

The Coastal Charlotte Harbor Monitoring Network, an inter-agency, collaborative coastal water quality monitoring program for Charlotte Harbor, Florida

Catherine A. Corbett

Charlotte Harbor National Estuary Program, 4980 Bayline Drive, North Fort Myers, FL 33917

Biographical Sketch of Author

Catherine Corbett is the Senior Scientist for the Charlotte Harbor National Estuary Program. From 1993-1995, she worked as a wildlife biologist in Morocco's Tazekka National Park, conducting field research for a Barbary sheep census, park species inventories, cave management plan and a pastoral use survey of park inhabitants. She has worked at IUCN-The World Conservation Union and the Atlantic Center for the Environment, on natural resource issues and conflict mediation. Ms. Corbett received a B.S. degree in Zoology and Minor in Physical Geography from Miami University in 1991 and a Master's degree in International Development from Clark University in 2000.

Abstract

Charlotte Harbor is the second largest open water estuary within Florida. The bay covers approximately 270 square miles, while the watershed extends over roughly 4,400 square miles. Charlotte Harbor and its watershed include all or part of eight counties, and two water management districts and two districts of the Department of Environmental Protection have jurisdiction over water supply and environmental regulation. The interconnected jurisdictions of these institutions have created both management opportunities as well as critical gaps. Water quality monitoring programs in the region are designed to sample for analytes and in areas that are of interest to the individual monitoring agency. The number of individual monitoring sites, the frequency of the collection and the sampled analytes at each site are highly variable, depending on the resources of each individual agency. Monitoring agencies also often use different protocols for lab analysis and sample collection. These inconsistencies can result in data gaps and incomparable data across basins. A major goal of the Charlotte Harbor National Estuary Program has been to help facilitate inter-agency cooperation and coordination to utilize the region's assets for more collaborative natural resources management and research.

In April 2001 an inter-agency, cooperative monitoring network—the Coastal Charlotte Harbor Monitoring Network—was initiated to monitor the coastal Charlotte Harbor region for essential nutrient, biological and field parameters. The Network uses a probabilistic design, based upon EPA's Environmental Monitoring and Assessment Program (EMAP) that subsegments Charlotte Harbor into 12 strata with 5 randomly selected sites per month per stratum. The Southwest and South Florida Water Management Districts; Charlotte and Lee Counties; FDEP-Charlotte Harbor Aquatic Preserves; Florida Marine Research Institute and Cities of Cape Coral and Sanibel divide monitoring and lab analyses responsibilities, while the Charlotte Harbor NEP has overall program management and data analysis responsibility for this Network.