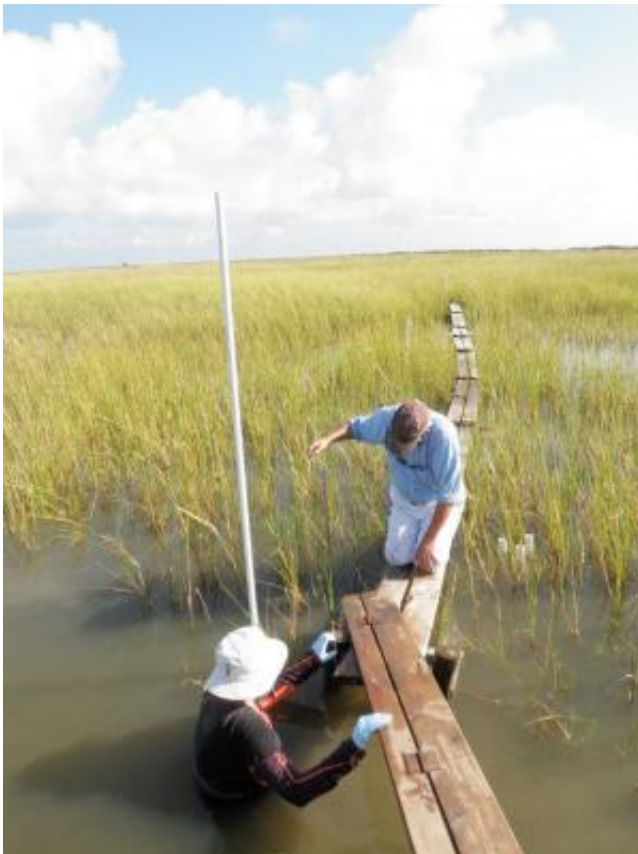


Scientist gets more support to study Deepwater Horizon spill impact on coast

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Scientists doing Deepwater Horizon impact research. Credit: Audrey Paterson

Since the Deepwater Horizon drilling rig exploded in 2010, Annette Engel has been traveling the coastline by boat and foot, taking samples to study how the oil has changed the coastal ecosystems.

The associate professor in earth and planetary sciences at the University of Tennessee, Knoxville, and her team have made new discoveries about [bacterial diversity](#) and oil degradation processes never before seen in marshes—and thanks to a new grant, their work can continue.

Through a collaboration with the Coastal Waters Consortium (led by the Louisiana Universities Marine Consortium, LUMCON), and funded from the Gulf of Mexico Research Initiative, Engel and her team of graduate and undergraduate students and research staff will receive \$849,000 over the next three years. This is the second round of funding provided by GoMRI to LUMCON and other consortia. GoMRI is a 10-year research initiative established in 2010 and funded by a \$500 million commitment by BP.

Over the past three years, Engel's research has uncovered fundamental changes in the types of bacterial communities associated with oil and carbon degradation. These changes, which affect the quality and quantity of oil by removing some compounds and concentrating others, also affect the overall ecosystem. For example, microbial changes correlate to increased concentrations of toxic hydrocarbon compounds.

The next stage of research will examine microbial oil and organic matter decomposition processes, and how microbial cycling of the oil may impact the coastal food webs. The team also will investigate how oil impacts marsh erosion.

"The goal of the CWC research is to understand the long-term consequences of the [oil](#) spill to [coastal ecosystems](#) in the Gulf," said Engel.

Their findings will help guide local, state and federal agencies in cleanup efforts when future [oil spills](#) occur.

Provided by University of Tennessee at Knoxville

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