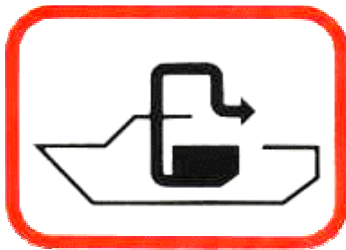


## Sewage

*When sewage is pumped or dumped directly into the water, there is a potential for disease-carrying microorganisms to be released into that water. These microorganisms can cause human diseases such as gastroenteritis, hepatitis, typhoid, cholera, and dysentery. In addition, as bacteria and other microorganisms decay the sewage, they use up oxygen that fish and other marine life need to breathe. Discharge of vessel sewage is especially harmful due to its high concentration of sewage and the presence of chemical additives – such as formaldehyde, para-formaldehyde, quaternary ammonium chloride and zinc sulphate – which are toxic to marine life.*

### Don't Dump Overboard!

- Know your marine sanitation device (MSD) type and manage it appropriately.
- Type III MSDs are the most common MSDs on recreational vessels and include recirculating and incinerating MSDs and holding tanks. It is illegal to discharge sewage from a Type III MSD overboard into coastal waters, lakes, or reservoirs. Use pumpout facilities for Type III MSDs.
- Type I and II MSDs treat the sewage and must not be discharged while in moorage or on lakes or reservoirs.



Look for the Pumpout Sign

- Empty portable toilets at dump stations or at home. Discharge of this untreated sewage overboard to coastal waters or into a lake or reservoir is illegal.
- If boat has a holding tank with a y-valve and through-hull fitting, keep them locked closed when inside coastal waters or on lakes or reservoirs.
- See the “Oregon Boating Facilities Guide” or the “Oregon Marina Guide” (available from the Marine Board) for pumpout and dump station locations. Both of these services are free of charge at all public facilities.

### Handle Sewage Appropriately

- Use restrooms on shore whenever possible.
- Establish a regular maintenance schedule for your MSD based on manufacturer’s recommendations.
- Avoid using additives like quaternary ammonium compounds (QAC) or formaldehyde in your holding tank. Use safer enzyme-based products to control odor and reduce solids.
- Consider installing a filtered air holding tank.
- Keep diapers, sanitary napkins, oils, solvents, and other harmful chemicals out of toilets.
- If using pumpout equipment, wash your hands with antibacterial soap after use.
- Dispose of your pet’s waste properly.

#### Gray Water

*Water from sinks, washers, and showers are discharged directly into the water without treatment. This gray water is often rich in phosphates that pollute the water and encourage the growth of unwanted algae.*

- Use upland laundry facilities and showers whenever possible.
- Limit the amount of water you use in sinks and showers.
- Use non-phosphate soaps.



*For more information, contact the Clean Marina Coordinator at 503-378-2625*