

Scientist Studies the Algae Bloom Issue

Brian Lapointe, a research professor at Florida Atlantic University's Harbor Branch Oceanographic Institute, has devoted his scientific career to studying water quality issues for more than three decades. Lapointe has presented his findings before the Florida Legislature and numerous local and state executive agencies. He recently talked about his work in an interview with G.B. Crawford.

Crawford: The emergence of widespread algae blooms in water bodies on both sides of the peninsula as well as outbreaks of red tide in the Gulf of Mexico in recent years have intensified public debate over water issues in South Florida. Brian Lapointe's comprehensive examinations of water quality throughout the region convince him that the problem can be minimized if Floridians are willing to take action.

Lapointe: My research in the Florida Keys has shown that septic tanks in the Florida Keys were a big part of the problem with water quality and algae blooms. They can be major sources of nitrogen in the form of ammonium and nitrates that feed algae blooms. Also, other contaminants like bacteria and pharmaceuticals and organic wastewater compounds are all coming from that septic tank effluent.

Crawford: After the installation of mandated wastewater treatment systems in various areas around the keys, water quality noticeably improved, Lapointe noted. Based upon his examination of a large number of freshwater samples from South Florida, he has concluded that the same solution would effectively limit nitrogen within internal waters.

Lapointe: We know that wastewater is a rapidly growing source of nitrogen feeding these algae blooms. We have done a lot in the past several decades about dealing with farm runoff and with fertilizer applications. In many cases on the Indian River Lagoon, we have ordinances – I think over 40 since 2011 – that restrict fertilizer applications in the wet season. We have similar ordinances up and down the West Coast of Florida.

What we have not been doing is dealing with the human wastewater-nitrogen footprint. Septic tanks are going into the ground pretty much every day. We are growing rapidly. Eleven hundred people every day are moving into Florida.

The problem is really getting out of control to the point that it is supporting these expanding, harmful algal blooms.

Crawford: According to Lapointe, public policy must address the primary source of the problem. The installation of wastewater treatment systems can prevent the emergence of large-scale algae blooms in the future. In the meantime, South Florida's natural environment and economy are at risk.

Lapointe: We are all aware that fertilizers are a big part of the problem. And we have been taking action to try to reduce those fertilizer impacts that we are seeing around the state. We now need to focus on cleaning up the human nutrient source from wastewater. We have met the enemy and they are us.

Crawford: This is G.B. Crawford for Florida Farm Bureau's *Newsline*.