

The Coastal Waters Consortium Presents:

Scientist Spotlight



Dr. William Carter

What is your educational background?

BS Civil Engineering University of Pittsburgh, MS Geodetic Science, Ohio State University, PhD Civil Engineering, University of Arizona

What inspired you to become a scientist?

As a newly Commissioned Officer in the U.S. Air Force I was assigned as a Geodetic Officer, Team Chief, and Observer, to make astronomic latitude and longitude observations at ICBM sites. I enjoyed the work and successfully applied for an Air Force Institute of Technology (AFIT) assignment to study Geodetic Science at Ohio State University. The rapid advances of space age technology made possible powerful new geodetic observing methods (lunar and satellite laser ranging, very long baseline interferometry, airborne light detection and ranging (LiDAR), , and the measurements collected by these advanced technologies enable many branches of science, as diverse as geomorphology, oceanography, and archaeology. Enabling advances in such a wide variety of scientific research is very satisfying.

Can you describe what you enjoy the most about conducting scientific research?

Interacting with scientists and providing information that enables the research of many fields of science is extremely rewarding. In the past few years the application of airborne light detection and range (LiDAR) to geophysics, geomorphology, and archaeology has profoundly changed the practice of those branches of science. In the case of archaeology airborne LiDAR is proving to be important as radio carbon dating was when it was introduced decades ago. The ability to map the ruins of ancient cities hidden in dense vegetation, including even rain forests, marks the beginning of a new era in prospective archaeology.

What is your role as a scientist for CWC?

I am the chief scientist for the National Center for Airborne Laser Mapping (NCALM). I work with NCALM staff members to collect research quality airborne lidar, digital photography and hyperspectral observations for researchers. NCALM collected airborne lidar and hyperspectral observations to support the oil spill research led by Michael Kearny, University of Maryland.

Can you summarize your oil spill research and describe any surprising findings you have come across?

We collected, processed and delivered airborne lidar and hyperspectral observations to Michael Kearny at the University of Maryland. The images we produced met our expectations, with no surprising findings.

The Coastal Waters Consortium's mission is to assess the chemical evolution, biological degradation, and environmental stresses of petroleum and dispersant within Gulf of Mexico coastal and shelf ecosystems.