



ENHANCE ★ PROTECT ★ CONSERVE

Mississippi Advisory Commission on Marine Resources

October 11, 2022



ENHANCE ★ PROTECT ★ CONSERVE

Employment, Contracts and Procurement Updates October 11, 2022

Employment Updates

- Brianna Andrews – Environmental/Natural Resources Specialist II – Grand Bay NERR – 10.01.22
- Jacob Nickerson – Environmental/Natural Resources Specialist II – Marine Fisheries – Lyman Hatchery - 10.08.22
- Eric Gigli – Promoted to Environmental/Natural Resources Specialist Team Lead – Marine Fisheries (Finfish) – 10.16.22

ENHANCE ★ PROTECT ★ CONSERVE



ENHANCE ★ PROTECT ★ CONSERVE

Actions Update for October 11, 2022 Commission Meeting

Discussed at the September 2022 meeting:

- The Commission recommended and the Director approved the following motions:

1) Approval of the following State Saltwater Youth Finfish Records.

a. Conventional Tackle

1. Redfin Needlefish (*Strongylura notata*) – 2.9 oz. – Rodie Armes

b. Fly Fishing Records

1. Hardhead Catfish (*Ariopsis felis*) – 1 lbs. 3.5 oz. – Rodie Armes

Pending Items:

Approval of the August 18, 2022 meeting minutes.



ENHANCE ★ PROTECT ★ CONSERVE

Mississippi

Department of Marine Resources

Agency Financial Results
as of September 30, 2022

Key Metrics:

- State Revenue of \$3.4M
- Agency Revenue of \$4.2M
- State Net Income of \$2.0M
- Agency Net Income of (\$382K)

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES					
Income Statement - Fiscal Year 2023					
As of September 30, 2022					
	Federal : GOMESA PHII: NFWF:		Operating		
	State	Non-Federal:	Subtotal	Tidelands	Total DMR
Revenue:					
Off-road Fuel Tax	3,050,000	-	3,050,000	-	3,050,000
Federal/NonFederal Grants	-	475,632	475,632	-	475,632
Sales Revenue	295,320	-	295,320	-	295,320
Indirect Cost Recovery	116,462	-	116,462	-	116,462
Other Revenue	30,102	219,065	249,166	56,972	306,138
Current Budget Year Revenue:	3,491,884	694,697	4,186,581	56,972	4,243,552
Expenditures:					
Salaries, Wages, Fringe	1,276,826	766,133	2,042,959	225,531	2,268,490
Travel	4,292	5,080	9,371	2,085	11,456
Contractual Services	64,878	123,329	188,207	69,365	257,572
Commodities	54,859	45,107	99,967	20,431	120,397
Other than Equipment	10,072	-	10,072	15,109	25,181
Equipment	-	9,698	9,698	1,266	10,964
Vehicles	20,035	28,175	48,210	-	48,210
Subsidies, Loans, and Grants	615	1,475,659	1,476,274	407,136	1,883,410
Current Budget Year Expenditures:	1,431,578	2,453,181	3,884,758	740,923	4,625,681
Current Budget Year Net Income/(Loss):	\$ 2,060,306	\$ (1,758,484)	\$ 301,822	\$ (683,951)	\$ (382,129)

Financial Budget Comparison

- After three months of Fiscal Year 2023:

MISSISSIPPI DEPARTMENT OF MARINE RESOURCES
2023 Budget Comparison
As of September 30, 2022

	<i>Actual Year to Date Expenditures</i>			<i>Budget Year Totals</i>			<i>Percent Remaining</i>		
	Operating	Tidelands	Total	Operating	Tidelands	Total	Operating	Tidelands	Total
Expenditures:									
Salaries, Wages, Fringe	\$ 2,042,959	\$ 225,531	\$ 2,268,490	\$ 12,147,340	\$ 1,672,239	\$ 13,819,579	83.2%	86.5%	83.6%
Travel	9,371	2,085	11,456	163,461	25,000	188,461	94.3%	91.7%	93.9%
Contractual Services	188,207	69,365	257,572	7,291,650	1,651,000	8,942,650	97.4%	95.8%	97.1%
Commodities	99,967	20,431	120,397	3,078,291	360,000	3,438,291	96.8%	94.3%	96.5%
Other than Equipment	10,072	15,109	25,181	10,072	15,109	25,181	0.0%	-	0.0%
Equipment	9,698	1,266	10,964	378,613	175,000	553,613	97.4%	99.3%	98.0%
Vehicles	48,210	-	48,210	170,000	250,000	420,000	71.6%	0.0%	88.5%
Wireless Devices	-	-	-	6,250	-	6,250	100.0%	0.0%	100.0%
Subsidies, Loans, and Grants	1,476,274	407,136	1,883,410	100,472,331	8,306,899	108,779,230	98.5%	95.1%	98.3%
Total Expenditures:	\$ 3,884,758	\$ 740,923	\$ 4,625,681	\$ 123,718,008	\$ 12,455,247	\$ 136,173,255	96.9%	94.1%	96.6%

- Operating Funds have 96.9% of Budget remaining
- Tidelands Trust Fund has 94.1% of Budget remaining



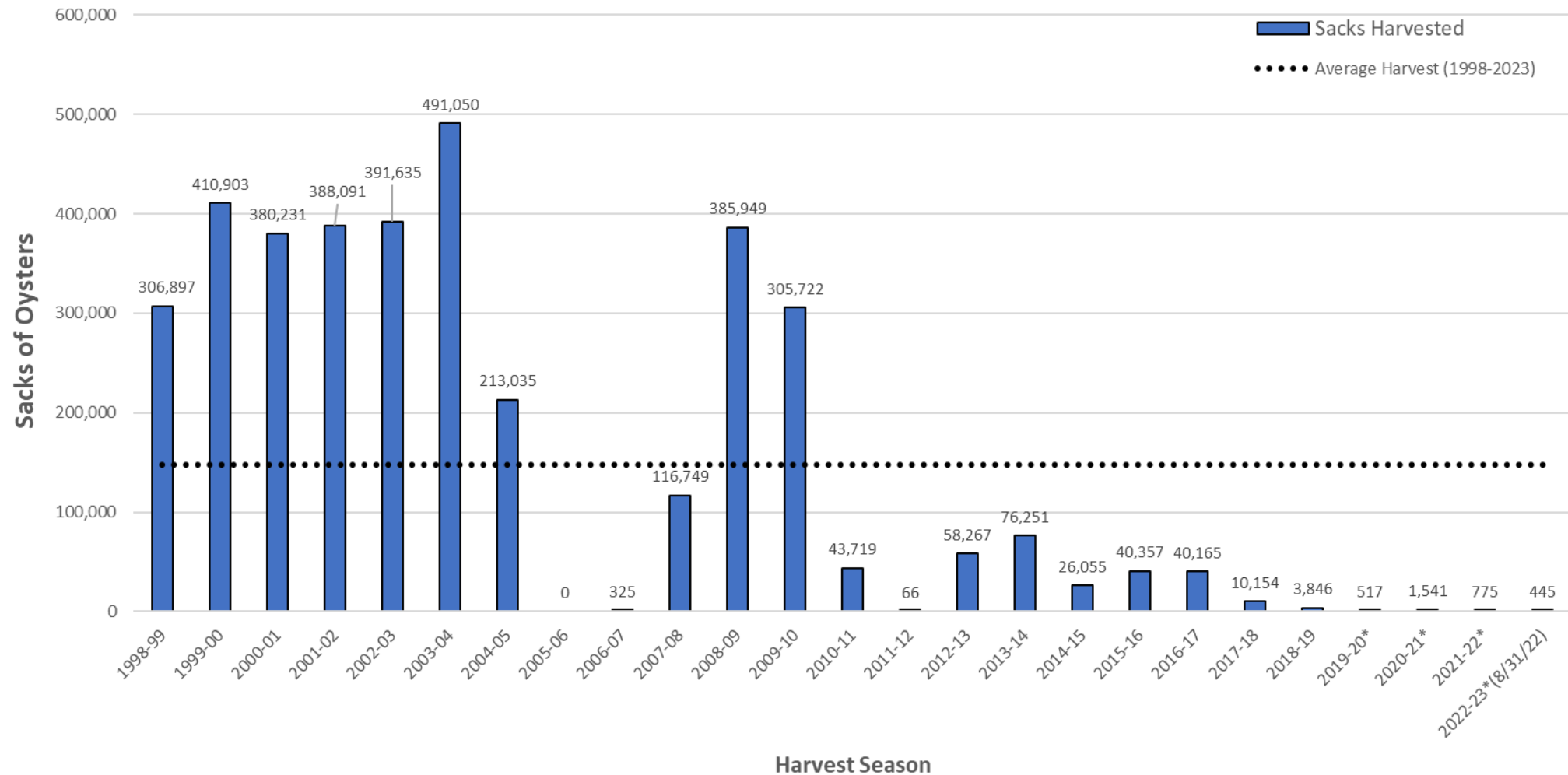
ENHANCE ★ PROTECT ★ CONSERVE

2022 Oyster Reef Assessment

Jason Rider
October 11, 2022

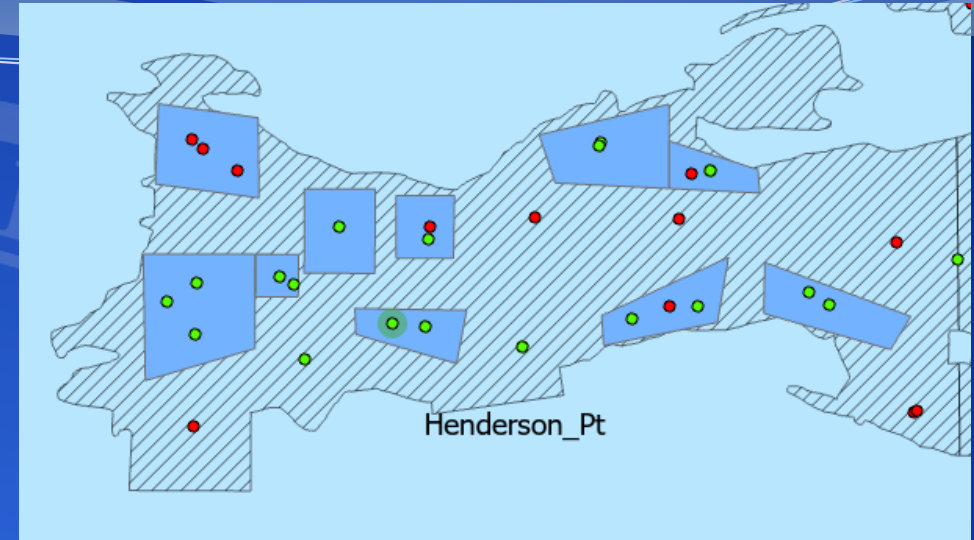
HISTORIC HARVEST RECORDS

MS Oyster Landings for Public Reefs and Off Bottom Oyster Aquaculture*

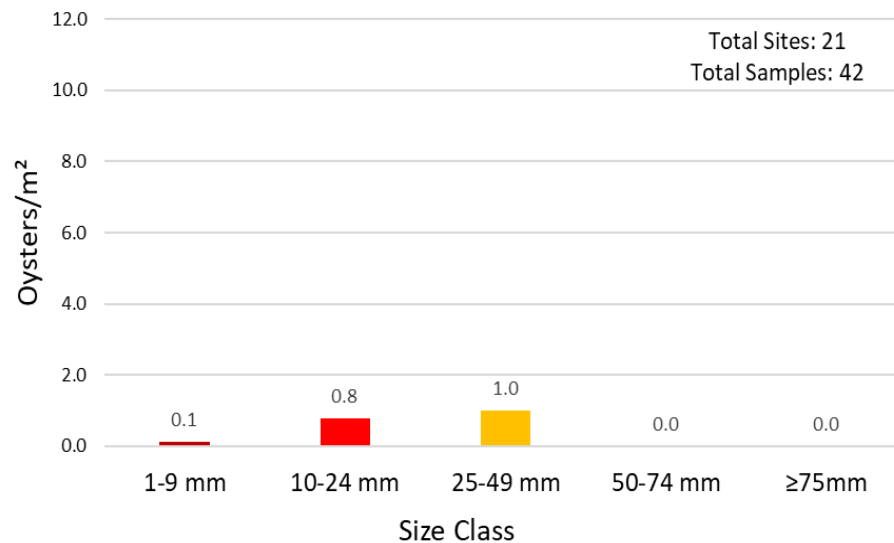


HENDERSON POINT

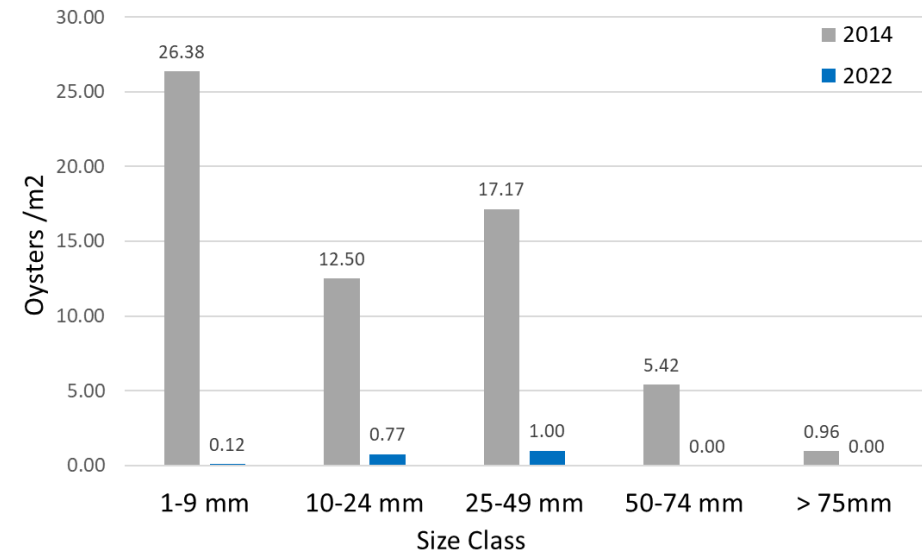
- Reef Footprint: 1,295 acres
- Predators: High levels of Hook Mussels
- Limited suitable material for reef expansion
- Majority of the areas sampled were soft/moderate mud or material was buried
- Potential Action:
 - Monitor. Long-term recovery mode



Henderson Point: 2022 Size Distribution

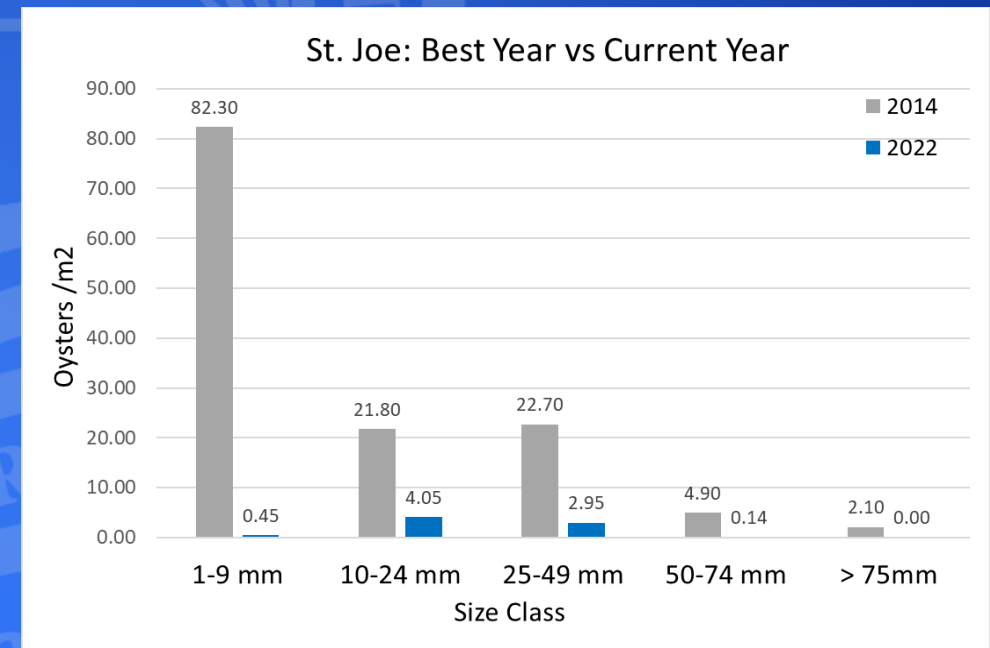
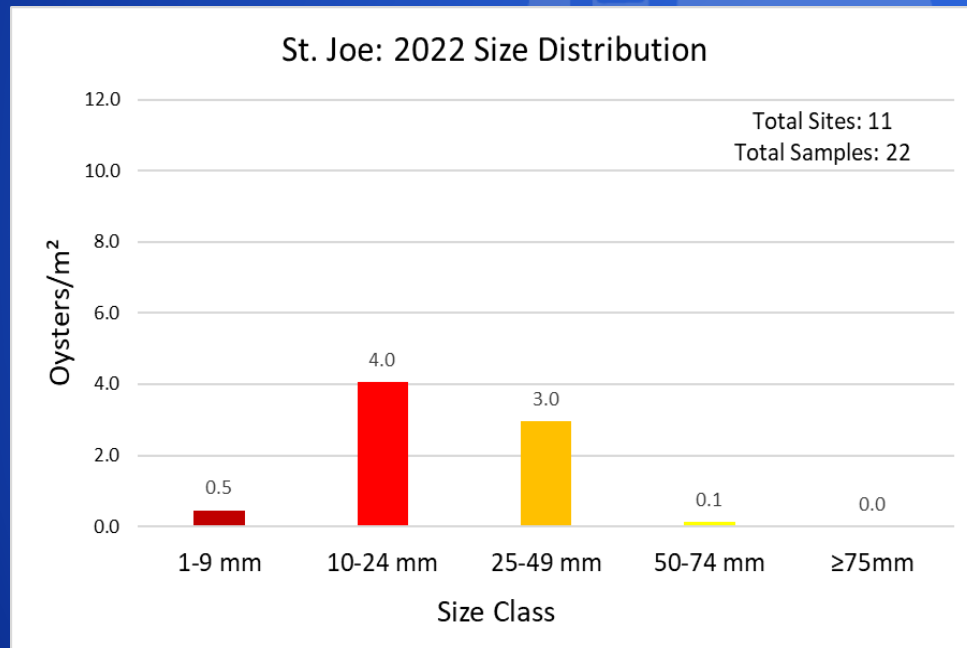
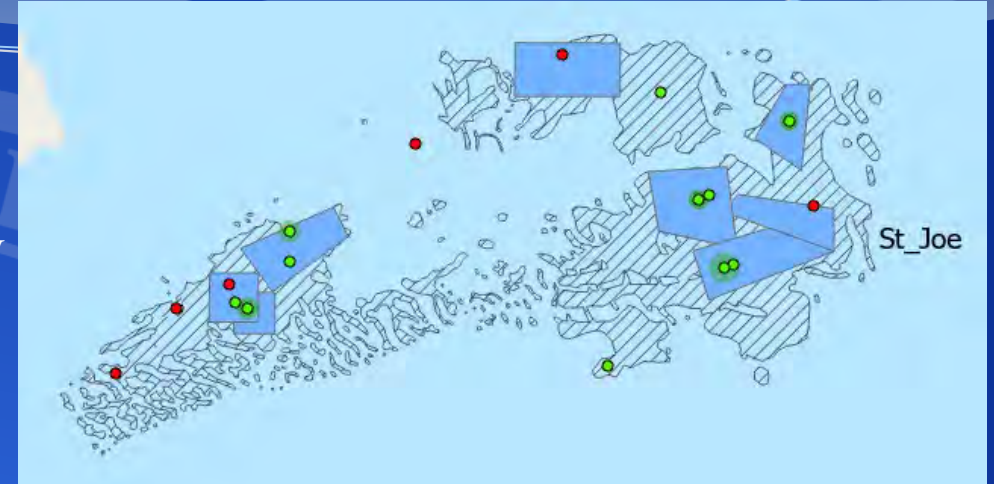


Henderson Point: Best Year vs Current Year



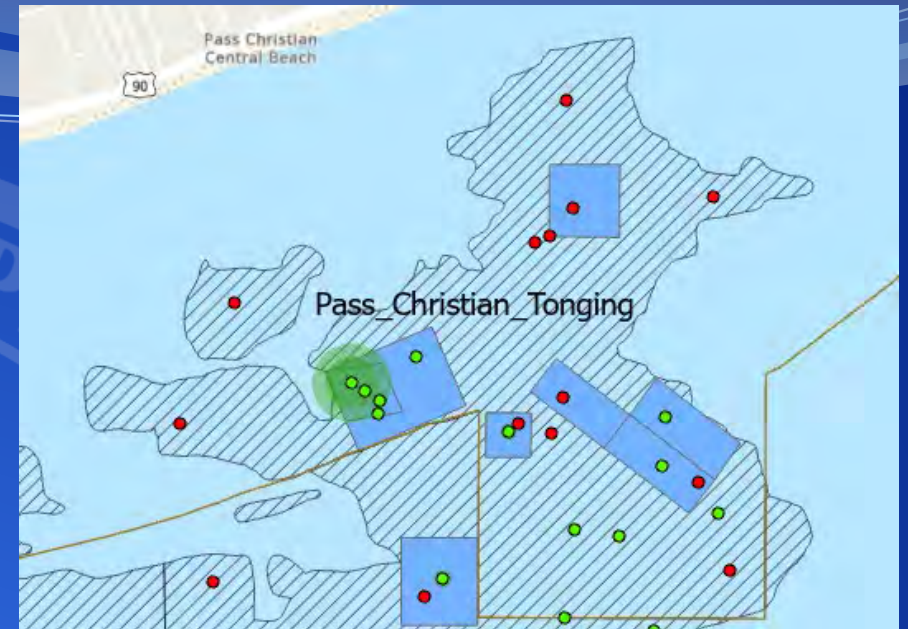
ST. JOE

- Reef Footprint: 473 acres
- Predators: Low
- Majority of oysters found within the cultch plants only
- Salinity major factor in oyster growth and spawning
- Potential Action:
 - Monitor mortality as seed sizes grow

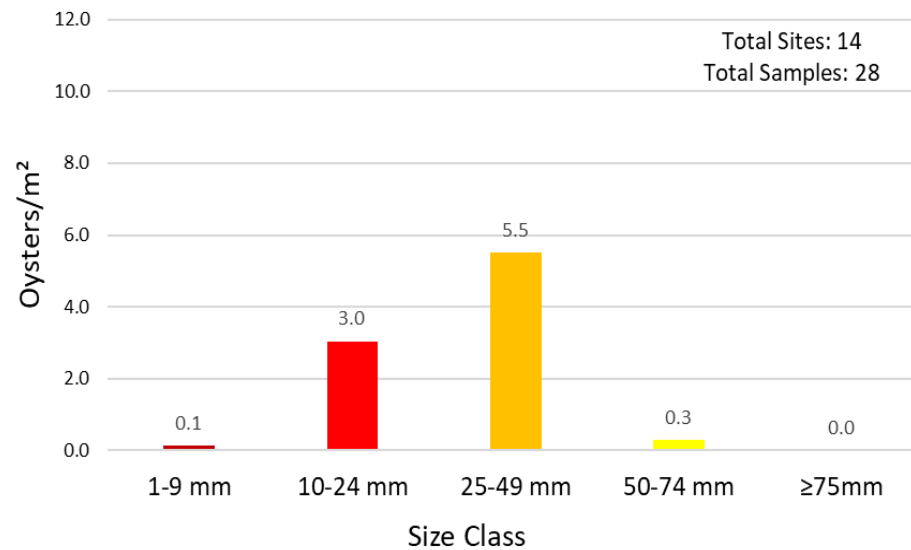


PASS CHRISTIAN TONGING

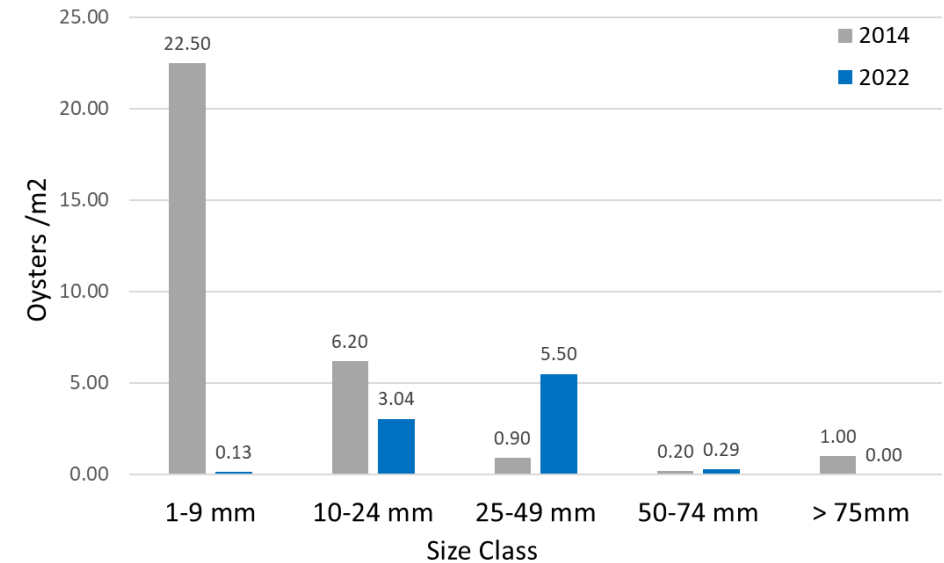
- Reef Footprint: 886 acres
- Predators: Moderate levels of Hooked Mussels
- Reef material is deteriorating due to low recruitment
- Majority of oysters found within a single cultch plant
- Surrounding cultch plants are almost entirely sand and shell hash
- Potential Action:
 - Additional cultch to expand the productive plants



Pass Christian Tonging: 2022 Size Distribution

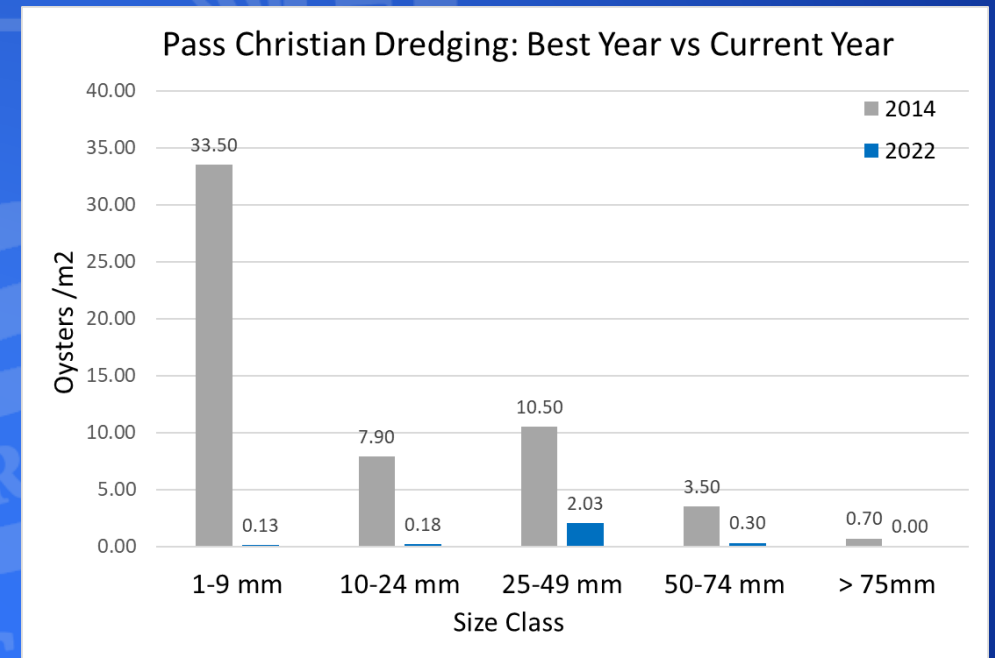
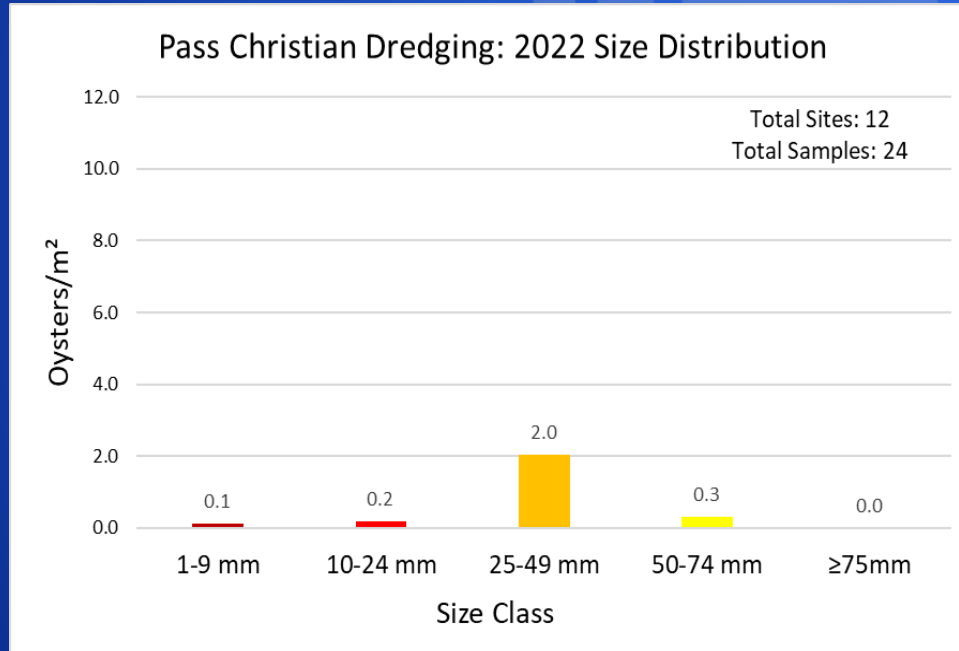
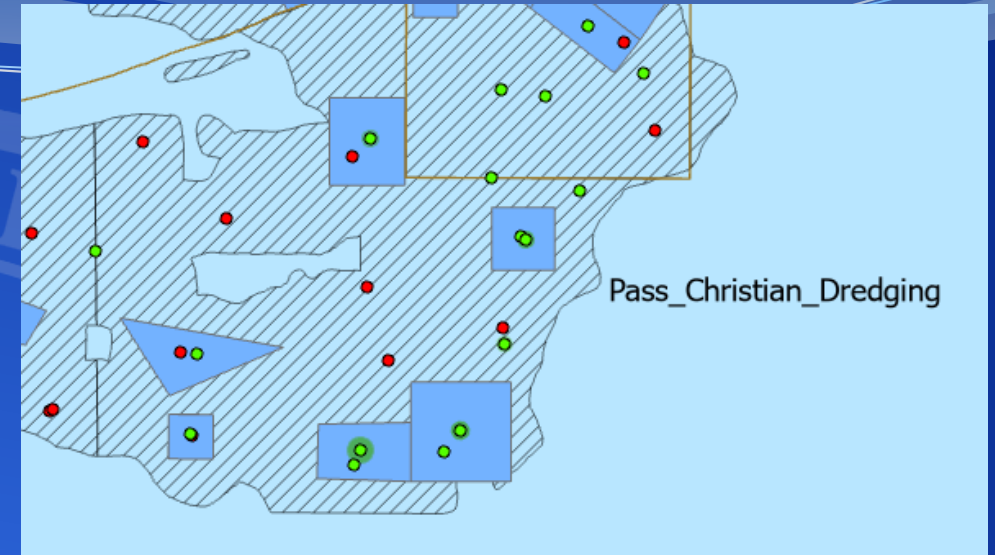


Pass Christian Tonging: Best Year vs Current Year



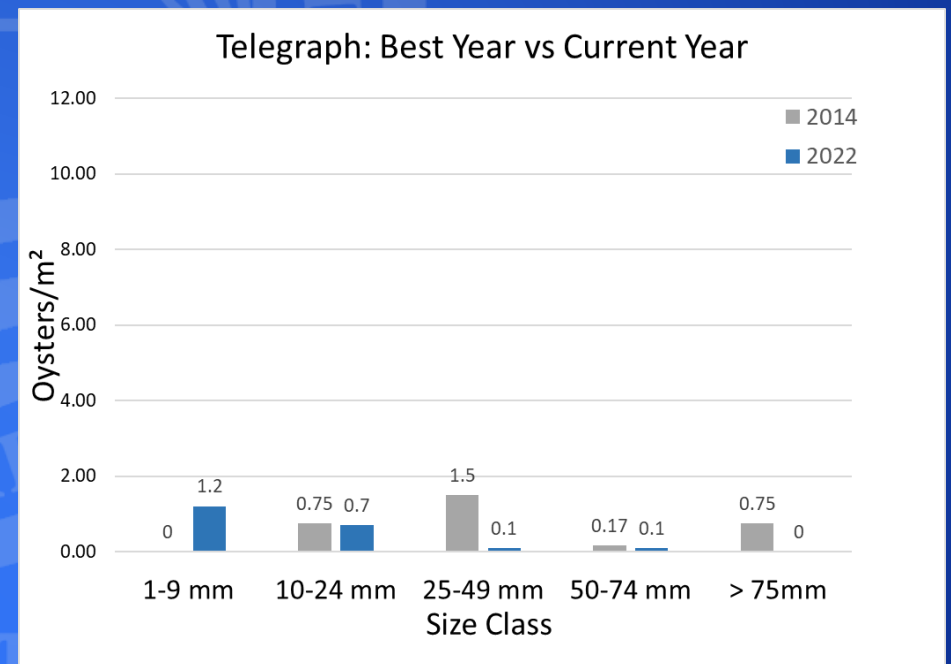
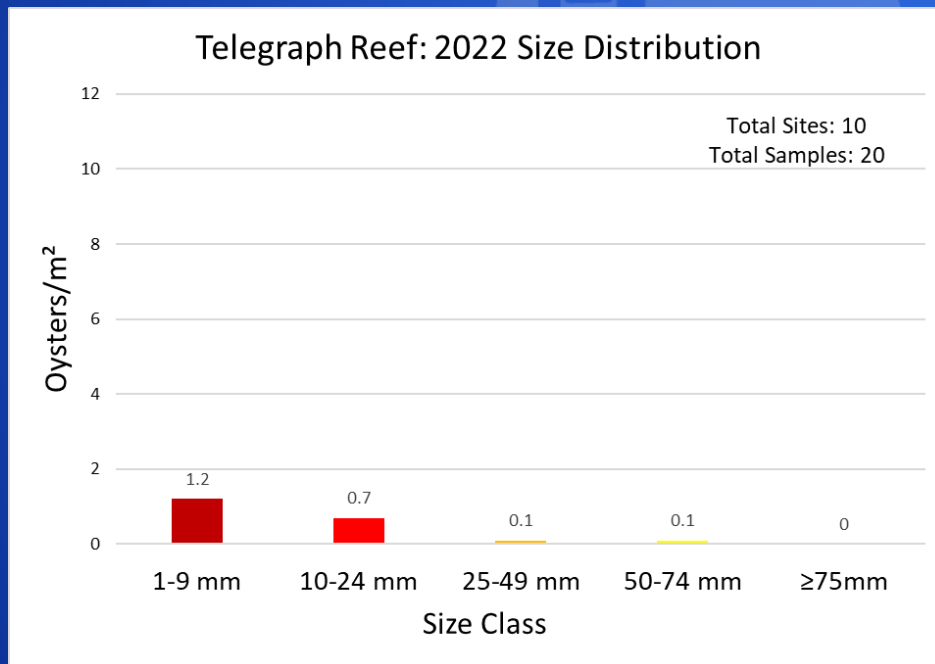
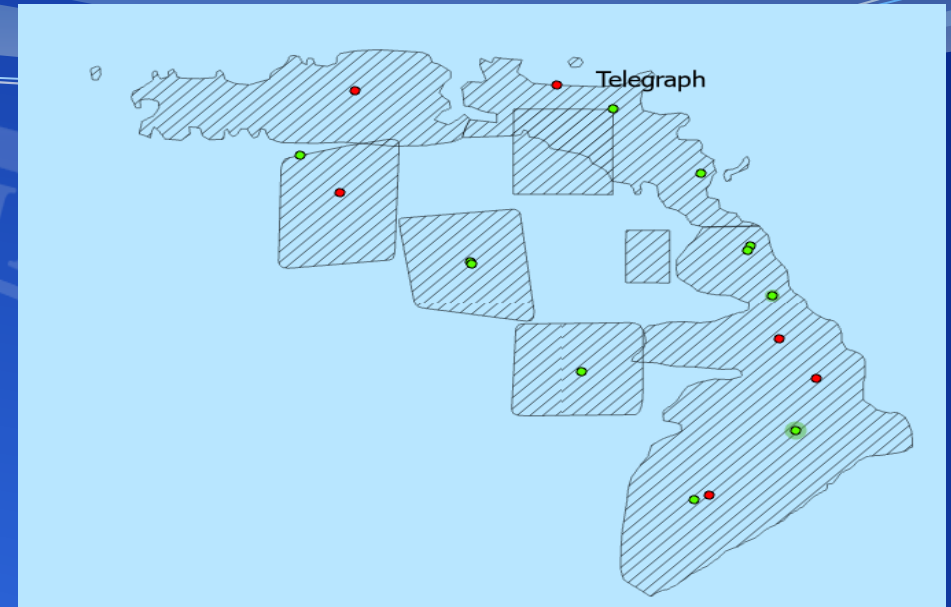
PASS CHRISTIAN DREDGING

- Reef Footprint: 933 acres
- Predators: Hooked Mussels and oyster drills low
- Limited suitable material for reef expansion
- Reef material is deteriorating due to low recruitment
- Majority of oysters found within the southern cultch plants
- Recommendations:
 - Additional cultch to expand the productive plants



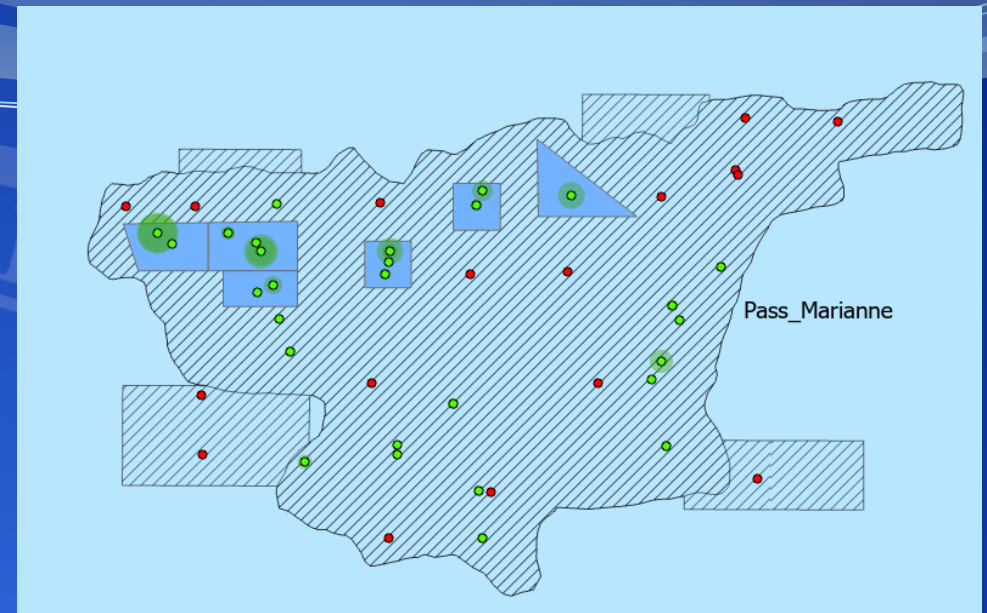
TELEGRAPH REEF

- Reef Footprint: 1,260 acres
- Telegraph Trend: Typically observe a yearly spat set, but experience mortality when they reach seed size.
- Potential Action:
 - Monitor salinity levels and effects on size distribution and survival.

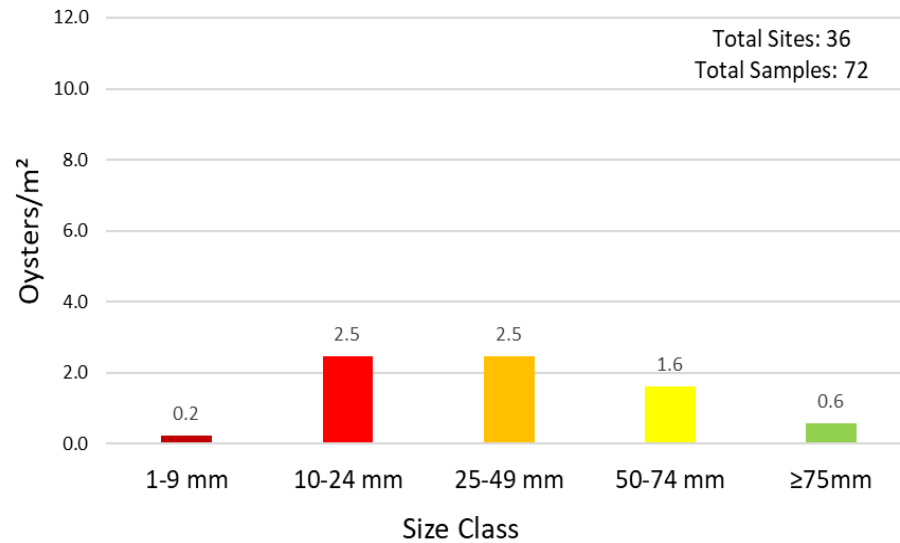


PASS MARIANNE

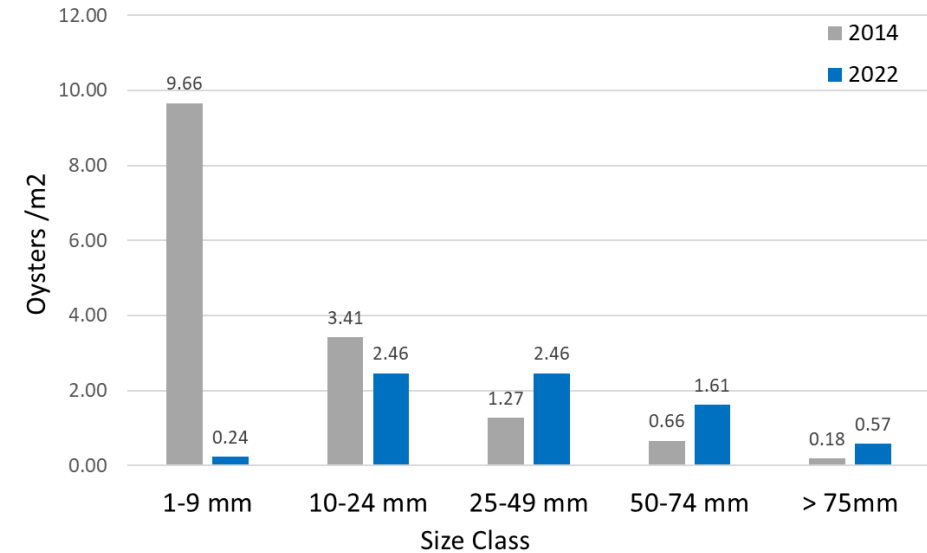
- Reef Footprint: 2,372 acres
- Most productive reef in the west
- Majority of oysters found within the cultch plants
- Size classes indicate an early spawn, (June/July)
- Potential Actions:
Cultch plant to fill voids with limited material, connect past cultch plants to increase productivity



Pass Marianne: 2022 Size Distribution

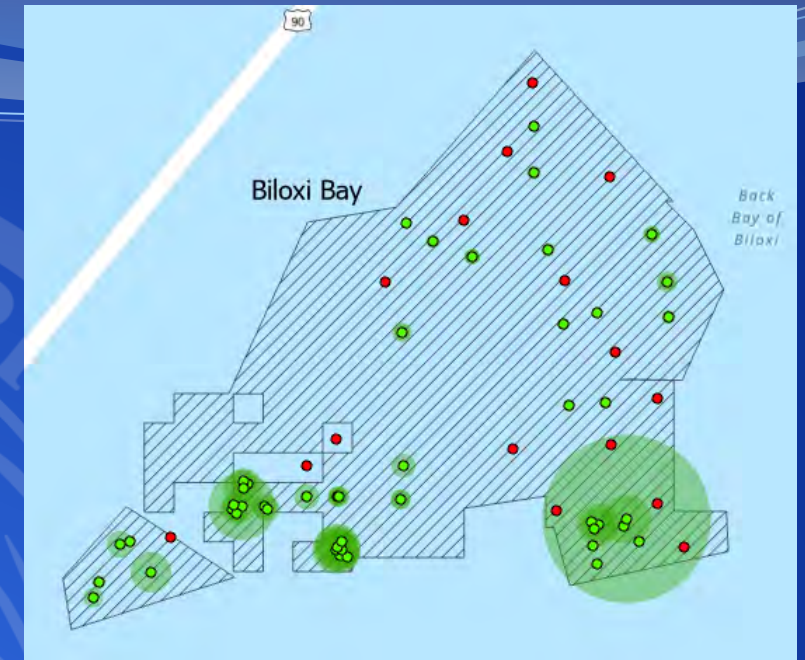


Pass Marianne: Best Year vs Current Year



BILOXI BAY

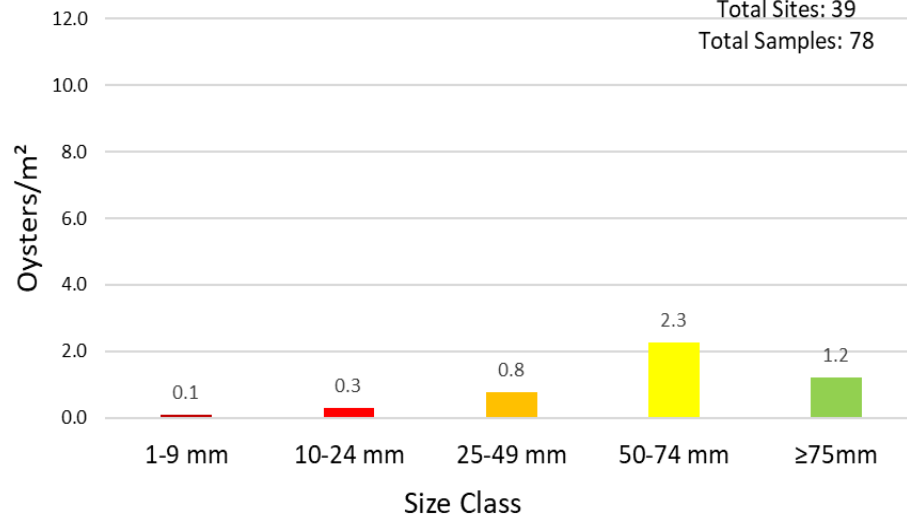
- Reef Footprint: 227 acres
- Population and size classes are increasing annually since 2019
- Recommendations:
 - Continue remote setting in strategic locations to increase spat settlement and brood stock development.
 - Cultivate and monitor for reef development.



Biloxi Bay: 2022 Size Distribution

WITHOUT Remote Set

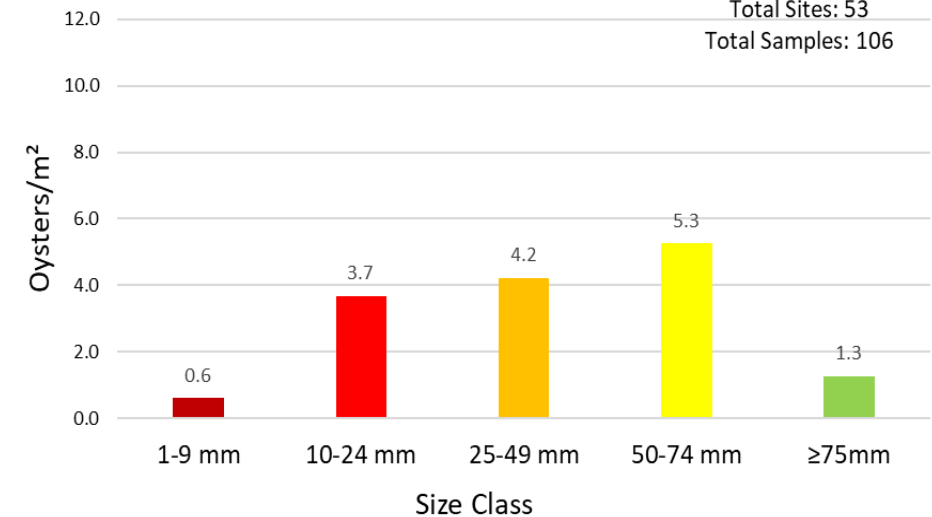
Total Sites: 39
Total Samples: 78



Biloxi Bay: 2022 Size Distribution

With 2021 and 2022 Remote Set

Total Sites: 53
Total Samples: 106



2022 MISSISSIPPI OYSTER STOCK ASSESSMENT

Reef	2022 Est. Sack Total	2021 Est. Sack Total	2020 Est. Sack Total	2022 Comments and Resource Status
Pass Marianne*	6,233	0	0	Recovering (limited resource)
Biloxi Bay Cultch Plants*	4,254	3,227	117	Recovering (limited resource)
Pass Tonging*	219	0	0	Recovering (limited resource)
Henderson Point*	143	0	0	Recovering (limited resource)
Pass Dredging*	0	0	1,372	No Resource
Telegraph	0	0	0	No Resource
St. Joe*	0	204	0	No Resource
St. Stanislaus	0	0	0	No Resource
Waveland	0	0	0	No Resource
TOTAL SACKS AVAILABLE	10,849	3,431	1,489	CLOSURE CONTINUATION RECOMMENDED
*Total Sacks at 30% Harvest from Approved Areas ONLY =				3,255

STAFF RECOMMENDATION

- Samples indicate positive growth in the resource but confirm a lack of size class variation and a resource that is still recovering from limited recruitment.
- Continue cultch plants/spat on shell deployments to increase diversity in size classes
- Staff recommends continuing the harvest closure for the 2022/2023 season



ENHANCE ★ PROTECT ★ CONSERVE

State Saltwater Finfish Records

Trevor Moncrief

October 11, 2022

The logo of the Mississippi Department of Marine Resources is a circular seal. It features a central illustration of a fish jumping out of stylized waves. Above the fish, the word "MISSISSIPPI" is written in an arc, flanked by two stars. Below the fish, the words "DEPARTMENT OF MARINE RESOURCES" are written in an arc. The entire seal is rendered in a light blue color against a darker blue background.

Youth Conventional Tackle

ENHANCE ★ PROTECT ★ CONSERVE

Youth Conventional Tackle Fishing Record

Blacktip Shark
Carcharhinus limbatus

New Record: 58lbs 6.4oz.

Angler: Rodie Armes

ENHANCE ★ PROTECT ★ CONSERVE



ENHANCE ★ PROTECT ★ CONSERVE



The background of the slide features a large, faint, light blue seal of the Mississippi Department of Marine Resources. The seal is circular, with the word "MISSISSIPPI" arched across the top and "DEPARTMENT OF MARINE RESOURCES" arched across the bottom. Inside the seal, there is a depiction of a bird in flight over wavy lines representing water.

Motion to Recommend Adoption of New State Record

ENHANCE ★ PROTECT ★ CONSERVE



ENHANCE ★ PROTECT ★ CONSERVE

Grand Bay NERR Update

Updates on Research, Stewardship, Education and Training



ENHANCE ★ PROTECT ★ CONSERVE

Research – New Margaret A. Davidson Fellow



We are working in partnership with Mississippi State University and MDMR Fisheries to conduct a bacterial source tracking project, and the graduate student working on the project, Amanda Free, applied for and won the Margaret A. Davidson fellowship which will fund the completion of her Master's thesis.

She is currently working on collecting and processing samples in coordination with MSU and MDMR Fisheries.





ENHANCE ★ PROTECT ★ CONSERVE

Stewardship – NRDA Project, Continuing Mastication

The most recent work at the Pecan loop by EcoRestore, Inc. (contractors). This shows the recently mulched 7 Brothers unit.



Photo Credit: Jay McIlwain



ENHANCE ★ PROTECT ★ CONSERVE

Stewardship – NRDA Project, Continuing Mastication



Last year, MDMR IT collected imagery using an Unmanned Aerial System (drone) and then we used that imagery to map invasive species.

That invasive species map was used to outline and direct EcoRestore, Inc. (contractors) on mastication areas and the imagery was used to check contractor progress.



ENHANCE ★ PROTECT ★ CONSERVE

Stewardship – Auburn Univ. Graduate Student Support



Photo Credit: Sandra Bilbo

Iwo Gross, a graduate student from Auburn University, is conducting genetics research on diamondback terrapins in MS and AL.

Iwo is collecting terrapin eggs from a Point Aux Chenes, hatching them in a lab at Auburn University, collecting genetic samples from the hatchlings, and releasing them.

We helped release 102 hatchlings from 13 clutches.

This project was permitted by MDMR and MDWFP.



Photo Credit: Sandra Bilbo



Photo Credit: Sandra Bilbo



ENHANCE ★ PROTECT ★ CONSERVE

Training – Courses and Stormwater Community Meeting

Provided two Wilderness First Aid courses, one as staff training and one for general public, local resource managers, consultants, boy scout leaders, etc.

Upcoming Wetland Delineation & Plant ID course, October 18-21, 2022

Awarded new EPA project – “Stormwater System Resilience through Green Infrastructure” in February 2022 to partnership with City of Moss Point

Held first a community meeting in September 2022 to collect input and to recruit for help with monitoring and installation/maintenance of green infrastructure.



Photo Credits:
Dennis McGrury



ENHANCE ★ PROTECT ★ CONSERVE

Training – Program Development and More Stormwater

New Education Grant

National Academy of Science Gulf Program (NASEM/GRP) – “Biodiversity, Relationships, and Aquatic Chemistry Knowledge in Saline Habitats (BRACKISH)”

New Stormwater Project in Partnership with University of Southern Mississippi

NASEM/GRP - “Mitigating flood risks on the Mississippi Gulf Coast using equity-based and stakeholder-informed multiscale nature-based solutions”

Stormwater Grant Proposals Submitted

Digital Coast – “Resilience Through Informing the Next Generation (RING)” - *submitted*

National Fish and Wildlife Federation (NFWF) America the Beautiful Competition – “Stormwater Park: Next Steps for Alleviating Flooding in Moss Point, MS” - *submitted*

NOAA – NERRs Habitat Protection & Restoration Infrastructure Investment and Jobs Act (IIJA) – “Creating a Multi-Beneficial Stormwater Park Using Nature-Based Solutions” – *to be submitted, October 14, 2022*

Other Stormwater Grants Submitted in Partnership with University of Southern Mississippi

NFWF Resilience Fund – “Mitigating Flood Risks on the Mississippi Coast Using Equity Based and Stakeholder Informed Multi-scale Solutions” - *submitted*

NOAA IIAJ – “Promoting planning capacity for multi-scale and interconnected nature-based solutions – Pathways towards a more resilient underrepresented coastal community in Mississippi” – *submitted*



Education – Outreach from August 20 to September 28

August 20 – Raptor Road Show

September 8-9 – Homeschool groups

September 10 – Fly Tie Class

September 19-20 – St. Martin 5th grade gifted students – kayak and boardwalk

September 22 – Teacher Open House at Infinity Science Center

September 23 – Master Naturalists field trip

September 24 – National Estuaries Day

September 28 – Group of visually impaired veterans from the Biloxi VA took a field trip to the NERR to learn about frogs. An emphasis was placed on identifying frog calls, and veterans were also able to touch some of the animals





ENHANCE ★ PROTECT ★ CONSERVE

Education – Outreach from August 20 to September 28

