



CLEAN BOATER TIP SHEET

WASTEWATER CONTAINMENT & DISPOSAL

All boats generate wastewater. Sources include marine toilets, laundry/dishwashing facilities, and bilge waste. Raw or poorly treated boat sewage is harmful to human health. Typhoid fever, hepatitis, cholera, gastroenteritis, and other waterborne diseases may be passed directly to people who swim in contaminated waters. People may also become infected by eating fish contaminated with viruses and other micro-organisms contained in sewage discharge.

Sewage is also harmful to water quality because it stimulates the growth of bacteria that feed upon organic wastes. Those bacteria use up oxygen as they consume the wastes, which reduces the amount of oxygen available to fish and other forms of aquatic life. Furthermore, the nutrients in sewage promote excessive algae growth. As the algae multiply, they block life-giving sunlight from reaching rooted aquatic plants. When the algae die they create another problem--dead algae are decomposed by bacteria, which further reduces levels of dissolved oxygen.

Please follow the tips listed below to make sure that you dispose of wastewater properly.

The Law

According to federal and state law, discharge of sewage (raw or partially treated) is not allowed into any body of water in Wisconsin, with the exception of portions of Lake Superior. All vessels must have a means of containing sewage, and vessels with installed toilets must have a Marine Sanitation Device (MSD). Type III MSD systems are the only legal MSDs for boats in Wisconsin waters--the use of type I or type II systems is prohibited. Therefore, type I and type II systems must be disabled, and any y-valves must be locked down. The following describes each class of MSD system:

- **Type I** systems mechanically cut solids and disinfect waste. They must bear a U. S. Coast Guard certification label.

- **Type II** systems are similar to Type I systems. The difference is that Type IIs treat sewage to a higher standard and generally require more space and energy. Type II systems also must have a Coast Guard certification label.
- **Type III** systems do not discharge sewage. Holding tanks are the most common Type III system. Incinerating systems are another option. A Coast Guard label is not required.

What Can You Do?

Handling Vessel Sewage

- ☞ Before heading out on the lake, use the restroom facilities at the marina. Use shoreside toilets rather than boat heads whenever possible.
- ☞ Use the marina's pump-out or dump station. These should be well marked. If there is not a pump-out or dump station at the marina in which you launch or moor, check with marina management. They may have a cooperative agreement to use another marina's pump-out station.
- ☞ Always radio ahead to find out the operation hours for a particular pump-out facility.
- ☞ Know your MSD to prevent accidental dumping.
- ☞ Use environmentally friendly additives for your MSD. Check with your marina operator for suggested additives.
- ☞ Maintain your MSD. Have your MSD inspected regularly to ensure that it is functioning properly.
- ☞ Keep the disinfectant tank full, use biodegradable treatment chemicals, and follow the manufacturer's suggested maintenance program.
- ☞ Do not dispose of fats, solvents, oils, emulsifiers, disinfectants, paints, poisons, phosphates, diapers, and other similar products in your MSD.

Holding Tanks

- ☞ Install a holding tank. For most recreational boats with facilities or an installed toilet, a holding tank (Type III system) is preferable.
- ☞ Use good plumbing to control holding tank odor. Fiberglass and metal tanks are highly resistant to permeation. Specially labeled flexible “sanitation hoses” and PVC piping are also highly impermeable. Keep the number of connections to a minimum and make sure that seals are tight.
- ☞ Use enzyme-based products in your holding tank to further control odor. Enzymatic products use biological processes instead of harsh chemicals to break down sewage. Be sure to pump out and rinse your holding tank prior to initial use of an enzyme product if you have used chemical-based odor control additives in the past. Chemical residues may interfere with the effectiveness of enzyme-based products.
- ☞ Avoid holding-tank products that contain quaternary ammonium compounds (QACs) and formaldehyde. These products may disrupt the function of municipal sewage treatment plants receiving wastewater from marina pump-out stations.

Portable Toilets

- ☞ If you have a small vessel, consider buying a portable toilet to contain raw sewage. Remember, it is against the law to dispose of raw sewage into any waters of Wisconsin.
- ☞ Empty portable toilets at the pump-out station. Do not dump the waste into marina toilets.



Pump-out station at Port Washington Marina, UW Sea Grant Institute.

Graywater

- Graywater includes soaps and detergents from boat showers and dishwashing and laundry facilities. These soaps, even those labeled as “biodegradable,” contain substances harmful to marine life.
- ☞ Use shoreside showers, dishwashing stations, and laundry facilities whenever they are available.
 - ☞ Use low-nitrogen and phosphorous-free detergents for onboard laundry, dish washing, and general cleaning.
 - ☞ Use all soaps and cleaners sparingly by using a little extra “elbow grease.”

Bilges

- Bilges can be a major source of wastewater pollution in marinas. They tend to collect engine oil, fuel, antifreeze, transmission fluid, and lubricants—all of which may contain pollutants known as petroleum hydrocarbons as well as other toxic elements and metals. When the bilge pump is activated manually or automatically, these pollutants are pumped overboard into the water. Additional bilge water concerns and good boating practices are included in the Wisconsin Clean Boater Tip Sheet titled “Fuel & Oil Control.”
- ☞ Avoid discharging bilge water that has an oily sheen.
 - ☞ Use bilge socks to collect floating oil and fuel in the bilge.
 - ☞ Replace these pads when they are heavily saturated or soiled.
 - ☞ Install a bilge pump switch that leaves an inch or two of water in the bilge.
 - ☞ Install a bilge water filter to your boat’s bilge. Filters will remove oil and fuel from the water.



Bilge sock (BoatU.S. Foundation).