

The Coastal Waters Consortium Presents:

# Scientist Spotlight



## Dr. Mark Besonen

### What is your educational background?

I am primarily a geoscientist by training, and earned my degrees at Tufts University (BS), the University of Minnesota Duluth (MS), and the University of Massachusetts Amherst (PhD).

### What inspired you to become a scientist?

I have always been interested in science, and basically understanding how things work, but it was excellent teaching and mentoring as an undergraduate that really sealed the deal for geology, in particular. Probably part of this was related to the fact that much geology is very visual, and I was thrilled to take many field trips to observe and understand how modern, natural systems work. These field observations are critical because they allow me to interpret the geologic evidence in sediment cores, which helps us understand the past.

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

My focus within geology is using sediment cores to interpret the recent past. I examine evidence at all different scales from things I can see with my bare eyes all the way down to the microscopic scale. I also studied classical archaeology as an undergraduate, and I see my geological work as archaeology, too, but for environmental systems. Essentially, these sediment cores provide information like a "paleo" environmental monitoring program, which is fascinating, but also incredibly useful as we try to understand modern impacts and trends.



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

I work with the CWCII Phytoplankton group. We are using sediment cores to understand the impact of the Deepwater Horizon event on Louisiana coastal wetlands. Importantly, we are also looking at the baseline history of three areas where over historic times, oiling events have ranged from chronic to essentially nothing.

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

We are still actively working to gather our data from sediment cores, and pull it all together so we do not have any surprising findings at the moment. But we should be able to make some interesting observations in the near future.

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.