



**Mississippi Department of
Marine Resource -
Shellfish Bureau**

Jason Rider

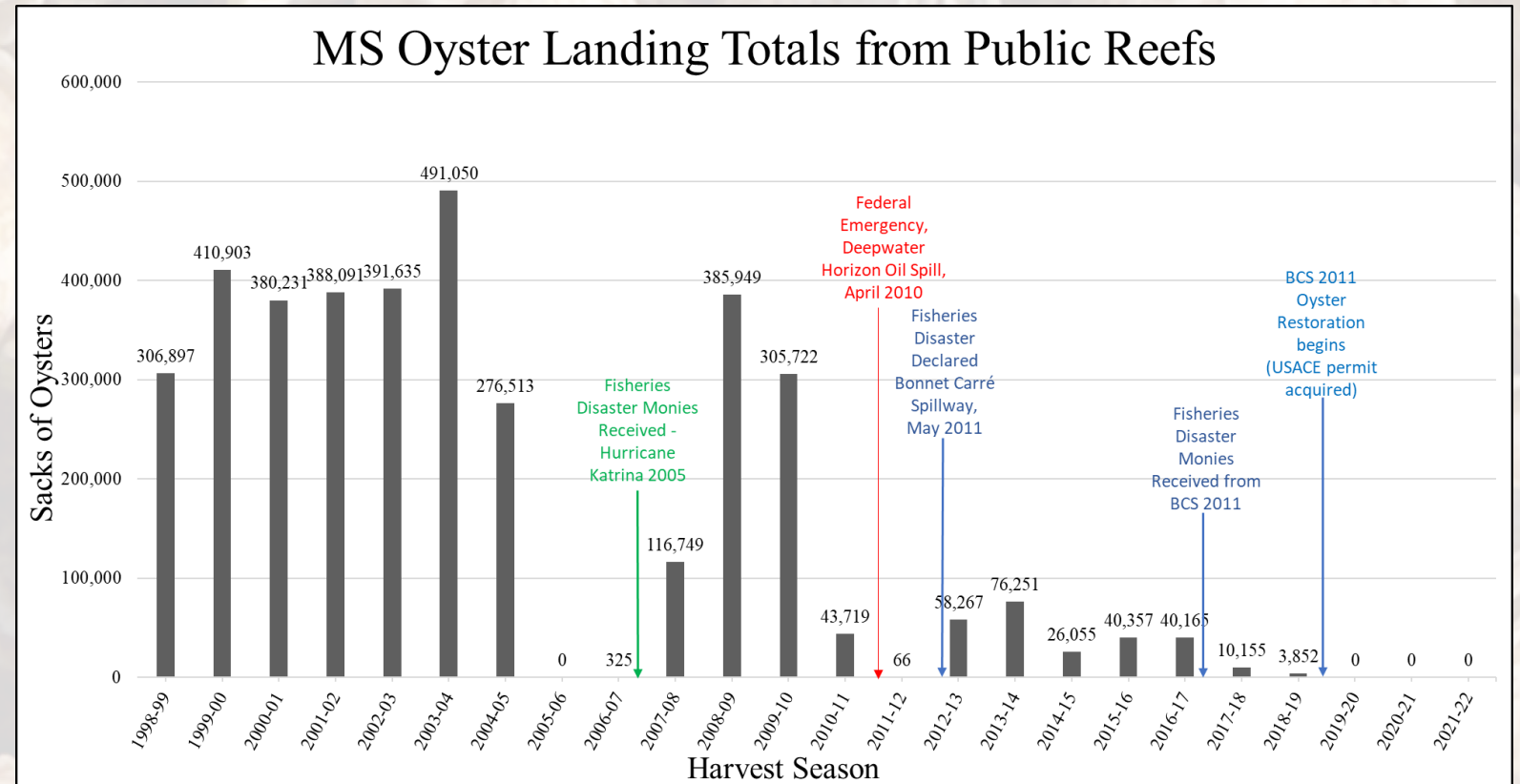
Mississippi Oyster Restoration Goals

Main Goal

- Rebuild and enhance oyster reef production and balance size class dynamics to re-establish sustainable public harvesting

Secondary Goals

- Ecosystem Services
- Water Quality Improvements





Compliance

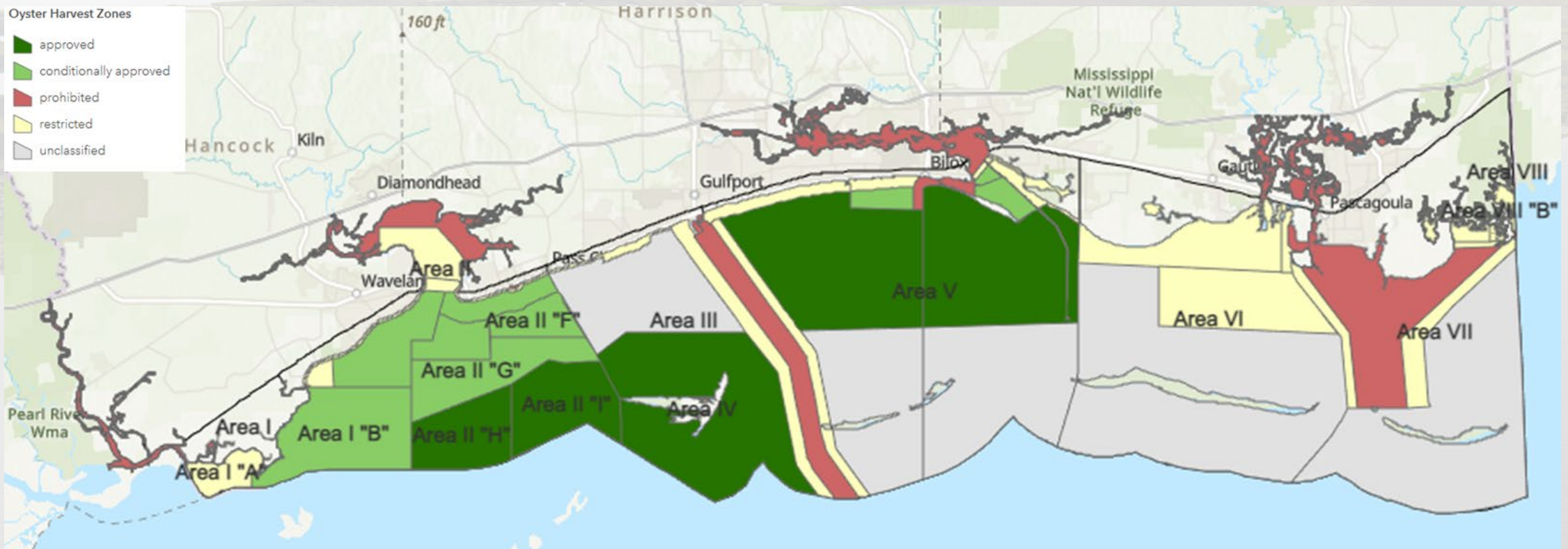
Compliance – Fecal Coliform Bacteria Sampling

- Collect 89 monthly sea water samples
- Routine sampling helps minimize the risk of seafood-borne illnesses and aid in determining sources of pollution along the coast
- Water sample sites are located in between the oyster resource and potential pollution sources
- Database includes historical data for the past 20 years.



Compliance – Growing Area Classifications

- A total of 8 areas
- Classifications: Approved, Conditionally Approved, Restricted, Prohibited, and Unclassified



A large pile of oyster shells, some open and some closed, is the central focus in the foreground. The shells are brown and grey, with some showing the white interior. In the background, there is a body of blue water, a concrete bridge with several pillars, and a large, multi-story building with a yellowish facade. The sky is blue with some light clouds. The text "Replenishment / Restoration" is overlaid in white, bold, sans-serif font across the middle of the image.

Replenishment / Restoration

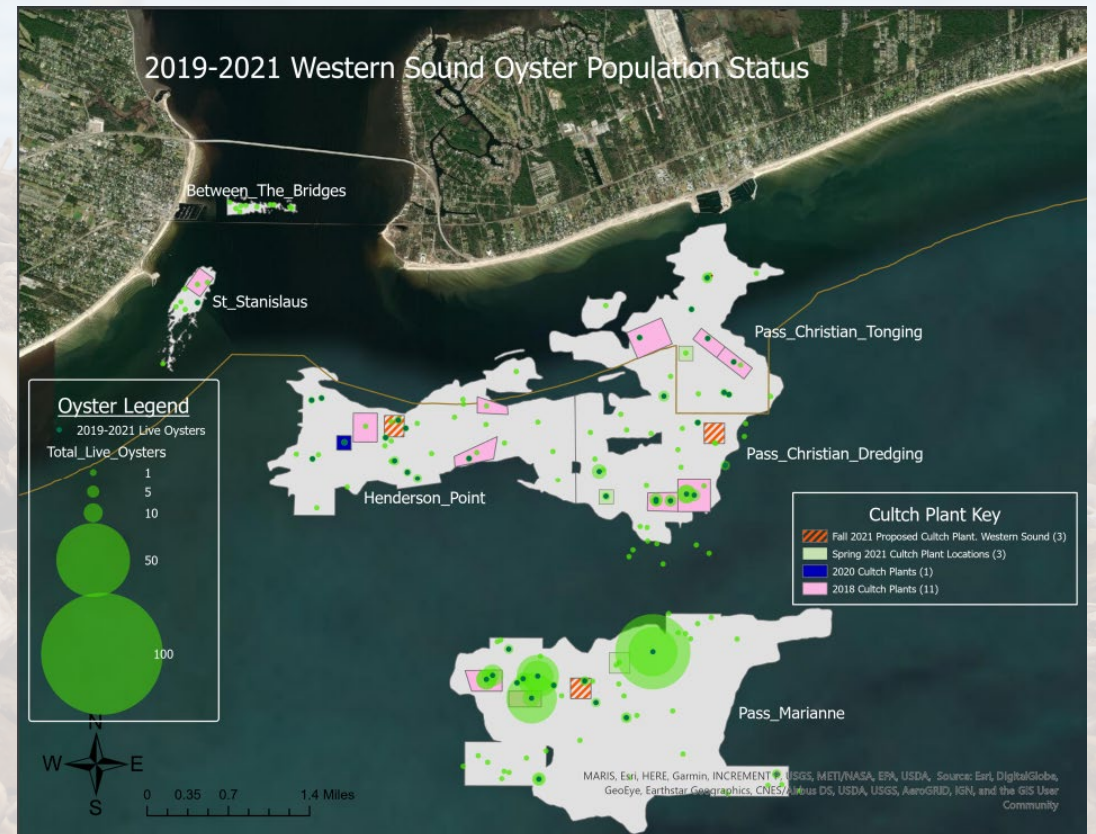
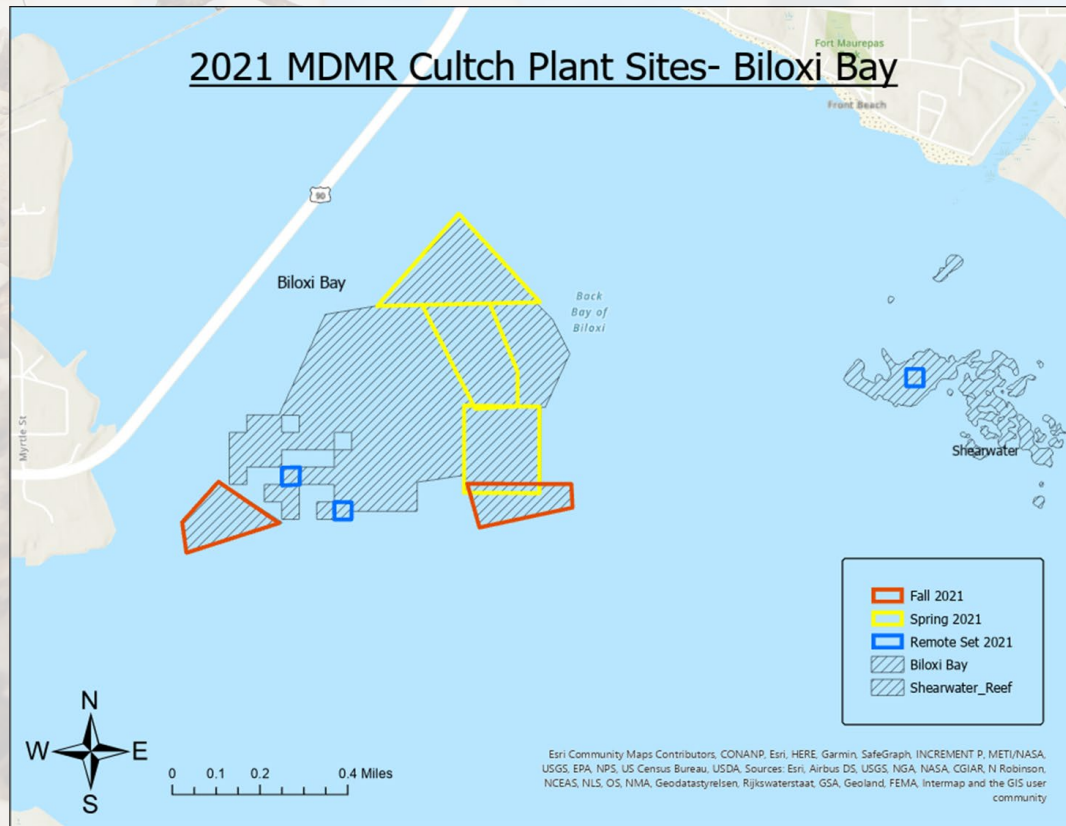
Replenishment / Restoration – MDMR Cultch Deployment

- MDMR deploys cultch material with the RV Conservationist.
 - These are relatively small-scale deployments that focus on restoring targeted areas and Remote-Setting deployments.



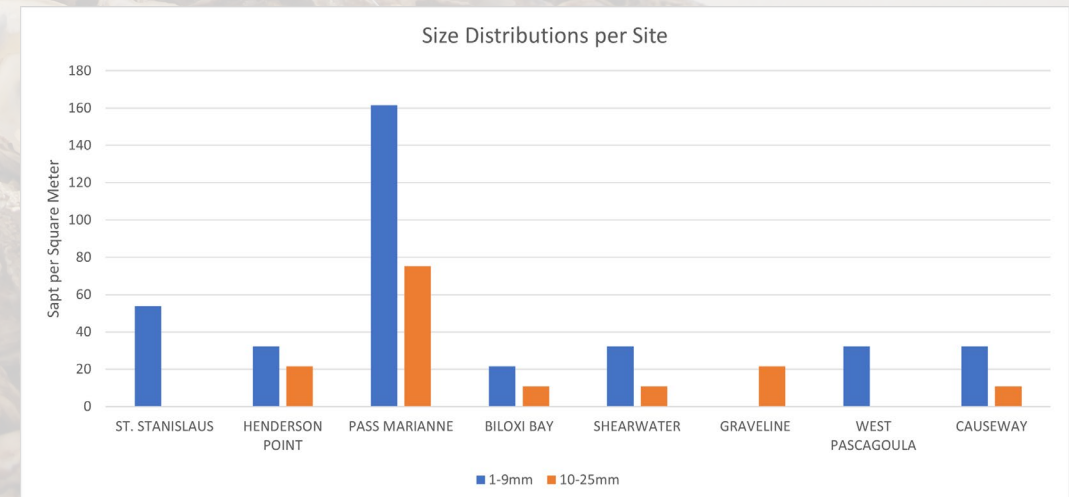
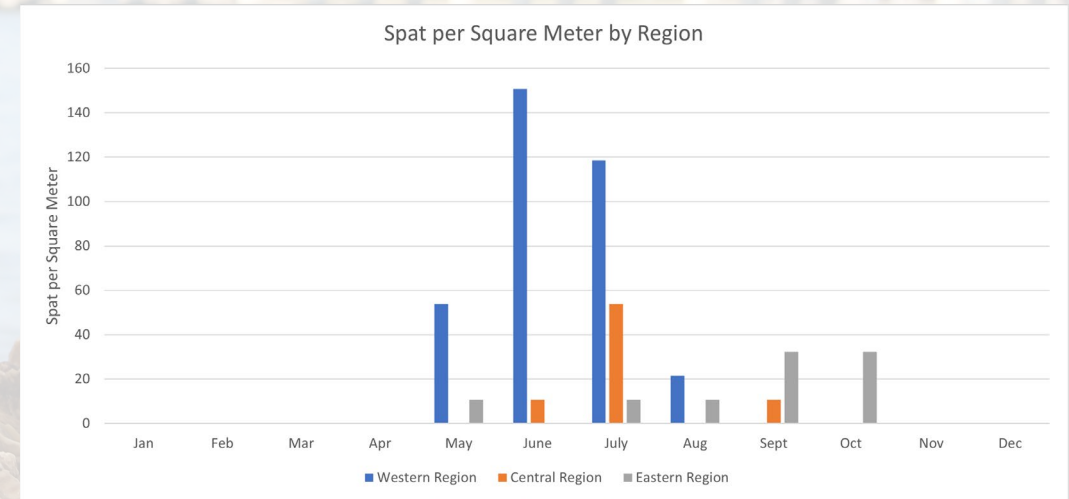
Replenishment / Restoration – Large Scale Cultch Deployment

- MDMR also contracts with local businesses to deploy large amounts of cultch in the Mississippi Sound.



Replenishment / Restoration - Recruitment Patterns of *Crassostrea virginica* in the Mississippi Sound

- Eastern oyster (*Crassostrea virginica*) settlement has been well documented in the Mississippi Sound through the MDMR's annual reef assessment.
- Typically, spat sets are seen from early summer through the fall, however, sampling primarily occurs from May to October leaving the rest of the year without a monitoring program of possible spawning.
- This project was designed to:
 - Continuously monitor the Mississippi Sound for spawning outside the known season across multiple years
 - Better identify recruitment hotspots for future restoration efforts.



Replenishment / Restoration – Remote Oyster Setting Facility – Phase 1

Phase I – Overview and Goals

- Restore Council-funded project aimed at determining the viability of a facility to assist with rebuilding oyster reefs faster than could be achieved naturally.
 - Assess the overall feasibility and infrastructure layout (2.5 Billion)
 - Determine the general design
 - Determine operational and maintenance cost
 - Determine setting efficiencies and identify production milestones

Phase I

Completed a compressive feasibility study

Number of spat-on shell oysters deployed: 23,997,905

Oysters per cubic yard deployed: 204,063

Average size of oyster deployed: 4.05mm

Average setting efficiency: 15-20%

Estimated cost per oyster: \$0.005
(half a cent)



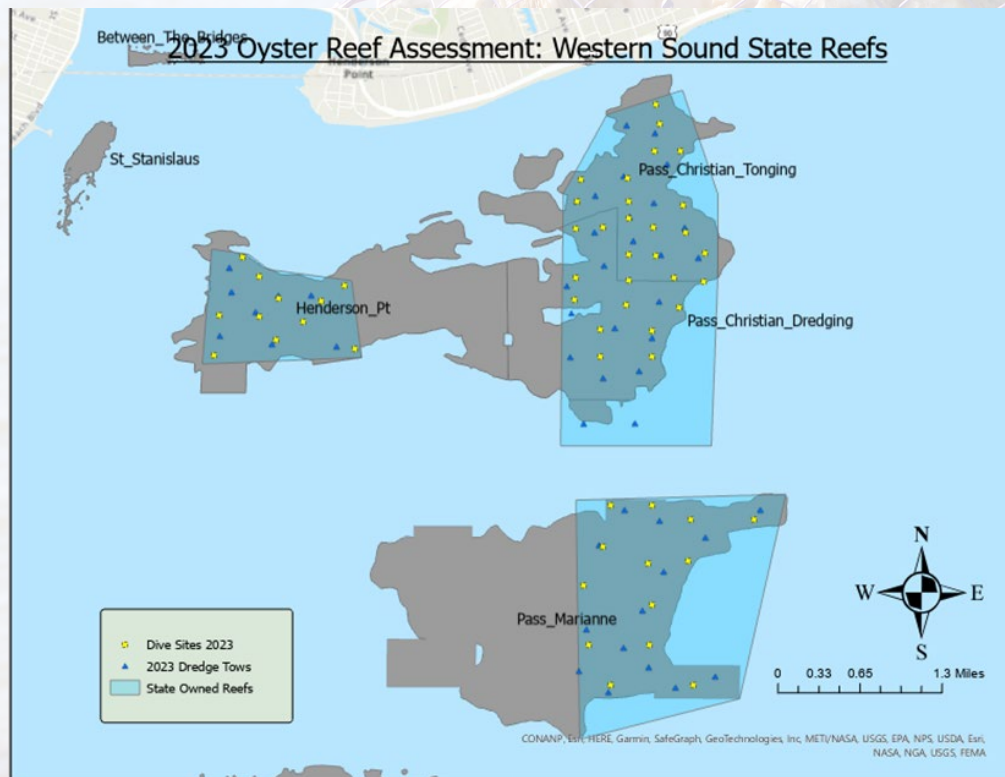


Oyster Harvest Strategy

Oyster Harvest Strategy – Square Meter Dives/Dredge Tows

Reef Assessments

- Completed 75 one-minute dredge tows
- Will complete 115 square meter samples site
 - 230 total samples



Off-Bottom Oyster Aquaculture (OBOA)

Total Graduates

- 70 farmers have graduated from the Off-Bottom Oyster Aquaculture Training Program

Increased Acreage for Commercial Aquaculture

- Acreage available for off-bottom leases originally 76 acres
- Increased from 2018 to 2021 in a total of three phases following the success of the program
- 465 acres currently permitted for commercial farming
- 68 acres currently leased by 35 farmers

Over a Million Oysters Harvested

- Off-bottom oyster aquaculture commercial operations have harvested 1,079,352 oysters, equivalent to 3,925 sacks of oysters
- Oyster prices range from \$0.65 to \$1.10, average of \$0.70



Oyster Harvest Strategy – On-Bottom Molluscan Shellfish Leases

- The overall goal is to promote the prosperity of coastal communities and foster a thriving shellfish industry in the state.

Primary objectives of the updated regulations:

- Encourages private individuals or businesses to lease and develop previously in-accessible water bottoms
- Ensures compliance with environmental and conservation requirements
- Fosters a sustainable framework for shellfish production in Mississippi
- Increases oyster production in Mississippi
- Stimulates economic development within the shellfish industry by creating leasing opportunities
- Job creation, revenue generation, and support for associated industries, such as hatcheries, processing facilities, and seafood markets

MISSISSIPPI LEGISLATURE

REGULAR SESSION 2023

By: Senator(s) Thompson, Moran

To: Ports and Marine
Resources

SENATE BILL NO. 2544
(As Passed the Senate)

1 AN ACT RELATING TO THE REGULATION OF SEAFOOD AND OYSTERS BY
2 THE MISSISSIPPI DEPARTMENT OF MARINE RESOURCES; TO BRING FORWARD
3 OR AMEND SECTIONS 49-15-5, 49-15-7, 49-15-27, 49-15-36, 49-15-37,
4 49-15-38, 49-15-39, 49-15-40, 49-15-41, 49-15-42, 49-15-43,
5 49-15-44, 49-15-45, 49-15-46, 49-15-47 AND 49-15-49, MISSISSIPPI
6 CODE OF 1972, TO CLARIFY THE AUTHORITY OF THE MISSISSIPPI
7 DEPARTMENT OF MARINE RESOURCES TO LEASE REEFS AND BOTTOM LAND FOR
8 OYSTER GROWING/HARVESTING AND TO CLARIFY THE AUTHORITY OF THE
9 DEPARTMENT TO REGULATE THE TAKING OF OYSTERS AND THE ESTABLISHMENT
10 OF NEW OYSTER BEDS; TO DELETE THE AUTHORITY OF LOCAL GOVERNING
11 AUTHORITIES TO ASSIST THE DEPARTMENT IN PLANTING OYSTER SHELLS; TO
12 DELETE THE PROVISIONS THAT ALL REEFS ARE PUBLIC; TO DELETE THE
13 AUTHORITY OF THE DEPARTMENT TO EXERCISE EMINENT DOMAIN IN
14 CONSTRUCTING CANALS; TO CLARIFY THE AUTHORITY OF MUNICIPALITIES
15 RELATIVE TO THE WATERS OF THE MISSISSIPPI SOUND; TO REPEAL SECTION
16 49-15-40.1, MISSISSIPPI CODE OF 1972, WHICH AUTHORIZES THE
17 MISSISSIPPI DEPARTMENT OF MARINE RESOURCES TO CONDUCT A PILOT
18 PROGRAM FOR BOTTOM LAND LEASING FOR OYSTER PRODUCTION IN WATERS
19 ADJACENT TO HANCOCK COUNTY; AND FOR RELATED PURPOSES.

20 SECTION 1. Section 49-15-5, Mississippi Code of 1972, is

Oyster Harvest Strategy – On-Bottom Molluscan Shellfish Leases

- Fifteen (15) year leases.
- Total acreage cannot exceed 2,500 acres per individual/business
- The leasing rate is three dollars (\$3.00) per acre per year.
- Lessees must propagate a minimum of 50% of the total bottom area leased within the first five (5) years, with a minimum of 20% being propagated by Year 2
- The minimum planting density
 - no less than 60 cubic yards of approved cultch per acre
 - or
 - no less than 5 cubic yards of approved cultch material with a minimum of 75,000 oyster spat per cubic yard.
- MDMR staff will inspect cultch material and volume prior to deployment
- Submit a yearly summary of lease activity by January 30th
- Failure to meet the leasing requirements may be deemed an “Event of Default.”



ON-BOTTOM MOLLUSCAN SHELLFISH LEASES

PROGRAM INFORMATION

The Mississippi Department of Marine Resources (MDMR) is pleased to announce the recent update of its on-bottom shellfish regulations. These changes were made possible by the passage of Senate Bill 2544 during the Mississippi Legislature 2023 Regular Session. The updated regulations now allow private individuals or businesses to lease previously inaccessible water bottoms, fostering a sustainable framework for shellfish production in Mississippi while ensuring compliance with environmental and conservation requirements.

One of the primary objectives of the updated regulations is to encourage private individuals or businesses to lease and develop water bottoms, thereby increasing oyster production in Mississippi. By creating leasing opportunities, the regulations aim to stimulate economic development within the shellfish industry. This includes job creation, revenue generation, and support for associated industries such as hatcheries, processing facilities, and seafood markets. The overall goal is to promote the prosperity of coastal communities and foster a thriving shellfish industry in the state. The updated regulations are designed to establish a vibrant and sustainable shellfish industry. They emphasize responsible cultivation practices, ensuring the long-term protection of the marine environment for future generations.

Through the MDMR's "Request for Proposals" process, interested parties can apply for shellfish leases. The application period will open on July 21, 2023, at 9:00 am and close on August 4, 2023, at 4:00 pm.

For a comprehensive understanding of the updated regulations, interested parties can access detailed information below.

WHAT YOU NEED TO KNOW

LEASE CONDITIONS

PROPERTY CLASSIFICATIONS

CULTIVATION AND PROPAGATION REQUIREMENTS

REPORTING

The MDMR has established lease conditions to ensure the sustainable cultivation and gathering of shellfish, while promoting responsible practices and compliance with regulations. These conditions outline various requirements that lessees must fulfill to obtain and maintain leases for shellfish cultivation.

- Leases are granted for a term of fifteen (15) years, with the lessee having the right to renew the lease for an additional fifteen (15) years and subsequent renewals at fifteen-year intervals, as long as the lessee actively cultivates and gathers shellfish, complies with all provisions, and possesses necessary permits and licenses.
- The proposed lease area must be located in growing waters classified as approved, conditionally approved, or

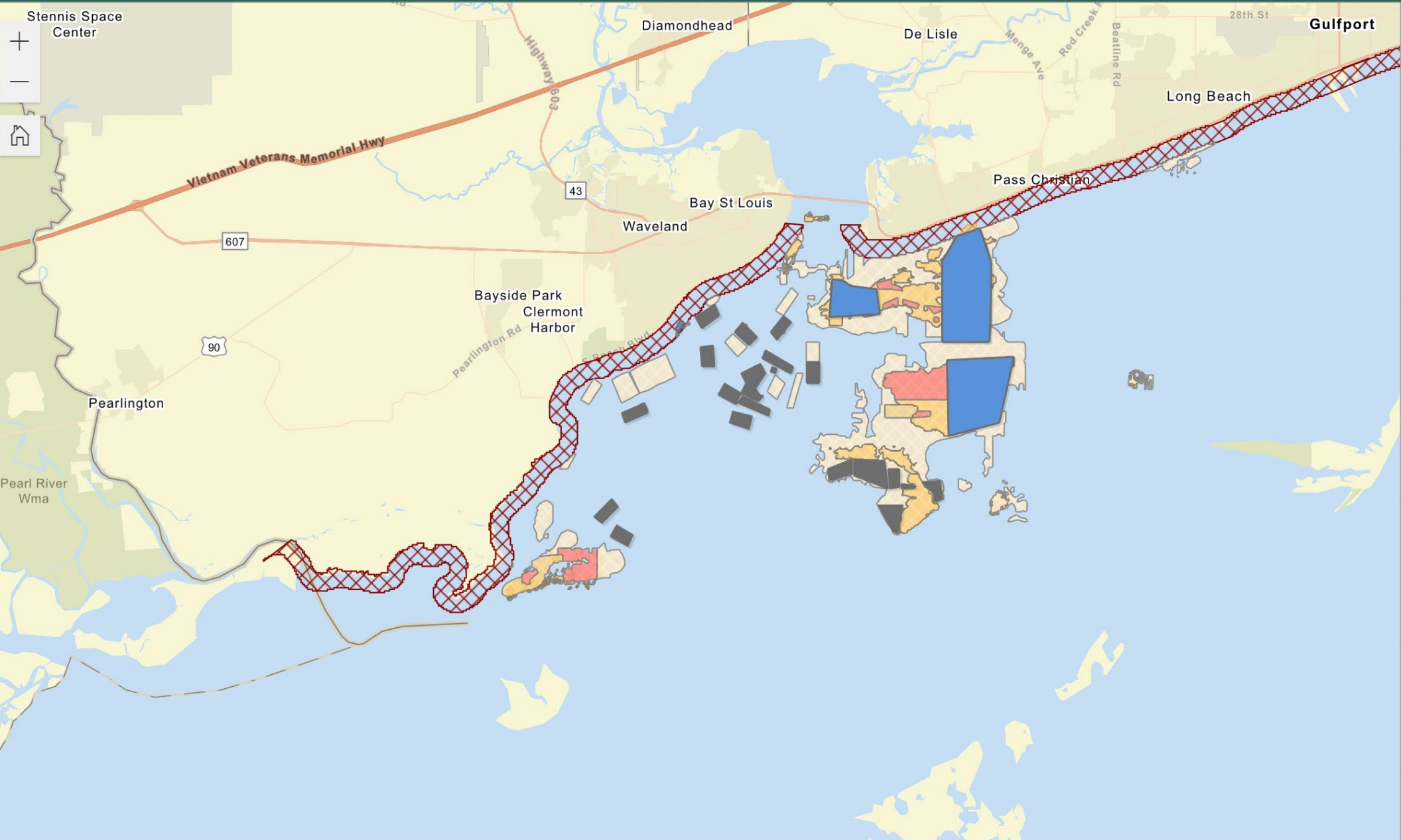
Please explore these helpful documents to learn more about the On-Bottom Molluscan Shellfish Leasing Process.

[READ SENATE BILL 2544](#)

[READ THE REQUEST FOR PROPOSALS](#)

[READ TITLE 22 PART 1](#)

[READ 2016 OYSTER RESTORATION PERMIT](#)



Active Oyster Leases - Not available for Lease

State-Owned Reefs - Not available for Lease

Property Classification

- Class I
- Class II
- Class III

Permitted Areas - Available to Lease

Historic Oyster Reef

Riparian Zone - Not available for Lease

Mississippi On-Bottom Oyster Lease Viewer

Mississippi Department of Marine Resources



30.273204 -89.631966 Degrees



The Bigger Picture

Mississippi needs to diversify oyster harvest and restoration strategies



Questions



ENHANCE ★ PROTECT ★ CONSERVE

Madison Parker

Shellfish Bureau – Office of Marine Fisheries