

WHO'S SAMPLING OUR WATER?



Image: City of Bolder Colorado

Maintaining good water quality is essential to maintaining the health of our harbor. Water quality refers to the condition of water relative to legal standards, social expectations or ecological health. In order to track water quality conditions in the harbor and identify specific areas of concern, long term water quality monitoring is a must.

A number of organizations conduct water quality monitoring water quality in Charlotte Harbor and its adjacent tributaries. What follows is a look at some of the organizations who conduct water quality monitoring and the reasons why:

FDEP, Charlotte Harbor Aquatic Preserves

Volunteers – Conduct monthly sunrise sampling at 40+ fixed locations from Lemon Bay to Estero Bay. Initiated in 1996, trained volunteers sample mostly near shore shallow waters. Sunrise sampling serves to identify Dissolved Oxygen levels (necessary for plant & animal survival) at their lowest levels.

FDEP Environmental Assessment and Restoration South Regional Operation Center – Conducts monthly sampling on Shell Creek, Prairie Creek, and Horse Creek at a total of 6 stations in support of the Shell Creek and Prairie Creek Watersheds Management Plan. They also perform water sampling in Charlotte, Collier, DeSoto, Glades, Hendry, Highlands, Lee, Monroe and Sarasota counties on a 3-5 year rotating basis in support of the states Impaired Waters Rule to help determine the overall health of the waterbodies of Florida.

Peace River Manasota Regional Water Supply

Authority – Monitors water quality in the Peace River at fixed stations and moving isohaline (salinity) stations. Initiated in the 1970s, this sampling is designed to ensure water withdrawals do not adversely affect downstream harbor health.

City of Punta Gorda – Monitors water quality in Shell Creek to ensure water withdrawals do not adversely affect downstream water quality.

Florida Fish and Wildlife Conservation Commission, FWRI – Samples water quality with all of their fisheries sampling. This helps them determine how different fish species and size classes respond to water quality changes, such as those observed seasonally in regards to salinity, temperature and dissolved oxygen. They also conduct water quality sampling for the Charlotte County Stormwater monitoring project that is detailed next.

Charlotte County Stormwater – Monitors water quality at 30 randomly selected locations monthly, by dividing the estuary into 5 distinct regions and then randomly selecting 5 points within each region (i.e. 5 in the Lemon Bay region, 5 in the Gasparilla Sound region, ect.). Initiated in 2001, the random design allows more of the harbor to be sampled, which over time produces more statistically valuable information. This project is conducted in collaboration with the Southwest Florida Water Management District, FWRI, and the Charlotte Harbor National Estuary Program. Lee County waters are also sampled using the same monitoring approach.

Florida Department of Health – Monitors bacteria levels at public bathing beaches. Data is available online at <http://www.floridahealth.gov/environmental-health/beach-water-quality/>. The presence of enteric bacteria can be an indication of fecal pollution, which may come from stormwater runoff, pets and wildlife, and human sewage. When present in high concentrations in recreational waters and are ingested while swimming or enter the skin through a cut or sore, they may cause human disease, infections or rashes. Beaches that exceed safe bacteria counts are issued an advisory which may result in closure until water quality conditions improve.

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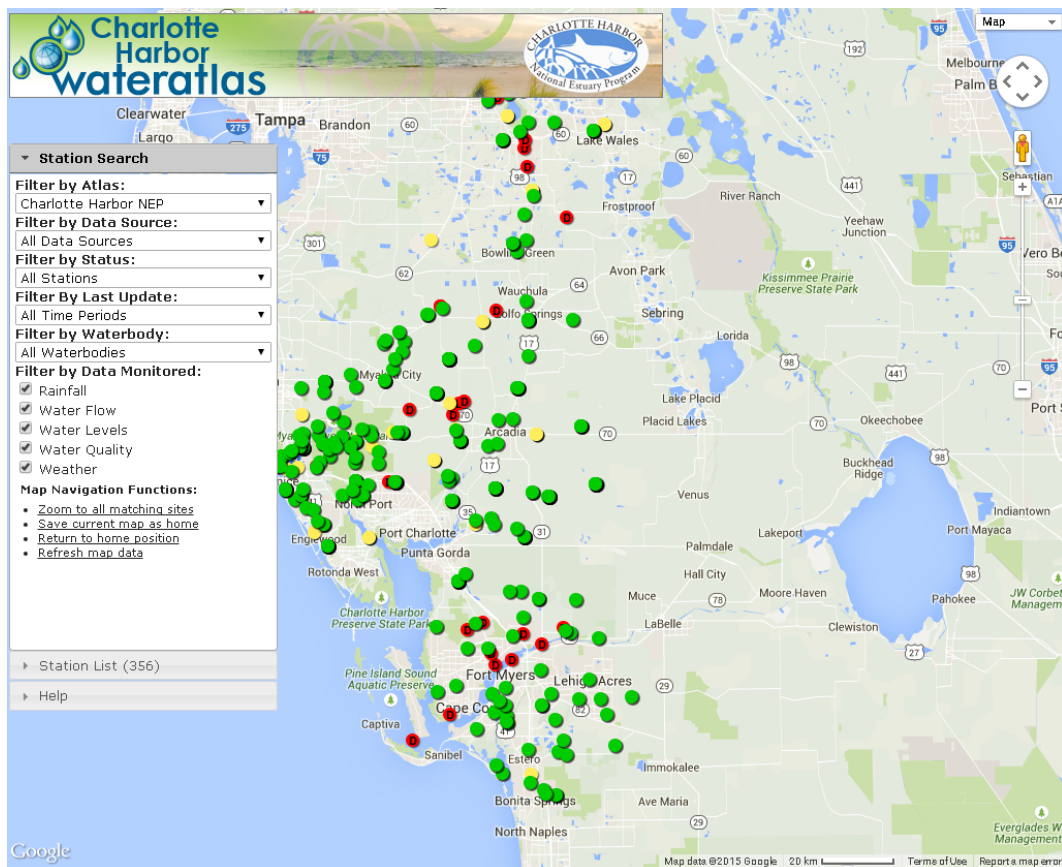
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Florida Department of Agriculture and Consumer Services (DACS) – Monitors water quality conditions in waters conditionally approved for shellfish harvesting. Shellfish can only be harvested from waters classified approved, or conditionally approved. Areas classified conditionally approved are periodically closed to harvesting based on pollution events, such as red tide, rainfall or increased river flow. DACS Shellfish Environmental Assessment Section (SEAS) is responsible for classifying and monitoring shellfish harvesting areas. The status of shellfish harvesting areas can be obtained online by visiting: http://shellfish.floridaaquaculture.com/seas/seas_statusmap.htm

Information collected by each of these programs is used by State and Federal agencies to determine whether the water quality is meeting its designated use (drinking water, shellfish harvesting, or recreational). If a water body or water body segment does not meet its designated use then it receives a TMDL (total maximum daily load). A TMDL is essentially a plan which outlines actions that will be taken to get water quality back to meeting its intended use. In addition to supporting the TMDL process, water quality data collected by the various agencies and organizations mentioned also supports specific research and resource management objectives. For instance, water quality data collected by FWRI is used to help determine physical conditions that effect habitat utilization of particular fish species.

Some of the water quality information mentioned above is available in really cool map format on the Charlotte Harbor Watershed Atlas. Just click here: <http://www.chnep.wateratlas.usf.edu/> and then select mapping. You can also get water quality graphs or raw data from this same website.



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