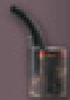
boat engine maintenance

Maintaining an outboard or inboard engine can pose problems for water quality because of the materials involved—cleaners, oils, transmission fluid and anti-freeze, to name a few. Oil can be a particular problem because a single spilled cup of oil can contaminate an area on the lake the size of a football field.

- Keep engines well-tuned. Routinely check for engine fuel leaks and use a drip pan under engines.
- Keep your engine clean. It makes it easier to spot and correct small leaks before they become big problems. Check and fix all gas and oil leaks. Absorbent pads can be used to clean engine spaces. Keep the use of engine cleaners to a minimum.
- Change oil and transmission fluid with a spill-proof pump or vacuum tank. In order to catch the oil traditionally spilled during filter removal, slip a plastic bag over the filter and then remove it. Wipe up oil drops immediately with an absorbent pad.
- Use orange/pink-colored propylene antifreeze/coolant which is less toxic. Blue/green-colored ethylene glycol is very toxic and kills animals that ingest it. Whether you winterize your inboard engine block with pink or green antifreeze, it is illegal to discharge the antifreeze into the lake. Remove the antifreeze from the engine block on land without spilling it onto the ground, and use proper disposal practices for the antifreeze.

Petroleum and Antifreeze Waste Disposal

Never dump used oil, engine coolants, or cleaners on the ground, or into storm drains, dumpsters, and/or open waters. These products contain toxic compounds which can contaminate surface and underground waters.



Used oil, antifreeze, cleaners and gas/oil absorbent pads from private, non-commercial boats, can be taken to the Bonner County Recycling/Transfer station.

boat cleaning

Think about where all the dirt, paint chips and solvents could go when you clean and maintain your boat, then chose a method that reduces the chance of getting any of these things into the lake.

- Look at product labels and buy "non-toxic" and "phosphate-free" cleaners. While "bio-degradable" sounds good, it doesn't mean "non-toxic"; avoid those products that warn "do not get in eyes" or "always wear gloves" since these can harm you AND the environment.
- Use alternative cleaners, such as baking soda, lemon juice, vinegar, and elbow grease; avoid those with bleach, ammonia, lye, or petroleum distillates.
- Wash decks and hulls frequently with fresh water, using a little cleaner goes a long way; more cleaner does not necessarily work better, but can be harmful.
- Clean boat bottoms ashore, over hard surfaces or a tarp, where all debris can be contained and will not wash back into the lake.
- Do as much hull work inside or under cover, where rain can't wash dust, dirt, paint chips, oil and solvents into the lake.

petroleum pollution & clean fueling practices

Oil, diesel fuels, and gasoline can be toxic to aquatic organisms, and some are labeled as carcinogenic to humans. Petroleum spills from boats can occur during fueling, pumping of oily bilges, and marine engine exhaust. Individually, each boat's contribution may seem insignificant, but collectively from numerous boats, petroleum pollution can add up and cause concern about harmful effects to aquatic organisms and human health.

clean fueling

- Know the capacity of your fuel tank(s). Fill the tank to 90% and NEVER "top off" fuel tanks.
- Listen to the filler pipe to anticipate when the tank is getting full to avoid back splash at the nozzle.
- Use an absorbent pad around the fuel nozzle to catch back splash, but make sure to maintain contact between the nozzle and fill to reduce the chance of spark.

- When filling boat tanks with a gas can, be extremely careful! Make sure the nozzle collar has a washer and the collar is on tight. Don't pop the can's air vent plug until the nozzle is in the tank filler tube. Don't try the fuel transfer if the boat or dock is bobbing.
- Never leave a fuel nozzle unattended during fueling.

tip for clean boating: One effective and inexpensive measure is to carry on-board oil/gas absorbent products. These are absorbent pads, pillows, or socks that soak up and trap petroleum but do not absorb water. These products can soak up to 30 - 40 times their weight in petroleum. Absorbent pads are available at marinas or boating supply stores.

bilge care

- Prior to pumping, inspect the bilge for petroleum sheens, oil droplets, hydraulic fluid, and grease. If bilge water is oily or has a sheen, do not discharge into the lake. Use petroleum absorbent pads, pillows, or booms to sweep the water and remove the petroleum. Some absorbent products can be kept in the bilge, floating around picking up gas, oil, and hydraulic fluid before the bilge water is discharged. If you place an absorbent pillow or boom in the bilge, make sure it can't drift over and foul the bilge pump intake.
- Routinely check and fix oil or fuel leaks.
- Avoid using bilge cleaners that are detergents or emulsifiers; these products don't get rid of the oil/fuel, they just spread it in the water column. These products can also be incompatible with absorbents.

if a spill occurs:

- First, report the spill to the National Response Center, 1-800-424-8802.
- DO NOT USE emulsifiers or dispersants (soaps) on fuel spills. These products simply break up the petroleum into small droplets that sink to the lake bottom or remain in the water column; also, it is illegal to use them.
- Instead, use absorbent pads, pillows, or booms to soak up as much petroleum as possible before the slick drifts away.
- If a significant gasoline or oil spill occurs, follow your marina's emergency plan.

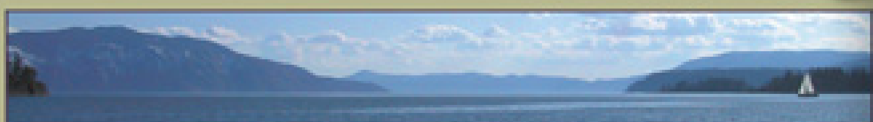


Photo courtesy of Bill Schmidt

eurasian milfoil

milfoil characteristics:

Rooted, submersed aquatic plants are found in the nearshore shallow bays of Lake Pend Oreille and are an important part of the lake's ecology. In summer months you may have observed these plants undulating under water. Eurasian milfoil is an extremely aggressive, non-native aquatic weed that poses a serious threat to Idaho's rivers and lakes. Once introduced into the shallow areas of a waterbody, Eurasian milfoil grows into thick beds, shading out native aquatic plants and impairing recreational uses, drinking and irrigation water supplies, fisheries, and surface water quality. In the last few years, Eurasian milfoil has infested many of the Lake Pend Oreille's shallow bays.

It is impossible to eradicate Eurasian milfoil once it infests a waterbody; therefore, efforts must focus on controlling the weed's growth and limiting its spread to new areas. The first step is learning how to identify this invader. Eurasian milfoil can be difficult to identify because it resembles native milfoil species. Check the characteristics listed at left before deciding if a plant might be Eurasian.

Important note to dock owners:

Because Eurasian milfoil can severely hamper the use of docks and swimming areas, some shoreline property owners may want to control the weed by applying herbicides around their docks. IT IS ILLEGAL TO APPLY ANY CHEMICALS TO THE LAKE WITHOUT A PERMIT. Chemicals can cause impacts to fish and the aquatic environment. Contact the Idaho Dept. of Environmental Quality (208-769-1422) or the Tri-State Water Quality Council (208-265-9092) for further information.

Photo courtesy of Bill Schmidt

The second step in controlling Eurasian milfoil's impact to the lake is to reduce its spread to new areas. Eurasian milfoil spreads by fragmenting. Just a tiny piece broken off from a milfoil plant can drift, sink, and form its own roots to start a new colony. Once it starts growing, it is very difficult to control. Milfoil infestation almost always occurs first at public boat ramps. Boats, trailers, motors, propellers and anchors are the most common carriers of this noxious weed.

Boaters can help the most since boats most commonly transport this weed.

- ALWAYS remove plant fragments from your boat, propeller, motor, anchor and trailer, before launching and after leaving the water.
- Dispose of plant fragments on high, dry ground.
- Clean fishing tackle and other equipment that has been in contact with weed beds.

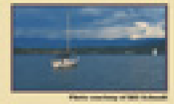


Photo courtesy of Bill Schmidt

boating & camping sanitation

IT IS ILLEGAL to discharge or dump sewage from marine toilets, boat holding tanks or portable toilets, into Lake Pend Oreille.

Untreated sewage is a pollutant in surface waters because it can contain disease causing bacteria and viruses leading to illnesses such as dysentery and infectious hepatitis. Discharged black water (sewage) and gray water (from sinks and shower drains) are also an aesthetic degradation, and can contain high levels of nitrogen and phosphorus that can stimulate algal and aquatic weed growth in our lake.

- Become familiar with the locations of the available vault toilets and restrooms on the lake. See map on flip side for locations of facilities that can be accessed by boat landing or docking. Whenever possible, use these land-based restroom facilities rather than onboard ones.
- Always use onshore restrooms when docked.
- When going boating for three or more hours, plan for onshore restroom stops while buying fuel or eating at waterfront restaurants.
- If your boat has a toilet/holding tank, use the pump-out facilities located on Lake Pend Oreille. (See flip side for pump-out locations.) State law requires that all installed toilets/holding tanks must be sealed to prevent discharge of treated or untreated wastewater.
- If your boat does not have a toilet, take a portable toilet on board your vessel; only empty portable toilets at a shore side dump station or home. (See flip side for dump station locations.)
- Keep fats, solvents, oil, emulsifiers, paints, poisons, phosphates, disposable diapers and sanitary napkins out of toilets.
- Portable toilets can be permanently plumbed on your boat. A special fitting is placed on the toilet pour-out, and connected to a 1 1/2" flexible hose. The hose is then attached to a thru-deck waste fitting. In this way, contents can be pumped out at marine pumpout stations.

using camping or day facilities

- Do not bathe or wash pets with soap in the lake.
- Do not wash dishes in the lake.
- Use phosphate-free detergents and soaps, which are readily available at local stores. Gray water from bathing or dishwashing should be dumped on the ground at least 50 feet from the lake.
- Don't burn campfires right on the shoreline. Ashes that wash into the lake during high water or rainfall contain nutrients that increase algae and aquatic weed growth. Build campfires above the high water mark.

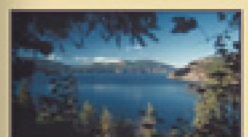


Photo courtesy of Bill Schmidt

Don't litter!

Pack it in – Pack it out.