



ENHANCE ★ PROTECT ★ CONSERVE

Oceans in Action 2022

Mississippi Department of Marine Resources

Joe Spraggins, Executive Director

Enhance. Protect. Conserve.

The Mississippi Department of Marine Resources is a state agency with an Executive Director and five member advisory commission appointed by the Governor. Our Motto is to enhance, protect and conserve the marine resources of Mississippi.

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Coastal Resources Management

- Coastal Preserves
 - Manages 42,000 acres of state-owned property and sensitive coastal habitats
 - Utilizes an ArcGIS based application for mapping and treatment of invasive species on Coastal Preserve Areas and coastal waterways
 - Aquatic invasive species reporting portal added to the MDMR website
- Wetlands Permitting
 - Coastal Wetlands Protection Act / Coastal Zone Management Act
 - CitizenServe – cloud-based file management system with electronic application portal
 - Zebra Tablets – allow staff to access applications, previous authorizations and satellite imagery while in the field
 - Alternative Bulkhead Designs, Living Shoreline and innovative approaches to shoreline stabilization that are protective of habitat and water quality while also preventing coastal erosion

GOMESA funds



- \$20 million for FY21
- 2021 projects include:
 - Response to opening of Bonnet Carré
 - Oyster Restoration and Enhancement
 - Reef Fish Monitoring and Assessment
 - Railroad Corner Beneficial Use Site
 - USM-Collection of Fishery-Dependent Information on Blue Crabs

Tidelands

Awarded more than \$10 million in Tideland grants to enhance cities, counties and state properties along the Mississippi Gulf Coast.



Marine Patrol

- 30 officers and 24 patrol boats
- Over 14,000 sq. miles of waterways
- Strengthening our State and Homeland Security through partnerships between MDMR Marine Patrol and our state ports.
- United States Department of Homeland Security (USDHS) Port Security Grants (PSG) to help protect the Ports of Pascagoula, Gulfport, and Bienville – 2018, 2019 and 2020

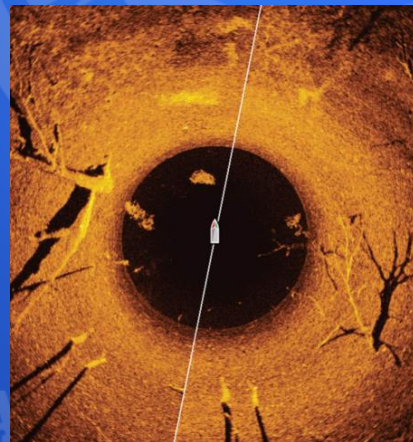
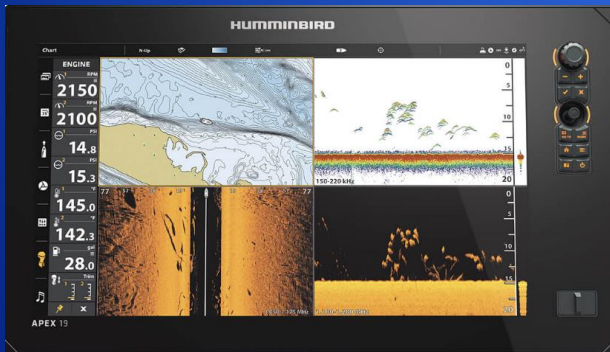


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Marine Patrol

Technology in Critical Incident Response

- Kongsberg 360 side scanning sonar is used for search and recovery missions to locate victims of drowning, evidence recovery or safety/security sweeps of ports and ships.
- Hummingbird Apex 19, a more portable sonar, allows a 360-degree view deployed from smaller vessels for locating victims, evidence, devices and following major storm events to clear critical ports along the coast for safe reopening.



Marine Patrol

Maritime Assistance to Mississippi Ports

- Marine Patrol represents the State of Mississippi on the Area Maritime Security Council and Subcommittees for the local Coast Guard Sector and both Ports of Pascagoula and Gulfport.
- After Hurricane Zeta, MDMR assisted the USCG in confirming the location and operability of navigational aids, expediting normal operations of the ports.



MDMR provides maritime security for Military Outloads within the Port of Gulfport.



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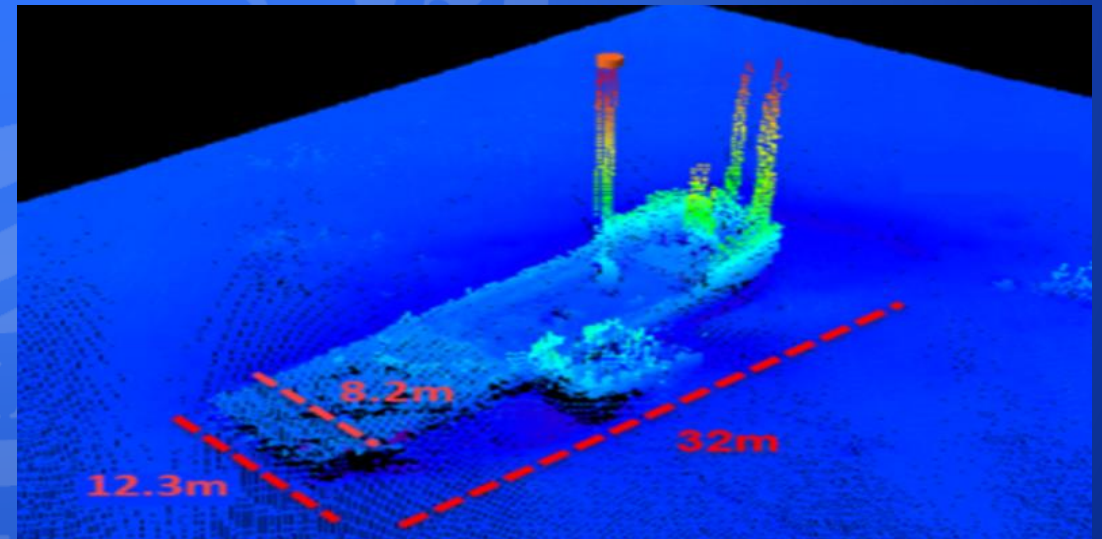
Marine Patrol

MDMR Dive Team Response and Assists



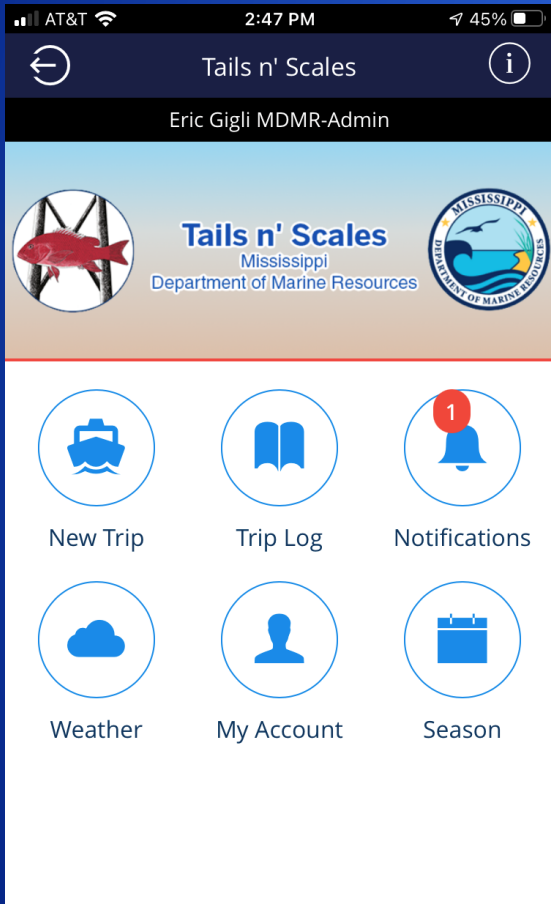
- August 5, 2021 – Marine Patrol divers, partnered with local agencies, assisted the US Coast Guard, US Army Corp of Engineers and NOAA with identifying a shipwreck near the Gulfport Channel that could potentially impact future development of the shipping channel.

- 2019 FEMA Port Security Grant funding provided conventional and technological upgrades to dive equipment and capabilities.



Office of Marine Fisheries

Electronic Reporting: Tails n' Scales



- Tails n' Scales is a quick and effective platform for mandatory Red Snapper reporting via app or website
- Anglers are required to register trips before departure and log details upon completion
- High angler compliance has allowed for accurate, real-time harvest estimates
- Recently awarded the American Fisheries Society *Presidents Fishery Conservation Award* for 2021 for being the premier recreational reef fish reporting system in the country.



Electronic Reporting: VESL Commercial Trip Ticket System

- An online submission process accessible from any computer or smart phone.
- Filtering that guides seafood dealers through completing a trip ticket, providing an easy step-by-step process.
- Improves accuracy of reported landings for better use by fisheries managers.

New Ticket

Trip Details

Start Date * 05/06/21 Transaction Date * 05/12/21 Dealer * MISSISSIPPI TEST DEALER County Landed * HARRISON

Fisherman * JOE CRABBER 9999997 Gear Used * CRAB TRAP / POT Gear Qty * 500 Hours Fished * 72 HOURS

Area Fished * MS WATERS SOUTH OF ...

	SPECIES	CONDITION	MARKET / COUNT	QUANTITY	PRICE PER UNIT	TOTAL	
	BLUE CRAB	LIVE	LARGE #1	100.000 lbs	\$4.00	400.00	
						TOTAL:	\$400.00

Off-shore Sampling Using CTD

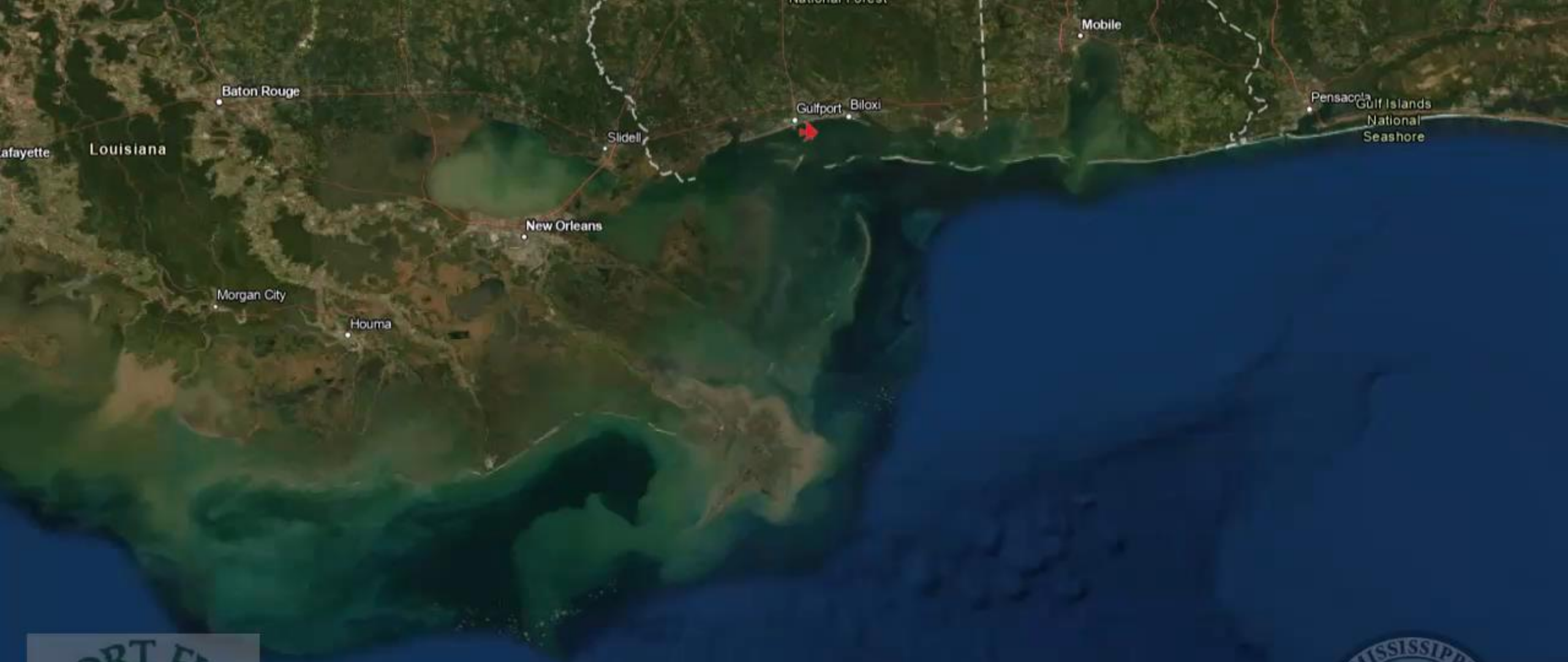
- MDMR Marine Fisheries staff uses CTD (conductivity, temperature and depth) technology when gathering data off-shore
- Collects a high-resolution data set of water quality parameters at multiple depths such as: temperature, salinity, pH, dissolved oxygen, depth and fluorescence



Atlantic Tripletail Satellite Tagging

- Seasonally inhabit MS state waters
 - April – October
- Winter migration whereabouts and factors largely unknown
 - Data needed for management
- 10 tags deployed Fall 2019
 - Analysis of recordings to determine most likely location throughout deployment
- 10 tags deployed Fall 2021
 - Real time satellite transmissions with surface breach and deployment recordings
- First-ever deployment of satellite tags on Atlantic Tripletail
- Average tagged fish size is 25” and 12 lbs;
the largest fish tagged was 31” and 20+ lbs





First Tagged Tripletail

8/20/2019



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Office of Marine Fisheries Dry Lab

- Funded by GOMESA
 - Completed January 2021
- Currently undergoing FDA compliance review
- Types of Analysis
 - Fecal Coliform Analysis (water/meat)
 - HAB (Harmful Algal Bloom) Analysis
 - HAB toxin monitoring
- Taxonomic Collection of Fishes



Off-bottom Oyster Farming

- 17 Active Off-Bottom harvesters in 2021
- 465 Acres permitted in the MDMR Commercial Aquaculture Park with 51 acres privately leased
- 3.3 million oyster seed deployed by harvesters
- Commercial operations harvested approx. 213,907 oysters in 2021
- Off-Bottom oyster aquaculture training classes began in June 2021



NOARC: Pelican Key; Baseline Hydrographic Survey

- Funded through GOMESA
- Project will provide baseline hydrography to define bottom characteristics and depths using an Autonomous Surface Vehicle.
- The baseline measurements will be utilized for determining efficacy of restoring Pelican Key with a beneficial use of dredge material.



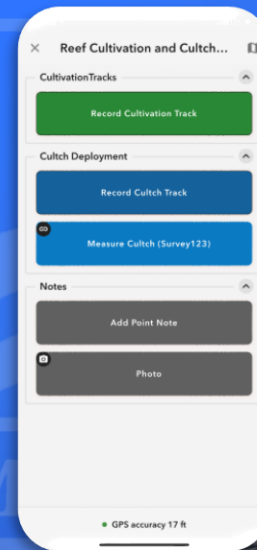
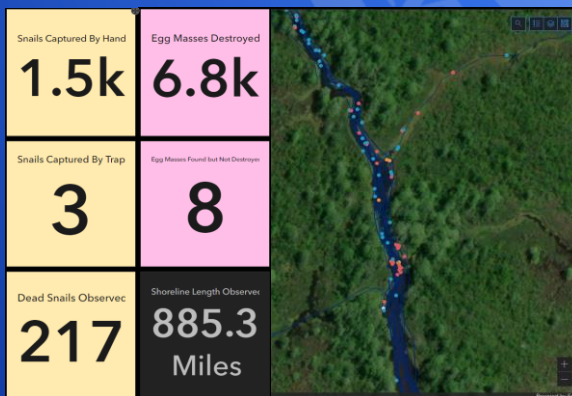
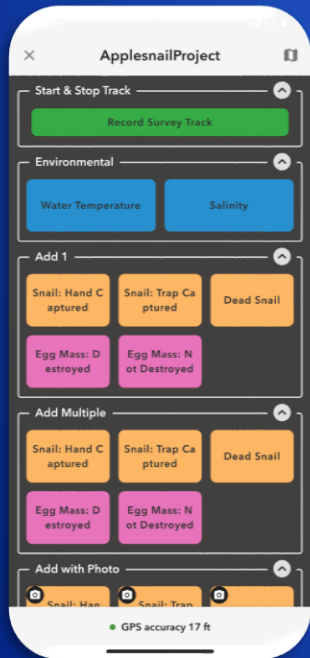
Sea Robotics Surveyor Autonomous Surface Vehicle equipped with an EdgeTech multibeam sonar.

Technology in GIS

Modernize data collection with mobile apps

Current Projects:

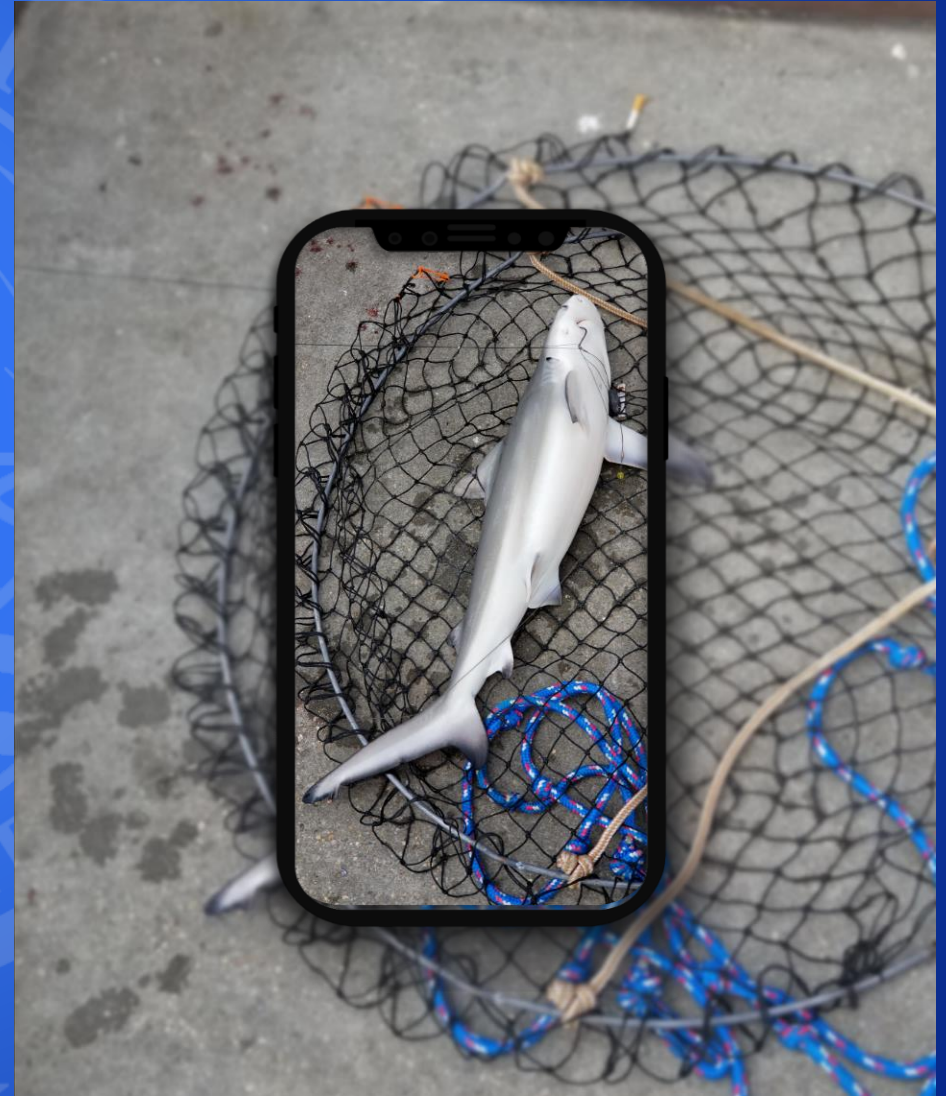
- Invasive species mapping and treatment
 - Applesnails
 - Invasive vegetation
- Fisheries management
 - Species monitoring
 - Tracking restoration activities

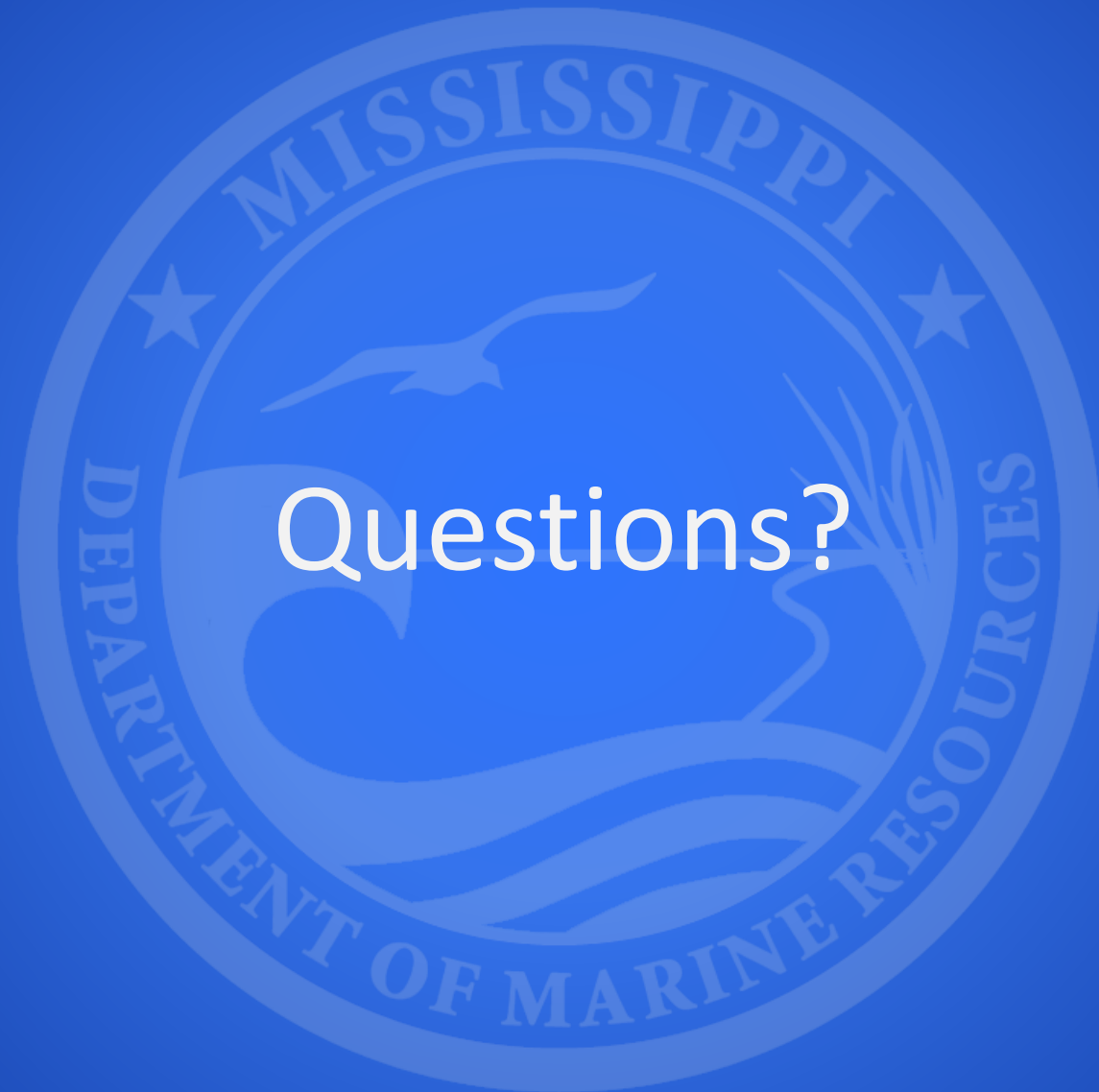


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Citizen Science App

- MDMR has teamed up with the University of Mississippi to develop a mobile app for citizens to contribute to data collection.
- Mobile App for Marine Assessment (MAMA) as part of the Gulf of Mexico Citizen Scientist Initiative.
- Citizens will be able to submit :
 - photos
 - measurements
 - GPS location
 - other data regarding specimens





Questions?

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