ATTACHMENT F

BEST MANAGEMENT PRACTICES TO REDUCE THE AMOUNT OF FUEL AND OIL ENTERING STORMWATER OR SURFACE WATERS

Fuel and oil are released into surface waters during the routine activities that occur at marinas. Activities including fueling, motorized watercraft operation, and bilge pumping all contribute amounts of fuel into surface waters. To reduce the amount of fuel and oil released into surface waters, the Discharger should implement the following Best Management Practices (BMPs) at the marina where appropriate.

Fueling Operations

1. If the facility is storing petroleum in an aboveground storage tank, the Discharger must comply with the Aboveground Petroleum Storage Act, if applicable, which became effective January 1, 1990. The SWRCB's pamphlet titled "Information on the Aboveground Petroleum Storage Tank Program" specifies the requirements of the Act and defines who is subject to the Act (enclosed).

2. Fuel tanks at the marina should be equipped with automatic shut-off nozzles. Marina staff and patrons who perform fueling should be educated so overfilling does not occur. To minimize the discharge of overflowing fuel, the Discharger may attach vents on fuel tanks that act as fuel/air separators.

3. Where appropriate, spills from the fuel nozzle can be minimized by wrapping the nozzle with fuel absorbent pads.

4. Fuel absorbent pads and booms shall be placed in a well marked area near or on the fueling dock. The availability of pads and booms should be checked regularly to ensure that an adequate supply is on hand in case of an emergency fuel spill.

5. Soiled absorbent pads should be disposed of properly by placing the pads in receptacles properly labeled as hazardous waste. If receptacles are not available on-site, absorbent pads should be safely stored and immediately disposed of at the refuse company as household hazardous waste.

Motorized Watercraft Operation

Marina operators shall provide adequate signage, distribute pamphlets, include inserts in billings, and/or verbally educate patrons on the following TRPA ordinances:

1. After October 1, 2002, the following engine types are no longer allowed on all lakes in the Tahoe Region:

    - Any engine that does not meet the U.S. EPA 2006 or the California Air Resources Board 2001 emission standard, including:

- Electronically Fuel Injected (EFI) two-stroke engines,
- Rotax Fuel Injected (RFI) two-stroke engines,
- Two-stroke engines auxiliary sailboat engines, and
- Two-stroke engines-10 horsepower or less.

2. 600 foot no-wake zone from shoreline.

Bilge Pumping

Motorized watercraft contain low points in the hull called the bilge area. Bilge areas typically collect oil, grease, gasoline, and other wastes. Boat bilges have automatic and manual pumps that empty directly to the water. When a bilge pump is activated, the oil and grease from the operation and maintenance of the engine discharges into the water. Pumping the bilge and releasing wastes (oil, greases, and other materials) into Lake Tahoe is prohibited.

1. Marina operators shall promote the use of oil-absorbing materials in the bilge areas of all boats. Boaters shall inspect absorbent pads at least once during the boating season and replace the pads as necessary.

2. Marina operators shall clearly mark receptacles where patrons can properly dispose of soiled absorbent pads.

3. Aside from emergency situations, marina operators shall discourage the use of unnecessary bilge pumping.

4. Marina operators shall encourage boaters to perform routine maintenance checks on their boat engines. If oil is detected in the bilge during a routine check, boaters should use oil absorbent pads and pillows to soak up oil that has accumulated in the bilge.

5. To encourage proper bilge disposal, marina operators shall make bilge pump-out facilities available. Bilge pump-out facilities that use filters to treat bilge water may dispose of treated water off site at a proper disposal area or may in some cases dispose of filtered bilge water in infiltration areas for further treatment.

Sunken Vessels

Direct discharges of gasoline and oil can impact surface waters when a boat sinking. If spills of gasoline, oil, or other waste occur at the marina, the Marina operators and the individual boat owner are liable. Accidental spills, including those associated with sunken vessels can be minimized with good housekeeping and preventive maintenance.

To avoid and minimize the potential of boats sinking at your marina it may be useful to develop guidelines for clientele that rent space at the marina. The following list provides suggestions that may be included in the guidelines.

1. Boats left on moorings and slips should always be properly secured (e.g., tied and anchored) according to requirements specified by the marina.

2. When boats are left in the water over the winter, snow loads on the boat should be minimized by frequent removal of snow or protective covering.

3. If boats are left in the water over the winter for long periods of inactivity, fuel volumes should be maintained at no more than ½ the total tank capacity and fuel fill caps should be in place.

4. In the event that a boat sinks at the marina, staff should be trained on the proper response techniques including notifying first responders (e.g., local fire department) and deployment of absorbent pads and booms to contain the fuel, oil, and/or other leaking fluids. Contact information for first responders, salvage, towing, and vessel assist services should be readily available.