

COASTAL SCIENCE SERVING SOUTH CAROLINA



2015 SITE REVIEW TEAM BRIEFING BOOK



SEPTEMBER 1-2, 2015
CHARLESTON, SOUTH CAROLINA

SCSGC-Q-15-03



S.C. Sea Grant
Consortium



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South Carolina Sea Grant Consortium

ORGANIZATION AND MANAGEMENT

Mission and Mandate

The S.C. Sea Grant Consortium is an independent, university-based state agency, unique among the nation's 33 Sea Grant programs, that undertakes a diverse range of initiatives to improve understanding of the region's coastal resources and our ability to manage them for long-term environmental and economic benefit.

Sea Grant started in South Carolina in 1972 under the auspices of what was then the S.C. Department of Wildlife and Marine Resources, but recognizing the needs and opportunities embodied by the state's vast array of ocean and coastal resources, the S.C. General Assembly formally united the state's university-based marine programs through the creation of the S.C. Sea Grant Consortium in 1978 (Code of South Carolina, Section 48-45-10:100).

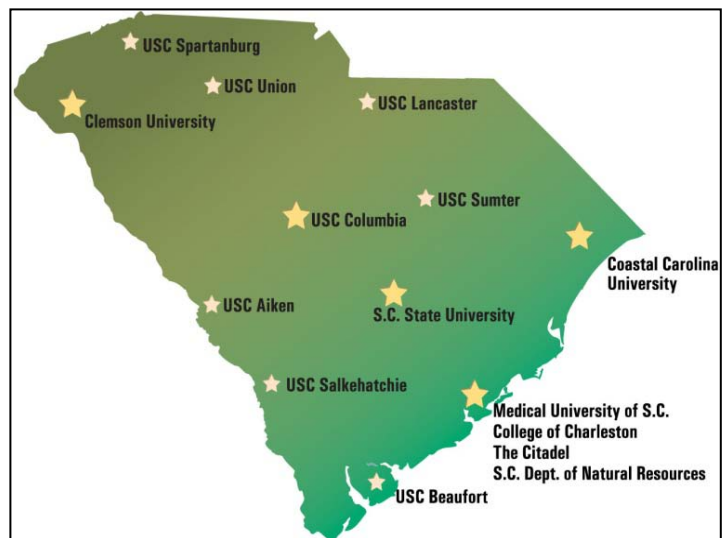
The Consortium's legislative mandate sets out three main tenets upon which the agency operates:

1. "To provide a mechanism for the development and management of the Sea Grant Program for the State of South Carolina and adjacent regions which share a common environment and resource heritage."
2. "To support, improve and share research, education, training and advisory services in fields related to ocean and coastal resources."
3. "To encourage and follow a regional approach to solving problems or meeting needs relating to ocean and coastal resources in cooperation with appropriate institutions, programs, and persons in the region."

Organization and Management

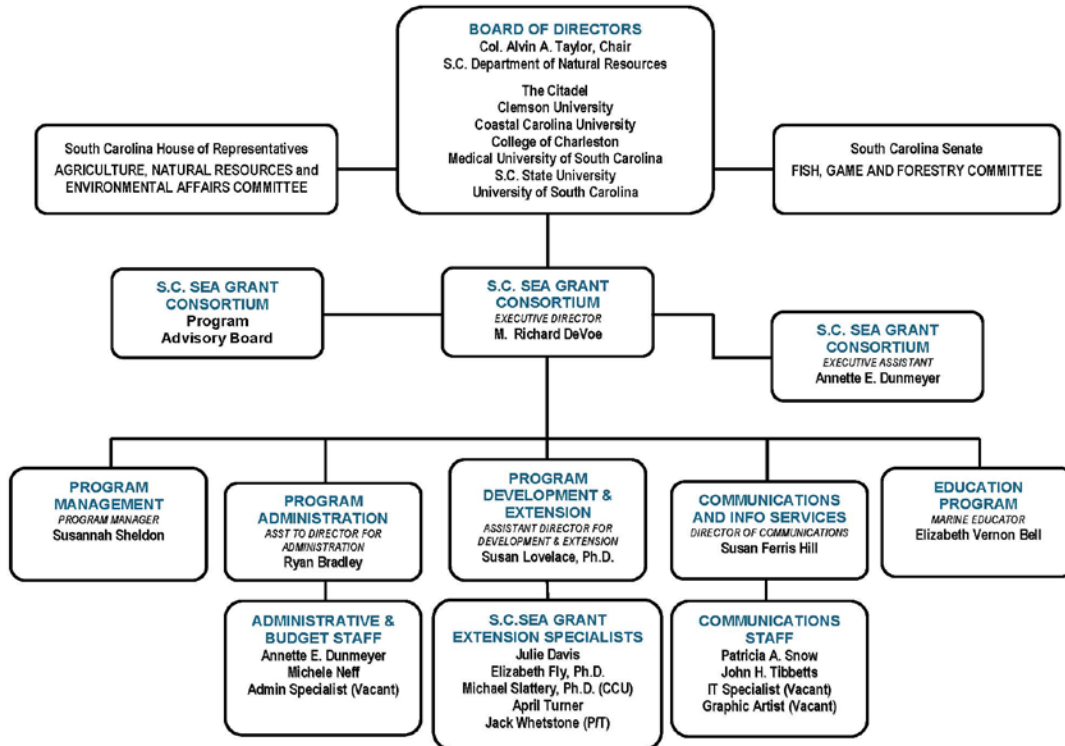
Currently, the Consortium is one of only four stand-alone legislative South Carolina state agencies (of 75 total), which allows the agency to be flexible, strategic and responsive, and independent in its activities. Its office is headquartered in Charleston, South Carolina.

The Consortium, which received its Sea Grant College designation by U.S. Secretary of Commerce Malcolm Baldrige in 1986, develops and supports a balanced and integrated research, education, and extension program for South Carolina that seeks to provide for future economic opportunities, improve the social well-being of its citizens, and ensure the wise use and development of marine and coastal natural resources. Charter member institutions of the Consortium are The Citadel, Clemson University (CU), College of Charleston (CofC), Medical University of South Carolina (MUSC), South Carolina State University (SCSU), S.C. Department of Natural Resources (SCDNR), and the University of South Carolina (USC). Coastal Carolina University (CCU) joined the Consortium as a member in 1996; state legislation and Board policy allow for the Consortium to add additional institutions based on prescribed criteria and institutional expressions of interest.



The Consortium's organizational structure (as of February 1, 2015) is as follows:

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Board of Directors

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 includes the chief executive officers of the Consortium's eight member institutions. 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. Each Consortium Board Member has designated a Board Alternate whom can act on his or her behalf. Board Members and Board Alternates are invited and participate in Board activities. The current members of the Board of Directors are:

Col. Alvin A. Taylor (<i>Chair</i>)	Director, S.C. Department of Natural Resources
David J. Cole, M.D.	President, Medical University of South Carolina
James P. Clements, Ph.D.	President, Clemson University
Glenn F. McConnell, J.D.	President, College of Charleston
W. Franklin Evans, Ph.D.	Interim President, South Carolina State University
David A. DeCenzo, Ph.D.	President, Coastal Carolina University
Harris Pastides, Ph.D.	President, University of South Carolina
Lt. General John W. Rosa	President, The Citadel

Consortium Institutional Liaisons

Institutional liaisons provide a direct administrative link between the Consortium and each of its member institutions. There are two designated liaisons for each Consortium member institution: one from the sponsored

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program office to address program development and proposal preparation matters, and one from the budget office that fosters communication about post-award grants and contracts. 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. The Consortium staff are now in the process of updating the *External Procedures Handbook* to incorporate changes and updates to the agency's policies and procedures based on changes at the state and federal levels.

Executive Director

The legislation creating the S.C. Sea Grant Consortium also established the position of Executive Director. The Executive Director is responsible for managing the Sea Grant program for South Carolina, including development and implementation of Sea Grant proposals, oversight of the proposal solicitation and review process, communication with the National Sea Grant College Program office, management and oversight of all Sea Grant projects and programs, and management of fiscal resources. The Consortium is also expected to seek funding from a variety of non-state sources, which represents a significant percentage (~80 percent) of total Consortium support.

Consortium Staff

Consortium staff positions consist of 14 full-time FTEs and several temporary grant employees. The following table lists the Consortium's current staffing as of July 1, 2015 (except for our Knauss fellows, who are technically Consortium employees) and identifies our "Core Group" senior management team (in italics).

Program Management

M. Richard (Rick) DeVoe
Executive Director

Susan Lovelace, Ph.D.
Assistant Director for Development and Extension

Susannah Sheldon
Program Manager

Melody Hunt, Ph.D.
Program Coordinator, Coastal Environmental
Quality

Program Administration

Ryan Bradley
Assistant to the Director for Administration

Annette Dunmeyer
Executive Assistant/Office Manager

Michele Neff
Accountant/Fiscal Analyst

(Vacant)
Administrative Coordinator

(Vacant, TBH)
IT Specialist

Communications and Information Services

Susan Ferris Hill
Director of Communications

Patty Snow
Art Director/Web Developer

(Vacant, TBH)
Science Writer

(Vacant)
Graphic Designer

Sea Grant Extension Program

April Turner
Coastal Communities Specialist

Julie Davis
Living Marine Resources Specialist

Elizabeth Fly, Ph.D.
Coastal Climate Specialist

(Vacant, TBH)
Coastal Processes Specialist

Sea Grant Education Program

Elizabeth Vernon Bell
Marine Education Specialist

Program Advisory Mechanisms

Program Advisory Board

The Consortium receives guidance and input from a 28-member Program Advisory Board (PAB). PAB members are invited by the Chair of the Consortium Board of Directors, and consist of representatives from a mix of academic, agency, business, and public interest organizations from South Carolina and adjacent coastal states. The PAB was established in 2005 based on recommendations from our 2004 National Sea Grant Program Assessment. The purposes of the Consortium PAB are to:

1. Provide the Consortium with a broad perspective on South Carolina's critical coastal and marine resource issues, needs, and opportunities.
2. Review and evaluate input received from Consortium stakeholders for use in revising and focusing the agency's strategic and implementation plans.
3. Offer strategic guidance and advice to the Consortium as it develops and implements research, education, and outreach programs and projects.
4. Advise the Consortium Executive Director regarding emerging trends in coastal and marine resource policy and management.
5. Identify potential opportunities for funding support, new partnerships, and innovative ways of "doing business."

The PAB meets at least annually to provide support and guidance to the Consortium on a wide range of topics including strategic planning, programmatic focus, and innovative funding strategies. Current PAB members are:

Federal Agencies

Mr. Michael Allen	Community Partnership Specialist, U.S. National Park Service
Dr. Paul Comar	Acting Director, NOAA NCCOS Center for Coastal Environmental Health and Biomolecular Research
Dr. Jeffrey King	Acting Director, NOAA NCCOS Hollings Marine Laboratory
Mr. Jeffrey Payne	Acting Director, NOAA Office for Coastal Management
Dr. Robert Mahood	Director, South Atlantic Fishery Management Council
Dr. Paul A. Sandifer	Senior Scientist (retired), NOAA NOS; Interim Science Advisor to the NOAA Administrator

State and Local Government

Mr. Robert Boyles	Deputy Director, SCDNR-Marine Resources Division
Ms. Sara Bazemore	Deputy Director, SCDHEC Ocean and Coastal Resource Management (OCRM)
Mr. Rutledge B. Leland	Mayor, McClellanville, S.C.
Dr. Robert Van Dolah	Director (retired), SCDNR-MRD-Marine Resources Research Institute

Academic and Research Institutions

Dr. Jeffrey Allen	Director, S.C. Water Resources Institute, Clemson University
Dr. James Arrington	University Official (retired), South Carolina State University
Dr. B.J. Copeland	Professor (retired), North Carolina State University
Dr. Paul T. Gayes	Director, School of Coastal and Marine Systems Science, Coastal Carolina University
Dr. A. Frederick Holland	Director (retired), NOAA NCCOS Hollings Marine Laboratory
Dr. James Morris	Director, Belle W. Baruch Institute, University of South Carolina
Dr. Michael Orbach	Professor (retired), Marine Affairs, and Policy Director (retired), Coastal Environmental Management Program, Duke University (NC)
Dr. James Sanders	Director, Skidaway Institute of Oceanography (GA)

Business, Private Sector, and Public Interest

Mr. Bill Cox	Owner, Island Fresh Seafood, Inc.
Ms. Mary Graham	Senior Vice President of Public Policy/Regional Advancement, Charleston Metro Chamber of Commerce

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Ms. Debra Hernandez	Director, Southeast Coastal Ocean Observing Regional Association
Mr. John Knott	Founder and President, CityCraft Ventures, LLC
Mr. C. Frank Lewis	Senior Engineer (retired), SCANA Corporation, Community/ Economic Development and Local Government
Mr. Chris Mack, P.E.	Coastal Project Manager, AECOM
Mr. Denver Merrill	Vice President, The Maritime Association of South Carolina
Dr. Timothy Reinhold	VP of Engineering, Insurance Institute for Business and Home Safety
Dr. Lundie Spence	Director (retired), COSEE-Southeast
Mr. Tim Todd	Executive Director, Discover Upcountry Carolina Association

Extension Advisory Committees

In addition, each S.C. Sea Grant Extension Program specialist convenes an Extension Advisory Committee to help direct their activities. A list of Extension Program Advisory Committee members will be available onsite.

Significant Institutional Policies

The State of South Carolina and the Consortium Board of Directors have developed the following key policies which strengthen the nature and efficiency of the Sea Grant College Program in South Carolina and contribute to its ability to field an innovative and cost-effective program:

1. The State of South Carolina continues to demonstrate its commitment to Sea Grant in the state through an annual appropriation of state funds.
2. Since its inception in 1980, the Consortium Board of Directors maintains a policy that waives overhead costs on Sea Grant projects; instead, overhead costs can be used by PIs to offset the matching requirements of the program.
3. Any institution which has “active comprehensive research, education and extension programs in the area of coastal and marine resources use and conservation” may seek membership in the Consortium by submitting its credentials to the Board for review in accordance with criteria and procedures laid out by the Board.
4. The S.C. Sea Grant Consortium itself charges no overhead on Sea Grant projects; therefore, 100 percent of each Sea Grant dollar for Sea Grant projects goes to support programmatic efforts.
5. In June 2015, the Consortium Board of Directors conceptually endorsed a proposal by the Consortium Executive Director to apply a de minimus indirect cost rate of 10% MTDC as a direct charge to proposals submitted to all funding organizations, except for any and all proposals submitted to the NOAA National Sea Grant College Program, and as a matching fund charge to all proposals submitted to the NOAA National Sea Grant College Program. The Board will formally act on this policy at its September 1, 2015 meeting.

STRATEGIC PLANNING AND PROJECT IMPLEMENTATION

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 strategic planning, program management, Communications and Information Services (CIS), S.C. Sea Grant Extension Program (SCSGEP), and Sea Grant marine education activities. All Consortium planning, management, and outreach programs are structured to ensure that (1) problems and needs of those who live and work along the coast are accurately identified, (2) research and outreach projects and programs are effectively providing necessary information, and (3) this information is delivered to target audiences in a timely fashion and user-friendly format.

The Consortium’s mission is to generate and apply science-based information on issues and opportunities that enhance the practical use and conservation of coastal and marine resources to foster a sustainable economy and environment. The agency achieves its mission by partnering with scientists from the state’s leading research institutions and a diversity of coastal stakeholders, serving as a broker of funding, facilitating dialogue among coastal interests, and providing science-based information to resource managers, policymakers, business and industry, and the public. The Consortium focuses its programmatic efforts on addressing critical issues and opportunities in five areas: coastal and ocean landscape, sustainable coastal development and economy, hazard

resilience in coastal communities, sustainable fisheries and aquaculture, and scientific literacy and workforce development. The Consortium's 2014-17 Strategic Plan, titled *The Changing Face of Coastal South Carolina: Enhancing Understanding – Informing Decision-making*, can be found at http://www.scseagrant.org/pdf_files/SCSGC-Strat-Plan-2014-2017.pdf.

Strategic Planning Process

The goal of the Consortium's 2014-2017 Strategic Plan is to "optimize the ability of S.C. Sea Grant Consortium's research, education, and outreach programs to address the coastal resource needs of South Carolina." The Consortium's plan serves as a guide and filter for the activities that the S.C. Sea Grant Consortium will undertake during this time, but its goals and objectives are expected to be relevant for a number of years to come. Nevertheless, the strategies the Consortium utilizes to achieve these goals and objectives are re-evaluated during every subsequent revision of the Plan. New strategies are included as current strategies are addressed and new issues arise. We assess the outcomes and performance measures on two-year cycles.

The S.C. Sea Grant Consortium consistently seeks involvement and input from its constituencies to help shape Consortium priorities and programs. This ensures that our activities are responsive to the needs of the Consortium's stakeholders and allows us to determine:

1. Priority needs in South Carolina pertaining to coastal and ocean resources use and conservation;
2. Current activities in South Carolina that are underway to address these needs;
3. Priority needs that are not being adequately addressed by current activities; and
4. Most importantly, specific potential actions that the Consortium can take to address these unmet needs.

The goal of the Consortium's strategic planning process is to provide a framework upon which to maximize the effectiveness of our research, education, and extension programs to address the coastal and marine resource needs of South Carolina. In addition to its ongoing 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, Program Advisory Board, Consortium member institutional liaisons, Blue Ribbon Committees, Sea Grant Extension Program specialists, and Communications and Information Services staff.

The Consortium's Strategic Plan section is divided into Programmatic and Management components. The Programmatic component includes the Consortium's goals, objectives, and strategies for research, education, and outreach activities for five areas: the Coastal and Ocean Landscape; Sustainable Coastal Development and Economy; Sustainable Fisheries and Aquaculture; Hazard Resilience in Coastal Communities; and Scientific Literacy and Workforce Development. The Consortium's Management component includes process-based activities which dictate how the Consortium supports its mission in three areas: Planning, Program Management, and Overall Performance; Connecting with Users; and Human Resources. The Implementation Plan section includes the outcomes, performance measures, and targets for the next four years for each Strategic Area of emphasis based on our Strategic Plan. The outcomes, performance measures, and targets are used to report on the success of our actions. Although our programs are in continual formative assessment, we gather data to formally assess our program during annual reporting cycles. The Consortium's management metrics will be provided onsite.

Proposal Solicitation and Review Process

The Consortium's 2014-17 Strategic Plan serves as the foundation for the development of detailed priorities included in our Request for Proposals (RFP) (see www.scseagrant.org/Funding/ to view our FY2016-18 RFP). For each two-year Omnibus cycle, the Consortium requests proposals which address the strategic goals identified by the Consortium and priorities of the National Sea Grant College Program Office as they relate to issues that face South Carolina, the region, and the nation. In preparation for the announcement, the Consortium staff develop an initial list of priorities for comment by resource managers and extension advisory committees. We strive to insure that the priorities are specific, relevant, and timely. The RFP includes a list of the priorities, as well as instructions for submitting a concept letter (preproposal) and full proposal. A concept letter submission and review process is employed by the Consortium to identify investigators whose conceptual ideas appear to

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address national and state needs and Consortium strategic goals. The following table provides a summary of concept letters and full proposals received, and full proposals funded, by each cycle.

	FY10-12	FY12-14	FY14-16
Concept Letters Received	53	49	57
Full Proposals Solicited	26	22	20
Proposals Funded	11	10	8

Concept Letter review panels, consisting of eight-to-ten state and federal resource agency scientists and managers and Sea Grant management and outreach staff, are convened to review all concept letters and select those that merit further development into full proposals. The review process generally results in about 20-25 concept letters being deemed meritorious, and full proposals are solicited. All full proposals are distributed to qualified professionals from academia, government, and industry throughout the United States for technical and conceptual review; we seek to secure at least three written peer reviews per proposal. It is Consortium policy to select technical peer reviewers from outside the state of South Carolina; however, at times comments on proposals are solicited from agency and user representatives within the state. All prospective reviewers are made aware of and subject to the Consortium’s Conflict of Interest Policy for peer and panel reviews, which reflects national policy. We average four-to-five written external peer reviews per proposal, typically receiving more than 100 for the 20-25 proposals being considered. All comments received from the Proposal Review Panel and peer reviewers are organized and filed at the Consortium office, blind copies of which are provided to the PIs.

Additionally, Full Proposal Technical Review Panels are convened at the Consortium office in late August to review and evaluate all full proposals. Panelists are selected based on the programmatic make-up of the proposals; thus, representation on the panel changes from biennium to biennium. In general, our panelists include natural and social scientists and outreach professionals with federal and academic backgrounds. As an example, our 2014-2016 Technical Review Panel included Merryl Alber, Ph.D., University of Georgia – Dept. of Marine Sciences; Fred Holland, Ph.D., retired, NOAA-Hollings Marine Laboratory; Carys Mitchelmore, Ph.D., University of Maryland Chesapeake Biological Laboratory; Kimberly Reese, Ph.D., Virginia Institute of Marine Sciences; James Sanders, Ph.D., Skidaway Institute of Oceanography; George Sedberry, Ph.D., Gray’s Reef National Sanctuary; and Jack Thigpen, Ph.D., North Carolina Sea Grant Extension Program. In addition, the Consortium’s NSGO program monitor at the time, Ms. Elizabeth Rohring, attended and observed the process.

Based on these reviews and the priority needs identified in the Consortium Request for Proposals, research and outreach proposals are selected for inclusion in each biennial cycle for the Consortium’s Sea Grant Program Plan. The table below provides metrics on the Consortium’s proposal solicitation, review, and selection process.

Project Selection – Core Funds

	2010-12	2012-14	2014-16	TOTAL
Concept Letters	53	49	57	159
Full Proposals Solicited	26	22	20	68
Full Proposals Funded	11	10	8	29
% Success – Full Props.	42%	45%	40%	43%
Continuing Projects	0	1	0	1
New Projects	11	10	8	29

Recruitment of Principal Investigators and Institutions

The Consortium undertakes a wide range of activities to recruit new PIs. The Consortium maintains continuous contact, including notifications of RFP announcements, with its Institutional Liaison officers, who work in the sponsored programs office of each of its member institutions. Consortium staff maintain and update a faculty and staff database to whom all announcements are directly distributed via e-mail, and make presentations at a range of venues about upcoming omnibus RFP and other funding opportunities. The table below illustrates the number of PIs who have responded to the Consortium’s Sea Grant RFP and the number of institutions they represent.

Recruitment of PIs* and Institutions

	2010-12	2012-14	2014-16
Cont./New PIs (Concept)	34:91	31:73	66:60
Cont./New PIs (Proposal)	28:57	20:33	28:15
Cont./New PIs (Funded)	16:22	8:18	12:3
Institutions (Concepts)	7	6	8
Institutions (Full Props)	6	6	7
Institutions (Funded)	5	5	3

*New/Cont. PIs and Institutions reflect lead PIs, co-PIs, and associate PIs.

Success in National Competitions

The Consortium always looks forward to the release of funding opportunities for National Strategic Investments as we have performed well in these competitions; our success rate for the last five years is 50 percent. The table below details our participation and success rate in these competitions since 2010.

National Competition Funding – Proposals Submitted vs. Funded

NSI Title	10-11	11-12	12-13	13-14	14-15	TOTALS
Marine Aquaculture	2:0	NA	NA	NA	2:0	4:0
Aquatic Nuisance Species	1:1	0	0	0	1:1	1:1
Fisheries Extension Enhancement	NA	NA	NA	1:1	NA	1:1
Oyster Disease - Gulf Oyster Industry	NA	NA	0	0	NA	1:0
Regional Coastal Climate Extension	1:1	NA	NA	NA	1:1	2:2
Aquaculture Extension	1:1	-	-	-	1:1	1:1

Consortium Funding – Sources and Trends

The S.C. Sea Grant Consortium budget consists of funding from three primary sources: the state of South Carolina, through its annual state appropriations process; the NOAA National Sea Grant College Program core; and from competitive state, Sea Grant, and other federal funding opportunities. The Consortium receives approximately 80 percent of its funding from non-state-appropriated grants and awards for which it competes. Budget trends covering the four-year period 2010-14 are found below.

During FY2010-11 and FY2011-12, state recurring appropriations for the Consortium, as well as for all state government programs across the board, continued to experience reductions. However, the next three fiscal years have seen state support for the Consortium increase from \$332,223 in FY11-12 to \$444,486 in FY2012-13, \$448,973 in FY13-14, and \$559,288 in FY14-15. *This represents an increase of 68% despite a series of gubernatorial vetoes and continued state-imposed fiscal tightening during that span.*

During the past five years the Consortium continued to be effective in securing non-state funding in support of its strategic program areas within which it organizes its research, education, and outreach activities. Because of the pressures brought on the agency from gubernatorial vetoes and significant staff turnover, the agency was unable to devote significant time to grant-writing, and thus experienced a gradual reduction of extramural funding to support Consortium programs over the past four years; however, the Consortium has begun to reverse those trends through new partnerships with the Bureau of Ocean Energy Management (BOEM) and the U.S. Geological Survey (USGS). Indeed, the Consortium has very recently signed a five-year extension, through September 2020, of its Memorandum of Agreement with the NOAA NOA Hollings Marine Laboratory to continue to foster graduate student scholarship and workforce development, and re-established a formal working relationship with the USGS’s Coastal and Marine Geology Program through September 2019 to support university-based research and resource studies on nearshore and offshore coastal processes. We expect this trend to continue as the Consortium actively pursues extramural funding for new projects relating to offshore energy development, community resiliency efforts, stormwater management, and other state, regional, and national strategic initiatives.

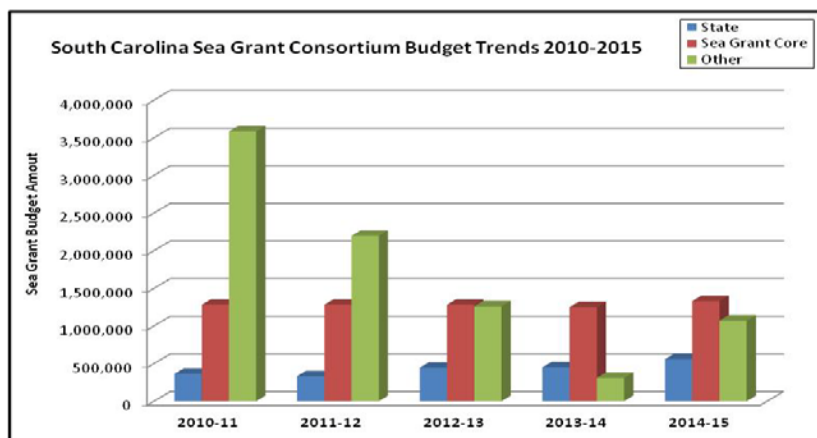
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S.C. Sea Grant Consortium Total Budget

Year	Total
2010-11	\$5,230,311
2011-12	\$3,811,728
2012-13	\$2,987,844
2013-14	\$2,008,474
2014-15	\$2,959,471

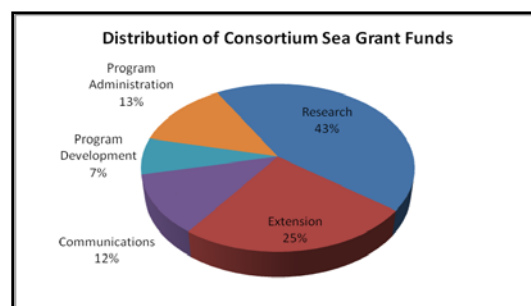
Notes

- *Figures do not include institutional cost shares.
- **Other funds include support by non-core Sea Grant, federal, state, and private sources.
- ***Sea Grant Core funds include the Coastal Community Development project
- ****FY13-14 includes budget reductions to Sea Grant Core funds.



Distribution of Consortium Sea Grant Dollars

The Consortium's federal Sea Grant support has been relatively flat since FY2001. The distribution of Consortium funding (both Sea Grant and matching funds) among program elements is illustrated in the table below. Collectively over the past three biennia (since FY10), the Consortium has allocated funds (core plus match) according to the following percentages: Research – 43.6%; Extension – 24.7%; Communications – 11.6%; Program Development – 7.0%; and Administration – 13.1%.



Distribution of Core Federal and Matching Funds (\$) among Program Elements (by biennium)

Year	Total Core Sea Grant*	Total Match	Research (core + match)**	Extension (core + match)	Education (core + match)***	Communications and Information (core + match)	Program Develop. (core + match)	Program Admin. (core + match)
10-12	\$2,563,340	\$1,395,361	\$1,739,885	\$1,083,496	\$0	\$408,090	\$250,846	\$476,384
12-14	\$2,532,020	\$1,102,991	\$1,572,221	\$791,778	\$0	\$474,123	\$282,209	\$514,680
14-16	\$2,659,340	\$1,351,955	\$1,514,021	\$841,821	\$93,692	\$559,085	\$347,326	\$655,350

*Includes Coastal Community Development (all) and Climate Supplement project.

**Includes support for undergraduate and graduate students.

***Sea Grant education efforts are complemented by COSEE-SE activities.

Distribution of Sea Grant Funding

The Consortium received Sea Grant funding over the four-year period FY10 to FY14 as follows:

Source of Funds	2010-11	2011-12	2012-13	2013-14	2014-15
Core Sea Grant	\$1,231,670	\$1,231,670	\$1,231,670	\$1,200,350	\$1,279,670
Sea Grant - Knauss Fellows	\$132,000	\$46,000	\$98,000	\$105,000	\$56,500
Sea Grant NSI - Coastal Communities	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
Sea Grant NSI - Climate Outreach/Adaptation	\$96,035	\$196,445	\$0	\$0	\$0
Sea Grant NSI - Aquaculture Extension/Tourism	\$80,715	\$80,715	\$141,663	\$79,576	\$0
Sea Grant Climate/Education Minibus	\$0	\$84,405	\$84,080	\$0	\$26,551
Sea Grant Initiatives (other) – Fisheries	\$88,955	\$3,540	\$3,540	\$3,540	\$117,844
Sea Grant Initiatives (other) – Climate	\$37,000	\$11,800	\$0	\$0	\$0
Sea Grant Initiatives (other) – Education	\$7,500	\$0	\$0	\$0	\$0

Consortium Leveraged Funds

The Consortium competed for and secured the following coastal and marine research, education, and extension grants from non-state sources for FY2010-11 through FY2013-14. The projects are organized by the Consortium's strategic priority areas as outlined in its FY2010-13 Strategic and Implementation Plan. Projects in italics are Sea Grant national initiatives or funded projects; budget numbers provided are as awarded.

Program Management

- *“S.C. Sea Grant College Core Program” – NOAA/OAR National Sea Grant College Program – \$4,515,360 – February 1, 2010 to January 31, 2014 (continuing).*
- *“S.C. Sea Grant College Program - Merit Funding” – NOAA/OAR National Sea Grant College Program – \$380,000 – February 1, 2010 to January 31, 2014.*

Coastal and Ocean Landscape

- *“Southeast Coastal Ocean Observations Regional Association (SECOORA): Building a Regional Association Framework for the Coastal Ocean Observing System of the Southeastern United States” – NOAA/NOS Coastal Services Center – \$399,670 – June 1, 2010 to May 31, 2012 (Year 3 of 3 plus extension).*
- *“Southeast Coastal Ocean Observations Regional Association (SECOORA): Developing the Regional Coastal Ocean Observing System (RCOOS)” – NOAA/NOS Coastal Services Center – \$1,819,332 – August 1, 2010 to July 31, 2012 (Year 3 of 3 plus extension).*
- *“Providing Ocean and Human Health Research, Education, and Training to Appropriate Audiences: A HML-SCSGC MOA Initiative” – NOAA/NOS Hollings Marine Laboratory – \$226,337 – October 1, 2010 to September 30, 2015 (Years 1, 2, 3, and 4 of 5).*
- *“Utilizing HABISS to Document, Analyze, and Interpret the Impacts of Harmful Algal Blooms and their Associated Marine Toxins on Ecosystems and Humans in South Carolina” – Centers for Disease Control and Prevention – \$337,270 – September 29, 2010 to March 31, 2014 (Years 3, 4, and 5 of 5 plus extension).*
- *“Supporting the NOAA IOOS Program Office: Intergovernmental Personnel Agreement” – NOAA/NOS IOOS Program Office – \$40,000 – January 1, 2011 to May 1, 2011 (Year 2 of 2).*
- *“Enhancing Communications and Coordinating Outreach Activities throughout the IOOS Community: The NFRA Contribution” – NOAA/NOS Coastal Services Center – \$250,000 – June 1, 2011 to May 31, 2013 (Years 1 and 2 of 2).*
- *“Governors’ South Atlantic Alliance: Building a Regional Ocean Partnership Framework for the Coastal Ocean of the Southeastern United States, Phase I” – NOAA/NOS Coastal Services Center – \$278,000 – January 1, 2012 to December 31, 2013 (Year 1 of 1 plus extension).*
- *“Designing a Multi-State and Regional Framework for CMSP and Decision-making: A Governors’ South Atlantic Alliance Initiative, Phase I” – NOAA/NOS Coastal Services Center – \$784,431 – January 1, 2012 to December 31, 2013 (Year 1 of 1 plus extension).*
- *“Designing a Multi-State and Regional Framework for CMSP and Decision-making: A Governors’ South Atlantic Alliance Initiative, Phase II” – NOAA/NOS Coastal Services Center – \$276,000 – October 1, 2012 to March 31, 2014 (Year 1 of 1 plus extension).*

Sustainable Coastal Development and Economy

- *“Marine Debris and Abandoned Vessels: Identification, Reduction and Prevention through Community-based Education and Action” – NOAA/NMFS Fisheries Habitat Conservation Program Office – \$64,500 – July, 1 2009 to December 31, 2011 (Year 1 of 1 plus extension).*
- *“Addressing the Challenges of Coastal Growth in South Carolina: A S.C. Sea Grant Consortium Initiative” – NOAA/OAR National Sea Grant College Program – \$200,000 – February 1, 2010 to January 31, 2014 (continuing).*
- *“Improved Understanding of Water Quality Dynamics in the Nearshore Ocean Waters of Long Bay, S.C. Immediately Adjacent to the Myrtle Beach ‘Grand Strand’” – SCDHEC/Ocean and Coastal Resource Management – \$99,979 – June 24, 2010 to March 23, 2012 (Year 1 of 1 plus extension).*

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- “Pesticides Decision-making Tool and Feasible Alternatives for Beaufort, Jasper, and Hampton Counties, S.C.” – The Lowcountry Institute – \$60,000 – August 15, 2010 to May 15, 2013 (Years 1 and 2 of 2 plus extension).
- “Determining the Role of Estuarine Swashes on Water Quality Impairment along the Grand Strand of South Carolina: Impacts of Land Use and Stormwater Runoff” – NOAA/NOS/National Estuarine Research Reserve Program (through UNH and the NI/WB NERR) – \$19,978 – September 15, 2010 to September 14, 2012 (Years 1 and 2 of 2).
- “Gray Triggerfish, *Balistes caprisucus*, Life History in the South Atlantic Bight” – NOAA/OAR (through the University of South Carolina) – \$45,100 – January 1, 2012 to June 30, 2014 (Years 1 and 2 of 2 plus extension).
- “Clean Marine: Debris Free Waterways in Beaufort County, SC” – NOAA/NOS Coastal Services Center (through University of Georgia) – \$8,675 – March 1, 2012 to March 1, 2013 (Year 1 of 1).
- “Developing a Low Impact Development Manual for Coastal South Carolina to Serve as Guidance for Improved Stormwater Management” – NOAA/NERR Science Collaborative (through University of South Carolina) – \$10,847 – September 1, 2012 to June 30, 2015 (Year 1 of 1 plus extension).

Sustainable Fisheries and Aquaculture

- “S.C. Sea Grant Fisheries Extension Enhancement Program – Phase II” – NOAA/OAR National Sea Grant College Program – \$24,455 – May 1, 2010 to April 30, 2011 (Year 2 of 2).
- “Support for the 2010 International Conference on Shellfish Restoration” – NOAA/NMFS Restoration Center – \$5,000 – July 1, 2010 to December 31, 2010 (Year 1 of 1).
- “2010 Trade Adjustment Assistance for Farmers and Fishermen” – U.S. Department of Agriculture, CSREES (through University of Minnesota) – \$50,147 – September 1, 2010 to August 31, 2013 (Years 1 and 2 of 2 plus extension).
- “The S.C. Sea Grant Aquaculture Extension Enhancement Program” – NOAA/OAR National Sea Grant College Program – \$242,145 – October 1, 2010 to September 30, 2013 (Years 1, 2, and 3 of 3).
- “Lionfish in the South Atlantic and Caribbean: Integrated Regional Research and Extension to Support Effective Management of an Invasive Marine Species” – NOAA/OAR National Sea Grant College Program (through Florida Sea Grant College Program) – \$10,620 – June 1, 2012 to May 31, 2015 (Years 1, 2, and 3 of 3).
- “Perceptions of Marine Aquaculture by Tourist Destinations on the Southeastern United States Coast” – NOAA/OAR National Sea Grant College Program Aquaculture Extension Research Program – \$140,524 – September 1, 2012 to August 31, 2015 (Year 1 and 2 of 2 plus extension).
- “South Carolina Horseshoe Crab Population Assessment Using an Integrated Approach” – Charles River Laboratories International, Inc. – \$27,663 – April 1, 2014 to March 31, 2016 (Year 1 of 2).

Hazard Resilience in Coastal Communities

- “Assessing Flooding Adaptation Needs in the City of Charleston, S.C.” – NOAA/OAR National Sea Grant College Program – \$30,000 – June 1, 2010 to September 30, 2010 (Year 1 of 1).
- “The Carolinas Coastal Climate Outreach Initiative” – NOAA/OAR National Sea Grant College Program – National Strategic Investment Program – \$192,702 – July 1, 2010 to June 30, 2012 (Years 1 and 2 of 2).
- “Coastal Community Climate Resilience” – NOAA/OAR National Sea Grant College Program (through Oregon State University) – \$14,000 – September 1, 2010 to July 31, 2013 (Year 1 and 2 of 2 plus extension).
- “Guidance for Identification of Local Vulnerability to Hazards and Climate Change Impacts in the Southeast and Caribbean Region” – NOAA/OAR National Sea Grant College Program (through University of Georgia) – \$4,800 – October 1, 2011 to September 30, 2013 (Year 1 of 1).
- “Using Participatory Scenario Building to Encourage Climate-Resilient Zoning in the Coastal Carolinas” – NOAA/OAR National Sea Grant College Program – Sea Grant Climate Adaptation 2011 – \$99,778 – February 1, 2012 to August 31, 2015 (Year 1 of 1 plus extension).
- “Integrating Climate Vulnerability and Working Waterfront Preservation” – NOAA/OAR National Sea Grant College Program – Sea Grant CACBI – \$58,665 – May 1, 2012 to August 31, 2015 (Years 1 and 2 of 2 plus extension).

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- “Promoting Climate Change Awareness and Adaptive Planning in Atlantic Fisheries Communities Using Dialogue-based Participatory Vulnerability Analysis, Mapping, and Collaborative Systems Dynamic Modeling” – Social and Environmental Research Institute (SERI)/NOAA Climate Program Office – \$33,534 – August 1, 2012 to July 31, 2015 (Years 1 and 2 of 2 plus extension)
- “The S.C. Sea Grant Coastal Climate Extension Program” – CISA/University of South Carolina/NOAA Climate Research Program – \$71,010 – September 1, 2012 to August 31, 2016 (Years 1 and 2 of 4).
- “Southeast and Caribbean Region Team (SECART): Supporting the Southeast and Caribbean Climate Outreach Community of Practice (CoP)” – NOAA/OAR National Sea Grant College Program (through University of Georgia) – \$3,585 – May 20, 2013 to July 27, 2013 (Years 1 of 1).

Scientific Literacy and Workforce Development

- “*Sea Grant Knauss Fellowships (8)*” – NOAA/OAR National Sea Grant College Program – \$381,000 – March 1, 2010 to February 28, 2014 (continuing).
- “Support for Beach Sweep/River Sweep 2010 through 2014 Activities” – Cash Donations – \$27,093 – July 1, 2010 to June 30, 2014.
- “Southeastern Center for Ocean Sciences Education Excellence (COSEE-SE): Addressing New Challenges” – National Science Foundation – \$1,049,989 – September 1, 2010 to August 31, 2015 (Years 1, 2, and 3 of 3 plus extension).
- “*Sea Grant/NERRs Graduate Student Fellowship Program*” – NOAA/OAR National Sea Grant College Program (through University of North Carolina) – \$7,500 – January 1, 2011 to December 31, 2011 (Year 1 of 1).
- “Southeast Coastal Ocean Observations Regional Association (SECOORA): Education and Outreach – Elementary BOB” – NOAA/NOS IOOS Program Office – \$15,125 – June 1, 2011 to November 30, 2012 (Year 1 of 1 plus extension).
- “*Enhancing Capabilities and Programs within the South Carolina Sea Grant Consortium’s Marine Education Program*” – NOAA/OAR National Sea Grant College Program – \$109,820 – May 1, 2012 to August 31, 2015 (Years 1 and 2 of 2 plus extension).
- “Sowing the Seeds of Estuary Health: Exploring Tidal Creek-Salt Marsh Ecosystems while Raising Awareness” – U.S. Environmental Protection Agency (EPA) – \$33,282 – June 1, 2014 to May 31, 2015 (Year 1 of 2).

STAKEHOLDER ENGAGEMENT

Engaging Stakeholders

The Consortium’s stakeholders can be divided into two categories: institutional and external. The Consortium’s institutional constituencies consist of the faculty, staff, and students of the agency’s eight member institutions. Externally, the Consortium is charged with serving the needs of an extremely diverse group of organizations, institutions, and individuals representing universities; federal, state, and local natural resource and economic development agencies; business and industry; state and local governments; community groups; non-governmental organizations; K-12 educational institutions; and others. The Consortium utilizes formal and informal methods to assess the needs of its institutional and external customers, including its strategic planning process; active participation in meetings, conferences, and workshops; direct stakeholder contacts; and service on a large number of planning, professional, and organizational committees. In the section “Recruiting Talent,” we describe how we engage stakeholders in the development of our strategic planning, priority-setting, and request for proposals, and in our proposal review process.

The Consortium’s Program Advisory Board, as described earlier, provides input on the priorities of the agency. The role of the PAB is to provide the Consortium with input into the development of program priorities and in the review and evaluation of Consortium proposals and programs. PAB members believe it is very important for the Consortium to use this strategic planning process to set priorities that will ensure that it maximizes its roles as catalyst, educator, and champion for wise decision-making and management of South Carolina’s coastal resources and communities. In addition, the PAB highlighted the importance for the Consortium to develop a

plan for the whole of the Consortium and all its programs, while being consistent with the NOAA National Sea Grant College Program.

The Consortium’s Sea Grant Extension Program involves users in its program planning and evaluation process in the areas of Living Marine Resources, Coastal Processes, Coastal Community Development, and Coastal Climate. Our Sea Grant Extension specialists live and work in coastal communities and interact daily with their program clientele. This informal daily interaction creates a relationship of trust between the specialists and the communities they serve, and provides the specialist with a deep knowledge of the issues and concerns among members of the user community in addition to an awareness of their vision of the future. Another informal mechanism by which the extension specialists gain a knowledge and understanding of stakeholder interests and concerns is through participation on a variety of program-related, community-based committees and task forces. These focused, topical interactions bring the specialists into regular contact with state agency representatives, local government staff, community interest groups, the business community, and individual citizens. In addition, each specialist is guided by a formal advisory committee consisting of local and state government agency representatives, business owners, representatives of community organizations, and others. The information, advice, and guidance received through these means is then fed into the Consortium strategic planning process.

The Consortium’s Communications and Information Services (CIS) program supports the agency’s mission by identifying users of coastal and marine resource information, assessing their needs, and providing them with information to address problems, enhance opportunities, and increase their understanding of coastal issues and human impacts upon the marine environment. CIS sets its objectives in accordance with the agency’s strategic plan, and builds visibility and support for Consortium programs and activities. In support of Consortium goals, CIS employs various tactics to communicate with the public and targeted audiences. These include regular publications (e.g., the quarterly magazine *Coastal Heritage* and the agency’s “impacts” e-newsletter *CoastalScience@Work*), topical publications (e.g., technical reports and brochures), media relations (e.g., press releases and feature stories), and the agency’s main website (www.scseagrant.org), as well as topic-specific sites such as the International Conference on Shellfish Restoration (www.scseagrant.org/icsr), Beach Sweep/River Sweep (www.scseagrant.org/content/?cid=49), S.C. Task Group on Harmful Algae (www.scseagrant.org/hab), and the S.C. Non-point Education for Municipal Officials (www.scseagrant.org/scnemo). CIS developed and maintains, with assistance from the Extension and Education programs, the Consortium’s Facebook page (www.facebook.com/scseagrant) and Twitter feed (www.twitter.com/scseagrant). CIS also organizes and spearheads special events, including the annual, statewide Beach Sweep/River Sweep litter cleanup in partnership with the S.C. Department of Natural Resources and the biennial International Conference on Shellfish Restoration. In addition, CIS manages the Consortium’s booth at various festivals and conferences.

Leadership by Staff on Boards and Committees

The Consortium encourages staff to serve on planning, professional, and organizational committees in order to develop relationships and conduct cooperative projects with targeted stakeholder groups on the international, national, regional, state, and local levels. A list of selected national and regional leadership positions held by Consortium staff is provided below; a complete listing of all leadership positions, including state and local, will be provided onsite. Sea Grant-related leadership activities are highlighted in italics.

Program Management

Rick DeVoe, Executive Director

<i>Member, Aquaculture Planning Group, Sea Grant Association</i>	2015
Co-Chair, Board on Oceans, Atmosphere, and Climate, Association of Public and Land Grant Universities (APLU)	2013 - present
Member, Advisory Committee, Carolinas Integrated Sciences and Assessments (CISA) – Regional Climate RISA	2011 - present
Member, Executive Planning Team, Governors’ South Atlantic Alliance	2008 - present
Associate Member, Consortium for Ocean Leadership; and Member, Public Policy Committee	2007 - present
Member, Board of Directors, SouthEast Coastal Ocean Observing Regional Association (SECOORA) (Vice Chairman 2013-2015; Finance and Audit Committee 2012-present)	2007 - 2015

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Member, Board of Directors and Education Committee, The Coastal Society	2007 - 2013
South Atlantic Sea Grant Representative, Marine Fisheries Initiative (MARFIN) Panel, National Marine Fisheries Service, NOAA	2006 - 2013
Member, Finance Committee (and Executive Committee Member and Treasurer 2004-2009), National Federation of Regional Associations for Ocean Observing (IOOS)	2004 - 2013
<i>Member (and Chair 2003-2008), External Relations Committee, Sea Grant Association</i>	2003 - present
Member, Board of Advisors, Southeast Center for Ocean Sciences Education Excellence	2003 - 2013
Moderator (Lead), National Ocean Science Bowl – SC-GA Region	1998 - present
<i>Elaine Knight, Assistant Director (retired 2012)</i> <i>Fiscal Officer, Sea Grant Association</i>	1995 - 2012
<i>Denise Sanger, Assistant Director for Research and Planning (separated in 2012)</i> President, Southeastern Estuarine Research Society	2010 - 2012
Member, Board of Directors, Coastal and Estuarine Research Federation	2009 - 2011
Member, Coastal and Estuarine Science News Editorial Board	2009 - 2012
<i>Susan Lovelace, Assistant Director for Development and Extension (2014 - present)</i> <i>Chair, Planning Committee and Host, South Atlantic Region Sea Grant Extension and Communicators Meeting</i>	2015
External Member of the Steering Committee, 2016 Social Coast Forum, NOAA Office for Coastal Management	2015 - present
Member, Scientific Committee & Site Consultant, International Symposium on Society and Resources Management	2014 - 2015
Collaborating Investigator, Carolinas Integrated Sciences and Assessments (CISA) – NOAA Regional Climate RISA	2014 - present
Invited Participant, Gulf Research Program, National Academies of Science – Health Opportunities Analysis Workshop	2014
Member, Planning Committee Social Coast Forum, NOAA Office for Coastal Management	2011 - 2012
<i>Susannah Sheldon, Program Manager</i> Member, Education Working Group, Citizen Science Association	2015
Member, Sea Grant National Pharmaceuticals and Personal Care Products (PPCP) Working Group	2015
Member, Steering Committee, Biennial TCS/RAE Summit	2013 - present
Officer, Board of Directors, The Coastal Society	2013 - present
Member, Steering Committee, 2014 Social Coast Forum, NOAA Office for Coastal Management	2013 - 2014
Member, Steering Committee, 16 th International Conference on Shellfish Restoration	2013 - 2014
<u><i>Extension</i></u> <i>Robert Bacon, Extension Program Leader (retired 2013)</i> <i>Member, Planning Committee, Sea Grant Week</i>	2012
<i>Chair, Assembly of Sea Grant Extension Program Leaders</i>	2011 - 2013
<i>Member, National Sea Grant Hazards Resilience in Coastal Communities Focus Team</i>	2007 - 2010
<i>April Turner, Coastal Communities Specialist</i> <i>Chair, Executive Committee, National Sea Grant Sustainable Coastal Community Development Network</i>	2014 - present
Member, Outreach and Education Committee, National Working Waterfronts Network	2013 - present
Team Lead, Working Waterfronts Technical Team, Governors' South Atlantic Alliance	2012 - 2014
<i>South Atlantic Regional Coordinator, National Sea Grant Sustainable Coastal Community Development Network</i>	2011 - 2014

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Jack Whetstone, Marine Aquaculture Specialist (retired 2014)

Member, Aquatic Ecosystem Restoration Foundation - Publications Committee	2008 - 2014
Member, National Science and Technology Council Committee on Science, Joint Subcommittee on Aquaculture, National Aquatic Animal Health Task Force – Crustacean Disease Committee	2006 - 2014
Member, Beach Vitex Taskforce	2006 - 2014

Amber Von Harten, Fisheries Specialist (separated in 2012)

Member, Southern Risk Management Education Center Advisory Council	2009 - 2012
Member, Project Team, Sea Grant eXtension Sustainable Marine Fisheries Community of Practice Development Team	2009 - 2012
Co-Chair, Fish and Seafood Subcommittee, National MarketMaker Program	2008 - 2012
Member, National Sea Grant Fisheries Extension and Enhancement Team	2008 - 2012

Julie Davis, Living Marine Resources Specialist (2013 - present)

Southeast aquaculture representative, Sea Grant Fisheries Extension Network	2015 - present
Member, Advisory Panel, East Coast Molluscan Health Management	2015 - present
Member, East Coast Molluscan Health Hatchery Certification Committee	2015 - present
Officer, Committee Member and Member at Large, National Shellfisheries Association	2015 - present
South Carolina representative, Board of Directors, and Member, Strategic Planning Team, Vibrio Working Group, East Coast Shellfish Growers Association	2014 - present
Member, Student Award Review Panel, Oyster South coalition for southern oyster mariculture	2014 - present

Jessica Whitehead, Regional Climate Extension Specialist (separated 2013)

Co-Chair, Steering Committee, Sea Grant Climate Network	2011 - 2013
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Elizabeth Fly, Climate Extension Specialist (2014-present)

Chair, Southeast and Caribbean Climate Community of Practice Steering Committee	2014 - present
Member, Planning Committee, Carolinas Climate Resilience Conference	2014

Clay McCoy, Coastal Processes Specialist (separated 2011)

Member, U.S. Army Corps of Engineers, Ocean Dredge Materials Disposal Site Task Team	2010 - 2011
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Education

Lundie Spence, Director, COSEE-SE (retired 2013)

Member, Education Committee, National Federation of Regional Associations	2009 - 2012
Chair, COSEE Council, National Centers for Ocean Sciences Education Excellence	2009 - 2010
Member, Board of Directors, Southeast Coastal Ocean Observing Regional Association	2007 - 2013
Member, National Marine Debris Advisory Panel	2007 - 2012

Elizabeth Vernon Bell, Marine Education Specialist

S.C. Chapter Representative, National Marine Educators Association	2008 - 2010
Chair, COSEE Professional Development Ad Hoc Committee	2009 - 2011
Member-At-Large, Executive Committee, Sea Grant Educators Network	2010 - 2012

Communications

Susan Ferris Hill, Director of Communications

Chair-Elect, Chair, and Past-Chair, National Sea Grant Communicators Network	2010 - 2012
Member, Planning Committee, National Sea Grant Communications and Extension Assembly Meeting	2011
Member, National Marine Debris Advisory Panel	2007 - 2011
Member, National Association of Government Communicators	2006 - present

Member, Association of Communications Excellence	2006 - present
Member, Steering Committee, and Chair of Communications Committee, International Conference on Shellfish Restoration	2006 - present
John Tibbetts, Writer and Editor (separated in 2015)	
Member, Council for the Advancement and Support of Education	1995 - 2010
Member, Society of Environmental Journalists	1994 - 2015
Member, National Association of Science Writers	1992 - 2015

PARTNERSHIPS AND COLLABORATIONS

Joint Initiatives

Partnerships are an integral component of how the Consortium conducts its work; indeed, another of the Consortium’s Operational Principles is that the “value of working with partners from all sectors is critical to our success.” A major element of the Consortium’s mandate from the S.C. General Assembly is to interact with other state natural resource agencies as an information provider, broker, facilitator, and catalyst on coastal and marine resource conservation, management, and utilization issues. Just by virtue of its structure as a consortium, the agency operates in partnership with its eight member institutions in planning, implementing, and administering its research, education, and outreach programs.

It is increasingly a fact of life that neither Sea Grant nor its partners individually have the resources to implement effective programs for the ever-increasing complex needs of stakeholders. So having their support and involving them in program development and implementation is a necessity. Thus, the Consortium actively engages in collaborative programming with state and federal government agencies, universities, community-based non-governmental organizations, local and regional governments, businesses, and a variety of industry user groups. The Consortium has worked diligently to enhance its statewide and regional research and outreach program efforts through large-scale grant funding and small-scale partnership efforts; the following reflect a sampling of these collaborative activities.

State Efforts

S.C. Coastal Information Network

Coordinating coastal community outreach activities in S.C.

The South Carolina Coastal Information Network (SC-CIN; www.sccoastalinfo.org.) was established by the Consortium in 2008 to encourage partnerships and collaborative efforts to enhance coordination of coastal community outreach efforts in South Carolina. The Network includes organizations seeking to coordinate and/or jointly deliver outreach programs while promoting the sustainability of natural resources along the coast, and includes representatives from S.C. Sea Grant Consortium, the NOAA Center for Coastal Management, NOAA Hollings Marine Laboratory, S.C. Department of Health and Environmental Control, S.C. Department of Natural Resources, ACE Basin National Estuarine Research Reserve, University of South Carolina Belle W. Baruch Institute, North Inlet-Winyah Bay National Estuarine Research Reserve, S.C. Department of Archives and History, S.C. Forestry Commission, Clemson University Extension, Berkeley-Charleston-Dorchester Council of Governments, Lowcountry Council of Governments, Waccamaw Regional Council of Governments, the S.C. Urban Land Institute, the Charleston Waterkeeper, and the Ashley-Cooper and Coastal Waccamaw Stormwater Education Consortia. The Network enhances collaborative efforts in delivering outreach programs to coastal communities, avoids duplication of effort, minimizes the number of meetings/workshops that community leaders and staff are asked to attend, leverages scarce resources, and therefore maximizes program benefits and expected outcomes.

✔ **Promoting Climate Change Awareness and Adaptive Planning in Atlantic Fisheries Communities Using Dialogue-Based Participatory Vulnerability Analysis, Mapping, and Collaborative Systems Dynamic Modeling**

Understanding drought impacts on the blue crab fishery

The Consortium is working in partnership with the Carolinas Integrated Sciences and Assessments program and the Social and Environmental Research Institute to determine how the blue crab fishery can adapt to the effects of climate change. The project team is talking with local resource managers, scientists, and crabbers to better understand how they see the challenges a changing climate poses to the community and the local blue crab fishery and what steps might be taken to address those challenges. Drought is the focal climate impact being discussed, specifically decreased rainfall which may result in increased salinity, decreased freshwater flow, and harm to estuarine habitats. The team used the VCAPS (Vulnerability, Consequences, and Adaptation Planning Scenarios) process to generate crab fishery impacts, including: decreased landings; changing location of crab populations; decreased access to crabs; increased parasitism; and economic harm to the fishery. The results of this work could be used to collaboratively develop a model that explores specific life history aspects of the blue crab and how drought may impact each of those stages of the crab's life. This modeling might allow resource managers, scientists, and crabbers to collaborate on aspects of the fishery needing further monitoring. A group of volunteer crabbers have formed the *Crabbers Who Care Research Network*, and have been provided with tools to monitor salinity in their catch locations for additional data input on the reach of drought.

✔ **Understanding Climate Impacts to Critical Infrastructure: Charleston Resiliency Network Formed**

A federal, state, and local partnership in Charleston, South Carolina

The Consortium was invited to join the planning and implementation team for a Climate Change Adaptation Table Top Exercise in Charleston, South Carolina, sponsored by the Department of Homeland Security's Office of Infrastructure Protection. Other principal partners included NOAA, FEMA, USACE, S.C. Department of Environmental Control-Ocean and Coastal Resource Management, College of Charleston, South Carolina Emergency Management Division, and Wells Fargo. The Consortium was invited to provide an opening contextual presentation at the table-top workshop, which examined the potential impacts of climate change on the port, intermodal transportation, and other critical infrastructure within the Charleston region. This meeting complemented existing hazard analysis and planning efforts, and led to the development of a working group to discuss the formation of a Charleston Resilience Network, a localized grassroots alliance working to assess specific hazard vulnerabilities and build community-level resilience to flooding and other water-related hazard issues. Principal organizations of the Charleston Resilience Network include the S.C. Sea Grant Consortium, City of Charleston, Charleston County Emergency Management, S.C. Department of Environmental Control-Ocean and Coastal Resource Management, Berkeley-Charleston-Dorchester Council of Governments, and SCANA Corporation.

✔ **From Seeds to Shoreline**

Consortium launches first state-wide salt marsh restoration program for K-12 educators and students

The Consortium developed, in partnership with the S.C. Department of Natural Resources and Clemson University Cooperative Extension, the first student-driven salt marsh restoration program in South Carolina. The program, From Seeds to Shoreline, engages students in the collection and germination of *Spartina alterniflora* seeds and the cultivation and transplantation of seedlings to salt marsh locations along the coast. The three-pronged partnership has increased the capacity to meet the growing demands of the program and leverage resources. Currently, the program is represented by schools from 10 coastal and inland counties and is expanding into the states of Georgia and North Carolina. At its core, the From Seeds to Shoreline program strives to teach K-12 students about the salt marsh ecosystem through a hands-on, stewardship restoration program.

✔ **South Carolina Shrimp Fishery Assistance Program**

Commercial shrimpers earn credit for trade assistance

Trade Adjustment Assistance (TAA) program provided by the U.S. Department of Agriculture offered technical training and cash benefits to farmers and shrimpers who have been adversely affected by

competition from imports. Shrimpers who qualified for TAA completed 12 hours of coursework and created a long-term business plan in order to receive up to \$12,000 in cash benefits. The S.C. Sea Grant Extension fisheries specialist led the workshops in Georgetown, Charleston, and Beaufort, South Carolina, giving technical training to over 200 shrimpers on U.S. Coast Guard licensing, federal laws, shrimp processing options, and shrimp marketing opportunities. Additionally, a three-hour training session on developing a business plan was held during the annual S.C. Shrimpers Association meeting in Beaufort.

☑ **Offshore Mapping and Analysis for Offshore Wind Energy Development**

BOEM Support Leads to Initial Resource Assessment in South Carolina

Offshore wind resource found off the coasts of southern North Carolina and northern South Carolina show high potential. In 2014, BOEM's Office of Renewable Energy program contacted the S.C. Energy Office to begin discussions about providing funding to initiate a mapping and analysis program in the northern portion of the state's coastal ocean, and the S.C. Energy Office in turn asked the Consortium to coordinate the preparation and submission of a formal proposal to BOEM to begin this work. The Consortium prepared and submitted a formal proposal – titled “Atlantic Offshore Wind Energy Development: Geophysical Mapping and Identification of Paleolandscapes and Historic Shipwrecks Offshore South Carolina” – to BOEM, which was funded for \$750,000, with more than \$780,000 was provided in match. Partners include: S.C. Energy Office; Coastal Carolina University; University of South Carolina; College of Charleston; Bureau of Ocean Energy Management (BOEM)-Office of Renewable Energy Program; S.C. Regulatory Task Force on Clean Coastal Energy; and the BOEM-S.C. Offshore Renewable Energy Task Force.

Regional Efforts

☑ **Southeast Coastal Ocean Observing Regional Association – a NOAA IOOS Office Partnership**

The Southeast Coastal Ocean Observing Regional Association (SECOORA), one of 11 ocean observing regional associations established through the Integrated Ocean Observing System (IOOS®) network, coordinates coastal ocean observing activities and facilitates dialogue among stakeholders in the southeastern U.S. In 2002, the Consortium was asked by university and ocean observing leaders in the region to lead the development and management of the region's ocean observations program. Over its first eight years, the Consortium assisted SECOORA in securing \$6 million in NOAA funding to support the organization's maturation, ocean observing assets, data generation and integration, stakeholder engagement, and administration. On March 17, 2010, SECOORA (www.secoora.org) was spun off from the Consortium, becoming an independent, non-profit corporation.

☑ **Governors' South Atlantic Alliance – a Federal-State Government Partnership**

The Consortium was actively involved with the formation and nurturing of the Governors' South Atlantic Alliance (GSAA; www.southatlanticalliance.org) formally established on October 19, 2009 at an official ceremony in Charleston, South Carolina involving the Governor's appointees from the four southeastern states, as well as representatives of the White House Council on Environmental Quality and three federal co-lead agencies. The Consortium executive director serves as a member of the GSAA Executive Planning Team, and its coastal community specialist serves as lead for the GSAA working waterfronts technical team.

☑ **Southeast and Caribbean Climate Community of Practice (CoP) – a Region-wide Partnership**

The CoP brings together individuals from local, state, and federal governments, academia, non-profit organizations, and the private sector in the Southeast U.S. (NC, SC, GA, FL, Puerto Rico) to apply climate science towards assessments of how coastal communities and ecosystems can adapt to the impacts of climate variability and change. The S.C. Sea Grant Consortium coastal climate extension specialist chairs the CoP steering committee, ensuring the CoP maintains momentum and reach into communities in the region. The steering committee, including leadership from all represented states, federal and local leadership, and non-profit organizations, hosted a workgroup meeting at the Carolinas Climate Resilience Conference to re-engage members of the CoP and identify priorities moving forward. They hosted a joint webinar with the Gulf of Mexico Climate Community of Practice on the newly released report, *Risky Business: The Economic Risks of Climate Change in the United States*, attended by 60 people. The climate extension specialist began providing monthly event emails to the community, and engaged a subcommittee

to plan a webinar on how to leverage the Community Rating System for climate adaptation. The CoP has expanded its membership to 159 members, an 18% increase in 2014.

☑ **Fostering Southeast Sea Grant Regional Efforts – a Joint Sea Grant Regional Partnership**

The N.C., S.C., GA, and FL Sea Grant College Programs held an Extension and Communications meeting March 30-April 1, 2015 in South Carolina at the historic Penn Center. This was the first regional meeting after a hiatus of seven years. The meeting, hosted by the S.C. Sea Grant Consortium and planned by a steering committee of representative from each of the programs, developed simple objectives to provide extension agents and specialists, communicators, and research coordinators the time and space to identify commonalities in interests and needs, assess the regional capacity in skills and experience, and develop ideas for programs that will meet those needs while benefiting from a regional perspective. This was accomplished through a series of presentations, facilitated discussions, and informal networking and idea-generating time.

Collaborative Network/NOAA Activities

The S.C. Sea Grant Consortium interacts routinely with NOAA and Sea Grant partners in its planning processes, program activities, research efforts, and outreach initiatives; the following are examples:

Program Advisory/Strategic Planning

- The Directors of the NOAA CSC, NOAA HML, and NOAA Center for Coastal Environmental Health and Biomolecular Research (CCEHBR) are members of the Consortium's Program Advisory Board.
- The Deputy Commissioner of SCDHEC-OCRM is a member of the Consortium's Program Advisory Board, as is the Director of the South Atlantic Fishery Management Council.
- The NOAA Center for Coastal Management is represented on S.C. Sea Grant Extension's Coastal Climate, Coastal Processes, and Coastal Communities Advisory Committees.

Regional Initiatives

- The Consortium Director is a member of the Executive Planning Team for the Governors' South Atlantic Alliance (GSAA; www.southatlanticalliance.org); NOAA is one of three lead federal agencies for the GSAA.
- The Consortium Director is Past-Chair and Executive Committee member of the Southeast Coastal Ocean Observing Regional Association (SECOORA; www.secoora.gov); the Consortium is a SECOORA institutional member.
- The Consortium is collaborating with the GA, N.C., and FL Sea Grant College Programs on a Regional Resiliency Research Competition, in partnership with the NOAA/NOS Office for Coastal Management.
- The Consortium is a partner with the GA, N.C., and FL Sea Grant College Programs on a regional project funded by the National Sea Grant College Program to study the ecological effects of and possible responses to the invasive Lionfish in South Atlantic and Caribbean waters.
- The Consortium was represented on the Steering Committee for the "NOAA in the Carolinas" regional partnership (www.carolinas.noaa.gov).
- The Carolinas RISA program, funded by the NOAA Climate Program Office, is located at the University of South Carolina and is a key partner in the Consortium's Coastal Climate Extension Program.
- The Climate Focal Point at the Charleston National Weather Service (NWS) Weather Forecasting Office is a member of the Consortium's Coastal Climate Extension Advisory Committee.
- The Consortium chairs the S.C. Task Group on Harmful Algae (www.scseagrant.org/hab) and assists in supporting the Phytoplankton Volunteer Monitoring Network, which is coordinated by NOAA NOS NCCOS (www.products.coastalscience.noaa.gov/pmn).
- The Consortium has managed several major multi-institutional research initiatives, supported by the NOAA/NOS National Centers for Coastal Ocean Science, that have involved scientists and resource managers from NOAA CCEHBR and HML, as well as universities in the Southeast U.S. region (e.g., the Land Use-Coastal Ecosystem Study).

- The Consortium's former Assistant Director for Research and Planning was the lead Principal Investigator for the Monitoring and Assessment Program of NOAA HML Center of Excellence in Oceans and Human Health; 25 percent of her time was supported by NOAA HML.
- The S.C. Sea Grant Extension Program recently held the Sea Grant seat on the South Atlantic Fishery Management Council's Education and Information Advisory Committee.
- The Consortium Executive Director recently served for several years as the South Atlantic Sea Grant representative on the Marine Fisheries Initiative (MARFIN) Panel of the NOAA National Marine Fisheries Service.

State Level Extension/Outreach Student Training/Workforce Development Programs

- The Consortium created and coordinates the South Carolina Coastal Information Network (www.sccoastalinfo.org) to enhance the coordination and collaboration among coastal outreach programs in South Carolina. Participating organizations include the S.C. Sea Grant Extension program, the NERRS Coastal Training Programs (NI/WB; ACE Basin), NOAA Center for Coastal Management, NOAA Hollings Marine Laboratory, SCDHEC Office of Ocean and Coastal Resource Management (SCDHEC-OCRM), Clemson Extension, and three Councils of Governments, among others.
- The Consortium is a partner in the Ft. Johnson Seminar Series, which includes NOAA CCEHBR, National Institute of Standards and Technology (NIST), CofC's Grice Marine Laboratory, MUSC's Marine Biological and Environmental Sciences Program, and SCDNR-Marine Resources Division (www.cofc.edu/~grice/fjseminar.htm).

Sea Grant Association Initiatives

- The Consortium Executive Director is serving as a member of the Sea Grant Association's Aquaculture Working Group, which is assembling a ten-year research and outreach investment strategy for Sea Grant programming.

PROGRAM CHANGES RESULTING FROM PREVIOUS REVIEW

Suggestions and Consortium Response

The S.C. Sea Grant Consortium's previous Site Visit review occurred on September 21-22, 2010 in Charleston, South Carolina. The final Site Visit report contained two suggestions:

Suggestion: The Program's inherent multi-institutional structure has created many opportunities and, given the effective leadership of the Program, significant efficiency and productivity. Thus, there is potential for continued and even improved performance. But in a multi-faceted, highly interrelated set of operations, changes in infrastructure or leadership can be disruptive. This implies that the Program should consider approaches or scenarios that can accommodate leadership or structural changes.

Response: Indeed, over the past five years the Consortium has had to respond to challenging situations regarding its standing and status in state government and a particularly high staff turnover, which is referred to in this report and will be discussed at the Site Visit. We can certainly agree that the saying "That which does not kill us makes us stronger" (by philosopher Friedrich Nietzsche) applies to the Consortium.

Suggestion: *Coastal Heritage* magazine is an excellent publication, and the Consortium should attempt to increase readership, in print and online, which may imply delivery to non-resident property owners.

Response: Indeed, *Coastal Heritage* is a highly respected award-winning magazine. The Consortium's communications team consistently seeks out new audiences for its magazine. In actuality, the Consortium consistently receives requests for additional copies of every issue of the magazine once it hits the streets, which certainly goes a long way in broadening its distribution.