

# Sixtieth Annual Report of the Gulf States Marine Fisheries Commission

For the Year 2009



The GULF STATES MARINE FISHERIES COMMISSION is an organization of the five states whose coastal waters are the Gulf of Mexico. This Compact, authorized under Public Law 81-66, was signed by the representatives of the Governors of the five Gulf States on July 16, 1949, at Mobile, Alabama. The Commission's principal objectives are the conservation, development, and full utilization of the fishery resources of the Gulf of Mexico to provide food, employment, income, and recreation to the people of these United States.

# GULF STATES MARINE FISHERIES COMMISSION

Sixtieth Annual Report  
(2009)

*to the  
Congress of the United States  
and to the  
Governors and Legislators  
of  
Alabama, Florida, Louisiana, Mississippi, and Texas*

Presented in compliance with the terms of the Compact and State Enabling Acts Creating such Commission and Public Law 66-81<sup>st</sup> Congress assenting thereto.



Edited by:

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*Preserving the Past ▪ Planning the Future ▪ A Cooperative Effort*

## Charles H. Lyles Award

The *Charles H. Lyles Award* is awarded annually by the Gulf States Marine Fisheries Commission (GSMFC) to an individual, agency, or organization which has contributed to the betterment of the fisheries of the Gulf of Mexico through significant biological, industrial, legislative, enforcement, or administrative activities.

The recipient is selected by the full Commission from open nominations at the spring March meeting. The selection is by secret ballot with the highest number of votes being named the recipient. The recipient is awarded the honor at the annual meeting in October.

### CHARLES H. LYLES Award Recipients

Charles H. Lyles	1984
Theodore B. Ford	1985
J.Y. Christmas	1986
John Breaux	1987
John Ray Nelson	1988
I.B. "Buck" Byrd	1989
Hugh A. Swingle	1990
John A. Mehos	1991
J. Burton Angelle	1992
Louis A. Villanova	1993
Theodore H. Shepard	1994
Edwin A. Joyce, Jr.	1995
Tommy D. Candies	1996
Walter M. Tatum	1997
Thomas L. Heffernan	1998
Trent Lott	1999
James Barkuloo	2000
Walter Fondren, III	2001
Jerald K. Waller	2002
Andrew J. Kemmerer	2003
Hal Osburn	2004
Leroy Kiffe	2005
Robert P. Jones	2006
Wayne E. Swingle	2007
Ralph Rayburn	2008
W. "Corky" Perret	2009

## Acknowledgements

In submitting this Sixtieth Annual Report, the Commissioners wish to express their most sincere appreciation for the splendid cooperation of the Members of Congress and the Governors and Legislators of the Compact states. The Commission fully appreciates that such measure of success as has been attained in the past sixty years could not have been possible without such valued assistance. This acknowledgement is also extended to the directors and staffs of federal, state, and interstate agencies, and to representatives of all organizations and individuals who have contributed to the realization of the objectives of the Gulf States Marine Fisheries Commission.

Respectfully submitted,

Butch Gautreaux, *Chairman*  
Virginia Vail, *Vice Chairman*  
Vernon Minton, *Second Vice Chairman*  
Larry B. Simpson, *Executive Director*

## Table of Contents

Charles H. Lyles Award.....	ii
Acknowledgements.....	iii
Table of Contents.....	iv
Commission Roster.....	v
Active Committees.....	vi
Executive Director’s Report .....	1
Emergency Disaster Recovery Program .....	2
Sport Fish Restoration Administration Program.....	9
Administration of the Gulf of Mexico Regional Panel on Aquatic Invasive Species.....	11
Southeast Monitoring and Assessment Program (SEAMAP).....	13
Joint GSMFC/GMFMC Habitat Program.....	15
Interjurisdictional Fisheries (IJF) Management Program .....	17
Fisheries Information Network (FIN).....	19
Economics Program.....	24
Alabama Marine Resources Division .....	28
Florida Fish and Wildlife Conservation Commission.....	34
Florida Department of Agriculture .....	42
Louisiana Department of Wildlife and Fisheries, Office of Fisheries .....	44
Mississippi Department of Marine Resources .....	71
Texas Parks and Wildlife Department .....	77
National Marine Fisheries Service, Southeast Regional Office.....	83
Gulf of Mexico Fishery Management Council .....	90
U.S. Fish and Wildlife Service.....	93
Report on Examination of Financial Statements, Supplemental Data, Internal Control and Compliance for the year ended December 31, 2009.....	103

**Commission Roster**

***Commission Officers***

**Chairman: Butch Gautreaux**

**First Vice Chairman: Virginia Vail**

**Second Vice Chairman: Vernon Minton**

***Commissioners***

*(order of listing – administrator, legislator, governor’s appointee)*

**ALABAMA**

Barnett Lawley  
Alabama Department of Conservation &  
Natural Resources  
Montgomery, Alabama

Spencer Collier  
Alabama House of Representatives  
Irvington, Alabama

Chris Nelson  
Bon Secour Fisheries  
Bon Secour, Alabama

**FLORIDA**

Ken Haddad, Executive Director  
Florida Fish & Wildlife Fisheries  
Commission  
Tallahassee, Florida

Thad Altman  
Florida Senate  
Melbourne, Florida

Hayden R. Dempsey  
Greenberg Traurig, P.A.  
Tallahassee, Florida

**LOUISIANA**

Robert Barham, Secretary  
Louisiana Department of Wildlife &  
Fisheries  
Baton Rouge, Louisiana

Butch Gautreaux  
Louisiana Senate  
Morgan City, Louisiana  
Wilson Gaidry  
Houma, Louisiana

**MISSISSIPPI**

William Walker, Executive Director  
Mississippi Department of Marine  
Resources  
Biloxi, Mississippi

Tommy Gollott  
Mississippi Senate  
Biloxi, Mississippi

Joe Gill, Jr.  
Joe Gill Consulting, LLC  
Ocean Springs, Mississippi

**TEXAS**

Carter Smith, Executive Director  
Texas Parks & Wildlife Department  
Austin, Texas

Mike Jackson  
Texas Senate  
Austin, TX

David McKinney  
Austin, TX

***Staff***

Larry B. Simpson, *Executive Director*

David M. Donaldson, *Assistant Director*

Virginia K. Herring, Administrative Officer  
Nancy K. Marcellus, Administrative Assistant  
Cheryl R. Noble, Staff Assistant  
Madeleine A. Travis, Staff Assistant  
Teri L. Freitas, Staff Assistant  
Deanna L. Valentine, Data Entry Clerk  
Alex L. Miller, Program Coordinator  
Wendy L. Garner, Staff Accountant  
James R. Ballard, Program Coordinator

Steven J. VanderKooy, Program Coordinator  
Jeffrey K. Rester, Program Coordinator  
Ralph E. Hode, Program Coordinator  
Gregory S. Bray, Programmer/Analyst  
Robert W. Harris, Programmer/Analyst  
Douglas J. Snyder, Survey Coordinator  
Donna B. Bellais, Survey Coordinator  
Joseph P. Ferrer, III, Network Administrator  
Lloyd W. Kirk, SEAMAP Database Programmer

## Active Committees

Executive Committee.....	Butch Gautreaux Joe Gill Jr. Vernon Minton Virginia Vail Mike Ray
Law Enforcement Committee.....	Jeff Mayne, Chairman
State-Federal Fisheries Management Committee.....	Virginia Vail, Chairman
Menhaden Advisory Committee.....	Borden Wallace, Chairman
Commercial/Recreational Fisheries Advisory Panel .....	Philip Horn, Commercial Chairman Darren Angelo, Recreational Chairman
Technical Coordinating Committee.....	Joseph Shepard, Chairman
TCC Artificial Reef Committee.....	Dale Shively, Chairman
TCC Crab Subcommittee.....	Tom Wagner, Chairman
TCC Data Management Subcommittee .....	Kerwin Cuevas, Chairman
TCC Habitat Subcommittee.....	Ron Mezich, Chairman
TCC SEAMAP Subcommittee .....	Read Hendon, Chairman
TCC Outreach Subcommittee.....	James Ballard, Facilitator



# **G**ULF STATES MARINE FISHERIES COMMISSION **EXECUTIVE DIRECTOR'S REPORT** *Larry B. Simpson, Executive Director*

The year 2009 could be called the year of the Councils or the year of the great debate over the use of reef fish species. At any rate, 2009 has been an eventful year. This Commission is vertically involved with reef fish, so to speak. We are partners in the data collection, electronic storage, distribution, and changes to the system, as well as, the management at the Council and State levels. Our programs are always being improved upon and changed for the better. This change is not rapid but well thought out and vetted with our state and federal partners with the best description and management of the resource in mind. Through all of this, we receive vital input from user groups. 2009 saw the states propose, as well as make, legislative changes that will enhance the data collected for management such as Florida's passage of a shore fishing license requirement for fishermen in that state. Mississippi saw passage of an overage exemption license mechanism to better track that population while Alabama began requiring state licenses to land fish no matter where caught to get better data on landings. Louisiana implemented a voluntary electronic logbook system for their for-hire vessels to get a better handle of catch and effort from that fishery. Texas fully implemented a trip ticket system which provides a more accurate accounting of commercial landings of reef fish and other important species.

Fisheries work should not be static, that is you institute and measure a requirement and never

address it again. To be relevant, all fisheries measures should be examined in the light of the current and projected status of the fishery. Further, all programs, to be relevant, must be subject to change and improvement. The complexity and appropriateness of proper use of the resource dictate no less.

Problems occur when specific groups, powerful enough to get their specific changes implemented, are too narrow or self-serving. This would be tantamount to legislating morality. If the system is working optimally, the decision makers will do what is necessary and right. Putting too many impediments to flexibility may be as bad as, or worse, than a system that is not functioning optimally and with extreme bias.

As a result of controversy, there is a new vigor to implementation of the changes we all wanted to make but did not have the political will to get going. Improvement next year in the data collection and management systems for reef fish will come to fruition. Studies on fisheries will show improvement in the health of the resources and, as always, new issues will arise. Thus is the way of marine fisheries. It is why I am so interested in this field. It is never static but always changing. We must stay diligent to make the right changes for best and proper use of these resources for which we are responsible.

# **E**MERGENCY DISASTER RECOVERY PROGRAM

*Ralph E. Hode, Fisheries Disaster Program Coordinator*

The Disaster Recovery Program was established by Congress to aid in the restoration of the Gulf of Mexico fishery resource proper and to provide economic assistance for fishermen and industries within the Gulf States that were severely damaged during Hurricanes Katrina and Rita in 2005. The Gulf States Marine Fisheries Commission, working with the National Marine Fisheries Services, continues coordinating the distribution of Disaster recovery funds appropriated under the program in 2006 and 2007. Recovery efforts within each State are regularly monitored and reimbursements for approved work continue to be distributed on a weekly basis. Additionally, progress reports for work performed are provided to the National Marine Fisheries Service quarterly; while expenditure reports are prepared on a monthly basis. An overview of significant activities and related spending for each program follows:

## **Resource Recovery Progress and Spending – EDRP I**

Overall spending in the Resource Recovery Program (EDRP I) in 2009 was approximately 46% above that of 2008. Unfortunately, combined spending in this sub-award remained nearly 5% below the projected

annual average necessary to assure that the grant is completed within the approved five year time period. As a result, the recipient states are being encouraged to examine individual programs and/or jobs for possible alternative actions that will utilize programmed funds within the guidelines of allowable uses; or, to begin planning for grant extensions. Staff will be working closely with individual states over the next several months in order to identify possible areas where there is a potential for funding to be lost due to inability of recipients to implement their programs in a timely manner.

The following tables provide an overview of activities through 2009.

**Table 1** reflects the distribution of funding by category for each state as amended over the past three years. The Shrimp and Shellfish Habitat Recovery sub-award which was originally programmed for 39.2% of the total Recovery grant now reflects 24.5% of the total. Accordingly, Cooperative Research is now programmed for approximately 36.5% where it was previously 21%. The Oyster Recovery element remains unchanged.

**Table 1.** Distribution of Funding - October 1, 2006 through September 30, 2011  
EDRPI

<i>State</i>	<i>Oyster Recovery</i>	<i>Shrimp and Shellfish Recovery</i>	<i>Cooperative Research</i>	<i>State Totals</i>
<i>Louisiana<sup>1</sup></i>	22,900,000.00	11,173,917.00	18,842,750.00	<b>52,916,667.00</b>
<i>Texas</i>	1,814,910.00	997,260.00	382,800.00	<b>3,194,970.00</b>
<i>Florida</i>	2,994,700.00	813,600.00	425,033.00	<b>4,233,333.00</b>
<i>Mississippi</i>	15,000,000.00	12,000,000.00	10,041,667.00	<b>37,041,667.00</b>
<i>Alabama<sup>2</sup></i>	7,116,306.00	8,341,606.68	16,675,420.00	<b>29,633,333.00</b>
<b>Total</b>	<b>\$49,825,946.00</b>	<b>\$30,806,384.00</b>	<b>\$46,367,671.00</b>	<b>\$127,019,970.00</b>
<b>Percentage</b>	<b>39.23%</b>	<b>24.25%</b>	<b>36.51%</b>	

Source: Final Sub-award agreements for each of the five Gulf States as approved by NOAA and on file in the GSMFC Administrator's

<sup>1</sup>As amended (in 2008) to reduce Habitat debris removal and increase economic impact assessment under Cooperative Research.

<sup>2</sup>As amended (in 2008) to reduce Habitat mapping project and increase stock assessment and implement hatchery repairs at Claude Peteet Mariculture Center under Cooperative Research..

**Table 2** shows spending by category for 2009 and includes, for comparative purposes, the 2008 categorical spending data. Overall spending in 2009 was approximately \$26,409,034.20 as compared to nearly \$17,955,045.41 million in 2008. Oyster program reimbursements were up by nearly 77.7% which is a reflection of overall improved weather conditions in the near shore areas of the Gulf – especially in the lower Mississippi River Valley area around Louisiana. The Habitat component in Shrimp and Shellfish grounds was down by 4.3% and the Cooperative Research component was up by 39.3%.

**Table 3** shows cumulative spending through the end of 2009, reflecting combined reimbursements of nearly \$75.6 million. Through December of 2009 approximately 60% of the total EDRP I fund had been utilized.

From a grant timeline perspective, by the end of December, the program was 39 months into implementation or approximately 65% into allotted time. Previous annual reports indicated that the gap between projected and actual spending was between 6 and 10% below projected; therefore, it can safely be concluded that spending had improved by the end of 2009. But it is significant to note that spending over the next 21 months (*the end date of the EDRP I grant*) will need to approach \$2.45 million per month in order to avoid a grant extension.

The primary reason for delayed spending is attributed to weather. Hurricanes and Mississippi River flooding in 2008 caused a significant delay in oyster restoration activity in Texas and Louisiana; drought conditions in the Mobile Bay area resulting in oyster drill infestations and loss of reefs in 2007 and 2008 precluded Alabama from further oyster restoration until conditions improved to support oyster growth; and prolonged rainy and stormy conditions in the northern Gulf in 2009 delayed cultch planting, artificial reef restoration in Mississippi waters.

Measurable accomplishments for which EDRP I reimbursements were made through 2009 are reflected as follows:

**Oyster Restoration**

- Nearly 2,962 acres of public oyster grounds have been rehabilitated through cultch plants and oyster relays involving nearly 150,000 sacks of seed oysters and the depositing of over 207,000 cubic yards of cultch materials.
- Rehabilitation of private oyster lease grounds involved the installation of nearly 3,400 acres of cultch materials and the re-seeding of nearly 58,000 acres through the transplanting of nearly 1.7 million sacks of oysters. The Louisiana quarterly report for the period ending in December 2009 indicated that the State’s private oyster lease recovery (POLR) program was completed in December, marking an

**Table 2.** Expenditures by Category 2009 – EDRP I (includes comparison numbers for 2008 and percentages).

<i>State</i>	<i>Oyster Recovery</i>	<i>Shrimp and Shellfish Recovery</i>	<i>Cooperative Research</i>	<i>Total</i>
<i>Louisiana</i>	8,697,612.46	626,206.64	2,327,193.02	<b>11,651,012.12</b>
<i>Texas</i>	369,503.87	194,347.22	74,027.66	<b>637,878.75</b>
<i>Florida</i>	451,771.22	128,135.16	64,430.85	<b>644,337.23</b>
<i>Mississippi</i>	2,480,848.96	454,124.31	1,824,125.93	<b>4,759,099.20</b>
<i>Alabama</i>	1,796,221.18	2,071,774.01	4,848,711.71	<b>8,716,706.90</b>
<b>Total 2009</b>	<b>\$13,795,957.69</b>	<b>\$3,474,587.34</b>	<b>\$9,138,489.17</b>	<b>\$26,409,034.20</b>
<b>% of tot exp 2009</b>	52%	13%	35%	
<b>Total 2008</b>	<b>\$7,761,702.03</b>	<b>\$3,631,272.85</b>	<b>\$6,562,070.53</b>	<b>\$17,955,045.41</b>
<b>% of tot exp 2008</b>	<b>43.0%</b>	<b>20.0%</b>	<b>37.0%</b>	

**Table 3. CUMULATIVE Expenditures by Category through 2009 – EDRP I**

	<i>Oyster Recovery</i>	<i>Shrimp and Shellfish Recovery</i>	<i>Cooperative Research</i>	<i>Total</i>
<i>Total</i>	<b>37,041,372.33</b>	<b>14,874,613.93</b>	<b>23,694,051.07</b>	<b>75,610,037.33</b>
<i>% of tot exp to date</i>	<b>49%</b>	<b>20%</b>	<b>31%</b>	

overall milestone in the gulf-wide oyster recovery effort as the majority of all oyster recovery effort was scheduled to occur in Louisiana waters. Even though additional work in the private lease sectors throughout the Gulf are expected to continue over the next year, the magnitude will be small by comparison to work performed. heretofore.

Overall expenditures in the oyster recovery effort were \$37 million through December 2009. This was \$1 million short of the congressional requirement that \$38 million be dedicated to the gulf-wide oyster recovery. Early indications are, however, that for the calendar year 2010, this condition will be met during the first quarter. Through December 2009, nearly 77% of the work programmed in the overall oyster budget had been accomplished and 97% of the Congressional requirement had been met.

**Habitat Restoration**

- Under the Habitat program, in excess of 11,000 derelict and abandoned crab traps were removed from nearshore waters by crabbers and shrimpers through a bounty and recycle project. Here, licensed commercial fishermen were paid a bounty for recovery of abandoned traps and all traps that were recovered were recycled. Additionally, commercial crabbers who participated in the program were provided with up to 50 “environmentally current” replacement traps; each containing turtle excluder devices and escape rings for release of diamond back terrapins and trapped finfish.
- Also under the Habitat program, approximately 400 square miles of nearshore Louisiana waters were surveyed and cleaned of residual storm debris which impairs fishing efforts and navigation.

Habitat expenditures in 2009 amounted to nearly \$3.5 million which was approximately 13% of the combined expenditures for the year for all three sub-award components. Cumulative spending to date

under the Habitat component amounted to nearly \$14.8 million or about 20% total EDRP I expenditures. However, total spending to date for this component alone amounts to only 48% of the budgeted amount.

Even though the Habitat component’s combined budget has been amended downward over the past two years, work under this sub-award is expected to reflect continued efforts during the next year. Anticipated projects include shoreline stabilization in several states (*Alabama, Louisiana and Texas*), further debris removal from inshore waters in and around Louisiana’s fishing grounds that are outside the scope of work currently being performed through FEMA’s program, planned replacement of hydrological and other monitoring equipment in Mississippi and Alabama; continued identification and treatment of Aquatic Invasive species in coastal waters (*Mississippi*); and varying degrees of additional oyster restoration scheduled in most of the Gulf States under the Habitat component.

**Cooperative Research**

- An estimated 615 pyramid type and goliath reef ball structures were installed in offshore waters south of the Mississippi barrier islands along with numerous associated rubble structures and steel hull vessels. The latest vessel to be incorporated into Mississippi’s offshore reefs was the 176 foot “Wicomico” which was sunk in November 2009. The Wicomico project was a joint effort involving Omega Protein, which donated the vessel and partnered with MDMR for cleaning, and the Mississippi Offshore Fishing Banks, Inc. group. Reports indicate that through December 2009, approximately 65% of Mississippi’s planned reef work under this component has been completed; and, that additional structure/components are scheduled for deployment during the spring and summer of 2010.
- Also in Mississippi, a total of 29 inshore/nearshore low-profile artificial fishing

reefs, covering nearly 290 acres of water bottom, were installed in strategic locations to promote nearshore opportunities for small boats and shore fishermen. The end of the year report for Mississippi, under the Cooperative Research component, indicated that this element has been completed.

- While replacement of damaged reef structures was paramount in the preceding activities, it was also the intention of the State through this program to determine the ability of varying reef material components to withstand the forces of tidal surges and decomposition over time; and to assess the ability of various materials to attract and hold fish species in Mississippi Gulf waters that would otherwise not be found because of an absence of natural reefs in State waters.
- Nearly 50,000 CPUE and stock recovery monitoring reports were received from area commercial and recreational (charter boat and guide boat) vessel operators or owners through the end of 2009 – primarily in Mississippi and Alabama. Mississippi has completed its analysis of both shrimp and crab data, and Alabama continues to validate and scan its trip data preparatory to review and analysis. Additional work is expected in Alabama during 2010 since a significant portion of its oyster industry is just beginning to get back into production following two years of post disaster drought and an infestation of oyster drills.
- Concurrently, Louisiana began an in depth analysis of disaster related economic impacts to its coastal fishermen, wholesalers, processors and related fisheries industries and businesses. This work began in late 2009 and is expected to be completed during the first half of 2010.
- Work continued on both an Oyster Larvae Dispersal study in Pensacola Bay by the Florida Department of Wildlife and Fisheries Research Institute and, on a Finfish Larvae Impact Study in Alabama utilizing both the Dauphin Island Sea Lab as well as area universities.
- With the latter, sampling includes both the collection of zooplankton as well as spatial and temporal water characteristics at stations located from within Mobile Bay to as far as 35 miles offshore. Preliminary review of collected data is ongoing as are attempts to discern the relationships between biological and physiological environments and the effect of these conditions on larval and egg abundances. In order to develop the most accurate data sets temporally, DISL expects to continue its sampling program through the full extent of the

grant cycle and to possibly request a no cost one year grant extension.

Cooperative Research expenditures in 2009 amounted to nearly \$9.1 million which was approximately 35% of the annual combined expenditures. Cumulative spending to date under the Cooperative Research component amounted to nearly \$23.7 million or about 31% of all EDRP I expenditures.

Although spending through 2009 under this component is only 49% of the (*amended*) budgeted amount, it should be noted that this includes an 81% budget increase in 2009 as a result of realignments of Habitat funds in both Louisiana and Alabama to meet Cooperative Research needs. Overall Cooperative Research spending is expected to see a significant increase in early 2010 as Louisiana finalizes its industry Economic Impact analysis and as other state projects begin to near completion.

#### **EXPECTATIONS OVER THE UPCOMING YEAR –EDRP I**

Recovery efforts in 2010 are expected to be much like those of 2009. Although Louisiana, the most active oyster restoration state, is expected to experience a slow-down in its oyster work, other states are just now beginning to implement theirs.

Habitat efforts, even though reduced, will experience a continuation of ongoing projects involving identification and treatment of aquatic invasive species, installation of hydrologic monitoring equipment, and implementation of data management systems to safeguard mapping information and other data gathered over the course of the recovery program. Additionally, the habitat program is expected to see increased reimbursements in 2010 as additional oyster habitat work is completed in Texas, Alabama and Florida; and, as Alabama continues with the installation of its storm surge attenuators and marsh restoration plans. Concurrently, Louisiana anticipates continued hurricane related debris removal in those inshore fishing grounds that are outside of FEMA's current mission assignments, and continued shoreline stabilization projects in those areas damaged by the storms of 2005 and further exacerbated in 2008.

Cooperative Research efforts are expected to increase as the disaster related economic impact study in the Louisiana industry is finalized; and as further installation of offshore artificial reefs, along with assessment of those previously installed in Mississippi, is accomplished.

**ECONOMIC ASSISTANCE PROGRESS AND SPENDING – EDRP II**

The second Congressional supplemental appropriation to the Gulf States for fisheries assistance following Hurricanes Katrina, Rita and Wilma in 2005 was approved in September 2007 in the amount of \$84,915,000. It was directed toward providing financial assistance to the Gulf States fishing industry in an effort to restore and further stabilize it during the recovery period.

Under this program, economic assistance is made available to shrimpers who were compliant with by-catch reduction regulations including use of turtle excluder devices; to fishery related businesses and industries that received damages or losses beyond that which was covered by insurance or other forms of assistance; to individual fishermen who were impacted through the loss of markets, equipment and infrastructure services; and, for seafood testing and promotion of Gulf-caught seafood products. Although there were no amendments or budget realignments during the first two years of the grant period, the level and type of assistance continues to be at the discretion of each state and may be in the form of direct financial assistance where applicants

meet state-defined criteria; or, in the form of infrastructure or resource improvements designed to improve access to fishing grounds, to improve habitat, or to make other improvements that will provide long-term benefit to the industry.

Most of the reimbursements to-date continue to reflect the efforts of Alabama, Mississippi and Louisiana where most of the economic losses were found and where most of the funds were programmed. As indicated in **Table 4**, the majority of planned spending is for assistance to fishermen and assistance to business and industry. The combined budget for these two categories amounts to nearly 90% of the total award to the Gulf States. The balance is programmed for additional assistance to TED/BRD compliant fishermen and for seafood marketing and testing.

As indicated in **Table 5**, by the end of 2009, over \$59 million (nearly 70% of the total budget) had been reimbursed throughout the Gulf States; with almost 65% of these being distributed under the **Economic Assistance to Fishermen** category; and another 30% having been distributed to assist impacted businesses and industries. However, as indicated in the notes in

**Table 4.** Planned Utilization of Funding December 1, 2007 through November 30, 2012.

<i>State</i>	<i>Economic Assistance for Fishermen</i>	<i>Assistance for Commercial Businesses &amp; Industry</i>	<i>Additional Assistance for TED/BRD Compliance</i>	<i>Domestic Product Marketing and Seafood Testing</i>	<i>State Totals</i>
<i>Louisiana<sup>1</sup></i>	39,153,631.00		825,460.00	1,293,909.00	<b>41,273,000.00</b>
<i>Texas</i>	1,173,000.00		27,000.00		<b>1,200,000.00</b>
<i>Florida</i>	460,000.00	1,500,000.00	40,000.00		<b>2,000,000.00</b>
<i>Mississippi<sup>2</sup></i>	6,300,000.00	14,000,000.00	750,000.00	3,950,000.00	<b>25,000,000.00</b>
<i>Alabama<sup>3</sup></i>	3,900,000.00	10,800,000.00	300,000.00		<b>15,000,000.00</b>
<b>Total</b>	<b>49,813,631.00</b>	<b>26,300,000.00</b>	<b>1,942,460.00</b>	<b>5,243,909.00</b>	<b>84,473,000.00</b>
<b>Percentage</b>	<b>59%</b>	<b>31.13%</b>	<b>2.3%</b>	<b>6.2%</b>	

Source: Final Sub-award agreements for each of the five Gulf States as approved by NOAA and on file in the GSMFC Administrator’s office.

<sup>1</sup>Louisiana’s **Economic Assistance for Fishermen** program includes 2% (\$825,460.00) to qualified participants for TED/BRD compliance and provides assistance to both fishermen and fisheries related business and industry;

<sup>2</sup>Mississippi’s **Domestic Product Marketing** program includes \$3,400,000 for Testing and \$550,000 for domestic product marketing;

<sup>3</sup>Alabama’s **Economic Assistance for Fishermen** program is an indirect assistance program to provide continued incentives to impacted fishermen. basic research and remote monitoring of fishery activities.

**Table 5.** CUMULATIVE Expenditures by Category through 2009 – EDRP II

<i>State</i>	<i>Economic Assistance for Fishermen</i>	<i>Assistance for Commercial Businesses &amp; Industry</i>	<i>Additional Assistance for TED/BRD Compliance</i>	<i>Domestic Product Marketing and Seafood Testing</i>	<i>State Totals</i>
<i>Louisiana</i>	32,512,408.33		601,092.00	59,253.86	<b>33,172,754.19</b>
<i>Texas</i>					
<i>Florida</i>	48,381.90	639,274.05	40,000.00		<b>727,655.95</b>
<i>Mississippi</i>	4,850,218.53	7,441,041.15	589,090.11	1,039,705.70	<b>13,920,055.49</b>
<i>Alabama</i>	1,143,610.10	9,792,935.14	300,000.00		<b>11,236,545.24</b>
<b>Total</b>	<b>38,554,618.86</b>	<b>17,873,250.34</b>	<b>1,530,182.11</b>	<b>1,098,959.56</b>	<b>59,057,010.87</b>
<i>% of overall spending</i>	65.3%	30.3%	2.6%	1.9%	
<i>% of budgeted</i>	<b>74%</b>	<b>68%</b>	<b>79%</b>	<b>21.2%</b>	<b>69.9%</b>

*Source: Final Sub-award agreements for each of the five Gulf States as approved by NOAA and on file in the GSMFC Administrator’s office.*

**Table 4**, a large portion of the Assistance to Commercial Fishermen (ACF) is attributed to the sub-award for Louisiana wherein both Assistance to Fishermen and Assistance to Business and Industry (ASBI) are combined – resulting in skewed figures under the ACF category.

The majority of these expenditures were in the form of direct financial assistance to fishermen, businesses and seafood industries that were qualified by virtue of licensing, trip reports, loss records, landings, revenue and tax records, and other criteria as defined and validated by the respective states. In some instances, distribution was made in part for services rendered, such as in Mississippi, where oystermen received a portion of the State’s apportionment for additional oyster relays conducted early in 2008. In other instances, distribution is made in the form of waterfront access upgrades, as in Texas, where it was determined that the long term use of these improvements would be of greater benefit to the area fishermen than minor direct financial distributions. Still others utilized portions of their allocations to continue with CPUE trip reports – indirectly providing financial assistance. In Florida, other than direct distributions for TED/BRD compliance, no direct distributions were made. In lieu thereof, the State instituted additional

oyster cultch planting to enhance the State’s fishing grounds, and developed an electronic log-book reporting system for the “for-hire” fishing industry.

Overall spending in 2009, as reflected in **Table 6**, was slightly over \$19 million. This represents only about 48% of the spending in 2008. A reduced level of spending in 2009 was expected, however, as most states had planned to distribute the majority of the assistance funding as quickly as possible (within the first year in most states) in order to provide relief to its fishermen and businesses as soon as possible. A review of the categorical spending as percent of that which was budgeted, **Table 5**, indicates that the States were successful in that 74% of the ACF budget, 68% of the ASBI budget, and 79% of the TED/BRD budgets had been utilized within the first two years of the five year grant timeline.

**EXPECTATIONS OVER THE UPCOMING YEAR –EDRP II**

Planned expenditures, reimbursements, and related work efforts in 2010 are expected to steadily decrease as each of the States completes its scheduled distributions or work. With nearly 70% of the overall program already complete, there remains only about 30% in other components to be completed over the next three years. Of these, nearly 6.2% are in the

**Table 6.** Expenditures by Category in 2009 – EDRP II (**na** indicates that there is no subaward for the category in this funding opportunity).

<i>State</i>	<i>Economic Assistance for Fishermen</i>	<i>Assistance for Commercial Businesses &amp; Industry</i>	<i>Additional Assistance for TED/BRD Compliance</i>	<i>Domestic Product Marketing and Seafood Testing</i>	<i>State Totals</i>
<i>Louisiana</i>	6,537,474.98	<b>na</b>	601,092.00	59,253.86	<b>7,197,820.84</b>
<i>Texas</i>	<b>na</b>	0.00	0.00	<b>na</b>	<b>0.00</b>
<i>Florida</i>	46,502.09	160,022.55	40,000.00	<b>na</b>	<b>246,524.64</b>
<i>Mississippi</i>	1,151,028.50	6,121,143.51	35,824.05	391,931.00	<b>7,699,927.06</b>
<i>Alabama</i>	892,024.26	3,089,533.18	<b>Completed in 2008</b>	<b>na</b>	<b>3,981,557.44</b>
<b>Total</b>	<b>8,627,029.83</b>	<b>9,370,699.24</b>	<b>676,916.05</b>	<b>451,184.86</b>	<b>19,125,829.98</b>

Source: Final Sub-award agreements for each of the five Gulf States as approved by NOAA and on file in the GSMFC Administrator's office.

marketing and testing components and are scheduled for the duration of the grant.

Under these circumstances, it is expected that the remaining distributions will be finalized by the end of 2010, and that only minimal, if any, amendments or realignments will be seen. Additionally, because most of the economic financial assistance activities

were programmed to be completed within the first two years and, because only minor infrastructure, cooperative research, or resource related activities involving use of the Assistance funds were scheduled, expectations that all funds will be fully utilized by the end of the grant period are very reasonable.



# **S**PORT FISH RESTORATION ADMINISTRATION PROGRAM

*James R. Ballard, Program Coordinator*

The Gulf States Marine Fisheries Commission (GSMFC) provided administrative support for the "Sport Fish Restoration Administrative Program," FWS Grant Agreement No. GS-96-Segment 12. The GSMFC furnished services, qualified personnel, materials, equipment, and facilities as needed, to perform required duties.

During the period covered by this report, the Program Coordinator attended meetings and participated in planning and development activities pertinent to carrying out responsibilities of this Grant Agreement. The GSMFC arranged and paid expenses for appropriate personnel to attend and participate in selected activities. Minutes, general correspondence, meeting notices, agendas, and other required materials were prepared and distributed to the appropriate persons. Persons authorized to travel have been reimbursed. A brief report on program progress follows:

## **Artificial Reef Activities**

### General Coordination

The Program Coordinator continues to provide general coordination for the TCC Artificial Reef Subcommittee and to facilitate work between the TCC Artificial Reef Subcommittee and the Atlantic States Marine Fisheries Commission (ASMFC) Artificial Reef Subcommittee. This coordination provides the opportunity to address issues of national scope and importance, such as drafting the National Artificial Reef Plan and developing a partnership with the Department of the Navy and the Maritime Administration for the distribution of decommissioned ships for artificial reef development.

### Proposed Federal Ship Reefing Program

The Program Coordinator, with help from the Subcommittee, drafted a letter proposing and outlining a program where the federal government would:

- Maintain responsibility for cleaning and preparing all donated ships to EPA-specifications as outlined in "National Guidance: Best Management Practices for Preparing Vessels Intended to Create Artificial Reefs".
- Maintain responsibility for ship towing, and ensure that they are sunk in a safe manner on permitted reef sites as delineated in appropriate permits.
- Maintain title to, and liability for, donated ships until such time as they are satisfactorily sunk on permitted artificial reef sites.

- Ensure that ships are provided to all interested states in as equitable a manner as possible.

These letters were sent to the Secretary of Transportation (for MARAD) and the Secretary of the Navy in March. No response was received from the Secretary of Transportation even after multiple letters were sent. A response was received from the Rear Admiral of the Navy. In the response he stated that the Navy encourages a strong reefing program, however, they have neither the funding nor legislative authority to carry out such a project.

### Artificial Reef Website and Bibliography Database Activities

The Program Coordinator drafted new content for the artificial reef website that is housed on the GSMFC's website. He also added over three hundred new artificial reef journal articles to the "Reef Compiled Data" bibliography database that is accessible from the GSMFC website.

### Geographic Information System Activities

The GSMFC continued to train a GSMFC staff member to run the Geographic Information System (GIS) and to use ARC/IMS, which is an online mapping program that will allow for the creation of maps using GSMFC data over the Internet. The application of GIS will prove beneficial for all of the projects supported by the Sport Fish Restoration Program.

## **Fisheries Habitat Activities**

The Program Coordinator supports and participates in the meetings of the TCC Habitat Subcommittee. This Subcommittee has currently been working on the development of a GSMFC Best Management Practices for inshore artificial reefs with help from the Artificial Reef Subcommittee. The final draft of this document was passed to the TCC for review at their fall meeting.

The Program Coordinator attended the annual Morone meeting to discuss current striped bass activities. This is one way the Coordinator keeps up with any anadromous fish issues that may have to be addressed by the TCC's Anadromous Fish Subcommittee.

## **Invasive Species Activities**

The Program Coordinator continues to work in conjunction with the National Aquatic Nuisance Species Task Force (ANSTF) to determine appropriate actions and roles for the GSMFC and its member states

in addressing invasive species issues. In addition, the GSMFC provides administration for and participates in the Gulf and South Atlantic Regional Panel on Aquatic Invasive Species (GSARP). During this reporting period the Program Coordinator arranged meetings of the GSARP, its associated work groups, and its steering committee.

The GSMFC continues to host the invasive species website for the Regional Panel. The website address is <http://nis.gsmfc.org>. It can also be accessed by going to [www.gsmfc.org](http://www.gsmfc.org) and clicking on “Aquatic Invasive Species Program” in the description of the Sport Fish Restoration Administration Program. The Program Coordinator, with help from the GSMFC’s System Administrator, has developed a new GSARP website. This new website was presented to the GSARP at their fall meeting. After incorporation of some minor changes, this new website will replace the current one

early in 2010. In 2010, the Program Coordinator will continue to work with the GSARP’s Information Management Work Group to update the content of the new website.

During this reporting period, the Program Coordinator also drafted the 2010-2014 Strategic Plan for the GSARP. The Panel is currently conducting the final review of this plan and will vote to accept it at their 2010 spring meeting.

The Program Coordinator continues to work on several aquatic invasive species issues; including the development of a list of research priorities, monitoring the spread of new non-native species in the region and trying to secure outside funding for aquatic invasive species demonstration projects.

#### Associated Meetings

- February 2, 2009  
Annual Morone Workshop
- March 16, 2009  
TCC Habitat Subcommittee Meeting
- March 16-19, 2009  
Gulf States Marine Fisheries Commission Annual Meeting
- March 3- April 2, 2009  
Gulf and South Atlantic Regional Panel on Aquatic Invasive Species Meeting
- September 14-16, 2009  
Association of Fish and Wildlife Agencies Annual Meeting
- September 28 – October 1, 2009  
NOAA State Directors Biennial Conference
- October 10-15, 2009  
Gulf States Marine Fisheries Commission Annual Fall Meeting
- October 27-28, 2009  
Joint GSMFC and ASMFC Artificial Reef Subcommittee Meeting
- November 3-5, 2009  
National Aquatic Nuisance Species Task Force Meeting
- November 10-11, 2009  
Gulf and South Atlantic Regional Panel on Aquatic Invasive Species Meeting

# **A**DMINISTRATION OF THE GULF AND SOUTH ATLANTIC REGIONAL PANEL ON AQUATIC INVASIVE SPECIES *James R. Ballard, Program Coordinator*

The Gulf States Marine Fisheries Commission (GSMFC) provided administrative support for "Administration of the Gulf and South Atlantic Regional Panel on Aquatic Invasive Species," FWS Grant Agreement No. 98210-5-G189. The GSMFC furnished services, qualified personnel, materials, equipment, and facilities, as needed, to perform required duties.

During the period covered by this report, the Gulf and South Atlantic Regional Panel on Aquatic Invasive Species (GSARP) Coordinator attended meetings and participated in planning and development activities pertinent to carrying out responsibilities of this Grant Agreement. The GSMFC arranged and paid expenses for appropriate personnel to attend and participate in selected activities. Minutes, general correspondence, meeting notices, agendas, and other required materials were prepared and distributed to the appropriate persons. Persons authorized to travel have been reimbursed. A brief report on program progress follows:

## **Administrative Support for the GSARP**

The GSMFC provided staff to maintain an active slate of membership on the GSARP. The staff facilitated communication among Panel members, planned and coordinated meetings of the GSARP, maintained an administrative record of GSARP meetings, provided staff support for development of documents, and was responsible for all fiscal management and tracking of funds supporting GSARP activities.

## **Liaison between GSARP and the National Aquatic Nuisance Species Task Force**

The Program Coordinator attended the National Aquatic Nuisance Species Task Force (ANSTF) meetings held during this reporting period. At these meetings the Program Coordinator provided an update of GSARP activities to the ANSTF. In addition, the Program Coordinator provided phone, e-mail, and other coordination between the GSARP and the ANSTF.

## **Logistical and Administrative Support for the GSARP Committees and Work Groups**

The GSARP has several work groups directed toward providing advice and guidance on selected subject matter. These groups required meetings and/or telephone conference calls from time to time, and the

GSMFC provided staff to assist these work groups in carrying out their respective charges. Planning and logistics for meetings and maintenance of administrative records of such meetings are the responsibility of the staff.

The Program Coordinator, with a lot of help from the GSMFC's System Administrator, developed a new GSARP website that was presented to the Panel at their fall 2009 meeting. At the time of this report this website was under final review by the Panel and will replace the old site in the spring of 2010. The Program Coordinator will continue to work with the Panel's Information Management Work Group to update the new website's content to make sure it stays as current as possible.

The GSARP formed an ad hoc work group to rework the current rough draft Rapid Response Plan into a universal final plan, which can be used as a guide in any of the member states to address a variety of emerging AIS issues. This group is looking at the possibility of working the Incident Command System into the revised plan and should have a draft ready for review by the full Panel early in 2010.

## **GSARP 2010-2014 Strategic Plan**

The Program Coordinator drafted the 2010-2014 Strategic Plan for the GSARP in the spring of 2009. There was a thorough review of this draft plan at the Panel's fall 2009 meeting and the Coordinator has finished making all suggested changes. The final draft of this plan is being reviewed by the Panel and should be accepted and enacted at the Panel's spring 2010 meeting.

## **Education/Outreach Work of the GSARP**

The program funded a project that was headed up by Mississippi Department of Wildlife, Fisheries and Parks to develop "Help Stop Aquatic Hitchhikers" brochures. These brochures highlight some of the most problematic aquatic invasive species in the GSARP states and outline ways in which environmental user groups (boaters, anglers, hunters, etc.) can help stop the spread of them. At the GSARP's spring 2009 meeting, approximately 84,000 "Stop Aquatic Hitchhikers" Brochures were distributed to the eight member states. The states reported on how these brochures were received by the public at the Panel's fall 2009 meeting and,

overall, the responses were very favorable. There have been requests for more brochures.

#### **Aquatic Invasive Species Research**

The Program funded a research project carried out by Florida Department of Agriculture and Consumer Services and assisted by other state agencies, federal agencies, universities and stakeholders. This program assessed the human health risk associated with channeled apple snails, *Pomacea insularum* in the GSARP region. This study looked at the prevalence of the rat lung worm parasite in populations of channeled apple snails from four states using DNA analysis. The principle investigator fulfilled the obligations of the subcontract in 2008; however, he expanded the survey in the spring of 2009 to include testing on two additional distinct and separate populations of *P. insularum* in Louisiana utilizing a separate funding source. One population was located in Schriever (to the west of New Orleans) and another in Mandeville (north of Lake Pontchartrain). The parasite was detected in the Mandeville population of *P. insularum*, but not the Schriever population.

#### **GSARP Member States ANS Management Plans**

- Georgia, Louisiana and South Carolina have completed plans and are actively implementing them.
- Alabama and Mississippi have finished plans that are up for approval by the Task Force during their spring 2010 meeting.
- Florida has a completed plan but it has not been approved by the ANSTF.
- Texas will soon submit the final drafts of their plan to the ANSTF for review.
- North Carolina is in the preliminary stages of formulating their plan.

#### **Other Invasive Species Activities**

The Program Coordinator continues to work on several aquatic invasive species issues; including the development of a list of research priorities, monitoring the spread of new non-native species in the region, and trying to secure outside funding for aquatic invasive species demonstration projects.

#### **Associated Meetings**

- January 21-23, 2009  
Early Detection of Dreissena Mussels in the West Workshop
- March 31-April 2, 2009  
Gulf and South Atlantic Regional Panel on Aquatic Invasive Species Meeting
- May 18-21, 2009  
National Aquatic Nuisance Species Task Force Meeting
- August 26, 2009  
Interagency Giant Salvinia Control Team Meeting
- September 14-16, 2009  
Association of Fish and Wildlife Agencies Annual Meeting
- November 3-5, 2009  
National Aquatic Nuisance Species Task Force Meeting
- November 10-11, 2009  
Gulf and South Atlantic Regional Panel on Aquatic Invasive Species Meeting

# **S**OUTHEAST MONITORING AND ASSESSMENT PROGRAM (SEAMAP) *Jeffrey K. Rester, Program Coordinator*

In 2009, SEAMAP operations continued for the twenty-eighth consecutive year. Last year, total program allocations for all three SEAMAP components, Gulf, South Atlantic and Caribbean, were approximately \$5.09 million.

The 2003 and 2004 SEAMAP Environmental and Biological Atlas of the Gulf of Mexico were both published in 2009. These Atlases provide a summary of all SEAMAP data collected during 2003 and 2004. Both Atlases are available on the Commission's web site for anyone interested in downloading a copy.

## **Winter Shrimp/Groundfish Survey**

A new Winter Shrimp/Groundfish Survey took place from January 21 to February 24. One hundred fifteen stations were sampled by Louisiana (January 26-29, 2009), Alabama (January 21, 2009), and Texas (February 3-24, 2009) during the survey that used protocols similar to the other shrimp/groundfish surveys. A new Spring Shrimp/Groundfish Survey, collecting data at 31 stations, also took place from March 15 to March 17.

## **Winter Plankton Survey**

The SEAMAP Winter Plankton Survey took place from February 4 to March 16, 2009. NMFS collected ichthyoplankton samples at 137 SEAMAP stations. The objectives of the survey were to assess the occurrence, abundance and geographical distribution of the early life stages of winter spawning fishes from mid continental shelf to deep Gulf waters; measure the vertical distribution of fish larvae by sampling at discrete depths in the water column using a 1-meter Multiple Opening and Closing Net Environmental Sensing System (MOCNESS); and sample the size fraction of fishes that are underrepresented in bongo and neuston samples using a juvenile (Methot) fish trawl.

## **Spring Plankton Survey**

The SEAMAP Spring Plankton Survey took place from March 29 to June 1, 2009. NMFS collected ichthyoplankton samples at 79 SEAMAP stations. This was the twenty-eighth year for the survey. The objectives of the survey were to collect ichthyoplankton samples for estimates of the abundance and distribution of Atlantic bluefin tuna larvae and to collect environmental data at all ichthyoplankton stations.

## **Inshore Longlining Survey**

The Inshore Longline Survey complements an existing long-term fisheries independent survey currently being conducted by NMFS, by targeting shark species within the shallow waters of the north central Gulf of Mexico. The objectives of the survey are to collect information on coastal shark abundances and distribution with a 1-mile longline and also to collect environmental data. Mississippi sampled ninety-two eight stations from March to October 2009.

## **Reef fish Survey**

The primary purpose of Reef fish Survey was to assess relative abundance and compute population estimates of reef fish found on natural reef fish habitat in the Gulf of Mexico. Video stereo cameras were used during the survey since they enabled the measurement of length frequencies. Each stereo camera contained paired black-and-white Video stereo still cameras along with a color mpeg camera in a cylindrical pressure housing. Four of these were mounted in a camera array and were positioned orthogonally with the center of the camera mounted 51 cm above the bottom of the array. A chevron fish trap, that measured 1.83 x 1.83 x 0.75 meters with 3.81-cm mesh, was used to capture fish for ageing and other life history studies. Both the fish trap and camera array were baited with squid. The camera array was allowed to soak on the bottom for 30 minutes, and the fish trap soaked for one hour. The totals for the SEAMAP Reef fish Survey in 2009 were 453 camera stations and 74 fish trap stations.

## **Summer Shrimp/Groundfish Survey**

The Summer Shrimp/Groundfish Survey was conducted from June 1 to July 18, 2009. Florida (142 stations), Alabama (10 stations), Mississippi (36 stations), Louisiana (29 stations), Texas (80), and NMFS (344) sampled 641 trawl stations during the survey. This was the twenty-eighth year for the survey. In addition, NMFS, Mississippi, and Louisiana vessels collected ichthyoplankton data.

## **Fall Plankton Survey**

The Fall Plankton Survey took place from August 25 through September 30, 2009. NMFS sampled 128 stations, Mississippi sampled 5 stations, and Louisiana sampled 7 stations. The objective of this survey was to collect ichthyoplankton samples with bongo and neuston gear for the purpose of estimating

abundance and defining the distribution of eggs, larvae, and small juveniles of Gulf of Mexico fishes, particularly king and Spanish mackerel, lutjanids and sciaenids.

**Fall Shrimp/Groundfish Survey**

The Fall Shrimp/Groundfish Survey was conducted from September 22 to November 20, 2009, from off Tampa, Florida to the U.S.-Mexican border. Vessels sampled waters out to 60 fm with trawls and plankton nets in addition to environmental sampling. The objectives of the survey were to sample the northern Gulf of Mexico to determine abundance and distribution of demersal organisms from inshore waters to 60 fm; obtain length-frequency measurements for major finfish and shrimp species to determine population size structures; collect environmental data to investigate potential relationships between abundance and distribution of organisms and environmental parameters; and collect ichthyoplankton samples to determine relative abundance and distribution of eggs and larvae of commercially and recreationally important fish species.

# **J**OINT GSMFC/GMFMC HABITAT PROGRAM

*Jeffery K. Rester, Program Coordinator*

The Commission's MARFIN funded bottom mapping project was finished in March 2009. The project developed a user friendly, interactive system that identifies, describes, and displays resources characterizing the seabed habitat of the Gulf of Mexico. The database was created from the recovery, interpretation, and integration of existing data for this region. The data from this project can be used for a multitude of purposes such as designating essential fish habitat, helping designate marine protected areas, ecosystem modeling, habitat suitability index modeling, ocean observation and monitoring, coastal zone management and planning, seabed engineering planning and design, and ocean disposal site placement and monitoring. The database contains approximately 275,000 seabed observations characterizing the seabed in two different datasets.

The Commission's portion of the NOAA funded aquaculture project was completed in July. The purpose of the report was to select the most suitable sites for offshore cage aquaculture in the U.S. Gulf of Mexico based on the use of GIS to support decision making. With its broad continental shelf, numerous ports, and existing infrastructure of oil and gas platforms, the U.S. Gulf of Mexico presents a unique opportunity for the development of offshore aquaculture. The report examined site selection for offshore fish cage or net aquaculture facilities. Therefore, the site selection criteria were specific for cage culture of fish.

Water depth, water quality, currents, and sediment type were the primary considerations for siting aquaculture facilities. Other possible considerations for aquaculture site selection were that the facility should not conflict with traditional highly fished areas; the facility should not conflict with other uses (oil and gas exploration, marine transportation, dredge material disposal areas, military warning areas) of the continental shelf; the facility should not be located in areas that experience frequent hypoxia; the facility should not be located in areas that experience frequent harmful algal blooms or red tides; and the facility should not be located in an area containing coral, seagrass, or other environmentally sensitive features. Since aquaculture facilities will have some type of physical footprint, facilities should avoid user conflict as much as possible. One of the many uses of the Gulf of Mexico is commercial and recreational fishing. One way to reduce user conflict

with the fishing industries is, to the extent practicable, site aquaculture facilities outside of traditional highly fished areas. Aquaculture facilities should not be sited around artificial reefs, in artificial reef zones, or in highly trawled or fished areas. For safety and so as to not interfere with the marine transportation industry, aquaculture facilities should not be sited in shipping fairways and anchorages. Approximately 4,000 oil and gas platforms exist in the Gulf of Mexico. Thousands of miles of oil and gas pipeline are buried throughout the Gulf of Mexico. When determining a site location, aquaculture companies and regulators should consider current and future oil and gas activities. Several interim and final unconfined dredge material disposal areas exist offshore of the major shipping channels throughout the Gulf of Mexico. Aquaculture companies and regulators should be aware of the potential problems unconfined dredge material disposal could have on facility operations. Aquaculture companies and regulators should also be aware that boat operations and aircraft use could be affected if facilities are sited in military warning areas. As a result of this site selection process, approximately 75,000 square kilometers were deemed suitable for offshore cage aquaculture.

The Habitat Subcommittee and Artificial Reef Subcommittee developed a guidelines document for inshore artificial reefs. Inshore artificial reefs were defined as reefs located in estuarine systems of variable salinity extending from the mouth of inlets to the upper estuary in bays and lagoons. At the October Commission meeting, the Habitat Subcommittee approved the guidelines document and sent it to the Technical Coordinating Committee for their approval.

A meeting of the Council's Louisiana/Mississippi Habitat Protection Advisory Panel (AP) was held in late October. The AP met and discussed the Mississippi Coastal Improvements Program, deepwater coral in the Gulf of Mexico, Individual Environmental Report 11 for hurricane protection around New Orleans, potential estuarine and marine impacts from the proposed Richton salt dome Strategic Petroleum Reserve, open water disposal of dredge material in Mississippi Sound, and Louisiana Coastal Protection and Restoration Plan Projects in Planning Unit 1 around New Orleans.

A meeting of the Council's Texas Habitat Protection Advisory Panel was held in early November. The AP met and discussed a hurricane protection structure for Galveston Bay (the Ike Dike), an update on oyster restoration in Galveston Bay, the conversion of the Texas Clipper into an artificial reef, the Flower Garden Banks National Marine Sanctuary Management Plan, the South Padre Island Second Access Project, and juvenile red snapper habitat use.



# **I**NTERJURISDICTIONAL FISHERIES (IJF) MANAGEMENT PROGRAM

*Steven J. VanderKooy, Program Coordinator*

The IJF program continued to provide the Gulf States with quality information and recommendations for interstate management of fisheries through the development and revision of its Fishery Management Plans. The IJF staff reviewed previously developed FMPs and monitored each state's progress in implementing management recommendations. The State-Federal Fisheries Management Committee (S-FFMC) reviewed these findings at the GSMFC's 60th Annual Meeting.

During 2009, the IJF Program Coordinator was Mr. Steven J. VanderKooy and the IJF Staff Assistant was Mrs. Teri L. Freitas. The IJF staff arranged and provided support for meetings, work groups, and committees. Program staff continued to accumulate data, research papers, and other materials critical to the further development of the FMPs in progress. A contractor continued to computerize the IJF literature repository into an electronic data base. Revisions, updates, and other pertinent information were distributed to technical task forces (TTFs), state personnel, and agency directors as needed, or requested regarding FMP development.

The Oyster TTF did not meet until September of 2009, due to continuing IJF funding issues. In lieu of travel and unfunded meeting costs, the TTF worked the first half of 2009 utilizing a web-based format and conference calls in combination with a webinar site. The webinars were used to review additional draft sections and talk about the potential stock assessment being developed with Dr. Richard Fulford from the Gulf Coast Research Lab. Even with the web-based activities, the draft did not make much progress. In September, the TTF met with Dr. Fulford, who presented an analysis of some Louisiana oyster data as a "proof-of-concept" that surplus production models used successfully in the Chesapeake could be applied to the Gulf.

The Arenarius TTF did not meet until August 2009; however, the Profile was moving along. The TTF also used the web-based seminar software, as well, throughout most of 2009. A setback to the Profile was that a large component of the commercial fishery is actually a two species complex of sand and silver seatrout, while the recreational fishery is dominated by sand seatrout. The TTF spent much of 2009 adding information on the biology and habitat requirements for silver seatrout which complicated

the Profile slightly. The TTF met again in November 2009 and worked on several sections including developing a short survey instrument for sampling the market channels and economic value of the two species included in the profile.

In accordance with The Gulf of Mexico Cooperative Law Enforcement Strategic Plan, the GSMFC Law Enforcement Committee (LEC) continued to work toward regional enforcement goals. The publication of the *Officer's Pocket Guide* for rules and regulations across the five Gulf States was met with overwhelming approval by the LEC. The first waterproof printing included 1,000 copies which were quickly distributed to every fisheries officer in the Gulf. Additional paper copies were generated for the inland officers in Texas. In addition, the long-standing 'red cover' Law Summary was produced in an electronic only format and is available on the GSMFC website for download. The LEC convened monthly conference calls to discuss regional management. In addition, the LEC continues to support the ongoing recovery efforts through enforcement and support to the EDRP program. JEAs continue to drive activities throughout the Gulf and the committee holds monthly conference calls to keep communications open and to share information.

The Crab Subcommittee continues to look at ways to incorporate the lipofuscin ageing technique into their state sampling programs. Florida has acquired the equipment independently, and there are discussions about attempting a pilot study with the other states using known-aged crabs. The Subcommittee is continuing to provide landings data to Butch Pellegrin at NOAA, in their effort to produce a regional stock assessment. The ageing data generated by the lipofuscin may be used in this process if it produces acceptable results and additional outside funding can be obtained.

In July, the revision to *A Practical Handbook for Determining the Ages of Gulf of Mexico Fishes* was completed as the *Second Edition*. Both editions of the manual utilize standardized protocols and techniques to facilitate consistent, quality age determination of exploited Gulf of Mexico fishes. The *Second Edition* of the manual includes several additional species for which data are currently being collected under the Gulf's FIN Program.

The IJF Coordinator attended and presented the Second Edition at the 4th International Otolith Conference in Monterey, California in August. The manual was well received and 240 CD copies of the *Second Edition* were distributed. Hardcopies in three-ring binders have been generated and distributed to the contributing authors and each of the state marine agencies' age-and-growth laboratories. The manual is available as a download from the GSMFC website as well.

Program administration in 2009 included financial and logistic support for all IJF-related meetings; production, duplication, and distribution of all documentation and correspondence related to the program; and provision of accountability reporting to the funding agency. In addition, the GSMFC IJF Program staff continued to provide numerous copies of existing FMPs, profiles, amendments, revisions, and other information upon request.

Electronic copies of all new GSMFC publications were generated and have been added to the publications on the Commission website. Finally, the

IJF Staff Assistant continues to edit, publish, and distribute two regional management documents annually; *Licenses and Fees for Alabama, Florida, Louisiana, Mississippi, and Texas in their Marine Waters for the Year* and *A Summary of Marine Fishing Laws and Regulations for the Gulf States*. The IJF staff continues to house and enter programmatic reprints and support literature into the Commission's ProCite database. The IJF bibliographic collection represents all the citations used in the last several FMPs and includes additional technical papers on a number of miscellaneous topics related to fisheries management in the Gulf. The database is searchable from the GSMFC website and provides keywords and complete abstracts when available. All reprints are housed electronically at the GSMFC office and copies are available upon request. In addition, the GSMFC is also hosting the Gunter Library Reprint Collection of the Gulf Coast Research Lab which is also searchable through the webpage. The IJF staff is happy to provide electronic copies of any and all reprints housed in GSMFC, as requested.

# **F**ISHERIES INFORMATION NETWORK (FIN)

*David M. Donaldson, Program Manager*

The Fisheries Information Network (FIN) is a state-federal cooperative program to collect, manage, and disseminate statistical data and information on the marine commercial and recreational fisheries of the Southeast Region.<sup>1</sup> The FIN program consists of two components: Commercial Fisheries Information Network (ComFIN) and the Southeast Recreational Fisheries Information Network [RecFIN(SE)].

The need for a comprehensive and cooperative data collection program has never been greater because of the magnitude of the recreational fisheries and the differing roles and responsibilities of the agencies involved. Many southeastern stocks targeted by anglers are now depleted, due primarily to excessive harvest, habitat loss, and degradation. The information needs of today's management regimes require data, which are statistically sound, long-term in scope, timely, and comprehensive. A cooperative partnership between state and federal agencies is the most appropriate mechanism to accomplish these goals.

Efforts by state and federal agencies to develop a cooperative program for the collection and management of commercial and recreational fishery data in the Region began in the mid to late 1980s. In 1992, the National Marine Fisheries Service formally proposed a planning activity to establish the RecFIN(SE). Planning was conducted by a multi-agency Plan Development Team through October 1992 at which time the program partners approved a Memorandum of Understanding (MOU) that established clear intent to implement the RecFIN(SE). Upon signing the MOU, a RecFIN(SE) Committee was established.

In 1994, the NMFS initiated a formal process to develop a cooperative state-federal program to collect and manage commercial fishery statistics in the Region. Due to previous work and NMFS action, the Southeast Cooperative Statistics Committee (SCSC) developed an MOU and a draft framework plan for the ComFIN. During the development of the ComFIN MOU, the SCSC, in conjunction with the RecFIN(SE) Committee, decided to combine the MOU to incorporate the RecFIN(SE). The joint

MOU creates the FIN, which is composed of both the ComFIN and RecFIN(SE). The MOU confirmed the intent of the signatory agencies to participate in implementing the ComFIN and RecFIN(SE).

The scope of the FIN includes the Region's commercial and recreational fisheries for marine, estuarine, and anadromous species, including shellfish. Constituencies served by the program are state and federal agencies responsible for management of fisheries in the Region. Direct benefits will also accrue to federal fishery management councils, the interstate marine fisheries commissions, the National Park Service, the U.S. Fish and Wildlife Service, and the NOAA National Marine Sanctuaries Program. Benefits that accrue to management of fisheries will benefit not only commercial and recreational fishermen and the associated fishing industries, but the resources, the states, and the nation.

The mission of the FIN is to cooperatively collect, manage, and disseminate marine commercial, anadromous and recreational fishery data and information for the conservation and management of fishery resources in the Region and to support the development of a national program. The four goals of the FIN include planning, managing, and evaluating commercial and recreational fishery data collection activities; implementing a marine commercial and recreational fishery data collection program; establishing and maintaining a commercial and recreational fishery data management system; and supporting the establishment of a national program.

## **PROGRAM ORGANIZATION**

The organizational structure consists of the FIN Committee, two geographic subcommittees (Caribbean and Gulf), standing and ad hoc subcommittees, technical work groups, and administrative support.

The FIN Committee consists of the signatories to the MOU or their designees, and is responsible for planning, managing, and evaluating the program. Agencies represented by signatories to the MOU are the National Marine Fisheries Service, U.S. Fish and Wildlife Service, National Park Service, Alabama Department of Conservation and Natural Resources, Florida Department of Environmental Protection,

<sup>1</sup> The Southeast Region (the Region) includes Alabama, Florida, Georgia, Louisiana, Mississippi, North Carolina, Puerto Rico, South Carolina, Texas, and the U.S. Virgin Islands.

Louisiana Department of Wildlife and Fisheries, Mississippi Department of Marine Resources, Puerto Rico Department of Environmental and Natural Resources, Texas Parks and Wildlife Department, U.S. Virgin Islands Department of Planning and Natural Resources, Caribbean Fishery Management Council, Gulf of Mexico Fishery Management Council and Gulf States Marine Fisheries Commission.

As of October 1998, the Georgia Department of Natural Resources, South Carolina Department of Natural Resources, North Carolina Department of Environment, Health, and Natural Resources, South Atlantic Fishery Management Council and Atlantic States Marine Fisheries Commission no longer actively participated on the FIN Committee. Although there is no representation of the South Atlantic on FIN, staff members from both FIN and the Atlantic Coastal Cooperative Statistics Program (ACCSP) continue to coordinate, ensuring that there is compatibility and comparability between the two regions.

The FIN Committee is divided into two standing subcommittees representing the major geographical areas of the Region: Caribbean, Gulf, and South Atlantic. These subcommittees are responsible for making recommendations to the Committee on the needs of these areas. Standing and ad hoc subcommittees are established as needed by the FIN Committee to address administrative issues and technical work groups are established as needed by the Committee to carry out tasks on specific technical issues. Coordination and administrative support of the FIN is accomplished through the Gulf States Marine Fisheries Commission.

#### **PROGRAM ACTIVITIES**

The FIN is a comprehensive program comprised of coordinated data collection activities, an integrated data management and retrieval system, and procedures for information dissemination. Activities during 2008 were associated with addressing issues and problems regarding data collection and management and developing strategies for dealing with these topics. In addition to committee activities, FIN was involved in various operational activities concerning the collection and management of marine commercial and recreational fisheries data. These activities were conducted by the various state and federal agencies involved in FIN. Each type of activity is discussed below.

#### **COMMITTEE ACTIVITIES**

##### **FIN Committee**

The major FIN meeting was held in June 2009. The major issues discussed during these meetings included:

- Identification and continuation of tasks to be addressed in 2009 and instruction to Administrative and Geographic Subcommittees and the Commercial Technical, Data Collection Plan, Data Management, For-Hire, Outreach, Recreational Technical, Social/Economic and ad hoc work groups to either begin or continue work on these tasks;
- Development of the 2010 FIN Operations Plan which presented the year's activities in data collection, data management, and information dissemination;
- Discussion of data management issues;
- Review of activities and accomplishments of 2009;
- Continued evaluation of adequacy of current marine commercial and recreational fisheries programs for FIN and development of recommendations regarding these programs;
- Review findings of and receive recommendations from technical work groups for activities to be carried out during 2010;
- Preparation and submission of a proposal for financial assistance to support activities of the FIN; and
- Continued internal evaluation of the program.

##### **Subcommittees and Work Groups**

The FIN subcommittees and work groups met during the year to provide recommendations to the Committee to formulate administrative policies, address specific technical issues for accomplishing many of the FIN goals and objectives, and examine other issues as decided by the Committee. Their activities included:

- The Marine Recreational Fisheries Statistics Survey data review meetings were held in February, July and October 2009 to discuss the RDD and Intercept Surveys for the East coast and Gulf Region, sampler performance activities, discussion of angler registry information,

outreach materials and economic surveys, angler info brochures, review of wave report fish tables and estimate tables and review of Gulf States For-Hire Telephone Survey;

- The Gulf of Mexico Geographic Subcommittee met in March, 2009, to convene a workshop regarding the collection of data in the Gulf of Mexico for-hire industry. The meeting was proposed to bring all interested parties together to attempt to coordinate efforts to revise data collection methods for the recreational for-hire fishery;
- The ComFIN Data Collection Work Group met (via conference call) in April 2009 to determine if the existing commercial data collection methods in the Gulf of Mexico are collecting bait and marine life landings sufficiently;
- The FIN Data Collection Plan Work Group met (via conference call) in April 2009 to review 2008 and 2009 otolith and length data collection and processing activities and develop recommendations for necessary lengths and otoliths for FIN priority species;
- FIN Administrative Subcommittee met (via conference call) in April 2009 to review FIN goals and objectives and develop results-oriented tables for the FIN Annual Report;
- The annual FIN Otolith Processor Training Workshop was held in May 2009 to discuss the various reference sets, development of reference sets for additional species, status of Otolith Manual Revision, as well as, conduct otolith reading and review of FIN priority species;
- The FIN Committee met in June 2009 for their annual meeting. There were a variety of important issues addressed including status of Atlantic Coastal Cooperative Statistics Program (ACCSP); FIN Data Management System (DMS) issues, review of *Monitoring the Gulf of Mexico Commercial Reef Fish Fishery* document, registration tracking module regarding vessel information, presentation of status of national registry, update of license frame pilot survey, overview and update of current economic projects and initiatives, future economic data portal and state involvement in fishing-related business survey, update on Marine Recreational Information Program, update on electronic trip ticket/IFQ compatibility

issues, review and approval of 2008 FIN Annual Report, various subcommittee and work group reports, status of 2009 activities, review and approval of 2010 Operations Plan and discussion of 2010 FIN funding priorities;

- The State/Federal Fisheries Management Committee met in August 2009 to determine the activities for inclusion in the 2010 FIN cooperative agreement;
- The Gulf of Mexico port samplers meeting was held in September 2009 to discuss various issues including addressing recruitment and population connectivity questions with otolith chemistry; shark bottom longline observer program; TIP/FIN sampling targets; update on Red Snapper IFQ; shark identification presentation; status of state trip ticket programs and reconciliation of trip ticket data; exploring use of electronic logbooks for various fisheries; species identification conflicts/differences between port agents and dealers, as well as, a staging of gonad condition training session;
- The Gulf of Mexico Geographic Subcommittee met in October 2009 to discuss the logbook/trip ticket reconciliation process; status of trip ticket/IFQ compatibility reconciliation; update on MRIP Gulf of Mexico For-Hire Logbook project; review and approval of FIN at-sea sampling protocols; discussion of FIN process to access confidential data; status of metadata data entry as well as a QA/QC workshop regarding the 2007-2008 commercial data;
- In addition, the Program Manager also attended the various Fisheries Information System (FIS), Marine Recreational Informational Program (MRIP), ACCSP, SEDAR data workshops and Gulf of Mexico Fishery Management Council meetings as a liaison for the FIN.

#### **OPERATIONAL ACTIVITIES**

- Coordination and Administration of RecFIN(SE) and ComFIN Activities – This task provides for the coordination, planning, and administration of FIN activities throughout the year as well as provides recreational and commercial information to the FIN participants and other interested personnel. This is a continuation of an activity from the previous year.
- Collecting, Managing and Disseminating Marine Recreational Fisheries Data – This task provided

for the conduct of the MRFSS survey in Louisiana, Mississippi, Alabama, Florida and Puerto Rico for shore, for-hire, and private modes, an activity under the RecFIN(SE). This task provided for coordination of the survey, a field-intercept survey of shore, for-hire and private boat anglers to estimate angler catch using the existing MRFSS methodology, and entry of the data. These data were combined with the NMFS effort estimate telephone survey. In addition, the states conducted supplemental sampling of the intercept portion for the MRFSS for charter boats in Louisiana, Mississippi, Alabama, and Florida (east and west coast). The states also conducted weekly telephone calls to a 10% random sample of the Louisiana, Mississippi, Alabama, and Florida (east and west coast) charter boat captains to obtain estimates of charter boat fishing effort. This is a continuation of an activity from the previous year.

- Head Boat Sampling Activities – The port sampling portion of this task provided for the sampling of catches, collection of catch reports from head boat personnel, and gathering effort data on head boats which operate primarily in the Exclusive Economic Zone from ports along the coasts of Texas and Florida. This is a continuation of an activity from the previous year.
- Menhaden Data Collection Activities – This task provided for sampling of gulf menhaden catches from menhaden purse-seine vessels that operate in Louisiana. The samples were processed for size and age composition for use in coast-wide stock assessments. In turn, gulf menhaden stock assessments are incorporated into the Fisheries Management Plan for the species, and are also utilized by the Gulf Coast states, the GSMFC, the menhaden industry, and the NMFS. This is a continuation of an activity from the previous year.
- Development and Implementation of FIN Data Management System – This task provided for further implementation of a fishery information system for the FIN based on the ACCSP model. This task will provide funding for the FIN Data Base Manager and ComFIN Survey Coordinator who will, in conjunction with the ACCSP, work on developing more data modules for the FIN and ACCSP data management systems. Responsibilities include further development of data modules structures; routine loading of Texas, Louisiana, Mississippi (oyster and finfish

only), Alabama, and Florida commercial catch and effort data, Gulf biological data, Gulf and Caribbean recreational data; and maintenance of DMS. It is the next step for implementing a regional system for FIN.

- Trip Ticket Program Implementation and Operation – This task provided for operations and further implementation of commercial trip ticket systems to census the commercial fisheries landings in the Gulf of Mexico. It provided funding to Texas, Louisiana and Alabama for the operations of trip ticket programs for all commercial species. In Mississippi, it provided for the operations of a commercial trip ticket program for oysters and finfish and continued implementation of a system for the other commercial species in that state. In addition, it provided funding to contract for implementation and operation of electronic reporting for the trip ticket systems as well as reporting of data for the quota monitoring and IFQ programs. This is a continuation of an activity from the previous year.
- Biological Sampling of Commercial and Recreational Catches - This task provided funding for collection of biological data from the recreational and commercial fisheries. These data are essential to accurately assessing the status of commercial and recreational species. For the commercial aspects, port samplers collected this information based on established guidelines. For the recreational side, samplers went to sites and collected the necessary biological data using a modified MRFSS method. This task provided funding for collection, processing and analysis of these data. The primary target species include black drum, gag, gray snapper, gray triggerfish, greater amberjack, king mackerel, red drum, red grouper, red snapper, sheepshead, flounders (gulf & southern), spotted seatrout, striped mullet and vermilion snapper. The secondary target species include Spanish mackerel, scamp, yellowtail snapper, cobia, black grouper, black sea bass, red porgy, snowy grouper, speckled hind and Warsaw grouper. This is a continuation of an activity from the previous year.

#### **Coordination and Administrative Support**

Working closely with the Committee in all aspects of program coordination, administration, and operation was a major function of FIN coordination and administrative support. Other important coordination and administrative activities included, but were not

limited to, providing coordination and logistical support, including communications and organization of meetings for the Committee, subcommittees, and work groups; serving as liaison between the Committee, other program participants, and other interested organizations; preparing annual operations plans under the direction of the Committee; preparing and/or supervising and coordinating preparation of selected documents, including written records of all meetings; and distributing approved FIN information and data in accordance with accepted policies and procedures.

### **Information Dissemination**

Committee members and staff provided program information in 2009 via a variety of different methods such as distribution of program documents, presentation to various groups interested in the FIN, and via the Internet:

- FIN Committee. 2009. *2010 Operations Plan for Fisheries Information Network (FIN)*. No. 170 Gulf States Marine Fisheries Commission, Ocean Springs. 26 pp + appendix.
- FIN Committee. 2009. *Annual Report of the Fisheries Information Network for the Southeastern United States (FIN) January 1, 2008 - December 31, 2008*. No. 171 Gulf States Marine Fisheries Commission, Ocean Springs. 22 pp + appendices.

- Variety of informal discussions occurred throughout the year during ASMFC, GSMFC, NMFS, and other participating agencies meetings and workshops.
- The FIN has developed a data management system that provides access to commercial and recreational data for the Gulf States. There are two levels of access: confidential and non-confidential and users can request access via the FIN DMS web site [www.gsmfc.org/data.html](http://www.gsmfc.org/data.html)
- NMFS provides a user-friendly data management system (DMS) for the MRFSS that is accessible via the web <http://www.st.nmfs.noaa.gov/st1/recreational/index.html>
- GSMFC has developed a home page that provides programmatic and operational information regarding FIN.

If you are interested in any of the documents, they are available upon request from the Gulf States Marine Fisheries Commission office.

# **E**CONOMICS PROGRAM

*Alexander L. Miller, Staff Economist and Program Coordinator*

The Economics Program, formed July 2008, continued to develop throughout 2009 in an effort to improve economic data collection and management of recreational and commercial fisheries throughout the Gulf of Mexico. The program is a cooperative partnership among Texas, Louisiana, Mississippi, Alabama, Florida, the Gulf States Marine Fisheries Commission (GSMFC), and NOAA's National Marine Fisheries Service (NOAA fisheries). The program monitors the economic performance of the fisheries of the Gulf of Mexico (GOM) and assesses the economic impacts of these fisheries on local and regional economies. In general, the activities of the economic program are divided into three main components: economic data collection, economic research and analysis, and economic outreach and dissemination.

## **Data Collection**

In conjunction with the Fisheries Information Network's (FIN) Social/Economic Workgroup, the GSMFC coordinates, plans, and conducts specific economic data collection projects throughout its five member states. Economic data collection projects implemented or under development in 2009 included the following: an economic survey of the GOM inshore shrimp fleet, an economic survey of fishing related businesses in the GOM, and a marine angler expenditure survey for the GOM. Additionally, a marine recreational use survey was also under development in 2009. Results from these studies will aid in describing the economic performance, as well as, the economic impacts of these industries. More specifically, economic data and analysis will contribute to a better understanding of the economic contributions that these industries have on local and regional economies. It is the intent that the collection of dependable economic data will further maximize the economic benefits of fisheries resources, while reducing negative costs to fishing communities throughout the Gulf.

## **Inshore Shrimp Fleet**

An economic survey of the inshore shrimp fleet was the most well developed project under the economic data collection component of the program in 2009. Cited as one of the most valuable fisheries within the United States, the GOM commercial shrimp fishery constitutes fishing pressure from both an offshore fleet and an inshore shrimp fleet. Following recent data collection efforts conducted by NOAA fisheries

for federally permitted vessels that harvest shrimp in waters offshore, this study will provide a systematic economic analysis of an important economic segment—the inshore shrimp industry—which has not previously been examined with such depth and rigor. The information gathered in this project will contribute to more informed decision-making on a variety of commercial fishing issues.

Throughout 2009, the GSMFC, in collaboration with the Louisiana Department of Wildlife and Fisheries, gathered up-to-date data about the economics of commercial shrimping in inshore or state waters across the GOM. These data included information on revenue, operating costs, annual expenditures, employment, and vessel characteristics of the inshore shrimp fleet. In preparation for data collection, the survey instrument and sampling frame were developed during late 2008 and early 2009. Scoping meetings and survey testing in each of the Gulf States were also carried out throughout early 2009. The survey and subsequent reminders were mailed to more than 1,800 inshore shrimpers throughout the spring of 2009. As of the end of December 2009, a total of 589 surveys had been returned. This represented a region-wide response rate of approximately 33%. A test for non-response bias was developed and administered throughout late 2009 in order to sample individuals in the original sample who had not responded to the initial survey. Data from the completed questionnaires was entered into a database.

A final report of the results will be compiled and presented soon after the analysis is conducted. All figures and estimates will be presented as industry totals and averages. In addition to analyzing the economic performance of the fishery, this study will also provide an estimate of the economic impacts of the industry on local and regional economies through the use of regional input-output impact models for the inshore shrimp fleet. In other words, the number of jobs and amount of revenue generated by the commercial inshore shrimp fishery, in the industry itself and in other portions of the regional economy, will be determined and presented as an addendum to the final report.

## **Fishing-related Businesses**

As fisheries management policies change, the economic consequences of these actions often extend



past commercial fishing fleets and marine recreation to supporting fishing related businesses. Linkages between specific fisheries industries and the region can be analyzed through the use of regional economic impact models so that the economic impacts of shore-side firms can be identified. The GSMFC and NOAA, therefore, will collect data to determine the economic performance of fishing related businesses and construct a regional input-output economic impact model that will further assess the economic contributions that shoreside firms have on local and regional economies.

This project was largely under development during the spring and summer of 2009 and is tentatively planned to be implemented into the field in 2010. As the project is being developed, the GSMFC is working with Louisiana Department of Wildlife and Fisheries (LDWF) as well as the states throughout the GOM. Furthermore, planning is currently underway concerning how the GSMFC and LDWF will proceed with conducting the fishing related business survey.

A conference call was held in June 2009 to discuss sample design and implementation for this project. It was determined that the project would focus on commercial shoreside dealers and processors throughout the Gulf. A mail survey will be administered to fishing-related dealers while in-person interviews will take place with fishing-related processors throughout each of the five states. Request for proposals were developed by the project coordinator in order to solicit qualified parties to conduct in-person interviews of seafood processors. These documents were distributed in early December 2009 with a deadline of late January 2010.

This project will continue to develop into 2010. Project managers for each region of the Gulf will be identified through the research funding proposal progress. These individuals will organize and conduct onsite interviews for commercial seafood processors for the identified regions. The early months of 2010 will also include further development of the sampling frame and survey instruments in preparation for collecting data sometime around late spring 2010.

### **Marine Angler Recreational Fishery**

A recreational fishery in the marine environment not only provides relaxation for stakeholders, but also provides economic stimulation to the surrounding economy. In the GOM, for example, millions of residents participate in marine fisheries recreation, which contributes millions to tens of millions of dollars each year to the economy. A continued understanding of the impact of how marine angler

expenditures influence local and regional economies in the GOM through sales, income, and employment, provides key economic information, which can be used in fisheries management decisions.

As part of a national initiative, the GSMFC and NOAA, therefore, will solicit saltwater anglers' expenditures on fishing trips throughout the States in order to assess the size and economic contribution of the marine recreational fishing industry to the GOM and the regional economy. The survey will, therefore, provide estimates of marine recreational angler expenditures. Furthermore, regional input-output assessments for the United States will be conducted in order that the economic impacts associated with marine recreational angling can be determined.

Budgets were solicited and reviewed throughout the fall of 2009 in order to estimate the cost to collect expenditure data from marine anglers throughout the Gulf of Mexico. An initial planning conference call with the regional project managers from throughout the United States was held during September 2009. A conference call with the U.S. Fish and Wildlife Service was also held during October 2009; it focused on discussion and coordination of future marine angler expenditure economic impact studies.

The initial planning and discussion for the implementation of the marine angler recreational survey will continue to take place into 2010. The timeline for data collection appears to be January 2011 to December 2011, with the analysis conducted from January 2012 to December 2012. This project will contribute to the larger national final report entitled, "The Economic Contribution of Marine Angler Expenditures in the United States, 2011."

### **Marine Recreational Use**

Economic impacts from recreation to local and regional economies also extend from other types of marine recreation besides marine angling. Such activities might include scenic landscape viewing, wildlife watching, kayaking, scuba diving, and boating. Determination of the economic impacts that these activities have on the economy is an important aspect of marine recreation that needs additional attention.

Planning and discussion for the development of a marine recreational use survey continued to take place in 2009. The GSMFC, in partnership with NOAA fisheries, plans to collect participation, effort, and expenditures related to ocean recreation activities, with the primary focus on non-

consumptive ocean uses. The project plans to sample the general public using a survey panel. The survey will be conducted through monthly waves with the sample rotating in and out of each month. Each individual will only be sampled a defined number of times. Selected individuals will be notified in advance so that they will be able to keep track of their activities and expenditures.

This survey is tentatively planned to be conducted in 2011. The current plan is to have the survey designed throughout 2010, with survey implementation occurring in January 2011. Future activities to be undertaken include the establishment of a workgroup to design information collection, conduction of cognitive interviews using focus groups to determine the methods and types of information to be collected, and pre-testing of questions. Outcomes of the project will include a database and a report.

### **Research and Analysis**

Analysis and research investigations allow for a better understanding of the economic performance and impact of Gulf fisheries. In 2009, the research and analysis component of the economics program consisted of an impact analysis initiative for Gulf fishing industries and the further development of a study of the influence that macroeconomic conditions (i.e. fuel prices) have on marine recreational angler effort throughout the Gulf.

### **Macroeconomic Conditions and Marine Recreational Angler Effort**

The purpose of this project is to increase the understanding of the impact that macroeconomic conditions such as fuel prices have on marine recreational angler effort (i.e. number of trips) and the area fished (e.g. state or federal waters). Furthermore, it is sometimes difficult to understand and explain why changes in marine recreational effort occur or do not occur. Quantifying how anglers choose to participate or fish in specific areas as macroeconomic factors change may lead to better fisheries management. For example, knowing that anglers choose to fish inshore or participate in an inexpensive mode of fishing as fuel prices increase may allow for fisheries to be better managed.

The analysis for this project was largely completed throughout 2009. The analysis determined that higher gasoline prices and poor economic conditions lead to a reduction in trips in federal and state waters but an increase in to inland estuaries by a similar magnitude. A manuscript for this project was finalized in 2009.

### **Impact Analysis**

While raw economic data allows for descriptive statistics and averages, economic impact analysis (e.g. input/output modeling) for a particular fishery can help us to further understand the economic contribution that a fishery has to local and regional economies throughout the Gulf. For example, impact analysis can be used to describe taxes, employment, income, value-added, and sales generated from a particular Gulf fishery.

As it is the goal to use impact analysis to better understand the economic contribution from the specific fishing industries studied within the economic data collection component of the program, additional preparation continued in 2009. The program coordinator consulted with experts in the field to ensure that the current data collection questions (e.g. from the inshore shrimp fleet survey) were well suited to be used in subsequent economic impact analysis.

### **Outreach and Dissemination**

The third component of the economic program is outreach and dissemination. The objective of this branch of the program is to present the information collected and analyzed within the data collection and research and analysis components of the program. Additionally, this component of the program involves the organization of an annual meeting for economists who are actively engaged in fisheries economic projects and activities throughout the Gulf.

### **Gulf States Fisheries Economic Information Portal**

In order for there to be a location where stakeholders of fisheries resources can logon and access fisheries economic data, analysis, and literature, the development of the Gulf States Fisheries Economics Information Portal continued throughout 2009. The information portal will likely become a web-based tool that will contain fisheries economic literature resources, final reports, and published literature for a variety of different types of fisheries economic information from throughout the Gulf. In addition to literature resources, the portal will also contain fisheries economic data/impacts for the Gulf through an online interactive user defined dashboard.

### **Gulf States Fisheries Economics Workshop**

The Gulf States Fisheries Economic Workshop is an initiative of the economic program that is aimed at promoting communication, coordination, and professional development among fisheries economists throughout the Gulf of Mexico. The workshop provides an opportunity to share data

collections and research projects and to discuss the future direction of economic data collections within the region. During 2009, the first Gulf States Fisheries Economics Workshop was held in conjunction with the GSMFC annual spring meeting in New Orleans on March 19th and 20<sup>th</sup>. Approximately 22 fisheries economists from throughout the region participated in this workshop. Workshop presenters and attendees discussed roughly 15 different recreational and commercial projects. It is the intention that this meeting will be held on an annual basis during the spring meeting of the GSMFC.

# **A** LABAMA MARINE RESOURCES DIVISION

*Vernon Minton, Director*

The Marine Resources Division (MRD) is responsible for the management of Alabama's marine fisheries resources through research and enforcement programs. Two division facilities supported an average of 61 employees of the Administrative, Enforcement, and Fisheries Sections during the 2009 fiscal year.

## **Significant Accomplishments**

The U.S. Department of Commerce appropriations budget for the 2009 fiscal year contained \$15 million earmarked for cooperative enforcement initiatives between NOAA law enforcement and state fisheries law enforcement entities. The Marine Resources Division and NOAA Enforcement entered into a joint enforcement agreement pursuant to the initiative. As part of the agreement, federal dollars are dedicated to increase fisheries law enforcement efforts and compliance with federal fishery regulations along coastal Alabama and the Gulf of Mexico. Fisheries resources are cooperatively protected, managed, and conserved by state and federal governments. The MRD enforcement section received funds to purchase one offshore vessel and surveillance equipment that will be strategically located in coastal Alabama. Additionally, it provided funding to increase patrol hours for MRD officers.

Enforcement officers conducted 17,349 hours of boat and shore patrol, 10,112 boat checks, 1,659 seafood shop inspections, 27,804 recreational fisherman checks, 5,689 commercial fishermen checks, and issued 2,092 citations and warnings for illegal activities. Fifty-seven percent of the citations and warnings (1,184) were for violations of recreational fishing laws and regulations. Violations of commercial fishing laws and regulations (218) comprised ten percent of the citations and warnings issued. Officers also issued citations and warnings for 323 violations of boating safety laws and regulations, 157 wildlife and freshwater fisheries, and 228 citations for other state and federal laws and regulations. A total of 14,059 hours was spent on administrative duties, court attendance, training, and equipment maintenance. Officers worked 6,058 hours with the National Marine Fisheries Services interjurisdictional fisheries enforcement program.

Enforcement officers continued to improve and expand the Coastwatch Program, established for the training of citizens to recognize and report violations of saltwater fishing laws and regulations.

Information from Coastwatch members has assisted with the planning of enforcement patrols and deployment of manpower and other resources resulting in saved man-hours by not responding to inaccurate reports of violations. To date, 230 citizens have been trained at 34 training sessions held in Mobile, Baldwin, and Jefferson counties. The response to the program continues to be very positive.

Officers attended training courses on boat handling, criminal investigation, computer forensics, criminal law update, environmental crimes enforcement, suicide terrorism, self-defense, supervision, and other state and federal agency law enforcement programs. Officers continued to enhance public outreach efforts to better communicate enforcement efforts to provide important information and to foster cooperative management initiatives.

The Marine Resources Enforcement Section worked with the other Divisions in our Department to develop a Conservation Officer Operations Reporting System (COORS). The COORS system will greatly reduce the amount of time the officers spend performing needed administrative duties. The officers' reports are completed and reviewed online; this data is calculated to allow for better analytics of the enforcement activities. A fleet management module of the COORS program will allow for real time maintenance cost analysis and tabulation to allow for more efficient maintenance of equipment. Subsistence claims are sent directly to accounting to save on processing costs. The COORS system was implemented beginning the week of September 26, 2009.

The Marine Resources Division, in conjunction with the University of Alabama and the Administrative Office of Courts, has developed an electronic e-citation program. The defendant's copy of the electronic citations is printed at the time of issuance in the field and the citation information is transmitted electronically to the court system. Among other items, the system captures the GPS location of all violations and warnings. This information will assist in the planning of patrols to address problem areas.

The Enforcement Section has begun the installation of cameras for the Marine Resources Coastal Remote Monitoring System. The system will place up to 30 high resolution cameras at different locations throughout the coastal Alabama areas. The video will

be available through a web based portal and will be accessible to officers in the field via a wireless internet connection. Not only will the officers be able to access the video, they will also be able to manipulate the camera through a web interface. The video will be stored for up to three weeks on secure servers and will be time and date stamped for use as evidence. The sensors will include closed-circuit television, thermal, and infrared cameras.

The 2009 edition of the popular Alabama Marine Information Calendar was produced and distributed. In addition, a calendar depicting conservation related artwork by coastal 4th graders was produced and printed by the Division. The artwork for the calendar was selected through an art contest, hosted by the Division and judged by local specialists in coastal conservation and the arts. The winning selections were also displayed in art museums in both Mobile and Baldwin counties. Receptions were held at each museum for the winning students, their friends, and families.

The tenth year of a cooperative project with Auburn University at Claude Peteet Mariculture Center (CPMC) has resulted in additional refinement of techniques for raising both bait and food shrimp in ponds. These will be used to enhance the production of shrimp on shrimp farms in west-central Alabama.

MRD hosted four fishing outreach days at Claude Peteet Mariculture Center. A total of 72 Alabama children were given the opportunity to fish in a pond at CPMC stocked with red drum. Almost all of the participants caught fish, a few of those for the first time in their lives. In addition to fishing, the children were given a tour of the hatchery operations at CPMC which included viewing a display of fish and invertebrates commonly occurring in Alabama.

During the year, the Fisheries Section collected 1,133 fisheries assessment samples. This data is utilized to afford managers the opportunity to review the populations of the recreational and commercial important species and of lower trophic level species to detect any changes before they affect the overall health of the ecosystem. A total of 26 habitat assessments were performed, and 5,114 fishermen were interviewed during creel surveys.

The success of the electronic trip ticket computer program continues to grow. Twenty-eight Alabama seafood dealers actively used this program. These dealers contributed over 76% of yearly Alabama landings. The computer program allows seafood

dealers to enter landings and trip information from commercial fishermen and submit it electronically on a monthly basis. During the past fiscal year, MRD processed and submitted trip ticket data from 15,179 commercial trips reporting 27.9 million pounds of seafood with a dockside value of \$40.1 million.

During FY 2009, MRD staff participated in three large outreach events; the four day Mobile Boat Show, the two day Conservation Expo at Oak Mountain State Park, and the one day Conservation Expo/Bird Festival in Fairhope. These events were conducted in an effort to inform and educate the public about Alabama's marine environment. Saltwater "touch tables" were set up at each event to allow children the opportunity to interact with living marine life and learn about these animals which are commonly found in Alabama's waters. Literature concerning seafood rules and regulations, and calendars were distributed. Children enjoyed the opportunity to complete activity books and use rub plates depicting various forms of aquatic life found within Alabama's waters.

Biologists from the Division continue to participate in the Alabama Aquatic Nuisance Species Task Force created in conjunction with the Department of Wildlife and Freshwater Fisheries and authorized by the Governor's Executive Order. This group encompasses all state agencies with interest in or regulation of aquatic nuisance species. The goal of this task force is to produce an Aquatic Nuisance Species Response Plan by early 2010.

MRD continued administration of the Offshore Artificial Reef Program during 2009. This program allows private reef builders a chance to deploy inspected material in United States Army Corps of Engineers permitted offshore areas resulting in the creation of fish habitat. Thirty-six permits were issued during the year containing 325 individual reefs. MRD created three offshore reefs and one reef adjacent to the new Gulf State Park Pier (GSPP) with materials from the old GSPP destroyed by Hurricane Ivan and the new GSPP damaged by Hurricanes Gustav and Ike. In addition, twelve prefabricated concrete and limestone rock pyramids were deployed within 300 feet of the new pier. This was done to increase habitat for popular finfish species and to increase fishing opportunities for pier anglers.

A spring planting of 1,600 cubic yards of material was accomplished on Cedar Point west and a summer planting of over 15,000 cubic yards in Portersville Bay. The average cost of material has risen to \$50.97

per cubic yard due to extensive oyster rehabilitation projects across the Gulf of Mexico.

#### **ADMINISTRATIVE SECTION**

The Administrative Section provides supervision, clerical, purchasing, and general administrative support for the two operational sections; supervises state seismic activities; and coordinates with other state, federal and regional agencies on fisheries and environmental matters.

Staff for the Administrative Section consisted of the Division director, six clerical, one accountant, and one marine mechanic employee. Offices are maintained at Dauphin Island and Gulf Shores.

#### **Future Plans**

The Division plans to continue development of the inshore artificial reef system particularly in Baldwin County. As donated material has been greatly reduced in coastal areas of Alabama due to the economic downturn, MRD plans to purchase appropriate material and enhance identified reef sites. MRD will investigate the possibility of receiving permit(s) for nearshore artificial reef zones. These areas, if permitted by the U.S. Army Corps of Engineers, would provide unique fishing opportunities for Alabama's coastal anglers. Various user groups will be contacted prior to submission of a permit for this activity to maximize success.

The Division will provide financial assistance to the City of Daphne to renovate a boat ramp on the Eastern Shore. This renovation will incorporate an elevated roadway to access the ramp. This unique design is believed to circumvent the current sedimentation problem that occurs along the immediate shoreline which hinders public use of the existing ramp.

MRD will work with the Department's Engineering Section, the State Lands Division, and outside contractors to develop plans for the construction and/or renovation projects pertaining to key structures located at the CPMC (Gulf Shores) and Dauphin Island facilities. These projects will consist of the construction of a new multifunctional laboratory and office complex at CPMC, renovation of the boat basins at CPMC and Dauphin Island, and upgrades to Enforcement boat docks at Dauphin Island. Funding will be provided through the Coastal Impact Assessment Program (CIAP). It is anticipated that the planning and design phase will be completed and a bid will be awarded for construction by the end of FY2010.

#### **ENFORCEMENT SECTION**

The Enforcement Section patrols Alabama's coastal waters, enforcing state and federal laws and regulations relating to the conservation and protection of marine resources. Officers also enforce laws and regulations relating to boating safety and freshwater fishing and hunting, conduct search and rescue missions, and participate in drug interdiction operations. Officers are cross-trained and deputized as National Marine Fisheries Service, U. S. Fish and Wildlife, and U.S. Customs and Border Protection agents. Marine Resources Enforcement Officers cooperate extensively with these agencies, the United States Coast Guard, and other Federal agencies in the coordination of joint enforcement operations, investigative and fisheries enforcement expertise, training, public safety, and other natural resource issues.

Facilities for the Enforcement Section consist of headquarters at Dauphin Island and a district office in Gulf Shores. There are currently seventeen enforcement officers in the section (ten stationed in Mobile County and six stationed in Baldwin County), two laborers, and the Chief Enforcement Officer stationed at the Dauphin Island headquarters.

#### **Future Plans**

Continue to develop mechanisms to improve the Coastwatch program and public outreach efforts to better communicate enforcement efforts and important information.

Continue to develop procedures to enhance the Joint Enforcement Agreement with NOAA, assure that such agreements are implemented in future years, and seek long term funding for agreements.

Work with other Gulf states and the National Marine Fisheries Service to implement the Gulfwide strategic fisheries enforcement plan.

Continue to develop procedures and provide officers with training to enhance Homeland Defense activities.

Continue to develop and expand the coastwide remote monitoring system and technology upgrades to enhance enforcement monitoring, deployment of enforcement manpower, and biological fishing effort research.

#### **FISHERIES SECTION**

The activities of the Fisheries Section are directed toward management of commercial and recreational fisheries in Alabama's marine and estuarine waters.

These activities involve cooperative efforts with the National Marine Fisheries Service (NMFS) in nearshore Federal waters in the Gulf of Mexico and with other Gulf of Mexico state agencies to develop cooperative fisheries management programs. These activities are mostly funded through federal aid programs of the U. S. Departments of Commerce (NOAA/NMFS) and Interior (U. S. Fish and Wildlife Service). Biological programs not covered by federal aid such as fish kill evaluation, oyster management, shrimp management, and pollution investigations are supported by commercial and recreational license fees. The section personnel also assist in oversight of natural gas activities within Alabama's coastal waters, territorial sea, and adjacent federal waters in the Gulf of Mexico and comment on applications for U.S. Army Corps of Engineer permits in the coastal area.

Fisheries facilities consist of the CPMC in Gulf Shores and the MRD Laboratory on Dauphin Island. Personnel consisted of one Biologist V, two Biologist IV's, two Biologist III's, four Biologist II's, one Biologist I, five Senior Biologist Aides, nineteen Biologist Aides, and two temporary laborers.

#### **Federal Aid**

Wallop/Breaux: Wallop/Breaux funds are administered through the U. S. Fish and Wildlife Service. Funds from this source were directed toward a creel survey of Alabama's saltwater recreational anglers, production of the 2009 edition of the popular Alabama Marine Information Calendar, children's coastal conservation art calendar, production of the new kids coloring book, maintenance of equipment and facilities in Gulf Shores and Dauphin Island, management of the public artificial fishing reef permit system in the Gulf of Mexico off Alabama, assisting individuals in designing artificial reefs, conducting mariculture research on marine species, maintaining and enhancing boat ramps for boating access, financing research of the ecology of artificial reefs and effects of reef designs with respect to ecology, and the sampling of coastal Alabama fishes to determine stock status. An additional project to coordinate all federal aid programs within the MRD and to coordinate with other Gulf states was also funded from this source.

Fisheries Assessment and Monitoring Program (FAMP) MRD continues to collect legacy data through the FAMP program. This program, implemented in 1981, provides a continuous database of fish and invertebrates captured through independent fishery sampling techniques. This sampling program allows MRD to monitor trends in

fishes and invertebrates abundance which are not associated with commercial or recreational fishermen.

Adult Finfish Sampling Program MRD continues a fishery independent gillnet sampling program. The objective is to gather data on adult fish to be used in the management of important species. Sampling was conducted through the use of two gillnet configurations and a stratified, random design. A total of 232 nets sets were conducted, collecting 4,998 finfish representing 9 freshwater and 42 saltwater species. An assessment of the red drum stocks was submitted to the Commissioner.

Cooperative Statistics Federal aid funds for this program are administered by the Department of Commerce (NOAA Fisheries) and are utilized by the MRD to collect fisheries-dependent data on commercial shrimp, oyster, crab and finfish landings. Additionally, information on processed seafood such as crabmeat and mullet is compiled. Biological information was collected on striped mullet, flounder, Spanish mackerel, grouper, and red snapper. Commercial seafood license data was forwarded to NOAA Fisheries under this grant.

Southeast Area Monitoring and Assessment Program (SEAMAP) Funds from this program are administered by the Department of Commerce (NOAA/NMFS) and are utilized in Alabama for the development of a long term fishery-independent database on recreationally and commercially important marine and estuarine fishery stocks. This project provides funds to assist in management of the Alabama shrimp fishery, as well as, to evaluate spawning success and juvenile survival for important recreational and commercial species. In 2009, twenty-three off-shore, 40' trawl samples and twelve nearshore ichthyoplankton samples were collected. Routine quarterly inshore sampling was conducted in state waters resulting in the collection of 23 trawl, six seine, and seven beam plankton trawl samples. Increases in funding have allowed for the addition of bi-monthly samples resulting in the collection of 117 trawls 29 seine and 35 beam plankton trawl samples.

Inshore Roving Creel Survey The survey uses non-uniform probability roving creel sampling methods based on aerial overflight counts to sample the marine recreational fishery in coastal Alabama. Goals of the survey include characterization of Alabama's coastal recreational boat fishers and their catch. Biological information from fishermen's catch are helpful for determining health of fish stocks. A total of 2,513 interviews were conducted during this survey.

The Marine Recreational Fisheries Statistics Survey (MRFSS) Funding for this project is provided through a subgrant from the Gulf States Marine Fisheries Commission. NMFS utilizes this survey to gather trip level catch and effort information for shore, charter and private boat anglers throughout the United States. Data generated from the survey is used by fisheries managers throughout its scope of coverage. MRD has a subcontract to conduct the portion of MRFSS which collects data from anglers after they have completed their fishing trips and interviews charter boat captains for effort. Division personnel completed 2,601 fishermen interviews during 2009.

Otolith Sampling Program Funding for this project is provided through a subgrant from the Gulf States Marine Fisheries Commission (GSMFC). MRD continued collection of otoliths (ear stones) from species given high priority for sampling including red snapper, greater amberjack, king mackerel, and southern and gulf flounder caught by commercial and recreational fishermen. Otoliths are used to age fish which is important information used to determine the health of fish stocks. A total of 2,031 otoliths were collected during 2009.

Commercial Trip Ticket Program Funding for this program is provided through the GSMFC. This program is part of a Gulf-wide effort to generate more specific information for each commercial fishery by collecting landings and effort data from each fishing trip. Trip tickets are printed in triplicate form and supplied to Alabama seafood dealers. Seafood dealers are required to complete the trip ticket for each transaction. An alternative form of submission is through an electronic entry program which allows seafood dealers to enter landings and trip information and submit it via the internet on a monthly basis. Data from the completed trip tickets is scanned into a computer, verified and edited. Monthly data is submitted to the GSMFC and will ultimately be supplied to NOAA Fisheries.

Hurricane Ivan Relief Funds Funds obtained by the Marine Resources Division in the aftermath of the damage caused by Hurricane Ivan were used to plant 1,600 yards in deep areas of Cedar Point West Reef utilizing a local contractor. This project exhausted the funds under this grant and the completion report has been submitted.

Emergency Disaster Relief Program In recent years, MRD worked with legislators, the Commissioner of

the Department of Conservation and Natural Resources, and neighboring state agencies to secure two grants totaling roughly \$44 million in NOAA fishery recovery funds. The monies are being used to clean up and restore oyster and shrimp grounds affected by recent hurricanes and to monitor the recovery of associated fisheries. Over \$4.3 million was distributed in fiscal year 2009 to participants in the commercial and for-hire fisheries through cooperative research. Over \$6 million was distributed to seafood related industries to assist in recovery of financial losses.

A total of 15,000 cubic yards of cultch was contracted by the Division for local oystermen to plant in Portersville Bay. Assessment of storm surge on some of our artificial reefs was accomplished through a remotely operated vehicle (ROV). A vessel was chartered from Dauphin Island marina for two trips that recorded 30 videos of various artificial reef structures which included transport cages, concrete triangles and concrete pyramids.

#### **Non-Federal Aid**

Personnel maintained and improved the home page for the Division, which is associated with and accessed through the Departmental home page at [www.outdooralabama.com](http://www.outdooralabama.com). The feedback to this site has been extremely positive and it has proven to be a tremendous asset in getting information and assistance to the public.

#### **Future Plans**

The Fisheries Section will continue to collect appropriate data and work with recreational and commercial fishermen and other resource user groups to provide Division administrators with recommendations for strategies and regulations for management.

Development of mariculture procedures for commercially and recreationally important marine organisms will continue. Cooperative research projects will continue with Auburn University, the Dauphin Island Sealab, and the University of South Alabama. This effort will be enhanced by the rebuilding of the saltwater supply pipeline from the Gulf State Park in Gulf Shores to CPMC.

Cooperative projects will continue with Auburn University, the Dauphin Island Sealab, and the University of South Alabama to investigate artificial reef benefits and red snapper production enhancement. MRD will continue to construct inshore and offshore artificial reefs as materials and



funding allow. Cooperative efforts with groups such as the Saltwater Series Tournament and the Mobile County Wildlife Association will maximize available resources.

Monthly inshore assessment and monitoring work will continue in order to provide a more comprehensive depiction of Alabama's marine waters and resources.

Continuation of the MRFSS in Alabama to include creels of anglers on charter boats, private boats, and shorelines and to continue the For-Hire Telephone Survey to better define effort within the charter fishery.

Collection of Alabama commercial seafood landings data via Alabama's Trip Ticket Program and the collection of commercial biological fishery dependent data will continue.

Rehabilitation of Alabama's oyster reefs, decimated by predation and recent drought and storm events, will continue. As part of the rebuilding process, MRD will revise its existing oyster management plan with assistance from Alabama's oyster community. This process is anticipated to achieve significant results.

# FLORIDA FISH & WILDLIFE CONSERVATION COMMISSION

Nick Wiley, Executive Director

## DIVISION OF MARINE FISHERIES MANAGEMENT

Mark S. Robson, Director

The major responsibilities of the Division of Marine Fisheries Management include:

- (1) development and implementation of marine fisheries management policies,
- (2) angler outreach and marine aquatic resource education, (3) commercial fisheries assistance,
- (4) the state artificial reef program,
- (5) monitoring compliance with the marine fisheries trip ticket reporting requirements through audits of applicable fish house records,
- (6) implementation of fisheries effort management programs,
- (7) administrative penalty assessments for violations of specified fisheries regulations, and
- (8) issuance of Special Activity Permits. Highlights of staff efforts in 2009 [i.e., state fiscal year 2008/2009] are summarized below.

## MARINE FISHERIES MANAGEMENT & POLICY DEVELOPMENT SECTION

The 2009 Florida Legislature created a new recreational saltwater fishing license for residents that fish from shore. The new license, which costs \$7.50 plus a \$1.50 administrative fee, went into effect August 1, 2009. Revenues generated from this license will help fund agency marine resource management, research, and law enforcement efforts. The Legislature established this license so Florida anglers would be exempt from the federal angler registration requirement beginning January 1, 2010.

During state fiscal year 2008/2009, the Florida Fish and Wildlife Conservation Commission (FWC) approved a number of amendments to marine fisheries rules. FWC staff worked with the Marine Life Workgroup, consisting of aquarium trade stakeholders as well as other NGO and government representatives, to formulate rule amendments that will conserve these valuable resources while sustaining a viable aquarium trade industry in Florida. Six species of finfish and six invertebrate groups were added to the marine life fishery. These species now fall under the recreational and commercial harvest of designated marine life species. The new marine life species include, but are not limited to, porcupine fish, black brotula, blackbar soldierfish, red mithrax crab, the star snail *Lithopoma*

*tectum*, and all hermit crabs. Recreational harvesters can take no more than five of any one marine life species daily within a 20-organism aggregate bag limit and possess no more than a two-day bag limit (up to 40 marine life organisms). Harvest limits were created and amended for the commercial harvesters, including a reduction in the bag limit of *Condylactis anemones* from 400 to 200, a reduction in butterflyfish from 75 per vessel to 50 per person (or 100 per vessel if two commercial license holders are aboard), creation of commercial daily bag limits of 400 per vessel for emerald crabs, 1 gallon per person (2 gallons per vessel) for *Lithopoma tectum*, and 1 quart per person (2 quarts per vessel) for scarlet reef hermits. Additionally, the maximum size limit for butterflyfish was increased from 4 to 5 inches and maximum size limits of 9 inches for tangs and 12 inches for parrotfish were created. The new rules also specify that the only gear allowed for collecting zoanthid and corallimorph polyps is a flexible blade no wider than 2 inches, such as a putty knife or razor blade. Other rule amendments related to the harvest of sponges with substrate, the sale of live rock counting towards the requalification of the marine life endorsement, and restricting the use of quinaldine to marine life dive endorsement holders only.

Rules governing harvest of blue crabs were amended with assistance from the Blue Crab Advisory Board, comprised of commercial crabbers. A series of six regional ten day closures were created to allow identification and recovery of lost or abandoned blue crab traps. The FWC also established a standardized approach to the assessment of administrative [civil] penalties for specified violations of the blue crab regulations. These penalties apply to violations such as untagged traps, trap molestation, illegal barter of tags, and trap theft. Penalties, consisting of a monetary assessment and/or suspension of fishing privileges, are assessed based on the severity of the violation and the number of previous violations up to the maximum allowed by Florida Statutes.

The FWC also revised the spiny lobster trap certificate program by ending the moratorium on the trap reduction and applying a trap certificate reduction rate of 10% when a commercial lobster harvester transfers trap certificates to a person outside his immediate family. This reduction in trap certificates will occur until the FWC reaches its goal of 400,000 traps in the spiny lobster fishery. (Note: a

trap certificate equates to a trap tag, which is transferable on the open market. Every lobster trap must have a tag. With reduction, a buyer would get 90% of the trap certificates sold by the seller; 10% are removed from the fishery.)

Rules regulating the harvest of snook in Florida were amended to clarify that it is unlawful to buy or sell snook taken within or without the state except as allowed under a special activity license; that no person shall harvest or possess any snook taken within or without the state during closed seasons; that snook possessed on state waters, whether landed within or without state waters, must be in whole condition; and that anglers may temporarily possess snook only to determine compliance with size requirements.

FWC's reef fish rules were amended to be consistent with federal regulations for Gulf of Mexico and South Atlantic reef fish fisheries.

For vermilion snapper in Atlantic state waters, the recreational bag limit was reduced from ten to five fish. Captain and crew on for-hire vessels were prohibited from keeping a bag limit, and a November 1 - March 31 closed season was established.

The recreational aggregate Gulf grouper bag limit was reduced from five to four fish per person, including a two-fish per person limit on red grouper and a two-fish per person limit on gag grouper within the four fish aggregate bag limit. A February 1 - March 31 spawning closure was created for Gulf shallow water grouper and the recreational Gulf red snapper fishing season was set at June 1 through August 14. The commercial minimum size limit for Gulf red grouper was reduced from 20 to 18 inches; the commercial and recreational size limit for gray triggerfish was increased from 12 to 14 inches; and the recreational size limit for greater amberjack was increased from 28 to 30 inches.

#### **ARTIFICIAL REEF PROGRAM**

In 2008/2009, \$400,000 from a USFWS Federal Aid in Sport Fish Restoration grant funded seven artificial reef construction projects at costs ranging from \$50,000 to \$60,000 each, year three of a five-county Southwest Florida socioeconomic study on the use and benefits of artificial reefs (\$58,889), and a side scan sonar survey of an artificial reef area off Escambia, County (Pensacola), Florida (\$31,963). Reef construction projects utilized designed concrete reef modules, limestone boulders, secondary use concrete materials, a steel tugboat (ex *USCG Spike*, deployed off Jacksonville), and a steel U.S. Maritime Administration (MARAD) vessel (Vandenberg,

deployed off Key West). An additional \$300,000 from saltwater fishing license revenues funded the fifth year of the University of West Florida's refugia reef research project (\$59,991), four artificial reef monitoring projects (\$19,808 to \$49,409), and a socioeconomic study of the 13,000 ton 520 foot long former missile tracking ship *ex U.S.S. General Hoyt S. Vandenberg* (Vandenberg) by the non-profit organization, Artificial Reefs of the Keys (\$81,800). Monitoring projects consisted of fish censuses, deployment verification and mapping. The University of West Florida continued into a fifth year of a study evaluating the performance of a portion of a system of 502 unpublished artificial patch reefs deployed in 2003 in 4 expansive permit areas off Northwest Florida. In April and November 2009, the FWC continued sampling legal-size recreationally targeted reef fish (red snapper, grey triggerfish, red porgy, vermilion snapper, grouper) for PCB analysis in compliance with the EPA risk-based PCB disposal permit for the *ex- U.S.S. Oriskany(CVA-34)*. The PCB analysis will be used to evaluate the pre-deployment risk-based PCB modeling results that concluded the fish caught on the Oriskany Reef would not pose a human health threat when consumed.

A major artificial reef program milestone was achieved in May with the successful completion of the Vandenberg project, which had been on the books for at least nine years. The former U.S. Maritime Administration vessel, Vandenberg, departed Norfolk under dead ship tow for Key West on April 12, 2009, arriving on April 22nd. Following a series of final walkthrough inspections by FWC and EPA to ensure cleanup punch list completion, the 520 ft. long former missile tracking ship was successfully sunk six miles off Key West inside the boundaries of the Florida Keys National Marine Sanctuary on May 27, 2009. The vessel sank upright in 142 ft. of water within one minute and 47 seconds, following the opening of 44 holes below the waterline (22 on each side of the vessel) with explosive cutting charges. The vessel was towed to the site and four-point anchored the day before, with overnight and day of sinking security provided by FWC Law Enforcement. They also provided a helicopter for a National Marine Fisheries Service Marine Mammal/Turtle aerial observer before and after detonation of the explosives. About 500 private vessels were present, observing a one mile standoff when the vessel sank. The vessel has a vertical navigational clearance of about 45 ft and rests in a navigational "Area to Be Avoided" that excludes large shipping traffic. There are six mooring buoys attached to the ship.

The total cost of the project was approximately \$8.6 million. A portion of this cost was covered by a \$1.25 million grant from the U.S. Maritime Administration to the FWC, a special appropriation of \$1 million in general revenue funds from the Florida Legislature to FWC for the City of Key West, and a \$1.6 million grant from the Governor's Office of Tourism, Trade and Economic Development to the City of Key West. The remaining financing was provided by the City of Key West, Monroe County, and the Monroe County Tourist Development Council. The City of Key West holds title to the vessel and the U.S. Army Corps of Engineers and the Department of Environmental Protection permits for the sink site.

Post deployment monitoring of the Vandenberg to detect user shifts from natural reefs in the general vicinity to the Vandenberg continues. Baseline pre-sink data of half a dozen natural reef sites in the general area of the Vandenberg sink site were collected prior to the vessel being deployed. The Reef Environmental Education Foundation (REEF) is currently receiving funding from FWC to conduct quarterly fish count surveys on the Vandenberg and on some surrounding natural reefs.

#### **MARINE FISHERIES SERVICES SECTION**

This section in the Division is responsible for conducting audits of saltwater products wholesale dealers, civil penalty assessments, the trap retrieval/trap debris removal program, issuing special activity licenses, commercial fisheries and angler outreach, reviewing project proposals for CZM consistency issues, and assisting with implementation of limited effort programs.

Audit Activity for 2008-2009 included (1) general wholesale audit, (1) red snapper audit with NOAA law enforcement, (3) wholesale audits with FWCC law enforcement to investigate lobster poaching with illegal habitat (casitas), and (5) recorded interviews and inspections conducted of dealers active in harvesting and selling live sharks. Thirty-seven Marine life retailers were inspected and notified of rules and requirements related to buying live sharks.

Assistance was given to NOAA Law Enforcement to investigate or prosecute six wholesale dealers and fourteen dealer analyses were provided for FWCC law enforcement investigators. The auditor assisted in conducting one federal search warrant and one subpoena for records was received.

One hundred fifty-three wholesale and retail dealers, who had failed to submit trip ticket reports in the previous 90 days, were notified to determine the

status of their business and informed of the importance of reporting on time and the penalties for not doing so.

A total of 23 administrative penalty assessments, totaling \$125,000, were issued for major or flagrant commercial marine fisheries violations: 19 for flagrant net violations (monofilament and/or mesh area >2000sq.ft.) and four for trap (spiny lobster, blue crab) theft or molestation. The penalties ranged from \$5000 with a 12 month suspension of fishing privileges to \$5000 and permanent revocation of fishing privileges.

Twenty eight informal administrative hearings were conducted for fishers appealing an administrative penalty assessment or agency action affecting their commercial fishing license(s). Of these 28 hearings, 15 concerned denial of a blue crab effort management endorsement and 13 addressed denial of other commercial permits, suspension of commercial fishing privileges and trap retrieval fee assessments.

With reference to the trap retrieval/debris removal programs, 5,113 spiny lobster, stone crab and blue crab traps were retrieved during the closed seasons over the course of 27 retrieval trips at a total cost of \$89,445. In addition, thirteen volunteer organized clean-up projects were authorized to collect and dispose of derelict traps and trap debris [broken traps, buoys and lines].

A total of 146 Special Activity Licenses (SAL) was issued, a total of 43 Special Activity License amendments was issued, and two applications were withdrawn.

A total of 86 Redfish Catch Hold and Release Tournament Exemption Permits were issued, and seven Redfish Catch Hold and Release Tournament Exemption Permit amendments were approved.

Wholesale dealers' concerns, concentrating on disaster aid, were sought out via telephone and on-site meetings. Visits were made to four facilities to determine primary concerns for disaster relief assistance concerns, which ranged from loss of electrical power to preventative disaster relief. These lines of communication were opened to facilitate the disaster aid discussions from both the fishermen's and the wholesale dealers' perspectives and how FWC could better address post-disaster assistance needs.

The Division's liaison with commercial fishers and saltwater products dealers produced the commercial

fishing regulations publication, newsletters and notices regarding proposed regulations, workshops, etc. by e-mail and regular mail.

### **Angler Outreach and Aquatic Resource Education Program**

Staff participated in various types of events where they provided information on fishing license requirements, fishing opportunities, fisheries management projects, effective catch and release techniques, the importance of habitat protection for healthy fisheries, and the Sport Fish Restoration Program. During nine fishing shows across Florida, over 44,209 anglers (including 2,978 children) engaged staff in discussions on fisheries issues; 373,016 stakeholders attended the 12-day Florida State Fair where FWC had a fisheries display. Five Ladies Let's Go Fishing Clinics were held; 219 women interested in learning more about sport fishing and fishery resources participated in these two-day events. A total of 12 Kids' Fishing Clinics were conducted statewide; 3,314 children and their parents participated in the clinics, learning about angling techniques, ethical angling, and the importance of habitat conservation. The Pigeon Key facility in the Florida Keys and the Cedar Key Field Laboratory in the West Central Florida Big Bend area were sites for 765 students, several dozen teachers, and 78 parents to learn how to use equipment and sampling methods that FWC biologists utilize to collect data for fisheries management. Twenty eight teacher workshops were conducted statewide; 41 teachers were instructed in fisheries management practices and proper specimen collecting methods for classroom learning programs. Teachers were issued "collecting certificates" after completing a training session; the certificate allows them, with their students, to collect specimens that would otherwise be prohibited because of size, season, etc., for educational purposes.

Staff continued active participation in The Monofilament Recovery and Recycling Program (MRRP), which has been growing steadily since its inception in Brevard County in 1999. Florida's MRRP is a partnership between government agencies, non-profit, public and private organizations. The FWC Division of Marine Fisheries Management coordinates the expansion and distribution of monofilament recycling bins throughout the state.

Staff also initiated outreach programs to saltwater anglers in the Panhandle region during this fiscal year. Staff engaged anglers at outdoor events, tackle shops and fishing club meetings. At these events

over 1,600 adult anglers interacted with FWC staff and discussed ethical angling practices, fisheries management and habitat conservation.

### **FLORIDA FISH AND WILDLIFE RESEARCH INSTITUTE**

*Gil McRae, Director*

#### **Finfish**

Studies of spotted seatrout reproduction in Tampa Bay were continued, as was an intensive data collection program aimed at fully characterizing the state's snook fishery, several projects examining snook population movements and habitat utilization along Florida's east coast, and a study of goliath grouper habitat utilization in the eastern Gulf of Mexico. A study of the physiological effects of catch and release on tarpon was initiated. Work on the biology and ecology of reef fishes in southeast Florida, with an emphasis on spawning aggregation studies, also continued.

#### **Mollusks**

Bay scallop (*Argopecten irradians*) population restoration is ongoing from Pine Island Sound to St. Andrew Bay, with success evaluated via surveys of adult abundance and recruitment patterns. Oyster (*Crassostrea virginica*) population assessment and larval dispersal studies are being conducted in southeast Florida and Pensacola Bay. Oyster monitoring programs are focused on the evaluation of the Comprehensive Everglades Restoration Program and federally-funded (ARRA) oyster restoration in St. Lucie County, FL. FWRI is also participating in updating the FMP for gulf oysters. A Community-Based Restoration Program for hard clam (*Mercenaria*) population enhancement was completed. A study of the impact of beach nourishment activities on beach denizens (*Donax*, *Ocyropsis*, *Emerita*) was completed. A study of calico scallop (*Argopecten gibbus*) population attributes was completed.

#### **Crustaceans**

Currently, a five-year study is underway involving lipofuscin age determination of Florida blue crabs. The study seeks to develop a Florida-based known-age blue crab calibration curve to verify the accuracy of correlating lipofuscin content with age. Following the implementation of a Blue Crab Effort Management Plan (BCEMP), blue crab effort and landings are being investigated to determine the effects of this program on landings. We continue the process of horseshoe crab spawning beach identification and collecting spawning site information. The stone crab monitoring project

continues at nine locations along the west Florida coast. This program gathers fishery independent data on the stocks exploited in this claws-only fishery. Since the program's implementation, sufficient data has been collected to suggest fishery specific trends.

### **Fisheries Genetics**

With angler assistance, we continued to use DNA markers to genetically track individual tarpon in capture-recapture and stock structure studies in Southwest FL; to date, ~5,000 samples from caught-and-released tarpon have been obtained and genotyped. Genetic stock identification studies of spiny lobster and common snook continued. We continued to examine the distributions of cryptic bonefish species in FL and identified a new bonefish species (ms in press), which occurs in south FL, Mexico, and some Caribbean locations. We continued to evaluate the Tampa Bay red drum stocking program, with about 2,700 of the 31,134 red drum processed to date found to be of hatchery origin. Because stocked fish have recruited to the breeding population, YOY red drum are also being collected from Tampa Bay and analyzed for genetic impacts from the stocking program. A total of 29 *de novo* microsatellite DNA markers were isolated and characterized for eastern-central GOM hogfish; 35 microsatellite markers were isolated and characterized for Atlantic and Pacific goliath grouper. Approximately 500 *Cynoscion* specimens from Georgia coastal waters and 200 specimens from FL Atlantic offshore waters were genotyped for species ID and to determine individual levels of hybridity.

### **Fisheries Statistics**

Fisheries-independent monitoring (FIM) of fishes continues in the Tampa Bay, Charlotte Harbor, Indian River Lagoon, Cedar Key, Apalachicola, and Northeast Florida. The FIM program uses a systematic sampling strategy to collect fish free from the biases associated with collecting data from recreational and commercial fisheries. Data has been used for numerous stock assessments for several inshore species. Staff has spent much time developing models that describe fish abundance associated with different habitats. Additionally, staff in this program have been involved in the mercury concentration in fish program, fish health assessment, environmental health, as well as, studying the fishes from the rivers feeding Charlotte Harbor and Tampa Bay.

During 2008-2009, Florida commercial landings totaled approximately 89.4 million (M) pounds of fish, crab, clams (wild harvest only, excludes aquaculture), lobster, shrimp, and other invertebrates

worth over \$165 M in dockside value from 211,774 commercial fishing trips. Marine life landings (live fish and invertebrates for aquaria and other uses) in 2008-09 amounted to 9.2 M individual specimens worth nearly \$3.4 M in dockside value from 5,936 commercial collecting trips. The top ten species in dockside value harvested during 2008-09 in Florida were: Caribbean spiny lobster (\$20 M), stone crab (claws: \$17.3 M), pink shrimp (\$14.1 M), red grouper (\$11.5 M), white shrimp (\$10.3 M), king mackerel (\$8.1 M), bait shrimp (\$7.9 M), blue crab (including soft-shell crabs; \$6.9 M), oysters (6.7 M), and black (striped) mullet (\$5.5 M). The total commercial harvest of food shrimp in Florida was 17 M pounds (heads on; \$33 M dockside value) in 2008-2009.

### **Stock Assessment and Population Modeling**

In December 2008, the assessment group completed its annual trends report. This report summarized available commercial and recreational landings, fishing effort, fishery catch rates, fishery-independent sampling effort and catch-success rates for 134 species/groups during the period 1996-2008. We also provided detailed narratives on the biology, fishery, and past assessments for 48 managed species in Florida. The assessment group also developed stock assessments for striped mullet, blue crab, mutton snapper, red drum, and stone crab during 2007-08 and contributed to numerous other state, federal, and interstate commission projects.

### **Stock Enhancement Research**

The Florida Marine Fisheries Enhancement Initiative continued to build momentum to establish a marine hatchery network in Florida. Several locations were identified and facility designs were developed and discussed to pursue funding sources for these future facilities. The stock enhancement group continued intensive culture of juvenile red drum *Sciaenops ocellatus* in a pilot recirculating system at the hatchery. Two brood groups of adult spotted sea trout *Cynoscion nebulosus*, held for reproductive conditioning, spawned consistently on demand providing the opportunity to begin intensive culture with this species. Stock enhancement staff, in concert with the FWRI crustacean group, began a study to raise juvenile blue crabs *Callinectes sapidus* in tanks and ponds to monitor Lipofuscin accumulation as a possible method for aging wild stocks. Spartina plugs (78,264) were harvested from the facility effluent marsh for restoration at 15 sites throughout Tampa Bay.

FWC and Mote Marine Laboratory began a pilot project in 1996 to develop and evaluate release and

sampling strategies for common snook *Centropomus undecimalis* in Sarasota Bay and southern Tampa Bay. There were no snook releases during this period. Field monitoring and genetic processing of hatchery-reared red drum released during Project Tampa Bay was discontinued. A total of 10,681 fin clips samples contributed by 1,924 participating anglers were processed by FWRI genetics of which 54 fish returns were identified genetically as hatchery-reared red drum.

### **Marine Fish and Shellfish Health**

Staff monitors the health of aquatic organisms throughout the state of Florida. As Project Tampa Bay winds down, preliminary results of the liver lipid assay comparing the livers of wild, stocked, and hatchery red drum suggest that recaptured stocked fish are acclimating to health challenges in the wild. Over 1500 calls were received and responded to this year on the marine fish kill hotline (1-800-636-0511). Most calls were about red tide events while the rest reported fish with parasites, other aquatic mortality and disease events, or requested information. Twenty-six fish kills were investigated by staff. Two manuscripts on ulcerative mycosis in estuarine fish caused by the fungal pathogen *Aphanomyces invadans* have been accepted by the Journal of Aquatic Animal Health. Staff completed a pilot study to gather baseline data on and evaluate the health of recreationally caught grouper/snapper species in conjunction with FIM cruises. Staff continued surveys on the health of blue crabs in Tampa Bay, and of pink shrimp and hard clams in the Indian River Lagoon.

### **Marine Mammals**

FWC documented 429 manatee carcasses in Florida during 2009. There were 97 watercraft related mortalities during that time period. All but 10 of these carcasses were recovered and necropsied. During this same time period, 82 rescues were performed statewide.

A statewide “synoptic” survey was flown in 2009 and a record minimum count of manatees was recorded: 3,802. This does not provide a population estimate, however. An important objective within the state Manatee Management Plan includes improving these methods and implementing statistically sound methods to estimate the manatee population.

During the 2008-09 North Atlantic right whale calving season (December 01, 2008 –March 31, 2009), staff coordinated and conducted aerial surveys off the coastal waters of Florida in an effort to alert vessels to the presence of right whales, monitor calf

production, identify unique individuals, and describe whale distribution and habitat. FWC staff conducted 61 aerial surveys this season. A record breaking 39 mother/calf pairs were documented during the 2008/2009 North Atlantic right whale calving season. Staff participated in an unprecedented five new right whale entanglement responses and one chronic case during the 2008-2009 season. In collaboration with Georgia Department of Natural Resources staff conducted 20 right whale biopsy sampling trips which resulted in 37 biopsy samples collected. Staff also assisted with the retrieval and necropsy of one dead right whale calf in the southeastern region.

## **DIVISION OF HABITAT AND SPECIES CONSERVATION**

*Tim Breaux, Director*

### **Imperiled Species Management**

The Imperiled Species Management Section (ISM) in this Division is responsible for the planning and implementation of management activities directed toward the protection and recovery of manatees, right whales, and five species of marine turtles. Marine turtle activities are funded from the Marine Resources Conservation Trust Fund. Manatee and right whale protection efforts are funded from the Save the Manatee Trust Fund.

### **Marine Turtles**

Accomplishments:

- ISM staff served on the Marine Turtle Grants Committee. This program awarded approximately ~\$392,567 in grants to Florida conservation groups, local governments, and educational institutions based on funds generated by the sale of the sea turtle license plate. ISM staff also managed the review of Marine Turtle Permit applications and the approval process for grant requests for projects requiring such permits.
- Staff reviewed and approved approximately 189 applications for conservation activities with marine turtles, including nesting beach surveys, stranding and salvage work, research, public turtle walks, rehabilitation at captive facilities and educational display. Staff also made presentations at six Nesting Beach Survey training workshops statewide.
- FWC authorizes captive facilities to hold marine turtles for rehabilitation (13), for educational display (21), or for research (2). Staff coordinated transfer and release of marine turtles

during rehabilitation, and supervised public sea turtle releases.

- Staff continued to monitor captive facilities in the State that rehabilitate marine turtles or hold turtles (loggerhead and non-releasable turtles only) for educational purposes. Staff conducted four facility inspections. Inspections focus on compliance with FWC's Marine Turtle Conservation Guidelines and ensuring facilities are safe for turtles being temporarily or permanently held in captivity.
- Staff reviewed approximately 212 projects and provided formal comment letters to the Florida Department of Environmental Protection's (DEP) District Offices, DEP's Bureau of Beaches and Coastal Systems, the Water Management Districts and the State Clearing House. Projects reviewed included Coastal Construction Control Line applications, Environmental Resource Permit applications, and Joint Coastal Permit applications. Staff participated in over 100 meetings on these projects and on other issues involving marine turtles with staff from local governments, other state and federal agencies, and stakeholders.
- Staff initiated or participated in more than 160 conference calls on specific projects and marine turtle conservation issues, as well as, participating in development of two Habitat Conservation Plans (HCP); the Walton County HCP and the statewide HCP (in cooperation with the DEP).
- Staff conducted more than 60 site inspections as part of our environmental commenting responsibilities, including approximately 50 lighting inspections at the invitation of local governments and property owners. Program staff also participated in three administrative hearings.
- Staff participated in the design, implementation, and review of monitoring to assess the impacts of permitted activities on marine turtles, their nests and hatchlings.
- FWC staff was invited to participate as an expert for the U.S. Fish and Wildlife Service and Army Corps of Engineer's Team on the Programmatic Biological Opinion for beach restoration. Staff served on the following teams, working groups, and committees: Archie Carr Sea Turtle Refuge

Working Group, DEP's Turtle Friendly Berm Technical Advisory Group, DEP's Hard Bottom Technical Advisory Committee, FWC's Coastal Wildlife Conservation Initiative, Permitting, and Wildlife Friendly Teams, the Marine Turtle Grants Committee, DOT's Coastal Roadway Lighting and Regional Endangered Species Team. Staff coordinated with local officials on lighting inspections in numerous coastal communities.

- Staff in the Tequesta Field Lab conducted sea turtle necropsies with Florida Wildlife Research Institute's (FWRI) Sea Turtle Stranding & Salvage Network during necropsy events at FWRI's Pathology Laboratory in St. Petersburg. The FMRI necropsy events take place every few months.
- Staff continued to work with federal, county, and municipal organizations to minimize lighting impacts to marine turtles. Staff in the Tequesta office managed the hatchling disorientation database, contacted local government, and helped to formulate appropriate actions to resolve problem lights on Florida's nesting beaches. Staff conducted numerous nighttime lighting inspections to identify problematic light sources and provide recommendations for potential solutions for each problematic light.
- FWC staff hosted the 2009 Marine Turtle Permit Holder Workshop in Tampa for over 300 Marine Turtle Permit Holders, volunteers, local government, state and federal agency staff. This two day event included approximately fifteen presentations by agency management and research staff, conservation organizations, and local governments as well as summaries of Marine Turtle Grant projects.
- Staff responded to 52 requests for educational materials concerning sea turtles and provided copies of educational brochures, posters, rack cards and other information.
- Staff created a colorful decal featuring a photograph of a loggerhead sea turtle at the water's surface. This decal, number 18 of a series, was distributed to local tax collectors' offices across Florida. Funds from the sale of this decal support FWC's marine turtle program.
- At the request of local governments, staff participated in six public workshops hosted in



the Panhandle and southeast Florida. Upon request, staff also conducted educational presentations concerning marine turtles, lights, and other impacts to schools and meetings of local conservation groups, home owners' associations and other interested groups.

- Through a Marine Turtle Lighting course, which was developed jointly with the USFWS, FWC staff was able to provide information on sea turtles and lights to a variety of entities across peninsular and panhandle Florida. A total of ten workshops was presented to an audience of 228 individuals. Participants included local government, code enforcement, private property owners, state agency staff, marine turtle permit holders, county employees, lighting consultants, insurance companies, and interested citizens. These workshops were hosted by different

organizations around the state, including Franklin, Walton, Sarasota, Palm Beach, Broward, Volusia, Monroe, and Brevard Counties.

Staff is administering three grants, including \$416,000 from the U.S. Fish and Wildlife Service for Walton County's Habitat Conservation Plan; \$47,292 from the National Fish and Wildlife Foundation for lighting improvements in areas impacted by the 2004 hurricanes; and \$87,000 from the Florida DEP Coastal Zone Management Program for improvements in coastal armoring designs to minimize impacts to marine turtles and their nesting habitat. All requirements of a fourth grant from the Sea Turtle License Plate Program were completed, and staff was notified of another grant award, ~\$25,000, from the National Marine Fisheries Service to assist captive facilities to obtain medical supplies to treat injured and sick marine turtles. Grant management includes oversight of contracts to local governments and vendors as necessary.

## **DIVISION OF AQUACULTURE**

*Sherman Wilhelm, Director*

The Division of Aquaculture conducts numerous activities to promote the development of aquaculture and ensure the quality of aquaculture and shellfish products in Florida. These activities include regulatory, administrative, advisory, and technical functions directed toward ensuring that aquaculture operations are compatible with the Florida Aquaculture Plan, Aquaculture Certification Program, best management practices, resource management goals, and public health protection. The Division provides several primary service programs to support aquaculture and shellfish resource development:

- 1) Aquaculture Certification Program;
- 2) Sovereignty Submerged Lands Aquaculture Leasing Program;
- 3) Oyster Culture and Shellfish Resource Development Program;
- 4) Shellfish Sanitation;
- 5) Shellfish Environmental Assessment; and
- 6) Technical Support Program (Ombudsman, training, technical outreach, grants).

The Division has been very progressive in its support of aquaculture development as a practicable alternative to commercial fishing and conventional agriculture to foster economic development in rural and coastal communities. The Division's programs offer unique and essential services to this emerging sector of Florida's agriculture community.

These programs provide the regulatory framework for aquaculture operations and public health protection, provide specific farming areas on state-owned submerged lands, and provide responsible stewardship for Florida's natural aquatic resources.

During FY 2008/2009, the Division continued its commitment to encourage the development of the aquaculture and shellfish industries in Florida. This commitment is based on the belief that aquaculture will become an integral segment of Florida's agricultural and economic future by providing high quality aquaculture products to worldwide markets while advancing resource management.

The following is a summary of the activities related to aquaculture and shellfish resource management carried out by the Bureau of Aquaculture Development and the

Bureau of Aquaculture Environmental Services during fiscal year 2008/2009.

## **BUREAU OF AQUACULTURE DEVELOPMENT Aquaculture Certification Program**

Chapter 597, Florida Statutes (F.S.) established the Aquaculture Certificate of Registration to recognize aqua-farming businesses. Aquacultural businesses in Florida are required to be certified annually and to attest that they will comply with the best management practices provided in Chapter 5L-3, Florida Administrative Code (F.A.C.). The aquaculture certificate is used to identify aquaculture producers as members of Florida's agricultural community and to identify aquacultural products produced in the state.

The Aquaculture Certificate of Registration is linked to the Best Management Practices Program. Best management practices have been established by and for the aquaculture industry and represent the most appropriate and practical framework for Florida's diverse aquaculture businesses. Site inspections are conducted at aquaculture facilities to ensure compliance with best management practices. Staff is trained to provide a standardized evaluation based on compliance with established best management practices.

The Division certified 923 aquaculture facilities during FY 2008/2009. Shellfish producers (398 farmers) make up 43% of the certified farms; 225 ornamental producers make up 24% of the certified farms; 171 food fish producers make up 19% of the certified farms, with the remaining producing live rock, alligators and bait. Certified farms are found in 61 of the state's 67 counties, with the highest number of certified farms occurring in Levy County (21%) and Hillsborough County (10%).

## **Sovereignty Submerged Lands Aquaculture Leasing Program**

The Division is responsible for the Aquaculture Lease Program under the provisions in Chapter 253, F.S. Currently, the Division administers 527 aquaculture leases containing about 1,200 acres and 71 shellfish leases containing about 1,187 acres. Aquaculture and shellfish leases are located in 17 counties, including: Bay, Brevard, Charlotte, Collier, Dixie, Franklin, Gulf, Indian River, Lee, Levy, Manatee, Monroe, Palm Beach, Pinellas, Santa Rosa, St. Johns, and Volusia Counties. In response to its statutory mandate, the Division identifies tracts of submerged lands throughout the state that are suitable for aquaculture

development. Twenty special aquaculture use areas have been identified by the Division and authorized by the Board of Trustees in nine coastal counties.

Unlike many upland agricultural ventures that are conducted on privately-held lands, marine aquaculture must be conducted on or over submerged lands that are largely held in the public domain. Since only an insignificant amount of suitable submerged acreage is privately owned, marine aqua-farmers are uniquely dependent upon the use of public lands to grow their crops. Accordingly, the Department must act on behalf of the Governor and Cabinet to administer and manage these public lands in the best interest of the people of Florida, including protecting valuable natural resources.

The Aquaculture Lease Program supports marine aquaculture in a very unique way, and producing hard clams on sovereignty submerged lands is the largest marine aquaculture business in Florida. A survey of hard clam processors conducted by the University of Florida reported that 184 million clams were sold during 2007, accounting for about \$41 million. These results demonstrated that clam production was increasing again, and that the industry was recovering from losses associated with hurricanes in 2004 and 2005.

#### **Oyster Culture and Shellfish Resource Development Program**

Under the mandate to improve, enlarge, and protect the oyster and clam resources of the state, the Division is actively engaged in enhancing shellfish resources and restoring oyster reefs on public submerged lands. During FY 2008/2009, the Division collected 117,336 bushels of processed oyster shell from processors located primarily in Franklin County, collected 2,928 bushels of clam shell from processors in Cedar Key, and purchased 3,843 tons of fossil shell from a local quarry. Shell planting operations accounted for the deposition of 3,925 cubic yards of processed oyster shell, 95 cubic yards of processed clam shell, and 1,900 cubic yards of fossil shell on public oyster reefs in Santa Rosa, Bay, Franklin, and Levy Counties. Oyster resource development projects involving the relaying and transplanting of live oysters were conducted in cooperation with local oystermen's associations in four coastal counties. A total of 255,310 bushels of live oysters were re-planted on public reefs in Franklin, Wakulla, Dixie, and Levy Counties.

#### **Restoring Public Oyster Reefs**

In 2006, the Department entered into a subcontract agreement with the Gulf States Marine Fisheries Commission (through NOAA) to restore oyster reefs adversely affected by hurricanes in 2005 under the

Emergency Disaster Recovery Program (EDRP). The five-year, \$4.2 million contract provides for three project components: 1) restoring public oyster reefs, 2) providing economic assistance to oyster farmers, and 3) developing a scientific model to assess the success of oyster reef restoration efforts in the Pensacola Bay system. In 2008/2009, the Division continued to be actively engaged in restoring oyster reef habitat on numerous sites identified in the EDRP oyster restoration plan. Oyster reef restoration operations accounted for the deposition of 5,920 cubic yards of substrate materials on public oyster reefs in some of Florida's most productive estuaries.

#### **Apalachicola Bay Oyster Harvesting License**

An oyster harvesting license is required to harvest oysters from Apalachicola Bay. In 2009, 1,168 oyster harvesting licenses were sold, representing a modest increase (2%) in the number of licenses sold in the preceding year. The number of harvesting licenses sold in 2009 represents the highest number of licenses sold since the license was established.

#### **Technical Support Programs**

Providing technical assistance to the aquaculture and shellfish industries is an important Division activity. Staff provides substantial technical and administrative support for aquaculture and shellfish operations through site visits, compliance inspections, and workshops. Staff conducted more than 2,500 site visits and compliance inspections to assist aqua-farmers and shellfish processors.

#### **BUREAU OF AQUACULTURE ENVIRONMENTAL SERVICES**

##### **Shellfish Sanitation and Environmental Assessment Programs**

A total of 39 shellfish harvesting areas totaling 1,445,833 acres are currently classified and managed statewide. During FY 2008/2009, 669 sampling excursions were conducted to collect and analyze 13,392 water samples for fecal coliform bacteria. There were 405 management actions to close or re-open shellfish harvesting areas in accordance with the management plans for individual shellfish harvesting areas. During FY 2008/2009, a total of 99 Shellfish Processing Plant Certification Licenses were issued and 357 regulatory processing plant inspections were conducted. Based on inspection results, 34 warning letters and 10 settlement agreements were issued.

# **L** LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES OFFICE OF FISHERIES *Robert Barham, Secretary*

The mission of the Louisiana Department of Wildlife and Fisheries (LDWF) Office of Fisheries is to conserve and protect Louisiana's renewable aquatic resources for present and future generations of Louisiana citizens by controlling harvest and replenishing and enhancing stocks and habitat. The mission is accomplished through the activities of programs within the Office of Fisheries: Shellfish (shrimp and crabs), Mollusc (oyster), Finfish, Habitat, and Research. The clients served by these programs include present and future generations of Louisiana citizens, as well as national and international interests that derive benefits from consumptive and non-consumptive use of Louisiana's fisheries resources. The Department recommends season, size, and possession limits or recommends other means of conserving key resources. Other conservation/protection methods include replenishing species and enhancing or developing species or habitats as needed to provide for the needs of consumptive and non-consumptive users or environmental health. The Department also conducts research to provide insight into the proper functioning of natural systems; and educates the public and promotes wise use of resources.

This report describes program activities that support this mission.

## **SHELLFISH PROGRAM**

The Marine Fisheries Division continued its long-term trawl sampling program throughout coastal Louisiana. Fishery biologists collected 955, 6-foot trawl and 1,917, 16-foot trawl samples from inshore and offshore waters. Data from these samples were used to recommend season frameworks for both the fall and spring inshore shrimp seasons and winter territorial sea shrimp seasons. In addition, these same data were used to recommend season extensions and special seasons and to provide recruitment indices for Gulf menhaden and blue crabs.

### **Shrimp**

The Office has continued to administer a \$146,749 federal grant (Interjurisdictional Assessment and Management of Louisiana Coastal Fisheries - NOAA/DOC Award No. NA07NMF4070050). The objective of the Interjurisdictional Fisheries Project is to maintain a coast-wide monitoring program for parameters relevant to important fisheries resources, including both population dynamics and associated hydrological and environmental parameters, and to

use information gathered to make management decisions. Technical, biological and hydrological data gathered from the monitoring program were used to establish seasonal frameworks within the shrimp and oyster fisheries, predict annual Gulf menhaden (*Brevoortia patronus*) abundance and provide data for managing groundfishes and blue crabs (*Callinectes sapidus*). These data have provided estimates of size, density and growth of juvenile penaeid shrimp on the nursery grounds and staging areas, movement of sub-adult shrimp from the nursery grounds to staging areas, and the abilities to correlate juvenile shrimp response and subsequent production to hydrologic conditions. Data collected from the monitoring program were crucial in establishing opening and closing dates for shrimp seasons within Louisiana inside and outside territorial waters during the fiscal year. Hydrological and biological data collected on oyster recruitment (spat set) and oyster density and availability estimates were used in formulating management recommendations regarding the oyster season on the public oyster seed grounds and seed reservations. Harvest estimates were determined from boarding report surveys of boats fishing the public seed grounds and seed reservations. These data were compared with annual stock availabilities and previous production estimates calculated during the fiscal year.

### **Management Actions**

In recognition of differences in shrimp recruitment, emigration and growth patterns between Louisiana coastal areas, the Department has managed the shrimp fishery in inside waters using a shrimp management zone concept. First implemented in 1975, this zone concept has provided the flexibility needed to create staggered opening and closing dates, season extensions, special seasons and special gear seasons between shrimp management zones. Louisiana's three shrimp management zones are:

- Zone 1 – From the Mississippi/Louisiana state line to the eastern shore of South Pass of the Mississippi River.
- Zone 2 – From the eastern shore of South Pass of the Mississippi River to the western shore of Vermilion Bay and Southwest Pass at Marsh Island.
- Zone 3 – From the western shore of Vermilion Bay and Southwest Pass at Marsh Island to the Louisiana/Texas state line.

## **Shrimp Seasons**

Based upon analysis of historic data as well as data from biological sampling by LDWF, the following management practices were implemented during the report period: Data were used to set the opening and closing dates of the 2009 Spring inshore shrimp season, set opening and closing dates of the 2009 Fall inshore shrimp season, extend inshore seasons in portions of inside waters and close and then reopen to shrimping portions of Louisiana outside territorial waters.

Recommendations for the opening dates of the spring shrimp season in inside waters are determined by projecting when 50% of the inshore population of brown shrimp sampled within each zone are 100 count per pound or larger. Closure of the spring shrimp season in inside waters is based upon the relative abundance, percentage and distribution of small juvenile white shrimp taken in trawl samples. Recommendations for the opening and closing dates of state offshore territorial waters are based upon the number and size of over-wintering white shrimp sampled in outside waters.

### ***Shrimp Management Zone I***

2009 - Spring Inshore Shrimp Season

- Opened on May 11, 2009 at 7:30 a.m. only in the open waters of Breton and Chandeleur sounds as described by the "double-rig line."
- Opened on May 18 at 7:30 a.m. in the remainder of Zone 1.
- Closed on June 30, 2009 at 6 a.m. except for Lake Pontchartrain including Rigolets Pass from the mouth of Lake Pontchartrain extending eastward to the western side of the CSX Railway Bridge; Chef Menteur Pass from the mouth of Lake Pontchartrain southeasterly to the mouth of Lake Borgne; that portion of Mississippi Sound beginning at a point on the Louisiana-Mississippi Lateral Boundary at latitude 30 degrees 09 minutes 39.6 seconds north and longitude 89 degrees 30 minutes 00.0 seconds west; thence due south to a point at latitude 30 degrees 05 minutes 00.0 seconds north and longitude 89 degrees 30 minutes 00.0 seconds west; thence southeasterly to a point on the western shore of Three-Mile Pass at latitude 30 degrees 03 minutes 00.0 seconds north and longitude 89 degrees 22 minutes 23.0 seconds west; thence northeasterly to a point on Isle Au Pitre at latitude 30 degrees 09 minutes 20.5 seconds north and longitude 89 degrees 11 minutes 15.5 seconds west, which is a point on the double-rig line as described in LA R.S. 56:495.1(A)2; thence northerly along the double-rig line to a

point on the Louisiana-Mississippi Lateral Boundary at latitude 30 degrees 12 minutes 37.9056 seconds north and longitude 89 degrees 10 minutes 57.9725 seconds west; thence westerly along the Louisiana-Mississippi Lateral Boundary to the point of beginning; and the open waters of Breton and Chandeleur sounds as described by the "double-rig line."

- Closed on July 11, 2009 at 6 a.m. except for Mississippi, Breton and Chandeleur sounds as described above.

2009- Fall Inshore Shrimp Season

- Opened on August 10, 2009 at 6:00 am
- Closed on December 22, 2009 at official sunset except for that portion of Shrimp Management Zone 1 extending north of the south shore of the Mississippi River Gulf Outlet, including Lake Pontchartrain and Lake Borgne
- Closed on January 14, 2010 at official sunset in remaining waters except for the open waters of Breton and Chandeleur Sounds as described by the double-rig line (LA R.S.56:495.1(A)2), which remained open to shrimping until 6 a.m., March 31, 2010.

### ***Shrimp Management Zone II***

2009 – Spring Inshore Shrimp Season

- Opened on May 11, 2009 at 7:30 a.m.
- Closed on June 22, 2009 at 6 p.m.

2009 – Fall Inshore Shrimp Season

- Opened August 10, 2009 at 6:00 am
- Closed on December 22, 2009 at official sunset

### ***Shrimp Management Zone III***

2009 - Spring Inshore Shrimp Season

- Opened on May 25, 2009 at 7:30 a.m.
- Closed on July 11, 2009 at 6 a.m.

2009 – Fall Inshore Shrimp Season

- Opened August 10, 2009 at 6:00 am
- Closed on December 22, 2009 at official sunset

### **Offshore Shrimp Season**

Offshore territorial waters south of the inside/outside shrimp line from the eastern shore of Freshwater Bayou Canal at 92 degrees 18 minutes 33 seconds west longitude to the U.S. Coast Guard (USCG) navigational light off the northwest shore of Caillou Boca at 29 degrees 03 minutes 10 seconds north latitude and 90 degrees 50 minutes 27 seconds west longitude were closed to shrimping on Dec. 16, 2008 at official sunset.

Offshore territorial waters south of the inside/outside shrimp line and east of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel red buoy line to the USCG navigational light off the northwest shore of Caillou Boca at 29 degrees 03 minutes 10 seconds north latitude and 90 degrees 50 minutes 27 seconds west longitude reopened to shrimping April 13, 2009 at noon.

Offshore territorial waters south of the inside/outside shrimp line and west of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel buoy line to the western shore of Freshwater Bayou Canal at 92 degrees 18 minutes 33 seconds west longitude reopened to shrimping on May 11, 2009 at 7:30 a.m.

Offshore territorial waters south of the inside/outside shrimp line from the eastern shore of Freshwater Bayou Canal at 92 degrees 18 minutes 33 seconds west longitude to the U.S. Coast Guard (USCG) navigational light off the northwest shore of Caillou Boca at 29 degrees 03 minutes 10 seconds north latitude and 90 degrees 50 minutes 27 seconds west longitude were closed to shrimping on Dec. 22, 2009 at official sunset.

### **Landings and Value**

Shrimp are Louisiana's most valuable commercial fishery, and Louisiana continues to lead the nation in shrimp landings. Louisiana shrimp landings in 2009 totaled approximately 110.2 million pounds (all species combined/heads-on weight) and accounted for \$117.3 million in dockside sales. Brown shrimp landings comprised approximately 30% of 2009 landings and have continued to decline over the past five years, measuring 15.8 million pounds below the long-term mean (1976-2009). Conversely, white shrimp landings over the past five years continued to exceed the long-term mean and in 2009 measured 74.5 million pounds or about 24 million pounds above the long-term mean.

### **Crabs**

Preliminary Louisiana commercial blue crab landings for 2009 totaled approximately 51.3 million pounds with a dockside value of approximately \$36.7 million. This represented a 20% increase from 2008 landings and an 11 % increase in dockside value. Stone crab landings for 2009 were 1,721 pounds, a decrease of approximately 29% from 2008. The stone crab fishery in Louisiana is not a directed fishery and stone crabs are primarily taken as incidental bycatch within the blue crab fishery. Low prices associated with increased foreign imports of crabmeat remain a major issue in the fishery.

The major LDWF activity related to blue crabs in 2009 was the removal of derelict crab traps from coastal waters under the Abandoned Crab Trap Removal Program. Legislation introduced by LDWF in 2003 gave the LWFC the authority to establish a derelict crab trap removal program.

The 2009 derelict crab trap removal program deviated from the 2004-2008 formats, which were volunteer-based and associated with closures for fishermen within defined geographical areas and time periods through rules adopted by the LWFC. Under the previous formats, crab traps remaining in the closure areas during the closure period were considered abandoned and could be retrieved by anyone.

Biologists based from the Houma Area Field Station conducted abandoned crab trap removal operations during February and March resulting in the removal and disposal of 788 derelict crab traps. Traps were removed in portions of Lake Mechant, Caillou (Sister) Lake, Lost Lake and Bayou Terrebonne located in Terrebonne Parish and Little Lake located west of Leesville in Lafourche Parish. LDWF reasoned that a crab trap closure was not warranted in 2009 which minimized impacts to crab fishermen and program administrative costs. LDWF used an approach that focused on removing derelict crab traps in waters frequently traveled by fisheries biologists while conducting biological sampling and monitoring.

A total of 17,972 derelict crab traps have been removed from Louisiana coastal waters during the first six years of crab trap cleanups (Table 1). Volunteer effort was 191+ boat-days; not included is effort by LDWF.

The Louisiana Crab Task Force continued to meet and address issues confronting the industry. Legislation supported by the task force and approved during the spring 2008 legislative session established an out-of-state crab shipping fee with proceeds dedicated to promotion and marketing of the crab industry. The Crab Task Force also continued discussions on a variety of topics such as certification of the Louisiana blue crab fishery under the Marine Stewardship Council, fisheries disaster assistance, crab bait availability, labor shortages, impacts of crabmeat imports and legislation impacting the crab industry. In October, the Crab Task Force also conducted a Legislative Crab Education Day for members of the Senate and House of Representatives Natural Resource Committees and media.

**Table 1.** Total number of traps removed and volunteer time in boat days from 2004 to 2009.

<i>Year</i>	<i>Traps</i>	<i>Boat Days*</i>
<b>2004</b>	6,894	90+
<b>2005</b>	4,623	51+
<b>2006</b>	2,935	31
<b>2007</b>	1,498	14
<b>2008</b>	1,234	3
<b>2009</b>	788	0
<b>2004-2009</b>	17,972	191+

### Special Bait Dealer Permit Program

In recent years, Louisiana saltwater anglers have shown increasing interest and demand for live bait and the live bait fishery has grown to become an important industry in Louisiana. During the 2009 permit period, bait dealers reported sales of approximately 322,000 live croaker and two million live shrimp with an estimated retail value of approximately \$479,000. Bait dealers in Jefferson Parish led all others in sales of live croaker and the number of bait trips reported while those in St. Bernard Parish sold the most live shrimp. In September, the Louisiana Wildlife and Fisheries Commission (LWFC) adopted a notice of intent to amend the special bait dealer's permit rule to allow for the harvest and sale of live bait shrimp and live croaker to the fishing public during the closed season beginning May first of each year until the opening of the spring inshore shrimp season and between the spring and fall shrimp season and to increase the fee charged for each special bait dealer's permit from \$100.00 to \$110.00.

### MOLLUSC PROGRAM

The Mollusc Program is responsible for the oyster resource on nearly 1.7 million acres of public oyster seed reservations, public seed grounds and public oyster areas. Seed grounds are designated by the LWFC and include a large continuous area east of the Mississippi River, as well as areas of the Vermilion/Cote Blanche/Atchafalaya Bay system. Seed reservations and the public oyster areas of Calcasieu and Sabine lakes are designated by the legislature. LDWF manages four seed reservations, including one east of the Mississippi River (Bay Gardene), one in the Barataria Bay system

(Hackberry Bay) and two in Terrebonne Parish (Sister Lake and Bay Junop).

Oysters provide an economic benefit to the state, and the ecological benefits of oyster reefs are very important as well. Oysters are biomonitors of the overall health of the ecosystem and provide forage and shelter habitat for a variety of fish and invertebrate species. Oysters also affect water quality through filter-feeding activities and estuarine current patterns, and may contribute to shoreline stabilization. Oysters are both economically and ecologically important, therefore, wise management of the public oyster resource is critically important to ensure that this valuable species continues to thrive in Louisiana's coastal areas.

In 2009, Louisiana led the nation's production of oysters with an average of 36% of the total US oyster landings. With over 50% of all oyster landings, Louisiana consistently ranks #1 among the Gulf of Mexico states.

Oysters have been a significant part of the Louisiana economy for many years and routinely have a total economic impact on the state's economy of roughly \$300 million. In 2009, the dockside value of oysters was the second-highest on record, totaling just over \$50 million, and harvest yielded approximately 14.8 million pounds of meat (LDWF Trip Ticket Data). This valuable resource is harvested from a variety of locations from bays to bayous and throughout the coast of the state.

Commercial oyster harvest in Louisiana is typically accomplished using large dredges (no greater than 6 feet wide) pulled behind oyster vessels called "luggers." Most of the commercial harvest from public oyster seed grounds occurs on the public grounds east of the Mississippi River in St. Bernard and Plaquemines parishes. Seed grounds and reservations are managed with the goal of providing seed oysters for transplant onto private oyster leases. However, two "Sacking Only Areas" exist east of the Mississippi River for the exclusive harvest of sack-sized oysters:

- Portions of Lake Fortuna and Lake Machias
- American/Long Bay

Mechanical dredge harvest in Calcasieu Lake mirrors the dredge harvest in other parts of the state with the exception of dredge size, as Calcasieu dredges are limited to 36 inches in width. On occasion, however, harvest in Calcasieu Lake is accomplished using traditional hand-tongs. Poor water quality has prohibited harvest in Sabine Lake for many years due

to public health concerns, and all oyster harvest in the southwest portion of Louisiana comes from Calcasieu Lake.

These public oyster areas are used heavily by the commercial oyster industry; and periodic reef rehabilitation projects (cultch plants) help maintain the productivity of the public grounds. During 2009, federal hurricane disaster funds coupled with state funding allowed cultch planting projects to be undertaken in portions of the Mississippi Sound (St. Bernard Parish), Black Bay (Plaquemines Parish), Lake Chien (Terrebonne Parish), Sister Lake (Terrebonne Parish) and Calcasieu Lake (Cameron Parish). Cultch planting provides settlement surfaces for the attachment of larval oysters by placing suitable hard material on the water bottoms. These projects placed roughly 87,000 cubic yards of crushed concrete and limestone rock on suitable water bottoms in these areas in May/June 2009. Specific information on the federally-funded cultch plants in Mississippi Sound, Black Bay, Lake Chien and Sister Lake can be found within the federal hurricane disaster project sections. The state-funded cultch planting project in Calcasieu Lake was accomplished in the southern portion of the lake in May 2009. This project consisted of placing approximately 7,500 cubic yards of limestone on approximately 15 acres of water bottoms. The site was selected to rehabilitate an area that had been impacted by a recent oil and gas pipeline project. That project dredged an access channel for the purpose of moving heavy equipment into Calcasieu Lake to install a liquefied natural gas pipeline. The access channel impacted existing reef resources and the cultch plant served to rehabilitate the impacted reef habitat.

Biological monitoring of the cultch plants began immediately and showed the presence of a successful spat (juvenile oysters) set at each location. Biological sampling of previous, federally-funded cultch plants performed in May 2007 and May 2008 showed how successful cultch plantings can be in terms of oyster production, as it was estimated that approximately 121,000 barrels (one barrel = two sacks) of seed and market-size oysters were available on these newly-constructed reefs (see "Biological Monitoring of Existing Cultch Plants" for more information).

### **Oyster Seasons**

State laws mandate that LDWF open the oyster season on Louisiana public seed grounds on the first Wednesday following Labor Day of each year and close these areas no later than April 30 of each year. However, the LWFC is authorized to extend the

season beyond April 30 provided sufficient stocks are available for harvest. The LDWF Secretary may close seasons on an emergency basis if oyster mortality occurs, or delay the season or close areas where significant spat catch has occurred with good probability of survival, or if excessive amounts of shell in seed oyster loads occur. Management practices often use rotational openings of the four Oyster Seed Reservations in alternating years. A law change during the 2008 Louisiana Legislative Session requires that the public grounds only be opened to the taking of seed oysters between the first Wednesday following Labor Day and the second Monday in October. The seed grounds can then be opened to the taking of market-size oysters on the second Monday in October, as well as for harvesting seed oysters.

Management of the public oyster grounds and reservations relies heavily upon data gathered through a comprehensive biological monitoring program. This program provides quantitative and qualitative data on oyster populations and other reef-associated animals. Approximately 165 square-meter samples are collected each July, and over 690 dredge samples are collected from March through October. Square-meter data are collected using SCUBA and the data are used to measure the annual oyster stock size and for yearly season recommendations by LDWF. Dredge data are used to monitor the overall health of the oyster resource during the year and to assess recruitment of new age classes of oysters into the population. Field biologists also gather hydrological data on public oyster areas and develop harvest and fishing effort estimates by conducting boarding report surveys of oyster boats.

Oyster landings in Louisiana are divided between harvest from public oyster areas and private oyster leases. Historically, landings from private leases have comprised 60% to 80% of annual Louisiana oyster landings; in 2009 roughly 77% harvest came from private leases. Over the years, the public oyster grounds have significantly contributed to the annual statewide oyster landings, and, in 2009, landings from the public grounds yielded 3.3 million pounds of oyster meat. In addition, much of the oyster production from the private leases is dependent upon small seed oysters (less than 3 inches) transplanted from the public grounds to the leases to be grown out for ultimate harvest at a legal and marketable size.

In general, the 2009/2010 oyster season opened in early September and was closed on April 1, 2010 (see Table 2). However, some areas, such as Hackberry Bay and Sister Lake, were opened for only a short



**Table 2.** Opening and closing dates of the public oyster grounds.

<i>Public Oyster Areas</i>	<i>Season Opening</i>	<i>Season Closing</i>
Bay Gardene Public Oyster Seed Reservation and all grounds east of the Mississippi River	Sept. 9, 2009	Sept. 23, 2009
	Oct. 28, 2009	
Hackberry Bay Public Oyster Seed Reservation	Oct. 28, 2009	Nov. 4, 2009
Little Lake Public Oyster Seed Ground	Sept. 9, 2009	Sept. 23, 2009
	Oct. 28, 2009	
Barataria Bay Public Oyster Seed Ground	Sept. 9, 2009	Sept. 30, 2009
Sister Lake Public Oyster Seed Reservation	Oct. 28, 2009	Nov. 13, 2009
Vermilion, East and West Cote Blanche and Atchafalaya Bay Public Oyster Seed Ground	Sept. 9, 2009	
Calcasieu Lake Public Oyster Area	Oct. 15, 2009	
Deep Lake, Lake Tambour, Lake Chien, Lake Felicity, and Lake Mechant Public Oyster Seed Grounds; Bay Junop Public Oyster Seed Reservation; Sabine Lake Public Oyster Area	Season Remained Closed	

time within that general framework. Additionally, the oyster seasons in Calcasieu Lake and Vermilion Bay extended to the end of April 2010.

In 2009, the annual stock assessment report (July 2009) estimated that over 1.1 million barrels of oysters (both seed and sack combined) were available on the public oyster grounds throughout the state; a 46.3% decrease from 2008 levels.

**Oil and Gas Monitoring Within the Public Oyster Areas**

The Louisiana Department of Wildlife & Fisheries (LDWF) acts as a commenting agency on all Coastal Use Permit applications received by the Louisiana Department of Natural Resources (DNR) for projects located within LDWF managed areas. The primary objective of the Oil and Gas Management Section is to monitor and minimize impacts on oyster resources resulting from oil and gas operations within public oyster areas. The section achieves this by reviewing and commenting on permit applications and requiring a water bottom assessment to be completed on each project area and proposed access route. The sampling protocol, developed by LDWF biologists, outlines what data is required to be collected for projects located in the public oyster areas and is available online at <http://dnr.louisiana.gov/crm/coastmgt/permitsmitigation/oyster/sampling-protocol.pdf>.

These assessments identify the type of bottom (soft mud, firm mud, buried shell, exposed shell, oyster reef) and the live oysters that will be impacted by the project. After the assessments are reviewed and the impacts calculated, the project can either be modified to reduce possible impacts or allowed to be permitted as proposed. In 2009, approximately 200 assessments were reviewed by section staff. Recommendation letters, which include recommended permit conditions designed to reduce impacts to oyster resources, were provided to DNR for each project.

Compensation for impacts is required as a condition of each permit issued for projects within the boundaries of the public oyster areas. The amount is calculated using the water bottom assessments and a rate schedule developed by LDWF economists. This rate schedule is available online at <http://dnr.louisiana.gov/crm/coastmgt/permitsmitigation/oyster/rate-schedule.pdf>. In 2008, approximately \$1,654,783 was collected as compensation for impacts and deposited into the Public Oyster Seed Ground Development Account. State law directs LDWF to use these monies to restore, enhance, and manage oyster resources on the public oyster areas. One such rehabilitation project was initiated in 2008 as a bid package was released to the public to rehabilitate approximately 50 acres of impacted area in Calcasieu Lake. In May 2009, approximately 15

acres was planted with cultch material to rehabilitate oyster resources impacted during a recent gas pipeline installation projects (See above).

### **Oyster Leasing**

The moratorium on the issuance of new oyster leases, at the request of Louisiana Department of Natural Resources, remained in effect throughout 2009. The moratorium was requested in order to reduce the state's liability related to coastal restoration efforts. This moratorium does not affect lease renewals, and 589 renewal applications were processed.

The Oyster Lease Survey Section office is currently located at the University of New Orleans Advanced Technology Center, 2021 Lakeshore Drive, Suite 400. The section continues to maintain a Web site, which provides information to the public about oyster leasing in Louisiana. This Web site contains a searchable Geographic Information System with background maps, DHH closure lines, a database of current leases, landings and harvest statistics and recent news articles about oysters. The Web site has had thousands of visits since it was developed and placed on the web in March 1998, and is available at: <http://oysterlease.wlf.la.gov/oyster/>.

### **FINFISH PROGRAM**

The primary objective of the finfish program is to make rational recommendations for the management of coastal finfish stocks based on a database of scientific information. The information in the database is collected through fishery independent and fishery dependent sampling. These programs are cooperative with NMFS and the Gulf States Marine Fisheries Commission (GSMFC). The fishery-independent monitoring program is an ongoing collection of data by LDWF biologists who conduct surveys designed to sample coastal waters in an objective manner. Such surveys collect information based on geographic ranges independent of commercial or recreational fishing operations. The Office of Fisheries fishery-dependent monitoring program collects information from fishers, processors and observers based on methods developed by NMFS for similar programs.

#### **Fishery-Independent Monitoring**

A comprehensive monitoring program was developed in 1985 to protect or enhance these valuable resources by providing information regarding the status of fish stocks that occur in the coastal waters of Louisiana at some time during their life cycle. Three gear types are used coast-wide to sample various year classes of estuarine dependent fish.

A bag seine is used to sample young of the year and provide information on growth and movement. A gill net is used to sample juvenile, sub-adult and adult fish and provides information on relative abundance, year class strength, movement and gonad condition. A trammel net is used to provide information on relative abundance, standing crop and movement. Gill net samples are collected semi-monthly from April through September, and monthly from October through March using a strike net technique. Gill nets are set in a crescent shape, open towards the shoreline and then circled several times by the sampling boat to drive those animals present into the net. Trammel net samples are taken monthly from October through March. Seine samples are taken monthly from January through August, and semi-monthly from September through December. Hydrological data (conductivity, salinity and water temperature) are collected with each biological sample, as are wind direction and speed. Samples are collected at specific locations arranged in such a manner so as to cover the beach, mid-marsh and upper marsh areas of all major bay systems throughout coastal Louisiana. The catch and hydrological information is summarized for each Coastal Study Area on a monthly basis to give resource managers information on the current condition of the resource. The pertinent life history information for the important species is also used in developing analytical and predictive models. During fiscal year 2008-2009, 692 (98%) seine samples, 802 (99%) gill net samples and 244 (99%) trammel net samples were completed for a 99% completion rate.

#### **Fishery-Dependent Monitoring**

The value of commercial landings in Louisiana exceeded \$281 million in 2008, a \$3 million increase from the 2008 landings year. The Department continues to collect commercial statistics through the Trip Ticket Program that was implemented in 1999. Through this program, commercial landings data are collected on a trip basis from wholesale/retail seafood dealers, crab shedders and commercial fishermen holding fresh products licenses. There were over 251,000 commercial fishing trips reported in 2008 producing in excess of 1 billion pounds of seafood.

Beginning in May 2000, a computerized electronic trip ticket program was developed and made available to dealers. To date, roughly 150 dealers use the computerized program to submit their trip ticket data. Trip ticket information has been used to enhance the accuracy of stock assessments conducted by state and federal fishery management agencies, to extend certain inshore shrimp seasons thereby providing additional economic opportunity to fishers,

led to development of a crop insurance program for oyster growers and to estimate damages from Hurricanes Katrina and Rita in 2005.

Along with the collection of commercial landings data, the Department also conducts trip interviews of commercial fishermen. Biologists interview commercial fishermen to gather detailed information about a specific fishing trip. The federally funded program focuses on species of greatest state and federal interest.

The Department continues to monitor recreational fisheries through the Marine Recreational Fisheries Statistics Survey (MRFSS) in cooperation with NMFS and GSMFC. This fisheries dependent program uses dockside interviews of recreational anglers to determine catch and a telephone survey to determine effort. Data from the MRFSS survey in Louisiana was only available for January to August and November to December 2009 (Table 3). The table below represents available 2009 data for the number of marine recreational fishing trips taken, the number of anglers participating and the numbers of red drum and spotted seatrout caught in Louisiana waters.

**Finfish Stock Assessments**

Division personnel updated and revised the stock assessment for striped mullet in 2009. This assessment uses yield-per-recruit (YPR) and Spawning Potential Ratio (SPR) to estimate the impact of fishing pressure on potential yield and the spawning potential of these stocks in Louisiana waters. The methodology previously used for the mullet assessment, an untuned VPA, was compared to the results from a tuned VPA (VPA-2Box version 3.05, NMFS Toolbox). Estimates derived from YPR

and SPR are based on information regarding the growth rate and spawning potential of the fish, and on estimated natural mortality rate (M) and fishing mortality rate (F) on the stock. A conservation threshold of 30% SPR was established by Act 1316 of the 1995 Regular Session of the Louisiana Legislature for striped mullet.

Striped Mullet - The results of yield per recruit analysis based on the continuity case indicate that if M=0.3 (the value within the range of estimates that allows the lowest allowable harvest), the current fishery is operating above F0.1 and near FMAX with yield near maximum, and SPR near 38%. An M of 0.6 would indicate a more lightly fished stock with the fishery operating below F0.1, with yield being about 64% of maximum and with SPR being near 73%. The results of the VPA-2BOX analysis at M=0.3 over the last 3 years would indicate a yield of around 92% of maximum and fishing at rates that would provide SPR near 53%, and over the last 5 years fishing near FMAX and SPR near 38%.

**Finfish Management Actions**

January 2009

- Secretary provided with authority to close commercial seasons of reef fishes if quota for species group is filled in federal waters.
- Set recreational creel limit for gag to two per person, with closed season of Feb. 1 - March 31, 2009.
- Set 2009 king mackerel commercial season; Provide Secretary with authority to close commercial season for king mackerel if quota for species is filled in federal waters.
- Commercial large coastal shark season opened on Jan. 23 at 12:01 a.m., concurrently with adjacent federal waters.

**Table 3.** Marine recreational fishing trips taken in 2009, anglers and numbers of targeted fish caught.

<i>Reporting Period</i>	<i>Number of trips taken</i>	<i>Number of anglers</i>	<i>Number of red drum caught</i>	<i>Number of spotted seatrout caught</i>
January – February	570,925	299,340	628,180	1,897,189
March – April	557,523	311,769	484,590	928,047
May – June	1,044,479	526,456	919,587	5,331,684
July – August	836,052	332,409	1,133,532	3,359,854
November - December	488,289	209,047	1,628,676	3,586,902

#### February 2009

- Present 2009 stock assessment for striped mullet to the LWFC and Legislature.

#### March 2009

- Commercial king mackerel season closed on March 27 at noon.

#### April 2009

- Recreational and commercial shark seasons closed from April 1 at 12:01 a.m. until June 30.
- Permanent rules established on recreational and commercial harvest of shark on April 20, to remain compatible with newly-modified federal rules.
- Rules established for voluntary reporting of charter boat trips on April 20.

#### May 2009

- Commercial fisheries for tilefishes closed on May 15 at 12:01 a.m.

#### June 2009

- Commercial large coastal shark season remained closed in state waters. Had been closed on April 1, but this action continued closure until 2010 season opens.
- Commercial fisheries for deepwater groupers and tilefishes closed on June 27 at 12:01 a.m.

#### July 2009

- Commercial fishery for king mackerel opened on July 1 at 12:01 a.m.
- Recreational fishery for red snapper opened on July 1 at 12:01 a.m.

#### August 2009

- Recreational fishery for red snapper closed on August 15 at 12:01 a.m.

#### September 2009

- Commercial fisheries for commercial king mackerel closed on September 12 at noon.

The Finfish Management Program interacts with other Department, State, regional, and national issues. The program contributes to the Gulf and Atlantic Aquatic Invasive Species Task Force that engenders cooperation on these issues for states from South Carolina to Texas and Mexico. It is also part of the Louisiana Aquatic Invasive Species Task Force. It works with the Gulf of Mexico Fishery Management Council Stock Assessment Panel to evaluate the status of fish stocks managed by the Council. It works with the GSMFC to develop fishery management plans and stock assessments for

state-managed fisheries that have inter-jurisdictional management considerations. The program also contributes to Department consideration on permitting issues that relate to finfish including coastal use permits, Liquefied Natural Gas (LNG) terminals, mariculture, and artificial reefs.

## HABITAT PROGRAM

### Artificial Reefs

Artificial reefs provide resource habitat benefits while giving anglers rich and abundant fishing areas in otherwise dormant conditions. The Louisiana Artificial Reef Program (LARP) was founded in 1986 through the cooperative efforts of the Louisiana State University Coastal Fisheries Institute (LSUCFI) and the LDWF. Resultant legislation called for the development of a State Artificial Reef Plan and provided for an artificial reef program in Louisiana. Act 100 of the 1986 Legislature established that LDWF would operate the program with logistical support from LSUCFI. LDWF and LSUCFI produced a plan in the fall of 1986 that was accepted by the Louisiana Legislature. The plan outlined the siting, permitting and monitoring requirements of the program.

LARP was established to use obsolete oil and gas platforms to provide habitat for Louisiana's coastal fishes and fishing opportunities for recreational and commercial harvesters. Federal law and international treaty require oil exploration companies to remove these platforms one year after production ceases. LARP has provided an opportunity for oil companies to contribute to the maintenance of fisheries habitat. Since its inception, 61 oil and gas related companies have participated in the offshore program and donated the jackets of 245 oil and gas structures. During 2009, 30 obsolete oil and gas structures were accepted into the offshore artificial reef program. Previously deployed offshore reef materials also include 40 armored personnel carriers and one offshore tug.

Four deep-water oil and gas platforms have been accepted into the deep-water reef program. Even though these reefs are in water depths in excess of 400 feet, the structure establishing the reef must maintain sufficient profile in the water column to be accepted into LARP. The deployments of the platforms undergo a non-explosive partial removal process which preserves the established biological community with minimal disturbance, maintains fishing opportunities for residents and saves money on the decommissioning of the platform.

LARP also manages a Special Artificial Reef Sites (SARS) program outside LARP's nine artificial reef planning areas and deepwater reef program. Fifteen SARS have been established and continue to be enhanced with additional oil and gas structures. Several approved SARS projects were completed in 2009. Industry continues to work on the remaining approved SARS projects related to the 2005 hurricanes. A moratorium is currently in effect on future SARS proposals.

In addition, LARP has developed 27 inshore reefs, primarily low-profile reefs composed of shell and limestone. LARP constructed nine reefs, and eighteen others were constructed in association with public conservation and private groups.

In working with one of these groups, eight reefs have been constructed using reef balls. The four original sites were the first attempt to deploy reef balls in an estuarine setting even though they had been deployed successfully in tropical and oceanic environments. In 2009, four new Lake Pontchartrain artificial reef sites were created with 600 additional reef balls.

The 2005 and 2008 hurricanes degraded the established and well known Bird Island and Point Mast artificial reefs in Lake Pelto. LDWF allocated \$670,000 to restore the habitat which in turn would provide recreational opportunities. After performing some preliminary surveys of the two reefs a decision was made to enhance the Point Mast Reef and to develop a new Bird Island II reef adjacent to the original Bird Island Reef. Approximately 8,852 tons of #57 limestone were deployed to create the two reef sites in November 2009.

LDWF is working with the Louisiana DOTD to make beneficial use of concrete debris resulting from the destruction of the I-10 Twin Span bridges by Hurricane Katrina to create two artificial reefs in Lake Pontchartrain. The project, which is scheduled for implementation beginning in 2010, will provide habitat for marine fisheries species and opportunity for recreational fishers. LDWF allocated \$915,000 towards the development of two new inshore reefs in Lake Pontchartrain from EDRP2 Program Sub Grant ACF-025-2007-02 (NOAA Grant Number NA07NMF4540373). Approximately 29,000 tons of concrete bridge material from 102 spans will be deployed at the two artificial reefs.

### **Southeast Area Monitoring and Assessment Program (SEAMAP)**

SEAMAP is a cooperative state, federal and university program for collecting, managing and disseminating fishery-independent biological and environmental data and information in the southeastern United States. Fishery-independent data are collected by fisheries scientists, rather than fishermen. SEAMAP collects data on fish stocks that are managed jointly by the states and federal government and conducts a variety of data collection activities including a Fall Shrimp/Groundfish Survey, Spring Plankton Survey, Reef Fish Survey, Summer Shrimp/Groundfish Survey, Fall Plankton Survey, Winter Shrimp/Groundfish Survey and other plankton and environmental surveys.

LDWF collects samples between the Southwest Pass of the Mississippi River and Pointe au Fer, out to the 120-foot depth contour off the Louisiana coast. Louisiana SEAMAP activities include spring (March-April), summer (June), autumn (September) and winter (December-January) trawl surveys that also collect zooplankton and environmental resource data.

Biological samples are collected using a SEAMAP standard 42-foot trawl to collect juvenile and adult animals. Each trawl station is sampled once during daylight hours and once at night to measure the different animal communities that are present in a daily cycle. Plankton nets are used to sample early life history stages (eggs and larvae) of marine organisms. Environmental data are collected at all stations.

Surveys were conducted aboard the chartered vessel, Pelican:

- Winter 2008 Survey: Conducted on Jan. 26-29. All 12 scheduled daytime and nighttime demersal trawl stations and four plankton stations were sampled successfully for a total of 28 samples.
- Spring 2009 Survey: Conducted on March 15-18. All 12 scheduled daytime and nighttime demersal trawl stations and seven plankton stations were sampled successfully for a total of 31 samples.
- Summer 2009 Survey: Conducted June 16-19. Eleven scheduled daytime and nighttime demersal trawl stations and seven plankton stations were sampled successfully for a total of 29 samples.
- Fall 2009 Survey: Conducted September 22-25. All 12 scheduled daytime and nighttime demersal trawl stations and seven plankton

stations were sampled successfully for a total of 31 samples.

Data from all sample cruises, including real-time shrimp and red snapper data from the summer cruise, were entered, verified and uploaded to the SEAMAP data management system. SEAMAP data are available by request, as are the various SEAMAP publications, including environmental and biological atlases of the Gulf of Mexico for each year from 1983 through the present. More information about SEAMAP is available at the GSMFC Web site: <http://www.gsmfc.org>.

### **Oil Spill Contingency Planning and Response**

LDWF's Oil Spill Task Force continued in 2009 to develop and implement plans to protect and restore the state's wildlife, fishery and habitat resources from the adverse effects of oil spills. During this fiscal year, state and federal trustees worked on approximately 20 ongoing oil spill assessment/restoration plans. In addition, the trustees continued to work on developing a way to estimate amounts and impacts of oil spilled as a result of hurricanes Katrina and Rita.

LDWF participates with other state and federal agencies in planning restoration of hazardous materials sites. Two planning activities continued in 2009: Bayou Trepagnier in St. Charles Parish and Calcasieu River in Calcasieu Parish.

LDWF also evaluated and responded as needed to approximately 3,000 oil spill notifications received from Louisiana State Police. These notifications cover a range of hazardous emissions and chemical spills, as well as oil spill related incidents. During 2009, the program was reassigned out of the Office of Fisheries to the Coastal and Nongame Resources Division in the Office of Wildlife. Office of Fisheries will no longer report on this activity.

### **Statewide Hydrographic Monitoring**

LDWF began collecting constant records of salinity, water temperature, and tide level in 1958. This program continued in 2007-2008, cooperatively between LDWF and the U.S. Geological Survey (USGS). Data are collected from 15 stations located from the Pearl River to Calcasieu Pass; details are shown in Table 4. USGS has converted some stations to hurricane resistant hardened platforms to provide more reliable storm surge data across the Louisiana coast.

Field data are collected by USGS, and finished data are provided to LDWF. All sites collect data in near

real-time (four-hour lag), and the data are transmitted via satellite from the instrument in the field to the USGS office in Baton Rouge and downloaded to LDWF's database via the Internet. Both internal and external data requests are filled from this database. Once processed, the data are used to support fishery management by, for example, determining how much suitable area of brown shrimp nursery grounds are available each year, and setting season opening dates.

### **Coastal Wetlands**

In 2009, the Research and Assessment Division continued to work with state and federal agencies to develop strategies for slowing the rate of coastal wetlands loss in Louisiana. Following hurricanes Katrina and Rita in 2005, the state of Louisiana embarked on a joint coastal planning process that includes both hurricane protection and coastal wetlands restoration. U.S. Army Corps of Engineers (USACE) received funding through a series of supplemental appropriations to provide "100-year level flood protection" in the New Orleans vicinity. USACE put forward individual environmental reports in lieu of Environmental Assessments or Environmental Impact Statements to support this goal. Division staff worked to coordinate and review these hurricane reaches and understand their impacts on estuarine and coastal environments. In addition, there were a number of coastal restoration projects moving through the formulation and development process. They include:

- Mississippi River Gulf Outlet (MRGO) restoration and the Violet Diversion studies
- Reauthorization studies of the Caernarvon and Davis Pond Freshwater Diversion projects
- The Morganza to the Gulf hurricane protection levee.
- Deepening of the Houma Navigation Canal
- Donaldsonville to the Gulf hurricane protection levee
- Planning for the Port of Iberia Channel Deepening Project
- The Southwest Louisiana Coastal Plan
- The Calcasieu Dredged Material Management Plan
- The Sabine-Neches Waterway plan

Division staff also participated in evaluation of 10 Coastal Wetlands Planning, Protection and Restoration Act projects for Priority List 18 and 19. Up to four of the 10 projects may be funded annually for engineering and development activities.

### **Seismic Monitoring**

The LDWF Seismic Section was created in 1939 specifically to protect oysters, fish, shrimp and other

**Table 4.** Hydrographic monitoring locations across Louisiana.

<i>LDWF #</i>	<i>USGS #</i>	<i>Station Name</i>	<i>Current Status</i>
105	301001089442600	Bayou Rigolets at LA 90 near Slidell	Online
112	07374526	Black Bay near Snake Island, Point-a-la-Hache, La.	Online
117	3007220891501	Mississippi Sound at Grand Pass	Online
315	073802516	Barataria Pass at Grand Isle	Online
317	07380251	Barataria Bay North of Grand Isle	Online
320	07380335	Little Lake near Cutoff	Online
327	07380330	Bayou Perot at Point Legard near Cutoff	Online
338	073802512	Hackberry Bay NW of Grand Isle	Online
417	073813498	Caillou Bay SW of Cocodrie	Online
518	07381349	Caillou (Sister) Lake SW of Dulac	Online
622	07387040	Vermilion Bay near Cypremont Pt.	Online
623	07387050	Vermilion Bay Bayou Fearman) near Intracoastal City	Online
730	08017095	North Calcasieu Lake near Hackberry	Online
731	08017118	Calcasieu River near Cameron	Online
732	08017044	Calcasieu River at I-10 at Lake Charles	Online

wildlife from the effects of seismic exploration. Seismic exploration uses energy waves to generate a profile of sub-surface reflective layers that help define potential oil and gas traps. The energy waves ground, by air guns that emit a powerful burst of air just above the surface or by large vibrating pads placed on the surface. These projects can occur in sensitive wetlands, water bodies and uplands. Seismic agents monitor geophysical companies to protect Louisiana's fish and wildlife resources by ensuring compliance with LDWF seismic rules and

regulations. During 2009, the Seismic Section monitored 24 projects throughout the state.

**Freshwater Diversion Monitoring**

Louisiana has a number of freshwater diversion structures in place, the largest of which are the Caernarvon and Davis Pond structures. Marine Fisheries personnel monitor the effects of both diversions on the fish and wildlife populations and vegetation in the Breton Sound and Barataria basins respectively.

### **Caernarvon Biological Monitoring**

The structure consists of a five-box culvert with each culvert measuring 15 square feet, and is capable of allowing a maximum discharge of 8000 cubic feet per second (cfs). Caernarvon was completed in 1991. Operations management of the structure is assigned to the Louisiana Office of Coastal Protection and Restoration. LDWF R&A staff participate in the Caernarvon Interagency Advisory Panel deliberations.

### **Davis Pond Biological Monitoring**

The Davis Pond Project began operations in July 2002. Ongoing maintenance designed to address problems with flooding in the ponding area north of Lake Cataouatche limited the amount of freshwater diverted through the structure. Though 2008 was the sixth full year of the post-construction operation, continued problems with diverted water leaving the ponding area caused operators to moderate flow. Despite the moderate discharge amounts, a thriving fresh water fishery has been developing in the upper part of the estuary.

Aquatic Vegetation (SAV) has been flourishing in Lake Cataouatche in the uppermost portion of the basin. For several years now and freshwater fish samples have been increasingly difficult to obtain in Lake Cataouatche due to the restrictive nature of moving a boat and nets through SAV. The majority of the SAV growth in Lake Cataouatche is comprised of coontail, hydrilla, filamentous algae, scattered duckweed, and little bits of common salvinia. There are several travel lanes kept open in the lake by fishermen due to the excellent fishing present in the lake. This increased SAV growth is likely due to the increased flow through the Davis Pond structure.

## **RESEARCH PROGRAM**

### **Fisheries Research Lab**

The Fisheries Research Lab, located in Grand Isle, has a primary mission to conduct the research required to manage Louisiana's marine, estuarine and freshwater fisheries. The laboratory is made available for the use of other LDWF and non-LDWF entities engaged in fisheries research, management, enforcement, coastal restoration and marine education. The lab also serves as a station for Coastal Study Area III in the Barataria Bay estuarine system. The marine laboratory also supports the monitoring of the Freeport Sulfur Mine Reef for the Louisiana Artificial Reef Program, Elmer's Island Wildlife Management Area (WMA) and a local operations center for LDWF enforcement agents.

### **Sport Fish Restoration**

The Federal Aid in Sport Fish Restoration Act, commonly referred to as the Dingell-Johnson Act, passed on Aug. 9, 1950, and was modeled after the Pittman-Robertson Act to create a parallel program for management, conservation and restoration of fishery resources. The Sport Fish Restoration program is funded by revenues collected from the manufacturers of fishing rods, reels, lures, flies and artificial baits, who pay an excise tax on these items to the U.S. Treasury. An amendment to the act in 1984 (Wallop-Breaux Amendment) added new provisions by extending the excise tax to previously untaxed items of sport fishing equipment.

Appropriate state agencies are the only entities eligible to receive grant funds. Each state's share is based 60% on its licensed anglers (fishermen) and 40% on its land and water area. No state receives more than 5% or less than 1% of each year's total apportionment. The program is a cost-reimbursement program, where the state covers the full amount of an approved project then applies for reimbursement through Federal Aid for up to 75% of the project expenses. The state must provide at least 25% of the project costs from a non-federal source. During fiscal year 2008-2009, Louisiana used the marine share of its Sport Fish Restoration Funds in support of the following projects:

### **Marine Boating Access**

Access, Opportunity, and Outreach also creates, enhances, and restores Louisiana's inventory of public boating and fishing access sites. Access sites, such as marinas, boat launches, and fishing piers, serve as doorways to the state's natural resources. In a cooperative effort, LDWF assists local government entities requesting financial assistance in the development and construction of boating and fishing access facilities. To accomplish this, LDWF obligates a portion of its federal funding and Sport Fish Restoration (SFR) funds to match up to 75% of the total costs of these projects. This program funds both freshwater and saltwater projects including the construction of boat ramps, parking areas, docks, bulk heading and fishing piers. A total of 79 projects are complete to date, and another 16 are in various stages of either planning or construction.

Tax revenues from these sites provide economic benefit to the state from consumer use by owners and recreational users. Not strictly limited to site selection and construction oversight duties, the Office of Fisheries also works in concert with local municipalities, media channels and landowners in the marketing and promotion of the sites.



### **Sport Fish Utilization of Artificial Reefs vs. Open Water Habitats (F-130-R)**

Knowledge of fish assemblages and their behavior around constructed oyster reefs is essential to evaluate the cumulative effects on the community of the original habitat induced by deployment, the potential changes in biomass and site fidelity, and for understanding the relationships between natural and artificial habitats needed for management of available resources. The objective of this project is to evaluate the value of limestone-based inshore artificial oyster reefs as essential fish habitat for important marine sport fish species, associated forage species, and benthic invertebrate colonizing species. There were significantly more spotted seatrout at the reef sites than at the mud bottom sites. However, the increase in abundance of spotted seatrout at the reef sites is likely due to increased food availability. In addition, the spotted seatrout were significantly larger at the reef sites. These larger fish are likely due to increased prey availability on the reefs. This research seems to support the anecdotal evidence that fishermen seem to catch more fish at the inshore reef structures, and it is likely that these fish are feeding on those structures.

### **Fisheries and Habitat Assessment of Bayou St. John (F-131-R)**

City Park is a public park located in the heart of New Orleans. It features two historical waterways and a set of man-made lagoons that connect to Lake Pontchartrain. Bayou St. John, Bayou Metairie and the lagoons have an estuarine influence, yet are still fresh enough to harbor freshwater fishes. The objectives of this project are to re-establishing water flow through the Bayou St. John complex to improve water quality and fisheries habitat through plantings and shoreline alteration and determine habitat utilization by sport fish. Preliminary analysis indicate that the sonic-tagged red drum reintroduced to the system avoid the southern portion of Bayou St. John and are associated with open or moving water in areas closer to Lake Pontchartrain. Also, City Park conducted shoreline planting projects for fisheries habitat improvement and purchased a water quality monitoring system.

### **Assessment of Louisiana's Marine Finfishes (F-97)**

High quality data for the stock assessment for various species are essential for making management decisions. This project will determine the spawning ratio of the major recreational saltwater finfish in order to comply with legislative mandates that regulatory action be taken when the Spawning Potential Ratio falls below 30%. The goal is to ensure that the stocks of these finfish are not over-fished.

The spawning potential ratio will be determined using age, growth, and fecundity. LSU will assist with the analysis of samples. Marine Fisheries sampling crews obtain otoliths from important marine fish. Additional work is added as needed to address age, growth, and reproductive biology of selected finfishes to support stock assessment efforts. This project started on July 1, 1999 and is ongoing. As of June 30, 2009, approximately 41 formal stock assessment reports have been completed as a result of this project.

### **Louisiana Marine Sport Fish Investigation, Laboratory Acquisition/Development, Southeast Louisiana (F-108)**

Construction work began on Phase 2 of the project in October 2006 by Circle, Inc. The contractors dredged the marina, installed the sheetpile walls and graded the land. Phase 2 was completed in February 2008. Phase 1 of the project was awarded to Shaw Constructors who began construction on June 4, 2007. Construction was completed in June 2009.

### **Evaluating Sport Fish Use of Created Wetlands in the Atchafalaya Delta (F-107)**

The objective of this project is to evaluate the sport fish use of submerged aquatic vegetation (SAV) and mudflat habitats in the Atchafalaya Delta. During the year, sampling equipment was tested and developed, and sampling sites were identified in the spring due to hurricanes Gustav and Ike causing the SAV to die. It was determined that the most efficient method of sampling the SAV beds is timed electrofishing transects. Two sampling trips were completed in the spring, and processing of the samples had begun at the end of this segment. Samples have been fully processed for the first trip and partially processed for the second trip.

### **Identifying Essential Fish Habitats in Barataria Bay (F-106)**

The objective of this project is to develop a better understanding of the relationship between wetlands habitats and fisheries productivity in Louisiana, and the efforts to maintain and restore both. Several studies have been performed to help achieve this objective including a Before-After-Control-Impact study with data collected by LDWF in Breton Sound, Mean Trophic Level Index in the Gulf of Mexico, multivariate analyses relating nekton biomass distributions to habitat characteristics, DIDSON hydro-acoustic data analysis, and tissue analyses of samples collected during fieldtrips on caloric content, isotopes, and stomach content, and to model the effect of the diversion using Ecopath with Ecosim software. Further analyses will be performed in the

upcoming year pending results from this year's studies.

#### **Marine Sport Fish Tagging Study (F-124)**

This three-year project will develop an alternative estimate of red drum escapement through a tagging study using a diverse partnership among fisheries scientists and volunteer anglers. Angler education is an important component of this project. LSU is a funding and research cooperator. This project started on July 1, 2004 and was completed June 30, 2007. This project was continued for an additional three years, July 1, 2007 - June 30, 2010.

#### **Louisiana Aquatic Outreach (F-136-EO)**

Through outreach efforts, LDWF advises beneficiaries on stewardship and best practices in preserving the unique nature of the state's natural resources. Via a strong presence at youth recreational events, industry related expos, and other state sponsored events, LDWF strives to align its efforts with the desires of citizens and foster a community sense of resource and habitat stewardship.

The Aquatic Outreach Program is designed to inform the public about the SFR Program to show that it is a vital funding source for aquatic access, resource enhancement, and management projects in Louisiana. LDWF participated in 16 public events throughout the year to inform attendees of the department's various SFR projects and the importance of purchasing a fishing license. An assortment of printed materials was distributed at these events, as well as an SFR brochure, designed specifically to highlight the funding cycle and projects SFR funding supports.

In addition to increased participation in public events, other avenues of public education were used including an informative lobby display in the LDWF headquarters building in Baton Rouge. The Fisheries Research Lab personnel provided samples and educational facilities for outreach staff. Lab personnel participated in the WETSHOP program, a "hands-on" environmental program for teachers, and assisted the Pontchartrain Institute for Environmental Sciences with their summer educational program. The new lab facility has a classroom and lab space for instruction and hands-on learning. School and community groups have access to the lab for various educational opportunities.

Through participation in outreach events and distribution of educational materials, the Aquatic Outreach Program message reached over 10,000 Louisiana citizens.

#### **LSU Bivalve Hatchery**

The Grand Isle Bivalve Hatchery, led by a university scientist, conducts many important experiments for the oyster fishery in the Gulf of Mexico. The hatchery is responsible for trying to develop disease resistant stocks for distributing to oyster leases, produce oyster larvae for seeding on leases and test innovative grow-out techniques. The scientists working on this project use lab space at the Fisheries Research Lab.

#### **Environmental Protection Agency's (EPA) Environmental Monitoring and Assessment Program (EMAP)**

Lab biologists collect data for EMAP, which is a program within the EPA. EMAP provides quantitative assessment of the regional extent of environmental problems measuring status and change in selected indicators of ecological condition. EMAP provides a strategy to identify and bound the extent, magnitude and location of environmental degradation and improvement on a regional scale.

#### **Stock Assessment**

The following projects and activities were conducted during 2009 by the Research and Assessment Division's Stock Assessment Group.

- Wrote research proposal entitled "Estimating Effort and Bycatch for the Inshore Shrimp Fishery in Barataria Bay, Louisiana" (Project PIs: James H. Cowan, Shaye E. Sable, Benny L. Galloway). Submitted to Louisiana Sea Grant Program for approximately \$150,000.
- Wrote research proposal entitled "Evaluating the Regional Stock Status and Population Attributes of Gray Snapper (*Lutjanus griseus*) in Louisiana" (Project PIs: Shaye E. Sable and Myron B. Fischer). Submitted to Cooperative Research Program (NOAA-NMFS-SE-2010-2001762) for approximately \$92,000, and Saltonstall-Kennedy Grant Program (NOAA-NMFS-FHQ-2010-2002039) for approximately \$169,000.
- Contract with USACE to simulate fish population responses for six tidal marsh species (e.g., grass shrimp, blue crab, gulf killifish) to changing environmental conditions (i.e., salinity, temperature, DO, water levels) due to the Caernarvon Diversion.
- First round of simulations completed with individual-based model constructed and further developed by Sable and linked to ADH model for the Caernarvon Diversion.

- Sable attended first project meeting and presented model findings in May 2009
- Data mining and analysis of LDWF's fisheries independent sampling program (e.g., shrimp trawl data, spotted seatrout in marine gillnets and seines, creel data). Included bootstrapping of spotted seatrout CPUE data from gill nets to determine sample size requirements.
- Created sample overlay maps showing overlap between Office of Coastal Protection and Restoration, LDEQ and LDWF sample stations (under direction of Ronald Lachica).
- Fish community analysis of Davis Pond data for streamlining purposes to see if stations and samples can be reduced yet still accurately assess fish community characteristics
- Maintain contract initiated by Pausina and Hoar with Joe Powers "Assessment Advice on Louisiana Marine Finfishes: Analytical Development, Support and Assessment Research."
- Powers gave three one-hour seminars to LDWF field biologists on MRFFS and creel data, age and growth data and tagging methods.
- Sable, Alford, Lachica and West attended three one-day work sessions with Powers on stock assessment modeling (e.g., mortality, catch-at-age, VPA, growth models)

## **ENVIRONMENTAL AND HABITAT DISASTER RECOVERY**

The Office of Fisheries strives to maintain Louisiana's abundant fishery resources and its commercial and recreational opportunities by seeking and efficiently implementing federally funded programs to aid the recreational and commercial fishing industries in recovery from natural and man-made disasters. Since Hurricane Andrew in 1992, the Office of Fisheries has received continual federal appropriations to assist the commercial and recreational fishing industries during times of declared disasters and aid these industries in recovery from the devastation. The recovery efforts include repairs to state fish hatcheries, building of artificial reefs and grant assistance awarded to vital fishing and boating access points.

## **EMERGENCY DISASTER RELIEF PROGRAM (EDRP) 1**

In response to the hurricanes of 2005, Congress authorized its first fishery disaster relief in June 2006 (Public Law 109-234). On Aug. 25, 2006, the U.S. Department of Commerce announced the issuing of a grant to the GSMFC to aid Louisiana, Mississippi, Alabama, Texas and Florida in rebuilding fisheries. The National Oceanic and Atmospheric Administration (NOAA) granted funds to GSMFC for further subgrant to the Gulf Coast states. Louisiana's subgrant awards are: OR-RRR-020-2006-01 entitled "Reseeding, Rehabilitating and Restoring Oyster Reefs" (Job 1); OB-SGR-021-2006-01 entitled "Rehabilitating Oyster Bed and Shrimp Grounds" (Job 2); and CR-M-022-2006-01 entitled "Cooperative Research to Monitor Recovery of Gulf Fisheries" (Job 3).

Following the passage of hurricanes Katrina and Rita, fishermen from across the coast formed the Louisiana Fishing Communities Rebuilding Coalition and identified funding priorities for the recovery of Louisiana's commercial and recreational fisheries. Priorities including debris removal and the evaluation of the status and health of natural resources are addressed by this congressional appropriation.

Projects were designed to be auditable and accountable, and to include local fishing communities and parishes or other local entities to best use local resources. General planning meetings were held among project staff on a regular and continuing basis throughout the planning and implementation period. Scoping and planning meetings were held with state and federal agencies and representatives of the fishing industries to identify needs and opportunities.

### ***Job 1: Reseeding, Rehabilitation and Restoration of Oyster Grounds—Subgrant OR-RRR-020-206-01***

#### **Private Oyster Lease Rehabilitation (POLR) Program**

The POLR program is an approximately \$12 million program designed to provide reimbursement assistance to private leaseholders for the performance of rehabilitation activities on privately-leased water bottoms. Rehabilitation activities available to the leaseholder under the POLR program include: sediment/debris removal, cultch deposition, resurveying/remarking of leases, relaying oysters, bedding (i.e., transplanting) oysters, and replacing lost/damaged lease records.

The program reimburses participating leaseholders (contracting parties) for costs associated with

rehabilitation activities up to a qualifying amount provided that the leaseholder supplies supporting evidence that documents the rehabilitation activities were performed.

The POLR program continues to follow strict audit and accountability measures, and has required that participating leaseholders sign a Cooperative Endeavor Agreement with the Louisiana Department of Wildlife and Fisheries (LDWF). This agreement outlines the terms of the POLR program and the amount of reimbursement the leaseholder qualifies to receive (upon the delivery of appropriate supporting documentation). In essence, the leaseholder signs the agreement, travels to his leases and performs the rehabilitation activities, submits a reimbursement request along with appropriate supporting documentation, and is then reimbursed for his associated costs (certain limits do apply, i.e. daily vessel rates, etc.).

Leaseholders began signing POLR agreements on May 25, 2007, when LDWF held the first of five public meetings with all interested leaseholders. The final public meeting was held in Baton Rouge at LDWF headquarters on Oct. 18, 2007. At these meetings, interested leaseholders proceeded through three stations in order to receive general information about the program, check documents showing person has the legal right to sign the agreement for the leaseholder, and sign the POLR agreement. In addition to the five public meetings, LDWF scheduled numerous one-on-one interviews with participating leaseholders for the purpose of signing POLR agreements. Jan. 18, 2008 was the final deadline for a leaseholder to sign the POLR Cooperative Endeavor Agreement.

The POLR program continued during fiscal year 2008-2009 with approximately 580 oyster leaseholders participating and over \$3 million in reimbursement assistance claims paid to participating leaseholders (as of June 30, 2009) for documented rehabilitation work including the following totals for each reimbursable activity (Table 5). As of the end of the fiscal year, 198 participants still had a funding balance remaining on their contract and signed contract amendments to extend their contract deadline to Dec. 31, 2009.

The POLR program as described above is monitored both in the office and in the field. LDWF continues to use a staff of four working directly on this program in the office, with additional staff performing administrative and field-monitoring duties. LDWF Marine Fisheries field staff members are trained to

assist with and to perform random field inspections of POLR-related rehabilitation activities. Office staff collect call-in reports from the toll-free call center, determine where rehabilitation work will occur, and distribute information electronically to field staff for field monitoring purposes. Field staff performs monitoring with assistance from office staff when needed. On dedicated field monitoring days, field staff will perform field inspections with the main goal of monitoring and documenting POLR activities. During non-dedicated field work, field staff will

**Table 5.** POLR breakdown of payments by activity.

<i>Activity</i>	<i>FY 2008-2009</i>
Sediment/Debris Removal	\$1,193,638.44
Cultch Deposition	\$586,167.55
Remarking/Resurveying	\$209,880.17
Relaying Oysters	\$52,400.00
Bedding Oysters	\$966,857.53
Replacing Lost/Damaged LDWF Lease Documents	\$4,310.00
<b>Total Reimbursement</b>	<b>\$3,013,253.69</b>

document POLR activities when a POLR vessel is encountered during the normal course of field work. During fiscal year 2008-2009, approximately 32% of all POLR work days reported to the toll-free call center by POLR participants was monitored in the field by LDWF staff.

**Native Stock Oyster Hatchery**

Plans continue to be developed to incorporate a native oyster hatchery at the new LDWF Fisheries Research Lab on Grand Isle, La. The construction of this laboratory was completed during fiscal year 2008-2009, and space was allocated for a native stock oyster hatchery. LDWF has received input on hatchery design from researchers, including LSU oyster hatchery researchers. Necessary hatchery equipment is planned to be purchased using other funding sources, and the hatchery should be in full working order by spring 2010.

### **Oyster Lease Data and Records Management**

A contract to develop a data and records management system for the Oyster Lease Survey Section has been issued to Aero-Metric. Several meetings have resulted in the testing of data dump conversions and reviewing samples of documents to determine what type of scanner will be the best for the project.

### **Public Oyster Resource Reseeding, Rehabilitation and Restoration**

Side scan sonar surveys of public oyster grounds - A side-scan sonar survey and water bottom assessment of important areas of the public oyster grounds was completed during fiscal year 2008-2009. Water bottom characteristics and oyster densities in selected areas of Calcasieu and Sabine lakes (Cameron Parish) were determined by a private contractor, ENCOS, Inc. The side-scan sonar and water bottom assessment determined that 3,907.1 acres of reef/shell bottoms exist in the surveyed area of Calcasieu Lake, while the surveyed area of Sabine Lake contains 1,479.5 acres of reef/shell bottoms. Oyster sampling on these bottoms found that almost 1.1 million barrels of oysters were present in Calcasieu Lake, and nearly 700,000 barrels of oysters were present in Sabine Lake. ENCOS provided a detailed report of the water bottom assessment (survey) to LDWF as part of the contract requirements.

Cultch placement on public oyster grounds - Four cultch planting (reef rehabilitation and/or construction) projects were undertaken during 2009 using EDRP funds. Project specifications were developed, and bid packages were published during the fiscal year. Low-bid contracts for both Sister (Caillou) Lake (Terrebonne Parish) and Black Bay (Plaquemines Parish) were awarded to Pontchartrain Materials Corporation. The winning bids for both Lake Chien (Terrebonne Parish) and Mississippi Sound (St. Bernard Parish) were awarded to Bertucci Contracting Co. LLC. The permitting process for the rehabilitation projects was also finalized during the fiscal year.

All four projects were accomplished by the contractors with close, daily oversight by LDWF biologists. The Black Bay site consisted of approximately 22,500 cubic yards of crushed limestone spread over 243 acres of water bottoms at a cost of approximately \$1.35 million. A similar project was completed in Sister Lake where approximately 22,600 cubic yards of crushed limestone was placed on 156 acres at a cost of approximately \$1.67 million. The Mississippi Sound cultch plant consisted of approximately 22,300 cubic yards of crushed limestone placed on approximately

45 acres of water bottoms at a cost of approximately \$1.37 million. An additional 22 acres were planted with approximately 11,350 cubic yards of cultch material in the Lake Chien Public Oyster Seed Ground at a cost of just over \$821,000. LDWF biologists, vehicles and vessels participated in these projects. The biological sampling design was developed during 2009 to track the development trajectory of oyster resources on the 2009 cultch plants. Sampling is scheduled to begin during the next fiscal year.

### **Biological Monitoring of Existing Cultch Plants**

Biological monitoring of three previous, federally-funded, cultch planting projects (Black Bay, Mississippi Sound and Hackberry Bay) continued during fiscal year 2008-2009, and June 2009 quantitative sampling indicated that the cultch plants were successful in producing harvestable quantities of oysters. On the 200-acre 2007 Mississippi Sound (at Turkey Bayou) cultch plant, sample results indicated approximately 9,800 barrels of seed oysters and 7,200 barrels of market-size oysters were present. Sample results from the 200-acre 2007 Black Bay cultch plant location (near Lonesome Island), indicated the presence of approximately 71,000 barrels of seed oysters and 29,000 barrels of marketable oysters. Biological sampling on the 50-acre 2008 Hackberry Bay cultch plant indicated approximately 3,800 barrels of seed oysters.

### ***Job 2: Rehabilitating Oyster Bed and Shrimp Grounds—Subgrant OB-SGR-021-2006-01***

#### **Underwater Obstructions/Wet Debris Removal**

Identifying underwater obstructions on fishing grounds - LDWF worked with other state and federal agencies using data and maps provided by NOAA and others to identify underwater obstructions which are fouling the fishing grounds or access channels for fishing vessels.

Enhancing state underwater obstruction removal program - LDWF terminated an inter-agency agreement with the Louisiana Department of Natural Resources Office of Conservation in April 2008 for a contract for removal of underwater obstructions within state waters. With the approval of GSMFC, funding for this task has been re-directed to implement cooperative research programs that enhance LDWF's ability to monitor recovery of Gulf of Mexico fisheries.

#### **Debris Removal**

LDWF has continued work on the removal of marine debris in state waters under a contract awarded to

Crowder-Gulf Joint Venture, Inc. The contract is structured whereby the contractor is assigned debris removal within individual grids measuring four square miles for a fixed price of \$37,100 per grid. The contractor uses side scan sonar equipment to survey all water bottoms within each assigned grid to identify the location of debris contacts (waters less than 3 feet in depth are not surveyed due to sonar's limited effectiveness in shallow waters). Contractor is required to use Louisiana resident licensed vessels and crews comprised of Louisiana resident fishermen and charter boat operators to retrieve debris. Marine debris removal work began in July 2007 within portions of Lake Borgne, followed by clean-ups within portions of Lake Pontchartrain (Middle Ground), Lake St. Catherine, Calcasieu Lake and Vermilion, Cote Blanche, Barataria and Caminada bays. Through June 2009, approximately 440 square miles of the Louisiana's shrimp fishing grounds have been cleared of debris at a cost of \$4.081 million.

#### **Coastal Habitat Rehabilitation and Enhancement**

Two projects are being conducted by the LSU AgCenter:

- Use of Bio-Engineered Reefs for Shore Protection in Coastal Louisiana: Evaluation of Shore Protection and Ecosystem Trade-offs (contracted to LSU AgCenter) - This project compares the effectiveness, sustainability and ecosystem effects of bio-engineered oyster reefs for shoreline protection along eroding medium and low energy sheltered shorelines. Shell oyster reefs were created in Caillou Lake (Sister Lake) in the Terrebonne Basin. The experimental design consists of different reef configurations in medium and low energy sites along the lake shore. In addition, off-bottom oyster racks are also deployed. Data collected at these sites measured: oyster growth rate; cumulative mortality; incidence of *Perkinsus marinus* and MSX infections; oyster condition; spat recruitment and settlement; nekton biomass; relative shoreline position; vegetation; soil percent organic matter; and Chlorophyll. The goal is to evaluate the effectiveness of bio-engineered reefs as shoreline protection measures. The project is in its second year.
- Evaluating the effect of marsh management structures on nekton utilization of salt marshes: A novel approach using DIDSON acoustic imaging technology (contracted to LSU AgCenter) - This project examines the effects of water control structures on nekton movement using dual-frequency identification sonar (DIDSON) acoustic imaging technology. The

project is specifically investigating the role of tide stage, diel periodicity and season on fine scale temporal and spatial patterns of nekton movement through water control structures in salt marshes. The project has examined a site in Hopedale, La. and several sites on Calcasieu Lake. The goal is to enhance our understanding of how fish move through these water control structures in the hopes that the findings may lead to development of structures that allow for greater movement. The project is in its second year.

#### **Data Management System Improvements**

LDWF issued an RFP in June of 2009 for migration of the existing data management system design and implementation. The LDWF legacy system is over 20 years old and is running on an aging platform. The RFP was developed to assist LDWF in cataloging existing data bases, convert all data bases into relational SQL tables and migrate existing SAS code to an updated SAS IT server version that will be able to access the SQL tables.

#### ***Job 3: Cooperative Research to Monitor Recovery of Gulf Fisheries—Subgrant CR-M-022-2006-01***

#### **Fishery-Independent Monitoring of the Gulf Fishery Stocks**

LDWF contracted with the University of New Orleans to collect and enter fishery-independent data within the Lake Pontchartrain system. Sampling is conducted using standard LDWF protocols at six stations located throughout Lake Pontchartrain and include sampling for both finfish and crustaceans. These data are being used by LDWF to evaluate and manage the recovery of the estuarine fisheries following hurricanes Katrina and Rita. These data are also being used to establish a new "baseline" to further assess any changes within this important area. During the reporting period, data were used to assess the impacts of the Bonnet Carre' Spillway opening in 2008.

#### **SALT Recreational For-Hire Industry Survey**

The survey was administered to 591 holders of a 2008 Louisiana resident charter captain license. The survey is designed to collect vital data on the effects of hurricanes Katrina and Rita and on the current status of Louisiana's charter industry, as well as provide a method of distributing funds appropriated for charter industry relief. Data compiled from the survey will provide a better understanding of the industry status at present, what it needs to survive, the short-term and long-term impacts of the 2005

hurricanes, as well as other factors affecting the industry.

LDWF reviewed a proposal by the LSU Louisiana Sea Grant office to develop and administer the survey. LDWF is currently developing a contract in conjunction with the LSU Louisiana Sea Grant office based on this proposal and LDWF needs for this program. LDWF staff biologists and economists developed a draft survey instrument to be presented to LSU Louisiana Sea Grant office as a foundation for the survey. Approximately \$148,200 of the 2006 Emergency Supplemental funds have been set aside for this project to cover costs of survey development and implementation, as well as cooperative research payments to those charter captains that participate.

#### **Pilot Voluntary For-Hire Reporting System**

LDWF contracted with BlueFin data to develop the voluntary for-hire reporting software. The software is computer based and designed to collect information on the number of for-hire anglers, residence of anglers, time fishing, fishing gear, area fished and information on each species caught and the disposition of each species. In an effort to make the software more attractive to the for-hire industry, several additional features were added, such as a calendar feature, additional windows to log expenses and a trip summary window. Only the data effort data will be transmitted to LDWF.

A total of eight outreach meetings were held across the state to introduce the for-hire captains to the software. These meeting were also an opportunity for the for-hire industry to provide feedback to LDWF on additional features or concerns they may have concerning the program. To date, 43 for-hire captains have requested and received a free copy of the software.

#### **Cooperative Research Surveys to Monitor Recovery of Gulf Fisheries**

LDWF developed a \$15.7 million cooperative research program to monitor the recovery of Louisiana commercial fisheries impacted by hurricanes Katrina and Rita in 2005 and Gustav and Ike in 2008. Funding for this program came from a \$52.9 million federal fisheries disaster assistance grant from NOAA (NOAA Grant Number NA06NMF4540319) through the GSMFC. LDWF will provide compensation to qualified Louisiana resident commercial fishermen and wholesale/retail seafood dealers who submit completed socioeconomic surveys. These surveys were designed by LDWF economists to capture information on the

recovery status of the state's commercial fisheries and fishing industries.

In order to be considered eligible to participate in this program, fishermen and dealers must meet one of the following requirements:

- Louisiana resident commercial fishermen who held a valid 2008 resident commercial fisherman's license and had combined trip ticket-reported sales valued at \$5,948 or more during the three-year period Sept. 1, 2005 - Aug. 31, 2008. All saltwater species landings (shrimp, crab, oyster, menhaden and saltwater finfish) are included in total sales, regardless of the fisherman's parish of residence. Freshwater species landings (freshwater finfish and wild-caught crawfish) are included only if the fisherman resided in any of the 26 LDWF-identified hurricane-impacted parishes.
- Louisiana resident wholesale/retail seafood dealers who held a valid 2008 resident wholesale/retail seafood dealer's license and had combined trip ticket reported purchases valued at \$20,756 or more during the three-year period Sept. 1, 2005 - Aug. 31, 2008. All saltwater species landings (shrimp, crab, oyster, menhaden and saltwater finfish) are included in total sales, regardless of the wholesale/retail dealer's parish of operation. Freshwater species landings (freshwater finfish and wild-caught crawfish) are included only if the wholesale/retail dealer operation was located in any of the 26 LDWF-identified hurricane-impacted parishes.
- The 26 LDWF-identified hurricane-impacted parishes are: Acadia, Cameron, Lafayette, Pointe Coupee, St. Martin, Ascension, Iberia, Lafourche, St. Bernard, St. Mary, Assumption, Iberville, Livingston, St. Charles, St. Tammany, Avoyelles, Jefferson, Orleans, St. James, Tangipahoa, Calcasieu, Jeff. Davis, Plaquemine, St. John, Terrebonne, Vermilion.

Eligible commercial fishermen and wholesale/retail dealers received information packets during April 2009 including instructions, application forms and a business-reply envelope. Once required forms were returned, participants received an additional packet containing the Cooperative Research Survey, detailed instructions for completing the survey and a self-addressed business reply envelope to be used in returning the completed survey.

Program parameters were developed, survey instruments created, and coordination with South Central Planning and Development Commission (SCPDC) and an external accounting firm was

undertaken to assure clear lines of communication and duties were developed and that resources were available for all necessary tasks. The SCPDC and affiliated planning districts receive and process all information about this cooperative research program. Any questions concerning eligibility, requests for information, etc. are handled by the SCPDC via telephone, mail or the Web site set up for the program at [www.scpdc.org/fisheriesassistance](http://www.scpdc.org/fisheriesassistance).

LDWF hosted a series of public meetings in coastal communities beginning April 21, 2009 to present information about the program and review instructions on participating in and completing cooperative research surveys.

Review of the surveys for completeness by SCPDC, for consistency by LDWF and payment of surveyed participants began in the months following the time period of this report.

A universe of 4,828 potential participants was identified, including 4,433 commercial harvesters and 395 wholesale/retail dealers. Through December 2009, a total of 3,409 entities had applied to participate in the program, 2,753 surveys had been received from those participants, of which 976 had been deemed complete and internally consistent so that they could be reimbursed for their efforts. The program has been extended into 2010 so that additional potential participants can participate in the program and return surveys.

**EDRP2 PROGRAM  
ASSISTANCE TO COMMERCIAL AND  
RECREATIONAL FISHERIES–SUB GRANT  
ACF-025-2007-02**

Congress authorized additional funding (\$41.3 million) under the U.S. Troop Readiness, Veterans' Care, Katrina Recovery and Iraq Accountability Appropriations Act (Public Law 110-28) to provide assistance to the Gulf of Mexico commercial and recreational fishing industries affected by hurricanes Katrina and Rita. The appropriation to GSMFC for sub grant to the states was approved in August 2007, and Louisiana received legislative budget authority in December 2007. Under this GSMFC Emergency Disaster Recovery Program (EDRP II), Louisiana's two sub grant awards are:

- Economic assistance to commercial fishers, charter boat operators, vessel owners and wholesale/retail seafood dealers (total to LDWF Office of Fisheries = \$40 million).
- Domestic Product Marketing and Promotion of Louisiana Wild-Caught Seafood (total to LDWF

Seafood Promotion and Marketing Board = \$1.3 million).

**Assistance to Commercial Fisheries**

LDWF contracted with SCPDC to assist with program administration by identifying and receiving responses from eligible participants who chose to participate in the LDWF economic assistance payment program. LDWF developed and provided eligible Louisiana resident commercial fishermen, commercial fishing vessel license holders, charter boat operators and wholesale/retail seafood dealers with a notification of eligibility packet. The packet was mailed to 8,111 commercial fishing participants and 721 charter guides. The packets included background information about the program and the funding source, and a unique, individual "Qualification for Economic Assistance Payments and Statement of Certification Form" identifying each specific economic assistance payment component the participant is qualified to receive. This form must be completed and returned to SCPDC in order to receive assistance payments. This form also includes a statement certifying that the applicant has not been found in violation of any turtle excluder device (TED) or bycatch reduction device (BRD) regulation by either federal or state law enforcement agencies if Louisiana trip ticket data indicated landings of trawl-caught shrimp during the qualifying period. Packets also contained additional instructions, information on the allocation of funds between and among the various fishing sectors and additional forms including a sample "Board Resolution" which is required if the participant is an incorporated business, a "Trip Ticket Report Application Request Form" for use if a participant wants to request a copy of their personal trip ticket report data, and a federal "Form W-9."

LDWF also entered into contract with Postlethwaite and Netterville, a professional accounting firm, to assist with processing payments and developing federal 1099 forms to qualified participants.

The assistance payment program was developed with strict accountability standards. The following risks were considered in program development, although this list is not intended to include every risk that may be inherent within the process:

- Disbursing funds to an ineligible individual/entity
- Disbursing funds to an incorrect individual/entity
- Fraudulently changing disbursement amount on a payment
- Lack of inadequate, inconsistent or fraudulent documentation



- Disbursement recorded to incorrect category
- Duplicate line item disbursement
- Unauditable controls
- Loss of documentation
- Over- or underpayment to individual/entity

The process addresses disbursements to qualified, eligible individuals/entities (defined as resident licensed charter boat guides, resident commercial fishermen, resident commercial fishing vessel license holders in the shrimp, oyster, saltwater fish and menhaden fisheries, and resident wholesale/retail seafood dealers).

A multi-user data management system was developed to capture the data related to these disbursements. The system has a secured connection between offices using an encrypted VPN connection on a server placed in a secure facility to mitigate potential exposure from unsolicited individuals. This accounting system allows the following:

- A user (SCPDC) enters qualification details into the data system from information included in the packets mailed to and returned by potential program participants.
- Another user (LDWF staff) to review the data entered.
- Another user (LDWF program staff) to approve the data entered.
- A user (LDWF staff) to run a report to compile a distribution amount for payment.
- Another user (LDWF program staff, administration, executive staff) to approve the payment, which includes payment details (bank account data).
- Another user (Disbursing Agent – Postlethwaite & Netterville) with the ability to execute payment by paper check or through an EFT upload to a financial institution.

SCPDC began certifying qualifying individuals/entities (step 1 in the payment process above) during May 2008, and disbursement of assistance payments to qualifying commercial fishers, commercial fishing vessel license holders, wholesale/retail seafood dealers and charter boat operators who were active in the fisheries during the qualifying period (September 2004 - August 2005) began in late June. LDWF paid direct assistance to eligible program participants through fiscal year 2008-2009 (Table 2).

Program activities were disrupted by the passage of Hurricane Gustav, which crossed the central Louisiana coast on Sept. 1, 2008, followed by

Hurricane Ike which crossed the Texas coast on Sept. 13. LDWF headquarters in Baton Rouge closed Aug. 29 - Sept. 4, 2008 for Hurricane Gustav and again on Sept. 12, 2008 for Hurricane Ike. LDWF field offices in coastal parishes were closed for varying amounts of time depending on location between Sept. 1-21. All LDWF activities immediately prior to, and for several days after, storm passages were directed toward support of the state's emergency response plan for search and rescue. All LDWF operational activities were severely disrupted during September. In addition, the office of the South Central Planning and Development Commission was commandeered by the Terrebonne Parish Office of Emergency Preparedness for use as their emergency response command center during the response to Hurricane Ike; SCPDC POLR staff operated in temporary office space from Sept. 11-29, 2008. Postlethwaite & Netterville's office also was closed during early September due to the heavy damage inflicted on Baton Rouge by Hurricane Gustav. Following both storms, LDWF, in conjunction with GSMFC and NOAA Fisheries, began re-evaluating the scopes of work for EDRP1 projects in light of the continuing needs of Gulf of Mexico fisheries still attempting to recover from the impacts of hurricanes Katrina, Rita and Wilma in 2005.

As required by Section 115(c) (1) of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006, 2% of the available appropriation was disbursed to fishermen with a demonstrated record of compliance with turtle excluder and bycatch reduction device regulations. LDWF commercial license and trip ticket report files were used to identify shrimp fishermen who were subject to turtle excluder and bycatch reduction device regulations (who reported sales of trawl-caught shrimp on LDWF trip tickets) in the period between September 2004 and August 2005.

Disbursement of assistance payments to qualifying fishermen continued through this reporting period. To date, 1,126 of the 1,556 potentially eligible shrimp fishermen have been paid a total of \$597,906 for TED/BRD compliance. A summary of payments is included in Table 6. A total of \$825,460 was allocated to TED/BRD compliance payments. In order to fully expend the 2% of the appropriation as required, the balance of TED/BRD funds (\$227,554) will be divided equally as a supplemental payment among the 1,126 who have already received the initial \$531 TED/BRD payment.

**Table 6.** Total Louisiana disbursements made through December 2009 of EDRP II.

<i>Fishery</i>	<i>Allocation</i>	<i>Tier</i>	<i>Payment amount</i>	<i>Number eligible</i>	<i>Number of Payments To-date</i>	<i>Total amount of payments To-date</i>
<b>COMMERCIAL FISHERIES TOTAL ALLOCATION \$26,905,942</b>						
<b>Fishers/Vessels</b>						
<b>Base Payments</b>	<b>\$583,450</b>		<b>\$50</b>	<b>11,669</b>	<b>7,478</b>	<b>\$373,900</b>
<b>Base Payment Balance</b>	<b>\$209,550</b>					
<b>Saltwater Fisheries</b>						
<b>Shrimp Fishers</b>		Tier 1	\$201	2,777	450	\$90,450
		Tier 2	\$854	1,983	786	\$829,230
		Tier 3	\$3,755	992	892	\$4,290,520
<b>Shrimp Vessels</b>		Tier 1	\$222	2,361	453	\$100,566
		Tier 2	\$926	1,684	708	\$812,784
		Tier 3	\$3,673	816	773	\$3,726,633
<b>TED/BRD Payments</b>	<b>\$825,460</b>		<b>\$531</b>	<b>1,556</b>	<b>1,126</b>	<b>\$597,906</b>
<b>TED/BRD Balance</b>	<b>\$277,554</b>					
<b>Shrimp Total</b>	<b>\$11,882,409</b>				<b>5,188</b>	<b>\$10,448,089</b>
<b>Shrimp Balance</b>	<b>\$1,434,320</b>					
<b>Oyster Fishers</b>		Tier 1	\$486	590	111	\$53,946
		Tier 2	\$1,295	421	153	\$272,943
		Tier 3	\$4,505	211	340	\$2,137,240
<b>Oyster Vessels</b>		Tier 1	\$423	523	123	\$52,029
		Tier 2	\$1,458	373	158	\$297,198
		Tier 3	\$4,405	185	0	\$0
<b>Oyster Total</b>	<b>\$3,362,946</b>				<b>885</b>	<b>\$2,812,906</b>
<b>Oyster Balance</b>	<b>\$550,040</b>					
<b>Marine Finfish Fishers</b>		Tier 1	\$65	770	172	\$11,180
		Tier 2	\$262	550	206	\$67,362
		Tier 3	\$3,332	275	240	\$878,160

<i>Fishery</i>	<i>Allocation</i>	<i>Tier</i>	<i>Payment amount</i>	<i>Number eligible</i>	<i>Number of Payments To-date</i>	<i>Total amount of payments To-date</i>
<b>Marine Finfish Vessels</b>		Tier 1	\$70	629	173	\$12,110
		Tier 2	\$298	475	211	\$77,648
		Tier 3	\$2,933	246	232	\$765,832
<b>Marine Finfish Total</b>	<b>\$2,017,768</b>				<b>1.234</b>	<b>\$1,812,292</b>
<b>Marine Finfish Balance</b>	<b>\$205,476</b>					
<b>Menhaden Vessels</b>		Tier 1	\$35,970	*	19	\$683,430
		Tier 2	\$100,414	*	8	\$1,091,072
		Tier 3	\$124,931	*	9	\$2,351,829
<b>Menhaden Total</b>	<b>\$4,090,357</b>				<b>36</b>	<b>\$4,056,047</b>
<b>Menhaden Balance</b>	<b>\$34,310</b>					
<b>Remaining Saltwater Fisheries</b>						
<b>Crab Fishers</b>		Tier 1	\$259	1,170	221	\$57,293
		Tier 2	\$1,020	836	323	\$413,117
		Tier 3	\$3,136	418	371	\$1,637,965
<b>Crab Total</b>	<b>\$2,466,160</b>				<b>915</b>	<b>\$2,108,321</b>
<b>Crab Balance</b>	<b>\$357,839</b>					
<b>Freshwater Fisheries</b>						
<b>Freshwater Finfish Fishers</b>		Tier 1	\$57	480	64	\$3,648
		Tier 2	\$193	343	96	\$24,000
		Tier 3	\$785	172	120	\$124,200
<b>Freshwater Finfish Total</b>	<b>\$228,819</b>				<b>280</b>	<b>\$151,848</b>
<b>Freshwater Finfish Balance</b>	<b>\$76,971</b>					
<b>Wild-caught Crawfish Fishers</b>		Tier 1	\$137	624	65	\$8,905
		Tier 2	\$369	446	127	\$64,262
		Tier 3	\$936	223	170	\$249,730
<b>Wild-caught Crawfish Total</b>	<b>\$464,572</b>				<b>362</b>	<b>\$322,897</b>

<i>Fishery</i>	<i>Allocation</i>	<i>Tier</i>	<i>Payment amount</i>	<i>Number eligible</i>	<i>Number of Payments To-date</i>	<i>Total amount of payments To-date</i>
<i>Wild-caught Crawfish Balance</i>	<i>\$141,675</i>					
<b>WHOLESALE/RETAIL DEALERS TOTAL ALLOCATION \$1,216,475</b>						
<b>Base Payments</b>	\$63,400		\$100	634	394	\$39,400
<i>Base Payment Balance</i>	<i>\$24,000</i>					
<b>Wholesale/Retail Dealers</b>		Tier 1	\$195	441	72	\$14,040
		Tier 2	\$718	312	98	\$89,474
		Tier 3	\$5,737	158	136	\$904,400
<i>Wholesale/Retail Dealers Total</i>	<i>\$1,216,475</i>				<b>306</b>	<b>\$1,047,314</b>
<i>Dealers Balance</i>	<i>\$169,161</i>					
<b>RECREATIONAL FISHERY TOTAL ALLOCATION \$529,586</b>						
<b>Charter Boat Guides</b>			\$735	721	443	\$325,605
<i>Charter Boat Total</i>	<i>\$529,586</i>				<b>443</b>	<b>\$325,605</b>
<i>Charter Boat Balance</i>	<i>\$203,981</i>					
<b>TOTAL</b>	<b>\$26,905,942</b>				<b>17,127</b>	<b>\$23,459,219</b>
<b>TOTAL REMAINING BALANCE</b>	<b>\$3,446,723</b>					

## ASSISTANCE TO RECREATIONAL FISHERIES

### Marina Program

A program designed to assist marinas was developed and implemented to provide economic assistance to the saltwater recreational fishing industry for losses incurred due to hurricanes Katrina and Rita. Eligibility criteria for participating in the program are as follows:

- The marina facility must be open to the general public to provide access to the state's waterways for the purpose of accommodating the needs of recreational saltwater fishermen.

- The facility must have been listed on the LDWF Marine Recreational Fishing Statistical Survey (MRFSS) site register during 2004-2005.
- The owners/lessees of the marina must have allowed LDWF biologists to conduct scheduled MRFSS at their facility during 2008.
- The marina facility must be privately owned. (Publicly owned facilities are not eligible).

The award amount is tiered based on predetermined fishing pressure estimated at each facility, and on measured or estimated storm surge at the facility resulting from hurricanes Katrina or Rita. Payment tier levels are:

Tier 1 - \$11,541.14  
Tier 2 - \$28,599.57  
Tier 3 - \$51,378.57  
Tier 4 - \$87,574.00  
Tier 5 - \$136,093.81

Owners/lessees must complete and submit a socioeconomic survey for payment.

Through the reporting period, a total of 60 marinas were pre-qualified to participate in the assistance program and 59 marinas have been paid a total of \$3,315,366. One "hostile" facility has returned a Memorandum of Understanding certifying that they will be cooperative in the MRFSS program and was awarded a base payment of \$5,770.57. An additional 10 facilities requested to be evaluated for eligibility. It was determined that seven of the 10 were eligible to participate in the program. Two facilities have requested reconsideration of their tier status.

#### **Recreational Access - Repairs to Elmer's Island Road**

LDWF worked in cooperation with the Louisiana Department of Transportation and Development (DOTD) to restore access to an important coastal waterfront through the repairs of a three-mile limestone road. This road was severely damaged during Hurricane Katrina, making it impassible due to large breaches. The repair of these breaches has allowed for vehicle passage and access to the important coastal waterfront.

#### **Baitfish Disease Investigations**

LDWF worked in cooperation with the LSU School of Veterinary Medicine to develop aquaculture protocols for cocahoe minnows (*Fundulus grandis*) that would ensure a steady supply of healthy minnows, uniform in size, for the bait industry.

#### **Providing Marine Baitfish to Louisiana Anglers**

Working in cooperation with LDWF, the LSU AgCenter will develop parameters and protocols for holding marine bait fishes to provide a consistent source of cocahoe minnows to Louisiana anglers.

#### **Marina Database Update**

LDWF worked in cooperation with LSU to begin redesigning the existing static marina, boat launch and commercial facility database created by LOSCO into an updatable database. The database will be available to the public online and will provide information on marinas, boat launches and commercial facilities such as operational status, location, ramp information, etc.

#### **Hatchery Repairs and Fish Stocking**

LDWF completed reconstruction of 16 one-acre ponds this year, and repair work commenced on and the last 16 ponds. The new construction is funded by the Fishing Industry Supplement for Hurricane Recovery Program. Reconstruction work on the Booker Fowler Hatchery should be complete this fiscal year.

#### **ECONOMIC DISASTER RELIEF FOR LOUISIANA DUE TO HURRICANES GUSTAV & IKE**

The 2008 hurricanes Gustav and Ike impacted the Louisiana coastline and its fisheries. The Secretary of Commerce declared a fishery resource disaster in the Louisiana Gulf of Mexico on Sept. 17, 2008 due to the devastation of hurricanes Gustav and Ike. The passage of these storms has severely impacted the commercial fishing industry through revenue and infrastructure losses. LSU AgCenter has estimated a maximum revenue loss to Louisiana fisheries as a result of hurricanes Gustav and Ike in September 2008 to be \$70.6 million. The maximum estimated infrastructure loss determine by LSU AgCenter associated with these hurricanes is \$84.1 million. (These values were estimates as of Sept. 24, 2008).

The U.S. Congress appropriated \$40 million to Louisiana for fisheries disaster assistance to the commercial fishing industry under sections 308(b) and 308 (d) of the Interjurisdictional Fisheries Act (16 U.S.C. 4107, NOAA Grant NA09NMF4520024). The appropriated funds are vital to the recovery of these important fisheries devastated by the hurricanes. These funds are being used to provide partial cost reimbursement for uninsured or underinsured commercial fisheries infrastructure (docks, ice houses, vessels, fishing gear, etc.) that were damaged during the storms.

In June 2008, the Office of Fisheries launched the \$30 million Federal Fisheries Reimbursement Program to distribute the appropriated funds to qualified commercial fishermen and wholesale/retail dealers. In order to qualify for the program, individuals must have held a 2008 resident Louisiana commercial fishing or wholesale/retail dealer license and must have reported sales or purchases of saltwater species on LDWF trip tickets during Sept. 1, 2005 - Aug. 31, 2008 (and received by LDWF by Nov. 30, 2008). Eligible participants will receive an initial payment of 50% of the participant's eligible reimbursement amount. The remaining 50% of the reimbursement will be issued after the participant

submits acceptable invoices/receipts documenting the use of the entire initial payment on eligible items.

## **MARINE FISHERIES MANAGEMENT**

### **Objectives**

Marine fisheries projects and activities coordinated through the Office of Marine Fisheries included:

- Design and initiate projects to collect and analyze data required for population dynamics estimates and other fisheries management projects;
- Develop scientifically-based management recommendations;
- Monitor the condition of fish stocks and the fisheries that depend upon them;
- Provide information transfer and liaison activities with regional fisheries management entities and others;
- Provide technical support to the Mississippi Commission of Marine Resources (MCMR) in developing fishery management plans, amendments, stock assessments, and technical analysis;
- Provide a state representative to serve on fisheries related boards, committees, panels, etc. as required; and
- Provide administrative services, general maintenance, locate funding sources, and other fisheries management support services as required.
- 2009 consisted of working closely with Federal and state agencies, local fishermen and seafood dealers on hurricane recovery efforts through the Emergency Disaster Recovery Program, designed to assist in the recovery and monitoring of Mississippi seafood industry.

### **Status**

During 2009, public notice was given to open and close commercial seasons for shrimp, oyster, blue crab, king mackerel, red snapper, red drum, and large coastal sharks. Regional management activities included membership on the GSMFC's TCC Artificial Reef Subcommittee, TCC Blue Crab Subcommittee, TCC Data Management Subcommittee, Oyster and Arenarius Technical Task Forces, Commercial/Recreational Fisheries Advisory Panel, Technical Coordinating Committee, and State/Federal Fisheries Management Committee.

Grant documents and proposals were prepared to secure funding for fisheries management projects under the Sports Fish Restoration Act, the

Cooperative Fishery Statistics Program, the Interjurisdictional Fisheries Act and liaison with Gulf of Mexico Fishery Management Council.

## **SHELLFISH MANAGEMENT PROGRAM**

### **Objectives**

Oysters, as sessile filter feeders, are more susceptible to influences of environmental conditions than mobile species. Accordingly, landings change dramatically from year to year. In addition to rainfall fluctuations, upland pollution can leave abundant supplies of oysters unsuitable for harvest. During the oyster season and throughout the year, field-sampling trips are made to oyster reef stations to collect water samples for fecal coliform analysis. Reef areas are opened and closed based on the level of fecal coliform in the water column, at the time of sampling. Oyster reefs in certain areas close after significant rainfall, or river stage events, until water quality significantly improves. Multiple stations are sampled in each reef area and clean samples must be obtained from each area before the area reopens for harvest. Throughout the year, water quality samples are obtained to properly classify shellfish growing areas.

The Shellfish Sanitation Program is one of the most labor-intensive efforts of the department, requiring almost daily, routine water quality sampling and laboratory analysis for fecal coliform bacteria. The data are used to classify oyster-growing waters in accordance with guidelines from the National Shellfish Sanitation Program (NSSP) and to provide justification to reopen oyster reefs following closures.

For areas classified as "approved," the geometric mean fecal coliform level, most probable number (MPN) cannot exceed 14; no more than 10% of the samples taken can exceed 43 MPN. Additionally, the FDA specifies minimum sampling frequencies at each of nearly 170 sampling stations in the Mississippi Sound. Approved areas are those in which water quality does not degrade at any rainfall level. Areas classified as "conditionally approved" are subject to frequent openings and closures, due to rain or river stage. Along with water quality monitoring, other work performed on the reefs included revitalization efforts such as reef turnover, oyster relaying, and planting cultch material.

### **Key Responsibilities**

- Administer Emergency Disaster Recovery Programs I & II;
- Maintain program compliance with the Interstate Shellfish Sanitation Conference NSSP;
- Map Mississippi oyster reefs;
- Survey potential cultivation and cultch planting sites;
- Cultivate oyster reefs;
- Planting of cultch material and management;
- Assess reef areas

### **Status**

The oyster season opened on January 1, 2009 and ended May 31, 2009. Oyster harvesters landed 138,907 sacks on 6,459 boat trips. Oyster season resumed on September 1, 2009 and ended on December 31, 2009. During the fall season 136,022 sacks were harvested on 6,537 trips. Oyster harvesting waters are divided geographically into eight major areas. Through daily monitoring, these areas may open and closed according to the management plan criteria. Potential cultivation and cultch planting sites were surveyed. A scannable oyster trip ticket was fully implemented and oyster check stations were computerized.

### **Major Accomplishments**

- The spring cultch plant began in April 2009 and ended in May 2009. Approximately 21,003 cubic yards of oyster shell and 14,330 cubic yards of limestone were planted over 575 acres. The fall cultch plant began and ended in August 2009. A total of 23,588 cubic yards of limestone were planted over 500 acres. This project was funded by NOAA EDRP.
- As part of the stewardship program, oyster harvesters attended a seminar discussing hygiene and proper on-board sanitation. Additionally, 178 marine sanitation devices were given away to the fishermen. This project was funded by NOAA EDRP.
- The oyster reefs are continuously being monitored and assessed to determine the status of the resource.

## **SHRIMP AND CRAB MANAGEMENT**

### **Objectives**

The Shrimp and Crab Bureau managed the state's commercial and recreational shrimp and crab fisheries. Cooperation and coordination with adjoining state marine fisheries agencies, as well as, regional and federal fishery authorities were integral to the success of shrimp and crab management activities. The program included monitoring and

research of the shrimp and crab fisheries, coordination of the Mississippi Crab Task Force, issuing scientific collection permits, inspecting and licensing the live bait shrimp fishery, installing and maintaining constant water-quality recorder instruments, coordinating Wallop-Breaux grants with the U.S. Fish and Wildlife Service, and overseeing the Derelict Crab Trap Recycling Program. These fisheries are managed by setting seasons, gear regulations, and other management measures. Shrimp and crab biologists worked cooperatively with federal agencies including the NMFS, USFWS, GSMFC, GMFMC, and USGS.

Cooperating state agencies and organizations included University of Southern Mississippi's Center for Marine Science; Mississippi Department of Environmental Quality; Mississippi Department of Wildlife, Fisheries, and Parks; Mississippi State University Cooperative Research and Extension Service, as well as neighboring state marine resource management agencies.

### **Key Responsibilities**

- Long-term monitoring of shrimp populations, in order to make management recommendations. Nearly 315 trawl samples were collected as part of the shrimp monitoring program. Data collection included monitoring surface and bottom hydrological parameters at each station (salinity, temperature, and dissolved oxygen.)
- Inspection of live bait shrimp operations and compilation of reports. The Live Bait Program included monthly compilation of Confidential Dealer Reports and licensing and inspecting live bait facilities. A trip ticket program was developed to improve data collection for this fishery.
- The Mississippi Crab Task Force was supported to allow various user groups to provide input and voice concerns. Since 2008, the task force has worked closely with the regional Diamondback Terrapin Work Group and began voluntarily placing TED gear in their traps to address potential incidental catch of this species of concern.
- Development continued on constant recorder instruments across the coast for real-time hydrological monitoring. Real-time data of water temperature, salinity, and stage from ten Mississippi Sound sites were available on the MDMR web site.
- Issuance of Saltwater Scientific Collection Permits. Recipients of Special Permits must first submit an application and, once determined worthy of merit and the permit issued, a



complete report of collection or harvesting activity must be submitted to the MDMR. Saltwater scientific collection permits were issued in a manner to protect Mississippi's marine resources while allowing legitimate research and development. Twenty-six Special Permits have been issued over the past year.

- Coordination of Sport Fish Restoration grants continued.
- The Derelict Crab Trap Recycling Program included recording the numbers of traps and area collected as well as documented ghost fishing (capture of animals other than crabs). There were 382 derelict traps collected in 2009, in cooperation with commercial fishermen. To date, over 17,000 derelict traps have been collected and recycled along the Mississippi Coast, mainly through cooperation with crab fishermen and the USM Gulf Coast Research Laboratory. As a result of these intensive derelict trap removal and recycling efforts, the program again received the First Place EPA Gulf Guardian Award.
- Hurricane Katrina recovery and monitoring for the shrimp and crab fisheries was conducted in the wake of Hurricane Katrina. Shrimp and crab fisheries benefited from two ongoing five-year NOAA funded Emergency Disaster Recovery Programs. Cooperative seafood industry and MDMR activities administered under this grant include shrimp and crab recovery reporting and storm related derelict crab trap removal efforts.

## **ARTIFICIAL REEF MANAGEMENT**

### **Objectives**

- To update coordinates and orientation of past artificial reef material deployments within Mississippi's marine waters and adjacent federal waters;
- To provide the MDMR web administrator with acquired coordinates of reef material, reef orientation, and maps and charts so that a portion of the web page can be created for the fishing community to access this information;
- To identify areas conducive for artificial reef development and enhancement both near shore and offshore within the framework of Mississippi's Artificial Reef Plan;
- To monitor artificial reef development in Mississippi's marine waters and adjacent federal waters; and
- To obtain artificial reef material from state, federal, and private entities through donations.

### **Status**

The Artificial Reef Bureau has been working with local contractors to get donated concrete material (concrete culverts, concrete rubble, and concrete light pole anchors) delivered to the Gulfport and Hancock County staging site. There were nine steel hull vessels, 13 barge loads of concrete culverts, and 250 Goliath Reef Balls deployed during this time frame in reef sites north and south of both Horn and Ship Islands.

The 2009 site plans for inshore reef construction is complete. The creation and enhancing of 21 inshore reefs sites throughout the three coastal counties was completed utilizing the use of 22,000 tons of crushed concrete and limestone.

The Mississippi Artificial Reef Rigs to Reef Program is currently working with a petroleum industry representative on a project in the main pass area south of Mississippi. Reef permits were obtained and the deployment should begin this summer.

Mississippi has 16 permitted offshore reefs encompassing approximately 16,000 acres of water bottom. These reefs range in size from one acre to 10,000 acres. To date, the material used for offshore reefs consists of concrete rubble, Goliath Reef Balls, Florida Limestone Pyramids, steel hull vessels (including barges), oil/gas platforms and armored personnel carriers. Mississippi permitted 67 near shore artificial reef sites. These reefs were located inshore so fishermen can take advantage of the fish that inhabit these reefs. The materials of the near shore reefs consist of limestone, crushed concrete, concrete rubble (when water depth allows), and oyster shells. Nearshore reefs were deployed at strategic times of the year when optimum oyster spat will settle for future growth of the reef. Two methods used to monitor and update coordinates and orientation of past artificial reef material deployments were sidescan sonar (used primarily offshore) and sounding with a pole (primarily inshore). Thirteen of the 16 artificial reef sites were located offshore Mississippi and adjacent federal waters and two of the 67 inshore artificial reefs were surveyed using sidescan sonar. Thirty-four inshore reefs were verified using pole sounding. All coordinates obtained from sidescan sonar and soundings are listed on the MDMR web site and available to the public. Maps are also available upon request.

## **FINFISH MANAGEMENT**

Staff worked closely with appropriate federal and state agencies, various user groups, and the public. They strived to promote, conserve, and regulate these fisheries based on the best available biological, social, and economic data. Constant recorder instruments were monitored and maintained to allow optimum data availability. Sport Fish Restoration grants were closely monitored to ensure pre-established goals of each project were achieved.

## **MARINE RECREATIONAL FISHERIES STATISTICS SURVEY (MRFSS)**

### **Objectives**

- Conduct the MRFSS Survey in Mississippi for shore, charter, and private modes.
- Provide a timely and reliable database on marine recreational fishing activity.
- Identify notable changes in recreational catch and effort trends.
- Evaluate the long-term implications of management measures.
- Conduct weekly telephone interviews of charter boat operators in Mississippi.

### **Status**

Recreational fisheries information was collected daily in all three modes through the survey. The data were processed, edited, and submitted to the GSMFC. The information provided a continuous standardized database of marine recreational catch, effort, and participation in the U.S. This data provided various fisheries councils the information necessary to make wise management decisions. Pressure estimates were submitted to the GSMFC according to schedule. These estimates, along with historical productivity, were used to estimate the number of assignments needed to achieve a given quota for each month. The MRFSS Program included a telephone survey of the charter boat fishery and weekly telephone interviews were conducted. The number of telephone interviews was based on random selection of 10% of the charter boats in Mississippi. Data were entered and sent to the GSMFC weekly. The information was used to obtain effort estimates for the charter and head boat sectors.

## **MARINE COMMERCIAL FISHERIES STATISTICS**

### **Objectives**

- Collect commercial fisheries landings and catch data for Mississippi;
- Collect biological data for selected, commercially important finfish species;
- Obtain boat trip information and biological statistics on migratory pelagic and reef fish such

as red snapper, grouper, and amberjack (collect otoliths from red snapper); and

- Expand the trip ticket system.

### **Status**

Fisheries landing data were collected weekly and monthly according to schedule. The data were processed, edited, and submitted to the NMFS in accordance with established data handling procedures. This data is an important part of the fisheries management process, both as an indicator of potential problem areas and as a gauge of the success of existing fisheries regulations and practices.

Information for selected pelagic and reef fish was collected from major landing sites on a monthly basis. The information was submitted to the NMFS for inclusion in its trip information system. Both state and federal fisheries managers utilized these data to properly manage valuable resources.

Biological data were collected for selected, commercially important finfish species from major seafood dealers along the Mississippi Gulf Coast. Some information will be utilized in the development of both state and regional fishery management plans.

## **SPORTFISH TAG AND RELEASE IN MISSISSIPPI COASTAL WATERS AND THE ADJACENT GULF OF MEXICO**

### **Objectives**

- Continue angler-cooperative tag and release of spotted seatrout in Mississippi coastal waters, specifically to obtain data on the seasonal movement patterns of fish of legal size.
- Continue angler-cooperative tag and release of tripletail and cobia in Mississippi coastal waters and the adjacent Gulf of Mexico, in order to obtain data on seasonal movement patterns.
- Coordinate a series of workshops to provide for the exchange of information, regarding the recreational fishery in Mississippi.

### **Status**

Seasonal movement and growth of spotted seatrout were studied utilizing angler tagged and released spotted seatrout in Mississippi coastal waters. Similar trends of limited movement were observed in recaptured fish as in other years. Seasonal movement and growth of cobia were studied; utilizing angler tagged and released cobia in the Gulf of Mexico. Future recaptures will supplement these initial data and allow for the analysis of migration trends.

## SEAFOOD TECHNOLOGY PROGRAM MANAGEMENT

### Objectives

- Conduct regulatory inspections of shellfish processing and transporting facilities to determine compliance with state and federal sanitation and health safety regulations;
- 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 add value, new markets, employment opportunities, and economic enhancement for the seafood industry;
- Provide technical advice to those interested in aquaculture and aid in creating expanded economic and employment opportunities;
- Provide technical expertise in investigating food borne illness reports;
- Undertake research project in line with seafood technical surveys, promotion of Mississippi seafood, 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;
- Promote food safety education to the public through participation in public fairs, public meetings, and events;
- Work in concert with public affairs staff to develop and distribute brochures, pamphlets, and fact sheets on proper seafood preparation and handling;
- Work with the MDMR Seafood Marketing Bureau to promote Mississippi seafood products; and
- Provide administrative support to the activities of the office, department, and MCMR.

### Status

A total of 6,111 technical assistance actions were provided. Some examples were:

- Technical advice and support inspections for the Mississippi Department of Agriculture and Commerce, regarding regulated aquaculture activities;
- Collaborated with the other member state agencies on seafood safety with emphasis on raw seafood handling, risks on eating shellfish, and cooking seafood;
- Inspected Mississippi permitted shellfish processing, storage, and distribution facilities to

determine compliance with state and federal sanitation and seafood safety regulations; to provide the public with confidence in Mississippi-inspected seafood products; and to aid in marketing Mississippi seafood products;

- Distributed brochures, poster, fact sheet, and PowerPoint presentations on individually quick frozen, heat/cool pasteurization, and high hydrostatic pressure technologies for educational and public outreach purposes;
- Promoted Mississippi seafood products through distribution of printed materials;
- Promoted seafood consumption and awareness of seafood safety through public outreach, education and participation at any seafood festivals and fairs and events along the coast. Participated in 15 public outreach events all over the state;
- Distributed the seafood guide and brochure “How to Start a Seafood Business in South Mississippi” to the different County Chamber of Commerce offices and Libraries; and
- Collaborated with Mississippi State University Coastal Research Extension Service in research surveys on economic impact assessments of the Mississippi seafood industry and seafood surveys.

### Shellfish Sanitation and Health Safety Regulatory Activities

- Inspected Mississippi permitted shellfish processing, storage, and distribution facilities to determine compliance with state and federal sanitation and seafood safety regulations; to provide the public with confidence in Mississippi-inspected seafood products; and to aid in marketing Mississippi seafood products;
- Participated in the shellfish processing plant regulatory review and evaluation by the FDA;
- Received FDA notification that the Mississippi Shellfish Sanitation Program met NSSP requirements;
- Hosted Basic seafood HACCP Training in March 2009.
- Hosted Norovirus Workshop with the participation of FDA and other state agencies;
- Conducted trace back investigations of multi case food borne illnesses associated with oyster consumption and positively identified with causative agent, *Norovirus*.
- Co-hosted the Gulf and South Atlantic Shellfish Conference in May 2009;
- Submitted two issues to ISSC;
- Attended 2009 May- Vibrio Education meeting

- Assisted in submitting the Reciprocity Complaint against the state of Virginia to ISSSC; and
- Participated at the Statewide Pandemic Influenza preparedness and Response Planning

#### **Types and Number of Seafood Facilities Permitted**

There were 61 seafood/sanitation processing permits issued which included 20 shrimp, 10 crab and 31 oyster permits. These 61 permits represent 692 inspected seafood units. Examples of seafood sanitation and health safety regulatory activities conducted by the Seafood Technology Bureau include: 574 seafood facility inspections, 5,537 technical assistance and associated actions including water sample collections of processing plant source water samples for testing. Conducted inspections and associated actions to determine compliance with the following sanitation and seafood health safety regulations:

- Molluscan shellfish sanitation inspections covered under the NSSP;
- Sanitation inspections on seafood species other than molluscan shellfish to aid the industry in meeting compliance conditions when the FDA conducted official inspections;
- Conducted quarterly inspections of all permitted facilities and conducted follow-up inspections as needed, completed recertification inspections of certified dealers, and issued permits;
- Worked with seafood processors to correct deficiencies to meet FDA seafood compliance criteria;
- Worked on management criteria and forms for dealers converting selected critical limits and critical control points from under HACCP management to management under standard operating procedures;
- Prepared consolidated report of inspection results for the FDA according to NSSP requirements;
- Provided seafood dealers with copies of the new FDA Guidelines on recall procedures;
- Implemented FDA regulations on product recall procedures;
- Distributed Recall Audit forms and recall flowcharts of product recall procedures to all seafood dealers;
- Developed Hazard Analysis Critical Control Point (HACCP) plans and sanitation forms for use in molluscan shellfish, shrimp, and crab processing facilities and seafood retailers;
- Provided the Interstate Shellfish Sanitation Conference (ISSC) brochures on “The Risk of Eating Raw Oysters and *Vibrio vulnificus*” to the industry and public;
- Implemented FDA-ISSC control measures on *Vibrio parahaemolyticus* that took effect June 20, 2008;
- Prepared and distributed letters to molluscan shellfish dealers regarding updated HACCP plans; and
- Participated at the deliberation of issues and resolutions on shellfish sanitation at the Gulf and South Atlantic States Conference.

# **T**EXAS PARKS AND WILDLIFE DEPARTMENT COASTAL FISHERIES DIVISION

*Mike Ray, Division Director*

The Texas Parks and Wildlife Department (TPWD) Coastal Fisheries Division is responsible for making management recommendations regarding fishery resources within Texas bays and estuaries and in state waters of the Gulf of Mexico from the shoreline seaward to nine nautical miles. The estimated value of fisheries within the four million acres of marine habitat exceeds \$2 billion.

## **Coastal Fisheries Division Objectives**

Coastal Fisheries long-term vision involves Texas coastal ecosystems that are ecologically healthy and that sustain economic and recreational opportunities for 3.5 million anglers and 10 million outdoor enthusiasts. Coastal Fisheries is responsible for making fisheries management, habitat conservation and water resource recommendations that support a coastal resource-based economy valued at more than \$2 billion annually.

This mission is being accomplished by:

- maintaining freshwater inflows and instream flows of sufficient quality and quantity to sustain the ecological health of Texas rivers, springs, lakes and estuaries;
- managing and conserving the marine environment including ecosystems, resources and habitats and provide fishing and outdoor recreation opportunities;
- facilitating the collection, computerization, summary, analysis, and reporting of routine monitoring and special study data, conducting research and coordinating cooperative projects, and recommending, implementing and evaluating fisheries management measures.

## **Major Program Activities**

### ***Assessments for Marine Resource Management***

- Provide annual status assessments of finfish, shrimp, crab, and oyster populations and associated environmental conditions within the marine waters of Texas;
- Work with user groups of recreational and commercial anglers and others with interest in marine resources to obtain input into resource issues;
- Prepare and update long-range management plans for optimal sustainable yield of marine resources that will provide consistent economic and sociological benefits to users and consumers of aquatic products while protecting the resource.

### ***Stock Identification and Research***

- Manage and enhance existing fishery populations through stock identification, life history studies, and genetic and reproductive physiology research;
- Coordinate studies to evaluate better methods to conserve and protect non-targeted aquatic species and to determine optimal uses of aquatic resources.

### ***Fisheries Enhancement***

- Maintain and enhance existing fish stocks in selected marine habitats;
- Provide continuous evaluation of the impact of fish stocking on resident populations and fishing success;
- Operate marine fish hatcheries in Corpus Christi, Lake Jackson (Sea Center Texas) and Palacios (Perry R. Bass Marine Fisheries Research Station).

### ***Artificial Reef Program***

- Oversee development and maintenance of artificial reefs off Texas coast;
- Evaluate utilization of artificial reefs by marine species, anglers, and divers.

### ***Water Resources--Water Quantity Program***

- Partner with other state agencies in statewide water planning and provide resources information to Regional Water Planning Groups to implement SB1(1997), SB2(2001) and SB3(2007);
- Provide comments to Texas Commission on Environmental Quality (TCEQ) on water use permits and proposed water development projects in order to minimize potential effects on environmental flows and fish and wildlife resources;
- Conduct geographic analysis of wetlands, salinity, and fisheries abundance as part of the freshwater inflow analysis.

### ***Water Resources--Water Quality Program***

- Provide comments to TCEQ on discharge permits and actions affecting fish and wildlife resources; and work with TCEQ on the implementation on the Total Maximum Daily Load projects;
- Coordinate and collaborate with TCEQ and other state agencies on water quality policy and

permitting activities that affect fish and wildlife resources.

### ***Ecosystem Resources Program***

- Provide information to the public on the importance of wetlands to fish and wildlife, and provide recommendations to the U.S. Army Corps of Engineers (USACE) to lessen impacts on state water and fish and wildlife resources;
- Implement habitat restoration projects within the coastal plain with a goal of restoring and maintaining fish and wildlife habitat;
- Respond to spills and pollution incidents that cause mortality of fish and wildlife; pursue civil restitution for the value of the fish or wildlife damaged; and oversee restitution projects conducted by the responsible party;
- Coordinate and promote partnerships with local, state and federal entities on research and planning efforts which maintain and restore aquatic ecosystem health and function.
- Calculate freshwater inflow needs to ensure that estuaries, wetlands and other coastal resources support healthy and productive fishery resources;
- Manage multidisciplinary conservation workgroups with a goal of addressing Harmful Algal Blooms (HABs), freshwater inflows and habitat threats to seagrass habitats;
- Assist local communities to conduct hands-on Coastal Expos that raise awareness of the coastal ecosystem to urban and minority populations.

### **Cooperation with Other Resource Management Entities**

Coastal Fisheries Division collaborates extensively with all Texas Parks and Wildlife Department (TPWD) Divisions, as well as with many public and private entities in order to perform their mandated functions.

Some federal agencies include: the U.S. Fish & Wildlife Services, U.S. Geological Survey, Environmental Protection Agency, U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration, U.S. Department of Agriculture, National Marine Fisheries Service, Natural Resource Conservation Service, and U.S. Geological Survey.

State agencies include: Texas Commission on Environmental Quality (TCEQ), Texas Water Development Board (TWDB), General Land Office (GLO), and Texas Department of Transportation (TxDot).

Commissions and programs include: Gulf of Mexico Fishery Management Council, Gulf States Marine Fishery Commission, Gulf of Mexico Alliance, Gulf of Mexico Program, Coastal Bend Bays and Estuaries Program, and Galveston Bay Estuary Program.

Other entities include: non-governmental organizations, conservation groups, river authorities, port authorities, industry, county and city governments, and universities.

### **Resource and Harvest Monitoring**

Monitoring the relative abundance of adult fish in Texas bay waters was accomplished using 600-ft gill nets with individual 150-ft sections of three, four, five and six inch stretched mesh. Bag seines (60 ft / ½-in mesh) and trawls (20 ft / 1½ in mesh) are used to determine abundance of juvenile and subadult finfish, shrimp, blue crabs, and associated organisms. Oyster dredges (19½ in wide) were used to collect oyster abundance data. Inshore waters (within 9 nm) were also sampled with trawls. Total sampling effort during FY 2009 included 780 gill net sets; 2,160 bag seine tows; 2,640 bay and Gulf trawls; and 1,200 oyster dredge tows.

Relative abundance of finfish and shellfish in Texas offshore waters is monitored through long-term monitoring programs and a cooperative agreement with the GSMFC. Texas participated in the SEAMAP, a cooperative program between the Gulf States and federal government for collection, management, and dissemination of fishery-independent data and information in the southeast U.S. Data obtained from this sampling effort was used in evaluating the “Texas Closure” management measure of the GMFMC Shrimp Management Plan and to provide information on shrimp and groundfish stocks in the northern Gulf from inshore waters to 50 fm. In fulfillment of SEAMAP requirements, the TPWD collected 240 Gulf trawls in 2009.

Sport landings (private and guided boat) and associated angler activities were derived from on-site creel interviews of recreational anglers at the completion of their trips. Roving trailer and wet slip counts were used to assess relative pressure at sampling sites. Relative pressure was used to determine how often a site should be selected for a survey; higher use sites are surveyed more often than low use sites. A total of 1,049 survey days were spent to estimate landings and pressure of private and party boat fishermen.

Routine collection, editing, summarization, and publication of self-reported commercial landings data

continued through a formal cooperative statistics agreement with the NMFS. Landings were obtained from commercial seafood dealers through submission of Monthly Aquatic Products Reports. The TPWD collected commercial landings statistics on crab, oyster, and finfish, while the NMFS continued to gather landings statistics on shrimp.

### **Crab Trap Cleanup Program**

During the 2009 closure held February 20 – March 1, a minimum of 151 volunteers using 46 vessels expended 906 man-hours of effort (plus additional TPWD staff time) to remove 1,927 derelict traps coastwide. This effort brings the total number of traps removed since the pm began in 2002 to 25,974. Over 71% of the traps have been removed from Galveston Bay (41%) and San Antonio Bay (31%) respectively. Additionally, approximately 30 donors contributed monies, materials, time, site use, promotional services and other assistance to help facilitate the program

### **Research**

The Perry R. Bass Marine Fisheries Research Station (Palacios) provided information and techniques necessary for improvement of Texas fisheries management strategies. Efforts to improve management or restoration of marine species were directed toward research in life and of important recreational and commercial species. In the past year, genetic studies were conducted on alligator gar, and southern flounder. Collection and processing of genetic samples from these species continued, and progress reports were completed as needed for both genetic projects.

A cooperative project with Texas A&M University-Galveston (Dr. Andre Landry) on species identification of juvenile snook was initiated. A cooperative project with NMFS Law Enforcement to identify species of commercially marketed shrimp using DNA sequencing was initiated. A life history study on gray snapper age, growth and reproduction was continued. Temperature tolerance studies of spotted seatrout at three life stages were completed. Otoliths were collected from red drum and spotted seatrout to estimate age structure of Texas populations and update age-length keys for these fish. A cooperative project with the GSMFC continued to collect age and growth data on commercial and recreational catches of Southern flounder, king mackerel, red snapper, greater amberjack, black drum, red drum, spotted seatrout, grey snapper, vermilion snapper, grey triggerfish, and sheephead. A cooperative project with Texas A&M University (Dr. John Gold) to evaluate effectiveness of red drum

enhancement efforts using DNA microsatellite fingerprinting of captive red drum broodstock and red drum collected in routine monitoring gillnets was continued. A routine fishery monitoring project using bag seines and gill nets continued in the Cedar Lakes area near the mouth of the San Bernard River.

### **Fish Stocking**

Efforts continued to spawn and rear marine fish for stock enhancement at the CCA/AEP Marine Development Center (MDC) in Corpus Christi, Perry R. Bass Marine Fisheries Research Station (PRB) in Palacios, and Sea Center Texas (SCT) in Lake Jackson. Controlled photoperiod and temperature protocols were used to induce captive red drum and spotted seatrout broodfish to spawn at the hatcheries.

During peak spawning periods, personnel collected an average of 1.5-2 million eggs per day. After hatching, larval fish were transferred to outdoor rearing ponds and grown to a target size of 35-40 mm TL. During the 2009 fiscal year (September 1, 2008 – August 31, 2009) a total of 16.7 million red drum fingerlings, 2.9 million spotted seatrout fingerlings averaging 39.6 mm TL and 39.5 mm TL, respectively, were released into marine waters for purposes of stock enhancement. A small number (4,335) of southern flounder fingerlings averaging 48.6 mm TL were hatchery reared and stocked into Aransas Bay and Sabine Lake. Approximately 1.1 million red drum fingerlings averaging 29.1 mm TL were released into inland freshwater reservoirs.

Cutting-edge research included developing captive southern flounder broodstock spawning protocols for large-scale fingerling production, and developing genotype markers for hatchery broodstock spotted seatrout and southern flounder to strengthen the scientific basis of the stock enhancement program and assessing survival of hatchery-reared red drum and spotted seatrout as released into coastal waters. Technical information about fish hatchery operations was provided to other coastal states in a cooperative effort to enhance coastal marine fisheries.

In addition to stock enhancement, each facility provided public outreach activities, interpretive displays, touch tanks and aquaria appeal to visitors. Sea Center Texas welcomed over 58,000 visitors in 2009. The Marine Development Center toured 2,737 visitors, and the PRB satellite pond facility received 40 visitors. These facilities, touted as the world's largest red drum hatcheries, represent a unique merger of fisheries science and visitor education.

## Habitat Protection

In FY 2009, the Ecosystem Resources Program staff played a significant role in initiating and implementing numerous coastal restoration projects along the Texas Coast. New projects initiated by staff included a shoreline protection project on Dagger and Ransom Islands in Redfish Bay and a marsh restoration and water quality improvement project in Dickinson Bayou. Staff also developed a monitoring program to evaluate the impact on salinity and marsh health of the proposed Rollover Pass closure in East Galveston Bay. This pass is an artificial pass that was created as a fish pass. The Texas General Land Office is proposing to close this pass due to its impact on beach erosion and sedimentation with in the Gulf Intracoastal Waterway.

Project planning continued on the Keith Lake Fish Pass Project and the West Bay Conservation Corridor Project. These projects have led to the conservation and restoration of numerous coastal habitats including intertidal marsh, coastal prairie, colonial bird rookery and seagrass meadow. TPWD also continued planning efforts on the Follett's Island conservation project and began to search for alternate tracts to conservation in lieu of the unavailable McAllis Point property.

TPWD was also instrumental in securing over \$5,000,000 in American Recovery and Restoration Act funds to restore over 500 acres of salt marsh in West Galveston Bay. TPWD developed the project concept, wrote the grant, and developed a partnership with the Texas General Land Office to submit the grant that ultimately received the funding. The project engineering and design was completed within FY 2009.

Marsh restoration activities were completed on the North Deer Island erosion control and marsh restoration project. North Deer Island is the most important rookery island on the Upper Texas Coast and utilized by 18 species of colonial waterbirds, including the formerly endangered brown pelican. Over 25,000 smooth cordgrass plants were transplanted to the five acres of marsh that were restored by this project. This project was awarded the Coastal America Partnership Award.

Ecosystem Resources Program staff spent significant time reviewing over 250 Section 404/10 permit applications directly impacting coastal natural resources. Staff continued to work with the Wildlife Division and other land managers to elevate the

effectiveness of mitigation projects on department managed and privately held lands.

Staff participated in various Interagency Coordination Teams (ICT) for federal projects administered by the U.S. Army Corps of Engineers (USACE). These projects included Houston-Galveston Ship Channels, Matagorda Ship Channel Improvement ICT, Freeport Channel ICT, Clear Creek Flood Damage Reduction ICT, Laguna Madre ICT, and the Sabine-Neches Waterway ICT. Staff also was involved with coordination with Harris County Flood Control District on numerous federal flood control projects including Hall's Bayou, Buffalo Bayou, and Hunting Bayou. Staff participation provided the primary input for the State regarding the impact to fish and wildlife resources from the projects to the federal government and project proponents.

Ecosystem Resources Program staff was also involved in numerous planning groups including the Dickinson Bayou Watershed Planning Group and the Gulf of Mexico Alliance and in the multi-stake holder Executive Councils and subcommittees of the Galveston Bay Estuary Program and the Coastal Bend Bay and Estuaries Program. TPWD has played a lead role in the Gulf of Mexico Alliance in establishing regional sediment management as a tool for coastal restoration and maintenance and in changing the federal standard to recognize dredged material as a coastal resource rather than a waste product.

Staff continues to work with land trusts and land conservancy organizations working on projects along the coast. These organizations include the Texas Nature Conservancy, Legacy Land Trust, Coastal Bend Land Trust, Scenic Galveston, Galveston Bay Foundation, Trust for Public Land, Friends of Galveston Island State Park, Audubon Texas, and the Conservation Fund. Staff provides technical information, supports biological assessments, and participates in technical advisory committees.

A new regulation went into effect May 1, 2006, that will affect all boaters who venture into the Redfish Bay State Scientific Area (RBSSA). The area has about 50 square miles (32,000 acres) of prime fishing habitat, including 14,000 acres of submerged seagrass beds, dominated by turtle grass (*Thalassia testudinum*) and shoal grass (*Halodule beaudettei*). The regulation makes it illegal to destroy any of the five species of seagrasses found throughout RBSSA when boating through a seagrass area. In 2009, TPWD staff continued to collect field data and aerial



photography to document the impact of the regulation on seagrass meadows within the RBSSA.

TPWD continued hosting the multi-agency Seagrass Monitoring workgroup to implement the Seagrass Conservation Plan and began planning for a Seagrass Management Plan Workshop that will evaluate progress in the implementation and make recommended updates for the statewide seagrass management plan. TPWD coastal ecologists participated in a wide variety of activities that involve protection and restoration of coastal habitats beneficial to fish and wildlife.

### **Artificial Reef Program**

This reporting period was effected by Hurricane *Ike* which struck the Galveston coastline in September 2008. Artificial Reef Program staff at the Dickinson Marine Lab were displaced and work on reefing projects was effected. All offshore petroleum reefing projects were delayed after the hurricane. The TPWD ARP received several calls on downed platforms but they were located in Louisiana waters; no Texas platforms were destroyed. Several reef buoys were lost and replaced.

University of Texas Brownsville (UTB) continued to conduct biological monitoring of the *Texas Clipper* reef. Fish diversity and quantity increased and many fish species observed included: Atlantic spadefish, look downs, albacore jack, gag, various snapper species, barracuda, grey trigger fish, yellowtail hamlet, numerous juvenile species, spotfin butterfly, rock hind, and a Goliath grouper. Invertebrates seen included: octopus, arrow crab, fringe back nudibranch, sea urchins, and oyster drills. Three UTB graduate students conducted thesis research on the ship.

The Artificial Reef Program was responsible for maintaining 58 permitted reef sites and 10 USCG-required marker buoys (six permanent and four temporary) in the Outer Continental Shelf area of the Gulf of Mexico in 2009. Several potential reef sites were identified as candidates for the nearshore reef program and US Army Corps of Engineers permit applications submitted. The Program received two petroleum structures in FY2009 for a total of \$299,000. Both structures were towed to existing reef sites in the Matagorda Island Area and were donated by Merit Petroleum Company (MI-651A and MI-672B).

Nearshore reef work included the addition of 75 1-ton quarry rocks at HI-117 (Sabine reef). The 100-ft ex-navy tug *Coshecton* tugboat was cleaned and

reefed at the Port Mansfield nearshore reef site (PS-1047), along with 40 concrete fish hatchery troughs and 800 culverts (24 – 72 in diameter x 8 ft long).

In addition, over 2,200 tons of concrete bridge spans, columns, and bents were reefed at the Matagorda Island-712 site to add to the site's existing complexity of materials.

## **LEGISLATIVE AND REGULATORY CHANGES**

### ***Legislative Actions:***

The Texas Parks & Wildlife Department underwent Sunset Review by the 81<sup>st</sup> Texas Legislature. House Bill 3391 reauthorized the agency. One provision of the bill pertinent to this report required the agency to develop and publish a list of approved exotic aquatic plants by December 31, 2010. This list is currently under development.

### ***Texas Parks and Wildlife Commission (TPWC) Rule-making Actions:***

Several new rules regarding saltwater fishing were approved by the TPWC.

- Established a reduction in the bag and possession limit for flounder due to long-term downward trends in the fishery. These changes included:
  - 5-fish recreational bag/possession limit;
  - 30-fish commercial bag/possession limit;
  - Closed season for gigging flounder during the month of November while allowing a 2-fish bag limit for flounder which may be caught only on rod and reel.
- Established changes in bag and size limits for certain finfish species to maintain consistency with federal rules in the Exclusive Economic Zone (EEZ). These included:
  - Increased the minimum size limit for greater amberjack from 32 inches to 34 inches;
  - Set the minimum size limit for gray triggerfish at 16 inches and a 20 fish/person daily bag limit (40 possession limit);
  - Set the minimum size limit for gag grouper at 22 inches and a 2 fish/person daily bag limit (4 possession limit).
- Established a daily bag limit of 1 fish (2 possession limit) for alligator gar due to declining populations throughout their historical range.
- Established changes in bag and size limits for certain sharks to maintain consistency with federal rules in the EEZ. These species have been determined to be in an overfished condition or are undergoing overfishing. Changes are as follows:

- Retained the 24-inch minimum size limit for Atlantic sharpnose, Blacktip, and Bonnethead sharks;
- Increased the minimum size limit for lawful species from 24 inches total length (TL) to 64 inches TL and retained for lawful shark species the bag limit of one fish per person per day, with a two-fish possession limit;
- Set a zero bag limit (catch-and-release only) for the following shark species: Atlantic angel *Squatina dumerili*, Basking *Cetorhinus maximus*, Bigeye sand tiger *Odontaspis noronhai*, Bigeye sixgill *Hexanchus vitulus*, Bigeye thresher *Alopias superciliosus*, Bignose *Carcharhinus altimus*, Caribbean reef *Carcharhinus perezii*, Caribbean sharpnose *Rhizoprionodon porosus*, Dusky *Carcharhinus obscurus*, Galapagos *Carcharhinus galapagensis*, Longfin mako *Isurus paucus*, Narrowtooth *Carcharhinus brachyurus*, Night *Carcharhinus signatus*, Sandbar *Carcharhinus plumbeus*, Sand tiger *Odontaspis taurus*, Sevengill *Heptranchias perlo*, Silky *Carcharhinus falciformis*, Sixgill *Hexanchus griseus*, Smalltail *Carcharhinus porosus*, Whale *Rhincodon typus*, White *Carcharodon carcharias*.
- Established various changes relating to the oyster fishery. These include:
  - Changed certain definitions as follows:
    - Barrel of oysters--As defined in Parks and Wildlife Code, §76.001, a barrel of oysters is three boxes of oysters in the shell or two gallons of shucked oysters without shells. The dimensions of a box are ten inches by 20 inches by 13 1/2 inches. In filling a box for measurement the oysters may not be piled more than 2 1/2 inches above the height of the box at the center;
    - Natural oyster bed (reef)--As defined in Parks and Wildlife Code, §76.051, a natural oyster bed is an area where at least five barrels of oysters are found within 2,500 square feet of any position on a reef or bed;
    - Open season--A period during which it is lawful to take oysters;
  - As a result of a name change for the former Texas Department of Health, the agency is now referenced by its current name as Texas Department of State Health Services (DSHS).
  - Set a closure of the East Bay Approved Area as designated by the DSHS in Galveston Bay for two harvest seasons.

**N**ATIONAL MARINE FISHERIES SERVICE, SOUTHEAST REGION  
NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION  
U.S. DEPARTMENT OF COMMERCE  
*Roy E. Crabtree, Regional Administrator*

The mission of NOAA Fisheries is stewardship of the nation's living marine resources. Through conservation and wise use, these resources and their habitats can be managed effectively and efficiently to maximize the benefit to the nation without jeopardizing future options.

NOAA Fisheries Service administered programs to conserve, protect, and manage living marine resources in a way that ensures their continuation as functioning components of marine ecosystems, affords economic opportunities, and enhances the quality of life for the American public. These programs include services and products to support fishery conservation and management; protected species and habitat conservation; stewardship of international marine resources; law enforcement activities for marine mammals, endangered species, and regulated fisheries; scientific and technical aspects of marine fisheries research; seafood inspection; and more.

The NOAA Fisheries Service Southeast Regional Office (SERO) is located in St. Petersburg, Florida. The regional administrator represents the agency's assistant administrator with state conservation agencies, recreational interests, commercial industries, consumers, environmentalists, and the general public. The SERO planned, organized, and implemented marine resource conservation and management through a range of domestic and international programs and provided program planning and evaluation, budgeting, technical and administrative support to regional fishery management councils.

The NOAA Fisheries Service Southeast Fisheries Science Center (SEFSC) is located in Miami and has laboratories in Miami, Panama City, Beaufort, Pascagoula, Stennis Space Center, and Galveston. The SEFSC developed the scientific basis required for status of stocks and status of fisheries reports; environmental assessment and environmental impact statements for management plans and/or international negotiations; and pursued research to answer specific needs in habitat conservation, aquaculture, fishery engineering, marine mammals, endangered species, fishery oceanography, food sciences, and fishery economics.

## **FISHERY CONSERVATION AND MANAGEMENT**

### **Gulf Shrimp Fishery**

#### *Annual Texas Closure*

The annual closure of the shrimp fishery in the western Gulf of Mexico allows brown shrimp to reach a larger (and more valuable) size before harvest, preventing discard and was of brown shrimp smaller than the preferred market size. For 2009, commercial shrimp fishing in federal waters off Texas was closed May 15 through July 15.

#### *Shrimp Effort Analysis for Possible Closures*

The red snapper rebuilding plan requires NOAA Fisheries Service to implement a time-area closure, as needed, to constrain shrimp effort (and associated bycatch mortality of red snapper) to a target level. This closure is to occur within a designated area of the north-central and western Gulf of Mexico where high juvenile red snapper bycatch occurs. The bycatch reduction goal is currently specified as 74% less than the 2001-2003 red snapper bycatch mortality level and is to be reduced over time as the red snapper stock rebuilds. No closure was necessary during the 2009 calendar year because shrimp effort within the designated area was lower than the 74% target.

#### *Bycatch Reduction Devices [BRDs]*

In late 2008, NOAA Fisheries Service published a final rule to decertify the Gulf Fisheye BRD and the Expanded Mess BRD, and to restrict the allowable placement of the fisheye-type BRDs. This change was effective May 18, 2009, to allow industry time to convert to new, more efficient BRD types.

### **Gulf Reef Fish Fishery**

#### *Red Snapper Individual Fishing Quota (IFQ)*

NOAA Fisheries Service issued IFQ allocation to 524 accounts in 2009, and fishermen landed 97% of the 2.297 mp gutted weight quota.

#### *Amendment 29 to the Reef Fish Fishery Management Plan*

The Gulf of Mexico Fishery Management Council's Amendment 29 established an individual fishing quota (IFQ) program for the commercial grouper and tilefish components of the reef fish fishery. The program divided five species-specific grouper and

tilefish quotas (red grouper, gag, other shallow water grouper (SWG), deepwater grouper (DWG), and tilefish) proportionately among eligible IFQ shareholders based on historical landings, with allowance for multiuse allocation and dual SWG/DWG classifications for scamp, speckled hind and warsaw grouper. The final rule implementing the IFQ program became fully effective on January 1, 2010.

#### *Reef Fish Interim Rule*

NOAA Fisheries Service published an interim rule at the request of the Gulf of Mexico Fishery Management Council to address overfishing of gag and other reef fish species pending the implementation of Amendment 30B (below) or alternative management measures. Effective January 1, 2009, the interim rule restricted the recreational and commercial harvest of gag and required persons onboard federally-permitted Gulf of Mexico commercial and for-hire reef fish vessels to comply with the more restrictive of federal or state reef fish regulations when fishing in state waters for red snapper, greater amberjack, gray triggerfish, and gag.

#### *Amendment 30B to the Reef Fish Fishery Management Plan*

The Gulf of Mexico Fishery Management Council's Amendment 30B restricted the recreational and commercial harvest of gag and other shallow-water grouper, increased recreational and commercial harvest of red grouper, established sector-specific annual catch limits, catch targets, and accountability measures for these species, and required persons onboard federally-permitted Gulf of Mexico commercial and for-hire reef fish vessels to comply with federal regulations for reef fish species regardless of where the fish are harvested to increase compliance with federal regulations. The final rule implementing the amendment became effective May 18, 2009. A supplemental final rule published June 24, 2009, ended a one-month seasonal closure in favor of a four-month closure of an area known as "The Edges," which will be effective for the 2010 fishing year.

#### *Temporary Actions Addressing Sea Turtle Interactions with Bottom Longline Gear*

Observer data collected aboard reef fish vessels indicated the bottom longline component of the reef fish fishery far exceeded the level of loggerhead sea turtle take authorized by a 2005 biological opinion. To ensure adequate sea turtle protection pending implementation of Amendment 31 (below) or other sea turtle mitigation measures, the Gulf of Mexico Fishery Management Council requested NOAA

Fisheries Service publish an emergency rule. The emergency rule prohibited bottom longline fishing for reef fish inshore of the 50-fathom contour in the eastern Gulf of Mexico (east of Cape San Blas, Florida). After the 2009 deep-water grouper and tilefish quotas were filled, bottom longlining was prohibited throughout the eastern Gulf. This rule was effective May 18, 2009, through October 16, 2009, when it was replaced by another rule implemented under the authority of the Endangered Species Act (ESA). The ESA rule prohibited bottom longline fishing for reef fish inshore of the 35-fathom contour in the eastern Gulf of Mexico and restricted the total number of hooks onboard a vessel in the eastern Gulf of Mexico with longline gear to 1,000, of which only 750 can be rigged for fishing. That rule is intended to remain in effect until replaced by regulations implementing Amendment 31 or alternative sea turtle protection measures.

#### *Amendment 31 to the Reef Fish Fishery Management Plan*

The Gulf of Mexico Fishery Management Council's Amendment 31 proposes long-term measures to reduce the number of sea turtle takes in the bottom longline component of the reef fish fishery, including: a longline endorsement provided only to federally-permitted vessels with demonstrated average annual landings of 40,000 pounds of reef fish taken by fish traps or longline gear during 1999-2007; a prohibition on the use of bottom longline gear to fish for reef fish shoreward of the 35-fathom contour from June through August (the existing 20-fathom boundary would apply the remainder of the year); and a requirement that the total number of hooks onboard a vessel in the eastern Gulf of Mexico with longline gear be restricted to 1,000, of which only 750 can be rigged for fishing. On December 31, 2009, NOAA Fisheries Service announced the availability of Amendment 31 for public review and comment. If approved, the new regulations are expected to take effect in spring 2010.

#### *Quota Monitoring*

- Recreational Red Snapper: Federal waters opened June 1 and closed August 15, 2009; fishermen landed 146 percent of the quota through August 2009.
- Recreational Greater Amberjack: Federal waters closed October 24, 2009; preliminary data indicate fishermen reached their quota in August 2009.
- Commercial Greater Amberjack and Gray Triggerfish: The greater amberjack fishery closed on November 7, 2009; preliminary data indicate fishermen landed 113% of the greater

amberjack quota and 56% of the gray triggerfish quota in 2009.

- Commercial deep-water grouper (speckled hind, and yellowedge, snowy, warsaw, and misty groupers) (DWG) and tilefish: The tilefish quota was met on May 15, 2009, and the fishery closed. The DWG quota was met on June 27, 2009, and the fishery closed.
- Commercial shallow-water grouper (SWG) (red grouper, gag, scamp, black grouper, red hind, rock hind, yellowfin grouper, yellowmouth grouper): None of the quotas (gag, red grouper, all SWG) were met during 2009.

### **Coastal Migratory Pelagic Fisheries: King and Spanish Mackerel**

No new regulatory actions were implemented during 2009 regarding coastal migratory fishes in the Gulf of Mexico.

#### *Quota Monitoring Fishing Year 2008-2009*

- The commercial gill net fishery for king mackerel in the southern Florida West Coast subzone closed on January 30, 2009.
- The commercial hook-and-line fishery for king mackerel in the Florida West Coast southern subzone had the trip limit reduced to 500 pounds per day on February 28, 2009, and did not close.
- The commercial hook-and-line fishery for king mackerel in the Florida East Coast subzone closed on March 6, 2009.
- The commercial hook-and-line fishery for king mackerel in the Florida West Coast northern subzone did not close.
- The commercial hook-and-line fishery for Spanish mackerel in the Gulf of Mexico did not close.

#### *Quota Monitoring Fishing Year 2009-2010*

- The commercial hook-and-line fishery for king mackerel in the Florida West Coast northern subzone closed October 24, 2009.
- The commercial fishery for king mackerel in the western zone of the Gulf of Mexico closed September 4, 2009.

### **Offshore Aquaculture Fishery Management Plan**

The Gulf of Mexico Fishery Management Council's aquaculture plan established a regionally-based regulatory framework for managing the development of an environmentally sound and economically sustainable offshore aquaculture industry in federal waters of the Gulf of Mexico. The plan took effect by operation of law on September 3, 2009; however, the regulatory framework it outlines will not be effective

until the plan is implemented through proposed and final rulemaking. NOAA believes offshore aquaculture activities should be governed by a national policy rather than by regional regulatory frameworks to enable a comprehensive ecosystem-based approach to offshore aquaculture. Consequently, the agency is developing a comprehensive national marine aquaculture policy that includes offshore aquaculture. NOAA Fisheries Service will examine the Gulf Council's Offshore Aquaculture plan in the context of that policy. If we determine the plan is inconsistent with that policy, we will consider appropriate action, which could include seeking amendment or withdrawal of the plan through the Magnuson-Stevens Act process.

### **Annual Catch Limits & Accountability Measures**

The Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006 established new requirements to end and prevent overfishing through the use of annual catch limits (ACLs) and accountability measures (AMs). Fishery management plans must establish ACLs and AMs by 2010 for stocks subject to overfishing and by 2011 for most other stocks. The red snapper quota management system was and remains consistent with these requirements. The Gulf of Mexico Fishery Management Council (Council) established ACLs and AMs for greater amberjack, gray triggerfish and gag in Reef Fish Amendments 30A and 30B, which NOAA Fisheries Service implemented in August 2008 and May 2009, respectively. During 2009, NOAA Fisheries Service worked cooperatively with the Council to begin development of a generic comprehensive amendment, which will address ACLs and AMs for most of the remaining stocks in Council fishery management plans. Species managed jointly with the South Atlantic Fishery Management Council (i.e., coastal migratory pelagics and spiny lobster) will be addressed through separate amendments.

## **PROTECTED RESOURCES DIVISION**

### *Biological Opinions*

- Completed a biological opinion for the "Continued Authorization of Fishing under the Fishery Management Plan for the Stone Crab Fishery of the Gulf of Mexico."
- Completed a biological opinion for the "Continued Authorization of Fishing under the Fishery Management Plan for Spiny Lobster in the South Atlantic and Gulf of Mexico."
- Completed a biological opinion for the Mobile District Corps of Engineers regarding "Funding

and Permitting the Reconstruction and Operation of the City of Biloxi Coliseum Pier, Harrison County, Mississippi,” and its effect on Gulf sturgeon, Gulf sturgeon critical habitat, smalltooth sawfish and sea turtles.

- Completed a biological opinion for the Jacksonville District Corps of Engineers regarding “Construction of an Extension to, and Continued Operation of, the City of Mexico Beach Fishing Pier, Bay County, Florida,” and its effects on Gulf sturgeon, Gulf sturgeon critical habitat, smalltooth sawfish and sea turtles.
- Completed a biological opinion for the Jacksonville District Corps of Engineers regarding “Replacement and Extension of the M.B. Miller Fishing Pier, Bay County, Florida,” and its effects on Gulf sturgeon, Gulf sturgeon critical habitat, smalltooth sawfish and sea turtles.
- Completed a biological opinion for the Mobile District Corps of Engineers regarding the “Ten-Year Authorization for Maintenance Dredging of East Pass, Destin, Florida,” and its effects on Gulf sturgeon critical habitat.
- Completed a biological opinion for the New Orleans District Corps of Engineers regarding “Installation of two Breakwaters in Lake Pontchartrain Providing 100-Year-Level Storm Protection for the City of New Orleans and Jefferson Parish,” and its effects on Gulf sturgeon critical habitat.
- Completed a biological opinion for the “Continued Authorization of Reef Fish Fishing under the Gulf of Mexico Reef Fish Fishery Management Plan, including Amendment 31, and a Rulemaking to Reduce Sea Turtle Bycatch in the Eastern Gulf Bottom Longline Component of the Fishery.”

#### *Conservation Measures*

- Completed the new Mississippi Department of Natural Resources’ Endangered Species Act Section 6 Cooperative Agreement.
- Completed the new Louisiana Department of Wildlife and Fisheries’ Endangered Species Act Section 6 Cooperative Agreement.
- Completed the new Texas Department of Natural Resources’ Endangered Species Act Section 6 Cooperative Agreement.
- Renewed and amended the Florida Fish and Wildlife Conservation Commission’s Endangered Species Act Section 6 Cooperative Agreement to add elkhorn and staghorn corals.

- Finalized Endangered Species Act rule to reduce bycatch of sea turtles in the bottom longline component of the Gulf of Mexico reef fish fishery.
- Completed the Gulf sturgeon 5-year review.
- Provided comments on the “proposed changes to the 2010 Marine Mammal Protection Act List of Fisheries” in the Gulf of Mexico.
- Solicited input and recommendations from the Gulf States for the “Endangered Species Act Sea Turtle Observer Rule Annual Determination.”

#### *Outreach Activities*

- Registered approximately 5,752 fishermen under the Marine Mammal Authorization Program.
- Began planning Dolphin SMART program implementation along the central, southwest coast of Florida in 2010; and continued implementation of the program in Key West, FL and Orange Beach, AL. There are currently four tour businesses recognized as Dolphin SMART.
- Maintained a NOAA booth at the Shrimp Festival in Orange Beach, Alabama and provided wild dolphin conservation information to attendees.
- Mailed educational packets to all commercial tour operators and water-related businesses along the central west coast of Florida and in Puerto Rico to remind them of the MMPA’s implementing regulations preventing feeding and harassment of wild dolphins, as well as, providing responsible viewing and advertising information and associated outreach materials.
- Debuted web site hosting animated video showing a dolphin addicted to human food, and initiated distribution of the video to use as an innovative educational tool conveying the harm illegal feeding causes dolphins, as well as, how the public can help.
- Conducted a workshop in Alabama for law enforcement personnel to discuss the harm from illegally feeding and harassing wild dolphins.
- Renewed several Stranding Agreements authorizing participation in the National Marine Fisheries Service Marine Mammal Health and Stranding Response Program, Southeast Region Stranding Network.
- Developed and designed an outreach brochure to inform the public on what to do in the event of a marine mammal stranding.
- Developed two outreach products for recreational anglers featuring NOAA Fisheries Service’s “Dolphin Friendly Fishing and Viewing Tips” and pertinent hotline numbers to

help anglers avoid interactions with dolphins while fishing.

## **HABITAT CONSERVATION AND PROTECTION**

Habitat Conservation Division (HCD) personnel in the SERO and in seven field offices strategically located throughout the southeast region interacted with federal, state, and local officials, private sector, and interested citizens to fulfill federal mandates to conserve, protect, and restore habitats that support managed fish stocks, protected resources, and healthy ecosystem functions. To accomplish these objectives, HCD applied its authorities to manage and influence the outcome of actions that may adversely affect essential fish habitat (EFH) and other fishery resources and, ultimately, the production of important commercial and recreational fisheries. Activities focused on a suite of actions intended to promote an ecosystem-based approach to management, including:

- Project and permit reviews and EFH consultations involving federal programs;
- Pre- and post-application planning and monitoring;
- Federal projects affecting habitat;
- National Environmental Policy Act (NEPA) consultations;
- Partnerships and coordination (e.g., fishery management councils and marine fisheries commissions); and
- Science-management coordination and outreach.

The HCD continued its intensive involvement in activities promoting conservation, restoration, enhancement, creation, and preservation of coastal wetlands, riverine habitats, and nearshore areas utilized by important commercial and recreational fish species. Also, the HCD became increasingly involved in regional partnerships to leverage resources and capabilities to conserve habitat and promote stewardship. These partnerships include the Southeast Aquatic Resources Partnership (SARP), the Gulf of Mexico Alliance, the Northern Gulf Institute, and the NOAA Gulf of Mexico Regional Collaboration Teams.

The HCD provided consultation services through field inspections, meetings, public hearings, informal discussions, and document review. Also, the HCD provided recommendations to sequentially avoid, minimize, and offset adverse impacts to EFH and other fishery habitats. 2009 accomplishments in the Gulf of Mexico region include:

- Reviewed over 1,700 individual proposals to construct in coastal waters or wetlands.
- Provided pre-consultative technical assistance on 74 projects.
- Provided detailed conservation recommendations on over 300 EFH consultations initiated by federal action agencies.
- Completed reviews on 48 NEPA actions.
- Participated in other activities associated with mitigation planning and habitat restoration, including providing technical assistance and consultation on two proposed closed loop liquefied natural gas (LNG) facilities in various stages of the permitting and licensing process and serving on technical advisory committees established to develop and implement plans to monitor and mitigate for unavoidable adverse impacts caused by multiple LNG facilities in offshore and onshore locations.
- Engaged in the following activities related to the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA, also known as the Breaux Act):
  - Completion of engineering and design activities for barrier island restoration projects in the Barataria basin (Pelican Island (-\$33 million and 325 acres) and Scofield Island (-\$32 million and 275 acres)).
  - Completion of construction of the Pass Chaland to Grand Bayou Pass project, which created almost 300 acres of saline marsh, beach and dune and restored two miles of Gulf of Mexico shoreline at a cost of \$34 million.
  - Modification of the Bio-Engineered Oyster Reef Demonstration Project, which would test a new technique to address rapid shoreline retreat and wetland loss along the Gulf of Mexico shoreline in areas with soils of low load bearing capacity at a cost of \$1.9 million.
  - Initiation of engineering and design activities on the Grand Liard Marsh and Ridge restoration project, which would create more than 300 acres of saline marsh, nourish 140 acres of existing marsh, and create 34 acres of maritime ridge habitat.
  - Completion of project nomination and initial planning activities for the Cheniere Ronquille barrier island restoration project, which would create more than 120 acres of dune habitat and more than 250 acres of marsh habitat.
  - Completion of engineering and design activities for the West Belle Pass Barrier Headland Restoration Project, which would create and restore 110 acres of dune and

- supratidal habitats and restore 150 acres of back barrier marsh at a cost of \$32 million.
- Continued assisting the Corps of Engineers with hurricane recovery and protection efforts by providing technical assistance and expedited reviews of proposed levee and flood control activities and engaging in long-term restoration planning.
- Under the auspices of the emerging Cooperative Habitat Protection Program (CHPP), continued to partner with the Galveston Bay Foundation and the National Fish and Wildlife Foundation to implement small landowner living shoreline projects in Galveston Bay and initiated a habitat mapping and prioritization project with the Mobile Bay National Estuary Program and Coastal Services Center.
- Provided habitat information and EFH reviews in support of fishery management plans, amendments, and other regulatory actions.
- Provided technical support and local expertise to the NOAA Scientific Support Coordinator and the Regional Response Teams during several hazardous material incidents and exercises.
- Worked closely with the Florida Department of Transportation throughout the bridge and highway project planning process to minimize project delays and ensure early consideration of measures to conserve NOAA trust resources.
- Participated in ecosystem planning activities through active membership in the SARP and other regional partnerships, including the Mississippi Coastal Improvements Program, Louisiana Coastal Protection and Restoration Program, Louisiana Coastal Area Feasibility Study, Florida's Subcommittee on Managed Marshes, National Estuary Programs in Texas, Louisiana, Mississippi, and Florida, and a variety of similar planning activities.
- Represented NOAA Fisheries Service Southeast Region on the Gulf of Mexico Alliance's Federal Work Group and by serving as the federal co-facilitator on the Habitat Conservation and Restoration Team, as well as participating in many of the Alliance's technical working groups.

Aggressively engaged in habitat conservation outreach by:

- Conducting poster sessions and making formal and informal presentations at scientific and management meetings.
- Addressing students of all ages in classrooms throughout the region.

- Delivering lectures at constituent meetings and maintaining continuous contact with concerned individuals and organizations.
- Producing reports and brochures for intra- and inter-agency coordination.
- Responding to requests for information from private citizens, news media, and local, state, and federal agencies.

#### **COOPERATIVE AGREEMENT AND GRANT PROGRAMS**

In 2009, 105 grants and cooperative agreements totaling \$83,743,104 were awarded to states, universities, non-profit/profit institutions, and individuals as follows:

- Regional fishery management councils: \$7,580,137 to conduct fishery management activities in accordance with the Magnuson-Stevens Fishery Conservation and Management Act.
- Southeast Area Monitoring and Assessment Program (SEAMAP): \$4,241,831.
- State-Federal Cooperative Fisheries Statistics Program: \$1,173,661.
- Interjurisdictional Fisheries Program: \$957,859.
- Atlantic Coastal Fisheries Cooperative Management Act Program: \$726,905.
- Atlantic Coastal Cooperative Statistics Program: \$142,772.
- Marine Fisheries Initiative (MARFIN) Program: ten new awards totaling \$1,146,924 and eight previous multi-year awards totaling \$927,363.
- Saltonstall-Kennedy (S-K) Grant Program: ten grants totaling \$2,083,762.
- Cooperative Research Program: eight grants totaling \$2,105,439.
- Unallied Science Program: \$977,310.
- Unallied Industry Projects: \$47,000,000.
- Cooperative Science and Education Project: \$645,000.
- Gulf States Marine Fisheries Commission: \$5,589,287 to coordinate activities of the Fisheries Information Network.
- South Carolina Department of Natural Resources: \$860,632 for work on the Marine Resources Monitoring, Assessment and Prediction (MARMAP) program.
- The Bay –Watershed Education and Training (B-WET) program: seven awards totaling \$674,347.
- Congressionally-identified awards: six awards totaling \$6,909,875.



## **SOCIO-ECONOMICS PROGRAM**

NOAA Fisheries Service provided socioeconomic review, assessment, and/or authorship services for the following fishery management plans, amendments, and rules in 2009: Offshore Aquaculture Fishery Management Plan; Amendment 29 to the Reef Fish Fishery Management Plan; Amendment 30B to the Reef Fish Fishery Management Plan; Emergency Rule and Endangered Species Act Rule to reduce sea turtle take by reef fish bottom longline gear; and Amendment 31 to the Reef Fish Fishery Management Plan.

Social science staff participated on technical work groups, panels, and committees as part of the Gulf of Mexico Fishery Management Council Socioeconomic Panel, the Gulf of Mexico Fishery Management Council Ecosystem Management

Science and Statistics Committee, and the Gulf States Marine Fisheries Commission Socioeconomic Workgroup. Other activities in 2009 included:

- Provided technical monitoring services to research investigations on the social impacts of allocation/reallocation on communities and the development of social indicators for fishing communities.
- Co-authored reports on the annual economic survey of Federal Gulf shrimp permit holders for the 2006 and 2007 fishing years.
- Assisted NOAA Fisheries Service's Southeast Fisheries Science Center in developing the shrimp vessel cost and earnings survey for the 2008 fishing year.
- Presented an overview of the Gulf shrimp industry to the Gulf States Marine Fisheries Commission at their fall meeting.

# **G**ULF OF MEXICO FISHERY MANAGEMENT COUNCIL

*Dr. Steve Bortone, Executive Director*

The Gulf of Mexico Fishery Management Council is one of eight regional fishery management councils established by the Fishery Conservation and Management Act of 1976 (now called the Magnuson-Stevens Act). The Council prepares fishery management plans designed to manage fishery resources from where state waters end, out to the 200-mile limit of the Gulf of Mexico. These waters are referred to as the Exclusive Economic Zone, or EEZ.

The Council consists of 17 voting members: the Southeast Regional Administrator of NMFS (or his designee), the directors of the five Gulf state marine resource management agencies (or their designees), and 11 members who are nominated by the state governors and appointed by the Secretary of Commerce. Appointments are three-year terms with a maximum of three consecutive terms. In addition, there are four non-voting members representing the U.S. Coast Guard, U.S. Fish and Wildlife Service, Department of State, and the Gulf States Marine Fisheries Commission.

The Council meets five times a year at various locations around the Gulf coast. Prior to taking final action on any proposed rule change, public hearings are held throughout the Gulf. Public testimony is also heard during the meeting at which final action is scheduled. Proposed rule changes are then submitted to NMFS for further review and approval before implementation.

When reviewing potential rule changes, the Council draws upon the services of knowledgeable people from other state and federal agencies, universities, and the public, who serve on panels and committees. Panels and committees include Advisory Panels, Scientific and Statistical Committees, Stock Assessment Panels and the Socioeconomic Panel.

## **Advisory Panels (APs)**

Panel members include recreational and commercial fishermen, charter boat operators, environmentalists, distributors, seafood dealers, and consumers who are knowledgeable about a particular fishery.

## **Scientific and Statistical Committees (SSCs)**

Committee members include economists, biologists, sociologists, and natural resource attorneys who are knowledgeable about the technical aspects of fisheries in the Gulf and advise the Council on annual

catch limits, acceptable biological catch, and other stock conditions.

## **Stock Assessment Panels (SAPs)**

Panel members include biologists who are trained in the specialized field of population dynamics, and who participate in the stock assessment process.

## **Socioeconomic Panel (SEP)**

Panel members include sociologists, anthropologists, and economists who advise the Council of social and economic impacts or conditions.

A review of AP and SSC membership is conducted every two years to fill vacancies on panels and committees. The Council made appointments to these panels and committees in 2009.

Additionally, the Council appointed members to three newly created advisory panels: the Vessel Monitoring System Advisory Panel; an Ad Hoc Mackerel Limited Access Privilege Program Advisory Panel; and an Ad Hoc Limited Access Privilege Program.

The Vessel Monitoring System Advisory Panel was formed to advise the Council on matters pertaining to the use of vessel monitoring systems in the reef fish fishery, and to advise how the data collected might be used. The Ad Hoc Mackerel Limited Access Privilege Program Advisory Panel will consider the trading of catch shares and other issues related to catch share programs for the commercial Gulf king mackerel fishery. The Ad Hoc Limited Access Privilege Program Advisory Panel will assist the Council in the development of an all-inclusive catch share program, or other limited access privilege program for the reef fish fishery.

## **FMPs**

In 2009, the Gulf Council addressed a variety of issues through the development and implementation of various management plans and amendments.

## **Shrimp**

After hearing an update on the conditions of the Texas shrimp stocks, an economic analysis, and public comment, the Council again recommended maintaining the Texas shrimp closure for 2009. The closure helps to protect juvenile shrimp migrating from the bays to the Gulf of Mexico, allowing the shrimp to grow to a larger, more valuable size. Also in 2008, a rule to revise the certification criteria for

bycatch reduction devices was published and became effective March 14, 2008.

### **Reef Fish**

In January 2009, the Gulf Council approved Reef Fish Amendment 29, which enables the implementation of an Individual Fishing Quota program for the commercial grouper and tilefish fisheries. This catch share program is intended to reduce effort and overcapacity. The program will become effective January 1, 2010.

Additionally, the Council established a control date of December 31, 2008 for the commercial reef fish fishery in the Gulf of Mexico, in anticipation of broadening the catch share program to include all reef fish.

Also in January 2009, the Council requested NOAA Fisheries implement an emergency rule to help protect sea turtles in the Gulf of Mexico. The rule temporarily closed the bottom longline fishery in waters less than 50 fathoms for the entire eastern Gulf of Mexico while the Council began developing Reef Fish Amendment 31 to address the problem.

Six public hearings were held around the Gulf coast regarding Reef Fish Amendment 31. The amendment was approved by the Council in August 2009, and includes the following management actions:

- Longline endorsement requirement – vessels must have average annual reef fish landings of 40,000 pounds gutted weight or more from 1999 – 2007;
- Reef fish bottom longline fishing restricted to outside the 35-fathom depth contour from June – August;
- Vessels are limited to 1000 hooks of which no more than 750 of which can be rigged for fishing or fished.

Finally, the Council began developing an amendment to its reef fish fishery management plan to end overfishing of gag and rebuild the stock, and to also review adjustments to red grouper annual catch limits and explore whether management changes are necessary. Reef Fish Amendment 32 is expected to be approved by the Council in 2010.

### **Sustainable Fisheries/Ecosystem Management**

New provisions in the Magnuson-Stevens Act require regional fishery management Councils to develop annual catch limits and accountability measures by 2010 for managed species subject to overfishing, and by 2011 for all other managed species, to ensure that overfishing does not occur.

In response, the Council has initiated a Generic Amendment for Annual Catch Limits and Accountability Measures. Nine scoping meetings were held around the Gulf in September 2009. Final approval of the amendment is expected in the fall of 2010.

### **Coastal Migratory Pelagics**

The Council continued to work on Amendment 18 to the Coastal Migratory Pelagic Fishery Management Plan (FMP) to set the overfishing level, acceptable biological catch, annual catch limits, and possibly annual catch targets for Gulf Migratory Group king mackerel, Gulf Migratory Group Spanish mackerel & cobia (in the Gulf of Mexico).

A new Coastal Migratory Pelagics Amendment 20 will address other issues, such as bycatch, the sale of migratory pelagics, catch shares, and modifications to zones, subzones, and migratory group boundaries. Seven scoping meetings were held around the Gulf in September 2009.

### **Aquaculture**

The Council approved the Generic Aquaculture Amendment and sent the plan to the Secretary of Commerce for approval and implementation. The plan is intended to provide a regional permitting process for regulating offshore aquaculture in the federal waters of the Gulf of Mexico – federal waters begin where state jurisdiction ends and extend 200 miles offshore.

The Aquaculture Amendment was approved by default; however, NOAA Fisheries has not approved implementing regulations, inasmuch as the agency is waiting for a national policy to be developed.

### **Spiny Lobster**

The Council initiated Amendment 10 to the Spiny Lobster fishery management plan to set annual catch limits and accountability measures now required by the reauthorized Magnuson-Stevens Act. Three scoping meetings were held in September 2009.

### **Southeast Data, Assessment and Review (SEDAR)**

The SEDAR process is a three-step process for conducting stock assessments. It consists of a Data Workshop to compile available data, a Stock Assessment workshop to prepare the actual assessment, and an Assessment Review Workshop to provide an independent review of the assessment, conduct additional analyses if necessary, and make recommendations regarding the status of stock and acceptable biological catch levels.

The Southeast Data, Assessment and Review (SEDAR) Steering Committee met once in 2009 to review generic terms of reference, review and approve proposed SEDAR procedural changes, and to review the SEDAR schedule and SEDAR Guidelines.

#### **Data Collection**

The Data Collection Committee met three times in 2009. The Committee/Council sent a letter to Dr. James Balsiger, Acting Assistant Administrator for Fisheries, NOAA Fisheries, endorsing the continued expansion of the Electronic Logbook Program.

The Committee also initiated an effort to establish mandatory electronic reporting systems criteria for all managed Gulf fisheries by February 2010. Finally, the Committee will convene its newly appointed Ad Hoc Data Collection Advisory Panel to define sector specific electronic data reporting system requirements.

#### **Outreach and Education**

The Outreach and Education Advisory Panel met three times in 2009. The panel has developed a list of recommendations for improving outreach and education and will meet in 2010 to begin developing a five-year strategic plan.

#### **Law Enforcement Advisory Panel**

The Law Enforcement Advisory Panel (LEAP) was convened twice in 2009 to review an emergency action to reduce longline/sea turtle interactions and a draft of Reef Fish Amendment 31. The panel also reviewed the Council's action schedule and enforcement reports.

#### **Other**

In 2009, Council representatives attended three meetings of the International Commission for the Conservation of Atlantic Tunas (ICCAT) Advisory Committee.

Also in 2009, the Council convened the Texas, Florida/Alabama, and Mississippi/Louisiana Habitat Protection Advisory Panels.

#### **Other meetings include:**

- New Council Member Orientation
- Five-Year Research Plan
- MARFIN
- Turtle Longline IPT (5)
- Aquaculture IPT (2)
- MAFAC
- Industry/NMFS BRD
- ACL/AM IPT (3)
- Finding Solutions to Longline
- SEDAR Catchability
- Aquaculture America 2009
- Amendment 31 IPT(4)
- HMS (2)
- CCC (2)
- SEDAR Gag/Red Grouper Update
- Grants Workshop
- GSA Expo
- SEDAR 19 Black Grouper Data
- Spiny Lobster IPT
- Grouper Data IPT
- Natural Mortality Workshop
- ABC Control Rule Workgroup
- SEDAR Red Snapper Update
- ED Meeting
- Flower Garden Banks 23
- Amendment 32 IPT
- World Aquaculture Meeting
- MAFAC Meeting
- Gulf States Marine Fisheries Commission Meeting
- Gulf and South Atlantic Fisheries Foundation Meeting

# UNITED STATES FISH AND WILDLIFE SERVICE

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The Fisheries Program of the U.S. Fish and Wildlife Service (Service) has played a vital role in conserving and managing fish and other aquatic resources since 1871. Today, the Fisheries Program is a critical partner with States, Tribes, other Federal agencies, other Service programs, private organizations, public institutions, and interested citizens in a larger effort to conserve these important resources.

Strategic Habitat Conservation (SHC) is the Service's approach for addressing the conservation challenges of the 21st century. It is fundamentally a landscape-based approach to resource conservation.

The challenge before the Fisheries Program is to fully incorporate and interlink the functional elements of biological planning, conservation design, conservation delivery, monitoring, and research into the regular and routine operations of the Program. To further facilitate adoption of strategic habitat conservation principles by all of the Region's Programs, six geographic areas that cover the entire Southeast Region have been identified: South Atlantic, Peninsular Florida, Gulf Coast Prairie, Appalachian, Gulf Coast Plain/Ozark, and the Caribbean. These areas were chosen because they correspond generally to existing Migratory Bird Joint Ventures boundaries and corresponding Bird Conservation Regions. Within these six geographic boundaries, conservation priorities that focus on population/habitat objectives for fish and wildlife resources will be refined by Landscape Conservation Cooperatives (LCC). LCCs are strong multi-state, multi-agency, partnerships that provide state-of-the-art support of conservation planning and design. LCCs will take the ecological systems and species forecast models and apply them in a more specific geographic and management context to answer questions about how populations of key species may shift in response to factors like climate change, sea level rise, land use change, and invasive species. The collective LCC partnerships will be comprised of capabilities pooled by partners (State, Federal, non-governmental, etc.) to develop goals, develop consensus on priorities, and provide scientific support.

Reversing the decline of fish and other aquatic species populations in coastal waters requires approved management plans and assessment information to identify, prioritize, and evaluate management actions. In dealing with trust species, the Fisheries Program

conducts planning and assessment in cooperation with State, Tribal, and Federal agencies with jurisdiction over these fish stocks. Existing fisheries councils and commissions, such as the Gulf States Marine Fisheries Commissions, the Gulf Fishery Management Council, the Gulf of Mexico Alliance, the Lower Mississippi River Conservation Committee, and the Southeastern Aquatic Resource Partnership will help define these priorities.

The Fisheries Program will expand its involvement with conservation partners along the Gulf to ensure that habitat and species-based management decisions occur in a science-based, biologically-driven, landscape-oriented, and adaptive conservation framework. Focal species of interjurisdictional fish and other aquatics that are found in coastal waters and rivers flowing into the Gulf would include: striped bass, paddlefish, Gulf sturgeon, pallid sturgeon, alligator gar, alligator snapping turtle, and a number of imperiled mussels. The Fisheries Program has a proven track record in working with its Federal and State partners to address fish and aquatic resource needs in the southeastern United States. This is evident by the formation of the Southeast Aquatic Resources Partnership (SARP) in 2001 that pulled together 14 State fish and wildlife agencies, the Gulf and Atlantic States Marine Fisheries Commissions, the Gulf of Mexico and South Atlantic Fishery Management Councils, NOAA Fisheries and the Service. The Service's Fish Passage Program and Fish Habitat Program have identified a number of projects that will help reverse the decline of fish populations in Gulf coastal waters. These projects will continue to restore valuable wetland habitat and stream habitat within the Gulf coast. Additionally, over 240 Lower Mississippi River habitat restoration projects have been identified as part of the multi-State, Service, and Army Corps of Engineers "Restoring America's Greatest River Plan."

Numerous activities conducted by the Service and its partners have contributed to coastal fisheries interests in the five Gulf States in 2009. Specifically, 1) Addressing Climate Change 2) Partnership Restoration Efforts, 3) Anadromous Fisheries Restoration, 4) Coastal Fisheries Restoration, 5) Habitat Protection and Enhancement, and 6) Federal Assistance to State resource agencies.

### **Addressing Climate Change**

The potential for rapid and lasting climate change poses a significant challenge for fish and wildlife conservation. Species' abundance and distribution are dynamic, relative to a variety of factors, including climate. As climate changes, the abundance and distribution of wildlife and fish will also change. Climate change will be a particular challenge for endangered, threatened and other "at risk" species. Most climate models predict sea ice conditions will continue to degrade through this century, and some show little or no summer ice cover as early as mid-century, others show it could be as long as 100 years. The Service is seeking information through scientific review by the U.S. Geological Survey (USGS) to determine which model is the most accurate. Climate change will influence our stewardship of lands within the National Wildlife Refuge System (NWRS). Some challenges posed by a changing climate might include:

- Changing fire regimes;
- Changing patterns of rain and snowfall;
- Changing access to water resources;
- Altered hydrology in rivers and wetlands;
- Increased frequency of extreme weather events;
- Rising sea levels at our 177 coastal refuges.

The NWRS is considering climate change in future Comprehensive Conservation Plans, which provide a framework for guiding refuge management decisions. The System is also looking at how projected sea level rise could affect selected coastal refuges and how wildfire could change as the result of a warming climate. This is particularly important since 177 NWRs are on the coast. Accelerated climate change is magnifying impacts on our fisheries and other aquatic resources. We know from experience and observations that the effects of climate change are neither isolated nor limited to just a small number of aquatic species. Fishes, mussels, and other aquatic organisms will be greatly impacted as water temperatures increase and water quality deteriorates throughout the southeastern United States.

The Southeast Region of the Service will play a key role in the conservation community's broad-based and growing effort to address climate change. Working broadly through creative partnerships, our goal is to expand our commitment and capability in three areas: landscape conservation planning and design, conservation delivery, and research and monitoring. Our goal is to secure additional funding to expand our capability, establish new partnerships, and refine existing ones with partners like the U.S. Geological

Survey and others, in an effort to develop groundbreaking adaptation strategies for fish and wildlife that take into account the effect of change on the nation's coastal communities. The Service Climate Change Strategic Plan will focus on the following priority areas:

- 1) Developing a national fish and wildlife adaptation strategy and inventory and monitoring program.
- 2) Building regional and field technical capacity for climate change adaptation.
- 3) Building climate change leadership and management capacities.
- 4) Identifying priority water needs.
- 5) Addressing habitat fragmentation.
- 6) Facilitating international leadership on climate change and wildlife.
- 7) Educating and communicating.
- 8) Reducing the Service's carbon footprint.
- 9) Expanding biological carbon sequestration to create habitat for wildlife.
- 10) Reviewing legal, regulatory and policy issues.
- 11) Assessing species vulnerability to guide conservation.
- 12) Considering climate change in grant criteria.
- 13) Assisting in shaping energy policy.

### **Partnership Restoration Efforts**

The National Habitat Action Plan that has been developed through the National Fish Habitat Initiative (NFHI) is a science-based, voluntary, and non-regulatory partnership that will function through the National Fish Habitat Board and a set of regional Fish Habitat Partnerships. For the Southeast Region, the Fisheries Program will deliver this action plan primarily through the Southeast Aquatic Resources Partnership (SARP). SARP developed the Southeast Aquatic Habitat Plan (Plan) which represents a blueprint for the cooperative conservation of Southeastern streams, rivers, lakes/reservoirs, estuaries, and coastal marine habitats to support aquatic resources for sustainable public use. This Plan is the centerpiece of the Fisheries Program's strategy for aquatic habitat conservation and management in the Southeast Region. The Plan will guide a Region-wide effort to fulfill the goals set forth in the National Fish Habitat Action Plan. Eight primary objectives have been identified in the Southeast Aquatic Habitat Plan:

- 1) Establish, improve, and maintain riparian zones;
- 2) Improve or maintain water quality;
- 3) Improve or maintain watershed connectivity;
- 4) Improve or maintain appropriate hydrologic conditions for the support of biota in aquatic systems;

- 5) Establish, improve or maintain appropriate sediment flows;
- 6) Maintain and restore physical habitat in freshwater systems;
- 7) Restore or improve the ecological balance in habitats negatively affected by non-indigenous invasive or problem species; and
- 8) Conserve, restore, and create coastal estuarine and marine habitats.

The Lower Mississippi River Conservation Committee (LMRCC) and SARP provide platforms for landscape conservation efforts to restore aquatic species impacted by climate change. Fish and mussel populations impacted by climate change will be the focus of funding from the National Fish Habitat Initiative, National Fish Passage Program, and the Aquatic Invasive Species Program. These landscape conservation efforts, both on and off Federal land, should significantly improve the ability of aquatic species to adapt to changing climates and they are likely the key to their survival. The LMRCC and the SARP have the tools in place to fully implement a positive outcome for impacted fish and aquatic populations.

The Fisheries Program continues to participate in the Gulf Hypoxia Task Force. This group of Federal, state, local, NGO, and private citizens is using a landscape-level perspective to try to reduce nutrient loading throughout the Mississippi River Basin to reduce the size of the associated hypoxia zone that forms in the Gulf as a result.

The Gulf of Mexico Alliance is a partnership formed between the five Gulf of Mexico states, with Federal agency support, focused on sharing science, expertise and financial resource to better protect the health of the Gulf of Mexico. The Fisheries Program is the Service representative on this Alliance.

#### **Anadromous Fisheries Restoration**

A major focus of Service efforts in marine fisheries is management and restoration of anadromous fish populations. Three species in Gulf coastal waters and rivers are considered anadromous: Alabama shad, Gulf of Mexico sturgeon, and striped bass.

**Striped Bass:** Under the Gulf States Marine Fisheries Management Plan (FMP), the Service is working to restore populations of striped bass along the entire Gulf Coast. Anadromous populations of Gulf Coast striped bass historically occurred in most Gulf Rivers, but habitat degradation and alteration have led to severe

population declines. The goal of this FMP, working with many state partners, is to restore and maintain striped bass throughout the Gulf of Mexico region and to establish self-sustaining populations of striped bass in at least 10 coastal rivers. This species is recognized as being of tremendous economic, social, and recreational consequence.

- Stocked over 2 million Gulf Coast striped bass for restoration efforts in Gulf of Mexico watersheds.
- Performed genetic analyses on Gulf Coast striped bass brood fish to address population genetic concerns and to improve diversity.
- Evaluation of Phase II Gulf Striped Bass Stocked in the Apalachicola River, Florida: A small population of native Gulf race striped bass survives in the ACF, and its occurrence in coastal drainages of the Gulf of Mexico is generally believed to be dependent on continued stocking. Optimum stocking strategies are essential for successful re-establishment of striped bass in the ACF river system. Post stocking assessments of Phase II Gulf striped bass were conducted at multiple locations in the Apalachicola River. A final report will be completed in 2010 and provide stocking recommendations.

**Gulf Sturgeon:** Gulf of Mexico sturgeon is a threatened anadromous species of Gulf Coast river systems. Stocks have been greatly reduced throughout much of its range through over-fishing, dam construction, and habitat loss. Service activities focus on addressing high priority action items identified in the Gulf Sturgeon Recovery/Management Plan; including threats to habitat, life history stages, marine movement and habitat use, and projects dealing with population assessments in major Gulf Rivers using tagging and telemetry.

- Choctawhatchee River, Florida: The second of a two-year Gulf sturgeon population survey was conducted in the Choctawhatchee River from October 2009 to November 2009 to coincide with the species' fall migration from freshwater to the marine environment. The Panama City Fish and Wildlife Conservation Office collected 526 Gulf sturgeons during the period. Each sturgeon was tagged with a Passive Integrated Transponder tag (PIT). Juveniles accounted for 39% of the catch,

while sub adults and adults represented 34% and 27% of the collection respectively.

- The Service sponsored the annual Morone Workshop and Stocking Coordination Meeting for all Gulf States. The workshop provides a forum and communication network for Federal, State, and university researchers to obtain and present technical and scientific information regarding current striped bass studies.
- The Service collaborated with NMFS to complete field work and submit for publication on winter foraging habitat of Gulf sturgeon in the Gulf and associated bays systems.
- Florida: In coordination with SARP, Florida Wildlife Commission (FWC), and the NMFS, the Service continues to monitor Gulf Sturgeon population status in various Panhandle drainages. These efforts provide information to support an upcoming species status review, as well as be used to evaluate fish habitat priorities related to suitable breeding areas, fish passage, and habitat quality.
- Mississippi: Cooperative efforts with the State and academia to promote recovery of the Gulf sturgeon through research specifically focused on movement patterns and habitat use by juvenile and sub-adult Gulf sturgeon in the Pascagoula watershed through the use of ultrasonic telemetry. Information obtained from this study increased knowledge of those areas more widely utilized and aids in designing protection strategies for this species.
- Louisiana: The Gulf sturgeon (*Acipenser oxyrinchus desotoi*) was listed as threatened in 1991. Critical habitat was designated in 1993 which includes 93 miles of the Bogue Chitto River from its confluence with the Pearl River to the Mississippi Highway 570. This species requires access to freshwater systems along major coastal rivers to successfully reproduce, but little is known about the spawning habits in Louisiana rivers. The Pearl River Basin in lower Louisiana and Mississippi was once inhabited by sturgeon and at least 19 other fish species. With the completion of the Pearl River Navigation Project in 1956, fish migration in the Pearl River Basin was impeded by two concrete sills and a dredged lock-and-dam navigation canal. A formidable physical barrier to migrating fish, the Bogue Chitto Sill (BC Sill) at river mile 44.0, stretches 250 feet across the lower

reach of the Bogue Chitto River. The affects of this barrier are exacerbated in the spring months when low water volume creates high velocity over the sill. At flood stage, spawning sturgeon could pass over the sill, or perhaps find their way around the barrier through the flooded marsh. However, fish surveys over the last several decades by the Service and the Louisiana Department of Wildlife and Fisheries (LDWF) confirm that sturgeon rarely reach the upper river.

Gravel bars are common in the critical habitat above the BC Sill, and likely provided suitable habitat for spawning sturgeon in the past. The Gulf sturgeon Recovery/Management Plan calls for action to be taken on structures, including low-head dams that are impeding migration or preventing access to critical sturgeon habitats. Actions taken on low-head dams should restore the natural hydrology or provide a viable bypass route around the structure. A study was started to test the hypothesis that Gulf sturgeon will attempt to spawn in critical habitat above the sill if transported over the obstruction. The Baton Rouge Fish and Wildlife Conservation Office proposed to fit sonic transmitters on twenty Gulf sturgeons, and then release tagged fish past the migration impediment. Movement and behavior, as well as habitat use pattern, will be evaluated during the spring spawning period from March through May. In February 2009, reconnaissance trips were made to the Bogue Chitto River from the BC Sill to McComb, MS to locate bridge crossings or boat docks suitable for deploying sonic receivers. Twenty sonic tags were modified to reduce the chances of being shed after being externally attached to the base of the Gulf sturgeon's dorsal fin. In March 2009, 13 receivers were deployed along the Bogue Chitto River from downstream of the sill to upstream near McComb, Mississippi. One male sturgeon was captured and fitted with a sonic transmitter. This fish was transported and released approximately one mile above the BC Sill. In April 2009, torrential rains began throughout the Bogue Chitto drainage and made gillnetting difficult. With field assistance from the Service's Lafayette Ecological Services Field Office and LDWF, attempts were made to capture sturgeon below the sill. However, even with nets specifically modified to fish in river conditions, no fish were encountered due to high water volume and velocity. Future sampling for fish below the sill during the spawning period in 2010 will be carefully scheduled with close attention to spring runoff in the Bogue Chitto drainage. It is envisioned that this investigation will provide fish movement and behavioral information



concerning critical habitat usage for areas that have not been regularly accessible to sturgeon since 1956.

**Alabama Shad:** The Alabama shad is an anadromous species native to northern Gulf of Mexico from the Suwannee to the Mississippi River and historically migrating inland as far as the Ohio and Missouri rivers. Populations of Alabama shad have declined significantly over the past century. The most significant remaining spawning population is believed to reside in the Apalachicola-Chattahoochee-Flint (ACF) river system in Alabama, Florida, and Georgia.

- Alabama Shad Restoration – Jim Woodruff Lock and Dam: A joint restoration project for the Alabama shad between the Service; U.S. Army Corps of Engineers; States of Alabama, Florida, and Georgia; U.S. Geological Survey, and the National Marine Fisheries Service is being implemented at the Jim Woodruff Lock and Dam, located on the Apalachicola River. The project is in year five of a ten-year project to restore Alabama shad runs to the spawning habitat that lies beyond the dam. An “attraction flow” has been installed in the lock chamber of the dam in order to re-create the sound of the rushing river. The U.S. Army Corps of Engineers has agreed to leave the dam’s upstream gates open for longer periods of time which will allow more shad to find their way to their historic spawning grounds. It is hoped that this enhancement of fish passage will produce a response at the population level. The project is funded from the Service’s Fish Passage Program.
- Restoration/Recovery Plan for Alabama Shad: In FY 2006 – 2009, a Restoration/Recovery Plan for Alabama Shad was drafted by representatives from the Georgia Department of Natural Resources, Florida Fish and Wildlife Conservation Commission, The Nature Conservancy, U.S. Geological Survey, NOAA and the Fish and Wildlife Service. The plan provides a historical perspective of the Alabama Shad population in the ACF, describes its life history, biology, and habitat, identifies data gaps, and evaluates methods and opportunities to restore spawning migrations. The plan will be finalized in 2010.

#### **Coastal Fisheries Restoration/Assessments**

Coastal habitats in the Southeast are critical to the region’s biological productivity. Sal marshes, oyster reefs, seagrass beds, estuarine wetlands, mangroves, coral reefs, and flats provide food, cover, shelter,

spawning, and nursery areas for fish and other aquatic species. These special places have suffered significant losses and degradation in recent years.

#### **Coastal Program**

The Service’s Coastal Program is charged with a mission to protect and recover threatened and endangered species, migratory birds, marine mammals, interjurisdictional fish species, and other species of concern by supporting voluntary restoration, enhancement, management, and protection of high-priority coastal habitats. The Coastal Program works with willing partners to provide technical assistance and to provide and leverage financial support to accomplish habitat improvement projects that benefit Federal trust species and their habitats on both private and public lands. Within the Southeast Region, and specific to the Gulf of Mexico, the Coastal Program has a dedicated office and one or more staff at: Panama City, Florida (Florida Panhandle Office); Tampa, Florida (Tampa Bay Office); and Vero, Beach, Florida (South Florida Office).

- Louisiana: The Coastal Wetland Planning, Protection and Restoration Act (CWPPRA) is a program funded with non-Service funds but the Service participates in the review of the planning, engineering and design, and construction of all projects through the CWPPRA Task Force and committees. CWPPRA funds are allocated to the Louisiana CWPPRA program from the Sport Fisheries and Boating Safety Trust Fund to the Corps of Engineers who serves as the banker and chairman of the Task Force. The funds are not Corps funds per se, but are shared and distributed to 5 Federal agencies and the State. The Service oversees the planning, engineering and design, construction, O&M, and monitoring of these Service-sponsored projects. Total CWPPRA 2009: 671 acres wetlands restored; 3.5 miles shoreline protected; Service-sponsored CWPPRA 2009: 447 acres wetlands restored; 2.1 miles shoreline protected
- Alabama: The Alabama Ecological Services Field Office recently received funding to start a new Coastal Program that covers the northern Gulf coast in Alabama, Mississippi and parts of Louisiana. Using initial start-up funds of \$461,000, the office has begun working with our partners in these three states to implement habitat improvement projects in coastal areas.

- Florida: The Service continued to prioritize, secure, and rehabilitate critical areas of marshes, bays, estuaries, and shorelines through partnership as well as support from the Coastal Program. Contingent on partnership participation and funding, these efforts will focus on increasing continuity between state- and federally-owned landscapes.

### **Contaminants Program**

The Contaminants Program works with partners to prevent contamination and maintain healthy ecosystems; identifies contamination that adversely affects the health of fish, wildlife, and their ecosystems; and acts as Federal trustee for fish and wildlife injured by contamination, negotiating settlements from polluters to restore lost resources and their benefits to local citizens.

- Louisiana: In 2009, evaluated 239 oil/hazardous materials spill reports (however, investigations showed no significant fish or wildlife damages). The Service is currently involved in 9 Natural Resources Damage Assessment and Restoration Program (NRDAR) cases, settlements pending.
- Florida: In partnership, evaluated and forecast the impacts of water quality on biota and ecological processes. These efforts include contaminant threats assessments to develop contaminant and nutrient loading thresholds for individual bays/estuaries across the Panhandle Region.
- Alabama: The Alabama Ecological Services Field Office is leading an effort to identify sources, toxicity and fate of mercury contamination in coastal Alabama. Mercury contamination in coastal ecosystems has led to fish consumption advisories in many of Alabama's coastal streams. New studies are underway to understand the concentrations and effects of mercury contamination in several taxa of the Mobile estuary including fish, birds and aquatic invertebrates. The information will be utilized as part of a natural resources damage assessment effort related to several mercury contaminated sites in the Mobile River watershed. The information will also be provided to appropriate agencies for development of total maximum daily load (TMDL) determinations for mercury-impaired waters.

### **National Wildlife Refuges**

A total of 37 National Wildlife Refuges perpetually

protect and manage thousands of acres of coastal wetlands in each of the five Gulf States. These refuges provide critical nursery habitat for most of the commercially and recreationally important fish and shellfish species in Gulf fisheries. Additionally, most of these refuges also provide access to and opportunity for coastal recreational fishing.

### **Assessments**

The Lower Mississippi River Fisheries Coordination Office continues to lead implementation of the actions and strategies of the Lower Mississippi River Aquatic Resources Management Plan (ARMP). The ARMP is a 10-year operational plan developed to address the primary factors adversely affecting aquatic resources in the Lower River's 2.7 million-acre leveed floodplain and 5 major backwater areas. The ARMP serves as the unifying mechanism for an array of stakeholders and the LMRCC to protect and restore aquatic resources in the area. The Lower Mississippi River Fisheries Coordination Office continues to facilitate and coordinate the development, maintenance, and refinement of geospatial databases necessary to effectively conserve and manage riverine, floodplain-dependent, and interjurisdictional aquatic resources, with special emphasis on fisheries; the development and refinement of Internet-based systems for distributing and updating geospatial information among a network of LMRCC, state partners, and the public; and the provision of Geographic Information System products and support to the LMRCC members and partners.

### **Habitat Protection and Enhancement**

Fish Passage Program: Restores native fish and other aquatic species to self-sustaining levels by reconnecting fish habitat that has been fragmented by barriers. Examples of past accomplishments as it relates to the Gulf Coast include:

- Funded projects that re-opened fish passage to over 53 miles of stream habitat within the Gulf Coast.
- Funded projects that removed or bypassed 17 fish passage barriers within the Gulf Coast.
- Evaluated and identified suggested actions for rehabilitation and elimination of sediment inputs for approximately 130 road-stream crossings, crossings, culvert replacement, and best management practices to prevent further erosion at Eglin AFB.

- The Service continued to provide technical assistance and project funding to restore access to fish habitat within rivers and streams of the Gulf Coast.
- Oyster Lake Restoration Project: Oyster Lake is a 26-acre coastal dune lake that has been hydrologically isolated from the Gulf of Mexico since 1975. A fish passage barrier is located at the outlet of Oyster Lake. A three chambered box culvert along with two metal culverts prevent tidal flows from entering the lake. The lake is dominated by freshwater runoff and groundwater seepage causing a dilute, brackish system. The proposed improvements include the construction of four bridges to re-establish the natural connections similar to the other coastal dune lakes in the area. One of the bridges will be a 30' span to replace the box culvert that was constructed without consideration for its long-term impacts. These improvements would re-establish the natural wetland flows and coastal connections and provide habitat for marine breeding grounds. The Oyster Lake culvert is the outlet for Oyster Lake that connects to the Gulf of Mexico and inhibits fish passage. In FY 2009, the Thompson Road culvert was removed and replaced with a bridge structure to restore 5 acres of wetland habitat along the western portion of Oyster Lake. The remaining culverts on Hwy 30A are still in contention with adjacent landowners and should be resolved in FY 2010.
- Anderson Branch Fish Passage Project: The Panama City Fish and Wildlife Conservation Office completed a design and secured funding for the Anderson Branch Fish Passage Project. The project is in final approval from Eglin AFB Jackson Guard and the 404 permit is being processed. This project is on-schedule to be completed in FY 2010. Restoring stream habitat in Anderson Branch will support recovery of the endangered Okaloosa darter. Anderson Pond currently impounds Anderson Branch and inhibits fish passage for about 2 miles of headwater streams. The overall project design is to restore Anderson Branch with a free flowing stream and redesign the existing Anderson Pond dam to maintain recreational uses. Anderson Pond will be excavated below floodplain elevation with a stream channel design around the pond to facilitate fish passage and instream habitat. A gated cross vane will act to divert flows into the pond thereby maintain water levels for recreational use. Restoration will consist of inchannel structures and planted floodplains.
- Black Lake Hydrology Restoration Project: The Black Lake Project consists of a culvert that inhibits the natural tidal hydrology to Black Lake, a tributary to the Perdido River, which effects aquatic organism passage and limits access to habitat. Additionally, rainfall runoff is greatly reduced and effecting the integrity of the road crossing prism. Some downstream and upstream scour has eroded bed materials and destabilized streambanks. The objective of this project is to restore the hydrological connectivity from natural and flood flows that will lead to long-term stability of bed materials and stream habitat. A land survey was conducted in FY 2009 by the Panama City Fish and Wildlife Conservation Office to initiate design plans and determine surrounding topography elevations. A 12'x24' bridge with floodplain culverts will be permitted and installed to restore the natural hydrology for the surrounding habitat. This project has been fully funded and scheduled for completion in FY 2010. Hydrologic connectivity is essential for long-term environmental health of the aquatic ecosystems. Allowing the natural flow regime provides effective sediment transport, instream habitat, channel stability and floodplain connectivity.
- Dam Removal on Uchee Creek, Alabama: Many watersheds within the northeastern Gulf support a high species diversity of mussels, fish, and other aquatics. Several watersheds have experienced degradation in recent years due to: sedimentation, maintenance at stream crossings, inchannel barriers, elimination of natural buffers for silvicultural purposes and row-crop and cattle grazing operations, etc. Uchee Creek, now designated as critical habitat, is one of three systems associated with the Chattahoochee River known to support federally-listed mussels. The shiny-rayed pocketbook along with the rare southern elktoe mussel, and two Alabama listed species of concern--rayed creekshell, and delicate spike all occur in Uchee Creek. The Panama City Fish and Wildlife Conservation Office has completed an extensive hydrologic review of the project site with the Natural Resource Conservation Service to determine the appropriate

design for removing a small low head dam on Uchee Creek. The design will include two 60' long bridges with one center pier to span the entire width of Uchee Creek. The design was coordinated with Contech Bridge Solutions and should be installed in FY 2010. The permit application is being processed and pre-monitoring has been completed.

- Kepner Branch Fish Passage Project: Proper stream function is essential for maintaining genetic diversity and stability in Okaloosa darter populations. Removal of fish passage barriers will help restore gene flow and improve instream habitat, thereby increasing the stability of the system for darters. Fragmentation of rivers, diversion structures and habitat alteration have prevented gene flow and caused the degradation of water quality, fish passage, natural sediment transport, and stream bank stabilization in Okaloosa darter streams. Kepner Branch is located on Eglin Air Force Base, Florida, and was blocked by a small 10 acre pond dam causing a fish passage barrier for the endangered Okaloosa darter. This project removed the existing dam and restored instream habitat. Approximately 1200 feet of stream was restored and 2.5 miles of upstream habitat opened for aquatic organism passage. The Panama City Fish and Wildlife Conservation Office collaborated and coordinated on the design, construction, and funding with Eglin Air Force Base. This project is one of many site located on Eglin which the Service identified as a threat to the recovery of the Okaloosa darter. Additional barriers have been identified by Panama City Fisheries staff and Eglin natural resource managers. Fish passage program funding in FY 2004 provided matching funds to complete this project.

Fish Habitat Program: Through the National Fish Habitat Action Plan, the States will continue to lead the implementation of the Fish Habitat Action Plan, in cooperation with the Service and other key partners. Efforts are directed at implementing on-the-ground cost-share projects identified by Fish Habitat Partnerships. For the Southeast Region, the delivery of fish habitat project will be primarily through the SARP. SARP has taken a comprehensive approach to watershed conservation, considering the aquatic flora and fauna within the integrated landscape. Examples of accomplishments as it relates to the Gulf Coast include:

- Conducted assessments of over 5,560 miles of in-stream habitat and shoreline habitat within the Gulf Coast.
- Funded projects that restored 4 miles of in-stream/shoreline coastal habitat within the Gulf Coast.
- Supported SARP in the development of the Southeast Aquatic Habitat Plan; a regional blue print for aquatic habitat conservation and restoration. Objective 8 of the Plan identifies the need to conserve, restore, and create coastal estuarine and marine habitats.
- Continued to play a major role in interagency efforts for planning and implementing water and aquatic resource management projects in the Atchafalaya River Basin in Louisiana.
- Identified Gulf sturgeon marine habitat use in near shore areas from Florida to Louisiana.
- The Fisheries Program continues to participate in the Gulf Hypoxia Task Force. This group of Federal, state, local, NGO, and private citizens is using a landscape-level perspective to try to reduce nutrient loading throughout the Mississippi River Basin to reduce the size of the associated hypoxia zone that forms in the Gulf as a result.
- Continued to provide technical assistance and funding for fish and aquatic habitat projects within rivers and streams of the Gulf Coast.
- Working through SARP, continued to work to reduce the percentage of Southeast coast and Gulf coast estuarine areas rated as being in poor condition with respect to water quality.
- Working through SARP, continued to work to reduce the percentage of Southeast coast and Gulf coast estuarine areas rated as being in poor condition with respect to contaminants in fish and oyster beds.
- Working through SARP, continued to work to prevent coastal erosion along coastlines classified as "severely eroding."
- The Service is working with the U.S. Army Corps of Engineers, Louisiana Department of Natural

Resources, Louisiana State University, and the U.S. Geological Survey on an integrated database and geospatial tools to evaluate geophysical processes and biological conditions in the Atchafalaya Basin. In much of the Basin there exists a disruption in water flow caused by sediment accretion, huge expanses of floating vegetation and willow tree encroachment. The yearly result is extreme hypoxia by late spring/early summer.

***Aquatic Nuisance Species Program:*** Invasive species are a part of the landscape and are expanding in the Southeast. While many are found in Florida, every Southeastern State has at least one exotic species, including aquatic and terrestrial plants and animals. Recognizing the importance of this issue, the Southeast Region has taken a leadership role in raising public awareness of the importance of this issue and implementing appropriate management and control measures, where and when appropriate. Over 150 exotic fish species occur in the Southeast Region. Invasive species, such as zebra mussels, Asian carp, Asiatic clams, Asian swamp eels, purple loosestrife, Eurasian water milfoil, water hyacinths, giant salvinia, apple snails, and hydrilla, to name a few, have been introduced into water bodies in many southern rivers, ponds, and wetlands.

Asian carp are species of great concern in the Southeast. Four Asian carp species (grass, bighead, silver, and black carp) have been introduced into United States waters. With the exception of black carp, all are known to be successfully established in the wild. Black carp (*Mylopharyngodon piceus*), are primarily used as a biological control agent to combat the spread of yellow grub in striped bass culture and the parasitic trematode (*Bolbophorus confusus*) found in commercial catfish aquaculture ponds in several States. Black carp have been identified in the wild from Louisiana waters, and if the species becomes established, it can pose a serious threat to native mussels and snails. Aquatic invasive plants are extremely problematic in the Southeast. Species such as water hyacinth (*Eichhornia crassipes*) and hydrilla (*Hydrilla verticillata*) occur throughout Southeastern waterbodies; however, they appear to be most prevalent in Florida and the Gulf Coast States. Millions of dollars are spent annually by State and Federal agencies to control the spread of these and other aquatic nuisance plants. For example, the State of Florida annually appropriates nearly \$35 million for invasive plant management. Giant salvinia (*Salvinia*

*molesta*) is an invasive aquatic plant currently spreading through waters of southern-tier states. The Aquatic Nuisance Species (ANS) Program has provided technical assistance to NWRs in Alabama and Louisiana, and limited funding to GADNR to respond rapidly to eradicate isolated infestations.

Examples of ongoing efforts as it relates to the Gulf Coast include:

- Served as a member of the Gulf and South Atlantic ANS Regional Panel and provided technical assistance, risk assessment, and status information.
- Continued to implement Asian swamp eel (ASE) management and control in South Florida where the species is impacting Everglades National Park.
- Working through SARP, all Southeast States have developed State ANS Plans.
- The Panama City Fish and Wildlife Conservation Office continues to monitor aquatic nuisance species in all Northeast Gulf drainages. A Hazard Analysis Critical Control Point (HACCP) Plan has been implemented to control aquatic nuisance species from other drainages. The Panama City office completed 184 surveys for early detection and monitoring of existing aquatic nuisance species in the Northeast Gulf drainages including seven major rivers, three military bases, and three National Wildlife Refuges.

#### **Federal Assistance to State Resource Agencies**

The Service continued providing funds to Gulf of Mexico states for estuarine and marine sport fish restoration projects under the Federal Aid in Sport Fish Restoration Act. Grants were made available to some Gulf States under the Sport Fish Restoration Program, State and Tribal Wildlife Grant Program, National Coastal Wetlands Conservation Grant Program, Clean Vessel Act Pump-out Grant Program, and Endangered Species program.

- Sport Fish Restoration Program – The Sport Fish Restoration Program assists State fish and wildlife agencies with marine and freshwater sport fish management, boating access, and aquatic education and sport fish outreach projects. Outreach objectives include the development of cooperative programs with industry and other partners relating to use, conservation, and restoration of aquatic systems. Through the management of marine sport

fish, all aspects, including habitat and water quality, in the marine environment are addressed. Improved recreational sport fishing in marine and freshwater collected data on sport fish, water quality and habitat; conducted outreach and education programs that informed citizens about the sport fishing and the aquatic environment; and conducted research to determine answers to key questions such as genetic relationships among selected fish populations, life history aspects, angler participation and other aspects that provide baseline information to manage sport fish and their aquatic habitat. Funding was provided to constructed infrastructure for public access to aquatic resources.

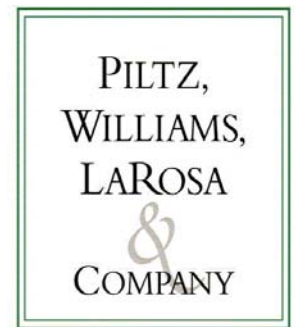
- State and Tribal Wildlife Grant Program – Established in 2000, the State and Tribal Wildlife Grant Program provides funding to States and Tribes for the development and implementation of programs that benefit wildlife and their habitats, including species that are not hunted or fished. All State Wildlife Action Plan were completed in 2005. Funding now focuses on implementation of projects that addresses key freshwater ecosystems, threats to those systems and data gaps identified in the plans. Project examples include: Conservation of shoal bass and spring associated darters in AL; Determine fish assemblages and landscape influences in the Pontchartrain Basin to update monitoring databases for the Southeastern Aquatic Resources Partnership and Louisiana Heritage Program; Four MS drainages aquatic surveys to determine fish assemblages, population status, distributional changes, and habitat use of endemic non game fish species.
- National Coastal Wetlands Conservation Grant Program – The National Coastal Wetlands Conservation Grant Program provides funds to coastal States to carry out coastal wetlands conservation projects for restoring habitats and for the acquisition of coastal wetland tracts. Assisted

with land acquisition and restoration planning for coastal wetlands habitat and maritime forests to protect fish and wildlife and their habitats, continued the management of active grants for wetlands, and developed strategies with the States and Commonwealth of Puerto Rico to conserve or protect coastal habitats. The four Gulf States (Florida, Alabama, Mississippi, and Texas) compete for funds with other coastal States through this grant program which provides a maximum project award of \$1 million.

- Clean Vessel Act Pump-out Grant Program – The Clean Vessel Act Pump-out Grant Program provides funds to States to build pump-out and dump stations for disposing of vessel sewage from recreational boaters. The program further encourages marina owners to implement clean marina programs and activities that further protect water quality. Improved water quality in the marine and freshwater systems with the construction of pump out facilities to remove boat sewage, conducted an outreach program to boaters and marina owners to reduce non point pollution.

**Financial Statements**  
**Gulf States Marine Fisheries Commission**  
**Ocean Springs, Mississippi**  
**December 31, 2009**

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CERTIFIED PUBLIC ACCOUNTANTS  
*A Professional Association*

**Gulf States Marine Fisheries Commission**  
Ocean Springs, Mississippi

**Financial Statements**

\_\_\_\_\_  
December 31, 2009  
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**Table of Contents**

	<u>Page</u>
Independent Auditors' Report.....	1-2
<b>Section I – Management's Discussion and Analysis</b> .....	3-7
<b>Section II – Financial Statements</b>	
Statement of Net Assets–Modified Cash Basis .....	8
Statement of Activities–Modified Cash Basis .....	9
Statement of Assets, Liabilities and Fund Balances–Cash Basis Governmental Funds .....	10
Reconciliation of the Governmental Funds Statement of Assets, Liabilities and Fund Balances–Cash Basis to the Statement of Net Assets–Modified Cash Basis.....	11
Statement of Revenues, Expenditures and Changes in Fund Balances– Cash Basis, Governmental Funds .....	12
Reconciliation of the Governmental Funds Statement of Revenues, Expenditures and Changes in Fund Balances–Cash Basis to the Statement of Activities–Modified Cash Basis .....	13
Notes to Financial Statements.....	14-20
<b>Section III – Supplemental Information</b>	
Budgetary Comparison Schedule.....	21-22
Schedule of Expenditures of Federal Awards–Cash Basis .....	23
<b>Section IV – Reports on Compliance and Internal Control</b>	
Independent Auditors' Report on the Compliance and Internal Control over Financial Reporting Based on an Audit of General Purpose Financial Statements Performed in Accordance with <i>Government Auditing Standards</i> .....	24-25



Independent Auditors' Report on Compliance with the Requirements  
Applicable to Each Major Federal Program and Internal Control  
over Compliance in Accordance with OMB Circular A-133 ..... 26-27

**Section V – Other Items**

Schedule of Findings and Questioned Costs..... 28-29





In accordance with *Government Auditing Standards*, we have also issued our report dated September 24, 2010 on our consideration of Gulf States Marine Fisheries Commission's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Governmental Auditing Standards* and should be considered in assessing the results of our audit.

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and budgetary comparison information and corresponding notes on pages 3 through 7 and 21 and 22 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standard Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise Gulf States Marine Fisheries Commission's basic financial statements as a whole. The accompanying schedule of expenditures of federal awards which is presented for purposes of additional analysis as required by U.S. Office of Management and Budget Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*, and is also not a required part of the financial statements. The schedule of expenditures of federal awards is the responsibility of management and was derived from and relate directly to the underlying accounting and other records used to prepare the financial statements. The information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the financial statements or to the financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the information is fairly stated, in all material respects in relation to the financial statements as a whole.

*Piltz, Williams, LaRosa + Co.*

Certified Public Accountants

Biloxi, Mississippi  
September 24, 2010

**Section I**

**Management's Discussion and Analysis**

## **Management's Discussion and Analysis**

This discussion and analysis of the Gulf States Marine Fisheries Commission's (the Commission) financial performance provides an overview of the Commission's financial activities for the year ended December 31, 2009. Please read it in conjunction with the Commission's basic financial statements and notes to the financial statements, which are found in Section I.

### **Using this Annual Report**

This discussion and analysis is an introduction to the Commission's basic financial statements, which comprise three components: 1) the commission-wide financial statements, 2) governmental fund financial statements, and 3) notes to the financial statements. This report also contains other supplementary information in addition to the basic financial statements.

### **Commission-Wide Financial Statements (Reporting the Commission as a Whole)**

The commission-wide financial statements are designed to be similar to private-sector businesses in that all commission activities are consolidated. These statements combine fund financial resources with capital assets and long-term obligations. The notes to financial statements provide detailed support to individual balances and classes of transactions found in the various statements. The required and other supplemental information (see Section III) provides information about the Commission's operating activities as compared to its budget, as well as certain other schedules required by *Government Auditing Standards*.

The Statement of Net Assets-Modified Cash Basis reports on all of the Commission's assets and liabilities, with the difference between the two reported as net assets. You can think of the Commission's net assets as one way to measure the Commission's financial health, or financial position. Net Assets are divided into the following two basic categories: Net assets invested in capital assets, net of related debt and net assets unrestricted and available for spending. Over time, increases or decreases in the Commission's net assets are one indicator of whether its financial health is improving or deteriorating. The Statement of Activities-Modified Cash Basis measures the annual change in the net assets displayed on the Statement of Net Assets-Modified Cash Basis. Assets and liabilities are measured using current values. One notable exception is capital assets, which are stated at historical cost less an allowance for depreciation

**Net assets** – net assets may serve over time as a useful indicator of government's financial position. In the case of the Commission, assets exceeded liabilities by \$2,046,694 as of December 31, 2009. As of December 31, 2008, assets exceeded liabilities by \$600,297.

Of the Commission's net assets, \$203,998 (10%) reflects its investment in capital assets (e.g. land, buildings, mobile equipment, furniture and equipment, and leased property under capital leases, less any related debt used to acquire those assets that is still outstanding). The Commission uses these capital assets to conduct its programs; consequently these assets are not available for future spending.

**Gulf States Marine Fisheries Commission**  
**Financial Statements**  
December 31, 2009

The following table presents a summary of the Commission's net assets for the year ended December 31, 2009 and 2008.

	December 31,	
	2009	2008
Current assets	\$ 1,842,589	\$ 314,471
Noncurrent assets		
Post Employment Health Plan investment account	74,762	58,630
Property and equipment, net of accumulated depreciation	203,998	285,672
Total noncurrent assets	278,760	344,302
 Total assets	 2,121,349	 658,773
 Current liabilities	 74,655	 31,906
Noncurrent liabilities	-	26,570
Total liabilities	74,655	58,476
 Net assets		
Investment in capital assets, net of related debt	203,998	245,636
Unrestricted	1,842,696	354,661
Total net assets	\$ 2,046,694	\$ 600,297

**Changes in net assets** – The Commission's total revenues for the year ended December 31, 2009 were \$48,768,818. The total cost of all programs and services was \$47,322,421. The Commission's total revenues for the prior year ending December 31, 2008 were \$70,188,020; and the total cost of all programs and services were \$ 70,145,281. The following table represents a summary of the changes in net assets for the year ended December 31, 2009; and the prior year, in comparison, for the year ending December 31, 2008:

**Gulf States Marine Fisheries Commission**  
**Financial Statements**  
December 31, 2009

	December 31,	
	2009	2008
Revenues		
General revenues		
Member state appropriation	\$ 112,500	\$ 112,500
Council activities	45,000	35,000
Other income	30,095	7,904
Interest income	1,223	8,211
Rent income	7,200	7,200
Post employment health plan revenue	15,506	16,020
Registration fees	13,040	16,785
Gain (loss) on sale of assets	-	(677)
Unrealized gain (loss) on investments	12,043	(16,407)
Program revenues		
Collection & dissemination of recreational and commercial fisheries information network	5,541,298	5,443,822
Interjurisdictional fisheries management	201,408	224,236
Coordination of recreational fisheries programs	186,927	207,779
Collection & dissemination of fishery-independent data and information	217,480	189,001
SEAMAP Supplemental	28,506	35,147
Review and formation of habitat information	48,869	48,066
Study of aquatic nuisances	76,626	63,221
Fish and wildlife support services	78,833	74,027
Billfish research	-	48,707
Emergency disaster recovery program I	26,542,918	18,162,600
Emergency disaster recovery program II	15,205,230	45,064,799
Aquaculture planning in the Gulf of Mexico	122,298	295,600
Economic data program	175,166	99,824
Other grant income	106,652	44,655
Total revenues	\$ 48,768,818	\$ 70,188,020
Expenses		
Programs	47,033,771	69,895,301
General and administrative	288,650	249,980
Total expenses	47,322,421	70,145,281
Change in net assets	1,446,397	42,739
Net assets, beginning	600,297	557,558
Net assets, ending	\$ 2,046,694	\$ 600,297

**Gulf States Marine Fisheries Commission**  
**Financial Statements**  
December 31, 2009

6

**Fund Financial Statements (reporting the Commission's major funds)**

The fund financial statements provide information about the major individual funds. A fund is a fiscal and accounting entity with a self-balancing set of accounts that the Commission uses to keep track of specific sources of funding and spending for a particular purpose.

The Commission's basic services are reported in the funds, which focus on how money flows into and out of those funds and the balances left at year-end that are available for future spending. The fund financial statements provide a short-term view of the Commission's general operations and the basic services it provides. Fund information helps determine whether there are more or fewer financial resources that can be spent in the near future to finance the Commission's programs. These funds are reported using the cash basis, which measures cash and all other financial assets that can readily be converted to cash. The Commission's funds include the General and Special Revenue funds.

**Notes to the Financial Statements**

The notes provide additional information that is essential to a full understanding of the data provided in the Commission-wide and fund financial statement. The notes to the financial statements are a required part of the basic financial statements.

**Budgetary Highlights**

The Commission establishes its budget to reflect financial conditions such as increases and decreases in operating revenues and expenses, and also to increases, decreases and availability of federal funding for operating and capital needs. As noted in the notes to the financial statements, it is the practice of the Commission to prepare its budget on the modified cash basis of accounting.

**Capital Asset Administration**

At the end of the current year ending December 31, 2009, the Commission had \$203,998, net of accumulated depreciation invested in facilities, equipment and automobiles. This amount reflected a net decrease (including additions, deletions and depreciation deductions) from the prior year of \$81,674. As of December 31, 2008, the Commission had \$285,672 invested in facilities, equipment and automobiles, net of accumulated depreciation.

**Long-Term Debt**

At the end of the current fiscal year, the Commission had no outstanding debt as all obligations were satisfied. The Commission has encountered no problems in obtaining financing as needed.



**Gulf States Marine Fisheries Commission**  
**Financial Statements**  
December 31, 2009

7

### **Significant Transactions**

In September 2006, the Commission was selected by the National Marine Fisheries Service (NMFS) to administer a program that authorized \$127.7 million for the Emergency Disaster Recovery Program (EDRP I). The program focused primarily on the assessment and restoration of the marine fishery resources that were damaged by the multiple disasters of 2005. Conditions for the use of the \$127.7 million required that not less than \$38 million be used for oyster rehabilitation; and that not less than \$7 million be used for cooperative research. The remainder was to be used as deemed necessary by the respective states for habitat restoration of other appropriate resource recovery efforts, as approved by the funding agency. The funds will be used for projects that have been approved by the funding agency in the years 2006-2011. If necessary, a no-cost extension will be granted by the funding agency until the project tasks are completed.

Further assistance for the Gulf States was provided by Congress in 2007, with a second appropriation in the amount of \$85 million for additional Emergency Disaster Recovery Program (EDRP II). The Commission was selected by the National Marine Fisheries Service (NMFS) to administer this program. The objective of this program is to provide assistance to impacted fishermen and fishery related industry. The intent of this appropriation was not only to provide opportunities for relief to those businesses, industries and individual commercial fishermen who lost income as a result of the disasters of 2005, but also to add further impetus in the stabilization of the Gulf of Mexico fishing heritage and its resulting contributions to the Gulf economy. The funds will be used for projects that have been approved by the funding agency in the years 2007-2012. If necessary, a no-cost extension will be granted until the project tasks are completed.

### **Economic Expectations**

The Commission receives the majority of its revenue from the administration of contracts and grants related to fisheries resource management. The Commission expects continued growth in these services. Most costs associated with administering these agreements have been reasonably stable (allowing for inflation). The Commission has been working diligently to moderate these costs where possible. The Commission's prudent use of resources continues to position it well in providing services to its customers and member states of Texas, Louisiana, Mississippi, Alabama, and Florida.

Subsequently, the Deepwater Horizon Oil Disaster of April 20, 2010, has presented unique and challenging circumstances related to fisheries management. Additional funds have been appropriated to mitigate the biological and economic impacts of this manmade disaster. These additional funds will support all programmatic activities of the Commission, as well as, develop new and expanding activities that benefit the stakeholders of the region.

### **Requests for Information**

This financial report is designed to provide a general overview of the Gulf States Marine Fisheries Commission's finances for all those with an interest in the Commission's finances. Questions concerning any of the information in this report or requests for additional information should be addressed to the Chief Financial Officer, Gulf States Marine Fisheries Commission, 2404 Government Street, Ocean Springs, Mississippi 39564.

**Section II**  
**Financial Statements**

**Gulf States Marine Fisheries Commission**  
**Statement of Net Assets - Modified Cash Basis**  
December 31, 2009

8

<b>Assets</b>	<b>Governmental Activities</b>
<b>Current assets</b>	
Cash in bank	\$ 1,795,286
Interest receivable	47,303
Total current assets	<u>1,842,589</u>
<b>Noncurrent assets</b>	
Post employment health plan investment account	74,762
Property and equipment, net of accumulated depreciation	203,998
Total noncurrent assets	<u>278,760</u>
Total assets	<u>2,121,349</u>
<b>Liabilities</b>	
<b>Current liabilities</b>	
DHHS payable	48,517
Payroll taxes payable	25,302
Section 125 cafeteria plan payable	836
Total current liabilities	<u>74,655</u>
<b>Net assets</b>	
Investment in general fixed assets, net of related debt	203,998
Unrestricted	1,842,696
Total net assets	<u>\$ 2,046,694</u>

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**  
**Statement of Activities - Modified Cash Basis**  
For the Year Ended December 31, 2009

	<u>Expenses</u>	<u>Charges for Services</u>	<u>Operating Grants and Contributions</u>	<u>Net (Expense) Revenue and Change in Net Assets Governmental Activities</u>
Functions/Programs				
Primary government:				
Programs				
Collection & dissemination of commercial and recreational fisheries information	\$ 5,600,928	\$ -	\$ 5,541,298	\$ (59,630)
Interjurisdictional fisheries management	207,940	-	201,408	(6,532)
Coordination of recreational fisheries programs	199,380	-	186,927	(12,453)
Collection & dissemination of fishery - independent data and information	221,973	-	217,480	(4,493)
SEAMAP supplemental	29,769	-	28,506	(1,263)
Review and formation of habitat information	55,766	-	48,869	(6,897)
Study of aquatic nuisances	59,990	-	76,626	16,636
Fish and wildlife support services	69,289	-	78,833	9,544
Emergency disaster recovery program	26,550,201	-	26,542,918	(7,283)
Emergency disaster recovery program II	13,589,821	-	15,205,230	1,615,409
Aquaculture planning in the Gulf of Mexico	136,450	-	122,298	(14,152)
Economic data program	214,410	-	175,166	(39,244)
Other	97,854	-	106,652	8,798
Total	<u>47,033,771</u>	<u>-</u>	<u>48,532,211</u>	<u>1,498,440</u>
General and Administrative				
Local administration	243,650	20,240	112,500	(110,910)
Council activities	45,000	-	45,000	-
Total	<u>288,650</u>	<u>20,240</u>	<u>157,500</u>	<u>(110,910)</u>
Total primary government	<u>\$ 47,322,421</u>	<u>\$ 20,240</u>	<u>\$ 48,689,711</u>	<u>1,387,530</u>
General revenues				
Other income				30,095
Post employment health plan revenue				15,506
Interest income				1,223
Unrealized gain (loss) on investments				12,043
Total general revenues				<u>58,867</u>
Change in net assets				1,446,397
Net assets, beginning				<u>600,297</u>
Net assets, ending				<u>\$ 2,046,694</u>

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**  
**Statement of Assets, Liabilities and Fund Balances-Cash Basis**  
**Governmental Funds**  
December 31, 2009

	Special Revenue Funds					Total Governmental Funds
	General Fund	RECFIN/ COMFIN Fund	EDRP Fund	EDRP II Fund	Other Funds	
<b>Assets</b>						
Current assets						
Cash in bank	\$ 160,022	\$ -	\$ 184	\$1,635,080	\$ -	\$ 1,795,286
Interest receivable	-	-	-	47,303	-	47,303
Noncurrent assets						
PEHP investment account	74,762	-	-	-	-	74,762
Total assets	<u>\$ 234,784</u>	<u>\$ -</u>	<u>\$ 184</u>	<u>\$1,682,383</u>	<u>\$ -</u>	<u>\$ 1,917,351</u>
<b>Liabilities</b>						
Current liabilities						
DHHS payable	\$ -	\$ -	\$ 184	\$ 48,333	\$ -	\$ 48,517
Payroll taxes payable	25,302	-	-	-	-	25,302
Section 125 cafeteria plan	836	-	-	-	-	836
Total liabilities	<u>26,138</u>	<u>-</u>	<u>184</u>	<u>48,333</u>	<u>-</u>	<u>74,655</u>
<b>Fund Balances</b>						
Fund balance - reserved for investments	74,762	-	-	-	-	74,762
Fund balance - unreserved	133,884	-	-	1,634,050	-	1,767,934
Total fund balances	<u>208,646</u>	<u>-</u>	<u>-</u>	<u>1,634,050</u>	<u>-</u>	<u>1,842,696</u>
Total liabilities and fund balances	<u>\$ 234,784</u>	<u>\$ -</u>	<u>\$ 184</u>	<u>\$1,682,383</u>	<u>\$ -</u>	<u>\$ 1,917,351</u>

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**  
**Reconciliation of the Governmental Funds Statement of Assets,**  
**Liabilities and Fund Balances - Cash Basis**  
**to the Statement of Net Assets - Modified Cash Basis**  
December 31, 2009

11

Total fund balances - governmental funds	\$ 1,842,696
Amounts reported for governmental activities in the statement of net assets - modified cash basis are different because:	
Capital assets used in governmental activities are not financial resources and therefore are not reported in the funds, net of accumulated depreciation	<u>203,998</u>
Total net assets - governmental activities	<u><u>\$ 2,046,694</u></u>

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**

**Statement of Revenues, Expenditures and Changes in Fund Balances - Cash Basis**

**Governmental Funds**

For the Year Ended December 31, 2009

	Special Revenue Funds					Total Governmental Funds
	General Fund	RECFIN/ COMFIN Fund	EDRP Fund	EDRP II Fund	Other Funds	
<b>Revenues:</b>						
Member state appropriation	\$ 112,500	\$ -	\$ -	\$ -	\$ -	\$ 112,500
Other income	30,095	-	-	-	-	30,095
Interest income	1,223	-	-	-	-	1,223
Rent income	7,200	-	-	-	-	7,200
Lease income	128	-	-	-	-	128
Post employment health plan revenue	15,506	-	-	-	-	15,506
Grant income	-	5,541,298	26,542,918	15,205,230	1,287,765	48,577,211
Registration fees	13,040	-	-	-	-	13,040
Unrealized gain on investments	12,043	-	-	-	-	12,043
<b>Totals</b>	<b>191,735</b>	<b>5,541,298</b>	<b>26,542,918</b>	<b>15,205,230</b>	<b>1,287,765</b>	<b>48,768,946</b>
<b>Expenditures</b>						
Personal services and benefits	102,236	474,514	101,797	26,618	736,705	1,441,870
Professional services	850	4,840,906	26,412,093	13,530,476	291,827	45,076,152
Other purchased services	52,770	245,866	28,797	26,358	274,111	627,902
Supplies and materials	4,906	39,641	7,513	6,369	34,866	93,295
Debt service:						
Principal	35,095	2,858	424	275	1,384	40,036
Interest	1,656	-	-	-	-	1,656
<b>Totals</b>	<b>197,513</b>	<b>5,603,785</b>	<b>26,550,624</b>	<b>13,590,096</b>	<b>1,338,893</b>	<b>47,280,911</b>
Excess (deficiency) of revenues over (under) expenditures	(5,778)	(62,487)	(7,706)	1,615,134	(51,128)	1,488,035
<b>Other financing sources (uses)</b>						
Interfund loans	(154,552)	62,487	7,706	18,081	66,278	-
Operating transfers in	15,150	-	-	-	-	15,150
Operating transfers out	-	-	-	-	(15,150)	(15,150)
<b>Total other financing sources (uses)</b>	<b>(139,402)</b>	<b>62,487</b>	<b>7,706</b>	<b>18,081</b>	<b>51,128</b>	<b>(7,706)</b>
Net change in fund balances	(145,180)	-	-	1,633,215	-	1,488,035
Fund balance - beginning	353,826	-	-	835	-	354,661
Fund balance - ending	<b>\$ 208,646</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 1,634,050</b>	<b>\$ -</b>	<b>\$ 1,842,696</b>

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**  
**Reconciliation of the Governmental Funds Statement of Revenues,**  
**Expenditures and Changes in Fund Balances - Cash Basis**  
**to the Statement of Activities - Modified Cash Basis**  
For the Year Ended December 31, 2009

13

Net changes in governmental fund balances	\$ 1,488,035
Amounts reported in the statement of activities are different because:	
Governmental funds report capital outlays as expenditures. However, the statement of activities - modified cash basis reports depreciation to allocate those expenditures over the life of the assets. Capital assets purchased amounted to \$0 and depreciation expense amounted to \$81,674.	(81,674)
Payment of principal on long-term liabilities is reported as an expenditure in the governmental funds, but the payment reduces long-term liabilities in the statement of net assets - modified cash basis.	<u>40,036</u>
Change in net assets of governmental activities	<u><u>\$ 1,446,397</u></u>

*See Notes to Financial Statements.*



**Note A – Summary of Significant Accounting Policies**

**Operations** – The Gulf States Marine Fisheries Commission was formally created with the consent of the 81<sup>st</sup> Congress of the United States granted by Public Law 66 and approved May 19, 1949. Congress authorized an interstate compact relating to the better utilization of the fisheries of the Gulf of Mexico. Parties to the agreement are the states of Alabama, Florida, Louisiana, Mississippi and Texas. The Commission's office is centrally located in Ocean Springs, Mississippi.

The Commission receives and expends such sums of money as shall from time to time be appropriated for its use by the participating governing authorities, and makes application for and receives and expends funds available under appropriated Federal Programs. The Commission may also receive and expend funds from any other sources not "prohibited by law".

**The financial reporting entity** – Gulf States Marine Fisheries Commission is a quasi-governmental corporation governed by a 15 member board. The Commission has no reportable component units.

**Basis of accounting** – The accompanying financial statements have been prepared on the modified cash basis of accounting. That basis differs from generally accepted accounting principles because the Commission has not recognized balances, and the related effects on earnings, of grant receivables from third party agencies and of accounts payable to vendors.

The Commission reports the following major governmental funds:

**General Fund** – This is the Commission's primary operating fund. It accounts for all financial resources of the Commission, except those required to be accounted for in another fund.

**RECFIN/COMFIN Fund** – This is the fund that is the Commission's program to collect, manage, and disseminate statistical data and information on the commercial and recreational fisheries of the Gulf of Mexico.

**Emergency Disaster Recovery Program (EDRP) Fund** – This is a program fund through which Federal Fisheries Disaster funds appropriated by Congress are distributed to assist the Gulf States in the restoration of damaged marine resources and to provide assistance to impacted fishermen.

**Emergency Disaster Recovery Program II (EDRP II) Fund** – This is an additional program fund through which Federal Fisheries Disaster funds appropriated by Congress are distributed to assist the Gulf States in the restoration of damaged marine resources and to provide assistance specifically to impacted commercial fishermen; small business and industry; domestic product marketing; and, seafood testing.

All other governmental funds not meeting the criteria established for major funds are presented as other governmental funds.

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
(Continued)

Additionally, the Commission reports the following non-major governmental fund types:

**Special Revenue Funds** – Special revenue funds are used to account for the proceeds of specific revenue sources that are restricted for specific projects or programs. The funds' principal revenue sources are grants and contracts from various federal and member state agencies.

**Basis of Presentation** – The Commission's basic financial statement consists of government-wide statements, including a statement of net assets and a statement of activities, and fund financial statements, which provide a more detailed level of financial information.

*Government-wide Financial Statements:*

The Statement of Net Assets and Statement of Activities display information about the Commission as a whole. They include all funds of the reporting entity. Governmental activities generally are financed through taxes, intergovernmental revenues and other nonexchange revenues.

The Statement of Net Assets presents the financial condition of the governmental activities of the Commission at year-end. The Government-wide Statement of Activities presents a comparison between direct expenses and program revenues for each function or program of the Commission's governmental activities. Direct expenses are those that are specifically associated with a service, program or department and therefore clearly identifiable to a particular function. Program revenues include charges paid by the recipient of the goods or services offered by the program and grants and contributions that are restricted to meeting the operational or capital requirements of a particular program. Revenues, which are not classified as program revenues, are presented as general revenues of the Commission with certain limited exceptions. The comparison of direct expenses with program revenue identifies the extent to which each governmental function is self-financing or draws from the general revenues of the Commission.

*Fund Financial Statements:*

Fund financial statements of the Commission are organized into funds, each of which is considered to be separate accounting entities. Each fund is accounted for by providing a separate set of self-balancing accounts that constitute its assets, liabilities, fund equity, revenues and expenditures/expenses. Funds are organized into one major category: governmental. An emphasis is placed on major funds within the governmental category.

**Fixed assets** – Fixed assets are recorded at actual cost. Contributed assets are reported at the estimated fair value at the time received. The Commission has adopted a policy of capitalizing assets with an acquisition cost of \$5,000 or more. Depreciation is computed on the straight-line method over the estimated useful lives of the underlying assets.

**Investments** – Investments in equity securities with readily determinable fair values and all investments in debt securities are measured at their fair market value in the Statement of Net Assets–Modified Cash Basis. The unrealized gain or loss on investments is reflected in the Statement of Activities–Modified Cash Basis.

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
(Continued)

**Income taxes** – The Commission is exempt from income taxes as a governmental entity and is classified by the Internal Revenue Service as a governmental organization.

**Long-term liabilities** – Long-term liabilities are the unmatured principal of notes or other forms of noncurrent or long-term general obligation indebtedness. Long-term liabilities are not limited to liabilities from debt issuances, but may also include liabilities on lease-purchase agreements and other commitments. Long-term liabilities should not be reported as liabilities in governmental funds; but should be reported in the governmental activities column in the government-wide Statement of Net Assets.

**Equity Classifications**

*Government-wide Financial Statements:*

Equity is classified as net assets and displayed in three components:

1. Invested in capital assets, net of related debt – Consists of capital assets including restricted capital assets, net of accumulated depreciation and reduced by the outstanding balances of any bonds, mortgages, notes or other borrowings that are attributable to the acquisition, construction or improvement of those assets.
2. Restricted net assets – Consists of net assets with constraints placed on the use either by (1) external groups such as creditors, grantors, contributors, or laws or regulations of other governments; or (2) law through constitutional provisions or enabling legislation.
3. Unrestricted net assets – All other net assets that do not meet the definition of “restricted” or “invested in capital assets, net of related debt”.

*Fund Financial Statements:*

Governmental fund equity is classified as fund balance. Fund balance is further classified as reserved and unreserved, with unreserved classified as designated and undesignated.

**Estimates** – The preparation of financial statements in conformity with the modified cash basis of accounting requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

**Note B – Concentration of Credit Risk**

The Commission has maintained bank accounts at one financial institution. The account balances at December 31, 2009 may be shown as follows:

<u>Description</u>	<u>Carrying Amount</u>	<u>Bank Balance</u>
Regular accounts	<u>\$ 1,795,286</u>	<u>\$ 1,799,040</u>

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
(Continued)

The bank balances at December 31, 2009 are categorized as follows:

Amount insured or collateralized with securities held by the Commission or its agent in the Commission's name	\$ 250,000
Uncollateralized, or held by the pledging financial institution's trust department or agent in the financial institution's name	<u>1,549,040</u>
Total bank balances	<u>\$ 1,799,040</u>

**Note C – Investments**

*Investments:*

Except for nonparticipating investment contracts and for participating interest-earning investment contracts and money market investments that had a remaining maturity at the time of purchase of one year or less, investments are reported at fair value which is based on quoted market price. Nonparticipating investment contracts such as repurchase agreements and nonnegotiable certificates of deposit are reported at cost. Participating interest-earning investment contracts and money market investments that had a remaining maturity at time of purchase of one year or less are reported at amortized cost.

Investments made by the Commission that are included on the statement of net assets are summarized below. The investments that are represented by specific identifiable investment securities are classified as to credit risk by the categories described below:

Category 1 – Insured or registered or for which the securities are held by the Commission or its agent in the Commission's name.

Category 2 – Uninsured and unregistered for which the securities are held by the broker or dealer's trust department or agent in the Commission's name.

Category 3 – Uninsured and unregistered for which the securities are held by the broker or dealer, or by its trust department or agent but not in the Commission's name.

Investment Type	Category			Reported Amount	Fair Value
	1	2	3		
Van Kampen Equity & Income Fund					
Cl. A, 8,177.833 shares		X		\$ 63,705	\$ 63,705
Van Kampen Inter Corp Invt 45, 5 shares		X		4,906	4,906
Tax-Free Money Market Fund		X		<u>6,151</u>	<u>6,151</u>
Totals				<u>\$ 74,762</u>	<u>\$ 74,762</u>

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
(Continued)

**Note D – Property, Plant and Equipment**

The Commission's land, depreciable property and equipment may be stated as follows:

	Balance 12/31/08	Additions	Deletions	Balance 12/31/09
<b>Restricted</b>				
Vehicles	\$ 84,670	\$ -	\$ -	\$ 84,670
Office equipment	780,579		1,743	778,836
<b>Totals</b>	<u>865,249</u>	<u>-</u>	<u>1,743</u>	<u>863,506</u>
<b>Unrestricted</b>				
Land	20,000			20,000
Buildings	182,817			182,817
Office equipment	59,627		30,652	28,975
<b>Totals</b>	<u>262,444</u>	<u>-</u>	<u>30,652</u>	<u>231,792</u>
<b>Less accumulated depreciation</b>				
Restricted	734,604	71,973	1,743	804,834
Unrestricted	107,417	9,701	30,652	86,466
<b>Totals</b>	<u>842,021</u>	<u>81,674</u>	<u>32,395</u>	<u>891,300</u>
<b>Governmental activities</b>				
Net property and equipment:				
Restricted	130,645	(71,973)	-	58,672
Unrestricted	155,027	(9,701)	-	145,326
<b>Totals</b>	<u>\$ 285,672</u>	<u>\$ (81,674)</u>	<u>\$ -</u>	<u>\$ 203,998</u>

**Note E – Notes Payable**

During a prior year the Commission acquired the building that it had previously been renting. This acquisition was financed in part with a loan from Hancock Bank. On February 18, 2007 the Commission refinanced the loan with Hancock Bank. Details of the refinancing are as follows:

Refinanced amount	\$ 59,689
Amount outstanding	\$ -
Interest rate	6.875%
Payment terms	59 monthly payments of \$692, plus 1 of remaining balance
Collateral	Land and building at 2404 Government St. Ocean Springs, MS

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
(Continued)

During 2004, the Commission acquired a new copy machine under a lease/purchase agreement. The financing details are as follows:

Cost of copier	\$ 30,652
Amount outstanding	\$ -
Interest rate	7.5%
Payment terms	60 monthly payments of \$614
Collateral	Xerox copier
Purchase option	Ownership at end of lease

During 2006, the Commission acquired a vehicle. The financing details are as follows:

Original loan amount	\$ 18,480
Amount outstanding	\$ -
Interest rate	6.30%
Payment terms	36 monthly payments of \$565
Collateral	2007 GMC Sierra

	Beginning <u>01/01/09</u>	Additions	Deletions	Ending <u>12/31/09</u>	Amounts Due Within <u>One Year</u>
<b>Governmental activities</b>					
Notes	\$ 36,430	\$	\$ 36,430	\$ -	\$
Capital leases	<u>3,606</u>		<u>3,606</u>	<u>-</u>	
Total governmental activities	<u>\$ 40,036</u>	<u>\$</u>	<u>\$ 40,036</u>	<u>\$ -</u>	<u>\$</u>

All obligations were satisfied during 2009.

**Note F – Retirement Plan**

The Commission has a tax sheltered annuity plan for all employees that have been employed for at least six (6) months. The Commission contributes seven (7) percent of each eligible employee's base pay with the amounts being fully vested upon payment by the Commission. The total expense for the year ended December 31, 2009 was \$77,881. During 2009 the Commission became aware that the 403(b) plan was not the appropriate plan for the organization. As a result the Commission closed the old 403(b) plan and opened a new 401(k) plan. Participants are allowed to roll their balances to the new plan without penalties.

**Note G – Post Employment Health Benefits**

During a prior year the Commission established a post employment health plan for its employees. The plan is available to any employee with at least ten (10) years of service, but less than twenty-five (25) years.

Upon separation from service 50% of the employee's unused sick leave hours are multiplied by 50% of the employee's hourly pay rate at the separation date to determine a value which will be transferred to a medical savings account.

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
(Continued)

During 2009 one employee separated from service and has qualified for this benefit. The amount payable to a medical savings account on her behalf is \$3,182.

At December 31, 2009 eleven (11) employees would qualify for this benefit. Assuming that all eleven (11) separated from service at that date, and utilizing their current sick leave hours and rates of pay then the computed value is \$70,387. During the current year the Commission invested \$15,506 to continue funding this benefit. This investment is shown on the Statement of Net Assets – Modified Cash Basis at its current market value of \$74,762.

Any employee with twenty-five (25) years or more of service is provided full health insurance coverage in lieu of the above. This coverage is provided from date of separation until death.

**Note H – Risk Management**

The Commission is exposed to various risks of loss related to torts; theft of, damage to, and destruction of assets; errors and omissions; injuries to employees; and natural disasters. The Commission carries commercial insurance for these risks. Settled claims resulting from these risks have not exceeded insurance coverage in any part of the past three fiscal years.

**Note I – Subsequent Events**

Management has evaluated subsequent events through September 24, 2010, the date on which the financial statements were available to be issued.

### **Section III**

### **Supplemental Information**



**Gulf States Marine Fisheries Commission**  
**Budgetary Comparison Schedule**  
For the Year Ended December 31, 2009

	Budget			Actual			Over (Under) Budget
	Operating Fund	Grant Funds	Total	Operating Fund	Grant Funds	Total	
<b>Revenues:</b>							
Member state appropriation	\$ 112,500	\$ -	\$ 112,500	\$ 112,500	\$ -	\$ 112,500	\$ -
Other income	-	-	-	30,095	-	30,095	30,095
Interest income	10,000	-	10,000	1,223	-	1,223	(8,777)
Rent income	7,200	-	7,200	7,200	-	7,200	-
Lease income	-	-	-	128	-	128	128
Post employment health plan revenue	-	-	-	15,506	-	15,506	15,506
Grant income	-	128,188,133	128,188,133	-	48,577,212	48,577,212	(79,610,921)
Registration fees	16,000	-	16,000	13,040	-	13,040	(2,960)
Transfers in	-	-	-	15,150	-	15,150	15,150
Unrealized gain (loss) on investments	-	-	-	12,043	-	12,043	12,043
<b>Totals</b>	<b>145,700</b>	<b>128,188,133</b>	<b>128,333,833</b>	<b>206,885</b>	<b>48,577,212</b>	<b>48,784,097</b>	<b>(79,549,736)</b>
<b>Personal costs</b>							
Salaries	68,828	945,139	1,013,967	70,868	947,235	1,018,103	4,136
Payroll taxes	6,201	74,152	80,353	5,689	72,645	78,334	(2,019)
Health insurance	12,186	256,558	268,744	8,059	232,315	240,374	(28,370)
Retirement expense	6,025	68,743	74,768	5,912	71,970	77,882	3,114
Post employment health plan expense	50	17,957	18,007	11,708	15,470	27,178	9,171
<b>Totals</b>	<b>93,290</b>	<b>1,362,549</b>	<b>1,455,839</b>	<b>102,236</b>	<b>1,339,635</b>	<b>1,441,871</b>	<b>(13,968)</b>
<b>Maintenance/Operations</b>							
Facilities	18,000	7,200	25,200	18,000	7,200	25,200	-
Office supplies	1,300	33,812	35,112	2,823	28,003	30,826	(4,286)
Postage	500	16,325	16,825	499	16,949	17,448	623
Travel - committee	-	350,804	350,804	-	188,906	188,906	(161,898)
Travel - staff	10,600	56,178	66,778	6,815	56,854	63,669	(3,109)
Telephone	1,500	37,051	38,551	1,241	38,510	39,751	1,200
Copying expense	1,274	33,142	34,416	875	31,501	32,376	(2,040)
Printing expense	400	18,175	18,575	69	7,523	7,592	(10,983)
Meeting costs	10,269	105,508	115,777	16,902	76,759	93,661	(22,116)
Subscriptions & dues	2,000	1,804	3,804	2,015	2,356	4,371	567
Automobile expenses	1,710	15,290	17,000	641	4,414	5,055	(11,945)
Insurance	1,050	25,713	26,763	1,049	24,037	25,086	(1,677)
Maintenance	2,000	123,200	125,200	1,266	145,496	146,762	21,562
Professional expenses	850	324,532	325,382	850	315,718	316,568	(8,814)
Other expenses	-	-	-	20,248	-	20,248	20,248
Contractual	-	123,616,815	123,616,815	-	44,759,584	44,759,584	(78,857,231)
Utilities	1,350	18,785	20,135	829	18,511	19,340	(795)
Janitorial	800	17,750	18,550	668	16,501	17,169	(1,381)
Courtesies	1,800	-	1,800	1,737	-	1,737	(63)
Carryover expense	-	1,998,547	1,998,547	-	-	-	(1,998,547)
Principal and interest on notes	-	-	-	18,751	4,941	23,692	23,692
Transfers out	-	-	-	-	15,150	15,150	15,150
<b>Totals</b>	<b>148,693</b>	<b>128,163,180</b>	<b>128,311,873</b>	<b>197,514</b>	<b>47,098,548</b>	<b>47,296,062</b>	<b>(81,015,811)</b>
<b>Excess of revenues over expense</b>	<b>\$ (2,993)</b>	<b>\$ 24,953</b>	<b>\$ 21,960</b>	<b>\$ 9,371</b>	<b>\$ 1,478,664</b>	<b>\$ 1,488,035</b>	<b>\$ 1,466,075</b>

**Gulf States Marine Fisheries Commission**  
**Budgetary Comparison Schedule**  
For the Year Ended December 31, 2009  
(Continued)

Budgetary Comparison Schedule

(1) Basis of Presentation

The Budgetary Comparison Schedule presents the original adopted budget, the actual data on the cash basis, and variances between the budget and the actual data.

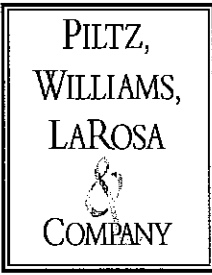
**Gulf States Marine Fisheries Commission**  
**Schedule of Expenditures of Federal Awards – Cash Basis**  
For the Year Ended December 31, 2009

Federal Grantor / Program Title	Catalog of Federal Domestic Assistance	Federal Expenditures
<b>U.S. Department of Interior</b>		
Aquatic Nuisance	15.608	\$ 60,012
Sports Fish Restoration Program	15.605	199,639
Total U. S. Department of Interior		<u>259,651</u>
<b>U.S. Department of Commerce</b>		
Interjurisdictional Fisheries Management Plan	11.407	208,047
Distribution of Bottom Habitat Information in the Gulf of Mexico	11.433	39,746
Recreational Fisheries Information Network (RECFIN) and Commercial Fisheries Information Network (COMFIN)	11.434	5,603,786
Economic Data Program	11.434	214,706
Southeast Area Monitoring and Assessment Program (SEAMAP)	11.435	222,292
SEAMAP Supplemental	11.435	29,769
Emergency Disaster Recovery Program	11.454	26,550,625
Emergency Disaster Recovery Program II	11.454	13,590,095
Habitat Conservation	11.463	55,789
Acquaculture Planning in the Gulf of Mexico	11.472	136,465
Total U. S. Department of Commerce		<u>46,651,320</u>
Total expenditures of federal awards		<u>\$ 46,910,971</u>

**Note** – This schedule was prepared using the same basis of accounting and the same significant accounting policies, as applicable, used for the financial statements.

**Section IV**

**Reports on Compliance and Internal Control**



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**Report on Internal Control over Financial Reporting  
and on Compliance and Other Matters Based  
on an Audit of Financial Statements Performed in  
Accordance with *Government Auditing Standards***

Board of Commissioners  
Gulf States Marine Fisheries Commission  
Ocean Springs, Mississippi

We have audited the financial statements of the governmental activities, each major fund and aggregate remaining fund information of Gulf States Marine Fisheries Commission as of and for the year ended December 31, 2009, which collectively comprise Gulf States Marine Fisheries Commission's basic financial statements and have issued our report thereon dated September 24, 2010. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States.

**Internal Control Over Financial Reporting**

In planning and performing our audit, we considered Gulf States Marine Fisheries Commission's internal control over financial reporting as a basis for designing our auditing procedures for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of Gulf States Marine Fisheries Commission's internal control over financial reporting. Accordingly, we do not express an opinion on the effectiveness of Gulf States Marine Fisheries Commission's internal control over financial reporting.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent or detect and correct misstatements on a timely basis. A material weakness is a deficiency, or combination of significant deficiencies, in internal control such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control over financial reporting that might be deficiencies, significant deficiencies, or material weaknesses. We did not identify any deficiencies in internal control over financial reporting that we consider to be material weaknesses, as defined above.

## Compliance and Other Matters

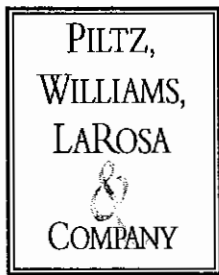
As part of obtaining reasonable assurance about whether Gulf States Marine Fisheries Commission's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

This report is intended solely for the information and use of the Commission, management, others within the organization, and federal awarding agencies and pass-through entities and is not intended to be and should not be used by anyone other than these specified parties.

*Piltz, Williams, LaRosa + Co.*

Certified Public Accountants

Biloxi, Mississippi  
September 24, 2010



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## **Report on Compliance with Requirements Applicable to Each Major Federal Program and Internal Control over Compliance in Accordance with OMB Circular A-133**

Board of Commissioners  
Gulf States Marine Fisheries Commission  
Ocean Springs, Mississippi

### **Compliance**

We have audited Gulf States Marine Fisheries Commission's compliance with the types of compliance requirements described in the U.S. Office of Management and Budget (OMB) Circular A-133 *Compliance Supplement* that could have a direct and material effect on each of its major federal programs for the year ended December 31, 2009. Gulf States Marine Fisheries Commission's major federal programs are identified in the summary of auditors' results section of the accompanying schedule of findings and questioned costs. Compliance with the requirements of laws, regulations, contracts and grants applicable to each of its major federal programs is the responsibility of Gulf States Marine Fisheries Commission's management. Our responsibility is to express an opinion on Gulf States Marine Fisheries Commission's compliance based on our audit.

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB Circular A-133, *Audits of State, Local Governments, and Non-Profit Organizations*. Those standards and OMB Circular A-133 require that we plan and perform the audit to obtain reasonable assurance about whether noncompliance with the types of compliance requirements referred to above that could have a direct and material effect on a major federal program occurred. An audit includes examining, on a test basis, evidence about Gulf States Marine Fisheries Commission's compliance with those requirements and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion. Our audit does not provide a legal determination on Gulf States Marine Fisheries Commission's compliance with those requirements.

In our opinion, Gulf States Marine Fisheries Commission complied, in all material respects, with the compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended December 31, 2009. However, the results of our auditing procedures disclosed an instance of noncompliance with those requirements, which is required to be reported in accordance with OMB Circular A-133 and which is described in the accompanying schedule of findings and questioned costs as item 2009-01

## Internal Control Over Compliance

Management of Gulf States Marine Fisheries Commission is responsible for establishing and maintaining effective internal control over compliance with the requirements of laws, regulations, contracts, and grants applicable to federal programs. In planning and performing our audit, we considered Gulf States Marine Fisheries Commission's internal control over compliance with the requirements that could have a direct and material effect on a major federal program to determine our auditing procedures for the purpose of expressing our opinion on compliance and to test and report on internal control over compliance in accordance with OMB Circular A-133, but not for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, we do not express an opinion on the effectiveness of Gulf States Marine Fisheries Commission's internal control over compliance.

Our consideration of internal control over compliance was for the limited purpose described in the preceding paragraph and was not designed to identify all deficiencies in internal control over compliance that might be significant deficiencies or material weaknesses and therefore, there can be no assurance that all deficiencies, significant deficiencies, or material weaknesses have been identified. However, as discussed below, we identified certain deficiencies in internal control over compliance that we consider to be material weaknesses.

*A deficiency in internal control over compliance* exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. *A material weakness in internal control over compliance* is a deficiency, or combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. We consider the deficiency in internal control over compliance described in the accompanying schedule of findings and questioned costs as item 2009-01 to be a material weakness.

Gulf States Marine Fisheries Commission's responses to the findings identified in our audit are described in the accompanying schedule of findings and questioned costs. We did not audit Gulf States Marine Fisheries Commission's responses and, accordingly, we express no opinion on the responses

This report is intended solely for the information and use of the Commission, management, others within the organization and federal awarding agencies and pass-through entities and is not intended to be and should not be used by anyone other than these specified parties.

*Piltz, Williams, LaRosa & Co.*

Certified Public Accountants

Biloxi, Mississippi  
September 24, 2010



**Section V**

**Other Items**

**Gulf States Marine Fisheries Commission**  
**Schedule of Findings and Questioned Costs**  
For the Year Ended December 31, 2009

**Section 1 – Summary of Auditors’ Results**

1. An unqualified opinion was issued on the basic financial statements.
2. There were no significant deficiencies in internal control disclosed by the audit of the basic financial statements.
3. The audit did not disclose any noncompliance which is material to the basic financial statements.
4. One significant deficiency in internal control over major federal award programs was disclosed during the audit. The deficiency is reported as a material weakness.
5. An unqualified opinion was issued on compliance for major programs.
6. Audit findings that are required to be reported in accordance with Section \_\_.510(a) of OMB Circular A-133 are reported in this schedule.
7. The major programs were: Recreational Fisheries Information Network and Commercial Fisheries Information Network and Economic Data Program – 11.434, Emergency Disaster Recovery Program I and II – 11.454.
8. The dollar threshold used to distinguish between Type A and Type B Programs was \$1,407,329.
9. The auditee does qualify as a low-risk auditee.

**Section 2 – Findings Related to the Financial Statements**

None

**Section 3 – Findings and Questioned Costs for Federal Awards**

Department of Commerce

2009-01      Emergency Disaster Recovery Program II – CFDA No. 11.454

*Criteria:* Management is responsible for implementing cash management controls to minimize the time elapsing between the transfer of funds from the U.S. Treasury and their disbursement.

*Condition:* On October 14, 2008 the Commission requested advance funds of \$5,000,000 under federal program Emergency Disaster Recovery Program II. On October 14, 2008 the advance funds were disbursed to the Department of Wildlife and Fisheries of Louisiana, a subrecipient. This matter was not addressed by the Commission until April 2009. The funds were held by the subrecipient in an interest bearing account until August 19, 2009, when the funds were returned to the Commission. Subsequently, the appropriate interest was returned to the Commission on January 8, 2010.

**Gulf States Marine Fisheries Commission**  
**Schedule of Findings and Questioned Costs**  
For the Year Ended December 31, 2009  
(Continued)

*Views of Responsible Officials and Planned Corrective Actions:* The funds were drawn down from ASAP on October 14, 2008, in response to a request for an advance by a state sub-recipient. The check was simultaneously dispersed in a timely manner on October 14, 2008; and, the check cleared our bank on October 23, 2008. It was not until April 2009 before the Commission realized that the advance money disbursed to the state sub-recipient had not been utilized by the state. The Commission immediately requested the money, along with interest, to be returned to the Commission. The funds were finally returned to the Commission on August 19, 2009. The applicable interest was returned to the Commission on January 08, 2010.

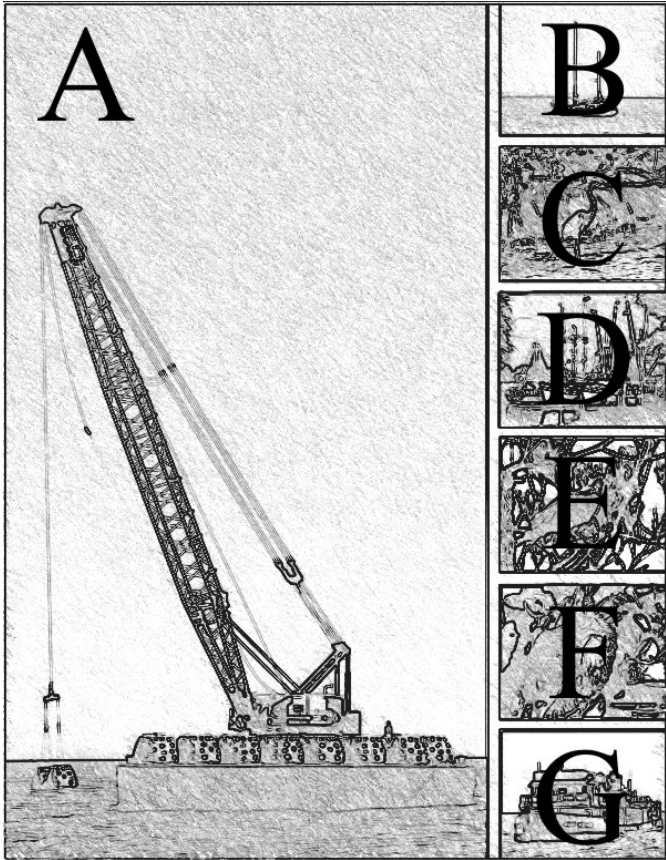
Because a large amount of time elapsed before the Commission became aware of the issue, the Commission has issued a new Policy on Advance Money to Sub-recipients:

**GULF STATES MARINE FISHERIES COMMISSION POLICY ON ADVANCE MONEY TO SUB-RECIPIENTS**

Gulf States Marine Fisheries Commission has implemented measures to eliminate the weakness in cash management controls discovered in the 2009 audit of the Emergency Disaster Recovery Program II (EDRP II).

First, the Commission has hired an additional accountant to assist the Chief Financial Officer and Administrative Officer in Grant and Contract management. Second, new procedures are in place to track advances from the approval process through expenditure phase. Sub-recipients are now required to provide documentation of expenditures utilizing the advance before requesting additional reimbursements from the Sub-Award. Furthermore, Excel spreadsheets have been utilized to flag cash advances and prohibit further reimbursements in that sub-award until documentation of expenditures against the advance has been received. All flagged sub-awards are checked weekly to ensure timely use of the advance funds.





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**Gulf States Marine Fisheries Commission  
2404 Government Street  
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