February 2025

Updates from LA-COE

As we approach Mardi Gras and recover from the Sneaux, the 12 LA-COE RFP3-funded projects are making great progress. In this newsletter, we highlight a LA-COE-funded research project and a LA-COE-funded graduate assistant. As the RFP3 projects continue, LA-COE will feature researchers and their work in our quarterly newsletters.

In addition, we'd like to remind RFP3 PIs that their first performance semiannual progress report (PPR) is due next Friday, on **February 28th, 2025**. Links to the PPR template, the LA-COE portal system, and a quick reference guide for PIs are available below.

Resources

RFP3 Research Award Project Update: Dr. Madeline Foster-Martinez, University of New Orleans

The LA-COE RFP3-funded research project led by Dr. Madeline (Maddie) Foster-Martinez, "Determining vegetation establishment thresholds with custom-built sensors," is off to an exciting start, laying the groundwork for critical discoveries about vegetation establishment and its role in land-building processes. This month, field stations are being set up with custom-built sensors to measure water levels and accurately calculate inundation times.

The project began on a high note last semester with a hands-on collaboration between Dr. Foster-Martinez's research team and a group of UNO engineering freshmen. Together, they built sensors essential for data collection efforts. This not only jump-started the project but also inspired a few of the students to join Dr. Foster-Martinez's lab this semester, bringing fresh energy and perspectives to the work. Additionally, the team is strengthened by the expertise of Dr. Abby Eckland, who has joined UNO as the postdoctoral researcher for this project.

Dr. Foster-Martinez is "most excited about the opportunity to dig into the complexity of something

we often take for granted." At the heart of this project is a deep dive into the complexities of vegetation establishment—a process often viewed as straightforward. The challenge of predicting vegetation patterns and determining land building underscores the intricacy of Louisiana's coast as Dr. Foster-Martinez finds "even officially declaring land as 'established' can be tricky." Through the collection of an extensive dataset, the aim of this research is to uncover the underlying drivers influencing vegetation growth, deltaic land building, and stability.

RFP3 Graduate Assistantship Award Project Update: Noah Flaherty, Louisiana State University

Noah Flaherty is the graduate student working with Dr. Matthew Hiatt on the RFP3-funded project, "Salinity dynamics between the Mississippi River and adjacent estuaries." Flaherty is in the first year of her Coastal and Ecological Engineering master's program at LSU, following her successful completion of a bachelor's in coastal environmental sciences at the same university in May 2024.

Originally from Colorado, Flaherty traveled south to Louisiana to study a subject that combines her various interests: "I love to be outside to fish, hike, and enjoy nature, and my favorite subject was math." Additionally, learning about hydrology and how the water balance and residence times all influence each other during her undergraduate degree, along with the mentorship from Dr. Hiatt, sparked her interest in continuing her education in the subject.

Flaherty is currently doing field research, measuring the salinity, water level, and temperature in Barataria Bay. She will then analyze the effects of those measurements on vegetation as well as the impacts of storms and droughts. The goal is to understand the drivers of marsh porewater salinity to improve modeling of how Mississippi River flow impacts porewater salinity and better predict ecosystem outcomes.

"I hope my research will be able to support the Coastal Master Plan by being able to better understand and predict flooding and drought and to help be effective and efficient in restoration plans."

After the completion of the RFP3-funded project and her master's program, Flaherty plans to be a coastal engineer focused on projects for flood control and prevention.

LA-COE funded LSU graduate student, Noah Flaherty, poses with her catch of the day.

What's a crawfish's favorite part of Mardi Gras?

A pinch of fun and a shell of a good time!

How do pelicans pay for things on the coast?

They put it on their bill!

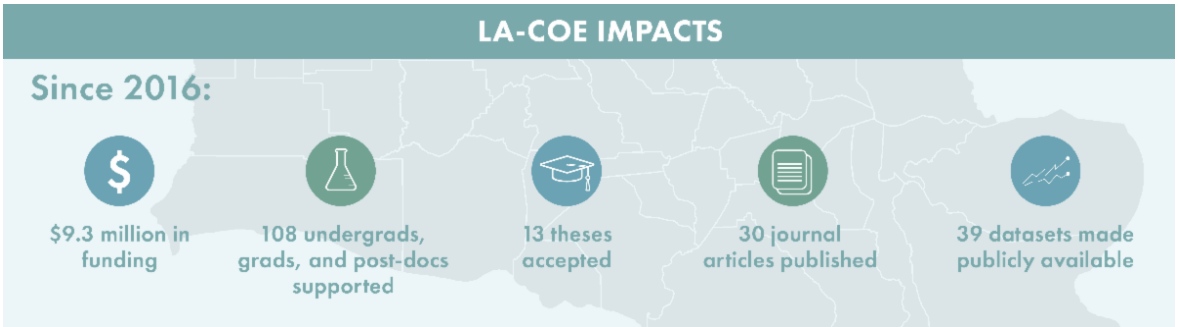
Why did the crab always get invited to parties?

Because he knows how to shell-ebrate!

Why don't oysters donate to charity?

Because they're shellfish!

Impacts



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The LA-COE is funded with federal funding from the Department of Treasury under the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act). Any statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the Department of Treasury.