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# The Advocate

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## Research to study how changes in the Mississippi River can impact the Gulf of Mexico



*Photo provided by LSU Earth Scan Laboratory -- This image from the 2011 Mississippi river flooding clearly shows how far out into the Gulf of Mexico the river can carry sediments and freshwater.*

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Research funded by a \$300,000 federal grant should shed more light on how the Mississippi River, with a watershed that drains about 40 percent of the contiguous 48 states, impacts the water quality and wildlife of the Gulf of Mexico.

The goal of the two-year grant from the National Oceanic and Atmospheric **Administration** also is meant to guide future **research** on river diversions and species management.

The recent grant-funded project builds on decades worth of information collection along the Gulf Coast, said principal investigator Alex Kolker, associate professor with the Louisiana Universities Marine Consortium.

“There are some gaps in our understanding of how the Mississippi River affects the ecosystem of the Gulf of Mexico,” Kolker said.

Researchers will take decades of information gathered by federal agencies and the five Gulf of Mexico states and connect it with computer models run through the Naval Research Laboratory, which will then factor in Gulf of Mexico currents and ocean circulations.

The models will help researchers learn about patterns that emerge and determine if conclusions can be made on the river’s impact, primarily as it touches the United States.

“We’re looking at existing data,” Kolker said. “It’s not like we’re starting from square one.”

In addition to applying the research already done, the study will also look for gaps of information to help determine any additional information that needs to be gathered in the future.

The two-year project will result in a report that can give decision-makers and provide NOAA with a list of projects needed to fill information gaps. In addition, the research findings will be shared with people all over the country, said Alisha Renfro, staff scientist with the National Wildlife Federation Mississippi River Delta Restoration Campaign.

“Why is the Mississippi River and its delta important, and why is it important for the health of the greater northern Gulf of Mexico?” Renfro, who is a co-investigator on the project, asked.

Renfro said the Mississippi River's influence, whether it be from freshwater, sediment or nutrients, extends across the Gulf Coast state borders. There are times of the year when the fresh water plume from the river reaches Florida.

"We think of the Gulf of Mexico state by state rather than a system. We have to look at what can we do for the Gulf of Mexico, so this will help bridge that gap," Renfro said.

The money paying for the grant is part of the **RESTORE** Act funding that distributes a portion of the civil penalties from the 2010 Deepwater Horizon disaster to states, federal agencies and others to do research and restoration along the Gulf Coast.

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