



## Water Quality Monitoring Program Documents High Organic Nitrogen



Baffin Bay's community-based Water Quality Monitoring Program established in 2013 gains momentum as water samples begin to paint a picture. Volunteers and scientists have wrapped up another year, and the first of a three year effort funded by Celanese to document water quality conditions in the Baffin Bay system. After analyzing the water samples, the group has made what they believe to be a critical finding when it comes to potential causes of brown tide, that concentrations of dissolved organic nitrogen in Baffin Bay are 3-fold higher on average than in other bay systems of the Texas coast (Corpus Christi, San Antonio, Lavaca-Colorado).

Principle Investigator Dr. Mike Wetz, Associate Professor in the Department of Life Sciences at Texas A&M University - Corpus Christi, states "I believe that these very high levels of organic nitrogen are the key to brown tide, based not only on our observations but those from other brown tide-dominated systems, and thus an important next step will be to determine the main sources of the organic nitrogen."

Nitrogen compounds are found in many forms in bay systems as plants and animals grow, reproduce, and decompose, but it is unusual for the organic concentrations to be so high. The reason this finding is significant, is because the brown tide organism can use organic nitrogen for growth, and this ability has been speculated to be important for allowing brown tide to outcompete other phytoplankton.

"These studies are establishing a baseline for us to better understand Baffin Bay so that good management decisions can be made by our resource managers. It also allows us to interact with the people living and working in Baffin Bay, by providing volunteer opportunities to assist in recording basic water quality parameters, and collect water quality samples for scientists to analyze" said Rae Mooney, Project Manager at the Coastal Bend Bays & Estuaries Program.



Photo: CBBEP File

This project is part of a larger effort spearheaded by the Baffin Bay Study Group (BSBG), which was formed to support interests in resolving Baffin Bay water quality and biological productivity concerns. The group meets regularly and interested parties are encouraged to attend. To learn more about BBSG efforts and get up to date meeting information visit <http://www.cbbep.org/baffin-bay/>.

View the full report at: [http://www.cbbep.org/manager/wp-content/uploads/1513\\_final\\_report\\_August2015.pdf](http://www.cbbep.org/manager/wp-content/uploads/1513_final_report_August2015.pdf)



Photos: Texas A&M University – Corpus Christi



The Coastal Bend Bays & Estuaries Program is a non-profit organization dedicated to protecting and restoring bays and estuaries in the 12-county region of the Texas Coastal Bend. CBEP is partially funded by the Texas Commission on Environmental Quality and the U.S. Environmental Protection Agency.

For more information about the Coastal Bend Bays & Estuaries Program, contact Kathryn Tunnell at (361)885-6202 or [ktunnell@cbbep.org](mailto:ktunnell@cbbep.org).

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