# CENTER OF EXCELLENCE FOR LOUISIANA (LA-COE)



QUARTERLY NEWSLETTER

### August 2025



## **LA-COE All-Hands Meeting**

The LA-COE would like to thank everyone who was able to attend the 2025 All-Hands Meeting on August 18th. It was a successful meeting of the LA-COE, RFP3 Pls, Co-Pls, CPRA Liaisons, Water Institute TPOCs, and LA-COE Executive Committee members.

RFP3 PIs and two graduate students each gave a 10-minute presentation on their progress after the first year of their LA-COE-funded projects. It was very exciting to see the tangible outcomes after the first year of research! After project presentations, PIs and graduate students were encouraged to enjoy a working lunch with present team members and their Water Institute Technical Points of Contact and CPRA Liaisons to further discuss project questions, challenges, and successes.

Following the All-Hands Meeting, the LA-COE Executive Committee Members met with the LA-COE team and CPRA to discuss the LA-COE's success metrics and potential updates for future RFP timelines.

Overall, both meetings went smoothly and were incredibly productive. The LA-COE looks forward to reviewing the suggestions and feedback received from participants and implementing some improvements. Thank you!

Friendly reminder: The deadline for RFP3 PIs to submit their second semiannual performance progress report (PPR) is Tuesday, September 2nd, 2025. Links to the PPR template, the LACOE portal system, and a quick reference guide for PIs are available below.

Resources

### **New LA-COE Co-Production Article is Live!**

The LA-COE is excited to announce the publication of a new open-access article on the co-

production of science to advance coastal restoration in the Gulf in a Special Issue of Estuaries and Coasts! This paper highlights how through co-production, the LA-COE works with CPRA to align researchers and state agencies in the face of complex coastal challenges.

Congratualtions to Jessica Henkel, Jacob Oster, Alyssa Dausman, Eva Windhoffer, Bingqing Liu, Melissa Baustian, Denise Reed, Summer Langlois, and David Lindquist for their hard work and collaboration on this publication.

Read "Advancing the Implementation of Coastal Restoration in Louisiana Through a Co-Production of Science Framework" below.

**Co-Production Article** 

# RFP3 Research Award Project Highlight: Dr. Gary LaFleur, Nicholls State University

The LA-COE RFP3-funded research project led by Dr. Gary LaFleur at Nicholls State University, "Developing Methods to Measure Flotant Marsh Extent and Stability in the Barataria-Terrebonne Estuary System," is making great progress! The Flotant Team has been sampling the unique flotant marsh of South Louisiana this summer, characterizing the flotant with three large sampling efforts compared across three different sites: Lac Des Allemands, Lake Boeuf, and Lake de Cade.

The remote sensing team is led by Dr. LaFleur at the Center for Bayou Studies, Dr. Balaji Ramachandran from the Geomatics Program, and graduate student Noah Wurtzel. They are combining two hyperspectral sensors and a LiDAR sensor to record high resolution imagery of flotant vegetative cover overlaying the more physical geomorphic features. The first image below shows Pilot Peter Jansen and Noah Wurtzel launching the hyperspectral sensor from the team's custom-made floating UAV platform. These data will allow the team to compare plant diversity and plant health as well as physical cohesiveness of the floating mat over several sessions.

The Flora and Fauna team, led by Dr. Chris Bonvillain and graduate student Ivy Norton, is sampling animals that are associated with the flotant of using gillnets, crab traps, and minnow traps. They have already collected several bull sharks near the flotant of Lake de Cade (second image). To expand their sampling of flora and fauna, Bonvillain and students are collecting water samples for eDNA analysis by Dr. Tina Whitaker at UMES.

The project is yielding productive results, including UAV sensor data that visualizes the slight changes in elevation, highlighting micro ridges and micro seams and comparisons over time. Dr. LaFleur and his team are excited to continue collecting samples and analyzing data that will benefit CPRA's efforts to protect flotant marsh across coastal Louisiana!



Pilot Peter Jansen and Noah Wurtzel launching the Hyperspectral Sensor.



The Fauna Team, led by Dr. Chris Bonvillain and graduate student Ivy Norton sampling sharks.

# RFP3 Research Award Project Highlight: Dr. Jeffrey Plumlee, Louisiana State University AgCenter

The Dr. Jeffrey Plumlee's RFP3-funded research project, "Does Propagation of Roseau Cane

Alter the Efficacy of Restoration to Enhance Saltmarsh Fisheries Production?" aims to improve the understanding of how emergent vegetation can potentially shape the community of fish and invertebrates reliant on marsh edge habitat.

Mature native marshes are idea nursery habitat for some of Louisiana's most important fisheries species, (white shrimp, Gulf menhaden, brown shrimp, blue crab, etc.) and support abundant populations of other diverse species. However, when native plants are replaced with non-native plants (e.g., *Phragmites australis*), which do not have the same structure and can reduce accessibility to this critical habitat there may be demographic changes to the diverse community of fish and invertebrates that are reliant on that structure and accessibility. Dr. Plumlee is excited to be able to test these fundamental hypotheses.

"The team works well together, and the project involves a ton of fun field work, so who wouldn't enjoy it?" Dr. Plumlee said.

During the first year of the project, Dr. Plumlee and his team collected and processed 1,115 individual samples representing 37 species. Of those species, the most abundant have been white shrimp, blue crab, and grass shrimp. The team will continue collecting samples during year two!

The outcomes of this research will not only improve our understanding of how emergent vegetation can shape fish and invertebrate communities but also could support the refinement of habitat suitability models used in the Louisiana Coastal Master Plan.



Why don't crawfish ever complain about the heat in Louisiana?

Because they're already used to being in hot water!

How do you know it's summer in Louisiana?

The mosquitos will ask YOU for bug spray!

#### **LA-COE IMPACTS**

#### Since 2016:



\$9.3 million in funding



108 undergrads, grads, and post-docs supported



13 theses accepted



30 journal articles published



39 datasets made publicly available

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The Water Institute | 2021 Lakeshore Drive, Suite 310 | New Orleans, LA 70122 US

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