



## Scientists and the Fishing Industry Join Forces for Better Data and Management

*NOAA Fisheries' Cooperative Research programs build partnerships between scientists and fishermen to collect data that improves fisheries management.*



While the [Northeast Fisheries Science Center](http://www.fisheries.noaa.gov/about/northeast-fisheries-science-center) ([www.fisheries.noaa.gov/about/northeast-fisheries-science-center](http://www.fisheries.noaa.gov/about/northeast-fisheries-science-center)) spent more than 300 days-at-sea monitoring and sampling from ships last year, no one spends more time out on the water than fishermen. Fishermen are in tune with the seasons and fish stocks and contribute significantly to the economy and food supply. That's why we have a dedicated research team focused on working closely with the fishing community. Together, we collect and analyze data that helps answer big questions about fisheries and ocean ecosystems.

We bring the fishing community and scientists together to answer shared questions and improve management of Northeast fisheries. Cooperative research can take many forms, from outfitting fishing gear with oceanographic sensors to partnering with fishing vessels to design and execute fisheries surveys.

*"We rely on the expertise of captains and crew in our region to get a more complete picture of fisheries and marine ecosystems," explained Cooperative Research Branch Chief Anna Mercer. "Many cooperative research projects start with fishermen sharing their observations and concerns. We work with industry members to develop research projects that address scientific uncertainties and harness the knowledge and expertise of the fleet."*

Cooperative research provides opportunities for fishermen to document what they are seeing on the water with data that is useful to them and the scientific community. Working together allows us to better understand the ocean and the fish stocks that fishermen rely upon for their daily catch. It also builds lasting relationships and trust between the scientific and fishing communities. In many cases, the data fishermen collect are used to make stock assessments more accurate, improving fisheries management practices. NOAA Fisheries promotes science-based fisheries management, ensuring both the industry's economic viability and the long-term health of marine ecosystems.

You may have heard about our [Cooperative Gulf of Maine Bottom Longline Survey](http://www.fisheries.noaa.gov/new-england-mid-atlantic/science-data/gulf-maine-bottom-longline-survey) ([www.fisheries.noaa.gov/new-england-mid-atlantic/science-data/gulf-maine-bottom-longline-survey](http://www.fisheries.noaa.gov/new-england-mid-atlantic/science-data/gulf-maine-bottom-longline-survey)). It has been collecting data on species that prefer rocky habitats in partnership with two commercial fishing vessels since 2014. [Our Study Fleet](http://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2022.869560/full) ([www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2022.869560/full](http://www.frontiersin.org/journals/marine-science/articles/10.3389/fmars.2022.869560/full)) has been going strong since 2006. It includes nearly 50 commercial fishing vessels whose captain and crew collect detailed data on fishing effort and catch. Fisheries stock assessments rely on data from both the Bottom Longline Survey and the Study Fleet.

Our science center has many other cooperative projects actively engaging with the fishing community, supporting stock assessments, oceanographic models and forecasts, and enhanced understanding of fisheries species.

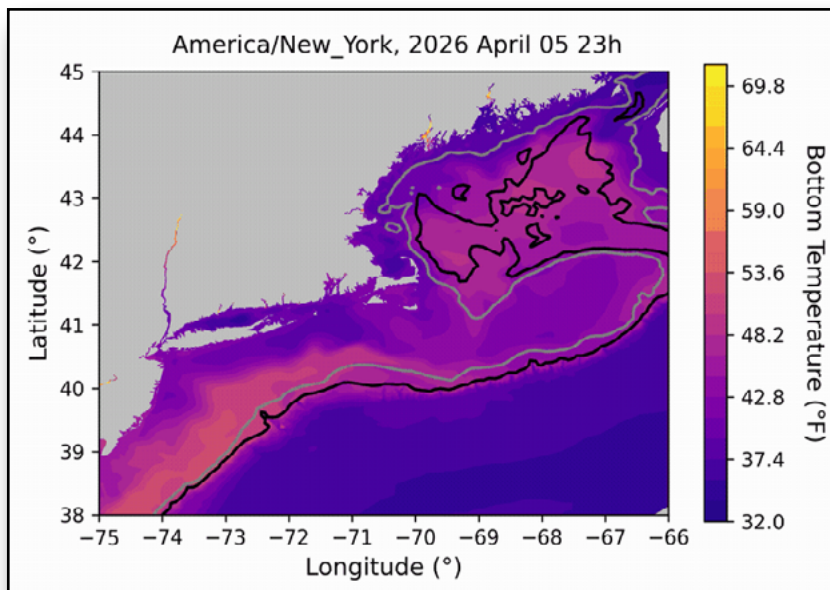
## Fishermen Are Powering Better Ocean Forecasts



*Huanxin Xu (left) from the Gulf of Maine Lobster Foundation and George Maynard (right) from the Northeast Fisheries Science Center install a temperature and depth sensor on a scallop dredge aboard the F/V Donna Marie in Provincetown, Mass.*

While satellites and oceanographic buoys collect data on sea surface temperatures, getting real-time bottom temperatures is more challenging. Many of our region's fisheries species use the ocean floor as habitat, including lobster, sea scallops and Atlantic cod. [Our Environmental Monitors on Lobster Traps and Large Trawlers \(www.fisheries.noaa.gov/new-england-mid-atlantic/climate-change/partnering-fishing-industry-monitor-northeast-shelf\)](http://www.fisheries.noaa.gov/new-england-mid-atlantic/climate-change/partnering-fishing-industry-monitor-northeast-shelf) program, or eMOLT, outfits fishing vessels from Maine to North Carolina with sensors and computers. They collect and transmit bottom-water temperatures when they deploy fishing gear including traps and trawls. Last year, about 145 fishing boats collected data through eMOLT.

Bottom temperature data collected by fishermen is used in 72-hour ocean forecast models. These can help fishermen make decisions about where to fish or how often to check their lobster or crab traps. It also supports forecasts the U.S. Coast Guard uses to plan Search and Rescue Operations and flood inundation predictions through the [Northeastern \(https://neracoos.org\)](https://neracoos.org) and [Mid-Atlantic Regional Associations of Coastal Ocean Observing Systems \(https://maracoos.org\)](https://maracoos.org).



*The Northeast Coastal Ocean Forecast System (NECOFS) model showing bottom temperature in the Gulf of Maine spring 2026.*

The eMOLT program also deploys dissolved oxygen sensors on lobster boats to monitor low oxygen conditions that can develop in the summer. Low oxygen conditions can affect fisheries. For example, lobsters will either move to avoid them or die if they are stuck in traps. Last year, the program deployed 70 sensors in New Jersey, Massachusetts, Rhode Island and Maine. We used this data to create a data product showing how many days of low oxygen were detected around the region last year. This shows where additional monitoring may be warranted. The data product will be presented to the New England and Mid-Atlantic Fishery Management Councils as part of the annual [State of the Ecosystem Report \(www.fisheries.noaa.gov/new-england-mid-atlantic/ecosystems/state-ecosystem-reports-northeast-us-shelf\)](http://www.fisheries.noaa.gov/new-england-mid-atlantic/ecosystems/state-ecosystem-reports-northeast-us-shelf).

*“When I heard about eMOLT, I chimed right in and wanted to be involved. We put in 180 days a year at sea, and I figured our input would help,” explained Chris King of the F/V Donna Marie, based in Provincetown, Mass. “We can find out where species will be, or where they won’t be.”*

eMOLT began as a collaboration between the Gulf of Maine Lobster Foundation, several lobster fishing associations, and the Northeast Fisheries Science Center. In recent years, the program has engaged with other fishing associations, non-profits, and academic institutions around the region. We have expanded coverage across different fisheries and geographic areas.

Making the data fishermen collect available to both the science and fishing communities in near real-time is a top priority. In collaboration with the Commercial Fisheries Research Foundation, we recently developed [FishBOT \(https://fishbot.net/\)](https://fishbot.net/). It combines environmental information collected by eMOLT participants with information collected by NOAA surveys and research programs at institutions including Woods Hole Oceanographic Institution and Rutgers University. FishBOT provides a more cohesive look at subsurface environmental conditions in our region. Our team is always working to update the data visualizations available to eMOLT captains in the wheelhouses of their vessels.

*“We are always interested in feedback from the fishing industry. We make changes to the software to make it more user-friendly and useful to fishermen. For example, we added a summary from the haul when the data downloads so the captain can add it to their logbook,” explained eMOLT Coordinator George Maynard. “That way the fisherman is the first to see the data.”*

## Rebuilding a Louisiana Bayou: Upper Barataria Restoration

*One year after creating 1,170 acres of wetland habitat in Louisiana’s Barataria basin, key species like shrimp and crab are returning. The effort addresses land loss while supporting local economies and vital fisheries.*



*Coastal Ecologists Erin Kiskaddon and Jacob Oster sift through the marsh’s sediment, collecting key species to monitor the health of the newly created wetland habitat. Credit: The Water Institute.*

Louisiana’s coastline has experienced significant land loss and to address this, the Upper Barataria Marsh Creation Project is restoring vital habitats. It’s part of NOAA’s larger effort to rebuild the region’s coasts after the Deepwater Horizon oil spill. Project partners created 1,259 acres of wetland habitat — including 1,170 acres of marsh and 89 acres of water features. Just one year later,

species like white and brown shrimp, blue crab and red drum are using the newly created habitat. As the marsh stabilizes and the food web matures, it will serve as a thriving home for fish, birds, and wildlife.

### ***A Coastline Under Pressure***

Nestled between the Mississippi River and Bayou Lafourche, the Barataria Basin’s wetlands provide vital ecosystem services to Louisiana’s coastal communities. Yet these important habitats are disappearing at an alarming rate. Since the 1930s, the basin has lost nearly 300,000 acres of land — an area larger than New York City. This land loss is due to erosion, storm surge, and a lack of sediment flow from the Mississippi River.

In 2010, the [Deepwater Horizon](http://www.fisheries.noaa.gov/habitat-conservation/deepwater-horizon-moment-time-decades-restoration) ([www.fisheries.noaa.gov/habitat-conservation/deepwater-horizon-moment-time-decades-restoration](http://www.fisheries.noaa.gov/habitat-conservation/deepwater-horizon-moment-time-decades-restoration)) oil spill accelerated Louisiana’s land loss. The severe oiling of the state’s shores caused a sharp decline in plant cover and marine species production. It further threatened the Barataria Landbridge, a critical hydrologic barrier separating fresh marshes in the upper basin from saltier waters of the lower basin.



*Shrimp and other species support the commercial fishing industry—critical to the region’s economy and a food source for the country. Their presence in the newly created habitat is a sign that recovery is working. Credit: The Water Institute.*

### ***Large-Scale Restoration***

To restore these wetland habitats, the [Louisiana Trustee Implementation Group](https://gulfspillrestoration.noaa.gov/restoration-areas/texas) (<https://gulfspillrestoration.noaa.gov/restoration-areas/texas>) — a joint effort of the State of Louisiana and federal trustees — developed a plan for the Barataria Basin. They undertook one of the largest habitat restoration efforts in the Gulf region: the [Upper Barataria Marsh Creation Project](http://www.fisheries.noaa.gov/southeast/habitat-conservation/upper-barataria-marsh-creation-project) ([www.fisheries.noaa.gov/southeast/habitat-conservation/upper-barataria-marsh-creation-project](http://www.fisheries.noaa.gov/southeast/habitat-conservation/upper-barataria-marsh-creation-project)).

Between 2022 and 2023, contractors from Weeks Marine dredged eight million cubic yards of sediment — enough material to fill the Caesars Superdome twice — from the Mississippi River to create:

- 1,170 acres of emergent wetland habitat
- 89 acres of water features, including a tidal pond and 18,815 linear feet of flow pathways that emulate natural tidal creeks
- Strategic dike gaps that ensure water and wildlife can easily move between the new marsh and the larger basin

The project focuses on building a functional, dynamic ecosystem. By restoring the basin’s structural integrity, it aims to ensure that fish and wildlife return, preserving Louisiana’s legacy as a “sportsman’s paradise.”



*The Upper Barataria Marsh Creation project created 1,170 acres of emergent wetland habitat, 89 acres of water features — including a tidal pond and 18,815 linear feet of flow pathways that emulate natural tidal creeks, and strategic dike gaps that ensure water and wildlife can easily move between the new marsh and the larger basin. Credit: Patrick M. Quigley.*

### ***One Year In: Wildlife and Key Species Return***

To measure success, NOAA and partners are tracking everything from the height of the land to the number of shrimp in the water. The process is hot, muddy and long: Research scientists from The Water Institute spend 12-hour days in the marsh, sometimes neck deep. As they scoop or pump sediment onto a giant cylinder topped with mesh, the mud slips through and reveals crabs, fish and grass shrimp they hope to see. They count and measure the many creatures in partnership with Nicholls State University, where students get first-hand experience with the project and learn about fisheries ecology.



*Dexter Ellis and Emelia Marshall in the engineered Upper Barataria Marsh collecting samples for monitoring in 2024. Credit: The Water Institute.*

Teams saw all target species — blue crab, brown and white shrimp, and red drum — using the new water features and channels. Their presence is a signal that the constructed marsh is connected to the surrounding basin, key for functional habitat.

This connectivity allows tides to carry nutrients in, larval fish to mature and shrimp to move in and out. It also points to the project's impact on the basin's fisheries at large, which benefit from the increase in available food.

Healthy marshes are some of the most productive ecosystems on Earth and engines for the economy. They sustain a massive seafood industry, generating approximately half of commercially harvested seafood in the United States. In 2024, the harvest of blue crab and white shrimp generated more than \$120 million in Louisiana ([www.fisheries.noaa.gov/foss/f?p=215:200:18972893024140::CR,200](http://www.fisheries.noaa.gov/foss/f?p=215:200:18972893024140::CR,200)) alone.

"I don't think there's anywhere in the world where you'll find the health of an ecosystem so intrinsically tied to the health of our economy," says Jonathan Hird, project principal at Moffatt & Nichol and lead engineer on the project.

### ***Exceeding Land Creation Goals***

The project successfully created 1,259 acres of land and water features, exceeding the original target by 76 acres. All five marsh creation areas met their initial target elevation ranges, providing a solid foundation for plant growth. Monitoring performed in partnership with the U.S. Geological Survey indicates that native species are naturally taking root in the marsh. Notably, a community effort led to the planting of 500 cypress saplings in one section of the project area. While survival has been challenged by extreme weather, these efforts are teaching restoration experts how to build more resilient forests in the future.

The results after just one year (<https://pub-data.diver.orr.noaa.gov/restoration/Upper%20Barataria%20Marsh%20Creation%20Monitoring%20and%20Adaptive%20Management%20Interim%20Synthesis%20Report-%20Preconstruction%20Through%20Project%20Year%201.pdf>) indicate the marsh is recovering. "It's amazing to already see not just fish in here, but there are tons of fishermen on the water," said Erin Kiskaddon, coastal ecologist at the Water Institute. "It's a big win."



*David Reeves, project manager for the Upper Barataria Marsh Creation Project and a lifelong Gulf Coast fisherman, holds a freshly caught red drum. These prized fish spawn in more saline waters of the Lower Barataria. Once hatched, tidal currents carry them into the safety of protected marshes. There, they find protection from predators and the food they need to grow and mature. Credit: David Reeves, NOAA.*

## Looking to the Future

Construction may be complete, but the project’s mission is just beginning. Over the next two decades, the area will settle and stabilize, increasing inundation — the time the marsh is flooded by tides — which further improves nutrient cycling and wildlife access.

To support long-term success, the project is governed by a 20-year monitoring and adaptive management plan. This rigorous oversight provides transparency and accountability. If the data shows the marsh isn’t thriving, the plan allows for corrective actions like adjusting water flow or replanting vegetation.

World-class fishing, hunting, and birdwatching throughout Louisiana’s wetlands are defining aspects of the region. Restoration also helps ensure the next generation of fishermen and outdoorsmen can continue these long-standing traditions.

Connor Gilbert, the sportsman outreach and policy specialist at the National Wildlife Federation, said “when I think about sitting in a duck blind or out on the water and watching the sunrise, I get goosebumps. So many people have the same excitement about this place.”

## Gulf Council Holds Fisheries Photo Contest to Showcase 50 Years of Fisheries

In celebration of its 50th anniversary, the Gulf Council is inviting photographers of all skill levels to participate in a special Gulf Fisheries Photo Contest highlighting the people, places and marine life that define fisheries in the Gulf region.

For five decades, the council has worked to manage federal fisheries in the Gulf of America. As part of this milestone celebration, the council is seeking powerful images that reflect the heritage, resilience and vibrancy of Gulf fisheries and coastal communities.

### CONTEST CATEGORIES

Participants may submit photos in the following categories:

- Best Overall Photo
- Best Recreational Fishing Photo
- Best Commercial Fishing Photo
- Best Historical Photo
- Best Marine Life or Habitat Photo
- Best Coastal Community Photo



### RECOGNITION

Winning photographers will be publicly acknowledged as part of the council’s 50th anniversary celebration. Selected photos will be displayed in council offices and featured prominently in council materials, including displays, print publications, the Council’s website and other communications materials.

### SUBMISSION GUIDELINES

To be eligible:

- Photos must be taken in the Gulf region.
- Images must be submitted in digital format (high-resolution preferred).
- Entries must be original. Minor adjustments including color correction and cropping are allowed. However, AI-generated or heavily manipulated images are not permitted.
- Photographers must have permission from any identifiable individuals in the photo. If a subject is a minor, permission must be granted by a legal guardian.
- By submitting a photo, participants grant the council a royalty-free license to use the image in communications and outreach materials.

### HOW TO ENTER

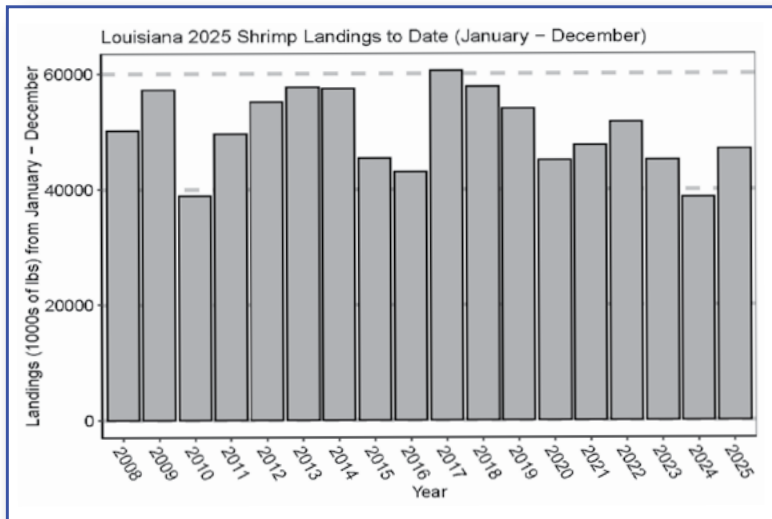
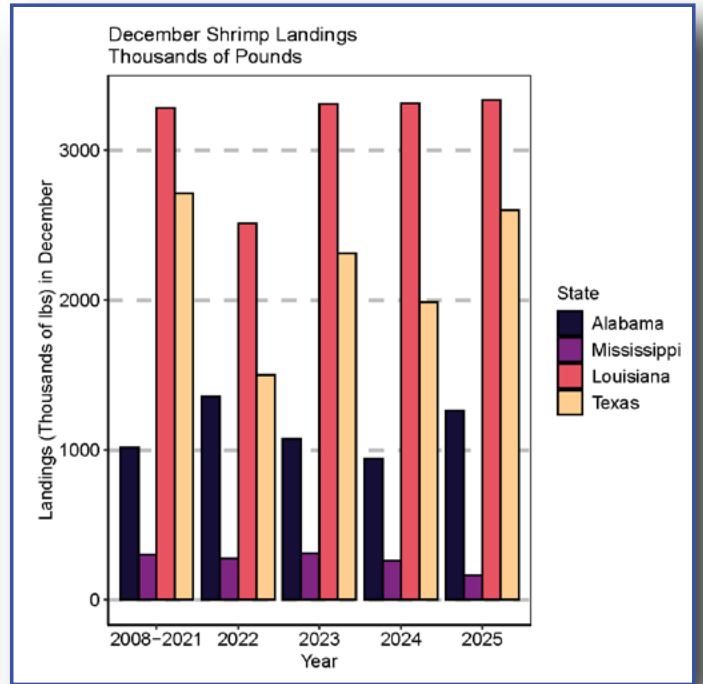
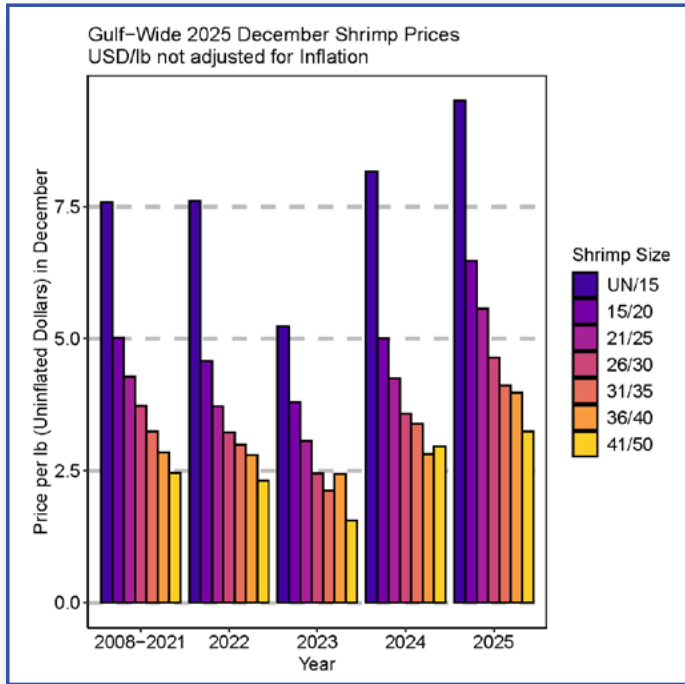
- Submit your photos using this Photo Entry and Release Form ([https://docs.google.com/forms/d/e/1FAIpQLSdtPem9Gt\\_f7O6M-bhz4MwreQUsxb0ft9ijjVUSsSsDfB2FA/viewform](https://docs.google.com/forms/d/e/1FAIpQLSdtPem9Gt_f7O6M-bhz4MwreQUsxb0ft9ijjVUSsSsDfB2FA/viewform)).
- A separate submission must be made for each photo entered in the contest.
- Submission Deadline: 5:00 PM Eastern Time on Thursday, April 30, 2026.

“This contest is an opportunity to reflect on 50 years of fisheries management and celebrate the communities and marine resources that make our region unique,” said Council Chair, JD Dugas. “We look forward to seeing the Gulf through the eyes of those who live and work on its waters.”

Contact [Emily.Muehlstein@gulfcouncil.org](mailto:Emily.Muehlstein@gulfcouncil.org) with questions.

# Louisiana Shrimp Watch

The shrimp watch data for the April issue includes data through December 2025. All landing data is based on trip ticket data provided by Gulf States Fisheries Commission and no estimations have been made.



# The Gumbo Pot

## Oyster Po-Boy

*Recipe provided by Addie K. Martin, chef for Culicurious*

This oyster po-boy recipe offers a taste of Southeast Louisiana in your own kitchen!

Prep: 20 min Cook: 1 minute per batch of oysters Total: 30 min



### INGREDIENTS:

#### **Fried Oyster Ingredients:**

##### Wet Batter Ingredients:

- 2 large eggs
- 1/2 cup whole milk
- 2 tablespoons spicy brown mustard
- 1 tablespoon Worcestershire
- 1 tablespoon garlic powder
- 1 tablespoon onion powder

##### Dry Batter Ingredients:

- 1 cup all-purpose flour
- 1 cup corn flour

##### Frying Ingredients:

- 1 quart oil
- 24 to 30 shucked small oysters

##### Po-boy Ingredients:

- 2-8" lengths of French bread
- 2 tablespoons mayonnaise
- 2 to 4 Bibb lettuce leaves
- 4 to 6 tomato slices
- 8 to 10 thin red onion slices
- Fried oysters

### METHOD:

#### Preparing the batter:

About 30 minutes before you're ready to fry the oysters, place all the ingredients in the Wet Batter Ingredients section into a mixing bowl. Whisk well to mix and refrigerate until ready to use.

On a dinner-sized plate, add the two flours, mix well with a fork and set aside until ready to use.

#### Battering the oysters:

On a table or countertop, lay out the wet and dry batter ingredients along with the raw oysters and an empty platter or pan for laying out the battered oysters before frying.

Start by dipping the oysters (a few at a time) in the flour mixture. Toss well to coat.

Next drop the oysters in the wet ingredients batter.

Carefully remove the oysters and place them in the flour mixture once more. Be sure the oysters are evenly coated with batter.

Shake off excess flour and lay the oyster in a single layer on the pan or platter until ready to fry.

*NOTE: The whole process is much less messy if you designate one hand as the "wet ingredients" hand and the other as the "dry ingredients" hand. It takes practice but makes a huge difference.*

#### Frying the oysters:

When ready to fry, heat the oil to 350°F. Once the oil is heated, carefully drop in five to six battered oysters and cook for about a minute per batch. Remove the oysters from the oil and set to drain on a plate lined with paper towels or a metal draining rack. Repeat until all of the oysters are fried.

#### Building the po-boy:

Start with two 8" lengths of French bread (or whatever length you desire).

Smear mayonnaise on both sides of each sandwich.

Divide the red onions and scatter on top of the mayonnaise.

Finish each sandwich top with half of the lettuce and tomatoes.

Divide the oysters between the two bottoms of French bread.

Place the tops on the sandwiches and enjoy!



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We would like to hear from you! Please contact us regarding fishery questions, comments or concerns you would like to see covered in the Lagniappe. Anyone interested in submitting information, such as articles, editorials or photographs pertaining to fishing or fisheries management is encouraged to do so.

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Be sure to visit the *Lagniappe* blog for  
additional news and timely events between issues.  
<https://louisianalagniappe.wordpress.com/>

## Lagniappe Fisheries Newsletter

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