

# **'Dead zone' area in Gulf could be increasing, researchers say**

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The "dead zone" area of the Gulf of Mexico – a region that annually suffers from low oxygen which can result in huge marine life losses – has appeared much earlier this year, meaning it could be potentially larger in 2005 and affect marine life more adversely than normal, researchers are reporting.

A team of scientists from Texas A&M University, Texas A&M at Galveston, Louisiana State University and NASA recently surveyed the dead zone in the northern Gulf of Mexico and their findings show that the area's water contains lower oxygen levels than expected this time of year.

That could mean the dead zone area could be more severe in 2005 and perhaps cover an even larger area than in previous years, says Steve DiMarco, associate professor in the Department of Oceanography at Texas A&M and leader of the project.

"During January and February of this year, the flow of the Mississippi River was larger than at any time in 2004," DiMarco explains. "That means the stratification levels between the fresh river water and heavier salt water could result in increased hypoxia, which creates the dead zone."

Hypoxia is a term for extremely low levels of oxygen concentrations in water. Hypoxia can result in fish kills and can severely impact other forms of marine life where it is present.

The dead zone area covers about 6,000 square miles in the Gulf.

The dead zone is located along the Louisiana coast where the Mississippi and Atchafalaya Rivers empty into the gulf. The dead zone area typically develops in late spring and early summer following the spring flood stage of the rivers, which bring large amounts of nutrients – often in the form of fertilizer – into the Gulf of Mexico.

The Mississippi is the largest river in the United States, draining 40 percent of the land area of the country. It also accounts for almost 90 percent of the freshwater runoff into the Gulf of Mexico.

"We saw no hypoxia in this area until June of last year, and this year we found in late March," DiMarco says.

"If the physical conditions we noticed continue, it could mean an unusually strong hypoxic zone this year, and that's not good news."

DiMarco said the team studied an area between Southwest Pass, La., and the Calcasieu ship channel. They were on the Gyre, a research vessel owned by Texas A&M, and the project is funded by NOAA (National Oceanic and Atmospheric Administration.).

DiMarco said the most intense hypoxia levels are usually between 30 to 60 feet below the surface. Fish in this area can be "stressed," meaning they can die or, at the very least, move to other areas, which adversely affects fishermen in the dead zone region.

"Bottom-dwelling marine life, where some of the most intense hypoxia levels are, can easily die," he says.

"This area is of immense importance to people along the northern Gulf of Mexico," he adds. "We plan to return there in May, July, August and

October to collect more data and see what condition the dead zone area is at that time."

Source: Texas A&M University

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