

## County taking a holistic approach to water quality

By Brandon Moody

Longtime enthusiasts of Charlotte Harbor are likely familiar with the ever-important seagrass beds that line the harbor floor. These shallow-water systems are among the most productive in the world; it's estimated that as much as 80% of commercially and recreationally important fish and shellfish rely on seagrass habitat at some stage of their life cycle. Seagrass beds provide food and shelter to such sea life as juvenile tarpon, green turtles, and manatees.

The Southwest Florida Water Management District recently released its biennial Charlotte Harbor seagrass maps. Between 2018 and 2020, Charlotte Harbor saw a 4,615-acre decline in seagrass habitat from 19,715 acres in 2018 to 15,100 acres in 2020. This represents a 23% loss in mapped seagrass acreage harbor-wide and the lowest mapped acreage since the district began mapping seagrasses in 1988.

Seagrass rely on good water clarity and quality to stay healthy. For example, excess nutrients in the harbor can help drive increased algal growth, which in turn can harm seagrass by reducing the amount of light that reaches them. Many state and regional entities are actively studying how sea level rise, red tide, hurricanes, and human disturbances can impact seagrass beds and other aquatic habitats within this dynamic ecosystem. We still have much to learn about how these drivers shape the health of the harbor, but Charlotte County and its partners continue to monitor and address potential impacts to seagrass habitat and identify sources of water quality impairments. These efforts include:

- The Coastal and Heartland National Estuary Partnership and Charlotte Harbor Aquatic Preserves coordinate monthly water quality sampling events within Charlotte Harbor. CHAP has conducted annual seagrass population assessments throughout the harbor since 1999. Charlotte County is designing a water quality monitoring network which will allow us to better understand how upland activities contribute to the water quality of Charlotte Harbor and the Caloosahatchee River.
- Past studies have shown septic drain fields are major contributors of nutrients to our waterways. Since 2007, Charlotte County has converted approximately 2,300 homes from septic to sewer. Planning is underway to add approximately 2,014 sewerage connections over the next five years in the Ackerman-Countryman and El Jobean areas.

Here are some ways you can help reduce your nutrient footprint and protect seagrass habitats:

**Think before you fertilize:** Did you know Charlotte County has a fertilizer ban ordinance? With few exceptions, fertilizer may not be applied to turf or landscape plants from June 1-Sept. 30. Please do your part to reduce nutrient runoff into the harbor.

**Take the Clean Boater Pledge:** Help protect our waters by following the Florida Department of Environmental Protection's clean boater habits. Be vigilant when boating in shallow waters; prop scarring can cause extensive damage to seagrass beds and other shallow water habitats.

It is important to remember that despite this news, the harbor is still home to more than 15,000 acres of seagrass habitat. Charlotte County, SWFWMD, CHAP, FDEP, CHNEP, Fish and Wildlife Conservation Commission, and many other organizations continue their vital work to

assess, enhance, and protect the health of the harbor. Stay tuned for future articles discussing these initiatives and other related topics, including development of the One Charlotte, One Water Plan. In the meantime, please visit [www.charlottecountyfl.gov/OneCharlotteOneWater](http://www.charlottecountyfl.gov/OneCharlotteOneWater) for more information on the resources and opportunities described above.

*Brandon Moody is the Charlotte County water quality manager. Readers may reach him at [Brandon.Moody@CharlotteCountyFL.gov](mailto:Brandon.Moody@CharlotteCountyFL.gov).*