

The Coastal Waters Consortium Presents:

Scientist Spotlight



Dr. Anne Bernhard

What is your educational background?

I got my undergraduate degree in biology from Texas A&M University, then went on to get a master's in Environmental Science from Western Washington University, and a PhD in microbiology from Oregon State University.

What inspired you to become a scientist?

Watching National Geographic episodes with Jacques Cousteau and spending summers at the beach in Galveston, TX inspired me to want to become a marine biologist. I also had a great high school biology teacher who made learning about biology really fun and interesting. He used to do the "bee dance" with an orange traffic cone on his butt to demonstrate how bees communicate with each other. I always thought I would be a whale biologist, but ended up studying phytoplankton as a master's student and really fell for the microbes.

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

I like figuring out how things work and then getting to tell it as a story. I like getting to work with other scientists as a team to answer questions that none of us could answer by ourselves. I still get excited when I get to play with new data set, to see if I can find the patterns, and then figure out how to explain the patterns in some way that makes sense ecologically and biologically. Thinking really hard about puzzle and then finally solving it is incredibly satisfying work.



What is your role as a scientist for CWC?

I am working with other scientists to understand how microbial communities and soil processes are impacted by oil. I measure the abundance and diversity of the microbial populations, particularly those involved in nitrogen cycling, and try to relate the microbial information to the soil processes that are occurring in the sediments.

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

My role during response has been coordinating scientific inputs to support response decision making. This has involved communicating science in lay terms, as well as risks and impacts to decision makers and communities affected by an oil spill. To this end, I've been the PI for two multi-disciplinary oil spill and dispersant risk communication research projects. One surprise has been that the social scientists accurately predicted surprising disconnects between science experts and lay persons, including decision makers, about spilled oil and dispersants.

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.