



Marinas and Recreational Boating Tier 2 Worksheet



Community Environmental Management

Acknowledgements

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and Department of Environmental Conservation
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We also would like to thank our County Soil and Water Conservation District colleagues Tom McMahon* and _____ for their review and comments.

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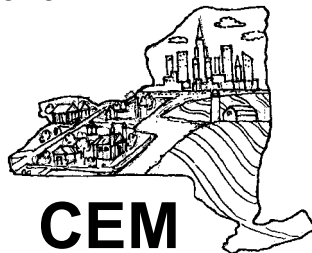
The CEM Logo was designed by Oan Somboonlakana. Additional thanks go to Barbara Silvestri for her assistance in design.

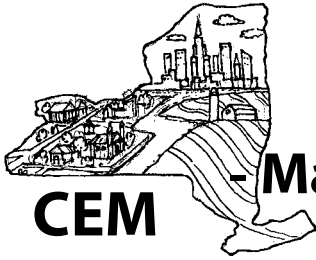
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* Indicates an anticipated reviewer.





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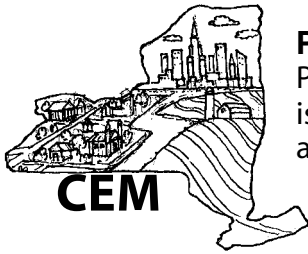
Marinas and Recreational Boating Tier II Worksheet -

Part 1- Community Risk Assessment Factors

The following is a list of strategies many communities have used to improve their operation and maintenance strategies to minimize pollution and other negative impacts from marinas and recreational boating. The more factors that apply to your community, the less likely you are to have adverse water quality impacts. Please check all of those that pertain to your community.

Please check all that pertain to your facility:

- We require and ensure that marinas and ports are designed and constructed to ensure water quality and habitat protection.
- We require the reduction of the day-to-day impacts of stormwater quality and volume from maintenance activities.
- We require and ensure proper hazardous material handling, transport and storage.
- We require and ensure proper disposal of solid waste.
- We have developed and provide public education programs for boaters, marina owners and operators.



Part 2- Community Problem & Needs Assessment

Part 2 of this assessment will help to determine how extensive flooding is in your community and what is your community's capacity for addressing flooding issues.

This assessment has not yet been developed. We are consulting experts in the field to make sure our remedial and preventive strategies outlined in Tier III are sound. If they are, we will develop the Tier II accordingly. If you have any questions or comments on the Tier III strategies, please contact Rich Lewis at the New York State Department of Ag and Markets (518) 485-1470.

Community Environmental Management TIER III: MARINA AND RECREATIONAL BOATING MANAGEMENT STRATEGY DEVELOPMENT

Marina management is a complex issue, with many factors contributing to the problem. The United States Environmental Protection Agency has developed the publication “National Management Measures Guidance to Control Nonpoint Source Pollution from Marinas and Recreational Boating” (EPA841-B-01-005, November 2001) that outlines strategies for managing marinas and recreational boating and preventing adverse water quality impacts that may result.

Strategy – Design and construct marinas and ports for water quality and habitat protection

- Design, construct and maintain marinas and associated channels so that they are not deeper than the surrounding navigable channels
- Retrofit facilities with poor circulation (e.g. wave attenuators, mechanical aerators)
- Design, construct and maintain facilities to keep water sections and basins connected and promote flow
- Maximize the benefits of entrance channels to promote flushing
- Promote flow through currents whenever possible
- Establish a hydrologic baseline before designing new or redeveloping marinas
- Model water quality changes for each development scenario
- Maintain an ongoing water quality monitoring program (e.g. rapid bioassessment techniques, chemical analysis)
- Establish a volunteer monitoring and/or cleanup program
- Perform a habitat baseline study before designing new or redeveloping marinas and emphasize awareness of exotic, invasive, threatened or endangered species, as well as functions of importance, such as spawning, nursery, feeding or migration areas.
- Work with interested parties to reclaim waterfront Brownfields for habitat
- Use low impact development practices to minimize the effect of development on critical environmental areas.
- Use dry stack storage to minimize the area needed for boat storage.
- Preserve wetlands and natural shoreline features for shoreline protection and prevent erosion.
- Use native vegetation for plantings.
- Limit or eliminate use of breakwaters, bulkheads and sea walls, and use riprap instead where structural support is needed.
- Manage boating activities to decrease turbidity and physical destruction of shallow water habitat (e.g. restrict boater traffic in shallow water areas; establish and enforce no wake zones to decrease turbidity, shore erosion and damage in marinas)

Strategy: Reduce the day to day impacts of stormwater quality and volume from maintenance activities

- Perform boat repair and maintenance work inside enclosures that are self-contained or have closed systems for air and water.
- Where inside workspace is not available, blasting and sanding activities must take place in spray booths or tarp enclosures, and vacuum sanders must be used to collect dust and paint chips.
- Where inside workspace is not available, boat maintenance must take place in designated areas away from water and on impervious pads. No runoff from these operations may enter the water.
- Where any outside work is performed, make sure the area is thoroughly cleaned and debris and waste material is disposed of properly.
- Develop, implement and enforce restrictions on “do-it-yourself” maintenance to prevent water quality impairments.
- Design, construct and maintain BMPs for stormwater management to trap and treat any contaminated runoff from the site.
- Develop and implement a routine maintenance schedule for the facility that includes sweeping maintenance areas and parking lots regularly.
- Install or preserve and maintain buffers between maintenance and parking areas and the water.
- Preserve and remediate wetlands, as they are natural stormwater mitigation areas.
- Develop and implement a system to prevent and react to hazardous materials spills.
- If there are floor drains or catch basins near maintenance activities, seal them for the duration of the maintenance to prevent spills from quickly reaching water supplies.
- Wash boat hulls above the waterline by hand. Where practicable, remove boats from the water and clean them where debris can be captured and treated.
- Where practicable, buy and sell detergents and cleaning compounds that are less toxic.
- Prohibit hull scraping or paint removal while boats are afloat.
- Use and sell only long lasting and low toxicity or nontoxic antifouling paints.
- Minimize the impacts of wastewater from pressure washing.

Strategy: Ensure Proper Hazardous Material Handling, Transport and Storage

- Install and test automatic shutoffs on fuel lines and at hose nozzles to reduce chance of major spillage.
- Retrofit fuel nozzles that have a mechanism to hold the nozzle open during fueling without holding.
- Install personal watercraft floats at fuel docks to minimizing spillage while refueling.
- Develop and implement a testing and maintenance schedule for all tanks, lines and hoses associated with fueling operations.
- Develop and implement a spill monitoring program.
- Train employees to prevent, identify, contain, clean up and report spills.
- Provide easy to read signs at each fueling station, which explain proper fueling, spill prevention and reporting procedures.
- Provide easily identifiable and accessible containment equipment on site in case of spill.
- Write and implement a fuel spill recovery plan.
- Promote the installation and use of fuel/air separators on air vents or tank stems of inboard fuel tanks to reduce the amount of fuel spilled into surface waters during fueling.
- Display easy to read signs at fueling stations to discourage overfilling of fuel tanks.
- At each fueling station, provide absorptive pads and disposal receptacles for people to use to catch splash back and drips while fueling and when replacing the nozzle.
- Post easy to read signs to inform patrons and employees of the benefits of properly maintaining engines for fuel-efficient consumption, clean exhaust and fuel economy. Encourage them to routinely check engines for leaks.
- Develop, implement and enforce a plan for bilge water treatment for employees and patrons.
- Develop a system of checks to make sure all materials from spill cleanup are disposed of according to the law.
- Make sure liquid materials are stored in a place that prevents precipitation from entering the storage area, has enough capacity to contain spills, and does not have drains which would allow spills to travel out of the containment area.
- Store as little hazardous material as necessary on site.
- Provide clearly labeled, separate containers for the disposal of waste oils, fuels and other liquid wastes.
- Dispose of or recycle hazardous materials as per Federal, state and local regulations.
- Perform spill proof oil changes
- Use less toxic materials for maintenance whenever practicable
- If pesticides or fertilizer are used, store and distribute as indicated on the manufacturer's label.
- Prepare and implement a hazardous materials spill recovery plan and update it as operations change.
- Keep adequate spill response equipment on site and clearly labeled.

Strategy: Ensure Proper Disposal of Solid Waste

- Limit or prohibit marina patrons from performing hull maintenance while in the water.
- Prohibit material from hull maintenance activities from entering that water.
- Make sure covered garbage and recycling cans are provided in convenient locations, and that they are clearly labeled.
- Make sure patrons clean up any pet waste and post signs telling them how to dispose of it properly.
- Prohibit patrons from disposing of fish waste in the water.
- Provide fish cleaning stations and covered garbage cans.
- Compost fish waste, or collect fresh waste and sell as chum.
- Encourage catch and release fishing, reducing the amount of fish waste.
- Install pumpout facility compatible with the facility's needs (e.g. fixed point systems, dump stations for portable toilets, portable systems, dedicated slipside systems)
- Provide pumpouts at reasonable times and at a reasonable cost.
- Keep pumpout stations clean and easily accessible.
- Train staff to maintain pumpout stations and recognize failures or emergencies.
- Provide adequate restrooms on shore.
- If no pumpout facilities are available, declare the marina a "no discharge area".
- Make sure patrons clean up any pet waste and post signs telling them how to dispose of it properly.
- Post signs asking patrons not to feed waterfowl and other wildlife.
- Develop, adopt and enforce a policy to prohibit the use of Y-valves on boats and inland waters.
- Maintain a dedicated fund and issue a contract for pumpout and dump station repair and maintenance (applies to government-operated marinas, pumpout stations, and dump stations only).
- Regularly inspect and maintain sewage facilities.
- Disinfect suction connections on pumpout stations to prevent pathogen transfer.
- Maintain convenient, dry, clean and pleasant restroom facilities to encourage their use.

Strategy: Develop and Provide Public Education Programs for Boaters, Marina Owners and Operators

- Use signs to inform marina patrons of appropriate clean boating practices.
- Establish bulletin boards for environmental information and idea sharing
- Promote recycling and trash reduction programs
- Hand out pamphlets or fliers, send newsletters, and add inserts to bill mailings with information about how recreational boaters can protect the environment and have clean boating water
- Organize and present enjoyable environmental education meetings, presentations and demonstrations.
- Educate and train marina staff to do their jobs in an environmentally conscious manner and to be good role models for marina patrons
- Insert language into facility contracts that ensure tenants use certain areas and clean boating techniques when maintaining their boats. Use an environmental agreement that ensures that tenants will comply with the marina's best management practices.
- Have a clearly written environmental best management practices agreement for outside contractors to sign as a precondition to working on any boat at the marina.
- Participate with an organization that promotes clean boating practices, and which can help implement and enforce these strategies.
- Provide MARPOL placards to boaters.
- Storm drain stenciling
- Establish and educate marina patrons about rules governing fish cleaning.
- Educate boaters about good fish cleaning practices.
- Provide information about local waste collection and recycling programs.
- Hold clinics on safe fuel and bilge maintenance.
- Teach boaters how to fuel to minimize spills.
- Stock phosphate-free, nontoxic cleaners and environmentally friendly products.
- Place signs in water and label charts to alert boaters about sensitive habitats.

