



VESSEL SEWAGE DISCHARGE



Commercial and recreational boating plays an important role in the U.S. economy. Coastal and ocean-related activities, such as fishing, shipping, and tourism, contribute over \$1 trillion a year to the U.S. economy.

Unfortunately, without proper management, the quality of many of these activities may be threatened by sewage discharges from boats.

While sewage primarily comes from land-based sources, such as runoff from livestock operations or inadequately treated effluents from sewage treatment facilities, sewage discharged from boats and ships also affects aquatic environments. The impacts from vessel discharge can be especially problematic in marinas, slow moving rivers, lakes, and other bodies of water with low flushing rates. Americans spend many hours fishing and swimming. Direct contact with or ingestion of shellfish inhabiting environments polluted with untreated or inadequately treated sewage increases the risk of bacterial and viral illnesses.

WHAT IS VESSEL SEWAGE?

- Vessel sewage is untreated or inadequately treated human wastes discharged from vessels.
- If it is not treated properly, vessel sewage can contain high concentrations of pathogens, such as viruses, bacteria, and protozoa.

WHY IS CONTROLLING VESSEL SEWAGE IMPORTANT?

- **Health:** When beaches are closed, it is often due to sewage contamination. Swimming and wading in waters with inadequately treated sewage increases the likelihood of contracting diseases, such as infectious hepatitis, diarrhea, bacillary dysentery, skin rashes, typhoid, and cholera.
- **Food:** Sewage contamination can contaminate shellfish beds. Since oysters and clams are filter feeders, bacteria and viruses that contaminate shellfish can be passed on to consumers who often eat these foods raw.
- **Environment:** Sewage contains large concentrations of nitrogen which is a source of food for algae. Excess algal growth can starve an aquatic ecosystem of oxygen thereby stressing fish, and in extreme cases causing fish kills. Excess algal growth can also smother and kill coral reefs and lead to a loss of biodiversity.



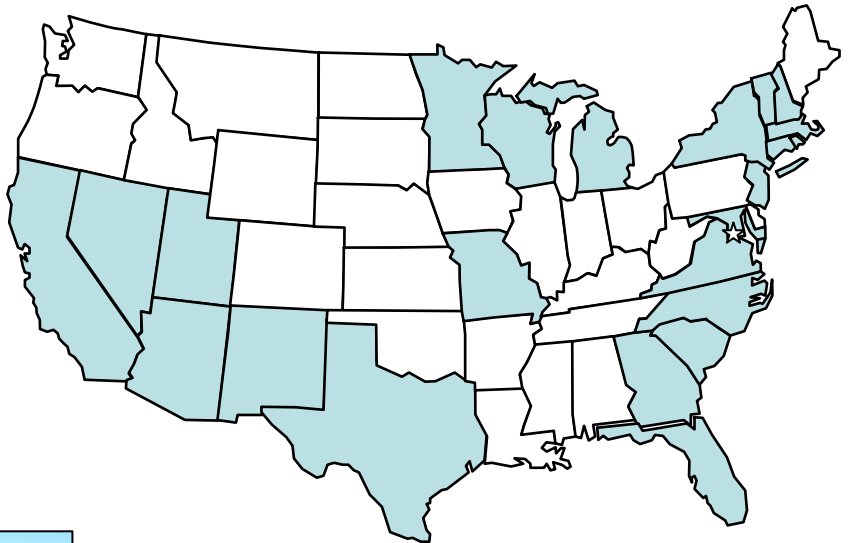
WHAT IS EPA DOING TO CONTROL SEWAGE FROM VESSELS?

EPA uses multiple tools to control the potential impact of vessel sewage.

- The Marine Sanitation Device (MSD) program sets standards for vessel toilet systems that depend on the size of the vessel. Some systems place the sewage into a storage tank while others treat and release sewage. EPA sets MSD performance standards; the U.S. Coast Guard certifies MSDs to ensure they meet the standard.
- The No-Discharge Zone (NDZ) program establishes aquatic areas where boats are not allowed to discharge sewage of any kind. Within NDZ boundaries, boaters are required to store sewage onboard their boats for disposal at appropriate facilities such as onshore pump-out stations. Certain special NDZ sites are Federally designated while most NDZs are a result of States applying to EPA to designate specific waterbodies as NDZs.
- As cruise ships have increased in size and the cruise ship industry has grown, there is increasing Federal, state, and public concern about the potential impacts of their sewage on the environment. Currently, EPA is researching the environmental impacts of sewage released from cruise ships to better understand what additional controls may be needed.



States with No-Discharge Zones as of January 18, 2006



HOW CAN I OBTAIN MORE INFORMATION ABOUT MSDs AND NDZs ?

- Visit our website at www.epa.gov/owow/oceans/regulatory/vessel_sewage/ .
- For more information on Marine Sanitation Devices visit www.epa.gov/owow/oceans/regulatory/vessel_sewage/vsdmsd.html .
- For more information on No-Discharge Zones visit www.epa.gov/owow/oceans/regulatory/vessel_sewage/vsdnozone.html .
- Contact the Oceans and Coastal Division at (202) 566-1200.