

Issue 2, February 2018

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## Fishermen and farmers unite to combat the Gulf of Mexico dead zone

Fishermen across the northern Gulf of Mexico are all too familiar with the “dead zone”, the largest recurring hypoxic zone in the United States. But what causes the dead zone to form? More importantly, what can we do to reduce its harmful impacts? The answer: **collaboration**.

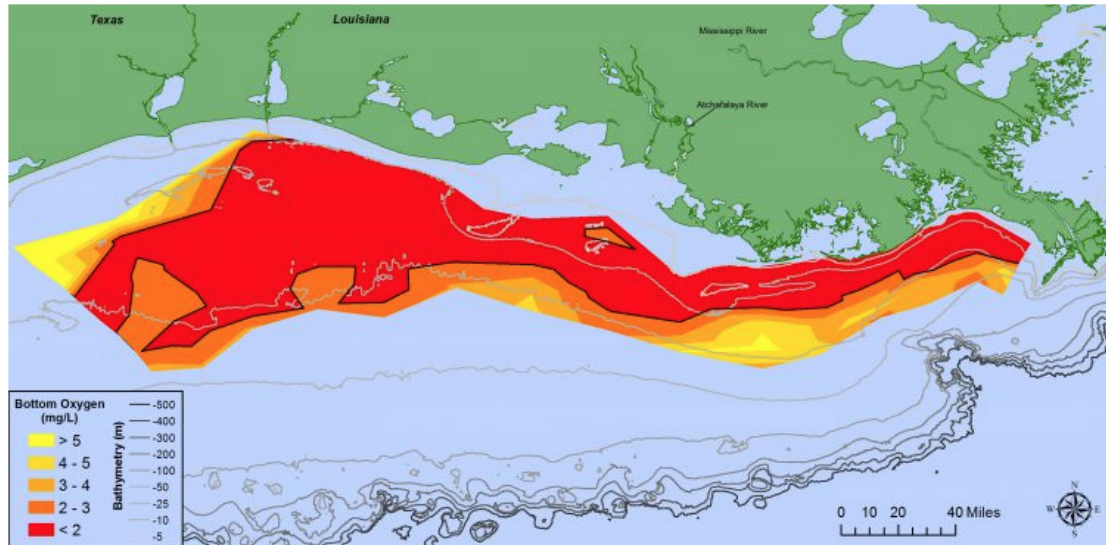


Courtesy of the National Parks Service

The dead zone is a product of the mighty Mississippi River, which drains an area that spans approximately 40% of the continental United States, or roughly

1.2 million square miles. The Mississippi River borders or passes through 10 different states, including the Midwestern states of Iowa, Illinois, Minnesota, Missouri, and Wisconsin. Nitrogen-rich material, such as fertilizer, drains into the Mississippi River and is discharged into the northern Gulf of Mexico.

This influx of nitrogen triggers explosions of microscopic organisms (plankton), which quickly die and sink to the bottom. Once on the bottom, they decompose, which depletes the available oxygen at the seafloor. Without oxygen, mobile fish and invertebrates leave the area; creatures that can't leave die.



Map showing area of hypoxia on Louisiana Gulf of Mexico shelf in 2017. Credit: LSU/LUMCON and NOAA.

The Gulf of Mexico dead zone costs U.S. seafood industries millions of dollars each year. Not content to sit idly by, Ryan Bradley, a commercial fisherman from Long Beach, Mississippi, and Director of Mississippi Commercial Fisheries United, decided to take action. In November Bradley joined a delegation assembled by Mississippi-Alabama Sea Grant to meet with Wisconsin farmers in an effort to understand how farming practices in the Midwest affect fishing practices in the Gulf of Mexico.



Not surprisingly, these farmers and fishermen shared considerable common ground. “I now have a better understanding of the complexity of the issue and have some ideas for what we need to be doing down here to make a difference. Allowing farmers and fishermen to meet face to face is one of the best things we can do” said Bradley. David Walker, a commercial red snapper fisherman from Alabama and member of the Gulf of Mexico Fishery Management Council, was equally impressed. “I’m pretty confident we can figure out a solution to this problem so that both farmers and fishermen can survive.”

To read more about this unique collaboration, [click here](#).

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## Amendment 46 revises gray triggerfish recreational harvest





After a year-long closed season in 2017, the recreational harvest of Gulf of Mexico gray triggerfish will open on March 1, 2018. Amendment 46 to the Gulf of Mexico Reef Fish Fishery Management Plan revises the recreational closed season, recreational bag limit, and recreational minimum size, detailed below.

***Recreational seasonal closure:*** The current recreational season closure for gray triggerfish is from June 1 – July 31, and was established to protect the species during peak spawning periods. Amendment 46 establishes an additional closed season for gray triggerfish from January 1 – the end of February to help prevent exceeding the annual catch limit (ACL).

***Recreational bag limit:*** The current bag limit set in Amendment 37 is 2-fish per person per day within the overall 20-fish aggregate reef fish bag limit. Amendment 46 reduces the gray triggerfish harvest to 1 fish per person per day. NOAA Fisheries anticipates this reduction will prevent recreational harvest from exceeding the ACL, and allow the sector to remain open through the end of the fishing year.

***Recreational minimum size:*** The current recreational minimum size for gray triggerfish is 14 inches fork length (FL), established in Amendment 30A. Amendment 46 increases the minimum size limit to 15 inches FL, which is expected to increase gray triggerfish spawning potential by maintaining larger fish, which produce more eggs.

To recover this population, a rebuilding plan was first implemented in 2008. In 2015, it was determined that the stock was no longer undergoing overfishing, but remained overfished (i.e. there were too few fish), and would not meet its 2017 rebuilding target. The stock is scheduled to be assessed again starting this year, with a completed assessment anticipated in early-mid 2019.

## The Marine Resource Education Program



*“ Now that I have a **better understanding** of how the process works, I feel more comfortable jumping in! ”*

*“ Very **beneficial** for **fishermen** hoping to shape the fisheries they are involved in. ”*

[gmri.org/mrepsoutheast](http://gmri.org/mrepsoutheast)

**Marine Resource Education Program**  
SOUTHEAST

Are you an avid recreational or current commercial fisherman? Do you fish the waters of the north-central Gulf of Mexico? Are you interested in learning more about the fisheries science and fisheries management processes? If so, the Marine Resource Education Program (MREP) is for you.

Created by fishermen for fishermen, MREP arose from a single question: ***what do fishermen need to participate effectively in collaborative science and management?*** What was created in response was a program designed to “break down historical barriers to cooperation, forge new areas of involvement for fishermen in the regulatory system, and fully engage the industry in the development of the best available science.” To accomplish this, MREP brings

together fishermen (commercial and recreational), scientists, and managers in a neutral setting outside the regulatory process.

The program consists of two separate three-day workshops conducted with the assistance of an industry moderator who facilitates presentations by fisheries scientists/staff and fisheries managers. Presentations are followed by hands-on activities and lab tours and conclude with evening hospitality and meals.

**Workshop 1: Fisheries science.** Participants are provided with a basic working knowledge of concepts in population biology and stock assessment, including survey sampling techniques, statistics, population models, and biological reference points. The objective of this workshop is to provide an overview of how fishing effort relates to stock assessments.

**Workshop 2: Fisheries management.** The second workshop is designed to illustrate how the science covered in the first workshop is applied to the management process. Components of the management workshop include the structure of the fishery management Councils, and the requirements of the Magnuson-Stevens Act.

Past attendees have said:

*“You always feel scientists are hiding behind the best available data phrase, but I now believe they are continuously trying to improve the system by looking at new options.”*

*“This program gave me a new respect for the process.”*

*“I may not agree with it all, but it gives you a better understanding.”*

*“Fishermen need this as a basis for action and knowledge.”*

*“Interactions between scientists and the fishing community are really lacking, so this opportunity was valuable for increasing communication.”*



Applications for the 2018 MREP Southeast program are now being accepted. All expenses are covered, including room, board, and mileage to/from your homeport, but participation is limited, so apply now. I hope to see you there!

For more information about MREP, including application materials, [click here](#).

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## Sea of Acronyms

Being an informed angler begins with understanding the terminology used in fisheries management. This series helps demystify the concepts hidden beneath a sea of acronyms.

# AM

## Accountability Measure

The term we defined last month was Acceptable Biological Catch (ABC). We also discussed the Annual Catch Limit (ACL), which by law cannot exceed the ABC. Accountability measures (AMs) are regulations that attempt to keep harvest under the ACL. AMs can be implemented in-season or after the season. Most AMs are in-season, and include changes to trip limits, bag limits, or closures. If it's determined that the ACL has been exceeded at the end of the season, that overage is deducted from the following season.

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## Upcoming events

[Biloxi boat show](#) (Feb 2-4) at the Mississippi Coast Coliseum, Biloxi MS

[USA Distinguished Lecture Series](#) (Feb 22) in Gulf Shores, AL "Sharks! Dispelling myths through research"



[Mobile boat show](#) (Mar 2-4) at the Mobile Convention Center, Mobile, AL

[Louisiana Fisheries Forward Summit](#) (Mar 6) in Kenner, LA

[MREP Fisheries Science Workshop](#) (Apr 24-26) in St. Petersburg, FL



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I'd like to hear from you - please send any comments or questions to [marcus.drymon@msstate.edu](mailto:marcus.drymon@msstate.edu), and click on the icons below for more information on my website and Facebook page.



Contributing authors shown with their favorite fishes: Amanda Jefferson (triggerfish), Extension Associate and Emily Seubert (sharpnose shark), Extension Program Associate.



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