2006-2007
MASGC Annual Report

Sea Grant
Mississippi-Alabama

October 2007

2006-2007 MASGC Annual Report

Introduction

Founded in 1972, the Mississippi-Alabama Sea Grant Consortium (MASGC) is an organization of nine universities and laboratories supporting scientific research, education, and outreach programs that foster the conservation and sustainable development of coastal and marine resources in Alabama and Mississippi. Coordinated by a central administrative unit in Ocean Springs, Mississippi, the Consortium members include Auburn University, Dauphin Island Sea Lab, Jackson State University, Mississippi State University, The University of Alabama, The University of Alabama at Birmingham, The University of Mississippi, The University of Southern Mississippi, and the University of South Alabama. The Consortium has an extension program with offices in Biloxi, Mississippi and Mobile, Alabama and a legal program located at The University of Mississippi in Oxford, Mississippi.

Objectives of the MASGC program include working with organizations interested in the sustainability of coastal resources, promoting strategic assets of the program and its quality pool of investigators, and integrating programmatic efforts with those of research and education institutions to produce greater benefits for the coastal communities being served. The key to achieving results is in our approach of effective partnering, efficient management of program resources, and making prudent investments in program development.

This annual report summarized the activities and accomplishments of the Mississippi-Alabama Sea Grant College Program from February 1, 2006 through January 31, 2007.

I. Award Reporting

Institution/Grantee: University of Southern Mississippi/Mississippi-Alabama Sea Grant Consortium
Award Number: NA05OAR4171118
(MASGC Project #EX-8)
Time period: 05/01/05 - 01/31/07
Award Title: Alabama and Mississippi Marine Debris Removal and Prevention: Boater Education and Volunteer Based Clean-up Programs.

Accomplishments and outcomes from this award:

1. An award-winning marine debris public service announcement repeatedly reached an estimated 240,000 people during Memorial and Labor Day weekends (2005 and 2006). Located at: http://www.masgc.org/communications/pubs/masgp/05-039.mp3 .
2. Reprints of *"Protecting Your Fishing Waters: Ways to Reduce Derelict Fishing Gear and Other Marine Debris"* fact sheet have been translated into both Spanish and Vietnamese languages, produced and distributed. Targeted audiences were commercial, recreational, and charter boat fisheries.
3. Co-sponsored Coastal Clean-up programs in Alabama and Mississippi.
4. Lidded marine litter buckets were designed, produced and distributed. Distribution of 3,000 marine debris buckets through marinas, agencies, aquariums, and bait shops has been completed. Providing enclosed buckets to boaters to "stash their trash" in will reduce the amount of litter accidentally released from boats.
5. A *Clean Boating* pledge signature form was produced, and boaters and anglers have signed approximately 1,500 of these. This gives insurance that the popular marine debris buckets will be used properly.
6. Funding was distributed for three educational centers to produce marine debris displays. These three centers were Dauphin Island Sea Lab Estuarium (Dauphin Island, AL), J.L. Scott Aquarium (Ocean Springs, MS) and the Environmental Studies Center (Mobile, AL). The Environmental Studies Center completed its display. Dauphin Island and Scott Aquarium both took damage from Katrina and are continuing to work on development of their displays using the funds already allocated to them. They are using the Environmental Studies Center display as a template.
7. A regional Monofilament Recovery and Recycling Program (MRRP) was designed. Brochures and a website were developed, inside recycling bins were ordered, decals for external recycling bins were ordered, and outdoor 12X18 polyvinyl signs for the external bins were ordered.
8. Additional outreach items distributed were marine debris T-shirts and temporary tattoos. These used the same popular artwork provided on the litter buckets.
9. Displays were placed at local boat shows and related conventions.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Marine and Aquatic Science Literacy
Impact 1

1. **Sea Grant Reaches Out to Citizens to Reduce Marine Debris:** Sea Grant Extension decreased marine debris by educating the public on the impacts of marine debris. **Impact:** An award winning marine debris public service announcement reached an

estimated 240,000 boaters; and other users of coastal resources participated in marine debris awareness programs including Spanish and Vietnamese speaking constituents.

Performance Measures:

2007 Actual

Tools and services provided: 3

1. Marine Debris Buckets.
2. Public Service Announcements.
3. Marine Debris Brochure in 3 languages.

Tools and services applied by managers in decision making: 1

1. Marine Debris Brochure in 3 languages.

2008 Anticipated

None.

Institution/Grantee: University of Southern Mississippi/Mississippi-Alabama Sea Grant Consortium
Award Number: NA05OAR4171184
(MASGC Project #EX-9)
Time period: 10/01/05 - 09/30/09
Award Title: Fisheries Extension Enhancement - Strategies to Engage the Asian Constituency.

Accomplishments and outcomes from this award:

1. Peter Nguyen, a Wild American Shrimp Incorporated (WASI) product certification instructor, helped to educate Vietnamese processing plant workers and shrimpers about relevant regulatory changes and technological advances.

Project Completion Report: Project has been extended to September 30, 2009. No completion reports have been filed.

Project Impacts:
Theme: Fisheries
Impact 1

1. **Sea Grant Works with the Vietnamese Fishing Community:** Sea Grant extension engaged the Vietnamese-speaking commercial fishing community and facilitated its participation in regulatory and technological advances.
   Impact: As a result of a Vietnamese-speaking fisheries specialist, the Vietnamese fishing community (approximately 30% of total in Alabama and Mississippi) has increased its participation in education programs on regulatory changes and technological advances.

Performance Measures:
2007 Actual
Tools and services provided: 1

1. Increased participation by Vietnamese-speaking commercial fishermen and processors in the Wild American Shrimp Program.

Tools and services applied by managers in decision making: 1

1. Managers are routinely utilizing the services of MASGC's Vietnamese-speaking fisheries specialist at meetings involving commercial fishermen and seafood processors.

2008 Anticipated
None.

Institution/Grantee: University of Southern Mississippi/Mississippi-Alabama Sea Grant Consortium
Award Number: NA06OAR4170204
(MASGC Project #M/GOMR-1)
Time period: 06/01/06 - 05/31/11
Award Title: Gulf of Mexico Marine Research and Information Needs and Planning.

Accomplishments and outcomes from this award:

1. A regional planning coordinator was hired.
2. A one-page project summary was developed, published, and distributed to interested groups.
3. The Gulf of Mexico Research Planning website (http://masgc.org/gmrp/) was developed and is being continuously updated.
4. A search was performed to identify appropriate individuals to invite onto the Planning and Review Council and letters of invitations were sent to 22 individuals to date.
5. Contact information was collected for individuals and groups that will be asked to participate in the survey and workshops.
6. An overview of the project was presented at the Gulf States Marine Fishery Commission/Sea Grant extension meeting in Biloxi, MS and provided an opportunity for SG personnel from around the Gulf of Mexico to learn about and ask questions related to the project.
7. More than 75 research plans from numerous agencies have been synthesized and rated by Ocean Research Priority Plan theme.
8. More than 1500 stakeholders completed an online Regional Research Strategic Planning survey.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Infrastructure
Impact 1

1. **Sea Grant Provides a Framework for Gulf of Mexico Research:** Sea Grant's Regional Research Planning Coordinator is facilitating a Gulf-wide research planning effort to identify regional research priorities and better utilize research funding. **Impact:** As a result of this work, the NOAA Northern Gulf Cooperative Institute, the Gulf of Mexico Alliance, the NOAA Regional Collaboration, and the NOAA Gulf Services Center are actively participating in the regional planning effort and utilizing information from the planning project.

Impact 2

2. **Gulf of Mexico Sea Grant Programs Fund Regional Research:** The four Gulf of Mexico Sea Grant Programs participated in a joint request for research proposals and will fund two regional multi-institutional resiliency research projects in 2008-2009. **Impact**: As a result of the regional research effort, scientists are working on regional resiliency research projects with a funding level greater than would have been available if funded by an individual Sea Grant Program ($200,000 per year versus a range of $50,000-$100,000 per year).

Performance Measures:
2007 Actual
Tools and Services Provided: 1

1. The Gulf of Mexico Research planning website (http://masgc.org/grmp).

Tools and Services applied by managers in decision making: 1

1. The Gulf of Mexico Research Planning Website is routinely used by all sponsors of Gulf of Mexico Research.

2008 Anticipated

Tools and Services Provided: 2

1. The Gulf of Mexico Research Planning Website (http://masgc.org/gmrp/).
2. Gulf of Mexico Research Plan.

Tools and Services applied by managers in decision making: 2

1. The Gulf of Mexico Research Planning Website is routinely used by all sponsors of Gulf of Mexico Research.
2. The Gulf of Mexico Research Plan will be used by all marine research sponsoring programs to improve funding efficiencies and regional collaboration.

Institution/Grantee: University of Southern Mississippi/Mississippi-Alabama Sea Grant Consortium
Award Number: NA06OAR4170125
(MASGC Project #ED-18)
Time period: 06/01/06 - 05/31/08
Award Title: Facilitating the Gulf of Mexico Alliance (GOMA) Environmental Education through the Employment of an Education and Outreach Coordinator.

Accomplishments and outcomes from this award:

1. Hired a Gulf of Mexico Alliance Education Coordinator based at the Dauphin Island Sea Lab.
2. Sponsored six workshops across the Gulf of Mexico.
3. Developed and Gulf of Mexico Education listserve.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Marine and Aquatic Science Literacy
Impact 1

1. **NOAA Sea Grant Initiates Regional Marine and Ocean Science Literacy Program:** The Gulf of Mexico Alliance is one of the first regional initiatives in the United States. The Marine Science Literacy Theme was the first theme to receive funding for a dedicated coordinator funded through NOAA's Office of Education and managed by the Mississippi-Alabama Sea Grant Consortium.
   Impact: The initial success of the GOMA education coordinator has led to the planned hiring of a coordinator each of the other GOMA Action Plan theme areas.

Performance Measures:
2007 Actual
Tools and Services Provided: 1

1. The GOMA Education listserve.

Tools and Services applied by managers in decision making: 1

2. The GOMA Education listserv has become one of primary mechanism for information exchange among Gulf of Mexico marine science educators.

2008 Anticipated
None.

Omnibus Awards

Institution/Grantee: University of Southern Mississippi/Mississippi-Alabama Sea Grant Consortium
Award Number: NA06OAR4170078
Time period: 02/01/06 - 08/31/08
Award Title: 2006-2007 Omnibus Program / Mississippi-Alabama Sea Grant Consortium.

Projects:

MASGC Project # E/ED-12:

PI: Sharon Walker
Title: Educational Efforts at the J.L. Scott Marine Education Center, the Dauphin Island Sea Lab, and the Environmental Studies Center.
Time Period of this project: 2/1/04 – 1/31/08

Accomplishments and outcomes from this project:

1. The first attempts at Likert-scale surveys and pre- and post-testing of all of the activities have revealed a successful educational program.

Environmental Studies Center, AL

2. 18 teachers and over 280 students from 11 Mobile County high schools participated in MASGC-sponsored learning experiences at the Environmental Studies Center.
3. Teacher training workshop at the Environmental Studies Center provided instructions for teachers on preparing the students for the planned experiences and instructions on how to carry out the pre- and post-testing.
4. Environmental Studies Center exhibits were viewed, and 21,000 visitors utilized educational resources.

Dauphin Island Sea Lab Estuarium / Discovery Hall Programs, AL

5. Teachers from 333 schools, involving 11,779 precollege students, 21 different colleges/universities, including 566 undergraduate/graduate students and 12 different adult groups with 374 participants were involved in Sea Grant and state-sponsored learning experiences at the DISL Estuarium.
6. The Discovery Hall Program Bay Mobile (a mobile marine classroom) was used by 10 schools, involving 116 teachers, 4,259 students and 5,000 additional participants
7. Vessel-based learning programs were used by 11 Mobile, AL, high schools to educate 560 students.
8. 25 high school students enrolled in the Discovery Hall Programs marine biology course.
9. 105 middle school students participated in a week-long Discovery Hall Program marine science camp.
10. 37 children and parents participated in Treasure Island, a Discovery Hall Program that teaches high school aged students about high-tech oceanographic instruments.
11. 96 children and their parents/grandparents participated in Oceans Alive, a Discovery Hall Program that combines arts and crafts and beach walks with hands-on educational activities.

J.L. Scott Marine Education Center, MS

12. 4,565 students and 442 teachers/chaperones from 35 schools and/or groups participated in Sea Grant and state-sponsored learning experiences at the J.L. Scott Marine Educational Center (MEC)
13. 227 students, 22 teachers, and 59 chaperones participated in the Project Marine Discovery Marine Encounters Program. This is a field trip program that educated K-12 students.
14. A pre-school program introduced 14 5-year-old children to basic concepts of the marine environment.
15. 10 Sea TV broadcasts educated 250 students, 10 teachers, and 6 members of the general public on topics from hurricane impacts to crabs. These are 1-hour interactive video broadcasts.
16. 14 schools representing 52 teachers, 69 chaperones, and 465 students, participated in the Project Marine Discovery Mini-Camp where students learn from 3 days of hands-on learning and field activities.
17. 752 students participated in Project Marine Discovery Sea Camp, a day camp that caters to 5 – to 16-year-olds.
18. 16 schools, 2,871 students, and 224 pre-college teachers participated in a traveling Project Marine Discovery program.
19. The Marine Education Center hosted the Hurricane Bowl National Ocean Science Bowl (NOSB) regional competition. This is one of the largest regional NOSB competitions. This year, 19 teams represented 13 schools with 94 student participants.
20. The MEC hosted the Region VI Science and Engineering fair. The fair had 364 participants.
21. 78 teachers, educators, and scientists participated in professional developments workshops produced by the MEC.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Marine and Aquatic Science Literacy
Impact 1

1. **Sea Grant Answers the Call for Increased Marine Sciences Literacy:** The Gulf of Mexico Alliance and the U.S. Ocean Commission Report called for increased Marine Science Literacy on Coastal and Marine issues.
   Impact: Sea Grant Education Programs in Alabama and Mississippi were instrumental in implementing education programs for more than 175,000 K-12 students and 440 teachers.

Performance Measures:
2007 Actual
Tools and Services provided: 2

1. Bay Mobile traveling exhibit.
2. Regional Ocean Science Bowl.

Tools and Services Applied by managers in decision making: 3

1. Education information delivered to 9,759 students, parents, and teachers.
2. Marine Science High School competition from 19 teams from 13 schools.
3. Professional development workshops delivered to 194 teachers in Alabama and Mississippi.

2008 Anticipated
Tools and Services provided: 4

1. Bay Mobile traveling exhibit.
2. Regional Ocean Science Bowl.

3. Alabama and Mississippi remote operated vehicle (ROV) competition.
4. Marine science curricula used by 194 teachers in Alabama and Mississippi.

Tools and Services Applied by managers in decision making: 2

1. Education information delivered to 11,000 students, parents and teachers.
2. Principles of ROV construction and operation will be taught in one school in Alabama and one school in Mississippi.

MASGC Project # A/L-3:

PI: Stephanie Showalter
Title: National Sea Grant Law Center.
Time Period of this project: 2/1/06 – 6/30/07

Accomplishments and outcomes from this project:

1. Eight fact sheets and 3 white papers were issued.
2. Two peer reviewed article/book chapters were published.
3. Thirteen issues of "Ocean and Coastal Case Alert," a listserve-distributed publication were distributed.
4. Distribution of Ocean and Coastal Case Alert increased to 100 subscriptions.
5. Four issues of "The Sandbar" newsletter were published.
6. "The Sand Bar" subscriptions increased to 1267 hardcopy and 81 electronic.
7. Two issues of the "The Sea Grant Law and Policy Digest" were published.
8. Four issues of "Water Log: The Legal Reporter of the Mississippi-Alabama Sea Grant Consortium" were published.
9. The National Sea Grant Legal Center prepared eight memorandum of law.
10. The National Sea Grant Legal Center prepared a document detailing the state authority to regulate coastal resources.
11. The National Sea Grant Legal Center entertained over 40 requests for information.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Infrastructure
Impact 1

1. **National Sea Grant Legal Center Provides Nationwide Legal and Regulatory Outreach:** The National Sea Grant Legal Center was created in 2002 and has rapidly become the primary source of legal and regulatory outreach for the Sea Grant Network and other parts of NOAA.
   Impact: Availability of in-depth, timely and accurate legal research has allowed the Sea Grant Network to routinely address legal issues associated with coastal and marine ecosystems.

Performance Measures:
2007 Actual
Tools and Services provided: 2

1. Creation of an Ocean and Coastal Case Alert, a listserve.
2. Detailed memorandum of law on legal issues particular to 16 state Sea Grant programs.

Tools and Services Applied by managers in decision making:

1. Timely, relevant, and regular dissemination of information through the Ocean and Coastal Case Alert listserve is used by 100 people from state Coastal Zone Programs,

National Estuarine Reserve Reserves, the NOAA Coastal Services Center and state management agencies.

2. Sixteen Sea Grant extension agents received Legal Center memoranda for inreach for their staff and outreach to their constituents to eliminate misperceptions, diffuse conflicts, and better inform the debates.

2008 Anticipated

Tools and services provided: 2

1. Ocean and Coastal Case Alert listserve.
1. Development of the third edition of "Understanding Fisheries Management" outreach publication as a result of the reauthorization of the Magnuson Fishery Conservation and Management Act.

Tools and services applied by managers in decision making: 2

2. 150 managers and legal staff from across the U.S. will use Ocean and Coastal Case Alert listserve.
3. "Understanding Fisheries Management" will be used as a training tool for all regional Fisheries Management Council members.

MASGC Project # A/O-1:

PI: Stephanie Showalter
Title: Mississippi-Alabama Sea Grant Outreach Program.
Time Period of this project: 2/1/06 – 1/31/08

Accomplishments and outcomes from this project:

1. Assisted fishermen's organizations in determining eligibility for fuel assistance after Hurricane Katrina resulting in 200 fishermen dividing 1.2 million dollars for fuel.
2. One hundred fourth-graders were educated on the importance of watersheds during the Water Festival in Alabama.
3. Sixty people attended a workshop on "Soils, Stormwater and Watershed Protection: Tools for Managing Erosion" that was co-produced with the South Alabama Regional Planning Commission and Weeks Bay National Estuarine Research Reserve. The audience included elected and appointed officials, developers, planners/planning commissioners, engineers, and natural resource managers.
4. Information on best management practices for clean water was provided to groups responsible for two Alabama watersheds.
5. The first "Continuing Legal Education" course was produced by the MASGC Legal Program and the National Sea Grant Law Center, and The University of Mississippi Center for Continuing Legal Education. Over 30 lawyers, law students, and engineers participated.
6. Two HAACP courses were given with 38 attendees
7. Two 1-week aquaculture summer workshops were held for 25-30 teachers at Gadsden State Community College to discuss technical issues, system design, construction and procurement.
8. 100 one-on-one dockside demonstrations and small meetings were conducted to show fishermen how to comply with federal and state fishery management regulations while minimizing production losses and downtime in the use of Turtle Excluder Devices and bycatch reduction devices
9. Four technical reports, 2 brochures, 3 fact sheets, 10 issues of "Gulf Coast Fisherman," 4 issues of "Sea Briefs," 6 issues of "Sea Harvest News," 24 press releases, 26 newspaper column articles, and 1 article for another agency were produced and published.

10. One professional poster, 2 research presentations, 35 general public outreach presentations, 11 community interest group meeting presentations, 5 educational presentations, and 5 displays at public events were given.
11. More than 55,000 oysters were grown by 30 volunteers, 4 high school students, and 1 teacher in the oyster gardening program
12. The Aquatic Nuisance Species Task Force was created with 17 partner agencies. This taskforce seeks to prevent and manage aquatic nuisance species in Alabama.
13. 360 people attended a Coastal Mixed Use Conference that was co-sponsored by MASGC.
14. Smart Growth guidance has been given to the Town of Dauphin Island, AL, to assist the town decision makers with their strategic planning process.
15. MASGC provided the coordination and facilitation to form the Alabama Working Waterfront Coalition and continues to assist the coalition.
16. Outreach personnel participated in training to become certified Wild American Shrimp Incorporated (WASI) instructors. These personnel have used this certification to teach local fishermen about the quality standards needed to increase their product marketability.
17. A collaborative introductory project involving 19 Gulf Coast fishing vessels was undertaken to expand the Gulf-wide use of electronic logbook technology by the offshore shrimp fleet. The program designed and implemented a shrimp effort and catch logbook program through voluntary agreement with randomly-selected vessels in the Gulf fishing fleet. A vessel tracking system using dedicated Global Positioning System (GPS) transponders was also developed and deployed on selected vessels operating in the Gulf. MASGC's role in this undertaking is to locate specific vessels, assist in hardware installation and maintenance, and swap out memory modules when the vessels visit ports in the northern Gulf to unload and pick up supplies.
18. Gulf of Mexico charterboat fishermen were given fish venting kits and demonstrations on how to correctly use the kits.
19. MASGC co-sponsored the 18th Annual Mississippi Coastal Cleanup. Around 3,200 volunteers picked up more than 31.5 tons of trash. This was the first cleanup held since Katrina.
20. The MASGC Legal Program answered 11 requests for legal information through the Advisory Service from our extension programs and 4 partners.
21. Clean Boater's Pledge was signed by approximately 1,500 boaters and anglers during the 2006 Mobile Boat Show.
22. MASGC co-hosted the Alabama-Mississippi Bays and Bayous Symposium with the Mobile Bay National Estuary Program, Dauphin Island Sea Lab, and Gulf Coast Research Lab. 350 registrants participated in the 3-day symposium by presenting 50 scientific talks and 35 posters.
23. Forty people attended a meeting in Biloxi, MS regarding Building Hurricane Resistant marinas.
24. Imagine: A Region with Thriving Mixed Use Communities, April 18, 2006, Mobile, AL. 150 attendees.
25. Balancing Coastal Needs: Working Waterfronts on the Gulf Coast, June 7, 2006, Biloxi, MS. 32 attendees.
26. Balancing Coastal Needs: Working Waterfronts on the Gulf Coast, June 8, 2006, Bayou LaBatre, AL. 43 attendees.
27. Alabama Working Waterfronts Coalition – 6 meetings: August 2006 – 7 attendees, September 2006 – 16 attendees, October 2006 – 11 attendees, November 2006 – 16 attendees, December 2006 – 22 attendees, January 2006 – 11 attendees.
28. One Sanitation Control Procedure Course. 6 attendees.
29. Individual marina/agency meetings for Clean Marina Program. 23 participants

30. Marine Debris Educational Display Design and Development, Jan. 06. 5 attendees.
31. Columbus Marina Clean Marina Designation Presentation. July 2006.
32. City of Gulf Shores, Drafting and Finalizing Marina Specific Ordinances, June 2006.
33. Break the Grip of the Rip, Orange Beach July 2006. Approximately 35 attendees.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Coastal Natural Hazards
Impact 1

1. **Sea Grant Works with Storm Water Managers:** A post conference survey revealed that of 60 people attended the storm water management practice workshop entitled "Soils, Storm Water and Watershed Protection: Tools for Managing Erosion."
   Impact: Based on post-workshop surveys, 84% are recommending best management practices to clients, with 33% recommending these practices least weekly, and 43% have designed/implemented at least one technique learned at the workshop.

Impact 2

2. **Sea Grant assist in Hurricane Katrina Recovery:** In response to Hurricane Katrina, Sea Grant Extension personnel worked with local fishermen to developed protocols to distribute international aid.
   Impact: Approximately 200 fishermen shared a total of $1.2 million dollars in fuel assistance.

Performance Measures:
2007 Actual
Tools and services provided: 6

1. Assisted in the swapping out memory modules in vessels in favor of hardware installation and maintenance of a vessel tracking system that uses dedicated Global Positioning System (GPS) transponders.
2. Alabama and Mississippi developed Aquatic Nuisance Species Management Plans.
3. Training provided by Sea Grant's seafood safety specialist led to commercial processing plants in Mississippi adopting HCP, HHP, and IQF processing systems for the rapidly growing and strictly regulated domestic markets for raw oyster products.
4. High school aquaculture workshops improved the management and decreased operation costs of small-scale aquaculture systems.
5. Wild American Shrimp Incorporated (WASI) Certification Program training was given.
6. The Aquaculture Network Information Center Website (http://aquanic.org) is the world's most used aquaculture Website.

Tools and services applied by managers in decision making: 6

1. Shrimp boat owners participating in the vessel tracking training have adopted the system.
2. The Aquatic Nuisance Species Management Plans will guide both states in minimizing accidental introductions of aquatic nuisance species and implement tactics to control species already present.
3. Oyster processing plants are using information provided by Sea Grant Extension to implement HCP, HHP, and IQF procession methods.
4. 15 high school programs adopted information provided during aquaculture workshops.
5. 10 Alabama and Mississippi shrimpers are WASI certified.
6. The Aquaculture Network Information Center (AquaNIC) provides a portal to the world's aquaculture information and is used by the NOAA Office of Aquaculture, private aquaculturists, aquaculture associations, and state agencies.

2008 Anticipated

Tools and services provided: 4

1. Coordination of the Alabama Working Waterfront Coalition (AWWC) will lead to the development of a Working Waterfront Management Plan.
2. Three marinas will implement best management practices to reduce pollution by participating in the bi-state Clean Marina Program.
3. Sea Grant Extension will implement a Living Shorelines education program.
4. Sea Grant Extension will implement an education program on decreasing reef fish mortality caused by regulatory discards.

Tools and services applied by managers in decision making: 4

1. The Working Waterfront Management Plan will be used by local and state governments to implement ways of maintaining the economically important working waterfronts along coastal Alabama.
2. Three new marinas in Alabama will join the Alabama and Mississippi Clean Marina program.
3. The Living Shorelines program will lead to the use of erosion control alternatives instead of vertical bulkheads.
4. Charter boat businesses will implement fish technologies to decrease regulatory discard mortalities.

MASGC Project # R/CEH-24

PI: Just Cebrian
Title: Evaluating the role of restored black needlerush marsh (*Juncus romerianus*) as a buffer of anthropogenic eutrophication of coastal systems: an isotope enrichment approach.
Time Period of this project: 2/1/06 – 1/31/07

Accomplishments and outcomes from this project:

1. An experimental marsh restoration plot was planted and initial experiments involving the plot were successful.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Ecosystems and Habitats
None.

Performance Measures:
2007 Actual
None.
2008 Anticipated
Tools and services provided: 1

1. Practical user-friendly tool on how to use constructed marshes to curtail water pollution arising from coastal development will aid in a watershed-integrated environmental management plan.

Tools and Services Applied by managers in decision making: 1

1. Coastal storm water managers and real estate developers will use constructed marshes to mitigate the effects of storm water runoff from developed areas.

MASGC Project # R/CEH-25

PI: Jinx Campbell
Title: The Diversity and Role of Root-Associated Fungi in Saltmarsh and Seagrass Plants and Implications for Restoration Success.
Time Period of this project: 2/1/06 – 1/31/07

Accomplishments and outcomes from this project:

1. Field collections were completed and are currently being analyzed for mycorrhizae using morphology and biochemical and molecular methods.
2. *Spartina sp.* and *Juncus sp.* plants were purchased from a Florida nursery and analyzed for root mycorrhizae.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Ecosystems and Habitats
None.

Performance Measures:
2007 Actual
None
2008 Anticipated
Tools and services provided: 1

1. Mycorrhizal fungi inoculation will enhance the growth of marsh plants.

Tools and services applied by managers in decision making: 1

1. Restoration practitioners will use mycorrhizal fungi inoculums in marsh restoration projects.

MASGC Project # R/SP-14

PI: Stephen Szedlmayer
Title: Reproductive Behavior, early life history, and interspecific interactions of gray triggerfish, *Balistes capriscus*, from the Northeastern Gulf of Mexico.
Time Period of this project: 2/1/06 – 2/1/08

Accomplishments and outcomes from this project:

1. On reefs where gray triggerfish were removed, their abundance was lower than that prior to removal while red snapper abundance increased across size classes. For non-removal sites, numbers of red snapper in specific size classes were observed to either increase or decrease.
2. Under conditions of unlimited food, no growth differences of red snapper were found when cultured alone or with gray triggerfish (30-day experiment).
3. Described and documented courtship and pre-fertilization behaviors of the male and female gray triggerfish 3 times and post-fertilization behaviors 15 times.
4. Larval gray triggerfish were reared for 8 days and their development was documented.
5. Two laboratory growth rate experiments on red snapper and grey triggerfish were completed.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Fisheries
Impact 1

1. **Sea Grant identifies spawning behavior of gray triggerfish:** As reef fish restrictions are placed on snapper species, increased fishing pressure will be placed on other reef fishes such as gray triggerfish, which have incomplete life history information.
   Impact: A documented unique spawning behavior of triggerfish may lead to a reassessment and possible modification of the management of populations of important commercial and recreational fish species.

Performance Measures:
2007 Actual
None.
2008 Anticipated
Tools and services provided: 1

1. Improved life history information of gray triggerfish and their interaction with snapper species.

Tools and services applied by managers in decision making: 1

1. Life history and behavior information will be applied by the Gulf of Mexico Fisheries Management Council and state fisheries managers.

MASGC Project # R/SP-15

PI: Stephen Watts
Title: Sea Urchins are Improved Candidates for Aquaculture and Biomedical/Ecotoxicological Models.
Time Period of this project: 2/1/06 – 1/31/08

Accomplishments and outcomes from this project:

1. Increases in seed stock production and survival of all early development stages of the sea urchin *Tripneustes ventriosus* have been achieved.
2. Laboratory produced sea urchins *Tripneustes ventriosus* fed formulated diets have been successfully cultured to adults that have produced gametes, and eggs have successfully been fertilized.
3. Preliminary nutritional experiments were conducted on the smallest size sea urchin (5mm diameter) ever to feed upon a formulated diet.
4. Three of seven formulated diets fed to adult sea urchins produced gonads (roe) that had marketable quality and color. The first taste test of the roe from sea urchins fed formulated diets was conducted.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Aquaculture
Impact 1

1. **Sea Grant develops larval diet for sea urchins:** Sea urchins are an important aquaculture species used for roe and biomedical research.
   Impact: Pelleted diets for sea urchins can now be produced commercially based upon the successful development of a cold extrusion process; the development of semi-purified

and purified diets for the culture of sea urchins allows for the determination of nutritional requirements and the development of standardized diets for medical research.

Performance Measures:
2007 Actual
Number of new products discovered: 1
1. Cold extruded larval sea urchin diet developed.

2008 Anticipated
Number of new product applied to use: 1
1. National feed company is commercializing larval sea urchin diet.

Number of New Jobs Created: 1
Amount of Economic Benefit: $500,000

MASGC Project # R/SP-16

PI: Harriet Perry
Title: Ecosystems and Fisheries Productivity: Assessment of Estuarine Populations of Fishes and Invertebrates in Mississippi-Alabama Waters.
Time Period of this project: 2/1/06 – 1/31/08

Accomplishments and outcomes from this project:
1. Preliminary analysis indicates declines in 5 species: (*Litopenaeus setiferus*, *Callinectes sapidus*, *C. similis*, *Cynocsion arenarius* and *Peprilus burti*) out of ten examined in Mississippi.
2. Data sharing and verification from the Alabama Department of Marine Resources has occurred to expand the database.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Digital Ocean
None.

Performance Measures:
2007 Actual
None.

2008 Anticipated
Number of new forecasting capabilities: 1
1. Predictive tool to determine the impacts of human development on trends in abundance of commercially important species of fish and crustaceans in Mississippi and Alabama costal waters.

Number of new forecasting capabilities applied: 1
1. Predictive tool will be applied by Mississippi Department of Marine Resources and Alabama Division of Marine Resources.

Institution/Grantee: University of Southern Mississippi/Mississippi-Alabama Sea Grant Consortium
Award Number: NA16RG2258
Time period: 02/01/02 - 05/31/08
Award Title: 2002-2005 Omnibus Program / Mississippi-Alabama Sea Grant Consortium

Projects

MASGC Project # E/ED-8-NSI:

PI: Sharon Walker
Title: Sea Grant Marine Environmental Biotechnology Program – Southeast Education Network.
Time Period of this project: 6/1/03 – 12/31/06

Accomplishments and outcomes from this project:

1. Three biotechnology workshops/conferences involving 454 participants (formal and informal) were held.
2. Four presentations were made at state, regional, and/or national meetings on biotechnology.
3. 31,595 precollege students and members of the general public were positively impacted concerning biotechnology during the duration of this grant.
4. Three biotechnology PowerPoint presentations and five biotechnology lesson plans were developed.
5. One conference was organized on biotechnology.
6. Eleven agencies and/or organizations provided collaborative support to ensure the success of this effort.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Marine and Aquatic Science Literacy
None.

Performance Measures:
2007 Actual
Tools and services provided: 1

1. Development of three biotechnology lesson plans.

Tools and services applied by managers in decision making: 1

1. The biotechnology lesson plans applied to use by teachers.

2008 Anticipated
None.

MASGC Project # E/ED-9-NSI:

PI: Sharon Walker
Title: Sea Grant Aquatic Nuisance Species Research Program – Southeast Regional Strategic Outreach Network.
Time Period of this project: 6/1/03 – 4/30/07

Accomplishments and outcomes from this project:

1. Eleven workshops and teacher mini-camps were implemented and discussed profession development programs on the topic of Aquatic Nuisance / Invasive Species. Approximately 500 teachers and citizens were educated on this topic.
2. Seven K-12 lectures, demonstrations and hands-on activities occurred to educate 17,960 students on Aquatic Nuisance/Invasive Species
3. Displays and exhibits at the Dauphin Island Sea Lab Estuarium and the J.L. Scott Marine Education Center were viewed by 121,575 general admission visitors.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Marine and Aquatic Science Literacy
None.

Performance Measures:
2007 Actual
None.
2008 Anticipated
None.

MASGC Project # E/ED-10:

PI: Sharon Walker
Title: Regional Center for Ocean Science Education Excellence (COSEE) – Central Gulf of Mexico (GCOM).
Time Period of this project: 12/31/03 – 3/31/07

Accomplishments and outcomes from this project:

1. During 2003, 2004, and 2005, within the five Gulf of Mexico states, a total of 15 three-week Institutes, four Sea Scholars' Voyages, and six two-day informal workshops were implemented.
2. Participation, to date, included 200 precollege teachers (27/14/8 sea scholars and 55/54/42 COSEE:CGOM teachers) and 144 scientists (38/42/26 "Face to Face" Institute, and 6/6/6 Sea Scholars and 8/6/6 online instructors not included in the "Face to Face" teams of scientists and middle school teachers);
3. One hundred "first tier" teachers had the potential to impact an additional 4,000 "second tier" teachers through the implementation of professional development workshops in their respective schools or school districts (this is a COSEE:CGOM selection criterion "signed" by both the teacher participant and his/her school principal).
4. Four thousand "second tier" teachers may have been positively affected through the staff development programs implemented by the Institutes and Sea Scholar participants;
5. Potentially, 2,835,000 precollege students may be impacted by these 200 "first tier" and 4,000 "second tier" teachers over a five-year teaching career;
6. Partnering of scientists and teachers resulted in an enhanced understanding and mutual respect between the disciplines of science and education;
7. The Oceanography and Coastal Processes Resource Guide developed by teachers for teachers has been aligned with NSES (hard copy, CD-ROM, Website <http://www.coast-nopp.org/toc.html>).

8. The Coast Website continued to be effective in the dissemination of the Resource Guide by receiving an average of 518,000 hits and 106,000 pages requests of information on a monthly basis since year 2000;
9. Over 700 URLs, seven glossaries, career exploration data, and visualization tools for teachers were added to the Resource Guide Website in 1999 and have been used consistently throughout the 2000-2006 timeframe;
10. The online portion of the 2003, 2004, and 2005 COSEE:CGOM Institutes integrated real-time data streams and archived data to promote "hands-on" learning experiences delivered directly to users via high speed Internet;
11. Evaluation and assessment analyses for pre-test and post-test cognitive achievement scores by all participants were analyzed and proved to be significant at either the 0.01 or 0.05 levels with the exception of LA and MS in 2003. In 2004, all pre-test and post-tests were significant at the 0.01 level for all five states. In 2005, pre-test and post-test were significant at the 0.01 level for FL, LA, and TX and significant at the 0.05 level for AL. The MS data were not significant; this finding is due to the fact the MS mean pre-test scores were 17-25% higher than the mean pre-test scores of the other states, while the MS mean post-test scores were 5-25% higher than the mean post-test scores of the other states.
12. Likert-scale attitudinal achievement for all participants were also analyzed, and the majority of those data revealed a high perceived value of content, presenters, activities, and/or field trips;
13. Three underserved/underrepresented students were positively impacted for potential career pathway (zero in 2005, two in 2004 and one in 2003);
14. Forty COSEE:GCOM presentations were made at local, regional, or national meetings/conferences during this grant award.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Marine and Aquatic Science Literacy
None.

Performance Measures:
2007 Actual
Tools and services provided: 1
1. The Oceanography and Coastal Processes Resource Guide [hard copy, CD-ROM, web site (http://www.coast-nopp.org/toc.html)].

Tools and services applied by managers in decision making: 1
1. The Oceanography and Coastal Processes Resource Guide aligned with NSES is being used by teachers.

2008 Anticipated
None.

MASGC Project # E/ED-17-PD:

PI: Glenn Parsons
Title: Publication Costs for "Sharks, Skates, and Rays of the Gulf of Mexico: A Field Guide".
Time Period of this project: 9/1/05 – 8/31/06

Accomplishments and outcomes from this project:

1. Sponsored publication of the book "Sharks, Skates and Rays of the Gulf of Mexico: A Field Guide." (Glenn R. Parsons).

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Marine and Aquatic Science Literacy
Impact 1

1. **Sea Grant co-sponsors comprehensive Sharks, Skates, and Rays Field Guide:** With the reported decline of numerous species of large coastal sharks in the Gulf of Mexico, it has become imperative that commercial and recreation fishers learn to properly identify these species. Sea Grant supported the development of "Sharks, Skates, and Rays of the Gulf of Mexico: A Field Guide." (Glenn R. Parsons)
   Impact: The sharks, skates, and rays field guide has become a commonly used reference for the commercial fishing community and recreational fishers including those who fish tournaments.

Performance Measures:
2007 Actual
Tools and services provided: 1

1. "Sharks, Skates and Rays of the Gulf of Mexico: A Field Guide." (Glenn R. Parsons) field guide.

Tools and services applied by managers in decision making: 1

1. "Sharks, Skates and Rays of the Gulf of Mexico: A Field Guide." (Glenn R. Parsons) field guide being used by the Mississippi Department of Marine Resources, the Alabama Division of Marine Resources and shark researchers across the Gulf of Mexico.

2008 Anticipated
None.

MASGC Project # A/EX-3:

PI: David Burrage
Title: Mississippi-Alabama Sea Grant Extension Program.
Time Period of this project: 2/1/05 – 7/31/06

Accomplishments and outcomes from this project:

1. 10 issues of *"Gulf Coast Fisherman"* were published.
2. 6 issues of *"Sea Harvest News"* were published.
3. 26 newspaper columns were published.

Seafood Technology

4. 34 visits were made to seafood processors to assist them with problems and issues. Ten of these visits resulted in evaluations of processing operations, reviews of processing records, and/or review and interpretation of regulatory documents.
5. Following Hurricane Katrina a special effort was made to contact seafood processors. Twenty-one firms were contacted and advice provided on issues ranging from disposition of damaged product to rewriting basic HACCP plans lost in the storm.
6. A 1-day Sanitation Control Procedures Course and a 3-day Seafood HACCP Course held in cooperation with Linda Andrews, Mississippi State University provided 25 seafood processors with information needed to comply with federal HACCP regulations.

Marine Fisheries

7. Technology transfer programming was provided to the shrimp fleet in the northern Gulf regarding the use of Turtle Excluder Devices (TEDs) and Bycatch Reduction Devices (BRDs). Gear research and technology transfer activities address the issue of bycatch in the Gulf shrimp fishery. Most of the work consisted of one-on-one dockside visits and demonstrations in small "town hall" type meetings. Details were also provided through office visits by commercial fishermen and news releases. Information regarding TED and BRD regulations, design and availability was also distributed through a network of regional marine suppliers. During 2005, over 100 dockside demonstrations were conducted showing fishermen how to comply with federal and state fishery management regulations while minimizing production losses and downtime.
8. Contractor, USDC/NOAA/National Marine Fisheries Service, Assessment of the Impacts of Hurricanes Katrina and Rita on Seafood Processing Plants and Dealers - An ongoing assessment of seafood processing plants and seafood dealer houses, livebait boats and dealers, commercial fishing fleet, commercial marinas, charter boats for hire and recreational boats is currently being undertaken (Oct 2005 to May 2006) in Mississippi to determine the level of damage sustained as a result of Hurricane Katrina and Hurricane Rita. The devastation by these hurricanes has created an urgent and compelling need to complete damage assessments in the affected areas in as short a period as possible. Congress will be developing damage assistance programs for the Gulf region in the near future. An accurate assessment of the damage created by these storms is needed to ensure that federal funds are both adequate and allocated to the appropriate sectors and recipients. The assessment, to the extent possible, identified all seafood processing plants and seafood dealer houses in the affected areas that existed prior to the hurricanes, identified original physical characteristics (number of buildings, types and quantity of equipment) and production levels for these operations, and provided an estimate of the cost of rebuilding or repairing the facilities structure and equipment to their pre-hurricane state so that harvesting and processing of seafood products can resume. **httn://www.msstate.edu/den~crec/disaster.html.**

Aquaculture

9. Needs assessment of local bait shop owners/operators was conducted to evaluate their needs for extension programming focused on maintaining healthy live bait, specifically shrimp. The result of the needs assessment suggested that group workshops would not be able to address the diversity of issues faced by the different bait shop owners/operators. To account for the variance found in bait shop systems and thus the problems encountered, it was decided that an appropriately sized (minimum legal gallons) bait shrimp recirculating system should be constructed for conducting demonstrations, investigations, or small workshops in the coming seasons. To further pilot the needs of local bait shop owners/operators, six one-on-one consultations with bait shop owners were conducted.
10. The Oyster Gardening program was supported by SGE with forty-seven (47) volunteers participating.
11. Aquaculture information from newspaper articles was made available to visitors to the AUMERC Website **(http://www.ag.auburn.edu/fish/aumerc)** which was maintained with all new articles written.
12. Approximately 80 consultations with scholastic aquaculture programs in Coastal Alabama/Mississippi were made during the reporting year. During this time approximately 400 students participated in the various aquaculture/aquascience courses available in the secondary school programs within the MASGC impact area. New species

were introduced for added diversity to the education opportunity in these programs including, red drum to Fairhope High School, rainbow trout to Alma Bryant High School, Tilapia to Baldwin County High School, red claw crawfish to Hale County High School, and the expansion of red claw crawfish culture at Alma Bryant High School to include up to 17 ponds.

13. MASGC provided support to two of the three schools piloting the Grasses in Classes program that focuses on reintroduction of native grasses to coastal areas. Approximately 200 students participated in these two programs during the reporting year. SGE personnel participated in the planting of one program's (Fairhope High School) grasses during the reporting year. The second program's grasses have not yet matured sufficiently to begin transplanting to affected areas.

Environmental

14. MASGC provided technical assistance to watershed groups. A presentation was made about the Bon Secour River Watershed Management Plan to the Bon Secour Protective Association. The Little Lagoon Watershed Management Plan was completed by SGE, with input from watershed stakeholders, including the Little Lagoon Protective Association. The general public gained knowledge of watershed and nonpoint source issues through presentations, public displays, and newspaper articles. Hurricane Katrina forced SGE to cancel participation in the Alabama Coastal Cleanup for 2005.
15. MASGC continued the facilitation of the Coastal Alabama Clean Water Partnership. This group, in partnership with the Alabama Department of Environmental Management, participated in the Stormcenter Weatherman project. The project contracted with a local television station to extend watershed information to the general public through the weather segment of the nightly news. Information is also provided via the Internet http://wkrg.iewatershed.com .
16. MASGC partnered with the Alabama Nonpoint Pollution Control Program to hold a workshop entitled "Vegetated Treatment Systems in Coastal Alabama." Held weeks after Hurricane Katrina, 20 engineers, contractors, and agency personnel attended this 2-day workshop. Design ideas for vegetated treatment systems, including rain gardens and constructed wetlands, were presented, and the workshop concluded with field tours of on-the-ground practices. A summative evaluation/needs assessment was conducted of attendees to previous workshops on stream restoration and stormwater best management practice design. The purpose of the assessment was to document the impacts of previous workshops and gauge interest for future workshops. The assessment showed that attendees of the stormwater best management practices workshops have used the information learned to implement practices, whereas the attendees of the stream restoration workshops need further training to implement practices. MASGC is currently discussing future workshops with other agency partners.
17. MASGC is coordinating with other entities to provide the public with information regarding issues related to smart growth. SGE attends Mississippi Coastal Resources Management Program meetings, and attended their Smart Growth conference. SGE personnel also coordinate with the Alabama Department of Environmental Management NEMO Coastal Workgroup and the Smart Coast initiative. SGE is also working with the town of Dauphin Island, AL to incorporate smart growth into their new master plan.
18. A bi-state Alabama-Mississippi Clean Marina Program (CMP) was developed with MASGC taking the lead in coordination of the program itself as well as developing materials and implementing the program. The non-regulatory program had a successful 2005 promoting and rewarding responsible marinas for using best management practices to protect water quality, despite the challenging hurricane seasons of 2004 and 2005. The program organized 2 conferences for marinas, a family event for National Marina Day

and participated in a nautical flea market. SGEP worked with AL marinas on reconstruction following Hurricane Ivan, with 1 pledged marina destroyed and not rebuilding and 2 designated marinas and 4 pledged marinas suffering significant damage but rebuilding. SGE is also working with 5 under-development marinas in an advisory role as construction proceeds. During 2005, the program received 6 new pledges, and 2 new designations, had at least 4 articles written about it from external sources and 7 from internal sources, plus 1 radio interview.

19. Sea Grant Extension Program is an integral part of a task force whose purpose is to gather information about aquatic nuisance species (ANS) in Alabama and to assist in developing an AL ANS plan. Using information from species rapid assessments in 2003 and 2004, along with information gathered from state agencies, the task force has begun writing the plan.
20. MASGC is administering a NOAA grant to increase marine debris education. This campaign targets recreational and commercial boaters and beach goers and includes promotional items, brochures in three languages, public service announcements, participation in Coastal Cleanups and marina and aquarium displays.
21. MASGC distributed 12 boxes of rip current educational brochures, signs and magnets to Gulf Shores and Orange Beach hotels, condos and visitors bureaus.
22. MASGC researched post-traumatic stress in relation to hurricanes, and put together a two-page document targeting those affected by the storm. It highlights stress indicators, and ways for the families to decrease stress in adults as well as children. These fact sheets were made available in English and Vietnamese and were distributed to shelters in Alabama and Mississippi.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:

Theme: Marine and Aquatic Science Literacy

None.

Performance Measures:

2007 Actual

Tools and services provided: 6

1. Multi-language (English and Vietnamese) fact sheets on how to identify the symptoms of stress and ways to manage stress for hurricane victims.
2. Two marinas implemented best management practices to reduce pollution by participating in the bi-state Clean Marina Program.
3. The Little Lagoon Watershed Management Plan.
4. Conducted a bait shop owner needs assessment.
5. Completed assessment of the economic impact of Katrina on the Mississippi commercial fishing industry.
6. Completed the Stormcenter Weatherman project (http://wkrg.iewatershed.com/).

Tools and services applied by managers in decision making: 6

1. Stress fact sheets were used by the commercial fishing industry, University and Sea Grant staff.
2. Two new marinas in Alabama joined the Alabama and Mississippi Clean Marina program.
3. The Watershed Management Plan will be used by the Little Lagoon Protective Association to improve water quality.
4. Data from the bait shop needs assessment are being used to design educational programs for these businesses to improve overall business management and profitability.

5. An economic impact study on the commercial fishing industry in Mississippi led to over $50 million in emergency funding for the commercial fishing industry.
6. The Stormcenter Weatherman project extends watershed information to the general public through the weather segment of the nightly news.

2008 Anticipated

None.

MASGC Project # A/L-1:

PI: Stephanie Showalter
Title: Mississippi-Alabama Sea Grant Legal Program.
Time Period of this project: 2/1/04 – 5/31/06

Accomplishments and outcomes from this project:

1. Four issues of "Water Log: The Legal Reporter of the Mississippi-Alabama Sea Grant Consortium" were published.
2. One book chapter on "Bankruptcy." in the *Hurricane Katrina Disaster Legal Assistance Reference Manual* was published.
3. Thirteen issues of "Ocean and Coastal Case Alert", a listserve-circulated publication were distributed.
4. The Legal Program answered over thirty requests for legal information through our Advisory Service. While the majority of requests came from the MASGC extension programs, the service was also utilized by the Dauphin Island Sea Lab, the Alabama Department of Conservation and Natural Resources, Mississippi Department of Wildlife, Fisheries, and Parks, the City of Daphne, Alabama, Bon Secour Fisheries, the Florida House of Representatives, and members of the general public in Florida and Alabama.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Infrastructure
Impact 1

1. **Sea Grant provides legal information to local managers:** The Mississippi-Alabama Sea Grant Consortium Legal Center entertained over 30 requests for legal information from the MASGC extension programs, the Dauphin Island Sea Lab, the Alabama Department of Conservation and Natural Resources, Mississippi Department of Wildlife, Fisheries, and Parks, the City of Daphne, Alabama, Bon Secour Fisheries, the Florida House of Representatives, and members of the general public in Florida and Alabama. **Impact**: An increased understanding of litigation from around the region has increased stakeholders ability to apply this information locally.

Performance Measures:
2007 Actual
Tools and services provided: 2

1. "Water Log: The Legal Reporter of the Mississippi-Alabama Sea Grant Consortium."
2. "Bankruptcy." in the *Hurricane Katrina Disaster Legal Assistance Reference Manual.*

Tools and services applied by managers in decision making: 2

1. "Water Log: The Legal Reporter of the Mississippi-Alabama Sea Grant Consortium" is used by Coastal Zone Programs, National Estuarine Reserve Reserves, NOAA Coastal Services Center and state management agencies around the Gulf of Mexico.

2. "Bankruptcy." in the *Hurricane Katrina Disaster Legal Assistance Reference Manual* is used by private attorneys, businesses, and homeowners affected by Hurricane Katrina.

2008 Anticipated

None.

MASGC Project # R/AT-6-GOIP:

PI: John Liu
Title: Gulf of Mexico Industry Program: Analysis of molecular indicators of oyster's responses to Dermo infections using microarray technology.
Time Period of this project: 6/1/05 – 5/31/07

Accomplishments and outcomes from this project:

1. mRNA was extracted from tissue of oysters with and without infection from the *Dermo* parasite; a normalized and subtracted cDNA library was constructed to evaluate possible differences among genes relative to susceptibility.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Seafood Science and Technology
Impact 1

1. **Sea Grant develops tools for the long-term genome research of oysters:** Using genetic research, Sea Grant has developed a high-quality normalized cDNA library, and a microarray useful in identifying genes important for defense and resistance to Dermo outbreaks in oysters.
   Impact: This work has moved oyster disease research to new levels by providing tools to study Dermo outbreaks.

Performance Measures:
2007 Actual

None.

2008 Anticipated:
Tools and services Provided: 1

1. Development of a predictive tool by identifying genes important for defense and resistance to Dermo outbreaks in oysters though a high-quality normalized cDNA library and a microarray technology.

Tools and services applied by managers in decision making: 1

1. The predicative tool will be used by the aquaculture industry and resource managers to select for Dermo resistant oysters for foodstock.

MASGC Project # R/CCD-9-PD:

PI: George Crozier
Title: Habitat Restoration Website and Database (Mississippi-Alabama Restoration Database).
Time Period of this project: 8/11/05 – 8/31/06

Accomplishments and outcomes from this project:

1. A Website called the Mississippi-Alabama Habitat Restoration Database http://restoration.dial.org/database/ has been created.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Ecosystems and Habitats
Impact 1

1. **Sea Grant establishes a GIS-based Habitat Restoration Database:** Sea Grant co-sponsored the development of a GIS-Based Website.
   Impact: Agencies now have a unified and uniform source of information about the type of restoration projects in coastal areas of Mississippi and Alabama, and their specific locations and chronology to improve planning and restoration endeavors and avoid repetitive effort.

Performance Measures:
2007 Actual
Tools and services provided: 1

1. Habitat restoration database to improve planning of restorative endeavors and the avoidance of repetitive effort.

Tools and services applied by managers in decision making: 1

1. The restoration database has been turned over to the Mobile Bay National Estuary Program for management and use in the implementation of its Comprehensive Management Plan.

2008 Anticipated
None.

MASGC Project # R/CEH-13:

PI: Michael Sullivan
Title: A New Paradigm: The Trophic Importance of Benthic Microalgae in Seagrass Beds.
Time Period of this project: 2/1/04 – 7/31/06

Accomplishments and outcomes from this project:

1. Determined that the labeling of animals in enriched areas receiving ^{15}N-labeled fertilizer was highly variable, but well above background levels.
2. Determined the carbon values for all animal species strongly suggest that the ultimate sources of carbon in the *Thalassia sp.* beds of the Lanark Reef area were the epiphytic and sediment microalgae.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Ecosystems and Habitats

1. **Sea Grant identifies the importance of benthic algae in production and nutrient uptake from effluents:** Sea Grant has contributed to the understanding of the role of microbenthic algae in successive tropic levels of seagrass food webs and their contribution to the management of shellfish and finfish stocks that support both recreational and commercial fisheries.
   Impact: Sea Grant sponsored research has identified that nutrient enrichment increases

benthic microalgae biomass and primary production, and that these algae rather than salt marsh macrophytes or seagrasses are the primary source of organic matter.

Performance Measures:
2007 Actual
Tools and services provided: 1
1. An understanding of the role of benthic microalgae in seagrass associated food webs.

Tools and services applied by managers in decision making: 1
1. Managers and developers now are able to understand the role benthic algae in seagrass associated food webs and the impacts of nutrient enrichment on these habitats.

2008 Anticipated
None.

MASGC Project # R/CEH-14:

PI: Bruce Comyns
Title: Use of otolith microchemistry of spotted seatrout to identify stock source-areas, reveal population movements, and determine interannual variability in regional patterns of otolith signatures in Mississippi coastal waters.
Time Period of this project: 2/1/04 – 1/31/07

Accomplishments and outcomes from this project:
1. 288 adult spotted seatrout were collected from nine regions along the Mississippi shoreline. Forty-eight were 3 years old.
2. Stable isotope ratios for all right otoliths have been determined.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Fisheries
None.

Performance Measures:
2007 Actual
None.
2008 Anticipated
Tools and services provided: 1
1. Identification of stock-source areas and population movements in coastal Mississippi.

Tools and services applied by managers in decision making: 1
1. The Mississippi Department of Marine Resources will apply this information for determining release sites for aquaculture-raised juvenile spotted seatrout.

2008 Anticipated
None.

MASGC Project # R/CEH-16:

PI: William Graham
Title: A Molecular Genetic Assay for Identifying and Quantifying a Cryptic Marine Bioinvader.
Time Period of this project: 2/1/05 – 7/31/06

Accomplishments and outcomes from this project:

1. A *Taqman* PCR assay that will be used in researching the genetics of local invasive jellyfish, *Phyllorhiza punctata* and *Aurelia aurita*, polyps was developed and tested.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Invasive Species
Impact 1

1. **Sea Grant determines pathway for cryptic invasive species.** Success in the identification and measurement of cryptic invasive species contributes to a better understanding of the mode of invasions and improves forecasting capabilities. **Impact:** The jellyfish found in the Gulf of Mexico, San Diego, Bermuda, and Puerto Rico are genetically distinct from all Australian specimens, indicating that they did not originate from the areas of Australia sampled; and animals collected in Brazil are members of a distantly related clade.

Performance Measures:
2007 Actual
Tools and services provided: 1

1. A genetic analysis tool has been developed to detect ribosomal sequences of the invasive jellyfish *Phyllorhiza punctata.*

2008 Anticipated
Tools and services applied by managers in decision making: 1

1. The tool will be applied by managers to identify high-priority carriers of invasive jellyfish.

MASGC Project # R/CEH-21-PD:

PI: Just Cebrian
Title: Examining the effects of Hurricane Ivan in Coastal Alabama and Northwestern Florida: A positive impact on shallow coastal lagoons?
Time Period of this project: 2/1/05 – 1/31/07

Accomplishments and outcomes from this project:

1. Sampling has been taking place at all three sites approximately every nine weeks for the last 15 months for a total of seven sampling periods thus far.
2. Data for all environmental stations as well as incubation stations are being transformed and analyzed on the computer following each field day.

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts:
Theme: Ecosystems and Habitats
None.

Performance Measures:
2007 Actual
None.

2008 Anticipated
Tools and services provided: 1

1. Forecasting tool to predict the impacts (low, medium, or high) of hurricanes on ecosystem services provided by seagrass beds.

Tools and services applied by managers in decision making: 1

1. The tool will be useful to resource managers as they prioritize restoration sites after hurricanes.

MASGC Project # R/CEH-22-PD:

PI: Charlotte Brunner
Title: Test of Foraminifer Hypoxia proxy in the Mississippi Bight.
Time Period of this project: 6/1/05 – 11/30/06

Accomplishments and outcomes from this project:

1. A low oxygen tolerant species of foraminifera that thrives in the dead zone of Louisiana was found south of western Horn Island in an area where hypoxic conditions were recorded the previous year.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Ecosystems and Habitats
None.

Performance Measures:
2007 Actual
None.
2008 Anticipated
New forecast capabilities developed: 1

1. A predictive tool for hypoxia south of Horn Island, MS, based on the occurrence of low dissolved oxygen tolerant foraminifera serving as proxies of hypoxia.

New forecast capabilities applied to use: 1

1. The Mississippi Department of Marine Resources will likely use foraminifer as proxies of hypoxia.

MASGC Project # R/CEH-23-PD:

PI: Hyun Jung Cho
Title: Current Status and Controlling Factors of Submersed Aquatic Vegetation (SAV) beds in western Grand Bay.
Time Period of this project: 8/1/05 – 7/30/06

Accomplishments and outcomes from this project:

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Ecosystems and Habitats

None.

Performance Measures:
2007 Actual
Tools and services provided: 1

1. Potential submerged aquatic vegetation (SAV) habitat model was developed to visualize habitat increase with proposed water clarity improvement. The model application also demonstrated that SAV does not grow along the shores that are under prolonged wind-driven wave stresses.

Tools and services applied by managers in decision making: 1

1. Managers at the Grand Bay National Estuarine Research Reserve are applying the model.

2008 Anticipated
None.

MASGC Project # R/SP-9:

PI: Stephen Watts
Title: Assessment of *Tripneustes ventricosus* as a candidate for aquaculture in the Gulf of Mexico region.
Time Period of this project: 2/1/04 – 1/31/06

Accomplishments and outcomes from this project:

1. Sea urchins were raised and survived through the development stages into the adult stage by using a synthetic feed produced in the laboratory.
2. Juvenile sea urchin nutrition was studied.
3. Roe production and taste was tested using sea urchin roe collected from the sea urchins that were feed the synthetic diet.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Aquaculture

1. **Sea Grant closes the production loop for larval cycle of sea urchins:** A small-scale closed loop system is essential for the use of holding sea urchins for biomedical research. **Impact:** Sea urchin larvae can now be cultured using 100% artificial seawater and held broodstock were successfully spawned.

Performance Measures:
2007 Actual
Tools and services provided: 1

1. Development of a research-grade culture system for medical research.

Tools and services applied by managers in decision making: 1

1. Commercialized by Aquaneering.

2008 Anticipated
None.

MASGC Project # R/SP-10-PD:

PI: Stephen Picou

Title: Patterns of Seafood Consumption among Recreational Fishers of the Coastal Regions of Alabama and Mississippi.
Time Period of this project: 9/1/04 – 2/28/06

Accomplishments and outcomes from this project:

1. A telephone survey of 1,250 recreational fishers in two Alabama and three Mississippi coastal counties revealed that men consume more inshore fish and more overall saltwater fish than females. Individuals characterized as risk takers consume more pounds of fish overall.
2. Overall males consumed 32.6 pounds/person/year and females consumed 16.6 pounds/person/year of recreationally caught finfish.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Marine and Aquatic Science Literacy
Impact 1

1. **Sea Grant determines seafood consumption of saltwater anglers:** With the growing concern of the health risks of methyl mercury in recreationally caught fish Sea Grant funded the first ever seafood consumption survey of recreational anglers.
   Impact: Consumption of recreationally caught finfish of more than 1,250 anglers in the coastal counties of Alabama and Mississippi indicated that the seafood consumption patterns of this population do not pose a methyl mercury health risk.

Performance Measures:
2007 Actual
1 Tool and service provided: 1

1. Saltwater recreational angler finfish seafood consumption patterns.

Tool and service applied by managers in decision making: 1

1. The Alabama Department of Environmental Management, in a cancer risk study, is using the seafood consumption patterns of recreational anglers.

2008 Anticipated
None.

MASGC Project # R/SP-11-PD:

PI: Stephen Kempf
Title: Apical sensory structure in the larva of *Crassostrea virginica*.
Time Period of this project: 10/1/04 – 3/31/06

Accomplishments and outcomes from this project:

1. The anatomy of the central nervous system of larvae of the oyster *Crassotrea virginica* was investigated.
2. The apical ganglion was found to have no ampullary neurons, suggesting some other neuron may be responsible for sensing the inductive cue for metamorphosis.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Biotechnology

None.

Performance Measures:
2007 Actual
None.
2008 Anticipated
None.

MASGC Project # R/SP-12-PD:

PI: Allen Davis
Title: Development of bait shrimp farming technologies in Alabama.
Time Period of this project: 3/1/05 – 1/5/07

Accomplishments and outcomes from this project:
1. The extension publication "Aquaculture of Bait Shrimp on the Gulf Coast" was produced and published by the Mississippi-Alabama Sea Grant Consortium and the Alabama Cooperative Extension System.
2. An enterprise budget for a small commercial bait shrimp enterprise has been developed.

Project Completion Report: Project completion report is on file.

Project Impacts:
Theme: Aquaculture
None.

Performance Measures:
2007 Actual
None.
2008 Anticipated
Tools and services provided: 1
1. Bait shrimp aquaculture technical assistance will lead to one new aquaculture business in Alabama.

Tools and services applied by managers in decision making: 1
1. Technical assistance provided by Sea Grant Extension will be applied by farmers who develop bait shrimp farms in Alabama.

MASGC Project # R/SP-13-GOIP:

PI: Linda Andrews
Title: Gulf Oyster Industry Initiative: Rapid Chill Depuration as a Post Harvest Treatment for the Reduction of *V. vulnificus* in Live Oysters.
Time Period of this project: 6/1/05 – 5/1/07

Accomplishments and outcomes from this project:
1. Rapid chill of oysters for 7-14 days at 16 ppt salinity was effective in reducing levels of *Vibrio vulnificus* to non-detectable levels (< 3MPN per gram of oyster meat).

Project Completion Report: No completion reports have been filed during this reporting period.

Project Impacts: Seafood Science and Technology
Theme: Seafood Science and Technology
Impact 1

1. **Sea Grant established alternative treatment method to reduce bacteria in oysters:** Sea Grant established the rapid chill depuration system as an additional method of postharvest processing for raw oyster products.
   Impact: The new method for the postharvest processing of raw oyster products, rapid chill depuration, will provide 50 new jobs and provide post-harvest processing alternatives to the oyster processing industry.

Performance Measures:
2007 Actual
Tools and services provided: 1

1. Rapid chilling for depuration of raw oyster products.

Tools and services applied by managers in decision making: 1

1. Rapid chilling for depuration of raw oyster products.

2008 Anticipated
None.

II. Program Metrics:

A. Management Metrics:

a. Staff Composition

FTEs (Full Time Employees = 12 man months) Devoted to Sea Grant			
Sea Grant Staffing	**# of Individuals**	**# of FTEs funded by Sea Grant $**	**# of FTEs funded by Non-Sea Grant $ (including match)**
Administrative	**6**	**3.11**	**0.92**
Communications	**2**	**1.36**	**0.11**
Extension	**13**	**3.83**	**1.78**
Education	**8**	**1.60**	**0.59**
Research (PIs, co-PIs, Students--not including Fellowships)	**67**	**17.00**	**7.02**
TOTAL	**96**	**26.90**	**10.42**

Mgmt. Team Member	Position	FTEs devoted to Sea Grant
LaDon Swann	Director	0.80
Louis D'Abramo	Associate Director	0.20
Loretta Leist	Research Coordinator	1.00
Devaney Cheramie	Fiscal Officer	0.50
Melissa Schneider	Communications Coordinator	0.50
Richard Wallace	AL Extension Program Leader	0.29
David Burrage	MS Extension Program Leader	1.00
Stephanie Showalter	Legal Program and Asst. Dir. Outreach	0.19
Sharon Walker	Director of Education	0.20
Kay Bruening	Executive Support Associate	1.00

b. Program Development Projects

Project Title	PI	Federal Funds	Matching Funds
EX-10-PD Fisheries Extension Enhancement for Coordination of Regional Programs.	Richard Wallace Auburn University	$3,000	$0
ED-17-PD Publication Costs for *Sharks, Skates, and Rays of the Gulf of Mexico: A Field Guide.*	Glenn R. Parsons, University of Mississippi	$5,000	$10,000
R/CCD-8-PD International Migratory Bird Day Celebration.	John F. Porter, Jr. Dauphin Island Bird Sanctuaries, Inc.	$5,000	$7,991
R/CCD-9-PD Habitat Protection and Restoration Website and Database.	George F. Crozier, Dauphin Island Sea Lab	$10,000	$9,259
R/CCD-10-PD Facilitation of a Long Term Strategic Plan for the Town of Dauphin Island	Jeffrey W. Collier Town of Dauphin Island	$50,000	$25,000
R/CEH-21-PD Examining the Effects of Hurricane Ivan in Coastal Alabama and Northwestern Florida: A Positive Impact on Shallow Coastal Lagoons.	Just Cebrian Dauphin Island Sea Lab	$20,000	$9,746
R/CEH-22-PD Test of Foraminifer Hypoxia in the Mississippi Bight.	Charlotte A. Brunner, University of Southern Mississippi	$10,000	$5,000
R/CEH-23-PD Current Status and Controlling Factors of Submersed Aquatic Vegetation (SAV) Beds in Western Grand Bay.	Hyun Jung Cho, Jackson State University	$10,000	$6,325
R/SP-10-PD Patterns of Seafood Consumption among Recreational Fishers of the Coastal Regions of Alabama and Mississippi.	Steven Picou University of S. Alabama	$63,841	$34,020
R/SP-11-PD Apical Sensory Structure in the Larva of *Crassostrea virginica.*	Stephen C. Kempf, Auburn University	$10,000	$10,118
R/SP-12-PD Development of Bait Shrimp Farming Technologies in Alabama.	D. Allen Davis, Auburn University	$15,000	$7,500
R/SP-17-PD Live Marine Baitfish Opportunities When Produced in Saline Waters of the Black Belt Region of Alabama.	Ronald P. Phelps Auburn University	$25,000	$12,500

c. Leveraged Funds

Project	Source	Amount	Years
MASGC – Administration	Auburn University – Center for Tropical and Sub Tropical Aquaculture	$2,387	1
MASGC – Contributions	Exxon	$5,000	1
MASGC – Administration	University of New Hampshire – Cooperative Institute for Coastal and Estuarine Environmental Tech	$894	1
MASGC – Outreach	Alabama Department of Conservation & Natural Resources, Coastal Programs	$24,000	1
MASGC – Research Project – R/SP-15 – Sea Urchins are Improved Candidates for Aquaculture and Biomedical/Ecotoxicological Models – Stephen A. Watts	Texas A & M – Lab support	$150,000	1
MASGC – Research Project – R/SP-15 – Sea Urchins are Improved Candidates for Aquaculture and Biomedical/Ecotoxicological Models – Stephen A. Watts	Zeigler Corporation – feed ingredients	$8,000	1

d. List of Partnerships

Federal

1. Bon Secour National Wildlife Refuge
2. Grand Bay National Estuarine Research Reserve
3. Gulf of Mexico Fishery Management Council
4. Gulf Islands National Seashore, National Park Service
5. Mobile Bay National Estuary Program
6. National Marine Educators Association
7. National Marine Fisheries Service, Southeast Regional Office
8. National Marine Fisheries Service, Pascagoula Office
9. National Organic Aquaculture Working Group
10. National Science Foundation
11. National Science Teachers Association
12. National Sea Grant Association
13. National Sea Grant Office
14. Natural Resources Conservation Service
15. NOAA Coastal Services Center
16. NOAA Fisheries, Marine Fisheries Initiative Program (MARFIN)
17. NOAA National Weather Service
18. NOAA Ocean Service, Charleston, South Carolina
19. NOAA National Ocean Service Office of Response and Restoration
20. NOAA Office of Coastal and Resource Management
21. NOAA Restoration Center
22. NOAA Southeast Fisheries Center
23. NOAA Fisheries Southeast Science Center
24. U.S. Agency for International Development
25. U.S. Army Corps of Engineers
26. U.S. Coast Guard Marine Safety Office, Mobile, Alabama
27. U.S. Department of Agriculture, Cooperative State Research, Education, and Extension Service
28. U.S. Department of Agriculture Experiment Station, Stoneville, Mississippi
29. U.S. Department of Justice
30. U.S. Economic Development Administration
31. U.S. Environmental Protection Agency's Gulf of Mexico Program
32. U.S. Freshwater Prawn and Shrimp Growers Association
33. U.S. FDA Seafood Laboratory, Dauphin Island, Alabama
34. U.S. Fish and Wildlife Service, Daphne Field Office [AL]
35. U.S. Fish and Wildlife Service
36. U.S. Geological Survey
37. U.S. Geological Survey, Corpus Christi
38. U.S. Minerals Management Service
39. U.S. Navy
40. Weeks Bay National Estuarine Research Reserve

Regional

41. Gulf of Mexico Alliance
42. Gulf of Mexico Coastal Ocean Observing System
43. Gulf of Mexico Regional Research Planning and Information Services
44. Gulf States Marine Fisheries Commission

45. Gulf and Caribbean Fisheries Institute
46. NOAA Gulf of Mexico Regional Collaboration
47. Northern Gulf Cooperative Institute
48. Southern Shrimp Alliance

Local & State

State

49. Alabama Agricultural Experiment Station
50. Alabama Aquatic Nuisance Species Task Force
51. Alabama Center for Estuarine Studies
52. Alabama Clean Vessel Program
53. Alabama Coastal Nonpoint Pollution Control Program
54. Alabama Cooperative Extension System
55. Alabama Department of Agriculture
56. Alabama Department of Conservation and Natural Resources, Coastal Programs, Division of Wildlife & Fisheries, Marine Resource Division, State Lands Division
57. Alabama Department of Education
58. Alabama Department of Environmental Management
59. Alabama Department of Public Health
60. Alabama-Mississippi Clean Marina Program
61. Alabama State Docks
62. Alabama State Port Authority
63. Alabama Working Waterfront Coalition
64. Fisherman's Disaster Relief Program [MS]
65. Florida Department of Education
66. Florida House of Representatives
67. Louisiana Department of Education
68. Michigan Fish and Wildlife Service
69. Mississippi Cooperative Extension Service
70. Mississippi Department of Education
71. Mississippi Department of Environmental Quality
72. Mississippi Department of Marine Resources, Coastal Programs
73. Mississippi Department of Marine Resources, Coastal Resources Management Program
74. Mississippi Department of Wildlife, Fisheries, and Parks
75. Mississippi Marine Debris Task Force
76. Mississippi Office of Secretary of State
77. Mississippi State Port Authority at Gulfport
78. Pascagoula River Basin Alliance [MS]
79. Texas Department of Education
80. The Governor's Office on Rebuilding and Renewal [MS]

Local & State

Local

81. Baldwin and Mobile County Soil and Water Conservation Districts [AL]
82. Baldwin County Commission [AL]
83. Baldwin County Planning and Zoning Department [AL]
84. Baldwin County Wetlands and Watershed Protection [AL]
85. Bayou Sara Watershed Management Program
86. Big Creek Lake Watershed Management Program
87. City of Daphne [AL]
88. City of Gulf Shores [AL]
89. City of Moss Point [MS]

90. City of Ocean Springs [MS]
91. City of Orange Beach [AL]
92. Gulf of Mexico Offshore Aquaculture Consortium
93. Harrison County Development Commission Seafood Park Planning Committee
94. Marina Task Force [AL]
95. Mobile Bay National Estuary Program [AL]
96. Mobile County Board of Education
97. Mobile County Planning Commission [AL]
98. Mobile County Environmental Studies Center [AL]
99. Mobile County Soil & Water Conservation Service [AL]
100. Pascagoula River Basin
101. Port of Pascagoula [MS]
102. Rookery Bay National Estuarine Research Reserve [FL]
103. South Alabama Regional Planning Commission [AL]
104. South Mississippi Environmental & Agricultural Coordination Organization (SMEACO)
105. South Mobile County Education Foundation
106. Town of Dauphin Island [AL]

Non-Governmental Organizations

107. Agriculture Economics Association American
108. AL-MS Clean Marina Program
109. Alabama Coastal Foundation
110. Alabama Clean Marina Partnership
111. Alabama Fisheries Association
112. Alabama Partners Against Litter
113. Alabama Water Watch Association
114. American Fisheries Society
115. Aquatic Nuisance Species Taskforce [AL and MS]
116. Aquarium of the Americas [New Orleans, LA]
117. Audubon Bird Sanctuary, Dauphin Island, AL
118. Board of the Friends of Shepard State Park
119. Clean Water Guardians Program
120. Coastal America
121. Coastal Conservation Associations (AL, MS)
122. Centers for Ocean Sciences Education Excellence
123. Dauphin Island Chamber of Commerce
124. Dauphin Island Parks and Beach Board/Fort Gaines [AL]
125. Dog River Clear Water Revival
126. Doug Houston Outdoors
127. Eastern Shore Art Center
128. Environmental Education Network
129. Extension Disaster Education Network
130. Florida Museum of Natural History
131. Heritage Watch
132. Land Trust for the Mississippi Coastal Plain
133. Louisiana Public Broadcasting System
134. Marine Science Graduate Student Organization
135. Marine and Estuarine Graduate Student Association of the University of Southern Mississippi
136. Marine Technology Society

137. McWane Science Center
138. Mississippi Agricultural Economics Association
139. Mississippi Exotic Plant Pest Council
140. Mississippi Coast Audubon Society
141. Mississippi Gulf Fishing Banks, Inc.
142. Mississippi Wildlife Federation
143. Mobile Arts Council
144. Mobile Bay Fishing Club
145. Mobile Museum of Art
146. Mobile United
147. Monterey Bay Aquarium
148. North American Fisheries Economics Association
149. Pond Dynamics / Aquaculture Collaborative Research Support Program
150. Restore America's Estuaries
151. Society of Wetland Scientists
152. South Alabama Regional Planning Commission
153. South Mobile County Education Foundation
154. Southern Agricultural Economics Association
155. Southern Association of Marine Educators
156. Southern Extension and Research in Aquaculture – Information Exchange Group
157. The Nature Conservancy of Alabama
158. Non-point Source Pollution Convention
159. Weeks Bay Reserve Foundation

International

160. American Fisheries Society
161. Food and Agriculture Organization of the United Nations
162. International Convention of Aquatic Invasive Species
163. International Institute of Fisheries Economics and Trade
164. National Center for Mariculture Israel Oceanographic Limnological Research, Israel
165. National Shellfisheries Association
166. Scottish Association for Marine Science
167. Shrimp News International
168. World Aquaculture Society

Industry/Business

169. Alabama Gulf Coast Area Chamber of Commerce
170. Alabama Gulf Coast Convention & Visitor's Bureau
171. Alabama Seafood Association
172. Bayou La Batre Chamber of Commerce
173. Bentoli, Inc.
174. Bridgestone Firestone
175. Bon Secour Fisheries
176. Chevron Refineries
177. Columbus Marina
178. Crockett's Oyster Farm
179. Dipasa USA, Inc.
180. Dog River Marine
181. Exxon Mobil Corporation
182. Fort Morgan Marina [AL]
183. The FORUM (industrial association of Harris Deville and Associates)

184. Gill's Art
185. GothicArch Greenhouses
186. Grass Roots, Inc.
187. Institute of Compatible Development
188. LGL Ecological Research Associates
189. Mississippi Charter Boat Captains Association
190. Mississippi Gulf Fishing Banks
191. Mississippi Power
192. Mobile Area Chamber of Commerce [AL]
193. Mobile Bay Oyster Gardening Program
194. Ocean Springs Chamber of Commerce [MS]
195. Organized Seafood Association of Alabama
196. Sea Urchin, Inc.
197. Seymour Engineering
198. Smart Coast
199. Wild American Shrimp Incorporation
200. Wharf Marine Fisheries
201. Zeigler Bros., Inc.

Academic Institutions

School Systems

202. Birmingham School System [AL]
203. Mobile County Public School System [AL]

Secondary Schools

204. Alma Bryant High School [AL]
205. Baldwin County High School [AL]
206. Citronelle High School [AL]
207. Clarke School of Math & Science [Mobile County, AL]
208. Daphne High School [AL]
209. Elberta Middle School [AL]
210. Fairhope High School [AL]
211. Jefferson County International Baccalaureate School [AL]
212. Mountain Brook High School [AL]
213. Moss Point High School [MS]
214. Parker High School [AL]
215. Pascagoula High School [MS]
216. Summerdale Middle School [AL]
217. Vigor High School [AL]

Junior Colleges

218. Faulkner State Community College [AL]
219. Pearl River Community College [MS]

Universities

220. Auburn University
221. Bordo College, Norway
222. Chicago-Kent College of Law
223. Cleveland-Marshall College of Law at Cleveland State University
224. Dauphin Island Sea Lab
225. Flinders University, Australia

226. Florida State University's Edward Ball Marine Laboratory at Turkey Bayou
227. Gadsden State Community College
228. Jackson State University
229. Louisiana State University
230. Louisiana University Marine Consortium
231. Michigan State University
232. Mississippi Academy of Sciences
233. Mississippi State University
234. North Carolina State University
235. Oregon State University
236. Purdue University
237. Roger Williams School of Law
238. Rutgers University
239. Scottish Association for Marine Science, Scotland
240. South Texas College School of Law
241. Stetson University College of Law
242. Texas A&M Shrimp Mariculture Facility
243. The University of Alabama
244. The University of Alabama at Birmingham
245. The University of Florida
246. University of Georgia
247. The University of Mississippi
248. The University of Southern Mississippi
249. University of Connecticut School of Law
250. University of Delaware Center for the Study of Marine Policy
251. University of Hawaii School of Law
252. University of Illinois
253. University of New Hampshire - CICEET
254. University of North Carolina at Wilmington
255. University of Texas-Marine Science Institute
256. University of South Alabama
257. Vermont Law School

Sea Grant Programs

258. Delaware Sea Grant
259. Florida Sea Grant
260. Georgia Sea Grant
261. Hawaii Sea Grant
262. Illinois-Indiana Sea Grant
263. Louisiana Sea Grant
264. Maine Sea Grant
265. Minnesota Sea Grant
266. North Carolina Sea Grant
267. South Carolina Sea Grant
268. Texas Sea Grant Program

e. Awards and Honors

1. Associate Director Lou D'Abramo was recognized for his dedication after serving 9 years for the National Shellfisheries Association in the offices of member-at-large, vice president, president elect and president.
2. Associate Director Lou D'Abramo was awarded the "Ralph E. Powe Research Excellence Award." This is the highest research award given to a faculty member from the Office of Research and Economic Development at Mississippi State University.
3. Education Director Sharon Walker was awarded a "Heroes of Katrina Celebration" award at The University of Southern Mississippi Student Services Center (May 5, 2006).
4. Education Director Sharon Walker was inducted into the Mississippi Gulf Coast Community College Hall of Fame at Perkinston.
5. Education Director Sharon Walker was given a key to the City of Wiggins by Mayor Jerry Alexander.
6. A Letter of Appreciation was presented to Dr. Sharon Walker, education director, from the Stone County Supervisor, Mike Cain.
7. The Environmental Studies Center was given the 3rd place "Gulf Guardian Award" in the Youth/Education Category for the Project, Student Enrichment Activities in Coastal Ecology (SEAICE). [Project #ED-12 B]
8. "Outstanding Dedication and Support – Community Coastal Watch Program." From the Homeland Security Outreach Program of the U.S. Coast Guard. [Project O-1]
9. "Outstanding and Dedicated Service to the International Coastal Cleanup and Profound Commitment to the Marine Environment" from the Ocean Conservancy. [Project O-1]
10. MASGC-supported student Allison Kennedy won second place in the student poster competition at the Restoring America's Estuaries (RAE) conference in New Orleans for her poster titled: "The role of fungi as indicators for saltmarsh restoration success." [Project R/CEH-25]
11. Dr. Steven Watts was awarded the "Caroline and Charles Ireland Award" from University of Alabama at Birmingham for scholarly distinction. This is the highest scholarship award that UAB. [Project #R/SP-9]

B. Communication Metrics

a. Publications List (print and electronic)

Technical Reports:

1. Posadas, Benedict C. 2005. "*Preliminary Assessment of the Impacts of Hurricane Katrina on Mississippi Commercial and Recreational Fisheries.*" Progress Report submitted to the National Marine Fisheries Service and Mississippi Department of Marine Resources. [Project #EX-3.]
2. Posadas, Benedict C. 2006. "*Economic Assessment of the Impacts of Hurricane Katrina on Mississippi Seafood Processing Plants and Dealer Houses.*" Final report submitted to the National Marine Fisheries Service, Silver Spring, Maryland. [Project #O-1.]
3. Posadas, Benedict C. 2006. "*Economic Assessment of the Impacts of Hurricane Katrina on Mississippi Commercial Fishing Fleet.*" Final report submitted to the National Marine Fisheries Service, Silver Spring, Maryland. [Project #O-1.]
4. Posadas, Benedict C. 2006. "*Economic Assessment of the Impacts of Hurricane Katrina on Mississippi Charter Boats for Hire, Marinas and Livebait Dealers.*" Final report submitted to the National Marine Fisheries Service, Silver Spring, Maryland. [Project #O-1.]
5. Posadas, Benedict C. 2006. "*Economic Assessment of the Impacts of Hurricane Katrina on Mississippi Recreational Boats.*" Final report submitted to the National Marine Fisheries Service, Silver Spring, Maryland. [Project #O-1.]

Proceedings, symposia:

1. 2006. "*Alabama-Mississippi Bays & Bayous Symposium. November 27 – 29, 2006. Mobile, AL.*" Symposium at the Mobile Aruthur R. Outlaw Convention Center, Mobile, Alabama. Sponsored by: Mobile Bay National Estuary Program, Alabama Center for Estuarine Studies, Mississippi-Alabama Sea Grant Consortium, and the University of Southern Mississippi.

Brochures, fact sheets, posters, etc.:

Brochures

1. Borden, S. 2006. "*Used Fishing Line is Harmful to Wildlife and Boat Motors, but It Can be Recycled.*" (Developed by FL and TX Sea Grant College Programs. Reprinting of this document was coordinated by MASGC in partnership with NOAA, Marine Debris Program.) MASGP-06-038. [Project #EX-8.]
2. Borden, S.M. 2006. "*Clean Boater's and Angler's Pledge.*" ADCNR. [Project #O-1.]
3. Borden, S.M. 2007. "*Monofilament Recovery and Recycling; Used Fishing Line.*" MASGP 06-038. [Project #O-1.]
4. Burrage, D. 2006. "*Mississippi Tide Tables 2007.*" Mississippi State University Extension Service Publication 850. Mississippi State University, Mississippi State, Mississippi. MASGP-06-011. [Project #EX-3.]
5. Nguyen, P. 2006. "*Protecting Your Fishing Waters: Ways to Reduce Derelict Fishing Gear and Other Marine Debris.*" Vietnamese Language Version. MASGP-06-005. [Project #EX-8.]
6. Schneider, M. 2006. "*Protecting Your Fishing Waters: Ways to Reduce Derelict Fishing Gear and Other Marine Debris.*" Spanish Language Version. MASGP-06-004. [Project #EX-8.]

7. Wallace, R.K. 2007 "*Spotted Seatrout in Alabama.*" ANR – 1304. MASGP-06-025. [Project #O-1.]
8. Waters, P., D.A. Davis, and R.Mays. "*Aquaculture of Bait Shrimp on the Gulf Coast.*" MASGP 06-010. [Project #O-1.]

Fact Sheets

1. Clemons, J., Showalter, S. and Savarese, J. 2006. "*Working Waterfronts in Alabama and Mississippi.*" White Paper. MASGP 06-012. [Project #O-1]
2. Schneider, M. 2006. *"Focus on Working Waterfronts."* MASGP-06-026. [Project #C-1.]
3. Schneider, M. 2006. *"Focus on Alonzo Landing."* MASGP-06-035. [Project #C-1.]
4. Showalter, S. 2006. "*Michigan Passes Water Withdraw Legislation".* MASGP-06-018. [Project #L-3.]
5. Showalter, S. 2006. "*EPA Promulgates Final Rule for Cooling Water Intake Structures for New Offshore Oil and Gas Extraction Facilities.*" MASGP-06-019. [Project #L-3.]
6. Showalter, S. 2006. *"President George W. Bush Establishes Northwestern Hawaiian Islands Marine National Monument."* MASGP-06-020. [Project #L-3.]
7. Showalter, S. 2006. "*California Enacts Sustainable Oceans Act.*" MASGP-06-021. [Project #L-3.]
8. Showalter, S. 2006. "*California Enacts Clean Coast Act.*" MASGP-05-048. [Project #L-3.]
9. Showalter, S. 2006. "*California Enacts Law to Protect Coastline from Ship Discharges.*" MASGP-06-034. [Project #EX-3.]
10. Showalter, S. 2006. "*EPA Promulgates Final Effluent Wastewater Guidelines."* MASGP-05-042. [Project # L-3].
11. Showalter, S., and Bowling, T. 2006. "*Michigan's New Ballast Water Regime: Navigating the Treacherous Waters of States' Rights, Federal Preemption, and International Commerce.*" [Project #L-3]

Books, monographs

1. Parsons, G.R. 2006. *"Sharks, Skates and Rays of the Gulf of Mexico: A Field Guide."* University Press of Mississippi, Jackson, MS, 165 pages. MASGP-05-017-04. [Project #ED-17-PD]

Peer-reviewed journal articles, book chapters

1. Amsler, M.O., Amsler, C.D. McClintock, J.B., Becerro, M.A., Rittschof, D. 2006. "The Use of Computer Assisted Motion Analysis for Quantitative Studies of the Behavior of Barnacle (*Balanus Amphitrite*) Larvae." *Marine and Freshwater Behaviour and Physiology* 39(4): 259-268. MASGP-07-008. [Project #R/MT-40.]
2. Clemons, J. 2005. "Bankruptcy." (Chapter of) the *Hurricane Katrina Disaster Legal Assistance Reference Manual*, published by the Mississippi Bar, Young Lawyers' Division. Jackson, MS. MASGP-07-024. [Project #L-1.]
3. Greer, S.P., Iken, K. McClintock, J.B. and Amsler, C.D. 2006. "Bioassay-Guided Fractionation of Antifouling Compounds Using Computer-Assisted Motion Analysis of Brown Algal Spore Swimming." *Biofouling* 22(1/2): 125-132. MASGP-06-024 [Project #R/MT-40.
4. Panicker, G. and Bej, A.K. 2005. "Real-Time PCR Detection of Vibrio vulnificus in Oysters: Comparison of Oligonucleotide Primers and Probes Targeting vvhA." *Applied*

and Environmental Microbiology 71 (10): 5702-5709. MASGP-06-023. [Project #R/SP-8.]

5. Panicker, G. Vickery, M.C.L. and Bej, A.K. 2006. "Multiplex PCR Detection of Clinical and Environmental Strains of Vibrio vulnificus in Shellfish." *Canadian Journal of Microbiology* 50: 911-922. MASGP-06-032. [Project #R/SP-8.]
6. Rakocinski, C., Peterson, M., Comyns, B. Zapfe, G., Fulling, G. 2006. "Do Abiotic Factors Drive the Early Growth of Juvenile Spot (Leiostomus zanthurus)?" *Fisheries Research* 82: 186-193. MASGP-06-015. [Project #R/ER-39.]
7. Rizvi, A.V., Panicker, G., Myers, M. and Bej, A.K. 2006. "Detection of Pandemic Vibrio parahaemolyticus O3:K6 Serovar in Gulf of Mexico Water and Shellfish Using Real-Time PCR with Taqman Fluorescent Probes." *Federation of European Microbiological Societies Microbiology Letters*. MASGP-06-033 [Project #R/SP-8].
8. Showalter, S.E. 2006. "The Growing Use of AUVs and Liability: Should Operators be Concerned?" *International Ocean Systems Magazine*, 10:1. MASGP-06-039. [Project #L-3.]
9. Ward, L.M., and Bej, A.K. 2006. "Detection of Vibrio parahaemolyticus in Shellfish by Use of Multiplexed Real-Time PCR with Taqman Fluorescent Probes." *Applied and Environmental Microbiology* 72 (3): 2031-2042. MASGP-06-022. [Project #R/SP-8.]
10. Walker, S.H. and Keener-Chavis, P. 2006. "The Path to Ocean Sciences Literacy: Essential Steps Along the Way," *Marine Technology Society Journal*, Vol. 39, No. 4, pp. 20-32. MASGP-06-029. [Project #ED-10.]

Program Reports (Annual/Biennial, Strategic and Implementation Plans)

1. Mississippi-Alabama Sea Grant Consortium. "2005-2006 Omnibus Annual Progress Report." MASGP-07-025. [Project #M/PA-1].
2. Mississippi-Alabama Sea Grant Consortium. 2006. "*Mississippi-Alabama Sea Grant Consortium Strategic Plan: Plotting a Course for 2006-2010*." MASGP-06-016. [Project #M/PA-1.]
3. Mississippi-Alabama Sea Grant Consortium. 2006. "*Mississippi-Alabama Sea Grant Consortium 2006-2008 Implementation Plan*." MASGP-06-026 [Project #M/PA-1.].

Electronic Publications

1. Andrews, L.S. 2006. "Economics of Oyster Postharvest Processing Systems." (http://msstate.edu/dept/crec/owmr.html) [Project #R/SP-13-GOIP.]

The following is a listserve distributed professional legal newsletter:

2. *Ocean and Coastal Case Alert*. (13 issues) Warene Roberson (MASGP-06-003-01 to 06-003-04) Josh Clemons (MASGP-06-003-06 to 06-003-12 and 07-002-01), Editors. [Projects #L-3 and L-1.]
    - January 17, 2006. MASGP- 06-003-01.
    - February 15, 2006. MASGP- 06-003-02.
    - March 15, 2006. MASGP- 06-003-03.
    - April 18, 2006. MASGP- 06-003-04.
    - June 2006. MASGP- 06-003-06.
    - July 2006. MASGP- 06-003-07.
    - August 2006. MASGP- 06-003-08.
    - September 2006. MASGP- 06-003-09.
    - October 2006. MASGP- 06-003-10.
    - November 2006. MASGP- 06-003-11.

- December 2006. MASGP- 07-002-01.
- January 2007. MASGP- 06-003-08.

Theses, dissertations

1. Sanderson, A. "Effects of Nutrient Enrichment on the Animal Assemblages of *Halodule wrightii* Seagrass Beds in Big Lagoon, Perdido Key, FL." M.S. Thesis from Department of Biological Sciences, Mississippi State University. Degree awarded May 2006. [Project #R/CEH-13.]
2. Bucolo, P. "Effects of Nutrient Enrichment on Biomass and Primary Production of Sediment Microalgae in *Halodule wrightii* Ascherson (Shoalgrass) Beds". M.S. Thesis from Department of Biological Sciences, Mississippi State University. Degree awarded May 2006. [Project #R/CEH-13.]

Newsletters, periodicals

1. *Gulf Coast Fisherman.* (10 issues) Dave Burrage, Editor. [Project #EX-3.]
   - *Gulf Council Votes on Red Snapper IFQ Program.* MASGP-06-001-04.
   - *NRC Endorses Proposal for Saltwater Angler Registration.* MASGP-06-001-05.
   - *Mississippi Shrimp Season Opens June 7.* MASGP-06-001-06.
   - *Mississippi Shrimp Season Opens with Fewer Boats.* MASGP-06-001-07.
   - *Shrimp Situation and Outlook.* MASGP-06-001-08.
   - *$128 Million to Assist Gulf States Fisheries.* MASGP-06-001-09.
   - *DMR Seeks Fishermen to Help in Restoration.* MASGP-06-001-10.
   - *DMR Seeks Licensed Commercial Mississippi Fishermen for Hurricane Recovery and Monitoring Program.* MASGP-06-001-11.
   - *Reimbursement for Vessel Monitoring Systems.* MASGP-06-001-12.
   - *Permit Waiver to Allow Reconstruction of Hurricane-Damaged Structures Extended Until End of 2007.* MASGP-07-001-01.

2. *Sea Briefs.* (4 issues) Valerie Winn, Editor. [Project #C-1.]
   - *In Search of the Perfect Oyster.* MASGP-06-006-01
   - *What's on an Angler's Plate?* MASGP-06-007-02.
   - *Unlocking the Mystery.* MASGP-06-007-03.
   - *Assessing the Circumstances.* MASGP-06-007-04.

3. *Sea Harvest News.* (6 issues) Richard Wallace, Editor. [Project #EX-3.]
   - *Gulf Council to Meet in Mobile.* MASGP-06-002-03.
   - *Action on Red Snapper/Shrimp Amendments Delayed.* MASGP-06-002-04.
   - *Final Rules on Gulf Shrimp Vessel Permits Published.* MASGP-06-002-05. This issue was also published in Vietnamese.
   - *Red Snapper/Shrimp Proposals.* MASGP-06-002-06.
   - *Red Snapper Management Comments Sought.* MASGP-06-002-07.
   - *Shrimp Permit Reminder.* MASGP-07-010-01.

4. *The SandBar.* (4 issues) Stephanie Showalter, Editor. [Projects #L-3 and O-3.]
   - *Bottled Water Dispute Boils Over.* MASGP-06-008-01.
   - *Supreme Court Fails to Clarify Limits of Corps' Wetland Jurisdiction.* MASGP-06-008-02.

- *Ninth Circuit Issues First Wetlands Decision Post-Rapanos.* MASGP-06-008-03.
- *First Circuit Interprets Rapanos to Determine Which Test to Apply.* MASGP-06-008-04.

5. *The Sea Grant Law and Policy Digest.* Vol. 5, No. 1, Stephanie Showalter, Editor. MASGP-06-014-01. [Project #L-3.]

6. *The Sea Grant Law and Policy Digest.* Vol. 5, No. 2, Stephanie Showalter, Editor. MASGP-06-014-02. [Project #L-3.]

7. *Water Log: The Legal Reporter of the Mississippi-Alabama Sea Grant Consortium.* (4 issues) Josh Clemons, Editor. [Projects #L-3 and L-1.]
   - *Fifth Circuit Applies New Supreme Court "Vessel: Test.* MASGP- 06-009-01.
   - *Fifth Circuit Rejects Challenge to LNG License.* MASGP- 06-009-02.
   - *Fifth Circuit Rejects Crawfish Producer's NEPA Challenge.* MASGP- 06-009-03.
   - *Federal Judge Rules Against State Farm in Katrina Case.* MASGP- 06-009-04.

Media placements

Press Releases:

1. "Nguyen to serve Vietnamese fishermen." Melissa Schneider. (April 16, 2006.)
2. "Sea Grant hires communications Coordinator." Melissa Schneider. (April 16, 2006.)
3. "Sea Grant workshop to focus on working waterfronts (Alabama)." Melissa Schneider. (May 18, 2006.)
4. "Sea Grant workshop to focus on working waterfronts (Mississippi)." Melissa Schneider. (May 18, 2006.)
5. "Free 5-gallon buckets to help put lid on marine debris." Melissa Schneider. (May 22, 2006.)
6. "Columbus Marina to become Clean Marina." Melissa Schneider and Shonda Borden. (May 24, 2006.)
7. "Workshop launches support for waterfront access." Melissa Schneider. (June 8, 2006.)
8. "Break the grip of the rip." Melissa Schneider and Shonda Borden. (June 15, 2006.)
9. "What's on an angler's plate? *Survey studies what fishermen eat.*" Melissa Schneider. (June 16, 2006.)
10. "USM student named Knauss fellow; Neu to work in marine policy in Washington, D.C." Melissa Schneider. (June 28, 2006.)
11. "Leist to coordinate Sea Grant projects." Melissa Schneider. (Aug. 7, 2006.)
12. "Scientific minds to prioritize Gulf issues; Regional research plan to determine hottest topics." Melissa Schneider. (Sept. 13, 2006.)
13. "Dauphin Island pier to open, complete habitat restoration project." Melissa Schneider. (Oct. 2, 2006.)
14. "Marine research plan to outline hottest Gulf topics." Melissa Schneider. (Oct. 2, 2006.)
15. "Migratory birds get newly remodeled home; *New Dauphin Island wildlife viewing area part of preservation effort.*" Melissa Schneider and Bridgestone-Firestone Media Relations. (Oct. 5, 2006.)
16. "Alabama-Mississippi Bays and Bayous Symposium scheduled for Nov. 28-29." Melissa Schneider and Shonda Borden. (Oct. 23, 2006.)
17. "New habitat research database seeks project entries." Melissa Schneider. (Nov. 1, 2006.)

18. "Two-day event to examine environmental status of Gulf." Melissa Schneider and Shonda Borden. (Nov. 1, 2006.)
19. "New habitat database seeks entries (brief)." Melissa Schneider. Nov. 1, 2006.
20. "Underwater explorer to speak on status of oceans." Melissa Schneider and Shonda Borden. (Nov. 22, 2006.)
21. "Students win art calendar contest." Melissa Schneider. (Dec. 8, 2006.)
22. "Bowling named Sea Grant research counsel." Melissa Schneider and Stephanie Showalter. (Jan. 25, 2007.)
23. "Sempier to coordinate regional marine research planning project." Melissa Schneider. (Jan. 25, 2007.)
24. "Boyd named assistant extension professor." Melissa Schneider. (Jan. 26, 2006)

Newspaper Columns:

1. Kemp's Ridley Sea Turtles by Rick Wallace (February 13, 2006)
2. The Mobile Delta by Shonda Borden (February 14, 2006)
3. Fish Diseases by P.J. Waters (February 24, 2006)
4. Boat Show by Shonda Borden (March 15, 2006)
5. Pond Balance by P.J. Waters (March 22, 2006)
6. Fire Ants by Shonda Borden (April 12, 2006)
7. Clay Turbidity by P.J. Waters (April 20, 2006)
8. Memorial Day by Shonda Borden (May 10, 2006)
9. Grass Carp by P.J. Waters (May 19, 2006)
10. Summer Aquascience by P.J. Waters (June 20, 2006)
11. Dogs and Beaches by Shonda Borden (July 5, 2006)
12. Fish Ponds by P.J. Waters (July 14, 2006)
13. Green Roofs by Jody A. Thompson (July 19, 2006)
14. Water Conservation by Shonda Borden (August 02, 2006)
15. Weed Identification by P.J. Waters (August 10, 2006)
16. Coastal Cleanup by Shonda Borden (August 29, 2006)
17. Aquaculture by P.J. Waters (September 9, 2006)
18. Love Bugs by Shonda Borden (September 20, 2006)
19. Mosquito Fish by P.J. Waters (October 7, 2006)
20. Bays & Bayous by Shonda Borden (October 19, 2006)
21. Weeks Bay by Shonda Borden (November 20, 2006)
22. Oyster Gardening Project Report by P.J. Waters (November 29, 2006)
23. Elberta Middle School by P.J. Waters (December 14, 2006)
24. Water Conservation by Shonda Borden (December 19, 2006)
25. Bald Eagles by Shonda Borden (January 17, 2007)
26. Fertilizing Your Pond by P.J. Waters (January 25, 2007)

Additionally there have been a number of newspaper clippings about our projects that we do not keep track of. The number added to the chart for these is a conservative estimate based on the clippings that we have documented.

Other

Articles supplied for partner agency newsletters:

1. *Alabama-Mississippi Clean Marina Program*, Alabama Department of Natural Resources Newsletter. Spring 2006. [Project #-O-1.]

2. Cho, H.J. and C.A. May. 2006. "An Initial Restoration Tool for Submersed Aquatic Vegetation." *National Wetland Newsletter* 28(6): 10-12 and 20. [R/CEH-23-PD]

Websites:

Websites:

1. Mississippi-Alabama Sea Grant Consortium Website: http://masgc.org .
2. Mississippi Coastal Clean-up Website: http://masgc.org/cleanup .
3. Monofilament Recycling and Recovery Website: http://www.aces.edu/dept/fisheries/aumerc/extension/MonofilamentRecoveryandRecycling.php .
4. Aquaculture Network Information Center (AquaNIC): www.aquanic.org/education .
5. Auburn University Marine Extension and Research Center Website: www.alearn.info/aumerc
6. Mississippi State University Coastal Research and Extension Center Website: http://www.msstate.edu/dept/crec/nre.html
7. Natural Resource Economics Program Website: http://www.msstate.edu/dept/crec/ecdev.html
8. Disaster Economics - Assessment of the Impacts of Hurricane Katrina on Mississippi Commercial and Recreational Fisheries and Charter Boat Industries. http://www.msstate.edu/dept/crec/disaster.html
9. http://www.msstate.edu/dept/crec/nwmr-sec.html
10. Aquaculture Economics and Marketing. http://www.msstate.edu/dept/crec/awmr.html
11. Fisheries Economics and Marketing. http://www.msstate.edu/dept/crec/fwmr.html
12. MSU-Coastal Research and Extension Center Website http://www.msstate.edu/dept/crec/crec.html
13. Mississippi Sea Grant Extension Program http://www.msstate.edu/dept/crec/sgas.html
14. MSU-Experimental Seafood Processing Laboratory http://www.msstate.edu/dept/crec/espl.html
15. Mississippi-Alabama Sea Grant Legal Program http://www.olemiss.edu/orgs/SGLC/msalhome.htm
16. National Sea Grant Law Center http://olemiss.edu/orgs/SGLC/lawcenterhome.htm
17. Gulf Coast Research Laboratory Coastal Ecosystems Group Website: www.usm.edu/gcrl/ceg.[R/CEH-25]

Presentations (in separate file for now)

Other:

1. "Keep Your Trash Outta My Splash" Marine Debris Buckets [Project #EX-8]

b. Publication Summary Table:

Category	# of Pubs
Technical reports	**5**
Proceedings/Symposia	**1**
Brochures, fact sheets, posters, etc.	**19**
Books, monographs	**1**
Peer-reviewed journal articles, book chapters	**10**
Program Reports (Annual/Biennial, Strategic and Implementation Plans)	**3**
Electronic Publications	**14**
Theses/Dissertations	**2**
Newsletters/Periodicals	**30**
Media Placements	**50**
Other (e.g. websites, such as Haznet or SGNIS)	**20**
Presentations	
Total	**155**

B. Extension Metrics

Number of SG-sponsored/organized meetings, workshops, and conferences	**17**
Number of attendees in SG meetings/workshops	**943**
Number of radio interviews	**6**
Number of TV appearances	**16**
Number of public presentations	**22**
Number of attendees at presentations	**38,444**
Number of volunteer hours	**2,986**

C. Education Metrics

a. K-16

Professional Development for Educators	**Elementary School**	**Middle School**	**High School**
Number of professional development sessions (workshops, institutes NOT for college credit)	**16***	**16***	**17***
Number of attendees at professional development sessions	**59**	**47**	**62**
Number of students reached through educators (NOTE: if you have this number, great, otherwise please use a multiplier for your state, e.g. most elementary teachers teach 25 students in your state.)	**1,355**	**1,259**	**1,792**
Number of curricula developed	**50**	**38**	**9**

Courses for College Credit	
Number of courses taught (for credit, college level)	**9**
Number of students/participants in courses	**45**

Advisory (state standards, national standards)	
Number of consultations	**116**

Informal Education/Free Choice Learning

Professional Development for Educators	
Number of attendees at professional development sessions	**148**

Programs for children and families	
Number of camps, programs, activities, clubs, etc.	**64**
Number of attendees	**95,474**
Number of class trips	**1,136**

b. Students Supported

Category	# of new students	# of continuing students	# of Degrees Awarded
Knauss Fellowship	1		
Industry Fellowship	0	0	
NMFS/SG Fellowship	0	0	
State Fellowship	0	0	
Sea Grant Supported MS/MA/JD Graduate Students	15	12	8
Sea Grant Supported PhD Graduate Students	5	5	0
Sea Grant Supported Undergraduate Students	13	8	0
High School Students*	0	3	
High School Teachers*	0	2	
TOTAL	**34**	**30**	**8**

D. Research Metrics

a. Omnibus Metrics

Stage	Number of Proposals	Number of Institutions Involved	Number from Home Institution
Pre-Proposals Submitted	30	14	10
Full-Proposals Submitted	18	12	4
Proposals Funded	9	8	2

b. NSI Metrics

Stage	Number of Proposals	Number of Institutions Involved	Number from Home Institution
Pre-Proposals Submitted	3	4	1
Full-Proposals Submitted	2	2	0
Proposals Funded	0	0	0

c. Recruiting Talent

Core Project Statistics

Status	Number of Projects	Number of PIs and co-PIs	Number of Institutions	Regional/Multi-program
Continued from previous award year	9	20	8	0
New	7	16	7	0

NSI Project Statistics

Status	Number of Projects	Number of PIs and co-PIs	Number of Institutions	Regional/Multi-program
Continued from previous award year	2	7	3	0
New	0	0	0	0

Number of Patents:
None.

Number of Licenses:
None.

MASGP-07-025