

# Fifty-Ninth Annual Report of the Gulf States Marine Fisheries Commission

For the Year 2008



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**

Fifty-Ninth Annual Report  
(2008)

*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

## Acknowledgements

In submitting this Fifty-Ninth 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 fifty-nine 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.

Ralph Rayburn, our Chairman, died suddenly at his home on January 31, 2008. Texas Sea Grant, the Sea Grant Network, the Gulf States Marine Fisheries Commission, and a host of agencies and individuals across the nation, lost a revered colleague and friend. He was a tireless advocate for the protection of marine resources in the Gulf of Mexico and respected by all who knew him. He will be sorely missed.

Respectfully submitted,

Ralph Rayburn, *Chairman*  
Joe Gill, Jr., *Acting Chairman and Vice Chairman*  
Randy Pausina, *Second Vice Chairman*  
Larry B. Simpson, *Executive Director*

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**Commission Roster**

***Commission Officers***

**Chairman: Ralph Rayburn**

**First Vice Chairman: Joe Gill, Jr.**

**Second Vice Chairman: Randy Pausina**

***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

Will S. Kendrick  
Florida House of Representatives  
Carrabelle, 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.....	Ralph Rayburn/Joe Gill Randy Pausina Vernon Minton Virginia Vail Mike Ray
Law Enforcement Committee.....	Walter Chatagner, Chairman
Commercial/Recreational Fisheries Advisory Panel .....	Philip Horn, Commercial Chairman Grey Cane, Recreational Chairman
State-Federal Fisheries Management Committee .....	Larry B. Simpson, Facilitator
Menhaden Advisory Committee .....	Joe Smith, Chairman
Technical Coordinating Committee.....	William S. Perret, Chairman
TCC Artificial Reef Committee.....	Steve Heath, Chairman
TCC Crab Subcommittee.....	Tom Wagner, Chairman
TCC Data Management Subcommittee .....	Richard Cody, Chairman
TCC Habitat Subcommittee.....	Heather Warner-Finley, Chairman
TCC SEAMAP Subcommittee .....	Jim Hanifen, Chairman



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

The Commission had a very active year in 2008. As our part of the Emergency Disaster Programs (EDRP), we dispensed \$62,720,871.97. This is broken down by category and state as follows:

**Expenditures by Category 2008 – EDRP I**

State	Oyster Recovery	Shrimp and Shellfish Recovery	Cooperative Research	State Totals
Florida	491,832.95	104,830.71	232,348.15	829,011.81
Alabama	338,620.71	91,356.66	4,167,299.21	4,597,276.58
Mississippi	1,398,381.51	969,973.80	1,972,934.41	4,340,289.72
Louisiana	4,616,734.00	2,903,297.51	189,398.66	7,709,430.17
Texas	-	313,682.80	-	313,682.80
<b>Total</b>	<b>\$6,844,569.17</b>	<b>\$4,383,141.48</b>	<b>\$6,561,980.43</b>	<b>\$17,789,691.08</b>

**Expenditures by Category 2008 – EDRP II**

State	Economic Assistance for Fishermen	Assistance for Commercial Businesses & Industry	Additional Assistance for TED/BRD Compliance	Domestic Product Marketing and Seafood Testing	State Totals
Louisiana	30,435,437.35	-	539,496.00	-	30,974,933.35
Texas	-	-	-	N/A	-
Florida	1,879.81	479,251.50	-	N/A	481,131.31
Mississippi	3,699,190.03	1,319,897.64	553,266.06	647,774.70	6,220,128.43
Alabama	251,585.84	6,703,401.96	300,000.00	N/A	7,254,987.80
<b>Total</b>	<b>\$34,927,589.03</b>	<b>\$8,502,551.10</b>	<b>\$1,392,762.03</b>	<b>\$647,774.70</b>	<b>\$44,931,180.89</b>

I am truly pleased with the Commission's efforts to assist fishermen, the environment, business and industry and the marine fisheries, in the wake of the worst natural disaster in the history of this country. I now believe, and I did have my doubts, that we could ever come back and that we will once again be a productive and thriving recreational and commercial industry. There have been changes in the number of people in the industry and the manner in which we use these marine resources, but I am confident we will be viable once again.

To accomplish the goals of the Commission, James Ballard was hired as the Sport Fish Restoration/Aquatic Invasives Coordinator to replace David Rice, who went back to graduate school. Alex Miller was hired as an Economist to work on the shrimp fishery and other fishery analyses. Lloyd Kirk was hired as the data base manager for the Southeast Area Monitoring and Assessment Program (SEAMAP). The Commission staff are dedicated

professionals who take pride in their work, have a strong sense of purpose with respect to the living marine resources of this region and I am glad to work with them on a daily basis.

Management continues to require and demand more detailed information upon which to make policy. This requires our data and interjurisdictional programs to strive to even greater heights to provide this service. Consequently, I have for the last few years brought the funding needs of these two programs to the attention of the funding committees of Congress, in hopes that they will assist us with our new initiatives and broader data collection needs.

I have observed the marked aging of the professional personnel in the states over the years. Now is the time for the younger professionals to begin taking over the policy setting for the Gulf. Our cadre of younger folks is up to the task and I have every confidence that they will prove themselves in the

common market place of ideas. Integrity, honesty, and ability will always carry the day for our natural resources that we are charged with protecting and using. It is my opinion that the new policy makers will be dealing with many of the same issues we are currently dealing with, such as populations, habitat and fishing pressures change, but the one new issue that I do see on the horizon that concerns me, is use of ground and surface water. Marine resources are highly sensitive to salinity regimes and changes caused by diversion or upstream use. Allocation and use will undoubtedly be a hotly contested issue in the years to come. We therefore must develop data collection systems that will give us the tools with which to properly manage marine resources in this new age of limited freshwater introduction. The Commission is properly placed and staffed to address these issues as well as other issues that will affect marine resources of the Gulf of Mexico.

# EMERGENCY 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 Restoration and Rehabilitation-EDRP I

Overall spending in the Resource Recovery Program (EDRP I) in 2008 was below that of 2007 which would normally indicate a slowdown in recovery efforts. However, a number of factors contributed to the decline in spending, not the least of which is a need to monitor the results of work completed in 2007; and the need to examine existing plans in light of past results and changing needs within the industry. Gulf Fishery recovery efforts following the disasters of 2005, for example, took on a slightly new complexion in 2008 as Hurricanes Gustav and Ike made their way to the upper Gulf States in early September with less than two weeks in time separating them. While Louisiana and Texas

received the brunt of damage from these two storms, all of the Gulf States went into a preparedness mode which effectively slowed ongoing recovery efforts.

Additionally, spring floods in the Midwestern states caused an increase in the freshwater discharge at the mouth of the Mississippi River and its adjoining tributaries as diversion structures along the river were opened to relieve pressure and potential flooding in and below New Orleans. Historically, such increased water flow has proven to be beneficial as additional nutrients are discharged in the affected areas; but at the same time, planned oyster restoration and other projects were temporarily delayed in coastal Louisiana and Mississippi pending return of area waters to acceptable conditions.

The EDRP I component also saw some overall work plans amended resulting in better utilization of recovery funds. Louisiana amended its Habitat restoration program when FEMA agreed to participate in the State's debris removal effort; effectively allowing recovery funds to be re-aligned in order to provide much needed assessments of disaster impacts on area economies as well as stock recovery analysis. Alabama also amended a planned resource mapping project when it was determined that area Universities were positioned to conduct this type of work – effectively eliminating duplicative efforts while expanding other recovery program components. Funds which were originally programmed for mapping under the State's Shrimp and Shellfish Habitat element were re-allocated to the Cooperative Research element for expanded stock recovery assessment and for enhancing the State's

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

State	Oyster Recovery	Shrimp and Shellfish Recovery	Cooperative Research	State Totals
Florida	2,994,700.00	813,600.00	425,033.00	4,233,333.00
Alabama*	7,116,306.00	221,251.68	6,224,706.00	29,633,333.00
		8,120,355.00	10,450,714.00	
Mississippi	15,000,000.00	12,000,000.00	10,041,667.00	37,041,667.00
Louisiana**	22,900,000.00	11,173,917.00	18,842,750.00	52,916,667.00
Texas	1,814,910.00	997,260.00	382,800.00	3,194,970.00
<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>

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

\*As amended in 2008 to reduce Habitat debris removal and increase economic impact assessment under Cooperative Research.

\*\*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. Expenditures by Category 2008**

State	Oyster Recovery	Shrimp and Shellfish Recovery	Cooperative Research	Total
Florida	491,832.95	104,830.71	232,348.15	829,011.81
Alabama	338,620.71	32,547.49	1,157,119.65	
		58,809.17	3,010,179.56	4,597,276.58
Mississippi	1,398,381.51	969,973.80	1,972,934.41	4,340,289.72
Louisiana	4,616,734.00	2,903,297.51	189,398.66	7,709,430.17
Texas		313,682.80		313,682.80
<b>Total 2008</b>	<b>\$6,844,569.17</b>	<b>\$4,383,141.48</b>	<b>\$6,561,980.43</b>	<b>\$17,789,691.08</b>
% of Total Expenses 2008	40.0%	23.06%	36.9%	100%
<b>Total 2007</b>	<b>\$14,947,881.49</b>	<b>\$7,789,107.32</b>	<b>\$7,992,166.14</b>	<b>\$30,729,154.95</b>
% of Total Expenses 2007	48.6%	25.0%	26.0%	100%

**Table 3. CUMULATIVE Expenditures by Category Through 2008**

	Oyster Recovery	Shrimp and Shellfish Recovery	Cooperative Research	Total
<b>Total</b>	<b>\$22,706,092.75</b>	<b>\$ 11,892,764.32</b>	<b>\$14,625,808.80</b>	<b>\$49,224,665.67</b>
% of Total Expenses to date	46.1%	24.2%	29.7%	100%

hatchery program through repair to the Claude Petet Mariculture Center saltwater intake system.

Table 1 reflects the distribution of funding with the amendments above included. As indicated, the Shrimp and Shellfish Habitat Recovery programmed spending now reflects 24.5% of the total. Initially, this element was programmed for 39.2%. Accordingly, Cooperative Research is now programmed for approximately 36.5%, where it was previously 21%. The Oyster Recovery element remains unchanged.

The spending by category for 2008 (Table 2) includes, for comparative purposes, the 2007 categorical spending data. Overall spending in 2008 was approximately \$17.8 million as compared to nearly \$31 million in 2007. Oyster program reimbursements were down due to flooding of the Mississippi River and Hurricanes Gustav and Ike. Increases in the reimbursements in the Shrimp and Shellfish Habitat element reflect debris removal efforts in Louisiana prior to FEMA participation, which was approved in early 2009. Reimbursements in the Cooperative Research element reflect the first

full year of stock assessment and trip reports primarily in Alabama and Mississippi.

The cumulative spending through the end of 2008 as shown in Table 3, reflects the combined reimbursements of nearly \$49.2 million. Through December of 2008 approximately 39% of the total EDRP I fund had been utilized. From a grant timeline perspective, by the end of December, the program was 28 months into implementation or approximately 47% into allotted time. There is a general consensus that while it is premature for concern at this stage, it is significant to note that if spending continues at the current rate (nearly \$1.75 million per month), by the end of the 60 month grant timeline, the states would have spent only \$105.5 million in the recovery effort.

As a result, all five Gulf States have been provided with current spending rate information in an effort to promote more awareness.

Measurable accomplishments for which EDRP I reimbursements were made through 2008 are reflected as follows:

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

State	Economic Assistance for Fishermen	Assistance for Commercial Businesses & Industry	Additional Assistance for TED/BRD Compliance	Domestic Product Marketing and Seafood Testing	State Totals
Louisiana*	39,979,091.00			1,293,909.00	41,273,000.00
Texas	1,173,000.00		27,000.00		1,200,000.00
Florida	460,000.00	1,500,000.00	40,000.00		2,000,000.00
Mississippi**	6,300,000.00	14,000,000.00	750,000.00	3,950,000.00	25,000,000.00
Alabama***	3,900,000.00	10,800,000.00	300,000.00		15,000,000.00
<b>Total</b>	<b>\$51,812,091.00</b>	<b>\$26,300,000.00</b>	<b>\$1,117,000.00</b>	<b>\$5,243,909.00</b>	<b>\$84,473,000.00</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.

- Nearly 2,962 acres of public oyster grounds are being rehabilitated through cultch plants and oyster relays involving an estimated 143,000 sacks of seed oysters. Over 207,000 cubic yards of cultch materials were installed on public grounds in the process.
- Rehabilitation of private oyster lease grounds involved the installation of nearly 3,400 acres of cultch materials, the re-seeding of nearly 44,000 acres of private reefs involving nearly 107,000 sacks of oysters and the transplanting or bedding of nearly 1,314,000 sacks for grow out and future harvest.
- Under the Habitat program, an 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 impaired fishing efforts and navigation.
- An estimated 615 pyramid type and goliath artificial fishing reef structures were installed in offshore waters south of the Mississippi barrier islands, along with numerous associated rubble structures and steel hull vessels. Even though this element was funded under the Cooperative Research sub award, which was designed to study the success of hatchery raised juvenile fish stocks; it none the less contributed to habitat restoration of those manmade reefs that were destroyed during 2005.
- A total of 29 inshore/nearshore low-profile artificial fishing reefs covering nearly 290 acres of water bottom were installed at strategic locations along Mississippi coastal areas utilizing limestone materials as well as concrete rubble donated by area cities.
- Nearly 43,000 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 2008. Analysis has begun on both shrimp and crab reports in Mississippi and Alabama is working on scanning and storing of its data. While only minimal data has been collected in the other States, 2009 is expected to see this effort expand as economic impact and other stock assessments are implemented.
- Work continued on both an Oyster Larvae Dispersal study in Pensacola Bay and on a Finfish Larvae Impact Study, based on sudden or drastic environmental changes that may be brought on by storm surges and related factors such as temperature and salinity changes.

Recovery efforts in 2009 are expected to exceed those of 2008, and should be much the same as those of 2007. Significant work is planned for the oyster recovery program, along with related reef monitoring to determine the success of work from the previous 18 to 28 months. Cooperative Research efforts are expected to increase as the disaster related economic impact study in the Louisiana industry is implemented; and as further installation of inshore artificial reefs along with assessment of those previously installed in Mississippi is accomplished. Habitat efforts, even though reduced, will experience a continuation of ongoing projects involving

**Table 5. Expenditures by Category 2008 – EDRP II**

State	Economic Assistance for Fishermen	Assistance for Commercial Businesses & Industry	Additional Assistance for TED/BRD Compliance	Domestic Product Marketing and Seafood Testing	State Totals
Louisiana	30,435,437.35	*	539,496.00	-	30,974,933.35
Texas	-	-	-	N/A	-
Florida	1,879.81	479,251.50	-	N/A	481,131.31
Mississippi**	3,699,190.03	1,319,897.64	553,266.06	647,774.70	6,220,128.43
Alabama***	251,585.84	6,703,401.96	300,000.00	N/A	7,254,987.80
<b>Total</b>	<b>\$34,927,589.03</b>	<b>\$8,502,551.10</b>	<b>\$1,392,762.03</b>	<b>\$647,774.70</b>	<b>\$44,931,180.89</b>

\*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;

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

\*\*\*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.

identification and treatment of aquatic invasive species, installation of hydrologic monitoring equipment, cultch plants in selected areas, and the 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 2009, as additional oyster habitat work is completed in Texas, Alabama and Florida; and, as Alabama implements its storm surge attenuator and marsh restoration plan.

**EDRP II**

**Assistance to Fishermen and related Business and Industry**

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 is directed towards 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 marketing to promote Gulf products. 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, improve habitat, or to make other improvements that will provide long term benefit to the industry.

Most of the reimbursements to date 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.

Through December of 2008 nearly \$45.0 million dollars had been reimbursed to the Gulf States, with nearly 69% distributed in the State of Louisiana. Also, as indicated in Table 5, nearly \$35 million, or approximately 77% of reimbursements to date was for Economic Assistance to Fishermen; with nearly 87% distributed in Louisiana.

Planned expenditures and reimbursements in 2009 are expected to result in the completion of most of the direct assistance elements. Only those efforts or projects that involve resource or infrastructure improvements or marketing and testing components (approximately \$6.9 million) are expected to run the grant timeline course. This means that nearly \$77.6 million or approximately 91% of the combined Economic Assistance funds appropriated in late 2007 could possibly be distributed by the end of 2009.

# **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 11. 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**

### Large Area Artificial Reef Sites (LAARS) Meeting

In response to a motion passed during the Commercial/Recreational Fisheries Advisory Panel's March 2008 meeting in Galveston, Texas; the Program Coordinator setup/supported a meeting to discuss the issues with the LAARS. In attendance at this meeting were representatives from the Jacksonville and Mobile Districts of the U.S. Army Corps of Engineers (ACOE), members of the Artificial Reef Subcommittee, NW Florida County artificial reef coordinators, GSMFC staff, a representative of the U.S. Coast Guard, and commercial and recreational stakeholders. The purpose of this meeting was to help everyone involved understand the new permit special conditions that were being proposed by the Jacksonville ACOE and to allow people to voice their concerns with them.

### 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 will be sent to the Secretary of Transportation (for MARAD) and the Secretary of the Navy.

### 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

## **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.

## **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).

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 continues to work on several aquatic invasive species issues; including the development of a list of research priorities, the refinement of the strategic plan for the GSARP and trying to secure outside funding for aquatic invasive species demonstration projects.

#### **Associated Meetings**

- |               |   |
|---------------|---|
| 3/10/2008     | TCC Habitat Subcommittee meeting  |
| 3/10-13/2008  | Gulf States Marine Fisheries Commission Annual Spring meeting               |
| 4/21-24/2008  | Gulf and South Atlantic Regional Panel on Aquatic Invasive Species meeting  |
| 4/28-5/1/2008 | National Aquatic Nuisance Species Task Force meeting                        |
| 7/16/2008     | Large Area Artificial Reef Sites meeting                                    |
| 10/13-16/2008 | Gulf States Marine Fisheries Commission Annual Fall meeting                 |
| 11/12-13/2008 | Joint GSMFC and ASMFC Artificial Reef Subcommittees meeting                 |
| 12/9-10/2008  | 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. A brief report on the 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 require 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.

## **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. This project resulted in approximately 10,500 brochures being printed for each of our eight member states with their specific states agency's logo and contact information on the back.

## **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; that assessed the human health risk associated with channeled apple snails 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.

## **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, the refinement of the GSARP's strategic plan and trying to secure outside funding for aquatic invasive species demonstration projects.

## **Associated Meetings**

- April 21-24, 2008 Gulf and South Atlantic Regional Panel on Aquatic Invasive Species
- April 28-May 1, 2008 National Aquatic Nuisance Species Task
- June 17-19, 2008 Florida Non-native Marine Fishes Workshop
- October 27-29, 2008 National Aquatic Nuisance Species Task Force
- November 5-6, 2008 Mississippi River Basin Panel's Rapid Response Mock Exercise
- December 9-10, 2008 Gulf and South Atlantic Regional Panel on Aquatic Invasive Species

# **A**TLANTIC BILLFISH RESEARCH PROGRAM

David M. Donaldson, Assistant Director

The Gulf States Marine Fisheries Commission continued to administer the Atlantic Billfish Research Program and awarded funds to projects that addressed population, distribution, post-release survival, and stock identification issues, among others. The original duration for these grants was through December 2006, but due to Hurricane Katrina, most of the project periods were extended into 2007. NOAA Fisheries is the technical monitor of this project.

In 2005, the GSMFC, through a partnership with the NOAA Fisheries, awarded eleven grants totaling \$1.8 million to support research and data collection on billfish to enhance billfish conservation, management, and rebuilding efforts, and provide updated information for stock assessments. These projects will assist in the accomplishment of:

1. Ecological and biological research;
2. Fishery and socio-economic research; and
3. Development of innovative analytical methods and research tools.

The competitive proposal review and evaluation process, conducted in early December 2004, resulted in eleven projects selected for funding over the next two years, beginning on January 1, 2005. The projects include:

- Virginia Institute of Marine Science – 3 projects for a total of \$505,526.
- University of Miami – 3 projects for a total of \$444,054.
- The Billfish Foundation – 1 project for \$162,800
- University of South Florida – 1 project for \$188,979.
- Texas Parks and Wildlife Department – 1 project for \$83,356.
- U.S. Virgin Islands Division of Fish and Wildlife – 1 project for \$200,205.
- University of Southern Mississippi/GCRL – 1 project for \$215,080.

The final two (2) projects were completed during this year:

- University of South Florida (Project #12): *White Marlin Essential Fish Habitat and Possible*

*Resident Populations in the Desoto Canyon Area of the Northern Gulf of Mexico – Assessment of Residence, Movements and Migrations Using Satellite Pop-Up Archival Tagging and Oceanographic Remote Sensing;* and

- U.S. Virgin Islands Division of Fish and Wildlife (Project #16): *Survey of U.S. Virgin Islands Recreational Fishing Boats.*

The GSMFC and NOAA Fisheries conducted a symposium in conjunction with the GSMFC March 2008 Annual Spring meeting. The purpose of the workshop was to provide an overview of the work that was conducted and present some of the preliminary findings from these projects. The presentations delivered at the symposium included:

- Development of a Portable, Universal Assay for Determination of Gender and Reproductive Status in Istiophorid Billfish - Peter Van Veld, *Virginia Institute of Marine Science;*
- Analysis of the Effect of Offset Circle Hooks on Post-Release Survival and an Estimation of the Relative Hooking Efficiency of Circle Hooks and Standard J-Hooks in the Recreational Fishery for White Marlin - John Graves, *Virginia Institute of Marine Science;*
- Age and Growth, Reproduction and Genetics of Billfish in Gulf of Mexico Waters off Texas - Randy Blankinship, *National Marine Fisheries Service, Southeast Regional Office;*
- An Atlantic-wide Study of Age and Growth in Atlantic Marlins - David Die, *University of Miami Rosenstiel School of Marine and Atmospheric Science;*
- Use of Pop-up Satellite Archival Tags to Estimate Post-Release Survival and Habitat Preferences of Sailfish *Istiophorus platypterus* from Commercial Pelagic Longline Gear in the Southern Gulf of Mexico - David Kerstetter, *Nova Southeastern University Oceanographic Center;*
- Reproductive Biology, Potential Spawning and Nursery Areas, and Larval Identification of Blue Marlin, *Makaira nigricans*, in the North-central Gulf of Mexico - Nancy Brown-Peterson, *University of Southern Mississippi, Gulf Coast Research Laboratory*

A proceeding of the workshop has been compiled and is available on-line at the GSMFC web site.

# **S**OUTHEAST MONITORING AND ASSESSMENT PROGRAM (SEAMAP)

*Jeffrey K. Rester, Program Coordinator*

SEAMAP fishery independent surveys continued for the twenty-seventh year in 2008. Total program allocations for the year for all three SEAMAP components, Gulf, South Atlantic and Caribbean, was approximately \$4.387 million. Several new SEAMAP surveys were instituted in 2007 and 2008 in the Gulf of Mexico. Also in 2008, the Gulf States Marine Fisheries Commission assumed data management responsibilities for all SEAMAP data collection in the Gulf.

## **Winter Plankton Survey**

The SEAMAP Winter Plankton Survey took place from February 7 to March 17, 2008. Ichthyoplankton samples were collected at 171 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); sample the size fraction of fishes that are underrepresented in bongo and neuston samples using a juvenile (Methot) fish trawl; and measure extrusion of the smallest size fraction of fish larvae through the standard SEAMAP bongo net by collecting samples at selected locations with a bongo frame fitted with a 333 micron net on one side and a 202 micron mesh net on the other side.

## **Spring Plankton Survey**

The SEAMAP Spring Plankton Survey took place from April 17 to May 29, 2008. Ichthyoplankton samples were collected at 157 stations. The objectives of the survey were to collect ichthyoplankton samples for estimates of the abundance and distribution of Atlantic bluefin tuna larvae and collect environmental data at all ichthyoplankton stations.

Plankton samples were taken with standard SEAMAP bongo and neuston samplers. The bongo sampler consisted of two conical 61-cm nets with 333-micron mesh. Tows were oblique, surface to near bottom (or 200 m) and back to surface. A mechanical flowmeter is mounted off-center in the mouth of each bongo net to record the volume of water filtered. Volume filtered ranges from approximately 20 to 600 m<sup>3</sup> but is typically 30 to 40 m<sup>3</sup> at the shallowest stations and 300 to 400 m<sup>3</sup> at the deepest stations. A single or double 2x1 m pipe

frame neuston net fitted with 0.947 mm mesh netting is towed at the surface with the frame half-submerged for 10 minutes. Samples are taken upon arrival on station regardless of time of day. At each station either a bongo and/or neuston tow are made depending on the specific survey. Samples are routinely preserved in 5 to 10 % formalin and later transferred after 48 hours to 95 % ethanol for long term storage. During some surveys selected samples are preserved initially in 95 % ethanol and later transferred to fresh ethanol. In addition, hydrographic data (surface chlorophylls, salinity, temperature and dissolved oxygen from surface, midwater and near bottom, and Forel-Ule color) were collected at all stations.

Right bongo and neuston samples collected from SEAMAP stations were transshipped to the Polish Sorting and Identification Center. Left bongo samples were archived at the SEAMAP Invertebrate Plankton Archiving Center (SIPAC).

## **Reeffish Survey**

The primary purpose of this survey was to assess relative abundance and compute population estimates of reef fishes found on natural reef fish habitat in the Gulf of Mexico. Two types of gear were used to deploy video cameras: 1) a single-funnel fish trap (2.13 m long by 0.76 m square) with the camera mounted at a height of 25 cm above the bottom of the trap; or 2) a 4 camera array with 4 cameras mounted orthogonal to each other at a height of 25 cm above the bottom. Both gears were baited with squid before deployment. The resultant video recordings (typically of one hour duration) were processed back at the laboratory where fishes were identified and counted independently by two tape readers. Final counts were entered into the SEAMAP reef fish database along with additional observations on habitat and fish activity. NMFS conducted reeffish sampling with fish traps and video cameras from April 17 to May 29, 2008, on the Oregon II and from June 4 to August 11, 2008, on the R/V Gandy. Approximately 220 stations were sampled on the Oregon II while 264 stations were sampled on the R/V Gandy.

## **Summer Shrimp/Groundfish Survey**

The SEAMAP Summer Shrimp/Groundfish Survey was conducted from May 31 to July 16, 2008. In addition, NMFS, Mississippi, and Louisiana vessels collected ichthyoplankton data. Objectives of the

survey were to monitor size and distribution of penaeid shrimp during or prior to migration of brown shrimp from bays to the open Gulf; aid in evaluating the "Texas Closure" management measure of the Gulf Council's Shrimp Fishery Management Plan; and provide information on shrimp and groundfish stocks across the northern Gulf of Mexico from inshore waters to 50 fm.

NMFS and Louisiana vessels collected ichthyoplankton data with bongo and/or neuston nets at sample sites occurring nearest to half-degree intervals of latitude/longitude. The Polish Sorting and Identification Center will sort the samples. Once sorted, the specimens and data will be archived at the SEAMAP Archiving Center.

#### **Fall Plankton Survey**

The Fall Plankton cruise took place from September 4 – 30, 2008. NMFS sampled 64 stations, Alabama sampled 9 stations, Mississippi sampled 9 stations, and Louisiana sampled 9 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.

#### **Inshore Longlining Survey**

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. During 2008, Mississippi sampled 72 stations from March to October over 23 days of sampling. A total of 861 fish were collected, of which 677 were sharks and rays, 72 were red drum, 102 were catfish, and 10 represented four other fish species. Three hundred twenty-eight sharks/rays and 32 red drum were tagged and released. Additionally two sea turtles were caught on the longline and were successfully released.

#### **Fall Shrimp/Groundfish Survey**

The Fall Shrimp/Groundfish Survey was conducted from October 8 to November 20, 2008, from off Mobile, Alabama 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*

During 2008, the Habitat Program continued to coordinate the Commission's MARFIN sponsored bottom mapping project. After a significant delay, due to problems with one of the contractors, the project was completed at the end of 2008. The database contains approximately 275,000 seabed observations characterizing the seabed in two different datasets. The first is the WWD dataset that holds the numeric integrated results from the original data sources. Parameters in the WWD data include such things as gravel, sand, mud, and clay content, grain size, Folk code, percentage carbonate, Munsell code, shear strength, and porosity. The CMP dataset includes a table of integrated data on grain components and features of the substrates. Many of the parameters in the CMP dataset have significance in habitat mapping. For example, the CMP dataset list things such as biogenic rhodoliths, *Halimeda*, shell or coral debris, the minerals glauconite, phosphate and hydrate, and features such as ripples, seagrass and hydrogen sulfide. The bottom mapping database will be valuable in the identification of essential fish habitat, delineating coral and hardbottom areas, and relating fish distributions to bottom type throughout the Gulf of Mexico.

In late 2007, the Commission began administering an aquaculture grant from NOAA Fisheries. Most of the work was being performed by the University of Southern Mississippi's Gulf Coast Research Laboratory (GCRL), who during the year constructed a copepod culture system for raising larval fish. A contractor under GCRL developed a planning exercise that will lead to the development of a full scale offshore aquaculture demonstration project in the northern Gulf of Mexico. During 2008, the Habitat Program Coordinator developed a geographic information system (GIS) model for aquaculture site selection in the Gulf of Mexico. A literature review was conducted to help determine siting criteria. The most important criteria for site selection were water depth, water currents, water quality, and bottom type. Excluded areas included seagrass areas, coral, hardbottom, marine protected areas, Council designated habitat areas of particular concern, National Marine Sanctuaries, shipping fairways, vessel lightering zones, dredged material disposal areas, artificial reefs and artificial reef zones, and oil and gas platform safety zones. Other considerations were traditional highly fished areas and areas that frequently experience harmful algal blooms. The entire project should be completed in 2009.

During the year, the Habitat Program Coordinator worked with the National Marine Fisheries Service (NMFS) and the National Coastal Data Development Center (NCDDC) to clean up the Essential Fish Habitat (EFH) GIS files that were produced for the Council's EFH Generic Amendment 3 in 2004. These files include EFH distribution maps for the Council's seven fishery management plans as well as habitat areas of particular concern. The original EFH GIS files had topology and artifact problems that prevented their release to other resource agencies and the public. The EFH GIS files will be important when the Council updates and refines EFH designations in the future.

The review of applications for liquefied natural gas (LNG) deepwater port facilities continued in 2008. The Draft Environmental Impact Statement for the Port Dolphin LNG Deepwater Port was released in April. The Port Dolphin facility would be located approximately 28 miles west of Tampa, Florida in 100 feet of water. Vessels at the Port Dolphin facility were designed to regasify the LNG onboard the vessel in a closed loop regasification system, thereby reducing potential fishery impacts. While the facility would not use seawater as a heat source for vaporizing the LNG back into a gas, there was concern over potential entrainment issues related to cooling water used for vessels and hardbottom impacts related to pipeline installation. In September the Commission reviewed the final environmental impact for the Bienville Offshore Energy Terminal (BOET) approximately 63 miles south of Mobile Point, Alabama, in a water depth of approximately 425 feet. The main concerns in reviewing the final EIS stem from relying only on Southeast Area Monitoring and Assessment Program (SEAMAP) ichthyoplankton data in the fishery impact assessment; that the fishery impact assessment does not use all available SEAMAP plankton data from the April and May time period, and that the fishery impact assessment does not examine impacts to species that are common around the BOET location. Under threat of veto from the Governor of Alabama, BOET withdrew their deepwater port license application in October.

The Gulf of Mexico Fishery Management Council's three Habitat Advisory Panels met in November and December. The Texas Habitat Advisory Panel discussed the Coastal Bend Bays and Estuaries Program, issues facing the Texas oyster fishery, a

spotted sea trout consumption advisory for Galveston Bay, Hurricane Ike impacts to habitat, an update on the Matagorda Ship Channel, and the Old River Cove restoration project. The Louisiana/Mississippi Habitat Advisory Panel discussed the Donaldsonville to the Gulf levee project, Hurricane Gustav and Ike impacts to habitat, monitoring results from the 2008 Bonnet Carré Spillway opening, open water disposal of dredge material in Mississippi Sound, and an update on the Louisiana Coastal Protection and Restoration Project. As a result of this meeting, the Council sent a letter requesting that the Corps consider using the Bonnet Carré spillway annually to divert up to 10,000 cfs during high river stages for fishery and habitat benefits. The Florida/Alabama Habitat Advisory Panel discussed building living shorelines, permit conditions and expansion of large area reef sites off Florida, examining the ecological and fishery function of artificial reefs in the north central Gulf of Mexico, the proposed Port Dolphin LNG Facility, and establishing penalties for seagrass scarring in Florida.

# **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 59th Annual Meeting.

During 2008, 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 is still in the drafting stages for the revision to the Commission's 1991 Oyster FMP. The Oyster TTF met several times in 2008 and spent a full meeting looking at the available data for a potential stock assessment. The TTF addressed their current sampling protocols in hopes of improving the quantitative approach needed to generate a baseline assessment. It is anticipated that the TTF will have a complete draft revision by the end of 2008 and begin final edits in early 2009.

The *Arenarius* TTF met twice in 2008 to work on draft materials. The profile is moving along nicely. Drafting is expected to continue into 2009. The TTF is sharing drafts and materials via a dedicated website setup exclusively for their use through the Commission.

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 LEC participated in a work session in August and revised both the five-year Strategic Plan and worked on the 2009-2010 Operations Plan. Both were approved in October by the full Commission. 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 completed the revisions to the Derelict Trap Guidelines document and it was approved in March 2008 by the Commission. The revision includes the results from the last three years cleanups and a better organization of the individual state information provided in the appendices.

The IJF Program Coordinator participated in the USFWS's annual Morone workshop in support of the GSMFC's Anadromous Subcommittee in March 2008. The IJF Coordinator participated as an invited speaker in the National Academies of Science Committee on the Effectiveness of International and National Measures to Reduce and Prevent Marine Debris and its Impacts this past February. The committee was convened by request of Congress to review the implementation of MARPOL both nationally and internationally. VanderKooy spoke on the issue of derelict fishing gear in the Gulf of Mexico as part of a larger discussion regarding sources of derelict fishing gear world-wide. The presentation focused on the regional approach to derelict blue crab traps and their removal.

The IJF Program Coordinator was invited to participate on the ASMFC's workshop on ageing red drum and Atlantic croaker in advance of the SEDAR for those species. The samplers on the Atlantic are incorporating the techniques outlined in the GSMFC's A Practical Handbook for Determining the Ages of Gulf of Mexico Fishes.

The IJF Program Coordinator continues to develop the species accounts needed to support the FIN Program's Biological Data component in the revision to the handbook. Four new species were added to the FIN target list and include red grouper, gag grouper, vermilion snapper, and grey snapper. The Coordinator obtained samples of these species for x-ray as well as for otolith removal throughout 2008. Otolith removal and processing techniques have been updated by the state representatives and were

provided to the GSMFC for inclusion in the revision which is expected by summer of 2009.

Program administration in 2008 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 the 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; to implement a marine commercial and recreational fishery data collection program; to establish and maintain a commercial and recreational fishery data management system; and to support 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 (Figure 1).

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, Louisiana Department of Wildlife and Fisheries, Mississippi Department of Marine Resources, Puerto

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<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.

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, the South Atlantic continues to participate at the work group level and there is continued participation by staff member from both programs to ensure compatibility and comparability.

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 2008. The major issues discussed during these meetings included:

- Identification and continuation of tasks to be addressed in 2008 and instruction to Administrative and Geographic Subcommittees and the Biological/Environmental, Data Collection, Data Collection Plan, Outreach and ad hoc work groups to either begin or continue work on these tasks;
- Development of the 2009 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 2008;
- 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 2009;
- 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, June and October 2007 to discuss the RDD and Intercept Surveys for the East coast and Gulf Region, sampler performance activities, discussion of angler info brochures, review of wave report fish tables and estimate tables and review of Gulf States For-Hire Telephone Survey;

- Gulf States and GSMFC staff met in March 2008 to review the historical commercial data to ensure these data are accurate and free of errors. In the future, this quality assurance/quality control (QA/QC) meeting will be conducted in conjunction with the GSMFC March meeting;
- Gulf States, NOAA Fisheries and GSMFC staff participated in a training workshop in March 2008 to examine the appropriate techniques and methods for reading gray triggerfish spines and vermilion snapper otoliths;
- The Gulf of Mexico Geographic Subcommittee meeting in March and October 2008 to discuss the status of biological sampling activities, the commercial QA/QC meeting, commercial fishermen, dealer and vessel information, status of license frame pilot survey, status of metadata data entry, trip ticket requirements to facilitate e-reporting, presentation of National Recreational Fishermen Registry; state participation in economics data collection activities, feasibility of using trip ticket systems for the for-hire fishery and various State/Federal Reports;
- The Otolith Processors Training Workshop was held in May 2008 to conduct an otolith readings and comparison exercise for black drum, red drum, spotted seatrout, gray triggerfish, king mackerel, flounders, sheepshead, striped mullet, gray snapper, red snapper and vermilion snapper as well as discuss the red snapper, flounder, king mackerel red drum/spotted seatrout/striped mullet, vermilion snapper, sheepshead, and black drum reference sets, developing reference sets for other species, and status of Otolith Manual Revision;
- The FIN Data Collection Plan Work Group met in May 2008 to review otolith and length data collection activities for 2007 and 2008, to develop targets for biological sampling, and to make recommendations for necessary lengths and otoliths collection for FIN priority species in 2009;
- The State/Federal Fisheries Management Committee met in August 2008 to discuss the finalization of activities for funding for the 2009 FIN cooperative agreement;
- The Social/Economic Work Group met in September 2008 to discuss the inshore shrimp, fishing-related business and marine angler expenditures projects under the Commission's new economic program;
- The Gulf of Mexico commercial port samplers meeting was held in September 2008 to discuss the reproductive staging of fishes, golden tilefish sampling and ageing techniques, TIP issues, hurricane relief efforts for fishing industry, monitoring of non-native species, representative sampling philosophies, law enforcement issues, processed products reports, new data confidentiality provisions as well as a field trip to a fish house in the New Orleans area;
- The Caribbean commercial port samplers meeting was held in October 2008 to discuss reproductive biology of three important baitfishes in Puerto Rico, Puerto Rico's queen conch assessment, highlights of Puerto Rico landings 2007, U.S. Virgin Island commercial catch records, trip interview program sampling, and biostatistical summaries as well as sampling trips to several fishing sites in the Cabo Rojo/Puerto Real and Rincón/Aguadilla areas; and
- 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, and Florida 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 Texas (using TPWD methodology), Louisiana, Mississippi, Alabama, and Florida (east and west coast). The states also conducted weekly telephone calls to a 10% random sample of the Texas, Louisiana, Mississippi, Alabama, and Florida (east and west coast) charter boat captains to obtain estimates of charter boat fishing effort. And the states conduct an economic add-on survey to collect data regarding trip expenditures concerning recreational fishing. In 2000, NMFS adopted this method as the official methodology for estimation of charter boat 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. The at-sea portion of this task provided for the collection of catch and effort data for head boats operating in Alabama and east and west Florida. The effort data was collected via the Telephone For-Hire Survey where the states conducted weekly telephone calls to a 25% random sample of the Alabama and Florida head boat captains to obtain estimates of head boat fishing effort. The catch and bycatch data was collected via at-sea sampling, where the states will conduct an at-sea sampling survey of approximately 10% of the trips made by for-hire vessels, using the protocols established by FIN and tested by Alabama. The port sampling portion is a continuation of an activity from the previous year. The at-sea sampling is a continuation in Alabama and Florida.
- 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 Louisiana, Mississippi (oyster and finfish only) Alabama, and Florida commercial catch effort data, Gulf biological data, Gulf recreational data; and maintenance of DMS. It is the next step for implementing a regional system for FIN.

- Trip Ticket Program Development, Implementation and Operation - This task provided for the development and implementation of a commercial trip ticket system for Texas and Mississippi, an activity under the ComFIN. This task provided for development of components for a commercial trip ticket system to census the commercial fisheries landings in Texas and Mississippi using the data elements and standards developed by the ComFIN. It will ultimately be combined with other commercial fisheries data collected from around the Gulf of Mexico. Full operation of Louisiana, Alabama and Florida trip ticket programs continue and Texas became fully implemented in September 2006. GSMFC entered into a contract with Southwest Computer Bureau (SCBI) to provide installation and maintenance of electronic trip ticket programs for Texas, Louisiana, Mississippi, Alabama and Florida. In Mississippi, the state is currently implementing a trip ticket program. Unfortunately, Mississippi was still unable to get legislation passed that would make it easier to collect data from dealers, but is continuing to implement a program for oyster, bait shrimp and finfish.
- Biological Sampling of Commercial and Recreational Catches - This task provided for the collection of biological data from the recreational and commercial fisheries. These data are essential to accurately assessing the status of commercial and recreational species such as red snapper, king mackerel, Gulf and southern flounder, and greater amberjack. For the commercial aspects, port sampling will be collecting this information based on established guidelines. For the recreational side, samplers will go to sites and collect the necessary biological data using a modified MRFSS

method. This task provides funding for collection, processing and analysis of these data. The GSMFC provided coordination as well as tracking of the collection and analysis portions of this activity. 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 2008 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. 2008. *2009 Operations Plan for Fisheries Information Network (FIN)*. Pub No. 164 Gulf States Marine Fisheries Commission, Ocean Springs. 25 pp + appendix.
- FIN Committee. 2008. *Annual Report of the Fisheries Information Network for the Southeastern United States (FIN) January 1, 2007 - December 31, 2007*. Pub No. 162 Gulf States Marine Fisheries Commission, Ocean Springs. 17 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 [www.st.nmfs.gov/st1/recreational/data.html](http://www.st.nmfs.gov/st1/recreational/data.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**CONOMIC PROGRAM

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

## **Introduction**

The Economic Program was formed in July 2008, as part of an effort to improve economic data collection and management of the recreational and commercial fisheries throughout the Southeast Region. It 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 the local and regional economy. In general, the activities of the economic program are divided into three main components. These components include: economic data collection, economic research and analysis, and economic outreach and extension.

## **Data Collection**

In conjunction with the Fisheries Information Networks' (FIN) Social/Economic Workgroup, the GSMFC coordinates, plans, and conducts specific economic data collection projects throughout its five member states. Economic data collection projects under development in 2008 included: 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 2008. 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 the 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 2008. Cited as one of the most valuable fisheries within United States, the GOM commercial shrimp fishery constitutes fishing pressure from both an offshore fleet, as well as 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 GSMFC, in collaboration with the Louisiana Department of Wildlife and Fisheries, will therefore gather up-to-date data about the economics of commercial shrimping in inshore or state waters across the GOM. These data include information on revenue, operating costs, annual expenditures, employment data, and vessel characteristics of the inshore shrimp fleet. In late 2008, the GSMFC obtained the cooperation and support of the relevant state regulatory agencies and several industry groups in each of the five Gulf States. The information gathered in this project will contribute to more informed decision-making on a variety of commercial fishing issues.

Most fisheries management decisions are made with an abundance of biological data. While these are useful in describing ecological conditions, such as the state of the shrimp stock, they do not describe the condition of the human element, the commercial shrimpers. Existing economic data for commercial shrimping in state waters are often piecemeal, outdated, or not fully relevant. This latest systematic effort to collect data from shrimpers throughout the Gulf will document the current economic health of the shrimp fishery. Having such information in hand will enable fisheries managers, commercial shrimpers, and others who utilize shrimp resources to form unbiased conclusions and will lead to improved fisheries management decisions.

In addition to analyzing the economic performance of the fishery, this study will also estimate the economic impacts of the industry on the local and regional economy using regional input-output impact models for the inshore shrimp fleet. In other words, the number of jobs and revenue generated by the commercial shrimp fishery, in the industry itself and in other portions of the regional economy, will be determined and presented in the final report.

This study will be conducted as a mail survey and will begin in early April 2009. Individual responses will remain confidential. All figures and estimates will be presented as industry totals and averages. The first 600 inshore shrimpers who complete the survey will receive a \$25.00 gift card that can be used anywhere credit cards are accepted. A final report of

the results will be compiled and presented soon after the final analysis is conducted.

### **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 throughout 2008 and is tentatively planned to be conducted in 2010. It will, however, largely follow the approach that the Northwest Fisheries Science Center is currently using for their West Coast community economic survey. The 'West Coast' survey method and approach will be used as the template for the actual survey which will likely be conducted in an on-the-ground interview-type format. Furthermore, planning is currently underway concerning how the GSMFC will proceed with conducting the fishing related business survey. It is likely that the project will focus on commercial dealers and processors for the Gulf. As the survey and sampling frame are developed, the GSMFC plans to work with other states throughout the GOM and use the procedures developed for Louisiana as a guide. The survey is slated to be employed no later than the end of 2010.

### **Marine Angler Recreational Fishery**

A recreational fishery in the marine environment provides not only relaxation for stakeholders, but also 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. 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 will be conducted in order that the economic impacts associated with marine recreational angling can be determined. 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." The initial planning and discussion for the implementation of a marine angler recreational survey took place in 2008.

### **Marine Recreational Use**

Economic impacts from recreation to the local and regional economy also extend from other types of marine recreation besides marine angling. Such economic impacts might include bird watching, kayaking, canoeing, sailing, etc. Determination of the economic impacts that these activities have on the economy is an important aspect of marine recreation that needs additional attention.

The initial planning and discussion for the development of a marine recreational use survey also took place in 2008. The objective of the project is to estimate the economic impacts and use value from marine recreational use activities. The GSMFC, in partnership with NOAA, plans to collect expenditure data that will include access value data, demographics, and attitudinal information. 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. Future activities to be undertaken include the establishment of a workgroup to design information collection; conduction of cognitive interviews using focus groups to develop the methods and types of information to be collected; and pre-testing of questions. This survey is tentatively planned to be conducted in 2011.

### **Research and Analysis**

While economic data from initial collection activities is often presented in a simplistic format, further analysis and research investigations allow for a better understanding of the economic performance and impact of Gulf fisheries. Currently the research and analysis component of the economic program

consists of an impact analysis initiative for Gulf fishing industries and a study of the influence that macroeconomic factors (i.e. fuel prices) has on marine recreational angler effort throughout the Gulf.

### **Fuel Prices and Marine Recreational Angler Effort**

The purpose of this project is to contribute to a greater understanding of the impact that fuel prices have on marine recreational angler effort (i.e. number of trips) and how it relates to the area fished (e.g. state or federal waters) and the mode of fishing (e.g. shore, charter, or for-hire) that anglers are engaged in. 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 in different types of fishing (i.e. modes) or fish in specific areas; as macroeconomic factors change may contribute 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 when recreational fishing effort is likely to increase in the near future. Data and research methods for this project were largely developed throughout late 2008.

### **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 better understand the economic contribution that a fishery has to the local and regional economy 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, initial training and planning was set forth in 2008. The program coordinator participated in a training program at the Minnesota IMPLAN Group Inc. in Stillwater, Minnesota. This training presented the initial background information needed to conduct impact analysis using the proprietary IMPLAN software in the future.

### **Outreach and Extension**

The third component of the economic program is outreach and extension. 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 log on and access fisheries economic data, analysis, and literature, the initial development phase of the Gulf States Fisheries Economic Information Portal was initiated in 2008. The information portal will 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. It is the intention that this meeting will be held on an annual basis during the spring meeting of the Gulf States Marine Fisheries Commission. During 2008, initial planning and development for future meetings was conducted.



# **A** LABAMA MARINE RESOURCES DIVISION

*Vernon Minton, Director*

The Alabama Marine Resources Division (AMRD) is responsible for the management of Alabama's marine fisheries resources through research and enforcement programs. Two division facilities supported an average of 60 employees in the Administrative, Enforcement, and Fisheries Sections during fiscal year 2008.

## **Significant Accomplishments**

The U.S. Department of Commerce appropriations budget for the 2008 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 AMRD 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 AMRD officers.

Enforcement officers conducted 19,904 hours of boat and shore patrol, 13,035 boat checks, 1,829 seafood shop inspections, 27,721 recreational fisherman checks, 10,060 commercial fishermen checks, and issued 1,842 citations and warnings for illegal activities. Sixty percent of the citations and warnings (1,116) were for violations of recreational fishing laws and regulations. The 218 violations of commercial fishing laws and regulations comprised twelve percent of the citations and warnings issued. Officers also issued citations and warnings for 273 violations of boating safety laws and regulations, 117 wildlife and freshwater fisheries, and 118 citations for other state and federal laws and regulations. A total of 14,059 hours were 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.

The ninth 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.

In 2008 children from Baldwin County were given the opportunity to fish in one of CPMC's ponds stocked with red drum. All of the children caught fish, some for the first time in their lives. In addition to fishing, the children were given a tour of the hatchery operations at CPMC.

During 2008, AMRD staff participated in two large outreach events in Alabama 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, both young and old, the opportunity to interact with and learn about marine animals commonly found in Alabama's waters. Literature concerning rules and regulations, calendars, posters, and other important issues was distributed. Children enjoyed the opportunity to color and complete activity books found in our children's art section. The events included the four day Mobile Boat Show and the one day Conservation Bird Festival at Fairhope.

## **Significant Problems and Solutions**

The lack of adequate quantities of high salinity water for rearing marine fishes such as red snapper at the CPMC continued. Hurricane Ivan destroyed the intake structure, pump station, and portions of the pipeline that supplied water to CPMC. This was to be rebuilt with FEMA and insurance monies. However, to date no FEMA or insurance monies have been allocated. A contract was awarded and construction began in November 2007 utilizing MRD funds. After construction setbacks caused by Hurricanes Gustav and Ike, it is estimated that the construction should be completed by Summer 2009.

The issue of permitting of Liquid Natural Gas (LNG) facilities offshore from Alabama remained an issue, particularly regarding the use of "open loop" systems to warm the liquid for transport to market.

## **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.

The 2008 edition of the popular Alabama Marine Information Calendar was produced and distributed. In addition, a calendar depicting conservation related artwork by coastal 4th and 5th 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.

#### **Future Plans**

The Division plans to continue development of the inshore artificial reef system, particularly in Baldwin County, as suitable reef material becomes available. After the new Gulf State Park Pier is completed the remaining "old" pier will be dismantled and the remains will be placed around the new pier to act as an artificial reef, which will enhance fishing on the pier.

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

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

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

#### **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. 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 nineteen enforcement officers in the section, eleven stationed in Mobile County, seven stationed in Baldwin County, and the Chief Enforcement Officer stationed at Dauphin Island headquarters.

#### **Accomplishments**

Enforcement officers conducted 19,904 hours of boat and shore patrol, 13,035 boat checks, 1,829 seafood shop inspections, 27,721 recreational fisherman checks, 10,060 commercial fishermen checks, and issued 1,842 citations and warnings for illegal activities. Sixty percent of the citations and warnings (1,116) were for violations of recreational fishing laws and regulations. The 218 violations of commercial fishing laws and regulations comprised twelve percent of the citations and warnings issued. Officers also issued citations and warnings for 273 violations of boating safety laws and regulations, 117 wildlife and freshwater fisheries, and 118 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, training citizens to recognize and report violations of saltwater fishing laws and regulations. Information from Coastwatch members has assisted with 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, 203 citizens have been trained at 31 training sessions held in Mobile, Baldwin, and Jefferson counties. The response to the program continues to be very positive.

The U.S. Department of Commerce appropriations budget for the 2008 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 AMRD 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 AMRD officers.

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.

A regulation was passed and implemented to allow the prosecution of violations in federal waters in the District Court System in Alabama.

Officers continued to enhance public outreach efforts to better communicate enforcement efforts to provide important information and to foster cooperative management initiatives.

#### **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 implement a 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 efforts, 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 Engineers permits in the coastal area.

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

#### **Accomplishments**

The ninth 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 techniques will be used to enhance the production of shrimp on commercial shrimp farms in west central Alabama.

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 2008.

AMRD continued administration of the Offshore Artificial Reef Program during FY2008. This program allows private reef builders a chance to deploy inspected material in U.S. Army Corps of Engineers permitted offshore areas resulting in the creation of fish habitat. Sixty permits were issued

during the period containing 718 individual reefs. AMRD staff assisted the State Park Division in developing a plan to utilize concrete material from the old Gulf State Park Pier for the creation of artificial reefs adjacent to the new pier. AMRD staff held public meetings in Baldwin County and solicited input through the Department's website before completing an application detailing the plan with the U.S. Army Corps of Engineers. A permit has been issued for this project; demolition and reef construction is expected to proceed in FY2009.

A fall 2007 planting of 10,000 cubic yards was accomplished in Heron Bay. A local contractor received the bid at \$34.87 per cubic yards. The shell was transported to the site and planted using high pressure hoses.

In the spring and early fall of 2008, the Marine Resources Division contracted with a Bayou La Batre firm to acquire 14,000 cubic yards of a combination oyster shell and limestone rock, transport it to site, and load it on to small oyster boats for planting. Expenditure for this product amounted to \$588,000. There was a total of 11,000 cubic yards of this cultch placed at the mouth of Heron Bay and 3,000 cubic yards planted in Mobile Bay over the area known as Single Cedar Reef.

During the year, a total of 1,033 fisheries assessment samples were taken. These data are utilized to afford managers the opportunity to review the populations of lower trophic level species to detect any changes before they reach the recreational and commercial important species. A total of 125 habitat assessments were performed, and 4,412 fishermen were interviewed during creel surveys.

The success of the electronic trip ticket computer program continues to grow. Twenty-eight (28) Alabama seafood dealers actively used this program. These dealers contributed 70% of yearly Alabama landings data to AMRD. 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, AMRD processed and submitted trip ticket data from 21,001 commercial trips reporting 23.5 million pounds of seafood worth \$43.4 million.

During FY2008, AMRD staff participated in two large outreach events; the four day Mobile Boat Show and the one day Conservation Expo/Bird Festival in Fairhope, 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.

AMRD hosted two fishing outreach days at Claude Peteet Mariculture Center. A total of 34 children from Baldwin and Mobile counties were given the opportunity to fish in a pond at CPMC stocked with red drum. 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's coastal waters.

#### **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 2008 edition of the popular Alabama Marine Information Calendar, children's coastal conservation art calendar, production of the new kids coloring book, maintaining equipment and facilities in Gulf Shores and Dauphin Island, managing 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 sampling coastal Alabama fishes to determine stock status. An additional project to coordinate all federal aid programs within the AMRD and coordinate with other Gulf States was also funded from this source.

Fisheries Assessment and Monitoring Program: AMRD continues to collect legacy data through the FAMP program. This program provides a continuous database of fish and invertebrates captured through independent fishery sampling techniques since 1981. This sampling program allows AMRD to monitor trends in fishes and invertebrates abundance which are not associated with commercial or recreational fishermen.

Adult Finfish Sampling Program: Alabama's AMRD

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 is being conducted through the use of two gillnet configurations and a stratified random design. Two hundred thirty-two net sets were conducted, collecting 5,477 finfish representing 5 freshwater and 43 saltwater species. An assessment of the spotted seatrout stocks was submitted to the commissioner and a red drum assessment is currently nearing completion.

Cooperative Statistics: Federal aid funds for this program are administered by the Department of Commerce (NOAA Fisheries) and are utilized by the AMRD to collect fisheries-dependent data on commercial shrimp, oyster, crab and finfish landings. Additionally, information on processed seafood such as crab meat 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 data base on recreationally and commercially important marine and estuarine fishery stocks. This project provides funds to assist in management of the Alabama shrimp fishery and evaluate spawning success and juvenile survival for important recreational and commercial species.

Inshore Roving Creel Survey: The survey uses non-uniform probability roving creel sampling 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 1,030 anglers were interviewed 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. The National Marine Fisheries Service 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.

AMRD 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 2,197 fishermen interviews for FY 2008.

Otolith Sampling Program: Funding for this project is provided through a subgrant from the Gulf States Marine Fisheries Commission. AMRD 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, important information used to determine the health of fish stocks. A total of 1,213 otoliths were collected during the reporting period.

Commercial Trip Ticket Program: Funding for this program is provided through the Gulf States Marine Fisheries Commission (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 are scanned into a computer, verified and edited. Monthly data is sent 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 14,000 yards in shallow areas of Heron Bay and Cedar Point Reef utilizing the small boats of the oystermen.

Emergency Disaster Relief Program: AMRD worked with legislators, the Commissioner of Conservation, and neighboring state agencies to secure through two grants 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 the next five years. Nearly \$2 million has been distributed in fiscal year 2008 to participants in the commercial fisheries through cooperative research and over \$6 million to seafood related industries to assist in recovery of financial

losses.

A total of 10,000 cubic yards of cultch was acquired by the division for local oystermen to plant in Heron 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 7 trips that recorded 16 videos of various artificial reef structures which included: transport cages, concrete triangles and concrete pyramids. Most structures were not affected by storm surge, however some structures experienced wash out around the base of the structure.

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

Biological and enforcement personnel worked together to collect data at oyster checkpoints, enabling the development of sound management measures for sustaining the oyster resources. Data collected assisted in increasing the accuracy of assessment of the status of Alabama oyster stocks.

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”. 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. The Fisheries Section will produce larvae of commercially and recreationally important species for use in experiments by the Dauphin Island Sealab. 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. AMRD 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.

Continue collecting Alabama commercial seafood landings data via Alabama’s Trip Ticket Program and to continue the collection of commercial biological fishery dependent data.

# **F** FLORIDA FISH & WILDLIFE CONSERVATION COMMISSION *Kenneth D. Haddad, 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 2008 [i.e., state fiscal year 2007/2008] are summarized below.

## **MARINE FISHERIES MANAGEMENT & POLICY DEVELOPMENT SECTION**

During state fiscal year 2007/2008, the Florida Fish and Wildlife Conservation Commission (FWC) approved a number of amendments to their marine fisheries rules. New rules were approved that allow recreational blue crab harvesters to use fold-up traps of any shape to harvest blue crabs. New rules were also passed that will help spiny lobster, stone crab, and blue crab fishers recover their traps following major storms, by allowing licensed trap fishers to designate people to recover and possess their traps when the governor and FWC declare an emergency. Also, a rule was passed to allow the use of 16 gauge or thinner staples to secure stone crab trap tie-down lids or the panel on wire stone crab traps, making this rule consistent with regulations for the blue crab fishery. The Commission also approved a rule to modify the legal dimensions for black sea bass traps to allow more flexibility in the size and shape of these traps. The FWC also amended regulations for black sea bass that were intended to make regulations in Florida state waters consistent with the changes to rule for those species implemented by the National Marine Fisheries Service in federally managed waters of the Atlantic Ocean. These changes included increasing the minimum size limit for black sea bass

from 10" to 12" and decreasing the bag limit from 20 to 15-fish per harvester per day. After much deliberation, the FWC passed new rules for red snapper in the Gulf of Mexico. These rules are similar to the recently implemented federal rules for red snapper that were intended to end overfishing. The new rules reduce the daily recreational bag limit for red snapper from four fish to two fish per person and establish a zero daily bag limit for captains and crew of for-hire vessels in all Gulf waters off Florida. No changes were made to the April 15 through Oct. 31 Gulf recreational red snapper harvest season in state waters. Other new FWC rules reduce the minimum size for imported and commercially harvested red snapper in the Gulf from 15 to 13 inches total length, and reduce the daily commercial bag and trip limit for red snapper harvested in Gulf state waters off Florida from four fish to two fish daily per person. Some of the changes to FWC rules regarding red snapper and all reef fish included regulations intended to reduce the release mortality of these fish by requiring de-hooking tools, venting tools, and circle hooks. New rules governing the spiny lobster fishery were passed that prohibit the harvest of egg-bearing lobsters. The spiny lobster rules were updated to allow the display of two spiny lobster endorsement numbers from one vessel, allowing two commercial lobster license holders to fish from the same vessel. This will help new lobster license holders who do not yet own a vessel to work their lobster traps. The amended rules also extend the current moratorium on reducing the number of traps in the lobster fishery until July 1, 2009. This will give the FWC time to work with stakeholders to find ways to limit the number of traps used to harvest lobsters in Florida. These rules were the results of recommendations of the Spiny Lobster Board (SLAB) and FWC staff. The SLAB met over three years and conducted 12 meetings. The SLAB made additional recommendations that will be discussed next year. A striped mullet stock assessment, completed in 2007, indicated that the stocks are exceeding their management goals, so the Commission passed a rule to reopen the weekends to commercial harvest of striped mullet. The FWC rules were also amended to extend the existence of the Stone Crab Advisory Board for an additional year, to work on issues related to the stone crab fishery. Additionally, FWC staff continued work with the Marine Life Workgroup. This workgroup consists of aquarium trade stakeholders as well as

other NGO and government representatives and is working towards managing the marine life harvest in the waters off Florida. Rule amendments will be discussed for this fishery in fiscal year 2008/2009.

New fees for hunting and fishing licenses were passed by the 2007 Legislature and took effect in October. Fishing license fees had not been increased since 1989. Legislators voted to increase the fees because programs such as freshwater hatcheries, law enforcement patrols and saltwater fisheries stock assessments were in danger of losing funding.

The FWC hosted a summit on climate change during this fiscal year in which the Division of Marine Fisheries Management staff highlighted the challenges facing fisheries [and wildlife] managers, governments, industry leaders, and the public in the next 50 years in the struggle of climate change.

Summit presentations and discussion summaries may be viewed at <http://www.ces.fau.edu/floc/agenda.php>.

#### **ARTIFICIAL REEF PROGRAM**

During FY 07/08, \$400,000 from a USFWS Federal Aid in Sport Fish Restoration grant, provided funding for nine artificial reef construction projects at costs ranging from \$27,117.00 to \$114,000 each, and funded year two of a five-county SW FL socioeconomic study looking at use and benefits of artificial reefs (\$30,696.58). An additional \$300,000 in state saltwater fishing license revenues funded the fourth year of a refugia reef research project (University of West Florida, (\$78,714) and three monitoring projects (\$10,399-\$40,000). Ten local coastal governments, one state university, one non-profit artificial reef organization, and the Florida West Coast Inland Navigation District representing five additional SW Florida coastal Counties were issued grants for 2007-08. Nine coastal (five East Coast, four Gulf Coast) Counties completed reef construction projects building reefs using designed concrete reef modules, or secondary use concrete materials. Three monitoring projects consisted of fish censuses, deployment verification and mapping projects. The University of West Florida continued into a fourth year of a study evaluating the performance of a portion of a system of 502 unpublished artificial patch reefs deployed by the FWC during 2003 in 4 expansive permit areas off Northwest Florida. Three different types of pre-fabricated reef units are utilized in this system. A combination of use of a tethered remote operated camera, hook and line sampling and tagging are used in this project.

During January 2008, and again in April 2008 the FWC conducted sampling of legal-size red snapper for PCB analysis in compliance with the EPA PCB disposal permit for the *Oriskany*. Sampling will continue semi-annually in compliance with the EPA mandated sampling to monitor PCB levels in legal-size red snapper, grey triggerfish, red porgy, and vermilion snapper. The PCB fish analysis will be used to verify the pre-deployment risk-based PCB modeling results that concluded the *Oriskany* does not pose a human health threat to fishers eating fish caught on the vessel over a period of years.

Also, during FY 2007-08, FWC and its local sponsors experienced significant financial and contractual set-backs in the reefing of another larger military vessel in Florida, the *USS Hoyt Vandenberg*. The 520 ft. long *USS Hoyt Vandenberg*, a 13,000 ton former missile tracking ship had been a Florida Keys Artificial Reef project on the books for at least 8 years. It is designated to be the third and final large ship placed in the Florida Keys National Marine Sanctuary, in the lower Keys, off Key West. (The Spiegel Grove is in the upper Keys and a coastal freighter, the Adolphus Busch, is in the middle keys). In March 2008 the project contractors notified all parties that an additional \$2.6M will be necessary in order to complete the project (bringing the revised estimated projected total project cost to \$8.29M). In light of the increased budget, the banks denied the contractors' withdrawal of additional funds on the outstanding loans (since the County grants require the project to be completed, on the bottom, and in the permitted area before reimbursement will be processed, the banks were concerned that the project sponsors would not be reimbursed if the project was not completed). During April – December 2008 the Title of the Vandenberg was held by the federal courts while the additional \$2.6M funds necessary to ensure the project's completion were secured from the Florida Legislature (\$1M), and the Florida Governor's Office of Tourism, Trade, and Economic Development (\$1.6M). Following court proceedings, in December 2008, the City of Key West regained title of the vessel. Reefing off Key West is anticipated in spring 2009.

#### **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.



In investigations carried forward from 2006/2007, one wholesale dealer audit investigation resulted in FWC Law Enforcement filing 36 criminal charges against 8 individuals and one joint NOAA/FWC wholesale dealer investigation resulted in a 57-count grand jury indictment against 7 individuals. As of this report, one dealer and one fisherman have pleaded guilty to interstate Lacey Act violations and Conspiracy. The plea agreements of two out-of-state wholesale dealer employees and trial in federal court of the remaining individuals is pending. Two separate wholesale dealer licenses in this case have been revoked. In 2007-2008 FWCC audit and law enforcement personnel assisted NOAA Law Enforcement in serving search warrants on two wholesale dealers resulting in collection of evidence of possible illegal activities on the part of 11 wholesale dealers and 58 fishermen. After being searched by FWC and NOAA LE personnel, one dealer was given a warning by the FWC auditor for keeping inadequate records in return for the dealer's cooperation in an ongoing investigation. And 63 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 inform them of the importance of reporting on time and the penalties for not doing so. Such notification helped improve compliance with the reporting requirements.

Ninety-four informal administrative hearings were conducted for fishers appealing a notice of an administrative penalty assessment or agency action affecting their commercial fishing license(s). Of these 94 hearings, 69 concerned denial of a blue crab effort management endorsement because the appellant either had not met the eligibility criteria or was eligible, but missed the application deadline and 14 addressed administrative penalties and suspension of commercial fishing privileges for convictions of major net violations.

With reference to the trap retrieval/debris removal program, 4673 traps were retrieved in the prior year and eight volunteer organized coastal clean-up projects were authorized to pick up and dispose of trap debris [broken traps, buoys and lines].

The Division's liaison with commercial fishers and saltwater products dealers produced the commercial fishing regulations publication, quarterly newsletters and several 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 49,623 anglers (and 3,252 children) engaged staff and 473,324 stakeholders attended the 12-day Florida State Fair where FWC had a fisheries display. Four Ladies Let's Go Fishing Clinics were held, where 231 women interested in learning more about sport fishing and fishery resources participated in these two-day events. A total of 15 Kids Fishing Clinics were conducted statewide; 3,621 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 167 students and 6 teachers to learn how to use equipment and sampling methods that FWC biologists utilize to collect data for fisheries management. Seventeen teacher workshops were conducted statewide and 318 teachers were instructed in fisheries management practices and proper specimen collecting methods for classroom learning programs. These 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 700 adult anglers and 698 children 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 (*Cynoscion nebulosus*) reproduction and catch and release mortality of tarpon in Tampa Bay were continued, as was an intensive data collection program aimed at fully characterizing the state's snook fishery and several projects examining snook habitat utilization. Life history and fishery characterization studies for hogfish and wahoo were completed, and a study of goliath grouper habitat utilization 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. Studies of calico scallop (*Argopecten gibbus*) population attributes have been completed and data analysis is underway. Evaluation of hard clam (*Mercenaria*) population enhancement strategies continues. Oyster (*Crassostrea virginica*) population assessment and larval dispersal studies are being conducted in southeast Florida and Pensacola Bay. Field studies of the impact of beach nourishment activities on beach denizens (*Donax*, *Ocypode*, *Emerita*) were recently completed and processing of resultant samples continues.

### **CRUSTACEANS**

We completed a five-year collection of population biology data on blue crabs in Tampa Bay, as well as a one-year project to conduct a health assessment of blue crabs in Tampa Bay; data analysis was initiated for both projects. We also worked on a joint grant proposal to age blue crabs throughout the Gulf of Mexico, and contributed to writing a blue crab stock assessment. Identification of horseshoe crab spawning beaches and collection of horseshoe crab spawning times and crab sizes continued. We initiated a three-year project, in conjunction with the FWRI Avian Research group, to assess the importance of horseshoe crab eggs in the diets of migrating red knots and sanderlings during refueling stops on selected Florida beaches. Our long-term stone crab monitoring project to gather biological data on the stocks exploited in this claws-only fishery was ongoing at nine locations along the west Florida coast.

### **FISHERIES GENETICS**

A genetic stock identification study of vermilion snapper from the Gulf of Mexico and South Atlantic was completed. A population genetic survey of pompano from Texas to North Carolina was completed, as was an individual-based movement/migration study of common snook from South Florida. A stock identification study of spiny lobster was continued. With angler assistance, DNA markers are being used to genetically identify individual tarpon in capture-recapture and stock structure studies in Southwest Florida. We continued to examine the distributions of cryptic bonefish species in Florida. We are also continuing to evaluate the Tampa Bay red drum stocking program, with about 2,600 of the 24,000 field-caught red drum processed to date found to be of hatchery origin.

### **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 2007-2008, Florida commercial landings totaled approximately 81.9 million (M) pounds of fish, crab, clams (wild harvest only, excludes aquaculture), lobster, shrimp, and other invertebrates worth over \$176 M in dockside value from 210,707 commercial fishing trips. Marine life landings (live fish and invertebrates for aquaria and other uses) in 2007-08 amounted to 9.8 M individual specimens worth nearly \$3.7 M in dockside value from 5,807 commercial collecting trips. The top ten species in dockside value harvested during 2007-08 in Florida were: Caribbean spiny lobster (\$27.8 M), stone crab (claws: \$24.7 M), red grouper (\$13.8 M), pink shrimp (\$11.2 M), blue crab (including soft-shell crabs; \$9.3 M), white shrimp (\$8.9 M), bait shrimp (\$7.9 M), king mackerel (\$7.3 M), oysters (5.9 M), and gag (\$5.3 M). The total commercial harvest of food shrimp in Florida was 12.9 M pounds (heads on; \$27 M dockside value) in 2007-2008.

## **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 FWC Florida Marine Fisheries Enhancement Initiative continued during 2007-08 to develop the public/private partnerships and promote the funding campaign to establish a network of saltwater hatcheries statewide. HDR Engineering of Springfield, Illinois, is assisting FWC managers in the search and evaluation of suitable locations to establish either full scale or intensive facilities as parcels of land became available. FWC is partnering with Mote Marine Laboratory and Harbor Branch Oceanographic Institution to develop and refine the technology to rear red drum *Sciaenops ocellatus* to phase-III release size in recirculating tank systems for large scale implementation at future fish hatcheries. Future facilities will be known as Marine Enhancement Centers because of their focus not only with fish enhancement, but also with resources directed for habitat restoration and education and outreach for schools and communities. Field monitoring of hatchery-reared red drum released during Project Tampa Bay continued.

A pilot project to develop and evaluate release and sampling strategies for common snook (*Centropomus undecimalis*) in Sarasota Bay and southern Tampa Bay that started in 1996 continued through this reporting period. This project is a partnership between Mote Marine Laboratory (MML) and FWC. FWC Fisheries Stock Enhancement staff assisted MML scientists in releasing juvenile 2,058 hatchery-reared common snook marked with coded wire tags into four creeks into Sarasota Bay. Distribution of fin clip kits to anglers was continued to enhance the returns of hatchery reared red drum from the fishery. To date a total of 6,181 angler-returned fin clips had been processed through the Mote Marine Fin Clip program, with 51 fish returns 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 1,500 calls were received on the marine fish kill hotline (1-800-636-0511) and responded to this year. 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**

For the fiscal year from July 1, 2007 through June 30, 2008, 305 manatee carcasses were documented in Florida. There were 80 watercraft related mortalities during that time period. All but 6 of these carcasses were recovered and necropsied. During this same time period, 84 rescues were performed statewide.

A statewide “synoptic” survey was not flown in 2008, due to warmer than average weather. When water temperatures are higher, manatees are less likely to seek refuge at warm-water sites, making them more difficult to find and count.

During the 2007-08 North Atlantic right whale calving season (December 01, 2007 –March 31, 2008) 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 70 aerial surveys this season. Staff participated in three disentanglement responses during the 2007-08 season. The effort contributed to a total of over 99 individual right whale sightings. In collaboration with Georgia Department of Natural Resources, staff conducted 31 right whale biopsy sampling trips, which resulted in 24 biopsy samples collected. Staff also assisted with the retrieval and necropsy of two dead whales (humpback and fin).

## **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:

- During 2007 - 2008, ISM staff completed the rule making process to amend the Marine Turtle Permit Rule, Chapter 68E-1. This work included public meetings in Tallahassee and Jacksonville.
- ISM staff served on the Marine Turtle Grants Committee. This program awarded approximately \$352,633 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 278 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 five (5) INBS/SNBS 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 two (2) 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 from the Tequesta Field Lab Program also hosted the 2008 Sea Turtle Rehabilitation Workshop at the Crown Plaza in Melbourne Beach, Brevard County, for approximately 100 individuals responsible for the care and treatment of sea turtles in captive facilities. This one-day event included representatives from facilities throughout Florida, the United States, and the Caribbean Islands. Participants observed eight presentations from facility staff members and participated in a roundtable discussion regarding topics such as care of long term, non-releasable animals.
- Staff issued approximately 290 comment letters to the Florida Department of Environmental Protection's (DEP) District Offices, DEP's Bureau of Beaches and Coastal Systems, 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 91 meetings with staff from local governments, other state and federal agencies, and stakeholders and more than 115 conference calls on specific projects and marine turtle conservation issues as well as participating in development of the statewide Habitat Conservation Plan. Staff conducted more than 97 site inspections as part of our environmental commenting responsibilities and participated in approximately 44 lighting inspections at the invitation of local governments and property owners. The program administrator also served as an expert witness in one administrative hearing.
- Staff participated in the design, implementation, and review of monitoring to assess the impacts of permitted activities on marine turtles, their nests and hatchlings.
- Interagency Coordination – FWC staff were 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, 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.

- In Broward County, FWC continued the multiagency effort to assist the County in implementing their approved Light Management Plan. In March, FWC staff met with staff from FWS, FDOT, FP&L, Deerfield Beach, Fort Lauderdale and City of Hollywood to discuss lighting issues and options for minimizing lighting impacts on marine turtle nesting beaches in the county. FWC staff continued to coordinate with local governments, property owners, and FWS on reducing lighting impacts on Broward County beaches through correspondence, training sessions, and nighttime beach inspections.
- 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.
- Storm Recovery Activities - Staff worked closely with the DEP's Bureau of Beaches and Coastal Systems, the Army Corps of Engineers, the U.S. Fish and Wildlife Service, FEMA, local governments, and private citizens to facilitate storm recovery activities while ensuring that state and federal laws for protection of marine turtles were met. Site inspections were conducted in Broward, Collier, Dade, Franklin, Manatee, Palm Beach, Martin, St. Lucie, Indian River, Brevard, St. Johns, Gulf, Bay, and Walton Counties to assess impacts to marine turtle nesting beaches and to coordinate on storm recovery activities.

- Staff conducted five (5) training workshops, "The Official Marine Turtle Exterior Lighting Course and Exam", for lighting designers, local government personnel, turtle volunteers, businesses, and landscape architects. Approximately 101 people participated in the course, which was developed jointly with the USFWS and was hosted by different organizations around the state, including Walton, Sarasota, Palm Beach, Broward, Volusia, and Brevard Counties.
- FWC staff hosted the 2008 Marine Turtle Permit Holder Workshop in Brevard County 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.
- Educational activities for marine turtle conservation included the distribution of brochures to local governments, permit holders, conservation groups, and citizens; distribution of informational booklets; responses to numerous requests for information from interested parties, attendance and participation in coastal-related conferences and forums; participation on committees on marine turtles and their nesting habitat; presentation of slide shows and lectures to groups; updating of the existing web site; and general promotion of the program and its fund-raising activities. Marine turtle program staff has developed sixteen colorful marine turtle decals that depict the marine turtle species that occur in Florida and their marine habitat. Proceeds from the sale of these marine turtle decals, primarily associated with boat registrations and the sea turtle license plate are used to help fund the agency's marine turtle program.
- Grant funding – Staff administered two grants, one from the Sea Turtle License Plate small grants program and one from the U.S. Fish and Wildlife Service, on marine turtle protection and education projects.

#### **MANATEES**

The Imperiled Species Management Section implements many tasks of the Florida Manatee Recovery Plan and the newly approved state Manatee Management Plan. The activities are focused in six program areas:

1. Development and implementation of county-based manatee protection plans (MPPs).
2. Promulgation of boat speed regulations to protect manatees.
3. Review of permitted activities to minimize negative impacts to manatees.
4. Various directed efforts to protect manatee habitat, particularly warm water refuges and seagrasses.
5. Outreach activities to provide current information to the public and promote conservation stewardship.
6. Stakeholder engagement to encourage participation and partnerships.

For more details on the manatee program, go to [http://research.myfwc.com/features/view\\_article.asp?id=31532](http://research.myfwc.com/features/view_article.asp?id=31532) For the Save the Manatee Trust Fund Annual Report to the Legislature.

### Highlights

In December 2007, FWC Commissioners voted to approve the first state Manatee Management Plan (Plan). A FWC team developed the Plan over the course of 18 months and received extensive stakeholder and public review. At the December 2007 Commission meeting, representatives from fishing groups, marine industries, and conservation groups all supported the Plan and recommended approval; the Plan was unanimously approved by the Commission. At the same meeting, the Commission decided not to reclassify the manatee as threatened as had been proposed by a scientific review panel. This was, in part, based on concerns expressed by the public, scientists, and some environmental groups, that the Commission's listing rule was inadequate. Instead, the Commissioners elected to maintain the manatee's classification as endangered and directed staff to reexamine the process used to classify imperiled species and report back with options for possible changes.

Broward and Palm Beach counties both finalized their MPPs and gained state approval in 2007. This involved extensive coordination with USFWS during the review and approval process.

Staff initiated discussions and attended meetings with Collier and Duval counties related to future MPP revisions in those county plans.

In March 2008, ISM staff held the annual coordination meeting of the 13 MPP counties. Volusia County hosted the annual meeting in Deland. The meeting included discussions of new information relevant to these counties and provided opportunities

for them to share strategies and provide feedback to FWC on local efforts to implement MPPs. The implementation of the newly-approved Manatee Management Plan was discussed, particularly regarding how the counties may be affected.

Staff reviewed a total of 808 projects during the fiscal year and offered recommendations to reduce or eliminate potential adverse impacts to manatee from the proposed activities.

Throughout the year, ISM staff worked extensively with the USFWS and the U.S. Army Corps of Engineers (USACOE) to revise the federal consultation process for assessing potential manatee impacts of projects (also referred to as the "Manatee Key").

In June 2007, the City of Jacksonville adopted a city ordinance to conform its local manatee protection zones to the FWC zones as amended in January 2007. The FWC formally approved the ordinance in July 2007.

Review of the Sarasota County rule (68C-22.026, FAC) is identified for action in the Manatee Management Plan. Staff assessed and acquired the needed data for this task. Internal FWC review of the existing protection zones will begin in the latter half of 2008.

A new outreach program called Wild Treasures of Brevard County debuted this year to target patrons (county residents and visitors) who use the libraries in Brevard County, Florida. The county has 17 libraries. The focus for the series is to provide educational materials, presentations or displays on the various imperiled species found in the county, with the emphasis on species awareness, habitat conservation and what people can do to help. Manatees were the first species covered and educational materials and programs were provided.

FWC staff coordinated with the USACOE, the South Florida Water Management District (SFWMD) and the Southwest Florida Water Management District (SWFWMD) to address central and south Florida structure-related manatee mortality issues through the Interagency Task Force for Water Control Structures. Structure-related manatee mortality has long been identified as the second leading cause of human-related manatee mortality. Since 1991, the ongoing efforts of the Task Force have led the USACOE and SFWMD to retrofit water control structures and revise their operational protocols. These efforts are having a significant influence on reducing structure-

caused mortality at retrofitted structures. A total of 187 manatees have died as a result of interactions with the numerous water control structures located on the state's waterways. The annual average structure related deaths pre-retrofitting has decreased from 6.5 manatees per year (1974-1999) to a post retrofitting of 3.75 manatees per year (2000 to 2007). Provided that there is continued funding, the few remaining water control structures requiring manatee protection should be retrofitted with proven technology over the course of the next three years.

Addressing the long-term future of warm-water habitat is a major focus of long term manatee conservation. Many tasks related to this issue have been initiated including:

1) meeting with the power companies that produce warm-water discharges used by manatees as warm-water habitat; FWC plans to partner with the industry and others to work on solutions to the potential loss of these warm-water sites;

2) working with the WMDs in the development of Minimum Flows and Levels (MFLs) for spring systems that provide warm-water habitat for manatees (MFLs for Volusia Blue Spring, Manatee and Fanning springs, and the Weeki Wachee Spring system have all been developed using criteria to protect winter warm-water manatee use);

3) updating existing contingency plans to address the unplanned loss of recognized warm-water refuges during the winter months. FWC has also continued to co-chair the Warm-Water Task Force (WWTF) with UFSWS during the past year.

FWC continued to work with USFWS toward the goals set by the former Recovery Team's Habitat Working Group and participate in a broad range of manatee habitat issues with various partners. These issues include: defining warm water and foraging habitat carrying capacity, assessing effects of reduced spring flow and loss of thermal refuges, and monitoring changes in foraging areas. One focused effort, related to habitat, included applying a habitat assessment tool or "checklist" for identified natural and artificial warm water refuges throughout the state.

**Florida Department of Agriculture and Consumer Services**

*Charles Bronson, Commissioner*

**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 aquacultural 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 aquacultural 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 2007/2008, 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 aquacultural 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 2007/2008.

**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 984 aquaculture facilities during FY 2007/2008. Shellfish producers (448 farmers) make up 45% of the certified farms, 237 ornamental producers make up 23% of the certified farms, 185 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 550 aquaculture leases containing about 1,190 acres and 73 shellfish leases containing about 1,270 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 aquacultural 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 2007/2008, the Division collected 142,680 bushels of processed oyster shell from processors located primarily in Franklin County, and purchased 9,250 tons of fossil shell from a local quarry. Shell planting operations accounted for the deposition of 4,950 cubic yards of processed oyster shell and 3,000 cubic yards of fossil shell on public oyster reefs in Santa Rosa, Walton, Bay and Franklin 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 245,337 bushels of live oysters were re-planted on public reefs in Franklin, Wakulla, Dixie, and Levy Counties.

#### Restoring Public Oyster Reefs

In 2008, the Department completed a \$1.7 million NOAA grant to restore oyster resources on Florida's Gulf Coast in response to impacts from the passage of Hurricane Ivan. Approximately 10,368 cubic yards of fossil shell and processed oyster shell were deposited to restore 42 acres of oyster reef habitat in Escambia Bay, East Bay (Santa Rosa Co.), Choctawhatchee Bay, West Bay, North Bay, and East Bay (Bay Co.).

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 2007/2008, the Division continued to be actively engaged in restoring oyster reef habitat on numerous sites identified in the EDRP oyster restoration plan. Shell planting operations accounted for the deposition of 4,950 cubic yards of processed oyster shell in Apalachicola Bay.

#### Apalachicola Bay Oyster Harvesting License

An oyster harvesting license is required to harvest oysters from Apalachicola Bay. In 2008, 1,142 oyster harvesting licenses were sold, representing a 25% increase from the number of licenses (916) sold in the preceding year. The number of harvesting licenses sold in 2008 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 aquacultural 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 38 shellfish harvesting areas totaling 1,445,833 acres are currently classified and managed statewide. During FY 2007/2008, 722 sampling excursions were conducted to collect and analyze 13,185 water samples for fecal coliform bacteria. There were 344 management actions to close or re-open shellfish harvesting areas in accordance with the management plans for individual shellfish harvesting areas. During FY 2007/2008, a total of 100 Shellfish Processing Plant Certification Licenses were issued and 415 regulatory processing plant inspections were conducted. Based on inspection results, 53 warning letters and 5 settlement agreements were issued.

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

## **OFFICE OF FISHERIES**

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 the various programs within the Marine Fisheries Division. The programs are: 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 fishery independent trawl sampling throughout coastal Louisiana. Data from these samples were used to set season frameworks for both the fall and spring inshore and the winter offshore shrimp seasons. Additionally, these data were used to recommend season extensions and special seasons.

### Shrimp

The Marine Fisheries Division has continued the administration of a \$148,298 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 rational

management decisions. Technical, biological, and hydrological data gathered from the monitoring program were utilized in establishing seasonal frameworks within the shrimp and oyster fisheries, predicting annual gulf menhaden (*Brevoortia patronus*) abundance and providing data for the management of 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 among Louisiana coastal areas, the Department has managed the shrimp fishery in inside waters utilizing 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 generated from biological sampling conducted by LDWF, the following management practices were implemented during the report period: Sample data were used to set the opening and closing dates of the 2008 Spring inshore shrimp season, set opening and closing dates of the 2008 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 percent of the inshore population of brown shrimp sampled within each zone will be at sizes of 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 made for the opening and closing dates of state offshore territorial waters are based upon the number and size of overwintering white shrimp sampled in outside waters.

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

#### *2008 - Spring Inshore Shrimp Season*

- Opened at twelve noon on June 2, 2008 including the open waters of Breton and Chandeleur Sounds as described by the “double-rig line” (LA R.S.56:495.1).
- Closed July 1, 2008 at 6:00 p.m. except for those portions of Zone I including Lake Pontchartrain, Rigoletes 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, the Mississippi River Gulf Outlet (MRGO) beginning at its juncture with the Industrial Canal, 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 seconds west; thence southeasterly to a point at latitude 30 degrees 03 minutes 12 seconds north and longitude 89 degrees 21 minutes 30 seconds west; thence northeasterly to the most easterly 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 July 12, 2008 at 6:00 p.m. in the remaining portion of Zone 1 except for 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 seconds west; thence southeasterly to a point at latitude 30 degrees 03 minutes 12 seconds north and longitude 89 degrees 21 minutes 30 seconds west; thence northeasterly to the most easterly 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”.

#### *2008- Fall Inshore Shrimp Season*

- Opened at noon on Monday, Aug. 11, 2008.
- Closed at official sunset December 16, 2008 except for that portion of Shrimp Management Zone I extending north of the south shore of the Mississippi River Gulf Outlet, including Lake Pontchartrain and Lake Borgne and the open waters of Breton and Chandeleur Sounds as described by the “double-rig line”.

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

#### *2008 - Spring Inshore Shrimp Season*

- Opened at twelve noon on May 12, 2008.
- That portion of Zone II extending from the Atchafalaya River Ship Channel at Eugene Island as delineated by the Channel red buoy line to the western shore of Bayou Lafourche closed at 6:00 p.m. June 24, 2008.
- The remaining portions of Zone II extending from the Atchafalaya River Ship Channel at Eugene Island as delineated by the Channel red

buoy line to the western shore of Vermilion Bay and Southwest Pass at Marsh Island and those waters from the western shore of Bayou Lafourche to the eastern shore of South Pass of the Mississippi River closed at 6:00 p.m. on June 30, 2008.

#### *2008 - Fall Inshore Shrimp Season*

- Opened at noon on Monday, Aug. 11, 2008.
- Closed at official sunset December 16, 2008.

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

#### *2008 - Spring Inshore Shrimp Season*

- Opened at twelve noon on June 2, 2008.
- Closed at 6:00 a.m. on July 1, 2008 except for the Calcasieu Ship Channel originating at a line between Channel Markers 85 and 86 thence southward to a point originating along the inside/outside shrimp line at Calcasieu Pass as described in LA R.S.56:495(A) and including East Pass from its origin at the Calcasieu Ship Channel to the south end of Calcasieu Lake and West Pass from its origin at the Calcasieu Ship Channel to the south end of West Cove.

#### *2008 - Fall Inshore Shrimp Season*

- Opened at noon on Monday, Aug. 11, 2008
- Closed at official sunset December 16, 2008

#### Offshore Shrimp Season

In late 2007, that portion of the State's Territorial Sea extending south of the inside/outside shrimp line from the eastern shore of the Atchafalaya River Ship Channel as delineated by the Channel red buoy line to the northwest shore of Caillou Boca at 29 degrees 03 minutes 10 seconds north latitude and 90 degrees 50 minutes 27 seconds west longitude closed to shrimping at 6:00 a.m. on December 18, 2007.

A portion of these outside waters extending from the Atchafalaya River Ship Channel at Eugene Island as delineated by the 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 was re-opened to shrimping at noon on April 15, 2008. That portion of the State's Territorial Sea extending south of the inside/outside shrimp line from the western shore of Freshwater Bayou Canal at 90 degrees 18 minutes 33seconds west longitude to the eastern shore of the Atchafalaya River Ship Channel as delineated by the Channel red buoy line re-opened to shrimping at noon on May 12, 2008.

In late 2008, that portion of the State's Territorial Sea extending south of the inside/outside shrimp line from the eastern shore of the Atchafalaya River Ship Channel as delineated by the Channel red buoy line to the northwest shore of Caillou Boca at 29 degrees 03 minutes 10 seconds north latitude and 90 degrees 50 minutes 27 seconds west longitude closed to shrimping at official sunset on December 16, 2008.

#### Landings and Value

Shrimp are this state's most valuable commercial fishery and Louisiana continues to lead the nation in shrimp landings. Preliminary Louisiana shrimp landings in 2008 totaled approximately 90.2 million pounds (all species combined/heads-on weight) and accounted for \$133.5 million in dockside sales. Overall, shrimp landings in 2008 declined approximately 23.2 million pounds from the previous year. Brown shrimp landings have continued to decline, measuring 25.7 million pounds and remaining approximately 25.3 million pounds below the long-term mean (1976-2008). White shrimp landings measured 63.3 million pounds and declined approximately 3.5 million pounds from the previous year yet exceeded the long-term mean by almost 14 million pounds. For the sixth consecutive year, white shrimp landings have exceeded the long-term mean. Brown shrimp landings in 2008 were greatest during June followed by May and July while monthly white shrimp landings peaked in November followed by October. Landings during September were approximately 52% below those reported in September 2007, due to Hurricane Gustav and Ike impacts. Seabob landings were highest during October and November.

#### Crabs

Preliminary Louisiana commercial blue crab landings for 2008 totaled approximately 40.6 million pounds with a dockside value of approximately \$32.1 million. This represented a 10% decrease from 2007 landings of approximately 44.9 million pounds and a 6% decrease in dockside value. Stone crab landings for 2008 were 2,384 pounds. Stone crab landings, although relatively low in comparison with other shellfish fisheries, also decreased approximately 43% from 2007 landings of 4,247 pounds. 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. Variations in annual stone crab landings are primarily due to salinity levels with higher abundance associated with dry years. Low prices associated with increased foreign imports of crabmeat remain a major issue in the fishery.

The major Division activity related to blue crabs in 2007-08 was the removal of derelict crab traps from coastal waters under the Abandoned Crab Trap Removal Program. Legislation introduced by the Department in 2003 gave the Commission the authority to establish a derelict crab trap removal program. Funding for the 2008 crab trap clean up came from increases in recreational and commercial crab trap gear license fees statutorily dedicated to support the abandoned crab trap removal program.

The following portion of Terrebonne Parish was closed to the use of crab traps over a 10-day period extending from 6:00 a.m. on February 23, 2008 through 6:00 a.m. March 3, 2008:

From a point originating along the western shoreline of Cut Off Canal at its intersection with Grand Bayou, thence southward along the western shoreline of Cut Off Canal to its intersection with the boundary of the Pointe au Chenes Wildlife Management Area, thence west along the southern boundary of the Pointe au Chenes Wildlife Management Area to the Humble Canal, thence west along the northern shoreline of Humble Canal to its intersection with Bayou Terrebonne, thence south along the western shoreline of Bayou Terrebonne to its intersection with Bush Canal, thence west along the northern shoreline of Bush Canal to its intersection with Bayou Little Caillou, thence south along the western shoreline of Bayou Little Caillou to 29 degrees 17 minutes 00 seconds north latitude, thence east along 29 degrees 17 minutes 00 seconds north latitude to the eastern shoreline of Bayou Pointe au Chenes, thence north along the eastern shoreline of Bayou Pointe au Chenes to the eastern shoreline of Cut Off Canal, thence north along the eastern shoreline of Cut Off Canal to its intersection with the southern shoreline of Grand Bayou, thence west across Cut Off Canal and terminating at the point of origin at the western shoreline of Cut Off Canal at its intersection with Grand Bayou.

A total of 1,234 derelict crab traps were collected during the 2008 clean up. There were three volunteer boats participating.

A total of 17,184 derelict crab traps have been removed from Louisiana coastal waters during the first five years of crab trap cleanups (Table 1). Volunteer effort was 191+ boat-days; not included is

effort by Louisiana Department of Wildlife and Fisheries (LDWF).

**Table 1.** Louisiana derelict trap effort from 2004-2008.

YEAR	TRAPS	BOAT-DAYS*
2004	6,894	90+
2005	4,623	51+
2006	2,935	31
2007	1,498	14
2008	1,234	3
2004-2008	17,184	191+

\*Public Volunteers Only

The 2009 derelict crab trap removal program will deviate from the 2004 through 2008 format, which were volunteer-based and associated with crab trap closures for fishermen within a defined geographical area and closure period as determined by the Wildlife and Fisheries Commission. Crab traps remaining in the closure area during the closure period were considered abandoned and could be retrieved by anyone.

The Louisiana Crab Task Force has continued to meet and address issues that confront 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 continues discussions on a variety of topics such as fisheries disaster relief, crab bait availability, impacts of crabmeat imports, and legislation impacting the crab industry. The Crab Task Force has also been planning an education day for state legislators.

Special Bait Dealer Permit Program

A total of 38 special bait dealer permits were issued to licensed wholesale/retail seafood dealers for the sale of live bait shrimp during 2008. This report summarizes only those data collected on submitted catch reports. According to permit catch reports, a total of 1,368,806 live shrimp (*Farfantepenaeus aztecus* and *Litopenaeus setiferis*) and 387,217 Atlantic croaker (*Micropogonias undulatus*) were harvested by dealers during the permit period. The number of live shrimp harvested during the 2008 permit period represents a 9% increase from levels reported last year. The number of trips taken fell slightly below those reported during the 2007 permit

period. In 2008, dealers reported a total of 727 trips taken during the permit period and sales of approximately 1,391 pounds of market shrimp.

St. Bernard Parish dealers led all dealers in the number of live shrimp harvested but were closely followed by dealers in Jefferson and Plaquemines Parish. Ranked in descending order, live shrimp harvests were next highest in St. Tammany, Terrebonne, Orleans, Lafourche and Cameron Parish. Dealers in Jefferson Parish led all in the number of trips taken (195) as well as in the number of croaker harvested (291,344).

Although the number of permits issued in 2008 was four fewer than in 2007, changes to special bait dealer regulations ratified in 2007 may have accounted for the increased number of shrimp harvested. According to provisions in LAC:VII.329, the special bait dealer program now allows for the harvest of croaker and the optional use of certain size skimmer nets to harvest live shrimp and croaker.

Assuming retail values of 25¢ for live shrimp and 30¢ for live croaker, the total estimated dockside value of live shrimp and croaker marketed by permitted bait dealers during the permit period was approximately \$342,201 and \$116,165 respectively. Retail sales of dead shrimp marketed by permit holders during the permit period contributed an additional \$2,782.

## **MOLLUSC PROGRAM**

The Mollusc Program manages the oyster resource on nearly 1.7 million acres of public oyster seed reservations, public seed grounds, public oyster areas, and public tonging areas. Seed grounds are designated by the Wildlife and Fisheries Commission and include a large continuous area east of the Mississippi River, and another in the Vermilion/Cote Blanche/Atchafalaya Bay system. Seed reservations, public oyster areas, and tonging areas are designated by the legislature. The Department 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 bio-monitors 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, affect estuarine current patterns, and help provide shoreline

stabilization. Because oysters are both economically and ecologically important, wise management of the public oyster resource is critically important to ensure that this valuable species continues to thrive in Louisiana's coastal areas. The importance of the oyster resource to Louisiana's economy is evident as Louisiana commercial oyster landings of over 12.8 million pounds had a dockside value of nearly \$38.9 million in 2008 (preliminary LDWF data). This dockside value grows nearly ten-fold within Louisiana's economy as it is expected to yield over \$300 million in total economic impact to the state.

### Oyster Seasons

Statutory provisions mandate that the Department open the oyster season on Louisiana public oyster areas on the first Wednesday following Labor Day and close these areas no later than April 1 of each year. However, the Louisiana Wildlife and Fisheries Commission are authorized to extend the season beyond April 1 provided sufficient stocks are available for harvest. The Secretary of the LDWF 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. In addition, a legislative change in 2008 restricted harvest of oysters on the public oyster seed grounds to the taking of seed oysters only between the openings in September to the second Monday in October.

Management of the public oyster areas 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 150 square-meter samples are collected each July and over 600 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 the Department. 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. 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%-80% of annual Louisiana oyster landings, and in 2008 approximately 53% of all oysters harvested in Louisiana came from private leases. Although the majority of oyster landings in recent years have come from private leases, the public oyster grounds continue to significantly contribute to annual oyster landings as landings in 2008 measured 6.02 million pounds of oyster meat (preliminary LDWF data). In addition, much of the oyster production from private leases is dependent upon small seed oysters (less than 3”) transplanted from the public grounds to the leases for grow-out purposes.

Seed grounds and reservations are managed with the goal of providing seed oysters for transplant onto private oyster leases. However, two “Sacking Only Areas” exists east of the Mississippi River exclusively for harvest of sack-sized oysters: 1) in portions of Lake Fortuna and Lake Machias in St. Bernard Parish, and 2) portions of Bay Long in Plaquemines Parish. Harvest from Calcasieu Lake is typically for sack-sized oysters as well since no private oyster leases exist nearby and due to the 15-sack per day limit. Sabine Lake harvest would likely mirror Calcasieu Lake, but poor water quality prohibits oyster harvest in Sabine Lake.

The state Department of Health and Hospitals is, however, in the process of re-evaluating water quality in Sabine Lake and preliminary indications are that water quality may have improved enough to allow limited harvest from the lake. LDWF recently completed and exhaustive water bottom and oyster assessment in the southern portion of Sabine Lake and confirmed harvestable quantities of oysters do exist. Oyster harvesters use mechanical dredges on public grounds and reservations, and hand dredges in the Calcasieu Lake Public Oyster Area.

The 2008/2009 oyster season on public oyster areas east of the Mississippi River, the Barataria Bay system, and the Vermilion Bay system was initially opened on September 3 for the taking of seed oysters only. The 2008/2009 oyster season on the public oyster areas are further described below in Table 2.

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 these assessments are reviewed and the impacts are calculated, the project can either be modified to reduce possible impacts or allowed to be permitted as proposed. In 2008, 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.

**Table 2.** Oyster season framework on the public oyster areas of Louisiana.

<b>Public Oyster Area</b>	<b>Opened</b>	<b>Closed</b>
Primary Public Oyster Seed Grounds East of MS River (including Lake Borgne and Bay Gardene)	September 3, 2008 October 13, 2008	October 6, 2008
Hackberry Bay Public Oyster Seed Reservation	September 3, 2008	
Little Lake Public Oyster Seed Grounds	September 3, 2008	
Lake Chien Public Oyster Seed Grounds	October 29, 2008	October 31, 2008
Lake Felicity Public Oyster Seed Grounds	October 29, 2008	October 31, 2008
Sister Lake Public Oyster Seed Reservation	September 3, 2008 October 13, 2008	September 10, 2008 October 24, 2008
Atchafalaya/Vermilion Public Oyster Seed Grounds	September 3, 2008	
Calcasieu Lake Public Oyster Area	October 15, 2008	

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 utilize 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. It is anticipated that the successful bidder will begin to rehabilitate this area in May 2009.

#### Oyster Leasing

The moratorium on the issuance of new oyster leases, at the request of Louisiana Department of Natural Resources (LDNR), remained in effect throughout 2008. The moratorium was requested in 2002 in order to reduce the state's liability related to coastal restoration efforts. This moratorium does not affect lease renewals and 680 renewal applications were processed.

The Oyster Lease Survey Section is in the UNO Advanced Technology Center located at 2021 Lakeshore Drive, Suite 400, New Orleans, LA, and continues to maintain a website, which provides information to the public about oyster leasing in Louisiana. This website contains a searchable Geographic Information System (GIS) database of current leases, historical lease statistics, and recent news articles about oysters. The website has had thousands of visits since it was developed and placed on the internet in March of 1998 and is available at: <http://oysterweb.wlf.louisiana.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. 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 Marine Fisheries Division fishery dependent monitoring program collects information from fishers, processors and observers based on methods developed by NMFS for similar programs.

#### 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. The gill nets are set in a crescent shape, open towards the shoreline and then circled several times by the sampling boat, driving 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 readings (conductivity, salinity, and water temperature) 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 the 2008 sampling year Marine Fisheries field personnel collected 2,058 seines, gill, and trammel net samples combined, to obtain a 98.8 percent success rate.

#### Dependent Monitoring

The value of commercial landings in Louisiana exceeded \$278 million in 2008, a \$12 million decrease from the 2007 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 200,528 commercial fishing trips reported in 2008 producing nearly 0.9 billion pounds of seafood.

Beginning in May 2000, an electronic trip ticket program was developed and made available to dealers. To date, roughly 150 dealers utilize the computerized program and submit their trip ticket data to the Department electronically. 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. The MRFSS survey in Louisiana reported over 4.4 million marine recreational fishing trips taken by approximately 1.1 million anglers who caught approximately 19.3 million spotted sea trout and 6.2 million red drum in Louisiana waters in 2008.

#### Finfish Stock Assessments

Division personnel updated stock assessments for black drum, striped mullet, southern flounder and sheepshead in 2008. These assessments use 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. 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 black drum, sheepshead, southern flounder, and striped mullet.

Black Drum - The result of YPR analysis indicate that if  $M=0.1$  (the most conservative value within the range of estimates), the fishery prior to existing regulations (Act 1316) was operating above  $F_{0.1}$  and below  $F_{MAX}$  with yield of 92% of maximum, and SPR at 44%. An  $M$  of 0.15 or 0.2 would indicate a more lightly fished stock with yield being 66% to 45% of maximum and with SPR being 57% to 66% respectively.

Southern Flounder - The result of YPR analysis based on disappearance rate calculations indicate that for the years assessed (2002-2006) if  $M=0.5$  (the most conservative value within the range of estimates), the fishery was operating between  $F_{0.1}$  and  $F_{MAX}$ , with yields of 97% to 100% of maximum and SPR at 23% to 26%. An  $M$  of 0.8 (the highest value within the range examined) would produce yields of 76% to 83% of maximum with SPR at 42% to 47%.

Striped Mullet - The result of YPR analysis indicate that if  $M=0.3$  (the most conservative value within the range of estimates), the fishery the current was operating above  $F_{0.1}$  and near  $F_{MAX}$  with yield near 99% of maximum, and SPR near 35%. An  $M$  of 0.6 would indicate a more lightly fished stock with the fishery operating below  $F_{0.1}$ , with yield being 75% of maximum and with SPR being near 69%.

Sheepshead - The result of YPR analysis indicate that if  $M=0.2$  (the most conservative value within the range of estimates), the fishery in the years assessed (1999 – 2006) was operating near or below  $F_{0.1}$  and well below  $F_{MAX}$ , with yield of 69% to 77% of maximum, and SPR at 51% to 59%. An  $M$  of 0.3 (the highest value examined) would indicate a more lightly fished stock with yield being 35% to 44% of maximum and with SPR being 72% to 78%.

#### Finfish Management Actions

January 2008

- Secretary provided with authority to close commercial seasons of reef fishes if quota for species group is filled in Federal waters.
- Set recreational seasons for gag, red and black grouper to close at 12:01 a.m. on Feb. 15, 2008, and remain closed until 12:01 a.m. on March 15.
- Set recreational trip limits on grouper to be 5 per person per day, but not to exceed 1 speckled hind or 1 warsaw grouper per vessel per day or 1 red

grouper per person per day. Neither the captain nor crew of a charter vessel is allowed to retain grouper.

- Set 2008 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 first season remains closed until July 1.

#### February 2008

- Present 2008 stock assessments for striped mullet, black drum, southern flounder, and sheepshead.
- Minimum size for vermilion snapper reduced from 11 inches TL to 10 inches TL, commercial closed season eliminated, restriction of 10 vermilion snapper within 20 fish aggregate bag limit removed (aggregate bag limit remains in effect).
- Minimum size for red snapper harvested commercially reduced to 13 inches TL.

#### March 2008

- Minimum size for red snapper harvested commercially reduced to 13 inches TL.

#### May 2008

- Commercial fishery for deepwater grouper and tilefish closed on the 10<sup>th</sup> at 12:01 a.m.

#### June 2008

- Recreational red snapper season opens.
- Commercial large coastal shark season remains closed until rules established for Federal waters under Amendment 2 of the HMS FMP.

#### July 2008

- Commercial season for king mackerel opens on the 1<sup>st</sup> at 12:01 a.m.

#### August 2008

- Minimum size for gray triggerfish increased from 12 inches total length to 14 inches fork length for both recreational and commercial harvesters.
- Minimum size for greater amberjack increased from 28 inches fork length to 30 inches fork length for recreational harvesters.

- Creel limit for captain and crew members of charter vessels for greater amberjack, red snapper or grouper of any species set to zero.
- Recreational red snapper season closes on the 5<sup>th</sup> at 12:01 a.m.
- Commercial large coastal shark rules modified, state waters re-open on the 11<sup>th</sup> at 12:01 a.m.

#### October 2008

- Regulations for large coastal shark fishery modified to clarify trip and daily take limits.

#### November 2008

- Commercial deepwater grouper and tilefish fisheries re-open November 1 to November 10 at 12:01 a.m.

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 Gulf States Marine Fisheries Commission (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

The Louisiana Artificial Reef Program (LARP) was founded in 1986 through the cooperative efforts of the LSU Coastal Fisheries Institute (LSU CFI) and the Louisiana Department of Wildlife and Fisheries (LDWF). Resultant legislation called for the development of a State Artificial Reef Plan and provided for an Artificial Reef Program in Louisiana (LARP). Act 100 of the 1986 Legislature established that LDWF would operate the Program with logistical support from LSU CFI. In the fall of 1986, the Louisiana Artificial Reef Plan produced by LSU CFI and LDWF was accepted by the Louisiana Legislature. The plan outlined the siting, permitting

and implementation of the program.

The LARP was established to provide guidance for artificial reef development in both state and federal waters. One intent of the plan; was to prevent haphazard construction of artificial reefs – all Louisiana artificial reefs should be developed consistent with this plan. A major focus has been to use obsolete oil and gas platforms to provide habitat for Louisiana's coastal fishes and fishing opportunities for recreational and commercial harvesters, and to provide deep-water sanctuaries for important marine fish. Federal law and international treaty require oil exploration companies to remove these platforms one year after production ceases. The LARP has provided an opportunity for oil companies to contribute to maintenance of fisheries habitat. Since its inception, sixty-one oil and gas related companies have participated in the offshore program and donated the jackets of 190 oil and gas structures. Forty-two obsolete oil & gas structures were accepted into the offshore artificial reef program during the 2008 calendar year. Previously deployed offshore reef material includes forty (40) Armored Personnel Carriers (APC's) 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 ft, the structure establishing the reef must maintain sufficient profile in the water column to be accepted into the LARP. The platforms undergo a non-explosive partial removal process which preserves the established biological communities with minimal disturbance, maintains fishing opportunities, and saves money on the decommissioning of the platform.

The LARP also manages a Special Artificial Reef Sites (SARS) program specifically aimed at establishing artificial reefs under unusual and/or exceptional circumstances, including occurrences such as natural and man-made catastrophes outside the LARP's nine artificial reef planning areas. The oil and gas industry in the Gulf of Mexico continues to recover from the devastation of the 2005 hurricane season and is currently faced with recovering from hurricanes Gustav and Ike in 2008. Sixty (60) structures were destroyed and another 124 were moderately to extensively damaged, by the 2008 storms. The offshore petroleum production industry has sought alternatives in cleanup activities to reduce the cost of removal and have petitioned the LARP to accept structures at the location they were destroyed. The LARP attempts to minimize negative impacts of removing these structures such as the need for

additional explosives for cutting and clearing of the site, while maintaining and enhancing fisheries habitat. The evaluation of the proposals from SARS projects related to the 2005 hurricanes has been completed. October 9, 2008 the Louisiana Artificial Reef Council (ARC) placed a moratorium on future SARS proposals while the LARP evaluates the current SARS process. The ARC and LARP are currently soliciting comments on proposed changes to the current SARS amendment and evaluation process through April 30, 2009.

In addition, the reef program has developed twenty-two inshore reefs, primarily low profile reefs composed of shell and limestone. LARP constructed eight reefs and fourteen others were constructed in association with public conservation and private groups. In working with one of these groups LARP constructed four reefs using reef balls.

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

The Southeast Area Monitoring and Assessment Program (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 those 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, and Fall Plankton Survey among other surveys.

During 2008, the Department conducted spring (April), summer (June), and fall (October) surveys in the Louisiana territorial sea and near-shore EEZ from the Mississippi River to Atchafalaya Bay. These seasonal day-night surveys provide information on the abundance and distribution of critical life stages of major Gulf of Mexico species. Shrimp/groundfish and zooplankton communities were sampled, as were associated environmental parameters.

The spring 2008 survey (LA081) was conducted April 1-4, aboard the chartered vessel Pelican. All 12 scheduled daytime and nighttime demersal trawl stations and six plankton stations were sampled successfully. All seven plankton stations were complete.

The summer 2008 survey (LA082) was conducted June 23-6, aboard the chartered vessel Pelican. All

12 scheduled daytime and nighttime demersal trawl stations and six plankton stations were sampled successfully. All seven plankton stations were complete.

The autumn 2008 survey (LA084) was conducted September 23-26, aboard the chartered vessel Pelican. Nine of twelve scheduled daytime and nighttime demersal trawl stations sampled successfully. Seven plankton stations were completed.

LDWF initiated a SEAMAP Summer Hypoxia Sampling Survey. The SEAMAP hypoxia summer sampling survey consists of offshore trips taken every two weeks from the beginning of June through the end of August, leaving from Grand Isle or Grand Terre through Barataria Pass. The sampling regime at a station includes bottom water quality, and trawl samples taken beginning at a depth of 30 ft, then moving to 20 ft, and finally to a depth of 10 ft. Station sampling ends when bottom dissolved oxygen levels are measured below 2 mg/L. The first offshore transect is located due south of Caminada Pass, the second transect is located due south of Grand Isle, and the third transect is located 1 mile west of the second transect. The Grand Isle transect coincides with the routine CSA 3 biological sampling transect. Analysis of bottom water is accomplished using a YSI to measure conductivity, salinity, water temperature, and dissolved oxygen.

This sampling strategy captures a picture of the edge of the hypoxic zone moving onshore at Grand Isle, as well as documents the endurance and then dissipation of the hypoxic zone later in the summer. The collection of biological data during the sampling provides a snap shot of species assemblages in the hypoxic zone.

Due to precautions taken as a number of hurricanes entered the Gulf of Mexico this summer, sampling schedules were modified and trips were made during three non-consecutive weeks in the summer of 2008; July 2, 15 and August 27,

#### Oil Spill Contingency Planning and Response

The Department's Oil Spill Task Force continued in 2007 to develop and implement plans to protect and restore the State's wildlife, fishery, and habitat resources from the adverse effects of oil spills.

Pre-assessment data collection for NRDA was begun for spills that occurred during 2007. These were:

- January 2007 Expert Oil & Gas well blowout in Bayou Perot

The Department continued damage assessment activities and monitoring spills.

- May 2007 Mariner pipeline spill near South Pass of the Mississippi River
- January 2007 Harvest Oil pipeline spill in Grand Bay
- January 2007 Forest Oil pipeline spill in Garden Island Bay
- June 2006 CITGO tank overflow in Calcasieu River
- January 2006 Shell pipeline spill in Joseph's Bayou in South Pass
- October 2005 Gold King/Shell had a mystery spill in Garden Island Bay.
- September 2005 multiple small spills related to Hurricane Rita in the western portion of the State
- August 2005 multiple small spills related to Hurricane Katrina in Southern Louisiana
- June 2005 Amerada Hess tank overflow onto Breton Island.
- Restoration planning for an April 2005 Exxon/Mobil spill in West Bay Champagne north of Grand Isle.
- January 2005 Shell pipeline spill in Joseph's Bayou in South Pass.
- Restoration planning for September 2004 Gulf Production tank failure in Raphael Pass
- September 2004 multiple spill related to Hurricane Ivan in Plaquemines Parish
- Restoration Planning for a December 2003 Exxon/Mobil spill on Mendicant Island
- Restoration Planning for a March 2003 Exxon/Mobil spill in Lake Washington
- Restoration Planning for a December 2002 Hilcorp spill in Duck Lake
- Restoration monitoring for a September 2003 Devon Energy tank rupture in North Pass
- Restoration Planning for a Unocal pipeline rupture in East Lake Palourde
- Restoration planning for a April 2002 BP pipeline spill in Little Lake
- Restoration Planning for a April 2001 Williams pipeline spill in Mosquito Bay
- Restoration monitoring for a November 2000 Marine Oil Trader 3 Ltd. Vessel grounding the Mississippi River
- Restoration planning for a September 1998 Equinox well blowout in Lake Grand Ecaille

- Restoration monitoring for a June 1997 Apache pipeline spill in Vermillion Bay

In addition the Department is participating with other state and federal agencies in planning restoration of hazardous materials sites. Two planning activities continue: Bayou Trepagnier in St. Charles Parish and Calcasieu River in Calcasieu Parish.

The Department also evaluated and responded as needed to approximately 3700 oil spill notifications which were received from State Police. These notifications cover a range of hazardous emissions and chemical spills as well as oil spill related incidents.

#### Statewide Hydrographic Monitoring

The LDWF, through an interagency agreement with the U.S. Geological Survey, continued to collect constant records of salinity, water temperature, tide level, wind speed and direction, and barometric pressure from a network of 15 stations located across coastal Louisiana. The data were collected in near real-time and LDWF provided database management for the program. The data were used for managing marine fisheries, and for investigating the extent and impact of a variety of environmental conditions such as tropical weather systems, drought, hypoxia and red tides in Louisiana coastal waters. The data also were provided on request to other state and federal agencies, as well as university researchers. The near real-time data are available to the public via the internet through the USGS website <http://la.water.usgs.gov/default.html#QuickLinks>. This website has been designed to include Google Earth functionality and to take full advantage of the features; Google Earth must be installed on a user's pc. For those without Google Earth, access to the data can be found at <http://waterdata.usgs.gov/la/nwis/nwis>. These data are posted in raw, unedited form within approximately 4 hours of the time the instrument measurement was recorded in the field. The data are updated frequently to provide the best, most accurate information possible.

Station 105 and 117 were completely destroyed during Hurricane Katrina in 2005. Station 117 in the Mississippi Sound came back on line in August 2008 with all new equipment on a redesigned, more protected platform at its original location. Station 105 could possibly be moved to a nearby location approximately ½ mile from the original site with new equipment. The decision whether to rename the station or maintain the current designation is still being debated. Discussion is ongoing to determine

whether to move Station 315 on the east end of Grand Terre Island to a new hurricane hardened platform in Barataria Pass. Should that occur Station 315 will be retired and replaced by a DCP in Barataria Pass.

The Department continues to update the database with rainfall, air temperature, and river discharge readings recorded throughout the state.

#### Coastal Wetlands

In fiscal year 2007-2008, the Marine Fisheries 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. USACE received funding through a series of supplemental appropriations to provide "100 year level flood protection" in the New Orleans vicinity. USACE put forward 17 individual environmental reports in lieu of Environmental Assessments or Environmental Impact Statements to support this goal. Division staff continuously worked to coordinate and review these hurricane reaches and understand their impacts on estuarine and coastal environments. One of the projects involved construction of gates in the Gulf Intracoastal Waterway, the Mississippi River Gulf Outlet, Bayou Bienvenu and a sector gate at the Seabrook entrance to Lake Pontchartrain. This project combined with discussions of the planned closing of the Mississippi River Gulf Outlet at Bayou La Loutre and the proposed large diversion of fresh water through a siphon near Violet into the Lake Borgne system required considerable effort to understand and provide relevant comments. In addition, division staff continued to monitor planning and construction efforts on the Morganza to the Gulf hurricane protection levee, Donaldsonville to the Gulf hurricane protection levee, refurbishment of non-federal levees at Grand Isle, planning for the Port of Iberia Channel Deepening Project, the Calcasieu Dredged Material Management Plan, and the Sabine-Neches Waterway Plan. Division staff also participated in evaluation of 10 Coastal Wetlands Planning, Protection and Restoration Act projects for Priority lists 17 and 18. Up to four of the 10 projects may be funded annually for engineering and development activities. Staff also participated in planning for and monitoring of the opening of the Bonnet Carré spillway that occurred on April 11, 2008. For the first time, LDWF was able to monitor impacts of the opening to estuarine resources with

data from before the opening and after the opening. LDWF had an existing contract with the UNO Nekton Research Laboratory for monitoring hurricane recovery of estuarine resources. In collaboration with UNO and USACE, division staff members were able to collect data after the opening that were comparable to data collected before the opening to evaluate the effects of the opening.

Extensive fisheries resource monitoring programs continued for both the Caernarvon and Davis Pond Freshwater Diversion Projects. The Caernarvon Project has been operational for 17 years and LDWF personnel have monitored its effects on the fish, wildlife and vegetation populations in the basin throughout its operation. The Davis Pond Project came on-line in July 2002. Ongoing maintenance designed to address problems with flooding in the ponding area north of Lake Cataouatche continued to limit the amount of freshwater diverted through the Davis Pond structure. More water was diverted through these structures in 2006-2007 as a result of recommendations by the Interagency Advisory Committees for both Davis Pond and Caernarvon. Marine Fisheries personnel continued to monitor the fisheries resources in the Barataria Basin including a comprehensive study of the Davis Pond project effects on recreational fishing throughout the basin. The Marine Fisheries Division provides input into the operation of both structures.

#### Seismic Monitoring

The Seismic Section was created in 1939 specifically to protect oysters, fish, shrimp, wildlife and the associated habitat from injury due to seismic exploration. Seismic agents monitor geophysical companies to protect Louisiana's fish and wildlife resources by ensuring compliance with LDWF seismic rules and regulations. During 2008 the seismic section monitored 23 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. Caernarvon was completed in 1991. Davis Pond was completed in 2002; drainage and levee issues have prevented its being run at its intended flows as yet. 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 8,000 cubic feet per second (cfs).

#### 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**

#### Lyle S. St. Amant Marine Laboratory

The Marine Laboratory's primary mission is to conduct the research required to manage Louisiana's marine fisheries. The laboratory is made available for the use of other Department and non-Department entities engaged in fisheries management, enforcement, coastal restoration, marine education, and serves as headquarters of Coastal Study Area III in the Barataria Bay estuarine system. Several LSU and Nicholls State University researchers make use of laboratory facilities to conduct marine and environmental research. The marine laboratory also supports the monitoring of the Grand Isle Sulphur Mine Reef for the Louisiana Artificial Reef Program. In September 2008, Hurricanes Gustav and Ike damaged the facility, which resulted in temporary relocation of lab personnel until the new marine fisheries laboratory in Grand Isle is completed.

#### Sport Fish Restoration

The Federal Aid in Sport Fish Restoration Act, commonly referred to as the Dingell-Johnson Act, passed on August 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 percent on its licensed anglers (fishermen) and 40 percent on its land and water area. No State receives more than 5 percent or less than 1 percent 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 percent of the project expenses. The state must provide at least 25 percent of the project costs from a non-federal source. During 2008 Louisiana used the marine share of its Sport Fish Restoration Funds in support of the following projects and activities.

#### Marine Boating Access

During 2008, this project continued development of marine boating access for recreational anglers. It is an objective of the Department to strengthen its ability to meet effectively the consumptive and non-consumptive needs of the public for marine fish resources.

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

The purpose of this research is to quantify the effects of habitat enhancement, in the form of addition of artificial materials meant to improve nursery function, on the structure of fish communities, food webs, and marsh pond ecosystems as habitat for sport fish. This will be done through a Before-After-Control-Impact study design. Sampling stations will be sampled prior to alteration for the "Before" portion of the study. Following the "Before" portion of the study, habitat enhancement will occur. Habitat enhancement will be sampled to evaluate to community response. This was a cooperative effort between the Department and Louisiana State University (LSU). A new project began July 1, 2008 and scheduled to be completed by June 30, 2011.

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

Bayou St. John and the City Park Lagoons are located near the downtown area of New Orleans, LA.

This grant will assess and restore habitat, determine the quantity and quality of sport fish populations, and quantify fishing pressure. Modifications in the water supply system will allow estuarine organism inflow into the entire system. Public use should increase as a result of improved fishing. This is a cooperative effort between the Department, New Orleans City Park and the University of New Orleans (UNO). This project was continued and is scheduled to be completed by December 31, 2010.

#### 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 (SPR) 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. The 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 fin fishes to support stock assessment efforts. This project started on July 1, 1999 and is an ongoing project.

During the 2008 calendar year, otoliths were collected from black drum (1209 collected, 1209 aged), striped mullet (726 collected, 726 aged), sheepshead (1312 collected, 1312 aged), gray snapper (542 collected, 542 aged), spotted seatrout (1794 collected, 1794 aged), and red drum (1387 collected, 1387 aged).

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

This grant is used to construct a new marine fisheries laboratory facility on a 7.8 acre tract in Grand Isle, Louisiana. This new laboratory facility will replace the Lyle S. St. Amant Marine Biological Laboratory located on Grand Terre Island. The project was delayed, due to Hurricanes Gustav and Ike in September 2008. This project started on September 1, 2001 and is scheduled to be completed and open by June 30, 2009.

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

The Atchafalaya Delta is losing coastal wetlands and the Coastal Wetlands Planning, Protection and Restoration Act provided funding to restore the

wetlands. Dredge spoil from the River will be used to create new wetland habitat. Phases one and two of this project examined the suitability of this habitat for sport fish production. This is a cooperative project between the Department and LSU. These data will be used in future planning efforts to optimize the creation of habitat for sport fish. Phase three sampled from the Wax Lake Delta to compare altered and unaltered systems. Phase one started on September 1, 2001 and was completed on June 30, 2003. Phase two started on October 26, 2003 and was completed on June 30, 2006. Phase three started on July 1, 2006 and was completed on June 30, 2008. Additional project was started to evaluate the sport fish use of submerged aquatic vegetation and mudflat habitats in the Atchafalaya Delta. This project started on July 1, 2008 and will be completed by June 30, 2011.

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

Objectives for phases one and two of this project were to describe essential fish habitat (EFH) using sidescan sonar, split beam hydro acoustics and stable isotope techniques. It will also identify EFH in Barataria Bay and quantified its value to important sport fish species. These techniques will yield data that can be used to address the protection and conservation of habitats important to marine, estuarine and anadromous finfish. Through a partnership, LDWF and LSU developed a monitoring program, established sampling protocols, and conducted field sampling. The project identifies juvenile habitat use by sampling tissue and examining differences in isotopic composition. These data will be integrated together to provide marine fisheries managers with habitat use by various fish species. Phase three is titled "Can Pulsed-River Diversions Shift Ecological Baselines in Louisiana Estuarine Ecosystems?" Phase three was initiated to develop a better understanding of the relationship between wetland habitats and fisheries productivity in Louisiana and the efforts to maintain and restore both. Another objective of phase three is to develop an explicit understanding of how higher trophic levels are affected by landscape and smaller-scale changes in wetlands topography and estuarine hydrology via direct collaboration and contemporaneous sampling with wetland scientists. This project is currently in the third phase of continuing research. Phase one started on September 1, 2001 and was completed on August 30, 2003. Phase two started on November 1, 2003 and was completed on June 30, 2006. Phase three is scheduled for completion by June 30, 2009.

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

This project was developed to establish a scientifically and statistically sound marine sport fish tag and recapture study utilizing a diverse partnership, but designed specifically to employ and educate anglers, through their participation in the study, about the importance and need for management and conservation. In addition this study was developed to gather data to improve our understanding of marine sport fish movements and patterns of habitat use, age structure, growth and mortality rates, estimates of population size, and rates of immigration and emigration in support of state stock assessments. During 2008, volunteer recruitment for the Marine Sport Fish Tagging Study continued. Over 6,000 additional spotted seatrout and red drum were tagged and released in coastal Louisiana during 2008. This is a cooperative project between the Department, LSU, UNO, and the Audubon Aquarium of the Americas. The first three years of this project were complete on June 30, 2007; however this project has been continued for an additional three years.

#### An Analysis of Spotted Seatrout Feeding Habits within Louisiana Bay Systems (F-123)

This project was developed to determine whether food web assemblages and trophic positions of seatrout differ among three distinct habitats using carbon and nitrogen stable isotope analysis and fatty acid analysis. Results show that spotted seatrout feed at a lower trophic level in Barataria Bay than in Lake Pontchartrain and Lake Calcasieu. This was a cooperative project between the Department and the UNO. This project started on July 1, 2004 and was completed in June 30, 2008.

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

This aquatic outreach project was developed to disseminate information on the results and benefits of aquatic Sport Fish Restoration grants being conducted in Louisiana. This project addresses Louisiana's current aquatic Sport Fish Restoration grants as well as additional grants if any are added over the course of this outreach grant. The dissemination of this information is through audio, video, written materials, web site links, public displays, and the media. The project is ongoing.

### **THE HURRICANES OF 2005**

#### **Fishery Disaster Assistance Programs**

Hurricanes Katrina and Rita impacted the Louisiana coastline and it's socially, culturally, and economically important fisheries. In response to the hurricanes of 2005, Congress authorized fishery disaster relief in June, 2006 (Public Law 109-234),



subsequently the US Department of Commerce, National Oceanic and Atmospheric Administration (NOAA), granted funds to the Gulf States Marine Fisheries Commission (GSMFC) to aid Louisiana, Mississippi, Alabama, Texas and Florida in rebuilding fisheries. Under this GSMFC Emergency Disaster Recovery Program (**EDRP I**), Louisiana's three subgrant awards are: Reseeding, Rehabilitating and Restoring Oyster Reefs; Rehabilitating Oyster Bed and Shrimp Grounds; and Cooperative Research to Monitor Recovery of Gulf Fisheries.

Congress authorized additional 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. Under this GSMFC Emergency Disaster Recovery Program (**EDRP II**), Louisiana's two subgrant awards are: Economic assistance to commercial fishers, charterboat operators, vessel owners and wholesale/retail seafood dealers (to LDWF Office of Fisheries); and Domestic Product Marketing and Promotion of Louisiana Wild-Caught Seafood (to LDWF Office of the Secretary, Seafood Promotion and Marketing Board).

EDRP I – Job 1: Reseeding, Rehabilitating and Restoring Oyster Reefs

The Private Oyster Lease Rehabilitation (POLR) program was designed and implemented to reimburse private oyster leaseholders for rehabilitating their oyster reefs from hurricane-related damage. Rehabilitation activities available to the leaseholder under the POLR program include: 1) removing sediment/debris, 2) depositing cultch, 3) resurveying/remarking leases, 4) relaying oysters, 5) bedding (transplanting) of oysters, and 6) replacing lost/damaged lease records.

The program reimburses participating leaseholders for documented costs associated with rehabilitation activities up to a qualifying amount. Reimbursement payments to participating leaseholders began in August 2007 and have continued through 2008. There are 580 Private Oyster Lease Rehabilitation (POLR) Program participants accounting for approximately 255,000 leased water bottom acres and \$12,088,119.32.00 in eligible reimbursements. As of December 31, 2008 the Louisiana Department of Wildlife & Fisheries has reimbursed \$7,522,130.06 to leaseholders for documented rehabilitation work performed on oyster leases.

**Table 3.** POLR breakdown of payments by activity.

<b>Activity</b>	<b>Amount Paid</b>
Sediment and Debris Removal	\$2,965,701.54
Cultch Deposition	\$166,778.02
Resurveying/Remarking	\$345,862.68
Oyster Relaying	\$320,874.32
Oyster Transplanting	\$3,711,052.50
Replacing Lost/Damaged Lease Records	\$11,861.00
Total Amount Paid to date:	\$7,522,130.06

The POLR program was developed with strict audit and accountability measures. Participating leaseholders are required to call a toll-free number prior to performing rehabilitation activities. Most participating leaseholders have been performing sediment and debris removal, as well as oyster transplanting. Some have chosen to plant cultch, remark lease boundaries, and relay oysters. The toll-free call center provides a call-in report to LDWF each morning at 8:00 a.m. and then again at regular intervals throughout the day. LDWF Marine Fisheries field staff performs random field inspections of POLR-related rehabilitation activities on a weekly basis. Field staff encounter vessels working under the program (such vessels are identified by being listed on the toll-free call-in report and by flying a 2' X 2' red flag), and record information concerning the activity being performed, the time and location of the encounter, and the vessel name. This information is used to check against reimbursement requests that are submitted by the participating leaseholder.

The Louisiana Legislative Auditor's Office (LLA) was contracted to develop and conduct an agreed-upon procedures audit of the POLR program during 2008. The audit found no evidence of incorrect reimbursement payments and provided an overall positive report on the POLR program.

A Cooperative Endeavor Agreement with Louisiana Department of Health and Hospitals (LDHH) was executed to provide assistance to reestablish seafood safety sampling and laboratory functions. LDHH has completed work to create a Panchromatic-TM Merge satellite image through Louisiana State University. The image has provided an updated background for seasonal classification maps showing the areas open for oyster harvest during various times of the year.

Plans continued to be developed to incorporate a native oyster hatchery at the LDWF Marine

Laboratory on Grand Isle, LA, although funding under EDRP1 for this task was reprogrammed to provide additional monies to the commercial fishing industry through cooperative research. This laboratory is currently under construction and plans for the development of the hatchery are being developed by the project architect. Input on the hatchery design has been received by researchers from academic institutions within Louisiana, most notably from Louisiana State University (LSU) researchers who have extensive oyster hatchery experience.

After developing a matrix for grading the proposals to develop a data and records management system of all the oyster lease records, a panel of five Department of Wildlife and Fisheries employees reviewed and evaluated the proposals that were submitted by the following firms:

1. Ultix Technologies, Baton Rouge, Louisiana
2. GCR & Associates, New Orleans, Louisiana
3. Aero-Metric, Inc., in connection with Terraconsult and Docutex, Sheboygan, Wisconsin
4. ENKON Information Systems (USA), Inc., Victoria, British Columbia, Canada
5. DataBank IMX, Monroe, Louisiana
6. Optimum Document Services, Silver Spring, Maryland
7. Ciber, Inc., Baton Rouge, Louisiana
8. Image API, Inc., Tallahassee, Florida
9. USA Consulting, Metairie, Louisiana
10. American Data Corporation, Lafayette, Louisiana

On November 12, 2008 the panel met and summarized all evaluations and recommended to award the contract to develop the Oyster Lease Data and Records Management System to Aero-Metric, Inc., in connection with Terraconsult and Docutex.

The system will provide for system security, backup and recovery of digital records, an integrated searchable database, metadata generation, and integrate physical and electronic records, organizing them and storing critical information in a digital repository. This will give staff the ability to quickly capture, preserve and share information critical to resource management. LDWF proposes to insure safety and security of the 103 year oyster lease database and the long-term accessibility and usability of the oyster leasing records by converting paper and cloth lease survey records, maps, plats, and other information to microfilm and creating a digital image record of all the above information; creating an

integrated file management system to make the records more readily accessible; and update and improve system data dictionary.

Several rehabilitation activities on the public oyster grounds were completed during 2008. A side-scan sonar survey and water bottom assessment of four important areas of the public oyster seed grounds was accomplished. Water bottom characteristics and oyster densities on reefs in Drum Bay and Morgan Harbor (St. Bernard Parish) were determined through a contract with Bio-West, Inc. The side-scan sonar and water bottom assessment determined that 1,769 acres of reef/shell bottoms exist in Drum Bay while Morgan Harbor contains 2,954 acres of reef/shell bottoms. Oyster sampling on these bottoms found that over 40,000 barrels of oysters were present in Drum Bay and nearly 47,000 barrels of oysters were present in Morgan Harbor.

A side-scan sonar survey and water bottom assessment of Calcasieu and Sabine Lakes in Cameron Parish was also completed in 2008. Water bottom characteristics and oyster densities on reefs in Calcasieu and Sabine Lakes were determined through a contract with ENCOS, Inc. The side-scan sonar and water bottom assessment determined that 3,907.10 acres of reef/shell bottoms exist in Calcasieu and 1,479.50 acres reef/shell bottoms exist in Sabine Lake. Oyster sampling on these bottoms found that over 900,000 barrels of oysters were present in Calcasieu Lake and over 650,000 barrels of oysters were present in Sabine Lake.

Cultch planting specifications were developed and a bid package was published for upcoming cultch plants in Sister Lake, Lake Chien, Mississippi Sound and Black Bay for the spring of 2009. The winning bids for reef rehabilitation (cultch planting) will be determined during the next reporting period. The permitting process for the rehabilitation projects was also initiated during this reporting period. All necessary state and federal permits/authorizations are expected to be in hand during the next reporting period.

Cultch planting specifications were developed, a bid package published, and a contract for reef rehabilitation (cultch planting) was awarded to Pontchartrain Materials Corporation (PMC) to build a 50-acre reef in Hackberry Bay (Jefferson & Lafourche Parishes) during the spring of 2008. The permitting process for this rehabilitation project was also finalized. During May, rehabilitation activities in Hackberry Bay were accomplished by PMC with close, daily oversight and guidance by LDWF

biologists. A 50 acre location of suitable water bottoms was selected in Hackberry Bay and approximately 10,000 cubic yards of limestone, crushed concrete, and oyster shell (cultch material) was spread thinly on the bottom. This project location was identified and selected based on water bottom information supplied by a previous federal hurricane disaster project, the Louisiana Oyster Rehabilitation and Promotion Project (Hurricane Lili disaster).

The schedule and experimental design for biological monitoring of cultch plants is being developed. Biological sampling is being developed to track the development trajectory of oyster resources on the rehabilitated reefs.

Biological monitoring of two previous cultch planting projects (Black Bay and Mississippi Sound) continued during 2008. Oyster sampling at these locations in June 2008 indicated the presence of a sizeable seed-oyster stock. On the 200-acre Mississippi Sound (at Turkey Bayou) cultch plant, sample results indicated approximately 50,000 barrels of seed oysters were present. At the 200-acre Black Bay cultch plant location (near Lonesome Island), sample results indicated the presence of approximately 29,000 barrels of seed oysters.

#### EDRP I – Job 2: Rehabilitating Oyster Bed and Shrimp Grounds

LDWF worked with other state and federal agencies and community organizations 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.

The LDWF received approval from the Division of Administration, State Office of Contractual Review for an inter-agency agreement with the Louisiana Department of Natural Resources (LDNR) Office of Conservation for a \$7,339,556 (total contract amount, of which \$500,000 is obligated in Louisiana Fiscal Year 2006-2007) contract for marine debris removal. All activities under this agreement remain suspended pending notification from the Federal Emergency Management Authority (FEMA) that the U.S. Coast Guard (USCG) has been mission assigned marine debris removal activities in Louisiana coastal waters. Once acknowledgement from FEMA has been received, the LDWF will re-program funds allocated under this activity to other means of rehabilitating shrimp and fishing grounds habitat.

Crowder Gulf Joint Venture, Inc. working under contract with LDWF have completed marine debris

removal activities in 68 four-square mile grids located in portions of Lake Pontchartrain Middle Ground and Lake St. Catherine (Orleans and St. Tammany Parishes), and Calcasieu Lake (Cameron and Calcasieu Parishes). LDWF initially assigned Crowder Gulf 10 grids within Lake Borgne, and in response to reports of debris hazards from recreational, commercial and charterboat fishers, LDWF assigned an additional 25 grids comprising all public waters within the Middle Ground and Lake St. Catherine and an additional 2 grids in Lake Borgne. LDWF then assigned an additional 33 grids in Calcasieu Lake. Finally, LDWF assigned Crowder Gulf two additional grids in Calcasieu Lake based on sonar data and 28 grids all located within portions of Vermilion and Cote Blanche Bays.

The reports prepared by Crowder Gulf assigned a target number to each debris item found in the side scan sonar (SSS) surveys which included a corresponding thumbnail SSS image of each debris item found and its coordinates and dimensions, transects of the side scan sonar survey vessel over the survey area or grid, GPS vessel tracks of each vessel engaged in debris removal and documented the location and description of each debris item listed and its disposition (removed, remains in place, nothing found). Due to location or size, certain debris items could not be removed under current contract terms. For instance, some debris items located within pipeline or cable crossings could not be removed, due to unacceptable risks. Likewise, several items such as large boats remain in place as well as a number of sonar contacts located in Chef Menteur and Rigoletes Pass because water depth and current velocity and associated safety risks. Disk copies of the report were provided to NOAA's Office of Coast Survey, LDNR and the Governor's Office of Homeland Security and Emergency Preparedness (GOHSEP).

In consultation with the GSMFC, NOAA Fisheries Grant Office in St. Petersburg, the Louisiana State Archaeologist and the Louisiana State Historical Preservation Officer (SHPO), LDWF solicited proposals and awarded a contract to Coastal Environments, Inc. to evaluate the presence of submerged cultural resources within areas targeted for marine debris removal in order to ensure compliance with Section 106 of the National Historic Preservation Act. Coastal Environments was contracted to perform the following tasks:

- Gather and examine records and databases on historic shipwrecks and archaeological sites in

these waters and develop a series of maps and database in Arcview 9.2 or compatible format.

- Evaluate side scan sonar survey data collected by the LDWF's marine debris removal contractor and/or NOAA's Office of Coast Survey within a series of 100 four square mile grids.
- Use the assembled data to develop protocols on the avoidance of impacting historic shipwrecks and archeological sites within all of the grids assigned to the salvage contractor for removal of debris and advise the LDWF and SHPO on specific areas and ship wrecks to be avoided.
- Develop an unanticipated discoveries plan to be implemented by the Contractor in order to inspect the discovery and provide immediate notification to the State on items of historical or cultural significance encountered during debris removal operations.
- Provide a detailed report identifying the methods used and database used including newspaper archives to identify known or suspected shipwrecks and sites of historical interest.
- Provide a digital database of the side scan sonar survey images of known and suspected shipwrecks within assigned grids.

LDWF identified potential projects and cooperators in the Lafayette NMFS office. A project proposal is being prepared for consideration. The department received two pre-proposals to investigate the concept of using cultch for wave attenuation and shoreline stabilization.

Work continues to inventory in-house data resources and conduct a needs assessment for developing an RFP to contract for consultation to obtain a new data system that would address the multiple needs of the Division and movement of data from the present to the new system.

In November, 2008 LDWF proposed to amend the scope of work for Job 2 based on changing needs related to hurricane recovery in the State of Louisiana since the subgrant agreement was first awarded. Some of the tasks originally proposed for funding under this agreement have been funded or implemented through other agencies. Other needs have not been met, and in the revised scope of work the LDWF reprogrammed funds within this subgrant agreement, decrease the overall level of funding for this Job (Job 2), and increase funds available for Cooperative Research (Job 3). Specifically, the changes in scope for Job 2 are:

- Coordinate with other state and federal agencies to use maps and other data sources to identify underwater obstructions which are fouling the fishing grounds or access channels for fishing vessels. Task to be continued.
- Documenting wet debris – pay fishermen, vessel owners, wholesale seafood buyers, fresh products license holders, seafood processors and organizations for location information for significant underwater obstructions. Task to be discontinued.
- Debris removal – fund underwater obstruction removal. Task to be continued.
- Transfer funds to DNR to expand scope of the state fisherman's gear compensation fund program for compensation for loss of fishing gear, due to encounters with wet debris. Task to be discontinued.
- Develop and implement a logbook which any commercial fishermen, vessel owners, wholesale seafood buyers, fresh products license holders and seafood processors not participating in the trip-level effort and economic survey task can use to record fishing activity. Task to be discontinued.
- Oyster Bed and Shrimp Ground Rehabilitation. Construct and monitor projects to demonstrate the ability to simultaneously manage for waterfowl and optimize marine organism access to marsh impoundments and to demonstrate use of cultch to construct wave attenuation/shoreline stabilization structures. Task to be continued at reduced level.
- Re-establish the LDWF Marine Research Laboratory located on Grand Isle where the Department develops methods to rehabilitate and monitor oyster beds and shrimp grounds. Task to be discontinued.
- LDWF Marine Fisheries Independent and Dependent Data Management System Improvements to monitor Gulf fisheries Recovery. Task to be continued.

#### EDRP I – Job 3: Cooperative Research to Monitor Recovery of Gulf Fisheries

Historic data from the trip ticket database has been tabulated and analyzed to establish baselines and trends for individual dealers and fishermen of the shrimp industry. A draft report was developed for the brown shrimp fishery using historic data from the trip ticket database. The report examines 2000 to 2006 data trends to gauge the impact of the hurricanes and subsequent recovery of the brown shrimp industry in Louisiana. Comment and suggested changes on the report will be solicited

from appropriate LDWF staff and changes will be incorporated. The format from the brown shrimp report will be duplicated for white shrimp, seabob, and other shrimp fisheries. Survey instruments to monitor recovery of Gulf fisheries are being developed. An RFP for contractual services to implement the final draft of surveys has been circulated internally. A draft log-book was modified to a survey format to collect hurricane impacts on the economics and business aspects of the for-hire industry. The draft fisheries recovery survey was further refined and separated into two surveys. One survey will attempt to measure the impact of the hurricanes on the for-hire industry and the other survey will collect base line operating and investment costs. The baseline and trend data will be used to gauge the impact of the hurricanes and subsequent recovery. Work continues on the first draft of a survey targeted at the recreational fishermen, to try to collect their before and after (hurricane) recollections, to collect their views on the condition of the Gulf Fishery, and their opinions for recovery aimed at recreational fishing.

LDWF entered into a contract with the University of New Orleans to conduct fishery-independent monitoring of Gulf fishery stocks. The work will be performed in Lake Pontchartrain; UNO began sampling under the subcontract in July 2007. Monthly sampling consists of trawls at 6 stations, gills and seines at 5 stations, and recreational fishing reports at 6 stations. The project also includes a crab fishery-dependent study.

In November 2008, LDWF proposed to amend the scope of work for Job 3 based on changing needs related to hurricane recovery in the State of Louisiana since the subgrant agreement was first awarded. Some of the tasks originally proposed for funding under this agreement have been funded or implemented through other agencies. Other needs have not been met, and in the revised scope of work the LDWF reprogrammed funds within this subgrant agreement, decrease the overall level of funding for Job 2), and increase funds available for Cooperative Research (Job 3). Specifically, the changes in scope for Job 3 are:

- Survey commercial fishery participants to characterize present fishing operations at the harvester level. Task to be discontinued.
- Detailed for-hire survey of charterboat captains. Task to be continued.

- Survey commercial shrimp, oyster and crab dealers and processors. Amend scope of work and continue task.
- Monitoring the recovery of commercial fisheries using trip-ticket data. Task to be continued.
- Collect trip level effort and economic information from the shrimp, crab and oyster industry. Task to be discontinued.
- Log-book program for for-hire captains. Task to be discontinued.
- Recreational Fishery mail/telephone and field interview surveys. Task to be discontinued.
- Fishery-Independent Monitoring of the Gulf Fishery Stocks. Task to be continued.
- Enhance collection of data for monitoring recovery of Louisiana fisheries through repair of public shoreside fisheries facilities in hurricane-impacted parishes. Task to be discontinued.
- New Task: Marina Database Update. Cooperative endeavor with Louisiana Oil Spill Coordinator (LOSCO) and LSU to collect and publish data on coastal marinas and launches.
- New Task: Voluntary pilot program to collect trip-level data from the charter fleet. Implement a pilot program to collect trip-level electronic data.
- New Task: Collecting Recovery Data and Survey Information from Commercial Dealers. Develop and implement a program to collect hurricane recovery data from commercial wholesale/retail seafood dealers. Participants will be pre-qualified based on licensing information and Louisiana Trip Ticket transactions. LDWF will compensate Louisiana resident commercial wholesale/retail seafood dealers for socioeconomic information regarding their business operations and other information that will be useful for state economists to assess the recovery of the fisheries. All participants will be classified into one of three tiers based on the level of their participation in Louisiana fisheries during the qualifying period. The level of detail required in a survey will be commensurate with the level of participation in the fishery and the level of compensation paid to the participant. All participants will be required to respond to and complete survey instruments. Survey data will include investment costs, operating costs, handling and storage capacity, perceived problems facing the industry, opinions on various management practices, as well as other operational characteristics.
- New Task: Collecting Recovery Data and Survey Information from Commercial Fishers. Develop and implement a program to collect

hurricane recovery data from commercial fishers. Participants will be pre-qualified based on licensing information and Louisiana Trip Ticket transactions. LDWF will compensate Louisiana resident commercial fishers for socioeconomic information regarding their business operations and other information that will be useful for state economists to assess the recovery of the fisheries. All participants will be classified into one of three tiers based on the level of their participation in Louisiana fisheries during the qualifying period. The level of detail required in a survey will be commensurate with the level of participation in the fishery and the level of compensation paid to the participant. All participants will be required to respond to and complete survey instruments. Survey data will include information on individual, family and household characteristics, investment costs, percent of indebtedness, size of operation, perceived problems facing each industry, opinions on various management practices, etc. will be collected.

#### EDRP II

LDWF developed a formula and qualifying criteria for disbursement of EDRP II funds consistent with the uses allowed by Section 115 of the Magnuson-Stevens Fishery Conservation and Management Reauthorization Act of 2006. Allocation was based on the Louisiana Trip Ticket program, a June 2005 report developed by Southwick and Associates on economic benefits of Louisiana fishing industries, and LDWF license sales, with final amounts approved by the legislature. Economic assistance payments will be distributed to eligible commercial fishers, commercial fishing vessel license holders, wholesale/retail seafood dealers, and charterboat operators who were active in the fisheries during the qualifying period (September 2004 through August 2005).

Allocation of funds between the recreational and commercial sectors was based on a June 2005 report developed by Southwick and Associates on economic benefits accruing to the state from the industries in the impacted parishes. LDWF used license files, trip ticket report files and other data to identify potentially eligible commercial fishers, commercial fishing vessel license holders, wholesale/retail seafood dealers, and charterboat operators who were active in the fisheries during the qualifying period (September 2004 through August 2005). Within the commercial sector the allocation among fisheries were based on pre-storm value of landings.

Economic assistance payments are being distributed to eligible Louisiana resident commercial fishers, commercial fishing vessel license holders in specific fisheries, and wholesale/retail seafood dealers who were licensed and had recorded sales or purchases of seafood on LDWF trip tickets during the qualifying period (September 2004 through August 2005). Charterboat operators who held a resident charter fishing guide license during the qualifying period (License Year 2004 and 2005 through August 2005) are eligible for equal assistance payments from the recreational sector allocation. Approximately \$26 million in assistance payments has been disbursed to-date.

Planning to develop a program to disburse funds for recreational fisheries projects for public fishing access, enhancement and outreach was conducted.

## **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.
- 2008 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 2008, 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 the State/Federal Fisheries Management Committee.

Grant documents and proposals were prepared to secure funding for fisheries management projects under the Sport 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 in January 1, 2008, and ended May 10, 2008. Oyster harvesters landed 79,543 sacks on 3,222 boat trips. Oyster season resumed on September 25, 2008 and ended on December 31, 2008. During the fall season 247,315 sacks were harvested on 9,984 trips. Oyster harvesting waters are divided geographically into eight major areas. Through daily monitoring these areas may open and close 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**

- Hurricane Katrina Oyster Relay Project – began March 17, 2006 to April 11, 2008 – 152 Mississippi boats participated in harvesting 68,365 sacks of seed oysters from Biloxi Bay. These oysters were relayed by barge to the commercial oyster's reefs south of Pass Christian. This project was funded by the NOAA Emergency Disaster Recovery Program.
- The fall cultch plant began in August 2008, and finished in September. A total of 24,196 cubic yards of oyster shells and 24,444 cubic yards of limestone were planted on 1,600 acres of oyster reef.
- 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 250 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. In 2008, the task force 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 1,259 derelict traps collected in 2008, 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 on-going 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;
- Identify areas conducive for artificial reef development and enhancement both near shore and offshore within the framework of Mississippi's Artificial Reef Plan;
- Monitor artificial reef development in Mississippi's marine waters and adjacent federal waters; and
- Obtain artificial reef material from state, federal, and private entities through donations.

### **Status**

The Mississippi's Artificial Reef Program is currently working with the Hancock County Port and

Harbor Commission on a staging site in Hancock County for the old Highway 90 Bridge rubble. This material will be stored, crushed, loaded, and barged out from this site to artificial reef sites for future deployments.

The Artificial Reef Bureau has also been working with local contractor's to get donated concrete material (concrete culverts, concrete rubble, and concrete light pole anchors) delivered to the Gulfport Staging Site. There were 3 steel hull vessels and 160 Reef Balls deployed during this time frame in reef sites south of both Horn and Ship Island; these vessels were donated by the U.S. Coast Guard. A local contractor was hired to clean and deploy these vessels.

The 2008 site plans for inshore reef construction is complete. The creation and enhancing of 18 inshore reefs sites thought out the 3 coastal counties will be done with the use of 21,000 tons of crushed concrete.

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 in early 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, steel hull vessels (including barges), oil/gas platforms and armored personnel carriers. Mississippi permitted 45 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 located offshore Mississippi and adjacent federal waters and two of the 46 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 precise 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 in Mississippi coastal waters and the adjacent Gulf of Mexico, in order to obtain additional data on seasonal movement patterns.
- Initiate angler-cooperative tag and release of tripletail 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.

## **EMERGENCY DISASTER RECOVERY PROGRAM**

### **Objectives**

- To restore and diversify nearshore and offshore ecosystems through the creation of low profile shallow water and offshore deep water artificial reef habitats.
- To monitor the recovery of Mississippi fisheries through a cooperative reporting system with charter boat and commercial finfish fishermen.

### **Status**

Monitoring finfish fisheries recovery with charter and commercial sector is ongoing. Harvest, effort and bycatch information is being collected by trip and electronically stored.

## **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 5,459 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;
- Hosted one training course on Basic HACCP and plant sanitation with the Auburn State University and Mississippi-Alabama Sea Grant Consortium;
- 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;
- Promoted Mississippi seafood products through development of printed materials;
- Reprinted brochures, poster, fact sheets, and PowerPoint presentations on individually quick frozen, heat/cool pasteurization, and high hydrostatic pressure technologies for educational and public outreach purposes;
- Published and printed Oyster Cookbook Vol. 2;
- 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;
- Published, printed and distributed a seafood business brochure: "How to Start a Seafood Business"; and
- Distributed the seafood guide "How to Start a Seafood Business in South Mississippi" to the different County Chamber of Commerce offices and Libraries;
- Collaborated with Mississippi State University Coastal Research Extension Service in research surveys on economic impact assessments of the Mississippi seafood industry and of the

economic impacts of the Hurricane Gustav and Ike.

### **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 FDA Plant Sanitation Training Course (FD140);
- Hosted the Gulf Coast States Director's Meeting on *Vibrio parahaemolyticus* Strategies; and
- Attended the Epi-Ready Team Training Workshop on Foodborne Illness Response Strategies on August 25-28, 2008 at Canton, MS, sponsored by the National Environmental Health Association.

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

There were fifty-four seafood/sanitation processing permits issued, which included nineteen shrimp, ten crab and twenty-five oyster permits. These 54 permits represent 692 inspected seafood units. Examples of seafood sanitation and health safety regulatory activities conducted by the Seafood Technology Bureau include: 542 seafood facility inspections, 5,459 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;
- Conducted 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 re-certification 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**

The goal of the division is to develop management plans for selected fisheries using the concept of optimum yield. These plans include recommended harvest regulations, resource stock enhancements, and enhancements based on fisheries independent and dependent monitoring program data utilizing the best scientific information available. Objectives of the division are:

1. To recommend management strategies for aquatic marine resources to the TPWD executive director, the Texas Parks and Wildlife Commission (TPWC), and the Texas Legislature based on sound scientific data;
2. To determine trends in abundance of finfish and shellfish populations affected by environmental conditions and fishing;
3. To determine landings of marine species and associated social and economic characteristics of the fisheries;
4. To restore, manage, and enhance existing fishery populations through stock identification, life history, genetic and reproductive physiology research, establishing appropriate stocking ratios for selected marine organisms in Texas bays, and assessing impacts of stocking on present populations and existing fisheries; and
5. To promote, develop, maintain, monitor, and enhance the artificial reef potential in the marine waters off Texas.

To achieve these objectives, the division is organized into four major components: administration, ecosystem monitoring, science, and enhancement. Effective management of finfish and shellfish populations must be based on a thorough knowledge of the population dynamics of the resources. Long-term trend data based on routine monitoring are necessary to assess trends in abundance. Commercial and recreational landings information is necessary to assess impacts of user groups on the fisheries and to determine economic importance of these fisheries to

the state. Activities in FY2008 (September 1, 2007 through August 31, 2008) included participation in the development, review, and revision of GMFMC and GSMFC fishery management plans. The division participated in workshops and advisory meetings with the Council, Commission, and other management authorities.

## **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 sub-adult 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 FY2008 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 160 Gulf trawls 2008.

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 1049 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 2008 closure held February 15-24, a minimum of 63 volunteers using 25 vessels expended 504 man-hours of effort (plus additional TPWD staff time) to remove 1,301 derelict traps coastwide. This effort brings the total number of traps removed since the program began in 2002 to 24,047. Most (71%) of the traps have been removed from Galveston Bay (42%) and San Antonio Bay (29%) respectively. Additionally, ~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 history and genetics 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. 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 project to examine reproductive biology and age and growth of sand seatrout was completed and a final report for the project was submitted. 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, vermillion 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.

### **Legislative and Regulatory Changes**

Legislative Actions: The Texas Legislature was not in session during 2008.

#### Texas Parks and Wildlife Commission (TPWC)

Rule-making Actions: Several new rules regarding saltwater fishing were approved by the TPWC.

The definition for the terminology “outside waters” and OCS (Outer Continental Shelf) as used in rules governing marine aquaculture was changed to “offshore aquaculture zone” (OAZ) to simplify and clarify the definition relative to offshore aquaculture.

The Commission adopted rules prohibiting possession of the exotic fish species silver carp (*Hypophthalmichthys molitrix*) and black carp (*Mylopharyngodon piceus*), and all species of southern hemisphere crayfish in the family Parastacidae.

A total allowable catch (TAC) of 31,500,000 lbs. per year was established for menhaden in the Texas Territorial Sea (TTS), which are the waters off of Texas, out to nine nautical miles. The TAC was based on the approximate average of the five-year period from 2002-2006. The rule provides a precautionary ecosystem-based approach to the management of the menhaden fishery in Texas waters. The TAC prevents any expansion of the menhaden fishery in state waters and keeps the current fishery and thus the fishery-associated bycatch at current levels. The current bycatch is estimated to be approximately one percent by number of total landings, which equals approximately 415,000 organisms per year.

### **Fish Stocking**

Efforts continued to spawn and rear marine fish for stock enhancement at the CCA/CPL 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 broodfish to spawn at the hatcheries. During peak spawning periods, personnel collected 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 calendar year 2008 a total of 23.6 million red drum fingerlings, 3.4 million spotted seatrout fingerlings averaging 37.1 mm TL and 39.9 mm TL, respectively, were released into marine waters for purposes of stock enhancement. Approximately 1.6 million red drum fingerlings averaging 30.3 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. Technical information on fish hatchery development 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 52,965 visitors in 2008. The Marine Development Center toured 2,335 visitors, and the PRB satellite pond facility received nine 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 FY2008, the Ecosystem Resources Program staff played a significant role in initiating and implementing numerous coastal restoration projects along the Texas Coast. As part of the settlement for the Natural Resource Damage Claim against the Chevron in Orange County, approximately 87 acres of coastal marsh/shallow water complex and 30 acres of wet prairie habitat were restored and enhanced in the Lower Neches Wildlife Management Area in the Sabine Lake System. Working with other Natural Resource Trustees, TPWD staff was the lead agency overseeing project implementation with NRD and Wildlife Staff working cooperatively to formulate this innovative project that directly restored marsh and restored hydrologic pathways to improve the health of an entire marsh system.

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 wrote grant proposals to continue preservation activities at McAllis Point on Galveston Island, initiated preservation activities on Follet's Island adjacent to the Christmas Bay Coastal Preserve and to purchase a conservation easement on 3,500 acres adjacent to Swan Lake in the Guadalupe Delta. The Swan Lake grant was awarded and this project will complement The Nature Conservancy's efforts to conserve 146,000 acres of whooping crane habitat in the San Antonio and Aransas Bay systems.

Construction was 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 endangered brown pelican. This project was awarded the 1<sup>st</sup> Place Gulf Guardian Award for Partnerships by the Environmental Protection Agency/Gulf of Mexico Program.

Ecosystem Resources Program staff spent significant time reviewing over 200 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 began coordinating with the Coast Guard and Maritime Administration on an offshore oil terminal off of the coast of Freeport and continued to coordinate with various Liquid Natural Gas terminals and pipelines to address environmental issues associated with project construction.

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 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 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 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 2008, 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**

The USTS *Texas Clipper* reefing project continued into fall 2007. Cleanup and hull modifications continued in September and October. The final hazardous materials cleanup report was approved by the U.S. Environmental Protection Agency and U.S. Fish and Wildlife Service in October 2007. The reefing of the ship was set for November 13, but was delayed due to severe weather. After much public fanfare, the ship was towed to the reef site 17 nm offshore of South Padre on November 16. By noon on November 17, 2007, the ship was at its final resting place in 135 ft. of water. Although the sink plan was thoroughly reviewed by several engineering firms, the ship listed during sinking, landing on its port side on the ocean bottom instead of in an upright position. Staff met with Resolve Marine Services over ideas to upright the ship, but final mediation ended by the company agreeing to conduct four reefing projects for TPWD as compensation for approximately \$1M in diver modifications that were compromised with the ship in its current position. Those projects will begin in 2009. TPWD also

received a combined \$2.1M reimbursement for the project from the U.S. Maritime Administration and the USFWS. In addition, University of Texas – Brownsville began conducting a biological monitoring and economic impact study of the ship through contracts with TPWD.

The Artificial Reef Program was responsible for maintaining 58 permitted reef sites, 10 USCG required marker buoys (six permanent and four temporary), and 5 mooring buoys in the Outer Continental Shelf area of the Gulf of Mexico in 2008. Several other potential reef sites were identified as candidates for the nearshore reef program and U.S. Army Corps of Engineers permit applications drafted. The program received four petroleum structures in FY2008 for a total of \$596,708. All structures were reefed in the High Island General Permit Area and included three structures from Maritech Resources, Inc. (HI-A-310, HI-A-315, and HI-A-317), and the HI-A-349 structure from Kerr-McGee Corporation. Three structures were towed to existing reef sites and the fourth was mechanically cut in place. Nine other petroleum donation agreements were drafted during FY2008 and are in various stages of completion.

Nearshore reef work included the addition of 70 one-ton quarry rocks at HI-85 (SALT reef). This represents the first materials to be reefed at the site since it was permitted in 1994. Cleanup began on the *Coshecton* tugboat in Aransas Pass. It is a 100 ft ex-navy tug that is being partially scrapped and will serve as the center point of the Port Mansfield reef site as the attachment point for the marker buoy. It is anticipated that cleaning and towing to the reef site will be finished in 2009.



**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 promote the conservation, management, and development of living marine resources for commercial and recreational use. Included are services and products to support the administration of fisheries management options; international fisheries affairs; fishery development and industry assistance; protected species and habitat conservation; law enforcement activities for marine mammals, endangered species, and regulated fisheries; and scientific and technical aspects of marine fisheries research.

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. Through a range of programs, the SERO planned, organized, and implemented fishery management and conservation including regulatory requirements, fishery management plans, and recreational and international fisheries. It provided administrative and technical support to regional fishery management councils including program planning and evaluation, budgeting, and administrative support. Support services were provided to other NOAA and NOAA Fisheries Service elements collocated with the SERO.

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 conducted multi-disciplinary research programs to provide management information to support national and regional programs and to respond to the needs of regional fishery management councils and other user groups. 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 RESOURCE CONSERVATION AND MANAGEMENT**

**Gulf Shrimp Fishery**

*Annual Texas Closure*

The annual closure of the shrimp fishery in the western Gulf of Mexico was established to allow brown shrimp to reach a larger (and more valuable) size before harvest, preventing discard and waste of brown shrimp smaller than the preferred market size. For 2008, commercial shrimp fishing in federal waters off Texas was closed May 15 through July 15.

*Amendment 27/14 – Red Snapper and Shrimp Fisheries (Shrimp Actions)*

Joint Amendment 27 to the Fishery Management Plan (FMP) for Reef Fish Resources of the Gulf of Mexico and Amendment 14 to the FMP for the Shrimp Fishery of the Gulf of Mexico (Amendment 27/14) was approved by the Gulf of Mexico Fishery Management Council (Council) and submitted to NOAA Fisheries Service for Department of Commerce Secretarial (Secretarial) review in 2007. The final rule implementing the actions in the amendment published January 29, 2008, and became effective February 28, 2008. The intent of the rule was to reduce the red snapper catch, bycatch, and discard mortality in the directed commercial and recreational fisheries, as well as in the shrimp fishery. The regulations were designed to ensure a reasonable probability of ending red snapper overfishing by 2010 and rebuild the stock by 2032. For the shrimp fishery, shrimp effort and the associated bycatch discard mortality of juvenile red snapper, would be controlled through time-area closures, as necessary, to reduce red snapper mortality 74 percent from the 2001-2003 time period. The size and duration of this time-area closure would be modified in the future as red snapper rebuild. No closure was necessary during the 2008 calendar year.

*Bycatch Reduction Device [BRD] Certification Criterion and New BRDs*

NOAA Fisheries Service published a new rule, effective March 14, 2008, that standardized the bycatch reduction certification criterion throughout the Gulf of Mexico and South Atlantic regions. To be certified for use in the shrimp fishery, evaluations must demonstrate a BRD reduces the weight of finfish in a trawl by 30 percent. In addition, NOAA Fisheries Service created a “two-year provisional certification” category for BRDs, if a BRD demonstrates a 25 percent reduction of the finfish by weight in a trawl. Based on this change, NOAA Fisheries Service modified the regulations in regard to certified BRDs. NOAA Fisheries Service certified the Modified Jones-Davis BRD, and provisionally certified the Composite Panel and Extended Funnel BRDs. Subsequent rulemaking, published November 18, 2008, decertified the Expanded Mesh BRD and revised and restricted the allowable placement of the fisheye-type BRDs; the effective date for this change was delayed, to allow industry time to convert to new more efficient BRD types.

### **Gulf Reef Fish Fisheries**

#### *Red Snapper Interim Rule*

During 2007, the total allowable catch for red snapper was set at 6.5 million pounds (mp), resulting in a commercial red snapper quota of 3.315 mp. The final rule implementing actions in Amendment 27/14 (see below), which included a reduction of TAC (and the subsequent commercial quota), was not expected to be implemented prior to January 1, 2008, when commercial red snapper allocation needed to be issued. Thus, an interim rule amended the regulations to distribute and issue 2008 allocations based on the more restrictive 2.55 mp quota proposed in Amendment 27/14.

#### *Red snapper Individual Fishing Quota*

For 2008, 97 percent of the 2.55 mp quota was harvested. A total of 59,791 pounds were left in 304 different accounts.

#### *Gulf of Mexico Reef Fish Vessel Monitoring System (VMS) Rule*

To alleviate a battery drain problem with certain VMS units, NOAA Fisheries Service revised regulations, effective January 28, 2008, to provide an in-port power-down exemption and reduced reporting rates when in port. This rule also established additional methods to report the landing notifications for the red snapper IFQ program. Thus, in addition to reporting via telephone, IFQ participants may now report a landing notification through their VMS units or by completing an electronic form from the IFQ website.

#### *Amendment 27/14 – Red Snapper and Shrimp fisheries (Red Snapper Actions)*

Amendment 27/14 was approved by the Council and submitted to NOAA Fisheries Service for Secretarial review in 2007. The final rule implementing the actions in the amendment published January 29, 2008, and became effective February 28, 2008. The intent of the rule was to reduce the red snapper catch, bycatch, and discard mortality in the directed commercial and recreational fisheries, as well as in the shrimp fishery. The regulations were designed to ensure a reasonable probability of ending red snapper overfishing by 2010 and rebuild the stock by 2032. For the directed red snapper fishery, the rule included:

- 1) Establishment of commercial and recreational quotas;
- 2) a reduction in the commercial minimum size limit from 15 to 13 inches total length (TL);
- 3) a requirement to use of venting tools, dehooking devices, and non-stainless steel circle hooks (when using natural baits) for all reef fish fishery sectors;
- 4) a reduction of the recreational bag limit from four fish to two fish;
- 5) a June 1-September 30 recreational fishing season; and
- 6) a zero red snapper bag limit for captains and crews of for-hire vessels.

Directed fishery management measures were estimated to reduce harvest by 45 percent. The requirement for venting tools, dehooking devices, and circle hooks became effective June 1, 2008.

Also, the recreational fishing season closed on August 5, 2008, when the quota was met, rather than closing on September 30, 2008.

#### *Vermilion Snapper Regulatory Amendment*

NOAA Fisheries Service implemented regulations, effective February 4, 2008, to increase harvest of vermilion snapper. The intended effect of these regulatory changes is to assist the vermilion snapper fishery in achieving the optimum yield. Management measures implemented were:

- 1) Reduction of the commercial and recreational vermilion snapper minimum size limit from 11 inches to 10 inches TL;
- 2) elimination of the 10-fish recreational bag limit restriction for vermilion snapper within the existing 20-fish aggregate reef fish bag limit; and
- 3) elimination of the April 22-May 31 commercial closure for vermilion snapper. In addition, this rule

provided clarification of several landings requirements in the red snapper IFQ program.

*Amendment 29 – Gulf Grouper and Tilefish Individual Fishing Quota (IFQ) Program*

NOAA Fisheries Service made a draft environmental impact statement (DEIS) for Amendment 29 available for public comment in July and August 2008. Actions in the amendment would establish an individual fishing quota program, establish design elements of the program, allow permit consolidation, and establish dual classifications to the shallow water and deepwater management units for speckled hind and warsaw grouper. Design elements of the IFQ program include: Restrictions on initial IFQ share distribution; distribution of shares proportionately among eligible participants; establishment of species-specific share types, with allowance for multiuse allocation; establishment of share caps and an annual allocation cap; methods to adjust allocation among IFQ shareholders; establishment of a formal appeals; establishment of cost recovery fees and fee collection and payment requirements; and methods to designate specific landing sites. A referendum was conducted in December 2008 and 81 percent of the voters approved the IFQ program.

*Amendment 30A to the Reef Fish Fishery Management Plan (Greater Amberjack and Gray Triggerfish)*

The Gulf of Mexico greater amberjack and gray triggerfish stocks are overfished and undergoing overfishing. Although the greater amberjack stock has been under a rebuilding plan since 2003, it is not recovering as projected. Action was necessary to end overfishing, and adjust total allowable catch and harvest controls to bring the rebuilding plan back on course for recovery by 2012. Action is necessary for gray triggerfish to set TAC and harvest controls to end overfishing, to set management targets and thresholds, and to set a rebuilding plan. A final rule implementing these actions was published on July 3, 2008, effective August 4, 2008.

*Amendment 30B to the Reef Fish Fishery Management Plan (Gag and Red Grouper)*

Amendment 30B includes actions to end overfishing of gag, increase red grouper harvest, and establish sector specific annual catch limits and accountability measures for these two species. NOAA Fisheries Service received this amendment from the Council for review and possible implementation by the Secretary in August 2008.

*Reef Fish Interim Rule:* Because gag are undergoing overfishing, the Council requested NOAA Fisheries

Service implement an interim rule to apply harvest restrictions for gag and other reef fish species undergoing overfishing until the actions in Amendment 30B can be implemented. The interim rule; was published on December 2, 2008, and will become effective on January 1, 2009.

*Amendment 31 to the Reef Fish Fishery Management Plan*

Recent SEFSC analyses of data collected by observers aboard reef fish vessels indicate the number of loggerhead sea turtle takes authorized in the 2005 biological opinion on the bottom longline component of the reef fish fishery in the Gulf of Mexico has been exceeded. In response, in October 2008, the Council began development of Amendment 31 with actions intended to reduce the number of sea turtle takes in this component of the reef fish fishery. Actions under consideration by the Council include:

- 1) Modifying gears and baits;
- 2) area, season, and depth restrictions;
- 3) effort reductions through a longline endorsement program; and
- 4) increased use of observers or electronic monitoring to close the fishery once a sea turtle take threshold is projected to be exceeded.

*Quota Monitoring*

The deep-water grouper (yellowedge, speckled hind, snowy, warsaw, and misty) and tilefish commercial fisheries were closed on May 10, 2008. Both were subsequently reopened for 10 days on November 1, 2008, because the quotas had not yet been reached. Final landings for both fisheries were approximately 106 percent of the quotas.

Neither the shallow-water grouper (red grouper, gag, black grouper, red hind, rock hind, yellowfin, yellowmouth, and scamp) commercial fishery or the red grouper commercial fishery reached its quota during 2008.

**Coastal Migratory Pelagics Fisheries: King and Spanish Mackerel**

No new regulatory actions were implemented during 2008 regarding coastal migratory fishes in the Gulf of Mexico.

*Quota Monitoring Fishing Year 2007-2008*

- The commercial gill net fishery for king mackerel in the southern Florida West Coast subzone closed on February 5, 2008.
- The commercial hook-and-line fishery for king mackerel in the Florida East Coast subzone closed on February 21, 2008.

- The commercial hook-and-line fishery for king mackerel in the Florida West Coast southern subzone had the trip limit reduced to 500 lbs per day on March 22, 2008, and did not close.
- The commercial hook-and-line fishery for king mackerel in the Florida West Coast northern subzone had the trip limit reduced to 500 lbs per day on December 27, 2007, but did not close.
- The commercial fishery for king mackerel in the western zone of the Gulf of Mexico did not close.
- The commercial hook-and-line fishery for Spanish mackerel in the Gulf of Mexico did not close.

### **Generic Aquaculture Fishery Management Plan (FMP)**

The Council finalized this FMP in 2008 to establish a regional permitting process for regulating and promoting environmentally-sound and economically-sustainable aquaculture in the Gulf of Mexico exclusive economic zone, consistent with the goals of the Magnuson-Stevens Fishery Conservation and Management Act.

### **PROTECTED RESOURCES DIVISION**

#### *Biological Opinions*

- Completed a biological opinion for the Jacksonville District COE regarding the Fort Pierce City Marina Reconfiguration Project in Indian River Lagoon, St. Lucie County, Florida, and its impact on Johnson's seagrass.
- Completed a biological opinion for the Jacksonville District COE regarding the Dredging Project in Boca Inlet, Boca Raton, Palm Beach County, Florida, and its impact on the green sea turtle.
- Completed a biological opinion for the Jacksonville District COE regarding the construction of a multi-family residential docking facility in Tequesta, Martin County, Florida, and its impact on Johnson's seagrass.
- Completed a biological opinion for the Jacksonville District COE regarding the proposed construction of a boardwalk and docking facility in Martin County, Florida, and its impact on Johnson's seagrass.
- Completed a biological opinion for the Jacksonville District COE regarding the proposed reconstruction of Shore Protection Dune (Reach 8) in Palm Beach County, Florida, and its impact on loggerhead, leatherback, hawksbill, Kemp's ridley, green sea turtles, smalltooth sawfish, elkhorn coral, and staghorn coral.
- Completed a biological opinion for the Jacksonville District COE regarding the proposed installation of a concrete breakwater and dredging project in eastern Palm Beach County, Florida, and its impact on Johnson's seagrass.
- Completed a biological opinion for the Jacksonville District COE regarding proposed dock construction and dredging project in Broward County, Florida, and its impact on Johnson's seagrass.
- Completed a biological opinion for the Jacksonville District COE regarding proposed a 10-year beach nourishment permit to restore and maintain a portion of Brevard Mid-Reach in Brevard County, Florida, and its impact on green sea turtles.
- Completed a biological opinion for the Jacksonville District COE regarding the proposed dock construction in Hollywood, Broward County, Florida, and its impact on Johnson's seagrass.
- Completed a biological opinion for the Jacksonville District COE regarding the proposed dock construction in Palm Beach Gardens, Palm Beach County, Florida, and its impact on Johnson's seagrass.
- Completed a biological opinion for the Jacksonville District COE regarding proposed construction of a residential structure over the Indian River in Martin County, Florida, and its impact on Johnson's seagrass and its designated critical habitat.
- Completed a biological opinion for the Jacksonville District COE regarding proposed seawall repair and concrete dock construction in Miami-Dade County, Florida, its impact on Johnson's Seagrass.
- Completed a biological opinion for the Jacksonville District COE regarding proposed dock construction in Miami-Dade County, Florida, its impact on Johnson's seagrass, and its designated critical habitat.
- Completed a biological opinion for the Jacksonville District COE regarding proposed construction of Community Maritime Park in Pensacola, Escambia County, Florida, and its impact on Gulf sturgeon critical habitat.
- Completed a biological opinion for the Jacksonville District COE regarding proposed demolition and reconstruction of the hurricane-damaged Navarre Beach Fishing Pier in Navarre Beach, Santa Rosa County, Florida, and its impact on Gulf sturgeon, Gulf sturgeon critical habitat and sea turtles.

- Completed a biological opinion for the Jacksonville District COE regarding the proposed action to restore, stabilize, and nourish five miles of beach on the south side of Santa Rosa Island with Eglin AFB, Florida, and its impact on Gulf sturgeon critical habitat.
- Completed a biological opinion for the Eglin Air Force Base regarding the effects of Advanced Littoral Reconnaissance Technologies Testing at Eglin AFB, Florida, and its impact on sea turtles and critical habitat.
- Completed a biological opinion for the USAF regarding the Biological Survey of the Trident Submarine Basin and adjacent marine waters of Port Canaveral, Florida, and its impact on loggerhead, Kemp's ridley, and green sea turtles, and smalltooth sawfish.
- Completed a biological opinion for the Mobile District COE regarding proposed maintenance dredging operation in East Pass, at Destin, Florida, and its impacts on Gulf sturgeon critical habitat.
- Completed a biological opinion for the Federal Highway Administration on the project Flagler Memorial Bridge Project in the city of West Palm Beach, Palm Beach County, Florida, and its impact Johnson's seagrass.
- Completed a biological opinion for the Florida Keys National Marine Sanctuary Permit to Dr. Kimberly Ritchie to Conduct Research Activities on Acropora.
- Completed a biological opinion for the Florida Keys National Marine Sanctuary Permit to Ms. Meaghan Johnson to Conduct Research Activities on "Large Scale Coral Bleaching and Disease Response Survey, and Organismal Measures of Resilience in the South Florida Reef Tract," and its impact on staghorn coral.
- Completed a biological opinion for the New Orleans District OE regarding the proposed Mississippi River Gulf Outlet and Lake Borgne Wetland Creation and Shoreline Protection Project in Lake Borgne, St. Bernhard Parish, Louisiana, and its impact on Gulf sturgeon critical habitat.
- Completed a biological opinion for the Florida Keys National Marine Sanctuary Permit to Dr. William Fitt to collect elkhorn and staghorn corals in the Florida Keys.
- Completed a biological opinion for the Florida Keys National Marine Sanctuary to Dr. Margaret Miller to "Collect 100 Fragments of Staghorn Coral for the Aquarius Coral Restoration and Resilience Project."
- Completed a biological opinion for the Mobile District COE regarding the proposed Deer Island Restoration Project to restore the western beach of the island and renourish the southern shoreline in Mississippi Sound off the Coast of Mississippi, and its impact on Gulf sturgeon critical habitat.
- Completed a biological opinion for the Jacksonville District COE regarding the proposed dredging project in Lake Worth Lagoon, Manalapan, Palm Beach County, Florida, and its impact on Johnson's seagrass, smalltooth sawfish, loggerhead, Kemp's ridley, hawksbill, leatherback, and green sea turtles.
- Completed a biological opinion for the U.S. FWS regarding the proposed "5-year Funding (2008-2012) of the Texas Parks and Wildlife Department's Fishery-Independent Sampling Program Through the Sport Fish Restoration and State Wildlife Grant Programs," and its impact on loggerhead, Kemp's ridley, hawksbill, and green sea turtles.
- Renewed the Florida Fish and Wildlife Conservation Commission's Endangered Species Act Section 6 Cooperative Agreement.
- Renewed the Texas Department of Natural Resources' Endangered Species Act Section 6 Cooperative Agreement.
- Renewed the Louisiana Department of Natural Resources' Endangered Species Act Section 6 Cooperative Agreement.
- Issued several authorizations to fish with a modified Georgia Jumper Turtle Excluder Device to test a method of improving shrimp retention efficiency in waters off Florida.
- Registered approximately 4,975 fishermen under the Marine Mammal Authorization Program.
- Launched the Dolphin SMART program in Alabama, with sponsoring partners, and continued implementation of the program in Key West, FL with an annual training workshop. There are currently five commercial tour operators as recognized Dolphin SMART participants.
- Conducted two sessions on dolphin conservation and the importance of responsible viewing at the 2008 Watchable Wildlife Conference in Orange Beach, AL.
- Created and designed, with sponsoring partners, an animated video showing a dolphin addicted to being illegal fed by humans to use as an innovative educational tool conveying the harm feeding causes dolphins, as well as how the public can help.

- Mailed educational packets to all commercial tour operators in Orange Beach, AL; Louisiana; Panama City, FL; and the central west coast of Florida 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.
- Conducted outreach visits to commercial operators in Orange Beach, AL to remind them that feeding and harassment of wild dolphins is illegal under the MMPA's implementing regulations.
- Conducted workshops in Louisiana and Mississippi to identify ways to build capacity throughout the Gulf of Mexico to better manage protected/endangered species of marine mammals and enhance marine mammal stranding response.
- Issued several Stranding Agreements authorizing participation in the National Marine Fisheries Service Marine Mammal Health and Stranding Response Program, Southeast Region Stranding Network.
- Conducted workshops in the panhandle of Florida, Mississippi, Louisiana, and Texas to train marine mammal stranding responders how to identify signs of human interaction (e.g., fishery interaction, vessel strike) and conduct necropsies of stranded marine mammals.

### **HABITAT PROTECTION**

The Habitat Conservation Division (HCD) used authorities from federal law and Executive Orders to conserve protect and restore habitats that support managed fish stocks, protected resources, and healthy ecosystem functions in the southeastern U.S. To accomplish these objectives, HCD applies its authorities to manage and influence the outcome of activities 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 project and permit reviews and EFH consultations involving federal programs, pre- and post-application planning, federal projects affecting habitat, National Environmental Policy Act (NEPA) consultations, ecosystem planning, partnerships and coordination with others (e.g., fishery management councils and marine fisheries commissions), coordination between science and management, 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 fishery

species. Increasingly, HCD is becoming 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 and Southeast/Caribbean Regional Collaboration Teams. The HCD accomplished its missions through personnel stationed in the SERO and seven field offices in key locations throughout the region where interaction with federal, state, and local officials; private sector; and interested citizens occurred frequently. Consultation services were provided through field inspections, meetings, public hearings, and document review. Recommendations were provided to sequentially avoid, minimize, and offset adverse impacts to EFH and other fishery habitats. During 2008, the HCD:

- Reviewed over 3200 individual proposals to construct in coastal waters or wetlands.
- Provided pre-consultative technical assistance to over 150 projects.
- Recommended measures to protect living marine resources on over 275 proposals, which included detailed conservation recommendations on 150 EFH consultations initiated by federal action agencies.
- Completed reviews over 50 NEPA actions.
- Participated in activities associated with mitigation planning and habitat restoration unrelated to other habitat programs and activities detailed here. The majority of this work was related to federal regulatory programs. Considerable effort was devoted to fulfilling requirements related to processing applications, permits and licenses for liquefied natural gas (LNG) facilities in the southeastern U.S. In 2008, HCD provided technical assistance and review and offered EFH conservation recommendations on a number of both open loop and closed loop LNG projects in various stages of the permitting and licensing process. We also served 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 activities related to the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA, also known as the Breaux Act). During FY08:
  - Engineering and design activities continue for the following barrier island

- restoration projects in the Barataria basin (Pelican Island - \$33 million and 325 acres; and Scofield Island - \$32 million and 275 acres). Received approval from the CWPPRA Task Force to complete preliminary design efforts for the Scofield Island project, including estimated project costs that have significantly increased.
- Successfully transferred construction of two NOAA Fisheries Service sponsored projects to the State of Louisiana's Coastal Impact Assistance Program. Both the East Grand Terre Island and Rockefeller Refuge Shoreline Protection projects completed full engineering and design under the CWPPRA program; however, construction funds had not been approved for either project due to program funding limitations. The state anticipates constructing the complete East Grand Terre project and some test sections of the Rockefeller Shoreline protection project this year.
  - The Bio-Engineered Oyster Reef Demonstration Project was approved for design and construction at a total cost of \$1.9 million. The purpose of this project is to 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. The project approval consists of design, construction and post-construction monitoring.
  - Initiated construction of the Pass Chaland to Grand Bayou Pass project. When completed, almost 300 acres of saline marsh, beach and dune will have been created and restored along two miles of Gulf of Mexico shoreline at a cost of \$34 million.
  - Completed planning activities for the Grand Liard Marsh and Ridge restoration project.
  - NOAA Fisheries also continued assisting the Corps of Engineers with hurricane recovery and protection efforts by providing 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) partnered with the Galveston Bay Foundation and the National Fish and Wildlife Foundation to implement small landowner living shoreline projects in Galveston Bay. Also under CHPP, a habitat mapping and prioritization project was initiated with the Mobile Bay National Estuary Program, Coastal Services Center, and the Office of Habitat Conservation.
  - Participated on SERO Interdisciplinary Planning Teams providing habitat information and EFH reviews during the development 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.
  - Through formal agreement with the Florida Department of Transportation, staff was assigned to work closely with that agency throughout the bridge and highway project planning process. This directed assignment of staff ensured that project delays were minimized and ensured early consideration of measures to conserve NOAA Fisheries Service-trust resources.
  - Participated in ecosystem planning activities through active membership in the Southeast Aquatic Resources Partnership (SARP). SARP is a collaboration of 14 states, the U.S. Fish and Wildlife Service, NOAA Fisheries Service, the Gulf States and Atlantic States Marine Fisheries Commissions, the Gulf and South Atlantic Fishery Management Councils, non-governmental organizations such as The Nature Conservancy, and business and recreational groups. The SARP was organized with the goal to protect, conserve, and restore aquatic resources including habitats throughout the Southeast, for the continuing benefit, use, and enjoyment of the American people. In 2008, SARP completed and adopted the Aquatic Habitat Plan, which will be applied by the SARP partners to implement the National Fish Habitat Initiative in the southeastern U.S. The Aquatic Habitat Plan will help identify and prioritize habitat conservation and restoration opportunities and will focus stewardship efforts on aquatic habitats by applying an ecosystem-based, watershed approach to conservation.
  - Participated in ecosystem planning activities through active membership in other 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.

- Participated in the Gulf of Mexico Alliance by representing the NOAA Fisheries Service, Southeast Region on the Alliance Federal Work Group and on the Habitat Conservation and Restoration Team. The Gulf of Mexico Alliance was formed in 2004 to establish a state-led, region-wide, cross-boundary collaborative approach among the Gulf coastal states of Texas, Louisiana, Mississippi, Alabama and Florida to enhance joint efforts to ensure the long-term health of the Gulf ecosystem, economic prosperity, and resiliency of coastal communities.
- Aggressively engaged in outreach, disseminating habitat conservation information 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 interagency coordination; and
  - ♦ Responding to requests for information from private citizens, news media, and local, state, and federal agencies.

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

In 2008, 94 grants and cooperative agreements totaling \$32,457,712 were awarded to states, universities, non-profit/profit institutions, and individuals. Three fishery management councils in the Southeast U.S. received a total of \$6,449,288 in 2008 to conduct fisheries management activities in accordance with the Magnuson-Stevens Fishery Conservation and Management Act:

- The Southeast Area Monitoring and Assessment Program (SEAMAP) - \$3,716,304
- The State-Federal Cooperative Fisheries Statistics Program - \$1,062,419
- The Anadromous Fisheries Program - \$104,364
- The Interjurisdictional Fisheries Program - \$961,893
- Atlantic Coastal Fisheries Cooperative Management Act Program - \$742,428
- Atlantic Coastal Cooperative Statistics Program - \$171,844
- The Marine Fisheries Initiative (MARFIN) Program - Nine new awards totaling \$1,178,876

and seven previous multi-year awards were funded totaling \$885,716.

- The Saltonstall-Kennedy (S-K) Grant Program – four grants totaling \$504,724 were awarded.
- The Cooperative Research Program - \$1,279,629 was awarded via seven grants.
- Unallied Science Program - \$4,044,098
- Unallied Industry Projects - \$1,140,601
- Cooperative Science and Education Project - \$245,000
- The Gulf States Marine Fisheries Commission received \$5,558,005 to coordinate activities of the Fisheries Information Network.
- South Carolina Department of Natural Resources was awarded \$811,178 for work on the Marine Resources Monitoring, Assessment, and Prediction (MARMAP) program.
- Two Congressionally identified awards totaling \$3,601,345 were implemented.

#### **SOCIO-ECONOMICS PROGRAM**

The SERO Fisheries Social Science Branch provided review, assessment, and/or authorship services for 12 Gulf of Mexico fishery federal management plans, amendments, and rules including the Aquaculture FMP, Reef Fish Amendment 27/Shrimp Amendment 14 (red snapper TAC and shrimp bycatch), Vermilion Snapper Regulatory Amendment, Reef Fish Amendment 29 (grouper LAPPs), the Gulf Grouper IFQ Referendum, Reef Fish Amendment 30A (gray triggerfish and greater amberjack), Reef Fish Amendment 30B (gag), Reef Fish Amendment 31 (bottom reef fish longline gear), VMS rule, the BRD testing protocol and decertification rules, the critical habitat designation for elkhorn and staghorn corals, and the critical habitat designation for smalltooth sawfish. Participation continued on technical work groups, panels, and committees as part of the GMFMC Socioeconomic Panel, the GMFMC Ecosystem Management Science and Statistics Committee, and the GSMFC Socioeconomic Workgroup. Other activities in 2008 included:

- Conducted post-hurricane recovery fieldwork in Louisiana and Mississippi.
- Provided technical monitoring services to research investigations on sequential license buy-back programs, and a commercial shrimp fishery supply model.
- Authored assessments of the fishing community impacts of Hurricane Katrina (in Mitigating Impacts of Natural Disasters on Fisheries Ecosystem, American Fisheries Society; and Our Living Oceans, NMFS).



- Monitored a contract for the development of the shrimp vessel gear form database and data entry.
- Assisted SEFSC in the development of a shrimp vessel cost and earnings survey.
- Authored report on the economic effects of the early closure of the 2008 recreational red snapper fishery.

# **G**ULF OF MEXICO FISHERY MANAGEMENT COUNCIL

*Dr. Steve Bortone, Executive Director*

## **2008 Activities and Accomplishments**

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 nonvoting 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)**

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)**

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)**

Biologists who are trained in the specialized field of population dynamics, and who participate in the stock assessment process.

### **Socioeconomic Panel (SEP)**

Sociologists, anthropologists, and economists who advise the Council of social and economic impacts or conditions.

The AP and SSC membership review process is conducted every two years to fill vacancies on panels and committees. The Council's next round of appointments will not occur until 2009.

### **FMPs**

In 2008, 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 2008. 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**

The Gulf Council held a series of public hearings for Reef Fish Amendment 29, which proposes to rationalize effort and reduce overcapacity in the commercial grouper and tilefish fisheries as a means to achieve and maintain optimum yield.

The Council, at its August meeting, requested NOAA Fisheries initiate a referendum seeking approval for the individual fishing quota (IFQ) program outlined in Amendment 29 for the Gulf grouper and tilefish fisheries. The referendum was conducted in December 2008.

The Council voted to submit Amendment 30A, which

provides rebuilding programs for greater amberjack and gray triggerfish, to NOAA Fisheries for approval and implementation. The Amendment became effective August 4, 2008.

The Council also continued developing Reef Fish Amendment 30B, which provides a rebuilding plan for gag and allows for the co-management of red grouper, which is not overfished or subject to overfishing.

Eight public hearings for Amendment 30B were held in the first quarter of 2008, and in August, the final document was approved by the Council and submitted for review and implementation.

Finally, the Council received an update on Reef Fish Amendment 28 (Grouper Allocation).

### **Red Drum**

The Ad Hoc Review Panel for Red Drum met to consider what is necessary to carry out a stock assessment on red drum. The Management Committee reported to the Council the review panel's conclusions, and the SEDAR Steering Committee agreed to hold the red drum stock assessment.

The SSC convened in July to review the terms of reference for the red drum benchmark assessment. The terms of reference were modified by the SSC and the Council, but were not approved due to the lack of data for a Gulf-wide assessment of the offshore stock. The benchmark assessment was delayed.

### **Coastal Migratory Pelagics**

The Council convened its Scientific and Statistical Committee (SSC) to review the terms of reference for the Southeast Data, Assessment, and Review for king mackerel (SEDAR 16) and to make recommendations in that regard. The Council approved those recommendations and the SEDAR 16 Data Workshop, Assessment Workshop and Review Workshops were all held in 2008.

The SSC met again to review the results of SEDAR 16 and provide recommendations to the Council. As a result, the Council initiated the development of 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) and include changes to these parameters by framework action.

### **Aquaculture**

The Council held a public hearing on its proposed Aquaculture Amendment in February 2008. Several changes were made to the document, including adding an action for biological reference points and status determination criteria. The Council also modified the Generic Aquaculture Amendment into an Aquaculture Fishery Management Plan (FMP), and added to it a framework procedure.

Additional public hearings were held, and the Council approved the new framework procedure. Final action on the FMP is expected in January 2009.

### **Spiny Lobster**

The Spiny Lobster Advisory Panel met to review a scoping document for Amendment 8 to the Spiny Lobster FMP, which would require a size limit on spiny lobster imported into the U.S.

The Council held a joint scoping meeting with the South Atlantic Fishery Management Council in Islamorada, Florida and, later, a public hearing in Key West, Florida.

The Gulf Council and the South Atlantic Council agreed unanimously to send the amendment to NOAA Fisheries for approval and implementation.

### **Southeast Data, Assessment and Review (SEDAR)**

The Southeast Data, Assessment and Review (SEDAR) Steering Committee met twice in 2007 to review the terms of reference for grouper, discuss research needs and prioritizations, as well as procedural issues, and to review the SEDAR schedule and SEDAR Guidelines modifications.

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.

### **Data Collection**

The Data Collection Committee met in August to review comments on the proposed rule for a National Saltwater Registry, as well as review recommendations made by the Ad Hoc Recreational Red Snapper Advisory Panel, which was formed to evaluate and recommend innovative management strategies for the private and for-hire recreational red snapper fisheries in the Gulf of Mexico.

**Law Enforcement Advisory Panel**

The Law Enforcement Advisory Panel (LEAP) was convened twice in 2008 to review amendments.

**Other**

In early 2008, the Council, in coordination with NOAA Fisheries and Florida Wildlife and Conservation Commission, held its second Grouper Forum to provide stakeholders an opportunity to ask questions about fisheries management and science and provide input on ways communication can be improved among stakeholders and government agencies.

A Council representative attended the International Commission for the Conservation of Atlantic Tunas (ICCAT) Advisory Committee meeting in Silver Spring, Maryland.

Also in 2008, the Council convened the Texas, Florida/Alabama, and Mississippi/Louisiana Habitat Protection Advisory Panels.

**Other meetings include:**

- SEDAR Steering Committee Meeting
- Council Member Orientation
- Numerous IPT Meetings
- SAFMC Liaison
- MARFIN Meeting
- Cooperative Research Program Meeting
- Gulf States Marine Fisheries Commission Meeting
- Islands in the Stream Workshop
- Gulf and South Atlantic Fisheries Foundation Meeting
- Council Chairs/NMFS Budget Meeting
- NMFS Data Workshop for Revising MRFSS

# **U**NITED STATES FISH AND WILDLIFE SERVICE *Douglas J. Frugé, Gulf Coast Fisheries Coordinator*

The U.S. Fish and Wildlife Service (FWS) participated in the Gulf States Marine Fisheries Commission's (GSMFC) spring (Galveston, Texas, March 10-12) and fall (Key Largo, Florida, October 13-16) semi-annual meetings.

Participation included meetings of the Habitat Subcommittee (HC), the Technical Coordinating Committee (TCC), the State-Federal Fisheries Management Committee and the GSMFC Business Sessions. Doug Frugé, Gulf Coast Fisheries Coordinator located in Ocean Springs, Mississippi, represented the FWS at both meetings, and John Huffman of the FWS Galveston (Texas) Ecological Services (ES) Field Office also attended the spring HC meeting.

Besides participation in GSMFC meetings, numerous FWS activities conducted by a number of regional and field offices throughout 2008 contributed to coastal fisheries interests of the five Gulf States and the GSMFC as described below under the major headings of Anadromous Fisheries, Other Coastal Fish and Wildlife Resources, Habitat Protection/Enhancement, Federal Assistance and Public Outreach and Education.

## **ANADROMOUS FISHERIES**

A major focus of FWS efforts in the marine fisheries arena 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.

### ***Anadromous Fish Subcommittee***

Doug Frugé continued serving as chair of the GSMFC Anadromous Fish Subcommittee until his transfer to the FWS Mountain-Prairie region in mid-December and chaired a meeting of the Subcommittee in Apalachicola, Florida on February 13. The Gulf Coast FWCO provided information on a proposed rule change involving Section 7 of the Endangered Species Act to the Subcommittee on August 13 and 15. The Gulf Coast FWCO also reviewed a Federal Register notice on a proposed rule by NOAA Fisheries Service to create a marine recreational fisher registration system and provided an assessment of the implications of this system for management of striped bass in Gulf rivers to the Subcommittee on August 19.

### ***Alabama Shad***

The Alabama shad is an anadromous species native to the northern Gulf of Mexico from the Suwannee to the Mississippi River and historically migrating inland as far as the Ohio and Missouri rivers. Similar to the other two anadromous Gulf of Mexico species, populations of Alabama shad have declined significantly over the course of the 20<sup>th</sup> Century. The most significant remaining spawning population is believed to reside in the Apalachicola-Chattahoochee-Flint (ACF) rivers system in Alabama, Florida and Georgia. During 2006-2008 the Panama City Fish and Wildlife Conservation Office (FWCO) in Florida continued working in conjunction with the Georgia Department of Natural Resources (GDNR), the Florida Fish and Wildlife Conservation Commission (FFWCC), The Nature Conservancy (TNC), U.S. Geological Survey (USGS), NOAA Fisheries and other FWS personnel in continuing development of a draft management plan for Alabama shad in the system. 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 final draft of the plan will be submitted to partners for review in 2009. The plan should serve as a catalyst for Alabama shad restoration throughout the Gulf of Mexico.

### ***Gulf of Mexico Sturgeon***

The Gulf Sturgeon is a subspecies of the Atlantic sturgeon and native to rivers from the Suwannee in Florida to the Lake Pontchartrain rivers of Louisiana and Mississippi. It was listed as threatened under the Endangered Species Act (ESA) in 1991. The Gulf Sturgeon Recovery Plan was developed jointly with the GSMFC also as an interjurisdictional fishery management plan (FMP) in 1995.

In March, the Baton Rouge FWCO in Louisiana hosted a meeting to review, plan and better coordinate Gulf sturgeon recovery activities in the western portion of the species' range, particularly in the Pearl and Lake Pontchartrain river drainages. Participants included representatives of the Louisiana Department of Wildlife and Fisheries (LDWF), USGS, Louisiana State University (LSU), the FWS Louisiana Ecological Services Field Office (ESFO), Louisiana Department of Natural Resources (LDNR), and TNC.

The Baton Rouge FWCO continued providing assistance to the LDWF in 2008 with Gulf sturgeon monitoring efforts in the Pearl and Bogue Chitto rivers. Sampling efforts occurred during March-July and September.

Baton Rouge and Panama City FWCO and FWS Southeast Regional Office personnel attended the annual Gulf Sturgeon Recovery Workshop in Ocean Springs during September 24-26.

The Panama City FWCO spent a limited amount of time in 2008 sampling for Gulf sturgeon in the Alabama, Apalachicola, Brothers, Conecuh, and Ochlockonee rivers and Choctawhatchee and Mobile bays. Other more specific activities focused on Gulf sturgeon recovery included the projects described below.

#### **Gulf Sturgeon Population Survey in the Choctawhatchee River Florida**

The Panama City FWCO conducted the first of a two-year Gulf sturgeon population survey in the Choctawhatchee River during October and November 2007 to coincide with the species' fall migration from freshwater to the marine environment. All sturgeon collected were weighed and measured and each fish was tagged with a Passive Integrated Transponder tag (PIT). Over 50 FWS personnel and volunteers assisted with the survey. The population for just sub-adult and adult Gulf sturgeons was estimated at 2,800 fish. The Panama City FWCO also implanted telemetry tags in 33 adult Gulf sturgeon collected in the Choctawhatchee River as part of a project to document marine and habitat use of Gulf sturgeon on Eglin Air Force Base. That project was coordinated with the Science Applications International Corporation (SAIC).

#### **Documentation of Gulf Sturgeon Spawning in the Apalachicola River Florida**

The Panama City FWCO sampled three hard bottom sites in the Apalachicola River for Gulf sturgeon eggs during April and May. Two-hundred eighty-two Gulf sturgeon eggs were collected. The majority of eggs collected followed decreases in discharge. The egg collections indicated a 41-day spawning period suggesting that multiple females likely contributed to the spawning. Also, telemetry indicated that three different groups of sturgeon moved upstream at different times between March and May further suggesting multiple periods of spawning.

#### **Environmental Threats to Gulf Sturgeon Spawning - Habitat**

During 2008, the Panama City FWCO surveyed 53 miles of the Pea River, Alabama to identify environmental disturbances that may threaten Gulf sturgeon spawning habitat. Threats documented during the survey included sediment runoff from boat ramps, uncontrolled rangeland and pastures and eroded river banks. Landowner lists were developed and prioritized according to the extent of the environmental disturbance. Fifty-five potential threats to Gulf sturgeon spawning habitat were identified. Habitat restoration on two sites where threats to Gulf sturgeon spawning habitats were previously identified in the Choctawhatchee River, Florida are on-going, and slated to be completed during FY 2009.

#### **Striped Bass**

Populations of striped bass in Gulf of Mexico rivers have been considered to be below historic population levels since at least the late 1960s and a coordinated cooperative program among state and federal agencies and the GSMFC to restore fisheries and self-sustaining populations have been on-going since that time. The GSMFC developed an interjurisdictional FMP for striped bass in the Gulf in 1986, and that plan was revised in 2006.

#### **Apalachicola-Chattahoochee-Flint (ACF) Rivers Striped Bass Restoration Technical Committee**

The FWS Panama City FWCO coordinates the efforts of the ACF Rivers Striped Bass Technical Committee (TC), which is composed of representatives of the states of Alabama, Florida and Georgia as well as the FWS. The TC oversees management of interjurisdictional striped bass restoration efforts in the river system. In this coordination role, the Panama City FWCO has assisted the TC in completing and periodically revising a Five-Year Plan for restoration and evaluation of striped bass populations, holding several meetings and conference calls of the TC throughout the year, including the annual *Morone* Workshop, and coordinating multi-agency broodfish collection, artificial spawning, fingerling production and stocking of Gulf race striped bass into the ACF and other Gulf river systems.

Personnel from several FWS offices (Gulf Coast FWCO; Panama City FWCO; Southeast Regional Office (RO), Atlanta, Georgia; Warm Springs Fisheries Technical Center (FTC), Georgia; and Welaka National Fish Hatchery (NFH), Florida) participated in the annual *Morone* Workshop of the Apalachicola-

Chattahoochee-Flint Rivers Striped Bass Technical Committee in Apalachicola, Florida on February 11-12. Representatives of the Gulf Coast FWCO, Panama City FWCO and the FWS Southeast RO participated in a TC meeting in Chattahoochee, Florida on September 16.

### **Striped Bass Fry/Fingerling Production and Stocking**

Through the cooperative efforts of a number of FWS field stations (Welaka NFH; Private John Allen NFH, Mississippi; Warm Springs NFH; Panama City FWCO; and Southeast Region Fisheries Office) as well as the states of Alabama, Florida, Georgia and Mississippi, approximately 2,096,200 Phase I and 133,200 Phase II Gulf race striped bass fingerlings were stocked within the species' historic range in Gulf coastal rivers during the 2008 stocking year (includes early 2009), as part of the multi-agency anadromous striped bass restoration program in the Gulf. Of these fingerlings, NFHs grew and stocked approximately 853,800 (41%) of the Phase I's and 87,600 (66%) of the Phase II's. Welaka NFH was key to this effort in the spawning of broodfish and production of fry used in producing fingerlings.

The Southeast Region Fisheries Office (Fisheries Supervisor Tom Sinclair) continued coordinating and managing efforts to analyze and monitor genetics of Gulf race striped bass broodfish. In 2008, the FWS regional genetics laboratory at the Warm Springs Fisheries Technical Center (FTC) performed genetics screening of Gulf striped bass broodstock. The purpose of the screening is to determine specific genotypes of striped bass being used for hatchery production and subsequent restoration stocking within the ACF and other river systems. Knowledge regarding the specific genotypes of fingerlings being produced is essential in applying genetic tagging procedures and assuring that only Gulf race striped bass are used in restoration stocking efforts. The data are also useful in monitoring genetic composition of the broodstock sources used in the restoration efforts. The RO also continued maintaining a historical database on genetics analyses conducted on striped bass in Gulf of Mexico rivers.

### **Apalachicola River Fingerling Survival/Recruitment Evaluation**

The Panama City FWCO, in cooperation with Welaka NFH, Natchitoches NFH and Warm Springs NFH continued a study begun in 2001 to evaluate the relative contributions of stocked Phase I and Phase II fingerlings and naturally-spawned striped bass to the broodfish population in the Apalachicola River. Since 2001, Phase I fish have been marked with

oxytetracycline (OTC) and Phase II fish with coded wire tags (CWT) or double OTC marks, while natural recruits have no marks or tags. During the spring of 2008 the Panama City FWCO conducted post-stocking assessments of Phase II Gulf striped bass at multiple locations in the Apalachicola River. The study will continue through FY 2009, and a final report will include stocking recommendations.

### **Other Striped Bass Restoration Activities**

The Gulf Coast FWCO delivered presentations on Gulf striped bass restoration on May 9 at a meeting of the Magnolia Fly Fishers in Jackson, Mississippi in cooperation with Larry Nicholson of the Mississippi State University's Institute of Marine Science and on May 16, at the annual Expo held by the Gulf Coast Council of the Federation of Fly Fishers in Lake Charles, Louisiana.

### **Anadromous Fish Habitat Restoration and Protection**

The FWS Ecological Services Field Offices (ESFO) located at: Daphne, Alabama; Jackson, Mississippi; Lafayette, Louisiana and Panama City, Florida implemented numerous aquatic habitat projects and activities within the native ranges of Gulf anadromous fish species during 2008. Although primarily initiated to benefit candidate or ESA listed freshwater mussel and fish species, many of these projects also benefited anadromous fishes through addressing problems related to streambank erosion, habitat degradation resulting from poorly-managed agricultural and silvicultural lands, unpaved roads, and streambed sedimentation. Many of the projects were funded through the FWS Partners for Fish and Wildlife and Coastal programs. Examples of projects in 2008 included the following by the Panama City FWCO and ESFO:

The Sheffield Mill Creek Stream Restoration Project in Early County, Georgia involving completing a temporary sediment retention basin for drainage ditch discharging sediment into the creek;

Providing technical assistance and outreach for the Partners for Fish and Wildlife Program;

A project to identify and prioritize removal of barriers to fish passage within the Northeast Gulf Ecoregion;

Participation in the Spring Creek (Flint River drainage) Watershed Partnership in Georgia to restore water quality in the drainage;

Participation on the Northwest Florida Unpaved Road

Interagency Team which was developed as a Collaborative effort to expedite the design and implementation of unpaved road stream crossing projects, programs, and technological tools needed to ensure the recovery and conservation of aquatic and wetland ecosystem in northwest Florida;

Conducting an aquatic resources threats analysis for the Chipola River in Florida using aerial imagery and land cover data;

Conducting a threats assessment of the Ochlockonee River watershed in Florida to identify and rank areas for restoration of critical habitat for listed species, including two streambank stabilization projects to be completed in 2009 benefitting about 6 stream miles of habitat;

The Econfina Creek Streambank and Riparian Restoration Project at the Patronis Farm in Florida consisting of 3,900 ft of streambank fencing to exclude cattle access, installing an alternative watering source and re-planting one acre of riparian floodplain with native tree species;

A project to stabilize about one mile of unpaved road at Spring Creek Old Mill Acres in Georgia, resulting in reduction of about 79 tons of sediment from going into Spring Creek annually and enhancing about one mile of instream habitat and several acres of riparian corridor;

Identifying and prioritizing road crossing structures that impact streams on and developing an Aquatic Ecosystem Adaptive Management Plan for Eglin Air Force Base, Florida; and

Panama City FWCO's involvement with several partners in the Upper Choctawhatchee River Basin, Alabama to restore habitat by reducing sediment and suspended solids, including three projects currently in design/permitting and targeted for completion in 2009.

### **Improved Fish Passage of Jim Woodruff Lock and Dam**

One of the major threats to anadromous species in the Gulf of Mexico is the prevention of spawning migrations by dams/impoundments on major streams. The Jim Woodruff Lock and Dam (JWLD) on the Apalachicola River in Florida inhibits passage of migratory fish species to spawning and resting areas upstream. A cooperative study among the FWS, USGS, U.S. Army Corps of Engineers (CE), GDNR, FFWCC, and TNC was initiated in FY 2005 to evaluate

the use of the lock for fish passage at JWLD. The objective of this ongoing study is to evaluate fish behavior in and near the lock and to monitor up- and downstream movement to evaluate fish passage opportunities. During each year of the study, sonic tags are being implanted in Alabama shad and Gulf striped bass. Fixed telemetry stations connected to a microprocessor monitor fish behavior near and in the lock. Upstream and downstream movement of fish is being monitored by participating agencies. During FY 2005-2008, Alabama shad passed through the locks at rates varying from 25-64%. Alabama shad passage was optimized when an attraction flow was used. Upstream gates were opened for an extended length of time, and the lock was operated during afternoons. The CE began operating the lock for fish passage in FY 2008, allowing access to over 100 miles of former habitat.

### **OTHER COASTAL FISH AND WILDLIFE RESOURCES**

The Gulf Coast FWCO reviewed and provided comments on the GSMFC's draft Derelict Trap Removal Program Guidelines in February. This program focuses primarily on "lost" crab traps, but potentially encompasses fish traps and other types of similar debris as well. The office also provided comments in March 20 to the GSMFC on a draft letter to the Texas Parks and Wildlife Commission regarding a proposed cap on harvest for gulf menhaden in Texas waters.

In September the Gulf Coast FWCO assisted the Alabama Department of Conservation and Natural Resources, Marine Resources Division with questions regarding applicability of Section 10 of the Endangered Species Act to coastal fisheries and research.

### ***Gulf of Mexico Fishery Management Council***

Doug Frugé represented the FWS at meetings of the Gulf of Mexico Fishery Management Council (GMFMC) and several of its committees at Key Largo, Florida during August 11-14 and at Mobile, AL during October 28-30. Specific committee meetings attended during 2008 included those of the: Administrative Policy; Allocation; Marine Reserves; Habitat Protection; Sustainable Fisheries/Ecosystem; Shrimp Management; joint Reef Fish, Red Drum and Mackerel Management; and Data Collection committees. Doug Frugé also chaired the GMFMC Habitat Protection Committee in Baton Rouge, Louisiana on April 10, but was not able to attend the entire Council meeting due to other commitments. The FWS's involvement with the GMFMC was significantly scaled back during 2008,



due to the retirement of Columbus Brown, Special Assistant for Fishery Management Councils, Commissions and the Gulf of Mexico Program to the Southeast FWS Regional Director. Mr. Brown's position was not replaced by the end of 2008, and staff limitations and priorities within the FWS Fisheries Program precluded extensive involvement with the GMFMC during the year.

### ***Sea Turtles***

The FWS continued providing support for field operations on the eastern Mexico coast to protect the Kemp's Ridley sea turtle nesting habitat located there. There were 17,882 Kemp's Ridley sea turtle nests recorded on the Mexican beaches during 2008, the highest number recorded since the cooperative efforts between the United States and Mexico were established in 1978 to protect the beaches that constitute the major nesting areas for the species. The nesting counts over this time period demonstrate an exponential increase in nests per season.

The Laguna Atascosa NWR continued co-leading a number of partners in the South Texas Sea Turtle Project during 2008. In this program beach patrols are utilized to locate and protect nesting Kemp's Ridley and other sea turtles, nests, and hatchlings on South Padre Island and Boca Chica beaches of south Texas. Secondary objectives include environmental education and public outreach to increase awareness of sea turtle conservation through public hatchling releases, literature, and special programs. In addition, live and dead stranded sea turtles located through this program are documented, retrieved, and transferred to the appropriate organization to assist with National Sea Turtle Stranding and Salvage Network efforts. The South Texas Sea Turtle Project is a cooperative conservation partnership between Sea Turtle, Inc., Laguna Atascosa NWR and Lower Rio Grande Valley NWR. During 2008 daily patrols were conducted by volunteers, interns, and staff from April through mid-July. A total of 53 sea turtle nests, including 52 Kemp's Ridley nests were found through the project in 2008; the other nest was a green sea turtle, only the second ever recorded on South Padre Island since the project began. This was a record year for the number of sea turtle nests found, more than doubling the previous record of 23 nests last year.

### **HABITAT PROTECTION/ENHANCEMENT**

The FWS ESFOs at: Vero Beach, Jacksonville (St Petersburg Sub-Office), and Panama City, Florida; Daphne, Alabama; Jackson, Mississippi; Lafayette,

Louisiana; Houston and Corpus Christi, Texas continued efforts to protect and restore coastal habitats through a variety of activities, many involving review of federal permit applications, consultations involving potential effects on species listed under the ESA, and activities under the FWS Environmental Contaminants and Coastal programs.

Comments were provided by FWS offices to either the GSMFC or GMFMC regarding a number of development activities with potential impacts on coastal and marine fisheries resources. These included:

A pipeline to be constructed in association with the proposed Port Manatee Liquefied Natural Gas facility to be located near Tampa, Florida:

- The proposed Strategic Petroleum Reserve expansion project near Richton, Mississippi;
- The proposed Port Dolphin Liquefied Natural Gas project to be located in the Gulf of Mexico offshore of St. Petersburg, Florida; and
- The proposed Bienville Offshore Energy Terminal, a liquefied natural gas import processing facility to be located approximately 80 miles south of Mobile, Alabama.

The Lafayette ESFO, Louisiana continued representing the FWS on the interagency Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA or Breaux Act) Team in developing and sponsoring wetland restoration projects focused on reducing subsidence and erosion-related wetlands loss in coastal Louisiana. The Lafayette ESFO also participates as the FWS lead in the Louisiana Coastal Area Study with the CE and Louisiana Department of Natural Resources. Numerous other FWS offices, including the Baton Rouge FRO and the coastal National Wildlife Refuges (NWR) in Louisiana were also involved in various aspects of planning or implementing coastal restoration strategies and projects during the year.

### **Oyster Lake Restoration Project**

The Panama City FWCO continued working in partnership efforts to restore Oyster Lake, a 26-acre coastal dune lake near Panama City, Florida that has been hydrologically isolated from the Gulf of Mexico since 1975 by a tidal gate that also prevents movement of estuarine organisms between the lake and Gulf. The structure has resulted in the system becoming predominantly freshwater in nature. The proposed

improvements include constructing four bridges to re-establish connection with the Gulf. Construction of the bridges was scheduled for 2008, but adjacent landowners objected to issuance of the required Clean Water Act Section 404 permit, and it was withdrawn by Walton County. Removal of a culvert at Thompson Road scheduled for 2009 should partially restore connectivity. Full completion of the project would provide fish passage for several fish species, including red drum, flounder, mullet, and spotted seatrout. Eventually, oysters may also be re-established in the lake. As part of this project the Panama City FWCO conducted pre- and post-restoration monitoring of the aquatic community (fish, invertebrates, insects and plants). Monitoring in 2007 and 2008 showed that the fauna was basically freshwater with poor diversity and number of individuals. Comparison monitoring is being conducted in Stalworth Lake, a similar more natural system, which contains a robust diversity of marine species. It is anticipated that Oyster Lake will become more similar to Stalworth Lake in the future after restoration is completed.

#### **St. Vincent NWR Fish Passage Project**

Road construction and other activities have severely altered the natural surface hydrology on St. Vincent NWR in Florida. Several sloughs, marshes and creeks have been blocked, and storm events have washed out roads and culverts, affecting estuarine habitats and blocking natural movement of organisms. The Panama City FWCO provided design and on-the-ground assistance for restoring surface hydrology on the refuge, including installation of new culverts and low-water crossings, removing roadbed material and revegetation of disturbed areas. Approximately 1.5 miles of tidal stream and 100 acres of wetlands were restored.

#### **Black Lake Hydrology Restoration Project**

The Panama City FWCO is collaborating with TNC to restore hydrologic connectivity in Black Lake, a tributary of the Perdido River, Florida. The project is located on TNC's Perdido Preserve and would entail redesigning the access road crossing with a larger structure to restore historic tidal creek flows and protect against rainfall runoff. A land survey of existing conditions was completed with preliminary design plans and cost estimates, and the project should be funded in FY 2009.

#### **Aquatic Invasive Species Management in Gulf of Mexico Drainages**

The Panama City FWCO monitored aquatic invasive species (AIS) in Northeast Gulf of Mexico drainages

during 2008. The purpose of this project was to prevent the introduction and spread of AIS in these rivers and to monitor existing populations. In 2006 the office developed and implemented a Hazard Analysis and Critical Control Point (HACCP) plan to eliminate the potential for transplant of AIS to other drainages by FWS biologists during field work. In 2008 the office continued to implement the HACCP plan and provided technical assistance to the CE in stocking grass carp. Areas surveyed and monitored also included Eglin and Tyndall Air Force bases and St. Vincent NWR. The Baton Rouge FWCO also continued actively monitoring and documenting occurrences of AIS in rivers of south Louisiana during 2008.

#### **Coastal Program**

The Florida and Texas Gulf Coastal programs, through the Jacksonville, Vero Beach, Panama City, Houston and Corpus Christi ESFOs contributed funding and technical assistance to numerous partners for a variety of habitat protection and restoration projects benefiting coastal habitats during the year.

#### ***Gulf of Mexico Program and Gulf of Mexico Alliance***

These two state-led partnership programs coordinated by the Environmental Protection Agency (EPA) have as goals the restoration and sustainability of the entire Gulf of Mexico ecosystem. The FWS has had a substantial history of involvement with the Gulf of Mexico Program (GMP) since its inception in the 1980s and with the Gulf of Mexico Alliance (GMA) since its initiation in 2005. Columbus Brown had been serving as the primary FWS representative to the GMP, until his retirement in early 2008. He had also served as the primary FWS representative on the Federal Workgroup of the GMA. Ms. Linda Kelsey, the FWS Southeast Assistant Regional Director for Fisheries began representing the FWS on both programs following Mr. Brown's retirement.

#### ***Mississippi River/Gulf of Mexico Watershed Nutrient Task Force***

The Mississippi River/Gulf of Mexico Watershed Nutrient (MR/GMWN) Coordination Committee (CC) was formed in 2000 to assist the MR/GMWN Task Force in addressing hypoxia in the northern Gulf of Mexico. The Task Force is coordinated by the EPA. The Gulf Coast FWCO continued representing the FWS on the CC. However, efforts during 2009 continued to consist primarily of keeping other FWS offices in the Southeast and Midwest regions apprised of Task Force activities due to the limited staff time of the Gulf Coast FWCO being occupied by other work. The Task Force

completed an update and revision of the 2001 Gulf Hypoxia Action Plan early in 2008. The Gulf Coast FWCO prepared information on private lands habitat restoration activities by the FWS within the Mississippi River basin and provided it to the CC in January. The information was used to prepare a 2008 Annual Operating Plan to step down the Action Plan. In April the office reviewed and commented on the draft work plan and also reviewed and commented on the FY 2009 Annual Operations Plan in September.

### **National Wildlife Refuges**

A total of 37 NWRs perpetually protect and manage thousands of acres of coastal wetlands in each of the five Gulf States providing 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.

### ***Southeast Aquatic Resources Partnership***

The Southeast Aquatic Resources Partnership (SARP) was established in 2001, in order to better unify joint state and federal agency efforts in addressing the numerous aquatic resource challenges in the southeast region. The SARP is envisioned as functioning similarly to the migratory bird joint ventures, but with a focus on aquatic resources, with habitat protection, restoration and enhancement being a primary focus. The GSMFC became a signatory to the SARP Memorandum of Understanding in 2003. The FWS Southeast Region Fisheries Assistant Regional Director, Linda Kelsey, serves as vice-chair of the SARP Steering Committee. The Gulf Coast FWCO continued to provide advice and support during 2008 to the SARP Coordinator and Steering Committee. Personnel of a number of FWS offices participated in the SARP Steering Committee meeting in Nashville, Tennessee on May 20-21 and in other meetings and conference calls regarding SARP business. With completion of the SARP's Southeast Aquatic Habitat Plan in early 2008, efforts of the SARP began to shift toward implementing the plan during the spring.

### **Water Issues**

The FWS, primarily through the Panama City and Daphne ESFOs, continued working on efforts to determine and protect water needs of aquatic resources in the on-going disputes involving the states of Alabama, Florida and Georgia and various federal agencies on water use and allocations in the Alabama-Coosa-Tallapoosa (ACT) and the ACF river basins. Basin commissions that had been established to resolve

these issues were dissolved in 2004 and efforts at resolution have continued for the most part since that time through court actions and related activities and through informal coordination meetings. The issue of water use in the basin reached a crisis point in the latter half of 2007 when continuing drought conditions resulted in projections that the water level in Lake Lanier on the Chattahoochee River would reach a critically low level in early 2008. The critical nature of the water issues in the region eased somewhat during 2008, however, with return of a more normal rainfall pattern during the latter part of the year

The Gulf Coast FWCO assisted the GSMFC with a draft freshwater inflow brochure that was jointly developed by the GSMFC Habitat Subcommittee and the SARP.

### **FEDERAL ASSISTANCE**

The FWS 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 during 2008. This also included provision of funds to the GSMFC (\$200,000) through an Administrative Grant and funds to the states to coordinate and administer coastal sport fish restoration programs. In addition, grants were also made available to some Gulf States under the Coastal Wetlands, Clean Vessel Act, Boating Infrastructure, Endangered Species, Multi-State Conservation Grant, North American Coastal Grant, North American Wetland Conservation Fund, and State Wildlife Grants (SWG) programs. Funding allocations and brief descriptions of the types of projects funded during federal FY 2008 (October 1, 2007 - September 30, 2008) are described below.

### **Sport Fish Restoration Grants**

In Alabama a total of \$1,304,655 was apportioned to the Marine Resources Division of the Department of Conservation and Natural Resources for marine sport fish restoration activities. Projects included: administering the Sport Fish Restoration program in coastal Alabama; a project to maintain and improve boating access to waters in coastal Alabama, specifically to complete the City of Fairhope breakwater and assist with the completion of Mo's Landing; a project to enhance recreational sport fishing in marine waters through fishery dependent and fishery-independent data collection, public outreach, habitat enhancement, and life-history research, and to maintain and improve facilities and equipment used in the sport fish restoration program; and a project to enhance and restore aquatic habitat for fisheries resources to benefit

sport fish and sport fish anglers in Alabama through surveys to determine where fish attractors or other habitat enhancement might be needed.

A total of \$5,420,837 was apportioned to the FFWCC to carry out marine sport fish restoration activities; note that some of this funding was also applied to efforts on the Florida east coast. Projects included: the Florida Marine Recreational Fishery Statistical Data Collection program to obtain data for fisheries managers to determine trends in relative abundance of juvenile and adult sport fishes, to provide early warning signs of problems or impacts of recent fisheries management decisions, and to obtain age, size, and sex composition data on important recreationally caught species (primarily hogfish, grouper, and snapper), in selected systems throughout Florida with focus on Tampa Bay, Charlotte Harbor, Indian River Lagoon, Apalachicola Bay, Cedar Key, and northeast Florida; investigations into marine gamefish abundance, ecology, and life history to provide management agencies with information on behavior, ecology and life history of Florida's coastal and estuarine fish species (common snook, spotted seatrout, tarpon, and goliath grouper) for stock assessment and development of appropriate management strategies; enhancement of a recreational fisheries component of The Marine Resources Geographic Information System, specifically to expand the project's efforts to characterize the demographics of boaters and boating activity in Collier County; a project to determine the genetic stock structure and geographic extent of genetic stocks for selected Florida marine sportfish species, including Atlantic tarpon, bonefish, common snook, pompano, hogfish, and goliath grouper; a project to monitor the health of Florida's sportfish species, develop species-specific health profiles for recreationally important fishes of Florida, including groupers and snappers, respond to recreational angler concerns, respond to fish kills or disease events, provide technical guidance and support for in-state fish stock enhancement efforts and investigate the effects of chronic exposure to brevetoxins on fish health; a project to identify potential sites for new boating access facilities and facilities in need of renovation, to design, plan, bid, and oversee construction of new and renovated boating access facilities, to maintain existing facilities, assist with the maintenance of waterway markers in manatee enforcement zones, and to coordinate all phases of the boating access program in Florida; an assessment of Florida's marine and freshwater fish hatchery programs; and renovating the existing boat ramp at Sawgrass Recreational Park and providing new boating access facilities on Munyon

Island at John D. McArthur Beach Park.

The LDWF received \$1,635,823 for marine sport fish restoration. Projects funded included: a project to fund the Louisiana Aquatic Education Program to enhance the public's awareness of aquatic resources as related to sport fish in both freshwater and marine areas; conducting stock assessments of Louisiana's important marine finfishes; identifying essential fish habitat in Barataria Bay; investigating sport fish utilization of artificial reefs versus open water habitats in coastal Louisiana; evaluating sport fish use of created wetlands in the Atchafalaya Delta; a project to assess fisheries and habitat in Bayou St John near downtown New Orleans and restore an historic urban sport fishery through increased access by marine organisms to the area; a marine sport fish tagging study; outreach to Louisiana citizens regarding the Sport Fish Restoration Program; and providing technical guidance and environmental review of proposed land and water development projects that have the potential to negatively impact fish and wildlife resources.

A total of \$435,496 was provided to the Mississippi Department of Marine Resources in FY 2008 for marine sport fish restoration efforts. Specific projects included: a project to develop, renovate and maintain public boat ramp facilities for safe access to public waters for boating and fishing throughout Mississippi; a project to evaluate the condition of stocked striped bass populations in Mississippi coastal waters and to enhance a program at the recently acquired Lyman State Fish Hatchery to address future striped bass culture and stocking; coordinating and implementing the Marine Sport Fish Restoration (SFR) Program in Mississippi; a project to increase public awareness of the Marine Sport Fish Restoration Program; coordination, site identification and monitoring of artificial reefs along the Mississippi Gulf coast; continuing the angler cooperative tag and release program for spotted seatrout, cobia, tripletail, and black drum, and coordinating public workshops on fishery research and management procedures in coastal Mississippi; and a project to provide scientific information necessary for the sound management for spotted seatrout, red drum, and selected shark species in Mississippi coastal waters.

The Texas Parks and Wildlife Department was apportioned \$5,158,473 for marine sport fish restoration programs. Specific projects carried out included: a project to monitor trends in landings, relative abundance, and sizes of recreationally important fishes

in the marine waters of Texas; operation and maintenance of the Perry R. Bass Hatchery and Research Station; construction of new facilities as needed, renovation of old facilities as needed, and operation and maintenance of existing facilities on the GCCA/CPL Marine Development Center, which produces marine species to support sport fishing in Texas Gulf coastal waters; operation and maintenance of facilities for ongoing marine sport fish production and research activities at the Sea Center Texas State Fish Hatchery; coordinating and providing administrative support for sport fisheries research at the Perry R. Bass Marine Fisheries Research Station; improving access for boaters and anglers to the Laguna Madre and the Gulf of Mexico by constructing an improved parking lot and access road to service the recently completed Packery Channel Boat Ramp; providing boaters with immediate access to Trinity and East Galveston bays and Double Bayou, by replacing an aged boat ramp and unimproved parking lot facility with a new 2-lane boat ramp and related facilities at Joe Beason County Park; and maintaining existing boat ramp facilities throughout the state in a safe and operational condition.

#### **Coastal Wetlands Grants**

Two states received funding under the Coastal Wetlands Grant Program. The State of Florida received \$520,000 to restore about 300 acres of coastal wetland habitats adversely affected by dragline ditching practices for mosquito control in Volusia County. The State of Texas received \$300,000 for a project to stabilize the Moses Lake shoreline of the Texas City Prairie Preserve and create additional areas for estuarine marsh enhancement, providing protection for up to 150 acres of existing wetlands and approximately 250 acres of coastal prairie habitat.

#### **Clean Vessel Act Grants**

Three states received funding under the Clean Vessel Act Grants. The State of Alabama received \$206,449 to construct/renovate six pumpout facilities in coastal Alabama, conduct outreach/education activities, and cover the cost of grant administration. The State of Florida received \$2,729,277 to construct/renovate 75 pumpout facilities, conduct outreach activities, and cover part of the cost of grant administration. A total of \$270,000 was awarded to the State of Louisiana to construct four pumpouts and one floating restroom, conduct outreach, and cover the cost of grant administration.

#### **Boating Infrastructure Grant Program**

Two states received Boating Infrastructure Program grants in 2008. The State of Mississippi received \$100,000 for a project to construct a slip-to-slip pumpout system at the Bert Jones Yacht Basin in Gulfport. The addition of this system will make it easier, and therefore more likely, that larger transient vessels will discharge sewage in a way that does not cause localized pollution.

A total of \$100,000 was granted to the State of Texas to provide temporary tie-up facilities for transient recreational boaters at Cove Harbor Marina to accommodate a total of 24 vessels.

#### **Endangered Species Grant Program**

Four Gulf States received funding under the Endangered Species Grant Program. The State of Alabama received \$15,000 for a saltmarsh topminnow survey and \$25,171 to monitor manatees in Mobile Bay. The State of Florida received \$19,116 to continue to provide the long-term data necessary to accurately assess nesting activity and nest success trends on 33 Florida beach sites representing the principal sea turtle nesting areas in Florida, which will provide information to land managers to make educated land management planning decisions to ensure the long-term survival of sea turtles in Florida. The State of Louisiana was granted \$14,547 to increase public awareness of manatees in Louisiana waters. A total of \$133,662 was granted to the State of Mississippi, a portion of which was used to conduct post Hurricane Katrina assessment of habitat and movement of juvenile Gulf sturgeon.

#### ***Multi-State Conservation Grant***

The State of Florida received \$468,000 for implementation of the SARP's Southeast Aquatic Habitat Plan.

#### **North American Coastal Grant Program**

The State of Mississippi received \$998,391 for the Gulf Coast Wetlands Restoration and Enhancement Project Phase II, and the State of Texas received \$1,000,000 for the Coastal Prairie Wetlands Restoration/Acquisition Project Phase II.

#### ***North American Wetlands Conservation Fund***

The State of Florida received \$2,000,000 for the North Florida Wetlands Conservation Project Phases II and III.

### **State Wildlife Grants**

The State of Mississippi received a \$183,342 grant to study the habitat characteristics and aspects of the reproductive life history of the saltmarsh topminnow in coastal Mississippi. The project will provide a better understanding of the habitat needs and stresses/threats to the species along the Mississippi coast and, in collaboration with Louisiana, Alabama, and Florida, will assist with developing a regional conservation plan that will outline strategies for increasing the viability of this species along the northern Gulf of Mexico coast. Mississippi also received \$514,574 for other projects, including one to study the population structure and trophic ecology of Alabama shad in the Pascagoula River drainage.

### **PUBLIC OUTREACH AND EDUCATION**

The Baton Rouge, Gulf Coast and Panama City FWCs, as well as the ESFOs, responded throughout the year to numerous telephone and other inquiries from the public for general information and questions on coastal fishing and fish habitats.

The Panama City FWCO provided information, gave presentations, and staffed information booths describing FWS programs to numerous civic and school groups, at environmental outreach events, and festivals such as Earth Day held in Panama City and the Choctawhatchee Estuary Festival which drew over 1,000 visitors. The office also participated in the St. Vincent NWR Open House.

The Gulf Coast FWCO participated in a Career Day on January 19 sponsored by the J.L. Scott Marine Education Center in Ocean Springs, Mississippi. Information was presented about the FWS to a group of approximately 40 high school students from Florida, Louisiana and Mississippi.

On January 31 the Gulf Coast FWCO posted information regarding the Gulf striped bass restoration program on an on-line forum of the Louisiana Fly-Fishing Club, as requested by one of the club's members.

In 2007 the FWS Southeast Region Fisheries Program developed a pilot environmental education program called Biologists in Training (BiT) targeted at elementary school students. Susan Blair, a volunteer with the Gulf Coast FWCO during 2008 prepared materials and delivered several segments of the program to groups of students in coastal Mississippi during the spring. Program materials were also

distributed to several schools in the area. A five-week version of the program was provided to a Cub Scout Pack in Florida by the Panama City FWCO.

Doug Frugé and Susan Blair of the Gulf Coast FWCO helped plan and participated in the annual *Celebrate the Gulf* event held in Pass Christian, Mississippi on March 29. The office staffed an information table at the event and distributed information and talked with participants about endangered and threatened species conservation, focusing primarily on Gulf sturgeon and sea turtles. Many Biologists in Training (BiT) activity booklets were distributed to teachers and other educators at the event.

The Gulf Coast FWCO staffed an information table at an Earth Day event held at the Davis Bayou Unit of the Gulf Islands National Seashore in Ocean Springs, Mississippi on April 19. The focus of the information table was endangered and threatened species conservation, including Gulf sturgeon and sea turtles.

The Panama City FWCO organized an event to celebrate Endangered Species Day. Four 5<sup>th</sup> grade students were chosen to select an endangered or threatened species to learn about and then prepare a presentation for their peers. For three days, the children went to three schools and presented their species programs to the 5<sup>th</sup> grade class. The students learned about the Red-cockaded Woodpecker, Birds-in-a-Nest endangered plant, the Gulf sturgeon and the Loggerhead sea turtle. A poster contest was conducted and five winners were chosen. The winning posters were mounted and protected with laminate and hung in the Panama City Junior Museum for one month.

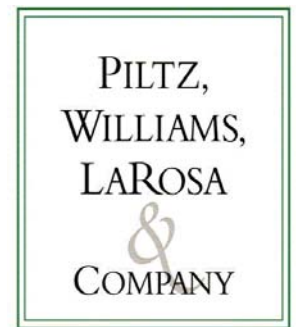
The Panama City FWCO assisted the FFWCC with the 12<sup>th</sup> Annual "Kids Fishing Clinic" held at the Panama City Mariana. The event attracted over 350 youthful anglers who learned at different stations about fish habitat, fishing ethics, knot-tying, casting and water safety. After completing the learning stations, each child received a free fishing rod and reel, tackle box and bait and were put to test the with their newly acquired angling skills in the bay waters.

The Panama City FWCO, along with the NOAA Fisheries Panama City Laboratory participated in the Gulf Coast Community College "Kids College" for three days. The first part of the day was in the classroom, and a slide show introduced the students to fish and invertebrate species likely to be found in the sea grass beds of St. Andrew Bay at Carl Gray Park.

Other discussions included the importance of sea grass beds and estuaries, and different threats that these important habitat types face. The remainder of the time was spent beach seining and using a kick net in the sea grass beds at Carl Gray Park. The students were in two groups, and each group collected specimens and placed them in small pools for identification and more discussion.

**Financial Statements**  
**Gulf States Marine Fisheries Commission**  
**Ocean Springs, Mississippi**  
**December 31, 2008**

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*A Professional Association*



**Gulf States Marine Fisheries Commission**  
Ocean Springs, Mississippi

**Financial Statements**

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December 31, 2008  
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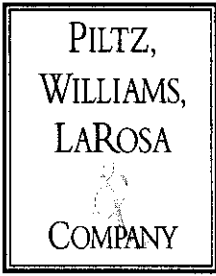
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## Independent Auditors' Report

Board of Commissioners  
Gulf States Marine Fisheries Commission  
Ocean Springs, Mississippi

We have audited the accompanying financial statements of the governmental activities, each major fund, and the aggregate remaining fund information of Gulf States Marine Fisheries Commission as of and for the year ended December 31, 2008, which collectively comprise Gulf States Marine Fisheries Commission's basic financial statements as listed in the table of contents. These financial statements are the responsibility of Gulf States Marine Fisheries Commission's management. Our responsibility is to express opinions on these financial statements based on our audit.

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. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and the significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinions.

As described in Note A, Gulf States Marine Fisheries Commission prepares its financial statements on the modified cash basis of accounting, which is a comprehensive basis of accounting other than accounting principles generally accepted in the United States of America.

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective financial position of the governmental activities, each major fund, and the aggregate remaining fund information of the Gulf States Marine Fisheries Commission, as of December 31, 2008, and the respective changes in financial position-modified cash basis, thereof for the year then ended in conformity with the basis of accounting described in Note A.

In accordance with *Government Auditing Standards*, we have also issued our report dated September 23, 2009 on our consideration of Gulf States Marine Fisheries Commission's internal control over financial reporting and 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.

The management's discussion and analysis and the budgetary comparison schedule and corresponding notes on pages 3 through 5 and 19 and 20, are not a required part of the basic financial statements but are supplementary information required by accounting principles generally accepted in the United States of America. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of the required supplementary information. However, we did not audit the information and express no opinion on it.

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. 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 basic financial statements of Gulf States Marine Fisheries Commission. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated, in all material respects in relation to the basic financial statements taken as a whole.

*Piltz, Williams, LaRose & Co.*

Certified Public Accountants

Biloxi, Mississippi  
September 23, 2009

**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, 2008. 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 \$ 600,297 as of December 31, 2008. As of December 31, 2007, assets exceeded liabilities by \$ 557,558.

By far the largest portion of the Commission's net assets (41%) 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, 2008

The following table presents a summary of the Commission's net assets for the year ended December 31, 2008 and 2007.

	December 31,	
	2008	2007
Current assets	\$ 314,471	\$ 239,696
Noncurrent assets		
Post Employment Health Plan investment account	58,630	58,640
Property and equipment, net of accumulated depreciation	285,672	351,331
Total noncurrent assets	344,302	409,971
 Total assets	 658,773	 649,667
 Current liabilities	 31,906	 41,438
Noncurrent liabilities	26,570	50,671
Total liabilities	58,476	92,109
 Net assets		
Investment in capital assets, net of related debt	245,636	282,987
Unrestricted	354,661	274,571
Total net assets	\$ 600,297	\$ 557,558

**Changes in net assets** – The Commission's total revenues for the year ended December 31, 2008 were \$70,188,020. The total cost of all programs and services was \$70,145,281. The Commission's total revenues for the prior year ending December 31, 2007 were \$37,286,254; and the total cost of all programs and services were \$ 37,421,424. The following table represents a summary of the changes in net assets for the year ended December 31, 2008; and the prior year, in comparison, for the year ending December 31, 2007:

**Gulf States Marine Fisheries Commission**  
**Financial Statements**  
December 31, 2008

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	December 31,	
	2008	2007
Revenues		
General revenues		
Member state appropriation	\$ 112,500	\$ 112,500
Council activities	35,000	35,000
Other income	7,904	6,909
Interest income	8,211	26,031
Rent income	7,200	7,200
Post employment health plan revenue	16,020	3,922
Registration fees	16,785	17,985
Gain (loss) on sale of assets	(677)	(947)
Unrealized gain (loss) on investments	(16,407)	1,316
Program revenues		
Collection & dissemination of recreational and commercial fisheries information network	5,443,822	5,000,727
Interjurisdictional fisheries management	224,236	249,761
Coordination of recreational fisheries programs	207,779	171,334
Collection & dissemination of fishery-independent data and information	189,001	98,970
SEAMAP Supplemental	35,147	9,324
Review and formation of habitat information	48,066	49,317
Study of aquatic nuisances	63,221	53,172
Fish and wildlife support services	74,027	45,221
Billfish research	48,707	299,744
Louisiana seafood exposition	-	150,000
Emergency disaster recovery program I	18,162,600	30,892,363
Emergency disaster recovery program II	45,064,799	-
Aquaculture planning in the Gulf of Mexico	295,600	7,475
Economic data program	99,824	-
Other Grant Income	44,655	48,930
Total revenues	\$ 70,188,020	\$ 37,286,254
Expenses		
Programs	69,895,301	37,135,131
General and administrative	249,980	286,293
Total expenses	70,145,281	37,421,424
Change in net assets	42,739	(135,170)
Net assets, beginning	557,558	692,728
Net assets, ending	\$ 600,297	\$ 557,558



**Gulf States Marine Fisheries Commission**  
**Financial Statements**  
December 31, 2008

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**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, 2008, the Commission had \$285,672, 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 \$65,659. As of December 31, 2007, the Commission had \$351,331 invested in facilities, equipment and automobiles, net of accumulated depreciation.

**Current Portion of Long-Term Debt**

At the end of the current fiscal year, the Commission had outstanding debt of \$58,476 of which \$13,466 is the current portion. The commission has encountered no problems in obtaining financing as needed.

### **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.

### **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, 2008

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<b>Assets</b>	<b>Governmental Activities</b>
<b>Current assets</b>	
Cash in bank	\$ 314,471
<b>Noncurrent assets</b>	
Post Employment Health Plan investment account	58,630
Property and equipment, net of accumulated depreciation	285,672
Total noncurrent assets	<u>344,302</u>
Total assets	<u>658,773</u>
<b>Liabilities</b>	
<b>Current liabilities</b>	
DHHS payable	16,995
Payroll taxes payable	116
Section 125 cafeteria plan payable	1,329
Notes payable, due within one year	13,466
Total current liabilities	<u>31,906</u>
<b>Noncurrent liabilities</b>	
Notes payable, due beyond one year	<u>26,570</u>
Total liabilities	<u>58,476</u>
<b>Net assets</b>	
Investment in general fixed assets, net of related debt	245,636
Unrestricted	354,661
Total net assets	<u><u>\$ 600,297</u></u>

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**  
**Statement of Activities - Modified Cash Basis**  
For the Year Ended December 31, 2008

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	Expenses	Charges for Services	Operating Grants and Contributions	Net (Expense) Revenue and Change in Net Assets <u>Governmental Activities</u>
Functions/Programs				
Primary government:				
Programs				
Collection & dissemination of commercial and recreational fisheries information	\$ 5,437,753	\$ -	\$ 5,443,822	\$ 6,069
Interjurisdictional fisheries management	223,424	-	224,236	812
Coordination of recreational fisheries programs	168,813	-	207,779	38,966
Collection & dissemination of fishery - independent data and information	176,001	-	189,001	13,000
SEAMAP Supplemental	35,655	-	35,147	(508)
Review and formation of habitat information	46,115	-	48,066	1,951
Study of aquatic nuisances	71,988	-	63,221	(8,767)
Fish and wildlife support services	64,539	-	74,027	9,488
Billfish research	48,163	-	48,707	544
Emergency disaster recovery program	18,142,949	-	18,162,600	19,651
Emergency disaster recovery program II	45,047,770	-	45,064,799	17,029
Acquaculture planning in the Gulf of Mexico	295,231	-	295,600	369
Economic data program	99,264	-	99,824	560
Other	37,636	-	44,655	7,019
Total	<u>69,895,301</u>	<u>-</u>	<u>70,001,484</u>	<u>106,183</u>
General and Administrative				
Local administration	214,374	23,985	112,500	(77,889)
Council activities	35,606	-	35,000	(606)
Total	<u>249,980</u>	<u>23,985</u>	<u>147,500</u>	<u>(78,495)</u>
Total primary government	<u>\$ 70,145,281</u>	<u>\$ 23,985</u>	<u>\$ 70,148,984</u>	<u>27,688</u>
General revenues				
Other income				7,904
Post employment health plan revenue				16,020
Gain (loss) on sale of assets				(677)
Interest income				8,211
Unrealized gain (loss) on investments				(16,407)
Total general revenues				<u>15,051</u>
Change in net assets				42,739
Net assets, beginning				<u>557,558</u>
Net assets, ending				<u>\$ 600,297</u>

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**  
**Statement of Assets, Liabilities and Fund Balances-Cash Basis**  
**Governmental Funds**  
December 31, 2008

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	Special Revenue Funds				Total Governmental Funds
	General Fund	EDRP Fund	EDRP II Fund	Other Funds	
<b>Assets</b>					
Current assets					
Cash in bank	\$ 296,641	\$ 2,190	\$ 15,640	\$ -	\$ 314,471
Noncurrent assets					
PEHP investment account	58,630	-	-	-	58,630
Total assets	\$ 355,271	\$ 2,190	\$ 15,640	\$ -	\$ 373,101
<b>Liabilities</b>					
Current liabilities					
DHHS payable	\$ -	\$ 2,190	\$ 14,805	\$ -	\$ 16,995
Payroll taxes payable	116	-	-	-	116
Section 125 cafeteria plan	1,329	-	-	-	1,329
Total liabilities	1,445	2,190	14,805	-	18,440
<b>Fund Balances</b>					
Fund balance - reserved for					
investments	58,630	-	-	-	58,630
Fund balance - unreserved	295,196	-	835	-	296,031
Total fund balances	353,826	-	835	-	354,661
<b>Total liabilities and fund balances</b>	<b>\$ 355,271</b>	<b>\$ 2,190</b>	<b>\$ 15,640</b>	<b>\$ -</b>	<b>\$ 373,101</b>

*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, 2008

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Total fund balances - governmental funds	\$ 354,661
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	285,672
Notes payable are not due and payable in the current period expenditures and therefore are not reported in the funds	<u>(40,036)</u>
Total net assets - governmental activities	<u><u>\$ 600,297</u></u>

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**

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**Statement of Revenues, Expenditures and Changes in Fund Balances - Cash Basis**

**Governmental Funds**

For the Year Ended December 31, 2008

	Special Revenue Funds				Total Governmental Funds
	General Fund	EDRP Fund	EDRP II Fund	Other Funds	
<b>Revenues:</b>					
Member state appropriation	\$ 112,500	\$ -	\$ -	\$ -	\$ 112,500
Other income	7,904	-	-	-	7,904
Interest income	8,211	-	-	-	8,211
Rent income	7,200	-	-	-	7,200
Lease income	537	-	-	-	537
Post employment health plan revenue	16,020	-	-	-	16,020
Grant income	-	18,162,600	45,064,799	6,809,085	70,036,484
Registration fees	16,785	-	-	-	16,785
Unrealized gain on investments	(16,407)	-	-	-	(16,407)
<b>Totals</b>	<b>152,750</b>	<b>18,162,600</b>	<b>45,064,799</b>	<b>6,809,085</b>	<b>70,189,234</b>
<b>Expenditures</b>					
Personal services and benefits	69,060	121,922	39,150	1,075,481	1,305,613
Professional services	545	17,957,275	44,932,896	5,004,739	67,895,455
Other purchased services	53,651	47,464	49,522	525,839	676,476
Supplies and materials	2,798	16,288	26,202	134,449	179,737
Capital outlay	-	-	-	19,707	19,707
Debt service:					
Principal	22,059	1,058	816	4,375	28,308
Interest	3,848	-	-	-	3,848
<b>Totals</b>	<b>151,961</b>	<b>18,144,007</b>	<b>45,048,586</b>	<b>6,764,590</b>	<b>70,109,144</b>
Excess (deficiency) of revenues over (under) expenditures	789	18,593	16,213	44,495	80,090
<b>Other financing sources (uses)</b>					
Proceeds from issuance of debt	-	-	-	-	-
Interfund loans	60,222	(349)	(15,378)	(44,495)	-
Operating transfers in	-	-	-	-	-
Operating transfers out	-	-	-	-	-
<b>Total other financing sources (uses)</b>	<b>60,222</b>	<b>(349)</b>	<b>(15,378)</b>	<b>(44,495)</b>	<b>-</b>
Net change in fund balances	61,011	18,244	835	-	80,090
Fund balance - beginning	292,815	(18,244)	-	-	274,571
<b>Fund balance - ending</b>	<b>\$ 353,826</b>	<b>\$ -</b>	<b>\$ 835</b>	<b>\$ -</b>	<b>\$ 354,661</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, 2008

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Net changes in governmental fund balances	\$ 80,090
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 \$19,707 and depreciation expense amounted to \$84,689.	(64,982)
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.	28,308
Proceeds from the sale of assets are reported in the governmental funds as revenues, but only the gain or loss on the sale of assets is reported in the statement of activities - modified cash basis.	<u>(677)</u>
Change in net assets of governmental activities	<u><u>\$ 42,739</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.

**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.

Additionally, the Commission reports the following non-major governmental fund types:

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
(Continued)

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, 2008 may be shown as follows:

<u>Description</u>	<u>Carrying Amount</u>	<u>Bank Balance</u>
Regular accounts	\$ 314,471	\$ 926,678

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
(Continued)

The bank balances at December 31, 2008 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>676,678</u>
Total bank balances	<u>\$ 926,678</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, 7,403.542 shares		X		\$ 47,753	\$ 47,753
Federal Home Loan Mortgage Bond, due 8/15/22, 5.5%		X		5,002	5,002
Tax-Free Money Market Fund		X		<u>5,875</u>	<u>5,875</u>
Totals				<u>\$ 58,630</u>	<u>\$ 58,630</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 12/31/07	Additions	Deletions	Balance 12/31/08
<b>Restricted</b>				
Vehicles	\$ 84,670	\$ -	\$ -	\$ 84,670
Office equipment	774,422	19,707	13,550	780,579
<b>Totals</b>	<b>859,092</b>	<b>19,707</b>	<b>13,550</b>	<b>865,249</b>
<b>Unrestricted</b>				
Land	20,000			20,000
Buildings	182,817			182,817
Office equipment	59,627			59,627
<b>Totals</b>	<b>262,444</b>	<b>-</b>	<b>-</b>	<b>262,444</b>
<b>Less accumulated depreciation</b>				
Restricted	673,578	73,899	12,873	734,604
Unrestricted	96,627	10,790		107,417
<b>Totals</b>	<b>770,205</b>	<b>84,689</b>	<b>12,873</b>	<b>842,021</b>
<b>Governmental activities</b>				
Net property and equipment:				
Restricted	185,514	(54,192)	677	130,645
Unrestricted	165,817	(10,790)	-	155,027
<b>Totals</b>	<b>\$ 351,331</b>	<b>\$ (64,982)</b>	<b>\$ 677</b>	<b>\$ 285,672</b>

**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	\$ 31,490
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	\$ 3,606
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	\$ 4,940
Interest rate	6.30%
Payment terms	36 monthly payments of \$565
Collateral	2007 GMC Sierra

	Beginning 01/01/08	Additions	Deletions	Ending 12/31/08	Amounts Due Within One Year
<b>Governmental activities</b>					
Notes	\$ 57,918	\$	\$ 21,488	\$ 36,430	\$ 9,860
Capital leases	10,425		6,819	3,606	3,606
Total governmental activities	<u>\$ 68,343</u>	<u>\$</u>	<u>\$ 28,307</u>	<u>\$ 40,036</u>	<u>\$ 13,466</u>

The annual requirements to pay principal and interest on the notes and capital leases outstanding at December 31, 2008 follow:

December 31,	Governmental Activities			
	Notes		Capital Leases	
	Principal	Interest	Principal	Interest
2009	\$ 9,860	\$ 3,508	\$ 3,606	\$ 80
2010	5,269	3,040		
2011	5,643	2,666		
2012	15,658	406		
Totals	<u>\$ 36,430</u>	<u>\$ 9,620</u>	<u>\$ 3,606</u>	<u>\$ 80</u>

**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, 2008 was \$58,702.

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
(Continued)

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**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.

During 2007 one employee separated from service and has qualified for this benefit. The amount payable to a medical savings account on his behalf is \$11,673.

At December 31, 2008 twelve (12) employees would qualify for this benefit. Assuming that all twelve (12) separated from service at that date, and utilizing their current sick leave hours and rates of pay then the computed value is \$63,604. During the current year the Commission invested \$16,020 to continue funding this benefit. This investment is shown on the Statement of Net Assets – Modified Cash Basis at its current market value of \$58,630.

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.



**Section III**  
**Supplemental Information**

**Gulf States Marine Fisheries Commission**  
**Budgetary Comparison Schedule**  
For the Year Ended December 31, 2008

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	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	750		750	7,904		7,904	7,154
Interest income	23,250		23,250	8,211		8,211	(15,039)
Rent income	7,200		7,200	7,200		7,200	-
Lease income			-	537		537	537
Post employment health plan revenue			-	16,020		16,020	16,020
Grant income		190,014,577	190,014,577		70,036,484	70,036,484	(119,978,093)
Registration fees	16,000		16,000	16,785		16,785	785
Unrealized gain (loss) on investments			-	(16,407)		(16,407)	(16,407)
<b>Totals</b>	<b>159,700</b>	<b>190,014,577</b>	<b>190,174,277</b>	<b>152,750</b>	<b>70,036,484</b>	<b>70,189,234</b>	<b>(119,985,043)</b>
<b>Personal costs</b>							
Salaries	48,730	906,492	955,222	49,880	864,911	914,791	(40,431)
Payroll taxes	6,575	72,536	79,111	6,619	63,645	70,264	(8,847)
Health insurance	6,395	254,157	260,552	7,205	238,631	245,836	(14,716)
Retirement expense	3,700	64,185	67,885	3,400	55,302	58,702	(9,183)
Post employment health plan expense	-	-	-	1,956	14,064	16,020	16,020
<b>Totals</b>	<b>65,400</b>	<b>1,297,370</b>	<b>1,362,770</b>	<b>69,060</b>	<b>1,236,553</b>	<b>1,305,613</b>	<b>(57,157)</b>
<b>Maintenance/Operations</b>							
Facilities	18,000	7,200	25,200	18,000	7,200	25,200	-
Office supplies	3,032	78,506	81,538	1,886	113,839	115,725	34,187
Postage	400	21,240	21,640	425	12,601	13,026	(8,614)
Travel - committee	-	297,909	297,909	5,574	225,874	231,448	(66,461)
Travel - staff	10,834	106,020	116,854	13,702	105,235	118,937	2,083
Telephone	1,400	34,824	36,224	982	35,360	36,342	118
Office equipment	1,250	32,800	34,050	-	19,707	19,707	(14,343)
Copying expense	1,200	37,183	38,383	352	29,471	29,823	(8,560)
Printing expense	500	7,477	7,977	225	12,507	12,732	4,755
Meeting costs	14,000	56,336	70,336	10,714	52,672	63,386	(6,950)
Subscriptions & dues	2,350	2,000	4,350	1,901	1,388	3,289	(1,061)
Automobile expenses	800	15,820	16,620	(91)	8,521	8,430	(8,190)
Insurance	1,000	23,300	24,300	717	21,776	22,493	(1,807)
Maintenance	12,700	142,703	155,403	10,498	145,333	155,831	428
Professional expenses	400	282,267	282,667	545	263,895	264,440	(18,227)
Contractual	-	186,625,873	186,625,873	-	67,631,015	67,631,015	(118,994,858)
Utilities	3,000	16,725	19,725	2,094	16,170	18,264	(1,461)
Janitorial	2,350	10,461	12,811	1,469	11,817	13,286	475
Courtesies	4,000	-	4,000	6,001	-	6,001	2,001
Carryover expense	17,084	879,948	897,032	-	-	-	(897,032)
Principal and interest on notes	-	-	-	7,907	6,249	14,156	14,156
<b>Totals</b>	<b>159,700</b>	<b>189,975,962</b>	<b>190,135,662</b>	<b>151,961</b>	<b>69,957,183</b>	<b>70,109,144</b>	<b>(120,026,518)</b>
<b>Excess of revenues over expense</b>							
	\$ -	\$ 38,615	\$ 38,615	\$ 789	\$ 79,301	\$ 80,090	\$ 41,475

**Gulf States Marine Fisheries Commission**  
**Budgetary Comparison Schedule**  
For the Year Ended December 31, 2008  
(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, 2008

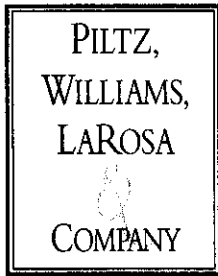
Federal Grantor / Program Title	Catalog of Federal Domestic Assistance	Federal Expenditures
<b>U.S. Department of Interior</b>		
Aquatic Nuisance	15.608	\$ 72,081
Sports Fish Restoration Program	15.605	169,183
Total U. S. Department of Interior		<u>241,264</u>
<b>U.S. Department of Commerce</b>		
Interjurisdictional Fisheries Management Plan	11.407	223,880
Distribution of Bottom Habitat Information in the Gulf of Mexico	11.433	37,636
Recreational Fisheries Information Network (RECFIN) and Commercial Fisheries Information Network (COMFIN)	11.434	5,440,439
Economic Data Program	11.434	99,732
Southeast Area Monitoring and Assessment Program (SEAMAP)	11.435	195,893
SEAMAP Supplemental	11.435	35,712
Billfish Research	11.454	48,163
Emergency Disaster Recovery Program	11.454	18,144,007
Emergency Disaster Recovery Program II	11.454	45,048,586
Habitat Conservation	11.463	46,196
Acquaculture Planning in the Gulf of Mexico	11.472	295,417
Total U. S. Department of Commerce		<u>69,615,661</u>
Total expenditures of federal awards		<u><u>\$ 69,856,925</u></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.

*See Independent Auditors' Report.*

**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, 2008, which collectively comprise Gulf States Marine Fisheries Commission's basic financial statements and have issued our report thereon dated September 23, 2009. 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 control deficiency 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 misstatements on a timely basis. A significant deficiency is a control deficiency, or combination of control deficiencies, that adversely affects Gulf States Marine Fisheries Commission's ability to initiate, authorize, record, process, or report financial data reliably in accordance with generally accepted accounting principles such that there is more than a remote likelihood that a misstatement of Gulf States Marine Fisheries Commission's financial statements that is more than inconsequential will not be prevented or detected by Gulf States Marine Fisheries Commission's internal control.

A material weakness is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that a material misstatement of the financial statements will not be prevented or detected by Gulf States Marine Fisheries Commission's internal control.

Our consideration of internal control over financial reporting was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in internal control that might be 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**

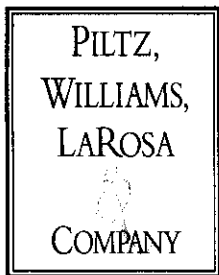
As part of obtaining reasonable assurance about whether Gulf States Marine Fisheries Commission's financial statements are free of material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have 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 23, 2009



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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 the compliance of Gulf States Marine Fisheries Commission with the types of compliance requirements described in the U.S. Office of Management and Budget (OMB) Circular A-133 *Compliance Supplement* that are applicable to each of its major federal programs for the year ended December 31, 2008. 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 requirements referred to above that are applicable to each of its major federal programs for the year ended December 31, 2008.



## Internal Control Over Compliance

The 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 in order to determine our auditing procedures for the purpose of expressing our opinion on compliance, 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.

A *control deficiency* in an entity's internal control over compliance 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 noncompliance with a type of compliance requirement of a federal program on a timely basis. A *significant deficiency* is a control deficiency, or combination of control deficiencies, that adversely affects the entity's ability to administer a federal program such that there is more than a remote likelihood that noncompliance with a type of compliance requirement of a federal program that is more than inconsequential will not be prevented or detected by the entity's internal control.

A *material weakness* is a significant deficiency, or combination of significant deficiencies, that results in more than a remote likelihood that material noncompliance with a type of compliance requirement of a federal program will not be prevented or detected by the entity's internal control.

Our consideration of internal control over compliance was for the limited purpose described in the first paragraph of this section and would not necessarily identify all deficiencies in internal control that might be significant deficiencies or material weaknesses. We did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above.

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, Larson & Co.*

Certified Public Accountants

Biloxi, Mississippi  
September 23, 2009

**Section V**

**Other Items**

**Gulf States Marine Fisheries Commission**  
**Schedule of Findings and Questioned Costs**  
For the Year Ended December 31, 2008

**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. There were no significant deficiencies in internal control over major federal award programs disclosed during the audit.
5. An unqualified opinion was issued on compliance for major programs.
6. The audit did not disclose any audit findings which are required to be reported under Section \_\_\_\_510(a) of OMB Circular A-133.
7. The major programs were: Recreational Fisheries Information Network and Commercial Fisheries Information Network and Economic Data Program – 11.434, Billfish Research and Emergency Disaster Recovery Program I and II – 11.454.
8. The dollar threshold used to distinguish between Type A and Type B Programs was \$2,095,708.
9. The auditee does qualify as a low-risk auditee.

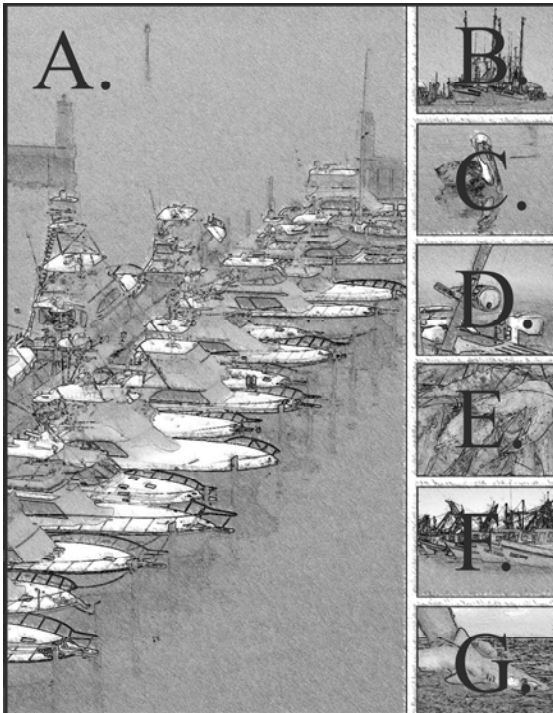
**Section 2 – Findings Related to the Financial Statements**

None

**Section 3 – Findings and Questioned Costs for Federal Awards**

None





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**Gulf States Marine Fisheries Commission  
2404 Government Street  
Ocean Springs, Mississippi, 39564**

