Prevent Poo in the Blue
A Bulletin for Marinas

What happens...

Human sewage in the ocean & waterways can cause human illnesses such as norovirus (the “stomach flu”), which causes nausea, vomiting, diarrhea, stomach pain, and sometimes fever. There are millions of cases each year in the U.S. alone, resulting in 1,000s of hospitalizations and 100s of deaths. It spreads through the fecal-oral route (poop to mouth), by way of food, water, objects, surfaces, and other people.

Reduce the Risk

1) Raise awareness. Post information about these risks where boaters can see it.

2) Provide functional facilities for boat waste disposal.

3) Post information about proper handwashing practices.
   • Hands should be washed with soap and water, and dried with paper towels.
   • Hands should be washed often, especially after using the bathroom.
   • Do not rely on hand sanitizers alone, they are not completely effective against norovirus. Provide handwashing facilities.

Poop matters.

Just one person’s poop is enough to cause an outbreak.

• 1 gram of poop, about the weight of a fish hook, can contain millions of virus particles.
• It only takes 10-100 viruses to get sick.
• The waste from one person can contaminate an area about the size of 25 football fields.

Boaters once contaminated a U.S. Gulf Coast waterway by dumping human waste overboard. Oysters harvested from that area caused a norovirus outbreak that sickened 200 people across 6 states. It only took this one incident to cause the outbreak.

Produced by the USDA-NIFA Food Virology Collaborative (NoroCORE). For more info, visit norocore.ncsu.edu or email norocore-admin@ncsu.edu. NoroCORE is supported by a grant from the United States Department of Agriculture, National Institute of Food and Agriculture. NCSU NC #005.