



ENHANCE ★ PROTECT ★ CONSERVE

# ANNUAL REPORT

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FISCAL YEAR 2017

July 1, 2016 - June 30, 2017







Dear Governor Bryant and Legislators:

On behalf of the Commission on Marine Resources and our staff, I present to you the Mississippi Department of Marine Resources 2017 fiscal year annual report. We thank you for your continued support of the activities and programs we deliver to enhance, protect and conserve Mississippi's marine resources. It is our intention to remain transparent and accountable to you and the taxpayers of Mississippi through our efforts.

This annual report covers all aspects of our agency accomplishments in a concise manner with easy-to-read charts and graphs that contain valuable information about our work and its impact on marine resources. The agency continues to work with local and federal partners to deliver programs that benefit the citizens, tourists and industry stakeholders on the Gulf Coast. We believe a healthy environment will provide for a healthy economy. We take pride in our work, and it shows.

We have made great progress over the last several years, but there still is work to be done. We are committed to increasing Mississippi's oyster production to 1 million sacks harvested annually by 2025 through public reef enhancement, private lease production and world class aquaculture capabilities. We continue to restore critical marsh and wetlands habitat through our Beneficial Use and Coastal Preserves programs. And Marine Patrol officers are committed to keeping our waters safe and making sure recreational and commercial fishermen follow our conservation laws.

This important work would not be possible without your support. We look forward to many successes together as we manage Mississippi's marine resources.

In appreciation,



Jamie M. Miller  
Executive Director





ENHANCE ★ PROTECT ★ CONSERVE

# ANNUAL REPORT

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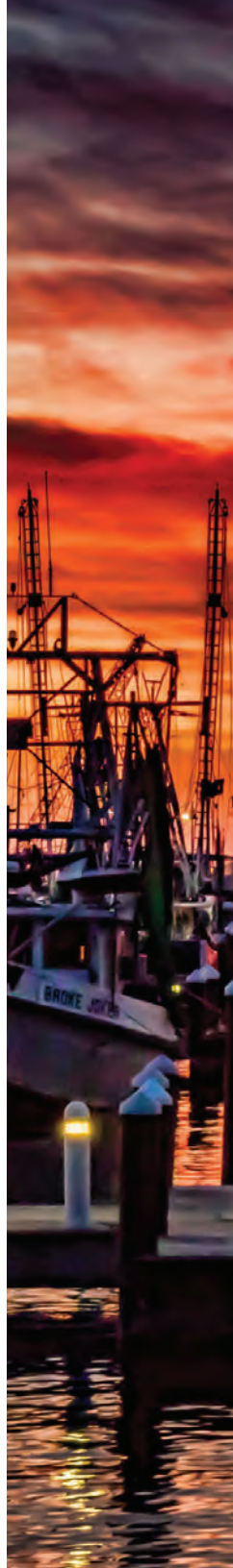
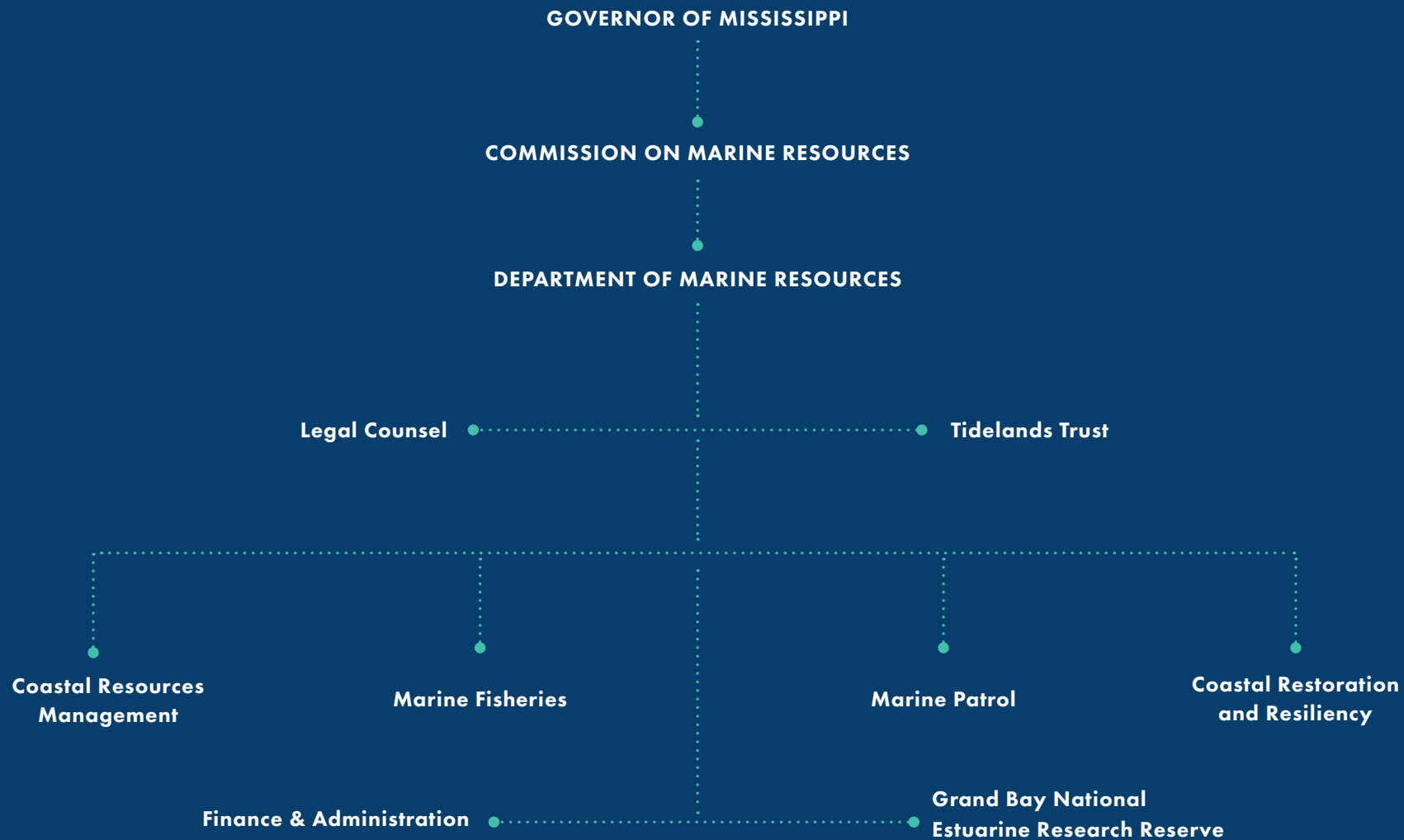
**FISCAL YEAR 2017**  
**July 1, 2016 - June 30, 2017**

The Mississippi Department of Marine Resources is dedicated to enhancing, protecting and conserving marine interests of the state by managing all marine life, public trust wetlands, adjacent uplands and waterfront areas to provide for the optimal commercial, recreational, educational and economic uses of these resources consistent with environmental concerns and social changes.

This annual report was prepared by the Mississippi Department of Marine Resources, Office of the Executive Director, with contributions from staff.

Photo and Illustration Contributions: Joe Jewell, Shelly Gilliam Fayard, Russ Pylant,  
Denny Hugg, Jane Ann Sawyer, Jordan O'Kariean, Phillip Pouge, Stacey Moseley and MDMR Staff

# ORGANIZATIONAL STRUCTURE







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# EXECUTIVE OFFICE

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The programs and services within the Executive Office of the Mississippi Department of Marine Resources (MDMR) provide operational support to all other programs within the MDMR.

These programs include:

- INFORMATION TECHNOLOGY
- PROPERTY MANAGEMENT
- PUBLIC AFFAIRS/SEAFOOD MARKETING
- DERELICT VESSEL
- HUMAN RESOURCES



**Jamie M. Miller**  
*Executive Director*

# INFORMATION TECHNOLOGY

*Director: Brian Sherwood*



Information Technology consists of two functional teams: IT operations and Geographic Information Systems (GIS).

## GOALS:


- Continue improving the overall security of the MDMR network
- Continue to improve internal collaboration with the agency's departments to understand workflows and develop tools to streamline their workflows and increase overall efficiency

## ACCOMPLISHMENTS:

- Created a new Federal Aviation Administration (FAA) certified Unmanned Aircraft System (UAS) program to provide new capabilities within the agency that already have yielded results, including:
  - Change detection on restoration projects
  - Volume calculation for cultch deployment
  - Capacity in facility planning for Lyman hatchery
- Engaged in external collaboration and partnership activities, including:
  - Presentations on the agency UAS program and the new 3D mapping and visualization capabilities
  - Organized the fourth annual statewide GIS conference
  - Partnered and consulted with outside agencies on projects, including the Gulf Coast Geospatial Center (GCGC) and the Lake Pontchartrain Basin Alliance (LPBA)
- Partnered with NASA's Develop Program for two consecutive terms
- Extended the MDMR-wide area network to provide for an off-site disaster recovery facility in Lyman, Miss.
- Initiated Request for Proposal (RFP) activities to replace three of the primary line-of-business applications that no longer fit agency needs
- Realized significant cost savings and improved operation efficiency by replacing the phone system at the Grand Bay NERR with an integrated solution connected to our primary location
- Delivered new collaborative and operational capabilities to the agency by migrating to a cloud-based email platform
- Established a unified data standard for spatial data within the agency
- Deployed two servers to host and organize spatial data

### UAS PROGRAM

  
**2** *certified pilots*  
**218** *flights*

 **358**  
*map requests filled*  
**5** **INTERACTIVE**  
**MAPPING**  
*applications*

**1317**  
*completed*  
**WORK**  
**ORDERS** 



## PROPERTY MANAGEMENT

*Chief Operations Officer: Joe Spraggins*



The mission of the Property Management office is to **MAINTAIN ACCOUNTABILITY FOR ALL STATE PROPERTY** under the control of the MDMR and maintain all pool vehicles and vessels to ensure their operational readiness.



### GOALS:

- Continue improving accountability of all assets owned by the Mississippi Department of Marine Resources.
- Ensure all items that are required by law are listed on inventory.
- Ensure that vehicles bought by taxpayers are properly maintained throughout their lifespan.

### ACCOMPLISHMENTS:

- Accounted for each inventory item during the FY17 property audit conducted by the State Auditor's Office.
- Updated the MDMR fleet and disposed of high-mileage vehicles that had become costly to maintain.
- Built new office space on fifth floor and break area for sixth floor. Painted walls for second and fifth floors. Total renovation cost: \$120,785.

## PUBLIC AFFAIRS BUREAU

*Director: Melissa Scallan*



THE PUBLIC AFFAIRS BUREAU PROVIDES A PROACTIVE PROGRAM OF COMMUNITY OUTREACH, EDUCATION, PUBLIC INFORMATION AND LEGISLATIVE AND MEDIA RELATIONS. These outreach efforts promote awareness of the MDMR and its roles, responsibilities and programs in balancing economic interests with enhancing, protecting, managing and conserving Mississippi's marine resources. This bureau participates in events throughout the community and distributes information through news releases, social media sites, brochures, a rules and regulations book, calendar, photographs and content for the MDMR website. Public Affairs also provides support to other offices and programs within the agency to create consistent, professional materials to further the agency's mission. The Seafood Marketing program is contained within Public Affairs, and it markets the sale and consumption of Gulf seafood to people throughout Mississippi and the southeastern region of the country.

### GOALS:

- Promote the agency and its mission throughout the community by sponsoring and participating in events and distributing information and promotional items.
- Provide the general public and specific user groups with comprehensive, consistent education and information about the programs within the agency.
- Promote the responsible use of marine resources.
- Raise awareness about the importance of purchasing and using Gulf seafood by fostering relationships among fishermen, restaurants, chefs and the public.

### ACCOMPLISHMENTS:



Participated in **82 EVENTS** in the **THREE COASTAL COUNTIES** to educate the public about the agency and MS Seafood



Grew agency reach on social media with **24,000 FOLLOWERS ON FACEBOOK** and **9,000 FOLLOWERS ON TWITTER**



**SPONSORED 45 EVENTS** promoting MDMR and MS Seafood on the Coast and throughout Mississippi and the southeastern region



Printed **131,500 BROCHURES AND PROMOTIONAL ITEMS**, which are used to increase awareness of the MDMR brand and educate the public about coastal resources and fishing rules and regulations (**72,000 ITEMS FOR EDUCATION; 59,500 PROMOTIONAL ITEMS**)



**CHEF ALEX EATON** of Manship Wood-Fired Kitchen in Jackson represented MS Seafood in the Great American Seafood Cook-Off in New Orleans and was crowned the **2016 KING OF AMERICAN SEAFOOD**.



## DERELICT VESSEL PROGRAM

*Coordinator: Jason Rider*



The Derelict Vessel Program was established by the Legislature in Section 49-27-71 of the Mississippi Code of 1972. This program enforces state laws through the removal and disposal of derelict vessels, which protects the environment and keeps coastal wetlands and navigable waterways safe for the general public.

**DURING FY17, A TOTAL OF 10 DERELICT VESSELS (375 CUBIC YARDS OF MATERIAL) WERE REMOVED FROM WATERWAYS IN HARRISON, HANCOCK AND JACKSON COUNTIES.**

# HUMAN RESOURCES

*Director: Christy Royals*



Human Resources provides services to employees and the public in the following areas: job recruitment, selection and retention, job classification, compensation and organizational structure. Staff also manage personnel budgeting and compliance, professional training and education, benefits administration, leave policy interpretation, Workers' Compensation administration, performance development system and personnel records management. **HUMAN RESOURCES ENSURES COMPLIANCE WITH APPLICABLE STATE AND FEDERAL LAWS AND PROVIDES OVERSIGHT OF THE EMPLOYEE DISCIPLINE PROCESS.** Staff also provide consistent administrative support to MDMR managers, including documentation of the organizational structure, comprehensive personnel policies and associated administrative activities.

## GOALS:

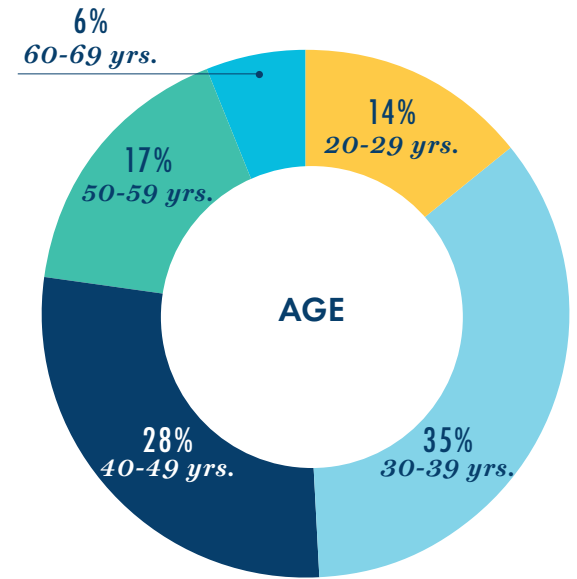
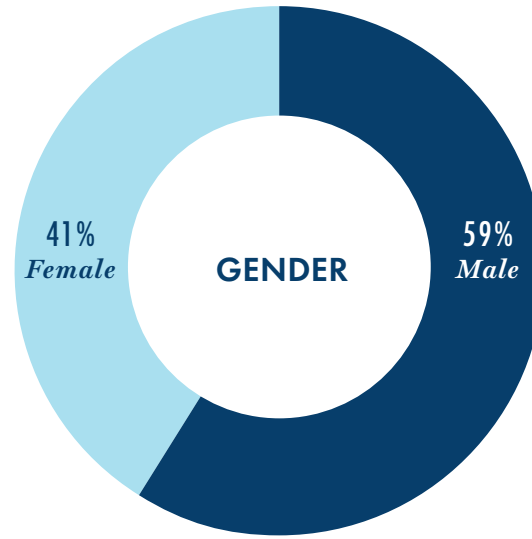
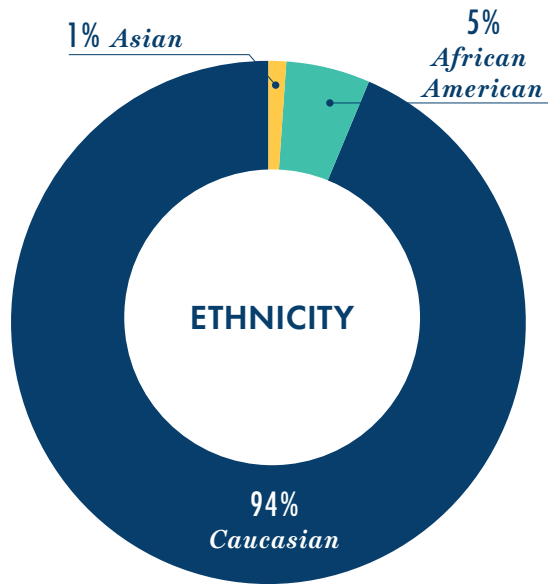
- Attract and retain the best talent.
- Recognize and acknowledge achievements.
- Compensate employees appropriately and provide adequate benefits.
- Facilitate professional growth and career development.
- Provide support and information to managers and employees.

## ACCOMPLISHMENTS:

- Maintained compliance of personnel budget and expenditures required by Appropriations Bill and the Mississippi State Personnel Board.
- Implemented salary realignment for Marine Patrol officers.
- Performed training needs assessment for all offices and developed training plans for employees.
- Established records control schedule and coordinated training for records retention of required state documents and records through the Mississippi Department of Archives and History.
- Facilitated and completed required state training for all employees on "Sexual Harassment Awareness and Prevention" and "Ethics in State Government."
- Recruited for 26 positions, resulting in 21 new hires for MDMR.
- Conducted New Employee Orientation for 21 new employees, seven contract workers and eight interns.
- Coordinated MDMR Wellness Program in conjunction with Mississippi State Personnel Board Wellness Initiative, including flu shots and on-site screenings for high blood pressure and skin cancer.
- Managed the MDMR Intern Program by providing eight interns to Fisheries, Finance, Coastal Resources, GIS, NERR and Aquaculture. Hired two of the interns into full-time positions.
- Identified and selected new dental and vision benefit plans. Communicated details of benefit plans, contact information and employee premiums during annual Benefits Open Enrollment process.



– DEMOGRAPHICS FOR MDMR –  
Total Number of State Employees: 154



– SALARY AVERAGES –









# FINANCE

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The Office of Finance and Administration is comprised of three bureaus:

- FINANCE AND ACCOUNTING
- GRANTS ADMINISTRATION
- PROCUREMENT

Bureau directors report to the Chief Financial Officer. This office is responsible for the annual budget for the Mississippi Department of Marine Resources (MDMR), accounts payable and receivable, payroll, travel, license sales, state and federal grants administration and procurement of all goods and services for the agency.



**Kacey Williams**  
*Chief Financial Officer*



## GOALS:

- Continue with training and education for all employees in the Finance Office, including internal training and sessions hosted by such agencies as the Mississippi Department of Environmental Quality, U.S. Fish and Wildlife Service and NOAA.
- Update policies and procedures to ensure processes are compliant with all state and federal laws and procedures.
- Develop internal handbooks for the bureaus to establish specific policies for each one.
- Follow all state statutes, laws and regulations as set out in applicable sections in the Mississippi Code 1972 Annotated and the Mississippi Agency Accounting Policies and Procedures Manual, as well as the Code of Federal Regulations.

## ACCOMPLISHMENTS:



*Managed*  
**36 GRANTS**  
for \$33.7 million

*Began* **27**  
**CONTRACTS**  
*that are currently active*



**Sold nearly 80,000 licenses  
for MDMR and the  
Mississippi Department  
of Wildlife, Fisheries and Parks.**



**3,389**  
MDMR COMMERCIAL

paid  
**538**  
VENDORS



a total of  
**\$30.1**  
MILLION

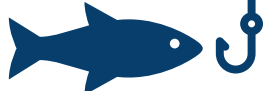


*processed*  
**447** travel  
authorizations




Oversaw agency  
**AUDITS**  
— *performed by  
federal and state groups*

**1,051**  
MDMR RECREATIONAL



**75,009**  
WILDLIFE, FISHERIES  
& PARKS



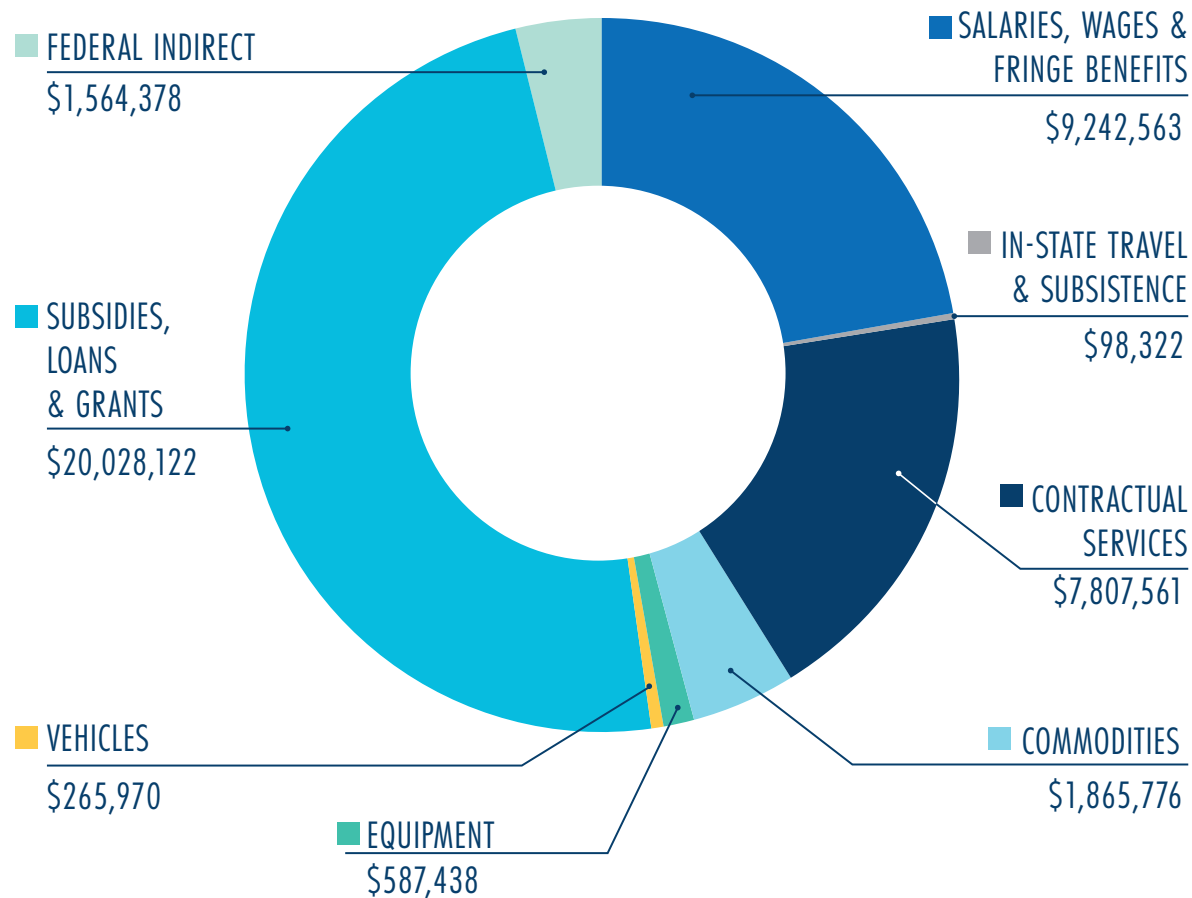
## FINANCE AND ACCOUNTING BUREAU

*Director: Shavay Gaines*



This bureau is responsible for annual budgets, monthly and intermittent financial reporting and reconciliation, accounts payable, payroll, travel and license sales. It is made up of a finance and accounting director, professional accountant, accounting specialist intermediate, payroll and travel manager, payroll and travel coordinator and licensing agent.

### – AGENCY EXPENSES BY CATEGORY –



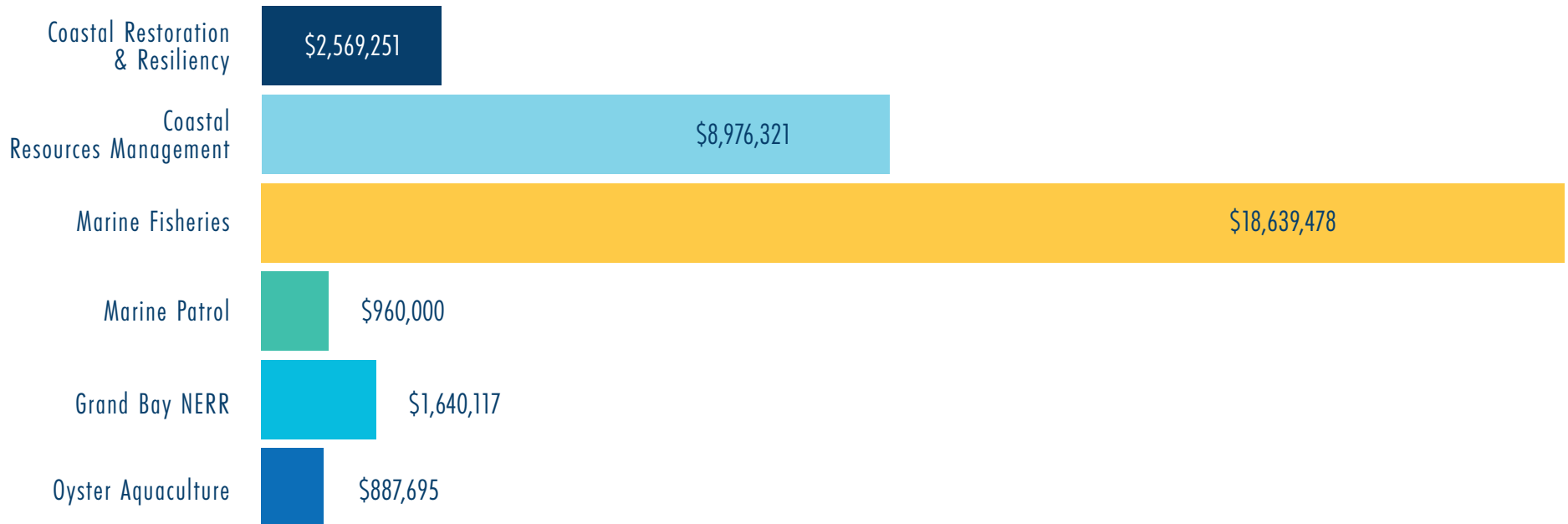
## GRANTS ADMINISTRATION BUREAU

*Director: Kimberly Rasmussen, Dr.iur.*



The Grants Bureau was established in May 2014 to serve as the clearinghouse for all grants awarded to or awarded by MDMR. This bureau provides oversight of all state and federal grants, including allowable spending, budgetary support and resource management. This bureau also is responsible for adhering to all federal, state and agency compliance requirements related to grants. It is made up of a grants director and three grants administrators.

### – SUMMARY OF FUNDING MANAGED BY GRANTS BUREAU –





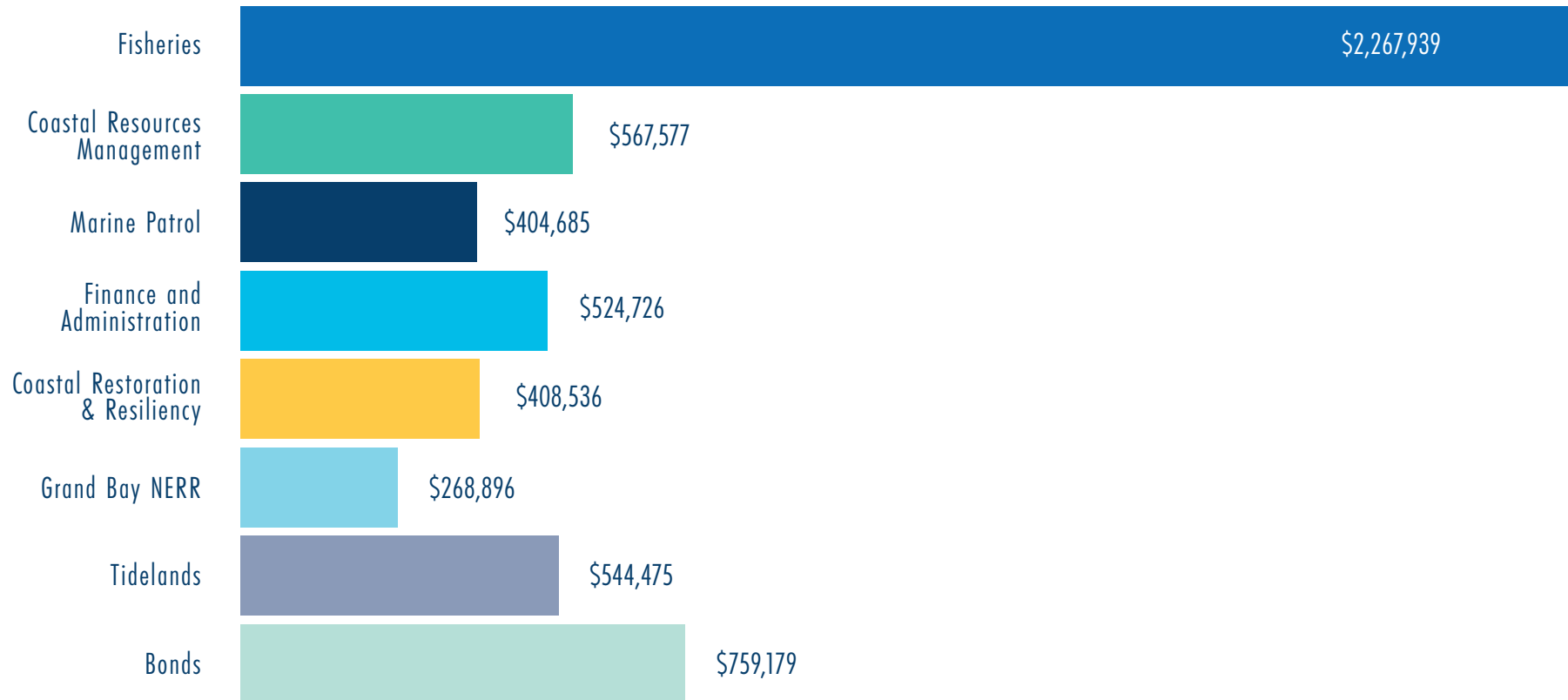
## PROCUREMENT BUREAU

*Director: Erin Gallagher*



The Procurement Bureau is responsible for all purchasing administration. This includes commodities and services using the quote and purchase-order processes, as well as smaller purchases made using procurement cards. This bureau also is responsible for agency purchasing contracts using a structured procurement process that can include requests for qualifications/proposals, memorandums of agreement and memorandums of understanding. It is made up of a procurement director, lead contracts analyst, purchasing agent and procurement specialist.

### – PURCHASE ORDERS BY OFFICE & BUREAU –

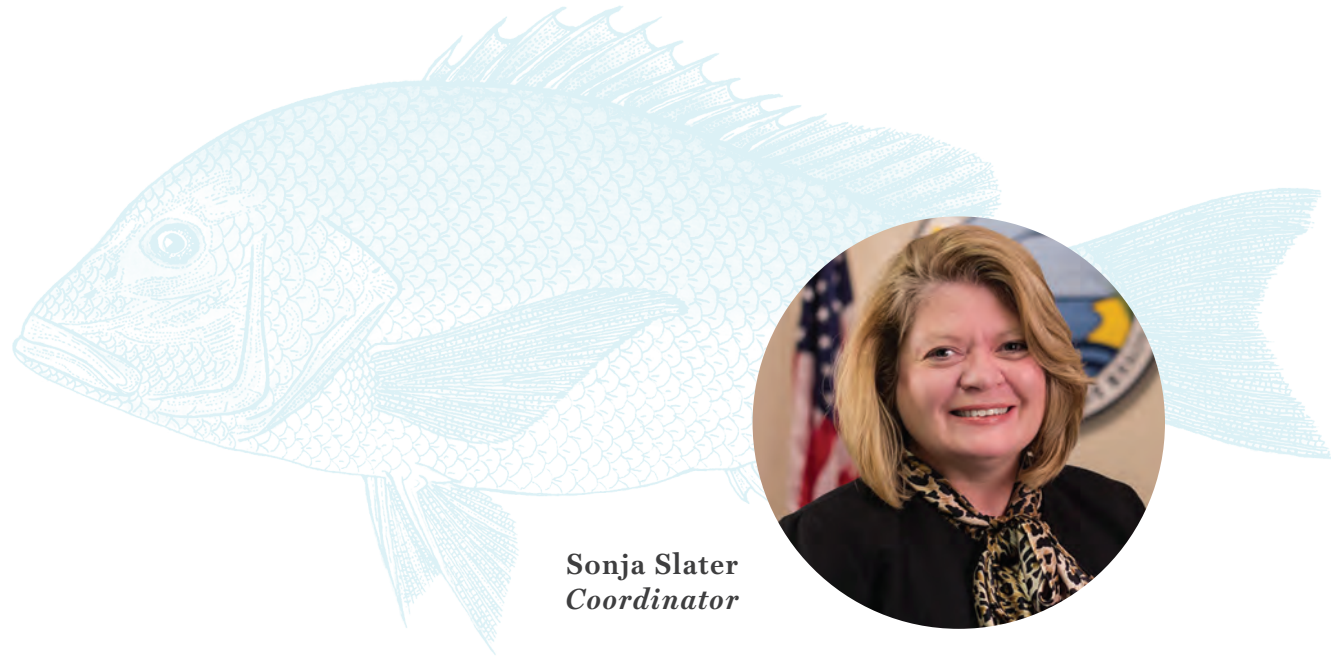




# TIDELANDS

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Tidelands are lands that are **COVERED AND UNCOVERED DAILY BY WATER** from the action of the tides, up to the mean line of the ordinary high tides. The Tidelands Trust Fund is comprised of funds derived from the lease of tidelands and submerged lands and is **ADMINISTERED** by MDMR as mandated by **STATE LAW**. The Secretary of State's Office presents the Tidelands check to Mississippi Department of Marine Resources (MDMR) officials and legislators each year.



**Sonja Slater**  
*Coordinator*



The state Legislature each year approves Tidelands funding for MDMR to administer through the Tidelands Program. This action is authorized through the Mississippi Code of 1971 Section 29-15-9 and Section 29-15-10.

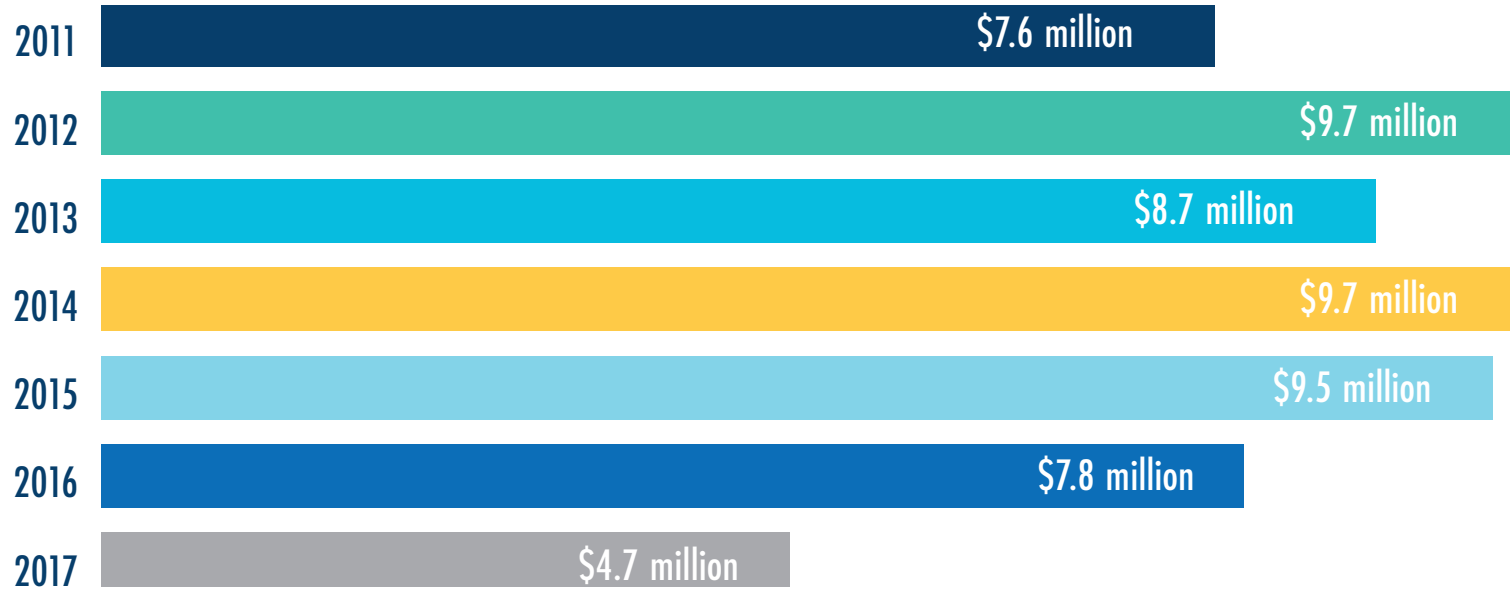
During the 2016 session, the Legislature approved \$9.8 million in projects through HB1545. In 2017, through HB1518, the Legislature approved \$9.7 million in funding.

Tidelands currently has 158 open projects, 83 Public Access and 75 Managed. During FY17, MDMR completed 46 Public Access and 63 Managed projects.

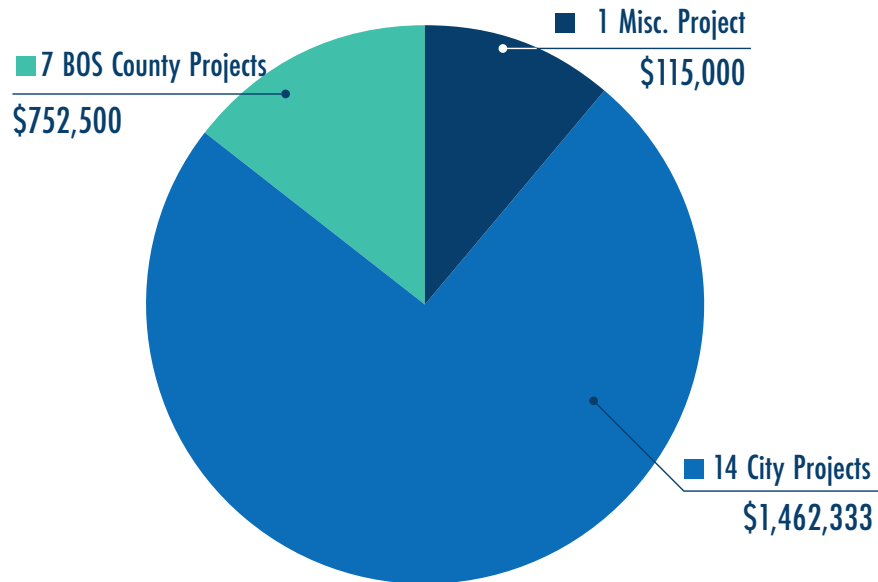
## THE LEGISLATURE APPROVED THE FOLLOWING PROJECTS DURING THE 2017 SESSION FOR FUNDING IN FY18:

HARRISON COUNTY	JACKSON COUNTY	HANCOCK COUNTY
West Biloxi Boardwalk/Bike Path and Festival Boardwalk and Boat Ramp	Inner Harbor Boat Slips, Ocean Springs Harbor, Phase One (Board of Supervisors)	Waveland Beach Pogodas (City of Waveland)
Preservation and Restoration of Biloxi Schooners and Pier; Camp; Maritime and Seafood Industry Museum (Biloxi)	Point Park Boardwalk and Piers (City of Pascagoula)	Day Pier Extension and South End Comfort Station (City of Bay St. Louis)
Brodie Bayou Public Access and Restoration, Phase Two (D'Iberville)	LA Pointe Krebs House Restoration and Foundation (City of Moss Point)	Montjoy Creek Sediment Management Project (City of Diamondhead)
Mooring Pile Upgrades (Pass Christian)	Sawmill Landing (City of Moss Point)	Working Waterfront Development (Hancock County)
Harbor Improvements (Long Beach Port Commission)	Mary Walker Bayou Parks Project (City of Gautier)	
Lynn Meadows Building Restoration (City of Gulfport)	Front Beach Living Shoreline Outfall Production (City of Ocean Springs)	
	Gulf Coast History Ecosystem Trail (MGCCC)	
	GCRL Public Access Enhancement (University of Southern Mississippi)	

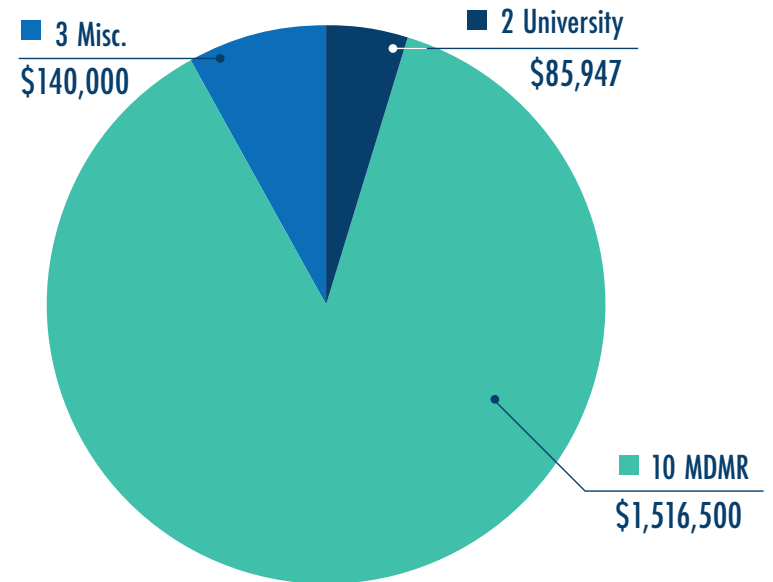
### - TIDELANDS FUNDING HISTORY -



### - TIDELANDS PUBLIC - ACCESS PROJECTS FUNDING



### - TIDELANDS MANAGEMENT - PROJECTS FUNDING









# MARINE PATROL

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The Office of Marine Patrol provides **MARINE ENFORCEMENT OF FEDERAL AND STATE LAWS** and the ordinances of the Commission on Marine Resources for the **PROTECTION, PRESERVATION AND CONSERVATION** of Mississippi's seafood, aquatic life and associated coastal wetlands habitats. Marine Patrol also carries out the enforcement of state and federal laws pertaining to **BOATING SAFETY** and provides **EMERGENCY ASSISTANCE** to marine boaters.



**Keith Davis**  
*Marine Patrol Chief*

## GOALS:

- Develop a comprehensive field training program for new officers. Training is key to keeping officers abreast of new developments and trends in law enforcement and maintaining a high level of proficiency in the many skills required to perform their duties effectively and safely.
- Continue processing and filing all paperwork and public records requests. Marine Patrol fills requests by the public, attorneys, courts, other law enforcement agencies and insurance companies.
- Continue community involvement. The success of any law enforcement agency is based on its relationship with the community. Marine Patrol will continue to reach out to the community by fostering partnerships aimed at educating the public and enhancing the agency's image.

## ACCOMPLISHMENTS:

- The CID investigated cases that were submitted to either NOAA's Law Enforcement Division or the appropriate District Attorney's Office for grand jury consideration and/or disposition in some manner. The Investigative Division was assigned 37 cases, of which five were referred to the appropriate District Attorney's Office and 20 cases were referred to NOAA for prosecution.
- From the inception of Joint Enforcement Agreement (JEA) in 2001, MDMR has received nearly \$7 million. In FY17, Marine Patrol officers conducted patrols of state and federal waters and contributed over 4,000 hours of enforcement effort and referred 20 enforcement action reports to NOAA.
  - o Officers contacted over 1,000 stakeholders while engaged in enforcement patrols.
  - o While enforcing the Endangered Species Act, officers made 226 commercial contacts and four recreational contacts. Officers issued three warnings and submitted three enforcement action reports to NOAA.
  - o Officers made 472 recreational contacts and 37 commercial contacts while checking fishery compliance on reef fish. Officers issued eight warnings, six state citations and submitted 11 reports to NOAA.
  - o Officers made 174 commercial contacts and 10 recreational contacts while conducting compliance on Highly Migratory Species, Lacey Act and other enforcement activities. Officers issued 10 warnings, five state citations and submitted six reports to NOAA.
  - o While doing public outreach events, officers contacted approximately 15,500 stakeholders.

- Conducted patrols of state marine waters resulting in 9,011 hours of boat time checking state statute/CMR compliance and boating safety compliance.

### THESE PATROLS RESULTED IN THE FOLLOWING NUMBERS FOR CITATIONS AND WARNINGS:

<b>466</b>	Fisheries Violations
<b>191</b>	Boating and Water Safety Violations
<b>9</b>	Marine Litter Citations
<b>3</b>	Wetlands Violations
<b>22</b>	Miscellaneous Violations
<b>339</b>	Courtesy Citations

### NOTABLE FISHERIES VIOLATIONS:

<b>4</b>	Possession of Red Snapper in a closed season
<b>4</b>	Possession of undersized Red Snapper
<b>20</b>	Possession of undersized Spotted Seatrout
<b>21</b>	Failure to register for Tails N' Scales



*answered and initiated*

**31,724**

**CALLS FOR SERVICE**

*processed*

**21**

**PUBLIC**

**RECORDS REQUESTS**



**OFFICERS and/or  
STAFF MEMBERS**

*– participated in –*

**2,325**

**HOURS OF TRAINING**

*at a variety  
of schools.*



**THE MARINE PATROL RESERVE UNIT**

supported the agency's objectives by contributing

**1,305 NON-COMPENSATED MAN HOURS**

assisting with regular patrols and marine events



*responded to*

**31**

**VESSEL ACCIDENTS**

five resulting in injuries



*responded to*

**DROWNINGS**

due to a vessel accident or  
other water-related incident

**THE PATROL DIVISION** answers the bulk of conservation services calls received by Marine Patrol. This division is comprised of uniformed marine officers assigned to a motor vehicle and vessel to patrol their respected assigned areas. The current staff consists of a captain, who commands the division, and four lieutenants who supervise individual shifts (two each on day and night shifts).

**INVESTIGATIVE DIVISION** is a recent division created within Marine Patrol. The current staff consists of a captain, one lieutenant and three officers. The supervisor for this division is responsible for the daily operations of the CID, including: supervising the JEA coordinator, training coordinator, boat and water safety classes, conservation investigations, internal affairs, BUI enforcement unit, communications division, Marine Patrol reserves and the dive team.

**THE JOINT ENFORCEMENT AGREEMENT** was part of the Magnuson-Stevens Reauthorization Act in 2007, and 45 states, territories, commonwealths and U.S. possessions became eligible to participate in the program. We currently have joint enforcement agreements with 28 states, territories and commonwealths. The primary goal of these agreements is to enhance enforcement of federal laws and regulations while improving the ability of the partner agencies to perform their routine marine conservation obligations.





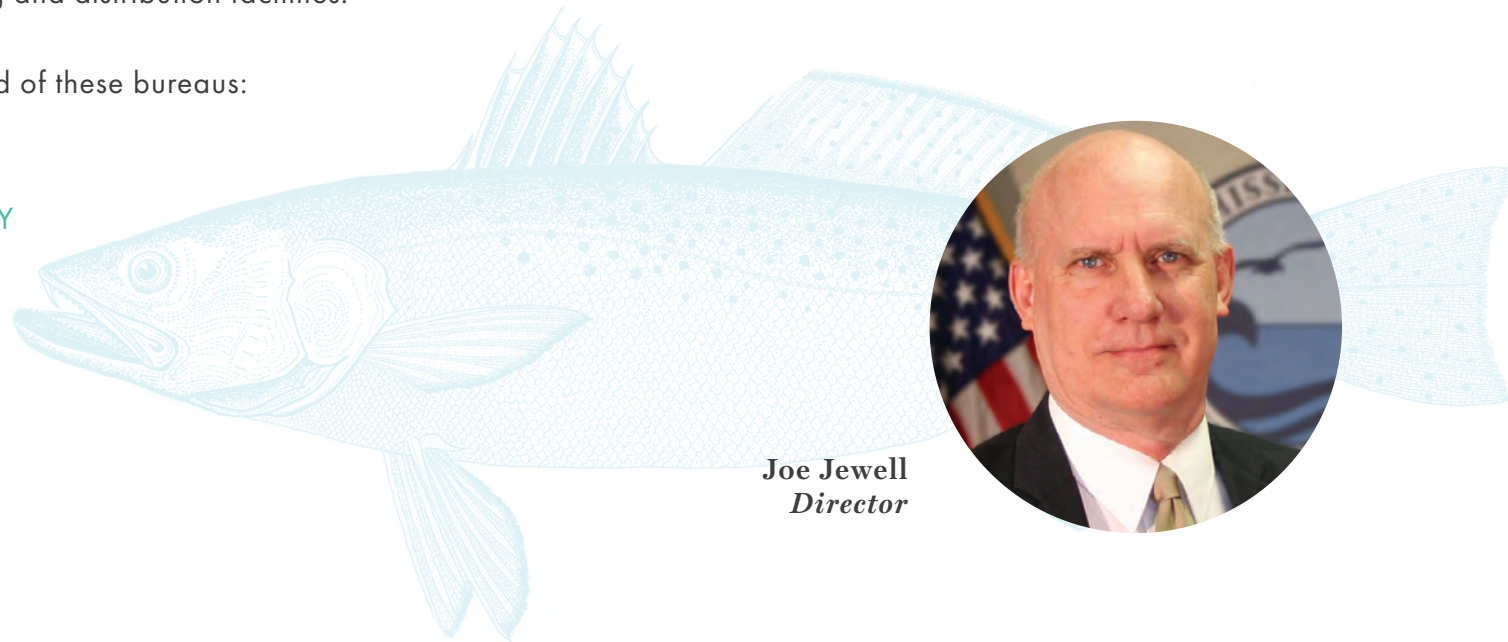
# MARINE FISHERIES

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The Office of Marine Fisheries provides for the **EFFECTIVE MANAGEMENT** of the state's **COMMERCIAL AND RECREATIONAL** marine fisheries, including oysters, shrimp, crabs and finfish. It includes conservation and overall management of marine resources through **RESEARCH** and **DATA COLLECTION** as modified by relevant social, economic and biological factors. Marine Fisheries uses the most appropriate methods for management, including but not limited to, **REGULATING** harvesting, habitat **ENHANCEMENT**, water quality **MONITORING** for molluscan shellfish harvesting, setting of catch limits and seasons and seafood safety **INSPECTIONS** of processing and distribution facilities.

Marine Fisheries is comprised of these bureaus:

- **ARTIFICIAL REEF**
- **FINFISH**
- **SEAFOOD TECHNOLOGY**
- **SHELLFISH**
- **SHRIMP AND CRAB**



**Joe Jewell**  
*Director*

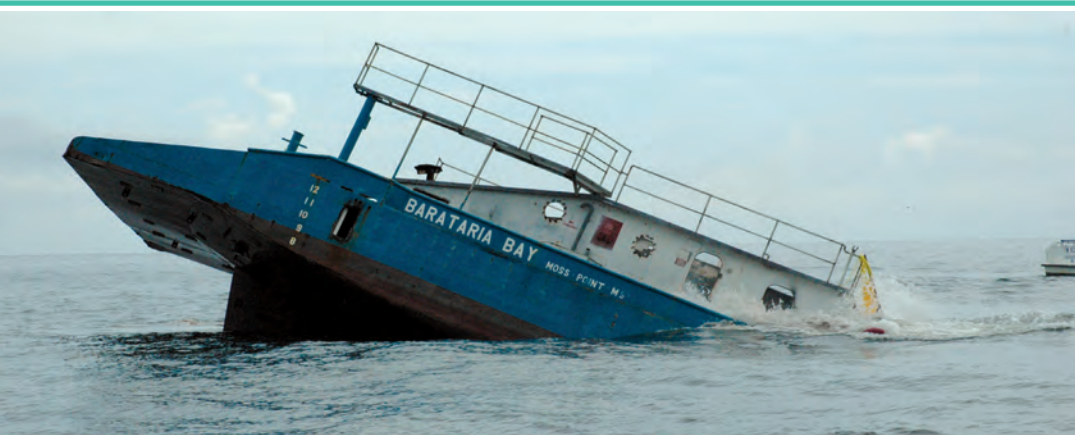


## GOALS:

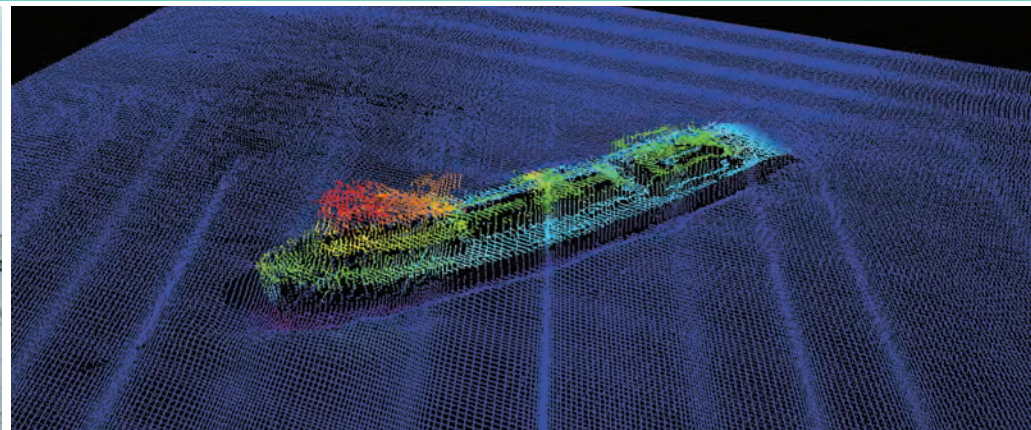
- Use 2011 Bonnet Carré Emergency Disaster Recovery Program funds to monitor and assist the recovery of Mississippi's commercial and recreational oyster and blue crab fisheries.
- Expand the National Fish and Wildlife Foundation grant to include Mississippi-protected species coordination with our federal, state and non-governmental organization partners through a new protected species coordinator position.
- Design and initiate projects for the collection and analysis of data required for population dynamics estimates and other projects related to fisheries management.
- Develop scientifically based management recommendations.
- Provide information transfer and liaison activities with regional fisheries management entities and other state and federal partners.
- Provide technical support to the Mississippi Commission on Marine Resources in developing fishery management plans, regulatory amendments, stock assessments, regulations and technical analysis.
- Provide representatives to serve on fisheries-related boards, committees, task forces and panels, as are required.

## ACCOMPLISHMENTS:

- Published public notices for opening and closing of the commercial seasons for shrimp, oysters, Spotted Seatrout, Flounder, Red Snapper, Grouper, Red Drum and large coastal sharks.
- Served on regional management committees of the Gulf States Marine Fisheries Commission (GSMFC), including Artificial Reef Task Force, Outreach Subcommittee, Menhaden Advisory Committee, White Trout Fishery Task Force, Blue Crab Task Force, Fisheries Information Network Committee, Data Management and Recreational Fishery Subcommittees, Technical Coordinating Committee, Gulf and South Atlantic Regional Panel on Aquatic Invasive Species, Southeastern Aquatic Resource Partnership, and the State/Federal Fisheries Management Board. Marine Fisheries personnel also served on the Gulf of Mexico Fishery Management Council, its habitat committee and special shrimp committee.
- Currently Marine Fisheries has 46 monofilament fishing line recycling stations.



▲ Barataria Bay deployed in Fish Haven-13



▲ Side scan of Barataria Bay below the water



## ARTIFICIAL REEF

*Director: Jimmy Sanders*



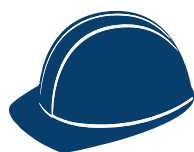
The Artificial Reef Bureau is responsible for artificial reef development in Mississippi's marine waters and adjacent federal waters. Reef sites that are properly located, constructed and managed can enhance the marine habitat for associated important sport fishes and other organisms. **CURRENTLY THERE ARE 69 INSHORE REEFS, 15 OFFSHORE REEFS ENCOMPASSING 16,000 ACRES OF WATER BOTTOM AND EIGHT RIGS-TO-REEF SITES THAT ENHANCE AND SUPPORT IMPORTANT MARINE SPECIES.** Reefs are built with concrete rubble, steel-hull vessels (including barges), crushed limestone, Florida Limestone Pyramids and Reef Balls. They can range in size from 8,000-10,000 acres.

### GOALS:

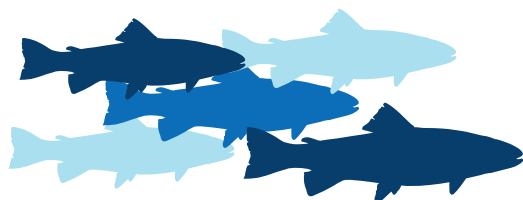
- Develop and enhance nearshore and offshore reef habitats in accordance with Mississippi's Artificial Reef Plan.
- Provide the MDMR web administrator with updated coordinates of reef material, reef orientation, maps and charts so the website can be updated and maintained for the fishing community to access.
- Within the framework of Mississippi's Artificial Reef Plan, identify areas conducive to artificial reef development and enhancement - both nearshore and offshore.
- Monitor artificial reef development in Mississippi's marine waters and adjacent federal waters.
- Purchase and obtain donations for artificial reef material from state, federal and private entities.
- Construct a loading zone on the west end of the staging site to load smaller cultch material, such as limestone, crushed concrete and oyster shell. This loading zone will be used to deploy material on the state's nearshore reefs, as well as oyster reefs in Biloxi Bay.

### ACCOMPLISHMENTS:

**15 DEPLOYMENTS  
OF CONCRETE CULVERTS**  
**11 OFFSHORE DEPLOYMENTS  
TOTALING 5,656 TONS**  
**4 DEPLOYMENTS TO CAT ISLAND  
REEF TOTALING 207.4 TONS**



**CONSTRUCTED A NEW BULKHEAD**  
on the east loading zone at the staging site for  
**LARGER MATERIAL TO BE LOADED FOR FUTURE DEPLOYMENTS**



*received* **72 DELIVERIES totaling 1,003 PIECES**  
**OF DONATED CONCRETE FROM THREE LOCAL COMPANIES**  
*These concrete culverts and boxes will be used to*  
**CREATE HABITAT IN STATE AND ADJACENT FEDERAL WATERS**

## FINFISH BUREAU

*Director: Matt Hill*



THE FINFISH BUREAU MONITORS FINFISH POPULATIONS IN STATE WATERS AND ADJACENT FEDERAL WATERS AND PROVIDES SCIENTIFIC INFORMATION, including biological life history and catch statistics, for commercial and recreational finfish for effective management. Bureau staff collects commercial and recreational fisheries landings statistics using the Trip Ticket Program and the Marine Recreational Information Program (MRIP).

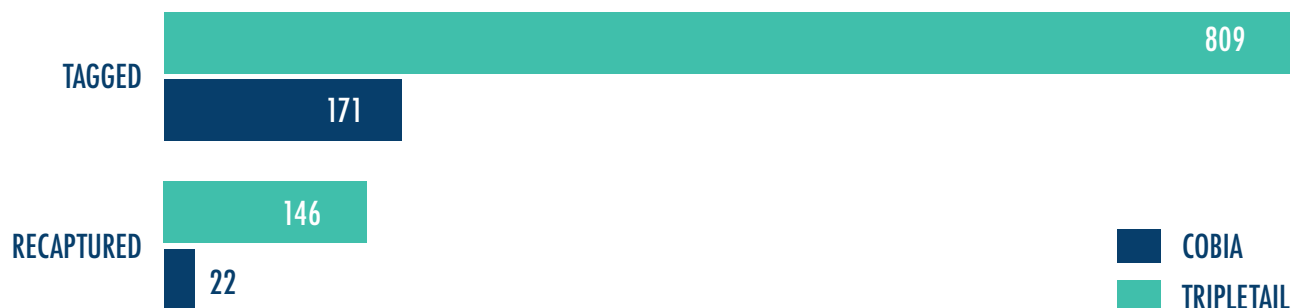
### GOALS:

- Monitor finfish populations through two independent sampling methods: Inter-jurisdictional and Fisheries Assessment and Monitoring (IJ-FAM).
- Develop and coordinate, with other state and federal agencies, independent projects on ecological requirements and biological life history information on recreationally and ecologically important finfish species. These projects include Sport Fish studies and Sport Fish tag and release in conjunction with Gulf Coast Research Laboratory (GCRL).
- Conserve and revitalize marine finfish and supporting habitats within optimal levels using relevant social, economic and biological factors.
- Provide scientific information, including biological life history and catch statistics, for commercial and recreational finfish for effective management.

### ACCOMPLISHMENTS:

- Provided management information through an ongoing commercial fisheries statistics program. Data is collected monthly from dealers' reported catch.
- Collected catch and effort information on the recreational sector in cooperation with the GSUFC through monthly MRIP surveys.
- Continued to collect data on Red Snapper harvest and angler effort for the 2016 and 2017 recreational Red Snapper seasons.
- Collected fishery independent data on finfish populations through a combination of gill net and trawl samples in Mississippi's major estuaries and bays.
- Developed several projects in cooperation with GCRL to obtain information on life history parameters and essential fish habitat of recreationally important finfish.
- Worked on a multi-year grant through the National Fish and Wildlife Foundation to assess reef fish species in conjunction with GCRL.
- Partnered with GCRL for a Sport Fish Studies program in Mississippi coastal waters. Monitored Spotted Seatrout, Red Drum and shark species.
- Partnered with GCRL for a Sport Fish Tag and Release program for Cobia and Tripletail.

### – SPORTFISH TAG AND RELEASE PROGRAM FOR COBIA AND TRIPLETAIL –





## FISHERY SAMPLING: DEPENDENT

### TRIP TICKET GOALS:

- Collect commercial fisheries landings and catch data for Mississippi in a timely manner.
- Continue the trip-ticket program for all fisheries in which dealers and/or fishermen submit paper or electronic trip tickets on a monthly basis. Data then are scanned into a database and transferred to the GSMFC Finfish Information Network.
- Implement a trip-ticket program for all fisheries.

### ACCOMPLISHMENTS:

- Collected, processed and submitted fisheries landings data to the National Marine Fisheries Service in accordance with established data handling procedures. Fisheries landings data are an important part of the management process, both as an indicator of potential population changes and as a gauge of success of existing fisheries regulations and practices.
- Collected biological data for selected commercially important finfish species from the major seafood dealers along the Mississippi Gulf Coast. The information is used in the development of various fishery management plans at the state and regional levels
- Collected information on selected pelagic and reef fish species. This information is submitted to NMFS for inclusion in its Trip Information System. Both state and federal fisheries managers use this data to properly manage these valuable resources.

### MARINE RECREATIONAL INFORMATION PROGRAM GOALS:

- Conduct MRIP surveys in Mississippi for shore, charter and private fishing modes
- Provide a timely and reliable database on marine recreational fishing activity.
- Identify notable changes in recreational catch and effort trends.
- Collect biological information on selected recreationally important finfish species.
- Evaluate the long-term implications of management measures.

### ACCOMPLISHMENTS:

- Collected recreational fisheries information daily through surveying more than 2,200 recreational fishermen. The information gathered from the survey provides a continuous standardized database of marine recreational catch, effort and participation.
- Conducted weekly telephone interviews of charter boat operators in Mississippi to obtain more precise fishing effort estimates for the for-hire sector.



## TAILS N' SCALES

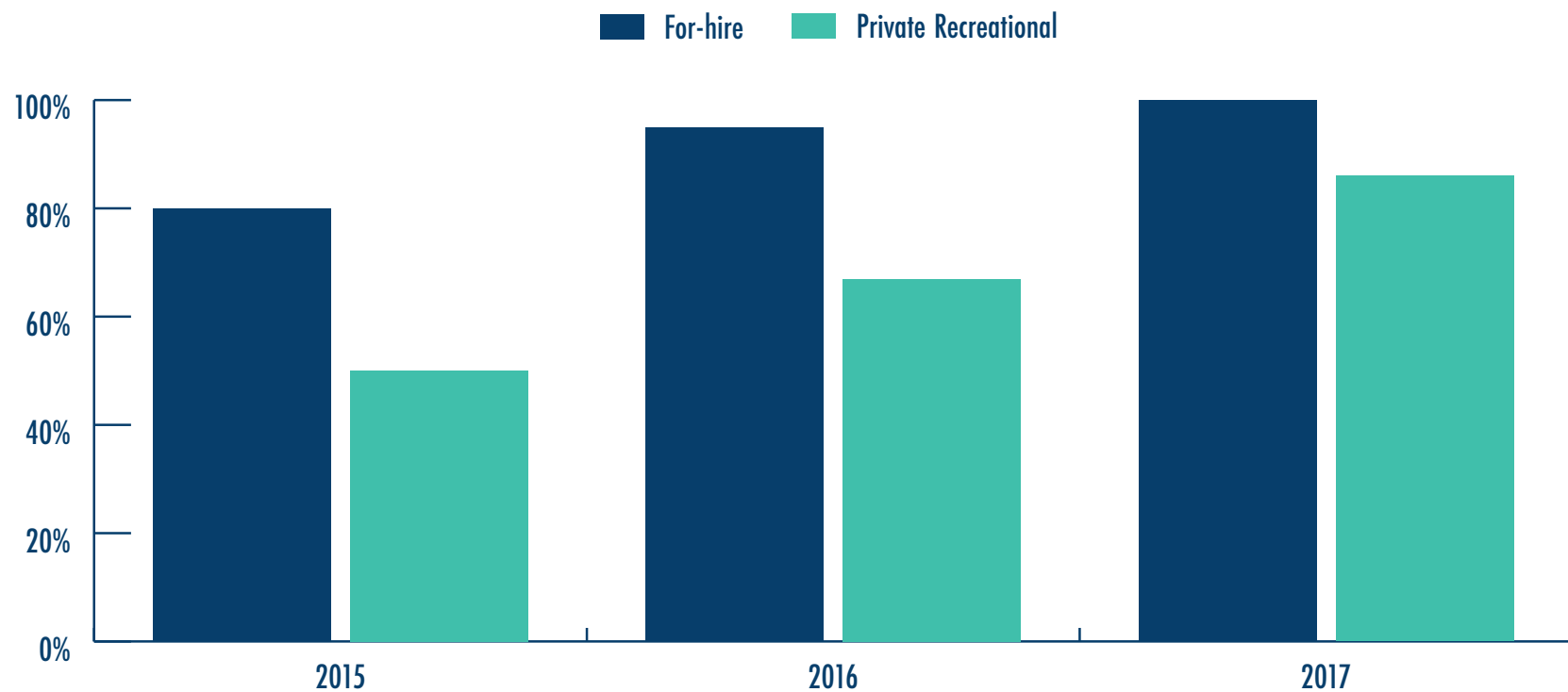
### GOALS:

- Continue to collect recreational Red Snapper harvest and effort data through MDMR's electronic application.
- Continue to improve functionality and ease-of-use for angler reporting along with adding new features to capture data on Red Snapper discards.

### ACCOMPLISHMENTS:

- Currently, trip compliance rates for the private recreational and for-hire sectors are 86 percent and 100 percent, respectively.
- Observed increases in compliance in the private recreational and for-hire sectors illustrates the increasing success of the program along with the precision of harvest estimates.

### – TAILS N' SCALES REPORTING COMPLIANCE –



## FISHERY SAMPLING: INDEPENDENT

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### INTERJURISDICTIONAL FISHERIES ASSESSMENT AND MONITORING

#### GOALS:

- Monitor finfish populations through fishery-independent sampling methods.
- Collect data to maintain a consistent database for the monitoring of the relative abundance and size distribution of the finfish populations in coastal Mississippi waters.
- Collect hydrological and climatological data at sampling stations.

#### ACCOMPLISHMENTS:

- Each month, eight stations were sampled, including four fixed sites (Pascagoula and Pearl River) and four randomly selected sites within the Grand Bay National Estuarine Research Reserve, Biloxi Back Bay, St. Louis Bay and the Pascagoula River.
- All data collected during these surveys are vital to the management of multiple recreationally and commercially important species, as this survey provides estimates of length-at-age, sex ratios and indexes of abundance.

## RED DRUM ASSESSMENT

---

#### GOALS:

- Target and obtain data on Red Drum age 3 to age 5 to develop an accurate escapement rate as well as an age/length key.
- Collect supplementary samples of Red Drum from the for-hire charter industry and cooperating recreational fishermen.
- Design and implement an acoustic telemetry project to track the movements of Red Drum in the Biloxi Bay area.

#### ACCOMPLISHMENTS:

- Collected over 100 Red Drum samples throughout the year from gill nets, recreational anglers and for-hire charter captains. These samples help fisheries scientists better understand length-at-age and age-at-maturity of Red Drum.
- Completed the acoustic telemetry array, which consists of 17 acoustic receivers within the project area. The acoustic receivers will detect tagged Red Drum that are within the detection range.

**CURRENTLY 20 RED DRUM HAVE BEEN TAGGED WITH BLUE EXTERNAL DART TAGS AND INTERNAL ACOUSTIC TRANSMITTERS.**  
The Finfish Bureau plans to tag additional Red Drum in 2018.



# SALTWATER STATE RECORDS



**SCAMP**  
28lbs. 4.32oz.  
Joey Antoon



**TIGER SHARK**  
390lbs.  
David Rogers



**FINETOOTH SHARK**  
34lbs. 8.64oz.  
Mark Huffmaster

**JUNE 11, 2016**

**JULY 1, 2016**

**JULY 2, 2016**

**JULY 20, 2016**

**JULY 23, 2016**

**JULY 30, 2016**

**BULL SHARK**  
203lbs. 0oz.  
David Rogers



**TRIPLETAIL (*Fly*)**  
24lbs. 7.01oz.  
Scott Corlew



**SOUTHERN HAKE**  
1lb.  
James S. Smith







### OYSTER TOADFISH

2lbs. 4.48oz.  
Scott Floyd



### SOUTHERN KINGFISH

2lbs. 0.84oz.  
Mark Alan Ros Jr.



### FINETOOTH SHARK

46lbs. 10.4oz.  
Shiloh Turner

AUGUST 23, 2016

NOVEMBER 6, 2016

FEBRUARY 9, 2017

FEBRUARY 14, 2017

APRIL 22, 2017

JUNE 10, 2017

### INSHORE LIZARDFISH

4.42oz.  
Aaron C. Gautier



### RED LIONFISH

1lb. 11.41oz.  
Elijah Troutman



### SWORDFISH

242lbs. 8.64oz  
Scott Cothran



# SEAFOOD TECHNOLOGY BUREAU

*Director: Ruth Alviola-Posadas*



The Seafood Technology Bureau is the **REGULATORY AUTHORITY FOR MISSISSIPPI'S SEAFOOD INDUSTRY** and ensures that commercial seafood is processed and prepared safely for the consumer market.

## GOALS:

- Conduct regulatory inspections of shellfish processing and transporting facilities to determine compliance with state and federal sanitation and health safety regulations.
- Ensure that suitable sanitary conditions exist for processing and distributing seafood in Mississippi.
- Assist the seafood industry in compliance with sanitation rules and regulations and provide technical assistance to the Mississippi seafood industry.
- Provide technical advice to the Mississippi seafood processing industry to aid in compliance with seafood sanitation and health safety regulations.
- Provide technical advice to the seafood processing industry regarding new technologies and new products that provide added value, new markets, employment opportunities and economic enhancement for the seafood industry.
- Provide technical advice to those interested in aquaculture and aid in expanding economic and employment opportunities.
- Provide technical expertise in investigating reports of food-borne illness and certifying product recalls and embargoes according to state and federal instituted protocols and procedures.
- Undertake research projects in line with seafood technical surveys, seafood safety education and sanitation training in line with the goals of the Mississippi seafood industry to disseminate information and educate consumers and food handlers in the seafood industry.
- Provide advice and technical support for the Mississippi Department of Agriculture and Commerce regarding aquaculture regulatory matters.



▲ Seafood Officer Jeff Davis conducts a sanitation inspection at a shrimp processing facility.



▲ Seafood Technology Bureau Technician Mai Dang collects a water sample from a processing facility to ensure water quality.



▲ Seafood Officer Jessica Rankin assists teachers in viewing phytoplankton species that affect seafood safety at a workshop held at the USM campus in Long Beach, Mississippi.

## ACCOMPLISHMENTS:

- Gave presentations at events and meetings, including Merchants Food Service conference, a teacher workshop in conjunction with the University of Southern Mississippi and the Gulf and South Atlantic States Shellfish Conference.
- Completed the Food and Drug Administration five-year re-certification requirements for State Shellfish Standardization Officers.
- Responded to 4,882 requests for technical assistance from the public, seafood industry and other state and federal agencies.
- Provided technical assistance to oyster dealers, crab and shrimp processors in the implementation of Hazard Analysis and Critical Control Points (HACCP) Plans.
- Provided technical assistance in validation of processes related to shellstock temperature requirements, as well as retail shrimp and crab cooking processes.
- Provided technical assistance to shellstock primary processors by conducting hands-on education related to Vibrio harvest requirements.
- Audited 28,541 sacks of oysters harvested during the October 2016 Vibrio season to ensure compliance with the time-temperature requirements as stated in the state Vibrio Management Plan.
- Participated in two foodborne illness investigations related to Vibrio.
- Conducted 419 regulatory inspections.
- Issued 302 violations related to HACCP and sanitation requirements.
- Certified nine new seafood dealers.
- Conducted 113 water samples to ensure compliance with the water quality requirements.
- Conducted three HACCP workshops certifying 30 participants.
- Conducted five public outreach events from July 2016 through June 2017.

## – 10 YEAR DATA RESEARCH PROJECT RESULTS –

*Certified processors in the seafood industry in Mississippi*



## – 76 TOTAL SEAFOOD SANITATION/ PROCESSING CERTIFICATES –

*These 76 permits represent 539 inspected seafood units.*





# SHELLFISH BUREAU

*Director: Erik Broussard*



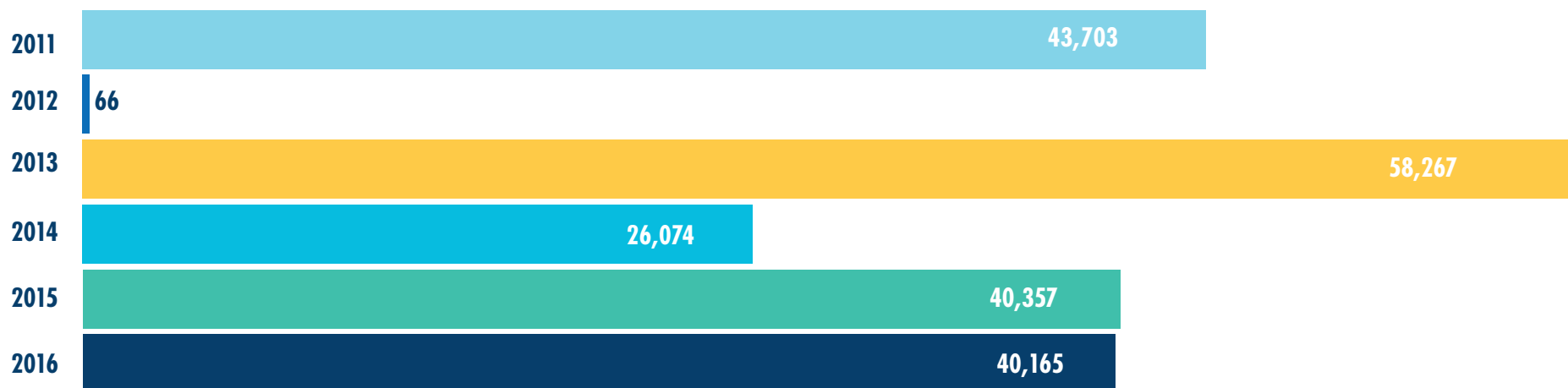
## THE SHELLFISH BUREAU MANAGES AND ENHANCES MISSISSIPPI'S MARINE SHELLFISH RESOURCES.

This bureau also maintains compliance with the Interstate Shellfish Sanitation Conference's National Shellfish Sanitation Program (ISSC/NSSP) Model Ordinance requirements for shellfish-growing waters.

### GOALS:

- Maintain program compliance with the NSSP.
- Map Mississippi's oyster reefs.
- Collect water samples in all oyster reef areas and analyze them for fecal coliform content.
- Use data collected from water samples to properly classify oyster-growing areas.
- Survey potential cultivation sites and cultch planting sites.
- Cultivate oyster reefs.
- Deposit oyster cultch material.
- Assess oyster reef areas.
- Work with other agencies to improve water quality.
- Educate harvesters and the public on shellfish issues.

### – MISSISSIPPI OYSTER LANDING (SACKS) –



## ACCOMPLISHMENTS:

*in May 2017*



**22,600** CUBIC YARDS  
CULTCH MATERIAL  
planted across 338 acres in the western  
**MISSISSIPPI SOUND**

### BILOXI BAY REEFS

• opened to oyster tonging for •

**THE FIRST TIME**  
*in more than*  
**50 YEARS**



### INSTALLED FIVE WEATHER STATIONS

*across the Mississippi Gulf Coast to be used for*

**OPENING AND CLOSING CRITERIA** of oyster reefs and  
general weather assessment in the three coastal counties

Commercial oyster fishermen  
*limits*

**15** DAILY SACKS  
FOR TONGING

**25** DAILY SACKS  
FOR DREDGING

*reported*

**2,602**  
COMBINED TRIPS FOR  
TONGERS & DREDGERS

**8** 1-minute  
DREDGE TOWS

**434** sq. meter  
DIVES 

**287 RANDOMLY  
SELECTED LOCATIONS**

*yielded* **514** SAMPLES  
COLLECTED  
**FROM PUBLIC OYSTER REEFS**



- Modified the rainfall management plan criteria for Area V growing waters of Biloxi Bay from 1 inch to 0.5 inches in accordance with the NSSP model ordinance. Area V reef, which is classified as Conditionally Approved, was subdivided into two units including "A" and "B" where "B" was reclassified as Restricted. Completed changes to Title 22 Part 1 and a new map reflecting these changes.

- Investigated Area V Approved south of Deer Island and the waters surrounding Round Island in Area VI for possible off-bottom aquaculture activities.

- Collected 16 routine phytoplankton samples from oyster reefs in Biloxi Bay and the Western Mississippi Sound and 1,090 fecal coliform water samples from Mississippi's eight shellfish growing area waters.

- Staff updated all of Mississippi's oyster growing area Sanitary and Shoreline Surveys.

- Collected 16 routine phytoplankton samples from oyster reefs in Biloxi Bay and the Western Mississippi Sound and 1,090 fecal coliform water samples from Mississippi's eight shellfish growing area waters.

# SHRIMP AND CRAB BUREAU

*Director: Rick Burris*



## THE SHRIMP AND CRAB BUREAU CONSERVES AND REVITALIZES MISSISSIPPI'S SHRIMP AND CRAB

**RESOURCE AND SUPPORTS HABITAT** to ensure balanced and sustained use. It maintains stewardship of living marine resources for commercial and recreational fisheries at optimal levels as modified by social, economic and biological factors.

### GOALS:

- Manage the state's commercial and recreational shrimp and crab fisheries and work with other state agencies, as well as regional and federal fishery management authorities.
- Monitor and assess the shrimp and crab fisheries; coordinate the Mississippi Crab Task Force; issue Scientific Collection Permits; inspect and report on the live-bait shrimp industry; coordinate grants with the U.S. Fish and Wildlife Service, the Interjurisdictional Fisheries Monitoring Program, the Derelict Crab Trap Removal Program and the Mississippi Bonnet Carré Fisheries Disaster Recovery Program for the Oyster and Blue Crab Fisheries from NOAA Fisheries.
- Set the seasons, gear regulations and implementation of other related management measures as required.
- Work cooperatively with federal agencies, including NMFS, USFWS, GSMFC, Gulf of Mexico Fisheries Management Council and the U.S. Geological Survey. Cooperating state agencies include GCRL, MDEQ, MDWFP and the Mississippi State University Coastal Research and Extension Center, as well as neighboring state marine resource management agencies and the Institute for Marine Mammal Studies.

### ACCOMPLISHMENTS:

— Distributed newsletters to MS Commerical —

#### CRAB FISHERMEN AND SHRIMPERS

**415** SHRIMPING THE  
SOUND NEWSLETTERS

**150** BLUE CRAB BEACON  
NEWSLETTERS

**COLLECTED  
HYDROLOGICAL DATA**  
from the surface and bottom  
at all trawl sampling stations  
and crab trap sets.

— Collected approximately —

**339** TRAWL SAMPLES  
as part of the  
**SHRIMP MONITORING**  
and  
**INTERJURISDICTIONAL FISHERIES  
MONITORING PROGRAM**

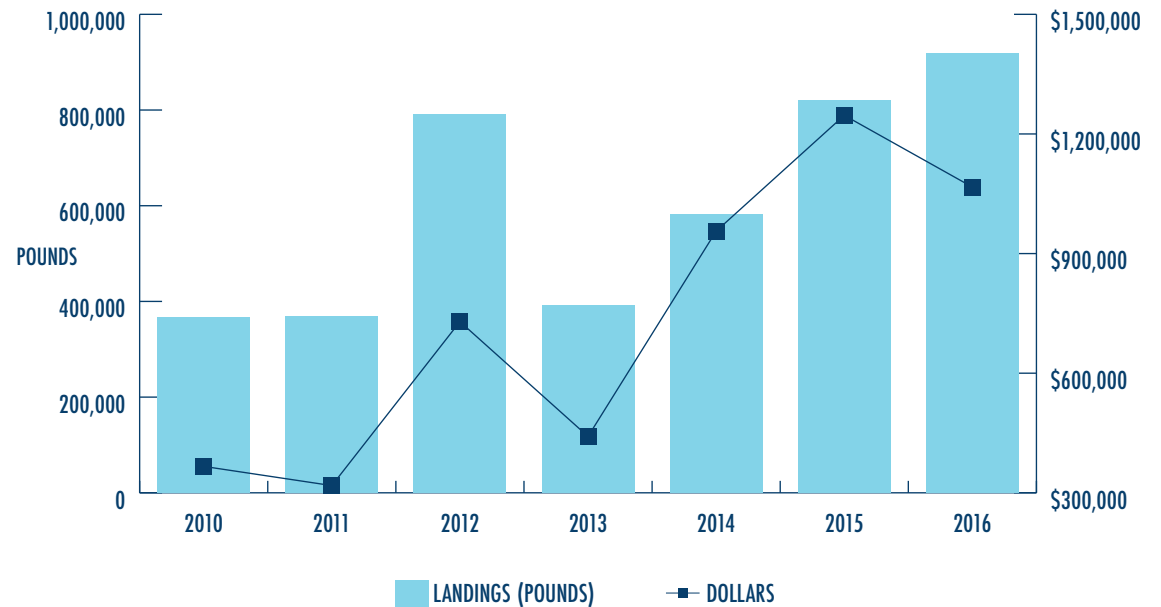


Conducted **53 CRAB TRAP SURVEYS** consisting of **534 INDIVIDUAL TRAPS**  
in Bay St. Louis, Biloxi Bay and the lower Pascagoula River to collect pertinent  
catch-per-unit-effort (CPUE), sex, maturity and bycatch data on the recreational blue crab fishery

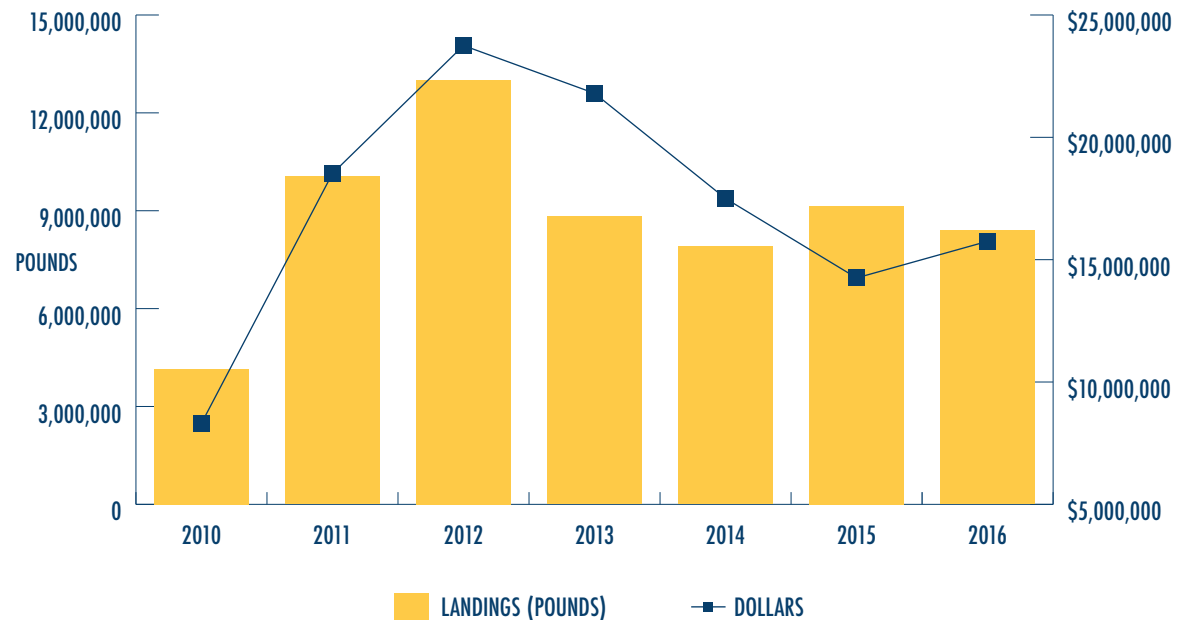


- Operated the Real-Time Hydrological Monitoring program at 10 stations in Mississippi waters and adjacent tributaries. The data is updated in 15-minute intervals and is available to the public and resource managers at [dmr.ms.gov](http://dmr.ms.gov).
- Worked with crab fishermen to remove marine debris, including 66 derelict traps using both vessel shoreline surveys and side-scan sonar surveys for submerged traps.
- Coordinated the USFWS Sport Fish Restoration Grants. Current projects include Mississippi Artificial Reef Program, Mississippi Coastal Sport Fish Studies, Sport Fish Tag and Release in Mississippi Coastal Waters and Adjacent Gulf of Mexico, Assessment of Red Drum Stock in Mississippi Coastal Waters.
- Continued the Mississippi Crab Task Force to encourage the various marine resource user groups to provide input and voice concerns on fishery management and research activities. The task force has worked in the ongoing efforts and coordination of the Derelict Crab Trap Removal Program, the recommendation of regulatory actions and the fisheries monitoring programs.
- Implemented the NOAA Fisheries Mississippi Bonnet Carré Fisheries Disaster Recovery Program for the Oyster and Blue Crab fisheries.
- Issued 40 special permits, including 32 scientific research permits, three experimental gear, two underused species permits and two brood stock collection permits.

### - MS BLUE CRAB LANDINGS -



### - SHRIMP LANDINGS -





# COASTAL RESTORATION & RESILIENCY

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The Office of Coastal Restoration and Resiliency was established by the Mississippi Legislature in 2014. Its primary purpose is to develop a long-range, multi-state strategy to restore Mississippi coastal resources and to provide for healthy and resilient communities and economies in the coastal area.

It is comprised of the following programs:

- MISSISSIPPI GULF COAST NATIONAL HERITAGE AREA
- RESTORATION COORDINATION TEAM
- BOATING INFRASTRUCTURE
- CLEAN VESSEL ACT
- BOAT ACCESS
- GULF OF MEXICO ALLIANCE

The office also collaborates with other agencies in Alabama and Louisiana, as well as federal agencies and non-governmental organizations. These partnerships work to assist with the planning, permitting and implementation of major coastal restoration projects focused on habitat, fisheries and structural or physically protective resiliency projects.

**George Ramseur**  
*Director*





## GOALS:

- Build capacity of state and local governments to better manage and protect coastal communities and marine resources for Mississippi.
- Promote the understanding of coastal risks and the availability of resiliency and restoration tools that support local, regional, national and international efforts related to protecting and/or improving cultural, natural and water resources along with the economic health within the Gulf of Mexico.
- Promote the acquisition, adaptation, use of habitat assessment data, mitigation and restoration as strategies to preserve heritage, conserve natural resources and support economic viability of the coast.
- Improve public familiarity with cultural and habitat resources, such as living shorelines in coastal communities, better communication about habitat restoration, water quality and storm-water management.
- Partner with local, state and federal agencies for the Round Island project. They include, NFWF, MDEQ, Corps of Engineers, Mobile District and the Port of Pascagoula.

## ACCOMPLISHMENTS:



### RESTORED ABOUT 220 ACRES

of the 1700's footprint of Round Island with dredged material.

### SAVED \$2 MILLION

in federal navigation dollars since it was less expensive to place the material at Round Island than to haul it miles out into the Gulf.

### REPLENISHED THE EROSION

that took place along Mississippi's coastline over the course of a year.

Implemented the New Round Island project, which reclaimed over

### 3 MILLION CUBIC YARDS OF DREDGED MATERIAL

from the Port of Pascagoula channel expansion.



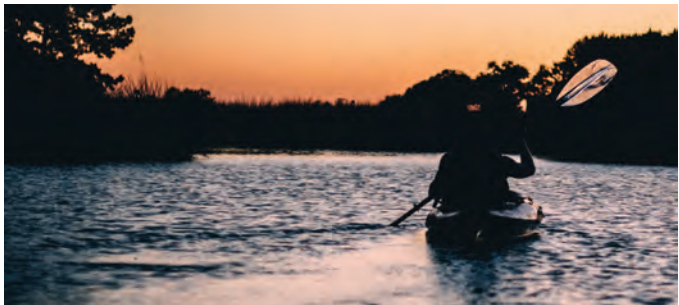
## RESTORATION COORDINATION TEAM

This team consists of MDMR and MDEQ employees who coordinate the implementation of restoration projects with funds from the BP Oil Spill. Revenue streams include RESTORE, Natural Resource Damage Assessment (NRDA) and National Fish and Wildlife Foundation (NFWF).



## RESTORATION FRAMEWORK

This ongoing process seeks to better define the functional limits of our coastal system and evaluate the potential impacts to that system over time. It broadens the focus beyond the Mississippi Sound to what is now defined as the Louisiana, Mississippi, Alabama Coastal System (LMACS). Objectives supported by the LMACS Restoration Framework for Sustainable Fisheries include the development of a comprehensive hydrogeophysical model capable of evaluating restoration concepts and strategies through a 50-year planning horizon. It also fosters collaborative restoration action with adjoining states.



## BOAT ACCESS PROGRAM

This program provides funds to coastal entities for the installation and renovation of boat ramps and kayak launches.

## BOATING INFRASTRUCTURE GRANT PROGRAM

This program provides funding for the construction, renovation and maintenance of public and private boating infrastructure, such as piers and boat docks. This innovative campaign provides transient boaters with unique access to Mississippi waterways.

### ACCOMPLISHMENTS:

- Received a \$100,000 grant to improve and renovate the transient boat docks at Smithville Marina
- Completed two projects for \$100,000 each at Bay Marina in Bay St. Louis and Grand Harbor in Iuka

## CLEAN VESSEL ACT

The Act provides funds throughout the state to harbors and marinas to install pump out stations at their facilities.

### ACCOMPLISHMENTS:

- Completed the installation of three pump-out stations: Pass Christian Yacht Works, Long Beach Harbor and Bay St. Louis Marina for a total of \$76,000

## GULF OF MEXICO ALLIANCE

This is a partnership of the five Gulf States, formed with the goal of significantly increasing regional collaboration to enhance the ecological and economic health of the Gulf of Mexico. The Alliance identified the following initial priority issues: water quality; wetlands and coastal conservation and restoration; environmental education, identification and characterization of Gulf habitats; reducing nutrient inputs to coastal ecosystems and coastal community resiliency.

### ACCOMPLISHMENTS:

**3** CLEAN & RESILIENT MARINAS  
— *designated in* **LONG BEACH,**  
**PASS CHRISTIAN AND GULFPORT HARBORS**



**MS HOMEOWNER'S HANDBOOK**  
updated in coordination with a new MY COAST APP

*funded three*  
**GULF STAR  
PROJECTS**   
*region-wide for a total of*

**\$60K**



## MISSISSIPPI GULF COAST NATIONAL HERITAGE AREA

The Mississippi Gulf Coast National Heritage Area Program (MGCNHA) is funded by the National Park Service and the State of Mississippi. It supports economic growth in the state's lower six counties by focusing on the natural, cultural and historical resources in the Mississippi Heritage Area.

### GOALS:

- Promote the area's recreational and historical resources through activities and partnerships that celebrate the area's unique history, people, traditions and landscapes.
- Produce and distribute a quarterly newsletter and education materials highlighting heritage-related events and projects.
- Promote Gulf Coast Outpost, a voluntary program that recognizes nature-based tourism businesses and gives them access to a business resource toolkit.
- Continue support of Whole Places, a fourth- and fifth-grade education curriculum centered around cultural and natural resource destinations.
- Continue managing the Charnley-Norwood House in Ocean Springs, a Louis Sullivan and Frank Lloyd Wright design.
- Complete projects from 13 grants totaling \$179,800.

### ACCOMPLISHMENTS:

- Released new branding for the Heritage Area, including a new logo and website and kiosks with information about the program.
- Released the Nature-Based Tourism Management Plan for Coastal Mississippi and submitted a proposal for implementation through MDEQ.
- Established 37 National Park Service passport stamp locations within the Gulf Coast's Heritage Area.
- Awarded 14 grants totaling \$380,800 and leveraging another \$398,940 in matching contributions from local governments and the private sector. Projects have been funded in all the lower six counties.
- Completed the French Colonial Garden, the second oldest European cemetery in the nation and oldest in the south. The garden is located west of the Biloxi Visitors Center.



▲ Merrill Bridge in George County







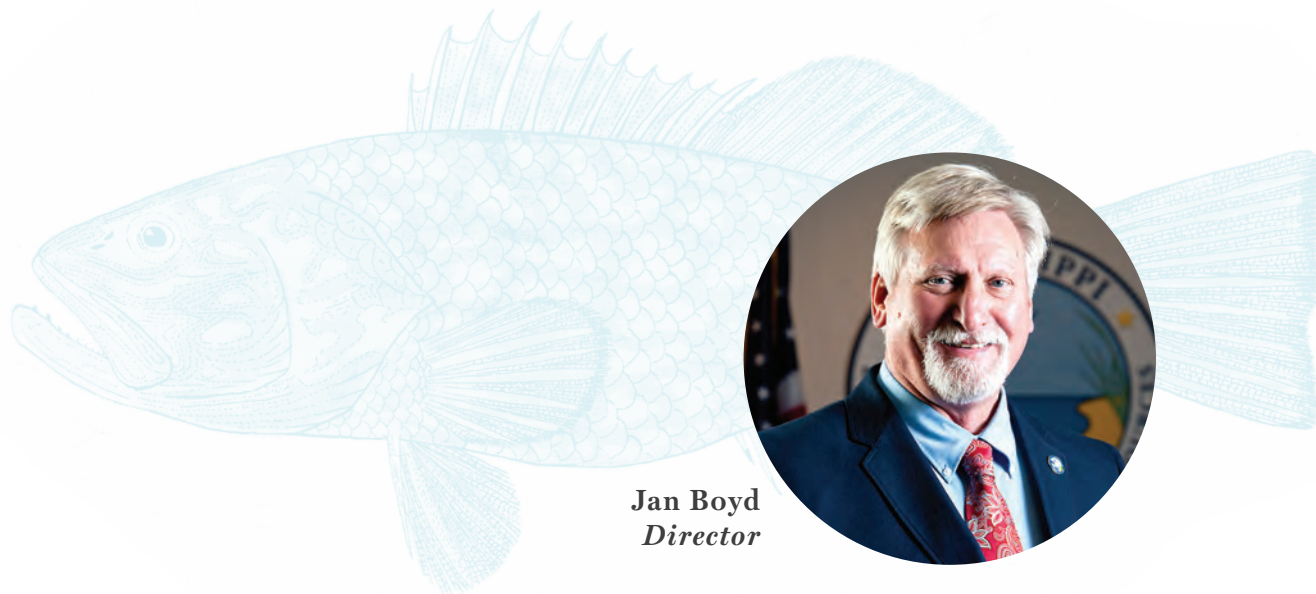
# COASTAL RESOURCES MANAGEMENT

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The Office of Coastal Resources Management (CRM) is responsible for **IMPLEMENTING THE MISSISSIPPI COASTAL PROGRAM**, which was mandated by the Legislature in Section 57-15-6 of the **MISSISSIPPI CODE OF 1972** and approved by NOAA.

CRM also administers these programs:

- **COASTAL PRESERVES**
- **WETLANDS PERMITTING**
- **INVASIVE SPECIES**
- **BENEFICIAL USE**



**Jan Boyd**  
*Director*





## GOALS:

- Administer the regulatory program under the Coastal Wetlands Protection Act.
- Review proposed projects for Coastal Zone Consistency determinations in accordance with the Coastal Zone Management Act.
- Acquire, protect and manage Mississippi's remaining coastal wetlands ecosystems.
- Partner with the Secretary of State's Office to manage Coastal Preserves.

## ACCOMPLISHMENTS:

- Reviewed proposed Mitigation Banking Instruments and inspected proposed and existing banks.
- Participated in credit-release surveys for mitigation banks servicing the Corps of Engineers Mobile District and other mitigation banks serving Mississippi's Coastal Zone.
- Collaborated with FEMA and the Coast Guard to remove 90,000 cubic yards of debris from the DeLisle Unit of the Wolf River Coastal Preserve.
- Invasive Species staff used boats and airplanes to search more than 1,034 river miles for invasive species and found and managed infestations of giant salvinia, common salvinia, water hyacinth and alligatorweed.

# WETLANDS PERMITTING BUREAU

*Director: Willa Brantley*



THE WETLANDS PERMITTING BUREAU HANDLES WETLANDS PERMITS IN THE MISSISSIPPI COASTAL ZONE, WHICH INCLUDES HARRISON, HANCOCK AND JACKSON COUNTIES. Staff issue these permits under a memorandum of agreement with the Mobile and Vicksburg districts of the U.S. Army Corps of Engineers.

## GOALS:

- Provide information to the public about the Coastal Wetlands Protection Act
- Evaluate applications for proposed coastal wetlands impacts and evaluate comments from state, federal and local agencies, as well as the general public.
- Compile data to make evaluations if project requires a variance from the Guidelines for Regulated Activities or a change to the Coastal Wetlands Use Plan.
- Conduct pre-application meetings when necessary and review potential wetlands alterations before application is filed.
- Verify compliance of permitted activities and investigate potential wetlands violations, as well as recommend mitigation to compensate for wetlands loss.

## ACCOMPLISHMENTS:

- Worked with the Beneficial Use Group, a multi-agency organization that identifies and permits locations along the Mississippi coast where dredged material can be used to restore tidal marsh and barrier island habitats that have been degraded or destroyed over time.
- Assisted in the creation of a guidebook on marine debris emergency response by providing information about state permitting requirements and feedback on the draft of the book.
- Conducted 55 pre-application meetings to help prospective applicants with the permitting process and to assist with minimizing wetlands impacts of projects, sometimes conducting site inspections before applications were filed.

## 659 PROJECTS WERE PROCESSED DURING FY2017:

26	Consistencies
1	Consistency Modifications
20	Direct Federal Consistencies
1	Direct Federal Consistency Modifications
3	Emergency Orders
33	Exclusions
3	Exclusion Modifications
1	Exclusions After-the-Fact
284	General Permits
45	General Permit Modifications
1	General Permit After-the-Fact
10	Permits
3	Permit Modifications
1	Permit Extensions
69	Waivers
7	Waiver Modifications
2	Waiver After-the-Fact
3	Waiver Extension
97	Reviews
49	Violations

## COASTAL PRESERVES BUREAU

*Director: Jennifer Wittmann*



The Coastal Preserves Program was developed in 1992 to acquire, protect and manage Mississippi's remaining coastal wetlands ecosystems. **THE STATE HAS IDENTIFIED 20 COASTAL PRESERVE SITES OF IMPORTANT COASTAL WETLANDS HABITAT AND ASSOCIATED UPLANDS.** Acquired lands are managed to safeguard and protect their natural characteristics, ecological integrity, environmental functions and economic and recreational values for the benefit of Mississippi residents. The Mississippi Secretary of State's Office is an active partner in the program. This bureau also oversees the Invasive Species Program and the Beneficial Use Program.

### GOALS:

- Acquire land within the state's 20 Coastal Preserve areas
- Protect sensitive coastal habitats
- Coordinate biological surveys and assessments and develop individual Coastal Preserve management plans
- Develop a public outreach and education program to increase awareness and interest in Mississippi's coastal wetlands
- Develop partnerships with federal, state and local agencies and identify approaches to protect and restore wetlands along the Mississippi coastline

### ACCOMPLISHMENTS:

- Staff hand cut and treated approximately 2,300 tallow trees and saplings from a five-acre plot at Indian Point Unit of the Pascagoula River Coastal Preserve.
- Continued with MDMR's National Fish and Wildlife Foundation-funded invasive species project. Contractors have treated the following tracts: Nugent Unit of the Hancock County Marshes Coastal Preserve (Chinese tallow), 8.14 of 51.7 infested acres treated; DeLisle Unit of the Wolf River Coastal Preserve (Chinese tallow, Chinese privet and cogongrass), 113.6 of 156.5 infested acres treated; Indian Point Unit of the Pascagoula River Coastal Preserve (Chinese tallow, Chinese privet, Japanese privet and cogongrass), 150.9 of 320.5 infested acres treated; and, Deer Island Coastal Preserve (Chinese tallow, Phragmites and rattlebox), 97.3 of 114.5 infested acres treated.
- Removed a stand of 120 Chinese tallow trees from a five-acre area on the east Deer Island restoration site. Reforestation efforts included planting 2,000 slash pine trees on the 25-acre tract on east Deer Island and the planting of five Live oaks on Deer Island Marsh Restoration Site 1 as a test for further planting of oaks on high spots within the Beneficial Use areas. In preparation for planting, this area was burned on December 9, 2016, to inhibit herbaceous ground cover before and during planting.

**DURING FY17, THE PROGRAM ACQUIRED EIGHT TAX-FORFEITED LOTS IN JACKSON COUNTY TOTALING SIX ACRES. TOTAL ACREAGE AS OF JUNE 30, 2017, IS 39,843 ACRES OF STATE-OWNED LANDS MANAGED BY THE COASTAL PRESERVES PROGRAM.** In addition to the state-owned lands within the coastal preserve boundaries, the U.S. Fish & Wildlife Service manages 3,300 acres at the Grand Bay National Wildlife Refuge, and the National Park Service, Gulf Islands National Seashore manages 6,486 acres within Cat, Ship, Horn and Petit Bois islands. Collectively, this includes 49,629 acres (69 percent) of the 72,000 acres proposed for acquisition in the original 20 coastal preserves.





- Beneficial Use Program supervised the placement of dredged material within the interior of the 220-acre Round Island site.
- Maintained the preserve sites as primitive wilderness while allowing for low-impact public use. This was achieved by mechanically maintaining the nature trails and parking areas at the Ansley Unit of the Bayou LaCroix Coastal Preserve, the Indian Point Unit of the Pascagoula River Coastal Preserve, Hellmer's Lane Unit of the Davis Bayou Coastal Preserve and the Deer Island Coastal Preserve.
- Installed 50 plant identification markers along the coastal preserves trail system at several of the more frequently visited preserves.
- Collaborated with Mississippi Department of Wildlife, Fisheries and Parks to conduct bat surveys on Deer Island. Prior to the mist-netting surveys, staff deployed an ultrasonic and acoustic recording device for one month. The mist-netting bat surveys detected two species and 16 total bats were captured.
- Coordinated a fall mushroom walk at the Twelve Oaks Unit of the Old Fort Bayou Coastal Preserve. Staff also took several groups to Deer Island for education and research purposes, including the Mississippi Habitat Stewards Training Program and Muck to Marshes volunteers. Gave tours of the island, including management efforts and ecology, to the Gulf Coastal Recycling Coalition and a Florida law class visiting the Gulf Coast Research Lab.



Monitored the giant applesnail population by weekly surveys conducted April through October. Staff destroyed **2,301 GIANT APPLESNAIL EGG MASSES** and euthanized **93 LIVE SNAILS.**



**PLANTED 1,400 SLASH PINE TREES** on a three-acre research tract at **DEER ISLAND** as part of a cooperative effort with the U.S. Department of Agriculture (USDA) Forest Service – DeSoto Research Station.



Continued the **MISSISSIPPI DIAMONDBACK TERRAPIN MONITORING PROJECT** along the eastern shoreline of the Hancock County Marshes, the Graveline Bay and the Deer Island coastal preserves.







# GRAND BAY NERR

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The Grand Bay National Estuarine Research Reserve (NERR) is a program of the Mississippi Department of Marine Resources. Designated in 1999, the NERR is **ONE OF 29 RESERVES** in the National Estuarine Research Reserve System (NERRS), which is a **STATE-FEDERAL PARTNERSHIP** operated by NOAA's Office for Coastal Management. The Grand Bay NERR is about **18,500 ACRES** of coastal waters and wetlands located in southeastern Jackson County, adjacent to the Mississippi-Alabama state line. The site is one of the **LARGEST ESTUARINE SYSTEMS** along the Mississippi Coast and includes a variety of wetlands types, including tidal emergent marsh, wet pine savanna and freshwater marsh. These unique and extremely **BIODIVERSE HABITATS** are home to a wide variety of plants and animals. The Grand Bay NERR is co-located with the U.S. Fish and Wildlife Service's Grand Bay National Wildlife Refuge and the two operate in close partnership. The NERR works with a group of stakeholders called the **COMMUNITY COLLABORATIVE** which provides input on program direction. Programmatic efforts at the NERR are consistent with the NERRS 2017-2022 Strategic Plan and the 2013-2018 Grand Bay NERR Management Plan.



Ayesha Gray, Ph.D.  
*Director*





THIS MISSION OF THE GRAND BAY NERR IS TO PRACTICE AND PROMOTE STEWARDSHIP OF COASTS AND ESTUARIES THROUGH INNOVATIVE RESEARCH, EDUCATION AND TRAINING USING A PLACE-BASED SYSTEM OF PROTECTED AREAS. The NERRS is a national network of estuaries and coastal watershed reserves whose primary goal is to support high-quality scientific studies that contribute to the understanding of these estuaries, then disseminate the information. Data collected are provided to the public and local decision makers to provide information on which to base management decisions. The research provides the foundation for various educational opportunities for students and the community.

To meet its mission and the objectives, the NERRS established the System-wide Monitoring Program. It helps to track short-term variability and long-term trends in biological and physical parameters in coastal systems to better understand current ecosystem function and changes in those parameters over time in response to anthropogenic and natural events. Our SWMP at Grand Bay includes water quality, weather, nutrients, wet and dry atmospheric deposition of mercury, bird communities, sediment dynamics, vegetation distribution/biomass and shoreline erosion monitoring. Information from ongoing monitoring aids in decision making. The NERR is also a resource for outdoor learning, recreation and fishing for the state. The NERR aids MDMR in addressing local issues and aiding in the protection of Mississippi's natural and heritage resources.

## GOALS:



**SERVE** the community as distinguished center for estuarine research, education and training and sound coastal management.



**PROVIDE** scientific understanding and knowledge that answers critical coastal management questions.



**GIVE** local communities opportunities to appreciate and value the significance of coastal ecosystems.



**TRAIN** local communities to make science-based coastal management decisions.



**PARTNER** with local, state and federal entities to manage reserve resources and enhance habitat condition and diversity.



**CONTINUE** research partnerships with Mississippi State University, University of Southern Mississippi's Gulf Coast Research Lab, Dauphin Island Sea Lab, University of Alabama, University of Southern Illinois, University of Central Florida and U.S. Geological Survey.

## ACCOMPLISHMENTS:

- Research Coordinator completed four peer-reviewed publications in this report period, including a National Academies of Sciences, Engineering, and Medicine publication entitled “Effective Monitoring to Evaluate Ecological Restoration in the Gulf of Mexico.”
- Continued to monitor vegetation, erosion and sediment dynamics; began analyses of sediment data to address questions about marsh resilience to sea-level rise.
- Developed three short outreach films to showcase NERR activities and shared on social media; maintained a social media presence on Facebook and Twitter.
- Conducted 10 training workshops for hundreds of community members, including Coastal Resiliency Series (wilderness first aid, disaster response exercises, Community Rating System training), Statistics using R, Communicating Science, Living Shorelines and Plant Identification.
- Partnered with training programs nationwide on a project titled “Resilience Dialogues: Strategies for Conflict Management in Collaborative Science Transfer Project.”
- Conducted a Teachers on the Estuary (TOTE) workshop for 11 teachers titled “Fire Ecology, Marsh Migration and Sea Level Rise,” which was developed in coordination with researchers and presented cutting-edge applied science information.
- Hosted a Veteran’s Fire Crew and worked with them on a variety of prescribed burns and pine savanna restoration activities.
- Worked in partnership with USFWS to develop restoration plans with emphasis on invasive species eradication, fuel reduction, fire lane construction and reintroduction of prescribed fire to the wet pine savanna habitats.
- Completed the installation of the Savanna Trail, an interpretive nature trail through Reserve pine savanna to freshwater wetland view points.
- Worked with partners at NOAA and Mississippi State University to acquire imagery of the Reserve using unmanned aerial systems.
- Worked with USFWS and local fire departments to respond to 500-acre Missala Wildlife.

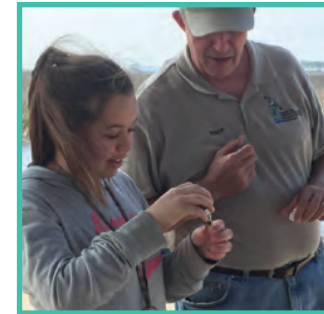


Conducted and/or participated in  
**11 COMMUNITY  
EDUCATION EVENTS**

for 3,477 participants, including National Estuaries Day, kayaking, art workshops, the Region VI Science and Engineering Fair and Celebrate the Gulf Marine Education Festival.



Continued to monitor  
water quality and weather  
and updated for  
**TELEMETRY SYSTEM.**



**CONDUCTED 30 PROGRAMS**

as part of the On the Road program (schools, community centers, senior centers) for **3,898 PARTICIPANTS** to present information on estuaries, watersheds and conservation.







# AQUACULTURE PROGRAM

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Aquaculture is the **RAISING OF AQUATIC ANIMALS** for the use of food, bait or enhancement of wild populations. MDMR has strongly supported the aquaculture approach to provide economic support to the fishing industry, as well as **STOCK ENHANCEMENT** of wild populations that use our state waters. Marine aquaculture in Mississippi is emerging as one of the most beneficial ways to raise multiple species, including **SHELLFISH** and **FINFISH**. The Gulf Coast provides one of the most productive areas in the world for aquaculture by producing favorable salinities and mild winters, which **PROMOTE** fast and robust **GROWTH** of multiple species. The agency is becoming more involved with the emergence of these aquaculture techniques, an industry which supports sustainable harvest.



**Paul Mickle, Ph.D.**  
*Chief Scientific Officer*

## AQUACULTURE HATCHERY

*Manager: Michael Lee*



THE AQUACULTURE FACILITY IN LYMAN IS AN MDMR-OPERATED PROPERTY THAT FOCUSES ON AQUACULTURE RESTORATION AND COMMERCIAL AQUACULTURE OPPORTUNITIES. Buildings at the facility consist of:

office/administrative, wet laboratory, mechanical shop, feed storage building, maintenance shop, two storage buildings, fuel shed, three tractor sheds, water laboratory, generator building, fish holding house and two pump houses.

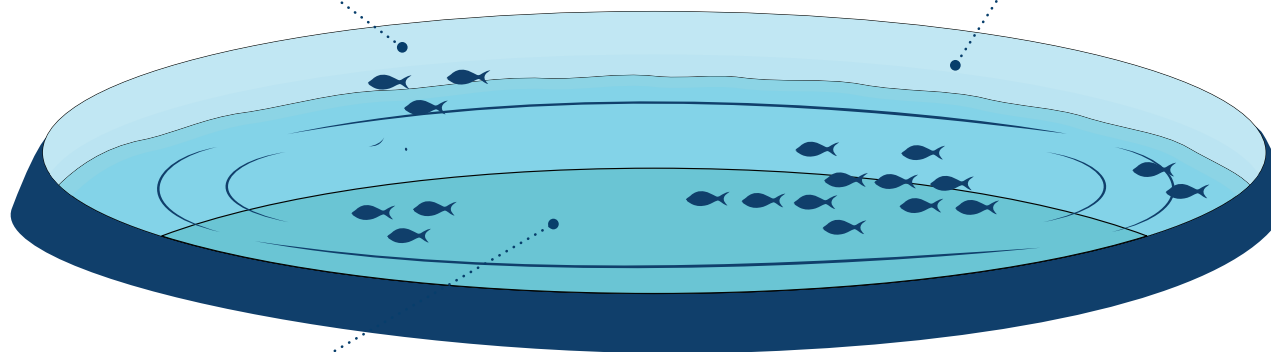
Operations at the Lyman aquaculture facility are critical to the sustainability of marine fisheries, as well as important to Mississippi's economy. The hatchery helps create marketable products by developing techniques that can be transferred to the private sector for commercial aquaculture. Lyman aquaculture aids recreational fisheries by restoring and enhancing fish populations through the release of cultured organisms to enhance, restore and conserve these populations. Aquaculture for stock enhancement can provide a means to rebuild spawning stock biomass for species recovery.

THE AQUACULTURE HATCHERY  
*is situated on*

**214** ACRES

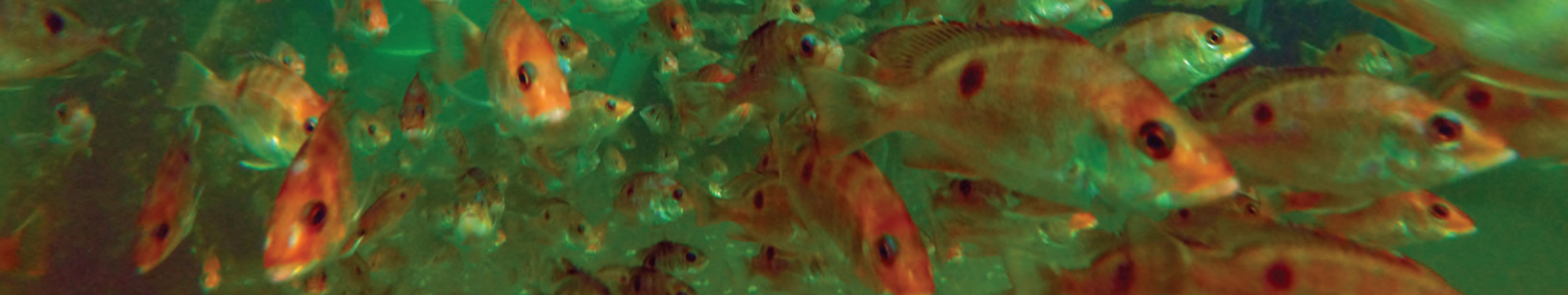
2018 PRODUCTION HAS BEGUN WITH

**40 RED DRUM** *ranging from*  
10-12 pounds & used for brood stock spawning



**14** & **11**  
HALF-ACRE  
LINED PONDS EARTHEN  
PONDS

*of various sizes from a quarter-acre to 12 acres,  
totaling 30 and one-quarter acres of water*



## GOALS:

- Continue lined-pond rearing of juvenile Spotted Seatrout for stock enhancement.
- Support and work with local educational institutions, such as GCRL and the Ocean Springs High School aquaculture program.
- Work with private-sector, marine-related projects, as well as many neighboring state-run programs, to advance aquaculture for Gulf of Mexico marine species.
- Continue culturing juvenile blue crab with the overall goal of establishing a blue crab bait industry in Mississippi.

## ACCOMPLISHMENTS:

- More than 2,000 bait crab were raised in low-salinity earthen ponds and introduced to charter boat captains to evaluate anglers' experience and success with reared blue crab.
- More than 100,000 Spotted Seatrout averaging three inches were released into coastal waters in 2017. The Spotted Seatrout, the most popular recreational fish in the Gulf of Mexico, receives the most pressure to its wild stocks.



▲ Spotted Seatrout release



▲ Students from Ocean Springs High School visit the Lyman Hatchery



## OYSTER AQUACULTURE

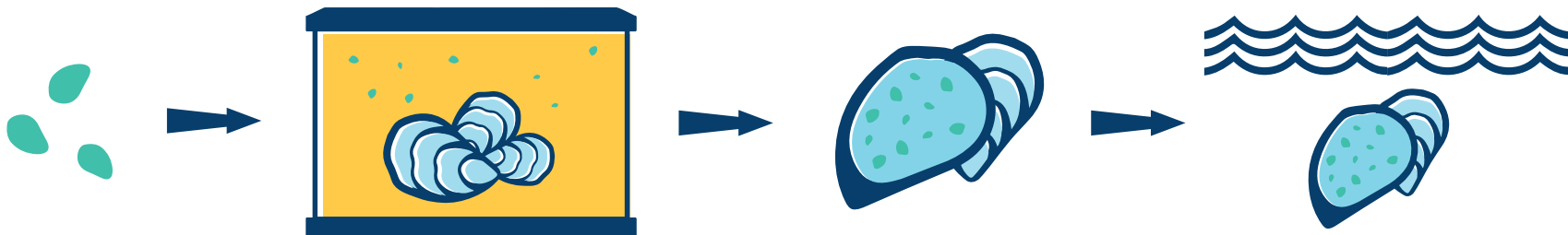
*Oyster Extension Agent: Jason Rider*



The oyster industry is an integral part of the Mississippi Gulf Coast – its economy, its history and its culture. It has suffered greatly because of several natural and man-made disasters since 2005, including Hurricane Katrina, the BP Oil spill and three separate openings of the Bonnet Carré Spillway (2008, 2011 and 2016). **IN 2004, OYSTER FISHERMEN IN MISSISSIPPI HARVESTED NEARLY 500,000 SACKS OF OYSTERS. IN 2012, THERE WERE 66 SACKS HARVESTED, AND IN 2016, ABOUT 40,000 SACKS WERE HARVESTED.** Gov. Phil Bryant created the Governor’s Oyster Council on Restoration and Resiliency in 2015 to address the problems this industry faces and to come up with solutions. These solutions include a remote-setting facility at the Port of Gulfport and oyster aquaculture training programs.

### PORT OF GULFPORT REMOTE SETTING FACILITY

Remote setting is a method of producing oysters that differs from natural oyster production. It is the production of oyster spat by setting hatchery-reared larvae onto cultch (hard material for oyster larvae to attach, typically shell, crushed concrete or limestone) at a remote location from the hatchery. Spat are then planted on bottom or off bottom.



### GOALS:

- Assist in increasing the production of the natural oyster reefs along the Mississippi Gulf Coast.

### ACCOMPLISHMENTS:

- In 2017 MDMR began setting oysters in four 2,600-gallon tanks at the Port of Gulfport. During its first year of operation, the facility restored over 30 acres of water bottom by the remote-setting method. This assisted in increasing the production of the natural oyster reefs along the Mississippi Gulf Coast.



## OFF-BOTTOM OYSTER AQUACULTURE TRAINING PROGRAM

The oyster industry along the Mississippi Sound currently is limited to harvestable reefs; however, the number of oysters available for harvest has decreased in the past decade, which has limited the number of oystermen and fishermen engaged in this economic sector.

MDMR PARTNERED WITH AUBURN UNIVERSITY TO DEVELOP AN OFF-BOTTOM OYSTER AQUACULTURE TRAINING PROGRAM. THE PROGRAM IS SET UP IN TWO PHASES THAT OCCUR OVER A TWO-YEAR PERIOD.	
PHASE 1	Includes classroom and field education on aquaculture, business operations and demonstrations of off-bottom aquaculture techniques. During the first phase, participants attended training meetings, workshops, received assistance with development of a business plan, deployed grow-out systems at training site(s) and stocked those systems with seed.
PHASE 2	Incorporate hands-on training by allowing participants to select an oyster-growing technique from the range of permitted methods using information gained from phase one. Participants will maintain their assigned gear and oyster seed, including all aspects of fouling control, grading, splitting and site maintenance following best management practices. Instructors and participants will periodically evaluate oyster survival, growth and quality, as well as comparing individual success among program participants to facilitate collaborative learning.

### GOALS:

- Diversify the oyster industry by training oystermen and fishermen in off-bottom aquaculture to support and grow the oyster industry and the overall Mississippi economy.

### ACCOMPLISHMENTS:

- MDMR and the Auburn Shellfish Lab began training coastal citizens in the techniques of Off-Bottom Oyster Aquaculture. The training program addressed all aspects of off-bottom oyster farming appropriate to the local/regional area with the capability of training and accrediting up to five participants per year. The program included classroom and field education on aquaculture, business operations and demonstrations of off-bottom aquaculture techniques.

# COMMISSION ON MARINE RESOURCES

The Commission on Marine Resources is comprised of five members appointed by the governor for four-year terms to represent the following areas: commercial seafood processors, nonprofit environmental organizations, charter boat operators, recreational fishermen and commercial fishermen.



**The Honorable Phil Bryant**  
*Governor, State of Mississippi*



**Mark H. Havard, II**  
*Recreational Sports Fishermen*  
*Jackson County*



**Jolynne Trapani**  
*Nonprofit Environmental Organizations*  
*Hancock County*



**Steve Bosarge, Chairman**  
*Commercial Fishermen*  
*Jackson County*



**Ron Harmon, Vice Chairman**  
*Charter Boat Operators*  
*Harrison County*



**Richard Gollott**  
*Commercial Seafood Processors*  
*Harrison County*







## MISSISSIPPI DEPARTMENT OF MARINE RESOURCES

1141 Bayview Avenue • Biloxi, MS 39530

228.374.5000 • [dmr.ms.gov](http://dmr.ms.gov)

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