

A Recreational Boater's Guide to

VESSEL SEWAGE



Approximately **1.5 million recreational boats** with installed toilets spend time in U.S. waters, generating over **3.5 billion gallons of sewage** annually.

Even **1 boater** discharging inadequately treated sewage can have a negative impact on water quality. It is up to **all of us** to help keep our waters clean.



Sewage Impacts Waterways

The discharge of raw and inadequately treated sewage from boats can negatively impact human health and the environment. As such, it is especially important to limit or prevent sewage discharges in popular fishing and swimming areas or sensitive wildlife areas.

SEWAGE SPREADS DISEASE

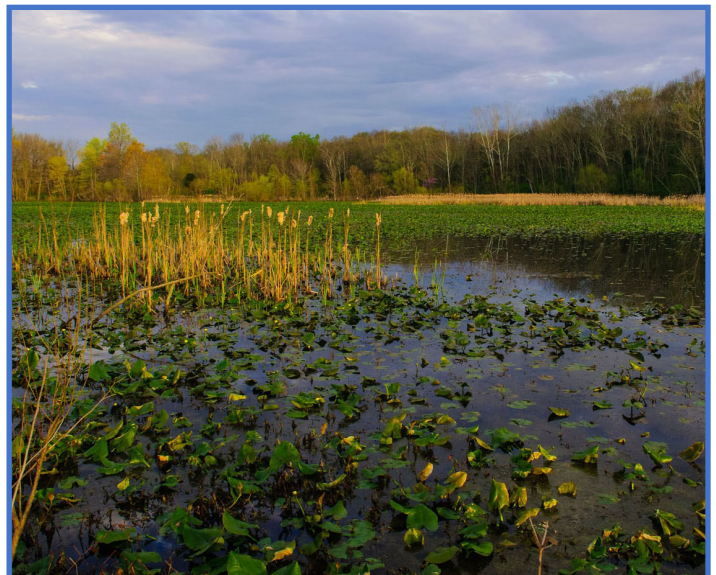
Sewage discharges can introduce disease-causing bacteria and viruses into a waterbody, creating human health concerns. When people are exposed to these bacteria and viruses, they can become sick with the stomach flu or other more serious illnesses. Exposure generally results from accidental consumption of contaminated water while swimming. However, people can also become sick from eating clams, mussels, and oysters harvested from contaminated shellfish beds.

SEWAGE HARMS THE ENVIRONMENT

Sewage impairs water quality by increasing nutrient levels, altering pH, and decreasing both water clarity and oxygen availability.

This reduced water quality can affect the behavior, reproduction, health, and survival of many aquatic organisms, including:

- Fish
- Shellfish
- Coral
- Mangroves
- Crabs
- Birds
- Seagrass
- Insects



Know The Law

All vessels with installed toilets must be equipped with a U.S. Coast Guard-certified **marine sanitation device** (MSD), which either treats sewage before discharging or stores sewage in a holding tank.

Federal law prohibits the discharge of untreated sewage from such vessels into U.S. waters, including all inland waters, the Great Lakes, and coastal waters extending to three miles from shore.

The discharge by such vessels of any **treated or untreated sewage** is prohibited in freshwater lakes, ponds, reservoirs, and rivers unnavigable by interstate vessel traffic.

Some waters are designated as **no-discharge zones** (NDZs). In NDZs, it is illegal for vessels to discharge **treated or untreated sewage**.

Failure to meet these requirements can result in **federal fines** for each violation, as well as possible additional state fines.

To report violations, contact your nearest **U.S. Coast Guard office** or the **National Response Center** (www.nrc.uscg.mil).



Marine Sanitation Devices

There are three types of U.S. Coast Guard-certified marine sanitation devices (MSDs). Type I and Type II MSDs are flow-through devices that treat sewage before it is discharged. Type III devices are holding tanks that do not treat sewage but store it on board.

TYPE I

Treatment device (uses maceration and disinfectants—such as chlorine)

Following treatment, bacteria count must be less than **1,000 fecal coliforms per 100 mL**, and there must be no visible floating solids.

For vessels 65 feet or less

TYPE II

Treatment device (uses bacteria to break down the solid waste, followed by disinfection)

Following treatment, bacteria count must be less than **200 fecal coliforms per 100 mL**, and there must be no more than **150 mg per L** of total suspended solids.

For vessels of any size

TYPE III

Holding tank (stores untreated sewage onboard)

Untreated sewage **cannot be discharged** in coastal waters within three miles from shore. Contents of holding tanks should be disposed of at appropriate facilities.

For vessels of any size

No-Discharge Zones

No-discharge zones (NDZs) are designated areas where the discharge of both treated and untreated sewage from vessels is prohibited. NDZs are created in waterbodies requiring additional protection, such as drinking water intake zones and those with shellfish beds.

To locate NDZs in your state, visit: www.epa.gov/vessels-marinas-and-ports/no-discharge-zones-ndzs-state

NDZ Compliance with a Flow-Through Device (Type I & II)

Toilets that are connected to a flow-through device must be secured to prevent any discharges. Take one of the following actions when operating in an NDZ:

- ◆ Close the seacock and remove the handle
- ◆ Padlock the seacock closed
- ◆ Close the seacock with a non-releasable wire-tie
- ◆ Lock the door to the head

NDZ Compliance with a Holding Tank (Type III)

Toilets with holding tanks should be secured by one of the following methods to prevent overboard discharge:

- ◆ Close overboard discharge valve ("Y valve," pictured on right) and remove the handle
- ◆ Keep the overboard discharge valve closed using a padlock or non-releasable wire-tie

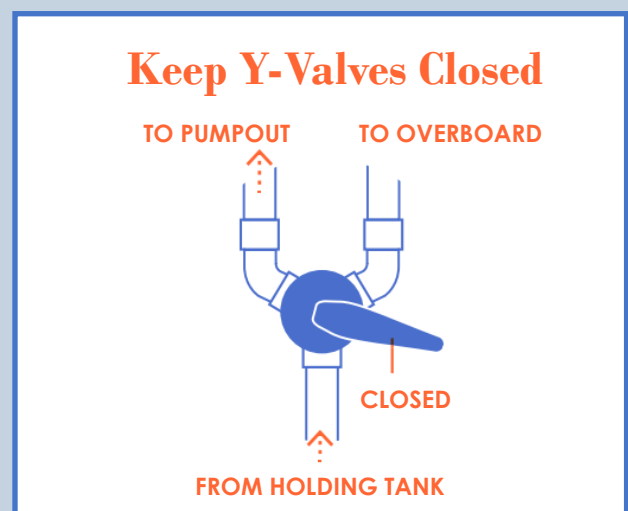


Image source: Adapted from *When Nature Calls*

Pumping Out MSDs

WHERE TO PUMPOUT

Holding tanks (pictured on right) can be emptied at pumpout stations located at marinas or other boating facilities, as well as by mobile pumpout boats and trucks.

Contact your local marina, boating organization, or state environmental agency to find out where the nearest pumpout station is and which facilities are best for you.

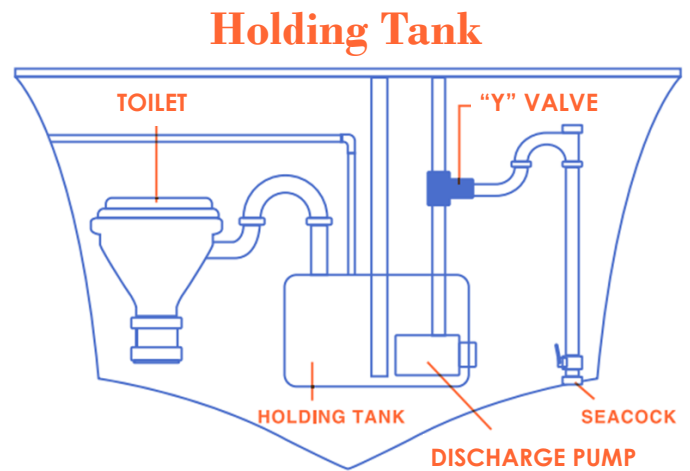


Image source: *When Nature Calls*

HOW TO PUMPOUT

Follow the manufacturer instructions. In most cases, the following instructions apply:

1 Close nozzle valve on pumpout hose.



2 Remove deck waste fitting cover (attach nozzle guard to deck waste fitting if available) and insert nozzle.



3 Turn on pump.

4 Open nozzle valve. Valves can be tough to turn—be persistent!

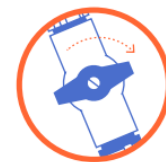


5 Check sight glass. If flow does not begin within one minute, place nozzle in water for ten seconds. If there is still no flow, check for an air leak or clog in hose or holding tank air vent.

6 When tank is empty, remove nozzle from fitting. Place nozzle in water for 30 seconds to flush the line. Flushing helps prevent clogging and costly pumpout breakdowns.



7 Close nozzle valve.



8 Turn off pump and return hose so it is ready for the next boater.

Image source: *Adapted from When Nature Calls*

What You Can Do To Help

Use onshore facilities

Use the restroom before leaving the dock.

Pumpout often

Empty your holding tank regularly to reduce the chance of overflows.

Call ahead

Ensure the pumpout facility is open and in service before visiting.

Control odor safely

Use fiberglass or metal holding tanks. Consider a filtered air holding tank.

Use MSDs for sewage only

Do not dispose of fats, oils, solvent, wipes, or other non-sewage products in your toilet.

Rinse your holding tank

Flush your system periodically with clean water.

Know your MSD

Know how to operate your MSD to prevent accidental spills. Keep hoses clean and disinfectant tanks full.

Maintain your MSD

Establish a regular maintenance schedule and make necessary repairs.

Discharge with care

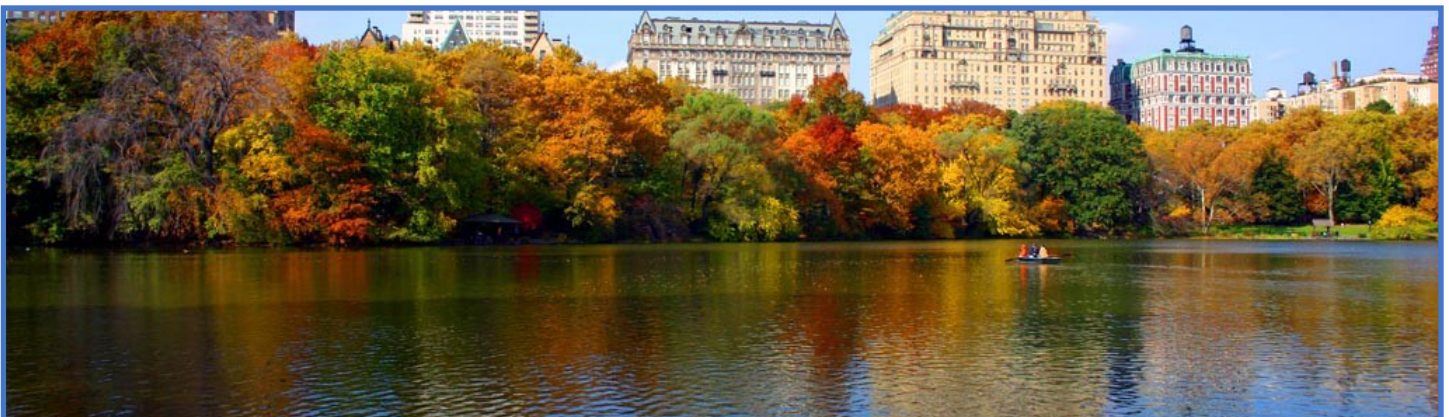
Avoid discharging Type I or Type II MSDs near marinas, shellfish beds, or swimming areas.

Read product labels

Choose to not use products with chlorine as an ingredient. Look for products with the EPA Safer Choice label as a best option.

Choose the best toilet paper

Purchase rapidly dissolving toilet paper and consider using recycled paper. Choose to not use wipes, even if advertised as flushable.



For more information on federal regulations related to vessel sewage, marine sanitation devices, and no-discharge zones, visit EPA's website: <https://www.epa.gov/vessels-marinas-and-ports/vessel-sewage-discharges>

Disclaimer: The information provided in this document describes federal regulations related to vessel sewage and is not comprehensive. Consult EPA's website and applicable statutes and regulations for further information, as well as your state environmental agency for additional state-specific requirements.

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Contributors: California State Parks Division of Boating and Waterways; The Bay Foundation

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