waste. This will include used thinners and filters when they can no longer be used, but would not normally include latex paints. See the Hazardous waste section on page 5. (See also: Painting BMPs)

#### Boatyard Bob Says . . .

“Use non-hazardous, aqueous based solvents for clean-up.”

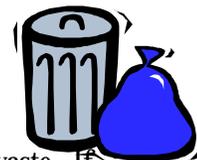
“Reuse rags whenever possible.”

“Don’t hang them to dry before disposal.”

#### Sandblast grit and debris



A representative sample of spent grit and residues must be collected for testing by a qualified laboratory. The required analysis is TCLP - Toxicity Characteristic Leaching Procedure (EPA test method 1311, 6010-B or 7000). Proper characterization of this waste usually requires a minimum of one sample composite from each boat project or one composite sample per 100 cubic yards of waste if more than 100 cubic yards are generated from any one project. If the results of the analysis indicate the waste is



hazardous, then the waste must be managed and disposed of as a hazardous waste. If the results indicate it is non-hazardous, then the waste must be disposed of as a special waste. Keep records that document the volumes of waste material generated on site and the level of toxins contained. (See also: Sand Blasting BMPs.)

#### All Liquids

All waste liquid products such as waste oil, or used antifreeze should be:

- Stored in separate, secure, labeled, covered containers.
- Placed on clean, durable, impervious surfaces.
- Stored within covered secondary containment with a capacity of 110% of the volume of the largest storage tank or container or 20% of the total volume.
- Removed by an approved transporter promptly after the container is filled.
- Inspected frequently for leaks, drips or spills.



Drum containment and labeling  
Photo Credit: MEDEP

If the volume of liquid being stored is relatively small, one secondary spill impoundment may be adequate to contain the material stored in several containers. If the area is secured, the facility may be able to better regulate oil disposal. If the facility allows boat owners to service their own equipment on site, providing clearly marked waste oil and used antifreeze collection areas will encourage the proper handling of those wastes.

Using absorbent pads and catch pans underneath nozzles can reduce spills.

#### Used Oil

A separate container for the disposal of used oil (lube oil, waste diesel fuel), accessible to your facility patrons will encourage the proper disposal of waste. However, it is often difficult to control what is put into an oil collection container. If a container becomes contaminated with water or other substances, then the cost to empty the waste oil may be very high, so locate and supervise the containers carefully. Note: Waste oil contaminated with hazardous waste becomes hazardous waste. Consider keeping the containers in a locked storage area, and instructing customers to leave their waste oil in a closed, sturdy container at a collection site. A member of the marina staff is then responsible for moving the waste from the collection facility and dumping it into the appropriate containers in the storage facility. Some facilities use waste oil burners to dispose of oily materials and provide heat for work areas.



### Used Anti-Freeze

Most used antifreeze is not hazardous waste unless it is contaminated with metals, benzene or other hazardous waste. It is toxic to people and animals. To determine if hazardous, test the antifreeze by TCLP analysis. If the antifreeze is non-hazardous, collect and store like all liquid waste, then recycle. Many commercial firms offer antifreeze recycling services. If the antifreeze is hazardous it must be handled accordingly.

Use non-toxic antifreeze (propylene glycol) in any system that may discharge to the water. Doing so will minimize the need to collect and recycle permanent (ethylene glycol) antifreeze.

### Waste Gasoline

Waste gasoline is a hazardous waste due to ignitability and so must be handled and stored in conformance with the hazardous waste rules. Specifically, the waste gasoline must:

- Be stored in labeled "hazardous waste, waste gasoline" non-leaking containers, on an impervious surface.
- Be stored according to local fire code in the appropriate covered container
- Not be allowed to evaporate
- Not be discharged to surface waters, or poured on the ground
- Be covered to prevent stormwater from contacting the container.
- Be in a storage location that conforms to local fire codes, as well as hazardous waste regulations.
- Be removed by a licensed hazardous waste transporter and taken to a licensed hazardous waste disposal facility.



Waste gasoline containment  
Photo Credit: MEDEP

Whenever possible, gasoline may be filtered and used again as gasoline product. Gasoline can be stored successfully for future use by adding a stabilizing compound to the fuel. Waste gasoline must not be poured on the ground; disposed of in storm sewers, septic systems, municipal sewers; discharged to surface waters; or be allowed to evaporate. It must be removed from the site by a hazardous waste transporter.



Engines and engine parts should be stored under cover over an impervious surface such as sealed asphalt or cement. Care should be taken to prevent oil and other petroleum fluids from leaking onto the open ground.

Oil filters should be drained for 24 hours by placing a filter in a funnel over the appropriate waste collection container to allow the excess petroleum product to drain into the container. Properly drained filters should be collected and recycled when possible or can be double bagged and disposed of as solid waste.



Used rags or other debris may be flammable and can spontaneously ignite. Rags should be stored in an approved ignition suppressive container in a cool dark place until such time as disposal is appropriate. Rags saturated with listed hazardous waste, such as listed "F" solvents (e.g. toluene, xylene, MEK, etc.), or that are dripping wet with unlisted or blended solvents with a flash point of less than 140°f, or with a corrosive compound then the rags are considered hazardous waste. However, if the rags are not saturated with either an "F" listed waste or an ignitable compound they would be considered to be non-hazardous, assuming no other characteristic is exhibited. Rag management is specifically addressed in Maine DEP's "Solvent Contaminated Wipers Management" guidance, please refer to that document for specific rag handling procedures. The wiper guidance can be found starting on page 3-50 of this manual and on the Brightwork CD.



Used lead-acid batteries (Unbroken) should be stored on an impervious surface, stored under cover, protected from freezing, and sent to an approved recycling facility. Cracked, broken or otherwise leaking lead-acid batteries are considered hazardous waste and must be managed accordingly.

Other Batteries



Nickel-Cadmium, and metal hydride batteries (both rechargeable), Lithium and all other non-alkaline batteries are classified as hazardous waste and must be recycled or disposed of accordingly. Collection containers and recycling services are available for most rechargeable batteries for a small fee. See the resources section for more information.



Mercury lamps and switches Spent fluorescent bulbs, other mercury lamps, and mercury switches are in a special category of hazardous waste called Universal Waste. Spent lamps must be collected and stored safely to prevent them from breaking. When a sufficient quantity has accumulated, they must be recycled as universal waste. Bilge pump "float switches" often contain mercury. When a float switch is removed from service it should be carefully examined to determine if it contains mercury.

Contact the manufacturer for more information regarding what switches contain mercury. If the switch does contain mercury, store it with the spent lamps for eventual recycling as universal waste.



Well labeled trash can  
Photo Credit: MEDEP





## Waste Resins and Epoxies

Solvent/resin or epoxy wastes are hazardous waste. Small amounts of catalyzed resins or epoxy left over from application may be disposed of as solid waste as long as the resin is completely solidified in small quantities (i.e. less than pint size or less 2 inches thick) such that there is no residual resin or solvent left. Deliberate polymerization treatment (solidification) for the purpose of disposal of useless resins or bad batches is prohibited unless licensed by Maine DEP. These wastes must be managed as hazardous waste.

## Glue and adhesives



Residual amounts of glues and adhesives remaining in empty caulking tubes may be disposed of as solid waste. Glues and adhesives in liquid form cannot be disposed of as solid waste and should be used for their originally intended purpose. If there is unused product that is planned for disposal, you must determine whether the product constitutes hazardous or special waste.

## Spill Cleanup materials

Most oil spill recovery material can be disposed of easily. Nonabsorbent booms can be cleaned and reused. Oil absorption materials, such as pads, retain little water when fully saturated and can be disposed of the same way as other oil-soaked material. If absorbent pads, booms, or other material become contaminated with a non-hazardous waste like oil, diesel, or grease, they can be collected in a plastic bag and disposed of as solid waste but only if the oil cannot be squeezed from the material.

## Special Waste

Several wastes generated at marinas and boatyards including paint waste, some rags and spent sandblast grit, are classified as special waste. Special waste should be handled and stored in a manner to prevent it from leaking, spilling or becoming airborne. Once the storage container is filled, you must contact one of the two disposal facilities in the state, for guidance regarding testing and disposal. The waste will need to be tested to document it is non-hazardous. Once approved, you must ship the waste via an approved transporter to one of the facilities.

## Hazardous wastes

A number of substances used in marinas may be considered "hazardous materials" or "hazardous wastes" and are subject to "cradle to grave" management measures specified under federal and state statutes and regulations. Marina owners and operators are responsible for determining whether materials handled at their facilities are subject to regulated management and for complying with applicable regulations for the handling, storing, transporting, and ultimate disposal of these



Hazardous waste storage  
Photo Credit: MEDEP



materials, including all manifesting and reporting requirements.

Where feasible, minimize the use and storage of hazardous materials on-site or replace hazardous materials with non-toxic ones.

Hazardous Waste must be:

- Carefully managed and tracked.
- Stored in separate, clearly labeled, containers, ensuring that only the material specified on the label goes into the container.
- Placed on clean, durable, impervious surfaces.
- Stored within covered secondary containment with a capacity of 110% of the volume of the largest storage tank or container or 20% of the total volume.
- Segregated and securely stored in separate areas in closed containers that prevent the mixing of chemicals if incompatible or reactive.
- In a storage location that conforms to local fire codes, as well as hazardous waste regulations.
- Removed by a licensed hazardous waste transporter and taken to a licensed hazardous waste disposal facility.



Hazardous waste storage building  
Photo Credit: MEDEP

#### Disposal and Recycling

Once waste material is collected, ensure that it is disposed of properly. If the material is regulated as hazardous waste, ensure that the pertinent requirements are satisfied.

Regardless of whether the material is eventually recycled or disposed of, carefully document how much material was collected, how it was removed from the facility, and the material's final destination. These records will be invaluable if there is ever any question about the facility's hazardous waste collection and disposal practices. Records of hazardous waste and universal waste shipments must be retained for a minimum of three years from date of shipment. In addition, these records can help you identify processes for waste reduction.

Whether or not a material can be recycled will depend primarily on the type of material and the availability of recycling facilities. In some cases, it may be possible to switch



from a product that is non-recyclable to a similar product that is recyclable without sacrificing effectiveness.

#### CUSTOMER RELATIONS

Waste management is a big issue for boatyards and marinas. Encouraging proper waste management by everyone who uses your facility will help your facility stay safe, in compliance and attractive to customers. As you are ultimately responsible for all activities that take place in your yard, it is in your interest to provide appropriate containers and clearly communicate proper waste practices to everyone who uses your facility.

## LEGAL REQUIREMENTS

The following summaries of Federal and State laws and regulations are for general reference only and do not represent the laws fully. For a complete review of the pertinent laws and regulations use the references below to find either the complete text of the law or regulation or a detailed and complete summary in Section 2.

### **GENERALLY**

Discharge of Pollutants to Water - 38 M.R.S.A § Section 413

Section 413 prohibits discharging (spilling, leaking, dumping) of pollutants into state waters without a license from the Department of Environmental Protection. See page 3-33 or the Brightwork CD for more detailed regulatory information.

For additional information: Bureau of Land and Water Quality, Maine Department of Environmental Protection, 17 State House Station, Augusta, ME 04333, phone # (207) 287-3901.

### **DISPOSAL OF WASTE EQUIPMENT AND MATERIALS**

Hazardous Wastes Regulations - Maine Hazardous Waste Management Rules Chapters 850-857.

These rules are the State's equivalent to the Federal Resource Conservation and Recovery Act (RCRA) and provide for "cradle to grave" management of hazardous waste. All facilities that generate hazardous wastes (see glossary) must manage any waste identified as "hazardous" in accordance with the rules and standards. Universal Waste is a very specific type of hazardous waste which has its own specific management requirements. Universal waste regulation is covered in these rules as well.

Most cleaners and solvents associated with engine work are identified as hazardous either by characteristic, primarily ignitability, or because they are an "F" listed hazardous waste including acetone, toluene, xylene, Methyl Ethyl Ketone (MEK), and



ethylbenzene. Some paints contain high amounts of lead or other heavy metals, which would trigger the identification of the waste as hazardous by the toxicity characteristic. Waste generated from cleanup, including rags, will be hazardous if it is contaminated with a listed waste or is saturated with another ignitable compound. However, if the rags are not saturated with either an “F” listed waste or an ignitable compound they would be considered to be non-hazardous, assuming no other characteristic is exhibited. Rag management is specifically addressed in Maine DEP’s “Solvent Contaminated Wipers Management” guidance, please refer to that document for specific rag handling procedures. The wiper guidance can be found starting on page 3-50 of this manual and on the Brightwork CD.

DEP views solvent/resin wastes as hazardous waste, and treatment of such waste, including useless resins, or bad batches, by deliberate polymerization treatment (solidification) for the purpose of disposal is prohibited unless licensed by Maine DEP. These wastes must be managed as hazardous waste. Incidental polymerization of small amounts of catalyzed resins left over from applications is acceptable without a license, as long as the resin is completely solidified in small quantities (i.e. less than pint size or less 2 inches thick) such that there is no residual resin or solvent left.

For additional information: See page 3-40 or the Brightwork CD for more detailed regulatory information. Contact information below.

Solid Waste Regulations – CMR Chapter 400 (1) III, Hhh, Nnn, and Cccc,

The Solid Waste Regulations classify non-hazardous waste materials and specify their appropriate disposal. Waste materials that are not identified as “hazardous” must be disposed of properly as either special or solid waste. Most wastes resulting from boatyard or marina activity can be classified as solid waste. However, non-liquid paint waste (dust and debris) is specifically identified as special waste. Wood or cured fiberglass debris from boat repair is normally classified as demolition debris, contact your local transfer station for proper disposal.

For additional information: See page 3-40 or the Brightwork CD for more detailed regulatory information. Bureau of Remediation and Waste Management, Maine Department of Environmental Protection, 17 State House Station, Augusta, ME 04333, phone # (207) 287-2651

Used Oil Collection Center 38MRSA § 1319-G and 1319-Y and Waste Oil Management CMR Chapter 860

In 1996, the Maine Legislature passed a law to encourage used oil recycling. It provides incentives for establishing centers where used oil can be collected from the public. If you wish to establish a used oil collection center, you may be eligible to obtain low interest loans or grants for purchasing above ground used oil storage tanks. The loan program is administered by the Finance Authority of Maine (FAME). In addition, the new law establishes design and operational standards to reduce releases of oil to the environment and to minimize the possibility of hazardous waste being mixed in with



the oil. Provided the marina operator is in compliance with these standards, is registered with the Department, and the operator has not mixed hazardous waste or knowingly allowed others to mix hazardous waste with the oil, the law allows for the reimbursement for disposal of waste oil which tests as hazardous waste.

For additional information: See page 3-52 or the Brightwork CD for more detailed regulatory information. Bureau of Remediation and Waste Management, Maine Department of Maine Department of Environmental Protection, 17 State House Station, Augusta, ME 04333, phone # (207) 287-2651

Antifouling Paint Labels FIFRA Section 12 (a)(2)(G) 7 MRSA § 606 (2)(B)

Because all antifouling paints are pesticides, their container labels are enforceable legal documents that require general and specific management practices for preparing surfaces, application, storage and disposal of the paint. See page 3-50 or the Brightwork CD for more detailed regulatory information.

For additional information on all FIFRA issues: Board of Pesticide Control, Department of Agriculture, 28 State House station, Augusta, ME 04333, phone # (207) 287-2731 or [www.thinkfirstspraylast.org](http://www.thinkfirstspraylast.org)

## **REPORTING REQUIREMENTS**

Emergency Planning and Community Right to know Act (EPCRA) – Superfund Amendments and Reauthorization Act of 1986, Title III and 37-B M.R.S.A Chapter 13 §791-806

The Emergency Planning and Community Right to know Act (EPCRA) of 1986 established requirements for federal, state, local governments and industry regarding emergency planning and notification reporting on hazardous and toxic chemicals. The requirements include provisions to increase the public's access to information on chemicals at facilities, their uses and any releases to the environment. The reporting requirements are also very important for the safety of local emergency response personnel (fire, police and rescue).

The EPCRA and state laws require that a facility submit to the local and state emergency planning organizations: 1) copies of all or a list of material safety data sheets (MSDS) for chemicals or any “extremely hazardous substance” used at the facility that are present on the property over the reportable quantity 2) chemical inventory reporting forms for those chemicals noted above and 3) facility emergency response plans for any extremely hazardous substance present over the threshold planning quantity. Some chemicals may trigger only one-time reporting, while others may trigger annual reporting. The laws require fees to be submitted on an annual basis depending on reporting requirements and quantities.

For marinas and boatyards, the most common extremely hazardous substances or hazardous substances that would exceed reportable quantities are: sulfuric acid (about 5



lbs. in each series 24 battery), and gasoline, diesel or fuel oil. If you have more than 200 regular car size batteries at your facility, you probably trigger the planning threshold for sulfuric acid and are required to submit a facility emergency response plan to your emergency planning organizations. However, if you have lots of consumer-sized batteries that are in use (in the boats) you may subtract the sulfuric acid volume from your total for determining whether you must submit an annual report on sulfuric acid. If you have more than 1557 gallons of gasoline, or diesel or fuel oil (not cumulative) stored on site (including gas tanks in boats) then you must submit an annual report and registration fee and perhaps an inventory fee).

For additional information: See page 3-52 or the Brightwork CD for more detailed regulatory information or, Maine Emergency Management Agency, attn: SERC 72 State House Station, Augusta, ME 04333-0072, phone # (207) 626-4503 or 1-800-452-8735.



## WASTE DISPOSAL QUICK REFERANCE CHART

WASTE PRODUCT	RECYCLING CONTAINER	SOLID WASTE (DUMPSTER)	SPECIAL WASTE	HAZARDOUS WASTE	OTHER
GENERAL TRASH		X			
DRINK BOTTLES	X				
FOOD CANS	X				
NEWSPAPERS	X				
OFFICE PAPER	X				
CONSUMER BATTERIES	X	X (alkaline only)		X (refer to manual page 2-60)	
PRODUCT CONTAINERS	X	X			
USED OIL	X				<b>Burn in licensed waste oil burner (permit may be required)</b>
USED ANTIFREEZE	X			X (may be)	
ENGINE BATTERIES	X			X (if broken)	<b>Used battery storage area</b>
PAINT DEBRIS			X	X (refer to manual pages 2-2 and 2-60)	
SANDBLAST GRIT AND DEBRIS			X	X (refer to manual pages 2-7 and 2-60)	
PAINTING WASTE			X	X (refer to manual pages 2-11 and 2-60)	
RAGS		X (see "Solvent Contaminated Wiper Guidance")	X (if contaminated with paint)	X (refer to manual page 2-60)	



WASTE THINNER AND SOLVENT	X		X (if contaminated with paint and not hazardous)	X	
WASTE GASOLINE				X	
MERCURY LAMPS				X	<b>Universal Waste</b>
FLUORESCENT LIGHTS				X	<b>Universal Waste</b>
BILGE PUMP SWITCHES		X		X (if mercury containing)	<b>Universal Waste</b>
WOOD DEBRIS (BRUSH OR UNTREATED)	X				<b>Burn with permit</b>
WOOD DEBRIS (PAINTED OR TREATED)		X			<b>Contact Transfer Station</b>
FIBERGLASS DEBRIS		X			<b>Contact Transfer station</b>
WASTE RESIN				X	
WASTE GLUE/ADHESIVES		X	X	X	<b>Determine if they are hazardous or special waste</b>
SPILL CLEAN-UP DEBRIS		X		X (for gasoline or other hazardous spill waste)	<b>If you have a spill, contact proper authorities</b>
MARINE LIFE DEBRIS (SEAWEED, MUSSELS)	X (compost)	X			<b>Small amounts can be dispersed back into water</b>
SHRINK WRAP	X	X			<b>Recycle if possible</b>

