

HURRICANE IAN AND WATER QUALITY IN CHARLOTTE COUNTY: COLLABORATIONS, OBSERVATIONS, LESSONS LEARNED

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In the aftermath of Hurricane Ian, multiple local, regional, and state entities coordinated alongside academic institutions to collect surface water chemistry data throughout coastal SW Florida, in an effort to identify potential near-term impacts of the storm event on water quality in the region. In Charlotte County, expected increases in fecal indicator bacteria (FIB) counts and 5-day biochemical Oxygen Demand concentration were observed in the days and weeks following the hurricane, alongside declines in dissolved oxygen. Recovery and return to pre-storm conditions in certain areas occurred within as little as three to four weeks, while other regions showed heightened FIB bacteria counts in the months following. Limited microbial source tracking studies in areas with protracted elevated FIB sample counts indicated untreated wastewater may not have been the primary contributing factor to said high counts. However, sucralose was detected in most samples, possibly due to discharges from multiple reclaimed water holding ponds found throughout the region.

In addition to providing insight into Ian's impacts upon our coastal ecosystem, this joint sampling effort highlighted the strength of the interagency partnerships throughout the region. Within a few days of Hurricane Ian's landfall, multiple entities swiftly coalesced around a sampling strategy, pooling what resources were available within each organization at that time. Still, many logistical hurdles had to be navigated in the moment that, with sufficient pre-planning, could potentially have been avoided. The experiences of this effort shine a spotlight on the need to establish a formal process for future storm response sampling events, alongside allocation of resources dedicated to supporting such efforts.

PRESENTER BIO: Brandon Moody is the inaugural Water Quality Manager for Charlotte County, developing monitoring and protection strategies while fostering inter-departmental coordination of related activities. Previously, Mr. Moody spent nearly 20 years in watershed regulation, monitoring, and assessment with the South Florida Water Management District and Georgia Environmental Protection Division.