A Message from the Connecticut Marine Trades Association, Inc. (CMTA)

Dear Friends in the Boating Community,

Long Island Sound is a precious environmental, economic and recreational resource in the heart of the most densely populated region of the United States. Preserving and protecting Long Island Sound for ourselves and future generations is a common goal we at CMTA share with our partners at the Connecticut Department of Energy & Environmental Protection (CT DEEP).

That is why we collaborated with CT DEEP in 2002 in the development of the Connecticut Clean Marina Program, which encourages environmental excellence at marinas and boatyards located throughout the State in order to reduce nonpoint source pollution and promote clean water and air.

CMTA has assumed the administrative functions of the Clean Marina Program from CT DEEP, as state budget cuts have threatened the future of the program. We have updated the Clean Marina Guidebook to reflect changes in permit requirements and their regulations. All program materials are available on our website ctmarinetrades.org and hard copies upon request.

The basic components of the Clean Marina Program remain the same, except that CMTA is now the point of contact for the program. We ask that you continue to use the Clean Marina Guidebook as a resource for achieving a level of regulatory compliance above the norm to demonstrate your commitment to improving the health of Long Island Sound and Connecticut, as well as the larger global ecosystem.

Thank you for your dedication and we look forward to working with you as our goal continues to be making all of our state's marinas certified Clean Marinas.

Sincerely,

Board of Directors
Connecticut Marine Trades Association (CMTA)

CONNECTICUT
MARINE TRADES ASSOCIATION
WELCOME TO OUR WATERS

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INTRODUCTION

This Guidebook provides the information necessary for Connecticut's marina and boatyard operators to make environmentally sound business choices and outlines the steps for certification as a Connecticut Clean Marina. The Connecticut Clean Marina Program is a voluntary, incentive-based education and outreach campaign to encourage environmental compliance and the use of Best Management Practices (BMPs) at Connecticut marinas and boatyards. The Clean Marina Program operates in conjunction with the Clean Boater Program which encourages boaters to pledge to use clean boating practices.

The goal of the Clean Marina Program is to reduce nonpoint source pollution associated with recreational boating facilities in Connecticut's inland and coastal marinas, and to promote clean water and clean air. Nonpoint sources of pollution occur when water runs over land, picks up pollutants and deposits them in surface waters. Mismanaged pollutants from everyday marina activities can enter a marina basin as a nonpoint source pollution. Nonpoint source pollution can be managed by using BMPs which are measures that control the pollutant at its source or intercept the pollutant before it is delivered to the receiving water body. This guidebook describes how to reduce potential pollution from marinas by outlining the legal requirements and suggesting BMPs for common marina activities.

Of course, marinas and boatyards are not the only potential source of pollution in our state's waters. Water quality is impacted by several upland activities from pesticide and fertilizer use at residential homes to discharges from industry and sewage treatment plants. These activities and others are being addressed through other programs. Every potential pollutant source needs to be addressed so that we can all do our part to improve the quality of Connecticut's waters.

The Clean Marina Program is part of a much larger effort to reduce nonpoint sources pf pollution throughout the state in part to address the requirements of the Environmental Protection Agency and the National Oceanic and Atmospheric Administration under Section 319 of the 1987 amendments to the Clean Water Act and Section 6217 of the federal Coastal Zone Act Reauthorization Amendments of 1990.

How to Use This Guidebook

This guidebook is divided into two parts, the CLEAN MARINA ACTIVITIES section and the LEGAL REQUIREMENT APPENDICES. The CLEAN MARINA ACTIVITIES section is divided into seven sections:

- One: Mechanical Activities
- Two: Painting and Fiberglass Repair
- Three: Hauling and Storing Boats
- Four: Fueling
- Five: Facility Management
- Six: Emergency Planning
- Seven: Boater Education

Each of the seven sections is divided into fact sheets on specific marina activities, such as changing oil or fueling. Every fact sheet is organized into the following categories:

- Potential Environmental Impacts
- Legal Requirements
- Best Management Practices
- Checklist for Clean Marina Certification

You can use the fact sheets as guidance for legal compliance and suggested BMPs when you are performing a specific marina activity. The BMPs can be used alone or in combination to reduce environmental impacts above and beyond what is legally required. The questions for Clean Marina certification come directly from the list of BMPs in each fact sheet. All these certification questions are compiled on the "Connecticut Clean Marina Award Checklist," which is used to determine Clean Marina status.

Each of the seven Clean Marina Activities sections begins with a **Quick Reference Table** to the legal requirements for the listed Clean Marina Activities. This table can be used to bypass the activity fact sheet and quickly obtain guidance about the legal requirements referred to in the **Legal Requirements Appendix.**

The Legal Requirements Appendices summarize many of the federal and state laws that apply to marinas and boatyards, and outline what steps need to be taken for legal compliance. The Legal Requirements section has seven appendices:

- Appendix A: Hazardous Substance Management
- Appendix B: Hazardous Waste Management
- Appendix C: Used Oil Management
- Appendix D: Solid Waste Management
- Appendix E: Spills
- Appendix F: Stormwater General Permit
- Appendix G: Wastewater Management.

Many of the fact sheets in the Clean Marina Activities section refer the reader to the appendices for more information.

How to Become a Certified Connecticut Clean Marina

A marina or boatyard must meet all legal and regulatory standards required by the state and federal government, and then meet a percentage of BMPs outlined in this document to become certified as a "Connecticut Clean Marina. The criteria are outlined in two checklists: the **"Connecticut Marina Compliance Checklist"** and the "Connecticut Clean Marina Award Checklist."

To become a certified Connecticut Clean Marina, use the "Connecticut Clean Marina Award Checklist," the Connecticut Marina Compliance Checklist" and the *Connecticut Clean Marina Guidebook* as referenced to assess your facility. Have your compliance consultant or Professional Engineer certify your completion of the checklist and submit it to CMTA at admin@ctmarinetrades.org. CMTA will then process and provide the flag award letter.

If you do not yet meet the minimum percentage of criteria on the checklist, you can still join the program as a Clean Marina Pledge. By signing the **"Connecticut Clean Marina Pledge"** you commit to becoming certified within one year. CMTA staff and volunteers are available to help answer questions as you work toward Clean Marina status.

The benefits of Clean Marina Certification are clear. All Connecticut Clean Marinas are authorized to use the Clean Marina logo on letterhead and in advertising. All receive a framed certificate and a Clean Marina logo flag. Certified Clean Marinas will be listed on Connecticut Clean Marina web page at www.ctmarinetrades.org and will be included in Clean Marina publications and public displays. Connecticut Marine Trades Staff will prepare a news release recognizing your demonstrated commitment to environmental stewardship.

List of Acronyms

ACOE	Army Corps of Engineers
AST	Aboveground Storage Tank
BMP	Best Management Practice
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CESQG	Conditionally Exempt Small Quantity Generator of Hazardous Waste
CFR	Code of Federal Regulations
CGS	Connecticut General Statutes
CMTA	Connecticut Marine Trades Association
CT DEEP	Connecticut Department of Energy & Environmental Protection
CVA	Clean Vessel Act
CZARA	Coastal Zone Act Reauthorization Amendments of 1990
DOT	Department of Transportation
EPA	United States Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act of 1996
HAP	Hazardous Air Pollutant
LDR	Land Disposal Restrictions (Hazardous Waste)
LQG	Large Quantity Generator of Hazardous Waste
MPPRCA	Marine Plastic Pollution Research and Control Act
MSD	Marine Sanitation Device
MSW	Municipal Solid Waste
NFPA	National Fire Protection Association
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
ODC	Ozone Depleting Chemical
OLISP	Office of Long Island Sound Programs
POTW	Publicly Owned Treatment Works
RCRA	Resource Conservation and Recovery Act
RCSA	Regulations of Connecticut State Agencies
SDS	Safety Data Sheet
SPCC	Spill Prevention Control Countermeasure
SQG	Small Quantity Generator
SWGP	Stormwater General Permit
SWPPP	Stormwater Pollution Prevention Plan
TCLP	Toxicity Characteristic Leaching Procedure
USC	United States Code

USCG	United States Coast Guard
UST	Underground Storage Tank
VOC	Volatile Organic Compound

1
Mechanical Activities

Noank Village Boatyard

Mechanical Activities
Quick Reference Table

Use this Table as a quick reference to determine what is legally required if you conduct any of the listed activities or use any of the listed products. We suggest that you read each fact sheet before turning to the referenced legal requirement section because each individual fact sheet provides more detailed information about each activity or product used.
If the “Additional Requirements” box is checked, there are additional requirements that are not described in any appendix but are described on the referenced fact sheet.

ACTIVITES/PRODUCTS USED	Fact Sheet Page #	Appendix A: Hazardous Substance Management	Appendix B: Hazardous Waste Management	Appendix C: Used Oil Management	Appendix D: Solid Waste Management	Appendix E: Spills	Appendix F: Stormwater General Permit*	Appendix G: MIUGeneral Permit*	Add' I Requirements
Antifreeze	11		P				✓		✓
Battery Replacement	13	P	P		✓		✓		✓
Commissioning Engines	16		P	P			✓		
Decommissioning Engines	17		P	P			✓		
Degreasing/Parts Washing	18		P				✓		✓
Oil Changes	20		P	✓			✓		✓
Rags	22		P	P	P	P			✓
Refrigerants	24								✓
Upland Engine Operations	25		P	P	P		✓		✓
Zinc Replacement	26		P		✓		✓		

✓ = applies **P** = potentially applies, see fact sheet for more information

***NOTE:** All facilities classified under Standard Industrial Code (SIC) 4493 (Marina) or SIC 373 (Ship and Boat Building and Repairing), with portions of the facility involved in vehicle, boat, or equipment maintenance, fueling and/or vehicle and boat or equipment cleaning operations, that discharge stormwater must register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

ANTIFREEZE

POTENTIAL ENVIRONMENTAL IMPACTS:

Antifreeze can pollute groundwater, surface water and drinking water supplies if dumped, spilled or leaked and is harmful to marine and aquatic life. While in an engine, antifreeze can become contaminated with lead or fuel to the point where it must be managed as a hazardous waste. There are two types of antifreeze. Antifreeze with ethylene glycol, a greenish-yellow, odorless, sweet-tasting chemical, poses a serious health hazard to humans and animals if ingested. Antifreeze with propylene glycol, (usually pink) which is less toxic is recommended for use.

LEGAL REQUIREMENTS:

- Waste antifreeze can be either hazardous or non-hazardous, depending upon the levels of contaminants it contains (the most common contaminants are lead and benzene). In order to determine which is the case, the generator must either have their waste tested, or utilize reliable "Knowledge of Process" information for the waste (if available) [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)] Such information could include testing by haulers or studies by industry trade groups (such as CMTA). For more information on waste testing requirements, see Appendix B.
- Antifreeze which is hazardous waste must either be recycled or disposed of via a permitted hazardous waste hauler. While stored on-site, it must be managed in accordance with hazardous waste storage requirements [40 CFR 262.11; RCSA §22a-449 (c) -102(a)(2)(A)]. See Appendix B for more information.
- Antifreeze, which is not a hazardous waste is still considered a non-hazardous Connecticut - regulated waste and must be either recycled or disposed of via permitted waste hauler. There are no specific storage requirements for CT regulated waste [CGS §22a-454].
- Antifreeze may not be discharged to storm drains, septic systems, sanitary sewers or surface waters without authorization from CT DEEP [CGS §22a-430]
- A hazardous waste determination must be conducted on any materials used to clean antifreeze spills [40 CFR 262.11: §22a-449(c)-102(a)(2)(A)]. See Appendix B for more information.
- If there is stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* (Stormwater General Permit). See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- Segregate used antifreeze from other wastes. Label the container "Waste Antifreeze".
- Use propylene glycol antifreeze (usually pink) which is less toxic than ethylene glycol (usually green) where appropriate. Sell propylene glycol in your ships store.
- Recover antifreeze used to winterize systems.
- Recycling options for antifreeze include:

1. Purchase on-site recycling equipment and recycle at your facility. Conduct a RCRA hazardous waste determination (i.e., test the residue or filter cartridge) at least one time to verify that the waste is not hazardous before recycling on-site. Keep a copy of the test results in your files.
2. Contract with an on-site mobile recycling service that is permitted by CT DEEP to recycle antifreeze.
3. Contract with a hauler that recycles the antifreeze off-site. If recycling off-site, use a CT DEEP permitted hauler for transportation to a permitted facility for recycling, treatment, storage or disposal. A list of permitted transporters can be obtained from the CT DEEP by calling 860-424-4193 or toll free 888-424-4193.
   - Provide well-marked, coverable containers which are in good condition to collect antifreeze from customers.
   - Use drip pans and funnels when transferring antifreeze to minimize spills and drips.
   - Store antifreeze in a container that can be completely drained with a wide opening. Keep antifreeze storage containers always closed.
   - Provide containment to prevent spills from entering ground water or stormwater.
   - Wear eye protection, clothing that covers exposed skin and rubber gloves when transferring antifreeze. Pour slowly and carefully to avoid splashing.
   - Never mix antifreeze with other chemicals.

Recycling waste antifreeze on-site may reduce your monthly hazardous waste totals and can minimize the regulations that you are required to comply with by reducing your hazardous waste generator status.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you recycle used antifreeze?

  YES **NO** **NA**

- ✓ Do you promote the use of less toxic, propylene glycol antifreeze for winterization?

  YES **NO** **NA**

- ✓ Do you store used antifreeze in separate, labeled and coverable containers and provide containment to prevent spills from entering groundwater or stormwater?

  YES **NO** **NA**

Battery Replacement

POTENTIAL ENVIRONMENT IMPACTS:

If handled improperly, lead acid batteries pose certain hazards. Battery components are toxic and corrosive and can also be a fire and explosion hazard. Lead and sulfuric acid can contaminate the air, soil, and water. Direct contact with sulfuric acid can burn the skin and eyes. Exposure to lead in the environment can pose a serious health hazard to children. Lead, which is very toxic to aquatic life, can enter marina basins through stormwater when spent lead acid batteries are not managed properly.

LEGAL REQUIREMENTS:

- Spent lead acid batteries must be recycled in Connecticut and may not be disposed of with other solid wastes [RCSA §22a-241b-2(a)(I)(N), CGS §22a-256g (a)].
- If you sell lead acid batteries at your facility, you must accept a used lead acid battery for each new battery that is sold to a customer. Consumers that are not returning a used battery with the purchase of a new battery must pay a five-dollar "core" charge. Retailers must post written notice informing consumers of these requirements. [CGS §§22a-256h and – 256i].
- There are two options for managing spent lead acid batteries prior to sending them off-site reclamation. Batteries can be managed according to the so-called Universal Waste Rule [RCSA §22a-449(c) -113, 40 CFR 273] or alternatively, under special lead-acid battery recycling rules [RCSA §22a-449 (c)-106 (c)] (see below).
- **Universal Waste Rule requirements.** Marinas that store less than 5,000 kilograms (11,000 pounds) of spent lead-acid batteries would be classified as "Small Quantity Handlers" under these rules. Such Handlers are required to do the following [40 CFR 273 Subpart B, RCSA §22a-449 (c) -113 (a)]:
    - Mark all batteries (or containers holding such batteries) with the words "Universal Waste – Batteries," "Waste Batteries," or "Used Batteries."
    - Store batteries for no more than one year before sending them off-site for recycling.
    - Place any battery that shows signs of leakage, spillage, or damage in a container that is kept closed, is structurally sound, and is compatible with the contents of the battery.
    - Immediately contain any releases of batteries or electrolytes.
    - Before shipping batteries off-site, ensure that they are packaged, marked, labeled, and placarded in accordance with U.S DOT rules for hazardous materials.
    - Ship the batteries to another Universal Waste handler or to an authorized destination facility for recycling. Prior to shipment, ensure that the receiving facility agrees to receive the shipment. Any shipments which are rejected must be taken back or directed to another handler or destination facility.
    - In addition, if you transport batteries from one site to another, you must comply with the Universal Waste transporter requirements [40 CFR 273 subpart D]

- **Lead acid battery recycling rules.** Persons managing their lead acid batteries under this set of rules must do the following [RCSA §22a-449(c)- 106(c):

  - Segregate batteries from paper, rags, garbage, flammables, scrap metal or hazardous chemicals by means of a dike, berm, wall, or other physical barrier.
  - Store spent lead acid batteries on an impervious surface (such as concrete sealed to protect the surface from degradation) and inspect spent lead batteries for leaks and deterioration.
  - Open, handle or store spent lead acid batteries so that the battery case does not rupture, leak, or produce short circuits.
  - Although the lead-acid battery recycling rules do not specifically require it, before shipping batteries off-site, ensure that they are packaged, marked, labeled and placarded in accordance with the U.S. DOT rules for hazardous materials.
  - Regardless of which set of rules lead-acid batteries are managed under, a hazardous waste determination must be conducted on spilled acid and broken lead acid batteries, and any materials used to clean a spill, to establish whether their disposal is subject to hazardous waste regulations [40 CFR 262.11; RCSA §22a-449(c) -102(a)(2)(A)]. Manage hazardous waste as described in Appendix B.
  - If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.
  - Report the chemicals in lead acid batteries (sulfuric acid and lead) as part of your hazardous and toxic chemical inventory and notifications required under the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) [40 CFR 355] if over 500 pounds of batteries are stored on-site. See Appendix A for more information on EPCRA requirements.

BEST MANAGEMENT PRACTICES

- Avoid long-term storage of lead acid batteries by sending accumulated batteries to a reclaimer within six months of generation or receipt from customer. Limit accumulation of large quantities of spent batteries. If necessary, ship more frequently.
- Store spent lead acid batteries upright in a secure location, protected from the elements.
- Never stack batteries directly on top of each other. Layer with wood.
- Never drain batteries or crack the casings.
- Place cracked or leaking batteries in a sturdy, acid-resistant, leak-proof, sealed container (e.g., sealable 5-gallon plastic pail). The container should be kept closed within the battery storage area.
- Strap batteries to pallets or wrap batteries and pallets in plastic during transport.
- Keep written records of weekly inspections of spent lead acid batteries.

CHECKLIST FOR CLEAN MARINA CERFTIFCATION:

- ✓ Do you store spent lead acid batteries in a covered area, layered with wood, if stacked?
  YES **NO** **NA**

Waste gasoline or diesel fuel sent for recycling (fuel blending) rather than for disposal or incineration are exempt from regulation as hazardous waste.

COMMISSIONING ENGINES

POTENTIAL ENVIRONMENTAL IMPACTS:

The waste fluids generated when commissioning engines on the upland, if not properly managed, can potentially enter the water in stormwater runoff. Contact with the fluids can harm fish and other marine and aquatic life. If certain fluids are mixed, they may become subject to hazardous waste requirements and be more expensive to dispose. Waste fluids from commissioning engines may include engine oil, gasoline, diesel fuel, and antifreeze.

LEGAL REQUIREMENTS:

- If stale gasoline cannot be reconditioned, dispose of it as hazardous waste [40 CFR 262.11: RCSA §22a-449 (c) - 102(a)(2)(A)]. See Appendix B for more information, especially the list of Hazardous Waste Minimization Tips.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit") See Appendix F for more information.
- If doing an oil change, see "Oil Changes" fact sheet.
- See "Antifreeze" fact sheet to determine how to handle, store and dispose of antifreeze used to winterize engines.
- Manage soiled rags as described in "Rags" fact sheet.

BEST MANAGEMENT PRACTICES:

- ➢ Inspect fuel lines for leaks or potential leaks such as cracks and loose connections. These can be persistent problems that last throughout the season, leaking engine fluids into the bilge.
- ➢ Household hazardous waste programs may accept unwanted gasoline and gas/oil blends generated by individual boat owners. Encourage marina patrons to dispose of their waste gasoline through their own municipal household hazardous waste collection programs, if appropriate.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

No Clean Marina certification criteria specific to commissioning engines.

DECOMMISSIONING ENGINES

Waste gasoline or diesel fuel sent for recycling (fuel blending) rather than for disposal or incineration are exempt from regulation as hazardous waste.

POTENTIAL ENVIRONMENTAL IMPACTS:

The waste fluids generated when decommissioning engines on the upland, if not properly managed, can potentially enter the water in stormwater runoff. Contact with the fluids can harm fish and other marine and aquatic life. If certain fluids are mixed, they may become subject to hazardous waste requirements and be more expensive to dispose. Waste fluids from commissioning engines may include engine oil, gasoline, diesel fuel, and antifreeze.

LEGAL REQUIREMENTS:

- If stale gasoline cannot be reconditioned, dispose of it as hazardous waste [40 CFR 262.11: RCSA §22a-449 (c) -102(a)(2)(A)]. See Appendix B for more information, especially the list of Hazardous Waste Minimization Tips.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit") See Appendix F for more information.
- If doing an oil change, see "Oil Changes" fact sheet.
- See "Antifreeze" fact sheet to determine how to handle, store and dispose of antifreeze used to winterize engines.
- Manage soiled rags as described in "Rags" fact sheet.
- Store batteries as described in "Battery Replacement" fact sheet.

BEST MANAGEMET PRACTICES*:*

- Use propylene glycol antifreeze to winterize all systems except "closed" or freshwater cooling systems. propylene glycol antifreeze is much less toxic than ethylene glycol antifreeze. Use the minimum amount of antifreeze necessary for the job.
- Where appropriate, add stabilizers to fuel to protect engines against corrosion and the formation of sludge, gum, and varnish. Stabilizers are available for gasoline and diesel fuels, and for crankcase oil. This also eliminates the problem of stale fuel disposal in the spring. Check manufacturer's warranty on engine before adding fuel stabilizers.
- Fill fuel tanks to 85-90% full to prevent flammable fumes from accumulating and to minimize the possibility of condensation leading to corrosion. Do not fill the tank more than 90% full if the boat has an external overflow vent. The fuel will expand as it warms in the springtime, and fuel will spill out the vent line of a full inboard tank.

- Household hazardous waste programs may accept unwanted gasoline and gas/oils blends generated by individual boat owners. Encourage marina patrons to dispose of their waste collection programs, if appropriate.

DEGREASING/PARTS WASHING

Products that list compounds with "...chloro..." are chlorinated compounds, most of which are hazardous due to their toxicity. Many non-chlorinated organic solvents and common parts washer solutions such as petroleum naptha or mineral spirits are also typically hazardous due to their ignitability.

POTENTIAL ENVIRONMENT IMPACTS:

Degreasers used to clean metal parts may be organic solvents (chlorinated or non-chlorinated) or water-based cleaners. Organic solvents usually contain Volatile Organic Compounds (VOCS) which can evaporate quickly. Many VOCs combine with the combustion emissions to form ground level ozone, a major component of "smog." Ozone damages lungs and degrades many materials. When solvents are released and reach water, even in very small quantities, they may render the water unfit for human consumption and uninhabitable for aquatic life. For the purpose of this section "cold cleaning" means the batch process of cleaning and removing soils from metal surfaces by spraying, brushing, flushing, or immersion while maintaining the degreasing solvent below its boiling point.

LEGAL REQUIREMENTS:

- A hazardous waste determination must be conducted to establish whether disposal of waste solvents and parts washer solutions is subject to hazardous waste regulations [40 CFR 262.11; RCSA §22a-449(c)- 102(a)(2)(A)]. A hazardous waste determination must also be conducted on any materials used to clean a spill. Manage hazardous waste as described in Appendix B.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.
- See "Rags" fact sheet for more information on managing solvent-soaked rags.
- Spray degreasing solvent as a solid fluid stream (not a fine, atomized, or shower type) within the confines of the cold cleaning unit and at a pressure which does not exceed 10 psi.
- Design and operate parts washers to minimize the evaporation of VOC [RCSA§ 22a-174-201(1)]:
    - The cover must be easy to operate with one hand and be kept closed whenever the parts washer is not in use for 2 minutes or more.
    -

- Equip the cleaning device with an internal rack or equipment for draining cleaned parts so that parts are enclosed under the cover while draining. The drainage rack may be external for applications where an internal type cannot fit into the cleaning system.
- Drain parts for at least 15 seconds, or until dripping ceases, whichever is longer.
- Only use solvents that have a vapor pressure of 1.0 mmHg or less at 20 degrees Celsius.
- Collect and store waste solvent in closed containers. Closed containers used for storing waste solvent may contain a device that allows pressure relief but does not allow liquid solvent to drain from the container.

- Cease operation if there are any visible solvent leaks.
- Post labels on or near each unit summarizing the applicable operating requirements
- Minimize the drafts across the top of the parts washer such that whenever the cover is open the unit is not exposed to drafts greater than 40 meters per minute, as measured between 1 and 2 meters upwind, and at the same elevation as the tank lip.
- Do not clean sponges, fabric, wood, leather, paper or other absorbent material in a cold cleaning unit.
- Keep records of the type of solvent use, the amount of solvent added to each unit on a monthly basis, and the vapor pressure and weight percent VOC of the solvent. Maintain those records for a minimum of five years.

BEST MANAGEMENT PRACTICES:

- Use parts washer units with remote reservoirs for parts cleaning liquids.
- Use water-based, non-VOC cleaners that are less hazardous than solvent-based degreasers. They are also less toxic and non-flammable. Don't use a toxic or flammable organic solvent if you don't have to.
- If using VOC-based solvents is unavoidable, catch excess solvents in a pan and reuse.
- Never discard any degreasing solvent into sinks, floor drains, or onto the ground. It will ultimately find its way to local waters, and as little as a thimble full may render thousands of gallons of water uninhabitable for aquatic life or unfit for human consumption. You may be held responsible for remediation costs.
- CT DEEP is aware of the following companies that can provide less hazardous parts washing systems. This list is not comprehensive, and the CTDEEP does not endorse these vendors or services over any others:

COMPANY NAME	PHONE & FAX	WEBSITE
Buckeye International	Phone: 800-321-2583 Fax: 314-298-2850	www.buckeyeinternational.com
Chem Station New England	Toll Free: 800-554-8265 Phone: 860-291-2863 Fax: 860-291-2864	www.chemstation.com
Connecticut Cleaning & Heating Equipment	Phone: 860-651-9116 Fax: 860-658-5765	www.connecticutcleaningandheatingequipment.com
Hubbard Hall Service	Phone: 203-756-5521 Fax: 203-756-9017	www.hubbardhall.com
Safety Kleen	Phone: 800-323-5040	www.safetykleen.com
System One	Toll Free: 800-711-1414 Phone: 305-593-8015 Fax: 305-593-8016	www.systemonetechnologies.com
United Laboratories	Phone: 800-323-2594 Fax: 630-443-2087	www.beearthsmart.com
ZEP Manufacturing	Phone: 404-352-1680	www.zep.com

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

Do you use water-based, non-VOC degreasers and part washers, if practical?

YES **NO** **NA**

OIL CHANGES

Used crankcase oil, automatic transmission fluid, power steering fluid and hydraulic fluid are all considered used oil and can be mixed and managed together.

POTENTIAL ENVIRONMENTAL IMPACTS:

Even small amounts of oil introduced into the marina environment can cause environmental problems, especially if they persist. Although some oil that spills into the water evaporates, petroleum hydrocarbons can remain suspended in the water column, concentrate on the surface, or settle to the bottom. Because of the properties of oil, a cup of oil can spread a very thin sheen over more than an acre of calm water. An oil sheen can block necessary oxygen and light from moving through the surface of the water. According to the EPA, the hydrocarbons in oil harm juvenile fish, upset fish reproduction, and interfere with the growth and reproduction of bottom-dwelling organisms.

LEGAL REQUIREMENTS:

- Waste oil must be recycled [RCSA §22a-24lb-2(a)(1) (O)].
- Manage used oil, and any materials used to clean a spill in accordance with the requirements specified in Appendix C [40 CFR 279 and RSCA §22a-449(c)-119].
- Storage of used oil is subject to all applicable Spill Prevention, Control and Countermeasures [40 CFR 112] See Spill Prevention Control and Countermeasure fact sheet in Appendix E for more information.
- If there is stormwater discharge from your facility, you may have to register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.
- Oily bilge water or any petroleum product that is discharged to the waters of the state must be reported to the CT DEEP Emergency Response and Spill Prevention at 860-424-3338 or toll free 866-DEP-SPIL (866-337-7745) [CGS§22a-450]. See Appendix E for state and federal spill reporting requirements.
- If oily bilge water on any petroleum product that is discharged into navigable waters causes a visible sheen, it may also be necessary to report the discharge to the National Response Center at 800-424-8802 [Section 311 of the Clean Water Act, 33 USC 1321]. See Appendix E for the state and federal spill reporting requirements.
- The use of dispersants, such as dishwashing soaps or detergents on a fuel spill or sheen of any size on the surface water is prohibited in most circumstances [40 CFR 110.4] Dispersants may only be used with permission from federal or state authorities, and only in rare instances.

BEST MANAGEMENT PRACTICES:

- Do not mix used oil with anything else, such as chlorinated solvents, or expose oil to electrical contact cleaner or carburetor cleaner which can contaminate used oil while in an engine. Doing so will result in

- the need to perform a hazardous waste determination on the used oil mixture to establish whether the mixture must be managed as a hazardous waste.
- Purchase a non-spill vacuum-type system for spill-proof oil changes, or to suction oily water from bilges.
- Slip a plastic bag over used oil filters prior to removal to prevent drips.
- Burn your used oil in a used oil fuel space heater. This is also a cost saving measure that eliminates the cost of waste oil removal and can extend maintenance activities through the winter. See Appendix C for more information on burning used oil in space heaters.
- Recycle used oil filters. Puncture and drain them first. Collect the drained used oil and manage as described in Appendix C. If you generate large numbers of filters, consider purchasing a filter crusher.
- Install collection facilities for used oil and used oil filters and encourage boaters to use them, or direct boaters to their municipal used oil collection facility, usually at local transfer station. Post signs indicating how important it is that the used oil is not contaminated. Consider providing separate tanks for used oil, one for patrons to use and a secure tank for used oil collected by marina facility staff. See Appendix C for details on used oil storage.
- Use oil absorbent materials to clean up small drips and spills. Sell oil absorbent pads in the ships store.
- Educate customers and staff not to use soaps and detergents to clean up oily drips and spills.
- Avoid pumping bilge water that is oily or has a visible sheen. Use oil absorbent materials or an oil/water separator to remove oil before pumping.
- Purchase a portable or stationary oil/water separator to clean bilge water. These devices draw contaminated water from bilges, capture hydrocarbons in a filter, and discharge clean water.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you have oil absorbent materials available when doing boat maintenance?

YES **NO** **NA**

- ✓ Do you offer spill proof oil changes with non-spill vacuum-type systems?

YES **NO** **NA**

RAGS

POTENTIAL ENVIRONMENTAL IMPACTS:

Contaminated rags that are improperly managed may pose fire, health, and environmental risks. Minimizing contamination of rags reduces health risks. Minimizing contamination of rags reduces health risks to workers and emissions of volatile organic compounds to the air, improves effluent discharge from industrial laundries if you use launderable rags, decreases liability risks, and saves money by minimizing solvent use.

LEGAL REQUIREMENTS

- How used cloth rags are managed depends on what the rags are contaminated with. If the used rag is:
  - Dripping with used oil, manage as used oil (see Appendix C).
  - Contaminated with used oil, but not drippling, test for hazardous waste then properly manage (see Appendix B).
  - Contaminated with paints or solvents, or other hazardous materials, manage as hazardous waste (see Appendix B).
  - Contaminated with non-hazardous materials such as waxes, polishing compounds, etc., manage as solid waste if only a small number are generated (1 or 2 per dumpster). If significant numbers of these rags are generated, however they must be segregated and managed as Connecticut-regulated waste (see Appendix B).
  - Contaminated with other material (or only with mild cleaners or soaps), dispose of in regular trash.
- If you lease rags and have them laundered, and they are all contaminated with hazardous waste, you must manage them as hazardous waste until they are picked up for laundering. However, they do not require a hazardous waste manifest.
- If you choose to launder your own rags, you will need a wastewater discharge permit from the CT DEEP which authorizes you to discharge effluent to the sanitary sewer [CGS §22a-430]. Contact CT DEEP Bureau of Materials Management and Compliance Assurance at 860-424-3018 for more information.

BEST MANAGEMENT PRACTICES:

- Keep oily rags separate from rags that have been contaminated with hazardous materials such as solvents.
- Use cloth rags which can be recycled by an industrial laundry service.
- Contract with a permitted industrial laundry service that will pick up soiled rags and deliver clean rags on a regular basis. The laundry service may require you to limit the solvent and other chemical content of the soiled rags because of the limits on their permit to discharge wastewater into the sanitary sewer.
- Store ignitable rags in NFPA approved, labeled containers until they can be laundered.
- Reduce the amount of solvent used in cleaning through improved work practices. Use solvents only when necessary. Use non-VOC cleaners.
- Remove excess solvent from rags by wringing or pressing excess into a coverable container.

CHECKLIST FOR CLEAN MARINA CERTFICATION:

No Clean Marina certification criteria specific to rags.

REFRIGERANTS

POTENTIAL ENVIRONMENTAL IMPACTS:

Refrigerants become an environmental problem when they escape into the air. Chlorofluorocarbons (CFCs, or Freon™) are gases used primarily as refrigerants in motor vehicle air conditioners, building air conditioning units, refrigerators, and freezers. When CFCs are released into the air, they rise into the upper atmosphere where they damage the protective ozone layer in the stratosphere. A single CFC molecule can destroy 100,000 molecules of ozone, The ozone layer absorbs the sun's harmful ultraviolet (UV) radiation, and as it is damaged, living things on earth become exposed to harmful UV radiation which can lead to skin cancer and cataracts.

Production of CFC was halted by amendments to the Clean Air Act on January 1, 1996.

LEGAL REQUIREMENTS:

- Everyone who services air conditioners must be certified in the proper use of CFC recovery and recycling equipment [Clean Air Act, Title VI, Section 608 and 609,40 CFR 82.34].
- The Clean Air Act prohibits release of CFCs and halons. Anyone repairing or servicing motor vehicle air conditioners must recover or recycle CFCs on-site or recover CFCs and send them off for recycling [40 CFR 82.34].

BEST MANAGEMENT PRACTICES:

- Investigate alternatives to ozone-depleting refrigerants. These include HFC-134 (or R-134a), R-409a, and R-404a.
- The EPA does not require that leaks be repaired, although it recommends that vehicle owners consider repairing leaks to reduce emissions and extend the useful life of their air conditioner. Repair of leaking systems will help vehicle owners avoid the need to continue to refill systems with high priced refrigerant.
- For more information on CFC handling, contact the EPA at 800-821-1237, or the National CFC Hotline at 800-296-1996, between 10:00 a.m. to 4:00 p.m. Monday through Friday, or the CT DEEP Bureau of Air Management at 860-424-4152.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

No Clean Marina certification criteria specific to refrigerants**.**

UPLAND ENGINE OPERATIONS

Used crankcase oil, automatic transmission fluid, power steering fluid and hydraulic fluid are all considered used oil and can be mixed and recycled together.

POTENTIAL ENVIRONMENTAL IMPACTS:

Working on boat engines has potential environmental impacts. If engine fluids are not well managed, they may be transported by stormwater into the marina basin, where they can harm fish and other aquatic life. If certain fluids are mixed, they may become subject to hazardous waste requirements and be more expensive to dispose. Waste fluids from upland engine operations may include engine oil, transmission fluid, power steering fluid, brake fluid, hydraulic fluid and antifreeze, all of which are recyclable liquids. Many of these fluids can be hazardous, and may pick up contaminants (e.g., Lead from bearings) during use in an engine.

LEGAL REQUIREMENTS:

- A hazardous waste determination must be conducted to establish whether disposal of waste fluids is subject to hazardous waste regulations [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)]. A hazardous waste determination must also be conducted on any materials used to clean a spill. Manage hazardous waste as described in Appendix B.
- Emissions from gasoline powered motor vehicles must not be visible and must be less than 40% opacity for diesel powered engines [RCSA §22a 174-18(a)(2)(i) and (ii)]. This does not apply to boat engines that are being repaired {RCSA §22a-174-18(a)(4)(iii)].
- If there is stormwater discharge from your facility, you may have to register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.
- Manage used oil as described in the "Used Oil" fact sheet.
- Manage antifreeze as described in the "Antifreeze" fact sheet.
- Manage soiled rags as described in "Rags" fact sheet.

BEST MANAGEMENT PRACTICES:

- Never pour waste fluids down the drain.
- Recycle fluids whenever possible. In general, the purer the waste stream, the higher the value to the recycler. Never mix gasoline, antifreeze, or chlorinated solvents into used oil because it may cause the used oil to become a hazardous waste, therefore requiring higher disposal costs.

CHECKLIST FOR CLEAN MARINA CERTIFICATION: No Clean Marina certification criteria specific to upland engine operations.

ZINC REPLACEMENT

POTENTIAL ENVIRONMENTAL IMPACTS:

Sacrificial zinc anodes fight corrosion in salt water by deterring corrosion of metal hull and engine parts. Elevated levels of zinc in marina sediments have been found to be associated with boat operation and maintenance. Zinc, in high concentrations, can be toxic to marine life, and can be potentially toxic to humans who eat contaminated shellfish or fish.

LEGAL REQUIREMENTS:

- A hazardous waste determination must be performed on waste zinc anodes being disposed of. However, if the anodes can be recycled as scrap metal, they do not have to be managed be hazardous waste. See Appendix B.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information**.**

BEST MANAGEMENT PRACTICES:

- Recycle zinc anodes with other scrap metals. Scrap metal dealers will take spent zinc anodes.
- Store zinc anodes with other recyclable scrap metals in clearly marked containers protected from the elements.

CHECKLIST FOR CLEAN MARINA CERTIFCATION:

No Clean Marina certification criteria specific to zinc replacement.

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PAINTING AND FIBERGLASS REPAIR

Milford Boat Works, Milford

PAINTING AND FIBERGLASS

Quick Reference Table

Use this table as a quick reference to determine what is legally required if you conduct any of the listed activities or any of the listed products. We suggest that you read each fact sheet before turning to the referenced legal requirements section because each individual fact sheet provides more detailed information about each activity or product used. If the "Additional Requirements" box is checked, there are additional requirements that are not described in any appendix but are described on the referenced fact sheet.

Activities/Products Used	Fact Sheet Page #	Appendix A: Hazardous Substance Management	Appendix B: Hazardous Waste Management	Appendix C: Used Oil Management	Appendix D: Solid Waste Management	Appendix E: Spills	Appendix F: Stormwater General Permit*	Appendix G: MIU General Permit*	Add' l Requirements
Abrasive Blasting	27		P		P		✓		✓
Compound Waxing	28		P		P		✓		
Fiberglassing	29	P	P		✓		✓		✓
Hull and Topside Painting	30		P		✓		✓		✓
Paint Spraying	32		P				✓		✓
Paint Stripping	34		P				✓		
Prepping & Painting Boat Bottoms	35		P		P		✓		✓
Scraping & Sanding	37		P		P		✓		
Teak Refinishing	39		P				✓		
Varnishing	40		P				✓		

✓ = applies P = Potentially applies, see fact sheet for more information

*NOTE: All facilities classified under Standard Industrial Code (SIC) 4493 (Marina) or SIC 373 (Ship and Boat Building and Repairing), with portion of the facility involved in vehicle and boat or equipment maintenance, fueling, and/or vehicle and boat or equipment maintenance, fueling and/or vehicle and boat or equipment cleaning operations, that discharge stormwater must register under the General Permit for the Discharge of

Stormwater Associated with Industrial Activity ("Stormwater General Permit"). See Appendix F for more information.

Abrasive Blasting

POTENTIAL ENVIRONMENTAL IMPACTS:

In abrasive blasting, sand, glass or plastic bead, walnut shells, metal shot or grit, sodium bicarbonate or dry ice pellets are used with air pressure or water pressure to remove paint. Traditional abrasive blasting of large boat hulls is a messy job resulting in many hundreds of pounds of spent abrasive mixed with bottom paint. While the abrasive can relatively cheap, the labor is costly, and the potential environmental impacts are large.

LEGAL REQUIREMENTS:

- You must determine if your blasting wastes are hazardous [40 CFR 262.11; RCSA §22a-449 (c)-102(a)(2)(A). If they are hazardous, manage as described in Appendix B.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.
- Perform abrasive blasting so that visible emissions do not cross outside of the property boundary or cause a nuisance [RCSA §22a-174-18(c)(2) and (c)(3)].
- Use containment methods during abrasive blasting operations [RCSA §§22a-174-18(c)(1)(F).

BEST MANAGEMNET PRACTICES:

- ➢ Consider alternatives to abrasive blasting on-site, such as dustless sanders or contracting the work off-site.
- ➢ If abrasive blasting must be done, perform it within well-ventilated spray booths or plastic tarp enclosures away from the water to minimize the spreading of dust and windblown material, and to prevent residue from being carried into surface waters.
- ➢ If tarp enclosures are used, avoid blasting on windy days. Because tarps are not rigid, they do not eliminate wind flow through the blasting area, and so they allow the wind to carry blasting and residue into surface waters.
- ➢ Prohibit uncontained blasting in the marina.
- ➢ Store spent sandblasting grit, scrapings, and debris under cover in a manner that minimizes contact with process water or stormwater.
- ➢ Recycle used blast media. Investigate companies that recycle used blast media into new media or other products.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you contain debris from abrasive blasting?

YES **NO** **NA**

COMPOUND WAXING

POTENTIAL ENVIRONMENTAL IMPACTS:

Whether a hull is slightly oxidized or heavily oxidized and stained, whether a one or two step process is required to improve a luster of the hull, there are a few environmental impacts from compounding and waxing a hull. Basic pollution prevention techniques and proper management of the substances used to restore fiberglass hulls will help keep waxes and cleaners out of the environment.

LEGAL REQUIREMENTS:

- Most stain removers, rubbing compounds, and waxes are not hazardous materials, although some have hazardous constituents. If any of the products, you use contain hazardous ingredients; you must determine if the waste materials that are generated are hazardous [40 CFR 262.11; RCSA §22a-449 (c)-102(a)(2)(A)]. If they are hazardous, they must be managed as described in Appendix B.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* (“*Stormwater General Permit”)* See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- Check all product SDS’s and purchase those which are non-hazardous.
- Conduct compounding and waxing away from the water.
- If possible, use phosphate free, biodegradable and non-toxic soap when prepping a hull. When removing tough stains, use only as much stain remover as necessary, or use a more abrasive rubbing or polishing compound.
- Manage used rags and buffing pads as described in the “Rags” fact sheet.

CHECKLIST FOR CLEAN MARINA CERTFICATION:

No clean Marina certification criteria specific to compound waxing.

FIBERGLASSING

POTENTIAL ENVIRONMENTAL IMPACTS:

The processes involved in fiberglassing, whether using epoxy, polyester, or vinylester resins for small or big jobs, can have environmental impacts. Some of the materials used in the fiberglassing process can be dangerous to workers. Some resins, catalysts, and the solvents used for the cleanup can be flammable, irritate the skin and respiratory system and may cause cancer.

LEGAL REQUIREMENTS:

- Styrene, the primary component of gelcoat and other polyesters resins, is an ignitable chemical. Therefore, cans or containers of waste resins may be regulated as ignitable hazardous waste CFR 262.11; RCSA §22a-449 (c)- 102(a)(2)(A). Certain hardeners and accelerators may also be regulated as hazardous waste. See Appendix B for more information.
- Chlorinated solvents and the rags used to apply them must be managed as hazardous waste CFR 262.11; RCSA §22a-449 (c)-102(a)(2)(A). See Appendix B and/or the "Rags" fact sheet for more information.
- If you store over 10,000 pounds of any hazardous substance requiring an MSDS (such as a solvent), you must comply with the reporting requirements under Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) [40 CFR 355]. See Appendix A for more information.
- If you manufacture hulls or decks for recreational boats made from fiberglass or aluminum and emit 10 tons or more per year of any one federally designated hazardous air pollutant (HAP) like styrene, toluene, or xylene, and/or 25 tons or more of all HAPs combined, several EPA air emission standards must be followed [40 CFR 63, Subpart VVVV]. Contact CT DEEP's Bureau of Air Management at (860) 424-4152 for more information.
- If there is a stormwater discharge from your facility, you may have to register under the General Permit for the Discharge of Stormwater Associated with the Industrial Activity ("Stormwater General Permit") See Appendix F for more information.

Cured epoxy resins, cutouts, trim end etc, may be disposed in the on-site trash dumpster as a non-hazardous solid waste; as long as:

- ***the amount is small (less than one cubic foot);***
- ***the cured resins are not mixed with paints, solvents, or other hazardous wastes prior to curing; and***
- ***no uncured resins or hardeners are disposed of with the material (these wastes must instead be disposed of as hazardous or Connecticut-regulated wastes depending on their ingredients.***

BEST MANAGEMENT PRACTICES:

- Minimize waste by working with small batches of resin.
- Avoid putting liquid hardener in the trash, since it can spontaneously combust when mixed with sawdust and other materials.

CHECKLIST FOR CLEAN MARINA CERTFICATION:

No Clean Marina certification criteria specific to fiberglassing.

HULL AND TOPSIDE PAINTING

POTENTIAL ENVIRONMENTAL IMPACTS:

Hull and topside paints may be toxic, and inhalation may cause cancer. If spilled, they may harm aquatic life and water quality. Additionally, the fumes released by some paints can contribute to air pollution.

LEGAL REQUIREMENTS:

- A hazardous waste determination must be conducted on painting wastes and any materials used to clean up spilled paint to establish whether their disposal is subject to hazardous waste regulations CFR 262.11; RCSA §22a-449 (c)- 102(a)(2)(A). Manage hazardous waste described in Appendix B.
- Paint cans and other containers that have residues of hazardous (e.g., oil-based) paints must be handled as hazardous waste unless they have been "emptied" which means drained of all material that can be removed from them by normal methods (e.g., pouring or pumping), AND no more than one inch (or 3% by weight) of residue remains in the container {40 CFR 261.7]. "Emptied" containers of hazardous paints and those that have dried out residues, of non-hazardous (e.g, latex) paints may be recycled as scrap metal, or disposed of in regular trash.
- Paint or varnish (any amount) that is accidentally discharged to the ground or waters of the state must be reported to the CT DEEP Emergency Response and Spill Prevention at 860-424-3338 or toll free at 866-DEP-SPIL (866-337-7745) [CGS §22a-450]. See Appendix E for more information.
- If paint or varnish that is discharged into the navigable waters of the state causes a visible sheen, it may also be necessary to report the spill to the National Response Center at 800-424 8802 [§311 of the Clean Water Act; 33 USC 1321] See Appendix E for more information.
- If there is a Stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit") See Appendix F for more information.
- Marinas that purchase 855 gallons or more of coatings and cleaning solvents for use in pleasure craft coating during any 12-month period, must control VOC emissions by using: 1) compliant low-VOC coatings, 2) VOC emission control equipment with an overall control efficiency of at least 90%, or 3) a combination of low-VOC coatings and emissions control equipment that achieve the applicable VOC emission rate [RCSA §22a-174-20(kk)(4)]. Other coatings may be used by obtaining a permit or order from DEEP

- that limits the total potential VOC emissions from all pleasure craft coating operations and related cleanings to 1,666 pounds or less in any calendar month. [RCSA §22a-174-20(kk)(4)(E)]. Up to 55-gallon non-compliant coatings may be used in a 12-month period [RCSA §22a-174-20(kk)(3)(C)].

Pleasure Craft Coating VOC Content Limits	
Coating Category	**grams VOC/liter coating**
Extreme high-gloss coating	600
High gloss coating	420
Pretreatment wash primer	780
Finish primer or surfacer	Effective January 1, 2016: 420
High build primer or surfacer	340
All other pleasure craft surface coatings for metal or plastic	420
Pleasure Craft Surface Coating VOC Emission Rate Limits	
Coating Category	**grams VOC/liter solids**
Extreme high-gloss coating	1100
High gloss coating	800
Pretreatment wash primer	6670
Finish primer or surfacer	Effective January 1, 2016: 800
High build primer or surfacer	550
All other pleasure craft surface coatings for metal or plastic	800

- Apply VOC-containing coatings using one of the following methods: electrostatic application, HVLP spray application or other method capable of achieving an equivalent transfer efficiency, airless spray application, air-assisted airless spray application, or hand application [RCSA §22a-174-20(kk) (5)].
- Store and convey VOC-containing coatings, diluents and cleaning solvents and VOC-contaminated absorbent applicators in closed, nonabsorbent, non-leaking containers. Contain, absorb and remove any spills or leaks of VOC-containing coating, diluents or cleaning solvent immediately [RCSA §22a-174-20(kk)(6)].

BEST MANAGEMENT PRACTICES:

- Store all paint in a centralized, covered area. Return all unused paints to that area and immediately and properly manage empty containers.
-
-

- Avoid the problem of having leftover paint by only mixing as much paint as is needed for a given job. Consider sharing leftover paints with customers or setting up an exchange area for customers to swap unused items.
- Limit in-water painting to interior surfaces and brightwork, where paint materials and spills can be contained and prevented from entering the water. Do not allow in-water hull scraping or any process that occurs underwater to remove paint from the paint from boat hull.
- Although it is not advised to conduct painting while the boat is in the water, if it must be done, transfer the paint to the vessel in a small (less than one gallon), tightly covered container. Small containers can mean small spills.
- Designate an upland area for debris-producing maintenance activities such as sanding and painting.
- Do as much work as possible away from the water, including mixing paints and/or cleaning brushes.
- Use tarps or drop cloths to collect drips. Weight the bottom edges of tarps and plastic sheeting to keep them in place.
- Use drip pans for all paint mixing, paint transfer, and/or equipment clean up.
- Use low-VOC, high solids content, and water-based paints and surface preparation products instead of traditional paints and primers.
- Encourage the use of non-toxic, high bonding, and easily cleaned hull coatings.
- Use brushes and rollers instead of paint sprayers whenever possible, since paint spraying is potentially more wasteful and more harmful to the environment. If paint spraying must be done, see the "Paint Spraying" fact sheet.
- Reuse solvents and thinners by draining the clean product off the top once solids settle out.
- Contain and clean up spilled paint or varnish immediately.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you conduct boat scraping, sanding, and other debris-producing maintenance in a designated upland maintenance area, where feasible?

YES **NO** **NA**

PAINT SPRAYING

POTENTIAL ENVIRONMENTAL IMPACTS:

Paint spraying has potential air and water quality impacts. Most paints contain volatile organic compounds (VOCs) which evaporate quickly and are ignitable. Many paints are also toxic. When released into the atmosphere, VOCs combine with combustion emissions of nitrogen oxides (NO_x) to form ground level ozone, which damages the lungs and degrades many materials. Marine paint may be toxic to aquatic and marine life.

LEGAL REQUIREMENTS:

- An air emissions permit may be required if your potential to emit is equal to or greater than 15 tons/year of VOC, 10 tons/year of any individual HAP, or 25 tons/year of any combination of HAP [RCSA §22a-174-3a].
- No air emission permit for use of paint spray guns is required if you maintain purchase records for the past 5 years demonstrating that you have not purchased more than 1,500 gallons of VOC containing coatings including diluents and cleanup solvents for the premises in any calendar year [RCSA §22a-174-3c]. Alternatively, you may be able to operate under RCSA §22a-174-3b without obtaining a permit by limiting your annual coating and solvent use to 3,000 gallons, using no coatings with a VOC or HAP content greater than 6.3 pounds/gallon, and keeping records. For more information about air emission permits, contact CT DEEP Bureau of Air Management at 860-424-3027.
- You must determine if your painting wastes (including leftover paints, spray gun solvents, and rags) or any materials used to clean a spill, are hazardous [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)]. If they are hazardous, they must be managed as described in Appendix B.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.
- Marinas that purchase 855 gallons or more of coatings and cleaning solvents for use in pleasure craft coating during any rolling 12-month period, must control VOC emissions by using: 1) compliant low-VOC coatings, 2) VOC emission control equipment with an overall control efficiency of at least 90%, or 3) a combination of low-VOC coatings and emissions control equipment that achieve the applicable VOC emission rate [RCSA §22a-174-20(kk)(4)]. Other coatings may be used by obtaining a permit or order from CT DEEP that limits the total potential VOC emissions from all pleasure craft coating operations and related cleaning to 1,666 pounds or less in any calendar month. [RCSA §22a-174-20(kk)(4)(E)]. Up to 55 gallons of non-compliant coatings may be used in a 12-month period [RCSA §22a-174-20(kk)(3)(C)].

Pleasure Craft Coating VOC Content Limits	
Coating Category	**grams VOC/liter coating**
Extreme high-gloss coating	600
High gloss coating	420
Pretreatment wash primer	780
Finish primer or surfacer	Effective January 1, 2016: 420
High build primer or surfacer	340
All other pleasure craft surface coatings for metal or plastic	420
Pleasure Craft Surface Coating VOC Emission Rate Limits	
Coating Category	**grams VOC/liter solids**
Extreme high-gloss coating	1100
High gloss coating	800
Pretreatment wash primer	6670
Finish primer or surfacer	Effective January 1, 2016: 800
High build primer or surfacer	550
All other pleasure craft surface coatings for metal or plastic	800

- Allowable spray-painting methods for VOC-containing coatings are electrostatic application, HVLP spray application or other method capable of achieving an equivalent transfer efficiency, airless spray application, and air-assisted airless spray application [RCSA §22a-174-20(kk (5)].
- Store and convey VOC-containing coatings, diluents, and cleaning solvents, and VOC-contaminated absorbent applicators in closed, nonabsorbent, non-leaking containers. Contain, absorb and remove any spills or leaks of VOC-containing coating, diluent or cleaning solvent immediately [RCSA §22a-174-20(kk)6)].
- Clean spray application equipment within an enclosed gun cleaner, by using only cleaning solvents with a VOC content that does not exceed 50 grams per liter, or by operating air pollution control equipment to reduce emissions by at least 85% [RCSA §22a-174-20(jj)].

BEST MANAGEMENT PRACTICES:

- Avoid unprotected paint spraying. Paint spraying may be conducted:
  - inside designated structures with ventilation and filter systems;
  - at designated shore-side areas away from open water, with temporary structures or plastic sheeting provided to minimize the spreading of overspray; or
  - in covered slips, with tarps and sheeting installed with a tight seal between the vessel being worked on and the floats or walkway surface. Prohibit paint spraying on the water without protective sheeting. Be sure to remove the protective sheeting with care to prevent loss of accumulated waste material into the water.
- If spraying outdoors with protective sheeting, avoid working on windy days when controlling the

- protective covering and paint spray is difficult.
- Use spray equipment with high transfer efficiency. Paint guns used in spray booths should be either High Volume Low Pressure (HVLP) or High Efficiency Low Pressure (HELP) which are rated at 65% efficient paint transfer. HVLP guns can reduce overspray by 25% to 50%.
- Electrostatic spraying also requires less pressure, produces little overspray, and uses relatively little paint.
- Encourage the use of non-toxic, high bonding, and easily cleaned hull coatings.
- Limit the amount of leftover paint and decrease solvent use by using a smaller paint spray gun cup.
- Reuse solvents and thinners by draining the clean product off the top once solids settle out.
- Whenever possible, use brushes and rollers instead of paint sprayers since paint spraying is potentially more wasteful and more harmful to the environment than applying paint by hand.

CHECKLIST FOR CLEAN MARINA CERTIFCATION:

✓ Do you conduct all paint spraying in a protective enclosure, where practical?

YES **NO** **NA**

✓ Do you use spray equipment with high transfer efficiency such as HVLP or HELP spray guns?

YES **NO** **NA**

PAINT STRIPPING

POTENTIAL ENVIRONMENTAL IMPACTS:

Many paint strippers are solvent-based and contain chemicals that are dangerous to humans. Some are flammable, and most can cause water and air pollution if not handled properly. Toxic chemicals in paint strippers may include methylene chloride (also called dichloromethane, or DCM), methyl ethyl ketone (or 2-Butanone), acetone, toluene, methanol, N-methyl pyrrolidone (NMP), or xylene. There are some less environmentally damaging and less hazardous paint strippers available on the market.

LEGAL REQUIREMENTS:

- A hazardous waste determination must be conducted to establish whether disposal of used paint strippers is subject to hazardous waste regulations [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)]. A hazardous waste determination must also be conducted on any materials used to clean up a spill. Manage hazardous waste as described in Appendix B.

- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- Consider alternatives to chemical paint stripping depending on the characteristics of the surface being stripped, the type of paint being removed, and the volume and type of waste produced. Alternatives include scraping, sanding, and/or abrasive blasting. Use a heat gun to remove paint and varnish where appropriate. See the "Scraping and Sanding" and "Abrasive Blasting" fact sheets for more information.
- If paint strippers must be used, use soy-based or water-based products, which are less hazardous.
- Use only the minimum amount of paint stripper needed for a job.
- Prevent evaporation by using tight fitting lids or stoppers. Reducing evaporation protects air quality, saves product and money.
- Reduce the chance of spills during transport by storing unused paint stripper where it's used most in the shop. Place the product on an impervious basis.
- Encourage careful use by informing all workers and operators of the hazardous nature of solvents and the purchasing and recycling costs.
- Train employees to use less paint stripper, to properly store new and used paint strippers, to use wise clean-up procedures, and prevent leaks and spills.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you reduce use of solvent-based paint strippers by changing practices or product?

YES NO NA

PREPPING & PAINTING BOAT BOTTOMS ANTIFOULING PAINT

POTENTIAL ENVIRONMENTAL IMPACTS:

Most antifouling paint contains elemental copper, cuprous oxide (a copper compound), or tin oxide compounds (tributyltin oxide) which kill organisms attempting to attach to a painted surface. By design, antifouling paints are toxic to marine life and can be absorbed by edible fish and shellfish. The toxic substances found in antifouling paints enter the environment through spillage, sanding, sand blasting, or scraping. Antifouling paint chips left on the ground or driveway can be transported into the water by stormwater runoff. The toxicants in antifouling paint can be passed up the food chain from mussels and

worms to fish, birds and humans.

LEGAL REQUIREMENTS:

- The use of anti-fouling tributyltin (TBT) containing paints with a release rate greater than 4.0 micrograms per square centimeter per day is prohibited in the state of Connecticut [RCSA §22a-66-2(c)(4)(D)].
- The owner or agent of a commercial boatyard may possess and apply TBT-containing antifouling paint if the paint is applied only within a commercial boatyard and (i) is applied to vessels exceeding 25 meters in length, or (ii) is applied to aluminum hulls [RCSA §22a-66-2(c)(4)(C)].
- No person may use a federally restricted-use pesticide, such as TBT, except under the supervision of a certified applicator [RCSA §22a-66-3(a)]. Applicators must be certified and licensed in accordance with RCSA §22a-66-5.
- A hazardous waste determination must be conducted to establish whether disposal of traditionally used antifouling paints, in solid or liquid form, is subject to hazardous waste regulations [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)]. A hazardous waste determination must also be conducted on any materials used to clean a spill. Manage hazardous waste as described in Appendix B.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.
- Pursuant to Section 22a-430 of the Connecticut General Statutes (CGS), the discharge of pressure washing wastewater to surface waters, a storm sewer, sanitary sewer, or the ground is a regulated activity requiring a permit from CT DEEP.
- Marinas that purchase 855 gallons or more of coatings and cleaning solvents for use in pleasure craft coating during any rolling 12-month period, must control VOC emissions by using: 1) compliant low-VOC coatings, 2) VOC emission control equipment with an overall control efficiency of at least 90%, or 3) a combination of low-VOC coatings and emissions control equipment that achieve the applicable VOC emission rate [RCSA §22a-174-20(kk)(4)]. Other coatings may be used by obtaining a permit or order from DEEP that limits the total potential VOC emissions from all pleasure craft coating operations and related cleaning to 1,666 pounds or less in any calendar month. [RCSA §22a-174-20(kk)(4)(E)]. Up to 55 gallons of non-compliant coatings may be used in a 12 month period [RCSA §22a-174-20(kk)(3)(C)].

Pleasure Craft Coating VOC Content Limits	
Coating Category	**grams VOC/liter coating**
Antifouling coating – aluminum substrate	560
Antifouling coating – all other substrates	400
Antifouling sealant or tie coat	420

Pleasure Craft Surface Coating VOC Emission Rate Limits	
Antifouling coating – aluminum substrate	1530
Antifouling coating – all other substrates	764
Antifouling sealer or tie coat	800

- Allowable spray painting methods for VOC-containing coatings are: electrostatic application, HVLP spray application or other method capable of achieving an equivalent transfer efficiency, airless spray application, and air-assisted airless spray application [RCSA §22a-174-20(kk)(5)].
- Store and convey VOC-containing coatings, diluents, and cleaning solvents, and VOC-contaminated absorbent applicators in closed, nonabsorbent, non-leaking containers. Contain, absorb and remove any spills or leaks of VOC-containing coating, diluent or cleaning solvent immediately [RCSA §22a-174-20(kk)(6)].
- Clean spray application equipment within an enclosed gun cleaner, by using only cleaning solvents with a VOC content that does not exceed 50 grams per liter, or by operating air pollution control equipment to reduce emissions by at least 85% [RCSA §22a-174-20(jj)].

BEST MANAGEMENT PRACTICES:

- Switch to long-lasting and low-toxicity antifouling paint. Recommend antifouling paints containing the minimum number of toxic materials necessary for the expected condition to your customers. Stock only those in the ships store.
- Stay informed about antifouling products, like Teflon, silicone, polyurethane, and wax that have limited negative impacts. Pass on the information to your customers.
- Discourage the use of antifouling paint on boats kept in fresh water; except where invasive species, like zebra mussels are a problem.
- Recommend that boats that are rack stored or trailered use alternatives to antifouling paint such as polyurethane, bottom wax, or non-metallic epoxies, since antifouling paint is not necessary for boats that are not continuously in the water.
- Use dust-collecting sanders when sanding anti-foul paint.
-

- Sandblasting is not recommended for removal of antifouling paint. If sandblasting is necessary, see "Abrasive Blasting" fact sheet.
- Sweep and collect paint chips (don't hose) immediately after scraping or sanding.
- Mix paints and solvents away from the water and prevent dripping into the water. Avoid mixing paint or cleaning brushes on open floats or other structures over the water.
- Use drip pans, tarps and sheeting to contain droppings and spilled materials. Drip pans should be used for all paint mixing, solvent transfer, or equipment cleanup operations unless the operations are conducted in controlled areas away from storm drains, surface waters, shorelines, piers, docks or floats. Weight the bottom edges of tarps and plastic sheeting to keep them in place.
- Mix only enough paint necessary for a job.
- Save excess or unused antifouling paint for future uses.
- Reuse solvents and thinners by draining the clean product off the top once solids settle out.
- Prohibit underwater bottom cleaning, hull scraping, or any in-water process that removes paint from the boat bottoms. Although this is a popular practice for racing boats prior to a race to reduce drag; it is impossible to treat what's cleaned from the boat bottom.

CHECKLIST FOR CLEAN MARINAS:

- ✓ Do you recommend less environmentally damaging bottom coating?

  YES **NO** **NA**

- ✓ Do you disallow in-water hull scraping or cleaning at your facility?

  YES **NO** **NA**

- ✓ Do you collect and properly manage dust and debris from boat bottom prep work and sanding at your facility?

  YES **NO** **NA**

SCRAPING AND SANDING

POTENTIAL ENVIRONMENTAL IMPACTS:

Hull paints can contain heavy metals and volatile organic compounds (VOCs). Sanding chips and dust that fall onto the ground can enter a marina basin through stormwater runoff. Paint chips and sanding debris can be particularly dangerous when ingested by shellfish, as other animals, including humans, ingest shellfish.

LEGAL REQUIREMENTS:

- You must determine if your sanding dust is hazardous [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)]. If it is hazardous, it must be managed as described in Appendix B.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- Conduct sanding and scraping away from the water's edge. Designate an upland area for debris-producing maintenance such as scraping, sanding, and sandblasting. The boat maintenance area can be a temporary structure or plastic sheeting provided to minimize the spreading of dust and windblown material. The work area should be well marked with signs.
- Place drop cloths or tarps under vessels when sanding or scraping. Weight the bottom edges of tarps and drop cloths to keep them in place.
- Consider installing an impervious pad for conducting debris-producing maintenance.
- Clean up all debris, trash, sanding dust, and paint chips immediately following any maintenance or repair activity. When sanding or grinding hulls over a paved surface, vacuuming or sweeping loose paint particles is the preferred cleanup method. Do not hose the debris away.
- Avoid scraping or sanding on windy days, unless conducting activity in an enclosed maintenance structure.
- Use dustless or vacuum sanders when sanding. These tools can collect over 98% of dust generated instead of releasing it into the air. Workers can use this equipment without full suits or respirators and have less cleanup when the job is done.
- Require customers and contractors to use dustless or vacuum sanders. Rent or loan the equipment to them.
- Post signs indicating the availability of the dustless or vacuum sanders.
- Provide a collection drum for the dust from vacuum sanders and other scraping debris.
- Restrict or prohibit sanding and scraping boats which are in the water, to the greatest extent practicable.
- If sanding, scraping, or grinding must take place while the boat is in the water, use tarps and sheeting installed between the vessel being worked on and the floats or walking surface to prevent dust, paint chips, debris, or other materials from falling or being blown into the water. The sheeting

should have a tight seal to the vessel and adjacent surfaces to prevent leakage of particulates outside the work area. Remove the sheeting carefully to prevent the loss of accumulated waste material into the water.

CHECKLIST FOR CLEAN MARINA CERTFICATION:

- ✓ Do you put tarps or drop cloths under boats to catch chips and drips while scraping, sanding and painting boats on the upland?

YES **NO** **NA**

TEAK REFINISHING

POTENTIAL ENVIRONMENTAL IMPACTS:

Teak cleaners, which contain acids and caustics, can be toxic to marine life when spilled in the water.

LEGAL REQUIREMENTS:

- A hazardous waste determination must be conducted for spent teak cleaner, and for any materials used to clean a spill [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)]. If hazardous, spent teak cleaner must be managed as described in Appendix B.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- ➢ Avoid teak cleaners containing acids (such as phosphoric acid or oxalic acid) or those labeled "caustic, corrosive, or acidic." Clean teak with a mild, phosphate-free detergent with bronze wool, if possible.
- ➢ If sanding teak, use a dustless or vacuum sander.
- ➢ If possible, conduct teak refinishing in upland maintenance area. If not possible, use safer cleaners and avoid flushing excess teak cleaner and teak oil into the marina basin.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

No Clean Marina certification criteria specific to teak refinishing.

VARNISHINIG

POTENTIAL ENVIRONMENTAL IMPACTS:

Spills of oil-based varnishes may be detrimental to the marine and aquatic environment. Since they are petroleum-based, spills may have an impact like oil spills. Chemicals in varnishes can be highly flammable and potentially harmful to human health.

LEGAL REQUIREMENTS:

- Many varnishes are composed of hazardous materials. You must determine if your waste varnish is hazardous [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)]. A hazardous waste determination must also be conducted for any materials used to clean a spill. Manage hazardous waste as described in Appendix B.
- If there is a stormwater discharge from your facility, you may have to register under the *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- Avoid the disposal problem of leftover varnish by mixing only as much as is needed for a given job. Consider sharing leftover varnishes with customers or setting up an exchange area for customers to swap unused items.
- Use less hazardous, water-based varnishes which pose less of a threat to human health or the environment.
- In case of spills of varnish on land, use absorbent material to clean it up, and collect any contaminated soils. Spills in waterways should be contained and mopped up with booms or pads that repel water but absorb petroleum.

CHECKLIST FOR CLEAN MARINA CERTFICATION:

No Clean Marina certification criteria specific to varnishing.

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HAULING AND STORING BOATS

Yacht Yard at Mystic

CONNECTICUT
MARINE TRADES ASSOCIATION
WELCOME TO OUR WATERS

HAULING & STORING BOATS

Quick Reference Table

Use this table as a quick reference to determine what is legally required if you conduct any of the listed activities or use any of the listed products. We suggest that you read each fact sheet before turning to the referenced legal requirement section because each individual fact sheet provides more detailed information about each activity or product used. If the "Additional Requirements" box is checked, there are additional requirements that are not described in any appendix but are described on the referenced fact sheet.

ACTIVITIES OR PRODUCTS USED	Fact Sheet Page #	Appendix A: Hazardous Substance Management	Appendix B: Hazardous Waste Management	Appendix C: Used Oil Management	Appendix D: Solid Waste Management	Appendix E: Spills	Appendix F: Stormwater General Permit*	Appendix G: MIU General Permit*	Add' l Requirements
Bilge Cleaning	41		P	✓		P	✓		✓
Boat Disposal	43		P	P	✓				✓
Pressure Washing	44		✓				✓	P	
Pumpouts	46								P
Shrink Wrap	48				✓				
Winterizing Vessels	49		P	P			✓	P	

✓ = applies P = Potentially applies, see fact sheet for more information

***NOTE**: All facilities classified under Standard Industrial Code (SIC) 4493 Marina) or SIC 373 (Ship and Boat Building and Repairing), with portions of the facility involved in vehicle, boat, or equipment maintenance, fueling, and/or vehicle and boat or equipment cleaning operations, that discharge stormwater must register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

BILGE CLEANING

POTENTIAL ENVIRONMENTAL IMPACTS*:*

Bilge water can commonly contain oil, fuel, antifreeze, and other contaminants. Even small amounts of such materials introduced into the marina environment can cause environmental problems, especially if they persist. Although some oil that spills into the water evaporates, petroleum hydrocarbons can remain suspended in the water column, concentrate on the surface, or settle to the bottom. An oil sheen can block necessary oxygen and light from moving through the surface of the water. According to the EPA, the hydrocarbons in oil harm juvenile fish, upset fish reproduction, and interfere with the growth and reproduction of bottom-dwelling organisms.

LEGAL REQUIREMENTS:

- Oily bilge water that is discharged to the waters of the state must be reported to the CT DEEP's Emergency Response and Spill Prevention at 860- 424-3338 or toll-free 1-866-DEP-SPIL (866-337-7745) [CGS §22a-450]. See Appendix E for more information on reporting spills.
- If oily bilge water or any petroleum product that is discharged into navigable waters causes a visible sheen, it may also be necessary to report the spill to the National Response Center at (800) 424-8802 [Section 311 of the Clean Water Act; 33 USC 1321]. See Appendix E for more information on reporting spills.
- If oily bilge water cannot be sufficiently cleaned for legal discharge, plan with a waste hauler to properly dispose of the bilge water. See Appendix C.
- The use of dispersants, such as dishwashing soaps or detergents, on oil or fuel spills or sheen of any size is prohibited in most circumstances [40 CFR 110.4]. Dispersants may only be used with permission from federal or state authorities, and only in rare instances.
- If there is a stormwater discharge from your facility, you may have to register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- Before pumping out a bilge, visually inspect the bilge water to determine whether there is a visible sheen of oil.
- Use oil absorbent materials to remove oil before pumping a bilge.
- Use an oil/water separator to remove oil from bilge water.
- Don't use soaps and detergents to clean up oily bilge water.
- Educate customers to keep their engines properly maintained, to continually check and fix all leaks, and to keep an absorbent pad or pillow in the bilge to absorb small drips and spills.

CHECKLIST FOR CLEAN MARINAS CERTIFICATION:

- ✓ Do you provide an oil/water separation service to remove oil from bilge water?

  YES NO NA

- ✓ Do you place oil absorbent materials in boat bilges as a standard maintenance practice?

  YES NO NA

- ✓ Do you provide staff training in bilge cleaning?

  YES NO NA

Some non-profit organizations operate tax deductible boat donation programs for boats in good repair. Some organizations to consider include American Lung Association, Connecticut Chapter, (800) LUNGUSA; University of Rhode Island Foundation, (401) 874-5273; Connecticut River Museum, (860) 767-8269.

BOAT DISPOSAL

POTENTIAL ENVIRONMENTAL IMPACTS:

Sunken or abandoned vessels can pose environmental and safety risks by leaking oil and fuel in a concentrated area. They can also cause navigational and safety hazards. If boats are properly disposed of before they become unseaworthy, the chances that the vessel will become an environmental risk are reduced.

Do you want to get rid of your boat but are unable to trade it in? Cutting it up and burning or incinerating the boat is not a legal option and may be dangerous. Open burning is regulated under Connecticut General Statute 22a-174(f) and incineration is regulated under the Regulations of Connecticut State Agencies. Due to the antifungal and other additives in the paints on the hulls of many boats many hazardous air pollutants would be released during the open burning or incineration of a boat. Illegal burning of materials subjects individuals to fines and/or imprisonment under Connecticut General Statute 23-48.

LEGAL REQUIREMENTS:

- Disposing of boats at a permitted solid waste landfill or transfer station [CGS § 22a-207b, 208a, 248, 250].
- The burning of vessels, otherwise being disposed of, or their framing is unlawful. Violators of the Connecticut General Statutes or Air Regulations promulgated under Chapter 446c of the Connecticut General Statutes may incur fines and/or imprisonment.

BEST MANAGEMENT PRACTICES:

- Empty the boat's fuel tanks and reuse or dispose of used gasoline as hazardous waste.
- Remove and recycle the following boat parts and fluid:
  - ➤ used oil
  - ➤ used antifreeze
  - ➤ boat engine (recycle as scrap metal)
  - ➤ any metal with reuse value, such as lead, zinc, aluminum, brass/bronze.
  - ➤ refrigerants
- Remove all mercury containing devices (i.e., some electronic equipment, bilge pump switches, old ship's barometers) and handle as hazardous waste. If removed by the boater, the mercury containing devices can be managed as household hazardous waste. Otherwise, see Appendix B for information on hazardous waste management.

- Reduce the size of the hull into smaller pieces as directed by the solid waste facility. The smaller the pieces, the easier it is for the facility to take. Measures should be taken during this process to control fugitive dust. Many marine products contain toxic materials that may become airborne.
- Abandoned boats may be sold. The procedure is described in CGS §15-140c, and CGS §49-55a and 55b. Call CT -DEEP's Boating Division at 860-434-8638 for more information visit their website www.ct.gov/deep and search for abandoned boats or call CMTA at 860.767-2645.

CHECKLIST FOR CLEAN MARINA CERTFICATION:

There are no Clean Marina certification criteria specific to boat disposal.

PRESSURE WASHING

Pursuant to CGS §22a-430 no person may initiate, create, originate, or maintain any discharge of water, substance, or material into the waters of the state without a permit for such discharge from the CT DEEP.

POTENTIAL ENVIRONMENTAL IMPACTS:

Pressure washing of boat bottoms to remove marine organisms produces wastewater contaminated with antifouling paints containing copper, tin, lead, zinc, and other heavy metals in concentrations that are harmful to the marine environment. Even in small amounts, untreated pressure washing wastewater can adversely impact water quality. Additionally, sediments contaminated with copper, lead, zinc and other metals can cause problems related to dredged material disposal. Pollutants dissolved in pressure washing wastewater can potentially pollute soil and ground water in upland areas.

LEGAL REQUIREMENTS:

- Pursuant to Section 22a-430 of the Connecticut General Statutes (CGS), the discharge of pressure washing wastewater to surface waters, a storm sewer, sanitary sewer, or the ground is a regulated activity requiring a permit from the CT DEEP.
- Pressure washing wastewater is a "process wastewater." *The General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit") does not cover process wastewaters, including but not limited to, pressure washing wastewater. See Appendix F for more information on the Stormwater General Permit.
- All pressure washing wastewater must be collected and handled in an acceptable manner. Below are several options:

1. **Untreated Wastewater:** Hire a waste hauler that is permitted by CT DEEP pursuant to CGS Section 22a-454 to transport your untreated pressure washing wastewater to a permitted treatment or disposal facility. In order to do this, you must first test your collected wastewater and any sludge or filtered solids that have been removed from the wastewater to determine if they are hazardous waste or not. [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)] If the wastewater or sludges/solids are determined to be hazardous, manage them in compliance with the hazardous waste requirements described in Appendix B. If the wastewater or sludges/solids are determined to be non-hazardous, manage them as "Connecticut-regulated wastes" as described in Appendix B.

2. **Treated Wastewater**: Discharge treated pressure washing wastewater to a sanitary sewer pursuant to the *General Permit for Discharges from Miscellaneous Industrial Users (MIU General Permit)*, or if a sanitary sewer is not available, employ a licensed waste hauler to haul treated wastewater to a Publicly Owned

Treatment Works (POTW). Before pressure washing wastewater can be discharged to the sanitary sewer or hauled to a POTW, the terms and conditions of the MIU General Permit must be met, which require collection and treatment to meet discharge effluent limitations. See Appendix G for more information on the MIU General Permit.

3. **Recycled Wastewater:** Treat and reuse pressure washing wastewater through a closed loop recycle/reclamation system. Any wastewater removed or used during maintenance and cleaning of the system must be handled as described in paragraph one or two above, and any generated solid or hazardous wastes must be handled as described in paragraph one above. See Appendix B for further information on handling solid and hazardous waste.

***Note:** Overspray must be controlled and is included in the wastewater collection and management requirements described above. This is especially important when using recycling equipment where contamination of the ground or surface waters may occur from spraying contaminated water.

BEST MANAGEMENT PRACTICES:

- Prohibit underwater bottom cleaning, hull scraping, or any in-water process that removes paint from the boat bottoms.
- Conduct pressure washing of boat bottoms over an impervious surface prepared and maintained to prevent wastewaters and paint particulates from infiltrating into the pavement and to the ground.
- Prevent overspray using enclosures and windbreaks where feasible and avoidance of pressure washing in windy conditions.
- Minimize the amount of water used when boats are pressure washed. Use low volume, high pressure washing systems.
- Contact the CT DEEP Bureau of Materials Management and Compliance Assurance Division of Water Permitting and Enforcement at 860- 424- 3025 for additional information or questions regarding the handling of pressure washing wastewater.

- To obtain a list of CT DEEP permitted waste haulers, call the CT DEEP toll-free hazardous waste compliance assistance line at 888-424-4193 or the Hartford office at (860) 424-3023.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Is pressure washing wastewater being handled at your facility consistent with state and federal law?

YES NO NA

PUMPOUTS

POTENTIAL ENVIRONMENTAL IMPACTS:

Generally, marina basins are naturally sheltered and semi-enclosed, which usually means they are not flushed as well as more open waters. Bacteria, chemicals, and nutrients contained in untreated and minimally treated human waste from boats can overload small, poorly flushed waterways and may cause local water quality problems. Disease carrying bacteria, viruses, and protozoa can enter waterways through the discharge of untreated or poorly treated boat waste. The nutrients in boat sewage can stimulate algae to grow in such large numbers that their respiration and decomposition uses up oxygen necessary for fish to live. Direct threats to human health can arise through consumption of contaminated water, fish, or shellfish. Scientists have shown there is more bacteria in the untreated waste discharged by one boat than in the treated wastewater discharged by a small city.

Use Clean Vessel Act (CVA) funds to defray costs of installing and operating a coastal pump out. Coastal marinas are eligible for reimbursement for up to 75% of the costs of installation and operation and maintenance of pumpouts through the CVA program. CVA funds may also be available for inland pumpouts. For more information, contact CT DEEP's Office of Long Island Sound Programs (OLISP) at (860) 424-3034

LEGAL REQUIREMENTS:

- There are no statutes or regulations that specifically require marinas in Connecticut to provide a pumpout facility. However, facilities may be required to provide a pumpout facility for customers and the boating public as a condition of a CT DEEP permit for a new or expanded marina construction. Regardless of possible permit conditions, more and more boaters are starting to demand pumpout facilities, so it makes sense to provide customers with convenient and affordable service.
- All Connecticut coastal waters are designated as No Discharge Areas. When operating a vessel on a body of water where the discharge of treated or untreated sewage is prohibited the operator

  must secure the device in a manner that prevents any discharge. Some acceptable methods are padlocking overboard discharge valves in the closed position, using non releasable wire tie to hold overboard discharge valves in the closed position, closing overboard discharge valves and removing the handle, locking the door, with padlock or keylock, to the space enclosing the toilets (for Type I and Type II only).

* Additionally, pursuant to federal regulations the discharge of all sewage from vessels is prohibited in all inland waters in Connecticut and the above-described requirement to secure MSDs applies.

For more information on No Discharge Areas in Connecticut visit the US Environmental Protection Agency's website at www.epa.gov/region1/eco/nodiscrg/ct.html or visit

the CT DEEP website at www.ct.gov/deep, click on the heading "Programs and Services" and click on "No Discharge Area".

BEST MANAGEMENT PRACTICES:

- Install a pumpout or portable toilet holding tank waste receptacle. Select the type of pumpout system that meets the needs of your marina, your customers, and transients:
  - ➤ Permanently fixed to the dock, or
  - ➤ Mobile, hand truck or pumpout boat
- If the pumpout is permanently fixed, choose an appropriate location which is convenient and accessible to the greatest number of boats throughout the tidal cycle:
  - ➤ Gas dock
  - ➤ T-head
  - ➤ Separate bulkhead
- If the marina services mostly smaller boats without holding tanks, provide portable toilet holding tank dump stations near small slips and launch ramps.
- Use Clean Vessel Act funds to defray costs of installing and operating a pumpout. The owners/operators of boating facilities are eligible for reimbursement for up to 75% of the costs of installation and operation and maintenance of pumpouts and dump stations through the federal Clean Vessel Act Program. For more information on this funding program, contact the Office of Long Island Sound Programs at 860-424-3034
- Train staff to operate the pumpout. Boaters rely on functional pumpout facilities.
- Upland waste holding tanks, if above ground, should be secured and have a secondary containment area, including a concrete pad. Inspect the area regularly.
- Provide clean and attractive bathrooms for marina customers. Encourage customers to use them rather than the toilets on their boats.
- Support boaters' compliance with Connecticut's statewide prohibition of vessel sewage discharges. Include in slip and mooring contracts that discharge of sewage in violation of Connecticut's No Discharge Area designation is cause for expulsion from the marina.
- Educate marina customers about the impacts of boat sewage and the proper way to manage it. Post signs in the marina outlining the rules for proper sewage handling.
- Provide and promote biodegradable and non-toxic holding tank deodorant. Sell it in the ship's store.
- Encourage the boaters at your facility with marine heads to install holding tanks.
- Allow pumpout boats to service customers in your facility.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you offer affordable, convenient pumpout facilities to customers and/or the general public?

  YES NO NA

- ✓ Does your facility provide clean bathrooms for customers?

  YES NO NA

Although reusable boat covers are environmentally preferable to disposable covers, recycling is an environmentally valuable option for dealing with waste material that cannot be reused.

SHRINK WRAP

POTENTIAL ENVIRONMENTAL IMPACTS:
Shrink wrap is a low-density polyethylene (LDPE) cocoon used by many boaters to protect their boats during storage and land transport. LDPE is made from petroleum, a limited nonrenewable resource, and is not biodegradable. If disposed of, it takes up disposal capacity at landfills or trash to energy plants.

LEGAL REQUIREMENTS:

- Shrink wrap must be managed as solid waste [CGS § 22a-207(3)]. See Appendix D for more information.

LDPE boat shrink wrap can be recycled and used to manufacture new products such as: plastic bags, composite lumber (decking, docks, benches, etc.), lawn edging, plastic banners, etc.
Recycling shrink wrap instead of disposing it may reduce overall waste disposal costs, and realizes environmental benefits over disposal i.e., saves energy, reduces greenhouse gas emissions; helps conserve natural resources; reduces both air and water pollution and conserves water use.

BEST MANAGEMENT PRACTICES:

- Use and encourage customers to use reusable covers (such as canvas or reusable plastic tarps);
- If using shrink wrap, explore options to recycle the used plastic covers.
  - ➢ There are recycling processors in Connecticut which can aggregate the material; prepare it to market specifications and market the material to manufacturers and other end users. Work with your hauler or self-haul the material hauled to those facilities. Call the CT DEEP Office of Source Reduction and Recycling at 860 424-3366 if you need more information; or
  - ➢ Check if your shrink wrap manufacturer will recycle their used product. Some companies recycle used shrink wrap. The following list is not an endorsement of the companies, but offered for your information:
  - ➢ Dockside Boat Reconditioning, 401-351-7130
  - ➢

➢ Dr. Shrink, 1606 State Street, Manistee, MI 49660-1855, 800- 968-5147 drshrink@dr-shrink.com, or:

Coordinate a regional recycling pickup of used shrink wrap with your waste hauler.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

✓ Do you recycle used shrink wrap or encourage customers to cover their boats with reusable canvas?

YES **NO** **NA**

Vessel storage may be subject to local building codes, zoning ordinances, and fire codes. Check with municipal building department for requirements

WINTERIZING VESSELS

POTENTIAL ENVIRONMENTAL IMPACTS:

The activity of preparing a vessel for winter storage may contribute to nonpoint source pollution through the use of heavy equipment (forklifts, cranes, and travel lifts) as well as through various storage procedures (use of antifreeze and battery storage).

LEGAL REQUIREMENTS:

- Please see referenced fact sheets for legal requirements for specific winterizing activities.

BEST MANAGEMENT PRACTICES:

- ➢ Use propylene glycol antifreeze (usually pink) which is less toxic than ethylene glycol (usually green)
- ➢ To winterize all systems except "closed" or freshwater cooling systems. See "Antifreeze" fact sheet for more information.
- ➢ Inspect and clean bilges prior to extended vessel storage. Clean all water, oil, or foreign materials from the bilge using absorbent material. See "Bilge Cleaning" fact sheet for more information.
- ➢ Promote reusable or recyclable boat covers. See "Shrink Wrap" fact sheet for more information.
- ➢ See also "Pressure Washing," "Decommissioning Engines," "Oil Changes," and "Battery Replacement" fact sheets for more information on these activities.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

No Clean Marina certification criteria specific to winterizing vessels.

4

Fueling

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FUELING

Quick Reference Table

Use this table as a quick reference to determine what is legally required if you conduct any of the listed activities or use any of the listed products. We suggest that you read each fact sheet before turning to the referenced legal requirement section because each individual fact sheet provides more detailed information about each activity or product used. If the "Additional Requirements" box is checked, there are additional requirements that are not described in any appendix but are described on the referenced fact sheet.

ACTIVITIES	Fact Sheet Page #	Appendix A: Hazardous Substance Management	Appendix B: Hazardous Waste Management	Appendix C: Used Oil Management	Appendix D: Solid Waste Management	Appendix E: Spills	Appendix F: Stormwater General Permit*	Appendix G: MIU General Permit*	Add' l Requirements
Fuel Storage	51	P	✓			P	✓		✓
Fuel Tank Disposal	53		✓		✓		✓		✓
Fueling Station Operation	54		✓			P	✓		✓

✓ = applies **P** = potentially applies, see fact sheet for more information

***NOTE:** All facilities classified under Standard Industrial Code (SIC) 4493 (Marina) or SIC 373 (Ship and Boat Building and Repairing), with portions of the facility involved in vehicle, boat, or equipment maintenance, fueling, and/or vehicle and boat or equipment cleaning operations, that discharge stormwater must register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

FUEL STORAGE

POTENTIAL ENVIRONMENTAL IMPACTS:

Fuel spills are very damaging to the marina environment. According to the EPA, the complex hydrocarbon compounds in oil and gasoline are toxic to marine life, upset fish reproduction and interfere with growth and reproduction of bottom dwelling organisms.

LEGAL REQUIREMENTS:

- If your facility stores 10,000 pounds or more of gasoline, diesel fuel, and/or fuel oil, either above- or underground for dispensing or for on-site use, you must report storage of that substance under the Emergency Planning and Community Right-to-Know Act of 1986 [42 U.S.C. 11001, et seq.]. For specific reporting requirements, see Appendix A.
- Both aboveground and underground storage tanks and their piping systems are subject to the National Fire Protection Association's (NFPA) *Automotive and Marine Service Station Code* (NFPA 30A). These requirements are adopted locally. Check with your municipal fire marshal for local requirements or contact the State Fire Marshal's Office at 860-685-8380.
- Underground Petroleum Storage: Tanks with ten percent or more of total volume below grade (including the volume of connected underground pipes) are considered Underground Storage Tanks (USTs) and must meet certain requirements [RCSA §22a-449(d)-1 and §§22a-449(d)-101-113]. The general requirements are that:

1. The tank and piping are constructed of noncorrosive materials or externally coated cathodically protected steel or be a composite or jacketed tank and installed according to manufacturer's specifications.
2. All new tanks and piping must be double-walled and have continuous interstitial monitoring.
3. The facility has an approved method of leak detection which includes the maintenance of all activity records for 5 years (on or after October 1, 2003, the UST system release detection must include continuous interstitial monitoring).
4. Fill-pipes on tanks have a liquid tight means to collect spills from delivery hoses.
5. The tanks have over fill protection, such as automatic shutoff devices, which activate at 90% UST capacity and restrict flow during deliveries or automatically shut off the flow into the tank when the tank is no more than 95% full monitoring).
6. Register tanks annually with CT DEEP (http://filings.deep.ct.gov);
7. All UST owners/operators must designate at least one certified Class A, B and C Operator for each UST facility.
8. If a facility has a total underground buried storage capacity of more than 42,000 gallons of petroleum product, it may require a Spill Prevention, Control and Countermeasure (SPCC) Plan [40

CFR 112.1]. See Appendix E for more information; and

9. UST facilities must be able to meet Financial Responsibility requirements.

**There are additional requirements for facility owners or operators when they are closing USTs through removal or in-place abandonment [RCSA §22a-449(d)-107]. Contact the CTDEEP Storage Tank Enforcement Unit at 860-424-3374 for more information or visit* www.ct.gov/deep/ust.

- **Aboveground Petroleum Storage:** If your facility stores more than 1,320 gallons of gas or oil in aboveground tanks, it may require an SPCC Plan [40 CFR 112.1], which outlines a facility-wide plan to prevent spills and contingency plans in case of spills. The aboveground storage tank should be located within a dike or over an impervious storage area with containment volumes equal to 110% of the capacity of the storage tank. See Appendix E for more information.
- **Stage I vapor recovery:** Gasoline storage tanks with a capacity of 250 gallons or more located at a facility with a throughput of 10,000 gallons or more must be equipped with a CARB-certified fill adapter, a pressure-vacuum vent valve and a two-point Stage I vapor recovery system [RCSA §22a-174-20(b)(6) & (7) and §22a-174-30(c)(6) & (7)]. Facilities must perform a pressure decay test annually [Public Act No. 13-120]. Additional Stage I requirements apply to facilities with monthly gasoline throughputs of 100,000 gallons or more [40 CFR 63 subpart CCCCCC.
- **Submerged fill pipe:** Gasoline Storage tanks with a capacity of 250 gallons (950 liter) or more located at a facility with a throughput of 10,000 gallons or more must have a permanent submerged fill pipe with a discharge point twelve inches or less from the bottom of the tank if the fill pipe was installed on or before November 9, 2006, and 6 inches or less if the fill pipe was installed after November 9, 2006. [40 CFR 63.11117]. For facilities with lower monthly throughputs, the submerged fill pipe must be no more than 18 inches from the bottom of the tank if installed on or before March 7, 2014, and six inches if installed after that date [RCSA §22a-174-20(a)(5)].
- The external surfaces of a gasoline storage tank with a maximum capacity of 2,000 gallons or greater that is exposed to the sun must be either mill-finished aluminum or painted white upon the next painting of the tank (words and logograms that cover no more than 20 percent of the external surface area of the tank are allowed) [RCSA §22a-174-20(a)(7)].
- Any fuel spill to the waters of the State must be reported to the DEEP Emergency Response and Spill Prevention at 860-424-3338 or toll-free 866-DEP-SPIL (866-337-7745) [CGS §22a-450]. See Appendix E for state and federal spill reporting requirements.
- If the fuel that is discharged into navigable waters causes a visible sheen, it may also be necessary to report a spill to the National Response Center at 800-424-8802 [Section 311 of the Clean Water Act; 33 U.S.C. 1321]. See Appendix E for the state and federal spill reporting requirements.
- A hazardous waste determination must be conducted on any materials used to clean a spill to determine whether disposal of the materials is subject to hazardous waste regulations [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2(A)]. Manage hazardous waste as described in Appendix B.
- If there is a stormwater discharge from your facility, you may have to register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- Keep all information about registered underground storage tanks and subsequent updates from CT DEEP and maintenance records filed in a central location, including the results of requisite monthly UST system inspections which are certified by Class A or Class B trained operators.
- Regularly inspect aboveground fuel storage tanks and associated piping for leaks.
- If possible, cover the tank with a roof to prevent rainwater from filling the containment area.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you regularly inspect and repair fuel transfer and storage equipment?

YES **NO** **NA**

FUEL TANK DISPOSAL

POTENTIAL ENVIRONMENTAL IMPACTS:

According to the EPA, the complex hydrocarbon compounds in petroleum products are toxic to marine life, upset fish reproduction, and interfere with the growth and reproduction of bottom dwelling organisms. Improperly disposed fuel tanks can also impact groundwater supplies and pose a serious fire safety risk.

LEGAL REQUIREMENTS:

- If a portable or fixed tank for gasoline or an oil and gasoline mixture is empty, meaning drained of all material that can be removed from the container by normal methods like pouring or pumping, AND no more than one inch (or 3% by weight) of residue remains in the container, it can be disposed of as regular solid waste or can be recycled as scrap metal [40 CFR 261.7]. If a tank is not empty, it must be disposed of as hazardous waste [40 CFR 262.11; RCSA Section 22a-449(c)-102(a)(2)(A)]. See Appendix B for more information.
- Prior to closing underground storage tanks (UST) through removal or in- place abandonment,

you must notify CT DEEP. You can either remove USTs and dispose of them as scrap metal, or you can remove the product and fill the tank with inert solid material and leave it in place following the provisions specified in the National Fire Protection Association Code 30. You are required to perform representative soil sampling, which includes sampling each of the four sidewalls of the tank grave and the bottom of the tank grave along the centerline of the excavated UST. Samples need to be taken

from soils below the level of the bottom of the UST. Owners and/or operators must maintain records of the sample results [RCSA Section 22a-449(d)-107] for no less than five (5) years from the date of permanent closure and at the UST site. Releases to the environment must be reported to CT DEEP at 860 424-3338. For more information on UST closure, contact CT DEEP's Storage Tank Enforcement Unit at 860-424-3374.

- If there is a stormwater discharge from your facility, you may have to register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- Use, recondition, or recycle all usable fuel before disposing of the tank.
- Store tanks awaiting disposal away from ignition sources like heat or sparks.
- Clearly label tanks "Waste Gasoline."

CHECKLIST FOR CLEAN MARINA CERTFICATION:

No Clean Marina certification criteria specific to fuel tank disposal.

FUELING STATION OPERATION

POTENTIAL ENVIRONMENTAL IMPACTS:

The small spills that occur during boat fueling can accumulate and become a much larger problem. According to the EPA, complex hydrocarbon compounds in oil and gasoline are toxic to marine life, upset fish reproduction, and interfere with the growth and reproduction of bottom dwelling organisms. Oil and gas that are ingested by one animal can be passed to the next animal that eats it. In a marina, petroleum will also deteriorate the white Styrofoam in floats and docks, and discolor boat hulls, woodwork, and paint. Gasoline spills are also a safety problem because of the product's flammability. A single pint of petroleum product released into the water can cover one acre of water surface area and can seriously damage aquatic habitat.

LEGAL REQUIREMENTS:

- All marine service stations are subject to the National Fire Protection Association's (NFPA) Automotive and Marine Service Station Code (NFPA 30A). These requirements are adopted locally. Check with your municipal fire marshal for local requirements or contact the State Fire Marshal's Office at 860-685-8380.
- The following requirements are listed in NFPA 30A as pertaining to marine service stations. It is not intended to be a complete list of requirements:
  - Dispensing nozzles must be of the automatic-closing type without a latch-open device [NFPA 30A, Section 11-4.2].

- All marine service stations must be attended by an employee responsible for supervising, observing, and controlling the dispensing of liquids whenever the station is open for business [NFPA 30A, Section 11-4.7].
- Each marine motor fuel dispensing facility shall be provided with fire extinguishers installed, inspected, and maintained as required by NFPA 10, *Standard for Portable Fire Extinguishers*. Extinguishers for marine motor fuel dispensing areas shall be provided according to the extra (high) hazard requirements for Class B hazards, except that the maximum travel distance to an 80 B:C extinguisher shall be permitted to be 31 m (100 feet) [NFPA 30A, Section11-7.1].
- Signs with the following legends printed in 2-inch (5cm), red letters on a white background must be posted in the dispensing area of all marine service stations [NFPA 30A, Section 11-10.8]:

BEFORE FUELING:
(a) Stop all engines and auxiliaries
(b) Shut off all electricity, open flames, and heat sources
(c) Check all bilges for fuel vapors
(d) Extinguish all smoking materials
(e) Close access fittings and openings that could allow fuel vapors to enter enclosed spaces of the vessel

DURING FUELING:
(a) Maintain nozzle contact with fill pipe
(b) Wipe up spills immediately
(c) Avoid overfilling
(d) Fuel filling nozzle must be attended at all times

AFTER FUELING:
(a) Inspect bilges for leakage and fuel odors
(b) Ventilate until odors are removed

- If your facility stores a certain amount of gas or oil, it may require a Spill Prevention Control and Countermeasure (SPCC) Plan [40 CFR 112]. See Appendix E for more information.
- Any fuel spill to the waters of the state must be reported to the CT DEEP's Oil and Chemical Spill Response Division at (860) 424-3338 [CGS §22a-450]. See Appendix E for state and federal spill reporting requirements.
- If the fuel that is discharged into navigable waters causes a visible sheen, it may also be necessary to
- report that spill to the National Response Center at (800) 424-8802 [Section 311 of the Clean Water Act; 33 USC 1321]. See Appendix E for the state and federal spill reporting requirements.
- A hazardous waste determination must be conducted for any materials used to clean a spill to establish whether disposal of the materials is subject to hazardous waste regulations [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)]. See Appendix B for more information.
- If there is a stormwater discharge from your facility, you may have to register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

BEST MANAGEMENT PRACTICES:

- Locate fuel docks in protected areas to reduce potential for accidents due to passing boat traffic, and design them so that spill containment equipment can be easily deployed to surround a spill and any boats that may be tied to the fuel dock.
- Store spill containment and control materials in a clearly marked and easily accessible location, attached or adjacent to the fuel dock.
- Keep oil absorbent pads and pillows available at the fuel dock for staff and customers to mop up drips and small spills.
- Carry vent line whistles, vent cups, oil absorbent fuel collars, and other fuel spill preventative devices in your ships store.
- Provide a stable platform for fueling personal watercraft, if your facility services significant numbers of them.
- Routinely inspect and repair fuel transfer equipment, such as hoses and pipes.
- Place plastic or nonferrous drip trays lined with oil absorbent materials beneath fuel connections.
- Train fuel dock staff to handle and dispense fuel properly. Many drips and small spills originate at the fuel dock. Fuel dock staff should be trained to:
  - ➤ Fill tanks slowly and carefully
  - ➤ Prevent overfilling of gas tanks by listening to or keeping a hand at the air vent, if possible. a pronounced flow of air is emitted when the tan is nearly full.
  - ➤ Remember that fuel expands in warm weather and to leave at least 5% of space in a fuel tank to allow for that expansion.
  - ➤ Attach a container to the external vent fitting to collect overflow, as a precautionary measure. Several products attach to the boat with suction cups.
  - ➤ Keep an absorbent pad or pillow ready to catch spills, drips, or overflow.
  - ➤ Put a drip pan under portable fuel tanks. If possible, fill portable fuel tanks ashore.
  - ➤ Prevent spills as well as respond to spills
  - ➤ Give information and direction to customers.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

✓ Do you train fuel dock staff to prevent drips and spills at the dock?

YES **NO** **NA**

✓ Do you have oil absorbent material available for fuel dock staff and customers to clean up drips and small spills?

YES **NO** **NA**

✓ Do you carry vent line whistles, vent cups, absorbent fuel collars, or other fuel spill preventative devices in your ships store?

YES **NO** **NA**

5

FACILITY MANAGEMENT

Petzold's Chester Boat Basin, Chester

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FACILITY MANAGEMENT

Quick Reference Table

Use this table as a quick reference to determine what is legally required if you conduct any of the listed activities or use any of the listed products. We suggest that you read each fact sheet before turning to the referenced legal requirement section because each individual fact sheet provides more detailed information about each activity or product used. If the "Additional Requirements" box is checked, there are additional requirements that are not described in any appendix but are described on the referenced fact sheet.

ACTIVITIES/PRODUCT USED	Fact Sheet Page #	Appendix A: Hazardous Substance Management	Appendix B: Hazardous Waste Management	Appendix C: Used Oil Management	Appendix D: Solid Waste Management	Appendix E: Spills	Appendix F: Stormwater General Permit*	Appendix G: MIU General Permit*	Add' l Requirements
Coastal Permits	57								✓
Compressor Blowdowns	59			**P**				**P**	
Facility Cleaning	60		✓						
Fish Waste	62				**P**				**P**
Floor Drains	63		**P**	**P**				**P**	✓
Landscaping	64		**P**		✓				✓
Litter and Recycling	66				✓				✓
Pet Waste	68								**P**
Stormwater Runoff Mngmt. Practices	69					✓	✓		
Control of Particulate Matter and Visible Emissions	71								✓
Swimming Pool Wastewater	73								✓

✓= applies **P** = potentially applies, see fact sheet for more information

*NOTE: All facilities classified under Standard Industrial Code (SIC) 4493 (Marina) or SIC 373 (Ship and Boat Building and Repairing), with portions of the facility involved in vehicle, boat, or equipment maintenance, fueling, and/or vehicle and boat or equipment cleaning operations, that discharge stormwater must register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

COASTAL PERMITS

POTENTIAL ENVIRONMENT IMPACTS:

The placement of structures on or over coastal waters and resources, dredging of marina basins, and filling of coastal waters and wetlands can degrade or eliminate coastal resources, which have economic, aesthetic, recreational and environmental value. CT DEEP's Office of Long Island Sound Programs (OLISP) coastal regulatory programs are designed to balance the protection of coastal resources with the wise use of the coastal area.

LEGAL REQUIREMENTS:

- Dredging, the erection of structures and the placement of fill, and work incidental thereto, in the tidal, coastal or navigable waters of the State waterward of the coastal jurisdiction line (CJL) are regulated by the CT DEEP [CGS §22a-359(a)]. It is necessary to obtain all required authorizations from CT DEEP prior to conducting work such as dredging (including maintenance dredging), construction or placement of new docks, pilings, ramps, floats, piers, travel-lift wells, seawalls, bulkheads, riprap, stormwater outfall pipes and/or mooring fields waterward of the CJL in the tidal, coastal or navigable waters of the State.
- The U.S. Army Corps of Engineers (ACOE) has jurisdiction over the above-listed activities in tidal, coastal or navigable waters as well, pursuant to Section 10 of the Rivers and Harbors Act of 1899 [33 USC §401 et seq.], and Section 404 of the Clean Water Act [33 USC §1344 et seq.]. Call the ACOE on 800 343-4789 for more information.
- Installation, upgrade or repair of a fixed pumpout station, if it or any part of it is waterward of the coastal jurisdiction line (CJL), requires registration with CT DEEP under a *General Permit for Pumpout Facilities* [CGS §22a-361(d)]. If the facility receives Clean Vessel Act funding, no registration is required.
- Floating homes or houses on barges not capable of self-navigation are considered non-water-dependent structures, obstructions or encroachments and are subject to regulation by the CT-DEEP [CGS §22a-359(a)]. As such, floating homes should not be allowed at any marina facility.

BEST MANAGEMENT PRACTICES:

- Design all marina expansions to minimize adverse impacts on basin flushing, water quality and adjacent coastal resources including shellfish beds, wetlands and submerged aquatic vegetation.
- Keep copies of all coastal permits in an easily accessible file. As management changes, pass on the information about coastal permits to the incoming marina manager.
- Keep all docks, floats and bulkheads in good working order by conducting routine maintenance Certain activities such as rebuilding, reconstructing or reestablishing to a preexisting condition and dimension any structure, fill, obstruction or encroachment, including maintenance dredging are considered "substantial maintenance" and may be eligible for a Certificate of Permission, an abbreviated authorization process allowed under CGS §22a-363b.
- Before doing ANY work that you think might be in the state's permitting jurisdiction, contact OLISP at (860) 424-3034 to discuss the work that you would like to do or to schedule a pre-application meeting. Some of the maintenance work you want to do may not require any prior authorization or may be eligible for a shortened permit process.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

✓ Do you keep your pumpout facility in good working order?

YES **NO** **NA**

COMPRESSOR BLOWDOWNS

Municipal permits may be needed to discharge to sanitary sewer.

POTENTIAL ENVIRONMENTAL IMPACTS:

Air compressor blowdown water commonly contains lubricating oil or other potential pollutants. These hydrocarbons can contaminate surface and groundwater when improperly managed.

LEGAL REQUIREMENTS:

- Compressor blowdown wastewater may not be discharged onto the ground or into surface waters without a permit [CGS §22a-430].

- Discharge air compressor blowdown wastewater to either the sanitary sewer or contain it in a holding tank. You may not discharge this wastewater into a septic system. Before compressor blowdown wastewater can be discharged to the sanitary sewer or hauled to a Publicly Owned Treatment Facility (POTW), the terms and conditions of the *General Permit for Discharges from Miscellaneous Industrial Users (MIU General Permit)* must be met, which will require collection and treatment to meet discharge effluent limitations. See Appendix G for more information on the MIU General Permit.
- Waste compressor oil, filters, and oil/water separator waste must be managed as used oil [40 CFR 279; RCSA §22a-449(c)-119]. See Appendix C for more information.

BEST MANAGEMENT PRACTICES:

- Evaluate the need for installing a dehumidifying system in the air compressor which would reduce the moisture content of the compressed air and therefore the volume of wastewater generated. This practice may also prolong the life of the compressor by reducing loss of lubrication and rusting.
- Visually inspect the exterior of air compressor equipment for the presence of oil leaks on a regular basis.
- Establish a preventative maintenance program which includes, but is not limited to, a schedule for cleaning parts, replacing oil, and replacing filters for the air compressor equipment as recommended in the manufacturer's specifications.
- Remove or retain any floating layer of oil prior to discharge.
- Investigate the purchase of an oil-free air compressor that would eliminate oil from the blowdown.

CHECKLIST FOR CLEAN MARINA CERFIFICATION:

No Clean Marina Certification criteria specific to compressor blowdowns.

FACILITY CLEANING

POTENTIAL ENVIRONMENTAL IMPACTS:

Many common cleaning products contain hazardous chemicals that with repeated or excessive contact may lead to lung problems, brain and nerve damage, cancer, and even death. Hazardous chemicals can often be found in drain cleaners, floor-care products, window sprays, and bathroom cleaners. Those labeled "DANGER" or "POISON" are typically the most hazardous. Others may be labeled "CAUTION" or "WARNING" because they are skin or eye irritants. Less hazardous alternatives for common cleaning products are often labeled "non-toxic."

LEGAL REQUIREMENTS:

- There are no legal requirements to use environmentally preferable products. Note that waste cleaning products must be disposed of in accordance with the hazardous waste disposal requirement. See Appendix B.

BEST MANAGEMENT PRACTICES:

- Use cleaning products which may have less of an impact on the environment because they are less toxic and contain lower concentrations of volatile organic compounds (VOCs), ozone depleting chemicals (ODCs), and/or carcinogens.
- Read product labels. Avoid cleaning products with:

✗ alcohol	✗ formaldehyde	✗ perchloroethylene
✗ ammonia	✗ glycols	✗ petroleum distillates
✗ bleach	✗ hydrochloric acid	✗ phenol
✗ butyl cellosolve	✗ hydrofluoric acid	✗ phosphoric acid
✗ cresol	✗ lye	✗ propellants
✗ dye	✗ naphthalene	✗ sulfuric acid
✗ ethanol	✗ PDCBs (paradichlorobenzenes)	✗ TCE (trichloroethylene)

- Depending on the cleaning job, always try cleaning with water and a coarse cloth first. Clean more often with fresh water only. If you must use a cleaner, use the product sparingly.
- Consider non-toxic alternatives for cleaning products. Even non-toxic substances can cause temporary harm to the environment and should therefore be used sparingly. Some non-toxic alternatives to typical cleaning products are:

ALL PURPOSE CLEANER	Mix one cup white vinegar with two gallons water.
AIR FRESHENER	Leave out an open box of baking soda.
AMMONIA-BASED CLEANERS	Vinegar, salt, and water.
BRASS CLEANER	Worcestershire sauce. Or paste made with equal amounts of salt, vinegar, and water.
COPPER CLEANER	Lemon juice and water. Or paste of lemon juice, salt, and flour.
CHLORINE BLEACH	Baking soda and water. Or borax.
CHROME CLEANER/POLISH	Apple cider vinegar to clean; baby oil to polish.
DISINFECTANTS	One half a cup borax in one gallon of water.
DRAIN OPENER	Dissemble and use a plumber's snake. Or flush with boiling water mixed with one quarter cup baking soda and one quarter cup vinegar.
FIBERGLASS STAIN	Baking soda paste.
FLOOR CLEANER	One-cup vinegar plus two gallons of water.
STAINLESS STEEL CLEANER	Baking soda or mineral oil for polishing, vinegar to remove spots.
TOILET BOWL CLEANER	Use toilet brush and baking soda.
WOOD POLISH	Olive or almond oil (interior walls only).
WINDOW CLEANER	Mix two tablespoons vinegar in one quart of water or rub glass with newspaper.

Sources: Buller (1995) and MA Department of Environmental Management, Environmental Hazards Management Institute

Checklist for Clean Marina Certification:

- ✓ Do you reduce the use of toxic cleaners for cleaning your facility by changing practices or products?

YES NO NA

FISH WASTE

Municipal permits may be required to discharge to the sanitary sewer.

POTENTIAL ENVIRONMENTAL IMPACTS:

Too much fish waste in a poorly circulated marina basin can lower oxygen levels in the water. As the waste decomposes; it can lead to foul odor and fish kills. Floating fish parts are also an unsightly addition to marina waters.

LEGAL REQUIREMENTS:

- Local harbor management ordinances might prohibit the discharge of fish waste within the jurisdiction of the harbor management plan. Check with local harbor management commission, if applicable.
- Disposal of fish waste into an enclosed water body may be a violation of the local health code. Check with your municipal or regional director of health.

BEST MANAGEMENT PRACTICES:

- Prohibit disposal of fish waste in the marina basin. Post signs displaying the rules.
- Do not permit fish cleaning on docks and floats.
- Install a fish cleaning station at your marina.
- Clearly identify the fish cleaning stations with signs that list the rules and regulations for their use.
- Direct rinse water from fish cleaning areas to a sand filter or sanitary sewer. It should be free of solids.
- Use one of the following disposal methods:
  - Compost fish waste where appropriate and use compost on landscaping. See "Landscaping" fact sheet for more information.
  - Encourage boaters to freeze fish parts and reuse them as bait or chum on the next fishing trip. Use a grinder to make chum out of fish carcasses. Freeze and sell chum at marina store.
  - If composting or freezing is not an option, encourage boaters to double-bag their fish parts and throw out in their regular trash.
- Encourage boaters to clean fish offshore where the fish are caught and discard the fish in unrestricted waters, unless there are length limits for the type of fish caught.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you prohibit disposal of fish waste in the marina basin, and/or provide for proper disposal of fish waste?

YES **NO** **NA**

FLOOR DRAINS

Municipal permits may be required to discharge to the sanitary sewer.

POTENTIAL ENVIRONMENTAL IMPACTS:

Repair shop wastewater typically contains chemicals such as oils, degreasers, gasoline, diesel, detergents, heavy metals, and antifreeze. In some instances it may contain solvents. If discharged through a dry well or septic system to the ground, these chemicals may render drinking water supplies unfit for human consumption. If discharged directly or indirectly to surface water these chemicals can be toxic to fish and other aquatic life.

LEGAL REQUIREMENTS:

- Floor drains from mechanical shops must be connected either to a holding tank (1,000-gallon minimum capacity) which meets the standards of tanks installed in accordance with RCSA §22a-449(d)-1, or to the sanitary sewer. You may not discharge this wastewater into an aseptic system. Before floor drain wastewater can be discharged to the sanitary sewer or hauled to a Publicly Owned Treatment Works (POTW), the terms and conditions of the *General Permit for Discharges from Miscellaneous Industrial Users (MIU General Permit)* must be met including the discharge effluent limitations. See Appendix G for more information on the MIU General Permit.
- Waste oil generated from oil/water separators must be tested for hazardous components and properly disposed [40 CFR 279 and RCSA §22a-449(c)-119; 40 CFR 262.11 and RCSA §22a-449(c)-102(a)(2)(A)]. See Appendix B and Appendix C for more information.

BEST MANAGEMET PRACTICES:

- Avoid or minimize the use of any ammoniated, petroleum, or chlorinated solvent-based cleaning agents.
- Sweep or vacuum floors often and immediately before floor washing.
- Clean up fluid spills quickly with absorbent material (See Appendix B and C for disposal information). Cover floor drains if there is a spill. There are inexpensive covers available for this purpose.
- Permanently seal floor drains with concrete if they do not connect to a sanitary sewer or holding tank.

Checklist for Clean Marina Certification:

No Clean Marina certification criteria specific to floor drains.

LANDSCAPING

Using the best management practices listed below can reduce or eliminate the need for pesticides in a marina's landscaping.

POTENTIAL ENVIRONMENTAL IMPACTS:

Excess pesticides and fertilizer that you put on your lawn and plantings can eventually run off into the marina basin and harm marine and aquatic life. Landscaping techniques can be used to reduce environmental impacts on marina basins and can save money by requiring less water and maintenance, while creating an attractive location for customers.

LEGAL REQUIREMENTS:

- Grass clippings may not be disposed of with regular trash [CGS §22a-208v(c)].
  Leave the clippings to decompose on the ground or compost them.
- Before disposing of old or unused lawn additives, particularly pesticides, conduct a hazardous waste determination to establish whether their disposal is subject to hazardous waste regulations [40 CFR 262.11; RCSA §22a-449(c)-102(a)(2)(A)]. Manage hazardous waste as described in Appendix B.

BEST MANAGEMENT PRACTICES:

- Use native plants for landscaping. Plants that are native to the region and climate compete well with weeds and other pests. They also require less fertilizer and pest control than non-native plants. Native plants can be purchased at your local nursery.
- Avoid planting invasive species. Invasive species multiply rapidly and take over areas very quickly. The list of invasive species in Connecticut is available at http://www.hort.uconn.edu/cipwg (click on "invasive lists") or by calling CT DEEP's Geologic and Natural History Survey at 860-424- 3583, or the UCONN Department of Plant Science at 860-486-6448.
- Save water by watering in the early morning or late afternoon. Oscillating sprinklers can lose up to 50% of water to evaporation on hot days.
- Use composted fish waste as fertilizer for your plants. See "Fish Waste" fact sheet for more information.
- Plant a vegetated filter strip or buffer between impervious areas and the marina basin. A vegetated filter strip is a densely vegetated strip of land engineered to accept runoff from upstream development as overland sheet flow.
- Minimize fertilizer use. When it comes to fertilizer, *more is not better!* The excess nutrients from unused fertilizer will run off into the marina basin and potentially cause an algal bloom. Plus, the more you fertilize, the more frequently you must mow. Leave grass clippings on the lawn areas since they act as a natural organic fertilizer.

- If you must use fertilizer, apply it in late April and again in September. If a third treatment is needed, apply in late May. Apply only a half pound of nitrogen per 1,000 square feet of lawn at each application. To figure this out, divide 100 by twice the percentage of nitrogen (N) in the fertilizer.

- This will give you the application rate in pounds of fertilizer per 1,000 square feet of lawn.

CLEANLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you use native plants in landscaping?

YES NO NA

- ✓ Do you minimize the use of fertilizers and pesticides or use compost on landscaping?

YES NO NA

- ✓ Do you have a vegetated buffer between impervious surface (like pavement) and the marina basin, where practical, or limit paved areas?

YES NO NA

LITTER AND RECYCLING

POTENTIAL ENVIRONMENTAL

Routine marina and boating activities produce a variety of non-hazardous solid wastes. These include bottles, plastic bags, aluminum cans, coffee cups, six- pack rings, disposable diapers, wrapping paper, cigarette filters, and fishing line. This type of debris harms living organisms and their habitats after it enters the water. A litter- f r e e facility is more attractive to present and potential customers. Diverting reusable materials out of the waste stream through recycling conserves natural resources and reduces the amount of waste that must be disposed of.

State statute prohibits individuals from littering on public property, on private property they don't own, or in the waters of the state [CGS §22a-250(a)]. Do your part to prevent your customers from littering by providing easily accessible, clearly marked, and frequently emptied litter and recycling receptacles.

LEGAL REQUIREMENTS:

- Marina operators must provide areas to collect solid waste from their customers [33 USC 1905(a)(2), 33 CFR 151.05]. For more specific information, see Appendix D.
- Marina facilities must provide for the separation from other solid waste of items designated for recycling [CGS §22a-241b(d)]. The following items are required to be recycled [RCSA §22a-241b-2]:

  ➤ corrugated cardboard and boxboard
  ➤ glass and metal food and beverage containers
  ➤ plastic containers marked "1" or "2"
  ➤ leaves
  ➤ newspapers and magazines
  ➤ white & colored office paper
  ➤ scrap metal
  ➤ waste oil
  ➤ spent lead acid storage batteries
  ➤ nickel-cadmium rechargeable batteries [CGS §22a-256a]

For more specific information, see Appendix D.

- Grass clippings may not be disposed of with regular trash [CGS §22a-208v(c)]. Leave the clippings to decompose on the ground or compost them.

BEST MANAGEMENT PRACTICES:

- Place covered trash receptacles in convenient locations away from the water for use by marina patrons.
- Do not put trash or recycling containers on docks, as waste can easily blow into the water.
- If practical, lock trash receptacles at night to prevent "midnight dumping" since marina operators are responsible for the content of dumpsters.
- Train employees to pick up stray trash as a daily practice.
- Provide clearly marked, conveniently located recycling containers for customers and staff to use, particularly for plastic, glass and metal food/beverage containers, and other recyclables generated at your facility.
- Purchase products made with recycled contents to close the recycling loop (i.e., create a market for the materials you recycle). Buy recycled printing and writing paper, towels, tissue, re-refined motor oil and antifreeze.
- Educate employees about separation requirements and your recycling program.
- Encourage boaters to exchange excess paints, thinners, and varnishes rather than dispose. Provide a bulletin board where boaters can post notices if they have or need a particular substance or establish a paint and maintenance chemical swap area for customers.
- Consider cooperating with other nearby businesses to simplify recycling and reduce costs. Your municipal recycling coordinator may be able to help you find or establish a cooperative business-recycling program.
- Use reusable or recyclable boat covers for boat storage. Recycle used plastic boat covers. See "Shrink Wrap" fact sheet.
- Require patrons to clean up after their pets. See "Pet Waste" fact sheet.
- For information on recycling antifreeze, see "Antifreeze" fact sheet.
- For information on recycling batteries, see "Battery Replacement" fact sheet.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you keep trash containers, bins or dumpsters covered and in convenient locations away from the water?

YES **NO** **NA**

- ✓ Do you provide clearly marked recycling containers for customers and staff to use, particularly for plastic, glass and metal food/beverage containers?

YES **NO** **NA**

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PET WASTE

POTENTIAL ENVIRONMENTAL IMPACTS:

Pet waste can contain harmful bacteria. If left on marina grounds, it will eventually enter the marina basin and contaminate the water and shellfish beds. The nutrients in pet waste may also encourage weed or algae growth in the marina basin, which may eventually lead to lower oxygen levels in water. Pet waste is also unsightly and may be a source of customer complaints.

LEGAL REQUIREMENTS:

- Mismanaged pet waste may be considered public nuisance by a local health director if it is allowed to accumulate on-site [CT Public Health Code, Section 19-13(B)(1)].
- Local ordinances may prohibit the leaving of pet waste on private property. Check with your municipality.

BEST MANAGEMENT PRACTICES:

- Provide a dog walking area that is identifiable by signs.
- Require customers to clean up after their pets. Provide bags for boaters to scoop up waste and dispose of trash.
- Specify pet waste rules in marina slip contract.
- Encourage cat owners to maintain a litter box on their boat.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you encourage customers to clean up after their pets by posting signs and/or providing bags to scoop up waste?

YES **NO** **NA**

STORMWATER RUNOFF MANAGEMENT PRACTICES

BMPs for stormwater control are often required as conditions for state and local permits with the goal of implementing effective runoff control strategies. Stormwater runoff management goals are to reduce the average annual loading of total suspended solids (TSS) in runoff from hull maintenance areas by 80%, based on an average of all storms in magnitude less than or equal to a 2 year - 24-hour storm.

POTENTIAL ENVIRONMENTAL IMPACTS:

Stormwater runoff from parking lots and other developed surfaces represents a significant mode of pollutant transport from land-based activities to receiving waterbodies. The runoff from parking areas, buildings, repair yards, and access roads can carry nutrients, metals, suspended solids, hydrocarbons, and other potential pollutants into marina basins. The highest concentration of these surface pollutants occurs in the runoff associated with the first half to one inch of rainfall depending on storm intensity. Stormwater that is treated in some way to remove pollutants before it reaches the marina basin minimizes impact to aquatic and marine life.

LEGAL REQUIREMENTS:

- If there is a stormwater discharge from your facility, you may have to register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

NON-STRUCTURAL BEST MANAGEMENT PRACTICES, "GOOD HOUSEKEEPING" PRACTICES:

- Perform as much boat repair and maintenance as practicable inside work buildings.
- Where an inside workspace is not available, perform abrasive blasting and sanding within spray booths or tarp enclosures.
- Where buildings or enclosed areas are not available, provide clearly designated land areas as far from the water's edge as possible for debris- producing maintenance. Collect as much maintenance debris on tarps, filter fabric, or paved surface.
- Use vacuum sanders to collect dust and chips while removing paint from hulls.
- Establish a list of "yard rules" which do-it-yourselfers and contractors must follow when performing debris-producing boat maintenance.
- Clean hull maintenance areas immediately after any maintenance is done to remove debris and dispose of collected material properly.
- Capture pollutants out of runoff water with permeable tarps, screens, and filter cloths.
- Sweep or vacuum around hull maintenance areas, parking lots, and

- driveways frequently, where appropriate.
- Store all potential pollutants such as pesticides, used oil containers, detergents, etc. under cover.

STRUCTURAL BEST MANAGEMENT PRACTICES:

- Plant a vegetated filter strip or buffer between impervious areas and the marina basin. A vegetated filter strip is a densely vegetated strip of land engineered to accept runoff from upstream development as overland sheet flow.
- Construct new or restore former wetlands where feasible and practical.
- Constructed stormwater wetlands are manmade shallow pools that create growing conditions suitable for wetland vegetation.
- Minimize impervious areas on marina sites by paving only where necessary. Use porous pavement for parking lots and lightly traveled access roads, or other pervious materials such as gravel or crushed concrete.
- Direct roof runoff to drywells or position downspouts so that they drain to vegetated areas. Avoid draining to concrete or asphalt.
- Install oil/grit separators to capture pollutants in runoff. Water from parking lots and other areas likely to have hydrocarbons should be directed through oil/grit separators before entering any other management structure (Note: this practice requires a lot of maintenance).
- Install sand filters. Intermittent sand filter facilities are underground vault-like facilities which capture, pre-treat, and filter the first flush of stormwater runoff. In some cases, these facilities can include an above- ground storage facility to store the excess volume of runoff from larger storms.
- Use catches basins with deep sumps where stormwater flows to the marina basin in large pulses.
- Maintain catch basins regularly. Typical maintenance of catch basins includes trash removal if a screen or other debris-capturing device is used, and removal of sediment by a hired contractor or on-site wet-vacuum system. At a minimum, catch basins should be cleaned at the beginning and end of each boating season.
- Add filters to storm drains that are located near work areas to screen solid materials out of runoff.
- Place absorbent materials in drain inlets to capture oil and grease.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you follow “good housekeeping” techniques to keep potential pollutants from entering stormwater runoff?

YES **NO** **N/A**

- ✓ Do you maintain catch basins, as necessary?

YES **NO** **N/A**

Control of Particulate Matter and Visible Emissions

POTENTIAL ENVIRONMENTAL IMPACTS:

Particulate matter and visible emissions are emitted from fuel combustion in diesel and gasoline engines and as airborne dust from operations such as materials handling, transportation, and storage; construction and demolished; road use; and the clearing or grading of land. Particulate matter air pollution may aggravate existing heart and lung disease and asthma; decrease lung function; and increase respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.

LEGAL REQUIREMENTS:

- Mobile sources, such automobiles, buses, trucks, tractors, earth moving equipment, hoists, cranes, boats, and lawnmowers:
  - Gasoline powered - No visible emissions for longer than five consecutive seconds.
  - Diesel powered - No visible emissions with a shade or density equal to or darker than 20% opacity for more than 10 consecutive seconds, with a maximum shade or density no darker than 40% opacity.
  - Do not operate a mobile source for more than three consecutive minutes when the mobile source is not in motion, except when forced to because of traffic conditions or mechanical difficulties, when heating or cooling is required, when needed to operate auxiliary equipment, and when the vehicle is undergoing maintenance that requires it be operated **[RSCA Section 22a-174-18(b)(3)]**.
- Minimize fugitive emissions during materials handling, transportation, and storage or during the use, construction, alteration, repair or demolition of a building, its appurtenances, or a road by taking reasonable precautions to prevent particulate matter from becoming airborne. Reasonable precautions include, but are not be limited to: application of asphalt, water, suitable materials or covers; use of hoods, fans, fabric filters or other devices to enclose and contain materials; and prompt removal of earth and other material deposited onto paved streets [RSCA Section 22a-174-18(c)(1)].
- No visible particulate matter emissions are allowed near ground level beyond the legal boundary of the property nor are any that cause a nuisance of diminish the health, safety or enjoyment of people using a building or structure located beyond the property boundary [RSCA Section 22a-174-18(c)(2) & (3)].

BEST MANAGEMENT PRACTICES:

- Conduct industrial activities that may produce particulate matter inside of an enclosed area.
- Avoid conducting debris-producing activities on windy days.
- Ensure all employees, subcontractors, and delivery services are made aware of the above air regulations.
- Do as much debris produce work as possible away from property lines as well as the water.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

There are no Clean Marina certification criteria specific to the control of Particulate Matter and Visible Emissions.

SWIMMING POOL WASTEWATER

POTENTIAL ENVIRONMENTAL IMPACTS

Chlorine and other chemicals (bromine) used in maintaining pools and spas often include acidic or alkaline cleaning compounds that can have a negative impact on marine and aquatic life if mismanaged. Even at extremely low levels, chlorine can be toxic to life in lakes, ponds, and coastal basins. Swimming pool wastewater can also contain solids and harmful bacteria.

Pool cleaning contractors must register with the CT DEEP. Before you hire one, ask to see a copy of their registration.

LEGAL REQUIREMENTS:

- Marinas which initiate, create, originate, or maintain a discharge of swimming pool wastewater to a dedicated subsurface disposal system, ground surface or surface water body, must register with CTDEEP for a *General Permit for the Discharge of Swimming Pool Wastewater* [CGS §22a-430b].
- Marinas which initiate, create, originate, or maintain a discharge of swimming pool wastewater to a Publicly Owned Treatment Works (POTW or sewage treatment plant) must comply with the DEEP *General Permit for Discharges from Miscellaneous Industrial Users (MIU General Permit) [*CGS §22a-430b].
- For both General Permits, swimming pool wastewater includes:
  - **Filtration Backwash Wastewater**: wastewater generated by backwashing a swimming pool filtration system.
  - **Pool Draining Water**: wastewater generated by draining a swimming pool.
  - **Pool Maintenance Wastewater**: wastewater generated by the acid cleaning, pressure washing, resurfacing, grouting, painting or any other maintenance of swimming pools of their associated equipment such as pool filters, pool covers, etc.
- The requirements for treatment of swimming pool wastewater before discharge depend on the type of wastewater and where it is intended to be discharged. Contact the DEEP Bureau of Materials Management and Compliance Assurance at 860-424-3025 for more information and a copy of the general permits which list all the legal requirements for discharge.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

No Clean Marina certification criteria specific to swimming pool wastewater.

6
EMERGENCY PLANNING

Chris Stone

Emergency Spill Kit

EMERGENCY PLANNING
Quick Reference Table

Use this table as a quick reference to determine what is legally required if you conduct any of the listed activities or use any of the listed products.

We suggest that you read each fact sheet before turning to the referenced legal requirement section because each individual fact sheet provides more detailed information about each activity or product used.

If the "Additional Requirements" box is checked, there are additional requirements that are not described in any appendix but are described on the referenced fact sheet.

ACTIVITIES	Fact Sheet Page #	Appendix A: Hazardous Substance Management	Appendix B: Hazardous Waste Management	Appendix C: Used Oil Management	Appendix D: Solid Waste Management	Appendix E: Spills	Appendix F: Stormwater General Permit*	Appendix G: MIU General Permit*	Add' l Requirements
Emergency Planning	75	**P**	**P**			**P**			✓

✓= applies **P** = potentially applies, see fact sheet for more information

*NOTE: All facilities classified under Standard Industrial Code (SIC) 4493 Marina) or SIC 373 (Ship and Boat Building and Repairing), with portions of the facility involved in vehicle, boat, or equipment maintenance, fueling, and/or vehicle and boat or equipment cleaning operations, that discharge stormwater must register for a *General Permit for the Discharge of Stormwater Associated with Industrial Activity* ("Stormwater General Permit"). See Appendix F for more information.

EMERGENCY PLANNING

Having a licensed spill cleanup contractor on retainer avoids the added expense of CT DEEP hiring one for you. Having am emergency response plan assures you more control during emergency response.

POTENTIAL ENVIRONMENTAL IMPACTS:

Being adequately prepared for emergency action can potentially reduce the overall environmental impact of a spill, fire, or other event.

LEGAL REQUIREMENTS:

- If your facility stores gas or oil: 1) aboveground in any size tank(s) with a total aggregate volume over 1,320 gallons (containers of less than 55 gallons and/or permanently closed storage tanks are exempt from the total); or 2) in underground storage tanks with total capacity greater than 42,000 gallons (unless the tanks are compliant with the state requirements for USTs), you need to prepare a Spill Prevention, Control and Countermeasure (SPCC) Plan, which outlines a facility-wide plan to prevent and clean up oil and gasoline spills [Clean Water Act, 40 CFR 112]. See Appendix E for more information.
- If your facility is a Large Quantity Generator of hazardous waste, you must prepare a hazardous waste contingency plan [40 CFR 262.34(a)(4); RCSA 22a-449(c)-102(a)]. See Appendix B for more information.
- If you have a marine service station, you must design and manage it to prevent spills, fire, and other dangers as required in the National Fire Protection Association's (NFPA) *Automotive and Marine Service Station Code* (NFPA 30A). These requirements are adopted locally. Check with your municipal fire marshal for local requirements or contact the State Fire Marshal's Office at (860) 685-8380.
- If you store hazardous materials in quantities above certain threshold amounts, you must report storage of that substance under the Emergency Planning and Community Right-to-Know Act of 1986 [42 USC 11001, and 42CFR 355]. See Appendix A for more information.
- Keep copies of Safety Data Sheets (SDS) for all hazardous substances used at your facility [Occupational Safety and Health Act of 1970, 29 USC Section 657].
- If you use stationary emergency engines to power emergency generators, water pumps, etc., no air emission permit is required from CTDEEP if you maintain records for the past 5 years demonstrating that you have purchased no more than the following for your facility in any calendar year:
  - ➤ 41 million cubic feet of gaseous fuel (natural gas), or
  - ➤ 21,000 gallons of distillate fuel (diesel/#2 oil), or
  - ➤ 100,000 gallons of propane [RCSA §22a-174-3c].

  *NOTE: This requirement applies only to stationary engines with the potential to emit more than 15 tons per year of any individual air pollutants [RCSA §22a-174-3a(1)(D)] and does not

apply to portable engines that are relocated at least once every 12 months [40 CFR 89.2]. If you have questions about these requirements, contact the CT DEEP's Bureau of Air Management at 860-424-3027.

- In case of a spill of oil, petroleum, chemical liquids or solids, liquid, gaseous products or hazardous waste, report the spill to CT DEEP's Emergency Response and Spill Prevention at 860-424-3338 or toll-free 866-DEP-SPIL (866-337-7745) [CGS §22a-450]. See Appendix E for state and federal spill reporting requirements.
- If any fuel that is spilled into navigable waters causes a visible sheen, it may be necessary to report that spill to the National Response Center at (800) 424-8802 [Section 311 of the Clean Water Act; 33 USC 1321]. See Appendix E or the state and federal spill reporting requirements.

BEST MANAGEMENT PRACTICES:

- Assess potential hazards at your facility, both manmade (fuel spill or fire) and natural (nor'easter or hurricane).
- Develop an oil spill contingency plan, even if you are not required by law to prepare an SPCC Plan. Such plans should identify potential spill sources, oil and hazardous materials used or stored in the area, spill prevention measures (e.g., security, inspection, containment, training, equipment), and spill emergency procedures, including contact information of marina personnel qualified to lead spill response efforts, notification, and spill containment measures.
- Store spill containment and control materials in a clearly marked location, readily accessible to work and storage areas. These spill response kits should include absorbent pads and booms, empty sandbags, sewer pipe plugs, drain covers, fire extinguishers, and a copy of the facility's spill contingency plan.
- Develop emergency response plans that include written procedures for action addressing potential emergency situations. Keep the plan in an accessible location. A spill contingency plan and emergency response plan can be combined into one document. Emergency response plans should:

  - Include a site plan of the facility, showing valves, pipes, tanks, structures, roads, hydrants, docks, power and fuel shutoffs, hazardous material storage locations, telephones, and location of emergency response materials.
  - Describe the type, amount, and location of hazardous and potentially hazardous materials stored on-site.
  - Identify which staff member will take what action in the event of an emergency.
  - Designate one person as the spokesperson for the marina.
  - Include a list of emergency phone numbers for:
  - USCG National Response Center 800-424-8802

    CT DEEP's Emergency Response and Spill Prevention at 860-424-3338 or toll-free 866-DEP-SPIL (866-337-7745)

➤Local fire and police

➤Facility owner

➤Local harbormaster

➤Neighboring marinas that have emergency response equipment

➤Spill response contractors

➤List and describe actions to be taken during an emergency and based on likely threats, what equipment should be deployed.

➤Indicate when additional resources should be called for assistance.

- Update the emergency response plan as necessary each year.
- Review the emergency response plan with employees and train them on proper use of containment material.
- Contact local emergency response providers or local U.S. Coast Guard Marine Safety Office (New Haven: 800-774-8724, or New London: 860-442-4471) to obtain basic information about how to handle emergencies and/or for training opportunities.
- Inform the local fire department and harbormaster of your emergency response plan.
- Develop an action checklist for severe weather. Preparations to reduce environmental risks include securing all dumpsters, removing or securing all objects which could potentially blow or wash away, and securing waterside sewage pumpouts and/or dump stations.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

✓ Do you have a spill contingency plan, if you are not required to have a Spill Prevention, Control and Countermeasure (SPCC) Plan?

YES **NO** **N/A**

✓ Do you have an emergency response plan for potential accidents or emergencies? [this may be part of the spill contingency plan]

YES **NO** **N/A**

✓ Do you train employees in emergency response every year?

YES **NO** **N/A**

✓ Do you keep emergency response equipment accessible and near potential sources of accidents?

YES **NO** **N/A**

7

BOATER EDUCATION

Cedar Island Marina, Clinton

BOATER EDUCATION & SIGNAGE

POTENTIAL ENVIRONMENTAL IMPACTS:

The environmental choices that marina customers make can improve the water quality in your marina basin, and the appearance of your facility.

LEGAL REQUIREMENTS:

- There are no legal requirements to educate customers about clean boating practices.

BEST MANAGEMENT PRACTICES:

- Photocopy and distribute Clean Boater Fact Sheets to your customers.
- The Clean Boater Fact Sheets can be found on this page.
- Contact CT-DEEP's Boating Division at 860-434-8638 for additional boater education materials to

- distribute to marina customers. Ask about the Clean Boater Program.
- Provide clear signage at your marina. Sample signs are shown on the next pages.
- Train employees in clean boating practices. Let them know what information is available to distribute to customers.
- Host an environmental workshop for customers.
- Include environmental information in facility newsletters.
- Include environmental boating practices in slip contracts.
- Provide a list of "yard rules" to your customers who do their own boat maintenance.

CHECKLIST FOR CLEAN MARINA CERTIFICATION:

- ✓ Do you pass on information about environmentally responsible boating practices to your customers?

YES **NO** **N/A**

CONNECTICUT
MARINE TRADES ASSOCIATION
WELCOME TO OUR WATERS

SAMPLE SIGNS

NOTICE

The Federal Water Pollution Control Act prohibits the discharge of oil or oily waste into or upon the navigable waters of the United States or the waters of the contiguous zone if such discharge causes a film or sheen upon, or discoloration of the surface water. Violators are subject to a penalty of $5,000. The use of soaps to disperse oil is illegal. Violators may be fined up to $25,000 per incident.

Report Oil Spills to
USCG at (800) 424-8802

OIL SPILL RESPONSE KIT

[Name & Number of people to contact in marina in case of a spill]

[Include name and number of people to contact at the marina in case of a spill.]

Pumpout Station

[Instructions for use]

[Hours of operation]

[Fee]

[Name and number of people to call in case of malfunction]

Vessel Maintenance Area

- Perform all major repairs in this area.
- Do all blasting and spray painting within an enclosed booth or under tarps.
- Use tarps or filter fabric to collect paint chips and other debris.
- Use vacuum sander [include rental information if appropriate].
- Use high-volume low-pressure spray guns [include rental information if appropriate].
- Use drip pans with all liquids.
- Reuse solvents.
- Store waste solvents, rags, and paints in covered containers.

CONNECTICUT
MARINE TRADES ASSOCIATION
WELCOME TO OUR WATERS

No Discharge Area
Do Not Discharge Sewage

Please use our clean, comfortable restrooms while you are in port.

Nutrients and pathogens in sewage impair water quality.

Keep Fuel Out of the Water

- Do Not Top Off Tank.
- Listen to Anticipate When Tank is full.
- Wipe-up Spills Immediately

Recycle Antifreeze

THIS CONTAINER IS FOR:

- Ethylene glycol antifreeze
- Propylene glycol antifreeze

Tailor to fit your hauler's requirements. Gasoline, diesel, kerosene, and all other

materials are STRICTLY PROHIBITED

If container is kept locked, include information about where to find the key or leave the antifreeze.

RECYCLE

Used Crankcase Oil
Office Paper
Magazines
Lead Acid Storage batteries
Solvents
Glass Food Containers
Steel
Corrugated cardboard
Boxboard
Ni-Cd
Plastic
Antifreeze
Newspaper
Tires
Rechargeable batteries
Containers (HDPE & PET)
Glass Food Containers
Tin
Tires
Metal fuel filter Canisters
Scrap Metal

* ***Leave Grass Clippings on the lawn***
* ***Compost Leaves***
* **Indicate which items you recycle and where the collection sites are located**
* ***Include information about Local recycling services for Materials that you do not collect***

CONNECTICUT
MARINE TRADES ASSOCIATION
WELCOME TO OUR WATERS

Recycle Oil

THIS CONTAINER IS FOR:

Engine oil
Transmission fluid
Hydraulic fluid
Gear oil
#2 Diesel
Kerosene

Gasoline is STRICTLY PROHIBITED

[Tailor to fit your hauler's requirements.]

[If container is kept locked, include information about where to find the key or leave the oil]

Think Before You Throw Away

The following items may not be placed in this dumpster:

- Oil
- Antifreeze
- Paint or varnish
- Solvents
- Pesticides
- Lead batteries
- Transmission fluid
- Distress flares
- Hazardous wastes

Ask marina staff about proper disposal of these items.

No Fish Scraps

Please do not discard fish scraps within the marina basin.

- Use our fish cleaning station.
- Bag the scraps and dispose in dumpster or at home.
- Freeze and reuse as chum or bait.
- Save and dispose over deep water.

Keep it Clean!

This marina provides food and shelter for young fish

- Prevent oil spills!
- Keep bilge clean!
- Use oil sorb pads!
- Help by recycling or properly disposing of used oil, antifreeze, solvents, cleaners, plastics, and other wastes.

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Thank you for Keeping the [Sound/ Lake/ River] clean and safe!

Environmental Policy

It is the policy of this marina to protect the health of our patrons, staff, and the environment by minimizing the discharge of pollutants to the water and air.

BILGE WATER, BOAT SEWAGE AND GRAY WATER

All boats generate wastewater. Sources include bilge water, marine toilets, and laundry/dishwashing facilities. Please follow the tips listed below to make sure that you dispose of this wastewater properly.

BILGE WATER

Oil and gasoline can collect in your bilge and mix with bilge water. Discharging your bilge to the water exposes marine and aquatic organisms to these toxic substances.

1. Avoid pumping any bilge water that is oily or has a sheen.
2. Keep your engine well-tuned, to prevent leaks, and clean; to spot oil and gas leaks more easily.
3. Regularly check fuel lines and hoses for leaks to prevent oil from entering the bilge.
4. Place an oil-absorbent pad in your bilge. Change the oil-absorbent pad regularly. If the pad is saturated with gas, allow it to air dry and reuse. If the pad is saturated with diesel or oil, double-bag and discard it in the trash.
5. Consider installing a bilge oil filter or oil/water separator in your bilge discharge line to allow you to directly discharge bilge water while protecting the environment. Check with your marina staff to see if the marina offers services to install such systems or if they can refer you to an installer.
6. Ask your marina if they provide bilge water removal services. If they do not, maybe they know where such a service is provided nearby.

BOAT SEWAGE

Boat sewage contains disease-causing bacteria that can make people sick either through direct contact in the water, or through consumption of affected shellfish. Sewage also disrupts the chemical balance of the natural environment, degrading fish and shellfish habitat.

1. Use pumpouts! For a list of pumpouts in Connecticut, call the nearest marina or harbormaster, or contact the Connecticut Department of Energy & Environmental Protection's Boating Division at 860-434-8638, www.ct.gov/deep/cva.
2. Always use shore side restrooms when docked.
3. All Connecticut coastal waters are designated as No Discharge Areas.
4. When operating a vessel on a body of water where the discharge of treated or untreated sewage is prohibited the operator must secure the device in a manner that prevents any discharge. Some acceptable methods are padlocking overboard discharge valves in the closed position, using non releasable wire tie to hold overboard discharge valves in the closed position, closing overboard discharge valves and removing the handle, locking the door, with padlock or key lock, to the space enclosing the toilets (for Type I and Type II only). Additionally, pursuant to federal regulations the discharge of all sewage from vessels is prohibited in all inland waters in Connecticut and the above-described requirement to secure MSDs applies. For more information on No Discharge

5. Areas in Connecticut visit the US Environmental Protection Agency's website at www.epa.gov/region1/eco/nodiscrg/ct.html or visit the CT DEEP website at www.ct.gov/deep, click on the heading "Programs and Services" and click on "No Discharge Area".
6. Maintain your Marine Sanitation Device (MSD). Keep the disinfectant tank full, use biodegradable treatment chemicals, and follow the manufacturer's suggested maintenance program.
7. Never discharge your holding tank soon after adding deodorants since some deodorants contain toxic formaldehyde that can kill fish.
8. Have your MSD inspected regularly to ensure that it is functioning properly.
9. Do not dispose of fats and solvents. Oils, emulsifiers disinfectants, paints, poisons, phosphates, diapers and other similar products in your MSD.

GRAY WATER

Gray water includes soaps and detergents from boat showers, dishwashing, and laundry facilities. These soaps, even those labeled as "biodegradable," contain substances that might be harmful to marine life.

1. Use shore side showers, dishwashing stations, and laundry facilities whenever they are available.
2. Check product labels and use low nitrogen and phosphorous detergents for on-board laundry, dish washing and general cleaning.
3. Use all soaps and cleaners sparingly.

BOAT MAINTENANCE

Do you routinely work on your boat rather than hire others to do the work for you? Do you clean the deck, repaint the hull, and change the oil? If so, here are some important tips to help you protect the waters wherever you boat.

BOAT CLEANING

Soaps and solvents are toxic to marine life. Take care when using harmful products near the water.

1. Minimize the need for soaps and solvents by washing your boat frequently with a coarse cloth and some water.
2. If washing with water does not work, try natural cleaners, such as lime juice, borax, and baking soda. See the list of non-toxic cleaning alternatives.
3. When you need to use detergents, always use biodegradable, non-toxic, phosphate-free soaps, and keep the caps on bottles when cleaning to avoid spills. Biodegradable soaps are comprised of natural compounds that breakdown more rapidly in the environment. Even these soaps can negatively affect marine life so always use as little as possible.
4. Try cleaning teak with a mild soap and abrasive pad, nylon brush, or bronze wool.
5. Do not use cleaning solvents on your boat when it is in the water.

HULL MAINTENANCE

Boat paints contain harmful components including metals, solvents, and dyes. Precautions must be taken to prevent paint and paint chips from ending up in the water.

1. Check with marina staff to find out where hull maintenance is allowed at the marina.
2. Do not work on your hull near the water or on the mudflats at low tide.
3. Never clean your boat's bottom when it is in the water because toxic paint may be removed.
4. Use a dust-free sander if possible. It will reduce cleanup time and is more enjoyable to use because you won't be breathing in paint dust. Ask your marine professional if they are provided through the marina.
5. If you are not using a dust-free sander, use tarps and filter cloth to help collect your scraps.
6. Keep your work area clean.
7. Let emptied paint cans and brushes dry before disposing them.
8. Share your leftover paint with a friend or marina staff rather than throwing it away. Dispose of old paint at a household hazardous waste facility in your municipality or check with your marine professional.
9. Ask if your facility has a collection area for boat maintenance waste from boaters. If not, take it home and dispose of it as household hazardous waste.
10. Use water-based paints and solvents. You can find them at most stores that sell marine paints.

ENGINE MAINTENANCE

Routine engine servicing requires the handling of toxic substances such as oil and solvents. Care must be taken while the cleaning is done.

1. Check with marina staff to find out where engine maintenance is allowed at the marina.
2. Clean up the work area with absorbent materials and a broom, instead of hosing.
3. Ask if your facility has a collection area for boat maintenance waste from boaters. (used oil filters, waste oil, lead-acid batteries, etc.). If not, take home and dispose of as household hazardous waste.
4. Pre-clean engine parts with a wire brush to eliminate the need for solvents.
5. Keep your engine well-tuned to prevent leaks and keep it clean to spot oil and gas leaks more easily.
6. If you must use solvents, use Volatile Organic Compound (VOC) free solvents.
7. Use the orange-pink colored propylene antifreeze, which is nontoxic, rather than the blue-green colored ethylene glycol, which is toxic to marine life.

8. Keep fuel tanks at 90% capacity during winter storage to prevent deterioration of the stored fuel. You should never fill the tank all the way because gasoline expands as it warms, causing a potentially explosive condition.
9. Never pour oil or oily liquids into the water – it is illegal.

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NON-TOXIC CLEANING

The following list provides non-toxic alternatives to typical cleaning products.
It should be noted that even non-toxic substances can cause temporary harm to the environment and should therefore be used sparingly.

When cleaning, always try water and a little elbow grease first

ALL PURPOSE CLEANER	Mix one cup white vinegar with two gallons water.
AIR FRESHENER	Leave out an open box of baking soda.
AMMONIA-BASED CLEANERS	Vinegar, salt, and water.
BRASS CLEANER	Worcestershire sauce. Or paste made with equal amounts of salt, vinegar, and water.
COPPER CLEANER	Lemon juice and water. Or paste of lemon juice, salt, and flour.
CHLORINE BLEACH	Baking soda and water. Or borax.
CHROME CLEANER/POLISH	Apple cider vinegar to clean; baby oil to polish.
DISINFECTANTS	One half a cup borax in one gallon of water.
DRAIN OPENER	Dissemble and use a plumber's snake. Or flush with boiling water mixed with one quarter cup baking soda and one quarter cup vinegar.
FIBERGLASS STAIN REMOVER	Baking soda paste.
FLOOR CLEANER	One-cup vinegar plus two gallons of water.
PAINTS	Use latex or water-based paints.
PAINT REMOVER / STRIPPER	Use heat gun to peel off paint.
PAINT THINNERS	Use water (effective for water-based paints).
STAINLESS STEEL CLEANER	Baking soda or mineral oil for polishing, vinegar to remove spots.
TOILET BOWL CLEANER	Use toilet brush and baking soda.
WOOD POLISH	Olive or almond oil (interior walls only)
WINDOW CLEANER	Mix two tablespoons vinegar in one quart of water or rub glass with newspaper.

Sources: Buller (1995) and MA Department of Environmental Management, Environmental Hazards Management Institute

BOAT OPERATION & FUELING

The way that you operate your boat or personal watercraft can have a direct effect on public safety and the environment. When not operated properly, boats can result in injuries to people and animals, and can cause pollution. Specific considerations should be given when fueling your boat. Consider the following tips to make sure your boating activities are safe and protect the environment.

BOAT OPERATION

1. Observe all rules and regulations including "no wake" zones.
2. Avoid operating through shallow areas (<3 feet). You risk causing damage to your boat and you may be harming sensitive habitats, such as eelgrass. If you are not familiar with the waters near the shore, proceed cautiously and refer to the most current local charts.
3. Watch your wake when boating near marshes and eroded banks. Your wake could cause erosion of marsh or shoreline.
4. Unless traveling to and from a port of entry or through a navigational channel, don't regularly operate your personal watercraft within 200 feet of shore.
5. Take a free boating safety course. Call CT-DEEP's Boating Division at 860-434-8638.
6. When your outboard motor needs replacing, consider a highly efficient 4- stroke or direct fuel injection 2-stroke engine. These higher efficiency engines will save you money on fuel and reduce the amount of unspent fuel that is released into the environment.

FUELING:

1. Attend to fuel hose when fueling
2. Always use an absorbent cloth or pad when fueling to catch small drips, particularly when you remove the fuel nozzle from the boat's fuel line.
3. Prevent spills by not topping off fuel tank, and listening to the filler pipe to anticipate when the tank is full.
4. To prevent spills from the tank vent of a built-in fuel tank, install a fuel/air separator or an air whistle in your tank line, or use a vent cup to capture overspill. Ask marina staff if they know who can provide this service.
5. Avoid overfilling tanks; remember that fuel expands as it warms up in the tank after being pumped from cooler storage tanks.
6. Fill portable tanks on shore.
7. Add a stabilizer to your fuel if you use your boat infrequently. This will help preserve the fuel

and make sure it burns efficiently.

8. If you see a leak or spill of any fuel, stop the spill at the source and contact the marina staff immediately.
9. You must report a spill of any size to CT- DEEP's Emergency Response and Spill Prevention at 860-424-3338 or toll-free 866-DEP-SPIL (866-337-7745). If the spill causes a "sheen" on the water, it must also be
reported to the National Response Center at 800-424-8802.
10. Understand that squirting any detergent or emulsifier on an oil slick is not good for the environment, against the law and can bring heavy fines.

GARBAGE AND FISHING WASTE

Everyone generates trash and garbage. When not handled properly, trash, fish waste, fishing line, hazardous waste, and pet waste can injure marine life and people, and can ruin your boating experience. Consider the following tips.

GARBAGE

1. Don't toss trash, including cigarette butts overboard. Never discard plastics into the water.
2. Always store your trash on board your boat and dispose of it when you return to land. Store it securely so it does not fly away while boating.
3. Use the appropriately marked trash receptacles. If a trash can is full, find another that has room for your trash.
4. Separate recyclable materials, like cans and bottles and certain types of paper, from regular trash for recycling. Recycle these items at the marina, at home or for depositing bottles and cans, at a local redemption center.
5. If you are not sure how to dispose of a certain waste, ask your marine professional.
6. Never leave used oil or fuel filters unattended near a dumpster after hours. Store it in a safe and secure place (on board your boat for example) and contact the marina office during normal business hours.
7. Be a good neighbor and pick up trash that you come across, either floating in the water or on land.
8. Always pick up after your pet and dispose of pet waste in the marina's trash receptacles.

FISH WASTE

1. Fish waste should be discarded offshore unless there are length limits for the type of fish caught. If fish are cleaned at the marina, they should be cleaned at a designated location and the waste should be disposed of as directed by the marina staff.
2. Take particular care to properly dispose of nylon fishing line. In the water, it can entangle fish, wildlife, swimmers, and boat propellers. Recycle fishing line at your tackle shop.

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APPENDIX A: HAZARDOUS SUBSTANCE MANAGEMENT

Noank Shipyard, Noank

Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) or Superfund Amendments and Reauthorization Act of 1986 (Sara Title III)

EPCRA [40 CFR 355] is a federal law, enforced by the federal Environmental Protection Agency (EPA) managed by the state and local emergency planning commissions. EPCRA applies to storage of hazardous materials before they are used. EPCRA requires that facilities report storage of certain chemicals above a certain amount to the state and local authorities. This law is called both "EPCRA" and "SARA Title III". In this fact sheet, it will be referred to as "EPCRA".

The principal reason for EPCRA is to provide citizens with information on the manufacture, use and environmental release of potentially toxic chemicals in their communities. EPCRA has four major sections that require reporting to state and local authorities:

- Hazardous chemical storage reporting or the "community right-to know" requirements (Sections 311-312)
- Emergency planning (Section 301-303)
- Emergency release notification (Section 304)
- Toxic chemical release inventory (Section 313)

This fact sheet provides a summary of EPCRA and is designed to guide you to determine whether you might be required to comply. More information is available by contacting the Connecticut State Emergency Response Commission (CT SERC), 79 Elm Street, Hartford, CT 06106 and 860-424-3373. (www.ct.gov/serc)

Reporting Hazardous Chemicals (EPCRA Section 311-312, or "Community Right-To-Know Requirements")

EPCRA Section 311—List of Chemicals Form

The Occupational Safety and Health Administration (OSHA) requires employers to keep copies of Material Safety Data Sheets (MSDS) now known as Safety Data Sheets (SDS) for each hazardous chemical available for employees. Distributors are required to provide MSDSs for hazardous substances [29 CFR 1910.1200]. You must complete a "Section 311—List of Chemicals Form" if you have chemicals on site that are required under OSHA to have SDSs and you meet one of the following two conditions:

1. you store one or more substance listed as an "extremely hazardous substance" in quantities equal to or greater than the listed "threshold planning quantities" or 500 pounds, whichever is less [The list of extremely hazardous substances and their threshold planning quantities is available in EPA's List of Lists.] **OR**
2. you store 10,000 pounds or more of any hazardous substance requiring a SDS's. Although the law states that you may submit copies of the SDS or a list of chemicals, Connecticut prefers the list of chemicals as provided in the form "Section 311-List of Chemicals". You must send the completed form to the CTSERC, 79 Elm Street, Hartford, CT 06106-5127 AND the Local Emergency Planning Commission (LEPC) (contact CTSERC or local fire department for LEPC contact) AND your local fire department. You must file the "Section 311—List of Chemicals Form" within 3 months of first having reportable quantities of hazardous chemicals at your facility, and it must be updated when new hazardous chemicals are stored in reportable quantities at a facility.

Annual Tier II Reporting (EPCRA Section 312)

If you are subject to the Section 311 reporting requirements described above, you must also submit an annual "Tier II Emergency and Hazardous Chemical Inventory". The "Tier II Emergency and Hazardous Chemical Inventory" requires you to inventory your facility's hazardous chemicals and identify their storage locations. Information about electronic filing for a Tier II is available at www.ct.gov/serc.

You must submit a completed Tier II report to the CTSERC *AND* the LEPC *AND* your local fire department each year by March 1.

What are marinas likely to report under the Section 311 and Tier II reporting requirements?

You must report storage of gasoline, diesel fuel, propane or fuel oil (all of which require SDSs) in excess of 10,000 pounds. This does not include the fuel in boats dockside. Gasoline weighs roughly 6.19 pounds per gallon, diesel weighs roughly 7.05 pounds per gallon, and propane weighs roughly 4.23 pounds per gallon at 60 degrees Fahrenheit.

You must also report the sulfuric acid in lead acid batteries in excess of 500 pounds. The average small boat battery contains approximately 5 pounds of sulfuric acid. You must also report the lead in lead acid batteries in excess of 10,000 pounds. The average small boat battery contains approximately 30 to 40 pounds of lead per battery. Note that these reporting requirements apply to the batteries that you store before or after use on your facility, but not the ones that boaters can physically move on and off their boats.

Reporting Storage of Extremely Hazardous Substances Storage (EPCRA Section 302)

Section 302—Emergency Planning Notification Form

If you store any of 356 listed "Extremely Hazardous Substances" in excess of the listed Threshold Planning Quantity, you are required to complete a "Section 302-Emergency Planning Notification Form" and submit it to the CTSERC AND the LEPC within 60 days of when the substance becomes present at the facility. The list is available in EPA's List of Lists.

If you are required to file a "Section 302-Emergency Planning Notification Form," you must also designate a facility emergency coordinator who will be the emergency contact person for your facility.

What are marinas likely to report under the Section 302 reporting requirements?

You must report the sulfuric acid in lead acid batteries in excess of 1,000 pounds. The average small boat battery contains approximately 5 pounds of sulfuric acid. Unlike Section 311 and 312 requirements, this requirement DOES apply to the batteries on your customers' boats. In the unlikely event that you store chlorine in liquid or granular form (not tablets or powder), you must report storage of 100 pounds or more.

Accidental Release Notification (EPCRA Section 304)

NOTE: Any spill of a chemical substance into Connecticut's waters must be reported to the CT-DEEP. In Connecticut, an accidental release, or spill, of any chemical substance is reportable under CGS Section 22a-450 to the CT-DEEP, Emergency Response and Spill Prevention at 860-424-3338 or toll-free 866-DEP-SPIL (866-337-7745).

Although any size spill must be reported to the State, you only need to report a chemical spill to the federal government under certain circumstances. If the spilled substance is a listed "Extremely Hazardous Substance" or a Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) listed hazardous substance released in amounts greater than the listed Reportable Quantity, then you must notify the CTSERC by calling 860-424-3338, CT DEEP Emergency Response and Spill Prevention at 860-424-3338 or toll-free 866-DEP-SPIL (866-337-7745), AND your LEPC, AND the National Response Center at 800-424-8802.
Under EPCRA, you are not required to report a chemical spill to the federal government above the Reportable Quantity if the release:

- does not affect persons off-property.
- is federally permitted.
- is a continuous release, except when statistically significant.
- is of certain nuclear material.
- results from pesticide or fertilizer applications; and
- is petroleum, unless "extremely hazardous substance" present

Initial notification can be made by telephone, radio or in person. Emergency notification Requirements involving transportation incidents can be met by dialing 911, or in the absence of a 911 emergency number, calling the operator. This emergency notification needs to include:

The chemical name;

- An indication of whether the substance is extremely hazardous.
- An estimate of the quantity released into the environment.
- The time and duration of the release.
- Whether the release occurred into air, water and/or land.
- Any known or anticipated acute or chronic health risks associated with the emergency, and where necessary, advice regarding medical attention for exposed individuals.
- Proper precautions, such as evacuation or sheltering in place; and
- Name and telephone number of contact person.

The facility owner or operator is also required to provide a written follow-up emergency notice as soon as practicable after the release. The follow-up notice or notices must:

- Update information included in the initial notice, and
- Provide information on actual response actions taken and advice regarding medical attention necessary for exposed individuals.

***NOTE:** If you are unsure about whether to report a chemical spill to the National response Center,

It is better to report than not. Not reporting can result in a costly error.

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Toxic Release Inventory (TRI)

TOXIC CHEMICAL RELEASE INVENTORY FORM

While it is unlikely that any marina in Connecticut will be subject to these reporting requirements, EPCRA Section 313 (commonly referred to as the Toxics Release Inventory or TRI) requires certain facilities to complete a Toxic Chemical Release Inventory Form annually for specified chemicals.

You are required to submit a "Toxic Chemical Release Inventory Form" each year by July 1 to the US EPA's EPCRA Reporting Center (address below) and the CT SERC for each potentially toxic chemical that is stored in quantities above a certain amount if your facility:

1. Is classified in major group 37 under Standard Industrial Classification code (primary classification), **AND**
2. Has 10 or more full-time employees, **AND**
3. Stores, uses or otherwise processes a toxic chemical in an amount above the listed threshold quantity

If your facility meets these three criteria, you must file a Toxic Chemical Release Inventory Form, either a "Form R" or "Form A," annually by July 1 for each toxic chemical. The reports must be sent to the CT SERC and EPCRA Reporting Center, P.O. Box 3348, Merrifield, VA 22116-3348, ATTN: Toxic Chemical Release Inventory. Copies of both forms can be obtained by calling the EPCRA hotline at 800-424-9346, or at http://www.epa.gov/tri.

FOR MORE INFORMATION:

Contact the Emergency Planning and Community Right-to-Know Information Hotline at 800-424-9346, or 703-412-9810, or TDD 800535-7672. Monday through Friday, 9:00 am to 6:00 PM, Eastern Time

Or contact, CT State Emergency Response Commission, 79 Elm Street, Hartford, CT 06106-5127 860-424-3373 or visit SERC's website at http://www.ct.gov/serc.

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APPENDIX B: HAZARDOUS WASTE MANAGEMENT

Milford Boat Works, Milford

Hazardous Waste Management in Connecticut

Hazardous waste is a group of wastes that are subject to special handling requirements because their mismanagement may lead to serious hazards to human health and the environment. The mismanagement of these wastes can also bring about loss of property value or legal action against persons that mismanage them. Many types of waste can be classified as hazardous waste, including some materials commonly generated at marinas. This section takes you through a step-by-step process to make sure that you are in compliance with hazardous waste requirements. Proper management of hazardous waste depends on several factors: determining which waste is hazardous, determining your hazardous waste generator status, and then applying the correct requirements based on your hazardous waste generator status. Note that you are responsible for your hazardous waste from the point of generation to its final disposal. If you already know that your waste is hazardous and know your generator status, then turn to Step Three for information on how to handle your hazardous waste.

Step One:

Determine Which of Your Wastes are Hazardous

Anyone who generates a waste is required by law to determine whether that waste is hazardous [40 CFR 262.11; RCSA § 22a-449(c)-1029(a)(2)(A)]. Some general knowledge about the basic characteristics of the waste may be helpful in making this determination, but some laboratory testing is usually required. For more guidance on hazardous waste testing, see the list of CT DEEP documents at the end of this section, or call CT-DEEP's Waste Engineering and Enforcement Division at 860-424-3023 for assistance. There are two ways a waste may be considered a hazardous waste: (1) if it is *Characteristically Hazardous*, or (2) if it is *Listed* as a hazardous waste.

Characteristically Hazardous Wastes are wastes that exhibit any one of the four characteristics listed below. An abbreviated definition is given for each one here. They are fully defined in the federal hazardous waste regulations [40 CFR 261.21 through 261.24]. Copies of these regulations may be obtained by contacting CT-DEEP or through U.S. EPA's web site at www.epa.gov.

Listed Hazardous Wastes are wastes that are specifically identified in one of four lists developed by U.S. EPA in the federal hazardous waste regulations [40CFR 261.31 through 261.33]. Each hazardous waste listing includes a description of a specific type of waste that EPA considers hazardous enough to warrant regulation. Hazardous waste listings describe wastes that are generated by certain industries come from common industrial processes or include specific chemical compounds as their main active ingredient. Several hundred specific solvents, metal finishing waste streams and sludges, pesticides, various organic and inorganic chemicals and discarded commercial chemical products are included in these lists.

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CHARACTERISTICALLY HAZARDOUS WASTES

CHARACTERISTIC	DEFINITION	TESTING	MARINA EXAMPLES
IGNITABILITY	Liquid wastes with a flash point lower than 140°F, ignitable solids, and materials that are designated by the U.S. DOT as oxidizers.	Laboratory certified by the CT Dept. of Public Health	• Used solvents • Waste gasoline • Old signal flares • Waste nitric acid
CORROSIVITY	Liquid wastes with a pH less than or equal to 2.0, or greater than or equal to 12.5	The most accurate way to determine pH is with a laboratory test.	• Lead-acid batteries • Waste muriatic acid • Caustic paint strippers • Old drain cleaners
REACTIVITY	Materials that are: normally unstable; react violently, explode, or emit toxic fumes when mixed with water; or can explode at room temperature and pressure or when heated under confinement.	Laboratory certified by the CT Dept. of Public Health	Cyanide compounds • Non-empty aerosol cans • Blasting caps • Dynamite • Other explosives
TOXICITY	Materials containing greater than the regulated concentration of any of 40 contaminants listed in the federal hazardous waste regulations [40 CFR 261.24].	Determined in a certified lab by a test called the Toxicity Characteristic Leaching Procedure (TCLP)	• Lead-based paint chips • Spent methyl ethyl ketone solvent • Waste gasoline (contains benzene) • Old containers of chlordane pesticide

The four groups of listed hazardous wastes are easily identified by the letter that begins their 4-digit EPA waste code (i.e., "F," "K," "U," or "P"). The four groups are classified as follows:

LIMITED HAZRARDOUS WASTES

LISTED WASTE	DEFINITION	MARINA EXAMPLES
"F" Wastes	Wastes from certain common nonspecific industrial activities	Spent chlorinated solvents (e.g., methylene chloride, 1,1,1- trichloroethane, perchloroethylene) Waste paint solvents (e.g., acetone methyl alcohol butyl alcohol, xylene, methyl ethyl ketone (MEK) methyl isobutyl ketone (MIBK), ethyl acetate
"K" Wastes	Wastes from certain specific industrial processes	Rarely, if ever generated by marinas
"U" AND "P" WASTES	Discarded commercial chemical products, off-spec products, container residues, and spill residues of such products	Not commonly generated by marinas: • Certain old pesticides, solvents and other unused chemical products

Non-RCRA-Hazardous "Connecticut-Regulated" Wastes.

If a waste is neither characteristically hazardous nor listed, then it is not subject to Connecticut's hazardous waste requirements. However, under separate state law [CGS §22a-454], certain wastes may not be disposed of at regular solid waste (i.e., trash) disposal facilities, but must instead be sent to specially permitted facilities that are equipped to handle industrial wastes. In general, the kinds of wastes that are subject to these special requirements include waste oils, petroleum or chemical liquids, and chemical solids (generally referred to collectively as "Connecticut-Regulated Wastes").

Some examples of Connecticut-Regulated Waste that might be generated at marinas may include:

- Non-hazardous paint-related wastes (e.g., sandblasting grit, bottom sanding dust, paints, solvents, cleanup residues, etc.)
- Non-hazardous rags/wipers contaminated with oil, grease, cleaners, paints, solvents, etc.
- Non-hazardous antifreeze
- Waste diesel fuel
- Used oil

These wastes cannot be placed in an on-site dumpster but must instead be segregated and picked up by a hauler that is permitted to transport Connecticut-Regulated Wastes. However, there is an exemption from transporter permit requirements for "waste chemical solids" (e.g., dried latex paint or paint chips). Such wastes do not have to be hauled by a permitted transporter, but they must still be sent to a permitted storage treatment or disposal facility. If sent to a facility in Connecticut for treatment or disposal, this facility must be permitted to take Connecticut-Regulated Wastes. There are no requirements for generators of these materials, other than that they ensure that they are properly disposed. However, as a best management practice, store these materials in a manner similar to that for hazardous waste (i.e., in secure, closed containers, in a storage area with an impervious base and secondary containment, etc.). When the material is shipped, the law does not require that the generator prepare a waste manifest. However, as a practical matter, generators will often find that their haulers will ask for one (either for their recordkeeping purposes, or because it is required under the receiving facility's operating permit).

For more information on Connecticut Regulated Wastes, contact CT-DEEP's Waste Engineering & Enforcement Division and ask for the free fact sheet entitled "Non-RCRA Hazardous Wastes (Connecticut-Regulated Wastes)." This document is among several helpful documents listed at the end of this section.

FREQUENTLY ASKED QUESTIONS ABOUT HAZARDOUS WASTE DETERMINATIONS

Q: I'm pretty sure that my waste is hazardous. Do I still have to test it?

A: There are two "tools" that may be used to determine if a waste is hazardous. The first of these is analytical testing. The second is to use information about the source, nature and contaminants of the waste (i.e., so-called "knowledge of process" information). Common sources of knowledge of process information include Safety Data Sheets (SDSs), product specification sheets, or analytical results from the testing of an identical waste stream

generated at another site. Although knowledge of process information can be very useful (especially in identifying hazardous constituents that are known to be present), it typically is not adequate to fully and properly characterize a waste. Knowledge of process cannot account for factors such as trace contaminants that may not be listed on a SDS, contaminants introduced during use, and cross-contamination from other wastes. As a result, some sampling is typically required to properly characterize a waste.

Q: Where can I get my waste tested?

A: The Connecticut Department of Public Health licenses analytical laboratories in Connecticut, and several dozens of these labs can do hazardous waste testing. To get a list of these labs, call CT DEEP's Waste Engineering and Enforcement Division at 860-424-32023 or toll-free 888-424-4193. Many of these labs are also listed in the Yellow Pages under "Laboratories – Analytical."

Q: How often do I have to test my waste?

A: Connecticut's hazardous waste rules require that generators test their waste annually, or whenever there is a raw material or process change that could affect the waste. However, if a generator can document that a waste has not changed over time (such as by having several previous years' analyses showing consistent testing results), this may constitute a valid basis on which to make a "knowledge of process" claim (see first question above).

Q: What if my waste is hazardous for more than one thing?

A: Some wastes can be hazardous for more than one characteristic or can be both listed and characteristically hazardous. For example, waste gasoline might be hazardous for the ignitability characteristic AND exhibit the toxicity characteristic for benzene. Hazardous waste rules require generators to determine *all* the applicable waste codes that apply to a waste, and list them on the manifest when the waste is shipped off-site.

Q: If my hauler tests the waste, do I have to test it, too?

A: Often transporters and/or receiving facilities will test waste that they accept (either to confirm information provided by the generator, or because their operating permit requires them to perform certain testing for quality control purposes). If the transporter or receiving facility is willing to provide this information, the generator may use it in complying with

hazardous waste determination requirements. However, it must be stressed that this kind of test data may not be adequate to fully characterize a waste, and additional testing or "knowledge of process" information may be needed to round out the waste determination.

Step Two:

Determine Your Hazardous Waste Generator Status

If, at the end of Step One, you have determined that you do not generate any hazardous waste, then congratulations! You're done! If none of the waste that you generate is hazardous (or if you can eliminate any hazardous waste you *do* generate), then you do not have to comply with any hazardous waste requirements. You just need to keep records of your test results documenting that your waste is non-hazardous.

However, if any of your waste is hazardous, you must take some additional steps to determine the requirements that apply to your handling of this waste. Generators of hazardous waste are subject to different requirements, depending on the amount of waste they generate and store on-site. There are three types of hazardous waste generators:

1. **Conditionally Exempt Small Quantity Generators (CESQG):**
   - generate 220 pounds (about 26 gallons) or less of hazardous waste per month; and
   - do not accumulate more than 2,200 pounds of hazardous waste on-site at any one time; and,
   - do not generate more than 2.2 pounds per month of acutely hazardous waste*; and,
   - do not accumulate more than 2.2 pounds of acutely hazardous waste* at any one time.
2. **Small Quantity Generators (SQG):**
   - generate between 220 and 2,200 pounds (about 26 to 260 gallons) of hazardous waste per month; and
   - do not accumulate more than 2,200 pounds of hazardous waste on-site at any one time; and
   - do not generate more than 2.2 pounds per month of acutely hazardous waste*; and,
   - do not accumulate more than 2.2 pounds of acutely hazardous waste* at any one time.
3. **Large Quantity Generators (LQG):**
   - generate 2,200 pounds or more of hazardous waste per month; or,
   - Accumulate more than 2,200 pounds of hazardous waste on-site at any one time: or
   - Generate 2.2 pounds or more per month of acutely hazardous waste*; or
   - Accumulate more than 2.2 pounds of acutely hazardous waste* at any one time.

*Acutely hazardous wastes are a subset of hazardous wastes that are particularly hazardous and

are therefore regulated in much smaller amounts than regular hazardous wastes. Typically, the waste generated by marinas will not fall into this category, although certain wastes may (for example, certain pesticides which are "P" listed wastes).

For more detailed information, call the CT-DEEP's fact sheet, *Determining Hazardous Waste Generator Category*, listed at the end of this section, which will help you determine what set of requirements you are subject to.

Step Three:

Properly Store and Dispose of Your Hazardous

Once you have determined your generator status, the next step is to determine the requirements that apply and ensure that your facility is following them. Table 1 on page 104 provides an overview of the various requirements that apply based on generator status. Details on these requirements are provided below.

1. Conditionally Exempt Small Quantity Generators (CESQG)

Many marinas will qualify as CESQGs, which have the fewest requirements of the three hazardous waste generators. The requirements and best management practices (BMPs) for CESQGs are listed below. If you would like more information on these requirements and BMPs, contact the CT-DEEP's Waste Engineering and Enforcement Division at 860-424-3023 and ask for the free booklet entitled *Conditionally Exempt Small Quantity Generator Handbook*. Several other helpful documents which are available are also listed at the end of this section.

In general, if you are a CESQG, then you must do the following:

[RCSA §22a-449(c)-101(b), 40 CFR 261.5]

- Ensure that your waste is disposed of at a permitted hazardous waste treatment or disposal facility, or at a household hazardous waste facility (or one-day collection event that is permitted to take CESQG waste).

- If you hire a waste hauler to take away your waste, be sure that the hauler has a valid EPA Identification number and transporter's permit to haul waste in Connecticut.
- Perform a hazardous waste determination on all the wastes you generate and keep records of all test results and other information used to make these determinations for at least three (3) years from the date that the waste was last sent off-site for disposal.
- Comply with Universal Waste requirements for any Universal Wastes that you generate. Universal Wastes are wastes that are subject to a special, reduced set of requirements in 40 CFR 273, and include batteries, recalled pesticides, mercury thermostats, and other mercury-

- containing equipment, fluorescent lamps and used electronics. (For more information on Universal Wastes, call the CT DEEP's Engineering & Enforcement Division at 860-424-3023 and request the fact sheet entitled "Universal Waste Rule.")
- Remember: if at any time your waste generation or storage amounts increase beyond CESQG levels, you must comply with the requirements for the higher generator category.

Best Management Practices for CESQGs:

- Look for ways to reduce or eliminate the generation of hazardous waste (see page 108 for "Hazardous Waste Minimization Tips"). If possible, eliminate the generation of hazardous waste, and avoid having to comply with hazardous waste requirements altogether.
- If you store waste in containers, keep it in an area which has an impervious base and secondary containment to capture any leaks or spills. Use containers that are compatible with the waste you are putting in them, and store waste containers away from other wastes or raw materials with which they may be incompatible. In addition, ensure that the containers are kept closed and in good condition, and immediately replace or overpack any damaged or leaking containers. Do not store hazardous waste within 50 feet of the facility property line, or immediately adjacent to rivers, streams, or shorelines.
- If you store waste in tanks, provide the tank with an impervious base and secondary containment to capture any leaks or spills (or, as an alternative, use double-walled tanks). Maintain the tanks to ensure they remain in good condition. Ensure that the fill opening for the tank is properly equipped to prevent spillage down the outside of the tank, and keep this opening always closed except when filling the tank. Be sure that the waste(s) that you place in the tank are compatible with the tank, and do not store waste that are incompatible with one another in the same tank.
- Inspect all waste storage areas on a regular basis (e.g., weekly), looking for leaks, spills, damaged containers, and other hazardous conditions. Correct any problems as quickly as possible. Document your inspections in a written inspection log.
- If you discontinue the use of a tank or container storage area, remove all waste, thoroughly clean and decontaminate the area, and perform post- decontamination testing to confirm that no waste residues remain.
- Develop written emergency procedures to respond to leaks, spills, fires, storms, floods, etc.
- Provide training for all personnel involved in waste management. Include, at a minimum, training in proper waste handling and emergency response procedures. Retain documentation of all training that is provided.

2. Small Quantity Generators (SQG)

Many marinas will qualify as SQGs, which have more requirements than CESQGs, but fewer than LQGs. The requirements and best management practices for SQGs are listed below. If you would like more information on these requirements and BMPs, contact the CT-DEEP's Waste Engineering and Enforcement Division at 860-424-3023 and ask for the free booklet entitled *A Road Map to RCRA: Small Quantity Generator (SQG) Requirements.*

In general, if you are a SQG, then you must do the following:

[RCSA §§22a-449(c)-102(b) and –102(c), 40 CFR 262.34(d)]

- If you have not done so already, apply for and obtain an EPA Identification Number. To do this, you will need to contact CT-DEEP's Waste Engineering & Enforcement Division and request EPA Form 8700-12, *Notification of Hazardous Waste Activity.* Once you have filled out this form and sent it to CT DEEP, you will be provided with the EPA ID Number.
- Be sure your waste hauler has a valid EPA Identification number and transporter's permit to haul waste in Connecticut.
- Ensure that your waste is disposed of at a permitted hazardous waste treatment or disposal facility.
- Perform a hazardous waste determination on all the waste you generate and keep records of all test results and other information used to make these determinations for at least three years from the date that the waste was last sent off-site for disposal.

TABLE 1:
OVERVIEW OF HAZARDOUS WASTE REQUIREMENTS BASED ON GENERATOR CATEGORY

	Large Quantity Generator (LQG)	**Small Quantity Generator (SQG)**	**Conditionally Exempt SQG (CESQG)**
Hazardous waste generation rate (per calendar month	2200 lbs or more of hazardous waste OR more than 2.2 lbs. of acutely hazardous waste	Between 220 and 2200 lbs. of hazardous waste AND no more than 2.2 lbs of acutely hazardous waste.	No more than 220 lbs of hazardous waste AND no more than 2.2 lbs of acutely hazardous waste
Maximum, Amount of Hazardous Waste On site	NO LIMIT	2200 lbs of hazardous waste 2.2 lbs of acutely hazardous waste	2200 lbs of hazardous waste
Maximum Storage Time	90 days	180 days	No limit
Waste Determination Required?	Yes	Yes	Yes
Generator EPA ID	Yes	Yes	No

Number Required?			
Manifest Required for Shipment Off Site	Yes	Yes	No
Permitted Transporter Required	Yes	Yes	Yes
Allowed Disposal Facilities	Permitted Hazardous waste treatment, storage, or disposal facilities	Permitted hazardous waste treatment, storage, or disposal facilities	Permitted hazardous waste treatment, storage, or disposal facilities; authorized household hazardous waste collection facilities
Storage Requirements	See text	See text	None. However, see BMPs for CESQGs.
Emergency Procedures/Plans	Full written contingency plan. See text for details	Emergency coordinator and post information near on-site telephone. See text for details.	None. However, see BMPs for CESQGs.
Inspection Requirements	Written inspection schedule and log. See Section 3 for details	Written inspection schedule and log. See text for details	None. However, see BMPs for CESQGs.
Personnel Training Requirements	Written training plan and formal classroom training. See text for details.	Employees must be familiar with waste handling & emergency procedures. See text for details.	None. However, see BMPs for CESQGs.
Recording Requirements	Must retain manifests, biennial reports, waste determination (w/test Must retain manifests, biennial reports, waste determination (w/test Results), inspection logs, and records of incidents requiring implementation of the contingency plan	Must retain manifests, biennial reports, waste determination (with test results), and inspection logs.	Record of waste determinations (with test results)
Biennial Report	Yes	No	No

- Prepare a hazardous waste manifest for each shipment of waste off-site and retain a copy of the manifest for each shipment. Ensure that the required Land Disposal Restriction ("LDR") Notices accompany each manifested shipment and retain copies of these notices on-site.
- Ensure that you do not store waste for more than 180 days.
- If you store waste in containers, mark each container with the words "hazardous waste," a description of the contents, such as the chemical name, and the date of initial accumulation. Store containers in an area which has an impervious base, and secondary containment that can contain the volume of the largest container stored in the area, or ten percent of the total volume of waste stored in the area (whichever is greater). Use only containers that are compatible with the waste you are putting in them, and store waste containers away from other wastes or raw materials with which they may be incompatible. In addition, ensure that containers are kept closed and in good condition, and immediately replace or overpack any damaged or leaking containers. And, when shipping containers of hazardous waste off-site, ensure that they are properly packaged, marked and labeled in accordance with U.S. DOT shipping requirements for hazardous materials.
- If you store waste in tanks, mark each tank with the words "hazardous waste," and a description of the contents, such as the chemical name. Ensure that the waste is compatible with the tank (e.g., don't put corrosive waste in an unlined steel tank) and do not store waste that is incompatible with one another in the same tank. Do not use uncovered tanks. Ensure that ignitable and reactive wastes that are stored in tanks are separated from sources of ignition or reaction (e.g., open flames, smoking, welding, sparks, etc.).
- If you discontinue the use of a tank or container storage area, remove all waste, thoroughly clean and decontaminate the area, and perform post- decontamination testing to confirm that no waste residues remain.
- Develop a written inspection schedule which lists the areas of the facility to be inspected and describes procedures to be followed during inspections. Perform inspections of all hazardous waste storage areas (weekly for containers, daily for tanks), looking for leaks, spills, damaged containers, and other hazardous conditions. Correct any problems as quickly as possible. Document your inspections (and any corrective actions taken to address noted problems) in a written inspection log and keep these records for at least three (3) years.
- Designate an emergency coordinator and post the name and telephone number of this coordinator next to the on-site telephone along with the locations of fire extinguishers and spill control material, the fire alarm (if you have one), and the telephone number of the local fire department (i.e., 911). Plan with local emergency response authorities to coordinate emergency services in the event of an emergency.

- Ensure that whenever waste is being handled, personnel have access to an internal alarm or emergency communication device.
- In the event of an emergency (e.g., fire, explosion, waste spill, severe storm, flood, etc.), take appropriate steps to ensure that hazardous waste is not released into the environment. Notify local emergency response authorities (i.e., local fire and/or police departments). If a spill has occurred, report it to the CT-DEEP's Emergency Response and Spill Prevention via its 24-hour spill reporting hotline at 860-424-3338 or toll-free 866-DEP-SPIL (866-337-7745). If there is a release of hazardous waste that could threaten human health outside your facility, you must also contact the National Response Center at 800-424-8802. Contain and properly dispose of any spilled or leaked waste (or hire a permitted spill cleanup contractor to perform this work)
- Train all personnel involved in hazardous waste management in proper waste handling and emergency procedures relevant to their specific job duties.
- Comply with Universal Waste requirements for any Universal Wastes that you generate. Universal Wastes are wastes that are subject to a special, reduced set of requirements in 40 CFR 273, and include batteries, recalled pesticides, mercury thermostats, and other mercury-containing equipment, fluorescent lamps and used electronics. (For more information on Universal Wastes, contact the CT DEEP's Waste Engineering and Enforcement Division at 860-424-3023 and request the fact sheet entitled "Universal Waste Rule.")
- Remember: if at any time your waste generation or storage amounts increase beyond SQG levels, you must comply with Large Quantity Generator Requirements.

Best Management Practices for SQGs:

- Look for ways to reduce or eliminate the generation of hazardous waste (see page 108 for "Hazardous Waste Minimization Tips"). For some SQGs, eliminating even a small amount of waste generation will be enough to allow them to reduce to CESQG status.
- Do not store hazardous waste within 50 feet of the facility property line, or immediately adjacent to rivers, streams, or shorelines.
- If you store waste in tanks, provide the tank with an impervious base and secondary containment to capture any leaks or spills (or, as an alternative, use double-walled tanks). Ensure that the fill opening for the tank is properly equipped to prevent spillage down the outside of the tank.
- Develop written emergency procedures to respond to leaks, spills, fires, storms, floods, etc.
- Document the hazardous waste training that you provide to your employees.

3. Large Quantity Generators (LQG)

Few marinas are likely to fall into this generation category. However, for those that do, the applicable requirements for LQGs are listed below. All the requirements and BMPs for LQGs are described in detail in a series of free fact sheets which are available free from CT-DEEP (see list at the end of this section).

In general, LQGs must comply with the requirements listed in Section 2 above for Small Quantity Generators, as well as the following, additional requirements: [RCSA §22a-449(c)-102(b), 40 CFR 262.34(a) and (b)]

- LQGs may not store waste for more than *90* days.
- LQGs may not store containers of hazardous waste within 50 feet of the facility property line.
- LQGs that store hazardous waste in tanks must comply with numerous additional requirements. These tanks must be designed in accordance with special design and installation requirements and must be tested for tightness prior to use. LQG tanks must also be provided with special secondary containment and leak detection systems, and spill prevention and overfill controls. LQGs are subject to special requirements in the event of a spill or leak, or if the tank becomes unfit for use. When LQGs permanently cease using a tank, they must perform special cleanup and decontamination activities, and, if the former tank storage area cannot be fully cleaned up, then the area must be closed in accordance with requirements for hazardous waste landfills. LQGs must have their tanks inspected by an independent, registered, professional engineer, and certified as to their integrity and compliance with the above requirements.
- LQGs must comply with special air emission standards for their tanks and containers (i.e., 40 CFR Subparts AA, BB, and CC).
- LQGs must comply with special air emission standards for their tanks and containers (i.e., 40 CFR Subparts AA, BB, and CC).
- LQGs must have a written contingency plan that includes emergency procedures in the event of a fire, explosion, spill, or other emergency. This plan must include the names, addresses, and telephone numbers of all persons qualified to act as emergency coordinator, a list of all emergency equipment at the facility (including the locations and brief descriptions of each item on the list), and a facility evacuation plan. The plan must also describe arrangements with local emergency authorities to coordinate emergency services.
- LQGs must have a formal personnel training program that provides both initial training and annual refresher training. The training program must include a written description of the training, a list of names, job titles, and descriptions for all personnel involved in hazardous waste management, and records documenting that all required training has been provided. These records must be retained
-

- until closure of the facility (or for at least three (3) years after an employee last worked at the facility).
- LQGs must submit biennial hazardous waste reports to CT DEEP and keep copies of these reports for at least three years.

Best Management Practice for LQGs:

- Look for ways to reduce or eliminate the generation of hazardous waste (see page 108 for "Hazardous Waste Minimization Tips"). As is clear from Table 1 and the above bullets, there are many advantages to reducing your generator status (e.g., longer storage times, fewer requirements to comply with, etc.).

HAZARDOUS WASTE MINIMIZATION TIPS

Waste minimization means finding ways to reduce or eliminate the generation of hazardous waste. Some general ways to do this include:

- *Eliminate activities that generate hazardous waste (e.g., by discontinuing certain services, or sub-contracting them out to off-site companies).*
- *Alter work practices and/or equipment so that you use less virgin material. Obviously, using less virgin material means generating less waste.*
- *Recycle or reuse materials on-site*
- *Switch from hazardous products to non-hazardous ones.*

Some specific waste minimization options for the marina industry include:

- ***Used Oil**: Keep hazardous waste and other contaminants out of your used oil so that it does not have to be handled as hazardous waste.*

- ***Waste Fuel (gasoline, diesel)**: Send the waste fuel that you generate for recycling (fuel blending) rather than for disposal or incineration. Waste fuels that are recycled in this way are exempt from regulation as hazardous waste.*

- ***Parts Washing**: Switch from a hazardous parts washing solvent (low-flash mineral spirits, chlorinated solvents) to a non-hazardous one (high-flash mineral spirits or water-based cleaners).*

- ***Paint Stripping**: Instead of sandblasting or using hazardous paint strippers (methylene chloride) to remove paint, use non-hazardous strippers or dustless sanders.*

- ***Paints/Solvents****: Investigate painting done by off-site contractors. If you must paint on-site, use as little paint and as little solvent as possible to get the job done. Look into non-hazardous solvents for cleaning up, etc. Reuse solvents by settling out the paint solids or recycle them in an on-site solvent recycling still.*

- ***Engine Coolant (Antifreeze)****: Reuse or recycle antifreeze on-site.*

- ***Rags/Wipers****: Use only non-hazardous cleaning agents/solvents for cleanup. Send your rags to an industrial laundry instead of disposing of them.*

- ***Batteries (Lead-Acid and Household Types)****: Send batteries for recycling rather than disposing of them. Manage batteries under reduced "Universal Waste Rule" requirements [40 CFR 273]. In CT, vehicle batteries are also managed through a deposit system CGS Sec22a-256h.*

- ***Old Virgin Products****: Marinas that stock products for their customers (e.g., paints, solvents, cleaners) often find that they must dispose of old or damaged products as hazardous wastes. To avoid this, try not to stock items which are hazardous. If this is not possible, see if the manufacturer will take the material back, or if there is someone else who can legitimately use the product.*

Hazardous Waste Management Documents Available from DEEP's Waste Engineering & Enforcement Division
Telephone number: 860-424-3023 (or toll-free at 1-888-424-4193).

TITLE	DATE	GENERAL TOPIC
Hazardous Waste Management Regulations Regulations	9/10/02	CT's hazardous waste rules, which incorporate the federal hazardous waste rules with certain additions and modifications.
Fact Sheet: "DEEP Issues New Hazardous Waste Regulations"	6/18/03	Summary of new provisions in DEEP hazardous waste regulations issued on 10/31/2001.
Fact Sheet: "DEEP Revises Hazardous Waste Regulations"	6/18/03	Summary of new provisions in DEEP hazardous waste regulations issued on 6/27/02 and 9/10/02.
Conditionally Exempt Small Quantity Generator Handbook	3/2009	Handbook that explains the requirements for Conditionally Exempt Small Quantity Generators of hazardous waste.
A Road Map to RCRA: Small Quantity Generator Requirements	2/2005	Handbook that explains the requirements for Small Quantity Generators of Hazardous Waste.
Determining Hazardous Waste Generator Category	2/20/13	Fact sheet that helps generators determine which set of hazardous waste requirements they must follow.
Hazardous Waste Generator Category Worksheet	7/28/09	A worksheet that helps generators of hazardous waste determine what category of generator that they are.

Hazardous Waste Determinations/ Knowledge of Process	1/31/13	Fact sheet that describes how to determine if a waste is hazardous.
Hazardous Waste Determinations Summary Sheet	7/28/09	A worksheet that generators of hazardous waste may use to organize and document hazardous waste determinations.
Hazardous Waste Container Management	1/31/13	Fact sheet that describes container management requirements for Large Quantity Generators of hazardous waste.
Hazardous Waste Personnel Training	2/1/13	Fact sheet that describes personnel training requirements for Large Quantity Generators of hazardous waste.
Hazardous Waste Inspections	2/20/13	Describes inspection requirements for Large Quantity Generators of hazardous waste.
Hazardous Waste Contingency Plan	1/31/13	Describes emergency planning and response for Large Quantity Generators of hazardous waste.
Draft RCRA Closure Guidance for Generators Who Store Less Than 90 Days, Container Storage Areas and tank Systems	2005	Fact sheet that provides guidance on the steps that Small and Large Quantity Generators must take when they discontinue using a hazardous waste container or tank storage area.
Guidance For Implementing and Documenting Closure (Waste Removal and Decontamination) For Indoor RCRA Hazardous Waste Storage Areas	5/1/13	Fact sheet that provides specific guidance for Small and Large Quantity Generators that are discontinuing the use of a well-managed, indoor hazardous waste storage area.
Permitted Waste Transporter's List	10/8/13	List of companies who are permitted to haul hazardous waste and Connecticut-Regulated waste in CT.
List of Commercial Hazardous Waste and Connecticut Regulated Waste Facilities in CT.	10/9/13	List of facilities in CT that are permitted to store, treat, or dispose of hazardous wastes or Connecticut-Regulated Wastes.
Non-RCRA Hazardous Wastes (Connecticut Regulated Wastes)	2/20/13	List of non-hazardous wastes which are subject to special requirements in CT.
Used Oil Fact Sheet #7: Used Oil Generated from Motor Vehicle Servicing Operations	8/17/09	Comprehensive fact sheet on the management of used oil for motor vehicle servicing, including crank case oil, transmission fluid, and oily wastewaters.
Used Oil Fact Sheet #10: Used Oil from Boats, Ships, and Other Watercraft	12/30/05	Brief, four-page fact sheet intended for marinas and individual boat owners that generate used oil.
Management of Aerosol Cans	2/8/11	Two-page fact sheet on the proper management and disposal of aerosol cans.
Universal Waste Rule	2/1/13	Fact sheet that describes special hazardous waste requirements for batteries, mercury thermostats and other mercury-containing equipment, recalled pesticides, fluorescent lamps, and used electronics.
Collection of Household Hazardous Waste and Conditionally Exempt Small Quantity Generator Hazardous Waste	2/6/13	Describes collection programs in Connecticut for household hazardous waste and waste generated by CESQGs.

Hazardous Waste Management Documents Available from DEEP's Pollution Prevention and Solid Waste Programs

Telephone numbers: (860) 424-3297 (Pollution Prevention*); (860) 424-3366 (Solid Waste**).

TITLE	DATE	GENERAL TOPIC
Water Based Paints — A Pollution Prevention Case Study*	12/8/06	Case study of an autobody shop that reduced air emissions and waste generation by switching to water-based paints.
New Parts Cleaning Systems Eliminate Hazardous Waste — A Pollution Prevention Case Study*	12/8/06	Case study of efforts by the USPS to reduce hazardous waste generation at its vehicle maintenance facilities.
Pit Stops Fact Sheets*	5/2012	A collection of fact sheets regarding various wastes generated from vehicle maintenance and painting operations.
Antifreeze*	8/2013	One-page fact sheet aimed at do-it-yourselfers.
Degreasers*	8/2013	One-page fact sheet aimed at do-it-yourselfers.
Managing Household Hazards: Managing Household Batteries*	5/1/13	Information on the proper disposal of a variety of small household batteries.
Recycling Rechargeable Batteries*	2/8/12	A fact sheet on the proper management of spent rechargeable batteries.
Recycling – It's the Law! **	9-11-13	Describes which items must be recycled in CT and how to properly recycle them.
Business Recycling Assistance**	3-12-14	Provides comprehensive guidance to help businesses comply with the law and save money by recycling.

NOTE: All the documents listed in the two tables above can be found on the Connecticut

DEEP website, www.ct.gov/DEEP. To find a particular document, enter the document title in the search box at the top of the page. Also, much more information is available on the following DEEP web pages:

www.ct.gov/deep/hazardouswaste (hazardous waste information)
www.ct.gov/deep/p2 (pollution prevention information)
www.ct.gov/deep/recycle (recycling information)

NOTE: The "Profile of the Shipbuilding and Repair Industry" can be found by searching the EPA website, www.epa.gov.

NOTE: The "Used Oil Regulations – A quick Guide for Auto Repair Shops" is available from the Northeast Waste Management Officials Association (NEWMOA); through their website www.newmoa.org and searching for Connecticut Used Oil Regulations – A quick Guide for Auto Repair Shops.

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APPENDIX C:
USED OIL MANAGEMENT

Chrisholm Marina, Chester

USED OIL MANAGEMENT IN CONNECTICUT

What is Used Oil?

Used oil includes used crankcase (engine) oil, used liquid and semi-solid gear, chain, and ball bearing lubricants, and used hydraulic fluid. Materials that contain or are contaminated with used oil can also fall under the definition of used oil, such as used oil filters, oily rags and wipers, used absorbents, and oily wastewater.

What State and Federal Requirements Apply?

Used oil is a regulated waste in Connecticut [RCSA §22a-449(c)-119 and 40 CFR 279] and must be recycled [RCSA §22a-241b-2(a)(1)(0)].

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Is it Hazardous?

Used oil is not considered hazardous waste unless it is mixed with a hazardous waste such as a chlorinated solvent. If used oil has been mixed with hazardous waste, see Appendix B for management requirements.

How Should a Marina Manage the Used Oil it Generates?

Note that used crankcase oil, automatic transmission fluid, power steering fluid, and hydraulic fluid are all considered used oil and can be mixed and managed together.

There are a few options for managing used oil. Two of the most common are collecting it, testing it and having it hauled away for recycling, or collecting it, testing it and burning it in on-site space heaters. If the used oil tests positive for hazardous constituents, it must be treated as hazardous waste (see Appendix B). If the used oil does not test positive for hazardous waste, the options for management are:

COLLECT, TEST, HAUL

1. Collect and store used oil in a secure collection tank or drum, separate from other wastes (proper storage described on page 112).
2. Test the used oil for total halogen content (see sidebar on next page). Maintain records on site.
3. Contract with a permitted waste oil transporter to haul your used oil to a permitted recycling facility. Commercial haulers of such used oil must be permitted to transport used oil in Connecticut. Contact CT-DEEP's Waste Bureau at 860-424-4193 for a list of permitted commercial transporters.

OR. COLLECT, TEST BURN

1. Collect and store used oil in a secure collection tank or drum, separate from other wastes (proper storage described on page 112).
2. Test the used oil for total halogen content (see sidebar on next page). Maintain records on site.
3. Burn the used oil in space heaters for energy recovery, i.e., to heat your shop, providing the heater burns only used oil generated on-site or received from "do-it-yourself" oil changers.

When testing used oil for hazardous constituents, four steps must be taken in this order: 1) determine if it is mixed with any listed hazardous waste.

2) determine if it has been mixed with any characteristic hazardous waste; 3) test for total halogens (if the oil contains total halogens of greater than 1,000 parts per million (ppm), it must be managed as hazardous waste); 4) if the oil tested at over 1,000 ppm, you could rebut the presumption of mixing by having the oil tested for the presence of chlorinated solvents. If no listed hazardous waste solvent is present over 100 ppm, the oil does not have to be managed as hazardous waste.

NOTE: Used oil heaters must:

a. have a maximum design capacity of not more than 0.5 million BTUs per hour; and
b. vent combustion gases outside the building; and
c. burn only used oil that you generate or that you have collected from your do-it-yourselfer customers.

For more information on burning used oil at your marina, contact the CT DEEP Waste Engineering & Enforcement Division at 860-424-4193 and Air Bureau at 860-424-4152.

What are the Requirements for Used Oil Storage in Tanks or Containers?

- Place the tank or container on an impervious base. If the tank or container is outdoors, you must provide secondary containment equal in volume to the capacity of the storage tank. If the tank or container is indoors, no secondary containment, device or structure is required [RCSA§22a-449(c)-119(b)(2)].
- Label the tank or container "Used Oil" [40 CFR 279.22(c)].
- Keep results of used oil testing [RCSA §22a-449(c)-119(b)(1)(C)].
- Prepare a Spill Prevention, Control, and Countermeasures (SPCC) Plan if you store more than 1,320 gallons of used (or new) oil aboveground (containers of less than 55 gallons are exempt from the total) [40 CFR 112.1]. See Appendix E for more information.

What are Recommended Practices for Used Oil Storage in Tanks or Containers?

- Locate the tank or container in an aboveground area, preferably roofed, that will prevent unauthorized access or vandalism, minimize possibility of fire or explosion and accidental release of oil to the environment.
- Lock the tank or container's fill spout when not in use.
- Visually inspect the tank or container on a regular basis for leaks or malfunctions. Maintain written inspection records.
- Instruct all employees who handle used oil on the proper operation and management of the oil storage area. Assign one person the responsibility for monitoring oil storage.

- Use kitty litter, saw dust, or a commercially available product to absorb oil from minor spills.
- If providing a collection tank or container for used oil from your customers who do their own engine maintenance, clearly label the tanks or containers to indicate the importance that ONLY used oil be placed in the tank. Remember that you'll be responsible for paying for the disposal of used oil that is contaminated with hazardous waste.
- Keep records of used oil collection.

If only used oil generated on-site is stored in the tank or container, no state permits are needed to install an above ground collection tank but check with your municipality because local permits might be needed.

CT-DEEP discourages installation of new underground storage tanks (UST). Since November 1985, it has been illegal to install any nonresidential UST component which is neither fiberglass-reinforced plastic (i.e., noncorrosive) nor which has a manufacturer-applied anti-corrosive coating and cathodic protection. Registration with CT-DEEP is required. Contact CT-DEEP's UST Program at 860-424-3374 for more information.

If a Marina Accepts Used Oil That Boaters Generate, How Should it be Managed?

Many marinas collect used oil from customers as a client service. Manage this oil in the same way as oil generated by the marina itself.

It may make sense to separate the waste area where you are collecting waste from boaters from those generated by the marina, since you have more control over the waste generated by your staff than by your clients. Used oil contaminated with a hazardous substance is much more costly to dispose of than unadulterated used oil. Educate your staff about the importance of keeping used oil from being contaminated with hazardous substances.

If you collect customers' oil, remind boaters not to:

- mix used oil with antifreeze or hazardous waste, i.e., waste gasoline.
- burn used oil in residential boilers or space heaters.
- dump used oil overboard.
- pour used oil into sewers or storm drains.
- dump used oil on the ground, use it for weed control, or to keep dust down.

Used oil testing Can be conducted in a laboratory, or marina personnel can test for total halogens using inexpensive, EPA-approved total halogen field testing kits. These total halogen test kits are available from numerous sources, including industrial supply or health and safety supply companies. The following product is offered for your information, and is not an endorsement of the company or their product; CHLOR-D-TECT 1000 or CHLOR-D-TECT Q4000 (available from Dexsil Corp, Hamden, CT, www.dexsil.com).

How Do Used Oil Rules Apply When a Vessel is at the Dock?

Used oils which are generated on board boats and personal watercraft become subject to CT-DEEP's used oil regulations at the time that the used oil is transferred ashore. Depending on the relationship between the owner/operator of the vessel and the dock at which used oil is being off-loaded, the used oil regulations may apply differently, as outlined in the following three examples:

(1) *The owner/operator of the vessel is the same as the owner/operator of the facility receiving and storing the used oil.* In this case, the marina is simply acting as a generator of used oil and is not required to have a permit to transfer this used oil ashore or store it prior to shipping it off- site for proper disposal.

(2) *The owner/operator of the vessel is different from the owner/operator of the facility, but the used oil is generated as the result of maintenance performed by the facility.* In this case, the used oil is generated as part of maintenance activities performed by the port or dock facility. Therefore, the owner/operator of the vessel and marina are considered "co- generators" of the used oil. Although the marina usually assumes this responsibility for compliance with the generator requirements for this used oil, both are considered equally responsible for ensuring that the used oil is properly managed.

(3) *The marina collects used oil from do-it-yourselfers*. In this case, the dock facility is acting as a "do-it-yourselfer used oil collection center" which is subject to the same rules as used oil generators. No permit is required for this activity if all used oil that is collected was generated on-site.

Can Used Oil Be Mixed with Diesel Fuel, as Recommended by the Manufacturers of Some Diesel Engines?

The manufacturers of certain diesel engines recommend that you add used oil to your diesel fuel. If you have a diesel engine of this type, you may mix your used oil with virgin diesel fuel according to the manufacturer's instructions. However, up until the point that the used oil is mixed with the diesel fuel, it must be handled the same as any other used oil.

Please note that this exemption applies only to your used oil and only if it is used in your own diesel engines. You may not add your used oil to diesel fuel that will be used in someone else's diesel engines. You may also not accept used oil from someone else to put into your diesel fuel.

How Should Used Oil Absorbent Material Be Disposed of?

Materials that *contain* or are *contaminated with* used oil can also fall under the definition of used oil. The most common of these materials are used oil *absorbent pads*, *rags and wipers*, and *absorbents* (such as kitty litter, speedi-dri, and absorbent pigs). Boaters or marina staff doing work on customers' boats dockside can dispose of oil absorbent materials generated while conducting

maintenance by double- bagging the absorbent material and disposing in the regular trash. Boaters can also take their waste oil absorbents to a household hazardous waste collection facility for disposal or to a collection area provided by the marina.

Marina staff that produce waste oil absorbent material as a result of maintenance of marina-owned or customer's vessels in the marina's maintenance shop, must collect all used oil absorbent material, test for hazardous constituents, and transport either as hazardous waste or used oil, depending on the test results. However, if the absorbents do not have free-draining oil and are not going to be burned for energy recovery, they are no longer subject to regulation as used oil. In this case, these soaked absorbents must have a hazardous waste determination and be disposed of as hazardous or CT-Regulated waste. See Appendix B for more information.

Are There Any Other Requirements?

On-board air conditioning systems may also generate used oils which are contaminated with refrigerants (such as freon). This type of used oil must be recycled for its freon content. See fact sheet on "Refrigerants" for more information.

Spills of used oil (or any other petroleum liquids, chemicals, or hazardous waste) must immediately be reported via CT-DEEP's Emergency Response and Spill Prevention 24-hour spill reporting number: 860-424-3338 or toll free866-DEP-SPIL (866-337-7745).

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APPENDIX D: SOLID WASTE MANAGEMENT

Chrisholm Marina, Chester

SOLID WASTE MANAGEMENT IN CONNECTICUT

Marina operators must make provisions for the proper disposal of solid waste on their site [33 USC 1905(a)(2)]. In addition, marina facilities are also required to make provisions for separating designated (i.e., mandatory) recyclables from other solid waste using one or more collection containers for designated recyclable items that are separate from the collection containers for other solid waste. [CGS Section 22a-241(b)(d)].

What is Solid Waste?

Solid waste means unwanted or discarded solid, liquid, semisolid or contained gaseous material, including, but not limited to, demolition debris, material burned or otherwise processed at a

resource's recovery facility or incinerator, material processed at a recycling facility and sludges or other residue from a water pollution abatement facility, water supply treatment plant or air pollution control facility [CGS §22a-207(3)].

Municipal solid waste (MSW) means solid waste from residential, commercial, and industrial sources, excluding solid waste consisting of significant quantities of hazardous waste, land-clearing debris, demolition debris, biomedical waste, sewage sludge, and scrap metal [CGS §22a-207(23)]. The solid waste in your dumpster is considered MSW.

How Must a Marina Manage its Solid Waste and the Waste of Customers?

Under federal law, marinas are required to provide adequate collection for garbage from customers and transients [33 USC 1905(a)(2)]. For stormwater management purposes, the dumpster should be covered with intact drain plugs or be positioned in a roofed area which does not allow dumpster leakage to enter any stormwater drainage system.

Marinas must recycle certain waste. State law requires that every resident living in a single or multifamily house or building, every business including non- profits, and all public and private agencies and institutions such as colleges, hospitals, local and state government agencies to recycle [CGS §22a-241b(b)-(d)].

Items that must be recycled are:

- **Glass and Metal Food/Beverage Containers**. The small number of containers generated by the employees who work at your facility can be taken home for recycling, to a grocery store to reclaim the deposit or taken to your town's recycling drop-off center or transfer station. Remember that boaters tend to generate a lot of these recyclables.
- **HDPE and PET(PETE) Plastic Containers**. These are containers that are marked with the number "1" or "2". If the number of these containers is small, these containers can be taken home for recycling. Alternatively, they can be taken to your town's recycling drop-off center or transfer station.
- **Corrugated Cardboard and Boxboard**. Corrugated cardboard has three (3) layers with a wavy layer between two (2) flat paper layers. Keep the corrugated cardboard separate from your other waste. Remove any contaminants from corrugated boxes (e.g., plastic, foam, wood), open and flatten the boxes and place them in a dumpster or compactor used only for corrugated cardboard. Boxboard is flat (non-corrugated), brown cardboard is used in packaging such as cereal and pasta boxes. Check with your solid waste hauler or local transfer station to find out if you can place boxboard corrugated, or if it should be stored separately.
- **White and Colored Office Paper, Newspapers and Magazines**. The simplest way to recycle office paper is by taking it to your municipal recycling center/transfer station or by joining with other small businesses to develop a cooperative office paper collection program (some

businesses share a dumpster and hauling arrangements). Because most small businesses generate very few newspapers or magazines, one easy way to recycle them is to have employees take them home for collection with their residential program.

- **Leaves and Grass Clippings**. Small businesses can rake leaves into a wooded area on their site, or compost leaves on site in a small, contained pile (provide water and turn periodically to provide oxygen for the microorganisms). In some towns you may be able to place leaves at the curb for municipal collection or take them to a municipal leaf composting pile. It is recommended that grass clippings be left on the lawn areas since they act as a natural organic fertilizer.
- **Scrap Metal**. Items consisting predominantly of ferrous metals (steels), aluminum, brass, copper, lead, chromium, tin, nickel or alloys must be recycled. You can store metal separate from other waste or share storage containers with other small businesses in your area.
- **Used Oil.** See fact sheet on "Used Oil" for more information.
- **Lead Acid Batteries.** See fact sheet on "Battery Replacement" for more information.
- **Nickel-cadmium Batteries and other Rechargeable Batteries.** Call (800-8BATTERY to find the nearest participating retail outlet that collects these batteries for recycling.

Specific questions about recycling options can be answered by your municipality, or call the CT DEEP Recycling Program at 860-424-3366 for more information.

In addition to the items listed above, many municipalities have ordinances which require additional items to be recycled, such as drink boxes, and mini-juice cartons, and discarded mail. To find out about those additional items, contact your municipal recycling contact or refer to your local solid waste and recycling ordinance.

Bottles, cans and plastics and paper can be collected, but try to keep bottles and cans empty so that they do not contaminate paper and cardboard. If you generate larger quantities of specific recyclables such as cardboard, it might be better to collect that item separately.

Management of hazardous waste is described in Appendix B.

What Should and Should Not be Placed in a Dumpster?

Any waste that must be recycled (see above) or is a hazardous waste should not be placed in a dumpster. Waste like used oil, antifreeze, liquid paints or varnishes, pesticides, or lead acid batteries should not be placed in a dumpster. Check with your solid waste hauler for more specific requirements.

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What Are Some of the State Requirements for Solid Waste Haulers?

In Connecticut, solid waste haulers:

- **Are required** provide a warning notice to customers suspected of violating separation requirements [CGS §22a-220c].
- **Are required** assist the municipality in identifying persons responsible for creating solid waste loads containing significant amounts of recyclables detected by the receiving resource recovery or solid waste facility [CGS §22a-220c].
- May not knowingly mix other solid waste with items designated for recycling pursuant to 22a-241b, or pursuant to municipal ordinance (CGS Sec 22a-220a(f)
- Must assure that each contract between them (the hauler) and a business for the collection of solid waste makes provision for collection of designated recyclable items – either by the same collector (i.e., hauler) or by a different collector (i.e., hauler) as identified by the customer. CGS 2a-241/ *(*b)
- Are required to provide customers with clear instructions on how to separate designated recyclable items (CGS 2a-241/ *(*b)

Be advised that designated recyclables must be kept separate from trash at your marina. Marinas which collect designated recyclables in the same containers or dumpsters as trash are in violation of state and local recycling requirements.

What Are the Laws about Littering?

According to CGS §22a-250(a), no person shall throw, scatter, spill or place or cause to be blown, scattered, spilled, thrown or placed, or otherwise dispose of any litter up on any public property in the state or upon private property in the state not owned by him or in the waters of this state.

State statute defines "litter" as "any discarded used or unconsumed substance or waste material whether made of aluminum, glass, plastic, rubber, paper, or other natural or synthetic material or any combination thereof, including, but not limited to, any bottle, jar or can, or any top, cap or detachable tab of any bottle, jar or can, any unlighted cigarette, cigar match or any flaming or glowing material or any garbage, trash, refuse, debris, rubbish, grass clippings or other lawn or garden waste, newspaper, magazines, glass, metal, plastic or paper containers or other packaging or construction material which has not been deposited in a litter receptacle" [CGS§22a-248(4)].

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What Are the Laws about Disposal of Solid Waste from Boats?

The Marine Plastic Pollution Research and Control Act of 1987 [33 USC 1901-1909, 33 CFR 151](MPPRCA) implements the International Convention for the Prevention of Pollution of Ships (MARPOL). The MPPRCA makes it illegal for any vessel to dump plastic trash anywhere in the ocean or navigable waters of the state, and makes the following restrictions on disposal of non-plastic trash:

- Within U.S. lakes, rivers, bays, sounds and within 3 nautical miles from shore, it is illegal to dump plastic, paper, rags, glass, food, garbage, metal, crockery, or dunnage (lining and packing material that float).

- Between 3 and 12 nautical miles from shore, it is illegal to dump plastic and dunnage, paper, rags, glass, crockery, metal, or food (unless ground to less than one inch in size).
- Between 3 and 12 nautical miles from shore, it is illegal to dump plastic and dunnage, paper, rags, glass, crockery, metal, or food (unless ground to less than one inch in size).
- Between 12 and 25 nautical miles from shore, it is illegal to dump plastic and dunnage.
- Outside 25 nautical miles from shore, it is illegal to dump plastic.

***NOTE: MPPRCA does not apply to fish waste [33 CFR 151.05].**

APPENDIX E: SPILLS

Yacht Yard at Mystic

Spill, Prevention, Control, and Countermeasure Plans

The federal Clean Water Act requires facilities that store any kind of oil in certain volumes to prepare and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans to prevent the discharge of oil from a facility into navigable waters or adjoining shorelines. SPCC Plans require that your facility have adequate containment, such as berms and dikes around oil tanks to protect the soil and water in the event of a spill [40 CFR 112.1].

A SPCC Plan is a federal requirement, administered by the EPA.

Does Your Marina Require an SPCC Plan?

Your facility needs to develop a SPCC plan if it does any of the following:

- Stores oil above ground in any size tank(s) with a total aggregate volume over 1,320 gallons (containers of less than 55 gallons and/or permanently closed storage tanks are exempt from the total); **or**
- Stores oil below ground in any size tank(s) with a total aggregate volume of 42,000 gallons (except for tanks that are compliant with the state requirement for USTs, see page 51)

AND

- Could reasonably be expected to discharge oil to a "navigable water of the United States" or "adjoining shorelines" considering a possible worst-case scenario. (This criterion applies to just about every marina in the state, since a facility cannot take into consideration any man- made impediments to the flow of oil.)

NOTE: "Oil" is defined in Section 311(a)(1) of the Clean Water Act as "oil of any kind or in any form including, but not limited to, petroleum, fuel oil, sludge, oil refuse, and oil mixed with wastes other than dredged spoil." EPA interprets this definition to include crude oil, petroleum and petroleum- refined products, as well as non-petroleum oils such as vegetable and animal oils.

NOTE: "Navigable waters" are broadly defined under the Clean Water Act and the Oil Pollution Act to include all waters that are used in interstate or foreign commerce, all interstate waters including wetlands, and all intrastate waters including wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds. Essentially, the term navigable waters refer to any natural surface water in the United States.

What is an SPCC Plan?

An SPCC Plan outlines a facility's oil containment systems and procedures to prevent an oil spill. It also outlines oil spill response and clean up protocols. Each SPCC Plan is site specific, but must address the following:

- Operating procedures that prevent oil spills.
- Control measures installed to prevent a spill from reaching the environment; and
- Countermeasures to contain, clean up, and mitigate the effects of an oil spill that reaches the environment.

Who Writes an SPCC Plan?

The facility can prepare the plan, but the plan must be certified by a Registered Professional Engineer.

Is There a Particular Form or Format for the SPCC Plan?

EPA does not expect any two plans to look alike. However, at a minimum, all plans must include:

- Facility layout and drainage patterns
- List of all oil storage tanks and areas
- Quantities of oil that could be released, with predicted path of flow, and flow rate.
- Procedures for receiving oil from supplier, transfer of oil within the facility, end point uses of the oil, and waste oil disposal.
- Effects of a spill at the facility, fire hazards, employee evacuation, customer/neighbor considerations, and press relations
- Capacity of required secondary containment devices. If it is not practicable to install secondary containment (i.e., a fuel dock), the owner/operator must explain why and provide a strong spill contingency plan, describing commitment to manpower, equipment, and materials to control and remove any harmful quantity of oil discharged.
- Clean-up procedures, use of in-house staff versus contractors
- Notification list. Name(s) and phone numbers of in-house management, remote management, fire and police, municipal, state, and federal agencies requiring notification.
- Facility security for prevention of internal sabotage, external vandalism
- Employee training for spill prevention, oil handling, and spill clean-up.
- Only oil handling personnel must be trained in operation and maintenance of equipment to prevent oil discharge. Discharge prevention briefings for oil handling personnel must occur at least once a year.
- OSHA considerations

Where Should the SPCC Plan Be Located?

REQUIRED: A copy of the SPCC plan must be maintained at any facility manned at least 4 hours per day. For remote locations, the SPCC plan should be filed at the nearest field office. A copy does not have to be filed with EPA or any other agency, unless it is a condition of a permit or license held by the facility. However, the SPCC plan must be available during normal business hours for review by an EPA inspector. EPA requires that facilities submit a copy of the SPCC plan to EPA Region 1 if a single spill of greater than 1,000 gallons occurs, OR if two discharges of 42 gallons or more occur within one year. All employees must be made aware of the SPCC plan.

HIGHLY RECOMMENDED: Copies should be made for posting in plain view at oil storage locations.

Does an SPCC Plan Need to be Reviewed and/or Updated?

- The plan must be reviewed at least once every five (5) years. You must keep records of these reviews. An example of such documentation is "I have completed review and evaluation of the SPCC plan for (name of facility) on (date) and will/will not amend the plan as a result (signature)."
- The plan must be amended when there are changes in facility design, construction, operation, or maintenance which materially affect the facility's potential for the discharge of oil; or there are two or more spills in 12 months, or one spill of 1,000 gallons.
- Only technical changes to the SPCC plan must be certified by a Registered Professional Engineer. Non-technical amendments include personnel or contact information changes.

Who Cares if My Facility Does Not Have a Plan?

- Company management. Having measures in place to prevent spills is cost effective, since spill cleanup can be costly. However, when a plan is in place, spill cleanup can be more efficient, more effective and less costly than if there is no course of action.
- The U.S. EPA. The penalty of failure to have a SPCC Plan can be up to $27,500 per day of violation, up to a maximum of $137,500, if an administrative action is filed. The EPA performs random, unannounced inspections of facilities suspected of needing a SPCC Plan.

If There is a Spill, What Could You Be Held Responsible for?

- Removing the material from public property. Cleaning of highways, waterways, storm drains, bridge abutments, etc.
- Removing material from private property, such as boat hulls and parking lots.
- Paying for natural resources damages (lost parking receipts at public beaches; lost revenues from fishing licenses; replacing killed fish, shellfish, and waterfowl).
- Paying for lost livelihood wages of fisherman and shell fisherman, devaluation of property for sale.
- Private lawsuits.
- Civil penalty for spilling into a water of the U.S.
- Criminal penalty if you fail to notify the federal authorities. State agencies and contractors have no responsibility to notify you.

For questions or information about the federal SPCC program, call Joe Canzano, Oil Spill-SPCC Enforcement Coordinator for EPA-Region One at 617-918-1763 or view the EPA's "A Facility Owner/Operator's Guide to Oil Pollution Prevention" at http://www.epa.gov/oilspill/pdfs/spccbluebroch2002.pdf .

State and Federal Reporting Requirements: Oil, Gas and Chemical Spills

What Constitutes a Spill?

In Connecticut, any oil or petroleum product, chemical or waste that is released in any manner constitutes a spill [CGS §22a-452c]. Spills also include leaks from underground and above ground tanks. Any size spill must be reported to the CT-DEEP Emergency Response and Spill Prevention Division.

What Immediate Actions Should Be Taken?

In case of a spill, stop the flow, contain the spill, call 911 or the local emergency response, report the spill to CT DEEP (see below), then report to the National Response Center if necessary (see below).

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When Should a Spill Be Reported to the Connecticut Department Of Environmental Protection?

In Connecticut, any size spill of oil or petroleum product, any chemical, or waste, must be reported to the CT DEEP. The party causing the spill or pollution and the property owner are responsible for immediately reporting the spill to the CTDEEP Emergency Response and Spill Prevention at 860-424-3338 or toll free 866-337-DEP-SPIL (866-337-7745), and beginning the appropriate containment and cleanup efforts, which must be performed by a licensed contractor [CGS §22a-454]. The telephone number is staffed 24-hours/seven days a week.

Connecticut law establishes what is called "strict liability" for spills of most pollutants into the environment. This means that the person or business causing the spill and the owner of the property where the pollution occurred are financially responsible for cleanup, regardless of fault. All spills must be reported and dealt with quickly.

When Should an* Oil Spill B*e Reported to the Federal Government? Section 311 of the Clean Water Act disallows the discharge of oil into or upon the navigable waters of the United States, their adjoining shorelines, or where natural resources may be affected [33 USC 1321, 40 CFR 110].

- You must report an *oil spill* to the National Response Center at 800-424-8802 if:
- the spill is to navigable waters or the adjoining shoreline, or
- water quality standards could be violated, or
- the spill is to navigable waters or the adjoining shoreline, or
- the spill causes a sheen or discoloration, or
- the spill causes sludge or emulsion.

Note that if you do not have a CT DEEP approved spill contractor spill contractor on retainer, the CT DEEP will assess a surcharge and hire one for you in the event of a spill. See the "Emergency Planning" fact sheet for more information.

When you call the National Response Center to report an oil spill or release, the staff person will ask you the following questions:

- Name, location, and telephone number
- Name and address of the party responsible for the incident
- Date and time of the incident
- Location of the incident
- Source and cause of the release or spill
- Types of materials released or spilled.
- Quantity of material released or spilled.
- Danger or threat posed by the release or spill.
- Number and type of injuries (if any)
- Weather conditions at the incident location
- Any other information that may help emergency personnel to respond to the incident.

When Should a Hazardous Chemical Spill Be Reported to the Federal Government?

You must report a *hazardous chemical spill* to the National Response Center at 800-424-8802 if:

- The release could threaten human health off the property.

When you call the National Response Center to report a hazardous chemical spill, the staff person will ask you the following questions:

- The chemical name
- An indication of whether the substance is extremely hazardous.
- An estimate of the quantity released into the environment.
- The time and duration of the release
- Whether the release occurred into air, water, and/or land.
- Any known or anticipated acute or chronic health risks associated with the emergency, and

where necessary, advice regarding medical attention for exposed individuals.

- Proper precautions, such as evacuation or sheltering in place.
- Name and telephone number of contact person

The facility owner or operator is also required to provide a written follow-up emergency notice as soon as practicable after the release. The follow-up notice or notices must:

- update information includes in the initial notice, and
- provide information on actual response actions taken and advice regarding medical attention necessary for exposed individuals.

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APPENDIX F: STORMWATER GENERAL PERMIT

Port Niantic Marina, Niantic

Stormwater General Permit

Pollutants carried in stormwater drainage systems make up between 50% and 90% of all pollutants reach Connecticut's surface waters. Some examples of potential sources of stormwater runoff pollution from industrial activities include:

- Outdoor boat maintenance,
- Dumpster leakage,
- Open topped dumpsters,
- Dumping of materials into storm drains,
- Internal floor drains or trenches connected to storm drains, and
- Outdoor storage including drums or other containers.

The 1987 amendments to the Federal Water Pollution Control Act, commonly known as the Clean Water Act, provide the authority for the National Pollutant Discharge Elimination System (NPDES) permit program to control pollutant discharges to the nation's waters, including those from stormwater runoff.

Section 22a-430 of the Connecticut General Statutes (CGS) requires ***all*** discharges, including stormwater runoff, to Connecticut's surface waters be permitted.

The CT DEEP developed the General Permit for the Discharge of Stormwater Associated with Industrial Activity ("Stormwater General Permit") to make compliance with this requirement easier and less expensive for facilities.

Who Must Register for the Stormwater General Permit?

- A permit is required for stormwater discharges from eleven categories of industrial activity defined at 40 CFR 122.26(b)(14) which includes Standard Industrial Classification (SIC) codes 4493 (marinas), yacht clubs (within SIC 7997) or boat dealers (SIC 5551) that have onsite engine service or repair, vehicle or equipment cleaning, painting operations, hull maintenance and repair (including, but not limited to, sanding, chemical stripping and painting) or fueling operations.

What Is a Stormwater Discharge Associated with Industrial Activity?

The discharge of stormwater runoff from any conveyance, such as a pipe, ditch, channel, swale, or other discrete discharge (including boat launch ramps and marine railways) used for collecting and conveying stormwater from manufacturing, processing, maintenance, waste disposal or material storage areas at an industrial facility. "Industrial activities" typically performed at marinas include boat bottom pressure washing and sanding, painting, engine maintenance and disposal of paints, solvents, engine fluids and other waste materials.

What is Required for Industrial Sites?

1. Registration of the facility includes submission of a fully completed Registration Form with a registration fee and all necessary supporting documents.
2. Develop and maintain compliance with your site-specific/sector specific Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be completed and certified at the time of registration.
3. Conduct stormwater monitoring (see details below).
4. Conduct semi-annual Comprehensive Site Compliance Evaluations, monthly routine inspections and quarterly sector-specific inspections.
5. Train staff annually on the contents of the SWPPP.

What is SWPPP?

A Stormwater Pollution Prevention Plan (SWPPP) is a document outlining the facility's potential pollutant sources, training, good housekeeping and other best management practices to prevent pollutants from getting into stormwater runoff and as further described in Section 5(c) of the Stormwater General Permit.

A SWPPP must:

- identify the individual(s) designated as the Stormwater Pollution Prevention Team to develop and implement the plan.

1. SITE MAP
2. NARRATIVE SITE DESCRIPTION
3. MEASURES AND CONTROLS including sector specific.
4. Preventive maintenance.
5. Spill prevention and response procedures.
6. Non-stormwater discharges.
7. Management of runoff

- describe all potential sources of pollution which may reasonably be expected to affect stormwater quality at the site or that may result in the discharge of pollutants to surface waters, or a storm drain during dry weather.
- include an inventory of exposed materials.
- include a discussion of the need for stormwater management or treatment practices and provide consideration of a variety of measures to minimize pollution.
- provide a schedule for monitoring, inspections and training; include copies of records.
- be maintained onsite; and
- be certified by a Professional Engineer licensed to practice in Connecticut or a certified Hazardous Materials Manager

What are the Stormwater Monitoring Requirements?

All facilities must conduct quarterly visual monitoring. Facilities must also conduct semi-annual stormwater monitoring once between October 1 and March 31 and once between April 1 and September 30 of each year for the parameters specified in the Stormwater General Permit. Sampling must be conducted on time and at least 30 days apart to be considered for an exemption. Sampling may be waived for each parameter if the average of 4 sets of results (except copper which must be done on a semiannual basis for the term of the permit) does not exceed the benchmark value for that parameter. Facilities must also collect one sample per year for the first two years of the permit for laboratory

analysis of aquatic toxicity. Facilities must also conduct additional site-specific and sector-specific monitoring as outlined in the Stormwater General Permit. Results must be submitted within 90 days of sampling to the DEEP on a Stormwater Monitoring Report Form. Records and information from monitoring activities must be retained for a minimum of five (5) years beyond expiration of the permit.

For more information:

A copy of the Stormwater General Permit can be obtained from the Department or the CT DEEP website. For specific questions regarding the requirements of the Stormwater General Permit, contact the CTDEEP's Bureau of Materials Management and Compliance Assurance at 860-424-3018. The General Permit for the Discharge of Stormwater Associated with Industrial Activity expires on September 30, 2024. Changes or modifications to the requirements of the Stormwater General Permit may occur.

CONNECTICUT
MARINE TRADES ASSOCIATION
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APPENDIX G: MISCELLANEOUS

Mystic Shipyard

General Permit for Discharges from Miscellaneous Industrial Users (MIU General Permit)

- The discharge of wastewater to a storm sewer, sanitary sewer, surface waters, or the ground is a regulated activity requiring a permit from the Department of Energy & Environmental Protection.
- Marine facilities in Connecticut must manage the process of wastewaters associated with pressure washing, outboard service tanks, and other activities to prevent the wastewater from contaminating soils, groundwater, and the surface waters of Connecticut. One option for dealing with these process wastewaters is to collect, treat and discharge to sanitary sewer, or haul the wastewater to a Publicly Owned Treatment Works (POTW). MIU

Who must register under the General Permit for Discharges from Miscellaneous Industrial Users?

Any person or municipality who currently has or wishes to initiate, create, or maintain a discharge of MIU wastewater to sanitary sewer of 1,000 gallons or more a day or hauls any quantity of wastewater to POTW.

When is a facility not required to register under General Permit for Discharges from Miscellaneous Industrial Users?

A facility does not have to register for this General Permit if it discharges less than 1,000 gallons a day of MIU GP-covered process wastewater to a POTW by means of a municipal sanitary sewerage system. A discharge is authorized under this general permit without the filing of a registration, provided such discharge is consistent with the provisions of Sections (3), (5), and (6) of this general permit. The discharge must meet all effluent limitations established in the general permit and comply with all conditions of the permit.

What is required for Registration?

A *MIU Discharge Notification Form to POTW Authority and* all supporting documents (refer to section 4 of the MIU General Permit) must be submitted to the POTW. *CT DEEP does not get notified.*

For more information:

Visit the CT DEEP website to view and download the MIU GP and registration forms at https://portal.ct.gov/DEEP/Permits-and-Licenses/Water-Discharge-Permits-and-General-Permits.

Select References

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United States Environmental Protection Agency. 2001. *National Management Measures Guidance to Control Nonpoint Source Pollution from Marinas and Recreational Boating.* Washington, DC: PA-841-B-01-005.

CONTACT INFORMATION – CONNECTICUT DEPARTMENT OF ENERGY & ENVIRONMENTAL PROTECTION

General Number	(860) 424-3000
Boating Division (Clean Boater Program)	(860) 434-8638
Clean Marina Program	(860) 424-3034
Bureau of Air Management, Planning & Standards	(860) 424-4152
Bureau of Material Managements and Compliance Assurance Waste Engineering and Enforcement Division	(860) 424-3023
Inland Fisheries	(860) 424-3474
Hazardous Waste Compliance Assistance	(888) 424-4193
Long Island Sound and Nonpoint Source Program	(860) 424-3020
Marine Fisheries	(860) 434-6043
Office of Long Island Sound Programs	(860) 424-3034
Office of Pollution Prevention	(860) 424-3297
State Emergency Response Commission	(860) 424-3373
Stormwater Permitting	(860) 424-3025
Source Reduction and Recycling	(860) 424-3366
Underground Storage Tank Enforcement Program	(860) 424-3374

OTHER NUMBERS

Connecticut Marine Trades Association	(860) 767-2645
National Response Center	(800) 424-8802
Superfund, TRI, EPCRA, RMP & Oil Information Ctr	(800) 424-9346, or TDD (800) 535-7672
State Fire Marshall's Office	(860) 685-8380
US Army Corps of Engineers Regulatory Branch	(800) 343-4789
US Environmental Protection Agency, New England Region (Toll Free)	(617) 918-1111 888-372-7341