Fueling dock at Hewitt's Cove Marina.

4.5 Fueling

For many marinas, fueling boats is an essential service to boaters and an important revenue generator. Marinas with fueling services must evaluate all aspects of their operation, including fuel station design, delivery, and dispensation, to ensure that their facility complies with safety, fire, and environmental laws. This section provides you and your customers with information about how to minimize impacts to coastal waters from fueling activities.

LEGAL REQUIREMENTS

The following laws apply to fueling activities. If your marina has a fuel pump, please read the summary of these regulatory programs in Chapter 6.

- Clean Water Act - Discharge of Oil
- National Pollutant Discharge Elimination System (NPDES) Multi-Sector General Permit for Industrial Activities, Spill Prevention Control and Countermeasures (SPCC) Plan
- Massachusetts Clean Waters Act
- Massachusetts Waterways Regulations
- Massachusetts State Fire Code

Safe Practice

A Spill Prevention Control and Countermeasures (SPCC) Plan is required as part of a Stormwater Pollution Prevention Plan under the federal NPDES Program. A SPCC Plan must be developed for any facility with above ground oil storage capacity in excess of 1,320 gallons or one above ground container of oil with a capacity of more than 660 gallons or underground storage capacity in excess of 42,000 gallons prepare an SPCC Plan. Oil means oil of any kind including petroleum, fuel oil, oil sludge, sulfonated fish oil, etc. Call the U.S. EPA NPDES Program at (617) 918-1615 for more information.

Best Management Practices

Planning and Training

▶ **Develop a Spill Prevention Control and Countermeasures Plan:** A Spill Prevention Control and Countermeasures Plan (SPCC) is required for all facilities that provide above ground oil/fuel storage capacity in excess of 1,320 gallons or one above ground container of oil with a capacity of more than 660 gallons or underground storage capacity in excess of 42,000 gallons.

▷ **Document All Formal Training Sessions:** Keep records of all training sessions for spill response, pumpout use, and other marina pollution prevention procedures. This information will be useful to show the good work your marina is doing.

Fuel Station Design

Fuel stations must be designed to be stable and to decrease the number of accidental spills. Naturally, fuel station design considerations are most effectively included when developing a new fuel station. However, each marina that provides fuel services should consider implementing the following BMPs.

▶ **Spill Containment:** Design boat-fueling stations with spill containment areas so that spills cannot be released to the water.

▷ **Reduce Wakes:** Locate fueling stations where they are protected from passing boat wake waves that may cause unstable conditions for fueling. Request that the Harbormaster establish a "no-wake zone" for the area in close proximity to the fuel docks, if not currently in place.

▷ **PWC Fueling Floats:** Install personal watercraft (PWC) floats at fuel docks to raise PWCs from the water and provide a more stable setting for fueling.

▷ **Secure the Fuel Station:** Secure and lock fueling stations and oil tanks during non-servicing hours.

Fuel System Components

Practical changes at the pump can improve your fueling system and prevent against all types of fuel spills. If you haven't yet made changes to upgrade components of your fueling system, consider the following BMPs.

▶ **Shut-Off Nozzles:** To prevent overflow spills, install automatic back pressure shut-off nozzles on fuel pump discharge hoses. The nozzles automatically stop the flow of fuel into a boat's fuel tank when sufficient reverse pressure is created by the full tank.

▶ **Nozzle Triggers:** If automatic shut-offs are not used, then remove fuel nozzle triggers that are used to hold the nozzle open without being held. Nozzles can be purchased through the fuel companies that service your pumps. Prohibit the use of cans or other items to prop the trigger open, especially on large boats with big fuel tanks.

▷ **Alternative Fuel Nozzles:** Install fuel nozzles that redirect blow-back into vessels' fuel tanks or vapor control nozzles to capture fumes. Blow-back is when fuel comes back out of the fuel vent when the tank fills up. Consult your fuel pump service provider for more information.

Fuel Delivery

The point of delivery for bulk fuel from your fuel service to the marina has the potential to produce major impacts. There any many requirements under fire prevention and underground storage tank design regulations, so consult these regulations to ensure that your system complies with the law. In addition, consider the following BMPs.

▶ **Spill Response Training:** Train all appropriate staff annually in the implementation of a spill response plan. Document the training. Also, review fueling procedure practices with staff and customers to reduce all small drips and spills. Include information about fueling in your spill response plan (see Section 4.6).

▷ **Fuel Delivery Staffing:** Be sure that a member of your staff is always on-hand when fuel is delivered so that the marina staff can be sure that fuel delivery is conducted without incident.

Install easy-to-read signs on the fuel dock that explain proper fueling procedures, and include spill reporting phone numbers.

▷ **Spill Response Locker:** Locate a small locker with spill response equipment near the delivery area so that you can quickly react to a spill. Also post a telephone number to report a spill.

Fueling Procedures

Precautions should be taken every time someone removes the gas nozzle to fill up. The following BMPs will reduce frequent small drips and the potential for more serious spills.

▶ **Disposal Procedures:** Provide for proper disposal of oil absorption materials and rags (refer to Section 4.10 for more tips).

▶ **Fuel System Inspection:** Regularly inspect the fueling system, and maintain, or replace fuel hoses, pumps, and tanks when necessary.

▷ **Fueling Signs and Supervision:** Install easy-to-read signs on the fuel dock that explain proper fueling procedures and list the spill reporting phone numbers. Be sure that an attendant is on hand to do the fueling.

▷ **Spill Equipment and Reporting:** Have a dock box or locker on the fuel dock filled with spill absorption pads and containment booms. Provide a sign that briefly states spill reporting requirements and a phone number for reporting a spill.

▷ **Fuel Collars and Absorption Pads:** Use oil absorption pads, or fuel collars directly at the gas line to catch splash back and small drips during fueling. Some companies that sell these products are listed in Appendix C.

LOCAL EXAMPLE

Seaport Landing Marina in Lynn provides absorbent materials to all its customers while filling up to catch all drips and small spills. A member of the staff is always on-hand during fueling to ensure against topping off and other signs of spill. These practices have become a standard part of their business. Call Jim Perry of Seaport Landing Marina at (781) 592-5821 for more information.

▷ **Proper Fueling Procedures:** Make it a policy to discourage topping off practices. Avoid overfilling boat tanks when selling fuel. Do not fill the tank beyond 95% capacity. Warn boaters not to top-off tanks in summer, since fuel expands when it heats up – an important consideration during the hot boating season. (There is an unfortunate practice among some boaters to keep pumping fuel until it squirts out the air vent indicating a full tank.) Typically even after the pump is shut off and the nozzle removed, fuel can continue squirting out as the boat rocks with waves and as the fuel in the tank warms up and expands.

▷ **Reducing Fuel Overflow:** Attach a container to the boat external vent fitting to collect overflow. Containers with suction cups used for attaching to the side of the boat directly underneath the fueling port are available from vendors. Pads can also be placed over the vent to catch any overflow.

- **Proper Nozzle Placement:** Hang nozzles vertically when not in use to prevent fuel remaining in hose from draining out after vessel fueling. If the fuel pump is high on a pier and a long hose runs out on a floating fuel dock, an alternative is to lay the nozzle into a shallow pan lined with an absorption pad between uses. In the evening when the fuel dock is closed, the nozzle should be locked in its slot on the side of the fuel pump.

- **Use In-Water Sausage Boom During Fueling:** Place a long sausage boom in the water between the dock and the boat to collect any drips and spills. Because fuel can inadvertently spit of the air vent, the boom will trap and absorb spilled fuel.

LOCAL EXAMPLE

Nantucket Boat Basin began using a three-step method to reduce unintentional spills. This method includes placing an absorbent donut around the end of the fuel nozzle, giving the boater an absorbent pad to catch drips, and using the sausage boom between the boat and the dock as added insurance. Small spills can really add up when fueling demand is high. These precautions have greatly the reduced the release of small spills at the Nantucket Boat Basin. Call George Bassett at (508) 228-8941 for more information.

- **Proper Gas Can Placement:** Place portable gas cans in an oil absorbent-lined drip pan when filling.

- **Install Fuel/Air Separators:** Sell fuel/air separators at the marina store and provide services to install them. Fuel/air separators are installed between the fuel tank and fume release vent to prevent fuel from exiting the vent during fueling. When installed properly, they allow air to escape but not fuel. These devices can be installed either by marina staff or the Do-It-Yourselfer (see Appendix C for manufacturers).

Useful Contacts

1. Call the State Fire Marshall's Office at **(617) 566-4500** for information about state fire code requirements and spill response.
2. National Spill Response Center — Call **(800) 424-8802** to report a spill.
3. U.S. Coast Guard Marine Safety Office — Boston (Cape Cod Canal to NH border), **(617) 223-3000;** Providence (RI border to Cape Cod Canal; including Cape & Islands), **(401) 435-2300** or **(800) 644-0217.** Call for information on federal spill response and reporting requirements.

FUELING

Complete this checklist if fuel services are provided by your facility.

Activities that occur at the facility: ☐ Attendant Fueling ☐ Self-Service Fueling ☐ PWC Fueling

Check either the "Yes" or "No" column to indicate if you are using each of the BMPs listed below. If the BMP does not apply (you are using a different BMP or the activity does not occur at your marina), put "NA" in the "Yes" column. In the "Action" box, list the next steps for all BMPs where you have checked the "No" column.

BMP	YES/NA	NO	Refer to Page	Action
*Develop SPCC Plan			4-27	
Document All Formal Training Sessions			4-27	
*Spill Containment			4-27	
Reduce Wakes			4-28	
PWC Fueling Floats			4-28	
Secure the Fuel Station			4-28	
*Shut-Off Nozzles			4-28	
*Nozzle Triggers			4-28	
Alternative Fuel Nozzles			4-28	
*Spill Response Training			4-28	
Fuel Delivery Staffing			4-28	
Spill Response Locker			4-29	
*Disposal Procedures			4-29	
*Fuel System Inspection			4-29	
Fueling Signs and Supervision			4-29	
Spill Equipment			4-29	
Fuel Collars and Absorption Pads			4-29	

BMP	YES/NA	NO	Refer to Page	Action
Proper Fueling Procedures			4-29	
Reducing Fuel Overflow			4-29	
Proper Nozzle Placement			4-30	
Use In-Water Sausage Boom During Fueling			4-30	
Proper Gas Can Placement			4-30	
Install Fuel/Air Separators			4-30	

***BMP will assist with regulatory compliance.**

NOTES: