



Standard Operating Procedures for:

## Water and Wastewater

## I. Potable Water

a. Overview

The Serenity is equipped with 5 80-gal potable water tanks for a total of 400-gal of potable water, which is far more that is likely necessary for a week of use. This water is pressurized for use by a 12-volt ShurFlo 3-GPM water pump. All the potable water aboard Serenity passes through a WaterFixer 3-stage filtration system, which has a 5.0-micron pre-filter, a 0.5-micron filter, and an Ultra-violet Light Exposure Chamber. The system also has a 10-gallon Reliant Hot Water Heater to provide hot water.

- b. Filling the Potable Water Tanks.
  - i. The potable water fill connection is located on the starboard side just outside the sliding glass door by the lower helm station. It is a standard female hose connection.
  - ii. It is recommended that the potable water tanks be filled at the slip, prior to departure, but you can also fill the potable water tanks at the pump out stations.
  - iii. If filling from the pump out station, you must take some additional precautions.
    - 1. Ensure that you are using the Potable water hose.
    - 2. Clean the connection with bleach.
    - 3. Flush the hose, running it over the side, for 30-seconds.
  - iv. Connect the potable water hose to the fill connection.
  - v. Turn off the Water Pressure breaker to secure the potable water pump.
  - vi. Open the Fill Valve on the starboard side of the hatch just behind the lower helm station. If this valve is not opened, the hose will pressurize the boats water system, which is useful for having water in the slip without having to fill the tanks or run the pump.
  - vii. Turn on the potable water.
  - viii. You cannot overfill the water tanks, there is an overflow on the port side.
  - ix. Once tanks are filled, turn off the water, close the Fill Valve, and disconnect the hose.
- c. Operation
  - i. The Water Pressure breaker on the breaker panel controls the water pressure pump, which pressurizes the entire potable water system.
  - ii. Potable water is used at all sinks and in the main shower.
  - iii. The Water Pressure system should not be left on when not in use, but should be energized only when called for. If the pressure system is left on, the system may

gradually lose pressure and the pump will run intermittently and the WaterFixer system remains energized, which can be a voltage draw on the 12-volt house batteries. Additionally, if a faucet is inadvertently left open or dripping, you can quickly run out of potable water.

## II. Wastewater Holding Tanks

a. Overview

The Serenity is equipped with 3 80-gal holding tanks for a total of 240-gal of Blackwater storage. These tanks must be pumped out at the conclusion of your use of the houseboat and primed for the next user. Pump out stations are located throughout the lake or you may contract with Executive Services, at your own expense, to have the Poo-topia pump the houseboat out at the slip.

- b. Pump Out Operations
  - i. Holding tank access plate is located under an access hatch on the front of the starboard engine compartment hatch.
  - ii. Open access hatch and remove cap.
  - iii. You can backfill the holding tank with non-potable water from the pump out station to thin the contents of the tanks and make it easier to pump. However, be careful not to overfill the tanks.
  - iv. Place the pump out hose on the pump out connection. If available utilize the screw in connection. If connector is not available at pump out station, you must hold the pump out hose firmly in place until the pump is turned off and the suction has dissipated.
  - v. Energize the pump and suck out the contents of the holding tanks. And shut the pump down.
  - vi. Fill the holding tanks at least half full of non-potable water, which should be done both by backfilling through the pump out connection and by pumping water through the heads.
  - vii. Repeat steps iv and v. This time, you can add non-potable water during pump out by repeatedly flushing the heads in the houseboat.
  - viii. At this point the material being pumped out of the holding tank should be fairly clear, if not, fill the tanks with non-potable water again and repeat steps iv and v.
  - ix. Never trust tank level gauges and always verify the tank levels by getting down into the hold and checking the level in the holding tanks by placing a flashlight between the tanks.
- c. Maintaining the System. Upon completing pump out, prime the system by pouring 5-gal of water mixed with 6-oz of Camco TST, or similar marine head treatment into each toilet (that is 10-gal total with 12-oz of Camco TST). This enzymatic treatment should help to keep down odors and will aid in the breaking down of waste.