

The Coastal Waters Consortium Presents:

# Scientist Spotlight



## Jane Tucker

### What is your educational background?

I have a B.S. in Zoology from the University of North Carolina-Chapel Hill, and an M.S. in Marine Sciences, also from UNC.

### What inspired you to become a scientist?

I was always interested and curious about the natural world. I was the nerdy kid who asked for a microscope for Christmas but also love to be outdoors. I had an aquarium as well as a variety of rescued pets, loved to identify seashells and tree leaves, and of course watched Jacques Cousteau and Wild Kingdom. I grew up on the coast of NC, and loved the oceans and marshes. I wanted to know what and why. So for me, a career in science was the obvious path to take.

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

I enjoy the range of work that is required to do our science, from field work to laboratory analyses to data analysis to writing, and the various challenges that come with each type of work. I enjoy puzzles. I enjoy working in a team of great people. But the “hook” of science itself is the unexpected result or observation....for example when organisms do things they “are not supposed to do”. It forces us to keep our minds open to new understanding and offers new puzzles to solve!



### What is your role as a scientist for CWC?

I work with PIs Anne Giblin, Brian Roberts, and Ann Bernhard studying the effects of oil exposure on nutrient cycling in marsh sediments. My primary role has been to analyze samples and process data to determine rates and pathways of nitrate reduction using membrane inlet mass spectrometry and stable isotope techniques.

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

Our group wants to understand if and how the oil exposure altered the microbial community in marsh sediments, and therefore the biogeochemical processes active in the marsh. The surprise has been that we have not found strong differences between oiled and unoled sites. However, our study began 2 years after the spill, so these results may speak to an ability of the microbial community to rebound more quickly than we might have anticipated. Experiments that mimic the effects of a fresh spill will be the next step in our study.

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.