



Marina Environmental Management Plan

A Workbook for Marinas, Boatyards & Yacht Clubs in New England



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Acknowledgements

This workbook was adapted for use by New England marinas, boatyards and yacht clubs—and based largely on— “Documenting Your Environmental Management Plan: A Workbook for Small Business,” which was published by the U.S. EPA Small Business Division in 2002.

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As part of EPA New England’s marina initiative, thanks to these marina managers who provided useful feedback on the contents of this workbook: William Munger (Owner, Conanicut Marina, Jamestown, RI), and Chris Ruhling (General Manager, Brewer Yacht Yard At Cowesett, Warwick, RI). In addition, thanks to the New England Regional Marina Networking Group for their assistance in reviewing drafts of this document and providing input.

Disclaimer: This workbook discusses some of the most significant management actions a marina can take to plan and track its environmental responsibilities and we hope that you find it useful. Here, however, we need to list a few things that this workbook does not do. First, this workbook should not be used as a method to identify applicable regulatory requirements because: while it does refer to some federal regulations, it does not provide a detailed description of any of the regulations which may apply to a marina; laws and regulations may change over time; figuring out which regulations apply to a facility will depend upon the particular processes and materials and chemicals used and finally, state and local requirements can be different from federal requirements. Second, the Best Management Practices (BMP) examples and technologies contained within this workbook, does not constitute any form of endorsement or approval by the EPA of such technologies. Finally, EPA does not exercise editorial control over the information contained in non-EPA guidance documents and web sites. The references to these documents and web sites are provided for your convenience.

Introduction

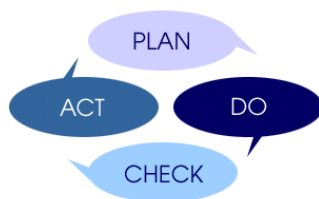
Who is This Workbook For?

This workbook targets marina, boatyard and yacht club owners and managers committed to improving environmental management in their boating business operations. For simplicity, **the word “marina” is used throughout this workbook to also mean “boatyard” and “yacht club.”**

By using this document, you will learn how to plan and implement controls and actions for effective management of your environmental responsibilities. To accomplish this result, you will need to obtain specific information regarding regulations and practices which are covered in other documents. It is recommended that your state Clean Marina Guide, which this workbook is designed to be utilized with, serve as your primary resource for obtaining detailed information (see page 4).

What is an Environmental Management Plan (EMP)?

An EMP is the action an organization is taking to determine how it affects the environment, comply with regulations, keep track of environment management activities, and meet environmental goals and targets. It also documents key elements of environmental management including the environmental policy, responsibilities, applicable standard operating procedures and Best Management Practices (BMP), record keeping, reports, communication, training, monitoring, and corrective action. The EMP features the "Plan, Do, Check, Act" model for ongoing improvement.



Plan—Planning, including identifying environmental impacts and establishing environmental goals

Do—Implementing, including employee training and establishing operational controls

Check—Checking, including auditing, monitoring and taking corrective action

Act—Reviewing, including progress reviews and taking action to make needed changes to the EMP

Environmental management is easier if you have an EMP, because it will help you better track your environmental management activities and implement them in a more organized and streamlined manner. An EMP gives you a framework in which to:

Comply—Assist you in assessing compliance with environmental regulations

Improve—Allow you to identify opportunities for improvement and cost savings

Know—Decrease costly confusion for your employees by spelling out exactly what is expected of them

What are the Benefits of Using an EMP?

Using an EMP allows you to realize both business and environmental benefits at your marina. Some examples of EMP benefits include:

- Improved environmental performance
- Prevention of pollution and conservation of resources

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- Reduced environmental risks
- Attracting new/improved customers
- Increased efficiency, more effective work procedures and reduced operational costs
- Enhanced employee moral and awareness of environmental issues
- Enhanced positive image with public and regulators
- Help in getting recognition for good practices, such as “Clean Marina” awards in states¹ with those programs

An EMP also provides you with a plan to oversee what is done—as well as when it's done and by whom—to meet and go beyond all required environmental regulations.

Clean marinas are proving attractive to more responsible boating customers, may operate more profitably, and can help protect the boating environment. Not every marina can realize all these benefits, but most can come close.

An Important Note About This Workbook

Throughout this workbook you will find examples for a fictional “Salty Cove Marina” that describe typical situations/problems and suggested actions/solutions that might apply to your marina. Of course, these examples for the Salty Cove Marina do not anticipate all of the problems or issues that could arise at all marinas; your marina may face different or additional issues.

Summary Description of the Salty Cove Marina:

Salty Cove Marina has 12 full-time employees with 75 dock slips, 12 moorings and on land storage for 200 boats. Located on the edge of a bay at the bottom of a watershed, the facility conducts boat maintenance and repair, cleaning and fueling and has capacity for storing more than 1320 gallons of oil and gas above ground and for storing more than 10,000 gallons of fuel underground. These operations contribute toward the marina having potential sources of pollutants similar to those commonly found in many other marinas such as oil, gas, boat sewage, pet waste, trash, toxic metals, solvents, antifreeze, and detergent. Also, due to the size of Salty Cove Marina, most employees have multiple job assignments. For example, the Service manager's area of responsibility includes the mechanic shop, paint shop, and carpentry.

Many federal, state and/or local regulations apply to Salty Cove Marina. While it is not within the scope of this document to fully address all regulations, this document does partially refer to some of the federal or state regulations that Salty Cove marina is required to meet in the following areas:

- Storm Water Management/The Clean Water Act (CWA)
- Hazardous Waste Management/The Resource Conservation and Recovery Act (RCRA)
- Spill Prevention Control and Countermeasure Planning (SPCC)/The Oil Pollution Act of 1990 (OPA)
- Hazardous Chemical Reporting/The Emergency Planning and Community Right to Know Laws (EPCRA)
- Air Quality Management/ The Clean Air Act (CAA)
- Pesticide Control/Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)
- Construction Management/Rivers and Harbors Act of 1899 (and the CWA)

¹Many states have clean marina programs which are typically voluntary incentive based recognition programs for establishing “clean marinas”. Under these efforts, marinas are encouraged to utilize state clean marina guides developed under the program and those participating marinas that meet and go beyond compliance are recognized as “clean marinas”. New England states with “Clean Marina Programs” include Connecticut, Maine, and Massachusetts; New Hampshire and Rhode Island are in development.

How to Use This Workbook

1. Read This Workbook First

Before beginning an EMP, we recommend that you read through this workbook to get an overall picture of the EMP process. Each section explains the recommended tasks you need to complete, contains a worksheet to guide you through the steps, and provides an example of how that portion of the EMP might look once completed.

2. Marina Environmental Team

You will find it helpful to appoint a clean marina team who works together to build the EMP. The team should include, as appropriate, the facility owner, general manager and key marina staff. Assign one reliable team member as the EMP coordinator.

3. Start With What You Have

For each section of the workbook:

1. Read the recommended tasks
2. Review the examples for Salty Cove Marina
3. Complete the recommended tasks using available resources, such as the worksheets provided, marina records, staff and published environmental guides

Much of what you need to put together for an EMP is likely already in place at your business. In fact, most marinas have already begun many parts of the environmental management process.

Use this workbook as a step-by-step approach to help better organize your marina's program to manage environmental impacts. In making this effort, you will need to use several important references published elsewhere, including publications with federal, state, and local laws and regulations. (see "*Some Useful References*" on page 4) In particular, your state Clean Marina Guide is a tool that can be used throughout the year to help you accomplish many of the tasks outlined in this document.

4. Dedicate Time Needed

Completing this process takes time and dedication. However, if done well and with steady progress, you will achieve the goal of improved environmental management for your marina. In determining what schedule to work on your EMP, consider the amount and type of business activity taking place at your facility throughout the year. For example, a good time to develop your marina EMP may be in the winter season after haul out ends, and well before spring launch begins. Another example for scheduling may be to assess your EMP in mid-August when all areas of the facility might be operating.

Some Useful References

New England State Clean Marina Guides

Each of the coastal New England states has published guidelines for marina use. These documents are very helpful and contain specific references to many state environmental laws and regulations. All the publications also list numerous BMPs illustrating a range of choices for marina managers.

In particular, we suggest you use this workbook with the following state guidelines for marinas:

Connecticut: Connecticut Clean Marina Guidebook. 2002. Contact: Elke Sutt, Connecticut Department of Environmental Protection, 79 Elm Street, Hartford, CT 06106, (860-424-3034), elke.sutt@po.state.ct.us

Maine: Bright Work: A BMP Guide for Marinas. 2003. Contact: Pamela Parker, Maine Department of Environmental Protection, 17 State House Station, Augusta, ME 04333, (207-287-7905), pamela.d.parker@maine.gov

Massachusetts: Massachusetts Clean Marina Guide. 2001. Contact: Robin Lacey, Massachusetts Office of Coastal Zone Management, 251 Causeway Street, Suite 900, Boston, MA 02114, (617-626-1220), robin.lacey@state.ma.us

New Hampshire: Best Management Practices for New Hampshire Marinas. 2001. Contact: Sara Johnson, New Hampshire Department of Environmental Services, Pollution Prevention Program, 29 Hazen Drive, Concord, NH 03301, (603-271-6460), www.des.nh.gov/nhppp/marinas.htm

Rhode Island: Environmental Guide for Marinas. 1994. Contact: Rhode Island Sea Grant Office, University of Rhode Island, Narragansett Bay Campus, Narragansett, RI 02882, (401-874-6842)

For Vermont reference material contact Judy Mirro (802-241-3745).

Other Useful References

In addition to state guides, these other documents and websites may be helpful when developing your EMP.

National Management Measures Guidance to Control Nonpoint Source Pollution from Marinas and Recreational Boating. Nationwide guide for controlling pollution from boats and marina operations on all inland and coastal water bodies; excellent source of practical clean marina practices to consider adopting; recommended for every marina manager's bookshelf. This national guide is used by all coastal states for developing their marina regulations, and is the common foundation for all clean marina programs nationwide. 2001; EPA 841-B-01-005. Source: Download from: <http://www.epa.gov/owow/nps/mmsp/>. Order: 513-891-6561, ncepiwo@one.net

Practical Guide to Environmental Management for Small Businesses. Using the Environmental Management System (EMS) approach, this publication helps small businesses organize their environmental management responsibilities in a cost-effective way. The guide has been dubbed "the on-ramp to EMS for small businesses," and praised for its practical approach. 2002; EPA-233-K-01-01. Source: Download from <http://www.smallbiz-enviroweb.org/> Order via telephone 800-368-5888.

Clean Marinas Clear Value. This EPA report gives case studies of 25 different marinas that successfully use BMPs to help the business comply with environmental regulations and improve business profits through cost savings, extra income or attracting more customers. 1996; EPA 841-

R-96-003. Source: Report can be downloaded from:

<http://www.epa.gov/owow/nps/marinas/index.html>.

Shipshape Shores and Waters: A Handbook for Marina Operators and Recreational Boaters.

This EPA summary guide is great reference booklet for marina use. 2003; EPA-841-B-03-001.

Source: Order via telephone 800-490-9198; E-mail: ncepimal@one.net; download from:

<http://www.epa.gov/owow/nps/marinas.html>.

U.S. Environmental Protection Agency Office of Solid Waste Regulations and Standards

Website- at: <http://www.epa.gov/epaoswer/osw/laws-reg.htm>

U.S. Environmental Protection Agency: The National Response Team's Integrated Contingency Plan Guidance (One Plan)-at:

<http://yosemite.epa.gov/oswer/ceppoweb.nsf/content/sta-loc.htm#OnePlan>

Section 1.

Establishing an Environmental Policy

Your marina should have an environmental policy as part of its business plan. An environmental policy is a concise statement of a boating business's commitment to protect the environment, comply with regulations and improve practices. It shows that managing environmental issues is a high priority for your business, and it represents the basis upon which all aspects of the EMP are built.

The policy should begin with a statement of your business commitment to environmental stewardship. This should include a commitment to preventing pollution and to continuously improving environmental performance. Many businesses also add a provision about keeping employees and community members safe and regularly trained. A sound environmental policy should also make a commitment to comply with applicable laws, and to use applicable BMPs.

The environmental policy also states how the marina, boatyard or yacht club will live up to its plan. It is important when putting the policy together to consider the stated goals and the level of resources your business is willing to commit to achieve them.

Once established, the environmental policy will help communicate your business's environmental management commitment to marina staff, customers, government officials and others.

Example 1: Salty Cove Marina² Environmental Policy

The management and staff of Salty Cove Marina are committed to preserving and protecting the quality of our bay areas environment. A clean environment is important for the success of our business and for that future generations can also enjoy these precious resources.

In support of this commitment, we strive to conduct clean boating and marina practices at our marina and will educate our staff, customers and guests on sound practices. Our overall goal is to be the Bay areas business leader in protecting the environment. We will achieve this goal by using a team-oriented management approach to help ensure responsible use of our air, land, and water resources.

To achieve this goal as a full service marina/boatyard business, Salty Cove Marina will meet or go beyond compliance with all applicable federal, state and local environmental rules and regulations. We endeavor to continually improve our environmental performance and to prevent pollution before it is produced. All our marina employees are expected to support our environmental goals while providing clean, affordable boating services that help keep boating good clean recreation.

(Signed) Salty Smith, Owner
(Date)

² "Salty Cove Marina" is a fictional example, not a real business, but may be similar to many marinas in New England; of course, your marina may have different, or additional challenges.

Environmental Policy

Step 1: Key Word List

Think about the goals you want to achieve through your environmental policy. Brainstorm a list of action words or very short phrases that reflect environmental impacts; then choose words or phrases that reflect your marina's environmental commitment to its business, employees, customers and community. Examples of action words include: reduce, improve, increase, preserve, protect, require, request, commit, support, provide, educate, train, demonstrate, and lead the way.

Step 2: Statement

Create a concise one- or two-sentence statement using the list of action words and phrases above.

Step 3: Plan Methods

List how the marina is achieving, or plans to achieve, the commitment(s) expressed in the statement above.

Step 4: Plan Statement

Use the list developed in step three to put together a statement of how the marina will fulfill its environmental commitment(s).

Step 5: Fine-Tune Policy

Combine the statements developed in steps two and four and fine-tune them to form the complete environmental policy. Consider asking key employees to help fine-tune your environmental policy.

Step 6: Approval

The marina owner, general manager or club commodore signs the final policy statement making it an official commitment to protect the environment.

Step 7: Communication

The marina's environmental policy is communicated to all employees and is posted on bulletin boards.

Step 8: Review

Periodically review your marina environmental policy to ensure it is relevant and current.

Section 2.

Making Progress Over Time: Setting Goals

A goal is a general statement expressing a desired outcome you wish to achieve through your marina's EMP. Setting goals to improve environmental management connects the EMP to daily business activities and helps assure overall commitment to your EMP. You should be able to measure progress made for each of the goals you establish.

The U.S. EPA and the National Oceanographic & Atmospheric Administration (NOAA) have jointly designated general pollution prevention goals³ for all marinas and boats.

These national goals are organized into broad categories that may apply to your marina:

- Stormwater runoff (controlling)
- Petroleum control
- Liquid material management
- Solid waste management
- Fish waste management
- Sewage facilities and maintenance
- Boat cleaning
- Boat operations
- Public education

For new marinas, or marinas planning major expansions, goal categories may include:

- Marina flushing
- Water quality assessment
- Habitat assessment
- Shoreline stabilization
- Stormwater runoff (designing for controls)
- Fueling station design

When you start setting goals, if your marina is not fully in compliance, first begin with the mandatory compliance goals. Once compliance is achieved, you will then need to set focused and measurable goals beyond compliance that will add the most value to the marina and boating environment.

Your goals should be realistic and fit within the marina's mission and overall business strategy. Your goals should also inspire action by giving a clear vision of desired environmental performance. Because the number of goals a small business can effectively tackle at once is limited, identify the goals that are critical to the business's environmental performance and tackle those first.

If you need help in identifying goals, your state clean marina guide may be a useful source of information. It is likely to contain comprehensive and specific information regarding applicable regulations and desirable best management practices for your facility.

³ EPA and NOAA call these key national goals "marina management measures."

Note:

EPA has adopted policies designed to encourage greater compliance with environmental regulations and laws. Two such policies, "Incentives for Self Policing, Discovery, Disclosure, Correction and Prevention of Violations" (Audit Policy), and "policy on Compliance Incentives for Small Businesses" (Small Business Policy), provide incentives to conduct environmental audits by substantially reducing or eliminating penalties for companies that voluntarily discover, disclose, and expeditiously correct violations of environmental law. For more information visit EPA's Audit and Small Business Web pages at :

<http://www.epa.gov/compliance/incentives/smallbusiness/index.html>

Your state may also have compliance incentive business policies. Please check with your state environmental agency for further information.

Setting Goals

Use **Worksheet 2a—Environmental Goals to Consider**—to complete this section.

Step 1: Brainstorm Goal List

Identify marina practices that can cause harmful environmental impacts. Then review the environmental regulations that apply to your marina. Brainstorm a list of possible goals to improve environmental management and list them in the first column of Worksheet 2a. Don't worry about the difficulty of achieving a goal or its relative importance at this point.

Step 2: Significance—Rate Your Goals as "Critical" or "Important"

Review the list of goals developed during step two and decide whether each goal is critical or important. Indicate the goal's significance in the second column of Worksheet 2a. What is deemed critical or important to one marina may not be so in other marinas.

In determining if a goal is critical or important, consider the following

Critical —Is the goal needed to comply with mandatory environmental regulations and/or avoid bad publicity? Is it essential to marina business?

Important —Is this something the marina wants to do to improve environmental conditions?

Step 3: Difficulty—Determine Your Goals' Degree of Difficulty

For each goal, indicate in the third column of the worksheet the degree of difficulty involved with achieving the goal. Consider the budget, number of staff, degree of effort and other resources needed to achieve it.

In determining how difficult the goal is, consider the following

High —Does it require considerable time, material, capital costs, etc., to complete?

Average —Can it be accomplished with moderate effort and cost to complete?

Low —Is it easy to do?

Step 4: Goals—Select Three to Six Primary Goals

Select at least three to six primary goals to consider working on for the next several months to a year. Critical goals should be the first priority. Once these areas are addressed, consider selecting goals that have the biggest return for the invested effort.

Worksheet 2a—Environmental Goals to Consider

Primary Goals	Significance ¹	Difficulty ²
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		

**Significance = Critical or
Important**

Difficulty = High, Average, Low

Selecting Goals and Setting Targets

Step 1: Select Goals to Use

Use answers on **Worksheet 2a—Environmental Goals to Consider**, to complete **Worksheet 2b—Environmental Goals and Targets Plan**. Use those primary goals to decide on the best way to measure progress toward meeting that goal. It is helpful to keep it simple by using your marina's environmental data that is already available, as long as it provides a meaningful measure.

Step 2: Set a Target

For each goal, decide how much improvement is desired and set a realistic target. Targets are specific, shorter-term steps towards achieving a goal. When coupled with measurable targets, meaningful goals become the driving force behind environmental performance improvement. Be sure your goals have reasonable targets.

For example, your goal might be to reduce water usage. The specific target might be to reduce water consumption by five percent. As a result of this goal and specific target, your annual water bill should also decrease. The cost savings realized is another indicator of success.

Step 3: Create a Goals and Targets Plan. You should create and implement a management plan to achieve each goal and target. For example, to achieve the goal of reducing water use and the specific target of reducing water use by 5 percent, your management plan might require that all water hoses use automatic shut-off nozzles and that all leaks in dock pipes be repaired.

Step 4: Assign Responsibility. Assign responsibility for gathering the information needed to establish your baseline and to confirm whether your marina has met its target. Add the name or title of the person responsible in the fourth column on **Worksheet 2b**.

Example 2: Environmental Goals and Targets Plan for Salty Cove Marina

Goal	Target	Management Action(s)	Responsible Person	Timetable
Comply with all environmental regulations	Comply with all environmental regulations	-Identify and list applicable regulations; primary research sources include the state marina guidance document -Develop a system to stay current with new requirements	General Manager	Within 60 days Within 90 days
Ensure that no inappropriate waste is disposed in the dumpster.	No inappropriate waste (oil, paint, etc.) disposed in the dumpster	-Monitor dumpster weekly for wastes that do not belong -Update employee training on waste management practices -Create clearly designated and marked areas for patrons to leave acceptable wastes -Educate patrons on use of site disposal options and unacceptable materials	Yard Manager	Within 2 weeks Within 60 days Within 60 days Within 6 months
Ensure all employees are aware of and understand environmental policy	Communicate environmental policy to all employees	-Present environmental policies to employees -Post environmental policy in office, break rooms, and work areas	Owner	Within 90 days Within 90 Days
Reduce the use of electricity	Reduce electricity use by 5%	Replace existing light bulbs with EnergyStar light bulbs in all marina buildings and in dock lights	Dockmaster	Within 45 days

Worksheet 2b—Environmental Goals and Targets Plan

Goal	Target	Management Action(s)	Person Responsible	Timetable

Section 3.

Assigning Responsibilities

As part of an EMP, each employee must have clearly defined roles and responsibilities for the environmental management activities they are assigned. This in turn will increase accountability within the marina and ensure that environmental management activities are handled correctly.

Because every boating business is unique and site specific, each marina should determine what roles and responsibilities are appropriate for the operation that will best achieve the stated goals. Depending on the size and range of services offered at each marina, the key responsible person may vary. No two marinas will have the exact same management organization or staffing.

For example, in a small marina, the owner may also be the general manager and have oversight, hands-on responsibility for all activities and all staff. The owner of a large, full-service marina chain, however, may have one or more general managers to control each facility. They then delegate key environmental responsibilities to the safety officer, service manager, parts manager, yard manager, dockmaster and/or maintenance manager, who in turn oversee their staff.

When assigning responsibility, you may also find it helpful to distinguish between *critical* responsibilities—those of highest priority—and *important* responsibilities, those based on the amount of time and work involved to implement the EMP.

Once defined, responsibilities must be formally communicated to each employee in their general job description. Everyone should receive a copy of his or her specific job description, with a signed copy placed in his or her personnel file. Doing this will help your staff understand their job responsibilities and provide a method for evaluating employee performance during annual reviews. Make sure you assign tasks so that the workload is shared and environmental management is a team effort within the marina.

See Example 3, Environmental Responsibilities at Salty Cove Marina—and use Worksheet 3 **Assignment of Environmental Responsibilities**.

Please note: To help ensure you identify all areas for assigning responsibility you can use your state clean marina guidebook and other resources (see “Some Useful Resources” on page 4).

Example 3: Environmental Responsibilities at Salty Cove Marina

Position	Environmental Responsibilities	Designation
Owner	Ensure compliance with all federal, state, and local laws and regulations. Oversee environmental policy and Environmental Management Plan (EMP) and Oversee environmental manual. Serve as primary contact for regulatory inspectors. Commit resources to achieve environmental goals. Review audit results and progress on achieving goals and revise EMP as needed. Update employees annually on environmental policy and goals. Incorporate environmental procedures into customer contracts.	Critical Critical Critical Critical Important Important Important
Environmental Coordinator (can be owner, general manager or assigned staff)	Manage environmental responsibilities for the owner. Oversee all employees and monitor their progress against management plan targets. Prepare all manual changes and report in advance of due dates. Conduct staff environmental training; regularly include environmental issues in weekly staff meetings. Maintain environmental permits and provide quarterly reports as needed Report monthly or as needed to owner. Track and inform owner of changes to regulations affecting marinas.	Critical Critical Critical Critical Critical Critical Critical
All Employees	Attend training on and understand role in emergency action plan. Attend training on and follow environmental SOPs and BMPs. Participate in annual review of marina environmental policy and goals.	Critical Critical Critical
Dockmaster	Act as marina's Emergency Coordinator for emergency action plan. Maintain emergency action plan and train employees on it. Develop environmental SOPs and train employees on them. Educate customers about marina's environmental policy and procedures and monitor their activities for conformance.	Critical Critical Important Important
Store Manager	Educate customers about environmental concerns related to product use, clean up, equipment rental and maintenance activities. Work with appropriate marina employees to evaluate effectiveness of environmentally sound products. Stock environmentally sound products that have proven to be effective.	Critical Important Important
Maintenance Manager	Oversee management of wastes generated by employee activities and compile data on waste management. Produce quarterly waste data reports. Perform sampling required by wastewater permit and submit reports to environmental coordinator. Monitor implementation of environmental SOPs and BMPs.	Critical Critical Critical Important

* Some Salty Cove employees are responsible for more than one position

* Designations may vary between different marinas.

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Maintenance Technician	Conduct weekly hazardous waste container inspections. Perform quarterly visual inspections as required by stormwater permit. Monitor oil/water separator for malfunction daily.	Critical Critical Important
Groundskeeper	Monitor for improper disposal practices while emptying trash containers. Utilize water conservation measures, integrated pest management and other means to reduce use of chemical products on grounds, including chemical fertilizer.	Critical Important
Fuel Dock Attendant	Monitor fueling operations and dock activities for consistency with marina. Environmental policy and procedures and report any problem to Dockmaster. Watch for leaks or spills at fuel dock or during boat hauling. Report all leaks to Dockmaster and initiate emergency action plan. Hand out environmental information to boaters and answer related questions or refer them to the Dockmaster.	Critical Critical Critical Important
Boatyard Manager	Oversee management of wastes generated by hauling, launching, light boat maintenance, bottom painting, and rigging. Monitor yard crew use of environmental SOPs and BMPs.	Critical Critical
Mechanic Shop Foreman	Oversee management of wastes generated by engine maintenance work.	Critical
Paint Shop Foreman	Oversee management of wastes generated by painting operations.	Critical
Carpentry Foreman	Oversee management of wastes generated by carpentry operations.	Critical
Yard Crew, Carpenters, Mechanics, Painters	Understand what environmental SOPs and BMPs each must follow. Report all spills, leaks or potential hazards to foreman. Keep eye on customers and report suspicious acts to foreman.	Critical Critical Important

Environmental Responsibility Assignments

Step 1: Position

In the first column of **Worksheet 3—Assignment of Environmental Responsibilities**, list the major positions within the marina that have environmental responsibilities.

Step 2: Environmental Responsibilities

In the second column of Worksheet 3, identify all of the environmental management responsibilities for each position.

Step 3: Designation of Importance Level

In the third column of Worksheet 3, designate each responsibility as either **critical** or **important**.

Step 4: Focus on Critical Responsibilities

Begin by adding critical environmental responsibilities to employee job descriptions.

Step 5: Review with Employee

Review the responsibilities with each employee to make sure that he/she understands what is expected. Training will be given to each as needed.

Step 6: Focus on Important Responsibilities

Once all the critical environmental responsibilities have been assigned, begin adding important responsibilities to employee job descriptions when needed. Consider phasing in these assignments over the second year or more.

Worksheet 3—Assignment of Environmental Responsibilities

Position	Environmental Responsibilities	Designation*

* **Designation** = either **Critical** or **Important**

Section 4.

Having Standard Operating Procedures (SOPs)

Environmental Standard Operating Procedures are the specific steps an employee would take to complete a job safely and in compliance with laws and regulations while contributing toward efficient and productive operations. SOPs can be developed based on Best Management Practices (BMPs), which are proven activities, practices or methods. SOPs can be designed to reduce pollution by five basic methods:

- Preventing pollution from occurring (e.g., eliminating the source by changing products)
- Reducing the amount of pollution produced (e.g., using less toxic cleaners or using smaller amounts)
- Capturing pollution before it can enter the environment (e.g., dustless sander)
- Trapping pollution before it can enter the environment (e.g., using ground filter cloth under boats being worked on outside)
- Cleaning/removing pollution from the environment (e.g., oil spill absorption boom)

The BMPs selected for normal use in the marina become its SOPs.

An effective SOP includes a complete description of the procedure, including a step-by-step breakdown of what needs to be done, and to whom the SOP applies. It should also include the date the procedure was first issued and the latest revision date. This tracking is beneficial to help ensure all necessary SOPs are completed.

Depending on the types of marina services offered, the number of SOPs will vary between marinas.

At first, it may not be feasible to develop and adopt all the SOPs you will need. Instead, you may need to gradually add new SOPs over time to reach the marina's environmental goals.

Standard Operating Procedure (SOP)

Step 1: Get Organized

First determine what reference materials you will need to identify and define your SOPs. In particular you may find your state marina guidance manual to be helpful for these activities. See also Example 4a for some example SOP's of Salty Cove Marina.

List your marina SOP in the first column of **Worksheet 4—List of Environmental SOPs**. In the second column, give the reason for developing the SOP (e.g., to support environmental requirements).

Step 2: Assign Responsibility

Determine who needs to be involved with developing each SOP and list them in the third column of Worksheet 4, "Who is Responsible." In column four, assign a target date to complete the development of the procedure.

Step 3: Define and Describe SOP

For each SOP that needs to be developed:

- a. Write a statement describing the SOP.
- b. State who the SOP applies to.
- c. Meet with key employees responsible for each SOP and develop a list of steps required to complete the task. For this task, use your appropriate environmental references. If a particular SOP seems very complex and takes many steps, consider whether more than one SOP is needed to adequately cover all the aspects of the process selected.
- d. Combine the information put together in steps **a** through **c** to develop a draft SOP.
- e. Share the draft with key employees and ask for their comments and input before finalizing each SOP.

Step 4: Communicate

Once finalized, the SOP should be communicated to relevant employees. Additional employee training may be necessary to ensure conformance with SOP.

Step 5: Review

Periodically review the environmental references and environmental SOPs to ensure they reflect any recent changes to environmental regulations or to processes within the business. Make sure that new copies are distributed and that outdated SOPs are filed away.

Example 4a: Some Examples of Salty Cove Marina's SOPs

Description of SOPs	Why Needed	Who Is Responsible
Monthly waste counting and identification	Comply with RCRA	Environmental Coordinator
Fuel storage management	Comply with SPCC and NPDES	Dockmaster, fuel dock crew
Boat sewage discharge pump outs	To reduce bacterial contamination of water to protect shellfish consumers and swimmers	All staff, especially dock staff working on fuel and pumpout dock
Drydock maintenance	To remove contaminants from ground before runoff takes it into the bay water; Comply with NPDES	Boat maintenance staff
Oil spill control at fuel dock, from bilges and engine maintenance area	To prevent oil spills and to prepare to control minor spills; Comply with SPCC and NPDES	Dock staff, boat service crew, boat owners
Storage of hazardous waste	Comply with RCRA and NPDES	Service Manager and boat service crew
Collection and recycling or disposal of used oil and solvents	Comply with RCRA	Service Manager Safety Coordinator Environmental Coordinator

Worksheet 4—List of Environmental SOPs

Description of SOPs	Why Needed	Who Is Responsible	Target Date

Example 4b: Salty Cove Marina SOP

Note: The following SOP does not cover all environmental and safety requirements which might apply including the following:

- Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)- for example, bottom paint repair may require the use of a pesticide, which in certain instances call for a licensed applicator.
- National Emissions Standards for Hazardous Air Pollutant (NESHAP)- for example, depending on the age of the boat and/or facility, and the work performed, federal and/or state asbestos requirements may apply.
- Emergency Planning and Community Right To Know Act (EPCRA)- for example, facilities have certain reporting requirements if there is a release into the environment of a hazardous substance that is equal to or exceeds the minimum reportable quantity.

Salty Cove Marina Bottom Paint Repair SOP

Date Created: 3/31/03

Date revised: 10/24/04

Prepared by: Salty Smith, Owner

Scope

This SOP pertains to repair of small areas of hard bottom paint only (less than ten square feet). Larger jobs involving hard bottom paint must be conducted in the spray paint booth under the SOP for bottom painting.

Personal Protective Equipment (PPE)

1. Refer to PPE Plan to select PPE for each task below.
2. Retrieve appropriate PPE from the PPE cabinet near the employee lockers in the main repair building.

Remove Paint from Work Area

1. Sand boats only in the main repair building or the adjacent covered maintenance bay to prevent sanding dust from blowing away.
2. Place nonabsorbent tarp, such as geotextile filter cloth, under the area of the boat to be sanded. Tarps are stored in plastic bags on shelf above the sanding equipment.
3. Use vacuum sander only for mechanical sanding or wet sand for dust control.
4. Contain dust from manual sanding within tarped area if done outdoors.
5. When done sanding, vacuum dust from the tarp. Next, fold, bag and put away tarp.
6. Empty dust out of vacuum sander and place, with used sand paper, in the designated storage area for appropriate disposal (a hazardous waste determination must be conducted).

Prepare Surface for New Paint

1. Retrieve acetone container from flammable liquids storage cabinet. Carry it to the work location in the drip pan hanging on the wall beside the cabinet, along with rags from the bin labeled "Cleaning Rags." Do not use paper towels for surface preparation.
2. Keep acetone container in drip pan throughout the process to prevent and contain spills.
3. Position drip pan under the area to be cleaned.

4. For cleaning, pour acetone onto a rag, wipe surface and repeat until clean. Replace lid tightly on acetone container.
5. Dispose of used rags in drum labeled “Solvent Contaminated Rags,” replacing the lid tightly.
6. If acetone spilled into drip pan, retrieve from the flammable liquids storage cabinet the container labeled “Acetone for Reuse.” Carry it to the work location in the second drip pan, along with the funnel. Pour spilled acetone into the “Acetone for Reuse” container using the funnel, while continuing to keep the second drip pan beneath it. Replace the lid tightly when done.
7. Return acetone containers to the flammable liquids storage cabinet, carrying them in the drip pan. Return drip pan, unused rags and funnel (if used) to storage locations.

Note: If any acetone spills outside of drip pan, follow emergency action plan.

Paint Surface

1. Place absorbent floor covering in an area big enough to capture all overspray. Absorbent floor covering is stored on the shelf above the spray paint equipment.
2. Spray surface holding nozzle 12 inches from surface. Disengage trigger at the end of each pass at edge of sprayed area. Spray at steady speed to keep excessive coating and overspray to a minimum.
3. When finished painting, record quantity and product number of paint used in Paint Log, located on top of the paint storage cabinet.
4. Clean spray gun using the SOP for Solvent Cleaning.
5. Place absorbent floor covering pieces that are dry and not heavily covered with paint in bin labeled “Reusable Floor Covering,” located on shelf above spray paint equipment.
6. Place paint-contaminated absorbent floor coverings, stir sticks or rags in the drum labeled “Paint-contaminated Solids,” taking care to replace the lid tightly.

Section 5.

Keeping Track of Information

Record Keeping

You must keep good records of the activities covered under your EMP. Indeed, some records must be kept under state and/or federal laws. By keeping good track of essential records, you can easily document that your marina is keeping its commitment to meet environmental regulations and desirable environmental practices. Keeping good records is also often one of the biggest challenges faced by marina owners/managers. When documents get lost, an otherwise good system can fall apart.

Basic recommendations for record keeping are:

1. Keep all master files, SOPs and records in one place. The best way to keep the process simple and safe is to designate a separate filing cabinet in your office just for environmental and safety records. This will promote organization and easy access.
2. Know what is contained in environmental files and how to get to them quickly. This knowledge can prevent many problems during any environmental emergency and will also be very useful during inspections.
3. Assign someone to keep track of the files and records so that information gets changed or updated periodically as required.
4. Use a document control list to keep track of all vital environmental records. Common master files to consider include:
 - a. Environmental Management
 - b. Emergency Planning
 - c. Emergency Action
 - d. Training Records
 - e. Hazardous Waste Management
 - f. Wastewater Management
 - g. Stormwater Management
 - h. Coastal Construction
 - i. Air Management

See Examples 5a and 5b, for some examples of Salty Cove's master files and document list(s) and suggested file organization.

Use **Worksheet 5—Document List**—to develop your files and document list.

Recommendations: 1) *Require all subcontractors and outside contractors working in your yard to also maintain environmental records related to their work in your marina. This helps build a reliable paper trail should something go wrong.*

2) *For marinas who are required to maintain more than one federal plan, consider using EPA's One Plan. The "One Plan", also known as Integrated Contingency Plan (ICP), allows a facility to comply with multiple federal planning requirements by consolidating them into one functional emergency response plan. The ICP places an emphasis on the use of pollution prevention as a*

primary means of reducing or eliminating sources of risk. The ICP framework presents an excellent platform for incorporating prevention into emergency response planning, by centralizing the planning process and encouraging a broad, facility-wide approach, as opposed to a more limited, process-specific focus. This tool would provide for time savings, for more continuous improvement, and puts in place long term cost savings. The “Bolder” software program supports EPA’s One Plan. (see” Some Useful Resources” on page 4)

Example 5a: Examples of Salty Cove Marina Master Files and Document List

(Note: **Master File names are in bold**, with reports and records listed below each.)

1. Environmental Management

- Environmental management plan
- Standard operating procedures (SOPs)
- Environmental contracts with customers
- Environmental contracts with outside contractors

2. Emergency Planning

- Emergency and hazardous Chemical Inventory for TIER II
- Emergency Planning Notifications
- Material Safety Data Sheet List
- Emergency Release Notifications

3. Emergency Action

- Emergency call list
- Spill reporting call list
- Copies of emergency plans such as hazardous waste contingency plan, spill prevention, control, and countermeasure (SPCC) plan, stormwater spill preparedness plan
- Documentation and critique of incidents that triggered emergency plan
- Reports of spills to regulatory agencies

4. Training Records

- Position description including environmental responsibilities
- Rights to know agreement (signed)
- HazMat training
- Material safety data sheets (MSDS)
- Training certificates and the agendas or topics list for each training session, in chronological order, with the most recent training first

5. Hazardous Waste Management

- Correspondence with regulators
- Hazardous waste communication plan
- EPA Generator ID number(s)
- Certificates of disposal (tipping and solid waste)
- Chemical inventory of all products used and sold (over past 10 to 15 years)
- Oil in and out records
- Contaminated fuel receipts
- Paint waste
- DOT sheets
- Waste determinations, chemical profile reports, lab tests
- Current hazardous waste permits and associated documents and correspondence
- Employee training
- Contingency plan
- Hazardous waste shipment paperwork, including all waste shipping manifests
- Inspection records
- Proof of insurance disposal companies

6. Wastewater Management

- Correspondence with local wastewater treatment plant authority
- Copy of current sanitary sewer ordinance
- Pre-treatment permit and associated documents and correspondence
- Wastewater permit
- Sampling results
- Pumpout facility records

7. Stormwater Management

- Inventory of stormwater drainage and outfalls from your property (include map)
- General stormwater permit
- Stormwater pollution prevention plan
- Maintenance plan for stormwater infrastructure
- Stormwater permit (if applicable) and associated documents and correspondence
- Stormwater annual reports and sampling results (if applicable)

8. Coastal Construction

- Permits for dredged or fill material
- Permits for structures
- Other Permits
- Applications
- Bottom sampling reports

9. Air Management (for work such as boat fiberglass repairs or spray painting)

- Correspondence with regulators (inspection reports, regulatory interpretations and other correspondence)
- Current permits for major or minor sources and associated documents and correspondence
- Emission calculations for potential to emit (PTE)
- Annual air toxics' inventory
- Inspection records and chemical usage records as required by permit conditions (e.g., VOC records, pressure drop inspections, operating hours)

Example 5b: Some Examples From Salty Cove Marina's Document List

Document	Master File	Person Responsible	Action Dates	Review Frequency	Distribution	Location(s) of Document(s)
Environmental Management Plan	Environmental Management	Marina Owner or General Manager	December	Annual	All employees as appropriate according to job responsibility	Environmental file cabinet in main office Dockmaster office bookshelf Repair shop desk
Emergency and Hazardous Chemical Inventory Form	Emergency Planning	General Manager	February	Annual or as needed	All employees SERC, LEPC and local fire department	Main office file cabinet
HazMat training lists	Training Records	Marina Owner	March	Biannual	Customers, Store Manager, Dockmaster, Fuel Attendant	Main office file cabinet
Uniform Hazardous Waste Manifest	Hazardous Waste Management	General Manager	As required	Quarterly	Maintained in file	Main office file cabinet
NPDES Stormwater General Permit Pollution Prevention Plan	Stormwater Management	General Manager	April	Annual	Business Owner and appropriate employees as needed	Main office file cabinet
SPCC plan	Emergency Action	Dockmaster	February	Annual	Filed and posted for view by all staff	Main office file cabinet Dockmaster office Posted in plain view at oil storage locations
NPDES Stormwater Permit	Stormwater Management	Marina Owner	As required	As required	Business Owners	Main office file cabinet
Water Quality Sample Test Results	Stormwater Management	Dockmaster	As required	As required	All employees	Main office like cabinet
Emissions Calculation	Air Management	Boat Yard Manager	As required	As required	Boat Service/Paint Manager	Main office file cabinet, and posted in main repair shop
Stage 1 Vapor Recovery Maintenance Test Results	Air Management	Boat Yard Manager	As required	As required	Maintained in a file	Main office file cabinet

Definitions:

SERC – State Emergency Response Commission LEPC- Local Emergency Planning Committee VOC – Volatile Organic Compounds

Worksheet 5—Document List

Document	Master File	Person Responsible	Action Dates	Review Frequency	Distribution	Location(s) of Document

Section 6.

Maintaining Communications

Communication by management to employees, customers and others about environmental matters and successes is essential in every marina business. Good communication must be second nature to all owners and general managers.

Implementing a solid communication plan for communication will help ensure that you, your employees and managers stay involved with environmental management. In addition, a solid plan will help ensure that they understand the business's environmental policy and are able to provide a consistent message to the community about the business's commitment to environmental performance. Good communication will also ensure that your staff and customers understand their environmental responsibilities as required by regulations.

As your EMP comes together and the business develops a track record of environmental excellence, you and your marina may benefit greatly by actively promoting the business's EMP with customers and community officials as well as the beyond compliance expectations you set as part of your EMP.

Communication Planning

Step 1: Develop an INTERNAL Communications Plan

Identify ways to inform employees and customers, when they are in the marina, about your EMP and its goals and list them in **Worksheet 6a—Internal Communications Plan**. Think about communication opportunities via existing business meetings, demonstrations, guest lectures, newsletters or customer events.

Decide with whom you need to communicate, what you need to communicate, how and when you want to do it and who on the marina staff you will assign responsibility for overseeing each task.

Step 2: Develop an EXTERNAL Communications Plan

Using **Worksheet 6b—External Communications Plan**, identify all the potential people you need to inform about your business's EMP. Consider who you will need to stay in touch with such as neighboring business owners and marina industry leaders – including those at state and national marine trade associations. Keep in mind the various marina assistance providers for government at all levels including the state environmental management coastal zone representatives, city councilors and harbor commissioners.

Decide the audience with whom you need to communicate, the message you need to communicate, the timing, and the person on the marina staff you will assign responsibility for overseeing each task.

(Helpful hint: If you do not feel your business is ready to present its EMP “to the world,” you can leave out people listed in step 2 until next year, when you can consider this question again.)

Example 6a: Some Examples From Salty Cove Marina's *Internal Communications Plan*

Creation date: January 2005

Date revised: October 2005

Audience	Message	Medium	When	Person Responsible
All staff and managers	Update on EMP goals	Presentation during annual meeting	February	Owner
All staff and managers	Explain new SOP's	1. Conduct training through course and one on one as needed 2. Review during staff meetings and as part of training	February March	General Manager
Oil-handling employees	Annual discharge prevention briefing required by SPCC regulation	Conduct briefing session	February	Manager
Boaters and customers	1. Request suggestions for improvement 2. Educate on waste disposal practices 3. Explain boater related SOP's used for pollution prevention and adopt policy for lease cancellation for noncompliance with environmental policies	1. Post notices in dock area, dumpster, bathrooms and picnic area 2. Post notice on bulletin boards; invite customers to information session and annual picnic at marina 3. Update contract language; announce in quarterly newsletters	April September November	Dockmaster

Worksheet 6a—*Internal Communications Plan*

Creation date: ____/____/____

Audience	Message	Medium	Person Responsible

Example 6b: Some Examples From Salty Cove Marina *External Communications Plan*

Creation date: January 2005

Date revised: October 2005

Audience	Message	Medium	When	Person Responsible
Town Mayor/Administrator	Demonstrate that our business wants to be a good neighbor	Present talking points at quarterly breakfast meeting	March	Owner
Harbor Commission	Be a good neighbor	Review plans during annual meeting	February	General Manager
US Coast Guard	Show spill prevention and containment preparation	Review spill plan and equipment	Within 60 days	General Manager
SERC, LEPC and local Fire Dept.	Annual Tier II Emergency and Hazardous Chemical Inventory Form completed	Submit through mail	Early February	General Manager
Fire Chief	Plan fire safety/response plan; chemicals present	Conduct annual fire safety review	February	General Manager
Community and press	Describe environmental efforts and commitment	Distribute press release, and conduct open house with photo opportunities	April	Owner and General Manager
High school class	Demonstrate environmental BMP's to local science class	Host student field trips	October	General Manager

Worksheet 6b—*External Communications Plan*

Creation date: ____/____/____

Audience	Message	Medium	When	Person Responsible

Section 7.

Conducting Training

Training employees about environmental management responsibilities is essential, and it is required by most environmental regulations. Trained employees will understand how their responsibilities contribute toward meeting the goals of your EMP.

Here are some suggestions for establishing an effective training program:

1. Make sure training programs are provided as required by regulations.
2. Set up a plan for the year. Set priorities while establishing a training plan so that the critical training takes place first.
3. Include what type of training needs to happen, who the teacher will be, where it will be done and a target date to do it.
4. Train employees on good practices that will improve efficiency, save time or money, and help the business be proactive.
5. Train all staff who handle chemicals about spill or release response.
6. Record all training for each staff member; include training date, subject covered and instructor.
7. Follow-up on observations of staff usage of the EMP and SOPs and provide immediate corrective instruction as needed.
8. Review training requirements and revise the plan on an annual basis.

The marina owner, general manager, dockmaster and other key managers should receive outside professional environmental training if possible. This includes activities such as attending state, regional and national marina environmental workshops or conferences sponsored by marine trade associations and government agencies. As a general practice, the owner and general manager should try to attend such training programs every year to help keep current on environmental regulations, best management practices and available new technology for marina and boat use.

Training Planning

Step 1: Required Training

To develop a comprehensive list of training regulations, use the marina environmental references referred to on pages 4-5 and check with local, state, and federal regulations to identify training that is required by applicable laws. List them on **Worksheet 7a—Required Training**. List the regulation name or code citation.

Step 2: Training Overview

Use **Worksheet 7b—Training Overview** to set up training for the staff. This step will indicate whether a class needs to be devoted to the training topic, or whether one-on-one, on-the-job training (OJT) is needed. New hires need immediate one-on-one training on appropriate SOPs. Use the worksheets to help with this analysis.

Step 3: Annual Training Plan

Fill out **Worksheet 7c—Annual Training Plan**, using the information developed in steps 1 and 2 to develop an Annual Training Plan. Winter is often a good, slow time to do most training, but some training will have to occur in season. See Example 7 (on page 39) for some examples from Salty Cove Marina's Training Plan.

Step 4: Training Plan for Each Employee

Develop a training plan for each employee using **Worksheet 7d—Individual Employee Training Plan**. This plan should include general and specific training requirements as needed. Use the worksheet to keep track of each employee's training progress.

Step 5: Review Training Plan

Annually review the marina's overall training plan to help ensure employees have had adequate training, to identify opportunities for improvement and to make changes as needed based on training experience and new regulations and technology. Ask the employees for suggestions on ways to improve training and ideas for new training courses.

Worksheet 7a—Required Training

Training Topic	Regulation/Code Citation
1.	
2.	
3.	
4.	
5.	

Worksheet 7b—Training Overview

Training Required	# of Employees to Train	How Often?
1.		
2.		
3.		
4.		
5.		

Example 7: Some Examples From Salty Cove Marina Training Plan

What	Training Candidate	Training Type ¹	Trainer	When Scheduled	Completed
1. Emergency procedures-new SOP's	All employees	Class OJT for new staff	Dockmaster	Annual (March) As hired	3/15/05
2. Hazardous waste-new SOPs	All employees	Class	General manager	Annual (October)	
		Briefings 1 on 1	Dockmaster Maintenance manager	Monday staff meetings and as needed	Variable
3. Stormwater pollution prevention-new SOP's	All employees	Class OJT for new staff	Environmental coordinator	Annual (July) As hired	7/15/05
4. Wastewater-new SOP's	For maintenance technicians	1 on 1	Maintenance manager	Annual (January)	5/15/05
5. Environmental new regulations and BMPs	Marina Owner, GM	Annual marina trade conference	Professional marina environmental experts	Annual (February)	3/31/05

¹Key for type of training:**OJT** = on-the-job training for new hires**Briefings** = short updates during weekly staff meetings**Class** = classroom**1 on 1** = one-on-one meeting with talking points on a handout**Worksheet 7c—Annual Training Plan**

What	Training Candidate	Training Type	Trainer	When scheduled	Completed
1.					
2.					
3.					
4.					
5.					

Worksheet 7d—Individual Employee Training Plan

Training Plan				
Employee Name:		Training Requirements 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____		
Employment Date: ____ / ____ / ____				
Termination Date: ____ / ____ / ____				
Job Title:				
Type of Training	Training Dates			
	2005	2006	2007	2008

Section 8.

Maintaining the EMP—Monitoring and Taking Corrective Action

Monitoring and taking corrective actions are important components of the EMP because they help verify if you are on the right track and provide a method to get back on track if operations have strayed. The marina's environmental manager oversees the monitoring, works with the staff and reports to the owner about changes needed.

Environmental monitoring must be an ongoing part of your daily marina routine and needs to be scheduled at required set intervals. When a critical problem is observed, management must take immediate corrective action. As one marina manager said, "Monitoring is a no-brainer. It is an everyday occurrence for us. The key is understanding environmental regulations and for everyone to know what to do."

Environmental Compliance Monitoring

This type of monitoring determines whether the business is in compliance with regulations, including whether employees are following Standard Operating Procedures (SOPs) and Best Management Practices (BMPs) that contribute to compliance. Most marina environmental monitoring will be informal, such as day-to-day observations by marina personnel, but will also include more formal weekly/monthly reviews and annual inspections done by marina management. Any noncompliance found should be immediately corrected.

Audits are a good way to determine compliance with regulations and to observe whether your employees are following SOPs and BMPs. You can conduct audits internally or hire an outside expert. You can also enlist managers to do performance checks in the course of their daily work.

It is a good idea to conduct a comprehensive compliance audit every few years to ensure that you have not overlooked any new activities within your marina that may affect the environment or any new or changed regulatory requirements. Your state marina guide may contain useful information to help you complete an audit of your marina facility. Also, your state environmental agency or marine trade association may be able to assist with compliance auditing. Keep in mind, by conducting a compliance audit of your facility you will likely be verifying your knowledge of regulations which apply to your facility including areas of non-compliance. You will need to be committed to correcting any problems you identify in your compliance audit (see Appendix A for an environmental checklist to use as a tool to spot check for compliance). You should also consider using incentive policies (see page 9) which are designed to encourage greater compliance with environmental regulations and laws.

Environmental Performance Monitoring

Environmental performance monitoring allows you to verify whether your marina is meeting the goals stated in your EMP. It does this by measuring the progress you've achieved towards those goals. These measures are usually expressed in numbers, such as the reduction in pounds of waste

generated or pounds of volatile organic compounds (VOCs) emitted. For example, if your goal is to reduce hazardous waste, then your measure of success could be the number of pounds of waste reduced over a year's time.

An **environmental target** indicates by **how much** you want to achieve a goal. For example, your target might be to reduce hazardous waste amounts by 10 percent within one year. Articulating specific targets and desired end results will help you achieve your marina's environmental goal. As your marina EMP matures, goals and targets need to be revisited. You may choose to keep the same goals, but change the targets to reflect a higher performance expectation. Or, you may choose to retire certain goals and adopt new ones to reflect new environmental management challenges your business is facing. The idea is that the goals and targets should work together to fuel ongoing improvement to the EMP.

Refer back to Section 2 (on page 11), Selecting Goals and Setting Targets, and use this guide to identify meaningful targets for stated goals.

Management Review

The marina top management team should conduct the EMP review internally. This will help ensure that it is functioning as planned. Seek the opinions and suggestions of managers and staff prior to meeting and before making decisions. This is an excellent opportunity to make changes to the EMP and report on environmental performance.

Management reviews should be done at least once annually and include:

- Reviewing the EMP to see if it effectively meets your marina business and environmental needs. This review should include confirming compliance with all local, state and federal laws.
- Developing recommended options to improve the EMP as a key to continual improvement.
- Determining what environmental goals and targets are still applicable or need to be updated.
- Revising or establishing new targets to assure the EMP is being met.

Also consider the EMP system of action and accountability throughout the marina, and look at the results of monitoring to see how well the EMP is working to achieve compliance and to meet its stated goals. Other questions you might consider include:

- How much value is the EMP returning to the business for the effort invested?
- Are environmental management costs higher or lower than this time last year?
- Are employees knowledgeable about their environmental responsibilities?
- Is it taking less time overall for your business to meet regulatory requirements?
- Have your boating customers joined the effort by using clean boating practices?

Use **Worksheet 8a—Management Review** to work through the management review process.

Corrective Action

Take corrective action if compliance monitoring identifies nonconformance with any applicable laws or with the EMP. In general, do the following for corrective action:

1. Investigate the root cause of the problem.
2. Create a solution to correct the existing problem as well as to prevent recurrence of the problem.
3. Assign responsibility for corrective and preventive action.
4. Ensure that the problem has been solved.

Use **Worksheet 8b—Corrective Action** to help work through the process.

Worksheet 8a—Management Review

Top Management Reviews the EMP and Monitoring Results

Review your EMP and the results of audits and performance monitoring conducted over the past year.

Step 1: Evaluate the EMP's Usefulness

Consider these questions when evaluating your EMP:

- a. Is compliance with environmental regulations being achieved? If not, why not?
- b. Is the environmental policy still appropriate for the marina's activities and culture?
- c. Are goals and targets being met? If not, why not?
- d. Are the goals and targets still adequate for keeping the business on track with environmental policy?
- e. Has the EMP added value to the business by:
 - Making environmental compliance more effective? ☐ Yes ☐ No
 - Making environmental management less time consuming? ☐ Yes ☐ No
 - Causing changes to processes or procedures that reduced liability? ☐ Yes ☐ No
 - Causing changes to processes or procedures that saved money? ☐ Yes ☐ No
- f. How does the EMP detract from the business? What can be done to prevent or reduce this from happening?

Step 2: Determine How the EMP Can Be Improved

Based on responses to the questions in step 2, what are the three most critical issues that need to be addressed to improve your EMP? If the critical issues have been taken care of, what are the three most important issues?

- a.
- b.
- c.

Step 3: Discuss the Corrective Action Plan

Meet with the responsible staff to talk about the issues identified in step 3. Discuss what changes need to be made to address or improve them and assign responsibility to ensure implementation.

Worksheet 8b—Corrective Action

Step 1: Identify and Describe the Problem

Briefly describe the identified problem.

Step 2: Investigate the Problem

Investigate the problem by asking members of the clean marina team and any involved employees what they believe is the root cause of the problem. Also, collect other useful observations such as those from customers and vendors.

Step 3: Determine Possible Corrective Steps

Determine possible corrective and preventive actions that the business can undertake to respond to the problem. Involve members of the clean marina team in a brainstorming session to develop a list of corrective and preventive steps.

Step 4: Select the Steps to Take

From the list of corrective and preventive actions developed, decide which one or two will be most effective and feasible given available resources. Write a memo briefly stating the problem, what corrective and preventive actions the business will take, and who will be responsible to oversee implementation.

Step 5: Inform Those That Need to Know

Distribute the memo to all appropriate parties. Check in with those who have follow-up responsibilities to make sure they understand what needs to be done.

Step 6: Calculate How Much Time is Needed

Decide how much time should pass before checking to see if the corrective and preventive actions are working. Put a reminder in your calendar.

Step 7: Evaluate Results

When the time comes, evaluate the results of the corrective and preventive actions and consider whether the EMP needs to be revised to reflect a better approach to this particular issue for the future.

Section 9.

Creating a Master Calendar

Creating a master calendar can help you ensure that all important activities, such as planning training, compliance with regulatory requirements and deadlines, are done when required or needed and when best fit into the marina's work schedule. Using a calendar will also save you time in the long run and will remind staff what to do and when.

Step 1: Review Master File List

Review **Worksheet 5—Master File and Document List** to identify all the reports, notifications and permits the business must file with regulatory agencies. Make an index card for each report and note to what agency (or agencies) it must be submitted, the person responsible for compiling and submitting it, any supporting internal reports or data necessary to produce it, and the person(s) responsible for providing that information. Put the due date for each report in one of the upper corners of the index card.

Step 2: Rank in Calendar Order

Review Example 9 (on page 47) for some examples of Salty Cove Marina's Environmental Master Calendar, to see how a typical schedule is organized.

List what your marina needs to do, in order, by due date, on **Worksheet 9—Environmental Master Calendar**. The calendar will serve as a helpful guide for everyone involved with key environmental activities you wish to schedule for the coming year. Display the master calendar on bulletin boards as a reminder of what must be done each month.

Step 3: Do an Annual Review

Check the requirements of regulations annually (or more often) to check if any reporting or notification requirements have changed. Revise the Environmental Master Calendar as needed.

Step 4: Keep Tabs on New Report Needs

Check with the clean marina team to see if new internal reports are needed to fulfill revised goals, or if any current internal reports are no longer needed. Revise the Environmental Master Calendar accordingly.

Example 9: Examples From Salty Cove Marina's Environmental Master Calendar

Month	Who Does It	What Is Done	Where Done	Special Instructions
January	Marina Owner and General Manager	Attend national marina conference Organize EMP training programs	Conference site	Collect newest information to update EMP
February	General Manager	Update stormwater pollution prevention plan Submit annual Tier II Emergency and Hazardous Chemical Inventory Form	Marina	Review changes with appropriate staff Send to SERC, LEPC and Local fire department
March	Marina and Yard Managers	Train staff on SOPs from EMP SPCC plan review	Repair shed	All participants sign in
April	General Manager Yard Manager	Collect and recycle shrinkwrap Collect and recycle antifreeze	Yard	Sent to recycler Sent to recycler
May	Service Manager Yard Manager	Train staff on hazardous waste Install dump station for portable toilets	Service building Dock	Update training records Place in convenient location near steps
June	Dockmaster	Conduct boater educational program	Dock	Demonstrate good pollution prevention
July	All Staff	Observe boater compliance with BMPs for boat use Promote pumpout use	Dock	Encourage use of spill pads at fuel dock
August	Yard Manager	Take stormwater runoff samples for testing	Point sources	Sample during heavy rain storm
September	All Managers	Inspect marina and yard for environmental improvements	Marina-wide	Report findings and recommendations to general manager
October	Service Manager	Educate staff on use of MSDs	Service office and building	Update training records
November	Paint Crew Manager	Track and record spray painting VOC volumes	Service office	Annual air emissions inventory information
December	Marina Owner and General Manager	Review EMP and SOPs Prepare new year's environmental master calendar	Main office	Discuss with all key managers and staff for their input and ideas

Worksheet 9—Marina Environmental Master Calendar

Month	Who Does It	What Is Done	Where Done	Special Instructions
January				
February				
March				
April				
May				
June				
July				
August				
September				
October				
November				
December				

Section 10.

Summary and Next Steps

As you can see, you and your staff can develop a marina EMP by following a series of manageable steps. Each step results in steady progress towards integrating environmental management into responsible boating facility practices. The EMP process is also designed with steps to review, and with opportunities to improve performance. This adds considerable value to your marina and can positively impact the environment.

Take time to develop your EMP and keep in mind that planning is important so that the effort does not detract from other marina activities. Define the boundaries of implementing an EMP at the beginning of the process and stay within them. During this initial time, to ensure efficiency and success, some fundamental decisions should be made such as:

- Should the EMP cover the entire business to start out or will it focus on key processes?
- Must the initial focus be on assuring compliance with applicable laws, or can it be on environmental performance that goes beyond compliance?
- At what stage should the EMP be shared with people outside the business?

Once your EMP is fully established, your marina will have systems and controls in place to help your facility achieve high-level environmental performance on a sustained basis. This includes having a framework to ensure it is in compliance. Beyond compliance, your marina will benefit in many ways including increased employee satisfaction as your employees better understand what's expected of them; increased savings as you more easily identify opportunities to reduce use of natural resources; and increased available labor as the time your employees have to devote to environmental management activities is kept at reasonable level.

Moreover, once your marina EMP is established, consider using it as the foundation for getting public recognition—such as outside recognition by your state Clean Marina Program. Potential customers who view your marina as clean will be more willing to patronage your marina. The marina owner may apply for state “clean marina” recognition.⁴

Help is Available

Finally, remember that help is available! Your state Small Business Assistance Program, as well as the EPA New England Regional Office of Assistance and Pollution Prevention (617-918-1836), can answer your questions about regulatory requirements or broader issues of environmental management. If you're uncertain about how to get in touch with the state Small Business Assistance Program, consult www.smallbiz-enviroweb.org.

⁴ Contact your state coastal or environmental agency about clean marina programs that currently exist in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont.

MARINA CHECKLIST**For All Questions, Please Use:**

Y: Yes N: No DK: Don't Know NA: Not Applicable

Facility Type

1. a. How many employees work at the facility during peak recreational boating season? Full-time ____
Part-time ____
- b. How many boats(capacity) are moored at the facility? ____ Docked? ____ Stored on land? ____
2. a. Are maintenance or repair operations performed at the facility? ____
- b. If yes, are these primarily customer do-it-yourself activities? ____

Hazardous Waste

3. a. Are manifests documenting hazardous waste shipments kept, going back at least 3 years? ____
- b. Do employees receive training in: Proper handling of wastes? ____ Emergency procedures? ____
- c. Are quantities of hazardous waste generated by the marina calculated each month, to determine what size generator the marina is? ____
- d. Are all hazardous wastes stored: In labeled containers? ____ In a dedicated storage area? ____
Indoors or covered? ____ In an area with an impervious floor? ____
With storage area spill containment? ____
- e. Are all hazardous wastes shipped with a properly licensed transporter? ____

Oil and Fuel

4. a. Is oil (including motor fuel) stored above ground in any size tank(s) with a total aggregate volume over 1320 gallons? ____
Below ground in any size tank(s) with a total aggregate volume over 42000 gallons? ____
- b. Is a Spill Prevention, Control and Countermeasure plan (SPCC):
On site? ____ Signed by a registered professional engineer? ____ Posted in plain view at oil storage locations? ____
5. a. Does **above** ground oil storage (including piping system) have: Secondary containment? ____ Leak detection? ____
- b. Does **below** ground oil storage (including piping system) have: Secondary containment? ____ Leak detection? ____
- c. Are spill prevention procedures in place for:
Receiving oil from a supplier? ____ Transferring oil within the facility? ____
Waste oil disposal? ____
6. a. Does the facility have spill prevention procedures in place for fuel dispensing? ____
Overfill alarm? ____ Automatic shutoff? ____ Fuel collars to capture splash/drips? ____
Employee monitoring of fueling? ____ Other? ____
- b. Is equipment available and procedures in place to contain a spill at the dispenser location? ____

- c. How would you evaluate the effectiveness of the methods you are using to prevent releases?
Excellent ____ Good ____ Fair ____ Poor ____

Hazardous Materials

7. Has the amount of each hazardous material stored onsite been calculated (including motor fuel in above-ground systems of greater than 10,000 pounds capacity) to determine if reporting to the Local Emergency Planning Committee is necessary? ____
8. Are up to date Material Safety Data Sheets (MSDS) for all hazardous chemicals kept on file? ____
Used for training all employees handling hazardous chemicals? ____

Storm Water

9. a. Is a National Pollutant Discharge Elimination System (NPDES) Storm Water Permit required of this facility? ____
b. Does the marina have a NPDES Storm Water Permit? ____
10. a. When pressure washing boats coated with ablative paints, are any efforts undertaken to prevent removed material from releasing to water? ____ from contaminating land? ____
b. Are blasting, other paint preparation and painting activities contained or controlled to prevent abrasives, paint chips, and over spray from being released to the water? ____ to land? ____ to protect employees? ____
c. Are all engine fluids promptly transferred from parts, drip pans, used filters and other containers to closed receptacles for disposal or recycling? ____
d. Are fuels, solvents and paints stored in a protected, secure location, away from drains? ____
Plainly labeled? ____
11. Has the marina made structural changes to minimize surface water runoff? ____ Berming? ____
Vegetation? ____ Riprap? ____ Drains? ____ Placement of filters in drains? ____
Other? ____

Other

12. Has the facility switched to alternative materials or products to reduce toxicity or other hazards to Health, safety or the environment? ____ Safer paint stripping? ____ Safer painting? ____
Safer MSD odor chemicals? ____ Dust collection? ____ Phosphate free cleaners? ____
Biodegradable cleaners? ____ Safer antifreeze? ____ Other? ____
13. Does the facility have a sewage pump out system? ____ Onshore ____ Boat ____ How many gallons (approx) do you pump out per week? ____ Do you use Clean Vessels Act funds? ____
14. Has the marina taken any action to improve environmental performance not included above? Please explain ____

This checklist does not include all marina requirements and preferable practices. For further information, see EPA New England's regional marina website at: (<http://www.epa.gov/region1/marinas>). In addition, your comments or suggestions can be sent to: U.S. EPA New England, Mail Code SPP-Marinas, One Congress St., Boston, MA, 02114