

**ANNUAL REPORT**

**TO THE**

**TECHNICAL COORDINATING COMMITTEE**

**GULF STATES MARINE FISHERIES COMMISSION**

**OCTOBER 1, 2002 TO SEPTEMBER 30, 2003**

**SEAMAP Subcommittee**

**James G. Hanifen, Chairman**

**Jeffrey K. Rester**

**SEAMAP Coordinator**

**September 30, 2003**

**GSMFC No: 117**



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## **INTRODUCTION**

The Southeast Area Monitoring and Assessment Program (SEAMAP) is a State/Federal/university program for collection, management and dissemination of fishery-independent data and information in the southeastern United States. The program presently consists of three operational components: SEAMAP-Gulf of Mexico, which began in 1981; SEAMAP-South Atlantic, implemented in 1983; and SEAMAP-Caribbean, formed in 1988.

Each SEAMAP component operates independently, planning and conducting surveys and information dissemination in accordance with administrative policies and guidelines of the National Marine Fisheries Service's Southeast Regional Office (SERO).

Federal programmatic funding for SEAMAP activities and administration was appropriated in Federal Fiscal Years 1985-2003 (October 1 through September 30). State and Gulf States Marine Fisheries Commission (GSMFC) funding allocations for FY1985-FY2003 were handled through State/Federal cooperative agreements, administered by SERO and the Southeast Fisheries Science Center (SEFSC), National Marine Fisheries Service (NMFS).

In FY2003, SEAMAP operations continued for the twenty-second consecutive year. SEAMAP resource surveys included the Fall Plankton Survey, Fall Shrimp/Groundfish Survey, Spring Plankton Survey, Summer Shrimp/Groundfish Survey, Reefish Survey, and plankton and environmental data surveys. Other FY2003 activities included SEAMAP information services and program management.

This report is the twentieth in a series of annual SEAMAP Subcommittee reports to the Technical Coordinating Committee (TCC) of the Gulf States Marine Fisheries Commission. It is intended to inform the TCC of SEAMAP-Gulf of Mexico activities and accomplishments during FY2003 and proposed SEAMAP activities for FY2004.

Appreciation is gratefully extended to the staff of the Gulf States Marine Fisheries Commission for their considerable assistance in the preparation of this document.

## **FY2003 SEAMAP RESOURCE SURVEYS**

Resource survey information continued for the twenty-second consecutive year. The surveys conducted during the year address distinct regional needs and priorities and provide information concerning the marine resources in the Gulf of Mexico.

### **Fall Plankton Survey**

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 1986-2001 covered Gulf waters from Florida Bay to Brownsville, Texas. The Fall



Plankton cruise took place from August 28, 2002 through September 21, 2002. Alabama, NMFS, Mississippi, and Louisiana sampled 109 stations on the west Florida shelf and northern Gulf of Mexico. The objective of this survey is 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.

Plankton samples were taken with standard SEAMAP bongo and neuston samplers. The bongo sampler consisted of two conical 61-cm nets with .333-micron mesh. Tows were oblique, surface to near bottom (or 200 m) and back to surface. Wire angle was maintained at 45 degrees. Neuston samples were taken with .947-micron mesh nets on 1 x 2-meter frames towed at the surface for ten minutes. Right bongo and neuston samples were initially preserved in 10% buffered formalin and after 48 hours were transferred to 95% ethyl alcohol for final preservation. Left bongo samples were preserved via an ethanol/ethanol transfer to aid in preservation of larval otoliths. In addition, hydrographic data (surface chlorophylls, salinity, temperature and dissolved oxygen from surface, midwater and near bottom, and Forel-ule color) were collected at all stations.

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

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

The Fall Shrimp/Groundfish Survey was conducted from October 12 - December 5, 2002, from off Mobile, Alabama to the U.S.-Mexican border. Vessels sampled waters out to 60 fm, covering 367 trawl stations, in addition to plankton and environmental sampling.

Sampling design was similar to the Summer Shrimp/Groundfish Survey. The objectives of the survey were to:

- (1) sample the northern Gulf of Mexico to determine abundance and distribution of demersal organisms from inshore waters to 60 fm;
- (2) obtain length-frequency measurements for major finfish and shrimp species to determine population size structures;
- (3) collect environmental data to investigate potential relationships between abundance and distribution of organisms and environmental parameters; and
- (4) 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. A total of 59 stations was sampled with bongo and/or neuston nets, as encountered along cruise tracks. NMFS completed 54





ichthyoplankton stations, Mississippi completed 2 stations, and Louisiana completed 3 stations. The Polish Sorting and Identification Center will sort the samples, except those taken by Louisiana. Once sorted, the specimens and data will be archived at the SEAMAP Archiving Center.

### **Spring Plankton Survey**

The SEAMAP Spring Plankton Survey took place from May 12 through May 31, 2003. One hundred seventeen stations were sampled from the west Florida shelf to the Louisiana/Texas border. This was the twenty-second year for the survey. The objectives of the survey were to collect ichthyoplankton samples for estimates of the abundance and distribution of Atlantic bluefin tuna larvae and collect environmental data at all ichthyoplankton stations.

Plankton samples were taken with standard SEAMAP bongo and neuston samplers. The bongo sampler consisted of two conical 61-cm nets with .333-micron mesh. Tows were oblique, surface to near bottom (or 200 m) and back to surface. Wire angle was maintained at 45 degrees. Neuston samples were taken with .947-micron mesh nets on 1 x 2-meter frames towed at the surface for ten minutes. Right bongo and neuston samples were initially preserved in 10% buffered formalin and after 48 hours were transferred to 95% ethyl alcohol for final preservation. Left bongo samples were preserved via an ethanol/ethanol transfer to aid in preservation of larval otoliths. In addition, hydrographic data (surface chlorophylls, salinity, temperature and dissolved oxygen from surface, midwater and near bottom, and Forel-ule color) were collected at all stations.

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

### **Reeffish Survey**

The primary purpose of this survey is to assess relative abundance and compute population estimates of reef fishes found on natural reef fish habitat in the Gulf of Mexico. Two types of gear are used to deploy video cameras: 1) a single-funnel fish trap (2.13 m long by 0.76 m square) with the camera mounted at a height of 25 cm above the bottom of the trap; or 2) a 4 camera array with 4 cameras mounted orthogonal to each other at a height of 25 cm above the bottom. Both gears are baited with squid before deployment. The resultant video recordings (typically of one hour duration) are processed back at the laboratory where fishes are identified and counted independently by two tape readers. Final counts are entered into the SEAMAP reef fish database along with additional observations on habitat and fish activity. Alabama conducted sampling on August 11, 2003 and September 19, 2003. Three sites were sampled using trap videos and fish traps.

### **Summer Shrimp/Groundfish Survey**

During the spring of 2003, there was communication between the Shrimp/Groundfish Work Group members to examine the design for the Summer Shrimp/Groundfish Survey and determine the random station locations for each participant.



Objectives of the survey were to:

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

The overall sampling strategy during the 2003 SEAMAP summer survey was to work from the eastern Gulf to the Texas/Mexico border, in order to sample during or prior to migration of brown shrimp from bays to the open Gulf area. This was the twenty-second year for the survey. The entire survey occurred from June 2 through July 27, 2003 and 313 trawl stations were sampled during the survey. In addition, NMFS and Louisiana vessels collected ichthyoplankton data. A total of 42 stations was sampled with bongo and/or neuston nets, as encountered along cruise tracks.

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.

### **Plankton and Environmental Data Surveys**

As in previous years, plankton samples and environmental data were collected routinely during most SEAMAP trawling surveys. During the Summer Shrimp/Groundfish Survey, plankton tows were piggybacked on the NMFS and state vessels, sampling randomly generated trawl stations within the standard 30-minute SEAMAP grids.

Objectives of these piggybacked surveys were: 1) to collect plankton samples throughout the survey area; and 2) to collect associated hydrographic and environmental data at each plankton station. Additionally, environmental data (salinity, temperature, and oxygen from surface, mid-depth and bottom waters, and chlorophyll from surface and bottom waters) were collected during the shrimp/groundfish surveys. Wind direction, wind speed and wave height were taken at all trawl stations.

Samples from the right side of the bongo nets and neuston samples were shipped to the NMFS-Pascagoula Laboratory for shipment to the Polish Sorting and Identification Center, where they will be sorted to the family level (both ichthyoplankton and selected crustacean and molluscan species).



The left bongo sample from each station is retained as a back up in the event of damage or loss of the specimens and maintained at the SIPAC.

Chlorophyll samples were filtered at each station using GF/C filters. All filters were put in petri disks and wrapped in foil for onboard storage in the freezer. Chlorophyll analysis will be completed ashore. Preservation of plankton samples was in buffered formalin prior to transfer to ethanol.

## INFORMATION SERVICES

Information from the SEAMAP activities is provided to user groups through the program administration and three complementary systems: the SEAMAP Information System, SEAMAP Archiving Center and SIPAC. Products resulting from SEAMAP activities can be grouped into two major categories: data sets (including broadly, digital data and collected specimens) managed by the SEAMAP Information System, SEAMAP Archiving Center and SIPAC; and program information. Program information is discussed in the *PROGRAM MANAGEMENT* Section of this report.

### SEAMAP Information System

Biological and environmental data from all SEAMAP-Gulf surveys are included in the SEAMAP Information System, managed in conjunction with NMFS-SEFSC. Raw data are edited by the collecting agency and verified by the SEAMAP Data Manager prior to entry into the system. Data from all SEAMAP-Gulf surveys during 1982-2002 have been entered into the system and data from 2003 surveys are in the process of being verified, edited, and entered for storage and retrieval. Verified, non-confidential SEAMAP data are available conditionally to all requesters, although the highest priority is assigned to SEAMAP participants. A total of 265 SEAMAP data requests have been received. In most instances, requests were filled promptly. To date, 263 requests have been completed. During this reporting period, 13 requests were received.

Requested SEAMAP data were used for a multitude of purposes in 2003:

- Evaluating the abundance and size distribution of penaeid shrimp in federal and state waters to assist in determining opening and closing dates for commercial fisheries;
- Evaluating and plotting the size of the hypoxic (Dead Zone) area off of Louisiana;
- Assessing shrimp and groundfish abundance and distribution and their relationship to such environmental parameters as temperature, salinity, and dissolved oxygen;
- Identifying environmental parameters associated with concentrations of larval finfish;
- Compiling the 2003 SEAMAP Environmental and Biological Atlas; and
- Comparing catches of shrimp and groundfish captured by 40-ft versus 20-ft trawl nets.



## **Data Management**

The requirements report for an integrated data system, *Data Management System Design Study for Gulf and South Atlantic, 1987*, was completed in March 1987. The document identifies the high-level design specifications and recommended implementation plan for a module-based SEAMAP Data Management System (DMS). The design is based on information contained in the SEAMAP Gulf and South Atlantic DMS Requirements Document developed through a cooperative effort between NMFS and other SEAMAP participants. The document has five sections: 1) background and brief descriptions of current centralized and proposed distributed systems; 2) summary of the Requirements Survey; 3) overview of the system's architecture; 4) description of developmental modules constituting the DMS design; and 5) a modular implementation plan which includes costs and schedule.

Work was completed during FY1990 on the new distributed SEAMAP DMS. New modules completed include those for data entry, edit, upload, data query and download. All of the Gulf States are now equipped with the necessary computer hardware and software.

The system is decentralized, i.e., distributed. Thus, the SEAMAP users are able to locally, and directly, enter and retrieve data. Software for the system has been distributed to participants for trial runs of data input.

This system decreases the time necessary to enter and retrieve data and provides powerful and flexible local data analysis and display capabilities. Under the system, each SEAMAP site enters, verifies and edits their data, eliminating the mail-oriented loop necessary to enter/edit/verify data. Secondly, each site has the capability of locally accessing SEAMAP data, utilizing a user-friendly system. Local data retrieval allows the data to be accessed in a timely manner with a minimum amount of effort and programming skills.

Under the system, outside users (e.g., Minerals Management Service, U.S. Army Corps of Engineers, etc.) may request special data sets for research or study. The outside users submit the request to the SEAMAP Subcommittee through the SEAMAP-Gulf Coordinator for approval to proceed. Once the request is approved, the Data Manager and staff members provide the information through a priority-based, mail-oriented system. Also, SEAMAP participants may use the Special Request mechanism for data sets too large for economical downloading by telephone. A Central Operations staff will handle these requests in the same priority-based, mail-oriented manner as noted above.

## **Real-time Data**

A major function of the SEAMAP Information System is the processing of catch data from the Summer Shrimp/Groundfish Survey as near-real-time data. Data were transmitted three times weekly via cellular phone to the NMFS Mississippi Laboratories from the NOAA vessel, while the states' data were entered into the system weekly. Plots of station locations and catch rates of shrimp, squid and dominant finfish species were prepared and edited at the NMFS Mississippi Laboratories, and processed by GSMFC for weekly distribution to management agencies, fishermen, processors





and researchers. SEAMAP real-time data plots were produced during the 2003 Summer Shrimp/Groundfish Survey. Seven weekly mailings were produced and distributed to approximately 220 interested individuals. These plots were also available through the SEAMAP home page. Management agencies also received comprehensive data listings showing penaeid shrimp length frequencies, sampling parameters and environmental conditions.

Data from the 2002 Fall Shrimp/Groundfish Survey were used to produce red snapper real-time plots in January 2003. These plots described research trawl effort and catch rates for juvenile red snapper during the Survey. This was the fifth year the plots were produced and distributed to interested individuals.

### **SEAMAP Archiving Center**

Larval fish and fish egg samples sorted to the lowest taxa level possible by the Polish Sorting and Identification Center are returned to the SEAMAP Archiving Center for archiving and loan to researchers. To date in 2003, 22,374 samples were returned from the Polish Sorting and Identification Center. Data entry for sorted samples is being completed in the new SEAMAP Access data entry system. The 27,602 samples cataloged this year represent 18 orders, 126 families, 235 genera and 245 species.

The SEAMAP Archiving Center, which is managed in conjunction with Florida Fish and Wildlife Conservation Commission (FWC) in St. Petersburg, Florida, processes specimen loans, requests for associated plankton survey data, and requests for data clarification. Seventy-eight requests have been accommodated this year to twenty different researchers at both the state and federal level.

### **SEAMAP Invertebrate Plankton Archiving Center**

The SIPAC is in its nineteenth year of operation. Sara LeCroy at the USM/COST/GCRL currently serves as the SIPAC curator. The overall mission of the SIPAC, to archive and manage the large collection of plankton samples acquired during SEAMAP cruises and to obtain specimens and/or data on selected invertebrate larval stages from those samples, continued during the year, but at a reduced level of activity. The SIPAC continues to provide unsorted plankton samples and data or specimens of larval invertebrates to qualified researchers upon request.

The student assistant employed during the past year currently aids the curator with the cataloging of new samples, and the maintenance and curation of the collection. Activities during the year were limited to the maintenance and curation of the existing collection, as well as the cataloging of 400 additional bongo net samples (48 from year 1998 plankton cruises; 38 from year 1999 plankton cruises; 20 from year 2001 plankton cruises; 247 from year 2002 plankton cruises; 47 from year 2003 plankton cruises). In addition, 35 neuston samples were received and cataloged (21 from year 1998 plankton cruises; 14 from year 1999 plankton cruises). The number of samples currently catalogued in the SIPAC collections is 8,586, with 326 samples currently on loan.



In an effort to keep the space required to house the SIPAC collection of unsorted plankton samples to a minimum, samples that have been in the collection for over 10 years and duplicate samples sorted and received from the Polish Sorting and Identification Center, are aliquoted to ¼ their original volume and placed into 100 ml vials, as necessary. When possible, the remaining ¾ aliquots are donated to educational institutions for use as teaching materials. If the remaining sample must be discarded, sample jars are cleaned and returned to NMFS-Pascagoula for reuse. To date, approximately 2,264 samples collected from 1982 - 1988 have been aliquoted and prepared for long-term storage. Due in part to the removal of approximately 180 samples to the NMFS - Pascagoula during the previous year (2002), there is presently sufficient space available for additional samples to be deposited into the SIPAC archives without continuing the aliquoting of 1988-1992 SEAMAP samples.

During the next year, the SIPAC will continue to manage SEAMAP plankton collections, accession samples, and provide unsorted samples, sorted specimens and data from the collection to qualified researchers as requested. Efforts with sorted materials will concentrate on curation and analysis of current holdings and publication of distribution patterns of selected taxa by cruise.

## **PROGRAM MANAGEMENT**

The SEAMAP program is administered by the SEAMAP Subcommittee of the TCC through the SEAMAP Coordinator, who is under the technical direction of the Subcommittee Chairman and administrative supervision of the GSMFC Executive Director.

Personnel associated with SEAMAP program management include the Coordinator, Data Manager, SEAMAP Archiving Center Curator, SIPAC Curator and the NMFS-Pascagoula Laboratory Director, serving as Program Monitor.

### **Planning**

Major SEAMAP-Gulf Subcommittee meetings were held in March 2003 in conjunction with the Annual Meeting of the GSMFC. All meetings included participation by various work group leaders, Coordinator, Data Manager, Program Monitor and other GSMFC staff. Representatives from the Gulf program also met with the South Atlantic and Caribbean representatives in August 2003 to discuss respective program needs and priorities for FY2004.

Coordination of program surveys and distribution of quick-report summaries of a Gulf-wide survey to management agencies and industry were major functions of SEAMAP management in 2003. Other important management activities included coordinating data provision and specimen loans, preparing publications and documents and assisting in the preparation of State/Federal cooperative agreements, including amendments to permit extension of activities previously not detailed in the agreements.



## **Information Dissemination**

The following documents were published and distributed during this reporting period:

- *2003 SEAMAP Marine Directory*. Inventories of marine agency contacts (State, Federal and university) concerned with fishery research in the Gulf of Mexico, and summaries of information provided by these organizations: target species, types of fishery-independent sampling gear and platforms, annual sampling effort, and other materials.
- *SEAMAP Subcommittee Report to the GSMFC Technical Coordinating Committee -October 1, 2002 to September 30, 2003*. A detailed summary of program accomplishments, emphasizing survey design, material collected, data dissemination, budget information, and future survey activities.
- *Annual Report of the SEAMAP Program - October 1, 2002 to September 30, 2003*. A summary of FY2003 activities and proposed FY2004 events for the SEAMAP-Gulf, South Atlantic, and Caribbean Programs.

## **Proposed 2004 Activities**

Preliminary 2004 SEAMAP-Gulf budget allocations are shown in Table 3. Last year, total program allocations for all three SEAMAP components, Gulf, South Atlantic and Caribbean, was approximately \$1.4 million. At the August meeting, the SEAMAP components based their allocations on level funding for 2004. At this level, the share to be allocated for SEAMAP-Gulf activities (including GSMFC) will be \$612,403.

Proposed 2004 activities for all Gulf participants are shown in Table 4. The approved 2004 Operations Plan for SEAMAP-Gulf is contained in Appendix B.

## **FY2003 Financial Report**

Total allocations for FY2003 program administration were \$90,564. The GSMFC has arranged and paid for all expenses associated with personnel, meetings, travel, and operating expenses to date. The remaining balance will be used to provide administration of the SEAMAP-Gulf program through December 31, 2003.



**TABLE 1.**

**SEAMAP REPRESENTATIVES FOR FY2003**

James G. Hanifen, Chairman  
Louisiana Department of Wildlife and Fisheries

Richard Waller, Vice Chairman  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory

Stevens Heath  
Alabama Department of Conservation and Natural Resources

Mark Leiby  
Florida Fish and Wildlife Conservation Commission  
Florida Marine Research Institute

Paul Choucair  
Texas Parks and Wildlife Department

Terry Henwood  
National Marine Fisheries Service  
Pascagoula Laboratory

Richard Leard (non-voting)  
Gulf of Mexico Fishery Management Council





**TABLE 2.**

**SEAMAP WORK GROUP MEMBERS FOR FY2003**

ADULT FINFISH WORK GROUP

Terry Henwood, Leader  
National Marine Fisheries Service  
Pascagoula Laboratory

Texas Parks and Wildlife Department	Rick Leard Gulf of Mexico Fishery Management Council
Mark Leiby Florida Fish and Wildlife Conservation Commission	James Warren University of Southern Mississippi College of Marine Sciences Gulf Coast Research Laboratory
John Roussel Louisiana Department of Wildlife and Fisheries	Joanne Lyczkowski-Shultz National Marine Fisheries Service Pascagoula Laboratory
Robert Shipp University of South Alabama	

DATA COORDINATING WORK GROUP

Mark McDuff, Leader  
SEAMAP Data Manager  
National Marine Fisheries Service  
Pascagoula Laboratory

Butch Pellegrin National Marine Fisheries Service Pascagoula Laboratory Shrimp/Groundfish Work Group	Mike Murphy Florida Fish and Wildlife Conservation Commission Red Drum Work Group
Terry Henwood National Marine Fisheries Service Pascagoula Laboratory Adult Finfish Work Group	Richard Waller University of Southern Mississippi/College of Marine Sciences/Gulf Coast Research Laboratory Reef Fish Work Group
Joanne Lyczkowski-Shultz National Marine Fisheries Service Pascagoula Laboratory Plankton Work Group	Terry Romaine LA Department of Wildlife and Fisheries Environmental Data Work Group



ENVIRONMENTAL DATA WORK GROUP

Terry Romaire, Leader  
Louisiana Department of Wildlife and Fisheries

Mark Van Hoose  
Alabama Department of Conservation and  
Natural Resources

Kim Williams  
Florida Fish and Wildlife Conservation  
Commission

Rob Ford  
National Marine Fisheries Service  
Pascagoula Laboratory

Richard Waller  
Gulf Coast Research Laboratory  
University of Southern Mississippi  
College of Marine Sciences

Thomas Leming  
National Marine Fisheries Service  
Pascagoula Laboratory

Joanne Lyczkowski-Shultz  
National Marine Fisheries Service  
Pascagoula Laboratory

PLANKTON WORK GROUP

Joanne Lyczkowski-Shultz, Leader  
National Marine Fisheries Service  
Pascagoula Laboratory

Alonzo Hamilton  
National Marine Fisheries Service  
Pascagoula Laboratory

Leslie Hartman  
Alabama Department of Conservation and  
Natural Resources

Ken Edds  
Louisiana Department of Wildlife and  
Fisheries

Sara LeCroy, Curator  
SEAMAP Invertebrate Plankton Archiving  
Center  
University of Southern Mississippi/College  
of Marine Sciences/Gulf Coast Research  
Laboratory

Mark Leiby  
Florida Fish and Wildlife Conservation  
Commission

Mark Benefield  
Louisiana State University

Harriet Perry  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory



RED DRUM WORK GROUP

Mike Murphy, Leader

Florida Fish and Wildlife Conservation Commission

James Warren  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory

Joanne Lyczkowski-Shultz  
National Marine Fisheries Service  
Pascagoula Laboratory

Joseph Shepard  
Louisiana Department of Wildlife and  
Fisheries

Mark Van Hoose  
Alabama Department of Conservation and  
Natural Resources

Texas Parks and Wildlife Department

REEF FISH WORK GROUP

Richard Waller, Leader

University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory

Texas Parks and Wildlife Department

Mark Leiby  
Florida Fish and Wildlife Conservation  
Commission

Chris Gledhill  
National Marine Fisheries Service  
Pascagoula Laboratory

Jim Duffy  
Alabama Department of Conservation and  
Natural Resources

Richard Kasprzak  
Louisiana Department of Wildlife and  
Fisheries



SHRIMP/GROUNDFISH WORK GROUP

Butch Pellegrin, Leader  
National Marine Fisheries Service  
Pascagoula Laboratory

Texas Parks and Wildlife Department

Ken Edds  
Louisiana Department of Wildlife and  
Fisheries

Bruce Comyns  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory

Leslie Hartman  
Alabama Department of Conservation and  
Natural Resources

Nate Sanders  
National Marine Fisheries Service  
Pascagoula Laboratory





**TABLE 3.**  
**PRELIMINARY 2004 PROGRAMMATIC BUDGET**

Alabama Department of Conservation and Natural Resources	88,000
Florida Fish and Wildlife Conservation Commission	111,340
Louisiana Department of Wildlife and Fisheries	135,200
University of Southern Mississippi/College of Marine Sciences/ Gulf Coast Research Laboratory	118,495
Texas Parks and Wildlife Department	58,804
Gulf States Marine Fisheries Commission	90,564
<b>TOTAL</b>	<b>\$612,403</b>

**TABLE 4.**  
**PROPOSED SEAMAP-GULF ACTIVITIES, 2004**

	Fall	Winter	Spring	Summer
<b>Resource Surveys:</b>				
Spring Plankton Survey			X	
Shrimp/Groundfish Surveys	X			X
Fall Plankton Survey	X			
Plankton & Environmental Data Surveys	X	X	X	X
<b>Information Operations:</b>				
Biological and Environmental Atlas Marine Directory			X	X
Joint Annual Report		X		
Data Input and Request Processing	X	X	X	X
Specimen Archiving and Loan	X	X	X	X
Real-time Data Summaries		X		X
<b>Program Administration:</b>	X	X	X	X



APPENDIX A

MINUTES FOR 2002 AND 2003 SEAMAP MEETINGS



**TCC SEAMAP SUBCOMMITTEE  
MINUTES  
Monday, October 14, 2002  
Duck Key, Florida**

APPROVED BY:  
  
COMMITTEE CHAIR

Chairman Jim Hanifen called the meeting to order at 1:05 p.m. The following members and others were present:

**Members**

Jim Hanifen, *Chair*, LDWF, Baton Rouge, LA  
Richard Waller, USM/CMS/GCRL, Ocean Springs, MS  
Paul Choucair, TPWD, Corpus Christi, TX  
Steve Heath, ADCNR/MRD, Gulf Shores, AL  
Rick Leard, GMFMC, Tampa, FL

**Staff**

Ron Lukens, Assistant Director, GSMFC, Ocean Springs, MS  
Dave Donaldson, Data Program Manager, GSMFC, Ocean Springs, MS  
Jeff Rester, SEAMAP/Habitat Program Coordinator, GSMFC, Ocean Springs, MS  
Cheryl Noble, Staff Assistant, GSMFC, Ocean Springs, MS

**Others**

Mark McDuff, NMFS, Pascagoula, MS  
Dennis Shields, NOAA/OMAO, Silver Spring, MD  
Tom McIlwain, NMFS, Pascagoula, MS  
Terry Cody, Rockport, TX  
Harriet Perry, USM/CMS/GCRL, Ocean Springs, MS

**Adoption of Agenda**

**P. Choucair will discuss the Mexican Shrimp Fishery and R. Waller will discuss an electronic species identification guide being developed under "Other Business." With these changes, the agenda was adopted.**

**Approval of Minutes**

R. Waller stated to add "not" in the second paragraph, second sentence under "Summary of 2002 Distribution of Shrimp Real-Time Data," "He said several fronts were **not** in the Gulf. . . ." **R. Waller moved to approve the August 2002 minutes with this change. S. Heath seconded, and the minutes passed unanimously.**

**Update on Coordinated Fishery Independent Data Collection**

D. Donaldson reported that the goals and objectives for developing a fishery independent data collection program were modified after the August SEAMAP meeting and will be presented to the TCC at this meeting. He said the modified goals and objectives were not

distributed to the TCC prior to the meeting so they may not be approved at the meeting, it may be by mail ballot. When the goals and objectives are approved by the TCC, the Gulf Subcommittee and other components will continue working on this new program.

The Subcommittee discussed the importance of data collection programs and the need for more funding. The GSMFC and the state agencies need to present a united front and approach Congress for more funding. R. Leard stated that data collection is more important than ever at the national level due to law suites, so hopefully, more funding will be available soon.

### **Administrative Report**

J. Rester reported the Fall Plankton Survey is currently taking place. The Survey started on August 30, 2002 and should be completed soon. The Fall Shrimp/Groundfish Survey is also currently taking place. Real time red snapper data will be produced after the surveys are completed. The annual Subcommittee report to the TCC was completed and a copy of the report is in the meeting folder. The GIS contractor for the Council's EFH EIS will be using SEAMAP data to produce species distribution and environmental data maps for the EIS.

### **SCS/FSCS: Shipboard Data Entry System**

M. McDuff discussed a new shipboard data entry system called the Scientific Computer System (SCS) that NMFS has installed on the OREGON II. Dennis Shields then gave a complete overview of the SCS and Fisheries Scientific Computer System (FSCS). The SCS measures wind speed and direction, boat speed, water depth, along with other measurements. The FSCS measures biological data such as fish length and fish weight. After the presentation he demonstrated the software. D. Shields stated that the GORDON GUNTER will be fitted with the systems next year, and that Mississippi is also investigating outfitting their vessel with the system next year. A complete copy of the presentation is available at the GSMFC office.

### **New SEAMAP Biocode**

M. McDuff discussed the new SEAMAP biocode that David Hanisko and others have been working on. M. McDuff reviewed the following report submitted by D. Hanisko and demonstrated what has been completed so far:

In the Fall of 2001, an ad-hoc committee was formed to address the need to update the NMFS Southeast Fisheries, Pascagoula Laboratories Bio-Numeric Code which catalogs marine organisms found in the SEAMAP Database System. The committee consists of David S. Hanisko, NMFS; Dr. Mark Leiby, Florida; Harriet Perry, Mississippi; and Dr. Joanne Lyczkowski-Shultz, NMFS.

The current bio-numeric code has not undergone a full update in at least 10 to 15 years, and the following problems have been identified with the current code:

1. The code no longer follows a well identified taxonomic/phylogenetic hierarchy.

2. Many orders and families found in the code are no longer accepted by the scientific community.
3. The current code does not allow for useful taxonomic levels such as suborders, infraorders, tribes and subfamilies.
4. There are many misspellings and gender changes found within the 13-character taxonomic name field.
5. The inability of the system to utilize the full scientific name of an organism results in duplicate 13-character taxonomic field names for several taxa that are commonly caught.

The Biocode Committee and NMFS Data Management group have identified the need for a hierarchical bio-numeric code. By having the code organized in this way, users of the data have the ability to run queries on ranges of codes, i.e., pulling down data on all the mollusks, or reversing the structure and collapsing lower taxonomic groups into higher level taxonomic groups for analysis. These possibilities are easily done with the use of a hierarchical code. Additionally, the Biocode Committee and NMFS Data Management has decided to use the full scientific name of all organisms in the new SEAMAP Database System.

A hierarchical listing of fishes and sharks from the western North Atlantic and Gulf of Mexico has been assembled and is being maintained by M. Leiby for inclusion into the new bio-numeric system. The list follows the phylogeny of fishes provided by William Eschmeyer's Catalog of Fishes at the following web site: <http://www.calacademy.org/research/ichthyology/catalog/fishcatsearch.html>.

A hierarchical listing of marine mammals, sea turtles, sea birds, and marine invertebrates found in the SEAMAP Database System has been assembled by D. Hanisko and H. Perry. The phylogenetic order of this group closely follows the hierarchical structure of the Integrated Taxonomic Information System (ITIS) found at the following web site: <http://www.itis.usda.gov/index.html>.

D. Hanisko is currently merging the two listings into a working database. The new database will become the core of the new bio-numeric system, and will be finished within the year.

D. Hanisko, M. Leiby or M. McDuff will give another update at the March meeting.

### **Update on the NCDDC Gulf of Mexico Habitat Pilot Project**

J. Rester reported the National Coastal Data Development Center (NCDDC) is now open at the Stennis Space Center. One of their first projects is the development of a Gulf of Mexico Habitat Data Pilot Project. NCDDC wants to improve access to habitat data related to the Gulf of Mexico. The project will improve access to habitat data in support of the environmental stewardship mission of NOAA and collaborators. The initial focus is on fisheries, protected species and habitat in the Gulf of Mexico with future expansion. A meeting was held September 17-18 to demonstrate capabilities and gather feedback on the project. Group leaders were looking for data needs and projects in the Gulf of Mexico. Access to the SEAMAP trawl database is currently available through NCDDC's web site. Full casts from SEAMAP CTD data will be online in the first quarter of next year.

### **Election of Chairman**

**R. Waller moved to elect Jim Hanifen Chairman and Steve Heath Vice Chairman. Paul Choucair seconded, and it passed unanimously.**

### **Other Business**

R. Waller reported that H. Perry and other SEAMAP researchers have developed an electronic species identification guide which currently has approximately 250 illustrations. She asked for input on how to distribute the guide. The Subcommittee agreed that CD-ROM would be the best and most economical way. J. Hanifen stated that staff from Louisiana is also working on a similar project. J. Hanifen asked J. Rester to coordinate with H. Perry and others working on similar projects so they may exchange information and illustrations.

Paul Choucair demonstrated a new SEAMAP data entry system that he developed in Microsoft Access. He said the new data entry system has been a substantial time saver and he hopes to have it online completely in the near future.

P. Choucair reported that Mexico's brown shrimp fishery has collapsed and they had to close their offshore season. It will reopen November 1<sup>st</sup> for evaluation. Mexico has requested to send several scientists to Texas to review their sampling protocols. They are interested in using similar protocols so their data will be compatible. He requested to have someone at the federal level and from SEAMAP at the meeting to discuss all protocols. J. Hanifen asked P. Choucair to represent SEAMAP and T. McIlwain will ask N. Thompson to send someone from NMFS.

**There being no further business, the meeting adjourned at 5:05 p.m.**



APPROVED BY:   
COMMITTEE CHAIRMAN

**TCC SEAMAP SUBCOMMITTEE  
MINUTES - 53<sup>rd</sup> Annual Spring Meeting  
Tuesday, March 18, 2003  
Point Clear, Alabama**

**Chairman Jim Hanifen** called the meeting to order at 8:28 a.m. The following members and others were present:

**Members**

Jim Hanifen, *Chair*, LDWF, Baton Rouge, LA  
Richard Waller, USM/CMS/GCRL, Ocean Springs, MS  
Paul Choucair, TPWD, Corpus Christi, TX  
Steve Heath, ADCNR/MRD, Gulf Shores, AL  
Steven Atran, GMFMC, Tampa, FL (*Proxy for Rick Leard*)  
Mark Leiby, FWC/FMRI, St. Petersburg, FL  
Joanne Lyczkowski-Shultz, NMFS, Pascagoula, MS (*Proxy for Terry Henwood*)

**Staff**

Ron Lukens, Assistant Director, GSMFC, Ocean Springs, MS  
Dave Donaldson, Data Program Manager, GSMFC, Ocean Springs, MS  
Jeff Rester, SEAMAP/Habitat Program Coordinator, GSMFC, Ocean Springs, MS  
Cheryl Noble, Staff Assistant, GSMFC, Ocean Springs, MS

**Others**

Mark McDuff, NMFS, Pascagoula, MS  
Jeff Jenner, NCDDC, SSC, MS  
Joe O'Hop, FWC/FMRI, St. Petersburg, FL  
Terry Cody, Rockport, TX  
Leslie Hartman, ADCNR/MRD, Gulf Shores, AL  
Heather Warner-Finley, LDWF, Baton Rouge, LA  
Jill Jensen, GRN, New Orleans, LA  
David Hanisko, NMFS, Pascagoula, MS  
Kirsten Larsen, GCRL, Ocean Springs, MS  
Michelle Kasprzak, LDWF, Baton Rouge, LA  
Karen Mitchell, NMFS, Pascagoula, MS  
Robert Adami, TPWD, Corpus Christi, TX  
Sallie Davis, GRN, New Orleans, LA

**Adoption of Agenda**

M. Leiby and D. Hanisko will discuss agenda item 8; P. Choucair will give an update on Mexico's long term monitoring program; and J. Jenner will give an update on NCDDC's SEAMAP activities. With these changes, the agenda was adopted.

## Approval of Minutes

**S. Heath** moved to approve the October 14, 2002 minutes. **J. Shultz** seconded the motion and the minutes were approved.

## Administrative Report

**J. Rester** reported the Fall Plankton Cruise and the Fall Groundfish Survey were completed last fall. Data from the groundfish survey will be used to produce the 5<sup>th</sup> annual red snapper real-time plots. These plots will only be available through the Commission's web site.

The SEAMAP 2003 Marine Directory was produced and distributed in February.

The EFH EIS contractor will not be using SEAMAP data for the mapping component of the EIS. The contractor underestimated the amount of work involved in putting the data in a GIS format.

SEAMAP will be producing real time shrimp data again this summer and **J. Rester** asked the members to please get their data in as soon as possible. **P. Choucair** has finalized the new real time data entry program and will distribute it to all members.

## Fishery Independent Sampling in Alabama

**L. Hartman** gave a presentation on Alabama's fishery independent sampling programs. A copy of the presentation can be obtained at the GSMFC office.

## Status of the Shipboard Data Entry System and Database Compatibility

**M. McDuff** reported they have used the FSCS data entry system for two cruises. He said they are pleased with the overall system and have provided the developers with a list of errors they found on the first two cruises. They now have an updated version and are checking it for errors. One of the biggest problems has been developing the protocol and training people to use the system. They hope to install the new system on the TOMMY MUNRO by the end of April and they will have training sessions this coming week. Several Subcommittee members and NMFS personnel met yesterday to discuss developing a new data entry system with Microsoft Access that can be used with the new FSCS system. **P. Choucair** will work with **M. McDuff** in developing this.

**M. McDuff** said that at the last joint SEAMAP meeting, the South Atlantic and Caribbean components suggested having a meeting to discuss where data management is going. They wanted to have the meeting in May, but decided to have it at this year's joint meeting. **M. McDuff** suggested the Gulf Data Coordinating Work Group have a conference call before the August meeting to decide what issues they want to discuss and if there is a need for any enhancements or developments of new tables, etc.

**M. McDuff** said they are spending a lot of time trying to set up the metadata protocols. He said the protocols are in the manual but the states may do something different than what is in the manual. He asked that each state send any of those differences to him so it can be incorporated into the manual as exceptions to the standard procedures.

**J. Rester** asked about a new program for entering the shrimp real time data. **M. McDuff** said a new program for the real time and atlas data has to be written to work with the new ORACLE structures so they are working on that. **P. Choucair** will send all the states the new program he uses for the Texas real time data. The Subcommittee discussed making changes to the Atlas since it will now be distributed on CD-ROM. **J. Rester** suggested having parts of it in color, maybe adding new tables, or the raw data to the CD-ROM. **J. Hanifen** asked **J. Rester** to contact the different work groups for suggestions and have all suggestions at the next meeting. The Subcommittee can then meet via conference call after the August meeting and discuss all changes or additions to the next Atlas.

### **Update on Coordinated Fishery Independent Data Collection**

**D. Donaldson** reported that a conference call with the chairmen and coordinators of the three components was held to discuss the next steps in the process. Initially, the plan was to begin the actual development of the data modules utilizing existing material that is available, but the South Atlantic Board had some concerns about this new fishery independent initiative that it might impact existing ACCSP and FIN programs. Their main concern was the existing programs under SEAMAP could be ignored if additional money was found to start this new program. They feel if additional funding is obtained, the existing programs should be priority in getting them to where they would be if they have been level funded. They also said other programs are doing this type of coordination and SEAMAP should contact those groups before developing a new program. Because of these concerns, the group decided to develop a white paper outlining the program more clearly including the funding strategies. He said if they did get additional funding, one of the main goals would be to get existing programs back to where they were when they had full funding. He thinks the paper will be useful and will provide some guidance. It will be available and discussed at the joint meeting.

He then asked the Subcommittee to review the "Expanding SEAMAP Activities" section of the management plan to make sure it is still current. **J. Hanifen** asked the Subcommittee to send any changes to **J. Rester** before April 18 and they will be incorporated into that section of the management plan.

### **Update on the SEAMAP Database Species Code Revisions**

**D. Hanisko** reported the ad hoc committee has developed a new coding system using the full taxonomic name. The entire classification is in the code. They have also developed new database structures to work with this. He said they have two new tables that will be integrated into the SEAMAP local database system. The first table



is the taxonomic code table and that contains a list of approximately 6,000 names and taxonomic descriptions. The second table is called the Taxonomic History Table and it will track changes to the taxonomic code. Both tables will be online to provide assistance when using the database. He said they are now in the process of testing and implementing the new system. He informed the Subcommittee that while they were developing this, they were informed that a group in DC are also working on integrating all the NMFS taxonomic databases into one common set and that will be available online to check with this new coding. They are having a meeting after this meeting to discuss final details of the revisions before testing.

**J. Jenner** asked if they are getting rid of the biocode completely. **M. Leiby** stated they were because there will no longer be a need for the biocodes, but it will be there through the transition.

### **Other Business**

**P. Choucair** reported that Mexico is still interested in developing a long term monitoring program that will be compatible with what is being used in the states. This was discussed extensively at a shrimp summit meeting last week and they are working toward that goal. He said he would like to provide them with a species list and help them set up shrimp statistical zones through Mexico. He said they have discussed several possibilities in helping Mexico get started but does not know if any will happen. One would be to have the OREGON II sample in Mexican waters, but he does not know how to get permission to do this. Another would be to use their research vessels with our assistance. He said their shrimp season closes in June and another option would be to loan them SEAMAP gear to do groundfish cruises with their commercial vessels. Also, the producers have suggested a self-imposed tax on every pound of shrimp to raise money for the research because they are sure the government will not provide enough funds for research.

At this point their priority is to set up a database that is compatible with the states and they want to learn how we analyze the data and what type of sampling procedures are used. The Subcommittee asked P. Choucair to continue working with the Mexican representatives and asked him to invite them to the meeting in Corpus Christi. He will keep the Subcommittee informed of their progress.

**J. Jenner** from NCDDC gave an update on their activities on accessing the SEAMAP database and linking it to all the data that is out there. He then went to the web page: [www.ncddc.noaa.gov](http://www.ncddc.noaa.gov) and demonstrated how to access the database. A complete copy of the presentation is available at the GSMFC office.

**J. Shultz** stated she is no longer the SEAMAP representative for NMFS and has been replaced by Terry Henwood. Scott Nichols will send a letter to the GSMFC office stating this. The Subcommittee thanked her for all her work over the years on the SEAMAP Subcommittee.

**There being no further business, the meeting adjourned at 11:07 a.m.**

SEAMAP Subcommittee Meeting  
**MINUTES**  
Myrtle Beach, South Carolina  
August 6, 2003

### **Call to Order**

Chairman Jim Hanifen called the meeting to order at 8:35 a.m. The following members and others were present:

#### **Members:**

Jim Hanifen, Chair, LDWF, Baton Rouge, LA  
Richard Waller, USM/CMS/GCRL, Ocean Springs, MS  
Paul Choucair, TPWD, Rockport, TX  
Steve Heath, ADCNR/MRD, Gulf Shores, AL  
Stu Kennedy, *proxy for Rick Leard*, GMFMC, Tampa, FL  
Mark Leiby, FWC/FMRI, St. Petersburg, FL  
Terry Henwood, NMFS, Pascagoula, MS

#### **Staff:**

Scott Nichols, NMFS, Pascagoula, MS  
Mark McDuff, NMFS, Pascagoula, MS  
Karen Mitchell, NMFS, Pascagoula, MS  
Dave Donaldson, Data Program Manager, GSMFC, Ocean Springs, MS  
Jeff Rester, SEAMAP/Habitat Program Coordinator, GSMFC, Ocean Springs, MS  
Cheryl Noble, Staff Assistant, GSMFC, Ocean Springs, MS

### **Adoption of Agenda**

R. Waller stated he would distribute a hand-out and discuss the Spring Plankton Cruise under Other Business. With this addition, the agenda was adopted.

### **Approval of Minutes**

**M. Leiby moved to approve the March 18, 2003 minutes. P. Choucair seconded and it passed.**

### **Administrative Report**

J. Rester reported the SEAMAP Spring Plankton Survey took place from May 12 through May 31, 2003. One hundred seventeen stations were sampled from the west Florida shelf to the Louisiana/Texas border. This was the twenty-second year for the survey. He stated the SEAMAP Summer Shrimp/Groundfish Survey took place from June 2 through July 27, 2002. Weather and mechanical problems did affect the survey. This was the twenty-second year for this survey, also. Real-time shrimp data were produced and distributed for seven weeks this summer. He said he did not receive any comments, negative or positive, concerning the data this year. An end of the year

summary is currently being produced and will be distributed on the Commission web site only. J. Rester stated he will give a report on the Data Coordinating Work Group Meeting under Agenda Item 9.

### **Status of FY2004 Budget**

T. Henwood reported that it appears SEAMAP will be level funded again at \$1.4 million. He said this is the Senate mark only because the House mark is not in yet, but he believes they will also level fund SEAMAP.

### **Activities and Budget Needs for FY2004**

Florida - M. Leiby reported Florida should be able to continue SEAMAP activities this coming year with level funding of \$121,340.

Alabama - S. Heath said Alabama should be able to continue SEAMAP activities this coming year with level funding of \$68,000, but he would like to purchase electronic measuring boards if he receives the \$20,000. R. Waller said he has an extra electronic measuring board he can give to him on permanent loan.

Mississippi - R. Waller said Mississippi will also continue at level funding of \$118,495. He said he was approximately \$5,000.00 short to purchase the computer system for the TOMMY MUNRO but he received the funds from ship time because the vessel had mechanical problems and did not go on all the scheduled cruises.

Louisiana - J. Hanifen reported Louisiana will continue SEAMAP activities at level funding of \$135,200. He said that, due to increased operating costs and other funding restrictions, only federal SEAMAP funds are available for SEAMAP activities; current funding levels will not support three cruises and plankton identification.

Texas - P. Choucair said Texas will also continue at level funding at \$58,804 but they will probably drop the video trap survey. He would like to purchase a tablet PC if there is any extra money from the \$20,000.00 to enter the real time data.

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GSMFC - J. Rester stated the GSMFC will continue at level funding which is \$90,564.

After discussion, the Subcommittee agreed that Alabama will get the \$20,000.00 to purchase the electronic measuring boards. If the complete \$20,000.00 is not used, J. Rester will coordinate a discussion on which state will receive the rest.

## **Coordinated Fishery Independent Data Collection**

D. Donaldson reported that at the last joint meeting it was decided to develop a white paper to address the south Atlantic's concerns about the initiative. He said this will be discussed at the joint meeting.

## **SEAMAP Data: EFH and Beyond**

J. Rester said this agenda item stems from several issues. He said one is the discussion from last year on different ways to market SEAMAP in order to receive more funding. SEAMAP has been in existence for over twenty years and the funding level is close to what it was at the beginning. The main emphasis for this is from his email concerning the GMFMC's EFH EIS. There was a paragraph in the section dealing with data sources (see handout) that were looked at but not used in the EIS and the justification for not using them and the justification for not using SEAMAP data starts off with "To use the SEAMAP data would require a substantial analytical effort to convert the survey results into interpolated distribution and/or density polygons in a GIS." He said as you read the hand out, it does not portray SEAMAP in the best light. He said he drafted new language to submit to the contractor. They did include it in the latest version, but he thinks that when they undertook the EIS they did not understand SEAMAP data and how they could use it. He said he does not think they realized they would receive the catch data and then they would have to make their own shapefiles, so they felt the data was not in GIS format but it actually is. He said that at the Data Coordinating Work Group meeting last week, they discussed possible things that can be done with the raw data. He said that a researcher from Texas Tech University used SEAMAP data in her paper "Locating Potential Sites for Marine Reserves and Softbottom Communities of the Gulf of Mexico (handout)." He pointed out the GIS maps in the paper that were produced from SEAMAP data.

P. Choucair demonstrated different ways SEAMAP data can be used to produce final products in GIS format. He showed how easy it was to make shapefiles and manipulate the data and showed examples of how the Subcommittee could make the data available. After discussion, the Subcommittee decided the contractor did not realize it would take time to use the data and probably underbid so they did not use the data. The Subcommittee felt that if P. Choucair can do this in a matter of four hours, then experts should not have had a problem using it. S. Kennedy stated that if these examples would have been available at the Council meetings, the SEAMAP data probably would have been used for the EIS. The Subcommittee decided they will have to have these examples in the future for the SEAMAP data to be used, and to help secure more funding. They discussed different protocols in standardizing the data and changing the atlas to a more user friendly version. After more discussion, it was suggested to start the Data Coordinating Work Group report to see what their suggestions were for the data and atlas before making any final decisions on changes and producing GIS products in the future.

## **Data Coordinating Work Group Meeting Review**

J. Rester reported the Data Coordinating Work Group met last week to discuss the data atlas, real time data, data collection sheets, and data collection protocols. Under the data atlas discussion, the



Work Group recommended that real time plots, the joint annual report, and the marine directory for 2001 be added to the upcoming 2001 atlas. The Work Group also recommended that the atlas include the raw data for 2001 with a disclaimer that it is only current up to the production date of the CD-ROM and that before using it for analytical purposes, users should check for updates. The Work Group also discussed several ways of modifying the current atlas layout. Specifically, the Work Group wanted to explore using other types of plots instead of 30 x 30' squares. The Work Group decided to develop new plots for 2001 for the Subcommittee to review at the March meeting. They suggest using the current format for this atlas and the new formats should be reviewed then implemented in the 2002 atlas. Additionally, the Work Group stated that some of the tables might not be useful if the raw data is located on the CD-ROM. This basically pertains to Table 2 which is the environmental table and it is about 25% of the atlas and would serve no purpose, except for visual reference, if the raw data is included on the CD-ROM. They also discussed ways to modify the maps in the second half of the atlas to make those "prettier", maybe with numbers or colors with densities, etc. They discussed several different ways and all suggestions will be presented at the March meeting, then the Subcommittee can decide how to do the 2002 atlas. He said they did not make a recommendation on what type of file the raw data should be in, ASCII or in a database structure. The Subcommittee decided to put it in ASCII format. J. Rester said the work group will have all recommendations at the March meeting for the Subcommittee to make the final decision.

The Subcommittee asked when the 2001 atlas will be ready and M. McDuff said it depends on David Hanisko's schedule. J. Hanifen asked if they could have a draft by the October meeting. The Subcommittee discussed the advantages of the new atlas format with the main one being extra funding may be secured with the new layout. Also, the atlas would be more usable and the users may help push to get more funding so the data will keep being available. J. Hanifen said there needs to be a way to get feedback from the users on the usefulness of the product and one way would be to provide links to the web page.

**After discussion, R. Waller moved to do the 2001 atlas in the same format as before but to add the marine directory, annual report, real time plots, and the data in ASCII delimited format. S. Heath seconded and it passed.**

**R. Waller moved to accept the Work Group's recommendation to change the format for future atlases. S. Heath seconded and it passed.** J. Hanifen asked the members to contact the GIS specialist in their office and ask them to give direction on how to develop a new GIS format for the Atlas. The members should then contact M. McDuff with the recommendations and then he will schedule a meeting. He also asked J. Rester to email the Subcommittee and remind them of this task.

J. Rester reported the Work Group then reviewed the SEAMAP real time data and discussed how it can be improved. In an effort to save money, the Work Group suggested generating an email distribution list for some of the real time recipients. Most recipients from universities and state and federal agencies should not need a hard copy, they can be sent an email with a link to the real time data. J. Rester suggested sending a questionnaire to the distribution list asking how they prefer receiving the data. He said most of the shrimpers may still want hard copies. The Work Group also discussed how the dominant species is determined. They wanted to clarify if numbers or weight



determines dominant species. The Work Group would like for the Subcommittee to decide how to determine dominant species and if it should be identified by the species level or species group. The operations manual needs to be clarified concerning this matter. **The Subcommittee determined this was only in there for informational purposes and felt there was no real need for it. P. Choucair moved to no longer put dominant species in the real time data but to keep the separate designations. R. Waller seconded it and it passed.**

J. Rester said the Work Group would like to add a size class distribution of the shrimp catch to the real time data. They would also like to change finfish catch to everything besides commercial shrimp species. They would also like to explore the possibility of using GIS shrimp and other catch abundance level maps for next year's end of year real time summary, along with a map of bottom dissolved oxygen levels. They also feel there is no need to have chlorophyll on the real time data collection sheets because that is not useful to shrimpers. **M. Leiby moved to accept these recommendations relative to real time data. R. Waller seconded and it passed.**

P. Choucair asked if the Subcommittee will do the real time snapper summary again this fall. M. McDuff suggested producing an end of cruise report for each survey. **R. Waller moved to not do the snapper real time summary but include it in an end of survey report. P. Choucair seconded it and it passed.** J. Hanifen asked J. Rester to contact the Data Coordinating Work Group and ask them what information should be in an end of cruise report. The Subcommittee will discuss the recommendations at the October meeting.

J. Rester said the next item discussed was the SEAMAP data collection sheets. M. McDuff stated SEAMAP no longer needs to fit every survey on the same data sheet. He wanted to solicit input into what each Work Group member thought was important information to collect on the data sheets. M. McDuff then demonstrated a new data entry program and asked the type of layout everyone preferred. The Work Group agreed that the forms and the layout of the data entry program should match. The Work Group also recommended that redundant information should be dropped whenever possible. Joanne Shultz stated that she would talk to the Plankton Work Group about how to classify the levels of *Sargassum* and Terry Romaine stated that she would talk to the Environmental Data Work Group to determine how they want to record the CTD casts.

Finally, the Work Group discussed data collection protocols. The Work Group decided that it was better to wait until the data sheets were finalized before changing the operations manual. M. McDuff asked that after January 1, 2004, for everyone to start using a four digit cruise number. The first two digits being the year, the last two the cruise within the year. **The Subcommittee accepted all of the recommendations.**

#### **Other Business**

R. Waller distributed a memo from Bruce Comyns on bluefin tuna collections during the spring plankton survey and discussed the results.

**There being no further business, the meeting adjourned at 11:55 a.m.**



Approved by: Aida Rosario

**SEAMAP - GULF, SOUTH ATLANTIC  
AND CARIBBEAN SUBCOMMITTEES  
JOINT MINUTES  
San Antonio, Texas  
August 7-8, 2002**

Chairman J. Hanifen called the meeting to order at 1:10 p.m. The following members and others were present:

**Members:**

James Hanifen, LDWF, Baton Rouge, LA  
Henry Ansley, GADNR, Brunswick, GA  
Richard Waller, USM/CMS/GCRL, Ocean Springs, MS  
Steve Heath, ADCNR/MRD, Gulf Shores, AL  
Mark Leiby, FWC/FMRI, St. Petersburg, FL  
Joanne Lyczkowski-Shultz, NMFS, Pascagoula, MS  
Darlene Haverkamp, FWC/FMRI, St. Petersburg, FL  
- Aida Rosario, FRL/PR-DNER, Mayaguez, PR  
Roger Pugliese, SAFMC, Charleston, SC  
Katy West, NCDENR, Washington, NC  
Dale Theiling, SCDNR, Charleston, SC  
Lisa Kline, ASMFC, Washington, DC  
John Merriner, NMFS-SEFSC, Beaufort, NC  
Paul Choucair, TPWD, Rockport, TX

**Others:**

Perry Thompson, NMFS, Pascagoula, MS  
Jeff Jenner, NCDDC, SSC, MS  
Elizabeth Wenner, MRRI/SCDNR, Charleston, SC  
Ellie F. Roche, NMFS/SER, St. Petersburg, FL  
Larry DeLancey, SCDNR, Charleston, SC

**Staff:**

Scott Nichols, NMFS, Pascagoula, MS  
Cynthia Binkley, NMFS, St. Petersburg, FL  
Mark McDuff, NMFS, Pascagoula, MS  
Dave Donaldson, GSMFC, Ocean Springs, MS  
Geoffrey White, ASMFC, Washington, DC  
Edgardo Ojeda, UPR Sea Grant, Mayaguez, PR  
Jeff Rester, GSMFC, Ocean Springs, MS  
Cheryl Noble, GSMFC, Ocean Springs, MS

**Adoption of Agenda**

The agenda was adopted as submitted.

### **Approval of Minutes**

The August 8-9, 2001 minutes were approved as submitted. It was suggested to separate the members, others, and staff on future minutes.

### **Overview of SEAMAP-Caribbean**

A. Rosario reported the conch survey in Puerto Rico was completed this past June. The USVI also completed their conch survey and the reef fish survey for the St. Croix area. They are now doing the Lobster survey which started in April and will run for a year and a half. They also added juvenile lobster collectors to this survey. They expect to start the same survey in Puerto Rico by the end of the month. She stated the Caribbean is on schedule for all of their surveys.

### **Overview of SEAMAP-Gulf**

J. Hanifen reported the fall plankton cruise took place from August 28, 2001 through December 5, 2001. This was the eighteenth year for the survey. Florida, Alabama, Mississippi, Louisiana, and the National Marine Fisheries Service sampled 171 stations on the west Florida shelf and the 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 groundfish cruise took place from October 10 - December 13, 2001. This was the seventeenth year for the survey. Alabama, Mississippi, Louisiana, Texas and the National Marine Fisheries Service sampled 334 trawl stations and 49 plankton stations during the survey. 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. Data from this Survey were used to produce red snapper real-time plots. These plots described research trawl effort and catch rates for juvenile red snapper during the survey. This was the fourth year the plots were produced and distributed to interested individuals.

The NMFS portion of the Reef Fish Survey took place from April 2 - May 31, 2002. 324 sites were sampled using trap videos and fish traps. The objectives of the survey were to assess relative abundances of reef fish in the Gulf of Mexico as well as collecting fish hard parts for age and growth work.

The spring plankton survey took place from April 17 through May 31, 2002. 167 stations were sampled from the west Florida shelf to the Louisiana/Texas border. This was the twenty-first year for the survey. The objectives of the survey were to collect ichthyoplankton samples for estimates of the abundance and distribution of Atlantic bluefin tuna larvae and collect environmental data at all ichthyoplankton stations.

The summer shrimp/groundfish survey took place from June 3 - July 17, 2002. This was the twenty-first year for the survey. 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. The overall sampling strategy was to work from the eastern Gulf to the Texas/Mexico border, in order to sample during or prior to migration of brown shrimp from bays to the open Gulf area. 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.

Finally, the Gulf of Mexico Fishery Management Council will be using Gulf of Mexico SEAMAP data in the preparation of their Essential Fish Habitat Environmental Impact Statement. SEAMAP will be providing larval, juvenile, and adult species data to the GIS contractor for use in species distribution maps for use in the EIS.

#### **Overview of SEAMAP-South Atlantic**

H. Ansley reported that in FY02 the South Atlantic component was very active, especially the Bottom Mapping Work Group. They finished and distributed the hard copy of the bottom mapping document and CD-ROM. Various agencies, libraries, contractors, fishermen, etc. have requested copies and have shown a huge interest in the mapping program. He said they were able to use funding from last year to help leverage additional funding for the bottom mapping program.

The Crustacean Work Group held a symposium in conjunction with the Southeast Estuarine Research Society in Savannah, Georgia in May 2002. The meetings went well and were basically an exchange of information on crustacean research, biology, etc. Draft proceedings are in preparation. He also stated the symposium was a good way to inform university personnel about the SEAMAP program.

Finally, the Shallow Trawl Survey continues on schedule. This is the thirteenth year for the survey and all goals and objectives are being done. The SEAMAP Cooperative Winter Offshore Tagging Cruise and the Pamlico Sound Survey are also continuing. These are not actual SEAMAP surveys but the information will be incorporated into the SEAMAP database.

J. Hanifen stated the hardbottom CD-ROM is very impressive and asked how they made the general public aware of it. G. White said he created a list of universities and libraries he thought would be interested and informed them of its availability. It is also posted on their website, FMRI's website and the Council's website. They also had good coverage at the EPA hearings.

#### **Overview of NMFS**

S. Nichols reported NMFS did not have any major ship failure this year so they were able to complete their surveys. He will give his complete report under the Data Management item on the agenda.



### Status of FY2003 Funds

S. Nichols reported that SEAMAP should be level funded and he is not aware of any activities that may increase or decrease that.

### Proposed Activities and Budget Needs for FY2003

**A. Caribbean** - A. Rosario stated they will continue activities with level funding which is \$145,000.

**B. Gulf** - J. Hanifen stated the Gulf will try to maintain all current programs with the same amount of funding which is \$612,403.

**C. South Atlantic** - H. Ansley stated in order to continue, they must have an additional \$21,676.00. He said their costs include 50% of the coordinator's time, meeting costs, the bottom mapping project, the shallow trawl survey and costs for the Crustacean Work Group Symposium. Their total budget needs are \$387,073.

**D. NMFS** - S. Nichols stated NMFS will continue current programs for the same amount of funding which is \$220,510. He said he does expect getting some funding back this year from a readjustment of the taxes. He proposes giving anything they receive over the \$220,510 to the South Atlantic. He expects to receive an additional \$10,000 but it could potentially be \$12,000.00.

**E. Joint Discussion of SEAMAP Budget for FY2003** - The group asked S. Nichols if this will be a permanent increase and he said it depends on the taxes from year to year. After discussion, the Gulf and Caribbean components agreed to stay at level funding and to try to continue operating at their current level. The South Atlantic will receive an extra one time approximately \$10,000.00 increase from the NMFS tax refund. If the taxes continue to decrease each year, the extra funding will be on the table for discussion for all three components. S. Nichols will forward the breakdown of funding after he receives the final amount.

### Mexican Participation in SEAMAP Activities

J. Rester informed the Committee that Mexico has expressed an interest in using SEAMAP protocols for their fishery independent sampling. P. Choucair reported he has been meeting with Mexican representatives and had invited them to attend this meeting but they were unable to attend. He said they are very interested in using SEAMAP protocols and would like the SEAMAP data coordinators to meet with them to help set up their system so eventually, data can be exchanged. M. McDuff said the survey design must be compatible to SEAMAP's in order for this to work. The Committee agreed to have P. Choucair continue to be the liaison to the Mexican representatives and keep the Committee informed.

### Grant Reporting Requirements/Timing

C. Binkley distributed an example package for the new multi year grants program NOAA has agreed to try. She said the components will be able to submit one application package that will suffice for the entire three years. Guidelines are included in the package and she reviewed each one. She said this is just a pilot program and it is not mandatory if any of the states do not want to

will meet next week to review the data entry systems developed and plan further work.

- F. The biocode is currently being revised by M. Leiby, Harriet Perry and David Hanisko. They are moving to full scientific names in the database with an up-to-date biocode. There are approximately 100 old species currently in the database that have to be reviewed.
- G. A shipboard data entry system, SCS/FSCS is being developed for NOAA ships by programmers at the Office of Marine and Aviation Operations (OMAO). Butch Pellegrin is overseeing the move to this system for trawl cruises. This system was used during the summer cruise. Current plans call for its installation on the GORDON GUNTER this spring followed by the CARETTA. If the system is successful, it will be available to the states in 2004.
- H. The table structures for CTD data have been developed. Processing protocols have been developed for Seabird 911 plus and a draft set for SBE 25. A report/proposal is being prepared for the appropriate committees.
- I. An agreement has been made with National Coastal Data Development Center (NCDDC) to help develop the metadata for SEAMAP data.

H. Ansley suggested having all three component's data management work groups meet to discuss the data management portion of SEAMAP. He also suggested having the Mexican representatives participate at the meeting. The Committee agreed.

### Planning for the 200<sup>3</sup> Joint Annual Meeting

G. White will gather hotel/flight information for Myrtle Beach on August 6-7, 2003. He will send the information to the other coordinators and a final decision of where the meeting will take place will be made.

### Other Business

Henry Ansley reported Dale Thieling is the new South Atlantic Chairman and Roger Pugliese is the Vice Chairman.

M. McDuff will demonstrate the new data entry software tomorrow morning, August 8, before the Gulf meeting.

**There being no further business, the meeting adjourned at 4:50 p.m.**

participate. The Committee discussed the new reporting requirements and agreed to try the new procedure. She will be available to provide guidance when the new reporting period starts.

### **Discussion of Coordinated Fishery Independent Activities**

D. Donaldson said that at the last meeting the Committee discussed coordinating the fishery independent activities in the southeast. The Committee tasked a subgroup consisting of the chairmen and coordinators of each of the three components to meet and begin addressing this issue. The subgroup met in May and submitted a report to be approved by the committee. D. Donaldson reviewed the report and discussion ensued. **K. West moved to pursue this task.** She said the intent of her motion is to endorse the concept that SEAMAP should be the appropriate body to undertake this task and should be expanded to incorporate the preferred methodology in coordinating the fishery independent activities in the southeast. After more discussion, J. Shultz seconded the motion and it passed.

D. Donaldson asked that by passing this motion does the Committee approve the report and the new goals and objectives. The Committee said the report will have to be reviewed by each component's policy board before approval. If approval is received, then a new work group will be appointed to continue developing this program. L. Kline will also ask their economic and social sciences committee to give suggestions on how SEAMAP can demonstrate the value of the SEAMAP program to receive more funding.

### **Data Management Issues**

Mark McDuff reviewed the SEAMAP Data Management Report and the status of the SEAMAP Oracle Database and Data Entry Programs. He stated:

- A. The trawl data is currently in the Oracle database and is available via SQL, but the line speed is slow. Currently, there are seven users besides contractors and in house users. A T1 line has been ordered for Pascagoula and should be installed after August 15, 2002. The firewall design is in progress.
- B. The contractors are currently writing java interface for entry/edit and data access. This has been a very slow development. Access via Oracle Discoverer is available but the documentation is still lagging.
- C. Because development has been slow, they are trying to do as much in-house as possible so they are currently advertising for a Oracle DBA/programmer.
- D. The data entry system design will allow for multiple methods of entry such as PC based, web based, and data reformatting systems. All systems will store data in temporary tables which will then be ingested after all edit routines are completed. This should allow for the most flexibility.
- E. The plankton tables have been established and reviewed by the Gulf Plankton Work Group. The data is being readied to populate these tables. M. Leiby and M. McDuff



APPENDIX B  
2004 SEAMAP OPERATIONS PLAN



# SEAMAP-GULF OF MEXICO

## OPERATIONS PLAN

January 1, 2004 - December 31, 2004

### INTRODUCTION

The Southeast Area Monitoring and Assessment Program (SEAMAP) is a State/Federal/University program for collection, management and dissemination of fishery-independent data and information in the southeastern United States. The program presently consists of three operational components, SEAMAP-Gulf of Mexico, which began in 1981, SEAMAP-South Atlantic, implemented in 1983, and SEAMAP-Caribbean, formed in 1988.

Each SEAMAP component operates independently, planning and conducting surveys and information dissemination in accordance with administrative policies and guidelines of the National Marine Fisheries Service's Southeast Regional Office.

Organizations directly involved in planning and managing the Gulf's program are the marine fishery management agencies of Florida, Alabama, Mississippi, Louisiana, and Texas, the National Marine Fisheries Service (NMFS), the Gulf of Mexico Fishery Management Council (GMFMC) and the Gulf States Marine Fisheries Commission (GSMFC) which administers the Gulf program. Sea Grant Directors are also asked to attend and participate in SEAMAP-Gulf Subcommittee meetings.

A five year *Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan: 2001-2005* has been developed for the SEAMAP outlining goals and objectives; management structure and responsibilities; data collection activities along with management and dissemination of the data; and financial and personnel resources necessary for successful operation of the program. This Management Plan, along with the *1981 SEAMAP Strategic Plan* and *SEAMAP Management Plan: 1996-2000* should be considered as charter documents defining and guiding operations of the Gulf program. An external review of SEAMAP-Gulf and South Atlantic was performed in 1987, and endorsement of specific recommendations was adopted by consensus of the joint SEAMAP-Gulf Subcommittee and SEAMAP-South Atlantic Committee. These recommendations, as implemented, will guide activities and operations of SEAMAP-Gulf, as well as the South Atlantic and Caribbean components.

Five major goals were outlined in the *Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan: 2001-2005* and remain as key missions:

- (1) Collect long-term standardized fishery-independent data consistent with established fisheries data systems on the condition of regional living marine resources and their environment;
- (2) Cooperatively plan and evaluate SEAMAP-sponsored activities;



- (3) Operate the SEAMAP Data Management System for efficient management and timely dissemination of fishery-independent data and information;
- (4) Identify and describe existing non-SEAMAP databases and activities that are of value in fishery-independent assessments of regional living marine resources; and
- (5) Coordinate and document SEAMAP activities, and disseminate programmatic information.

Each of these goals is implemented by several objectives requiring specific tasks and events, e.g. a Summer Shrimp/Groundfish Survey. By intent, some specific tasks may fulfill more than one objective. Each of the participants in the Gulf program receives a portion of the annual Congressional allocation to perform tasks associated with the goals. Participants also contribute significant in-kind support for activities.

The SEAMAP-Gulf and South Atlantic committees, meeting jointly in January 1988, accepted the Program Review recommendation to develop separate annual operations plans. During the SEAMAP Joint meeting held August 2003, the SEAMAP-Gulf, South Atlantic, and Caribbean, to coincide with the new NOAA Grant procedures, agreed to develop an operations plan on a three year basis. This SEAMAP-Gulf Annual Operations Plan describes planned activities and events for the period January 1, 2004 through December 31, 2004. Detailed information on Gulf program objectives, activities, administrative procedures, data management protocols, information dissemination and funding requirements are found in the *Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan: 2001-2005*.

## **SURVEYS**

### Spring and Fall Plankton Surveys

The objectives of the spring and fall plankton surveys are to provide data on the distribution and abundance of eggs and larvae of commercial and recreational species such as bluefin tuna, mackerels, carangids, sciaenids and lutjanids. Stations are located in a systematic grid across the northern Gulf at increments of 30 minutes latitude/longitude.

Plankton samples will be taken with standard SEAMAP bongo and neuston samplers. The bongo sampler consists of two conical 61-cm (mouth opening) nets with 333 micron mesh. Tows are oblique, surface to within 5 m above the bottom (or 200 m maximum) and back to surface. Wire angle will be maintained at 45°. Neuston samples will be taken with 947 micron mesh nets on 1 x 2 meter frames towed at the surface for ten minutes. Most plankton samples are to be initially preserved in 10% buffered formalin and after 48 hours transferred to 95% ethyl alcohol for final preservation. Some samples are initially preserved in 95% ethanol for use in genetics and age/growth studies. Hydrographic data at all stations will include at a minimum chlorophyll or fluorescence, salinity, temperature and dissolved oxygen, and water color, using the Forel-ule test.



Right bongo samples and neuston samples collected in 2004 from SEAMAP stations will be transshipped by the NMFS Pascagoula Laboratory to the Polish Sorting and Identification Center for sorting and identification, after which the larvae removed from those samples will be returned to the SEAMAP Archiving Center at Florida Marine Research Institute in St. Petersburg, Florida. Left bongo and neuston samples from previous surveys are currently archived at the SEAMAP Invertebrate Plankton Archiving Center (SIPAC) housed at the USM/CMS Gulf Coast Research Laboratory in Ocean Springs, Mississippi.

### Reef Fish Survey

The objectives of the survey are to:

- (1) assess relative abundance and compute population estimates of reef fishes using a 4-camera system and fish traps;
- (2) determine habitat using an echo sounder and video camera;
- (3) estimate length distributions of fishes using lasers; and
- (4) collect environmental data at each station.

The primary purpose of this survey is to assess the relative abundance and compute population estimates of reef fishes. Stations are 100 m<sup>2</sup> sites designated as “reef areas” that are selected by a stratified random sample procedure. The 4-camera system soaks on the bottom for 30 minutes. A chevron fish trap is employed to collect fish specimens and soaks for 1 hour.

### Summer Shrimp/Groundfish Survey

Objectives of this survey are to:

- (1) monitor size distribution of penaeid shrimp during or prior to migration of brown shrimp from bays to the open Gulf;
- (2) aid in evaluating the management measures of the GMFMC's Shrimp Fishery Management Plan;
- (3) provide information on shrimp and groundfish stocks across the northern Gulf of Mexico from inshore waters to 60 fm;
- (4) obtain length frequency measurements for major finfish, shrimp and other important invertebrate species to determine population size structures; and
- (5) collect ichthyoplankton samples to determine abundance and distribution of the larvae of commercial and recreationally important species.





The sampling strategy will include sites chosen randomly in three areas (east of the Mississippi River, west of the River to the Texas-Louisiana border and off Texas) stratified by depth and statistical area. Trawls will be towed perpendicular to the depth contours and cover a specified depth stratum at each station. Plankton samples will be taken along a ½ degree grid system.

### Fall Shrimp/Groundfish Survey

Objectives of this survey will be to:

- (1) sample the northern Gulf of Mexico to determine abundance and distribution of white shrimp and other demersal organisms from inshore waters to 60 fm;
- (2) obtain length frequency measurements for major finfish, shrimp and other important invertebrate species to determine population size structures;
- (3) collect environmental data to investigate potential relationships between abundance and distribution of organisms and environmental parameters; and
- (4) collect plankton samples to determine relative abundance and distribution of the larvae of commercial and recreationally important species.

Trawl sample stations and plankton sampling will be conducted as described for the Summer Shrimp/Groundfish Survey.

## **OPERATIONS**

The following activities and events by participant comprise the SEAMAP-Gulf of Mexico operations schedule for the period January 1, 2004 to December 31, 2004:

### Texas Parks and Wildlife Department

- (1) Summer Shrimp/Groundfish Survey: June, nearshore and offshore Texas waters
- (2) Fall Shrimp/Groundfish Survey: November, nearshore and offshore Texas waters
- (3) Reef Fish Survey: sampling in Texas waters
- (4) Adult Finfish Survey: March-May, nearshore Texas waters
- (5) Attend SEAMAP Subcommittee and work group meetings as scheduled and provide assistance to SEAMAP Subcommittee
- (6) Data inventory, entry, edit and transmit to mainframe all SEAMAP cruise information



Louisiana Department of Wildlife and Fisheries

- (1) Summer Shrimp/Groundfish Survey: July, nearshore and offshore Louisiana waters
- (2) Fall Shrimp/Groundfish Survey: October-November, nearshore and offshore Louisiana waters
- (3) Fall Plankton Survey: September, nearshore and offshore Louisiana waters
- (4) Winter Seasonal Shrimp/Groundfish Survey: November-December, nearshore and offshore Louisiana waters
- (5) Plankton sampling in conjunction with trawl surveys
- (6) Plankton sample sorting and identification
- (7) Attend SEAMAP Subcommittee and work group meetings as scheduled and provide assistance to SEAMAP Subcommittee
- (8) Process sediment and chlorophyll samples
- (9) Data inventory, entry, edit and transmit to mainframe all SEAMAP cruise information

University of Southern Mississippi/College of Marine Sciences/Gulf Coast Research Laboratory

- (1) Spring eddy and front Plankton survey
- (2) Summer Shrimp/Groundfish Survey: June and July, Gulf waters
- (3) Fall Plankton Survey: September, nearshore and offshore Gulf waters
- (4) Fall Shrimp/Groundfish Survey: October, Gulf waters
- (5) Plankton sampling in conjunction with trawl surveys
- (6) SEAMAP Invertebrate Plankton Archiving Center operations
- (7) Attend SEAMAP Subcommittee and work group meetings as scheduled and provide assistance to SEAMAP Subcommittee
- (8) Data inventory, entry, edit and transmit to mainframe all SEAMAP cruise information



Alabama Department of Conservation and Natural Resources

- (1) Summer Shrimp/Groundfish Survey: June and July, nearshore Gulf waters
- (2) Fall Plankton Survey: September, nearshore Gulf waters
- (3) Fall Shrimp/Groundfish Survey: October-November, nearshore Gulf waters
- (4) Reef Fish Survey: sampling in nearshore Alabama waters
- (5) Quarterly estuarine shrimp/groundfish sampling
- (6) Attend SEAMAP Subcommittee and work group meetings as scheduled and provide assistance to SEAMAP Subcommittee
- (7) Data inventory, entry, edit and transmit to mainframe all SEAMAP cruise information

Florida Fish and Wildlife Conservation Commission

- (1) Spring Plankton Survey: May, nearshore/offshore Gulf waters off Florida
- (2) Fall Plankton Survey: September, nearshore/offshore Gulf waters
- (3) SEAMAP Archiving Center operations
- (4) Attend SEAMAP Subcommittee and work group meetings as scheduled and provide assistance to SEAMAP Subcommittee
- (5) Data inventory, entry, edit and transmit to mainframe all SEAMAP cruise information

National Marine Fisheries Service, Southeast Fisheries Science Center

- (1) Reef Fish Survey: July-August, offshore Gulf waters
- (2) Spring Plankton Survey: April-May, offshore Gulf waters
- (3) Summer Shrimp/Groundfish Survey: June-July, offshore Gulf waters
- (4) Fall Plankton Survey: September-October, offshore Gulf waters



- (5) Fall Shrimp/Groundfish Survey: October-November, offshore Gulf waters
- (6) Plankton sampling in conjunction with trawl surveys
- (7) SEAMAP Information System implementation and operations
- (8) Processing and transshipment of SEAMAP plankton samples to the Polish Sorting and Identification Center
- (9) Real-time data processing
- (10) Attend SEAMAP Subcommittee and work group meetings as scheduled and provide assistance to SEAMAP Subcommittee

#### Gulf of Mexico Fishery Management Council

- (1) Attend SEAMAP Subcommittee and work group meetings as scheduled and provide assistance to SEAMAP Subcommittee
- (2) Annual review of fisheries-independent data needs

#### Gulf States Marine Fisheries Commission

- (1) Coordination of meetings for Subcommittee and work groups
- (2) Provision of SEAMAP-Gulf Coordinator, clerical and office support
- (3) Publication and distribution of SEAMAP Environmental and Biological Atlas, SEAMAP Marine Directory, SEAMAP Subcommittee Report to the GSMFC Technical Coordinating Committee, Real-time data summaries, minutes of Subcommittee meetings and co-production of the SEAMAP Joint Annual Report
- (4) Attend SEAMAP Subcommittee and work group meetings as scheduled and provide assistance to SEAMAP Subcommittee
- (5) Annual Operations Plan development





## **INFORMATION DISSEMINATION**

Data produced from SEAMAP-Gulf of Mexico surveys and studies will be entered into the SEAMAP Information System, in accordance with procedures and protocols stated in the *Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan: 2001-2005*. User policies and procedures are also defined in this document.

The SEAMAP Archiving Center and SIPAC have the responsibility of maintaining SEAMAP specimens and samples, processing specimen requests and ensuring that archiving and loans are carried out in accordance with guidelines and policies established by the SEAMAP Subcommittee. Specific duties and responsibilities of the curators are found in the *Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan 2001-2005*.

Documents to be produced in the period covered by this Annual Operations Plan are:

- (1) SEAMAP Annual Report, in conjunction with South Atlantic and Caribbean;
- (2) SEAMAP Subcommittee Report to the GSMFC Technical Coordinating Committee;
- (3) SEAMAP Marine Directory;
- (4) Minutes of Subcommittee meetings;
- (5) SEAMAP Environmental and Biological Atlas;
- (6) Annual Operations Plan;
- (7) Real-time Data Summaries of the Summer Shrimp/Groundfish Survey and juvenile red snapper summary;
- (8) Maintain SEAMAP web page on Commission's website; and
- (9) Other pertinent documents deemed appropriate by the Subcommittee

## **ADMINISTRATION**

Program administration is achieved through coordination by the SEAMAP-Gulf Subcommittee and work groups, the SEAMAP Coordinator, and the Gulf States Marine Fisheries Commission. General responsibilities are described below.

### SEAMAP-Gulf of Mexico Subcommittee

The Subcommittee will convene for three regularly-scheduled meetings during 2004:



- (1) Spring meeting (in conjunction with the GSMFC Annual Spring Meeting): March;
- (2) Joint meeting (with SEAMAP-Caribbean & SEAMAP-South Atlantic): August; and
- (3) Fall meeting (in conjunction with the GSMFC Annual Fall Meeting): October.

Other meetings may be called at the discretion of the Chairman. Specific responsibilities of the Subcommittee and procedures of governance are described in the *Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan: 2001-2005*. Designated members for 2004 are:

Texas Parks and Wildlife Department:	Paul Choucair
Louisiana Department of Wildlife and Fisheries:	James Hanifen
University of Southern Mississippi/College of Marine Sciences/Gulf Coast Research Laboratory:	Richard Waller
Alabama Department of Conservation & Natural Resources:	Stevens Heath
Florida Fish and Wildlife Conservation Commission:	Mark Leiby
National Marine Fisheries Service:	Joanne Lyczkowski-Shultz
Gulf of Mexico Fishery Management Council:	Richard Leard (non-voting)

Work Groups

SEAMAP work groups are formed to assist in planning, coordinating and evaluating program activities. Members of work groups are invited to serve by the Subcommittee and do not have to be members of the Subcommittee. SEAMAP-Gulf work groups and membership for 2004 are:



ADULT FINFISH WORK GROUP

Terry Henwood  
National Marine Fisheries Service  
Pascagoula Laboratory

Billy Fuls  
Texas Parks and Wildlife Department

John Roussel  
Louisiana Department of Wildlife and Fisheries

Robert Shipp  
University of South Alabama

Richard Leard  
Gulf of Mexico Fishery Management Council

Mark Leiby  
Florida Fish and Wildlife Conservation  
Commission

Joanne Lyczkowski-Shultz  
National Marine Fisheries Service  
Pascagoula Laboratory

James Warren  
University of Southern Mississippi  
College of Marine Sciences/GCRL

DATA COORDINATING WORK GROUP

Mark McDuff, Leader  
SEAMAP Data Manager  
National Marine Fisheries Service

Butch Pellegrin  
National Marine Fisheries Service  
Pascagoula Laboratory  
Shrimp/Groundfish Work Group

Terry Henwood  
National Marine Fisheries Service  
Pascagoula Laboratory  
Adult Finfish Work Group

Joanne Lyczkowski-Shultz  
National Marine Fisheries Service  
Pascagoula Laboratory  
Plankton Work Group

Terry Romaine  
Louisiana Department of Wildlife and Fisheries  
Environmental Data Work Group

Richard Waller  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory  
Reef Fish Work Group

Mike Murphy  
Florida Fish and Wildlife Conservation  
Commission  
Red Drum Work Group



ENVIRONMENTAL DATA WORK GROUP

Terry Romaine, Leader  
Louisiana Department of Wildlife and Fisheries

Thomas Leming  
National Marine Fisheries Service  
Pascagoula Laboratory

National Marine Fisheries Service  
Pascagoula Laboratory

Joanne Lyczkowski-Shultz  
National Marine Fisheries Service  
Pascagoula Laboratory

Kim Williams  
Florida Fish and Wildlife Conservation  
Commission

Mark Van Hoose  
Alabama Department of Conservation and  
Natural Resources

Richard Waller  
Gulf Coast Research Laboratory  
University of Southern Mississippi  
College of Marine Sciences

PLANKTON WORK GROUP

Joanne Lyczkowski-Shultz, Leader  
National Marine Fisheries Service  
Pascagoula Laboratory

Alonzo Hamilton  
National Marine Fisheries Service  
Pascagoula Laboratory

Mark Benfield  
Louisiana State University

Ken Edds  
Louisiana Department of Wildlife and Fisheries

Sara LeCroy, Curator  
SEAMAP Invertebrate Plankton Archiving  
Center (SIPAC)  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory

Mark Leiby  
Florida Fish and Wildlife Conservation  
Commission

Harriet Perry  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory

Leslie Hartman  
Alabama Department of Conservation  
and Natural Resources





RED DRUM WORK GROUP

Mike Murphy, Leader  
Florida Fish and Wildlife Conservation Commission  
Florida Marine Research Institute

James Warren  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory

Joanne Lyczkowski-Shultz  
National Marine Fisheries Service  
Pascagoula Laboratory

Joseph Shepard  
Louisiana Department of Wildlife and Fisheries

Mark Van Hoose  
Alabama Department of Conservation and Natural  
Resources

Larry McEachron  
Texas Parks and Wildlife Department

REEF FISH WORK GROUP

Richard Waller, Leader  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory

Billy Fuls  
Texas Parks and Wildlife Department

Mark Leiby  
Florida Fish and Wildlife Conservation  
Commission

Chris Gledhill  
National Marine Fisheries Service  
Pascagoula Laboratory

Jim Duffy  
Alabama Department of Conservation and  
Natural Resources

Richard Kasprzak  
Louisiana Department of Wildlife and Fisheries

SHRIMP/GROUNDFISH WORK GROUP

Butch Pellegrin, Leader  
National Marine Fisheries Service  
Pascagoula Laboratory

Billy Fuls  
Texas Parks and Wildlife Department

Leslie Hartman  
Alabama Department of Conservation and Natural  
Resources

Ken Edds  
Louisiana Department of Wildlife and Fisheries

Nate Sanders  
National Marine Fisheries Service  
Pascagoula Laboratory

Bruce Comyns  
University of Southern Mississippi  
College of Marine Sciences  
Gulf Coast Research Laboratory



SEAMAP work groups will meet as determined by work group leaders. Specific responsibilities of the work groups are described in the *Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan: 2001-2005*.

#### SEAMAP-Gulf Coordinator

The Coordinator's primary responsibility is to assist the Subcommittee in ensuring that the SEAMAP-Gulf component functions efficiently and satisfies user requirements. The *Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan: 2001-2005*, schedule of events, survey plans, and GSMFC directives constitute the basic documents by which the Coordinator monitors program status, coordinates Subcommittee meetings and operations, anticipates potential problems, and initiates corrective action. Specific responsibilities of the Coordinator are described in the *Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan: 2001-2005*.

#### Gulf States Marine Fisheries Commission

Planning and funds disbursement for authorized SEAMAP-Gulf administrative activities (travel meetings, publications, information dissemination, etc.) are administered by the Gulf States Marine Fisheries Commission under a NMFS/GSMFC Cooperative Agreement, and in accordance with this Annual Operations Plan, GSMFC policies, and Department of Commerce/National Oceanic and Atmospheric Administration policies and procedures.

