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 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:

NFPA 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.
<u>Fuel station requirements:</u> Nozzles Attendant Extinguisher Signs Before fueling During fueling After fueling	❑ 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 or holding clip [NFPA 30A, Section 10-4.2]. Remove old fuel nozzle triggers that lock in the "on" position. ❑ 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, Section10-4.7]. ❑ At least one fire extinguisher with the minimum classification of 40-B:C must be located within 100 feet of each pump, dispenser, and pier-mounted liquid storage tank [NFPA 30A, Section10-8.1]. ❑ Signs with the following legends printed in 2-inch (5cm), red block capital letters on a white background must be posted in the dispensing area of all marine service stations [NFPA 30A, Section 10-11.8]: ▪ BEFORE FUELING: o Stop all engines and auxiliaries o Shut off all electricity, open flames and heat sources o Check all bilges for fuel vapors o Extinguish all smoking materials o Close access fittings and openings that could allow fuel vapors to enter enclosed spaces of the vessel ▪ DURING FUELING: o Maintain nozzle contact with fill pipe o Wipe up spills immediately o Avoid overfilling o Fuel filling nozzle must be attended at all times ▪ AFTER FUELING: o Inspect bilges for leakage and fuel odors o Ventilate until odors are removed
SPCC Plan	❑ If your facility stores a certain amount of gas or oil, (1,320 gallons or more

	in above ground storage) it may require a Spill Prevention Control and Countermeasure (SPCC) Plan [40 CFR 112].
Report spills	❑ Any spill or release of petroleum that results in a sheen on the waters of the state or threatens the waters of the state to include groundwater must be reported immediately to the: 1. SCDHEC Emergency Response Section and 2. National Response Center [Section 311 of the Clean Water Act; 33 USC 1321].

Best Management Practices

Fuel dock location	❑ 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.
Spill materials at 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.
Sell spill materials	❑ Carry vent line whistles, vent cups, oil absorbent fuel collars and other fuel spill preventative devices in your ships store.
Personal watercraft	❑ Provide a stable platform for fueling personal watercraft, if your facility services significant numbers of them.
Inspect hoses	❑ Routinely inspect and repair fuel transfer equipment, ie. hoses and pipes.
Fuel connections	❑ Place plastic or nonferrous drip trays lined with oil absorbent materials beneath fuel connections.
Train staff	❑ Train fuel dock staff to handle and dispense fuel properly. Fuel dock staff should be trained to: 1. 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 tank is nearly full. 2. Remember that fuel expands in warm weather and to fill tank to no more than 90% capacity to allow for that expansion. 3. Use a fuel collar or fuel bib and keep an absorbent pad or pillow ready to catch spills, drips, or overflow. 4. Put a drip pan under portable fuel tanks. If possible, fill portable fuel tanks ashore. 5. Prevent spills as well as respond to spills. 6. Give information and direction to customers.

Relevant Sections and Appendices:

⇒ Appendix B and Hazardous Waste section for hazardous waste management information.
⇒ Appendix E for state and federal spill reporting requirements and SPCC Plan information.
⇒ Spill section.

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:

Facility storing >10,000 lbs fuel	❑ 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 USC 11001, and 42 CFR 355].
Storage tanks NFPA	❑ Both above 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.
Underground storage tanks (USTs) Requirements	❑ **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 [UST Regulation R.61-92.280.12; 40 CFR 280]. The general requirements are that: 1. Owners and operators of USTs must provide release detection for tanks and piping. [DHEC R. 61-92.280.41 and 42]. 2. The tank and piping be constructed of non-corrosive materials or externally coated cathodically protected steel and installed according to manufacturer's specifications; 3. The facility has an approved method of leak detection which includes the maintenance of all activity records for 5 years; 4. Fill-pipes on tanks have means to collect spills from delivery hoses; 5. The tanks have overfill protection, such as overfill prevention equipment, that will automatically shut off flow into the tank when the tank is no more that 95% full [Sec. 280.20(C)(ii)(a)], or alert the transfer operator when the tank is no more than 90% full by restricting flow into the tank or triggering a high level alarm (280.20.(C)(ii)(B), or restrict flow 30 minutes prior to overfilling, alert the operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling (280.20(C)(ii)(c). 6. The tank must be registered with the SCDHEC. 7. 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].
Underground tank removal	❑ There are additional requirements for facility owners or operators when they are closing USTs through removal or in-place abandonment [DHEC R.61-92.280.71].

Aboveground petroleum storage SPCC plans	❑ **Aboveground Petroleum Storage**: If your facility stores a certain amount of gas or oil in aboveground tanks (a total aggregate volume greater than 1,320 gallons) it may require a Spill Prevention, Control and Countermeasure (SPCC) Plan [40 CFR 112], which outlines a facility-wide plan to prevent spills and contingency plans in case of spills. ❑ SPCC plans require [40 CFR 112]: 1. The aboveground storage tank should be located within a dike or over an impervious storage area. 2. The tanks require secondary containment of 110% of the volume of the largest container. 3. A professional engineer must approve written spill prevention and response measures as adequate.
Report spills	❑ Any spill or release of petroleum that results in a sheen on the waters of the state or threatens waters of the state to include groundwater must be reported immediately to the: 1. SCDHEC Emergency Response Section and 2. National Response Center [Section 311 of the Clean Water Act; 33 USC 1321].
Make hazardous waste determination	❑ A hazardous waste determination must be conducted on any materials used to clean a spill to determine whether or not disposal of the materials is subject to hazardous waste regulations [RCRA; 40 CFR 262.11; DHEC R.61-79.262.11].

Best Management Practices:

Secure areas when not in use	❑ Fueling facilities and storage areas must be secured when not in use by appropriate shutdown devices and security locks.
Spill Contingency Plan	❑ Even if you are not required to, develop a Spill Contingency Plan for all fuel storage and dispensing areas.
Post phone numbers	❑ Post emergency phone numbers in an obvious location.
Inspect for leaks	❑ Regularly inspect aboveground fuel storage tanks and associated piping for leaks.
Tank roof	❑ If possible, cover the tank with a roof to prevent rainwater from filling the containment area.

Relevant Sections and Appendices:

⇒ Appendix A for hazardous substance management information.
⇒ Appendix B for hazardous waste management information.
⇒ Appendix E for spill plan and reporting information.
⇒ Appendix F and Stormwater Runoff Management Practices section for stormwater discharge information.
⇒ Hazardous Waste section.

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 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:

Tank disposal	❑ 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; DHEC R.61-79.262.11].
Contact UST Program	❑ Prior to closing underground storage tanks (UST) through removal or in-place abandonment, you must notify the UST Program and follow applicable regulations [UST, R.61 (92.280.71)(a)].

Best Management Practices:

Leftover fuel	❑ Use, recondition or recycle all usable fuel before disposing of the tank.
Keep away from heat	❑ Store tanks awaiting disposal away from ignition sources like heat or sparks.
Label tanks	❑ Clearly label tanks "Waste Gasoline."
Fuel canisters	❑ Large fuel canisters should be de-valved with a fire marshal permit or taken to a hazardous waste collection facility.
Disposable canisters	❑ Disposal propane canisters should have their pressure released using an official puncturing device and used as scrap metal. These pressurized canisters could explode dangerously and should not be punctured with any other device. If you do not have the appropriate device, take the canisters to a hazardous waste collection facility.

Relevant Sections and Appendices:

⇒ Appendix B and Hazardous Waste section for hazardous waste management information.