

August 31, 2001

Office of State Budget
Attention: Karen Amos
1122 Lady Street, 12th Floor
Columbia, SC 29201

Dear Ms. Amos:

It is my pleasure to submit to you the FY2000-01 Accountability Report of the S. C. Sea Grant Consortium, which represents our twenty-first year of operation. An electronic version of this report has been sent to your e-mail address, and four hard copies and one 3.5" diskette (Word 97) are enclosed. This report has been prepared in accordance with Sections 1-1-810 and 1-1-820 of the S.C. Code of Laws and Section 72.63 of the FY2000-01 Appropriations Act.

The objectives and performance measures included in our FY00-01 Accountability Report are based in part on the Consortium's Strategic Plan, approved by the Consortium Board of Directors in December 1996, the National Sea Grant College Program Strategic Plan, and input provided by Consortium staff and constituencies whom we serve. The Strategic Plan was revised in 1999. Our mission statement is based on our enabling legislation (Section 48-45-10:100, S. C. Code of Laws).

I am confident that the Consortium's FY00-01 Accountability Report meets the requirements set forth in state law. If you do have any questions or require further information, please feel free to contact Ms. Elaine Knight or me at (843) 727-2078.

Thank you and we look forward to your continued assistance as we move to enhance the quality and delivery of services to South Carolina's citizens.

Sincerely,

M. Richard DeVoe
Executive Director

MRD/

Enclosures

cc: Dr. Leroy Davis, Sr.
Chair
S.C. Sea Grant Consortium Board of Directors



**FY00-01 Accountability Report
South Carolina Sea Grant Consortium**

FY00-01 ACCOUNTABILITY REPORT
SOUTH CAROLINA SEA GRANT CONSORTIUM

Section I:

EXECUTIVE SUMMARY

General Information and Mission Overview

The S.C. Sea Grant Consortium, created in 1978 by the S.C. General Assembly, is charged with managing and administering the Sea Grant Program and related activities to support, improve and share research, education, training, and advisory services in fields related to ocean and coastal resources. The Consortium's unique mission is to maximize the economic, social, and environmental potential of the coastal and marine resources of the state and region, and does so by serving as a broker of information and funding. Eight of the state's universities and laboratories are members of the Consortium, and provide the expertise of their respective faculty and professional staffs, as well as a wide range of facilities and equipment, necessary to carry out the diversity of programs supported by the Consortium.

The Consortium addresses its mission by leading the way in developing and supporting a balanced and integrated research, education, and extension program for South Carolina which seeks to provide for future economic opportunities, improve the social well-being of its citizens, and ensure the wise use and development of its marine and coastal natural resources. It also administers an effective and efficient communications and marine extension network among academia, business, government, and the general public to ensure that Consortium activities are responsive to marine and coastal users and that information generated is delivered in a timely fashion. The S.C. Sea Grant Consortium is part of a nationwide network of 29 Sea Grant Programs that report to the National Sea Grant College Program, NOAA, U.S. Department of Commerce; thus, Consortium activities are responsive to regional and national needs, as well as to those of South Carolina. It is unique among Sea Grant programs in that it is an academically based state agency.

Institutions which hold membership in the Consortium include The Citadel, Clemson University, Coastal Carolina University, the University of Charleston, S.C., the Medical University of South

Carolina, S.C. State University, S.C. Department of Natural Resources, and the University of South Carolina. Consortium institutions provide the expertise of their respective faculty and professional staffs, as well as a wide range of facilities and equipment, necessary to carry out the diversity of programs supported by the Consortium.

In addition to its direct relationship with its member institutions, the Consortium interacts with numerous other local, state and federal agencies, businesses, industries, and non-profit organizations to identify issues and opportunities and form partnerships to address the needs of its diverse constituencies.

The Consortium's overarching goal of maximizing the potential of the state's coastal and marine resources is a broad one. To effectively direct its day-to-day activities toward this goal, the Consortium's research, education, and extension activities are organized around six program areas, each of which supports the sustainable use of the state's coastal and marine resources. The six major program areas are:

- Coastal Ocean Studies
- Ecosystem Dynamics
- Climate and Hazards
- Emerging Technologies
- Sustainable Economic Development
- Marine Education

Efforts distributed among these six areas provide a balanced program which is key to achieving the major goals of the agency. A seventh area, Management and Administration, is centered on the agency's day-to-day operational goals and objectives, and forms the basis for this accountability report.

Strategic Planning and Program Goals

The goal of the Consortium's strategic planning process is to maximize the ability of S.C. Sea Grant's research, education, and outreach programs to address the coastal resource needs of South Carolina. To this end, the Consortium's strategic planning process has identified three concepts that provide the foundation for future Sea Grant activities:

- To develop and maintain an integrated Sea Grant Program for South Carolina that seeks to provide for future economic opportunities, improve the social well being of its citizens, and ensure the sustainable use and development of its marine and coastal natural resources.
- To continue to build an effective and efficient research, communications and marine extension network among academia, business, government, and the general public to ensure that Consortium activities are responsive to marine and coastal users and that information generated is delivered in a timely fashion.
- To remain an integral component of the National Sea Grant College Program where Consortium activities are responsive to regional and national needs, as well as to those of South Carolina.

Results

The National Sea Grant College Program is specific in requiring compliance with a merit review process for member institutions based on program evaluations performed every four years by a Program Assessment Team (PAT). The South Carolina Sea Grant Consortium's evaluation was conducted in 1999. The Consortium received an "Excellent" rating from the PAT, meaning, according to National Sea Grant guidelines, that our program "substantially exceeds the benchmarks" established by the National Office and "does the things expected of it exceptionally well." The Consortium's outstanding performance resulted in an increase of \$140,000 in our Core budget in 2001 with Federal funds coming from the National Sea Grant College Program.

The Consortium experienced an increase in its non-state funding level to \$5,110,911, a \$89,481 increase over FY99-00, and a \$225,301 increase over FY98-99.

The Consortium's total annual budget for FY00-01 was \$5,761,668, representing a 2.6% increase over FY99-00, and a 5.5% increase over FY98-99. State appropriations accounted for only 11.3% of the total, up slightly from 10.5% in FY99-00.

The S.C. General Assembly's commitment to and support of the S.C. Sea Grant Consortium has positioned it to be able to successfully compete for non-state funding, and with only 11 percent of its budget coming from state appropriations, the Consortium represents a highly cost-effective investment by the State of South Carolina.

Nevertheless, while the S.C. Sea Grant Consortium has benefited from a significant increase in its non-state funding for research, education, and extension programming, there is now a need for additional program and fiscal management and administrative support from state appropriations to handle the demand for Consortium efforts and activities as they continue to increase. Coastal growth will remain THE significant state management issue into the foreseeable future. In fact, anecdotal information suggests that we have approached a point where research funding may not keep pace with the issues resulting from coastal development.

At the heart of the Consortium's mission are the efforts of Sea Grant researchers. For the FY02-04 Biennial Request for Proposals, the Consortium experienced a 22% increase in pre-proposals (61) submitted for funding consideration compared to forty-nine (49) received in the previous biennial request. In that request, twenty-six (26) of the principal investigators were invited to submit full proposals. Of those, twelve (12) were funded. In the current biennial cycle, twenty-seven (27) of the investigators have been invited to submit full proposals, which are presently under technical review.

The Consortium went online with its new Web site in 2001, and in addition to being well received by the public and our other stakeholders, we made doing business with us more convenient for researchers by making our Request for Proposals and the associated forms available in electronic format.

Results of the Consortium's research, education, and extension programs and activities supported by competitive grants from the Consortium's core Sea Grant program, the National Sea Grant Office's National Strategic Initiatives, and other funding agencies, as well as our success with the Coastal Management and Dean John A. Knauss Fellowship competitions can be found in Category 7.

Section II:

BUSINESS OVERVIEW

1. Number of Employees

The S.C. Sea Grant Consortium employs a total of fourteen (14) individuals. The trend in number of employees essentially has remained constant over time.

2. Operation Location

The Consortium's main office is located at 287 Meeting Street in Charleston, South Carolina. Specialists working for the S.C. Sea Grant Extension Program are located in offices in Charleston, Conway, and Georgetown, South Carolina.

3. Expenditures/Appropriations Chart

Base Budget Expenditures and Appropriations

Major Budget Categories	99-00 Actual Expenditures		00-01 Actual Expenditures		01-02 Appropriations Act	
	Total Funds	General Funds	Total Funds	General Funds	Total Funds	General Funds
Personal Service	\$ 628,815	\$ 309,167	\$ 614,123	\$ 332,289	\$ 569,209	\$ 354,209
Other Operating	\$ 463,773	\$ 178,142	\$ 513,380	\$ 196,377	\$ 535,875	\$ 105,745
State Aid	\$ 10,251	\$ 10,251	\$ 7,129	\$ 7,129	\$ 1,956	\$ 1,956
Allocations	\$ 2,762,374	\$ 18,000	\$ 3,468,966	\$ 0	\$ 6,442,478	\$ 0
Fringe Benefits	\$ 134,366	\$ 78,222	\$ 141,920	\$ 88,979	\$ 124,132	\$ 89,740
Total	\$ 3,999,579	\$ 593,782	\$ 4,745,518	\$ 624,774	\$ 7,673,650	\$ 551,650

Other Expenditures

Sources of Funds	99-00 Actual Expenditures	00-01 Actual Expenditures
Information Technology	\$ 4,467	\$ 0

4. Key Customers

Because of the unique nature of the Consortium’s mission, we do not have “customers” as such. Instead, we serve many constituencies, through the provision of information and funding, including faculty, staff, and students of our eight member institutions; federal, state, and local natural resource and economic development agencies; institutions and individuals involved in the management of the state’s coastal resources; state and local government officials and community leaders; K-12 teachers and students; non-governmental organizations; business and industry, citizen groups; and the general public.

5. Key Suppliers

The Consortium depends on the expertise and knowledge of the faculty, staff, and students of its member institutions as well as its own to generate, translate, and deliver pertinent coastal and marine resource-related information to its constituents. It also depends on the success of the proposals it prepares and/or submits on behalf of its member institutions to secure the financial resources necessary to support the myriad of activities with which it is engaged.

6. Major Products and Services

The Consortium’s major products and services fall into the following categories:

- Marine and coastal research that delivers applied, science-based information to educate individuals, businesses, local and state government, and other organizations on the wise use and conservation of coastal and ocean resources.
- Extension, advisory services, and technical assistance activities, focusing on coastal hazards, environmental and water quality issues, coastal recreation and tourism, aquaculture, and coastal community development.
- Community-based volunteerism, through marine litter and habitat restoration projects (e.g., Beach Sweep/River Sweep; Oyster Reef Restoration).
- Communications products (print, media, Web-based) that inform and educate citizens about the issues relevant to life, work, and play in the coastal zone of South Carolina (e.g., *Coastal Heritage* newsletter).

The Consortium organizes its research, education, and extension activities in six programmatic areas. A seventh area, Management and Administration, is centered around

the agency's day-to-day operational goals and objectives. The Consortium's program areas and goal statements are:

Coastal Ocean Studies: To identify and understand the processes dominating the coastal ocean of the South Atlantic Bight (SAB) as they affect coastal processes, pollution of the coastal zone, fisheries dynamics, and mineral resource management, and are influenced by global climate change.

Ecosystem Dynamics: To enhance the availability and quality of marine, estuarine, and freshwater resources that can support the economic and quality-of-life needs of the public and private sectors in South Carolina.

Climate and Hazards: To provide technical and educational programs that examine the forces of climate and hazards and provide information to the public and private sectors on the nature of hazards and how to plan for them.

Emerging Technology: To develop techniques, technologies, and new products based on marine systems for use in commercial and industrial applications, and to continue to apply low-cost technologies to coastal and marine resource problems.

Sustainable Economic Development: To establish and enhance economically viable business and municipal opportunities that are compatible with the long-term conservation of natural and cultural resources of the coasts of South Carolina and the region.

Marine Education: To provide an effective mechanism for exchanging information required to address both long- and short-term issues and opportunities related to the conservation of marine and coastal resources.

Management and Administration: Through research, education, and extension programs, the S.C. Sea Grant Consortium ensures that coastal and marine issues and opportunities are rigorously researched and understood, and that the resulting information is communicated to those who use and manage these resources.

7. Organizational Structure

The S.C. Sea Grant Consortium is structured to optimize communication and feedback linkages necessary for the proper development and implementation of its programs. Activities of the Consortium are governed by authorizing committees of the S.C. General Assembly and a Board of Directors to which the Executive Director reports. The Board of Directors includes the chief executive officers of the Consortium's member institutions:

Dr. Leroy Davis, Sr., Chair
President
S. C. State University
Orangeburg, SC 29117

M. Gen. John S. Grinalds
President
The Citadel
Charleston, SC 29409

Dr. Ronald R. Ingle
President
Coastal Carolina University
Conway, SC 29526

Dr. Paul A. Sandifer
Director
S. C. Department of Natural Resources
Columbia, SC 29202

Dr. Raymond S. Greenberg
President
Medical University of South Carolina
Charleston, SC 29403

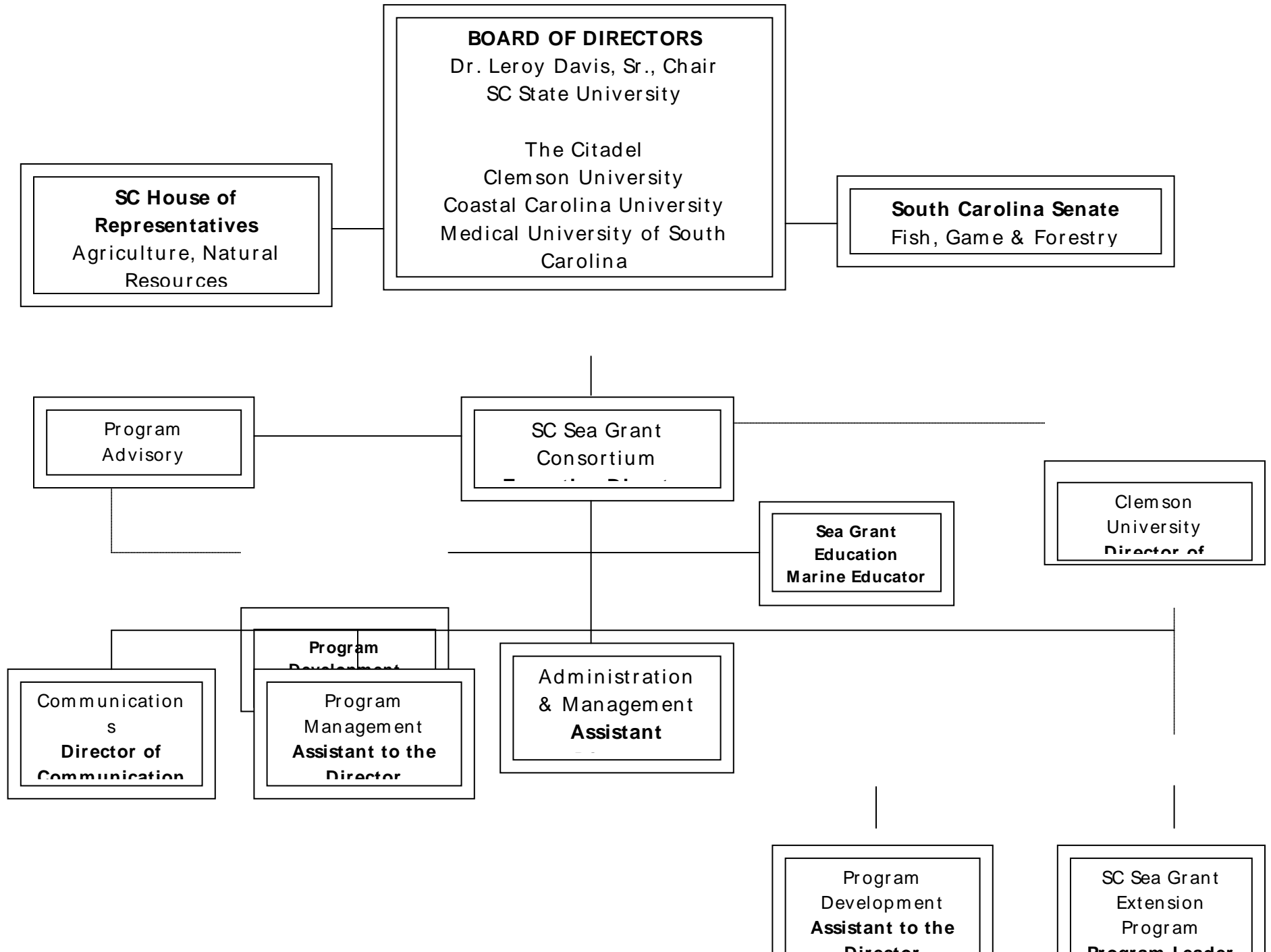
Dr. James F. Barker
President
Clemson University
Clemson, SC 29634

Judge Alexander M. Sanders, Jr.
President
University of Charleston, S.C.
Charleston, SC 29424

Dr. John M. Palms
President
University of South Carolina
Columbia, SC 29208

The Board meets annually to review Consortium program policies and procedures. The Board also provides a direct line of communication between the Consortium Executive Director and the higher administrative levels of its eight member institutions. An organizational chart depicting the administrative structure of the S.C. Sea Grant Consortium can be found on the next page.

SC SEA GRANT CONSORTIUM – Organizational Chart



Communications
Staff
Susan Ferris
Patty Snow

Office Support Staff
Annette Dunmeyer
Traci Thompson-
Bryant

SCSGEP
Specialists
Beth Judge
Cal Sawyer

Section III:

MBNQA CATEGORIES

Category 1 – Leadership

1.1-1.7

1. Organizational Approach

To ensure that all Consortium staff understand the agency's strategic plan and quality expectations, an annual planning session, typically in a retreat setting, is conducted in which information about the agency's mission, goals, and objectives is explained and discussed, and staff are encouraged to share their ideas about ways to improve the agency's performance.

The Consortium also addresses its strategic goals and day-to-day business requirements through meetings of its “Core Group” on a monthly basis. The Core Group consists of the Executive Director, the Assistant Director for Administration and Management, the Sea Grant Extension Program Leader, the Assistant to the Director for Program Management, the Assistant to the Director for Program Development, and the Communications Director. Each member represents the program activities and staff within his/her division, and collectively the group discusses short- and long-term program priorities, budget and staff needs, constraints and issues, and future opportunities.

2. Leadership Activities - Executive Director

The South Carolina Sea Grant Consortium staff has played key leadership roles in organizations, professional societies, and activities that advance the mission of the Consortium and enable it to better serve the needs of its constituencies.

Selected activities of the Executive Director include:

2.1. State Activities

- Invited Moderator, Public Opinion Panel, Governor’s Summit on Growth, Myrtle Beach, March 11-13, 2001
- Organizer and chair, South Carolina Task Group on Harmful Algae, an organization of state and federal agencies, universities and others to develop strategies to deal with harmful algae blooms.
- Member, Advisory Board of the Water Resources Center, Strom Thurmond Institute, Clemson University.
- Member, S.C. Downtown Development Association Board
- Vice President, 113 Calhoun Street Board of Directors.

- Member, Management Committee, State of the Harbor - Charleston Harbor Project (under the auspices of SCDHEC/OCRM)
- Chair, coastal and ocean research discussion group (with representatives of SCMRD, University of South Carolina, Clemson University, Coastal Carolina University, University of Charleston, SC, and NOAA/NOS-Charleston Laboratory) to explore the development of a coordinated state coastal and ocean research strategy.
- Organizer and co-chair, S.C. Aquatic Nuisance Species Task Force -
- Organizer and chair, S.C. Task Group on Toxic Algae
- Member, LowCountry Institute (Spring Island Trust) Board of Trustees
- Graduate, Leadership, South Carolina, Class of 1998

2.2. National Activities

- President, national Sea Grant Association, a federation of the 30 Sea Grant College Programs located in every coastal and Great Lakes state.
- Formal participant, as SGA president, of the National Sea Grant Review Panel (NSGRP), a FACA-approved committee charged with overseeing the National Sea Grant College Program office. The NSGRP reports to the Secretary of the U.S. Department of Commerce.
- Organizer and host, Sea Grant Week 2001, a biennial conference of the Sea Grant Association with participation of the National Sea Grant Office and the National Sea Grant Review Panel, on Hilton Head Island in March 2001. Mr. Scott Gudes, Acting Administrator of NOAA, was a keynote speaker.
- Invited member, National Sea Grant Program Assessment Team for the University of Wisconsin Sea Grant College Program, scheduled for June 4-7, 2001.
- Co-chair, National Sea Grant Theme Team on Coastal Natural Hazards, one of nine national planning groups made up of scientists, extension specialist, educators, and government representatives charged with developing the national Sea Grant agenda for this and other topics.
- Charter member; Secretary/Treasurer (1989-91); Vice President (1992); co-chair, Annual Meeting (1993); President-Elect (1996); President (1997); Past-President (1998), U.S. Chapter, World Aquaculture Society
- Member, Steering Committees, Aquaculture America Conferences (1997-2000)

2.3. Other Activities

- Co-founder and co-chair, International Conference on Shellfish Restoration (ICSR). ICSR'00 was held November 14-18, 2000 on Hilton Head Island, with over 200 participants.
- Immediate Past President of the National Shellfisheries Association.
- Program Chairman (2000-2001) for the international Aquaculture 2001 Triennial Conference and Trade Show, attended by more than

3,500 people. Invited Speaker and Author, special session on responsible aquaculture.

- U.S. Chapter representative, Conference Committee for Aquaculture America 2000, held in New Orleans, La.
- Member, United States-Japan Natural Resources (UJNR) Aquaculture Panel (1995-present)

3. Leadership Activities - Consortium Staff

Employees are encouraged to join and actively participate in professional organizations. Examples include:

3.1. Local

- Charleston 2000 Plan - chair, Economic Development Committee
- Charleston Tourism Commission - chair, Long-Range Planning
- Charleston Area Small Business Development and Resource Network - founding member
- Charleston County World of Wonders Family Science Program - instructor
- Public Relations Society of America, S.C. Chapter - member
- Beaufort County Stormwater Ordinance Advisory Committee - co-chair; staff
- Maritime Association of the Port of Charleston - member
- Nonpoint Education for Municipal Officials - program coordinator
- Wind-Aid Program – Coordinator (2001)
- Winyah Bay Task Force – Technical Committee

3.2. State

- S.C. Aquaculture Association - charter member and advisor
- S.C. Shrimp Growers Association - advisor
- S.C. DHEC/DNR Mariculture Regulatory Committee - member
- S.C. Dept. of Health and Environmental Control - member, Nonpoint Source Task Force
- S.C. Farm Bureau - adviser, Aquaculture Commodities Committee
- ACE (Ashepoo-Combahee-Edisto) Basin Economic Forum - member
- North Inlet-Winyah Bay National Estuarine Research Reserve - member, Advisory Board
- Clemson University Extension Senate - President-Elect (1998-99); President (1999-00)
- Clemson/SCDNR Cooperative Fisheries Unit - coordinator
- Clemson Extension, Natural Resources Initiative Team – member
- S.C. Governmental Finance Officers -- member
- S.C. Rural Economic Development Council - member
- S.C. Nature-Based Tourism Association Annual Conference - Program Chair (1994-99), Technical Advisory Board (1994-01)
- S.C. Flood Hazard Mitigation Planning Committee – member (1998-99)
- S.C. Information Resources Council - member, Standing Committee on Geographic Information
- S.C. Mapping Advisory Committee - member
- S.C. Economic Development Association - member

- S.C. Chapter, American Planning Association - member
- S.C. DNR Marine Advisory Committee, Disease Introductions Subcommittee - advisor
- S.C. Association of Environmental Professionals – member
- S.C. Marine Educators Association – Board member (1998); newsletter editor (1997-98)
- Leadership, South Carolina – graduate, Class of 2001
- Coastal Pesticide Advisory Council (CPAC) – On-going.
- Tidelands Birding Festival – Principal Organizer (2001)
- SC Aquatic Plant Management Society Board of Directors (2001)
- SCDNR Natural Resources-Aquaculture Legislation Committee (2000-01)
- SCDNR Exotic Species Introductions Sub-Committee
- South Carolina Aquarium – Technical Committee (2000-01)

3.2. National and Regional

- Coastal Zone '01 Conference – Planning Committee, presenter (2001)
- Atlantic States Marine Fisheries Commission – Aquaculture Committee
- Southern Task Force on Wetlands and Endangered Species Issues, Cooperative Extension Service – member
- National Marine Educators Assn. – logistical coordinator and registrar, 1999 Conference
- National Sea Grant Extension Program Leaders – Southeast Region, Chair (1994-95)
- National Sea Grant Extension Assembly - Natural Hazards Initiative Chair (1995-99); Chair-elect (1999-2000)
- Sea Grant Week Conference – Logistical coordinator and registrar (2001)
- Assembly of Sea Grant Extension Program Leaders (ASGEPL) – Executive Committee, Chair (2001)

Category 2 – Strategic Planning

2.1-2.2

The goal of the Consortium’s strategic planning process is to maximize the ability of S.C. Sea Grant’s research, education, and outreach programs to address the coastal and marine resource needs of South Carolina and its citizens. The objectives of the strategic planning process are to:

- Receive input from constituents and stakeholders
- Update the existing strategic plan based on the input received
- Use the strategic plan to guide programs

The Consortium's ability to anticipate and respond to constituent needs is critical to its success in serving the state. The Consortium employs several planning tools to ensure that its programs are achieving the maximum possible benefits. These include both formal and informal mechanisms.

1. Strategic Planning Process

To determine how the Consortium's existing strategic plan (1997-2001) addresses the needs of the State, the Consortium's Core Group reviewed that plan in 1998 and agreed to initiate an update. The Core Group felt that the major program areas identified in the existing plan remain relevant, however, suggestions of specific action steps were needed for how best to achieve the plan's goals. A series of focused workshops were held with stakeholders to address these goals and the following six thematic areas:

- K-12 Marine Science Education
- Coastal Hazards
- Coastal and Ocean Processes
- Coastal Historical, Cultural, and Nature-based Tourism
- Aquaculture
- Ecosystem Dynamics

A seventh thematic area, Emerging Technologies/Biotechnology, will be addressed at a workshop in the future.

The workshops were designed to achieve four primary objectives:

1. Identify priority needs in South Carolina pertaining to the area of concern.
2. Identify current activities in South Carolina in the area of concern.
3. Identify priority needs in the area of concern that are not being adequately addressed by current activities.
4. Identify specific potential actions that SC Sea Grant could take to address these unmet needs.

The most important factor of the workshops was the participants. Each workshop began with an invitation list comprised of scientists, policymakers, business and industry representatives, community leaders, and other stakeholders. Significant effort was spent to include all possible categories of stakeholders in each topic area. Invitees were sent background materials prior to the workshop that described the National Sea Grant Program's objectives in this area; recent and current S.C. Sea Grant objectives and activities in this area, and other useful preparatory materials.

Following each workshop, a summary of the discussions and presentations was produced. Summaries were mailed to those who attended as well as those who were invited but could not attend; comments were requested. These summaries, and any comments received, served as the basis for updating the existing Strategic Plan. Also, the input from this process is incorporated into the Consortium's biennial Request for Proposals (RFP) to ensure that program areas, objectives, and priorities continue to meet the changing needs of our stakeholders and enable the agency to successfully meet its mission goals.

2. Development and Tracking

The 1997-2001 Strategic Plan is undergoing revision based on the comments received during the workshops, input from other advisory groups, and the input of Sea Grant staff. The Consortium views its Strategic Plan as a dynamic document; at all times there are planning activities

occurring. Implementation of one element of the plan often leads to identification of a new need, which is then incorporated into the plan for implementation, and so on.

The Consortium will continue to review all of its program areas, selecting several each year for particular attention with the goal that each program area is thoroughly reviewed every four years.

3. Communication and Deployment

Effective March 1, 2000, the Consortium began implementing its current strategic plan, which formed the basis for the Consortium's Sea Grant biennial RFP for the FY2000-FY2002.

Consortium priorities are being addressed in the agency's six programmatic areas (described earlier). Innovative research continues in the area of Emerging Technologies, and the strategic issues of this program area will be addressed by stakeholders in 2001 when the vacant position for Program Development is filled.

The goal of the strategic planning process is to maximize the ability of S.C. Sea Grant's research, education, and outreach programs to address the coastal and marine resource needs of South Carolina. In addition to its on-going strategic planning process, the Consortium utilizes other means to enhance its ability to identify constituent groups and their needs. It does this through interaction with members of the Consortium's Board of Directors, liaisons at the Consortium's member institutions, Blue Ribbon Committees, its Sea Grant Extension Program specialists, and its Communications and Information Services staff.

Category 3 – Customer Focus

3.1-3.6

1. Key Customers and Stakeholders

As previously mentioned, the Consortium's constituencies consist of the faculty, staff and students of the agency's eight member institutions, as well as an extremely diverse group of organizations and individuals representing universities, federal, state, and local natural resource and economic development agencies, business, industry, state and local governments, community groups, non-governmental organizations (NGOs), K-12 teachers and students, and others. Simply put, the Consortium's mission is to serve the coastal and marine resource needs of all who live, work, and play in South Carolina and throughout the southeastern United States.

The Consortium serves its member institutions: The Citadel, Clemson University, University of Charleston, S.C., Coastal Carolina University, Medical University of South Carolina, South Carolina State University, S.C. Department of Natural Resources, and University of South Carolina. Federal organizations with which the Consortium has collaborated during FY00-01 include the NOAA National Sea Grant College Program, NOAA Coastal Services Center, NOAA National Marine Fisheries Service, NOAA National Ocean Service, NOAA Coastal Ocean Program, NOAA National Severe Storms Laboratory, U.S. Geological Survey, Federal Emergency Management Agency, U.S. Army Corps of Engineers, and U.S. Coast Guard. The Consortium has worked with the following state agencies during the reporting period: S.C. Department of Health and Environmental Control, SCDHEC/Office of Ocean and Coastal Resource Management, S.C. Department of Parks, Recreation and Tourism, S.C. Emergency Preparedness Division, and the S.C. State Ports Authority. Other organizations include: numerous counties, cities, towns, and councils of government, S.C. Marine Educators Association, S.C. Coastal Conservation League, S.C. Downtown Development Association, S.C. Marine Association, S.C. Nature-Based Tourism Association, S.C. Aquaculture Association, Extension Disaster Education Network, Beaufort Water Quality Task Force, coastal Chambers of Commerce, Lowcountry Seafood, Inc., African-American Heritage Council, 113 Calhoun St. Foundation, Charleston Area Project Impact, Donlar Corporation, Mayo Clinic, South Carolina Aquarium, Duke Power Company Foundation, Georgetown Steel, Springs Industries, Lockheed Aeronautical, Inc., BMW Manufacturing Corp., SCANA Corporation, Charleston Homeownership Center, WCSC-TV 5, WCBD-TV 2, 96.9 WAVE-FM, BP Amoco Chemicals Company, Ben & Jerry's Charleston, Cisco's Café, Marine Terminals, The City Marina, The Have Nots!, and Sonoco Products, Inc.

2. Identification of Customer Needs

The S.C. Sea Grant Consortium is structured to optimize communication and feedback linkages necessary for the proper development, implementation, and delivery of its programs.

In addition to its Board of Directors, Institutional Liaisons provide a direct administrative link between the Consortium and each of its member institutions. Each Institutional Liaison provides a channel of communication on matters dealing with the proposal process, processing of grants

and awards, and oversight of ongoing projects and programs. In addition, the Consortium's *External Procedures Handbook: A Faculty and Institutional Guide for Consortium Proposals and Projects* provides documentation on the administrative processes the Consortium employs in managing its extramural programs, and is made available to faculty and staff at the Consortium's member institutions.

Program Area Advisory Groups are convened as needed to provide assistance in long-term planning, technical quality, and identification of available expertise in the Consortium's program areas.

The S.C. Sea Grant Consortium maintains direct contact with coastal and marine user groups and the general public, and serves as a conduit between institutional knowledge-seekers and coastal and marine knowledge-users, through its S.C. Sea Grant Extension Program (SGEP) and Communications and Information Services (CIS) activities. These outreach programs assure that (1) problems and needs of those who live and work along the coast are accurately identified, (2) research projects and programs are effectively providing the necessary information, and (3) this information is delivered to target audiences in a timely fashion and "user-friendly" format. Further, these users play an active role in the ongoing process of refining our strategic plan to meet the changing needs of our constituencies. The overarching goal of the strategic planning process is to maximize the ability of the Consortium's research, education, and outreach programs to address the coastal resource needs and opportunities of South Carolina and its citizens.

3. Listening and Learning

Several internal mechanisms have been established by the Consortium to facilitate a programmed team approach to address coastal and marine resource issues and constituency needs. As previously mentioned, the Consortium's Core Group supports communication and information exchange among the Consortium's internal program components: staff members of the Core Group represent program policy, program development, program management, extension services, communications, and administration. Meetings, held on a monthly basis, help ensure efficient and effective program component interaction. Using a team approach, the Core Group develops and coordinates Consortium programs and activities.

The Consortium's revised Web site (www.scseagrant.org) has been restructured to enhance its interactive features. Users can now order publications and request information on-line, as well as keep abreast of the activities and efforts of Consortium faculty and staff. Additional techniques are being explored to incorporate even more interactivity on the Consortium's Web site. Traditional means of communication are still extremely important for information delivery; the Consortium's Communications staff produced over 70 publications in FY 00-01, which informed our constituents about coastal issues and, where appropriate, facilitated the transfer and exchange of information.

In addition to its strategic planning process, the Consortium utilizes other means to enhance its ability to identify and communicate with constituent groups and their needs. It does this through interaction with members of the Board of Directors; liaisons at the Consortium's member

institutions, Blue Ribbon Committees; its Sea Grant Extension Program specialists; and its Communications and Information Services staff.

Category 4 – Information and Analysis

4.1-4.4

1. Evaluation of Consortium Proposals and Programs

The primary focus of the Consortium’s information and analysis process is the evaluation of how well research and outreach proposals address the mission, goals, and priorities of the agency, as laid out in our Biennial Request for Proposals (available on the Internet and in hard copy format to all Sea Grant researchers).

1.1. Proposal Review Process

All research, education, and outreach proposals received by the Consortium go through a rigorous scientific review process. The Consortium maintains a database of experts in all scientific fields relevant to the kinds of research we consider for funding. Those experts are called upon to evaluate research that proposes work in their areas of expertise. Our objective is to obtain at least three detailed, written reviews of every proposal to guide the Core Group in its decision-making. Development proposals (called “seed projects”) are evaluated by the Core Group with the aid of these written peer reviews.

The larger, longer-term proposals that comprise our biennial “Proposal to the National Sea Grant College Program Office” are subjected to additional review by a technical peer review panel. During the review process of these proposals, a panel of scientists, who in the aggregate have the expertise necessary to analyze the proposals submitted for funding consideration, is convened at the Consortium’s headquarters in Charleston. The Consortium’s program monitor from the National Sea Grant Office participates in the panel as well. Typically, the panel review process is completed over a two-day period. Input from the panel, as well as the written peer reviews, are then used to guide the decision-making process of the Core Group, in consultation with the National Sea Grant Office.

On occasion, formal technical panels are convened to review major research efforts, such as the Land Use-Coastal Ecosystem Study (LU-CES) and the USGS Coastal Erosion Study.

1.2. Conflict-of-Interest

Another important feature of the Consortium’s review process is its Conflict of Interest Policy, which is designed to protect the integrity of all peer reviews. It asks that potential reviewers recuse themselves if they have: (1) a major professor/student relationship with the Principal Investigator (PI); (2) published with the PI in the last five years; (3) been a colleague of the PI in the same academic department or served directly or indirectly in a supervisory role over the PI in the last year; (4) grants, contracts, or any financial interest with a PI; and/or (5) a relationship (by blood or by marriage) to the PI.

2. Consortium Management Information System

The S.C. Sea Grant Consortium Management Information System (CMIS) became operational in 1988. This computer-based system was designed to address one of the Consortium's major management objectives – the evaluation of organizational performance against performance goals and standards. While this objective is partly met by the ongoing, day-to-day monitoring of Consortium projects, a system was needed to address managerial and financial control issues that typically requires the evaluation of actual accomplishments against planned objectives. Because these controls are retrospective in nature, the CMIS was designed to serve as the agency's primary historical database, management tool, and evaluation and assessment mechanism.

The CMIS, which first became operational in November 1987, is a text-based management system used to maintain data and information on Consortium projects and activities. CMIS enables agency personnel to track financial information, progress, and results for all projects (full, development, pass-through, etc.). Included in the database is information about the investigators, their progress and final results, papers published, professional presentations at symposia, technical reports, graduate students supported, peer reviewers, and key words. The database is searchable, facilitating access to information and the production of various accountability reports, such as the State of South Carolina Annual Accountability Report and the National Sea Grant Annual Progress Report.

The database is organized by major categories with a hierarchy of folders within each category. The major categories are research, communications, administration, and extension.

With the S.C. Sea Grant Consortium's changeover from CTOS-based to Windows-based information technology, CMIS was imported into a Microsoft Access database management system. The new system should address the Consortium's information management needs as we proceed in the new millennium.

3. Internal Decision-making

Several internal mechanisms have been established by the Consortium to facilitate a programmed team approach for decision-making. For example, the "Core Group" supports communication and information exchange among the Consortium's internal program components. Staff members of the Core Group represent program policy, program development, program management, extension services, communications, and administration. Meetings, held on a monthly basis, help ensure efficient and effective program component interaction and analysis of programs and activities. Using a team approach, the Core Group develops and coordinates Consortium programs and activities.

Other mechanisms established by the Consortium include internal task groups to deal with information technology, mailing lists, and the Consortium Management Information System (CMIS). It is organized into eight database files (Sea Grant Projects, "Seed" Projects, Non-Sea Grant Projects, Principal Investigators, Graduate Students, Peer Reviewers, Publications, and Workshops); data are updated and revised regularly.

Additionally, the Consortium first produced its *Internal Procedures Handbook: A Staff Guide for Consortium Operations, Proposals, and Projects* in 1992. Updated in 1999, this document details programmatic and administrative policies for use by Consortium staff.

4. Fiscal Analysis

Finally, fiscal responsibility is the keystone of any state agency because of its fiduciary responsibility to the state's citizens and taxpayers it serves. The Office of the State Auditor recently completed an evaluation of the Consortium's accounting and procurement practices for the fiscal year ending June 30, 2000. The auditors found no exceptions to the Consortium's accounting procedures in ten categories that were evaluated, and its procurement practices were found to be very satisfactory.

Category 5 – Human Resource Focus

5.1-5.6

1. Employee Motivation

Consortium supervisors formally meet with their staff on a monthly or quarterly basis. Employees are encouraged to participate in these meetings and to voice their opinions and ideas that may promote their division and/or the agency to function in a more efficient manner. Employees are also strongly encouraged to join state, national, and other organizations to enhance their professional development, further develop and sharpen their skills and knowledge, and build leadership capabilities. Each staff member is given the opportunity, at least once a year and if funds are available, to attend a workshop or conference of their choice, to enhance his/ her job performance and build professional skills.

2. Development and Training Needs

The S.C. Sea Grant Consortium is a small agency and many of its employees wear more than “one hat.” Therefore, in some instances, employees are cross-trained to be able to perform job functions in more than one program division (administration, communications, program research, program development, and extension services) of the office. New employees are given an overview of the agency policies and procedures during the interview stage and there is a personnel manual and a Consortium Internal Procedures Manual available for their use.

New employees are also oriented by the personnel director. Employees, as stated before, are given the opportunity to enhance their job skills and knowledge through training - state, federal, and/ or national.

3. Employee Evaluation

Employees are not only rated annually through the Employee Performance Management System, but are assessed throughout the year to keep their performance level as high as possible. They are encouraged to talk to their supervisor any time they have questions or have problems or concerns. Employees are encouraged to bring their ideas and/ or problems to their supervisor, whether it is within their division or agency wide. If their supervisor cannot help with their problems or are unable to give them adequate guidance, they are encouraged to talk to the human resources manager or to the Executive Director of the agency, if necessary. We have found that this open line of communication fosters enhanced performance and helps to promote idea-sharing, enhance teamwork, or/ and solve problems.

4. Assessment Methods

Monthly or quarterly meetings with and among employees within and across agency divisions are held regularly. In addition, the Executive Director chairs an agency-wide monthly staff meeting in which employees share their accomplishments and needs, and inform agency staff of what is going on within their divisions. These meetings help agency managers assess employees' problems and successes. Additionally, the Executive Director and agency supervisors are in constant communication and contact with all agency staff on a daily basis, and use these opportunities to assess staff morale, provide "attaboys," and encourage excellence. This provides direct and constant means by which agency supervisors can determine whether employees are motivated and satisfied with their work and working conditions.

6. Community Involvement

The Consortium and its staff are directly involved with the community. The agency is a member of the Trident and South Carolina Chambers of

Commerce, and many other community-based organizations and institutions. The agency is an active participant in the state's United Way campaign. Two (of many) Consortium programs that foretell the agency's involvement with the community are the Beach Sweep/ River Sweep program and the 113 Calhoun Street Sustainability project, which are described in more detail under Category 7. A listing of the community groups, organizations, institutions, businesses, industries, and public interest groups with which the Consortium and its staff are engaged can be found in Category 3.

Category 6 – Process Management

6.1-6.4

1. Product/Service Design and Delivery

While the Consortium has always made it a priority to focus its process management around the needs of our stakeholders, there are always opportunities for improvement, particularly in the new Internet Information Age. In 2001 the S.C. Sea Grant Consortium unveiled its re-designed Web site at www.scseagrant.org, featuring an array of information about coastal and marine issues for researchers, educators, students, and the public.

The site offers Web pages about Sea Grant research, extension, and educational activities. It includes current and back issues of the periodicals *Coastal Heritage* and *Inside Sea Grant*, frequently updated information about ongoing projects such as Beach Sweep/River Sweep and 113 Calhoun Street: A Center for Sustainable Living, and links to other research and educational institutions. The Flash software we employ on the site will eventually allow S.C. Sea Grant to create interactive educational activities for students and other users.

In addition to being well received by the public and our various stakeholders, we made doing business with us more convenient for our researchers by making our Request for Proposals and the associated proposal application forms available in electronic format on the Web.

The goal of the Consortium's communications department is to place information produced by research, education, and extension activities into the hands of those who manage and use South Carolina's coastal and marine resources. To facilitate that effort a "South Carolina Sea Grant Communication Support Guidelines" booklet is being introduced. The guide advises Sea Grant-sponsored investigators, extension specialists, and others of the procedures and opportunities available for publication and dissemination of information derived from their work.

Program Area Advisory Groups are convened as needed to provide assistance in programmatic matters, while Institutional Liaisons provide a direct administrative link between the Consortium and each of its member institutions. Each Institutional Liaison provides a channel of communication on matters dealing with the proposal process, processing of grants and awards, and oversight of ongoing projects and programs. In addition, the Consortium's *External Procedures Handbook: A Faculty and Institutional Guide for Consortium Proposals and Projects*, first prepared in 1985 and most recently revised in 1999, provides documentation on the administrative processes the Consortium employs in managing its extramural programs, and is made available to faculty and staff at the Consortium's member institutions.

With these demands comes a need to support the economic development goals of the state and coastal and marine resource use through the tools of conservation and management. By bringing together the talents and expertise of the state's major academic and research institutions, the S.C. Sea Grant Consortium addresses this need through the acquisition and exchange of reliable information and the provision of technical assistance.

A balanced approach to research, education, and extension programs ensures that important coastal and marine resource problems and opportunities are thoroughly understood and rigorously researched, and that resultant information is delivered in a timely fashion to marine and coastal resource managers and users. Mechanisms such as the Consortium's Communications and Information Services (CIS) and the Sea Grant Extension Program (SGEP) provide crucial two-way communication between those who work to understand the limits of the state's natural resources and those who seek to take advantage of the opportunities they afford. This integrated triad of research, education, and extension services represents a concerted effort to link government, industry, academia, and coastal users together in the pursuit of efficient and wise use of South Carolina's coastal and marine resources.

2. Meeting Key Performance Requirements

The principal investigator of a Sea Grant project is responsible for all technical reporting and, in conjunction with the institutional business office, all fiscal reporting to the Consortium. In turn, the Consortium is responsible for technical and fiscal reporting to funding agencies. Consortium professional staff frequently visit with investigators on campus to discuss project progress and needs. The investigator must submit formal requests for budget changes, time extensions, and changes in project scope to the Consortium Director, through the institution's Office of Sponsored Programs, at least 60 days prior to the end of a grant period.

The Sea Grant fiscal year begins March 1 with the formal award announcements mailed to the investigator. Under separate notification, the respective institution's business office is provided with two copies of the Consortium Award Agreement, which must be read, agreed to, and endorsed by the appropriate signatory authority and the P.I. The institution must then forward one copy of the signed original back to the Consortium for its records.

Permanent equipment purchased under a Consortium project is and remains the property of the Consortium, but can remain with the investigator's institution. The Consortium does reserve the right to transfer use of this equipment upon completion of the project. However, there are provisions for the investigator and/or institution to obtain title to equipment. Final disposition of the equipment will be determined under existing statutes.

In addition to the Agreement, fiscal reporting forms that reflect the approved budgets are mailed to investigators and their respective institutional fiscal officers. The "Federal and Match Expenditure Report" is used to reflect expenditures and is sent quarterly to the Consortium's Assistant Director by the institutional business office, with the appropriate endorsement.

The policy and procedures set forth in the DOC regulations (37 CFR 401), "Rights to Inventions made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements," published in the Federal Register on March 18, 1987, apply to all grants and cooperative agreements made for which the purpose is experimental, developmental, or research work. The Consortium's Assistant Director receives with the final expenditure report a completed "Final Invention Statement" if any patents were developed during the course of the project.

There are three categories of project reports required by the Consortium:

1. "Progress Report," prepared by the Consortium staff (with input provided by the principal investigators) 90 days prior to the end of a project year, that briefly summarizes project progress for the current effort;
2. "Annual Report," summarizing annual progress of a project which is proposed for continuation; and
3. "Final Report," prepared at the end of a project, providing a concise summary of results of the entire project. Annual and Final Reports are due at the Consortium office 30 days after the project year ends.

Annual and Final Project Reports are due to the Consortium 60 days after the close of the project grant year. The Final Fiscal Reports are also due 60 days after the close of the project. Final reimbursement to the institutions is not made until the Project Report is received and deemed acceptable by the Consortium office.

Category 7 – Business Results

7.1-7.5

A. Program Support - FY00-01

A.1. Consortium Funding - Current Status

The Consortium experienced an increase in its non-state funding level to \$5,110,911, a \$89,481 increase over FY99-00, and a \$225,301 increase over FY98-99. Overall, the Consortium's total annual budget for FY00-01 was \$5,761,668, representing a 2.6% increase over FY99-00, and a 5.5% increase over FY98-99. State appropriations accounted for only 11.3% of the total, up slightly from 10.5% in FY99-00.

The South Carolina Sea Grant Consortium has been very effective in securing non-state funding in support of its six program areas around which it organizes its research, education, and extension activities. Budget trends covering the period 1988-2001 are found in Table 7.1-5 A and Figure 7.1-5 A. The sources of funding for the current fiscal year (2000-01) are shown in Figure 7.1-5 B. A budget trend for the period 1997 through 2001 is shown in Figure 7.1-5 C.

The S.C. General Assembly increased the Consortium's FY00-01 recurring state budget by \$59,221 to \$650,757, reflecting the annualization of state employee pay raises and \$40,000 in recurring funds to the Consortium for operation and management of 113 Calhoun Street: A Center for Sustainable Living.

Figure 7.1-5 A. Year-to-year comparisons of SCSGC funding by sources.

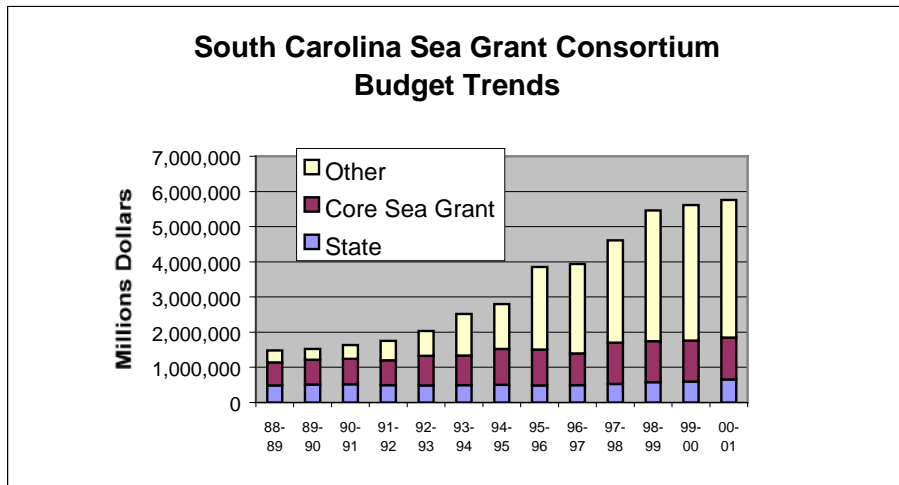


Figure 7.1-5 B. Breakout of SCSGC 2000-01 budget.

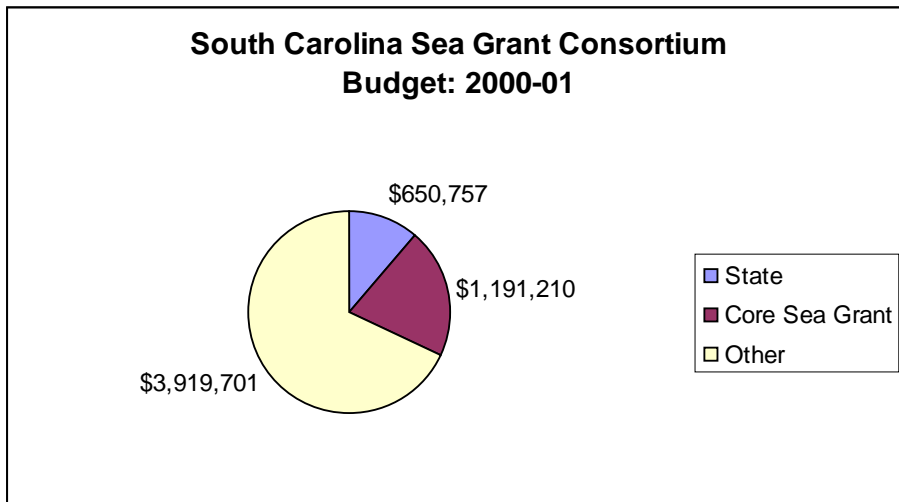


Figure 7.1-5 C. Four-year budget trend, fiscal 1997 through 2001.

South Carolina Sea Grant Consortium Four Year Budget Comparison

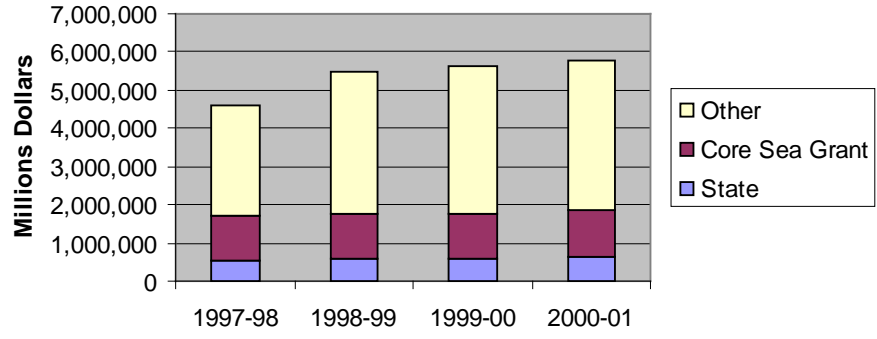


Table 7.1-5 A. Annual SCSGC budgets by funding source.

South Carolina Sea Grant Consortium

BUDGET TRENDS 1988-2001

(As of July 1, 2001)

Year	State¹	Core Sea Grant	Other²	Total
1988-89	\$483,100	\$659,300	\$339,400	\$1,481,800
1989-90	510,400	705,000	310,300	1,525,700
1990-91	518,400	725,000	386,200	1,629,300
1991-92	496,800	705,000	553,000	1,754,800
1992-93	485,500	845,000	705,300	2,035,800
1993-94	490,800	845,000	1,185,700	2,521,500
1994-95	503,900	1,015,000	1,283,100	2,802,000
1995-96	487,400	1,015,000	2,352,500	3,854,900
1996-97	496,500	896,500 ³	2,548,800	3,941,800
1997-98	528,300	1,169,000	2,916,500	4,613,800
1998-99	575,200	1,169,000	3,716,600	5,460,800
1999-00	591,536	1,169,000	3,852,430	5,612,966
2000-01	650,757	1,191,210	3,919,701	5,761,668

Note: All figures rounded to the nearest 100. Figures do not include institutional cost shares.

¹ State appropriations include B&CB-mandated reductions and B&CB adjustments such as BPI, FB, bonus and annualizations.

² Other funds include support provided by local, state, federal (other than core Sea Grant) and private sources.

³ Reduced Sea Grant core funding due to a six-month administrative budget as per National Sea Grant Office transition of grant start dates.

A.2. Consortium Funding - Coming Year

The Consortium's state appropriation was reduced from \$650,757 in FY00-01 to \$551,650 for FY01-02, a 15.2% (= \$99,107) reduction.

According to the President's budget submitted to the U.S. Congress at the beginning of April this year, the National Sea Grant College Program is proposed for funding at \$62.4 million, the first time in two decades that an administration budget has exceeded the current appropriations level for the National Sea Grant College Program. The House-passed appropriations bill for Sea Grant calls for funding at \$62.41 million, while the Senate Commerce, State, Judiciary Appropriations Committee requests \$65.4 million for Sea Grant, of which \$3 million is targeted to a nationwide fisheries extension effort.

B. Personnel and Administration Overview

The Consortium's fourteen full-time equivalents are evenly divided among the Consortium's Outreach, Program Administration, and Program Management activities (Figure 7.1-5 D). Of these FTEs, 8.9 are funded with state monies, and 5.1 are funded with Federal monies. The Consortium's FTEs have remained relatively constant over time, even though the Consortium's activities have significantly expanded.

While the Consortium's programmatic activities continue to increase, administration costs have remained level over time. Administration costs for the period 2000-01 increased just 4.4 percent since 1998-99. decreased by approximately 6 percent from 1998-99 (Figure 7.1-5 E).

Figure 7.1-5 D. SCSGC full-time equivalents by function.

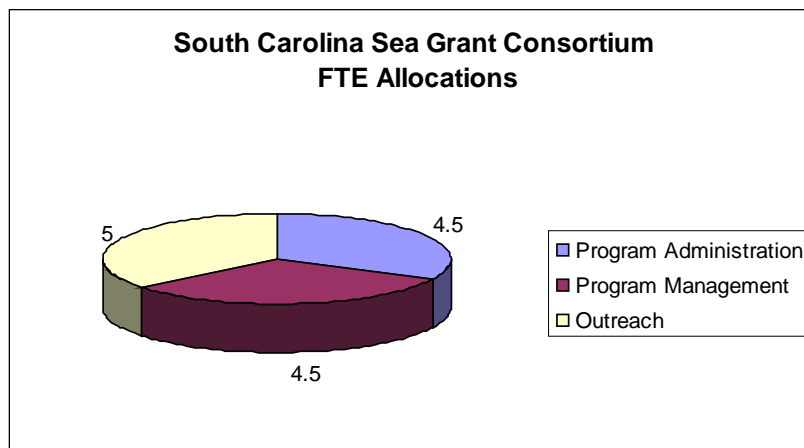
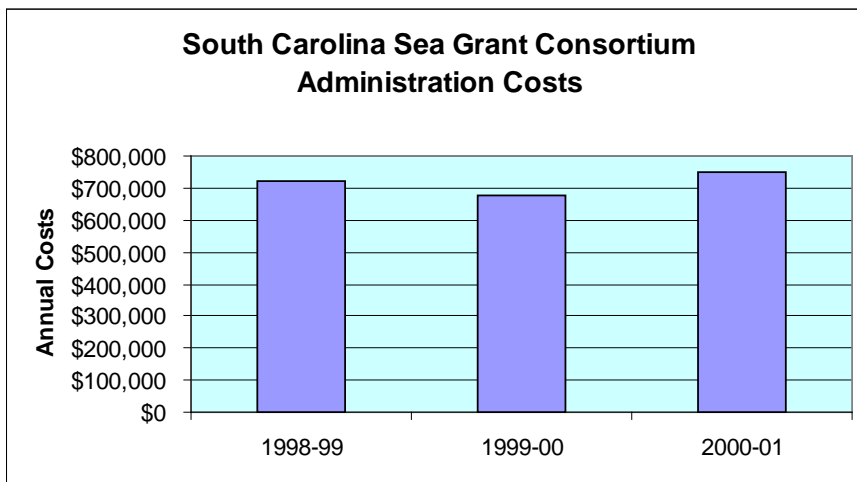


Figure 7.1-5 E. Comparison of current period administration costs to previous years.



C. Consortium Program and Project Summary - FY00-01

C.1. Overview

The Consortium received \$1,191,210 in Sea Grant core funding to support 12 research and education projects, its program management and development activities, its Communications and Information Services program, and the S.C. Sea Grant Extension Program (managed jointly by the Consortium and Clemson Cooperative Extension Service).

In addition, the Consortium was awarded an additional \$114,000 from the National Sea Grant Office as merit funding as a result of the National Sea Grant Program Assessment Team evaluation process, which rated the S.C. Sea Grant Consortium as “excellent.”

The S.C. Sea Grant Consortium was extremely competitive in securing funds through the National Sea Grant College Program National Strategic Initiative program competitions. The Consortium submitted 13 proposals to the National Sea Grant Office for consideration. Of these, 4 were awarded funding from the National Sea Grant Office: Two for marine biotechnology, one for marine aquaculture, and one for minority-serving institution partnership education.

The Consortium continues to seek and receive funding from a number of non-state sources. Funding was secured from the NOAA Sea Grant College Program for the Seaworthy Education Program at the South Carolina Aquarium (\$167,580), the NOAA Coastal Ocean Program for the Land Use-Coastal Ecosystem Study (LU-CES; \$1.2 million) and the Urbanization and Southeastern Estuarine Systems program (USES; \$697,320), the NOAA Coastal Services Center for operation of 113 Calhoun Street (\$90,000), the NOAA National Ocean Service for FISHTEC (\$388,500), and the U.S. Geological Survey for the SC/ GA Coastal Erosion Study (\$750,000).

C.2. Program Grants 2000-2001 Update

The S.C. Sea Grant Consortium competed for and secured the following coastal and marine research, education, and extension grants from non-state sources:

C.2.a. Program Management, Research and Outreach

- "S.C. Sea Grant College Core Program" - NOAA National Sea Grant College Program - \$1,114,200 - March 1, 2001 to February 28, 2002 (continuing) - M. Richard DeVoe (S.C. Sea Grant Consortium).
- "S.C. Sea Grant College Program - Merit Funding" - NOAA National Sea Grant College Program - \$140,000 - March 1, 2001 to February 28, 2002 (Year 1 of 4) - M. Richard DeVoe (S.C. Sea Grant Consortium).
- "National Sea Grant Knauss Marine Policy Fellowship Program" - NOAA National Sea Grant College Program - \$38,000 - February 1, 2001 to January 31, 2002 - M. Richard DeVoe (S.C. Sea Grant Consortium) - [University of South Carolina]
- "The *Communicator*: Creating a More Cohesive and Informed Sea Grant Network Through an Educational Newsletter for Internal Audiences - Phase III" - NOAA National Sea Grant College Program - \$29,000 - July 1, 2000 to February 27, 2001 (Year 3 of 3) - Linda J. Blackwell (S.C. Sea Grant Consortium).
- "Sea Grant National Media Relations Project" - NOAA National Sea Grant College Program - \$189,828 - March 1, 2001 to February 28, 2002 (Year 3 of 4) - Linda J. Blackwell (S.C. Sea Grant Consortium).
- "Sea Grant Abstracts" - NOAA National Sea Grant College Program - \$91,900 - March 1, 2001 to February 28, 2002 (Continuing) - F. Shephard (WHOI).
- "Support for Beach Sweep/River Sweep '00 Activities" - Private Donations - ~\$20,000 - September 2000 - Linda J. Blackwell (S.C. Sea Grant Consortium).

C.2.b. Coastal Ocean Studies

- "South Atlantic Bight Land Use - Coastal Ecosystem Study (LU-CES)" - NOAA Coastal Ocean Program Office - \$1,200,000 - July 1, 1999 to August 31, 2001 (Year 1 [extended] of 5) - M. Richard DeVoe (S.C. Sea Grant Consortium).
- "Urbanization and Southeastern Estuarine Systems (USES)" - NOAA Coastal Ocean Program - \$697,320 - June 1, 2000 to May 31, 2001 (Year 11 of 12) - F. John Vernberg (University of South Carolina).

C.2.c. Climate and Hazards

- "SC/GA Coastal Erosion Study - Phase II" - U.S. Geological Survey - \$750,000 - September 1, 1999 to August 31, 2001 (Year 1 of 5) - M. Richard DeVoe (S.C. Sea Grant Consortium).
- "National Sea Grant Coastal Hazards Theme Team" - NOAA National Sea Grant College Program - \$15,000 - July 1, 2000 to February 27, 2001 (Year 1 of 2) - M. Richard DeVoe (S.C. Sea Grant Consortium).
- "Establishing the Operational and Management Functions of 113 Calhoun Street: A Center for Sustainable Living" - NOAA/NOS Coastal Services Center - \$90,000 - September 1, 2000 to August 31, 2001 (Year 1 of 1) - M. Richard DeVoe (S.C. Sea Grant Consortium).

C.2.d. Marine Biotechnology

- "Cooperative Program in Fisheries Molecular Biology (FISHTEC)" - NOAA National Ocean Service - \$388,500 - September 1, 2000 to August 31, 2001 (Year 8 of 9) - M. Richard DeVoe (S.C. Sea Grant Consortium).
- "Examination of Altered Gene Expression in the Mummichog (*Fundulus heteroclitus*) Due to Chronic Exposure to Estuarine Pollutants" - NOAA National Sea Grant College Program - \$147,893 - September 1, 2000 to August 31, 2001 (Year 1 of 2) - Lisa J. Bain et al. (Clemson University).
- "Environmental Marine Biotechnology - Assessing the Health of Coral Reef Ecosystems in the Florida Keys Using an Integrated Molecular Biomarker System" - NOAA National Sea Grant College Program - \$125,000 - September 1, 2000 to August 31, 2001 (Year 1 of 2) - Cheryl M. Woodley & Eric R. Lacy (Medical University of South Carolina).

C.2.e. Sustainable Economic Development

- "Technology Transfer to Establish Black Sea Bass Aquaculture as a Commercial Reality" - NOAA National Sea Grant College Program - \$80,186 - October 1, 1999 to March 31, 2001 - Theodore I.J. Smith (S.C. Department of Natural Resources).

C.2.f. Marine Education

- "Seaworthy Education Program" - NOAA National Sea Grant College Program - \$167,580 - September 1, 2000 to August 31, 2001 (Year 2 of 2) - Christopher Andrews (S.C. Aquarium).
- "SG-MSI Partnership Program: Strategic Partnership to Enhance Experiential Learning in Marine Sciences" - NOAA National Sea Grant College Program - \$45,000 - October 1, 2000 to September 30, 2001 (Year 1 of 3) - Donald I. Anadu (South Carolina State University).

C.2.g. Training and Outreach

- “Implementation of a Nonpoint Education for Municipal Officials Program” - S.C. Department of Health and Environmental Control - \$60,209 - July 1, 2000 to June 30, 2003 (Year 1 of 3) - M. Richard DeVoe (S.C. Sea Grant Consortium)

D. Consortium Program Results - FY00-01

Two hallmark events highlighted the South Carolina Sea Grant Consortium’s entry into the new millennium. The Consortium celebrated its 20th Anniversary. On October 19, 2000, a ceremony recognizing past board chairmen and other individuals who were instrumental in supporting the growth and success of the Consortium was held at the new South Carolina Aquarium. More than 250 Consortium stakeholders, including researchers, government officials, policy makers, and citizens attended the event. Earlier that day, there was a dedication ceremony for the opening of the *113 Calhoun Street: A Center for Sustainable Living*, another important milestone for the Consortium, its 113 Calhoun Street partners, and the citizens of South Carolina.

During the reporting period, the Consortium administered research, education, and extension projects involving 82 grant actions. Consortium support was provided to many faculty and staff, as well as post-secondary students, at our eight member institutions. Consortium educational programs reached about 86 K-12 teachers and over 6,200 K-12 students. Consortium communications produced over 70 publications, ranging from extension manuals to technical reports.

D.1. Research and Education

D.1.a. Core Sea Grant Research and Education Efforts

The S.C. Sea Grant Consortium organizes its core Sea Grant research and education efforts into six program themes: Coastal Ocean Studies, Ecosystem Dynamics, Climate and Hazards, Emerging Technologies, Sustainable Economic Development, and Marine Education.

Coastal Ocean Studies

No projects supported in the current core Sea Grant program.

Ecosystem Dynamics

R/ER-10 "**An Examination of Oyster Reefs as 'Biologically Critical' Estuarine Ecosystems**" - L. Coen (SCDNR-Marine Resources Research Institute) – The program continues to evaluate the functional roles and processes of oyster reef habitat in a manner that contributes to the development of restoration and management plans for these critical resources. Two papers were published, and four presentations were given at professional meetings.

R/ER-16 "**Structure and Functions of Tidal Freshwater Wetlands on the Cooper River, S.C.: Effects of Water Management on Succession, Nutrient Cycling, and Fish Habitat**" - J. Morris, et al. (University of South Carolina, The Citadel, SCDNR-Freshwater Fisheries and Wildlife) – This project was designed to determine the ecological values of intertidal, freshwater wetlands that differ in the type of plant community found in each site. Emergent vegetation continues to close at a rapid pace within the fields, and results of this research will help determine how to best manage these resources. Meetings have begun with landowners and user groups to discuss findings, and a special session on the ecological values of impoundments is planned for the 2001 international meeting of the Estuarine Research Federation.

R/ER 18: "**DNA Analysis of Pesticide Resistance in Marine Nematodes**" – J.L. Staton, B.C. Coull, G.T. Chandler, and J.M. Quattro (University of South Carolina) - Using degenerate primers designed from fruit fly and nematode sequences, researchers have isolated a 168-bp fragment of the GABA_A beta-subunit receptor from the marine nematode *Cylindrotheristus miamiensis*. Laboratory cultures established baseline studies of the common nematode ivermectin (a GABA-channel disruptor) toxicity for *C. miamiensis*. Early indications are that the marine nematode can develop resistance, within a defined 'window,' to the pesticide under study.

A new project in the Ecosystem Dynamics program area started March 1, 2001 is R/ER-19 "**Linkages Between Cellular Biomarker Responses and Reproductive Success in Oysters (*Crassostrea virginica*) and Mussels (*Geukensia demissa*)**" – A. Ringwood (SCDNR-Marine Resources Research Institute) – The study will attempt to validate potentially valuable cellular biomarkers of anthropogenic perturbations on the health of two common estuarine bivalve species. These markers may provide early signals of chronic stress, thus providing resource managers with information to better manage fishery resources.

Climate and Hazards

R/CE-3 "**Development of Low-Cost and Self-Help Retrofit Techniques for Reduction of Damage and Losses in Severe Windstorms**" - T. Reinhold (Clemson University) – The investigative team produced pamphlets and videotapes explaining ways to retrofit roof sheathing connections. One pamphlet and video covers what to do when a homeowner is replacing their roof covering. The other set offers an alternative using adhesives that can be used if the roof covering does not need to be replaced. These videos and pamphlets are being distributed through the SC Sea Grant Extension Program. A portable test device for demonstrating the strength of various roof-to-wall connections was developed. Dr. Reinhold participated in a number of expositions for hurricane mitigation throughout the coastal region of South Carolina, demonstrating the various mitigation measures developed during this project. The investigator is now working on simple retrofit for garage door openings to improve the lateral shear resistance

of the opening. This retrofit has uses in both wind and seismic hazard areas. The simple retrofit tripled shear capacity, and detailed comparisons of the shear and uplift resistance of roof sheathing panels attached with nails versus screws were completed. This work is expected to form the basis for code acceptance of screws as the best method for attaching roof sheathing.

R/CE-4 **“Characterization of Surface Level Winds in Hurricanes”** – P. Sparks and T. Reinhold (Clemson University) – Conducted one field deployment to measure winds in Hurricane Gordon as it struck Florida. Data was obtained at two sites for onshore winds with towers near the beach and about ¼ mile inland. Analysis of this data is proceeding and is expected to provide information on the reduction in mean wind speeds and increase in turbulence as the winds move inland. Data was also collected for several sites with onshore strong winds along the pacific coast. Data from coastal sites for winter storms in Europe and hurricanes in the Caribbean have also been assembled. The deployment vehicles have been modified to contain larger fuel tanks for extended deployments. Problems with obtaining fuel prevented redeployment from Florida to North Carolina during Hurricane Floyd. The extended tanks solve that problem. The absolute pressure transducer technology developed under a Sea Grant Industrial Fellowship was installed on the house and the Florida Institute of Technology Sea Grant researchers have been monitoring the house for a couple of months. This work is expected to provide the seed for a new joint proposal in the next round of S.C. Sea Grant funding.

A new project, R/CE-5, was initiated in March 2001. It is **“Nearshore Impacts of Offshore Dredging for Beach Nourishment”** – P. Work (Clemson University) – The study proposes to determine nearshore impacts of dredging a previously identified sand source off Folly Beach, SC. It will seek to determine the significance of wave-current interaction, and determine the optimum borrow pit configuration.

Emerging Technologies

R/MT-2 **“Development of Aquatic Bioassay Models for Evaluating Physiologically Based Biomarkers of Exposure to Environmental Contaminants”** - R. Pollenz & P. Morris (Medical University of South Carolina) – To date, substantial progress has been made on (1) the characterization and expression of AHR and ARNT cDNA isolated from a piscine source; and (2) the development of antibodies specific for the AHR and ARNT protein isolated from as piscine source. Dechlorinated and fractionated PCB mixtures will be used in future toxicity assays.

R/MT-3 **“Genetic Engineering of Heavy Metal Processing in *Spartina alterniflora*”** – L. Marton (University of South Carolina) – This proposal is centered around the development of new *Spartina* lines with an improved heavy metal bio-pump function. In constructed wetlands these selected engineered plants are expected to collect these pollutants from the soil, translocate them into their upper parts and volatilize (e.g. Mercury) and/or accumulate them in a nontoxic protein (metallothionein) or peptide (phytochelatin) complex (e.g. Cd in the vacuoles). Leaf and stem material can be harvested and further processed (metals could be recycled).

R/MT-4 **“Remediation of Haloorganic Pollutants with *Spartina alterniflora*”** – L. Marton (University of South Carolina) – This proposal, initiated March 1, 2001, is centered on the biochemical and molecular characterization of the dehalogenation ability of *Spartina* discovered

very recently by Dr. Marton. New technology development for the degradation of TCE and TCP based on this invention is also in progress with the LandRec Company, which is a local remediation venture with 8 years of experience in the field.

Sustainable Economic Development

R/A-31 “Development of Aquaculture Techniques for Southern Flounder: Phase II” – T. Smith (SCDNR-Marine Resources Research Institute) - For the first time, cultured males were spawned with wild females to compare performance with use of wild males. Data are being analyzed to compare results. It appears that pH can be used to predict egg quality in southern flounder. Two successful larval feeding trials were conducted which evaluated the use of enriched Artemia and rotifers. Results demonstrated the need to enrich first feeds of larval flounder for increased growth and survival. Ponds at the Waddell Mariculture Center were stocked with 764,037 fry. Unfortunately, no juveniles were produced. It is believed that predacious insects were the problem and studies are underway to test various aquatic insect control techniques. The goal is to be able to determine sex at an early age in order to document the ability to control sex associated with various manipulative techniques.

R/A-32 "Nitrogen Assimilation and Gut Evacuation Time in Penaeid Shrimp Fed Different Quality Food: Promoting Environmentally Safe Shrimp Culture" - R.J. Feller (University of South Carolina) - Thirteen different feeds prepared by Dr. A. Lawrence (Texas A&M Univ.) varying in protein, fat (carbohydrate), and fiber content have been fed ad libitum to white shrimp (*Penaeus setiferus*) ranging in size from 0.5-5g in the laboratory at room temperature and 28-32 psu. Prototype containment devices for conducting gut evacuation trials in the field have been designed and partially tested, but further improvements will be necessary before this phase of the study is conducted in Year 2.

Marine Education

E/O-15 "Testing and Evaluating a Teaching Model in Marine Science at the Middle School Level: The COASTeam Program" - L. Sautter (University of Charleston, S.C.) - Twenty-one middle school teachers and 14 elementary teachers completed their COASTeam Facilitator training and graduate course in May 2000. Twenty-five additional middle school teachers completed the COASTeam Facilitator Training Workshop in November 2000.

D.1.b. National Sea Grant Projects

E/C-1 “Sea Grant National Media Relations” – B. Sherman (National Sea Grant Office) The Sea Grant National Media Relations Project is an ongoing effort to facilitate the transfer of Sea Grant research and outreach information from individual state Sea Grant programs to national and regional news media and other interested audiences. The project also completely redesigned the main Sea Grant news center Web site within the past year and is preparing a third edition of "Sea Grant's Guide to Coastal Science Experts." The project is being conducted primarily by the National Media Relations Coordinator, with assistance of investigators from Washington, Maryland, and South Carolina Sea Grant programs, and overall supervision by a committee

representing the administrative, extension and communication components of the Sea Grant network nationwide.

E/C-2 "**Sea Grant Abstracts Production and Publication**" - Frank C. Shephard (Woods Hole Data Base, Inc.) – Now in its fifteenth year, Sea Grant Abstracts has clearly established itself as a valuable tool for aiding Sea Grant's goals in technology transfer, education, and development. Hard copy and electronic versions reach complementary readerships.

A/ NO-1 "**Sea Grant Haznet**" - R. Bacon (S.C. Sea Grant Extension Program) - With support from NOAA's Coastal Services Center, developed a Sea Grant coastal hazards Web site www.haznet.org, and the architecture and graphics are presently being re-designed. The HazNet Web site will become the Web site of the Sea Grant Hazards Theme Team. Discussions have been initiated with the National Sea Grant Office and the USDA to conclude a cooperative agreement between HazNet and EDEN for resource sharing and to create an expanded hazards outreach education network.

R/NP-1 "**Wise Investments/Shared Benefits: Development of a Sustainable Infrastructure Planning Model in a Coastal Region**" - C. Prince & W. Peters (University of South Carolina) - Activities have included participation by all partners in a series of planning and informational meetings and workshops for the constituent planners for the four counties of the LCOG (Beaufort, Colleton, Hampton and Jasper Counties). Project deliverables include: "Infrastructure Planning in South Carolina: A User's Guide;" "Making Infrastructure Decisions – Resource Book;" "A Practical GIS Tool for Environmental Sustainability Analysis for Infrastructure Planning in Colleton, Jasper, Hampton, and Beaufort Counties of S.C.;" "A GIS Planning Application for the South Carolina Lowcountry Council of Governments;" and "Community Infrastructure Planning as a Deterrent to Urban Sprawl: Assessing Regional Needs in Beaufort, Colleton, Hampton and Jasper Counties."

D.1.c. Other Grants and Activities

R/FT-1 "**Cooperative Institute for Fisheries Molecular Biology**" - DeVoe, et al. (SCSGC, University of South Carolina, SCDNR-MRRI, NOAA/NOS/Charleston Lab) - The 1998-01 Comparative Institute for Fisheries Molecular Biology (FISHTEC) research project continues to enhance knowledge about the population biology of commercially important pelagic fish species, such as tunas and swordfish. Further mtDNA analyses added to evidence that Mediterranean, North Atlantic, and South Atlantic populations of swordfish are genetically distinct. Other research has refuted the hypothesis that the Atlantic bluefin tuna exist as a panmictic unit. Progress is also being made in our understanding of sharks and the striped bass. Work was concluded on red drum and white shrimp, and nuclear gene markers are being developed for southern flounder. Several manuscripts have been accepted for publication in peer-reviewed journals.

R/GS-2 "**South Carolina/Georgia Coastal Erosion Study**" - DeVoe, et al. (SCSGC, University of Charleston, S.C., Coastal Carolina University, Clemson University, University of South Carolina, Skidaway Institute of Oceanography, Georgia State) - Investigators from five South Carolina and Georgia research institutions and the U.S. Geological Survey, with funds provided through the USGS Coastal and Marine Geology Program, are continuing work towards the development of a conceptual model of the sediment budget for the South Carolina coast. Phase II of the Coastal Erosion Study has begun this year with the selection of seven research and data management proposals for funding. Work will be conducted along the northern coast of South Carolina (Northern Study Region) and the southern coast of South Carolina and northern coast of Georgia (Southern Study Region).

R/COP-7 "**The South Atlantic Bight Land Use - Coastal Ecosystem Study (LU-CES)**" - DeVoe and Kleppel (SCSGC, University of South Carolina, Marine Resources Research Institute-SCDNR, Clemson University, University of Georgia, Georgia Institute of Technology, Skidaway Institute of Oceanography) - Planning for the South Atlantic Bight Land Use - Coastal Ecosystem Study (LU-CES) began in 1996 with "seed" monies provided through National Sea Grant by NOAA Coastal Program Office. The last two years have seen the development of a series of State-of-Knowledge Reports that are now available on the LU-CES Web site; information in the documents provided the fodder for the development and dissemination of a field research Announcement of Opportunity in 1999. Research proposals were received and peer-reviewed, and final selections were made this past Spring. Planning workshops involving the 20+ investigators have been held over the last six months, with fieldwork commenced this past winter. The overall goal of LU-CES is to establish a functional understanding of the environmental and socioeconomic trends that characterize the southeastern U.S. coastal region, and to fill critical information gaps that currently limit the identification of links between population and development trends and their effects on the region's ecosystems.

D.2. S.C. Sea Grant Extension Program

D.2.a. Administration and Management

A revised S.C. Sea Grant Consortium/ Clemson University Extension Service Memorandum of Understanding, intended to replace the outdated 1987 document, was drafted and submitted for review by the Consortium Executive Director and the Clemson University Vice President for Public Service and Agriculture. The revised MOU was formally signed on March 26, 2001.

D.2.b. Staffing

A Coastal Communities Specialist, April Turner, was hired in early 2000 to fill the vacancy that existed since the departure of her predecessor in 1999. Turner comes to the SCSGEP from the South Carolina Office of

Ocean and Coastal Resource Management. Her program effort is focused on the impact of land uses on coastal natural resources and the economy. Her work location will be at the S.C. Sea Grant office in Charleston. The Coastal Communities Specialist position is fully funded by Consortium dollars.

D.2.c. Program Update

The following are selected examples of recent S.C. Sea Grant Extension Program activities and accomplishments.

Coastal Hazards

- Completed work on the renovation and retrofit phase of the 113 Calhoun Street hazard resistant construction project. The house is completed, fully staffed and operational. It is open to the public for self and guided tours. We are now entering the next phase – design, fabrication and installation of educational signage, exhibits and displays.
- Developed Web site for 113 Calhoun St.: A Center for Sustainable Living www.113calhoun.org to educate SC citizens about strategies for living sustainably with respect to hurricane resistant housing, recycling, water efficient landscaping and energy conservation.
- Developed and delivered, in conjunction with Clemson Extension personnel, a course "Housing Pitfalls in S.C.", an in-service training for Clemson Extension agents and a continuing education course for S.C. Realtors. The course has been approved for Continuing Education credit by the S.C. Real Estate Commission.
- Developed and implemented the "Wind-Aid" program, designed to provide plywood hurricane shutters to needy senior citizens on area barrier islands. Obtained over \$1200 in private donations and assembled 30 volunteers to cut plywood and install permanent fasteners on window frames.
- Developed a series of hazards related publications, including:

Tri-fold Brochures -

Not Ready to Re-Roof? Use Structural Adhesives to Strengthen the Attachment of Roof Sheathing.

Re-Roofing? Opportunities for Reducing Wind Damage Vulnerability When You Re-Roof.
Window and Door Protection: How much is Enough?

Booklet -

Q & A on Purchasing Coastal Real Estate in South Carolina.

Videos -

Holding on to Your Roof Part 1: Retrofitting Roof Sheathing Using Adhesives.

Holding on to Your Roof Part 2: Retrofitting Your Asphalt Shingle Roof Covering and Sheathing Connections.

Aquaculture

- Serves on Shrimp Aquaculture Effluent Sub-Committee of the U.S. Joint Sub-Committee on Aquaculture to draft alternatives in the development of new National Pollution Discharge Elimination System (NPDES) regulations.
- Continues to work with SC Department of Natural Resources on the development of in-state shrimp hatcheries to provide producers with less expensive stock and to better control and manage disease.
- Assisted pond owners in the control of aquatic weeds using chemical and biological methods in Horry, Georgetown, Charleston, Colleton, Beaufort, Jasper, Richland, Williamsburg, Florence, Dorchester, Oconee, Pickens, Anderson, Greenwood, Marion, Orangeburg, Newberry, Barnwell, Allendale, Greenville, York and Sumter counties.
- Wrote four S.C. Sea Grant Extension Program bulletins on pond management for the Clemson Extension Home and Garden Information Center:
 - “Liming Recreational Fish Ponds”
 - “Fertilizing Recreational Fish Ponds”
 - “Stocking and Harvesting Recreational Fish Ponds”
 - “The Use of Rotenone in Renovating Fish Ponds”
- Serves as a member of a South Carolina Department of Natural Resources committee working on modifications to South Carolina aquaculture regulations.
- Developed a lake management plan, addressing water quality and storm water issues, for the city of Surfside Beach. The city’s eight lake system is used for both recreation and storm water management.
- Conducted an Integrated Pest Management grant program to demonstrate the feasibility of Tilapia in controlling filamentous algae and duckweed in irrigation ponds in coastal counties.
- Assisted in the organization of a organize the South Carolina Shellfish Industry Association, a private, non-profit organization concerned with issues of shellfish sanitation; harvesting laws, rules and regulations; and water quality.
- Serves on the Aquaculture Committee of the Atlantic States Marine Fisheries Commission to formulate aquaculture policy for the South Atlantic region on topics related to “user conflicts and water allocation”, “research, extension and stakeholder interaction” and “aquaculture, disease and therapeutics”.
- Developed an aquatic plant management plan for the ponds and lakes at the South Carolina State University's Camp Harry Daniels, their 4-H Camp in Santee.
- Worked with the South Carolina Farm Bureau in the development of the “Ag in the Classroom” aquaculture curriculum for fifth grade students.

Coastal Recreation and Tourism

- Completed work on “The Game of Bird Watching in Coastal South Carolina,” a video intended to be used to help promote nature-based tourism in coastal South Carolina, and the Tidelands Birding Festival held at sites along the Grand Strand in February 2001.

- Served as the lead organizer of the first annual “Tidelands Birding Festival”, a regional wildlife festival in the Grand Strand area attended by over 500 people from SC and around the southeast. Produced a marketing video for the festival.
- Assisted Myrtle Beach hotels in the development and delivery of “Nature Week,” a week of specialized nature tours for guests of all ages.
- Worked with the Ocean Lakes Campground in the development of their beach/ nature trail, a self-guided trail consisting of interpretative signage about beach flora and fauna.
- Received a Outdoor Recreational Resource grant, with Dr. Bill Norman of Clemson University, to develop a “Master Naturalist” program, including a curriculum and certification program for public, non-profit and commercial nature tour operators.

Environmental Quality

- Implementing a statewide NEMO water quality program in partnership with the S.C. Department of Health and Environmental Control, the University of South Carolina, and others.
- Published “Coast-A-Syst”, a comprehensive homeowner’s guide to water quality. The “Coast-A-Syst” project is a cooperative venture of SCSGEP, Clemson Extension and other organizations under the leadership of the SCSGEP Environmental Quality Specialist.
- Delivered “Coast-A-Syst” trainings to Master Gardeners from Horry, Georgetown, and Williamsburg counties and an inservice training to Clemson Extension agents.
- Implementing a statewide NEMO water quality program in partnership with the S.C. Department of Health and Environmental Control, the University of South Carolina, and others.
- Completed the “pilot” NEMO Project in Horry County, resulting in the modification of a local storm water ordinance in Conway to mandate the use of vegetated areas in storm water management retention areas to help reduce run-off and filter contaminants.
- Began conducting statewide NEMO workshops for local elected officials. Completed NEMO workshops in the Pee Dee watershed (the first of six targeted watersheds) in Marion, Dillon, Chesterfield and Marlboro counties.

Coastal Communities

- Working with the South Carolina Office of Ocean and Coastal Resource Management on a project to collect and analyze the land use planning documents from all the local government jurisdictions in the coastal region. The completed analysis will be used to demonstrate how better coordination of plans across jurisdictional lines might contribute to natural resource conservation and enhance economic efficiency.

D.3. Communications and Information Services

During FY00-01, the Consortium's Communications and Information Services (CIS) group wrote and produced more than over 70 publications in FY00-01 (a 10% increase over FY99-00), published the Consortium's five-year report, had 252 media placements (up from 169 last year), launched the Consortium's new Web site, and assisted in several major events.

D.3.a. Coastal Heritage

Four issues of *Coastal Heritage*, the Consortium's premier publication, were produced. Major issues featured included "The Beauty of Sprawl," "The Salty Dogs," and "The Bird Chase." The Consortium's five-year report, a double issue of *Coastal Heritage*, was also produced.

D.3.b. Key Products

Other notable communications products include, *The National Sea Grant College Program Biennial Report 1998-1999*, *Of Sand and Sea: Teachings from the Southeastern Shoreline*, three issues of *The Communicator* newsletter (a National Sea Grant information piece), a Beach Sweep/ River Sweep display and the Consortium's new tabletop display.

D.3.c. S.C. Sea Grant Consortium Web site

Communications was vital in the September 2000 launch of the Consortium's newly redesigned Web site - www.scseagrants.org. The site offers information about Sea Grant research, extension, and educational

activities. Communications is also charged with coordinating site maintenance, with input received from the Consortium's Web site core group.

D.3.d. Beach Sweep/ River Sweep

Beach Sweep/ River Sweep, South Carolina's largest one-day clean up, was held September 16, 2000, celebrated its 12-year anniversary. Organized and coordinated by the Consortium, S.C. Department of Natural Resources, and SCANA Corp., beach Sweep/ River Sweep 2000 engaged over 6,000 volunteers, who picked up over 63,000 pounds of trash. An educational video, encouraging volunteerism, was produced and continues to be distributed.

Sea Sweepers, the year round educational program of Beach Sweep/River Sweep, reached 4,622 students and teachers this school year. The program is a free, hands-on program for K-12 students that teaches litter prevention.

D.3.e. 113 Calhoun Street Dedication Ceremony

The Consortium's communications program assisted in planning the 113 Calhoun Street dedication ceremony that was held October 19, 2000. To prepare for the ceremony, CIS updated the schedule, produced invitations, a mounted donor board, a marketing brochure, a bronze dedication plaque, signs for the house, and printed programs. Media was also alerted and was present at the ceremony. CIS staff took photographs.

D.3.f. S.C. Sea Grant Consortium's 20th Anniversary Celebration

The Consortium's communications program assisted in planning the Consortium's 20th Anniversary Celebration that was held October 19, 2000. To prepare for the celebration, CIS updated the schedule, produced invitations, programs, and give-away items. CIS staff also assisted during the event by taking on station assignments. Members of the media were invited, and the Consortium did receive coverage by the media.

D.3.g. Communications Awards and Recognition

Targeted toward the general public, each issue of the *Coastal Heritage* quarterly magazine focuses public attention on a coastal theme selected in accordance with the Consortium's program areas and current events on a state or national level. In addition to its biennial mailing list, the Consortium receives regular feedback, both written and oral, on the magazine. Among those who have noted the valuable contribution *Coastal Heritage* makes toward raising public awareness and understanding are civic/business groups, the news media, educators, (elementary, secondary, college, and graduate levels) and other agencies involved in managing natural resources. The magazine has won numerous awards including, for FY00-01:

- Notable State Document Award 2000 (from the S.C. State Library)
- 2001 People's Choice Award (from Sea Grant at Sea Grant Week 2001)
- 2001 APEX Grand Award (out of 724 entries from throughout North America)

The Consortium's Five-Year Report, produced as a special issue of *Coastal Heritage*, focused on building visibility and support for S.C. Sea Grant's program and activities. The Consortium's five-year report won the following awards:

- 2001 APEX Award of Excellence
- 2001 Blue Ribbon Award (from Sea Grant at Sea Grant Week 2001)

As part of the national publications and graphic identity task force and in cooperation with the National Sea Grant Office, the Consortium's communications program designed and produced the *National Sea Grant College Program Biennial Report, 1998-1999*. The report also was recognized at Sea Grant Week 2001:

- Blue Ribbon Award (by Sea Grant at Sea Grant Week 2001)

E. Student Fellowships

E.1. Dean John A. Knauss Marine Policy Fellowship

The National Sea Grant College Program sponsors the Dean John A. Knauss Marine Policy Fellowship Program to advance marine-related educational and career goals of participating students and to increase partnerships between universities and government. The fellowship provides a unique educational experience to students who have an interest in ocean, coastal and Great Lakes resources in the national policy decisions affecting those resources. Each year, fellowships are awarded on a competitive basis at the national level. Selected Knauss Fellows are hosted by the legislative and executive branches of federal government.

For FY 2002, two of S.C. Sea Grant Consortium's applicants were awarded this prestigious fellowship, and they will begin their one-year assignments effective February 2002.

E.2. Coastal Management Fellowship

The National Oceanic and Atmospheric Administration (NOAA) Coastal Management Fellowship provides on-the-job education and training opportunities for postgraduate students in coastal resource management policy and also provides specific technical assistance for state coastal resource management programs. The program matches highly qualified students with hosts around the U.S. in state coastal zone management (CZM) programs.

For FY 2001, all three of the S.C. Sea Grant Consortium's applicants in a nationwide competition were selected and matched with CZM programs. In fact, these applicants successfully competed for three out a total of six available openings. They will be working in the following state programs:

- Michigan's CZM project entitled "Environmental Protection for Coastal Communities: A Guide for Local Governments"
- Maine's CZM Geological Survey on a project entitled "Creating a Sustainable Beach Community at Camp Ellis"
- Delaware's CZM project entitled "Tracking and Monitoring System for Coastal Non-point Pollution Control Program"

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