

2017 MWMC Carl Weber Award – Dr. Walter Boynton



Dr. Boynton is a Professor at the Chesapeake Biological Laboratory (CBL), University of Maryland Center for Environmental Science and has been a faculty member at CBL since 1975. Boynton's research expertise is estuarine ecology, particularly issues related to eutrophication and ecosystem restoration.

He has published over 100 scientific papers and many more technical reports related to water quality, habitat and restoration issues. All of this research involves coastal and estuarine eutrophication and restoration of these ecosystems. In 2009, Dr. Boynton and Dr. Michael Kemp were awarded the Odum Award for Lifetime Achievement from the Coastal and Estuarine Research Federation. In 2016, he was awarded the Mathias Medal from MD and VA Sea Grant and the Chesapeake Research Consortium and, during 2017, he received the Ruth Patrick Award from the Association for the Sciences of Limnology and Oceanography.

As you can tell, Dr. Boynton has been busy over the last 4 decades, not only teaching the next generation of environmental stewards, but providing a solid foundation for others to continue to build upon. Here are a few highlights from his research efforts which helped him earn the designation as Admiral of the Chesapeake by Governor Martin O'Malley in 2015.

- Dr. Boynton explored the location, timing and factors controlling the success (or failure) of striped bass recruitment in the Bay. These studies helped identify factors causing the striped bass decline and supported the adoption of a fishing moratorium, a management practice that eventually led to a resurgence in the striped bass population.
- He helped design, implement and institutionalize the comprehensive Chesapeake Bay Monitoring Program. This program, established in 1983-84, is widely considered one of the best in the world and continues to this day.
- Walter co-led a team of scientists who clarified the causes and ecological consequences of the huge seagrass decline in the Bay.

- He played an important role in arguing for a dual nutrient control strategy for the Chesapeake system. General scientific belief used to say that only phosphorus was important in controlling eutrophication in estuaries. Boynton and his colleagues Dr. Michael Kemp (Horn Point Laboratory) and Ms. Carolyn Keefe (CBL) helped to change that view by publishing perhaps the first paper showing that nitrogen plays a key role in the eutrophication of many estuarine ecosystems. This paper is still highly cited today – a sign of its scientific importance.
- Dr. Boynton also initiated routine measurements of key sediment processes throughout the Bay system as part of the Bay monitoring program. These measurements have proven to be key processes influencing Bay eutrophication. The data generated from this effort has been called "The Gold Standard" for judging water quality model performance.

Anyone who has met Dr. Boynton would agree that he has a gift for turning numbers and figures into captivating stories that aid policy-makers in their decision making and engage the public into caring about our precious water resources. He has worked with the Maryland Department of Natural Resources since 1985 to guide monitoring programs, interpret and analyze data, and foster new monitoring technologies such as continuous monitoring and water quality mapping (DATAFLOW), to further our understanding of the spatial and temporal character of water quality processes, their causes, and remedies.