

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

For the Year 2004



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 66-81<sup>st</sup> Congress, 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-Fifth Annual Report  
(2004)

*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 Winners

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 R. Osburn	2004

## Acknowledgements

In submitting this Fifty-Fifth 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-five years could not have been possible without such valued assistance. This acknowledgement is also extended to the directors and staffs of federal, state, and interstate agencies, and to representatives of all organizations and individuals who have contributed to the realization of the objectives of the Gulf States Marine Fisheries Commission.

Respectfully submitted,

Billy Hewes, *Chairman*  
John Roussel, *Vice Chairman*  
Virginia Vail, *Second Vice Chairman*  
Larry B. Simpson, *Executive Director*

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## Commission Roster

### *Commission Officers*

**Chairman: Billy Hewes**

**First Vice Chairman: John Roussel**

**Second Vice Chairman: Virginia Vail**

### *Commissioners*

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

#### ALABAMA

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

Legislator – *Vacant*

Chris Nelson  
Bon Secour Fisheries  
Bon Secour, Alabama

#### FLORIDA

Ken Haddad  
Florida Fish & Wildlife Fisheries  
Commission  
Tallahassee, Florida

Nancy Argenziano  
Florida Senate  
Crystal River, Florida

William Ward  
Tampa, Florida

#### LOUISIANA

James H. Jenkins, Jr.  
Louisiana Department of Wildlife &  
Fisheries  
Baton Rouge, Louisiana

Warren Triche  
Louisiana House of Representatives  
Thibodaux, Louisiana  
Frederic Miller  
Shreveport, Louisiana

#### MISSISSIPPI

William Walker  
Mississippi Department of  
Marine Resources  
Biloxi, Mississippi  
Billy Hewes  
Mississippi Senate  
Gulfport, Mississippi  
Walter J. Blessey  
Biloxi, Mississippi

#### TEXAS

Robert L. Cook  
Texas Parks & Wildlife Department  
Austin, Texas  
Gene Seaman  
Texas Senate  
Austin, Texas  
Governor’s Appointee – *Vacant*

### *Staff*

Larry B. Simpson, *Executive Director*

Ronald R. Lukens, *Assistant Director*

Virginia K. Herring, Executive Assistant  
Nancy K. Marcellus, Administrative Assistant  
Cynthia B. Yocom, Staff Assistant  
Cheryl R. Noble, Staff Assistant  
Madeleine A. Travis, Staff Assistant  
Deanna L. Valentine, Data Entry Clerk  
Gayle E. Jones, Receptionist  
Jason S. Keenum, CPA

David M. Donaldson, Program Manager  
Steven J. VanderKooy, Program Coordinator  
Jeffrey K. Rester, Program Coordinator  
Gregory S. Bray, Programmer/Analyst  
A. Mike Sestak, III, Programmer/Analyst  
Douglas J. Snyder, Survey Coordinator  
Donna B. Bellais, Survey Coordinator  
Joseph P. Ferrer, III, Network Administrator

## Active Committees

Executive Committee.....	Billy Hewes John Roussel Virginia Vail Vernon Minton Mike Ray
Law Enforcement Committee.....	Larry Young, Chairman J.T. Jenkins, Vice 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 .....	Borden Wallace, Chairman
Striped Bass Technical Task Force.....	Doug Frugé, Chairman
Stock Assessment Team .....	Joe Shepard, Chairman
Technical Coordinating Committee.....	William S. Perret, Chairman
TCC Artificial Reef Subcommittee .....	Steve Heath, Chairman
TCC Crab Subcommittee.....	Tom Wagner, Chairman
TCC Data Management Subcommittee .....	Page Campbell, Chairman
TCC Habitat Subcommittee.....	Mark LaSalle, Chairman
TCC SEAMAP Subcommittee .....	Jim Hanifen, Chairman



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

As I was looking over my calendar for the year 2004 to begin writing this piece for the Annual Report, I found several interesting things I was not immediately aware of. In addition to the "routine" and day to day things I had done during the year, I also:

- Attended Commission and Council Meetings
- Testified before Congress at a House Subcommittee on recreational data
- Met with State Legal Councils regarding data
- My youngest daughter graduate from college
- Met with the oyster industry the menhaden industry
- Met with State directors regarding south Florida habitat
- Met with a U.S. Senator and his staff along with our Commission Chairman and two other Commissioners about commission programs
- My nephew received his Master's degree
- Played in a bragging rights softball tournament with my staff, GSMFC vs. Mississippi Department of Marine Resources and Louisiana Department of Wildlife and Fisheries (and we won)
- Did a radio broadcast with Dave Donaldson in Alabama about Commission activities
- Met with Alabama charter boat and other recreational anglers about their constituents concerns
- Held a regional meeting with Dr. Hogarth and the shrimp industry to discuss the future of the fishery

- Participated in an eight (8) Council Chairman and Executive Directors Meetings regarding national management issues
- Reviewed Gulf-wide research proposals and recommended funding of high priority and highly ranked projects
- Reviewed and selected Billfish projects for funding
- Shot a deer
- Sold a house
- And I finally saw LSU beat Alabama in Baton Rouge

Now I bet your thinking, what does all of this have to do with anything? I continue to be thankful for the work the Gulf States Marine Fisheries Commission does in and outside the region towards the better utilization of marine fisheries resources.

I am content with meaningful work and a career that makes a difference. One cannot always see the immediate benefit of their work, but I have a satisfied feeling about what has been done and how it was accomplished.

The Gulf States Marine Fisheries Commission is integrally involved with marine fisheries at all levels. I am very proud of what we do the Commission employees who work so hard to make a difference, as well as our State and Federal partners.

Today, younger, eager, committed and talented individuals are entering this field, so let's all do our part to lead them in the right direction for the betterment of our valuable marine resources.

# **S**PORT FISH RESTORATION ADMINISTRATION PROGRAM

Ronald R. Lukens, Assistant Director

The Gulf States Marine Fisheries Commission (GSMFC) provided administrative support for "Sport Fish Restoration Administrative Program," FWS Grant Agreement No. GS-96-Segment 8. The GSMFC furnished services, qualified personnel and materials, equipment, and facilities as needed to perform required duties.

During the period covered by this report, the Program Coordinator attended and or participated in meetings and 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**

### **Revision of Materials Guidelines**

The TCC Artificial Reef Subcommittee, in cooperation with the Atlantic States Marine Fisheries Commission's Artificial Reef Subcommittee, completed revising the document entitled *Guidelines for Marine Artificial Reef Materials*, which was adopted and published in mid 2004. The revision process began during the meeting held in February 2001. During this reporting period, the members of the two subcommittees conducted final editing exercises to prepare the document for final printing.

### **Artificial Reef Database**

During this reporting period, the GSMFC completed the development of a web-based data entry program, in Beta testing form, through which the states will be able to enter their own artificial reef data in the regional database. In addition, the GSMFC plans to develop a web-based query system that will allow individuals to run custom queries of the database. A demonstration of the data entry program was performed during the May meeting of the Joint Artificial Reef Committee. Final edits, based on comments from the meeting, have been made to the system, and members are expected to begin testing the system by in early 2005. It is hoped that a hands-on workshop to assist state program coordinators with initial data entry will be held during 2005. The GSMFC continues to manage the artificial reef literature database.

### **Fisheries Habitat Activities**

In 1996, the U.S. Congress passed significant amendments to the Magnuson-Stevens Fishery Conservation and Management Act, including provisions to identify, describe, enhance, and protect essential fish habitat (EFH). While the Magnuson-Stevens Act establishes federal fishery management from estuarine waters of the Gulf of Mexico thanks to these removal efforts. Members of the Habitat

policies, fisheries habitat is largely located within state jurisdictional waters, a situation that represents the potential for conflict if there is not close coordination between the federal agencies and the states. Important issues involving the Habitat Program activities include the development of a regional policy on management of submerged aquatic vegetation, a regional policy on management of wetlands, and the development of an annotated bibliography on fishing gear impacts on habitat. This latter document is available on the GSMFC web page. The GSMFC Habitat Subcommittee will be integrally involved in the development and review of the habitat sections of all FMPs being developed by the GSMFC.

At the March 2004 Commission meeting, the Habitat Subcommittee met and discussed potential funding from the U.S. Fish and Wildlife Service for development of Habitat Conservation Plans, hardbottom mapping in the Gulf of Mexico, derelict crab trap activities, and developing an educational web site. Hardbottom mapping was recently completed in the South Atlantic, and the Subcommittee was interested in gathering the data necessary to map hardbottom in the Gulf of Mexico. The Gulf of Mexico Fishery Management Council is establishing fishing gear regulations on certain types of habitat, so this hardbottom mapping project is needed in the Gulf of Mexico. The Subcommittee discussed the status of derelict trap recovery efforts in the Gulf of Mexico as part of the NOAA Community Based Restoration grant that the Commission received. Texas, Louisiana, Mississippi, and Alabama held derelict trap removal days in early 2004. Approximately 11,000 traps were removed

Subcommittee are currently working on a draft of the

habitat section for the Sheepshead Fishery Management Plan currently under development.

As part of the Commission's growing effort in GIS mapping, the Habitat Program Coordinator attended three levels of Microsoft Access training during June. Microsoft Access is a database management program that will help in transforming and managing data before being entered into a GIS. Currently, this training is being used to standardize the trawl times and net sizes in a fishery independent trawl database. This standardization will allow comparisons of catch rates among different vessels and areas in the Gulf of Mexico.

### **Invasive Species Activities**

The Program Coordinator continues to work in conjunction with the National Aquatic Nuisance Species Task Force and the National Invasive Species Advisory Committee 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 of Mexico Regional Panel on Aquatic Invasive Species (Regional Panel).

The GSMFC has continued to update and manage the invasive species website for the Regional Panel. A number of updates have been accomplished during this reporting period. 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 the Invasive Species button. The Program Coordinator has been working on several issues associated with aquatic invasive species, including the development of a list of research priorities, some future considerations for the GSMFC invasive species database, and the development of a strategic plan for the Regional Panel. These issues were discussed during a meeting held in March and were further developed by the end of the project year.

### **Associated Meetings**

- |               |  |
|---------------|--|
| 1/8-9/2004    | Mississippi River Basin Regional Panel meeting   |
| 1/13-15, 2004 | Southeast Aquatic Resources Partnership meeting  |
| 2/10-12/2004  | Joint Artificial Reef Subcommittee meeting with ASMFC  |
| 3/1-5/2004    | Invasive Species Advisory Committee meeting  |
| 3/31-4/1/2004 | Gulf of Mexico Regional Panel on Aquatic Invasive Species meeting  |
| 4/26-29/2004  | Florida Artificial Reef Summit   |
| 5/5-7/2004    | Artificial Reef meeting with the Maritime Administration and the Navy regarding the use of ships as artificial reefs |
| 5/10-12/2004  | Southeast Aquatic Resources Partnership meeting  |
| 8/30-9/3/2004 | Mississippi Invasive Species Rapid Assessment Project (AMRAT)  |
| 9/14/2004     | Regional Panel Early Detection/Rapid Response Work Group meeting   |
| 9/19/2004     | Mississippi Invasive Species Task Force meeting  |
| 9/25-27/2004  | Southeast Aquatic Resources Partnership meeting  |
| 10/3-4/2004   | Florida Invasive Species Working Group meeting   |
| 10/8-10/2004  | Invasive Species Regional Panel meeting  |
| 10/16-17/2004 | Aquatic Nuisance Species Task Force meeting  |

# **A**DMINISTRATION OF THE GULF OF MEXICO REGIONAL PANEL ON AQUATIC INVASIVE SPECIES

*Ronald R. Lukens, Assistant Director*

The Gulf States Marine Fisheries Commission (GSMFC) provided administrative support for "Administration of the Gulf of Mexico Regional Panel On Aquatic Invasive Species," FWS Grant Agreement No. 98210-3-G691. The GSMFC furnished services, qualified personnel and materials, equipment, and facilities as needed to perform required duties.

During the period covered by this report, the Regional Panel Coordinator attended and/or participated in meetings and 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.

## **Task 1: Administrative Support for the Gulf of Mexico Regional Panel on Aquatic Invasive Species**

The Gulf States Marine Fisheries Commission provided staff to maintain an active slate of membership on the Gulf of Mexico Regional Panel. The staff facilitated communication among panel members, planned and coordinated meetings of the Regional Panel, maintained an administrative record of Regional Panel meetings, provided staff support for development of documents, and was responsible for all fiscal management and tracking of funds supporting Regional Panel activities.

The following are meetings and other administrative activities accomplished during this reporting period:

- August 30-September 3, 2004  
Alabama-Mississippi Rapid Assessment in Mississippi Sound
- September 14, 2004  
Regional Panel Steering Committee meeting
- September 30, 2004  
Early Detection/Rapid Response Work Group
- October 19, 2004  
Mississippi Invasive Species Planning meeting
- October 26-27, 2004  
Southeast Aquatic Resources Partnership Meeting – Invasive Species Committee
- November 4, 2004  
Florida Invasive Species Working Group
- November 8-10, 2004  
Gulf and South Atlantic Regional Panel Meeting

- November 16-17, 2004  
ANSTF Meeting

## **Task 2: Liaison Between Regional Panel and Aquatic Nuisance Species Task Force**

The Program Coordinator attended the ANSTF meeting held during this reporting period (see above). The Program Coordinator provided a Regional Panel update at the ANSTF meeting. In addition, the Program Coordinator provided phone, e-mail, and other coordination between the Regional Panel and the ANSTF.

## **Task 3: Logistical and Administrative Support for Gulf of Mexico Regional Panel Committees and Sub-groups**

The Gulf of Mexico Regional Panel currently has several working groups directed toward providing advice and guidance and selected subject matter. These groups require meetings and/or telephone conference calls from time to time, and the Gulf States Marine Fisheries Commission provided staff to assist these working 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. During this reporting period, there were two meetings (see above) and two conference calls.

## **Task 4: Preparation and Presentation of Annual Report**

The Program Coordinator provided a report on the activities of the Gulf of Mexico Regional Panel on Aquatic Invasive Species during the ANSTF meeting scheduled during this project period.

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

*Jeffrey K. Rester, Program Coordinator*

The SEAMAP Spring Plankton Survey took place from May 4 - May 31, 2004. One hundred three stations were sampled from the west Florida shelf to the Louisiana/Texas border. NMFS completed 98 ichthyoplankton stations and Mississippi completed 5 stations. This was the twenty-third year for the survey. The objectives of the survey were to:

- collect ichthyoplankton samples for estimates of the abundance and distribution of Atlantic bluefin tuna larvae
- collect environmental data at all ichthyoplankton stations.

The SEAMAP Summer Shrimp/Groundfish Survey took place from June 2 through July 16, 2004 and 381 trawl stations were sampled during the survey. In addition, NMFS, Mississippi, and Louisiana vessels collected ichthyoplankton data. Fifty-six stations were sampled with bongo and/or neuston nets, as encountered along cruise tracks. This was the twenty-third year for the survey. The overall sampling strategy during the 2004 SEAMAP Summer Shrimp/Groundfish Survey was to work from the eastern Gulf to the Texas/Mexico border. 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. During the Survey, the NOAA Ship OREGON II and R/V TOMMY MUNRO sampled offshore and inshore Gulf waters with 40-ft trawls. Alabama's R/V VERRILL sampled offshore Alabama waters with 40-ft trawls, the R/V PELICAN sampled both Louisiana state waters and offshore waters with 40-ft trawls, and Texas vessels sampled Texas state waters and offshore waters with 20-ft trawls. All vessels took environmental data, including temperature, salinity, oxygen, and chlorophyll at each station. Real-time shrimp data were again produced from the survey. Catches of shrimp and finfish were reported weekly from the survey and plots and catch rates were distributed to interested individuals.

The first fall ichthyoplankton survey to assess abundance and distribution of king mackerel eggs

and larvae occurred in August 1984. No sampling survey was conducted in 1985; however, expanded surveys in 1986-2003 covered Gulf waters from Florida Bay to Brownsville, Texas. In 2004, the Fall Plankton cruise took place from August 31 to September 30. NMFS and Louisiana sampled 101 stations on the west Florida shelf and northern Gulf of Mexico. 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.

The Fall Shrimp/Groundfish Survey was conducted from October 12 - December 12, 2004, from off Mobile, Alabama to the U.S.-Mexican border. Vessels sampled waters out to 60 fm, covering 314 trawl stations, in addition to plankton and 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. NMFS, Mississippi, Alabama, and Louisiana vessels collected ichthyoplankton data at sample sites occurring nearest to half-degree intervals of latitude/longitude. Forty-eight stations were sampled with bongo and/or neuston nets, as encountered along cruise tracks. The Polish Sorting and Identification Center sorted the samples, and the specimens and data were archived at the SEAMAP Archiving Center.

During 2004, SEAMAP began working with the National Coastal Data Development Center to develop an ArcIMS website that allows users to visually display SEAMAP trawl and environmental data. The trawl database was standardized so that the ArcIMS site could display catch per unit effort information between various areas and across years.

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

*Jeffery K. Rester, Program Coordinator*

During 2004, the Gulf of Mexico Fishery Management Council finalized their Essential Fish Habitat Environmental Impact Statement (EFH EIS). The EFH EIS included designating EFH and habitat areas of particular concern (HAPC) and also enacting management measures to reduce fishing gear impacts on habitat. Once the EFH EIS was completed, the Council drafted EFH Amendment 3 to enact the measures detailed within the EFH EIS. EFH Amendment 3 amended all Council FMPs to include preferred alternatives for designating EFH and HAPCs and also enacting management measures to reduce fishing gear impact on habitat from the EFH EIS. EFH was defined as areas of higher species density, based on the 1985 NOAA Data Atlas and a functional relationships analysis for the Red Drum, Reef Fish, Coastal Migratory Pelagics, Shrimp, Stone Crab, and Spiny Lobster FMPs; and on known distributions for the Coral FMP. HAPC were identified as the Florida Middle Grounds, Madison-Swanson Marine Reserve, Tortugas North and South Ecological Reserves, Pulley Ridge, and the individual reefs and banks of the Northwestern Gulf of Mexico (East and West Flower Garden Banks, Stetson Bank, Sonnier Bank, MacNeil, 29 Fathom Bank, Rankin Bright Bank, Geyer Bank, McGrail Bank, Bouma Bank, Rezak Sidner Bank, Alderice Bank, and Jakkula Bank). In an effort reduce fishing gear impacts and protect sensitive habitats, the Council instituted the following measures:

- prohibit bottom anchoring over coral reefs in HAPC (East and West Flower Garden Banks, McGrail Bank, Pulley Ridge, and North and South Tortugas Ecological Reserves) and on the significant coral communities on Stetson Bank
- prohibit use of trawling gear, bottom longlines, buoy gear, and all traps/pots on coral reefs throughout the Gulf of Mexico EEZ (East and West Flower Garden Banks, McGrail Bank, Pulley Ridge, and North and South Tortugas Ecological Reserves) and on the significant coral resources on Stetson Bank
- require a weak link in the tickler chain of bottom trawls on all habitats, and
- establish an education program on the protection of coral reefs when using various fishing gears in coral reef areas for recreational and commercial fishermen.

The Habitat Subcommittee applied for and received a MARFIN grant to map bottom habitat within the Gulf of Mexico. The objective of the project was to create and distribute a digital spatial database of bottom habitats on the continental shelf and slope from the Texas/Mexico border to the southern tip of Florida. The database will be created from the recovery, interpretation, and integration of existing data for this region. The data will be organized spatially in ArcGIS format and will be available via printed document, CD-ROM, and on the web.

In 2003, the Gulf States Marine Fisheries Commission was awarded funding by the NOAA Restoration Center's Community-based Restoration Program to help Alabama, Mississippi, Louisiana, and Texas with removing derelict crab traps from their coastal waters. The primary goal of the community-based derelict trap program was to remove lost and abandoned traps from the water and educate the public on how to prevent unintentional losses of traps in the future. During February through April, 2004, Texas, Louisiana, Mississippi, and Alabama held derelict trap removal days in which the public volunteered to remove derelict traps from coastal waters. During this time, over 750 volunteers representing a multitude of organizations came together to remove 11,478 derelict traps from the coastal waters of Alabama, Mississippi, Louisiana, and Texas. The success of the project was based on innovative partnerships among governmental, environmental, educational, industrial, and recreational and commercial fishing groups. Groups, who in the past were often antagonistic or competing with one another, put aside differences and worked together to achieve a common goal of protecting resources and habitat by removing derelict traps. The 2004 efforts were a major step towards removing the thousands of derelict traps that litter the coastal waters of the Gulf of Mexico and continue to catch and kill crabs, fish, and other species. The Commission's and states derelict trap program project won a second place Gulf Guardian Award in the Government Category. The award was sponsored by the Gulf of Mexico Program who developed the Gulf Guardian awards as a method of recognizing and honoring the businesses, community groups, individuals and agencies, that were taking positive steps to keep the Gulf healthy, beautiful and productive.

During 2004, the Commission and Council became involved in the liquefied natural gas (LNG) issue in the Gulf of Mexico. Due to rising natural gas prices, the U.S. Coast Guard and the Federal Energy Regulatory Commission received a number of applications for onshore and offshore terminals for offloading LNG. All offshore facilities in the Gulf of Mexico proposed to use millions of gallons of seawater per day to regasify the LNG to a gas so it could be pumped through the network of national natural gas pipelines. The use of seawater as a heating agent had the potential to impact marine fish and crustacean stocks through killing their eggs, larvae, and juveniles. Two workshops were held by the National Marine Fisheries Service to formulate guidelines for assessing and quantifying impacts of LNG facilities on marine species. The Commission and Council wrote several letters of concern over these facilities and their potential impacts on marine species.

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

*Steven J. VanderKooy, Program Coordinator*

The IJF Fishery Management Plan development and review program of the GSMFC continued to provide the Gulf States with quality information and recommendations for interstate management of fisheries. Additionally, this information was used continuously by the states in their respective programs. The IJF Program 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 55th Annual Meeting.

During 2004 the IJF Program Coordinator and Staff Assistant were Mr. Steven J. VanderKooy and Mrs. Cynthia B. Yocom, respectively. 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 database. 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.

Task force and committee travel was coordinated and supported through the IJF Program and included the Striped Bass Technical Task Force, the Crab Subcommittee, the Derelict Trap Technical Task Force, the Habitat Subcommittee, the Menhaden Advisory Committee, the Commercial/Recreational Fisheries Advisory Panel, the Sheepshead Technical Task Force, and the Law Enforcement Committee.

The Striped Bass TTF has been reviewing the final draft of the FMP and plans to meet to finalize it later this fall. The IJF staff continued to work on format and final wrap up of the plan for the TTFs action. The FMP will be presented to the Commission's Technical Coordinating Committee after the October meeting for their review in early 2005.

The Crab Subcommittee continued to work on derelict trap programs around the Gulf and add to the materials in the Derelict Trap Task Force's guidelines document. The Subcommittee continues to work with NOAA's Marine Mammals Division to address the proposed reclassification of the Gulf of Mexico crab pot fishery from a NOAA Category III to

Category II based on its "interactions" with marine mammals.

The 2003 publication *A Practical Handbook for Determining the Age of Gulf of Mexico Fishes* continues to be one of the most requested documents from the GSMFC. The IJF Program Coordinator traveled to Queensland, Australia in July to present the age-and-growth manual to the Third International Symposium on Fish Otolith Research where it was well received. Over 450 copies, both bound and electronic, have been distributed to over 13 countries since its release. The manual includes general and species specific techniques for processing and ageing fish that will assist in the standardization of techniques used throughout the Gulf of Mexico and has already become an invaluable training tool.

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 convened monthly conference calls to discuss regional management and subsequent enforcement activity including coordinated "high-contact" events, joint enforcement agreements, and regional training opportunities. Also discussed were pertinent Congressional activities including enforcement coordination, homeland security, and funding. The conference calls allowed the opportunistic discussion of regional issues. The IJF Staff Assistant continued to provide administrative support to all law enforcement activities.

Support and travel were provided to the Commercial/Recreational Fisheries Advisory Panel (C/RFAP) during the reporting period. The panel continued to provide input and review to FMPs in development. The C/RFAP examined and addressed several issues at their meetings which include bycatch issues, state legislation, artificial reefs, and under-utilized food fish species in the Gulf of Mexico.

For the forth and final year, the IJF Program has entered the NMFS's historic menhaden logs (Captain's Daily Fishing Reports) for the Gulf of Mexico. This effort is being conducted as time and money permit using temporary personnel to computerize historic data currently housed in Beaufort, North Carolina. Supervision of personnel has been directed by the IJF Coordinator.



Program administration 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. Lastly, 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*.

# **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> FIN consists of two components:

1. Commercial Fisheries Information Network – ComFIN
2. 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:

1. Planning, managing, and evaluating commercial and recreational fishery data collection activities;
2. To implement a marine commercial and recreational fishery data collection program;
3. To establish and maintain a commercial and recreational fishery data management system; and
4. 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. 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:

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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.

- 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 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
- 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
- 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 coordination and administrative support, coordinated data collection activities, an integrated data management and retrieval system, and procedures for information dissemination. Activities during 2004 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 2004. The major issues discussed during these meetings included:

- Identification and continuation of tasks to be addressed in 2004 and instruction to Administrative and Geographic Subcommittees and the Data Collection, Biological/Environmental, Social/Economic, Data Collection Plan, Registration Tracking and ad hoc work groups to either begin or continue work on these tasks;
- Development of the 2005 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 2004;
- 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 2005;
- 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. Subcommittee and work group members are listed in Table 3. Their activities included:

- The Gulf of Mexico Geographic Subcommittee meeting in March and October 2004 to discuss

the status of biological sampling activities, status of registration tracking module, using fishing licenses as sampling frame methods, monitoring of changes in scientific names, Mississippi Tournament Sampling Protocols, head boat sampling in the Gulf of Mexico, changes in TIP since implementation of trip ticket programs, and confidentiality issues regarding the FIN data management system;

- The FIN For-Hire Work Group met in March 2004 (via conference call) to discuss the status of the telephone calls to head boat operators in the Gulf of Mexico;
- The RecFIN(SE) Biological/Environmental Work Group met in March 2004 (via conference call) to discuss tournament sampling issues and the status of tournament sampling in Mississippi, development of sampling strategies for recreational non-rod-and-reel activities and private access site sampling;
- The Otolith Processors Training Workshop was held in May 2004 to discuss establishing primary readers for otolith processing, status of University of Florida greater amberjack project, the red snapper reference set, development of reference sets for additional species, processing status of otoliths collected in 2002 – 2004 as well as an otolith readings exercise for red snapper, greater amberjack, and king mackerel;
- The FIN Data Collection Plan Work Group met in May 2004 to review of 2003 and 2004 otolith and length data collection activities, development of targets for biological sampling, recommendations for necessary lengths and otoliths for FIN priority species, discussion of adding new species, discussion of developing sampling targets for east Florida, development of 2005 fin data collection plan document;
- The FIN Social/Economic Work Group met in May 2004 (via conference call) to discuss the status of the data collection plan for social/economic activities under FIN;
- The State/Federal Fisheries Management Committee met in August 2004 to discuss the finalization of activities for funding for the 2005 FIN cooperative agreement;
- The Caribbean commercial port samplers meeting was held in September 2004 to discuss the status of Commercial Fisheries Information Network (ComFIN), an overview of the Gulf Shrimp program, overview of NMFS Caribbean SEDAR process, portrait of the fisheries of the red hind, mutton snapper and spiny lobster in Puerto Rico during 1988-2001, Puerto Rico's commercial landings reported in 2003 as well as

a sampling trip to several shrimp operations along the Gulf coast; and

- The Gulf of Mexico commercial port samplers meeting was held in November 2004 to discuss the status of Commercial Fisheries Information Network (ComFIN), discussion of otolith issues, discussion of the TIP Online program, other pertinent issues as well as an otolith training workshop.

#### **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 as well as social economic data. In addition, the states also called head boat captains to obtain fishing effort from these vessels. 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 Port Sampling in Texas, Louisiana, and Florida - 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, Louisiana, and Florida. This is a continuation of an activity from the previous year.

- Menhaden Data Collection Activities - This task provided for sampling of Gulf menhaden catches from menhaden purse-seine vessels that operate in Louisiana. The samples were processed for size and age composition for use in coast-wide stock assessments. In turn, Gulf menhaden stock assessments are incorporated into the Fisheries Management Plan for the species, and are also utilized by the Gulf Coast states, the GSMFC, the menhaden industry, and the NMFS. This is a continuation of an activity from the previous year.
- Development and Implementation of FIN Data Management System - This task provided for further implementation of a fishery information system for the FIN based on the ACCSP model. This task will provide funding for the FIN Data Base Manager and ComFIN Survey Coordinator who will, in conjunction with the ACCSP, work on developing more data modules for the FIN and ACCSP data management systems. Responsibilities include further development of data modules structures; routine loading of Louisiana, Mississippi (oyster 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 initiation and development 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. GSMFC entered into a contract with Southwest Computer Bureau, Inc. (SCBI) to provide installation and maintenance of electronic trip ticket programs for 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. Texas is still evaluating the feasibility of implementing trip ticket program in their state.
- 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 2004 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. 2004. *2005 Operations Plan for Fisheries Information Network (FIN)*. Publication No. 124 Gulf States Marine Fisheries Commission, Ocean Springs. 26 pp + appendix.
- FIN Committee. 2004. *Annual Report of the Fisheries Information Network for the Southeastern United States (FIN) January 1, 2003 - December 31, 2003*. Publication No. 123 Gulf States Marine Fisheries Commission, Ocean Springs. 18 pp + appendices.

- FIN Committee. 2004. *2005 FIN Data Collection Plan*. Gulf States Marine Fisheries Commission, Ocean Springs. 74 pp.
- FIN articles in the GSMFC newsletters.
- 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 website ([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.

# **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 54 employees of the Administrative, Enforcement, and Fisheries Sections during fiscal year 2004.

## **SIGNIFICANT ACCOMPLISHMENTS**

A program aimed at the elimination of derelict crab traps in Alabama's coastal waters was completed for a second year and resulted in the removal of 418 derelict traps in the spring of 2004. This program followed the overwhelming success of the 2003 program which resulted in the removal of 1,074 traps. The reduction of traps from 2003 to 2004 is a result of the cooperation of everyone involved with the program. More volunteers had to "go farther to collect fewer" traps. The program will be considered for reimplementation in 2005. In addition to the improved habitat, reduced navigational hazard and the reduction in bycatch mortality, this program also serves to bring together numerous agencies, universities, commercial fishermen and civic groups as well as division personnel.

A three year no trawl study area was created in upper Mobile Bay and Grand Bay. For the duration of this study, no trawling will be permitted in the affected areas. This study is being conducted to ascertain the effects of the no-trawl zone on marine organism recruitment, seagrass bed enhancement with subsequent improvement in nursery areas, and reduced user conflicts in these areas. This area was created through the cooperation of commercial shrimp fishermen and recreational fishermen with the Marine Resources Division personnel.

Enforcement officers continued to improve and expand the Coastwatch Program by training citizens to recognize and report violations of saltwater fishing laws and regulations. Information from Coastwatch members has been valuable in enforcement patrol planning, and deployment of manpower and other resources resulting in saved man-hours by not responding to inaccurate reports of violations. To date, 198 citizens have been trained at 30 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 2004 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 \$600,000 as part of the agreement. The money will be used 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.

The facilities for red snapper brood fish maturation studies recently completed at the CPMC have resulted in the increased production of red snapper fingerlings. The production of these fingerlings by naturally spawning fish has enabled continued cooperative research to occur between the AMRD, Auburn University, and Alma Bryant High School. A pumping system and pipeline that extends from the Gulf of Mexico at the Gulf State Park Pier to the CPMC. This project was funded by CIAP funds. It enhanced the development of red snapper production at CPMC by providing a supply of high salinity water.

The fifth year of a cooperative project with Auburn University at CPMC has resulted in refined techniques for raising shrimp in ponds. These will be used to enhance the production of shrimp on the shrimp farms in west central Alabama.

## **SIGNIFICANT PROBLEMS AND SOLUTIONS**

The lack of adequate quantities of high salinity, high quality water for rearing of marine fishes such as red snapper at the CPMC was solved during FY 2004. A portion of the CIAP monies was used to construct a pipeline from the Gulf State Park pier to CPMC to solve this problem. This pipeline was completed in the spring of 2004. However, Hurricane Ivan destroyed the intake structure, the pump station, and portions of the pipeline. This will be repaired with FEMA monies after the Gulf State Park pier is relocated to serve for attachment of the intake structure.

There is a need for authority to allow offenses committed in the Gulf of Mexico outside of the state's territorial waters to be heard in State District Court. This could be accomplished by amending regulation 9-12-4.

There currently is no way to track the recreational effort expended against the marine resources with the use of gig, castnet, recreational crab traps, or spearfishing. These fishing gears need to be added to the recreational fishing license at no additional fee by amending 9-11-53.1 and 9-12-55.2.

At present commercial fishermen can not legally sell fish caught in cast nets or with gigs because of a lack of a commercial license for this activity. A commercial license should be established for these activities.

#### **ADMINISTRATION 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, seven clerical, one accountant, one custodial worker, and one marine mechanic employee. Offices are maintained at Dauphin Island, and Gulf Shores.

#### **Accomplishments**

A three year no trawl study area was created in upper Mobile Bay and Grand Bay. For the duration of this study, no trawling will be permitted in the affected areas. This study is being conducted to ascertain the effects of the no-trawl zone on marine organism recruitment, seagrass bed enhancement with subsequent improvement in nursery areas and reduced user conflicts in these areas.

Construction was completed of a pumping system and pipeline that extends from the Gulf of Mexico at the Gulf State Park Pier to CPMC. This project was funded by CIAP funds. It enhanced the development of red snapper production at CPMC by providing a supply of high salinity water. However, Hurricane Ivan destroyed the intake structure, the pump station, and portions of the pipeline. This will be repaired with FEMA monies after the Gulf State Park pier is relocated to serve for attachment of the intake structure. It is estimated that it will take two years to repair the structure.

The 2004 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.

The success of the electronic trip ticket computer program continues to grow. Currently 23 Alabama seafood dealers are online with this program. These dealers contribute substantial amounts of 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.

#### **Future Plans**

If after studying the areas in upper Mobile Bay and Grand Bay, the closures seem to be improving the grass beds, and shrimp and finfish production for Alabama fishermen, the areas will be permanently closed.

Plans are in place to continue work at the Pier Street ramp in Fairhope during the next fiscal year with the addition of a breakwater.

The Division plans to complete its Coastal Impact Assistance Program project during fiscal year 2005.

Attempts will be made to extend the jurisdiction of District Courts to offenses committed offshore from Alabama in addition to those committed fully within Alabama's territorial sea.

#### **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 agents and cooperate extensively with these agencies 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 17 enforcement officers in the section, ten stationed in Mobile County, six stationed in Baldwin County, and the Chief Enforcement Officer stationed at Dauphin Island headquarters. One vacancy was filled in FY2003-2004 and one additional position for Baldwin County is scheduled to be filled in FY2004-2005.

### **Accomplishments**

Enforcement officers conducted 11,074 hours of boat and shore patrol, 6,381 boat checks, 1,098 seafood shop inspections, 12,022 recreational fisherman checks, and issued 1,371 citations and warnings for illegal activities. Twenty-nine percent of the citations and warnings (399) were for violations of recreational fishing laws and regulations. The 526 violations of commercial fishing laws and regulations comprised thirty-eight percent of the citations and warnings issued. Officers also issued citations and warnings for 279 violations of boating safety laws and regulations, 70 wildlife and freshwater fisheries, and 97 citations for other state and federal laws and regulations. A total of 14,203.5 hours was spent on administrative duties, court attendance, training, and equipment maintenance. Officers worked 1,512.5 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, 198 citizens have been trained at 30 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 2004 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 \$600,000 as part of the agreement. The money will be used 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 assisted with the relief efforts after hurricane Ivan severely damaged the Alabama Coastal areas. Marine Resources Enforcement officers assisted police departments in Mobile and Baldwin Counties by providing additional security to prevent looting, assisted with the distribution of food, water, and other supplies, provided manpower for check points, provided marine security and transport, and provided enforcement manpower to assist with additional enforcement requirements.

Officers attended training courses on boat handling, criminal investigation, self-defense, supervision, and other state and federal agency law enforcement programs.

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

### **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 foster efforts to allow the prosecution of violations in federal waters in the District Court System in Alabama.

## **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 Engineer 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, one Biologist IV, one Biologist III, four Biologist II's, one Biologist I, five Biologist Aides III, eleven Biologist Aides I/II, one ASA I/II, two by-weekly laborers, and three temporary laborers.

### **Accomplishments**

The facilities for red snapper brood fish maturation studies recently completed at the CPMC have resulted in the increased production of red snapper fingerlings. The production of these fingerlings by naturally spawning fish has enabled continued cooperative research to occur between the AMRD, Auburn University, and Alma Bryant High School. A pumping system and pipeline that extends from the Gulf of Mexico at the Gulf State Park Pier to the CPMC. This project was funded by CIAP funds. It enhanced the development of red snapper production at CPMC by providing a supply of high salinity water. However, Hurricane Ivan destroyed the intake structure, the pump station, and portions of the pipeline. This will be repaired with FEMA monies after the Gulf State Park pier is relocated to serve for attachment of the intake structure.

The fifth year of a cooperative project with Auburn University has resulted in refined techniques for raising shrimp in ponds. These will be used to enhance the production of shrimp in the shrimp farms of north central Alabama.

In 2004, the Division participated in the Alabama-Mississippi Rapid Assessment Team (AMRAT) to search for aquatic invasive species. This is the second year of the assessment which was initially conducted in Mobile Bay and Mississippi Sound in 2003 and was conducted in Mississippi waters in 2004. Some known invasive species were identified. The introduction of invasive species is a threat to biodiversity and nation wide costs billions of dollars annually to remove or reduce well maintained populations. The rapidity of this team enhances collaborative efforts within the region and may identify a problem species before they become well established.

The fifth year of a cooperative project with Auburn University has resulted in refined techniques for raising shrimp in ponds. These will be used to enhance the production of shrimp in the shrimp farms in west central Alabama.

Four new concrete fishing reefs were constructed in the nearshore Gulf, along the remnants of a "trolling corridor" built in the mid-1990s by the Division in cooperation with the Orange Beach Fishing Association. The concrete materials for these four new reefs came from the demolition of the old Gulf State Park Beach Pavilion. Two hundred twenty-two (222) new concrete and steel pyramid reefs were deployed in a grid fashion offshore in Alabama's reef areas. These reef modules are about ten feet tall, weigh about 5,000 pounds each, and are covered on each side with perforated plate steel up to one inch thick. The modules were distributed from east to west and shallow to deep to spread out the fishing effort over the widest possible area.

During the year 841 fisheries assessment samples were taken. This data is part of a long-term data base that lets managers review the populations of lower trophic level species to detect any changes before they reach the recreational and commercial important species. A total of 91 habitat assessments were performed, and 4,477 fishermen were interviewed during creel surveys.

### **Federal Aid**

Wallop/Breaux. Wallop/Breaux funds are administered through the U. S. Fish and Wildlife Service. Funds used from this source by the AMRD were directed toward a creel survey of Alabama's saltwater recreational anglers, production of the 2004 edition of the popular Alabama Marine Information Calendar, production of the new children's coastal conservation art calendar, construction of artificial

fishing reefs in the Gulf of Mexico off Alabama, maintaining equipment and facilities in Gulf Shores and Dauphin Island, managing the public artificial fishing reef permits issuing system in the Gulf of Mexico off Alabama, assisting individuals in designing artificial reefs, conducting mariculture research on red snapper, maintaining and enhancing boat ramps for boating access, conducting a study of the attraction of juvenile red snapper to small patch reefs, sampling coastal Alabama fishes to determine stock status, and testing various offshore artificial reef modules with respect to attractant qualities and durability. An additional project to coordinate all federal aid programs within the AMRD and coordinate with other Gulf States was also funded from this source.

Personnel also revised the Alabama Marine Resources Activity Book, which provides an interactive format for educating elementary students about the life cycles and habits of local organisms.

Wallop/Breaux funds are administered through the U. S. Fish and Wildlife Service. Funds used from this source by the AMRD were directed toward a fisheries independent assessment and monitoring program that samples fishes and invertebrates of from the lower trophic levels and serve as a source of forage for most commercially and recreationally important marine species, a creel survey of Alabama's saltwater recreational anglers, production of the 2004 edition of the popular Marine Information Calendar, construction of artificial fishing reefs in the Gulf of Mexico offshore from Alabama and inshore in Mobile Bay, maintaining equipment and facilities in Gulf Shores and Dauphin Island, managing the public artificial fishing reef permits issuing system in the Gulf of Mexico off Alabama, assisting individuals in designing artificial reefs, conducting mariculture research on red snapper, maintaining and enhancing boat ramps for boating access, conducting a study of the attraction of juvenile red snapper to small patch reefs, and testing various offshore artificial reef modules with respect to attractant qualities and durability. An additional project to coordinate all federal aid programs within the AMRD and coordinate with other Gulf States was also funded from this source.

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.

In 2004, 6,315 finfish representing 50 species were collected. Under contract with the National Marine Fisheries Service, 270 tissue samples were collected from 11 species for total mercury content. Cooperating with the Alabama Department of Environmental Management, 59 samples from 6 species of harvestable size fish were also tested for total mercury.

Cooperative Statistics. Federal aid funds for this program are administered by the Department of Commerce (NOAA/NMFS) 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 information was stored on AMRD computers in a specifically designed database.

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. It also provides funds for a project to independently assess the local red snapper population by video camera and fish trap sampling. conducted in Alabama's offshore artificial reef permit areas in the Gulf of Mexico.

The Marine Recreational Fisheries Statistics Survey (MRFSS). All quotas established by the NMFS were met or exceeded in 2003. Division Personnel completed 2,133 fishermen interviews. Through August 2004, the most recent data available, over 146,000 fish were identified representing 67 species and of these, 6,597 fish were measured. The Division completed an economic add-on survey representing a calendar year of information in August. The quota in private boat mode was not met in Wave 1, 2004 due to a rainy February and the quotas for shore mode and charter mode in Wave 5, 2004 were not met due to Hurricane Ivan.

Otolith Sampling Program. AAMRD continued collection of otoliths (ear stones) primarily from red snapper, greater amberjack, king mackerel, and

southern and Gulf flounder caught by commercial and recreational fishermen. Otoliths are used to age fish. A total of 3,070 otoliths were collected in fiscal year 2004. A paper was presented at the red snapper SEDAR meeting discussing possible discrepancies in the ageing of red snapper.

Commercial Trip Ticket Program. Funding for this program is provided through the Gulf States Marine Fisheries Commission. 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 Gulf States Marine Fisheries Commission and will ultimately be supplied to the National Marine Fisheries Service.

Coastal Impact Assessment Program (CIAP). CIAP funds, administered through the Lands Division of the Alabama Department of Conservation and Natural Resources were utilized in a program to remove derelict crab traps from Alabama coastal waters and beaches. The program resulted in the removal of 1,074 derelict traps. CIAP funds used to date have also provide two renovated boat ramps and several inshore and offshore artificial reefs.

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

Alabama Oyster Reef Enhancement. A formally barren bottom and a marginally productive oyster reef in Portersville Bay, Mississippi Sound, Alabama, were planted with a total of 20,000 cubic yards of oyster cultch material in 2002 to enhance oyster growth and create a new reef in this formally productive section of Alabama waters. Both areas were surveyed by dredge in July 2003 and had caught an excellent spat set. Oysters in this area should be of harvestable size in late summer 2004.

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. The AMRD also continued the cooperative endeavor

with Auburn University and the new Alma May Bryant High School in Mobile County to provide a mariculture training center at the high school. This continues to be a very successful program which expands students' ability to participate in future fisheries.

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 projects will continue to be initiated with Auburn University, the Dauphin Island Sealab, and the University of South Alabama.

Development of mariculture procedures for commercially and recreationally important marine organisms will continue. This will be enhanced by the completion of a saltwater supply pipeline from the Gulf State Park in Gulf Shores to CPMC.

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

Inshore assessment and monitoring work will be continued monthly with the addition of new stations 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 shoreline and to continue the 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.

Creation of artificial reefs in the Perdido Bay system to enhance inshore fishing opportunities for anglers in coastal Baldwin county.

Renovation of Boggy Point Boat Ramp to include a new boat launching ramp and additional parking spaces for vehicle and trailers.

# **F**LORIDA FISH & WILDLIFE CONSERVATION COMMISSION

*Kenneth D. Haddad, Executive Director*

During 2004, (i.e., state fiscal year is 2003/2004) the Executive Office, Division Directors, and Regional Directors with their respective staff were actively involved in planning and implementing a reorganization of the Florida Fish & Wildlife Conservation Commission's (FWC) operational units. Goals of reorganization were to affect a better focus on mission critical activities, improve efficiency through consolidation of similar functions performed by multiple organizational units, and enhance communications within and without the agency. The Florida Legislature approved the plan, and the FWC officially reorganized on July 1, 2004. With specific references to marine fisheries, the Division of Marine Fisheries became the Division of Marine Fisheries Management, commercial saltwater fishing license staff transferred from the Division of Marine Fisheries to the new Office of Licensing & Permits, and FWC research activities were consolidated into the new Fish and Wildlife Research Institute. The following summary of agency accomplishments uses the "old" organizational nomenclature, in effect during the reporting period.

## **DIVISION OF MARINE RESOURCES**

*Mark S. Robson, Director*

The major responsibilities of the Division of Marine Fisheries include:

- 1) development and implementation of marine fisheries management policies,
- 2) issuance and reconciliation of commercial fishing licenses,
- 3) angler outreach and marine aquatic research education,
- 4) the state artificial reef program,
- 5) monitoring compliance with marine fisheries trip ticket reporting requirements through audits of applicable fish house records,
- 6) administration of the spiny lobster and stone crab effort management (i.e., trap certificate) programs,
- 7) civil penalty assessments for violations of specified fisheries regulations, and
- 8) issuance of Special Activity Permits.

Highlights of staff efforts in 2003/2004 are summarized below.

### **Marine Fisheries Management and Policy Development**

During 2003/2004 the FWC passed a rule to raise the minimum size limit for permit and pompano from 10" to 11" fork length and lowered the recreational aggregate bag limit for pompano and permit from ten to six fish in response to the latest stock assessment information that pompano is undergoing overfishing on both coasts. The rule also applied the 250 pompano commercial harvest limit to fish caught in federal waters where there were no limits before. The FWC also approved the conceptual development

of fisheries strategic plans for Florida's inshore marine fisheries. A rule was issued to ban the harvest of puffer fish from five East coast counties because of the occurrence of saxotoxin poisoning from the ingestion of puffer fish from this area. A rule was established to implement a licensing program in the 2004/2005 season for commercial lobster divers. This program includes a moratorium on the issuance of new commercial dive permits until July 1, 2010. This rule also created a daily vessel harvest and possession limit of 250 lobsters for commercial divers in Monroe, Dade, Broward, Lee, and Collier counties and a statewide vessel limit of 250 lobsters caught with commercial bully nets. It also established dive vessel marking requirements and prohibits the harvest of lobsters by commercial divers within ten years of artificial habitats. The FWC took final action on a rule to prohibit the snagging and snatch-hooking of tarpon and limit the number of fishing lines in the water per boat in the waters of Boca Grande Pass to no more than three during April, May, and June. The FWC passed a rule to permit catch-and-release red drum fishing tournaments to allow participants to catch, hold in a live well, release fish under certain conditions, and allow two-person teams to possess two fish. A rule that consolidates and reorganizes the marine Special Activity License Program into a single rule chapter and establishes various rule criteria and standards was finalized. A series of rules to address various trap-fishing issues were also approved. These included degradable panel orientation in stone crab traps, aspects of the lobster and stone crab certificate programs, and extending the blue crab trap closure throughout the Gulf of Mexico between three and nine miles from September 20 through October 4 each year. Effort management programs for the blue crab fishery and the marine ornamental fishery were also in the works.

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

Staff participated in various types of events where they provided information on fishing license requirements, fishing opportunities, fisheries management projects, the importance of habitat protection for healthy fisheries, and the Sport Fish Restoration Program. Ten fishing shows across Florida gathered over 43,000 anglers who interacted with FWC staff on a wide variety of fisheries related topics. Five *Ladies, Let's Go Fishing* clinics were held where 390 women interested in learning more about sport fishing and fish resources participated in these two-day events. A total of 11 *Kids Fishing* clinics were conducted state wide. Throughout the year, 5,085 children participated in the clinics and had a positive fishing experience learning about ethical angling and habitat conservation. The Pigeon Key facility and Cedar Key Field Laboratory were the backdrop for 1,278 students to learn how to use equipment and sampling methods that FWC biologists utilize to collect data for fisheries management. Eleven teacher workshops were conducted state wide and 166 teachers were instructed in fisheries management practices and proper specimen collecting methods for classroom learning programs.

### **Artificial Reef Program**

During 2003/2004, \$300,000 from a USFWS Federal Aid in Sportfish Restoration grant, in concert with \$300,000 in state fishing license revenues provided funding to sixteen local coastal governments and two non-profit organizations for ten marine artificial reef construction projects, one socio-economic study of artificial reefs, and seven monitoring projects. The ten construction projects consisted of reefs using designed concrete reef modules, limestone boulders, and scrap and concrete materials. The socio-economic study was conducted in Martin County located on the East coast of Florida. The monitoring projects consisted of fish census and deployment verification mapping projects. On November 21, 2004, the FWC approved the Florida Strategic Plan developed with the assistance of a 12 person Artificial Reef Advisory Board with public input from four public workshops. On April 5, 2004, the U.S. Navy announced the award of the donation of the aircraft carrier USS ORISKANY to Florida for deployment as an artificial reef at a site located 22.5 nautical miles southeast of Pensacola Pass at a depth of 212 feet. Since then, FWC staff worked closely with the Navy and EPA on the necessary environmental cleaning preparations and addressing human health risk assessments and PCB analysis. The anticipated date of deployment is winter 2004, but deployment is subject to change based on the

completion of the EPA human health risk assessments. In 2003/2004, the Florida Legislature appropriated an additional \$195,000 (\$120,000 from a USFWS grant and \$75,000 from state fishing license revenues) for a cooperative effort with the University of Florida Department of Fisheries and Aquatic Sciences. Phase I activities include the construction and deployment of artificial reef modules off the Florida Big Bend as part of a project designed to identify and alleviate a potential bottleneck in the life history of recreationally and commercially important fish species. Construction on the gag grouper project will begin in fall 2004. The FWC awarded a \$59,940 research grant to the University of West Florida to study the effect of 502 unpublished artificial reefs deployed by the FWC during 2003/2004 in four expansive areas off northwest Florida using three different types of prefabricated reef units.

### **Marine Fisheries Services**

The primary function of this bureau is processing applications for the 24 basic types of commercial saltwater fishing licenses and permits and administering the trap certificate programs. Nine saltwater products wholesale dealers were audited for purchases from unlicensed fishers and compliance with trip ticket reporting requirements. Six administrative hearings were conducted in response to a notice of proposed agency action pertaining to denial, suspension, or revocation of a commercial license/permit, allocation of stone crab trap tags, or civil penalty assessment. The Division's liaison with commercial fishers and saltwater products dealers produced a newsletter on commercial saltwater fishing regulations, issued several notices regarding proposed regulations, workshops, etc. by e-mail and regular mail, and began development of a regulations newsletter in Spanish. The liaison also became known as the contact person for those with questions on proposed rules or problems with license application. The Florida Legislature approved industry requests to raise the spiny lobster commercial permit fee by \$25 to fund trap retrieval activities and to specifically allocate stone crab trap certificate fee revenues to trap retrieval, purchase of trap pullers for law enforcement vessels, and posting signs to warn the public that molesting or stealing traps was a felony violation with criminal and civil penalties. The program retrieved 3,001 illegal traps from bay side and ocean side waters of the Florida Keys from Key Largo to Key West. Plans to expand the effort include the addition of the Tortugas and Marquesas next year. This section administered the Federal Food Shrimp Fishery Disaster Relief Program; awards were issued in February 2004 to

1,203 eligible shrimp fishermen and wholesale dealers. The FWC entered into a contract with the Department of Agriculture and Consumer Services for implementation of a campaign to promote Florida's wild shrimp harvest.

## FLORIDA MARINE RESEARCH INSTITUTE

*Gil McRae, Director*

### Finfish

A three-year study of spotted seatrout (*Cynoscion nebulosus*) reproduction continued in Tampa Bay. Study was designed to supplement earlier work conducted on the east coast of Florida and was aimed to determine geographically-specific maturity schedules, spawning frequency, and batch fecundities in order to refine the accuracy of spawning potential ration (SPR) estimates for spotted seatrout in Florida waters. Study continued on age, growth, and reproduction of Florida pompano (*Trachinotus carolinus*) along the Gulf coast of Florida. Work also continued on the biology and ecology of reef fishes in southeast Florida, with an emphasis on the life history of yellowtail snapper (*Ocyurus chrysurus*) in support of a stock assessment conducted during the period. A study of catch and release mortality of tarpon is underway, as well as an intensive data collection program aimed at fully characterizing the state's snook fishery. Life history and fishery characterization studies were conducted for American shad and wahoo populations in Florida.

The Florida Keys Finfish Research Program continued to monitor abundance, size structure, and habitat utilization of economically important fish species (including grouper, snapper, grunt, butterflyfish, angelfish, hogfish, triggerfish, and bigeye) inhabiting reef areas in the Florida Keys National Marine Sanctuary (FKNMS) using census surveys. Most species observed during surveys have shown consistent densities and size structure over the last five years of the study. Mean densities overall were higher in 2003/2004 (69 fish/100 m<sup>2</sup>) than in 2002 (48 fish/100m<sup>2</sup>). In addition, one-third lower densities of yellowtail snappers and gray snappers were observed during 2002 and 2003 than were observed during the first three years of the study from 1999-2001. As in previous years, grunts strongly dominated surveys, accounting for 84% of the individuals observed. Length distributions for economically important species for many of the snapper and grouper species observed have been in the smaller size classes for their species. In 2003/2004, a low percentage of yellowtail snappers (7.4%), red groupers (17.3%), black groupers (9.8%), scamps (5.9%), and gag groupers (4.2%) were

observed at or above the legal recreational fishing size limit.

### Mollusks

Bay scallop (*Argopecten irradians*) population restoration is ongoing in the area between Pine Island Sound and Crystal River, and assessment of success was evaluated via surveys of adult abundance and recruitment patterns. Studies of calico scallop (*Argopecten gibbus*) population attributes were initiated on the east Florida shelf and in southwest Florida. Larval dispersal and genetic studies of hard clams (*Mercenaria*) continue. An oyster (*Crassostrea virginica*) population monitoring program was initiated in southeast Florida.

The queen conch research and restoration program continues to monitor juvenile and adult queen conch abundance throughout the Florida Keys in order to track the recovery of the species. Since 1999, the number of adult conch in offshore breeding aggregations has increased steadily. It was estimated that there were 37,000 adults in spawning aggregations in 2003/2004; in addition, it was estimated that there were approximately 25,000 juveniles in offshore aggregations as well.

Restoration efforts focused on transplanting non-reproductive conch from nearshore sites to offshore breeding aggregations. With the aid of volunteers, 2,000 conch were transplanted to offshore aggregations at Looe Key and Eastern Sambo. Monitoring and acoustic tracking of the most recent transplants has shown that the transplanted conch do not displace the native animals, and transplanted conch remain in the area over an extended period of time. In order to identify the locations where adult conch should be transplanted to maximize the probability that their progeny are retained and deposited in the Florida Keys, 5,000 drift vials were released over known spawning aggregations to examine the fate of the larvae. An additional 4,000 drift vials were released in Mexico and the Gulf Stream to examine the contribution to recruitment from larvae originating upstream from the Florida Keys. Finally, work has begun on a two-year EPA grant designed to determine the cause(s) of the lack of reproduction in the nearshore population using an endocrine disruption approach. Fifteen male conch were estrogenized in the lab so partners at the University of Florida can develop an enzyme linked immunosorbent assay. The blood of these conch, along with the blood of three wild males and three wild females to be used as references, was sent to the university for bioassay development.



## **Crustaceans**

The crustacean fisheries research program is comprised of fisheries-oriented biological and ecological studies on economically important crustaceans (shrimps and crabs) and other marine arthropods (horseshoe crab). During the fiscal year, work continued on a three-year grant that included studies to characterize the shrimp fisheries, to gather information on the blue crab fishery, and to identify spawning beaches and determine the population genetic structure of horseshoe crabs. Manuscripts on the efficiency of BRDs in skimmer trawls and on the genetic stock structure of blue crabs, pink shrimp, brown shrimp, and white shrimp were published in peer-reviewed journals. Manuscripts are being prepared on the population biology and fisheries biology of stone crabs in northwest Florida and in the Tampa Bay area, and on the effectiveness of BRDs in roller frame trawls. Field studies continued on the population biology of blue crab and stone crab in the Tampa Bay area.

The spiny lobster program continued to monitor landings and other important fishery components for both the commercial and recreational fisheries. Commercial lobster fishery landings were 4.6 million lbs during the 2002/2003 fishing season, up from last year's 3.1 million lbs but still well below the long-term average of 6 million lbs. Recreational lobster license holders returned nearly 2,000 survey questionnaires. Their responses indicate that 340,000 lobsters were landed statewide during the Two-Day Special Sport Season and 838,000 lobsters were landed during the first month of the regular season. In order to ground truth mail surveys, a creel survey was designed. Recreational harvesters captured, on average, the same sized lobster, as do commercial fishermen. Interestingly, harvest reported by the mail surveys appeared to be slightly greater than that observed in the creel surveys.

The sixth year of monitoring spiny lobster populations within the marine reserves of the Florida Keys National Marine Sanctuary was completed. Overall, the abundance of legal-sized lobsters progressively increased inside the reserves relative to unprotected areas. Additionally, the Western Sambo Ecological Reserve showed a steady increase of large male lobsters, which indicated some long-term retention of lobsters occurred within the reserve. Males in excess of 100 mm carapace length comprised approximately 10% of the offshore population inside the reserve.

## **Fisheries Genetics**

The fisheries genetics research program has two principal directions: 1) genetic stock identification of economically important marine organisms and 2) monitoring the effects of FWRI hatchery operations on the gene pools of wild populations supplemented with hatchery reared organisms and monitoring the success of stock restoration efforts. Genetic stock identification studies of naturally hybridizing populations of weakfish and sand seatrout were completed; a summary report to the FWC was generated, and a manuscript was nearly completed. Genetic analyses of spotted seatrout, vermilion snapper, and common snook continued. A species-identification study of bonefish in south Florida was initiated.

## **Fisheries Statistics**

The Fisheries Dependent Monitoring Program at FWRI had three distinct components:

- 1) marine fisheries trip tickets to monitor commercial landings, effort, and value;
- 2) marine recreational fisheries surveys to monitor recreational catch, harvest, and effort; and
- 3) biological sampling of specimens from commercial and recreational harvests through trip interviews (commercial) and angler interviews (recreational).

These data are useful for stock assessments in characterizing the magnitude of harvest by fisheries and in providing samples for determining the size, sex, and age composition of the harvest of many species. Additional data are taken for length-weight and length-length relationships, and in some cases other tissue samples are taken during the sampling for genetic analyses or mercury testing.

During 2003/2004, Florida commercial landings totaled approximately 98.5 million lbs of fish, blue crab, and stone crab claws, clams (not including aquacultured clams), lobster, shrimp, and other invertebrates worth over \$170 million from 237,163 commercial trips. Marine life landings (live fish and invertebrates for aquaria and other uses) in 2003/2004 amounted to over 6.3 million individual species worth over \$2.45 million. Live rock (aquaculture only) and live sand (both for saltwater aquaria) amounted to nearly 900,000 lbs worth about \$220,000 during 2003/2004. The top ten species rated by the commercial value of the landings were: stone crabs (claws \$22.9 million), pink shrimp (\$21.7 million), Caribbean spiny lobster (\$18.8 million), red

grouper (\$11.7 million), blue crab (including soft-shell crabs \$9.6 million), rock shrimp (\$7.5 million), gag grouper (\$7.2 million), white shrimp (\$6.1 million), bait shrimp (\$5.5 million), and striped mullet (\$5.4 million). The commercial harvest of food shrimp was just over 21.8 million lbs in 2003/2004 compared with a little over 20 million lbs in 2002 but averaged \$1.87 per lb in 2003/2004 compared to \$2.01 per lb. Commercial landings during 2002 were roughly similar, with about 97 million lbs landed worth approximately \$171 million from 248,419 commercial trips.

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

In March 2003, the assessment group released 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 135 species/groups during the period 1993-2002. Detailed narratives were provided on the biology, fishery, and past assessments for six popular species in Florida. The assessment group developed stock assessments for yellowtail snapper, Atlantic croaker, managed contracts for assessments on hogfish and gray angelfish, authored reports on the blue runner and black sea bass fisheries, and updated portions of assessments for Caribbean spiny lobster and striped mullet in July 2003-June 2004. These assessments were made using a variety of analytical methods including age-structured models such as tuned sequential population analysis, separable virtual population analyses, non-equilibrium surplus production models, and modified De Lury depletion models.

### **Stock Enhancement**

During 2003/2004, stock enhancement of finfish continued to focus on red drum (*Sciaenops ocellatus*) and common snook (*Centropomus undecimalis*) while molluscan enhancement projects targeted queen conch (*Strombus gigas*).

Project Tampa Bay was designed to determine the most cost-effective size hatchery-reared red drum to release to increase the population of that species without displacing wild fish. The experimental design intended to answer the questions of size-at-release, season of release, and release habitat as well as improve the catch rates of red drum by recreational anglers by 25%. Calendar 2003/2004 was the fourth year of releases and by year's end, more than 3.54 million fish were released comprising five different size classes. Experimental releases were to continue through calendar year 2004. In late 2005 or early 2006, production scale releases will begin and

assessment of the effect as well as a cost-effectiveness analysis will be completed.

A pilot project to develop and evaluate release and sampling strategies for common snook in Sarasota Bay and southern Tampa Bay, begun in 1996, continued through this reporting period. This project is a partnership between Mote Marine Laboratory, National Marine Fisheries Service, and the FWC. More than 50,000 hatchery-reared snook have been released, the majority in Sarasota Bay. The goals of this project are similar to Project Tampa Bay described above.

### **Coral Reefs and Hardgrounds**

The seventh annual sampling of 43 coral reef sites between north Key Largo and Tortugas Banks was conducted as part of the Florida Keys National Marine Sanctuary (FKNMS) Coral Reef Monitoring Project. Significant declines in relative percent coral cover were documented in 1997 and 1998; however, coral cover and species diversity remained relatively stable since 1999. In 2002, additional sampling protocols were instituted at nine sites to better elucidate cause and affect relationships. Expansion of the Coral Reef Monitoring Project into Broward, Dade, and Palm Beach counties was proposed through the FDEP. Eight sites were sampled during 2002 in Dry Tortugas National Park. Coral cover and species diversity are relatively high at several reefs; however, there is no sign of recovery of staghorn coral west of Loggerhead Key. Many colonies of the brain coral – *Colpophyllia natans* had been decimated at Bird Key Reef since the prior year's sampling. *Acropora palmate* (inhabiting only one site in Dry Tortugas) appeared to be declining, possibly from a form of disease.

The FWRI provided input and review of monitoring for the Gulfstream pipeline hardbottom habitat mitigation projects in Tampa Bay and offshore in the eastern Gulf of Mexico. The FWRI was sub-recipient of funds through Florida State University from the GMFMC to evaluate the status of six sites in the Florida Middle Grounds studied in the early 1970s. An unusual water column event (referred to as "Blackwater") occurred in spring 2002 on the Gulf of Mexico side of the Keys. High densities of diatoms and phytoplankton were associated with the water mass. Coincidentally, summer sampling documented coral cover loss at two sites within the discolored water mass mapped by satellite imagery.

### **Aquatic Health**

The Aquatic Health Group monitors the health of marine fishes throughout the state of Florida. From

July 1, 2003 to June 30, 2004, 1,408 fish were evaluated for abnormalities, parasites, and disease conditions. In the Tampa Bay Project, 718 were evaluated. Of these, 299 were collected from the Alafia. There were also 420 cultured fish from SERF evaluated. Results continued to suggest that stocked fish are having little or no impact on the health of wild fish, and recaptured stocked fish are acclimating to health challenges in the wild.

The most common species evaluated during the year were red drum, striped mullet, southern puffer, and hardhead catfish. The **Marine Fish Kill Hotline** (1-800-636-0511) received 1,037 calls, which were responded to. Of those calls, 99% reported fish kills, fish with parasites, other aquatic mortality and disease events, or requested information. Staff investigated 18 fish kills, primarily related to low dissolved oxygen (83%) and red tide (11%); an estimated 211,032 fish were affected.

Staff completed the investigation on the cause of ulcers in marine and estuarine fish in Florida and completed two manuscripts. These reports of ulcerative mycosis caused by the fungal pathogen *Aphanomyces invadans* represent new host records for sheepshead, striped mullet, silver mullet, silver perch, black drum largemouth bass, and American shad. The manuscripts will be submitted to the Journal of Aquatic Health for publication.

### **Harmful Algal Blooms**

The Red Tide Monitoring Program, MERHAB2002: Eastern Gulf of Mexico Sentinel Program and Harmful Algal Bloom (HAB) related research grants which focused on toxin issues, the significance of PSP to Florida, nutrient-HAB issues and ballast water introductions were the primary focus of the HAB group. Monitoring of *Karenia brevis* and other potential HABs in Florida waters increased this year due to environmental concerns in Bishop Harbor and Piney Point, the Panhandle dolphin mortality event, and puffer fish poisonings from the Indian River Lagoon and the association of *Pyrodinium bahamense*. During 2003/2004, a red tide was present from Pinellas to Sarasota County in early 2003 and continued as far south as Naples through November and north to Pinellas through the first week in March 2004. HAB staff analyzed over 3,744 water samples for HAB species identification, and conducted 86 NSP mouse bioassays and four PSP mouse bioassays for shellfish aquaculture consumer safety. The HAB toxin lab completed immunoassay, receptor-binding, and enzyme assay analyses on approximately 4,500 samples of water, animal tissues and fluids, seagrass, and sediments for the detection

of brevetoxin, saxitoxin, okadaic acid, domoic acid, and microcystins. Two grant-funded studies examined saxitoxin in Indian River Lagoon dinoflagellates, pufferfish, and other biota where pufferfish continued to be toxic and the puffer-harvesting ban was extended indefinitely. Other projects screened Florida manatees for the presence of brevetoxin, saxitoxin, and okadaic acid and studied brevetoxin accumulation in fish. Following the dolphin mortality, fish collected from St. Joseph Bay contained significant levels of brevetoxin and brevetoxin metabolites, but none were above the regulatory limit set for brevetoxin in shellfish (80 ug/100 g).

### **Habitat Assessment**

The FWRI habitat assessment projects seek to assess the ecological status of coastal fisheries habitats, evaluate trends in coastal ecosystem health, and identify physical and biological factors that influence coastal plant communities. The FWRI staff also developed ecologically and economically sound practices for restoring coastal habitats. Seagrass habitats are the current focus of study due to ongoing decline in distribution and abundance in many Florida estuaries. Although activities are conceptually divided between assessment and restoration, staff within this work group conducted research related to both groups.

Habitat assessment research included:

- 1) status and trends of seagrass communities in the southeastern Gulf of Mexico, Tampa Bay, and Florida Bay;
- 2) measuring physical and biological characteristics of seagrass communities to assess ecosystem health;
- 3) determining the role of the pathogenic slime mold *Labyrinthula* on seagrass mortality;
- 4) developing a monitoring plan for the threatened seagrass species *Halophila johnsonii*;
- 5) developing methods to measure those characteristics (ecoindicators) that may be used to document status and trends in the ecological and physiological condition of seagrass habitats; and
- 6) characterizing benthic habitats in the Tortugas Ecological Reserve.

### **Marine Mammals**

During 2003/2004, there were 380 manatee mortalities recorded by the FWRI. Weekly and monthly updates of manatee mortality data were posted regularly on the FWRI website for public use.

In February, 2,568 manatees were counted by 23 observers in 20 areas on both coasts during the annual state-wide synoptic survey. Aerial surveys were flown twice monthly in Volusia and Indian River counties throughout the winter months.

Aerial surveys were conducted in Florida and its adjacent waters since 1991 to monitor the seasonal occurrence of right whales. This effort focuses on alerting vessels to the presence of right whales within the southeast critical habitat. Sixty surveys were conducted this season resulting in 42 sightings of right whales. Staff was involved in disentanglement efforts and participated in documenting and responding to several unusual right whale sightings this season.

### **Marine Turtles**

Staff from the FWRI coordinated the Florida portion of the Sea Turtle Stranding and Salvage Network (STSSN), an 18-state program administered by the NMFS. A total of 2,184 sea turtle stranding incidences were documented in Florida during 2003/2004. Sea turtle populations were monitored by recording numbers of nests made on Florida beaches, a number that is proportional to the number of breeding females in the population of each species. In 2003/2004, 186 survey areas were monitored, comprising 1,301.6 km of beaches. A total of 63,446 loggerhead nests; 2,262 green turtle nests; and 842 leatherback nests were documented.

### **Information Science and Management**

The FWRI continued to support the FWC through application of geographic information systems (GIS) and remote sensing technologies. Projects of interest to GSMFC include:

Marine Recreational Fishing. This work aims to identify the portion of the population that participates in the marine recreational fishery. The relationship between the entire population and fishery participants changed through recent history to develop a predictive model that will provide insight into possible changes in recreational fishing, given various future scenarios.

Habitat Suitability Modeling. FIM fisheries data and various statistical programs were continued to standardize CPUE for development of predictive GIS models showing distribution of spotted seatrout pinfish and bay anchovy by life stages in Tampa Bay and Charlotte Harbor.

Recreational Boating Characterization. Work continued with the University of Florida to characterize boating activities to understand the impacts that boating has on the environment, and the impacts that development, population growth, and management actions have upon boating.

### **SEAMAP**

During 2003/2004, 3,689 lots of invertebrates, 502 lots of fishes, and 34,725 lots of SEAMAP larvae were accessioned into the collections; over 300 scientific and educational specimen loan requests were received and provided; more than 400 requests for information and requests for assistance were answered; and at least 150 public outreach activities were completed. SEAMAP personnel participated in three SEAMAP or SEAMAP related ichthyoplankton cruises.

### **DIVISION OF WILDLIFE**

*Frank Montalbano, Director*

### **Imperiled Species Management**

*Kipp Frohlich, Section Leader*

The ISM is responsible for 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 Resource Conservation Trust Fund. Save the Manatee Trust Fund provided monies for right whale protection efforts.

### **Marine Turtles**

The Marine Turtle Protection Program worked for the protection of threatened and endangered marine turtles and their critical nesting beaches, development habitat, and foraging habitat along Florida's coast. Florida is a lead state or cooperating agency for the implementation of approximately 91 tasks identified in the USFWS and NMFS recovery plans for the five species of marine turtles that occur in Florida. Staff participated in development of scientific information necessary to guide recovery efforts (research), in review of ongoing and proposed human activities that could impact marine turtles and their nesting and foraging habitats (management), and in public education about marine turtles.

### **Accomplishments:**

- The marine turtle license plate went on sale in February 1998. A cumulative total of 105,937 plates have been issued generating a total of approximately \$5,589,383 in revenue for the

state (including vehicle registration fees and renewals). During 2003/2004, the state issued or renewed 68,327 turtle plates.

- During 2003/2004, Imperiled Species Management staff managed 17 marine turtle grants including review and approval of deliverables. Staff assisted the FWRI in soliciting and reviewing marine turtle grant proposals for 2003/2004. On July 1, 2003, oversight of the marine turtle grants program transferred to the Caribbean Conservation Corporation. Oversight was provided for the marine turtle permit review and approval process through the Marine Turtle Grants Committee.
- Approximately 164 marine turtle permits were issued during 2003/2004. This included about 87 permits for nesting survey work, about 27 permits for sea turtle stranding and salvage work as well as permits for turtle walk programs, educational display of loggerhead turtles, and rehabilitation work. Oversight of this program included numerous meetings with permit holders in the field to provide training and technical advice, participation in training workshops, and revision of the FWC *Marine Turtle Permit Holder Guidelines*.
- A \$500,000 grant from the USFWS was completed which developed off-beach parking in Volusia County.
- State captive facilities that rehabilitate marine turtles or hold turtles (loggerhead and non-releasable turtles) for educational purposes were monitored. Three sea turtle holding facilities were inspected. These inspections focused on compliance with Sea Turtle Conservation Guidelines and ensure the facilities are safe for turtles temporarily or permanently held.
- The Tequesta Field Lab participated in the annual rehabilitation workshop held at Hidden Harbor Sea Turtle Hospital. The number of turtles received in rehabilitation facilities, successful rehabilitation rates, and a five-year summary of sea turtle holding facility data was presented. Certificates of appreciation were given to each rehabilitation facility in recognition of their responses to the increased rehabilitation needs associated with elevated strandings over the past two years.
- Work continued with the USFWS on a grant-funded project to minimize lighting impacts on marine turtles.
- Technical expertise was provided on marine turtle protection during the review of 263 FDEP and other state permits. This included 28 applications for coastal armoring installation or

repair, 63 lighting plans, four rock revetments, ten dredging applications, and eight beach nourishment applications. Marine turtle protection conditions were provided for 177 permit applications, field permits, or special events. Numerous meetings were attended with agencies and individuals to discuss application of projects and minimization of impacts to marine turtles. Assistance in design, implementation, and review of monitoring to assess the impacts of permitted activities on marine turtles, their nests, and hatchlings continued.

- The FDEP was assisted in the development and implementation of updated standard conditions for marine turtle protection during beach cleaning and special events. A meeting was co-hosted with FDEP for beach cleaners and concessionaires to discuss these conditions.
- The 2004 International Sea Turtle Symposium was held in San Jose, Costa Rica, where staff presented a five-year summary of sea turtle holding facility data including a comparison to the previous five-year period.
- Data was presented on environmental considerations for beach nourishment at the Annual Florida Beach and Shore Preservation Society meeting.
- Staff was invited to present at the Annual Florida Local Environmental Resource Agencies, Inc. meeting on the FWC Marine Turtle Protection Program.
- Staff served as expert witness during a F.S. Chapter 120 hearing for a FDEP permit issued pursuant to F.S. 161, the Coastal Construction Control Line Program.
- The Tequesta Field Lab conducted sea turtle necropsies with the FWRI Sea Turtle Stranding and Salvage Network during two necropsy events at the pathology laboratory in St. Petersburg. Necropsy events take place every two months and gross necropsies are conducted on 40-70 sea turtle carcasses.
- Work continued with federal, county, and municipal organizations to minimize lighting impacts on marine turtles. 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. Ten nighttime lighting inspections were conducted to identify problematic light sources and provide recommendations for potential solutions for each problematic light.
- Work coordinated with the NMFS to acquire, distribute, and conduct training in the use of

various mouth gags and dehooking devices. Due to a delay in production of the training video, kits were not distributed in 2003/2004.

- In cooperation with the USFWS, local governments, and local conservation organizations, the official Marine Turtle Lighting Course was developed and implemented.
- Staff participated in the Archie Carr Working Group and attended meetings on a regular basis.
- Sea World hosted and co-sponsored the 2003/2004 Marine Turtle Permit Holder Workshop. Approximately 200 marine turtle permit holders, volunteers, and agency staff attended this two-day event.
- Educational activities for marine turtle conservation included development of brochures for different topics involving marine turtles; 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 funding-raising activities. Thirteen, colorful marine turtle decals and three posters were developed 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 help fund the agency's marine turtle program.

### **Manatees**

The Imperiled Species Management Section implements many tasks of the Florida Manatee Recovery Plan. The activities focused on five 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 education and information to the public.

### **Accomplishments**

- Staff reviewed and prepared comments on the Brevard, Sarasota, Indian River, Duval, Volusia, Broward, and Clay counties MPP drafts. The FWC approved final plan for Sarasota County and approved plan amendments for Indian River County.
- A total of 633 projects were reviewed during the year and biological opinions and recommendations were provided to reduce or eliminate potential negative effects of the proposed activities. Numerous meetings with Cabinet Aides were attended in order to assist with agenda items regarding impacts to manatees.
- General Provisions of the state and speed zone rule 68C-22 were amended. The Lee County speed zone rule was challenged; judges ruling found that the zones exceeded FWC statutory authority. The FWC appealed the order to the Circuit Court and the Second District Court of Appeal; however, all attempts were denied for procedural reasons.
- Lee County was notified that the FWC was considering rule making to re-address the Lee County rule and asked the county to form a Local Rule Review Committee. The committee had 60 days to submit a report.
- Speed zones for Tampa Bay were developed, and the Tampa Bay Local Rule Committee provided recommendations for FWC to consider as the proposal was developed. The FWC approved moving forward with a final rule, and two public hearings were held in the area in June. A final public hearing was scheduled for September 2004.
- Staff continued to provide the Way of the Manatee Treasure Box program to teachers in Leon and Wakulla counties. These kits, available on a loan basis, provide a free resource for teachers to educate their students on manatees, habitat protection, and their environment.
- An intranet company specializing in educational field trips on line for classroom worked with staff to develop an e-field trip about manatees. This self-guided tour into the life of the manatee meant elementary and high school students nationally and internationally could learn about the manatee. The field trip reached 25,000 public, private, and home-schooled students in 45 states. During the initial month the e-field trip went online, staff participated in a live web chat with 80 students. A written "Ask the

Experts” question session provided additional contact with 250 students.

- A new message was developed for manatee outreach efforts called *The Florida Manatee – A Florida Treasure*. Posters and brochures were developed and integrated into other educational efforts.
- The FWC completed an assessment of manatee foraging impacts to aquatic vegetation in Manatee Springs off the Suwanee River. The study used cages placed around aquatic vegetation to prevent manatees from eating protected plants and assessed the recovery of resources after manatees left the system. An article entitled *Managing Natural Aquatic Plant Communities in Manatee Springs: The Effects of Manatee Grazing, Nutrient Pollution, and Flooding* was published in the August 2004 edition of *Aquatics*.
- The FWC coordinated with the ACOE and SFWMD to address central and south Florida structure-related mortality issues through the Interagency Task Force for Water Control Structures.
- The FWC co-chaired the Warm-Water Task Force (WWTF) and Habitat Working Group (HWG) with USFWS partners in 2003/2004. An action plan was drafted and a warm-water management plan was begun. The HWG worked on refining habitat recovery criteria in the manatee recovery plan.
- The FWC continued work with federal and SFWMD partners to draft recommendations for manatee protection in Comprehensive Everglades Restoration Plan (CERP). Recommendations will address culvert and water control structure installation, potential Aquifer Storage and Recovery thermal effects, potential manatee entrapment in canal networks and in-water construction effects. Manatee Habitat Evaluation Surveys were conducted in over 100 miles of flood control canals in the Everglades and Everglades Agricultural Area.
- Work began in cooperation with the Kings Bay Advisory Group to restore submerged aquatic vegetation in the Kings Bay in Crystal River. Assessments were performed of invasive algae removal techniques to determine if those efforts improved flowering plant abundance. Through regional citizen and interagency coordination, the group hoped to complete ecological restoration of Kings Bay.

## **Florida Department of Agriculture and Consumer Services**

### **Division of Aquaculture**

#### **Bureau of Aquaculture Development**

*Mark Berrigan*

During 2003/2004, the bureau continued its commitment to encourage the development of the aquaculture industry in Florida. Aquaculture will become an integral segment of Florida’s agricultural and economic future by providing high quality aquaculture products to worldwide markets while advancing resource management. Numerous activities were conducted to promote development of aquaculture. These activities included regulatory, administrative, advisory, and technical functions directed toward ensuring that aquaculture activities are compatible with the Florida Aquaculture Plan, Aquaculture Certification Program, best management practices, resource management goals, and public health protection. The bureau is divided into four primary components:

- 1) Aquaculture Certification Program
- 2) Sovereign Submerged Lands Aquaculture Leasing Program
- 3) Oyster Culture and Shellfish Resource Development Program
- 4) Technical Support Program (Ombudsman, training, technical outreach, grants)

The bureau was progressive in its support of aquaculture development as a practicable alternative to commercial fishing and conventional agriculture to foster economic development in rural and coastal communities. Its core programs offer unique and essential services to this emerging sector of Florida’s agricultural community. The bureau’s programs provided the regulatory framework for aquaculture programs, provided specific farming areas on state-owned submerged lands, and provided responsible stewardship for Florida’s natural aquatic resources.

The Florida Agricultural Statistics Service reported sales of Florida aquaculture products exceeded \$95 million in 2003/2004, a moderate decline of 4% from 1999. Sales of hard clams and oysters contributed substantially to the decline in reported values; decreasing to \$13 in 2003/2004 from \$18.3 million in 2001. Production of hard clams was lower than in 2003/2004, but the unit price for hard clams declined 20%-25% over the period affecting the overall product value.

### **Aquaculture Certification Program**

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

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

During 2003/2004, 1,018 aquaculture facilities were certified. Shellfish producers (509 farmers) make up 50% of the certified farms, 222 ornamental producers make up 22% of the certified farms, and 202 food fish producers make up 20% of the certified farms. The remainder produced live rock, alligator, and bait. Certified farms were found in 61 of the state's 67 counties: The highest number of certified farms occurred in Levy County (20%), Hillsborough County (10%), and Dixie County (9%).

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

The bureau is responsible for the Aquaculture Lease Program under provisions in Chapter 253, F.S. It administered 664 aquaculture leases containing about 1,581 acres and 82 shellfish leases containing about 1,321 acres. Leases are located in ten counties, including Brevard, Charlotte, Dixie, Franklin, Indian River, Lee, Levy, Monroe, Pinellas, and Volusia counties. By statutory mandate, the bureau identified tracts of submerged lands throughout the state that are suitable for aquaculture development. Twenty special aquaculture use areas were identified and authorized by the Board of Trustees in eight coastal counties including Franklin, Dixie, Levy, Charlotte, Lee, Indian River, Brevard, and Volusia counties. Potential aquaculture use areas in the Ten Thousand Islands located in Collier County were evaluated. In cooperation with the Office of Agricultural Law Enforcement, bureau staff conducted compliance inspections on aquaculture leases to determine compliance with lease agreements. The Aquaculture

Lease Program supported marine aquaculture in a very unique way, and producing clams on submerged lands is the largest marine aquaculture business in Florida. Hard clam sales accounted for \$13 million in 2003/2004 (Florida Agriculture Statistics Service 2004). Farming hard clams is different from many other agriculture activities since cultivation usually requires the use of state-owned land. Unlike many upland agriculture activities conducted on privately held lands, marine aquaculture must be conducted on or over submerged lands that are largely held in the public domain. Only a small amount of suitable submerged acreage is privately owned; therefore, marine aqua-farmers are dependent upon the use of public lands to grow their crop. Accordingly, the department must act on behalf of the Governor and Cabinet to administer and manage public lands in the best interest of the people of Florida while protecting valuable natural resources.

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

Under the mandate to improve, enlarge, and protect the oyster and clam resources of the state, the bureau actively enhanced shellfish resources and restoring reefs on public submerged lands. During 2003/2004, 63,116 bushels of processed oyster shell from Franklin County processors were collected and 127,872 bushels were planted on public reefs. Oyster resource development projects were conducted in cooperation with local oystermen's associations in four coastal counties. A total of 261,870 bushels of live oysters were re-planted on public reefs in Franklin, Wakulla, Dixie, and Levy counties.

### **Conserving Public Oyster Reefs**

The bureau applied its expertise and equipment to mitigate potential impacts on oyster resources in Apalachicola Bay. The department completed a joint project with the Florida Department of Transportation and the FDEP to enhance and restore public oyster reefs as part of the St. George Bridge Replacement Project. The mitigation plan involved the restoration of oyster reef habitat by placing processed oyster shell and live oysters on designated reefs.

### **Technical Support Programs**

Substantial technical and administrative support for aquaculture operations was provided through site visits, compliance inspections, and workshops. More than 2,000 site inspections were conducted to assist aqua-farmer and to ensure compliance with best management practices. Water quality studies continued in order to evaluate the effectiveness of



best management practices. Research was also conducted to quantify the impacts of clam culture in the Alligator Harbor Aquaculture Use Area and on adjacent aquatic communities. The research objectives were:

- Developing baseline ecological data
- Sampling fish communities
- Analyzing benthic core samples
- Collecting physical and water quality data
- Determining the quality and condition of seagrass habitat

These data provide baseline information to evaluate changes that may occur as clam production increases in the aquaculture use area. Three projects related to the aquaculture production of sturgeon were completed. Results of this research are expected to provide the regulatory and technological basis for commercial production of non-native sturgeon in Florida.

# **L** LOUISIANA DEPARTMENT OF WILDLIFE AND FISHERIES OFFICE OF FISHERIES *Dwight Landreneau, Secretary*

The mission of the Louisiana Department of Wildlife and Fisheries (LDWF) Office of Fisheries is to conserve and protect Louisiana's renewable aquatic resources for present and future generations of Louisiana citizens by controlling harvest, by 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. Clients served by these programs include present and future generations of Louisiana citizens, as well as national and international interests that derive benefits from use of Louisiana's fisheries resources. The LDWF recommends seasons, 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 LDWF 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 shrimp seasons and the winter offshore shrimp season. Additionally, these same data were used to recommend season extensions and special shrimp seasons.

### **Shrimp**

The Marine Fisheries Division continued administering an \$8.68 million federal grant (Louisiana Shrimp Fisheries Disaster Assistance Grant - NOAA/DOC Award No. NA03NMF4520310). The grant activities, which included providing economic assistance to commercial shrimp fishers who demonstrated a record of compliance with turtle excluder and bycatch reduction device regulations, incentives to commercial shrimp fishers to ensure widespread and proper use of turtle excluder and bycatch reduction devices in the fishery and personal assistance to commercial shrimp fishers, has been completed. Activities related to the promotion and marketing of wild caught Louisiana shrimp and the initiation of a quality certification and marketing program in conjunction with the Southern Shrimp Alliance continues.

The Marine Fisheries Division also continued a \$146,073 federal grant (Interjurisdictional Assessment and Management of Louisiana Coastal Fisheries - NOAA/DOC Award No. NA03NMF4070125) 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 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 provided 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. 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.

### **Management Actions**

In recognition of differences in shrimp recruitment, emigration and growth patterns among Louisiana coastal areas, the LDWF has managed the shrimp fishery in inside waters utilizing a shrimp management zone concept. First implemented in 1975, this zoning 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 as follows:

- 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.

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 over-wintering white shrimp sampled in outside waters.

**Offshore Shrimp Season.** State outside territorial waters south of the inside/outside shrimp line from the eastern shore of Freshwater Bayou at longitude 92° 18' 33"W to eastern shore of Belle Pass at latitude 29° 05' 77"N and longitude 90° 13' 30"W were closed to shrimping January 12, 2004. State outside territorial waters south of the inside/outside shrimp line and east of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel buoy line to the eastern shore of Freshwater Bayou Canal at longitude 92° 18' 33"W to the eastern shore of Belle Pass at latitude 29° 05' 07"N and longitude 90° 13' 30"W reopened to shrimping April 5, 2004. State outside waters south of the inside/outside shrimp line and west of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel buoy line to the eastern shore of Vermilion Bay reopened to shrimping on May 14, 2004.

**Inshore Shrimp Seasons.** The open water of Breton and Chandeleur Sounds in Shrimp Management Zone 1 closed on March 31, 2004 and later reopened on May 14, 2004. The inside waters of Zone 2 opened May 14, 2004 followed by the inside waters of Zone 1 with the exception of Breton and Chandeleur Sounds opening on May 24, 2004. Zone 3 opened on May 31, 2004. The spring shrimp season in the inside waters of Zone 2 closed on June 16, 2004. The spring shrimp season in the inside waters of Zone 1 closed on July 6, 2004 except for that portion of Mississippi Sound originating at a point along the Mississippi-Louisiana territorial sea

boundary at longitude 89° 30' 00"W thence due south to a position at latitude 30° 05' 00"N and longitude 89° 30' 00"W thence southeasterly to the US Coast Guard navigational light off the eastern shore of Three-Mile Pass at latitude 30° 03' 12"N and longitude 89° 21' 30"W thence northeasterly to a position which intersects the menhaden line as described in the Menhaden Rule (LAC 76:VII, 307D) north of Isle au Pitre at latitude 30° 10' 00" W and the open waters of Breton and Chandeleur Sounds as described in the Menhaden Rule, remained open to shrimping throughout the spring shrimp season.

The 2004 fall shrimp season in inside waters in Zones 1 and 3 opened on August 9, 2004 and in Zone 2 on August 2, 2004. Zones 1, 2 and 3 closed on December 21, 2004.

### **Landings and Value**

Louisiana shrimp landings in 2004 totaled approximately 84.7 million pounds (all species combined/heads-off weight) and accounted for \$139.8 million in dockside sales. These figures represent increases of approximately 9% in landings and 2.5% in dockside value from levels reported in 2003. Commercial landings since 1976 have ranged from a high of 93.7 million pounds in 1986 to 49.4 million pounds landed in 1983. Brown shrimp landings in 2004 were greatest during May followed by June and July while white shrimp production peaked in October. Seabob landings were highest during late fall and early winter.

### **Crabs**

Louisiana commercial blue crab landings for 2004 totaled approximately 44.4 million pounds and accounted for \$29.9 million in dock-side sales. Blue crab landings represent an 8% decrease from 2003 landings of approximately 47.7 million pounds. A major issue in the fishery is the low prices associated with increased foreign imports of crabmeat. Stone crab landings for 2004 were 1,669 pounds. Stone crab landings decreased approximately 84% from the 2003 landings of 12,278 pounds.

The major LDWF activity related to blue crabs in 2004 was the derelict crab trap removal program. Two trap sweeps to remove derelict crab traps took place. A shallow water winter cleanup took place from February 28 through March 14, 2004 in the upper Terrebonne Bay estuary and a deep water spring closure took place from May 14 through May 22, 2004 in Western Vermilion Bay. The winter closure was dependent upon a broad-based group of volunteers that actively targeted derelict traps in shallow water whereas the spring

closure was dependent upon shrimp fishermen that inadvertently picked up traps in their shrimp gear. During the winter closure, 6,676 derelict crab traps were retrieved and brought to the designated disposal sites. A total of 215 volunteers in 90 boats contributed 1133 man-hours of effort. Additionally, 30 volunteers worked at the disposal sites.

During the spring closure, 218 derelict crab traps were retrieved and brought to the designated disposal sites; of these, 100 traps were returned by shrimp fishermen and 118 by LDWF personnel. The number of volunteers that participated is unknown because most of the traps were brought to the disposal sites at night when LDWF personnel were not present.

The Crab Task Force continued to meet and address issues that confront the industry. The Crab Task Force endorsed and also participated in the 2004 crab trap removal program. The Crab Task Force worked on a limited entry bill for the commercial blue crab fishery for the 2005 legislative session; however, the proposed legislation was not adopted.

## **MOLLUSC PROGRAM**

### **Oysters**

Unequaled in oyster production over recent years, Louisiana consistently produces one of the most abundant and valuable oyster resources in the nation. Averaging nearly 14 million pounds per year, Louisiana accounted for approximately 55% of all Gulf of Mexico oysters, and was responsible for 50.5% of all oysters landed in the United States in 2004.

The importance of the oyster resource to Louisiana's economy is evident as Louisiana commercial oyster landings had a dockside value of over \$35.2 million in 2004. Oyster landings in Louisiana are divided between harvest from public oyster areas and private oyster leases. Oyster season on the public grounds generally runs from September to April, but may extend through mid-May only after approval by the Louisiana Wildlife and Fisheries Commission. Historically, landings from private leases comprised 60%-80% of annual Louisiana oyster landings, and in 2004 seventy percent 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 2004 measured 4.1 million pounds of oyster meat.

The majority of available public oyster stocks are located east of the Mississippi River in Coastal Study Areas I and II and these areas of the state contribute the

most to annual public oyster landings. These areas also provide large amounts of seed for transplant to leases.

### **Oyster Seasons**

Oyster areas in Louisiana are divided into public oyster seed grounds (known as seed grounds, seed reservations, and tonging areas) and privately leased water bottoms. The public oyster seed grounds are managed by the LDWF to provide seed oysters for transplant to leases. When a healthy supply of marketable oysters also exists on these grounds, harvest is allowed within a seasonal framework. Marine Fisheries Division biologists sample the public grounds on a monthly basis and perform a stock assessment each July in preparation for the upcoming season. Most seed grounds are opened each year, although some public areas are opened every other year depending on the health of the oyster population.

The Calcasieu Lake Public Oyster Area previously restricted commercial harvest to tonging. However, a 2004 law change allowed for the use of hand dredges to harvest oyster resources in the lake beginning in the 2004/2005 oyster season. Sabine Lake is the only public tonging area in Louisiana, but poor water quality prohibits oyster harvest based on public health concerns. Seed grounds and reservations are managed with the goal of providing seed oysters for transplant onto private oyster leases. However, a "Sacking Only Area" exists east of the Mississippi River in portions of Lake Fortuna and Lake Machias for the exclusive harvest of sack-sized oysters. Oyster harvesters use mechanical dredges on public grounds and reservations, and hand dredges with no mechanical assistance in the Calcasieu Lake Public Oyster Area. Harvest is restricted to the use of hand tongs in Sabine Lake.

The 2004/2005 Louisiana oyster season began with the opening of the Vermilion, East and West Cote Blanche and Atchafalaya Bay Public Oyster Seed Ground on September 8, 2004. The public oyster seed grounds east of the Mississippi River and Bay Gardene Public Oyster Seed Reservation opened one week later on September 15, 2004. These areas all closed on April 1, 2005.

The Bay Junop Public Oyster Seed Reservation was opened for a short, one-week season on October 1, 2004 and closed October 10, 2004. The Lake Mechant Public Oyster Seed Ground except for the 2004 cultch plant was opened for a short season on October 11, 2004 and closed on October 31, 2004.

The Calcasieu Lake public tonging area was opened on October 15, 2004 and closed on April 30, 2005.

Calcasieu Lake is opened and closed within the season framework by DHH based on the level of the Calcasieu River.

### **Oyster Leasing**

The moratorium on the issuance of new oyster leases, at the request of Louisiana Department of Natural Resources (LDNR), remained in affect throughout 2004. 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 702 renewal applications were processed.

The Oyster Lease Survey Section 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, landings and harvest statistics, and recent news articles about oysters. The website has had thousands of visits since it was developed and placed on the web in March of 1998, and is available at: <http://oysterweb.dnr.state.la.us/oyster>. In 2004 in Louisiana there were 8,348 individual leases comprising 397,892 acres.

### **Additional Oyster Projects**

Six additional public grounds were designated in 2000 to be developed for oyster production; these include portions of Barataria Bay, Deep Lake, Lake Felicity, Lake Chien, Lake Tambour, and Lake Mechant. Initial site selection for new reefs in these areas was completed in 2002/2003 by utilizing sidescan sonar technology to analyze water bottoms. Barataria Bay, Lake Chien, Lake Felicity, and Lake Mechant were chosen as locations for reef-building activities in 2004 funded by the federal government through the Coastal Impact Assistance Program (CIAP). This project placed roughly 35,000 cubic yards of crushed concrete and limestone rock on suitable water bottoms in these areas in May/June 2004. Biological monitoring of the new reefs began immediately and will continue through July 2006.

Additional reef building projects were the result of a federal disaster grant (Louisiana Oyster Rehabilitation and Promotion Project – NA03NMF4520316) secured by LDWF following Hurricane Lili and Tropical Storm Isidore in September/October 2002. Reef building activities in Hackberry Bay and Sister Lake were planned and carried out in May/June 2004. Over 20,000 cubic yards of cultch material were placed on suitable water bottoms in Hackberry Bay and Sister Lake. Biological monitoring began immediately after cultch planting and will continue through July 2006.

### **FINFISH PROGRAM**

The primary objective of the finfish program is to develop and maintain a database of scientific information to be used to make rational recommendations for the management of coastal finfish stocks.

Over 4.8 million marine recreational fishing trips were taken by approximately 1.1 million anglers in 2004. Recreational trips have been on a general rise since 1990. About 15.9 million spotted seatrout and 5.4 million red drum were caught recreationally in Louisiana in 2004.

The value of commercial finfish landings in Louisiana exceeded \$62 million in 2004, the thirteenth highest since 1990. The LDWF 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 296,000 commercial fishing trips reported in 2004 producing nearly 1.1 billion pounds of seafood. Starting in May 2000 an electronic trip ticket program was developed and made available to dealers. Roughly, 90 dealers to date have taken advantage of the computerized program and submit their trip ticket data to the LDWF via the internet. Trip ticket information has been used to enhance the accuracy of stock assessments conducted by state and federal fishery management agencies.

### **Monitoring**

A comprehensive monitoring program was developed in 1985 to protect or enhance valuable marine finfish 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 coastwide 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 provide information on relative abundance, year class strength, movement and gonadal condition. A trammel net is used to provide information on relative abundance, standing crop and movement.

Gill net samples are taken semi-monthly from April through September, and monthly from October through March; trammel net samples are taken monthly from October through March, and seine samples are taken monthly from January through August, and semi-monthly from September through December.

Hydrological readings (conductivity, salinity, and water temperature) are taken each time a biological sample is taken. Also, estimates of wind direction and speed are taken each time a biological sample is taken. Samples are taken 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 area on a monthly basis to give the resource managers information as to the current condition of the resource. The pertinent life history information for the important species is also used in developing analytical and predictive models.

### **Finfish Stock Assessments**

Division personnel updated stock assessments for black drum, striped mullet, southern flounder and sheepshead in 2004. 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 results 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 results of YPR analysis indicate that for the years assessed (1997-2003) 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 96% to 100% of maximum and SPR at 16% to 30%. An M of 0.8 (the highest value within the range examined) would produce yields of 60% to 71% of maximum with SPR at 44% to 52%.

*Striped Mullet* - The results 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  $F_{MAX}$  with yield of about 98% of maximum, and SPR near 31%. An M of 0.6 would indicate a more lightly fished stock with yield being 83% of maximum and with SPR being near 65%.

*Sheepshead* - The results 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 - 2003) was operating well near  $F_{0.1}$  and well below  $F_{MAX}$ , with yield of 69% to 81% of maximum, and SPR at 47% to 57%. An M of 0.3 (the highest value examined) would indicate a more lightly fished stock with yield being 32% to 50% of maximum and with SPR being 66% to 78%.

## **HABITAT PROGRAM**

### **Artificial Reefs**

The Louisiana Artificial Reef Program was established in 1986 to take advantage of obsolete oil and gas platforms which were recognized as providing habitat important to many of Louisiana's coastal fishes. Federal law and international treaty require these platforms be removed one year after production ceases.

Since the program's inception in 1986, 34 different petroleum companies have participated in the program.

In addition to the material, the participating companies also contributed to Louisiana's Artificial Reef Trust Fund for operation, and maintenance, and reef research.

In June 2004, the LDWF deployed its first deep-water reef as part of its deep-water reef program. The structure, located in South Pass Block 89, approximately 15 miles south of the mouth of the Mississippi River, was previously owned by Marathon. The reefs are in water depths in excess of 400 ft. This water depth was chosen to minimize the impacts on the shrimp fishery. It has been reported that less than 1% of the shrimping activity takes place at these water depths. In addition these platforms are very difficult and expensive to remove. The partial removal preserves the hard bottom habitat and maintains fishing opportunities for its residents, the oil and gas industry saves money on decommissioning the platforms but more importantly the fish keep their homes.

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

SEAMAP is a state/federal/university program that collects, manages, and disseminates fishery-independent data and information in the southeastern United States. Louisiana participated in planning and resource surveys of this National Marine Fisheries Service-funded cooperative project. Planning activities included identifying priorities for data acquisition, and coordinating Gulf-wide resource surveys by SEAMAP participants. The LDWF also conducted summer (July), fall (September), and winter (December) sample 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. Summer and fall surveys coincided with NMFS resource survey activity off the Louisiana coast.

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

The LDWF's Oil Spill Task Force continued in 2004 to develop and implement plans to protect and restore the State's wildlife, fishery, and habitat resources from the adverse effects of oil spills. With other state and federal trustees, LDWF representatives continued to develop a pilot plan for a regional restoration planning program for Louisiana that will provide a means to efficiently restore habitat and other natural resources injured as a result of small spills.

Pre-assessment data collection for NRDA was begun for four spills that occurred during 2004. These were:

- July 2004 Exxon/Mobil spill in West Bay Champaigne north of Grand Isle.
- August 2004 Unocal pipeline spill in Lapice Field in St. James Parish.
- September 2004 Stone Energy pipeline spill at Weeks Island South of Lafayette.
- September and October 2004 multiple post Hurricane Ivan oil spills into the marsh along Pass-a-Loutre and in the Wildlife Management area itself.

The LDWF continued damage assessment activities and monitoring spills:

- Damage assessment on November 2003 Exxon/Mobil pipeline spill on Mendicant Island north of Grand Isle in Barataria Bay.
- Restoration planning with Shell/Texaco on a Dec/Jan 2003 pipeline blowout in Terrebonne Bay, south of Cocodrie, LA to discuss restoration projects.
- Injury determination on a March 2003, an Exxon/Mobile oil spill in Lake Washington, out of Port Sulphur, LA.
- Injury determination for the April 2002 BP/Amoco pipeline spill in Little Lake in the Barataria Basin near Galliano, LA.
- Injury determination for the May 2002 Unocal Oil pipeline spill in the East Lake Palourde Field near Morgan City.
- Cooperative damage assessment for the September

2002 Ocean Energy well blowout at North Pass of the Mississippi River near Delta National Wildlife Refuge and Pass-a-Loutre State Wildlife Management Area is complete and restoration planning is in the works.

- Continual site visits for damage assessment determinations of the December 2002 Hilcorp pipeline spill at Duck Lake in the Atchafalaya basin.
- Continual restoration planning for an April 2001 Williams Petroleum pipeline spill at Mosquito Bay near Pointe au Fer.
- Monitoring of restoration that was put in place for the November 2000 T/V Westchester tanker spill in the Mississippi River. The focus of restoration for this spill was the area on and around Pass-a-Loutre State Wildlife Management Area where a delta splay project was constructed to compensate for marsh and other habitat injuries. Improvements were also made to campground facilities on the WMA. Monitoring continues.
- A marsh creation project near the site of a September 1998 Equinox well blowout in Lake Grand Ecaille, Plaquemines Parish has been selected for implementation pending insurance claims issues resulting from bankruptcy of the responsible party and completion of a consent decree.
- Restoration planning activities for a June 1997 Apache Corporation pipeline spill in coastal Vermilion Parish continued in 2004.
- LDWF staff continued to work with other state and federal trustees to determine the extent of natural resource injuries resulting from the spill and develop suitable restoration alternatives for a Sonat well blowout in August 1997.

The LDWF also participated in an interagency project initiated by the Louisiana Oil Spill Coordinator's Office to develop regional plans to restore natural resources injured in oil spills. These regional restoration plans and the regional Environmental Impact Statement associated with these plans went through a number of edits in 2004.

In addition the LDWF 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 LDWF also evaluated and responded as needed to approximately 3000 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 LDWF website: [http://www.wlf.state.la.us/apps/netgear/index.asp?cn=la\\_wlf&pid=884](http://www.wlf.state.la.us/apps/netgear/index.asp?cn=la_wlf&pid=884) or the USGS Louisiana Hydrowatch website:

<http://www.la.water.usgs.gov/hydrowatch.htm>.

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 and most accurate information possible.

### **National Coastal Assessment (Louisiana)**

The LDWF participated in the EPA's National Coastal Assessment program (formerly known as the Coastal 2000). This was the fourth sampling season of the five-year assessment. LDWF personnel sampled 50 randomly generated sites in coastal Louisiana for water quality, fish tissue and sediment samples between July and September in the seven Coastal Study Areas. Data from the program will be used in a comparative assessment of the health of the Gulf of Mexico waters. Because of Hurricane Ivan's destruction of EPA's Gulf Breeze, FL Lab in September of 2004, transfer of samples was significantly delayed after the 2004 sampling season.

### **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. The LDWF monitored 27 projects during 2004.

### **Caernarvon Biological Monitoring**

Since 1991, the U. S. Army Corps of Engineers and the Louisiana Department of Natural Resources have operated a project for the controlled diversion of

freshwater from the Mississippi river into the Breton Sound Estuary. The diversion structure is located in the mainline Mississippi River levee at Caernarvon, Louisiana, and has a design flow capacity of 8,000 cubic feet per second (cfs). In 2004, the Caernarvon structure was open for 208 days with an average flow of 2043 cfs.

The Louisiana Department of Wildlife and Fisheries conducts extensive monitoring in the Breton Sound Estuary; and is continuing a biological monitoring program to accurately measure effects of the project on fish and shellfish populations. Biological monitoring of the project has been undertaken by LDWF in three phases:

- 1) preconstruction (4 years), to determine the conditions in the basin before the project went on-line;
- 2) post construction (4 years), an intensive study of the biological effects of the diversion;
- 3) and long-term (46 years), to monitor the extended project effects. Marine Fisheries staff collects oyster, shrimp, crab, and finfish samples at stations situated from the diversion outfall to the Gulf. The ninth year of the long-term phase of the post-diversion monitoring program was in 2004. These studies gather both fishery dependent and fishery independent data.

### **Davis Pond Biological Monitoring**

In 1998, Louisiana Department of Wildlife and Fisheries personnel began a three-phase sampling program venture spanning more than 50 years to monitor effects of the Davis Pond Freshwater Diversion Structure. The Louisiana Department of Natural Resources is leading the overall monitoring effort in coordination with the U.S. Army Corps of Engineers.

Work began on Davis Pond, in St. Charles Parish, in January 1997. The structure, capable of diverting up to 10,650 cfs of Mississippi River water into the Barataria estuary, opened on July 18, 2002. In 2004, the Davis Pond structure was open for 228 day with an average flow of 1070 cfs. Ongoing maintenance designed to address problems with flooding in the ponding area north of Lake Cataouache limited the amount of freshwater diverted through the structure. The Davis Pond project is designed to compensate for loss of freshwater, nutrients, and sediment by providing a controlled flow of freshwater from the Mississippi into a target area in the Barataria estuary to benefit thousands of acres of marshland.

To determine how fish and shellfish populations



change, oyster, shrimp, crab and finfish samples were taken at stations located from the diversion outfall to the Gulf. Commercial fishery harvests will also be monitored. In addition, LDWF biologists take water quality readings at 38 locations within the basin each month, to provide a complete picture of how salinity and flow patterns are changing.

An extensive study of recreational fishing in the project impact area began in July 1999. This creel study covers the entire Barataria basin, from the freshwater zones in the north to the Gulf barrier islands in the south. Species composition, sizes, catch rates, and amount and location of fishing effort are monitored, using point-access surveys and aerial counting/mapping surveys.

### **Coastal Wetlands**

State and federal agencies continued to plan and implement projects throughout the coast that impact marine habitat and dependent species. Marine Fisheries staff participated.

## **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 are also the headquarters of Coastal Study Area III in the Barataria Bay estuarine system. The Enforcement Division routinely used the laboratory as a base of operations. Several LSU, ULL, and Nicholls State University researchers make use of laboratory facilities. The marine laboratory also supports the monitoring of the Grand Isle Sulphur Mine Reef for the Louisiana Artificial Reef Program. In 2004, The LDWF Marine Fisheries Division continued its support of university research in our coastal areas by providing access to the Lyle St. Amant Marine Laboratory, other field research stations, boats, and personnel.

### **Sport Fish Restoration**

The Sport Fish Restoration Act was passed on August 9, 1950 to create a 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, creels, 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 may receive 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.

In 2004, Louisiana used the marine share of its Sport Fish Restoration Funds in various activities:

- 1) Development of marine boating access for anglers,
- 2) Assessment of Louisiana's marine finfishes,
- 3) Continuation of the new Marine Fisheries Research Laboratory planning and design phase
- 4) Continuation of the Evaluating Sport Fish Use of Created Wetlands in the Atchafalaya Delta Project (Contracted to Louisiana State University, Coastal Fisheries Institute (LSU, CFI),
- 5) Continuation of Identifying Essential Fish Habitats in Barataria Bay Project (Joint project with LSU, CFI),
- 6) Marine sport fish tagging study (Joint project with LSU, CFI), and
- 7) An analysis of spotted seatrout feeding habits with Louisiana bay systems (Joint project with the University of New Orleans (UNO)).

### **Marine Boating Access**

During 2004, this project continued development of marine boating access for recreational anglers. It is an objective of the LDWF to strengthen its ability to meet effectively the consumptive and non-consumptive needs of the public for marine fish resources.

### **Assessment of Louisiana's Marine Finfishes**

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 LSUCFI 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 and growth and reproductive biology of selected finfishes to support stock assessment efforts.

During the 2004 calendar year, otoliths were collected from black drum (495 collected, 488 aged), striped mullet (707 collected, 707 aged), sheepshead (505 collected, 498 aged), gray snapper (37 collected, 37 aged), spotted seatrout (1115 collected, 1111 aged), and red drum (987 collected, 976 aged).

#### **Louisiana Marine Sport Fish Investigation, Laboratory Acquisition/Development, Southeast Louisiana**

This grant is used to construct a new marine fisheries laboratory facility on a 7.8 acre tract in Grand Isle, LA. This new laboratory facility will replace the Lyle S. St. Amant Marine Biological Laboratory located on Grand Terre Island. During 2004, the site prep documents for the dredging, bulkhead and site fill work were completed and the building design team started final design and development of final drawings and technical specifications.

#### **Evaluating Sport Fish Use of Created Wetlands in the Atchafalaya Delta**

The Coastal Wetlands Planning, Protection and Restoration Act provided funding to restore wetlands in the Atchafalaya Delta. Dredge spoil from the River was used to create new wetland habitat. During 2004, this project examined the suitability of this habitat for sport fish production through fish collection in the Atchafalaya Delta. These data will be used in future planning efforts to optimize the creation of habitat for sport fish. The project will also evaluate potential created wetland sites that could be altered to increase use by fish and fishermen. This project is a cooperative project between the LDWF and Louisiana State University, Coastal Fisheries Institute.

#### **Identifying Essential Fish Habitats in Barataria Bay**

This project describes essential fish habitat (EFH) using sidescan sonar, split beam hydroacoustics and stable isotope techniques. During 2004, essential fish habitat in Barataria Bay was identified and their value to important sport fish species was quantified. These techniques yielded data that can be used to address the protection and conservation of habitats important to marine, estuarine and anadromous finfish. This is a partnership project between Louisiana Department of Wildlife and Fisheries and Louisiana State University to develop a monitoring program, establish sampling protocols, and conduct field sampling. The project identified habitat use by juveniles 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. This project is a cooperative project between the LDWF and Louisiana State University, Coastal

Fisheries Institute.

#### **Marine Sport Fish Tagging Study**

This three year 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 2004, preparation and development of protocols for the Marine Sport Fish Tagging Study and the associated pond based experiments were conducted. In addition, 287 spotted seatrout and red drum were tagged and released in Barataria Basin during 2004. This is a cooperative project between the LDWF, Louisiana State University, and the Audubon Aquarium of the Americas.

#### **An Analysis of Spotted Seatrout Feeding Habits Within Louisiana Bay Systems**

This project will determine whether food web assemblages and trophic positions of sea trout differ among three distinct habitats using carbon and nitrogen stable isotope analysis and fatty acid analysis. In 2004, delays in contract approval resulted in missed sampling therefore sampling was postponed to 2005. This is cooperative project between the LDWF and the University of New Orleans.

## **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.

### **Status**

During 2004, 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, the TCC Blue Crab Subcommittee, the TCC Data Management Subcommittee, Sheepshead Technical Task Force, Commercial/Recreational Fisheries Advisory Panel, Technical Coordinating Committee, and State/Federal Fisheries Management Committee. Grant documents and proposals were prepared to secure funding for fisheries management projects under the Sports Fish Restoration Act, the Cooperative Fishery Statistics Program, the Interjurisdictional Fisheries Act, and liaison with Gulf of Mexico Fishery Management Council.

## **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. Data are 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. The trip ticket system was improved for oyster and live bait fisheries. Data are being scanned into a database and transferred to the GSMFC.

### **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.

## **SHELLFISH MANAGEMENT PROGRAM**

### **Objectives**

- Maintain program compliance with the Interstate Shellfish Sanitation Conference NSSP;
- Map Mississippi oyster reefs;
- Survey potential cultivation and cultch planting sites;
- Cultivate oyster reefs;
- Cultch management; and
- Assess reef areas

### **Status**

During the 2004-2005 season, 397,992 sacks of oysters were harvested. Oyster harvesting waters are divided geographically into eight major areas and open and close according to close monitoring. Potential cultivation and cultch planting sites were surveyed. A scannable oyster trip ticket continued to

be improved, and oyster check stations were computerized.

### **Major Accomplishments**

- Cultch materials were planted to enhance oyster reefs (funded by shell retention fees collected from oyster harvesters and processors as authorized by statute.
- Several hundred acres of oyster reefs were cultivated with MDMR equipment and personnel.
- Continued collection of shell retention fees to generate funds for shell planting and reef revitalization.

### **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 295 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.
- Development continued on constant recorder instruments along the coast for real-time hydrological monitoring.
- Real-time data from seven 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 approval worthy of merit and issued permit, a complete report of collection or harvesting activity must be submitted to the MDMR. Over thirty 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). To date, over 5,200 traps were collected and recycled.

## **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. Saltwater scientific collection permits were issued in a manner to protect Mississippi's marine resources while allowing legitimate research and development. 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.

### **Artificial Reef Program**

#### **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 sports 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**

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 85 concrete modules (26'x12'x9'), concrete rubble (152 deployments), 64 steel hull vessels (including barges), one oil rig living quarters, two oil rig jackets, and 122 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, concrete rubble (when water depth allows), oyster shells, and fly ash. Near shore 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 14 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.

## **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 world. 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.

### **INVESTIGATION OF JUVENILE FISHES THAT UTILIZE SARGASSUM AND FRONTAL ZONES AS ESSENTIAL HABITAT IN MISSISSIPPI MARINE WATERS AND ADJACENT GULF WATERS**

#### **Objectives**

- To describe species diversity, determine temporal and spatial occurrence, and develop indices of relative abundance for juvenile fishes that occur in *Sargassum* and frontal zones;
- To characterize frontal zones and *Sargassum* habitat utilized by juvenile fishes based upon water quality parameters, physical location, general direction of movement, and general characteristics of the frontal zone (estimated length, width, and depth) and maps sampled.

### **Status**

In 2001, the MDMR received funds made possible by the Federal Aid in Sports Fish Restoration Act (16 U.S.C. 777-777k;)50 CFR Part 80, administered by the U.S. Fish and Wildlife Service. A portion was provided to the Gulf Coast Research Laboratory for the study of juvenile fish in *Sargassum*. More than 25,000 larval and juvenile fish that utilized *Sargassum* and frontal zones were collected and identified in 57 families and at least 135 species. Larval billfishes, bluefin and yellowfin tuna, dolphin and amberjack are a few of the important fishery species found in samples. Work continued to clearly establish the role of *Sargassum* in providing essential fish habitat for these important fish species.

### **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 (14" and larger).
- 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. The longest time out for a tagged fish was 1,462 days; the greatest distance traveled was 980 nautical miles. Similar trends of movement were observed in recaptured fish as in other years. Seasonal movement and growth of tripletail were studied utilizing angler tagged and released tripletail in Mississippi coastal waters and adjacent Gulf of Mexico waters. The longest time out for a tagged fish was 112 days; the greatest distance traveled was 185 nautical miles. This is the third year of the tripletail project and the first year in which recaptured fish were reported. Future recaptures will supplement these initial data and allow for the analysis of migration trends.

### **SEAFOOD TECHNOLOGY PROGRAM MANAGEMENT**

#### **Objectives**

- Conduct regulatory inspections of shellfish processing and transporting facilities to determine compliance with state and federal sanitation and health safety regulations;
- Provide technical advice to the Mississippi seafood processing industry to aid in compliance with seafood sanitation and health safety regulations;

- Provide technical advice to the seafood processing industry regarding new technologies and new products that add value, new markets, employment opportunities, and economic enhancement for the seafood industry;
- Provide technical advice to those interested in aquaculture and aid in creating expanded economic and employment opportunities;
- Provide technical expertise in investigating food borne illness reports;
- Undertake research project in line with seafood technical surveys, promotion of Mississippi seafood, seafood safety education, and sanitation training in line with the goals of the Mississippi seafood industry to disseminate information and educate consumers and food handlers in the seafood industry;
- Provide assistance to the Mississippi Food Safety Task Force in promoting 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;
- Provide administrative support to the activities of the office, department, and MCMR.

#### **Status**

A total of 3,500 technical assistance actions were provided. Examples were:

- Technical advice and support inspections for the Mississippi Department of Agriculture and Commerce regarding regulated aquaculture activities;
- Provided seafood inspectors with pre-oyster harvest packets of educational information for molluscan shellfish dealers and a technical assistance packet to crab and shrimp processors;
- 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 brochures on “The Risk of Eating Raw Oysters and *Vibrio Vulnificus*” to the industry and public;
- Participated in the Mississippi Food Safety Task Force with the goals of education, communication, cooperation, and coordination with the other member state agencies in the promotion of food safety with emphasis on raw seafood handling, risks on eating shellfish, and cooking seafood;

- Participated in the Food Security Symposium held in Jackson, Mississippi;
- Hosting training courses on Basic HACCP and plant sanitation in April and co-sponsored training courses in September with the MSU CREC;
- Provided HACCP and sanitation assistance to the Louisiana Shellfish Control Authority;
- Assisted in Louisiana’s recall of oysters and illness investigations;
- Assisted North Carolina in an illness investigation;
- 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;
- Conducted onsite visits to post-harvest processors and seafood dealers to document the different post-harvest processing technologies;
- Developed a generic post-harvest processing HACCP Plan for individually quick-frozen, heat/cool pasteurization, high hydrostatic pressure, and irradiation processing technologies;
- Participated in the research grant entitled “Integrated Oyster Market Research, Product Development and Evaluation, Promotion, and Consumer Education Program for the Gulf of Mexico Oyster Industry;”
- Produced a video on “Available Technologies in Post Harvest Treatment of Oysters;” and
- Produced brochures, poster, fact sheet, and PowerPoint presentations on individually quick-frozen, heat/cool pasteurization, and high hydrostatic pressure technologies.

#### **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; and
- Received FDA notification that the Mississippi Shellfish Sanitation Program met NSSP requirements.

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

Shrimp – 26

Crab – 15

Oyster – 41

Total number of seafood sanitation/processing permits – 82. These 82 permits represent 600 inspected seafood units.

Examples of seafood sanitation and health safety regulatory activities conducted by the Seafood Technology Bureau include: 2,200 seafood facility inspections and associated actions and 201 water sample collections of processing plant source water samples for testing. Conducted inspections and associated actions to determine compliance with the following sanitation and seafood health safety regulations:

- Molluscan shellfish sanitation inspections covered under the NSSP;
- Sanitation inspections on seafood species other than molluscan shellfish to aid the industry in meeting compliance conditions when the FDA conducted official inspections;
- Conducted quarterly inspections of all permitted facilities and conducted follow-up inspections as needed, completed re-certification inspections of certified dealers, and issued permits;
- Work with seafood processors to correct deficiencies to meet FDA seafood compliance criteria;
- Work 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;
- Prepared and distributed letters to molluscan shellfish dealers regarding ISSC meeting actions and updated HACCP plans;
- Answered the Gulf Oyster Industry Council's *Vibrio vulnificus* survey;
- Prepared NSSP HACCP comments for the FDA on critical limits and correction action in the model ordinance; and
- Met with Mississippi Department of Health and Mississippi Department of Agriculture and Commerce on inspection coordination and development of memorandum of understanding and coordination; 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 FY 2004 (September 1, 2003 through August 31, 2004) 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' gill nets with individual 150' sections of three, four, five and six inch stretched mesh. Bag seines (60'/ ½" mesh) and trawls (20'/1½" mesh) are used to determine abundance of juvenile and subadult finfish, shrimp, blue crabs, and associated organisms. Oyster dredges (19 ½" wide) were used to collect oyster abundance data. Inshore waters (within 9 nm) were also sampled with trawls. Total sampling effort during FY 2004 included 778 gill net sets; 2,160 bag seine tows; 2,700 bay and gulf trawls; and 1,093 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 shrimp trawl and eight long line samples in 2004.

Sport landings (private and guided boat) and associated angler activities were derived from on-site creel interviews of recreational anglers at the completion of their trips. Roving trailer and wet slip counts were used to assess relative pressure at sampling sites. Relative pressure was used to determine how often a site should be selected for a survey; higher use sites are surveyed more often than low use sites. A total of 1,169 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.

### **External Science Review**

An external review of science-based assessment programs of Coastal Fisheries and Inland Fisheries by a team assembled by the American Fisheries Society was begun. In short, TPWD is ensuring that its data collection and analysis is conducted with the utmost accuracy and the proper emphasis. The team leader of this external review, Dr. Rich Noble, is scheduled to produce a final report on the work in early 2005. The National Academy of Sciences also began reviewing instream flow study methods and mechanisms used by TPWD and other agencies. Dr. Noble conducted the review in partnership with TPWD's Coastal Fisheries and Inland Fisheries Divisions.

### **Crab Trap Cleanup Program**

The 2004 closed season was February 20-29, 2004 with 311 volunteers using 103 vessels and expending approximately 2,500 man-hours of effort, plus numerous TPWD staff, removed 3,571 derelict traps coastwide. This effort brings the total number of traps removed since the program began in 2002 to 15,499. Most (78%) of the traps were removed from Galveston Bay (35%) and San Antonio Bay (43%) respectively. Additionally, 48 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 and seagrasses. In the past year, genetic studies were conducted on Gulf menhaden, spotted seatrout, sheepshead, bonnethead and blacktip sharks, and shoalgrass. Final reports were completed for shoalgrass, bonnethead sharks and blacktip sharks.

Collection and processing of genetic samples from other species continued. Otoliths were collected from red drum and spotted seatrout to estimate age structure of Texas populations and update age-length keys for these fish. Projects continued to identify spotted seatrout spawning areas and examine reproductive biology and age and growth of Atlantic croaker and sand seatrout. 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, and Gulf flounder. 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 2004.

#### TPWC Rule-making Actions

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

A requirement was adopted that any minnow trap fished in saltwater must have a gear tag attached that is less than 30 days old. The gear tag must contain the name, address and date the gear tag was set out. Game wardens finding traps displaying gear-tag dates greater than 30 days old can recognize the trap as abandoned and remove it from Texas waters.

Rules were adopted regarding the commercial oyster fishery that would simplify and clarify oyster transplant requirements. These included:

1. TPWD may designate the total number of boats that may be used for transplanting and then equitably allocate those boats among leases. However, boat allocations may be voluntarily transferred between leases as long as those transfers are completed before transplanting permits are issued for those leases;
2. A reduction of application lead-time and clarification of the due date of transplant/harvest reports;
3. The removal of the monthly requirement of inspecting lease boundary markers; and
4. Require that a permit be available for inspection and establish a five-calendar day cancellation of a permit for violating this provision.
5. Establish a closed season for the period February 20 – February 29, 2004 during which the use of crab traps in public waters will be prohibited.

### **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 mm TL. During calendar year 2004, a total of 13.2 million red drum fingerlings and 834,967 spotted seatrout fingerlings averaging 36.5 mm TL were stocked into marine water. Approximately 1.0 million red drum fingerlings were released into inland freshwater reservoirs. Cutting-edge research included automated routine respirometry and broodfish genotyping 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 almost 176,000 visitors in 2004. The Marine Development Center toured 7,246 visitors, and the PRB satellite pond facility received 180 visitors. These facilities, touted as the world's largest red drum hatcheries, represent a unique merger of fisheries science and visitor education.

### **Habitat Protection**

The Coastal Fisheries Division worked with the Texas Water Development Board (TWDB) and the Texas Commission on Environmental Quality (TCEQ) to complete scientific analysis of freshwater inflow needs for seven major bay systems.

TPWD also worked directly with legislative committees that include the Water Conservation Task Force and the Science Advisory Committee of the Study Commission on Water for Environmental Flows.

Coordination between Coastal and Inland Fisheries proved invaluable as TPWD made recommendations to the TCEQ on new standards for nutrients in Texas reservoirs to protect freshwater fisheries. Additionally, the reorganization of TPWD's Resource Protection Division into other field

divisions was designed to allow the agency to better address critical water resource issues.

The teamwork at TPWD also continued with data collection efforts made as part of a comprehensive biological and water quality study of tidal streams, and the agency worked with TCEQ and the TWDB to implement freshwater inflow recommendations in regional water plans and in water rights permits.

TPWD's successful oversight of the aquaculture industry in Texas resulted in over 1,100 shrimp pond inspections performed by the Coastal Fisheries aquaculture team, ensuring that shrimp would be free of disease before pond effluent was discharged into public waters.

### **Artificial Reef Program**

The Artificial Reef Program was responsible for maintaining 50 permitted reef sites and five permanent buoys. Development of the nearshore reef strategic plan continued in 2004. Three nearshore reef sites were enhanced with approved artificial reef material. A hopper barge (194' x 35' x 16') and 152 square concrete utility poles cut and bundled into groups of 6-9 were deployed at the Matagorda Island 712 Reef. Basco's Reef, in the High Island area (HI-117), was enhanced with 82 quarry rocks (3-12 tons each). An additional 5 reef balls were deployed at the Port Isabel Reef (PS-1169L) to enhance the area with the existing 37 reef balls. An exhibit and workshop at the Houston Sea Space Exposition in June 2004 promoted the understanding of artificial reefs.

**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 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 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 elements collocated with the SERO.

The NOAA Fisheries 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 2004, commercial shrimp fishing in federal waters off Texas were closed May 15 through July 15.

*Bycatch Reduction Devices (BRDs)*

On July 3, 2002, the GMFMC submitted Amendment 10 to its Fishery Management Plan (FMP) for the Shrimp Fishery of the Gulf of Mexico to NOAA Fisheries Service for implementation. Amendment 10 established a requirement for commercial shrimp vessels fishing in the exclusive economic zone (EEZ) of the eastern Gulf of Mexico (east of Cape San Blas, Florida) to use BRDs that exclude at least 30 percent of the total finfish biomass bycatch. NOAA Fisheries Service approved Amendment 10 on November 2, 2003, and published a final rule establishing this requirement effective on February 9, 2004.

**Gulf Reef Fish Fisheries**

*Secretarial Amendment 1*

Secretarial Amendment 1 established a 10-year red grouper rebuilding plan, structured in 3-year intervals that would end overfishing and rebuild the stock to MSY. The rebuilding plan seeks to achieve a 9.4-percent reduction in the recreational and commercial harvest of red grouper, relative to the average landings for 1999-2001, during the first 3 years of the 10-year rebuilding plan. The final rule for Secretarial Amendment 1 was effective July 15, 2004. The final rule:

- 1) Establishes a red grouper commercial quota of 5.31 MP, gutted weight (GW)
- 2) Reduced a shallow-water grouper commercial

- quota of 8.80 MP, GW.
- 3) Includes a provision that would close the entire shallow-water grouper commercial fishery when either the red grouper quota or the shallow-water grouper quota is reached.
  - 4) Establishes a deep-water grouper commercial quota of 1.02 MP, GW.
  - 5) Establishes a commercial quota of 0.44 MP, GW, for all tilefishes in the management unit, combined.
  - 6) Establishes a 2-fish red grouper recreational bag limit (within the aggregate 5-fish grouper bag limit).

#### *Red Snapper*

In November 2004, NOAA Fisheries Service approved Amendment 22 will become effective on July 5, 2005. This amendment set biological reference points and status determination criteria for red snapper, established a rebuilding plan for the red snapper stock, and specified a reporting program to improve bycatch monitoring in the reef fish fishery. This rebuilding plan is designed to end overfishing in 2009/2010 and rebuild the stock to  $B_{MSY}$  by the year 2032.

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

Under Section 407(c) of the Magnuson-Stevens Act, the GMFMC is authorized to prepare and submit a plan amendment and regulations to implement an IFQ program for the commercial red snapper fishery. NOAA Fisheries Service conducted two referendums as required by § 407(c) of the Magnuson-Stevens Act. The first referendum, in 2004, was to determine whether commercial red snapper fishermen supported consideration of an IFQ program.

#### *Quota Monitoring*

The deep-water grouper (yellowedge, speckled hind, snowy, warsaw, and misty) commercial fishery was closed July 15, 2004.

The shallow-water grouper (red, gag, black, red hind, rock hind, yellowfin, yellowmouth, and scamp) commercial fishery was closed on November 15, 2004.

The red snapper commercial fishery was extended an additional five days during the 2004 fishing year. The season was extended to afford fishermen the opportunity to catch the commercial quota of 4.65 million pounds, which had not been met in the normal fishing year.

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

#### *Quota Monitoring*

- In 2004, the commercial fishery for king mackerel in the western zone of the Gulf of Mexico closed on October 20.
- The commercial gill net fishery for king mackerel in the southern Florida West Coast did not close in 2004.
- The commercial hook-and-line fishery for king mackerel in the Florida East Coast subzone was increased to 75 fish per day effective February 1 each year, and the fishery did not reach its quota.
- The commercial hook-and-line fishery for king mackerel in the southern Florida West Coast subzone closed on April 9, 2004.
- The commercial hook-and-line fishery for king mackerel in the northern Florida West Coast subzone did not meet its quota in 2004.

### **PROTECTED RESOURCES DIVISION**

#### *Biological Opinions*

- Registered approximately 15,000 fishermen under the Marine Mammal Authorization Program.
- Responded to listing petition for three *Acropora* species, and convened status review team.
- Participated in the SEDAR review of data available for Goliath grouper (candidate species) stock assessment.
- Developed SER's contribution to the annual List of Fisheries under the Marine Mammal Protection Act.
- Completed a biological opinion for the New Orleans District COE regarding breakwater construction and dredge and fill operations associated with the Coastal Wetland Planning, Protection and Restoration Act Lake Borgne-Mississippi River Gulf Outlet Shoreline Protection Project in Lake Borgne, St. Bernhard Parish, Louisiana.
- Completed a biological opinion for the Mobile District COE regarding dredging and disposal of materials associated with the new berthing area and turning basin at Pier 7, Port of Gulfport, in Mississippi Sound, Harrison County, Mississippi.
- Completed a biological opinion for Eglin Air Force Base regarding Eglin's Gulf Test and Training range.
- Completed a biological opinion for the Mobile District COE regarding maintenance dredging of Biloxi Navigation Project in Mississippi Sound, Harrison County, Mississippi.

- Completed a biological opinion for the Jacksonville District COE regarding the dredging of the Federal Navigation Channel and associated access channels/marina basins within Palm Harbor in Lake Worth, Palm Beach County, Florida.
- Completed a biological opinion for the Jacksonville District COE regarding construction of dock and installation of a new seawall cap located in Biscayne Bay, Miami-Dade County, Florida.
- Completed a biological opinion on a proposed scientific research permit for two bottom longline cruises in the South Atlantic and Gulf of Mexico.
- Completed a biological opinion for the Jacksonville District COE regarding maintenance dredging of the Loxahatchee River and its impact to Johnson's Seagrass in Martin County, Florida.
- Completed a biological opinion for Minerals Management Service regarding injection of waste into Salt Caverns and Caprock, Gulf of Mexico.
- Completed a biological opinion for U.S. Dept. of Transportation regarding the construction and operation of a liquid natural gas LNG deepwater port in the Gulf of Mexico, off the coast of Louisiana.
- Completed a biological opinion for the Mobile District COE regarding expansion of Square Handkerchief Shoal Key, Bay St. Louis, Mississippi.

### **HABITAT PROTECTION**

The Habitat Conservation Division (HCD) used authorities from federal law and Executive Orders to manage and influence the outcome of activities that may affect essential fish habitat (EFH) and other fishery resources and, ultimately, the production of import commercial and recreational fisheries. Activities focused on project and permit reviews and EFH consultations involving federal regulatory 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 restoration, enhancement, creation, and preservation of coastal wetlands, riverine habitats, and nearshore areas utilized by important commercial and recreational fishery species.

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, corporations, and private 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 2004, the HCD:

- Reviewed 4250 individual proposals to construct in coastal waters or wetlands.
- Reviewed 62 large federally-constructed or sponsored projects.
- Recommended measures to protect living marine resources on over 940 proposals, which included detailed conservation recommendations on 323 EFH consultations initiated by federal action agencies.
- Completed 147 reviews on 147 National Environmental Policy Act actions.
- Participated in activities associated with mitigation planning and habitat restoration unrelated to other habitat programs and activities detailed here. The majority was related to federal regulatory programs. Considerable effort was devoted to mitigation bank development, mitigation guideline development, and general mitigation planning.
- Fulfilled requirements related to processing applications, permits and licenses for liquefied natural gas (LNG) facilities in the southeastern U. S. In 2004, 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, and 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 FY04, NOAA Fisheries Under the Coastal Wetlands Planning, Protection, and Restoration Act NMFS received approximately \$3 million in engineering and design funds to initiate evaluation of the Scofield Pass Riverine Sand Mining and Barrier Island Restoration Project. The project is designed to mine sediments from the Mississippi River for

placement on a barrier island segment in the Barataria Basin. NMFS also received funding to construct the Little Lake marsh creation and shoreline protection project that would restore approximately 1,000 acres of marsh and protect 27,000 linear feet of shoreline at a cost of \$27 million. During this period, NMFS also initiated construction on the Hopedale hydrologic restoration project that helped protect approximately 3,000 acres of brackish marsh from elevated salinity and water levels.

- Completed the Final Environmental Impact Statements in response to the settlement agreement for the *American Oceans Campaign vs. Department of Commerce* lawsuit. The documents analyzed alternatives for identifying and describing EFH, identifying habitat areas of particular concern, and identifying measures to minimize the adverse effects of fishing on EFH for all the fishery management plans of the Gulf of Mexico and Caribbean Fishery Management Councils.
- Participated in ecosystem planning activities through active membership in various partnerships including the Louisiana Coastal Area Feasibility Study, Florida's Subcommittee on Managed Marshes, and National Estuary Programs in Texas, Louisiana, Mississippi, and Florida.
- 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 many 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 2004, 96 grants and cooperative agreements totaling \$31,835,017 were awarded to states, universities, non-profit/profit institutions, and individuals. Three fishery management councils in the Southeast U.S. received a total of \$5,723,606 in 2004 to conduct fisheries management activities in accordance with the Magnuson-Stevens Fishery

Conservation and Management Act. NMFS SERO awarded \$2,718,359 to the Institute for Marine Mammals Studies for the continued development of the Center for Marine Education and Research. The center provides rescue and rehabilitation of marine mammals in the north-central Gulf of Mexico (Mississippi-Alabama-Louisiana). The research facility supports and accommodates research consistent with the Marine Mammal Protection Act. Additionally, \$1,880,000 was awarded to the Gulf States Marine Fisheries Commission for the Atlantic Billfish Program. Other funded programs were:

- The Southeast Area Monitoring and Assessment Program (SEAMAP) - \$1,391,459
- The State-Federal Cooperative Fisheries Statistics Program - \$1,062,419
- The Anadromous Fisheries Program - \$110,542
- The Interjurisdictional Fisheries Program - \$996,469
- Atlantic Coastal Fisheries Cooperative Management Act Program - \$713,660
- Atlantic Coastal Cooperative Statistics Program - \$295,912
- The Marine Fisheries Initiative (MARFIN) Program – Fourteen new grants were funded at \$1,145,598, and six previous multi-year awards were funded totaling \$628,650
- The Saltonstall-Kennedy (S-K) Grant Program – The competitive program was not conducted in 2004 due to an insufficient funding allocation. The Gulf and South Atlantic Fisheries Development Foundation, Inc. received a Congressional Earmark for \$250,000 for educational outreach to high-risk consumers of raw shellfish.
- The Cooperative Research Program - \$1,329,872
- Unallied Science Program - \$8,522,916
- Unallied Management Program - \$1,088,964
- Fishery Disaster Assistance - \$108,535
- Unallied Industry Projects - \$4,496,706

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

Review, assessment and/or authorship activities continued for 16 Gulf fishery management plans and amendments including Reef Fish Amendment 18A (vessel monitoring systems), Reef Fish Amendment 22 (red snapper rebuilding plan), Reef Fish Amendment 23 (vermillion snapper rebuilding plan), Reef Fish Amendment 24 (reef fish limited access), Shrimp Amendment 13 (limited access), and Reef Fish Amendment 25 and Coastal Migratory Pelagic Amendment 17 (for-hire permit moratorium). Participation continued on technical work groups, panels, and committees as part of the Fisheries

Information Network, the GSMFC Socioeconomic Work Group, and the GMFMC Socioeconomic Panel. Other activities in 2004 included:

- Worked with three southeast fishery management councils to develop the economic and social portion of Operations Plans for products and services.
- Monitored and provided professional oversight of contracts to collect cost and earnings data on the Gulf commercial EEZ shrimp fishery and fishing community data for Gulf States.
- Provided technical monitoring services to research investigations on sequential buy-back programs, a commercial shrimp fishery supply model, and commercial fishing participation case studies.
- Collected fishing community profile data from southern Louisiana (Grand Isle and Abbeville areas).



# GULF OF MEXICO FISHERY MANAGEMENT COUNCIL

*Wayne Swingle, Executive Director*

The Gulf of Mexico Fishery Management Council is one of eight regional fishery management councils established by the Fishery Conservation and Management Act of 1976 (now called the Magnuson-Stevens Act). The Council prepares fishery management plans designed to manage fishery resources from where state waters end, out to the 200-mile limit of the Gulf of Mexico. These waters are referred to as the Exclusive Economic Zone, or EEZ.

The Council consists of 17 voting members:

- the Southeast Regional Administrator of NMFS (or his designee),
- the directors of the five Gulf State marine resource management agencies (or their designees),
- 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, and
- four non-voting members representing the U.S. Coast Guard, U.S. Fish and Wildlife Service, Department of State, and the Gulf States Marine Fisheries Commission.

The Council meets five times a year at various locations around the Gulf coast. Prior to taking final action on any proposed rule change public hearings are held throughout the Gulf. Public testimony is also heard during the meeting at which final action is scheduled. Proposed rule changes are then submitted to NMFS for further review and approval before implementation.

When reviewing potential rule changes, the Council draws upon the services of knowledgeable people from other state and federal agencies, universities, and the public, who serve on panels and committees.

Panels and committees include Advisory Panels, Scientific and Statistical Committees, Stock Assessment Panels and the Socioeconomic Panel:

- Advisory Panels (APs) are comprised of recreational and commercial fishermen, charter boat operators, environmentalists, buyers, sellers, and consumers who are knowledgeable about a particular fishery.
- Scientific and Statistical Committees (SSCs) are comprised of economists, biologists,

sociologists, and natural resource attorneys who are knowledgeable about the technical aspects of fisheries in the Gulf.

- Stock Assessment Panels (SAPs) are comprised of biologists who are trained in the specialized field of population dynamics, and who assess the available biological data and advise the Council on the status of stocks and level of allowable biological catch.
- Socioeconomic Panel (SEP) is comprised of sociologists, anthropologists, and economists who review the findings of the SAPs, and advise the Council of the social and economic impacts of setting total allowable catches at the various levels recommended by the SAPs.

The AP and SSC membership review process is conducted every two years to fill vacancies on panels and committees. The next scheduled appointments are for March, 2005. In 2003, 29 new appointments were made to various advisory panels, seven new appointments were made to the SSCs, and six new appointments were made to the Stock Assessment Panels.

The Council moved, at its July meeting, to create an Ad Hoc Reef Fish IFQ Advisory Panel to begin work on a reef fish IFQ plan.

The Ecosystems Committee and the Ad Hoc Sustainable Fisheries Committee merged into a single Sustainable Fisheries/ Ecosystem Committee.

Earlier this year, the Council created an Ad Hoc Offshore Aquaculture Advisory Panel to help revise the Scoping Document for a Generic Amendment that will allow and regulate offshore marine aquaculture facilities in the EEZ. In May, the Council appointed ten members to the panel, who will begin working on the document over the summer.

Also in May, the Council agreed to oppose the use of open loop liquefied natural gas (LNG) systems in the Gulf of Mexico, and further recommended the use of closed loop systems at inshore, nearshore, and offshore locations. With the increased demand for liquefied natural gas, 15 new LNG terminals are proposed throughout the Gulf of Mexico. Six of those are open loop systems, each of which would circulate between 100 million and 200 million gallons of water per day to heat the liquefied natural

gas back to its gaseous state, and since all fish eggs and larvae are assumed dead after passing through these systems, the facilities will have a significant negative impact on fish populations in the Gulf of Mexico.

### **FMPs**

In 2004, the Gulf Council addressed a variety of issues through the development and implementation of various management plans and amendments.

### **Shrimp**

The Council continued the development of Amendment 13 to the shrimp FMP, which defines MSY, OY, the overfishing threshold, and the overfishing condition for royal red and penaeid shrimp stocks that previously lacked such definitions. The amendment includes a standardized bycatch reporting methodology through the use of paper logbooks, electronic logbooks, or observers, and the potential requirement of a Gulf shrimp vessel and gear characterization form. Other alternatives include establishing an endorsement to the existing federal shrimp vessel permit for vessels harvesting royal red shrimp and a moratorium on commercial shrimp vessel permits. The amendment also considers requiring the completion of as well as reporting and certification of landings during a moratorium.

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 2004. 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.

### **Reef Fish**

The Reef Fish FMP received a great deal of attention in 2004. Due not only to the large number of issues contained in Reef Fish Amendment 18, but also to the complexity of those issues, that amendment was split into two smaller amendments – 18A and 18B. Each will concentrate on a more focused set of issues:

- Amendment 18A will focus on capacity control and enforcement issues,
- while the focal point of Amendment 18B will be the development of Sustainable Fisheries Act (SFA) requirements to develop status determination criteria, develop rebuilding plans for Nassau and goliath grouper, and address bycatch reduction.

The 2004 Council year also marked the implementation of Reef Fish Amendment 21, which extends the rules for marine reserves located at Madison-Swanson and Steamboat Lumps. The purpose of the amendment is to continue to provide protection for spawning aggregations of gag, and to continue to evaluate the effect and usefulness of marine reserves as a fishery management tool.

Amendment 22 to the Reef Fish FMP, also known as the red snapper rebuilding plan, is in its final stages and was submitted to NMFS for approval and implementation. The plan calls for the successful rebuilding of the red snapper stock by 2032 and, based on a 1999 stock assessment, sets total allowable catch (TAC) at 9.12 million pounds. A new assessment is currently underway and should be completed and presented to the Council early next year. TAC will be adjusted accordingly based on that assessment.

Amendment 23 to the Reef Fish FMP was also submitted to NOAA Fisheries in 2004. The document contains a rebuilding plan and sets the SFA parameters for vermilion snapper. The plan calls for the stock to reach its maximum sustainable yield (MSY) of 3.37 million pounds by the end of 2013. Management measures include an 11" size limit for both the recreational and commercial sectors; a recreational bag limit of 10 fish; and a forty-day commercial closure from April 22 – May 31.

The Council began writing Reef Fish Amendments 24 and 25, both related to permit moratoria. In Amendment 24, the Council is looking at whether to extend a moratorium on the issuance of new commercial reef fish permits from December 31, 2005, or to establish a limited access system for an indefinite period.

Amendment 25 will consider whether to let the Charterboat/headboat permit moratorium expire June 16, 2006, extend the moratorium for a finite time period (5 or 10 years), or establish an indefinite limited access program.

Following the approval of referendum held earlier this year where commercial red snapper fishermen were asked to decide if the Council should begin the process of developing an IFQ system for that fishery, Amendment 26 was presented to the public through a series of scoping meetings. The meetings provided the public an opportunity to review the program and provide input early in the process.

IFQ programs are intended to reduce overcapacity in

the commercial fishery, lengthen the fishing season, lower operating costs by giving vessel owners more flexibility, improve market conditions, and increased safety at sea.

Finally, the Council directed staff to begin development of an IFQ program for grouper and other associated reef fish. A control date of October 15, 2004 was set and all participants in the fishery were notified of this date. Landings recorded after October 15, 2004 will not be used as a basis for allocation.

### **Coastal Migratory Pelagics**

Gulf-group king mackerel and Spanish mackerel were also a big issue. The Council reduced the commercial trip limit for king mackerel in the southern Florida west coast sub-zone to 500 pounds.

Also approved was the final rule for a regulatory amendment that includes status determination criteria and the MSY and OY values for Gulf-group king and Spanish mackerel, as well as cobia.

The Council continued to work on Amendments 15 and 17 to the Fishery Management Plan for Coastal Migratory Pelagic Resources in the Atlantic and Gulf of Mexico. Amendment 15 proposes to establish two actions. First, it would establish an indefinite limited access program for the king mackerel fishery in the exclusive economic zone under the jurisdiction of the Gulf of Mexico, South Atlantic, and Mid-Atlantic Fishery Management Councils. Establishing a system that caps participation at the current level provides for long-term social and economic stability in the mackerel fisheries, as does action two.

Action 2 proposes to change the fishing season to March 1 through February 28/29 for the Atlantic groups of king and Spanish mackerel. Beginning the fishing year on March 1 ensures the mackerel fisheries in the Atlantic are open during March when several other fisheries are closed.

Amendment 17 is being developed along with Reef Fish Amendment 25 and proposes either a limited access system on for-hire reef fish and CMP permits or an extension of the current moratorium.

### **SEDAR**

A number of stock assessment workshops were held as part of the Southeast Data Assessment and Review (SEDAR) process. SEDAR 5 – King Mackerel and SEDAR 6 – Goliath Grouper/Hogfish, were completed in 2004. SEDAR 7 – Red snapper is underway and will be completed in 2005.

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.

### **MPAs**

The Council extended the Madison-Swanson and Steamboat Lumps marine reserves, located in the eastern Gulf of Mexico, encompassing a total area of about 219 square nautical miles. The final rule extending the reserves an additional six years, through June 16, 2010, published in early 2004. The extension provides protection for spawning aggregations of gag and other reef fish, and allows continued research on the effectiveness of the closures. The rule also modifies fishing restrictions within the reserves.

### **BRDs**

A final rule requiring certified bycatch reduction devices on vessels trawling for shrimp in the eastern Gulf of Mexico EEZ also published. The rule became effective February 9, 2004 and complements existing federal regulations requiring the use of BRDs in the western Gulf of Mexico EEZ. The rule also eases enforcement issues. Shrimp trawlers fishing for royal red shrimp are exempt, as are vessels using rigid-frame roller trawls that are 16 feet or less in length and try nets with a headrope length of 16 feet or less.

### **Ecosystems**

Before combining with the Ad Hoc Sustainable Fisheries Committee, the Ecosystem Committee met for the first time at the October Council meeting. The Committee reviewed the ecosystem pilot project budget and an ecosystem statement of work. Goals, tasks and implementation of the ecosystem project and the SAFMC approach to ecosystem management were also presented.

Council staff participated in the *NOAA Fisheries Social Science Issues and Ecosystem Management Workshop* held November 30 – December 1, 2004. The purpose of the workshop was to facilitate the development of a survey instrument to examine fishery stakeholder opinions toward and ecosystem approach to management.

# **U**nited States Fish and Wildlife Service *Douglas J. Frugé, Gulf Coast Fisheries Coordinator*

Personnel of the US Fish and Wildlife Service (FWS) attended the Gulf States Marine Fisheries Commission (GSMFC) spring meeting (New Orleans, Louisiana, March 15-17) and fall meeting (Biloxi, Mississippi, October 11-13). FWS participation included meetings of the Habitat Subcommittee, Technical Coordinating Committee (TTC), State-Federal Fisheries Management Committee (S-FFMC) and Commission Business Sessions. Participating personnel included: Columbus Brown, Special Assistant to the Southeast Regional Director for Councils, Commissions and the Gulf of Mexico Program; Doug Frugé, Gulf Coast Fisheries Coordinator in Ocean Springs, Mississippi; and Marilyn Lawal of the Southeast Region Federal Assistance Office in Atlanta, Georgia. On August 24, John Forester, Project Leader at the FWS Fisheries Resource Office (FRO) in Baton Rouge, Louisiana, attended the S-FFMC meeting on August 24 in New Orleans, Louisiana to discuss the proposed 2005 work plan of the GSMFC's Fisheries Information Network (FIN). Besides participation in GSMFC meetings, numerous FWS activities conducted by a number of regional and field offices throughout 2004 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 Fisheries
- Habitat Protection/Enhancement
- Federal Assistance
- Public Outreach and Education.

## **ANADROMOUS FISHERIES**

### **Striped Bass Fishery Management Plan Revision**

The FWS Gulf coastal fisheries activities in 2004 continued to be focused on cooperative participation with the GSMFC and the Gulf states in their efforts to revise the *Striped Bass Fishery Management Plan for the Gulf of Mexico* (Striped Bass FMP). Most of this activity was centered in the Gulf Coast Fisheries Coordination Office (FCO), which is co-located with the GSMFC in Ocean Springs. Doug Frugé continued serving as chair of the Striped Bass Technical Task Force (TTF), the GSMFC entity working on the revision. He chaired the final meeting of the TTF for this FMP revision December 13-17 in Empire, Louisiana.

A significant amount of time was invested in 2004 by the Gulf Coast FCO in editing and revising drafts of

the FMP revision. This included continuing efforts to obtain needed reference materials for use in completing the document. Two additional sections of the FMP revision were drafted and provided to the GSMFC on July 20. These two sections were on "Population Structure and Dynamics" and "Conservation Status".

Doug Frugé made a presentation to the TCC on the status of completion of the FMP revision on October 12 at the fall GSMFC meeting in Biloxi, Mississippi. Information was reviewed during October and November for development of figures (maps) in the FMP revision. In addition to conducting editorial review of the draft Mr. Frugé drafted short subsections on genetics management in the Management Recommendations section in December.

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

Personnel from several FWS offices (Gulf Coast FCO; Panama City FRO, Florida; Southeast Regional Office, Atlanta, Georgia; Warm Springs Regional Fisheries Center (RFC), Fisheries Technical Center (FTC) and National Fish Hatchery (NFH), Georgia; Welaka NFH, Florida) attended the annual *Morone* workshop sponsored by the ACF rivers system Striped Bass Technical Committee February 11-12 in Bainbridge, Georgia.

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

Through the cooperative efforts of a number of FWS field stations: Welaka NFH; Inks Dam NFH, Texas; Private John Allen NFH, Mississippi; Warm Springs NFH; Panama City FRO; Southeast Region Fisheries Office; and Gulf Coast FCO as well as the states of Alabama, Florida, Georgia and Mississippi, approximately 1,835,300 Phase I and 102,400 Phase II Gulf race striped bass fingerlings were stocked within the species' historic range in Gulf coastal rivers as part of the multi-agency anadromous striped bass restoration program in the Gulf. 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 Staff Specialist Tom Sinclair) continued coordinating and managing a contract with the New York University School of Medicine for striped bass broodfish genetics screening during the 2004 spawning season. This was the second option year

for continuation of a multi-year contract for this purpose. 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 system. 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 Regional Office also continued developing a historical database on genetics analyses conducted on striped bass in Gulf of Mexico rivers.

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

The Panama City FRO in cooperation with Welaka NFH, Natchitoches NFH (Louisiana) and Warm Springs NFH continued a study begun in 2001 to evaluate the importance of stocking Phase II striped bass in the Apalachicola River as compared to the contributions of Phase I stocked fish and fish that recruit from natural spawning. About 62,800 Phase II fingerlings were stocked in the river and 24,000 in Lake Seminole in the winter of 2004/2005, and all were marked with coded wire tags. Sampling for striped bass occurred in the system during October to determine survival and growth rates and contribution of previously-stocked Phase II fingerlings to the population in the river. All fish stocked as Phase I fish into the river had been otolith-marked with oxytetracycline pigment in recent years in order to distinguish them from Phase II and wild-spawned fish. The study will be continued through 2007 to determine the relative contribution of stocked Phase I and Phase II fingerlings and wild fish to the adult population of the river.

The FWS Panama City FRO, Florida coordinated completion of a revision of the ACF Rivers Striped Bass Restoration Plan during 2004.

The Gulf Coast FCO sent comments to the Mississippi Department of Wildlife, Fisheries and Parks (MDWFP) on November 1<sup>st</sup> regarding placement of Gulf race striped bass on the priority species list for preparation of the Mississippi Comprehensive Wildlife Conservation Strategy (CWCS).

#### **Gulf Sturgeon Recovery Activities**

The Baton Rouge FRO continued providing assistance to the Louisiana Department of Wildlife and Fisheries (LDWF) during 2004 in efforts to track sonic-tagged Gulf sturgeon in Lake Pontchartrain,

Louisiana and Mississippi Sound as part of a study to determine coastal bay habitat use by the species. This included gill netting in Lake Pontchartrain near Bayou Lacombe during January 14-15, sonic telemetry on February 19 in the Rigolets, Lake Borgne, and Lower Pearl River system, and sonic telemetry on February 26 near the mouth of the Tchefuncte and Tangipahoa rivers, lakes Pontchartrain and Maurepas, and Pass Manchac.

During March the Baton Rouge FRO staff edited a draft paper titled *Movement and habitat use of Gulf Sturgeon in the Lake Pontchartrain Basin of Southeastern Louisiana* and sent comments to the LDWF District VIII Fisheries Office in Lacombe on April 16. Cedric Doolittle of the Baton Rouge FRO was a co-author of the paper which was submitted to the Southeastern Association of Fish and Wildlife Agencies for presentation at the 2004 annual meeting.

The Panama City FRO, Florida conducted the first of a two-year project to estimate the population size of Gulf sturgeon in the Apalachicola River during June-August. The total population estimate was 350 fish, slightly higher than the previous estimate of 321 in 1999.

The Panama City FRO also conducted a sonic telemetry study of Gulf sturgeon habitat use of coastal waters during winter-spring of 2004. Fish from the Apalachicola, Choctawhatchee, Escambia, Ochlockonee and Yellow rivers in Florida were sonic-tagged and tracked during the study period.

A survey of the Yellow River, Florida to identify Gulf sturgeon spawning habitats was initiated by the Panama City FRO during the spring. Although no spawning activity was detected, the project was planned for continuance in 2005.

The Panama City FRO also provided various forms of technical assistance to numerous other government agencies and organizations with Gulf sturgeon recovery activities. These included the Alabama Department of Conservation and Natural Resources, Florida Department of Environmental Protection, Florida Fish and Wildlife Conservation Commission, Georgia Department of Natural Resources, Gulf Coast Research Laboratory (GCRL), LDWF, University of Florida, University of Southern Mississippi (USM), US Air Force, US Army Corps of Engineers (CE) and US Geological Survey.

As part of Gulf sturgeon collection activities in the Escambia, Choctawhatchee and Ochlockonee rivers,

the Panama City FRO provided tissue samples from 46 fish to the USM for genetics analyses to better define population relationships among these rivers. In addition USM researchers sampled Gulf sturgeon collected by the Panama City FRO in the Escambia River for external parasites as part of a research project on that aspect of Gulf sturgeon biology.

In partnership with the GCRL, the Panama City FRO participated in sampling benthic macroinvertebrates from six habitat sites along the northern Florida coast where Gulf sturgeon are believed to forage. The GCRL analyzed the samples, and comparisons were made with respect to population composition between sites from different depths.

During 2004 the Panama City FRO floated 40 miles of the Choctawhatchee River in Florida specifically to identify potential threats to Gulf sturgeon spawning habitat. Potential threats identified included sediment runoff from bridge crossings, boat ramps, dirt roads, poorly-managed range and pastures, eroded river banks and other point and non-point discharges. Efforts were planned to engage other government agencies, organizations and individuals to address these issues.

Personnel from a number of FWS offices attended the annual Gulf sturgeon informational and coordination workshop, held during 2004 in November 17-18 at Big Branch in Louisiana.

#### **Habitat Restoration Projects**

The FWS Ecological Services Field Offices (ESFO) located at: Daphne, Alabama, Jackson, Mississippi; Lafayette, Louisiana and Panama City, Florida implemented numerous aquatic habitat projects within the native ranges of Gulf anadromous fish species during 2004. Although primarily initiated to benefit candidate or Endangered Species Act listed freshwater mussel and fish species, many of these projects also benefited anadromous fishes through addressing problems related to point and non-point pollution discharge, turbidity and poor water quality, channel instability and streambank erosion, stormwater runoff, loss of riparian buffers, runoff from poorly-managed agricultural and silvicultural lands, unpaved roads, streambed sedimentation, and blockages to fish movement. Most of these projects were funded through the FWS Partners for Fish and Wildlife Program.

#### **OTHER COASTAL FISHERIES**

##### **Fisheries Information Network**

Doug Frugé was the FWS representative on the GSMFC's Fisheries Information Network (FIN)

Committee and the FIN Administrative Subcommittee during 2004. However, to save on limited travel funding, Ana Roman, of the FWS Boqueron ESFO, Puerto Rico represented the FWS at the FIN annual meeting June 3-4 in Fajardo, Puerto Rico.

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

The FWS, in coordination with state fish and wildlife agencies in the southeastern United States, established the Southeast Aquatic Resources Partnership (SARP) in 2001 in order to better unify joint agency efforts in addressing numerous aquatic resource challenges in the 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. Doug Frugé, of the Gulf Coast FCO began serving as the interim SARP Coordinator during March 2004 and continued serving in that capacity throughout the year.

#### **HABITAT PROTECTION /ENHANCEMENT**

The FWS ESFO's 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 CE permit applications, consultations involving potential effects on species listed under the ESA, and activities under the FWS Environmental Contaminants and Coastal programs.

A total of 37 national wildlife refuges (NWR) provide protection and management on 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.

The FWS, primarily through the Panama City and Daphne ESFO's, 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 were continued for the most part through court actions.

The Florida Gulf Coastal Program, through the Jacksonville and Panama City ESFO's contributed funding and technical assistance to numerous partners for a variety of habitat protection and restoration projects benefiting coastal habitats during the year.

During 2004 the Panama City FRO provided technical assistance to Walton County, Florida in designing and preparing a monitoring plan for a proposed project to restore tidal flow to 10 acres of isolated wetlands and 26-acre Oyster Lake, a coastal dune lake, that has been isolated from the Gulf of Mexico since 1975. The County proposes to replace culverts with a series of bridges. The FRO will document project success with before and after project monitoring of chemical, physical and biological data.

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, as well as participating as the FWS lead in the Louisiana Coastal Area Study with the CE and Louisiana Department of Natural Resources. Representatives of numerous FWS offices met at Lafayette, Louisiana on March 30-31 to discuss and develop a multi-program Fiscal Year (FY) 2005 budget initiative focused on Louisiana coastal restoration activities.

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 7,147 Kemp's Ridley sea turtle nests recorded on the Mexican beaches during 2004, continuing the steady increase in the nest counts that began in the early 1990s. A total of 6,656 egg clutches were translocated to protected corrals, 118 were protected in Styrofoam boxes and 256 nests were protected *in situ* for a total of 659,628 protected eggs. A total of 500,767 hatchlings were released from the project area into the Gulf of Mexico in 2004.

On March 3 the Gulf Coast FCO provided approximately 5,000 copies of the GSMFC's Gulf of Mexico habitat poster to the FWS Southeast Regional External Affairs Office for distribution to other FWS offices. The FWS had provided funding in FY 2002

for re-printing the poster, which was developed by the GSMFC in 2001.

Doug Frugé of the Gulf Coast FCO attended the organizational meeting of the Advisory Panel for the MDWFP CWCS in Jackson, Mississippi on August 20. The Mississippi CWCS will address coastal habitats and species in addition to inland and freshwater resources.

The Gulf Coast FCO sent inquiries on November 16 to FWS Gulf coastal ESFO's requesting information on coastal habitat restoration projects for an information web site being developed by the GSMFC's Habitat Subcommittee.

The Gulf Coast FCO provided comments to GSMFC staff on November 17 regarding a letter to be sent by the GSMFC to the US Coast Guard regarding environmental and fisheries concerns related to proposed liquefied natural gas (LNG) processing facilities in the Gulf of Mexico.

Copies of a joint notice by the FWS and NOAA Fisheries regarding a petition to list the American eel under the Endangered Species Act was provided to the GSMFC and member states on November 17.

#### **Gulf of Mexico Program**

Columbus Brown continued serving as the primary FWS representative to the Gulf of Mexico Program (GMP) and representing the agency on the Management Committee. Several FWS offices in the Southeast and Southwest regions also continued representing the FWS on GMP focus teams and committees. These included the Invasive Species (Patricia Carter, Southeast Regional Office; Bob Pitman, Southwest Regional Office, Albuquerque, New Mexico), Habitat (Larry Goldman, Daphne ESFO) and Nutrient Enrichment (Doug Frugé, Gulf Coast FCO; and John Forester, Baton Rouge FRO) focus teams.

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

The FWS continued participation in the Mississippi River/Gulf of Mexico Watershed Nutrient (MR/GMWN) Coordination Committee (CC), which was formed to assist the MR/GMWN Task Force in addressing hypoxia in the northern Gulf of Mexico. Doug Frugé (Gulf Coast FCO) continued serving as the FWS representative on the CC. Efforts during 2004 primarily keeping other FWS offices in the Southeast, Midwest and Northeast regions apprised of Task Force activities to due to limited staff time at

the Gulf Coast FCO being occupied by higher priority work.

John Forester (Baton Rouge FRO, Louisiana) represented the FWS at meetings of the Louisiana Hypoxia Working Group on February 17, March 16, May 11, June 24, September 29, October 18 and November 30. The Working Group is a subcommittee of the Lower Mississippi River Sub-basin Team that was established under the MR/GMWN Action Plan. John Forester also attended the meeting of the Lower Mississippi River Sub-Basin Team of the Gulf Hypoxia Task Force on November 3-4 in Memphis, Tennessee.

### **Fish Passage**

The FWS initiated a project through the FWS Fish Passage Program during 2002 for a project to evaluate alternative lock operational scenarios at Miller's Ferry Lock and Dam on the Alabama River in order to facilitate fish passage, potentially benefiting anadromous fish species. The project was coordinated by the Alabama ESFO through a contract with the Geological Survey of Alabama and continued through 2004.

### **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. 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 and Boating Infrastructure Grant programs. Funding allocations and brief descriptions of the types of projects funded during federal Fiscal Year (FY) 2004 (October 1, 2003 - September 30, 2004) are described below.

### **Sport Fish Restoration Grants**

In Alabama a total of \$1,074,039 was apportioned to the Marine Resources Division of the Department of Conservation and Natural Resources for marine sport fish restoration activities. Projects included: grant coordination and administration of sport fish restoration programs; maintaining and improving boating access in coastal areas; and a variety of projects to gather various types of fisheries data, conduct public outreach, enhance habitat, conduct fish life history research, and maintain and improve facilities and equipment used in conducting these programs, including significant renovations to the

Marine Resource Division's headquarters on Dauphin Island.

A total of \$5,032,396 was apportioned to the Florida Fish and Wildlife Conservation Commission to carry out marine sport fish restoration activities, although some of this funding was also applied to efforts on the east coast. Projects included: planning, assessing, developing and administering a system of artificial reefs in state waters; collecting marine recreational fisheries data; research on behavior, ecology and life history of snook, spotted seatrout, red drum and tarpon; enhancing the recreational fisheries component of the Marine Resources Geographic Information System; conducting a statewide Sport Fish Restoration marine education program; conducting outreach to better inform citizens regarding the State's Sport fish Restoration programs; surveying and inventorying all boat ramps, marinas, dry storage and mooring areas statewide; and further developing a multispecies approach for assessing and managing estuarine and coastal sport fish stocks.

The Louisiana Department of Wildlife and Fisheries received \$1,638,331 in FY 2004 for marine sport fish restoration. Projects funded included: Sport Fish Restoration program coordination and administration; stock assessment of various marine finfish species; identifying essential fish habitat in Barataria Bay; evaluating recreational fish species use of created wetlands in the Atchafalaya River delta; construction of a marine fisheries laboratory at Grand Isle, Louisiana; constructing a new fishing pier in the southern portion of Calcasieu Parish; expanding a boat trailer parking area at the Burns Point Boat Launch on East Cote Blanche Bay; an assessment of spotted seatrout feeding habits in Louisiana bay systems; tagging red drum to develop an alternative estimate of escapement in Barataria Bay; and providing technical guidance and review of proposed land and water development projects that could potentially impact fish and wildlife resources.

A total of \$586,030 was provided to the Mississippi Department of Marine Resources in FY 2004 for marine sport fish restoration efforts. Specific projects included: administering and coordinating the marine Sport Fish Restoration program; constructing and renovating three fishing piers and three boat ramps; culturing, tagging and stocking striped bass fingerlings in Mississippi coastal rivers; a public outreach program to disseminate information on coastal Sport Fish Restoration projects; coordination, site identification and monitoring of the Mississippi Artificial Reef Program; evaluating and



monitoring populations of seatrout, sheepshead, sand seatrout and shark species in coastal waters; managing a recreational tag and release program in coastal Mississippi to encourage fishers to take measurements and keep accurate records on seatrout, cobia and tripletail they catch and tag; conducting ecological research on juvenile fishes utilizing *Sargassum* habitats in Mississippi offshore waters; assessment of concrete rubble as an artificial reef material; and a tagging program to gather more information on shark species utilizing Mississippi waters.

The Texas Parks and Wildlife Department was apportioned \$3,572,702 in FY 2004 for marine sport fish restoration programs. Specific projects carried out included: monitoring trends in landings, relative abundance and sizes or recreationally important fishes in coastal waters; developing and maintaining the Perry R. Bass Marine Research Facility, the Sea Center State Fish Hatchery, and the GCCA/CPL Marine Development Center, all of which produce red drum and spotted seatrout fry and fingerlings for stocking in Texas bays; assessing genetic structure of sheepshead, spotted seatrout and Gulf menhaden populations in Texas waters; providing technical guidance, project review and recommendations to private, local, state and federal regulatory entities regarding proposed development projects with potential to impact marine recreational fisheries species; investigations into Atlantic croaker reproductive biology in Texas coastal waters; administering research activities at the Perry R Bass Marine Fisheries Research Station; and dredging a 4,000-foot section of Piper Channel connecting the Island Moorings Marine area to the Corpus Christi ship channel, thus improving access for boating and fishing in adjacent areas of the Gulf of Mexico.

#### **Coastal Wetlands Grants**

Three Gulf States received funding under the Coastal Wetlands Grant Program in FY 2004. The State of Alabama received \$1,000,000 to acquire two tracts of land totaling 934 acres to augment existing state lands along the Perdido River and in the Perdido Bay estuary.

The State of Florida received \$1,000,000 to acquire 1,000 acres in McIlvane Marsh near Rookery Bay to be placed under management by the Rookery Bay National Estuarine Research Reserve to enhance hydrology and habitat. Florida received another \$1,000,000 to acquire 70 acres of coastal wetland habitat in Mullock Creek Slough to enhance management of and achieve ecosystem management

goals for the Estero Bay State Buffer Preserve and the Estero Bay Aquatic Preserve.

The State of Texas received \$954,000 to acquire 100 acres, restore 10 acres of estuarine marsh, plant one acre of seagrass and protect additional coastal habitats totaling almost 452 acres in Starvation Cove on Galveston Island. An additional \$148,180 was received by the State to acquire approximately 669 acres of estuarine marsh, tidal flats and adjacent uplands within the Aransas estuary.

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

Three Gulf States received funding under the Clean Vessel Act in FY 2004 for coastal projects. The State of Alabama received \$149,510 to construct two new pumpout facilities at Pirates Cove Marina and Dead Lake Marina, renovate existing facilities at several other sites as well as for outreach and administrative activities.

The State of Florida received \$400,000 for a marketing and collection strategies project, part of which was used to help increase pumpout facilities use in Monroe County (Florida Keys). With an additional \$1,000,000 grant the State constructed 45 new coastal pumpout facilities as well as for outreach and administrative activities related to the Clean Vessel program.

The State of Mississippi received \$125,250 to construct six new pumpout facilities at Island Point Marina, LaFrances Fish Camp, Casino Magic, Kremer Marina, Bay Point High and Dry and Harbor Point Marina.

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

Three Gulf States received funding in FY 2004 under the Boating Infrastructure Grant Program. This included \$100,000 awarded to the State of Florida to increase the amount of tie-up space for transient vessels 26 feet or longer at Marathon in the Keys by creating or designating an additional 600 linear feet of wet slips for these vessels. The State of Louisiana received \$100,000 to construct 175-185 linear feet of dock space with tie-ups for large transient vessels at Intracoastal City. The State of Texas received \$100,000 for one-time dredging of a portion of Piper Channel and to make handicapped accessibility improvements to an existing restroom adjacent to transient dock slips at Island Moorings Marina at Port Aransas.

#### **PUBLIC OUTREACH AND EDUCATION**

The Gulf Coast FCO and Panama City FRO, as well as the Daphne and Lafayette ESFO's, responded

throughout the year to numerous telephone and other inquiries from the public for general information and questions on coastal fishing and fish habitats.

During 2004 the Panama City FRO funded an outreach video with the Pensacola Bay Watershed Partnership on the importance of sea grasses and estuaries. The video was one of a series of seven videos planned on natural resources of North Florida.

Information on Gulf sturgeon in the forms of videos and brochures was provided to numerous schools and organizations by the Panama City FRO, and the office also made presentations on Gulf sturgeon to the Panama City Lions Club and Bay Haven Charter School.

The Panama City FRO participated in a “Kids Fishing Clinic” at the Panama City Beach Pier and a “Junior Angler’s Pier Fishing Rodeo” at the Panama City Marina sea wall in celebration of National Fishing Week in 2004.

**Financial Statements**

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

**December 31, 2004**

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PILTZ,  
WILLIAMS,  
LAROSA  
&  
COMPANY

CERTIFIED PUBLIC ACCOUNTANTS  
*A Professional Association*

Independent Auditors' Report on Compliance with the Requirements  
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**Gulf States Marine Fisheries Commission**  
Ocean Springs, Mississippi

**Financial Statements**

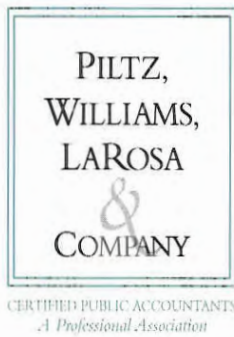
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December 31, 2004  
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**Section I**

**Management's Discussion and Analysis**



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Stanford A. Williams, Jr., CPA (Retired)

## Independent Auditors' Report

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, 2004, 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 an opinion 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 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 opinion.

As described in Note A, these financial statements were prepared 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—modified cash basis of the governmental activities, each major fund and the aggregate remaining fund information of Gulf States Marine Fisheries Commission as of December 31, 2004, 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 July 28, 2005 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 and grant agreements. 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 read in conjunction with this report in considering the results of our audit.

The Management's Discussion and Analysis on pages 3 through 5 and the Budgetary Comparison Schedule and corresponding notes on pages 20 through 21 are not a required part of the basic financial statements but are supplementary information required by the Governmental Accounting Standards Board. 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 required by U.S. Office of Management and Budget Circular A-133, *Audits of States, Local Governments, and Non-Profit Organizations*, is presented for purposes of additional analysis and is not a required part of the basic financial statements. 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.

A handwritten signature in black ink, appearing to read "R. Williams, CPA" followed by a stylized flourish.

Certified Public Accountants

Biloxi, Mississippi  
July 28, 2005



**Gulf States Marine Fisheries Commission**  
**Financial Statements**  
December 31, 2004

### **Management's Discussion and Analysis**

Our discussion and analysis of the Commission's financial performance provides an overview of the Commission's financial activities for the year ended December 31, 2004. Please read it in conjunction with the Commission's basic financial statements, which are found in Section II. Also, as more fully discussed in Note A in the Notes to Financial Statements, the Commission has adopted GASB 33 and 34.

### **Using this Annual Report**

This annual report consists of a series of financial statements. The Statement of Net Assets-Modified Cash Basis and the Statement of Activities-Modified Cash Basis provide information about the activities of the Commission similar to that of a for profit private-sector business enterprise with the appropriation and use of economic resources as the measurement focus. 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 the Commission's net assets. You can think of the Commission's net assets (the difference between assets and liabilities) 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.

**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 \$406,182 as of December 31, 2004.

By far the largest portion of the Commission's net assets (93%) 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, 2004

The following table presents a summary of the Commission's net assets for the year ended December 31, 2004.

	<u>Amount</u>
Current assets	\$ 113,156
Noncurrent assets, net	<u>429,621</u>
Total assets	<u>542,777</u>
Current liabilities	32,317
Long-term liabilities	<u>104,278</u>
Total liabilities	<u>136,595</u>
Net assets	
Invested in capital assets, net of related debt	262,852
Unrestricted	<u>143,330</u>
Total net assets	<u>\$ 406,182</u>

**Changes in net assets** – The Commission's total revenues for the year ended December 31, 2004 were \$5,220,080. The total cost of all programs and services was \$5,317,842. The following table presents a summary of the changes in net assets for the year ended December 31, 2004.

	<u>Amount</u>
Revenues	
Program revenues	\$ 5,189,367
General revenues	<u>30,713</u>
Total revenues	<u>5,220,080</u>
Expenses	
Programs	5,005,316
General and administrative	<u>312,526</u>
Total expenses	<u>5,317,842</u>
(Decrease) in net assets	<u>\$ (97,762)</u>

### **Budgetary Highlights**

The Commission establishes its budget to reflect to 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 the Commission had \$394,901, 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 \$74,978. During the current year the Commission expended \$78,312 for capital additions. Of this amount, all monies were expended for computers and office equipment.

**Section II**  
**Financial Statements**

**Gulf States Marine Fisheries Commission**  
**Statement of Net Assets - Modified Cash Basis**  
December 31, 2004

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<b>Assets</b>	<b>Governmental Activities</b>
<b>Current assets</b>	
Cash in bank	\$ 113,156
<b>Noncurrent assets</b>	
PEHP investment account	34,720
Property and equipment, net of accumulated depreciation	<u>394,901</u>
Total assets	<u>542,777</u>
<b>Liabilities</b>	
<b>Current liabilities</b>	
Payroll taxes payable	1,890
Section 125 cafeteria plan	2,656
Notes payable, due within one year	<u>27,771</u>
Total current liabilities	32,317
<b>Noncurrent liabilities</b>	
Notes payable, due beyond one year	<u>104,278</u>
Total liabilities	<u>136,595</u>
<b>Net assets</b>	
Investment in general fixed assets, net of related debt	262,852
Unrestricted	<u>143,330</u>
Total net assets	<u><u>\$ 406,182</u></u>

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**  
**Statement of Activities - Modified Cash Basis**  
For the Year Ended December 31, 2004

	Expenses	Charges for Services	Operating Grants and Contributions	Net (Expense) Revenue and Change in Net Assets Governmental Activities
Functions/Programs				
Primary government:				
Programs				
Collection & dissemination of commercial and recreational fisheries information	\$ 4,217,105	\$ -	\$ 4,253,689	\$ 36,584
Interjurisdictional fisheries management	223,088	-	221,371	(1,717)
Coordination of recreational fisheries programs	186,705	-	192,632	5,927
Derelict crab	131,015	-	121,900	(9,115)
Collection & dissemination of fishery - independent data and information	95,467	-	94,341	(1,126)
Review and formation of habitat information	42,704	-	45,177	2,473
Study of aquatic nuisances	45,572	-	41,734	(3,838)
Fish and wildlife support services	49,687	-	52,639	2,952
Other	13,973	-	-	(13,973)
Total	5,005,316	-	5,023,483	18,167
General and Administrative				
Local administration	282,006	23,384	112,500	(146,122)
Council activities	30,520	-	30,000	(520)
Total	312,526	23,384	142,500	(146,642)
Total primary government	\$ 5,317,842	\$ 23,384	\$ 5,165,983	(128,475)
General revenues				
Other income				12,951
Post employment health plan revenue				12,289
Gain (loss) on sale of assets				(299)
Interest income				4,384
Unrealized gain (loss) on investments				1,388
Total general revenues				30,713
Change in net assets				(97,762)
Net assets, beginning				503,944
Net assets, ending				\$ 406,182

*See Notes to Financial Statements.*

**Gulf States Marine Fisheries Commission**  
**Statement of Assets, Liabilities and Fund Balances - Cash Basis**  
**Governmental Funds**  
December 31, 2004

	General Fund	Special Revenue Funds		Total Governmental Funds
		RECFIN/ COMFIN Fund	Other Funds	
<b>Assets</b>				
Current assets				
Cash in bank	\$ 104,224	\$ -	\$ 8,932	\$ 113,156
Noncurrent assets				
PEHP investment account	34,720	-	-	34,720
<b>Total assets</b>	<b>\$ 138,944</b>	<b>\$ -</b>	<b>\$ 8,932</b>	<b>\$ 147,876</b>
<b>Liabilities</b>				
Current liabilities				
Payroll taxes payable	\$ 1,890	\$ -	\$ -	\$ 1,890
Section 125 cafeteria plan	2,656	-	-	2,656
<b>Total liabilities</b>	<b>4,546</b>	<b>-</b>	<b>-</b>	<b>4,546</b>
<b>Fund Balances</b>				
Fund balance - reserved for investments				
	34,720	-	-	34,720
Fund balance - unreserved				
	99,678	-	8,932	108,610
<b>Total fund balances</b>	<b>134,398</b>	<b>-</b>	<b>8,932</b>	<b>143,330</b>
<b>Total liabilities and fund balances</b>	<b>\$ 138,944</b>	<b>\$ -</b>	<b>\$ 8,932</b>	<b>\$ 147,876</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, 2004

8

Total fund balances - governmental funds	\$ 143,330
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	394,901
Notes payable are not due and payable in the current period expenditures and therefore are not reported in the funds	<u>(132,049)</u>
Total net assets - governmental activities	<u><u>\$ 406,182</u></u>

*See Notes to Financial Statements.*

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

## Governmental Funds

For the Year Ended December 31, 2004

	General Fund	Special Revenue Funds		Total Governmental Funds
		RECFIN/ COMFIN Fund	Other Funds	
<b>Revenues:</b>				
Member state appropriation	\$ 112,500	\$ -	\$ -	\$ 112,500
Other income	12,951	-	-	12,951
Interest income	4,384	-	-	4,384
Rent income	7,800	-	-	7,800
Lease income	5,954	-	-	5,954
Post employment health plan revenue	12,289	-	-	12,289
Grant income	-	4,253,689	799,794	5,053,483
Registration fees	9,631	-	-	9,631
Proceeds from sale of assets	60	-	-	60
Unrealized gain on investments	1,388	-	-	1,388
<b>Totals</b>	<b>166,957</b>	<b>4,253,689</b>	<b>799,794</b>	<b>5,220,440</b>
<b>Expenditures</b>				
Personal services and benefits	85,727	476,468	460,071	1,022,266
Professional services	1,024	3,448,057	145,212	3,594,293
Other purchased services	28,421	259,516	155,141	443,078
Supplies and materials	5,298	33,064	58,306	96,668
Capital outlay	31,099	35,494	11,719	78,312
Debt service:				
Principal	29,067	-	-	29,067
Interest	8,608	-	-	8,608
<b>Totals</b>	<b>189,244</b>	<b>4,252,599</b>	<b>830,449</b>	<b>5,272,292</b>
Excess (deficiency) of revenues over (under) expenditures	(22,287)	1,090	(30,655)	(51,852)
<b>Other financing sources (uses)</b>				
Proceeds from issuance of debt	30,652	-	-	30,652
Interfund loans	(21,838)	(1,090)	22,928	-
Operating transfers in	4,282	-	-	4,282
Operating transfers out	-	-	(4,282)	(4,282)
<b>Total other financing sources (uses)</b>	<b>13,096</b>	<b>(1,090)</b>	<b>18,646</b>	<b>30,652</b>
Net change in fund balances	(9,191)	-	(12,009)	(21,200)
Fund balance - beginning	143,589	-	20,941	164,530
Fund balance - ending	\$ 134,398	\$ -	\$ 8,932	\$ 143,330

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, 2004

Net changes in governmental fund balances \$ (21,200)

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 \$78,312 and the depreciation expense amounted to \$152,931. (74,619)

Proceeds from the issuance of long-term debt is reported as a revenue in the governmental funds, but increases long-term liabilities in the statement of net assets - modified cash basis (30,652)

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. 29,067

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. (358)

Change in net assets of governmental activities \$ (97,762)

**Gulf States Marine Fisheries Commission**  
**Notes to Financial Statements**  
Year Ended December 31, 2004

**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** – In prior years Gulf States Marine Fisheries Commission reported as a not-for-profit organization based upon a letter ruling from the Internal Revenue Service. Subsequent to the close of the previous fiscal year, the Internal Revenue Service was conducting an audit of a prior year's tax return (Form 990) and determined that the Commission was a governmental entity rather than a not-for-profit entity. As a result of that finding the Commission has determined that it should report as a governmental entity.

Gulf States Marine Fisheries Commission is a quasi-governmental corporation governed by 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 account for in another fund.

**RECFIN/COMFIN Fund** — This is the fund that is the Commission's program to collect, manage, and disseminate statistical data and information on the commercial and recreational fisheries of the Gulf of Mexico.

All other governmental funds not meeting the criteria established for major funds are presented as other governmental funds.

Additionally, the Commission reports the following fund types:

**GOVERNMENTAL FUNDS**

**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 \$500 or more. Depreciation is computed on the straight-line method over the estimated useful lives of the underlying assets.

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

**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 Statements of Activities – Modified Cash Basis.

**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, constructions 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.

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

**Note B – Concentration of Credit Risk**

The Commission has maintained a bank account at one financial institution. The account balance at December 31, 2004 may be shown as follows:

<u>Description</u>	<u>Carrying Amount</u>	<u>Bank Balance</u>
Regular accounts	<u>\$ 113,131</u>	<u>\$ 217,219</u>

The bank balances at December 31, 2004 are categorized as follows:

Amount insured or collateralized with securities held by the Commission or its agent in the Commission's name	\$ 100,000
Uncollateralized, or held by the pledging financial institution's trust department or agent in the financial institution's name	<u>117,219</u>
Total bank balances	<u>\$ 217,219</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 hut not in the Commission's name.

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

<u>Investment Type</u>	<u>Category</u>			<u>Reported Amount</u>	<u>Fair Value</u>
	<u>1</u>	<u>2</u>	<u>3</u>		
Van Kampen Equity & Income Fund Cl. A, 3,433.136 shares		X		\$ 29,680	\$ 29,680
Federal Home Loan Mortgage Bond, due 8/15/22, 5.5%		X		4,837	4,837
Tax-Free Money Market Fund		X		<u>203</u>	<u>203</u>
Totals				<u>\$ 34,720</u>	<u>\$ 34,720</u>

**Note D – Property, Plant and Equipment**

The Commission's land, depreciable property and equipment may be stated as follows:

	<u>Balance 12/31/03</u>	<u>Additions</u>	<u>Deletions</u>	<u>Balance 12/31/04</u>
<b>Restricted</b>				
Vehicles	\$ 45,958	\$	\$	\$ 45,958
Office equipment	<u>965,412</u>	<u>47,213</u>	<u>42,015</u>	<u>970,610</u>
Totals	<u>1,011,370</u>	<u>47,213</u>	<u>42,015</u>	<u>1,016,568</u>
<b>Unrestricted</b>				
Land	20,000			20,000
Building	182,817			182,817
Vehicles	51,105			51,105
Office equipment	<u>73,899</u>	<u>31,099</u>	<u>15,010</u>	<u>89,988</u>
Totals	<u>327,821</u>	<u>31,099</u>	<u>15,010</u>	<u>343,910</u>
<b>Less accumulated depreciation</b>				
Restricted	746,135	134,879	41,656	839,358
Unrestricted	<u>123,177</u>	<u>18,052</u>	<u>15,010</u>	<u>126,219</u>
Totals	<u>869,312</u>	<u>152,931</u>	<u>56,666</u>	<u>965,577</u>
<b>Governmental activities</b>				
Net property and equipment:				
Restricted	265,235	(87,666)	359	177,210
Unrestricted	<u>204,644</u>	<u>13,047</u>		<u>217,691</u>
Totals	<u>\$ 469,879</u>	<u>\$ (74,619)</u>	<u>\$ 359</u>	<u>\$ 394,901</u>

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

**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. Details of the financing are as follows:

Original loan amount	\$ 122,448
Amount outstanding	\$ 86,404
Interest rate	6.0%
Payment terms	59 monthly payments of \$1,039, plus 1 of remaining balance
Collateral	Land and building at 204 Government St. Ocean Springs, MS

During the current year, 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	\$ 28,076
Interest rate	7.5%
Payment terms	60 monthly payments of \$614
Collateral	Xerox copier
Purchase option	Ownership at end of lease

During a prior year, the Commission acquired a 2001 Ford Crown Victoria under a capital lease. The financing details are as follows:

Cost of Ford Crown Victoria	\$ 25,700
Amount outstanding	\$ 1,955
Interest rate	6.9%
Payment terms	Initial payment of \$5,000 plus 48 payments of \$496
Purchase option	Option to purchase at end of lease

During a prior year, the Commission acquired a copy machine under a lease/purchase agreement. The financing details are as follows:

Cost of copier	\$ 33,763
Amount outstanding	\$ 15,614
Interest rate	7.50%
Payment terms	60 monthly payments of \$676
Collateral	Xerox copier
Purchase option	Ownership at end of lease

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

	Beginning <u>01/01/04</u>	<u>Additions</u>	<u>Deletions</u>	Ending <u>12/31/04</u>	Amounts Due Within <u>One Year</u>
<b>Governmental activities</b>					
Notes	\$ 98,813	\$	\$ 12,409	\$ 86,404	\$ 13,174
Capital leases	<u>31,652</u>	<u>30,652</u>	<u>16,659</u>	<u>45,645</u>	<u>14,597</u>
Total governmental activities	<u>\$ 130,465</u>	<u>\$ 30,652</u>	<u>\$ 29,068</u>	<u>\$ 132,049</u>	<u>\$ 27,771</u>

The annual requirements to pay principal and interest on the notes and capital leases outstanding at December 31, 2004 follow:

<u>December 31,</u>	<u>Governmental Activities</u>			
	<u>Notes</u>		<u>Capital Leases</u>	
	<u>Principal</u>	<u>Interest</u>	<u>Principal</u>	<u>Interest</u>
2005	\$ 13,174	\$ 4,826	\$ 14,596	\$ 2,877
2006	12,789	3,711	14,295	1,550
2007	60,441	598	6,328	1,042
2008			6,820	551
2009			<u>3,606</u>	<u>80</u>
Totals	<u>\$ 86,404</u>	<u>\$ 9,135</u>	<u>\$ 45,645</u>	<u>\$ 6,100</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, 2004 was \$52,817.

**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.

At December 31, 2004 seven (7) employees would qualify for this benefit. Assuming that all seven (7) separated from service at that date, and utilizing their current sick leave hours and rates of pay then the computed value is \$37,825. During the current year the Commission invested \$15,934 to continue funding this benefit. This investment is shown on the Statement of Net Assets – Modified Cash Basis at its current market value of \$34,720. This would leave an unfunded amount of \$3,105 based upon the above assumptions.

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.



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

**Gulf States Marine Fisheries Commission**  
**Budgetary Comparison Schedule**  
For the Year Ended December 31, 2004

18

	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	14,816		14,816	12,951		12,951	(1,865)
Interest income	4,000		4,000	4,384		4,384	384
Rent income	10,500		10,500	7,800		7,800	(2,700)
Lease income			-	5,954		5,954	5,954
Post employment health plan revenue			-	12,289		12,289	12,289
Grant income		5,155,495	5,155,495		5,053,483	5,053,483	(102,012)
Registration fees	9,816		9,816	9,631		9,631	(185)
Transfers in			-	4,282		4,282	4,282
Gain on sale of assets			-	60		60	60
Unrealized gain (loss) on investments			-	1,388		1,388	1,388
Proceeds from issuance of debt			-	30,652		30,652	30,652
<b>Totals</b>	<b>151,632</b>	<b>5,155,495</b>	<b>5,307,127</b>	<b>201,891</b>	<b>5,053,483</b>	<b>5,255,374</b>	<b>(51,753)</b>
<b>Personal costs</b>							
Salaries	69,694	709,143	778,837	67,517	696,943	764,460	(14,377)
Payroll taxes	5,605	57,026	62,631	5,483	53,449	58,932	(3,699)
Health insurance	8,050	142,634	150,684	7,258	125,713	132,971	(17,713)
Retirement expense	4,748	49,209	53,957	4,672	48,145	52,817	(1,140)
Post employment health plan expense	-	-	-	797	12,289	13,086	13,086
<b>Totals</b>	<b>88,097</b>	<b>958,012</b>	<b>1,046,109</b>	<b>85,727</b>	<b>936,539</b>	<b>1,022,266</b>	<b>(23,843)</b>
<b>Maintenance/Operations</b>							
Facilities	18,000	5,400	23,400	18,000	2,700	20,700	(2,700)
Office supplies	4,200	22,123	26,323	3,674	24,456	28,130	1,807
Postage	500	15,568	16,068	785	15,249	16,034	(34)
Travel - committee	-	221,880	221,880	1,436	159,754	161,190	(60,690)
Travel - staff	9,000	45,753	54,753	9,420	48,662	58,082	3,329
Telephone	1,700	23,358	25,058	1,283	20,208	21,491	(3,567)
Office equipment	-	8,482	8,482	31,099	47,213	78,312	69,830
Copying expense	1,200	29,800	31,000	351	22,114	22,465	(8,535)
Printing expense	500	1,100	1,600	119	15,630	15,749	14,149
Meeting costs	12,000	25,120	37,120	6,242	29,701	35,943	(1,177)
Subscriptions & dues	500	1,400	1,900	713	1,264	1,977	77
Automobile expenses	1,000	13,640	14,640	369	13,922	14,291	(349)
Insurance	5,500	10,461	15,961	4,005	15,284	19,289	3,328
Maintenance	1,800	123,627	125,427	720	124,511	125,231	(196)
Professional expenses	1,000	213,777	214,777	1,024	207,370	208,394	(6,383)
Property taxes	1,285	2,980	4,265	-	-	-	(4,265)
Contractual	-	3,415,437	3,415,437	-	3,385,899	3,385,899	(29,538)
Utilities	3,350	7,375	10,725	3,283	8,968	12,251	1,526
Janitorial	2,000	10,202	12,202	1,319	3,604	4,923	(7,279)
Principal and interest on notes	-	-	-	19,675	-	19,675	19,675
Transfers out	-	-	-	-	4,282	4,282	4,282
<b>Totals</b>	<b>151,632</b>	<b>5,155,495</b>	<b>5,307,127</b>	<b>189,244</b>	<b>5,087,330</b>	<b>5,276,574</b>	<b>(30,553)</b>
Excess of revenues over expense	\$ -	\$ -	\$ -	\$ 12,647	\$ (33,847)	\$ (21,200)	\$ (21,200)

**Gulf States Marine Fisheries Commission**  
**Budgetary Comparison Schedule**  
For the Year Ended December 31, 2004  
(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.

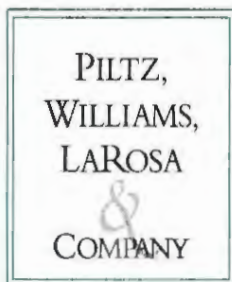
**Gulf States Marine Fisheries Commission**  
**Schedule of Expenditures of Federal Awards – Cash Basis**  
For the Year Ended December 31, 2004

Federal Grantor / Program Title	Catalog of Federal Domestic Assistance	Federal Expenditures
<b>U.S. Department of Interior</b>		
Aquatic Nuisance	15.608	\$ 45,613
Sports Fish Restoration Program	15.605	191,163
Total U. S. Department of Interior		<u>236,776</u>
<b>U.S. Department of Commerce</b>		
Interjurisdictional Fisheries Management Plan	11.407	229,199
Recreational Fisheries Information Network (RECFIN) and Commercial Fisheries Information Network (COMFIN)	11.434	4,252,599
Southeast Area Monitoring and Assessment Program (SEAMAP)	11.435	96,540
Billfish Research	11.454	2,484
Derelict Crab	11.463	131,015
Habitat Conservation	11.463	42,739
Total U. S. Department of Commerce		<u>4,754,576</u>
Total expenditures of federal awards		<u>\$ 4,991,352</u>

**Note** – This schedule was prepared using the same basis of accounting and the same significant accounting policies, as applicable, used for the financial statements.

**Section IV**

**Reports on Compliance and Internal Control**



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**Independent Auditors' Report**  
**On the Compliance and Internal Control over Financial Reporting**  
**Based on an Audit of the 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, 2004, which collectively comprise Gulf States Marine Fisheries Commission's basic financial statements and have issued our report thereon dated July 28, 2005. 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.

### Compliance

As part of attaining 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*.

### Internal Control Over Financial Reporting

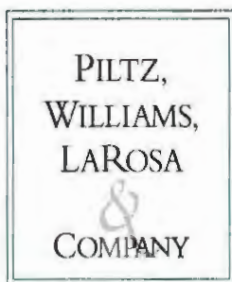
In planning and performing our audit, we considered Gulf States Marine Fisheries Commission's internal control over financial reporting in order to determine our auditing procedures for the purpose of expressing our opinion on the financial statements and not to provide an opinion on the internal control over financial reporting. Our consideration of the internal control over financial reporting would not necessarily disclose all matters in the internal control that might be material weaknesses. A material weakness is a reportable condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements caused by error or fraud in amounts that would be material in relation to the financial statements being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. We noted no matters involving the internal control over financial reporting and its operation that we consider to be material weaknesses.

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.

A handwritten signature in black ink, appearing to read "Reg. Wilkins, CPA". The signature is written in a cursive style with a large initial "R" and "W".

Certified Public Accountants

Biloxi, Mississippi  
July 28, 2005



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## **Independent Auditors' 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 years ended December 31, 2004. 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 audits.

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 years ended December 31, 2004.

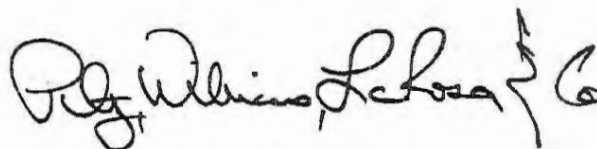


**Internal Control Over Compliance**

The management of Gulf States Marine Fisheries Commission is responsible for establishing and maintaining effective internal control over compliance with 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 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 and to test and report on the internal control over compliance in accordance with OMB Circular A-133.

Our consideration of the internal control over compliance would not necessarily disclose all matters in the internal control that might be material weaknesses. A material weakness is a reportable condition in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that noncompliance with applicable requirements of laws, regulations, contracts and grants caused by error or fraud that would be material in relation to a major federal program being audited may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. We noted no matters involving the internal control over compliance and its operation that we consider to be material weaknesses.

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.

A handwritten signature in black ink, appearing to read "P. Williams" followed by a stylized flourish.

Certified Public Accountants

Biloxi, Mississippi  
July 28, 2005

**Section V**

**Other Items**

**Gulf States Marine Fisheries Commission**  
**Schedule of Findings and Questioned Costs**  
For the Year Ended December 31, 2004

**Section 1 – Summary of Auditors’ Results**

1. An unqualified opinion was issued on the basic financial statements.
2. There were no reportable conditions 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. The audit did not disclose any material weaknesses in internal control over major programs.
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 – 11.434.
8. The dollar threshold used to distinguish between Type A and Type B Programs was \$300,000.
9. The auditee does qualify as a low-risk auditee.

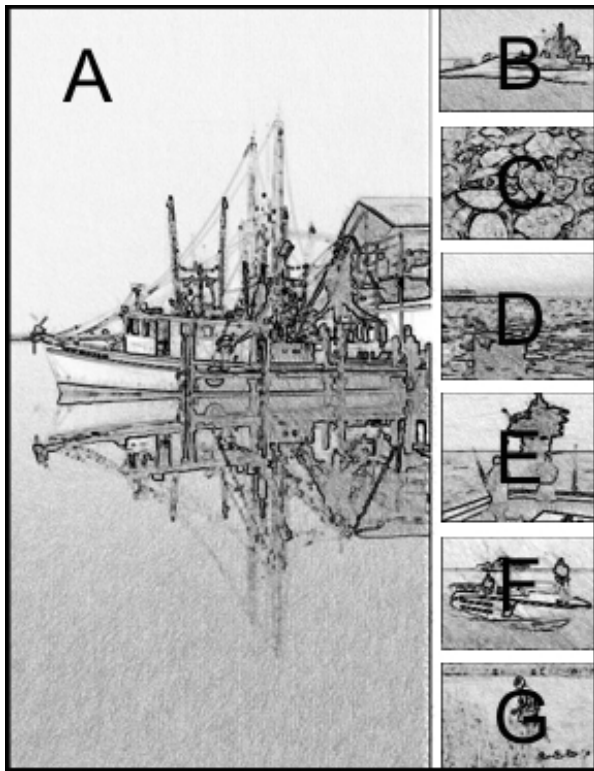
**Section 2 – Findings Related to the Financial Statements**

None

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

None





### Cover Photo Credits

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- G. Jeff Rester - GSMFC



**Gulf States Marine Fisheries Commission**  
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