

PETROLEUM CONTROL

Environmental Concerns

Petroleum in or on the water is harmful, flammable, and, in some cases, fatal to aquatic life. Petroleum products typically contain a wide range of volatile organic compounds. Gasoline contains benzene, a carcinogen, and motor oil contains zinc, sulfur, and phosphorus.

Once petroleum is spilled into the water, it may float at the surface, evaporate into the air, become suspended in the water column, or settle to the lake bottom. Floating gasoline is flammable, and floating petroleum is particularly noxious because it reduces light penetration and the exchange of oxygen at the water's surface. Floating oil also contaminates the uppermost portion of the water column, which contains thousands of aquatic plant, animal, and microbe species.

Laws and Permits

Spill Response and Reporting

The Clean Water Act (33 U.S.C 1321) prohibits discharges of oil or oily waste into or upon navigable waters of the United States that cause a film or sheen upon, or discoloration of, the surface of the water or cause a sludge or emulsion beneath the surface of the water.

In Illinois, all spills must be reported immediately to the Illinois Emergency Management Agency (IEMA) at (800) 782-7860 and to the Local Emergency Planning Committee (LEPC) for the area affected by the release (41 IAC 176.300). Petroleum spills must also be reported to the National Response Center (NRC) at (800) 424-8802. Report the location, source, size, color, substance, and time of the spill. Failure to report a spill may result in substantial fines. In addition, the U.S. Coast Guard must be notified of spills that produce a sheen on the water. For more information, visit www.epa.state.il.us/emergency-response/.

All boats 26 feet or more in length are required to display a placard that is at least 5x8 inches, made of durable material, and fixed in a conspicuous place, such as in the machinery spaces or at the bilge pump control station. The placard must read as shown on the following page:

Environmental Concerns

Laws and Permits

- Spill Response and Reporting
- Oil and Hazardous Substance Liability
- Spill Prevention, Control, and Countermeasure Plans
- Petroleum Use and Storage
- Tier Two Reporting

Best Management Practices for Preventing Spills at the Source

- Install and Protect Petroleum Storage Tanks Properly
- Supervise Fueling
- Install Environmental Controls
- Maintain Fuel Transfer Equipment
- Avoid Waves and Wakes
- Use and Manage Oil-Absorbent Materials
- Minimize Impacts of Spills and Leaks from Machinery
- Offer Spill-Proof Oil Changes
- Provide an Oil/Water Separator
- Educate Boaters

Best Management Practices for Spill Response Planning

- Maintain a Spill Prevention, Control, and Countermeasure (SPCC) Plan
- Make Information Accessible
- Maintain Oil Spill Response Equipment
- Store Oil Spill Response Equipment Wisely
- Comply with Fire Codes
- Maintain Material Safety Data Sheets
- Train Employees
- Follow Spill Procedures



Discharge of Oil Prohibited

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 of the water or causes a sludge or emulsion beneath the surface of the water. Violators are subject to a penalty of \$5,000.

The Clean Water Act requires that the U.S. Coast Guard be notified any time a spill produces a sheen on the water. Failure to report a spill may result in civil penalties. Report spills to (800) 424-8802.

State law also requires owners and operators of fuel storage tanks to contain and clean up petroleum spills of 25 gallons or less (41 IAC 176.340). The Clean Water Act prohibits the use of soaps or other agents used to dissipate oil on the water or in the bilge without permission from the U.S. Coast Guard. Soaps, emulsifiers, and dispersants cause the petroleum to sink and mix with the sediments, where it may remain for years. Also, the soaps themselves are pollutants. Marinas that use soap or other dispersing agents on the water or in the bilge may be fined up to \$25,000 per incident.

Oil and Hazardous Substance Liability

Accountability and penalties of a fuel discharge to waters within federal jurisdictions, including the Great Lakes, are regulated by federal law (33 U.S.C. 1321). Calling the NRC does not designate the reporter as the responsible party for a spill or initiate a penalty. The cause and source of a spill will be investigated by the U.S. Coast Guard. Marinas will not be held accountable for spills that did not originate at their facility. However, failure to report spills to the U.S. Coast Guard may result in civil penalties.

Marinas will be held liable for any oil discharges that come from their facility (33 U.S.C. 2101-2720). Boaters are also responsible for any spills originating from their boat. The financial liability for all non-tank vessels is \$600 per gross ton or \$500,000, whichever is greater.

Spill Prevention, Control, and Countermeasure (SPCC) Plans

The U.S. Environmental Protection Agency's (EPA) oil pollution prevention regulation (40 CFR 112.3) requires that marinas prepare and implement a plan to prevent any discharge of oil into navigable waters or adjoining shorelines if the facility has an aggregate aboveground storage capacity greater than 1,320 gallons or an underground storage capacity greater than 42,000 gallons.

Oil is defined in the SPCC regulations 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 and oily mixtures."

Petroleum Use and Storage

It is illegal under 41 IAC 175.250 for boaters to fuel their own ves-

sels at a marina. Marinas must ensure that an attendant is always available to fuel vessels for customers. This rule also requires that emergency shutoff switches be installed at each fueling facility in case of fire or physical damage.

Marinas are required to follow additional rules governing the handling and storage of petroleum, particularly the installation and operation of aboveground and underground storage tanks. General storage laws are listed under 41 IAC 160. For more information about underground tank regulations, contact the Office of the State Fire Marshal (OSFM) Division of Petroleum and Chemical Safety at (217) 785-1020. Questions regarding aboveground tanks should be directed to OSFM Division of Fire Prevention at (217) 785-4714.

Tier Two Reporting

The Emergency Planning and Community Right-to-Know Act (EPCRA) requires that marinas with 10,000 pounds or more of hazardous materials, including petroleum (approximately 1,250 gallons), file Tier Two forms with emergency response agencies by March 1 of each year (42 U.S.C.11004-11049). The form must be submitted to IEMA, your LEPC, and your local fire department. Marinas are not included in the retail gas exemption, which only applies to motor vehicles on land. Forms and contact information for LEPCs are available from IEMA at www.state.il.us/iema/disaster/serc_tier2.htm.

Best Management Practices for Preventing Spills at the Source

Install and Maintain Petroleum Storage Tanks Properly

Because fuel storage tanks at marinas typically hold from 1,000 to 10,000 gallons of fuel, the consequences could be devastating if a tank were to rupture. Even if the tank system leaks or drips, the impact to the environment can be significant and expensive to remediate.

- ✓ Register storage tanks with OSFM (41 IAC 176.440) and display your registration placard (430 ILCS 15/3.5).
- ✓ Hire a certified installer to install underground storage tanks (USTs). Certified personnel are also needed to repair and close tanks.
- ✓ Locate aboveground storage tanks (ASTs) at least 10 feet from the ordinary high water mark of a navigable body of water or have appropriate anchoring to prevent tank flotation (41 IAC 160.50).
- ✓ Allow space between stored boats and ASTs.
- ✓ Consider covering ASTs with a roof made of noncombustible material to prevent rainwater from

filling the containment area or providing a way to pump out any accumulated oil/water mix. Ensure that the tank is still properly vented if you build a roof.

- ✓ Position single-walled ASTs within a dike or over an impervious storage area with the same capacity as the largest storage tank. Double-walled tanks over land do not need a dike.
- ✓ Consult with municipality officials about additional siting requirements.
- ✓ Consider measuring inventory every operating day. Record the amount of fuel dispensed and the amount remaining in the tank.
- ✓ Take a daily reading of the amount of fuel delivered and pumped.
- ✓ Inspect ASTs and piping regularly for drips or leaks and check for leaks in USTs every 30 days (41 IAC 175.650).
- ✓ Ensure marina personnel who work with the tanks receive operator training (41 IAC 176.625). Visit www.sfm.illinois.gov/commercial/ust/operatortraining.aspx for information on the three classes of operator training.
- ✓ Maintain UST operator training records on-site (41 IAC 176.645).
- ✓ Maintain a current green sticker from OSFM (41 IAC 177.115).
- ✓ Keep inspection records indicating compliance with UST requirements (41 IAC 176.430).

Supervise Fueling

- ✓ Ensure that there is a trained employee at the fuel dock to conduct fueling. Self-service at marinas is prohibited in Illinois (41 IAC 175.250).
- ✓ Post signs that read “No dispensing by anyone other than the attendant” on or near fuel dispensers (41 IAC 175.250).
- ✓ Train employees (41 IAC 175.210) to:
 - ♦ Maintain nozzle contact with the fill pipe to prevent static spark.
 - ♦ Use a slow filling rate at the beginning and end of fueling.
 - ♦ Listen to filler pipes to anticipate when tanks are nearly full and stop when tanks are filled to 90 percent capacity.



- ♦ Leave expansion space in fuel tanks of boats going into storage.
 - ♦ Avoid topping off to prevent fuel discharges to the water.
 - ♦ Ensure fuel does not accidentally flow into the holding or water tank.
 - ♦ Attach a container to the external vent fitting to collect overflow. There are products on the market that may be attached to the hull with suction cups. A rubber seal on the container fits over the fuel vent, allowing the overflow to enter the container. Fuel captured in this manner can be used to fuel the next boat.
 - ♦ Use oil absorbent pads to capture backsplash and vent line overflow.
 - ♦ Place small gas cans in drip pans when filling.
- ✓ Require all passengers to disembark from gasoline-powered vessels before fueling.
 - ✓ Require boaters to stay with their craft during fueling.
 - ✓ Instruct boaters to:
 - ♦ Stop all engines and auxiliaries
 - ♦ Shut off all electricity, open flames, and heat sources
 - ♦ Extinguish all cigarettes, cigars, and pipes
 - ♦ Close all doors, hatches, and ports
 - ♦ Inspect the bilge after fueling for leakage or fuel odors
 - ♦ Turn on bilge blowers for several minutes before starting the engine and ventilate until odors are gone
 - ✓ Encourage boaters to keep their engines well-tuned. Properly maintained engines use fuel and oil more efficiently and are less likely to leak or emit oil and vapor emissions into the environment.

Install Environmental Controls

- ✓ Install emergency shutoff switches at each fueling facility at your marina in case of fire or physical damage (41 IAC 175.20). Inspect and test emergency shutoff switches annually.
- ✓ Install automatic back pressure shut-off nozzles on fuel pump discharge hoses to automatically stop the flow of fuel into a fuel tank when sufficient reverse pressure is created (41 IAC 175.405).
- ✓ Consider installing fuel nozzles that redirect blow-back into fuel tanks or vapor control nozzles to capture fumes.
- ✓ Remove fuel nozzle holding clips. The use of holding clips to keep fuel nozzles open is illegal at marina fuel docks (41 IAC 175.460).



- ✓ Offer to install fuel/air separators on boats.
- ✓ Ask your fuel company representative to set the delivery rate based on the size of the boats at your marina. Problems with backsplash and vent-line overflow are often due to high-pressure flow from the pump.

Maintain Fuel Transfer Equipment

- ✓ Inspect transfer equipment regularly for frayed fabric or other damage that may lead to leaks and immediately fix all leaks.
- ✓ Reel, rack, or otherwise protect fuel hoses longer than 18 feet from damage (41 IAC 175.460).
- ✓ Ensure good connections can be made with the delivery nozzles on fuel delivery trucks.
- ✓ Hang nozzles vertically when not in use so that fuel remaining in hoses does not drain out.

Avoid Waves and Wakes

Spillage around fueling areas is often caused by unanticipated movement of the boat or dock.

- ✓ Locate fuel docks in areas protected from wave action and boat wakes when constructing new or upgrading existing facilities. For safety reasons, all fueling stations should be accessible by boat without having to enter or pass through the main berthing area.
- ✓ Consider placing the personal watercraft fueling area at the end of the fuel pier to reduce conflict with larger boats.
- ✓ Provide a stable platform for fueling personal watercrafts. Consider purchasing prefabricated drive-on docks or modify an existing dock by cutting a v-shaped berth and covering it with outdoor carpeting.

Use and Manage Oil-Absorbent Materials

Oil-absorbent pads, booms, and pillows absorb hydrocarbons and repel water. Depending upon the type, they may hold up to 25 times their weight in oil. These products are useful for capturing spills at the fuel dock, cleansing bilge water, and wiping up spills in engine maintenance areas.

- ✓ Require tenants to use oil-absorbent materials as part of your lease agreement.
- ✓ Ensure absorbent materials and collection devices are readily available at the fuel dock and for bilges.
- ✓ Distribute pads, pillows, or booms to your customers.



- ✓ Make bilge pillows available to boaters to remove oil from bilge water.
- ✓ Place plastic or nonferrous drip trays lined with oil-absorbent material beneath fuel connections at the dock to prevent fuel leakage from reaching the water.
- ✓ Post instructions at the fuel dock directing staff and patrons to clean up spilled fuel from the dock and water immediately with oil-absorbent materials.
- ✓ Secure oil-absorbent materials at the waterline of fuel docks to quickly capture small spills. Look for oil-absorbent booms that are sturdy enough to stand up to regular contact with the dock and boats.
- ✓ Store used absorbents in covered fireproof containers to prevent evaporation.
- ✓ Dispose of used oil-absorbent materials as appropriate for the product and how it was used (415 ILCS 5). Visit www.epa.state.il.us/small-business/used-rags/index.html for more information.
 - ♦ Standard absorbents saturated with oil or diesel only (no gasoline) may be wrung out over oil recycling bins and reused.
 - ♦ Bioremediating bilge booms may be discarded in the trash as long as they are not dripping any liquid. Because the microbes need oxygen to function, do not seal them in plastic bags.
 - ♦ Small pads used to clean up minor drips at the fuel pump may be allowed to air dry and be reused.
 - ♦ Standard absorbents saturated with gasoline should be disposed of as hazardous waste.
- ✓ Call your municipal solid waste department or the Illinois Environmental Protection Agency (IEPA) Bureau of Land for locations to recycle used oil collected by absorbent materials. There are long term collection sites in Naperville, Rockford, Chicago, and Lake County. Service stations and retail outlets may also accept used motor oil for reuse and recycling.

Minimize Impacts of Spills and Leaks from Machinery

- ✓ Use non-water-soluble grease on Travelifts, fork lifts, cranes, and winches.
- ✓ Place containment berms around fixed pieces of machinery that use oil and gas. Berms should be able to contain volumes equal to 1.1 times the capacity of the machinery's fuel tank.
- ✓ Design containment areas with spigots to drain collected materials.

- ✓ Cover machinery with a roof if possible to prevent rainwater from filling the containment area.
- ✓ Park machinery on an impervious pad.
- ✓ Place oil-absorbent pads under machinery.
- ✓ Position leak-proof drip pans beneath machinery and empty the pans regularly.
- ✓ Dispose of all collected materials appropriately. Refer to the Waste Containment and Disposal chapter for more information.

Offer Spill-Proof Oil Changes

- ✓ Encourage the use of spill-proof oil change equipment as a condition of your slip rental agreement.
- ✓ Purchase a non-spill pump to draw crankcase oils out through the dipstick tube. Use the system in the boat shop and rent it to boaters who perform their own oil changes.
- ✓ Slip a plastic bag over used oil filters prior to their removal to capture any drips.
- ✓ Hot drain filters by punching a hole in the dome end and draining for 24 hours.
- ✓ Purchase or rent an oil filter crusher. This device will crush the filter to approximately one-fifth its original size, removing the majority of excess oil for recycling. Crushing filters also makes it possible to place five times more crushed filters in a disposal drum.
- ✓ Recycle the metal filter canister and any oil collected. Call your municipal solid waste department or the IEPA Bureau of Land for more information.

Provide an Oil/Water Separator

- ✓ Invest in a portable or stationary oil/water separator to draw contaminated water from bilges, capture hydrocarbons in a filter, and discharge clean water.
- ✓ Subcontract bilge cleaning services at your facility.

Educate Boaters

- ✓ Photocopy the Fuel and Oil Control tip sheet from the back of this guidebook and distribute it to your customers. There is room to add your marina's name and logo.

Best Management Practices for Spill Response Planning

Maintain a Spill Prevention, Control, and Countermeasure (SPCC) Plan

Use Appendix I as a guide for creating your SPCC plan.

- ✓ Develop an SPCC plan (40 CFR 112.3) that addresses:
 - ♦ Operating procedures implemented by the facility to prevent oil spills
 - ♦ Control measures installed to prevent a spill from entering navigable waters or adjoining shorelines
 - ♦ Countermeasures to contain, clean up, and mitigate the effects of an oil spill that affects navigable waters or adjoining shorelines
- ✓ Certify your plan. In some cases, an SPCC plan must be certified by a professional engineer. Visit www.epa.gov/osweroe1/content/spcc/ to view up-to-date rules and criteria.
- ✓ Keep your SPCC plan on-site for EPA review.
- ✓ Submit a copy of your plan to EPA Region 5 if a single spill of greater than 1,000 gallons occurs or if two discharges of 42 gallons or more occur within one year. For more information call (312) 886-7187.
- ✓ Ensure your SPCC plan is reviewed by the marina owner or manager at least every five years (40 CFR 112.5).
- ✓ Store review records at the beginning of the plan. Records should include the reviewer's signature, the date signed, and a list of any changes.
- ✓ Amend your SPCC plan for major changes, such as new tank installations or removals. Amendments must be signed by an engineer.

Make Information Accessible

- ✓ Keep copies of all emergency response plans in a readily accessible location. See the Safety and Emergency Preparedness chapter for more information on developing emergency response plans.
- ✓ Place a copy of the SPCC plan in the oil spill response kit.
- ✓ Post emergency contact numbers in various places at your marina to ensure proper notification of a spill.

Maintain Oil Spill Response Equipment

- ✓ Maintain enough oil spill response equipment to contain the greatest potential spill at your facility (29 CFR



1910.106).

- ✓ Ensure your marina has enough booms to encircle the largest boat in your facility. Booms should be three times the length of the vessel.

Store Oil Spill Response Equipment Wisely

- ✓ Store response equipment and booms in fuel-receiving and fuel-dispensing areas (29 CFR 1910.106).
- ✓ Mark the storage site with a sign reading “Oil Spill Response Kit.”
- ✓ Store materials in an enclosed container or bin accessible to all staff, especially those who handle fueling operations.
- ✓ Consider leaving the storage container unlocked so that it is available to patrons as well as staff. If leaving the bin unlocked at all times is not feasible, try leaving it unlocked just on weekends and holidays, when both activity and risk are greatest.
- ✓ Check the inventory regularly if the bin is left unlocked.
- ✓ Include instructions in the kit for deploying pads and booms and a notification that all spills must be reported to the NRC at (800) 424-8802 and IEMA at (800) 782-7860 (41 IAC 176.340).

Comply with Fire Codes

- ✓ Meet the National Fire Protection Association standards for marinas. Refer to the Safety and Emergency Preparedness chapter for more information.
- ✓ Schedule annual fire inspections to ensure compliance with all applicable fire codes.
- ✓ Maintain fire inspection records (41 IAC 176.430).

Maintain Material Safety Data Sheets

- ✓ Keep a file of material safety data sheets (MSDSs) for all products used at your facility (29 U.S.C. 657).
- ✓ Ensure MSDSs are readily accessible to employees who use the chemicals, materials, or products.
- ✓ Inform employees that MSDSs cannot be used during an emergency to determine the presence or quantities of materials onsite.
- ✓ Notify your LEPC of the materials you store and what is released when they burn.

- ✓ Submit Tier II forms to IEMA, your LEPC, and the local fire department annually if you have an MSDS for any hazardous chemical. Visit www.state.il.us/iema/disaster/serc_tier2.htm for additional information.

Train Employees

- ✓ Review plans and response procedures with staff at the beginning of each boating season.
- ✓ Train employees on containment measures (41 IAC 175.210).
- ✓ Remind employees that using detergents to dissipate fuel spills on the water is prohibited (33 CFR 153.305).
- ✓ Run emergency response drills at least twice a year.
- ✓ Invite the U.S. Coast Guard and local fire department to demonstrate emergency response procedures at your marina.

Follow Spill Procedures

- ✓ When oil, gas, or diesel is spilled on the water:
 - ♦ Protect yourself and others.
 - ♦ Identify the spilled material and determine how much has spilled, if possible. This information will help you assess the risks to human health, the environment, and property.
 - ♦ Confine the oil or diesel spill using absorbents in your spill kit. If a spill happens on land, confine it before it can spread to the water. Do not try to confine gasoline spills. Due to the risk of explosive fumes or fires, gas spills should be allowed to dissipate and vaporize from the water surface.
 - ♦ Stop the source.
 - ♦ Contact authorities. Call the NRC at (800) 424-8802 and IEMA at (800) 782-7860.
 - ♦ Clean up the remaining oil, gas, or diesel.
 - ♦ Remove or neutralize any hazardous materials that have accumulated during the spill to decontaminate the site and equipment.