



People Can Make a Difference in Water Quality

Nancy Diersing, FKNMS Education Specialist

The Sanctuary Advisory Council (SAC) of the Florida Keys National Marine Sanctuary has named water quality as its number one priority. Why are citizens and resource managers so concerned about water quality? Simply put, degraded water conditions resulting from nutrient enrichment and pollution damage the seagrass and coral reef communities that are national treasures and critical to the fishing- and tourism- based economy of the Florida Keys.

What can individuals do to help restore water quality to the clean and clear conditions that once existed in the Keys? According to U.S. Environmental Protection Agency scientist Dr. Bill Kruczynski, "There are many ways for residents and visitors to help improve water quality. First, it is important to understand that the Keys are made of porous limestone rock. Any chemicals or pesticides that are deposited on the ground can seep into the underlying limestone rock, reaching the groundwater and then eventually the nearshore waters." In fact, the geology of the Keys makes it easy for substances to reach the nearshore waters by way of the groundwater in a very short period of time. Scientists have observed that when the tides change, the groundwater in the limestone flows back and forth, just like the water does in the passes between the islands. "Thus, if chemicals, detergents or pesticides must be used in the house or yard, use them sparingly and dispose of containers properly at hazardous waste sites," he added.



Using a pump-out station to properly dispose of sewage is one way boaters can reduce nutrient inputs to nearshore waters.

To decrease nutrient inputs into local waters, citizens should support efforts to improve sewage treatment to Advanced Wastewater Treatment (AWT) standards. High treatment standards will help restore water quality by removing nutrients. Approved treatment methods will also prevent bacteria that are potentially harmful to humans from getting into nearshore waters. Lower nutrient levels mean less chance of triggering a microalgal "bloom," or sudden population explosion of microscopic algae in the water column. Blooms reduce water clarity and often lead to lower dissolved oxygen conditions, which can be harmful to fish and other marine life. Lower dissolved oxygen levels occur after the microalgae die and begin to decay, a process that uses up dissolved oxygen in the water. Lobster and fish carcasses should be placed in the trash, not thrown back into the water, especially a canal, for the same reason--they use up dissolved oxygen during decomposition.

People who live, work and play on the water have a special responsibility to be stewards of clean water. Boaters should keep boat engines in good running condition and use pads to soak up bilge water, instead of pumping it out into nearshore waters. While underway, special precautions should be taken to stow trash and

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For more information about:

Household Guide to Coral Reef Protection
http://www.ficus.usf.edu/docs/guide_reefs/housguid.htm

Clean Boating Habits/Clean Marina Program
www.dep.state.fl.us/law/Grants/CMP/

Florida Yards and Neighbors Program
<http://monroe.ifas.ufl.edu/fyn.htm>

properly dispose of it on land. Old gasoline, used oil, old flares, used batteries, paint stripper and bilge pump switches containing mercury should be disposed of at proper hazardous waste facilities. Sewage generated on board should be pumped out at a marina pump-out service; it is a violation of Federal law to discharge sewage in the state waters of the Sanctuary. Marina owners can opt to join Florida's Department of Environmental Protection's **Clean Marina Program** which outlines procedures marinas can follow to protect Florida's coastal resources. By adopting the environmentally friendly landscape practices outlined by the University of Florida's **Yards and Neighbors Program**, home and business owners can decrease stormwater runoff from land into nearshore waters. Planting a berm of native vegetation along the shoreline to filter stormwater pollutants and reducing the amount of fertilizer used on lawns and golf courses are just a few practices suggested by the **Yards and Neighbors Program**.

*Note: This article appeared in the Winter 2002 issue of the newsletter of the Florida Keys National Marine Sanctuary, **Sounding Line**. For more information, visit: floridakeys.noaa.gov.*