

Marine Industry Pollution Prevention & Waste Reduction



Fact Sheet

CHECKLIST FOR THE MARINE INDUSTRY

Facility management practices that impact the environment are: boat sewage disposal, use of pumpouts and dump stations, boating litter and fish waste disposal, fueling and bilge care, boat repair and maintenance, engine servicing, hull cleaning and painting, and other facility practices for marinas and other boating facilities. Any waste or pollution created cuts into profits, reduces operation efficiency, may involve worker safety issues, and could require regulatory involvement. Pollution prevention and waste reduction efforts can increase business profitability while conducting every day activities in a more ecologically sound manner.

Pollution prevention uses source reduction and environmentally sound recycling to reduce or eliminate negative impacts to the environment. Implementing pollution prevention ideas leads to identifying more ideas. Success is only limited by willingness to try something different, and the payoff could be immense!

General Pollution Prevention Activities and Waste Reduction Tips

- ↓ Develop a waste reduction action plan, develop goals with measurable objectives, and establish a company-wide commitment to preventing pollution as part of conducting business with a task force headed by an enthusiastic pollution prevention advocate. Best management practices will reduce and prevent contamination of the aquatic environment.

- ↓ Develop an employee education program focusing on pollution prevention techniques. Ensure that employees are aware of the company's position on best management practices with an emphasis on general housekeeping procedures that are economically and environmentally sound.
- ↓ Most best management practices can be implemented with minimal cost; however, you should develop a budget, making sure resources will be available. Inquire upon your federal, state, and local governments for possible grants and loans.
- ↓ Establish policies prohibiting activities that threaten the environment. Policies may be established in an "environmental" lease or contract with boaters. Include boat maintenance procedures and waste recycling and disposal.

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- ↓ Publish a newsletter to keep tenants informed and educate customers on cleaner boating. Offer information to boaters on environmentally friendly alternative products for proper boat maintenance. Offer the alternative products for sale. Provide information to boaters on local household hazardous waste collection events.
- ↓ Establish a pollution prevention hierarchy. Identify when and where waste is generated. Identify waste characteristics, including quantities of each material and how they are handled and disposed. Look for opportunities to eliminate and reduce waste followed by reuse or recycling.
- ↓ Keep the shop clean and orderly to eliminate spills and leaks. Good housekeeping should include practices pertaining to pesticides, lawn care, fertilizers, chemicals, oil, gasoline, pet wastes, and fish wastes.
- ↓ Maintain an accurate inventory of raw materials, which eliminates excessive inventory and prevents materials from exceeding their shelf life. Designate work areas for chemical storage to minimize potential spills. Restrict access to storage areas and provide containment for spills and leaks. Reduce excess inventory by developing a materials exchange program with other companies or use a material exchange service.
- ↓ Institute a hazardous waste collection program. Include antifreeze, paint, thinner, oil filters, bilge water, batteries, gasoline, and oil rags. Collect and recycle used oil, fluids, and solvents. Never pour these materials down the drain. Never mix different wastes. Keep used solvents separate from used oil.
- ↓ Encourage boaters to use canvas covers instead of shrink wrap for boat storage. Develop a shrink wrap recycling program: survey potential markets, design a collection and handling system tailored to the operation, educate program participants, and implement a quality control program.
- ↓ Collect and remove trash and rubbish from the marina yard to prevent rain or wind from transporting pollutants and debris to water. Implement a solid waste recycling program. Separate paper, metals, glass, plastics, cardboard, and other recyclables from solid waste. Recycle aluminum and steel hulls. Donate fiberglass hulls to charities or trade schools.
- ↓ Rent or share equipment that is used only occasionally.
- ↓ Prevent boat cleaning and repair waste from contaminating stormwater runoff. Offer off-site boat repair and storage at inland sites to avoid potential environmental harm to coastal waters.
- ↓ Install a closed-loop hull blasting system with reused plastic blasting medium for hull servicing. Current technologies include utilizing sand, plastic media, metal shot, dustless vacuum sanders, and cryogenics to remove paint. Prevent migration of debris and residue into the air or water. High pressure water jet stripping can be used and incorporated with technologies to recycle the used water. Never allow in-the-water hull scraping and paint removal activities.
- ↓ Install a bottom-wash recycle system and eliminate in-water hull cleaning. Boat cleaning activities in the slip or dockside can create water quality problems. Many products used for cleaning may be harmful to the marine environment. Educate boaters on less toxic substitutes such as phosphate-free and biodegradable soaps. Encourage boaters to clean frequently with fresh water using a soft, non-abrasive sponge and “elbow grease” to minimize marine growth and prolong the life of hull coatings.

- ↓ Establish a fish waste disposal policy and provide a suitable facility for fish wastes. Encourage fishermen to recycle fish wastes back into the natural ecosystem in a way that will not reduce water quality or cause other adverse environmental impacts. Post signs to prevent fishermen from throwing fish wastes into the water.
- ↓ Offer free holding tank pumpouts to encourage use of the pumpouts.
- ↓ Designate a dog run for pet owners. Offer disposable bags for clean up after pets.
- ↓ Stencil storm drains – “Dump no waste—drains to river (lake, stream, etc.).”

Pollution Prevention Resources

Publications and Information



Sources:

- ↓ Michigan Department of Environmental Quality
Environmental Assistance Division
Environmental Assistance Center
P. O. Box 30457
Lansing, MI 48909-7957
1-800-662-9278
- ↓ *Coastal Marinas Assessment Handbook*
www.epa.gov/ncepihom/Catalog/EPA904685132.html
- ↓ *Clean Marinas-Clear Value: Environmental and Business Success Stories*
www.epa.gov/ncepihom/Catalog/EPA841R96003.html
- ↓ *Nonpoint Pointers: Managing Nonpoint Source Pollution From Boating and Marinas, Pointer No.9*
www.epa.gov/ncepihom/Catalog/EPA841F96004I.html
- ↓ *Guidance Specifying Management Measures for Sources of Nonpoint Pollution in Coastal Waters*
EPA840B92002

Web Sites:



- ↓ www.deq.state.mi.us/ead
Michigan Department of Environmental Quality Environmental Assistance Division
Oversees a number of assistance and information activities leading to improvement in environmental quality, with an emphasis on pollution prevention. Provides nonregulatory services related to all environmental programs administered by the department.
- ↓ www.MEEF.org
Marine Environmental Education Foundation Inc.
Creator and national organizing sponsor of the National Clean Boating Campaign. Provides educational information which results in cleaner water for the boating public.
- ↓ boatbiz.com
Boating Industry
The management magazine for the recreational marine industry. Internet resources and links to other sites.
- ↓ www.pacific.ccg-gcc.gc.ca/Epages/offboat/pae/pme.htm
Canadian Coast Guard's "Protecting the Aquatic Environment: A Boater's Guide"
Highlights boat maintenance, garbage, fueling, antifreeze, paint, batteries, introduced species, and spill reporting.
- ↓ www.cmc-ocean.org/search.html
Searchable for “boats” on clean up campaigns, youth educational activities on boats and the environment.
- ↓ ceres.ca.gov/coastalcomm/web/boatbib.html#FACT
“Annotated Bibliography of Marina and Recreational Boater Pollution Education Material”

- ↓ www.imimarina.com
International Marina Institute
 A nonprofit membership organization serving the global marina industry.
- ↓ seagrant.orst.edu/crt/index.html
National Sea Grant College Program MarinaNet
 Information about marinas, ports, waterfronts, recreational boating, and Sea Grant publications.
- ↓ www.dnr.state.oh.us/odnr/watercraft/laws/opsguide/envir.html
"Boating and Environment"
 Ohio Department of Natural Resources; clean boating tips and information.
- ↓ www.marinasontario.com/mres.htm
Ontario Marina Operators Association
 Marine resources information clearinghouse.
- ↓ [seagrant.gso.uri.edu/riseagrant/Rhode Island Sea Grant](http://seagrant.gso.uri.edu/riseagrant/Rhode%20Island%20Sea%20Grant)
 Offering publications on-line about marina and boating environmental management, including fact sheets on sanding and painting, vessel sewage, bilges and fueling, engine maintenance, and vessel cleaning and fish waste.
- ↓ nsgd.gso.uri.edu
National Sea Grant National Depository
 Searchable archive of all Sea Grant funded documents since 1967, including hundreds of studies on boating, marinas and the environment, plus brochures and fact sheets.

- ↓ www.dot.gov/dotinfo/uscg/hq/g-m/nmc/seapart.htm
US Coast Guard Sea Partners
 Environmental education and outreach program focused on communities to develop awareness of maritime pollution issues and to improve compliance with marine environmental protection laws and regulations.
- ↓ www.mbia.org
Michigan Boating Industries Association
 A non-profit trade association for Michigan's marine-related businesses.
- ↓ www.dnr.state.mi.us
Michigan Department of Natural Resources (DNR)
 The DNR offers a variety of brochures, fact sheets, guides, newsletters, and reports designed to inform the media, public, educators, and business people about Michigan's natural resources.
- ↓ www.greatlakesportsocall.com
 Link to boating on the Great Lakes featuring several ports on the Great Lakes.
- ↓ www.MidwestConnection.com
 Helpful and free Internet guide to the public containing information on state and private harbors and ports of call, lighthouses, scuba diving and shipwrecks, fishing, and additional related items throughout the Great Lakes region.

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