Dauphin Island Sea Lab



The State of Alabama's Marine Science Education and Research Institution

2011 Annual Report

The Twenty-Two Member Schools of the Dauphin Island Sea Lab/ Marine Environmental Sciences Consortium



- Alabama A&M University, Huntsville, AL*
 Alabama State University,
- Montgomery, AL*
- · Athens State University, Athens, AL
- Auburn University, Auburn, AL*
- Auburn University at Montgomery, Montgomery, AL
- Birmingham Southern College, Birmingham, AL
- · Huntingdon College, Montgomery, AL
- Jacksonville State University, Jacksonville, AL*
- Judson College, Marion, AL
- Samford University, Birmingham, AL*
- Spring Hill College, Mobile, AL
- Talladega College, Talladega, AL
 Troy University, Troy, AL
- Troy University, Troy, AL
 Tuskegee University, Tuskegee, AL*
- University of Alabama, Tuscaloosa, AL*
- University of Alabama at Birmingham,
- Birmingham, AL*

 University of Alabama in Huntsville,
- Huntsville, AL*
 University of Mobile, Mobile, AL
- University of Montevallo,
 Montevallo, AL
- University of North Alabama, Florence, AL
- University of South Alabama, Mobile, AL*
- University of West Alabama, Livingston, AL
- * Schools with Graduate Degree Programs

Statement of Purpose



The Dauphin Island Sea Lab (DISL) is Alabama's marine research and educational institution. Founded in 1971 by the Alabama legislature to maximize the marine sciences capabilities of several Alabama institutions and minimize duplication, DISL serves twenty-two Alabama colleges and universities, both public and private. DISL and its faculty work toward the combined purposes of conducting pure and applied research, and sponsoring structured educational programs for individuals and organizations interested in and dependent upon the

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Dauphin Island Sea Lab/ MESC provides equal deducational opportunity, and is open and accessible to, and is open and accessible to, all qualifed students, without regard to race, color, creed, national origin, sex or quali

Disabled students will be provided "reasonable accommodations" when they have identified themselves and validated their special need(s). Complete con7dentiality is maintained unless authorization for release or information has been given in regards to disability.

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For questions about this Annual Report, please e-mail Lisa Young, Public Relations Consultant, at lyoung@disl. org.

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2011 Letter from the Executive Director

For more than 30 years, the Sea Lab was fortunate to toperate Zinder/The Steadying/In/Juence/DrfDr.7 George Crozier. During those formative years, the understaffed lab survived despite miniscule state appropriations that often left it struggling just to survive. These were the days, when we were best characterized by pipes insulated with asbestos.

Formica-covered chemistry benches.7broken77oor7 tiles and a rich diversity of wild mammals that made the labyrinth of cable channels once found in the underworld of the original Marine Science Hall their home. Staff and faculty alike, pitched in to teach in the classroom, serve lunches in the cafeteria and work on facilities repairs in the evenings. What held everyone together in those early days was a "dream-a dream" that someday this nascent educational facility would become a leader in the7feld7of7marine7education and research. As I think back on the stories I have been told about those days,

and the many challenges our

predecessors had to overcome, I think it is a miracle that They Survived To Jouild The Jaboratory We 77nd 7 ourselves working in today.

With time and a lot of hard work by the surviving staff and new faculty, our state appropriations began to grow, as did our reputation for excellence in research and education. The addition of faculty and, later, educators led to new research grants, facilities renovations and the growth of our academic programs. As success in these emerging endeavors grew, DurTevenue Portfolio MiversiTed, 2nd Mess Tuctuations In State Pappropriations Decame Acet Camaging to our overall programmatic stability. Make no mistake about it, the \$1.5 million dollar reduction in our state appropriation the past few years has

diminished our ability to live up to our potential, but our success in acquiring extramural money has tempered this loss for the time being, and serves to illustrate just how far the lab has come and how well we are thought of today.

Amidst7an7atmosphere7of7dif7cult7economic7



Dr. John Valentine became Executive Director of the Dauphin Island Sea Lab on October 1, 2011.

times and belt-tightening battles in Montgomery and Washington, DC, I can assure you that we in administration are working hard during these challenging times to make sure our programs receive every consideration as budget priorities are developed - but nothing is guaranteed. It has not been lost on me during my visits to these two seats of government, the gratifying words of support expressed/by/bur/Blecled/b/Toials/for/The/Sea7 Lab's mission, and their statements of appreciation about our accomplishments. All recognize the value science and education have for the citizens of our state and nation. They recognize the fact that the Gulf, despite its enormous contributions to the nation's economy, has not received the attention from federal agencies in Washington it

deserves. I am particularly proud of how hard our representatives in Washington have worked to pass the RESTORE Act. Should the Act pass in Washington, there is a very good chance the Sea Lab will be named the Center for Excellence for Alabama. Depending on the state's allocation from BP7nes, This tlesignation Xwill represent a Signi7cant7 improvement/nour/mancailposition.

Since I have taken on the role of Executive Director in October 2011, I have been asked by staff and supporters alike what my plans are for the Sea Lab, 8x0 Act The Explain Them Driety, Withaue Two goals. It is my hope, that with continued growth in facilities and people, and with the integration of new approaches and technologies into our classrooms and laboratories, that we will become a beacon for the importance in education, science, and the application of science in coastal communities throughout the South. I also wish to promote the importance of the Gulf of Mexico both in Montgomery and Washington to anyone who will listen. I know that these will come across as simple, but I consider them to be key to our future. Already we Zare Taking Steps Sachieve The 7rts Typal. 7.

I/believe/hat/he/Aliversi/Cation/h/Tour/energy/portfolio is of paramount national importance. If this Aliversi/Cation/Includes/Alevelopment/b/T sustainable sources of energy, those provided by nature, so much the better, and science will be the key to this success. Dr. Dindo's acquisition of a grant from the Department of Energy led to successful installation of solar panels on buildings along much of the southern portion of the campus. This %57% pilori/cant/importance/00x8 %3/minest/7 10% of our state appropriation is spent on power. A new Sharks and Rays exhibit, which relies on geothermal energy to control water temperature, will soon be completed in the Estuarium. We are continuing to negotiate with Alabama Power for the installation of wind turbines on our campus. These will be wonderful opportunities for us to promote the application of science to our state. Dr. Heck has convinced the members of the Marine Environmental Sciences Program Committee to revise the summer curriculum which will bring more of the MESC-member institutions on to our campus.

This is not all that we are working on. Soon we will be soliciting bids for the development of a new website for the Sea Lab and campus-wide software that/willZallow/us/Zobe ZeonomicallyZef7cientZas7we7 continue to promote our mission. We are also close to completing our new faculty searches bringing new ideas and skills to our campus. To improve the academic atmosphere of our facility, we will

continue to spruce up the campus with trees, bushes and benches wherever we can. We have every reason to believe that we will receive funding to add on to the Estuarium in the coming year. This addition will allow us to include traveling exhibits to our educational repertoire. I would also call your attention to the efforts of the Dauphin Island Sea Lab Foundation whose success in acquiring grants that contribute to the richness of the academic programs which build on our reputation for innovation in the classroom. When you add in the recognition received from the leadership shown by University Programs during the initial impact assessment phase of Deepwater Horizon Accident on Alabama's coastal resources, our work on habitat restoration and 7sheries \(\tilde{D}\)cean can our growing educational programs, you have no choice but to conclude that our best years are not behind us! I would be remiss if I did not mention the fact that none of these successes would have been possible without the help of our excellent support staff.

I will close by saying that the administration cannot bring us into a new brighter future alone. When I was young I listened on my father's black and white television, to the inaugural address presented by the person I consider to be the best political leader of my lifetime. In this address, President Kennedy challenged the citizens of our nation to recognize that there was a greater good that we were all a part of, something that was bigger than the sum of our individual desires and wants. He called on us to proactively be a part of a greater nation, rather than limitibur/āocus/āo/burselves/3/7/md/that/ēcollection/ to be an appropriate metaphor for the moment we 7nd/burselves/in/how.7/Just/ās/bur/predecessors/ committed to the vision of a future greater Sea Lab, it is our time to take responsibility for the future growth of this remarkable institution. It is time for each of us to come together, to focus our efforts on building a better Sea Lab, one that leads the way, not follows the path of others. I hope you will buy into this challenge as our success will be determined by your willingness to be a part of the Sea Lab's future.

I don't know about you, but I am excited to see what you make happen next!



Dr. John F. Nalentine
Executive Director, Dauphin Island Sea Lab

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Administration and Facilities

DISL is located on 36 acres on the eastern end of Dauphin Island, a barrier island approximately three miles from the mainland and 40 miles south of Mobile, Alabama. The Sea Lab spans the island and thus has direct access to the Gulf of Mexico, Mississippi Sound and Mobile Bay. A causeway and bridge connects the island to the mainland!

There are 50 buildings on campus, including eight instructional buildings; three dormitories; nine family-style houses; and two research buildings. The ZDISL also Thouses 7the Zhubum Zhell7sh7 Laboratory. The Shelby Center, our newest research lab, has been recogized as a LEEDS Gold Zerti7ed Zhuilding, Rand/s Ancluded Th/The Zea7 Lab's solar powered grid, making the Sea Lab the largest public producer of solar energy in the State of Alabama.

databases, as well as access to a variety of on-line library catalogs.

Wet Lab facilities house modular sea-water systems,

kreisels, and other instruments for experimental work on living marine organisms. Research laboratories are equipped with state-of-the-art instrumentation for biogeochemical research. Field collection equipment for marine ecological and oceanographic research is available.

DISL maintains two large research vessels, including the 65-ft. R/N A.E. Alabama Discovery and the 40-ft. E.O. Wilson, In Taddition To Ta Teet To Ts mall To oats Tand7 skiffs.

Administrative Personnel Dr. George Crozier, Executive Director (retired Sept. 2011)

Dr. John Walentine, Æxecutive 7 Director (as of Oct. 2011 to present) David England, Associate Director, Administrative Services Dr. John Dindo, Associate Director, 7 Operations and Institutional Advancement Lori Angelo - Adminstrative Assistant to the Executive Director

Business/Finance
The Business 70/7ce 70/7the 20/SL7
operates under the principles of
Fund Accounting set forth by the
National Association of College
and University Business 70/7cers. 7/7
The State Examines of Public
Accountants audit annually the
procedures, accounting records and
policies of the DISL.

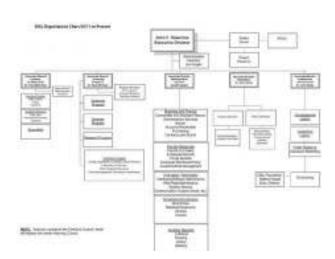


Solar panels, seen here on Horizon and Discovery Hall, have made the Sea Lab the largest public producer of solar power in the state of Alabama. Credit - John Dindo.

The DISL library is highly specialized in the marine sciences, particularly those areas relating to the ecology and geology of the Gulf Coast region. Its holdings include more than 7,400 bound volumes and approximately 500 periodical titles, with current subscriptions to many of those periodicals. The library also has numerous CD-ROM

Business/Finance Personnel David England – Associate Director, Administrative Services

Lynn Bryant – Payroll Processor Christine Hilburn –Human Resources Generalist Ashley Foster-Bursar/Purchasing Agent Mary Darby-Accounts Payable



Denise Keaton-Scheduling Coordinator DaphnerWood-Contracts/and/Grants/Of/cer Cindy Grimes-Receptionist Dennis Patronas-Library/General Clerk

Auxiliaries Auxiliaries of the DISL include the Cafeteria, Estuarium Gift Shop, Laundromat and vending machines.

Cafeteria Personnel Classie Beritech-Manager Faye Bentley Judy Barber Gayle Zirlott Karen Saunders Renee Cain

Estuarium Gift Shop Personnel Jeana Layne-Manager Amy Hannah Jamelle Roy Janice Watanabe Shea Childress Collier Alana Splawn Sallie 7Jo Williams Dennis Patronas

Information Technology
Information Technology (IT) instituted many cost
saving projects in 2011. An onsite PBX system was
installed in 2010 to help save roughly \$7200/year
in phone costs by eliminating separate phone lines.
Further enhancements were made to the system,
such as expanding cordless phone coverage to
more than 75% of the buildings on campus. This
helps employees have access to their phones while
away from their desk.

IT also acquired and set up a Webex portal for the use of our staff and faculty. Webex allows DISL to host or attend a meeting via video teleconference from any computer with Internet access. This has also helped save traveling costs for many people that normally have to travel in order to meet with students or other colleagues.

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- Other noteworthy IT activities for 2011:
 •7//Upgraded7Wiese7MSH7io71gb7LAN7connection 77/Set7up7Vimeo.com7channel7for7sharing7and7
- viewing of HD quality videos

 7//Enacted/hetwork/wide/security/enhancements

 7//Upgraded/internet/connection/to/50mb,/with/ho/7 cost increase to DISL
- Titledse to DISL
 Titledse to DISL
 Titledsed And Supported The National Benthic7
 Ecology Meeting for over 600 participants
 Titled Tupgrades To Tall Thorizon Thall and 7
- Galathea classrooms that included, new interactive projectors, presenter viewing monitors, podiums and WiFi for students.

Information Technology Personnel Melissa Mills - IT Manager Shane Johnson 7:Systems Administrator7 Sam Hardwick - PC / Network Support Specialist Lei Hu - Data Manager Rachel Nowlin - Data Specialist

Library

The DISL library is highly specialized in the marine sciences, particularly those areas relating to the ecology and geology of the Gulf Coast region. Its holdings include more than 7400 bound volumes and approximately 500 periodical titles, with current subscriptions to many of those periodicals. Online full text access to over 80 subscribed titles and hundreds of open access titles is available. Besides free Alabama Virtual Library, subscriptions to online databases Aquatic Sciences and Fisheries Abstracts, Oceanic Abstracts and Current Contents on Diskette continue to give students and faculty current bibliographic resources.

In 2011, several journals, including Marine Biological Association of the U.K. and Fish Biology, were donated to the Gulf Coast Research Laboratory in Mississippi to help stock their library, devastated by Hurricane Katrina

Library Personnel Dennis Patronas - Librarian

Public Relations

Public Relations was handled in the reporting year under the auspices of Institutional Advancement's Dr. Zlohn Zindo. TWorking With Thim Were Lisa Young, 7
Public Relations Consultant; Lori Angelo, Public
Relations Liaison; and Robert Dixon, Estuarium Manager, who was responsible for Estuarium

20117presented7a7range7of7scienti7c7discoveries,7 educational programs and special events, proving once again that no year is a typical year. Of note was the expansion of Dr. Ruth Carmichael's Manatee Sighting Network to include other marine mammals (i.e. dolphins); the 40th Annual Benthic Ecology Meeting, hosted by DISL scientists, that brought over 600 marine scientists to Mobile, AL; scienti7c7/ndings7on7elly7sh7populations7Dr.7Rob7 Condon) and stingray consumption by Great Blue Herons (Dr. Marcus Drymon); and the DISL receiving the Clover Award from the US Green Building Council of Alabama for the Shelby Center's ecofriendly design and operations.

Special events included a highly successful Discovery Day; the Wiese Lecture series, featuring Dr. Ray Hilborn of the University of Washington; and the DISL Foundation's annual fundraiser, Cocktails

ExxonMobil continued to support a Public Relations Intern for the summer of 2011 Niki Marchand a Public Relations major at the University of South Alabama, spent the summer covering the participants and programs of summer school, producing feature stories for internal and external publications. She did a great job, and we are grateful for ExxonMobil's continuing support of this hands-on, intensive fellowship.

Media outlets that featured the Sea Lab included national (MSNBC, CNN, New York Times), regional and local electronic and print press.

The Sea Lab produces a monthly electronic newsletter, the Sea Lab Skimmer. To subscribe, visit http://skimmer.disl.org/skimmer/skimmerform.html.

Public Relations Personnel Dr.7John7Dindo.7Institutional7Advancement Lisa Young, Public Relations Consultant Lori Angelo, Public Relations Liaison Robert Dixon, Estuarium Manager

Facilities and Vessel Operations Maintaining the vast Sea Lab campus, with its combination of new facilities and 60-year old structures, is often times accomplished by the sheer willpower, labor, and skill of the facilities and housekeeping crew. From building new countertops for a scientist's lab to installing a new long-line winch for the *RV Alabama*, the work is as varied and challenging as one might imagine.

One of the biggest projects of this reporting year's work was the installation of the solar panels and electrical wiring for the South Campus, speci7cally7 Horizon Hall. Countless hours were also spent on the Shelby Building's solar metering devices. The hard work and dedication of the facilities team helped the Sea Lab become the largest public solar generator in the State of Alabama, a recognition much appreciated by staff and supporters

The Estuarium also saw its share of the crew's hard work with new kiosks in the building and along the Boardwalk.

New and current faculty were provided with new cabinets, lab lables, lof7ce7 furniture and much more, adding both cost savings and custom features for the

Existing buildings were given a facelift as well. The old maintenance shop was totally remodeled with new insulation, wiring, bathrooms, cabinets, and more; and the Challenger dorm's ancient showers were remodeled and retiled. The graduate student dorm, Albatross, received a new hot water holding tank and electrical sub-panel.

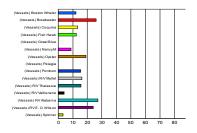
Security and safety were in mind when facilities put new lighting up along Shelby's east walkway, Estuarium hoardwalk and the hoat dock

All this and more was accomplished, on top of the hundreds of daily research and staff work requests that arose. We are grateful for their skill, hard work, and patience in dealing with the myriad to frequests, all to fwhich are gragged as 7 "needs to be done as soon as possible!

Facilities and Vessel Operations Personnel Dr. 7John 7Dindo, Associate Director, Operations Troy McBride, Manager, Facilities and Vessel Operations

Facilities Tommie Blocker Wilfred Gazzie Ricky Gibbs Tom Pritchett Jody7Schultz7

Housekeeping Tammy McClintock, Supervisor Shirley Emerson Cindy7Johnson7



			Utilia	ration %		
Report: Scope:	Utilization.rpt Vessels	Resource U				
Range:	01/01/2011 - 12/31/2011					
Res	source	Reservation Count	Hours Used	Available Hours		
(Ve	ssels) Boston Whaler	84	735.5	5,980		
(Ve	ssels) Breakwater	48	1,564.0	5,980		
(Ve	ssels) Coquina	70	793.5	5,980		
(Ve	ssels) Fish Hawk	78	748.3	5,980		
(Ve	ssels) Great Blue	0		5,980		
(Ve	ssels) Nancy M	47	525.3	5,980		
(Ve	essels) Oyster	78	1,138.3	5,980		
(Ve	ssels) Pelagia	0		5,980		
(Ve	ssels) Pontoon	47	921.8	5,980		

Tammy Ladnier Dina Smith

Vessels operations Rodney Collier Tom Guoba John7Hunt7 Willie7Inhnston7

Technical Support Technical Support encompasses four services in support of the faculty and students, including diving operations; aboratory services; 7/eld support7 services; and data management.

The Laboratory and Field Support Services were particularly busy in 2011 with the continuing enhanced sampling of the FOCAL transect in the wake of the BP Oil disaster, in addition to their regular duties. The Wet Lab and Mesocosm

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facilities had 100% occupancy from early spring well into the late fall. Long-time?/eld/technician?/antzee?/lintz?went? on active duty status with the National Guard and was deployed overseas. His duties were assumed by Brian Cabral, who came to DISL from an aquaculture farm on the Caribbean island of South

In7January72011,7two7members7of7 Tech Support went down to Biscayne National Park to recover a 16' buoy and instruments that broke free from the FOCAL site just after Hurricane Katrina. The buoy had wandered the Gulf for over a year before it grounded on one of the small islands within the park.

Technical Support also provided the proving/ground/for/the//rst7/Liason"7 unit manufactured by Picarro for the determination of del 13C married to the Costech Elemental Anaylzer. The samples analyzed resulted in the following publication and information on the Picarro page.
The DISL has the serial number "001," meaning the 7rst7one7ouilt, and 7had 7he7rst7aboratory7application7 of that unit

http://iopscience.iop.org/1748-9326/5/4/045301/ http://www.picarro.com/resources/literature

publications/oil_carbon_entered_the_coastal_ planktonic_food_web_during_the_deep

Laura Linn - Coordinator Technical Support Services, Analytical Technician

Brian Cabral - Wet lab/Field Technician Al Gunter - Field Technician Roxanne Robertson – Field Technician Kyle Weis - Field Technician

Technical Support Personnel

The Mobile Bay National Estuary Program Environmental Monitoring webpage (www. mymobilebay.com)is a continuation of 25 years of meteorological observations at DISL. Various funding sources have provided more than \$1,200,000 since 2003 to add water quality monitoring to the original DISLsite and establish stations on the northern edge and in the middle of the bay, completing a N-S transect across a large, ecologically important ecosystem and yielding information on the vertical



Field technicians (I-r) Roxanne Robertson, Kyle Weis, and Al Gunter at the National Data Buoy Center in Stennis, MS. National Data Buoy Center staff behind buoy and on far rigtht.

structure of the water column in thebay that has never before been available on an hourly time scale A fourth station was added in 2010 in Bon Secour Bay and additional stations were added inPerdido Bay and Mississippi Sound in 2011 to create an E-W transect. The principal product is the real time output and display of data 2-3 times per hour at eachof the stations. The website, which averaged 3,264 visits/month in 2011, may be visited at anytime by anyone to check on weather and water conditions in their area. The data are presented in a userfriendly fashion to the public through the webpage to increase public knowledge of the parameters used to measure water quality, and to increase the public's Zon7dence7n Environmental knowledge.7
Professionals may also download data from the website in several formats for further analysis.

Data are also served to several entities in near real time for inclusion in national and regional webpages,including the National Data Buoy Center (http://www.ndbc.noaa.gov/maps/Alabama inset. shtml),the Gulf of Mexico Coastal Ocean Observing
System (http://gcoos.rsmas.miami.edu/) and the
Integrated Ocean Observing System (http://www. openioos.org/real_time_data/gm_sos.html).

Data Monitoring Personnel Mike Dardeau, Marine Scientist Lei Hu, Data Manager Rachel Nowlin Data Specialist (at reporting time) Roxanne Robertson, Field Technician Kyle Weis, Field Technician



Discovery Hall Programs

Dauphin Island Sea Lab's Discovery Hall Program Totals

Veer	K-3	Hidde	High	College	Teachers	Other	Tetal
15.00	200	School	School	20.			Magnetic Control
1998	7,183	1,364	905	433	185	307	10,796
1900	2,296	745	. 329	127	254	938	54,321
1993	6,100	2,005	3,197	651	234	386	10,571
1990.	7,138	1,784	2,123	765	238	124	12,567
1994	7,634	2,047	:1,333	660	356	478	13,687
1955	5,981	1,763	5,137	634	212	1346	16,664
1996	6,915	2,148	1.411	455	.300	129	11,326
1903.	0,512	1,6006	1,176	648	369	784	16213
1906	6,233	2,070	1,494	369	230	382	10,742
1959	4,232	2,095	1,307	429	225	300	2,689
290e	- 6,567	2,141	1,346	476	190	368	EL497
2005	3,399	1,918	2,489	5400	177	217	11,636
3002	-4,196	2,934	1,860	460	175	438	10,050
2003	4,665	2,683	2.219	278	2300	20	10,466
2004	4,737	1,38%	1,438	262	3.50	1111	8,157
2005	1,897	1,603	1,590	339	367	. 98	7,174
2006	6,576	2,136	2.877	566	317	314	12,836
2907	3,064	1,440	1,391	432	. 36	1111	6,724
2006	1,268	2,621	5,355	+4	126	(17)	7,797
3909	4,349	2,899	1,302	3.99	90	1000	11,614
2010	0,256	2,667	1,030	186	90	95	12,360
3011	3,133	3,007	1,827	127	70		13,337
Total.	187,714	39,16	34,568	8,646	4,602	6,252	197,376

Discovery Hall Programs (DHP) is the Education and Outreach arm of the Dauphin Island Sea Lab. Chaired by Dr. Tina Miller-Way, DHP employs one half-time (Mendel Graeber) and seven full-time educators (Jenny Cook, Greg Graeber, JoAnn7 Moody, Zarrie Riley, Stephanie Serra, Iloan Turner, 7 Hazel Wilson) as well as an administrative assistant (Sara IJohnson). TMost of The &ducation &taff hold? advanced degrees in education (2) or marine science (2) Torturent/leaching terti7cation (4).7/n7 2011, we were also fortunate enough to have 2 marriages and 2 babies born among our staff. With the overarching mission of experiential marine science education, DHP consist of several different types of activities.

Academic Year programs During the school year, DHP offers a variety of experiential environmental education classes to visiting school groups. We currently offer 10 different classes for K-12 students. In 2011, we added ROVing the Gulf, in which students learn about the technology that marine scientists use to explore and study marine environments, particularly the deep sea. The class culminates in students building and driving their own ROV in the Sea Lab's pool. All classes have been tied to the Alabama Course7of7Study7Standards7and7speci7c7Ocean7

In 2011, 221 school groups visited the Sea Lab to take one or more of these classes. These groups

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Marine educator Joan Turner, holding 5sh, explains the contents of a trawl net catch to students aboard the RV Alabama Discovery.

represented a total of 8713 students. Ninety (3912 students) of these groups stayed overnight at the Sea Lab. Most of our visiting groups come from Alabama (190) and 74% are from public schools (163) though we also serve private schools, college students, home-school groups and Boy & Girl Scout groups. While at the Sea Lab, groups may elect to take one or more of our classes. In 2011, DHP educators taught 604 classes.

For The 7/rst Time, 7DHP 7offered 7an 7en vironmental 7 education camp for special needs students titled Sea Stars in 2011 with funding from the Gulf of Mexico Alliance. Over a long weekend in September, we hosted 15 special needs students and their parents/ guardians. Participants visited salt marshes and barrier island beaches and took a boat trip to Mobile BayWhere 7hey. 7bollected 79sh, plantkon 7and 7bther 7 living marine organisms. Evaluations indicated that each student experienced growth in some manner. Counselors and educators said it was an extremely rewarding experience and we anticipate offering this again in the future.

Summer Camps and Classes

Once school is out, DHP switches gear and offers fun and educational camps for all ages during the summer. We also offer one of the few residential programs in marine science for high school students nationwide. In 2011, our Marine Science Course for high & chool & tudents 7/lled To Zapacity And Zave7 over 150 contact hours of directed marine science education to each of 30 high school students. These reducation to each of 30 high school students.

high school students came from 11 different states and 6 different counties in Alabama. Following a successful trial in 2010, we offered 2 sessions of our short overnight camp for 5th and 6th graders, Barrier Island Explorer. Both Sessions/Filed To-Zapacity7 enrolling a total of 30 students. We offered 3 sessions of Gulf Island Journey, TourTweek-long/ZampTor middle schoolers. All sessions 7 fled Serving/80 Students/from/127 different states and 12 different counties in Alabama. We also offered a number of day camps, including Ocean shive, Treasure Hunters and Art-Sea Discovery, reaching 53, 37 and 21 young ocean enthusiasts, respectively.

Professional Development Given the state of the economy and the pressures on K-12

and the pressures on K-12 teachers, Twe Thave Tlevoted Signi7 cant Time? and resources to providing inexpensive or free professional development to K-12 teachers and informal educators. In 2011, we offered 4 different multi-day workshops during the summer, The Delta; Reefs, Rhizomes and Restoration; Fins, Fishes and Fisheries; and Oceanographic Technology Tools in Education and Research (OTTER). These workshops were funded by grants from Mississippi-Alabama Sea Grant (MASGC), the Gulf of Mexico Alliance (GOMA) and the Northern Gulf Institute (NGI) and reached 76 teachers. These workshops consist of content delivery, relevant relativities and presentation and exploration of activities suitable for the classroom or laboratory. Additionally, DHP collaborated on 2 multi-day workshops (MSU, Teachers Exploring Coastal Hazards and Resilience, funded by NGI; From the Mountains to the Gulf, funded by Legacy) which reached 42 teachers. Lastly, DHP hosted 3 single day workshops for educators. These included NOAA's Offce&fExploration7workshops7itled7Learning7 Ocean Science through Ocean Exploration and Why do We Explore? which reached 55 teachers In collaboration with 3 other Gulf states, DHP also implemented and hosted a single day workshop for educators on the Deepwater Horizon event (DWH), funded7by7NOAA's7Of7ce7of7Education.7/Using7video7 conferencing technology, workshops were held at 3 locations across the state of Alabama (DISL and consortium7member7schools7UWA,7JSU)7as7well7as777 other locations throughout the Gulf. Four scientists spoke on several aspects of the DWH event;

combined enrollment was 171 teachers with 43 of those participants being from Alabama.

BayMobile and Other Outreach

The BayMobile is DHP's traveling marine science classroom. It is a truck equipped with recirculating aquania for transport of live animals and with storage for preserved specimens and other teaching supplies. In 2011, the BayMobile visited 53 schools in the state of Alabama (primarily Title I schools) and reached approximately 13,500 K-12 students. Educators also took the BayMobile to more than 50 outreach events, including regional and national environmentally themed events such as Earth Day, Celebrate the Gulf, My Two Boots, Delta Woods and Waters, BirdFest, Kits Day in Bienville Square, Project/WetKids,/EnviroBowl, Zeo/Jlays,/Tshing/ rodeos and boat shows. DHP educators also participated in many other outreach events including career days, library events, science fairs and AMSTI nights. Lastly, DHP took part in the Alabama Department of Education's distance learning event, ACCESS Week.

Estuarium

DHP works with the Estuarium manager and staff to present the latest in research and issues to the public. In 2011, The Estuarium had 69,550 visitors. Approximately 30% of these visitors are students. New exhibits in 2011 included the Ocean Today Kiosk, the Deepwater Horizon Event display, a Living Shorelines display with audio kiosk and a game

Which Niche is Which? for the younger visitors.

DHP educators offer a weekly series in the Estuarium, know as Boardwalk Talks on an almost weekly basis. These are intended to be informal conversations between Estuarium visitors and researchers at DISL or the surrounding area. In 2011, 36 Boardwalk Talks were offered on amazing variety of topics from oyster reef restoration to manatee tracking to climate change. More than 670 individuals attended these Boardwalk Talks.

Through The Testuarium, TOHP Telso Toffers Treld Trips Tor7 families known as Summer Excursions. In 2011, 69 individuals visited and learned about salt marshes or barrier island beaches and maritime forests through this program.

DHP educators continue to train docents for the Estuarium, offering training days, current events discussions, boat trips and also social events.

Grant-related events and other activities During 2011, DHP continued work on several grants and was awarded additional grants in support of activities described above or in the following section.

Funds from the COSEE-CGOM NSF grant supported a forum on the Deepwater Horizon event for the public. Public meetings were held at 3 locations in the state, Birmingham Southern College, Aubum High 3chool and DISL. Æighty-7ve7





Teachers help replant the shore during their summer workshop Reef, Rhizomes and Restoration.

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pro7t7environmental7organizations,7a7commercial77sherman7and7a7e7nery7echnician.

Funds from the Northern Gulf Institute supported the development of approximately 20 fact sheets on research on the Deepwater Horizon event for teachers and members of the public.

The Gulf Alliance Partnership is an EPA funded program designed to provide multiple hands-on learning experiences for middle school students so that they move beyond the exploration stage and begin to develop inquiry skills. The partnership encompasses 10 locations in 4 states: in Alabama, DHP has been working with North Mobile County Middle School. In 2011, these 6th graders completed The 3rd Toff Their 137 Teld Taybreinces 7 on watershed issues by traveling aboard DISL's research vessel, the AL Discovery, to sample the water quality and collect animals of Mobile Bay. They also began building a living shoreline, bagging one than 160 bags of oyster shell and deploying these bags just offshore Bayfront Park. This living shoreline will be completed in 2012. With beginning of the new school year in August, we began the 2nd year of the project with a new cohort of 6th graders.

We continued work on a Climate Change Community Outreach Initiative (funded by NOAA) completing a survey designed to evaluate current knowledge and behaviors, developing an outreach exhibit on Climate Change and collaborating with the grant's partners to develop an online game for K-12 students (and the public) aimed at increasing awareness of climate change issues as well as soliciting individual behavioral changes that may help to ameliorate climate change.

In addition to these funded activities, DHP was fortunate enough to receive 2 donations through the Dauphin Island Sea Lab Foundation to support bus and tuition costs for Mobile County Public School System high school students to participate in the ROV class, ROVing the Gutf.

DHP also sent a delegation from Murphy High School in Mobile County to the Coastal Ecosystem Learning Center Student Summit on Climate Change in Washington DC. During the school year, students learned about climate change and conducted a service project that addressed climate change. The DISL supported team of 7 students and their teacher not only conducted several habitat restoration projects in the area, but also visited multiple elementary schools teaching about our local habitats and their value, particularly as they relate

to climate change. During the 4 days in Washington, DC, students met with Alabama's legislative representatives and congressional staff and many agency personnel and were treated to several events, including an evening in the Smithsonian Institution's Sant Ocean Hall hosted by Zlean Michel 7 Cousteau.

Lastly, DHP staff gave many presentations at professional meetings. These included the National Science Teachers Association national meeting (Joan/Turner, March), National/Science/Teachers 7 Association/Turner, March), National/Science/Teachers 7 Association/Teqional/Turner, 7 November), Alabama Science Teachers Association meeting (Tina Miller-Way, Carrie Riley, October), National Marine Educators Association (Greg Graeber, Tully), Environmental/Education Association 7 Alabama (Carrie Riley, April), Northern Gulf Institute annual meeting (Mendel Graeber, Tina Miller-Way, Johan/Moody; May), Coastalf-Estuarine 7 Research Federation biannual meeting (Tina Miller-Way, Johan/Moody; May), Coastalf-Changer 7 Community MiPractice (Tina Miller-Way, Zilune), 7 BWET Regional meeting (Tina Miller-Way, Zilune), 7

DHP Personnel and Faculty Dr. Tina Miller-Way, Ph.D. 1995 (Louisiana State University), Associate Director, Outreach and Education

Sara Johnson, Administrative Assistant

Faculty Jenny Took, M.S.719917(University Tof South 7 Alabama) Greg Graeber, M.E. 2008 (University of South

Alabama)
Mendel Graeber/part-time, B.S. 2001 (University of Alabama)

JoAnnaMoody, MAT/Biology 120057 (University Tof West7 Alabama)

Carrie Riley M.S. 2007 (College of Charleson) Stephanie Serra, M.E. 2010 (University of South Alabama)

Joan/Turner, B.A.71999 (University of Alabama, 7 Huntsville) Hazel Wilson, B.S. 1981 (Memphis State University) The George F. Crozler Estuarium
251.861.7500
Toll Free: 866.403.4409
www.sealabestuarium.org

The Estuarium at the Dauphin Island Sea Lab Visitor Totals

Year	Stodents.	Adolts	Scalers	Members Passes	Total
				Euspiances, Camps	
1000	:26,861	16,468		2,343	53,246
1006	34,551	18,842	18,427	2,485	66,281
2009	38,223	20,283	31,887		73,055
2001	36,213	21,305	32,312		32,348
3060	38,321	21,966	32,636	3,056	72,987
3003	38,622	21,266	12,435		27,475
2004	:34,429	21,389	12,142	3,356	71,856
2009	26,501	13,090	6,728	2,533	48.812
2006	31,099	15,745	3,600		46.81.7 87.774
7000	34,152	18,669	16,556	3,229	66,647
2006	37,921	19,073	18,138	4,130	70,356
2001	37,931	18,677	18,332	2,798	71,947
2019	29,209	11,399	1,697		53,413
2011	37,994	18,756	18,799	2,004	69,643
Tetal	410,731	219,600	126,929	35,415	600,411

The Estuarium continues to be a much-visited local attraction, with an increase in visitation of 34 percent over the 2010 attendance. Recovering from the loss of attendance during and after the 2010 Mocondo Well Oil Spill, the Estuarium posted an attendance of 69,550 during the reporting year.

In 2011, the Estuarium also became part of the "Coastal Connection," a national scenic byway ranging from Grand Bay, across the Mobile Bay Ferry, through Orange Beach and onto Spanish Fort.

New exhibits included the Oceans Today Kiosk, part of a Coastal America initiative, and a display on the Deepwater Horizon Oil Spil. We also hosted the Mississippi River traveling exhibit "Rivers to the Sea"

The Estuarium also hosted celebrity chef Alton Brown in March 2011 for the "Eatin' Good in Alabama" event sponsored by the West Bay and Gulf Coast Tourism Development Council. The ever was designed to help South Mobile County and the state of Alabama grow in sustainable tourism

awareness.
Mr. Brown
met with
DISL
scientists
and
supporters
who
discussed
everything
from
7sheries7o7
hurricanes
with him.

Like all museums and aquariums around the nation, the Estuarium could not



Aquarist Melissa Torres.

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The Oceans Today Kiosk keeps visitors informed of the lastest news and research in our seas. This interactive exhibit was sponsored by Coastal America.

function at the level that it does today without the dedicated involvement of our docent volunteer force. Currently, we have over 55 docents who volunteer their time in the Estuarium or around the campus in other capacities helping to explain the Mobile Bay ecosystem to visitors to greening up our campus. Our stalwart crew of docents provided over 2,900 hours of service in 2011. There is no question that they are a tremendous resource for us.

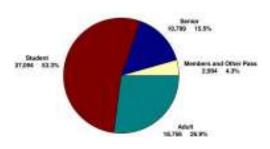
If7vou7admire7our7ushly7andscaped7outter7y7 gardens, please thank our volunteer gardeners: Stella Anderson; Kay Breitenfeld; Blanche Emerson; Anne Ferguson; Carol Goss; Rina Schuett; Carol Standish; Bonnie Staples and Pierce Staples

If you are interested in volunteering at the Estuarium.7blease7contact7Ms.7Jamelle7Rov7at7rov@ disl.org.

Estuarium Personnel Robert Dixon, Estuarium Manger Brian Zlones Senior Aquarist Joe/Ingraham, Aquarist/ Melissa Torres, Aquarist Denise Keaton, Estuarium Docent Coordinator (current)

Jamelle Roy, Estuarium Docent Coordinator7
(current)

Estuarium Visitor Breakdown for 2011



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Eight of these were Ph.D. graduates.

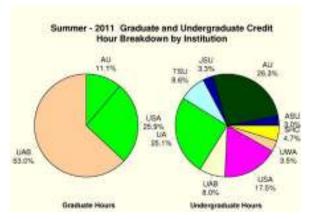
Six NSF Reseach Experience for Undergraduates REU) participants completed a 12-week program of workshops, lectures and research with faculty mentors in 2011 (Table 2).

The UP Faculty contributed \$\$9,228,698 in extramural funding (inclusive of \$2,184,210.27 in BP Gulf Research Initiative expenditures)

There was an additional \$1,264,585 in faculty

During the reporting period, the faculty produced 47 refereed publications; 3 technical reports; 1 book chapter: 15 refereed publications in press; and 1397scienti7c7presentations.7A7complete7isting7of7 research faculty activity can be found on pages 26-

extramural funding through the University of Alabama and University of South Alabama





University Programs

University Programs (UP) oversees summer undergraduate and year round graduate (M.S. and Ph.D.) education, as well as faculty research.

In/faculty/hews./iDr./John/Valentine/assumed/the/ postion of Executive Director in October 2011, and Dr. Ken Heck became Associate Director for University Programs.

Dr. William "Monty" Graham was named chairman of The University of Southern Mississippi Department of Marine Science in August 2011.

Seventeen (17) of the 22 member institutions sent students to the DISL for the 2011 Summer Program. UP delivered 977 undergraduate hours and 72 graduate hours during the summer and 545 graduate hours during the academic year for a total of 1594 hours (Figure 1).

Eighteen graduate students who conducted their research at the DISL received their degrees from their home institutions during the reporting period of October 1, 2010 to September 30, 2011 (Table 1).

Table 1. 2010-2011 Graduates

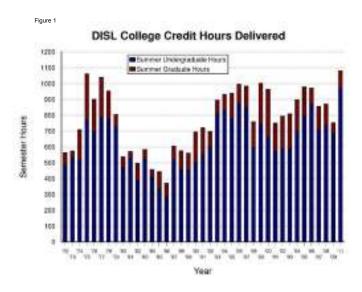
Table 1. 2010-2011 Graduates:

Students Graduated
Ajemian, Matthew. Foraging ecology of large benthic mesopredators: effects of myliobatid rays on benthic communities. Ph.D. (USA)
Baggett, Lesley "The Affects Xi Tutrient Peninchment 2n.7 he Atolchiometry, Timess, Tecundity, And Teeding Perference? of invertebrate grazers of seagrass. (Thalassia testudirum) epiphytes in Florida Bay, Florida USA Ph.D. (USA)
Biancani, Peter Tiseasonal Pand Spatial Effects Dit Waste Water Eff vent 2n.D (Spatial Spatial Spatial File Constitutions of Costal Sharks within the Northern Gulf of Mexico. Consequences for Trophic Transfer and Foodweb Dynamics. Ph.D. (USA)
Fisher, Karen. Evaluating nursery habitat utilization by juvenile gray snapper (Lutjanus griseus) in the northern Gulf of Mexico. MS. (USA)
Gericke, Rebecca. Effects of climate-driven range expansions of tropical snapper species (Lutjanus spp.) on the dominant Tabrie Xipectage (Indian Agradom Arbomboides). 7M.S. 3. (USA)
Kenworthy, Matt. Effects of Temporal Variation in Predation Risk on Predator-Prey Interactions, M.S. (USA)
LeMoine, Nathan. Andividual Pard Zommunity Tevel Tesponses SiCrustaceans 3nd 7sh 150 Testoration Toftmariner biogenic habitat. M.S. (USA)
Martin, Charles. Impacts of Invasive Eurasian Milfoll and Nile Tilapia in Coastal Alabama. Ph.D. (USA)
Miller, Glenn. The Antivence Difavian Predators Dn Thearshore Zommunities The Protrhem Zulf Tif Mexico 2nd 7
Copper River Delta, Alaska: implications for habitat conservation. Ph.D. (USA)
Miller, Andrews. Zooplankton community structure in the northern Gulf of Mexico: implications for ecosystem management. M.S. (USA)
Myers. Joseph. 7Effects Of Species Species Species Capazing and Nutrient Addition 2nd Tyrowth 3nd 4production 70/16he7

management. M.S. (USA)
Myers, Joseph, Zffledts/Täpecies-speci7c3grazing/and/hutrient/addition/2n/growth/and/production/br/the7
shoalgrass Halodule wrightii and its epiphyle. M.S. (USA)
Novoveska, Lucie, Zfhe7n/cnecepf.24vian/predators/bn/hearshore/2communities/in/zhe7n/orthern/Zulf/br/Mexico/2nd7
Copper River Delta, Alaska: implications for habitat conservation. Ph.D. (USA)
Puntila, Riika./Zho/piscivorous/9sh/have/2ascading/impacts/bn/lower/zrophic/zevels/in/zoral/zeef/environment:7
comparisons of food web interactions in back reef and fore reef environments. M.S. (USA).
Shiplett, Randi. Prey selectivity and Ichthyoplankton predation by scyphomedusae in the northern Gulf of Mexico.
M.S. (USA)

M.S. (USA).
Smith, Casey. The relationship between phytoplankton pigment concentrations and dmsp, dms, and dmso in a diatom dominated bloom in the Ross Sea, Antarctica, M.S. (USA)
Stutts, Debra. Paleocilmates from two Late Neogene Fossil Floras of Eastern North America, including Comparisons with the Marine Record, Ph.D. (USA)
Wells, Tami M. Natural disasters and long-term recovery: A baseline study of historical change and habitat structure of Juncus Toemerianus Transhes In Mississippi and Alabama. Ph.D. (USA)

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University Programs Personnel Dr. Kenneth L. Heck, Jr. - Associate Director. October 2011 to present

Dr. John F. Valentine - Associate Director, January 7 2008 - September 2011 Sally Brennan - University Programs Registrar Carolyn Wood - Administrative Assistant

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Prepared by Roberta Arena Swann, Director, Mobile

PROGRAM IMPLEMENTATION

The Mobile Bay National Estuary Program (MBNEP)20117unding Sources 7e 7ected 7ts ability7 to collaborate with numerous partners. Fifteen grants from 12 different organizations were active during 2011including two grants from the U.S EPA Gulf of Mexico Alliance, two grants from Alabama Department of Conservation and Natural Resources, two grants from Alabama Department of Transportation, and two grants from U.S. Fish and Wildlife Service. Match funding for the MBNEP annual U.S. EPA ward was received from the State of Alabama, the Alabama Department of Conservation and Natural Resources and several Mobile and Baldwin County municipalities, totaling \$215,946. Both the City of Fairhope and the City of Spanish Fort each contributed \$5,000 this year (after not contributing match dollars for severa years) and the City of Daphne increased their contribution by \$5,000, to \$10,000. In total, the MBNEP managed over \$2,600,000 to conduct 42 projects affecting the water quality and living resources of Mobile Bay.

STATUS AND TRENDS

Mobile Bay Sediment Budget
MBNEPIOINED#ORCES/with/ihe/IJ.75. Army7
Corps of Engineers to develop a Sediment Budget
for Mobile Bay that will describe the various sediment inputs (sources) and outputs (sinks) for the entire Mobile Bay watershed. This budget will be used to predict morphological changes within over time and will be particularly useful in assessing any changes related to future habitat restoration projects. Such a tool will provide great value to regulatory and enforcement agencies to make decisions that affect policy development, project implementation and management of habitats and living resources.

Contractor: Dr. Mark Byrnes, Applied Coastal

Research and Engineering, Inc.



Mobile Bay National Estuary Program 4172 Commanders Drive Mobile, AL. 36615 (251) 431-6409 Fax: (251) 431-6450 www.mobilebaynep.com

MOBIL F BAY REAL-TIME MONITORING With continued funding (5th year) from the Gulf of Mexico Program in 2011, water monitoring sites at Meaher Park, Dauphin Island, Weeks Bay, and at Meaher Park, Dauphin Island, Weeks Bay, and Mobile (Middle) Bay continue to provide real-lime data that can be viewed at www.mymobilebay. com. That website also contains links to the Mobile River, Fort Morgan, and the Farewell Buoy as part of the Physical Oceanographic Real-Time System of the National Ocean Service with data particularly pertinent to shipping interests. Data is also available from Weeks Bay and Grand Bay through the NOA A National Weather Service. through the NOAA National Weather Service Hydrometeorological Automated Data System. The My Mobile Bay website will ultimately be connected to a larger network of stations as part of the Gulf Coast Ocean Observing System with research

reports, maps, and other information available to the public. Contractor: Mike Dardeau, DISL

ECOSYSTEM RESTORATION AND PROTECTION

In/the/ID'Olive/watershed./Joes/Branch./a/tributary/ parallel to Highway 31, is eroding at an accelerating rate due to increases in the volume and velocity of stormwater #unoff. #dentified #as a #app #priority7 stabilization area in the D'Olive Creek, Tiawasee Creek@and70e's Branch7Watershed7Management7
Plan, MBNEP secured a \$645,600 grant from
the Alabama Department of Environmental
Management and a \$200,000 award from the Management and a \$200,000 award from the Alabama Department of Transportation on behalf of its partners in Spanish Fort, Daphne, and Westminster Village. The goals of the project include removing this stream from the State's 303(d) list for impairment by siltation and demonstrating to public/Tricalis, Panineers?and?ather.professionals? how water quality protection through natural "green infrastructure"?ss@practical?altemative?io?ack?fil?and? amonged.bank.etaehtine.sustems. armored bank retention systems.

The restoration will involve using a cutting-edge The testoration will involve using a cutting-every technology called Regenerative Step Pool Storm Conveyance. This methodology Involves Tilling? the Tully NoTrush Twith Tarnixture To Tsand Tand Taw dust and installing a series of rock step pools down the length of the impacted stream to slow velocity and 7 promote 7 in 7 it ration 7 of 7 the 7 unoff 7 underlying 7 the 7 stream degradation. The project includes restoration of downstream wetlands impacted by sediments resulting from the upstream erosion. In addition, the Design and Engineering Services Contractor: Emery Baya, Thompson Engineering

Mon Louis Island

The western shore of Mobile Bay has suffered erosion and degradation of its shallow water and intertidal habitats that provide nursery grounds for 7sh7and7shell7sh.7benthic7biodiversity.7and7brimary7 production. This erosion stems not only from the effects of tropical weather events, but also from chronic impacts like prevailing winds and ship wakes. MBNEP and six contiguous property owners are undertaking this project to use "living shorelines" technology. To Idemonstrate Its Ibene 7ts, Including 7 increases in acreage and ecosystem function of these near shore habitats for a greater community

MBNEP received funding from the Gulf of Mexico Foundation Community Restoration Partnership and the U. S. Fish and Wildlife Service Coastal Programs



This before and after photo to the right shows the crossion on a tributary of Joe's Branch. Ashley Campbell with the City of Daphie sits on a boulder that fell off the wall of the stream after a storm last summer. The second photo shows a completed step pool conveyance in Anne Arundel County, MD. The restoration of the tributary of Joe's Branch will resemble the Maryland project.

to undertake this project. The six property owners of parcels encompassing almost 700 feet of shoreline, have agreed to partner with the to demonstrate how such a project would be implemented on a multiproperty scale and constructed under existing State and Federal regulations. The project is currently being designed by South Coast Engineers with input from the property owners.

Project goals are to create and enhance sub-tidal reef and intertidal marsh habitats. The objectives are to install 0.25 acres of reef structure to expand quality oyster settlement opportunities and to establish 0.45 acres of low energy inshore area to restore emergent marsh vegetation, while optimizing sandy areas along this stretch of shoreline. Another objective is to engage private property owners in designing and implementing this public shoreline restoration project as a demonstration of green technology as an alternative to shoreline armoring. Design and Engineering Services Contractor: Scott Douglass, Caren Dixon, South Coast Engineers

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Prichard's7Jackson7Reading7Park/Eight7Mile7Creek7 With a Watershed Management Plan for the Eight Mile Creek (EMC) Watershed recently completed, MBNEP received a National Fish and Wildlife Foundation#FiveStarGrantXo7estore2a77rst2order7 tributary7that7borders7Prichard's7Jackson7Reading7 Park in the Whistler Community. The creek conveys stormwater from a drainage area north of St. Stephens Road past the Park and downstream to Sight Mile Creek, which was listed on the State's 303(d) list for impairment by pathogens before development of a total maximum daily load (TMDL). developinent of a foot maximum dually dual (much Partners from Auburn University (Landscape Architecture Department and Alabama Cooperative Extension System (ACES)) are collaborating on developing an engineering plan for the stream restoration, scheduled for construction by the City of Prichard Public Works Department in early November, 2012. Partners also include the Coastal Alabama Clean Water Partnership and the Prichard Environmental Restoration Keepers, who will coordinate volunteer clean up and planting efforts. The restored stream will provide an educational venue to connect school-age stakeholders with environmental assets where they live. Design and Construction Management Services: Charlene LeBlue, IJessica Roberts Brown, Auburn University.

EDUCATION, OUTREACH AND CAPACITY BUILDING

"A7Red7sh7Tale,"7an7educational7video7produced7by7 MBNEP and directed by Hidden World Productions, was created as part of a grant from the Gulf of Mexico Program and was released in April, 2011. This 77 lm-short 7 leatures 7a 7pair 7of 7animated 7 ed 7sh, 7 Jimbo and Thibodeaux, who explain The concepts of nutrient over-enrichment, eutrophication, hypoxia, and anoxia along with storm water runoff and watershed dynamics to an elementary through middle school audience. 77 he 77 lm 7premiered 7at 17he 7 Crescent Theater in Mobile and is available via the MBNEP website. The cast was recruited from the Alabama School for Mathematics and Science student/body@nd/aculty.?7A/Red/sh/Tale/*will/be7 distributed to area schools, libraries, and educational venues, available on the MBNEP website (www. mobilebaynep.com) and offered at interactive kiosks across the Gulf Coast. Movie Contractor. Lynn Rabren, Hidden World Productions. Kiosk Contractor: Hamline University



Clean Up the Bottom involved volunteers on water and on land.

Clean Up the Bottom

In an effort to engage the community and bring attention to the Three Mile Creek Watershed, MBNEP partnered with the City of Mobile, Keep Mobile Beautiful, the Mobile Housing Board, the Mobile Beautiful, the Mobile Housing Board, the Martin Luther King Redevelopment Corporation, and others to coordinate a neighborhood and waterway cleanup in "The Bottom." This historically African-American, traditionally-underserved community located along Martin Luther King Avenue near downtown Mobile has a rich heritage and is home to many ârea leaders and ælected of Tricals Dut Buffers? from pnopion problems with illenal disposal trash from ongoing problems with illegal disposal, trash and filter. //The problems & re //Intensi7ed //Lue //Io7 stormwater runoff which routinely carries discarded material into local tributaries to Three Mile Creek where it impairs rich wildlife and aquatic habitat and destroys aesthetics.

On October 21, 2011 almost 400 volunteers spent four hours on neighborhood streets and Three and One Mile Creeks to collect and dispose of litter, debris, and tires. Filled trash bags were collected by City public works staff from dead ends and intersections and Sheriff's Flotilla deputies from

volunteers' kayaks and canoes. An eighteenwheeled tractor trailer provided by Firestone/ Bridgestone was "Med With "abandoned Tires? collected from along Conception Street Road. Local elected of Trials, "Mobile Thousing Board Tesidents, 7 community residents, and City and agency staffs all community residents, and City and agency starts all worked together to improve this area's condition and inspire pride in the Bottom community. The event was sponsored by BP, with support from Scotch Gulf Lumber, Coca Cola. This event was a signature event for raising awareness about the need to develop a comprehensive watershed management plan for the Three Mile Creek Watershed.

Mobile Bay National Estuary Program Personnel

Roberta Swann, Director Tom Herder, Watershed Protection Coordinator Katherine Eddy, Community Relations Coordinator Brenda Lowther, Program Administrator Christian Miller, Non Point Source Pollution



Volunteers help Clean Up the Bottom in the shadow of the RSA Tower

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Resident Research Faculty

Ruth Carmichael, Ph.D. (Boston University, 2004). Senior Marine Scientist, DISL and Assistant Professor of Marine Sciences, University of South Alabama. Employing natural abundance stablisotopes to understand biological and physiological responses to environmental perturbations, assessing nutritional importance of food sources, discerning physiological state of organisms, and determining time scales of ecosystem-level change.

Just Cebrian, Ph.D. (Polytechnic University of Catalonia, Spain, 1996). Senior Marine Scientist, DISL and Associate Professor of Marine Sciences, University of South Alabama. Trophic interactions and carbon budgets in marine ecosystems, nature and controls of trophic routes of primary production in marine and terrestrial ecosystems.



Dr. Ken Heck is Chief Marine Scientist at the DISL

Rob Condon, Ph.D. (Virginia Institute of Marine Science, The College of William & Mary, 2008). Research Senior Marine Scientist, DISL: Plankton and microbial ecologist interested in understanding the climatological, physical and biogeochemical processes controlling zooplankton and bacterial communities, the biological pump and carbon (C) cycling in estuarine, coastal and open-ocean systems.

John Dindo, Ph.D. (University of Alabama at Birmingham, 1991). Senior Marine Scientist, DISL and Associate Director for Institutional Advancement and Operations. Marine vertebrate ecology; avian breeding biology; predator-prey relationships in avian and herpetological fauna, habitat assessments; and age, size tlass and recruitment ates of firsh on 7 hardhattoms.

Brian Dzwonkowski, Ph.D. (University of Delaware, 2009). Research Senior Marine Scientist, DISL. Understanding physical processes that In Tuence Three-dimensional Transport Impacts marine ecosystems. Focused on improving the understanding OrThe Trow Teld 2nd 18th sessociated 7 response to forcing functions at a range of temporal and spatial scales.

Monty Graham, Ph.D. (University of California, Santa Cruz, 1994) Senior Marine Scientist, DISL, and Associate Professor of Marine Sciences, USA. Physical and behavioral mechanisms that cause plankton to be distributed in patches; processes that In Tuence The Tornation Indiano Tale Tornation Indiano India

Kenneth L. Heck, Ph.D. (Florida State University, 1976). Chief Marine Scientist, DISL Professor of Marine Sciences, University of South Alabama. Ecological studies of interactions between seagrasses and associated macrofauna, especially shrimps, & bab. & and experimental of seagrass nursery value, and experimental investigations of herbivory, nutrient enrichment and over/shing & Barthey impact & eagrass & cosystems.



Dr. Frank Hernandex, fourth from bottom right, shows students an oar5sh which was brought in by a local 5sherman. This speciman was donated to the Natural History Museum at Louisiana State University for their 5sh collection.

Frank J. Hernandez, Ph.D. (Louisiana State University, 2001). Research Senior Marine Scientist, DISL and Research Assistant Professor, University of South Alabama. Ecology of marine organisms, primarily Zoastal Zand Teef-associated Tishes, 7 particularly The Zarly Tifle Thistory Tatages 76/78 hes Zand The physical and environmental processes that affect dispersal, survival to settlement, habitat selection and the eventual recruitment to the adult population.

Ronald P. Kiene, Ph.D. (SUNY Stony Brook, 1986). Senior Marine Scientist, DISL and Professor of Marine Sciences, University of South Alabama. Biogeochemical cycling of organic matter in coastal and ocean systems with emphasis on compounds containing sulfur and nitrogen; cycling of climatically important trace gases in relation to phytoplankton and food web dynamics; and microbial ecology and biogeochemistry in sediments.

Christine (Tina) Miller-Way, Ph.D. (Lousiana State University, 1994). Marine Scientist and Associate Director, Discovery Hall, DISL. Science education - curriculum development, inquiry-based marine

science; Research - functional ecology of marine benthos, benthic community structure, macrofaunal effects on benthic processes and coastal hypoxia.

Behzad Mortazavi, Ph.D. (Florida State University, 1998), Senior Marine Scientist, DISL and Assistant Professor and Director of the University of Alabama M.S. Degree Program in the Marine Sciences. Focus on the transfer and cycling of bioreactive material in terrestrial and marine ecosystems, with a particular emphasis on how naturally occurring perturbation and anthropogenic activities are impacting biogeochemical cycles.

Alice C. Ortmann, Ph.D. (University of British Columbia, 2005). Senior Marine Scientist, DISL and Assistant Professor of Marine Sciences, University of South Alabama. Diversity and ecological roles of marine microbes including Bacteria, Archaea and their viruses using both culture-based and molecular biology techniques.

Kyeong Park, Ph.D. (College of William and Mary, 1993). Senior Marine Scientist, DISL and Associate Professor of Marine Sciences, University of South Alabama. Physical transport processes and their effects on water quality and living resources in tidal rivers, **estuaries**and**coastal**systems, **Issing**Reld**data,7* theoretical**panalyses**and**numerical**prodels**. Speci**7c7* topics include estuarine residual circulation, dispersion of pollutants, sediment transport, eutrophication, hypoxia/ anoxia, etc.

Sean Powers, Ph.D. (Texas A&M University, 1997). Senior Marine Scientist, DISL and Assistant Professor of Marine Sciences, University of South Alabama. Fisheries, experimental ecology, conservation and restoration of Coastal Abell 75h and 77n75h populations.

John F. Valentine, Ph.D. (University of Alabama, 1989). Executive Director DISL and Professor of Marine Sciences, University of South Alabama.
Current interests focus on the role of biotic processes incontrolling/hr-70/w/of-fenergy-among/trophicZevels/fn/marine habitats, particularly herbivory on seagrasses. The application of conservation techniques for the protection of nearshore marine ecosystems. The use of marine protected areas to test the impacts of higher order consumers on the strength of trophic linkages between seagrass and coral reef habitat.

Post-Doctoral Fellows

Leslie Baggett Laure Carrasou Brian Dzwonkowski Marcus Drymon Agota Horel Glenn Miller Bidyut Mohapatra Ryan Moody

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Faculty Activity

Book Chapters and Projects Valentine, 7J.-F.X.T. Z.-Heck, 7JI., 7M. 7 R. Dardeau and H. Burch. In press. Ecosystem-Based Management of Mobile Bay, Palabama. 7Pp.000-000, 1n. 7J. 7 W. Day and A. Yanex-Arancibia (Eds.), Ecosystem-Based Management. Texas A&M Press.

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Just7Cebria

Colonization and functionality of two black needlerush (J. Toemerianus) m black needlerush (J. Toemeránrus) marsh restoration designs. Grand Bay National Estuarine Research Reserve; 1st Research Symposium, October 2011
Presentation 1/20 5/1/cers/from?he/Alabama? Presentation 1/20 5/1/cers/from?he/Alabama? Resources (ADCNR) for an update and discussion on results to date from the Alabama? Designs of the Comment of the Comm Guy Gunter about restoration projects in Coastal Alabama during his visit to DISL, February 2011

Presentation/lo/bf7cers/from/EPA/and7

Presentation No https://docs.new.incom.eth.n

Ken Heck Evaluation of the Effectiveness of SAV Evaluation of the Effectiveness of SAV Restoration Approaches in Chesapeake Bay. A program review conducted at the request of the Zhesapeake Bay Scienti7c7 and Technical Advisory Committee (STAC) October 7, 2011. NGI Ar ual Conference. Oral presentation. Mobile. May 2010.

Frank Hernandez 2010 -Guest Lecturer, Quantitative Methods in Fisheries and Ecology, Dauphin Island Sea Lab
2010 - Guest Lecturer, Biological and
Physical Interactions, Dauphin Island Sea
Lab

Non Nene Invited Presentations - University of Alabama Birmingham, April 2011; University of Southern Mississippi-Stennis Space Center – November 2010.

Kyeong Park Invited seminar, entitled "Environmental engineering for coastal zone," Ulsan National Institute of Science and Technology, School of Urban and Environmental Engineering, Ulsan, Kore October 21, 2010 modeling study of Invited seminar," A modeling study of

in Alabama coastal water," University of Alabama, Department of Biological Sciences, Tuscaloosa, AL, October 28, 2010

Presentation, entitled "Across-shelf surface

transport and velocity structure on a coastal shelfZlirectlyIn7uencedIn/Restuarine7 out7ow,"The7l6th7eat7c-Asian7Marginal7 Seas, GIS NTU Convention Center, Taipei, Taiwan, April 21-23, 2011 Talwan, April 21-23, 2011
Invited seminar, entitled "Temporal
variability in summertime bottom hypoxia
in a shallow, atrati7ed, znicro-tidai/asutany,"
Chungnam National University, Department
of Oceanography, Taejon, Korea, April 26, 2011

to Ceanugraphy, Jedyni, Notea, Apin 20, 2011
Invited lecture (14-hr over 2 days), entitled 'Water quality modeling in coastal and estuarine eaters, '2011 GGSG Intensive Course on Estuarine Dynamics, Gyeong-Gi Sea Grant Program, Inha University, Inchon, Korea, Duly 27-28, 2011
Invited seminar, entitled "Temporal variability in summertime bottom hypoxia in 2 khallow, 8tratified, micro-IddaRstuary, 7 kinson Maldragel Inliversity Denatment of Kinson Maldragel Inliversity Denatment of in a shallow, stratired, micro-liceal estudy, Kunsan National University, Department of Oceanography, Kunsan, Korea, August 3, 2011 Invited seminar, entitled "Temporal variability in summertime bottom hypoxia

เกลิเลเลแห ะกระเทศ bottom hypoxia in ลิเลเลแห strati7ed, Inicro-tidal lestuary, 7 Korea Maritime Institute, Seoul, Korea, August 5, 2011

Workshops, Meetings Attended or Organized Ruth Carmichael 2010 October - Coastal & CERF Biennial October - Coastal & CERF Biennial Conference Planning Meeting, Daytona, Ft., Estuarine Research Federation Bienn Conference Planning Meeting November - Gulf Estuarine Research Society Meeting, Port Aransas, TX December – Bays & Bayous Symposium, Mobile AL 2011

March - Benthic Ecology Meeting, Mobile, AL

April - FWC Marine Mammal Stranding

Workshop & Necropsy training, Pensacola Beach, FL Prescott Cetacean Stranding Workshop, FWC, Gulf Breeze, FL; Junez-International/Workshop/on/Science7 June Americanoma Workshop on Scie and Conservation of Asian Horseshoe crabs, Hong Kong August – Gulf Coast Student Chapter of the Society for Marine Mammalogy, Hattlesburg, MS

Just7Cebrian
Co-organizer of the Dedicated Session:
"Restoration Practices in Coastal Alabama",
2010 Restore America's Estuaries.
Galveston Island Convention Center,
Galveston Island, TX, November 13-17,
2010.

2010.
Chair of the "Habitat Management" Session of the 2010 Bays and Bayous Symposium Member of the Program Committee of the XL Benthic Ecology Meeting, Mobile, AL, March 16-20, 2011
Chair of the Session "Ecosystem Function"

March 16-20, 2011
Chair of the Session "Ecosystem Function" of the XL Benthic Ecology Meeting, Mobile, AL, March 16-20, 2011
Panelist and presenter in the session "Coastal/Systems" In/Inte/ISOST/Deepwate Horizon Oil Spill Principal Investigator (Pl) Conference, St. Petersburg, FL, October 56-2010.

Conference, St. Petersburg, F.L., October 5-6, 2010 Presenter the Technical Season on Modeling Approaches and Data Needs with Focus on Ecological and Physician Process originated by the GOMA Habitat Conservation and Restoration Team, Sea Level Risks outbeam, in Saint Petersburg, Florida, November 3-4, 2010 Open Technical November 3-4, 2010 Open Season Seaso GOM Digital Atlas" organized by NCDDC (NOAA), Grand Bay NERR, IJanuary 718,7

(NOAA), GrandBay MERR, January 18,7
2011

Member of the Executive Committee
and Subject Matter Expert (Perido
Coastal Lagoons) for the GOM Digital
Allas Development Team organized and
coordinated by NCDDCTNOAA), Tanuary 7
2011-present.
Participant in an implementation workshop
for the NASA funded project. The
order Medical Committee of the NASA funded project. The
restoration along the Northern Guilf of
Mexico Coast" (Pt. Maury Estes), Five
Rivers/Center, Spanish/Fort, AL, Jänuary 7
21, 2011

21, 2011
Organizer of workshop: "Earth System Modeling for Integrated Assessment of Ecosystems" Gulf Coast Research Laboratory, Biloxi, Mississippi, Zlanuary7 26-27, 2011

26-27, 2011.
Presenter at the workshop: "Earth System Modeling for Integrated Assessment of Ecosystems" Gulf Coast Research Laboratory, Billout, Affississippi, Zianuary 7 26-27, 2011.
State of Alabama representative for the Gulf of Mexico Alliance Steering Committee on Habitat Conservation and Restoration. on Habitat Conservation and Restoration February 2011-present. Member/Dfthe Alabama/TNC/Scienti7c7 Advisory Council for the development of restoration criteria in the 100:1000 Restoration Partnership. Presenter at the workshop "Submerged Presenter at the worksnop "Submerged Aquatic Vegetation and Seagrass of Louisiana, Mississippi, and Alabama Coasts", Grand Bay NERR, May 24, 2011. Member of the Science Advisory Committe for the Mobile Bay National Estuarine Program. April 2011-present. Member of the Northern Gulf Institute

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Council of Fellows. September 2011-present.

Member of the NOAA/Gulf of Mexico Sea Grant Hydrological Restoration Monitoring Panel for successful restoration partnership in the Gulf of Mexico. September

Rob Condon Sept 2011, Chair of the ASLO Image Library Committee.

Ken Heck A program review conducted at the requorifile Chesapeake Bay Scientl/Tcland7 Technical Advisory Committee (STAC.) October 7, 2011, Member Coastal Habitats Coordinating Team Meeting/NEP2and*NOAA), Jan2010,7 Mobile.

Ron Kiene University of Alabama Birmingham, Seminar. Marine biogeochemistry of organic sulfur – from cells to the global ocean.

ocean.
University of Southern MississippiStennis Space Center – Seminar. Marine
biogeochemistry of dissolved DMSP.
November 2010.

Behzad Mortazavi Mortazavi G. (10/2010). Invited speaker. Impact of Gulf oil spill on Coastal Ecosystems. Webinar conducted in collaboration with Earth Gauge, a program of the National Environmental Education Foundation that provides environmental and climate knowledge to broadcast meteorologists in order to increase the public's knowledge to make environmental informed decisions. Video archived at http://www.earthgauge.net/2010/gulf-oil-spill-webinar Behzad Mortazavi

Kyeong Park Participated in the 2010 Bays and Bayous Symposium - Science, Industry, Community: Building Bridges to Coastal Health, Arthur R. Outlaw Convention Health, Arthur R. Outlaw Convention
Center, Mobile, AL, December 1-2, 2010,
organized by the Mobile Bay National
Estuary Program and Mississippi-Alabams
Sea Grant Consortium.
Participated in the Workshop on
Coordinating R&D on Oil Spill Response
in the Wake of the Deepwater Horizon,
Lod Cook Conference Center, LSU, Bation
Rouge, LA, March 22-24, 2011, organized
by the Coastal Response Research
Center (CRRO) at the University of New

Hampshire.
Participated TinThe716th7Paci7c-Asian7
Marginal Seas Workshop, GIS NTU
Convention Center, Taipei, Taiwan, April
21-23, 2011, organized by National Taiwan

Viniversity.

Participated in the 2011 Northern Gulf
Institute (NGI) Annual Conference,
Renaissance Mobile Riverview Plaza Hotel,
Mobile, AL, May 17-19, 2011, organized by

NGI.
Participated in the Coastal Hazards
Collaboratory - 2011 Annual Meeting,
Renaissance Mobile Riverview Plaza Hotel
Mobile, AL, May 18-19, 2011, organized by

NG-CHC.
Participated in the Workshop on Water
Quality Modeling in Coastal and Estuarine
Waters, Inhar University, Inchon, Xorea, Zuly/
27-28, 2011, organized by Gyeong-Gi Sea
Grant Program, Inha University and Ministry
of Land, Transport and Maritime Affairs,
Korea

Public Outreach & Other Service Public Outreaun S. ... Ruth Carmichael Coastal Nature Guide Program - Oral presentation: Alabama manatees: Shallow

water phantoms.
Rotary Club of Mobile - Oral presentation:
Alabama manatees: Shallow water
phantoms.
Alabama Coastal Fisherman's Association
Oral presentation (co-author): Manatees in Oral presentation (co-author): Manatees Alabama (D. Ingram, USFWS). Alabama Deep Sea Fishing Rodeo -Information Booth: Mobile Manatees Sighting Network. DISL Discovery Day - Interactive oral presentation: Mobile Manatees Sighting Network.

Network.

Dog Paddle, Dog River Clearwater Revival
- Information Booth: Mobile Manatees Sighting Network

Cocktails with Critters - Information Booth Mobile Manatees Sighting Network.

Just/Cebrian
October 2010. Speaker at luncheon with the October 2010. Speaker at luncheon with the U. South Alabama Foundation. December 2010. Reader for the Christmas tale: "The Polar Express" for Kindergarten students at Bayside Academy. January 2011. Scienti7c/advice 10 Journalist7 January 2011. Scientifi-Zadvice 7o Journals Kathle Farrell on the ecology of seagrass beds and salt marshes for an article for Flidrers World Magazine.

January 2011. Srioup Leader Rior Royster restoration project at Helen Wood Park (Mobile, Alabama) organized by TNC. (Mobile, Alabama) organized by TNC. Mobile, Alabama) organized by TNC. Mobile seamed to the season of the season powers at East Mobile season of the season Mobile season of the season Mobile season Mobil underwater"). May 2011. Presentation for 3rd grade students at Bayside Academy (title: "The Macondo Oil-Spill: impacts on Gulf of Mexico marine ecosystems"; activity developed in Toillaboration //with Tioan /Turner/and/JoAnn Mitchell/Irom/Discovery/Hall/

Programs).
Regular meetings with residents around our study sites in Perdido Bay (Big Lagoon State Park, Kee's Bayou and Gongora Drive) for environmental education and

stewardship (from 2000 to present). Marinas (Universidad de Alicante, Spain), September 2011, two weeks, Graduate Course: "Anthropogenic Impacts on Coastal

Rob Condon Discovery Day, DISL: 2011 - Hosted children's Jelly7sh7art7display.

Ken Heck Special Course: Centro de Investigaciones Marinas (Universidad de Alicante, Spain), September 2011, two weeks, Graduate Course: 'Anthropogenic Impacts on Coastal Ecosystems."

Odum Lifetime Award Selection Committee
Member (CERF).

Member (CERF).
Frank Hemandez.
Presentation for "Fin, Fish and Fisheries"
Teacher Education Workshop, Discovery
Hall Program, DISL.
Presentation for NOAA Oil Spill
Professional Development Workshop,
Discovery Hall Program, DISL.
Open laboratory with exhibits during
Discovery Day, DISL.
2011, Presentation for "Fin, Fish and
Fisheries" Teacher Education Workshop,
Discovery Hall Program, DISL.
2011, Presentation for NOAA Oil Spill
Professional Development Workshop,
Discovery Hall Program, DISL.
2010, Presentation for public at Dauphin
Island Sea Lab's Estuarium "Boardwalk
Talk' series.
2017-date, High School Career Day,
Discovery Hall Program, DISL.
2004-date, Discovery Day Laboratory Open
House, DISL. House DISI

Ron Kiene
Chief Scientist, RV Pelican, Gulf of Mexico,
Sep 10-23, 13 sea days.
USA-Press Conference Panel for
anniversary of Deepwater Horizon blowout.
Battle House Hotel, Mobile.
High School Science Fair project guidance
for Pranaya Chilikuri, Davidson High
School Science Fair project guidance
for Pranaya Chilikuri, Davidson High
School Science Fair project guidance
for Pranaya Chilikuri, Davidson High
School Science Fair project guidance
for Pranaya Chilikuri, Davidson High
Rosearch Integrity Workshop Coordinator
(annual, Inal' day workshop for graduate
students and faculty).

Behzad Mortazavi Seminars Hosted - October, 2010. Kyeong Park, University of South Alabama. Park presented *A Modeling Study of Transport and Retention of Oyster Larvae in Alabama Coastal Water at Biological Sciences, UA, Tuscaloosa, AL.

Alice Ortmann Alice Ortham

Little Lagoon Preservation Society –

Presentation of research results at the quarterly meeting April 19, 2011.

ASLO7-StudentPosterZjudge, Aquatic7 Sciences Meeting February 2011. Animal Rescue Foundation - Volunteer,

Of7ces, Boards, Panels, Consulting Offices, Boards, Fariets, Consuming Ruth Carmichael 2010-present, Science Advisory Committee, Mobile Bay National Estuary Program, Member. 2009-present, Gulf Estuarine Research 2009-present, Gulf Estuarine Research Society (GERS), President Elect. 2007-present, DISL Data Management Advisory Committee, Chair. 2007-present, Ecological Research Development Group, Lewes, DE, Scientif-CRAVisor. 2006-present, ERF/CERF Biennial Conference, Workshops Chair.

Just/Cebrian
Aquatic Botany, Staff Referee,
2004-present.
AGAUR (Catalan NSF), Proposal
Evaluator, 2005-present.
FBBVA (Spanish Foundation), Proposal
Evaluator, 2006-present.
Marine Ecology Progress Series,
Contributing Editor, 2007-present.
The Open Oceanography, Board Member,
2007-present. 2007-present. The Open Marine Biology Journal, Board 7 Member, 2007-present.
Gulf and Caribbean Research, Associate
Editor. 2010-present. The International Scholarly Research Network/Ecology/Journal,/Board/Member,7 Network Ecology Journal, Assartu Avenua 2010-present.
Public Library of Science, PLoS ONE, Academic Editor, 2011-present.
Member of the Expert Panel for the Member of the Expert Panel for the periodical evaluation of the performance of the Gulf Breeze EPA laboratory (2007-present). Member of evaluation committee for promotion ZhD. Zilm Hagy Arom Ane-EPA7 Gulf Breeze Laboratory (Florida) 2008. External Reviewer of terruer promotion package for 30-Pack Biber, Gulf Coast Letteral Reviewer of terruer promotion package for 30-Pack Biber, Gulf Coast Induction as a Member of the International Ecology institute (http://www.int-res.com/ ecology-institute/staff).

Ken Heck President Elect, Coastal and Estuarine President Elect, Josastia and Estuarine Research Federation (CERF). Review of EPA's draft approaches for deriving numeric nutrient criteria Florida's Estuaries, Coastal'u Vaters and southern'thland/Towing/Waters/Tor/USEPA,7 July 19.72011.

U.S. Environmental Protection Agency
Science Advisory Board Nutrient Criteria
Review Panel. President Coastal and Estuarine President, Coastal and Estuaries, Research Federation (CERF) (2011-). Member: Scienti7c Advisory Committee, 7 Mobile Bay NEP. Member 5/fihe Coral Reef Scienti7c And 7 Statistical Committee, Gulf of Mexico

Fisheries Management Council Ad Hoc Nutrient Panel of the EPA Science

Advisory Board.
Chesapeake Bay SAV Restoration Review
Panel/for/CB7Scienti7c/and/flechnical7 Advisory Committee, 2009-present. JSOST/DwH/PI/Workshop/Thematic/Chair7 (declined). Senior Sub-Editor, Marine Ecology Progress Series. Editor, Gulf of Mexico Science.

Editor, Gulf of Mexico Science.
Director, Alabama Center for Estuarine
Studies.
Director, Shelby Center for Ecosystem
based Fisheries Management.
Gulf of Mexico Fishery Management
Council: Coral Advisory Panel.
Mobile Bay National Estuary Program:
Scientific Advisory Panel.
PhD Examiner for: Filnders University
(Australia). Marchel Inharest (Australia) PND Examiner for: Flinders University (Australia), Murdoch University (Australia), University of Melbourne. DISL Faculty Annual Review Committee

(Chair).
Member7of7the7Ecosystem7Scienti7c7and7 Statistical Committee, council measure. Fisheries Management Council. External Promotion Reviewer: Dr. Sally Hacker, candidate for promotion to Professor at Oregon State University.

Frank Hernandez Frank Hernandez 2011, Research contributor, NOAA Gulf of Mexico Data Atlas. 2011-date, Secretary-Elect, Early Life History Section, American Fisheries

nistory Section, American Fisheries Society. 2010-date, Gadsen State Community College Aquaculture Program Advisory Committee. Committee. 2010. NOAA SEFSC/SEAMAP Deepwate Horizon Fishery Resource Workshop

Invited. LNG-BMP Advisory Panel, 2008-present. Fisheries Oceanography of Coastal Alabama (FOCAL): Supervise ichthyoplankton Taboratory and Teld7 survey ops; coordinate sample processing with NMFS and Plankton Sorting and Identi7cation/Center/Szczecin_Poland):7 communicate progress, as needed, wit ADCNR.

ADCNR.

U.S.**Poland Zloint/Studies Advisory7
Committee, 2005 - present.
Member American Society of Limnology
and Oceanography, The Oceanography
Society, American Fisheries Society
(AFS), AFS Early Life History Section,
Research contributor, NOAA Gulf of research contri Mexico Data Atla WIEARCO Data Atlas.
Secretary-Elect, Early-Life History
Section, American Fisheries Society
Gadsen State Community College
Aquaculture Program Advisory
Committee.

Ron Kiene Marine Chemistry, Associate Editor (January,719967-7present). Marine Ecology-Progress Series, Contributing Editor (January,7

2008-present). Member, Advisory Board, Chemical Pro7ciency7esting7-7DMSP/and/DMS7 certi7ed/standard/Intercallibration.7October7 2011- present.

Behzad Mortazavi Behzad Mortazavi
UA representative on the Board
on Oceans and Atmosphere at the
Association of Public and Land Grant
Universities, serve at the discretion of
Provost®onner&ttUAr&incerUulyz011.

Alice Ortmann
American Society of Limnology and
Oceanography, Member.
American Society for Virology, Associate
Member.
American Society of Microbiology,
Member. Alice Ortmann International Society for Microbial Ecology, Member.

Kyeong Park Advisor, GeoSystem Research Co., Member, Advisory Committee, Korea. Maritime Institute, Korea.

Sean Powers 2011-2012. Chair, Gulf of Mexico Fishery Management/Council's/Standing/Scienti/7c7 Management/Zouncil's Standing/Scienti and Statistical Committee. 2010-2011. Vice-Chair, Gulf of Mexico Fishery Management Council's Standing Scientif-Zand Statistical Zommittee. 72 010. Chair, Red drum special working group for Gulf of Mexico. Gulf of Mexico Fishery Management Council. 2010-2011. Science Advisory Team, The Nature Conservancy's Oyster Reef restoration Program. restoration Program.
2010-2011. Chair, SEDAR Gulf of Mexico, Greater Amberjack stock assessment.
2010-2011. Committee Member, Gulf of Mexico Gollath Grouper Stock of Mexico Collegia Groups Cock.
Assessment.
2011. Integrating socioeconomics and ecosystem principles?incurent/fishery? management. National Fishery Council SSC, 4th annual meeting. Williamsburg

VA.
2011. 40th Annual Benthic Ecology
Meeting, Mobile, Alabama. Co-host with
Dr. Zlohn Valentine.
2010-2011. NOAA Damage Assessment and Restoration, via Industrial
Economics. Fisheries and habitat damage
assessments for the Deepwater Horizon

assessments 101 the Oil Spill. Associate Director, Alabama Oyster Reef Associate Director, Alabama Oyster Reef Restoration Program, 2003-present. Associate Editor, Gulf of Mexico Science, 2004 – present. Chair, SEDAR Red Snapper stock assessment update workshop. 2009-

2010. 2010.
Advisor, Hudson River Foundation, Oyster Reef Restoration Initiative. 2009-2010.
Member, Gulf of Mexico Fishery
Management/Council's/Scienti7c/and7

Annual Report 2011 - page 34 Annual Report 2011 - page 35 Statistical Committee 2009-2011

Ruth Carmichael 2007-2011, DISL Data Management Advisory Committee, Member/Chair. 2008-2011, DISL Seminar Series, Co-Chair. 2008-2011, Recruitment, Student Stipend Review, Member. 2008-2011, Wiese Distinguished Lecture Series, Co-Organizer.

Just/Cebrian
DISL Seminar Committee Chair 2001-2011.
DISL Faculty SMS I Search Committee
Chair 2008, 2011.
DISL Promotion and Tenure Committee
Member 2006- 2011. Member 2006- 2011.
USA Marine Sciences Promotion and Tenure Committee Member 2006-2011
USA Marine Sciences Adjunct Committee Chair 2007-2011.
USA Marine Sciences Wiese Committee Co-Chair 2008-2011

Ken Heck
DISL Faculty Annual Review Committee
(Chair). (Chair).
USA Faculty Representative for DISL
Grad Student Organization.

Ron Kiene
DISL-FDA Fellowship Program Liaison.
DISL Faculty Review Committee.
DISL Ad Hoc Committee Chair for
Fellowship Policies and Procedures (April
2010-present).
USA Department of Marine Sciences, USA Department of Marine Sciences, Graduate Coordinator since 2000. Curriculum Committee Chair, Marine Sciences, since ~1995. Research Integrity Workshop Coordinator (annual, half day workshop for graduate students and faculty). students and faculty).
USA Faculty Search Committee
for Fisheries Scientist, Chair Fall
2010-February 2011.
USA Department of Marine Sciences New
Student Orientation Committee.
USA Graduate Arts and Sciences
Program Committee (GASP), since
-1985.
USA Graduate Curriculum Committee,
USA Graduate Curriculum Committee,

USA Graduate Curriculum Committee, October 2009-present. USA Research Conduct and Ethics Committee (minor activity). USA Graduate Coordinator, Department of Marine Sciences, 2000-present. USA Curriculum Committee Chair, Marine Sciences, 1995-present.
USA Graduate Arts and Sciences
Program Committee (GASP),
1995-present.
DISL Faculty Review Committee, 2006-present.
USA Dean of Arts & Sciences Search
Committee, September 2009 - present.
USA Research Conduct and Ethics

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Committee (minor activity). DISL-MESC-BP Research Initiative – Co-Chair of Theme #4 – Degradation and fate of oil and gas from Deepwater Horizon

spill. USA Department of Marine Sciences Promotion and Tenure Review Committee Chairman, 2001, 2005, 2006, 2007, 2010, 2011.

Rehzad Mortazavi DISL Ad Hoc Fellowship Committee, Member.
UA Ad hoc Committee Member, Initiative for GTAs at DISL, 2008-present.
DISL Faculty Search Committee Member, 2009-present. 2008-present.
UA Biological Sciences, Library
Committee Member, 2008-present
UA China Initiative.

Alice Ortmann USA Curriculum Committee Member.
USA Curriculum Committee Member.
USA Policy and Procedures Committee
Member. Member. USA Fisheries Faculty Search Committee,

Kyeong Park
USA Department of Marine Sciences
Policy and Procedures Committee, Chair.
USA Department of Marine Sciences
Graduate Academic Standards
Committee, Member.
USA Department of Marine Sciences
Member, Finance Committee, Member.
USA Department of Marine Sciences
Member, Finance Committee, Member.
USA Department of Marine Sciences Adhoc Core Course Committee, Member.
USA Department of Marine Sciences Curriculum Committee, Member

Sean Powers 2011-present, Member, Senior Marine Scientist I Search Committee. Scientist I Search Committee.
2011-present, College of Arts and Sciences Promotion Evaluation Committee.
2011-present, College of Arts and Sciences Tenure Evaluation Committee.
2011-present, College of Arts and Sciences Tenure Evaluation Committee.
2009-present, University of Scientific Associate Director, Alabama Oyster Reef Restoration Program. Program.
2005-2011, University of South Alabama Institutional Animal Care and Use Committee (IACUC).
2006-present, Mamerier, Scientifor Advisory? Committee for the proposed NMF-S/DISL Ecosystem Management Center.
2003-present, Chair, Department of Marine Sciences Graduate Recruitment Committee. 2003-present, Member, Graduate Academic Standards Committee. 2003-present, Member, Departmental Curriculum Committee.

Grants in Force Ruth Carmichael Ruth Carmichael
Prescott Fund, Fisheries Protected
Resources Program, Establishing a
regionally cooperative dolphin stranding
network for Alabama (P) (\$74,388) NOAA
Award Number NA11NMF4390080, 2011-

2012
National Fish and Wildlife Foundation, A cooperative marine mammal stranding network for Alabama (PI) (\$175.887) #2011-0108-000, 2011-2012
Alabama Division of Wildlife and Freshwater Fisheries, Monitoring manatee habitat and movement patterns in Alabama waters (PI) (\$43,162), 2011-

2012.
MESC BP-GRI, Gulf of Mexico Ecosystem
Recovery: Sentinel macrofauna (PI)
(\$243,000; \$45,000 Carmichael portion of
award), 2011-2012.

(s243,000), \$45,000 Carmicnael portion of award), 2011-2012.

NOAA/NERR National Science Collaborative, Legacy effects of land-use change and nitrogen source shifts on a benchmark system: Building capacity for collaborative research leadership at the Grand Bay Reserve (Pt) (5354,780), 2010-2013.

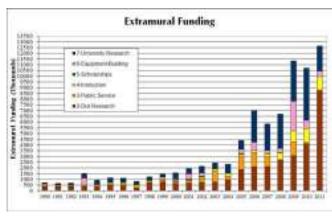
Alabama Division of Wildlife and Freshwater Fisheries, Use of tagging and ecropsy 2fast 302 Fer Provements 2nd 7 diet of Alabama manatees (Pt) (\$35,794), 2010-2011.

2010-2011.
NGI BP-GRI, Effects of oil contaminants NGI BP-CRI, Effects of oil contaminants on sentine benthic and pelagic species in Mobile Bay (PI) (\$69, 355); Phase II (PI) (\$45,00), 2010-2011.

NGAANNEDA, Proposed data collection plan to assess injury to West Indian management of the senting o wiginitar) (CO-F1) (3-36/01), 2009-2011.
Shelby Center, From Mobile Bay to nGOM 7sheries: 7the 7trophic/Importance 7t/7and-derived organic matter (PI) (\$96,205), 2009-2011.
Alabama Division of Conservation and

Natural Resources, Linking nutrient source to harmful algal blooms in Little Lagoon, AL (Co-PI) (\$13,000 Carmichael portion of award), 2009-2010. Alabama Division of Wildlife and Alabama Division of Wildlife and Freshwater Fisheries, Population Ecology of West Indian manates in Alabama waters (PI) (533, 307), 2009-2010. NOAANCDDC, Data Management in Support of NoA's Integrated Ecosystem Assessment for the Gulf of Mexico through the NSI Ecosystem Data Assembly Center (PI) (581,302), 2009-2110

Assembly Center (PI) (\$81,302), 2009-2010.
MS-AL Sea Grant Consortium, Use of stable isotope ratios to link wastewater sources105/ffects 7n3heli7sh7and7 human health: De7ning7elevant7and7 effective spatial and temporal scales for management (PI) (\$99,995), 2008-2010.



Just/Cebrian
National Coastal Data Development
Center: "Long-term ecological studies in
coastal lagoons of Perdido Bay" \$50,000
01/11-12/11 (single PI).
The Alabama Department of Conservation
and Natural Resources: "Analysis
11,000 01/10-12/10 (PI with Ken Heck
and/John/Valentine).
NSF Rapid Program: "Evaluating the
performance of the ISIS-Cylinder
as a bioremediation method for oil reprince of the ISIS-Cylinder as a bioremediation method for oil contamination in marshes' \$23,375 9/10-9/11 (co-PI with Mark Roses from ISIS; money received as a subcontract from ISIS).

ISIS).

Northern Gulf Institute: "Impacts of the Deep Horizon Oil Spill on Ecosystem Structure and Function in Alabama's Marine Waters." \$60,000. 6/10-12/10 (co-Manne waters. 300,000. 3... Pl with Ken Heck).
NOAA-The Shelby Center "Impact of SAV loss on the diversity and production of prey/lor/coastal//sheries" \$74,000/701/10-

prey/for/coastal/f/sheries*75/4,000/701/10-04/11 (Pl with Ken Heck). The Alabama Department of Conservation and/Natural/Resources/Fin/sh/and/7 Shell/sh/Nursery/Habital/Restoration/7 Project*51,500,000 07/08-06/11 (Pl with K. Heck, S. Powers and R. Aronson as

K. Heck, S. Powers and N. Florinson. — co-Pf's).
EPA-GOMA "Development of a Decision-Support Tool to Assess the Risk of Habitat Degradation Following Watershed Land Use Changes" \$350,000 01/09-12/10 (Pl with David Rupple and Mark Woodrey as

NOAA- The Economic Recovery and Ecological Restoration Program "Coastal Alabama Economic Recovery and Ecological Restoration: Creating jobs to protect shorelines, restore oyster reefs@and@anhance?Sherles@roduction?" \$446,275 08/09-08/11 (co-PI with Ken Hech and Sana Powers) so46.275 0800.06/11 (co-P) with Ken Herck and Sean Powers). The Northern Gulf Institute: "Ecosystem Approach to Management for the Northern Gulf To57,000 01/11-12/12 (co-P) with William MacAnally and Richard Fullord). The Alabama Department of Conservation and Natural Resources "Coastal Zone Management Program: "Effective restoration of sall masshes for reduction restoration of sall masshes for reduction 10/10-3/12 (single P). The Alabama Marine Environmental Science Consortium BP program 'Impacts of the Deepwater Horizon oil releases on the functional integrity of sall marshes and seagrass meadows and associated

and seagrass meadows and associated fauna" \$66,148 1/11-12/11 (co-PI with Ken Heck)

and seagrass meadows and associated found "565,148 "I/11-12/11 (Oo-Pl with Ken Heck).

The Northern Gulf Institute "Potential impacts.2/files Dwi-Hzülzpullzn/7/8hery? resources: will there be reduced recruitment of economically important strings, zhabs, sand/7/7/8/shin Reagrass? and marsh nursery habitats of the north III (1997) and I

scales" \$56,000 11/11-10/12 (single PI). The Northern Gulf Institute "Extend Sulis Toolkit" \$172,592 01/11-12/11 (co-PI with Philip Amburn and Bill McAnally). The Northern Gulf Institute "An ecosystem modeling framework to examine ecological impacts of the Deepwater Horizon Oil Spill." \$206,387. 01/11-12/11 (co-PI with Richard Fulford and Scott

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Frank Hernandez
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Editorial Service
Ruth Carmichael
Journals
Marine Biology (1), Estuarine Coastal
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Rob Condon Journals Marine Ecology Progress Series, FEMS MicrobiologicalTecology, 7Journal 75/7 Plankton Research, and Hydrobiologia

Ken Heck
Journals
Lumnolegy and Oseanography, Esologic
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Applications, Proceedings of the Royal
Society (B) Quarterly Review of Biology
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Declined multiple requests from NSF,
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Journals Limnology and Oceanography – 1 Bulletin of Marine Science - 1
Proposals
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Design Reviews (at the request of ADCNR)
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Ron Kiene Journals 17 manuscripts for L&O, Nature, PNAS, Marine Chemistry, MEPS among others. Proposals NSF (2), NOW Netherlands (1)

Behzad Mortazavi Journals Global Tchange Biology (2), Zlournal Tof T Geophysical Research – Biogeosciences (1), Limnology and Oceanography (1), Tree Physiology (2), Proposals National Science Foundation (1)

Alice Ortmann Journals Deep-Sea Research, FEMS Microbiology Letter, Microbial Ecology, Aquatic Microbial Ecology, Aquatic Botany Proposals NSF

Kyeong Park Journals Estuaries and Coasts (1); BP Gulf Research/Initiative, Zompetition IZ, 70/70e7 of Research and Economic Development, LSU (1), Journal 70/Asien Earth Rolences (1), Journal 70/Asien Earth Rolences (1), Journal 70/Asien Earth Rolence (2), Continental Earth Research (1), Continental Earth Research (1)

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Ecology (1), Estuaries (1), Gulf of Mexico
Science (3), 30umal 76/Shell 78h Research 7
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Bulletin (2)
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International Programs Division of Ocean
Sciences (2), North PaoTo-Research 7
Board (2), Texas SeaGrant (2)



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The Executive Committee has full power and authority in the interval between meetings of the Board of Directors to do all acts and perform all functions which the Board of Directors itself might do or perform, except that it shall have no power to amend the bylaws. Among its duties are to review and approve the annual budget; approve curricular options and other major policies and procedures; and facilitate and stimulate the development of education and research programs.

The Program Committee Members consists of one faculty member, appointed by the President, from each of the member institutions. These members serve as the primary liaison between the member institution and the Sea Lab, and are responsible for advising the Sea Lab's Executive Director in planning and implementing the education, research and service programs of the DISL. The Program Committee Members listed here are for the time at print; those who served at the reporting time of 2007 are so noted.

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**Samford University President: Dr. Andrew Westmoreland Program Committee: Dr. Lawrence Davenport (2007: Dr. Robert Stiles) ijdavenp@samford.edu Department of Biology Birmingham, AL 35229 Ph: (205) 762-2584 Fax: (205) 762-2479

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Program Committee: Dr.
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Fax: (256) 781-8437

Troy University
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Program Committee: \(\Dar{D}\)r. \(\Dar{D}\)stephen
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Federal Awards/Gran



Federal Grantor/ Pass-Through Grantor/ Program Title Research and Development Cluster U.S. Department of Commerce Direct Programs	Assistance Period	Budget Total	Federal Share	Recognized	Expenditures
Marine Fisheries initiative Marine Fisheries Initiative Marine Fisheries Initiative Marine Fisheries Initiative Marine Fisheries Initiative	08/01/2009-07/31/2012 07/01/2008 - 06/30/2012 07/01/2006 - 01/31/2011 09/01/2010 - 08/31/2011	211,258.00 221,230.00 2,129,368.00 899,100.00 749,250.00	211,258.00 221,230.00 2,129,368.00 899,100.00 749,250.00	40,736.14 181,484.95 488,382.03 730,552.07 237,022.74	40,736.14 181,484.95 488,382.03 730,552.07 237,022.74
Passed Through University of Southern Mississippi Sea Grant Support Oceanic and Minospheric Projects 02/01/201 Sea Grant Survort Oceanic and	n Mississippi nd 02/01/2010-01/31/2012	126,934.00	79,265.00	52,704.40	52,704.40
Atmospheric Projects Institute for Marine Mammal Studies	02/01/2010-01/31/2012 04/04/2011-08/31/2012	441,549.00 28,100.00	289,254.00 28,100.00	116,785.90 6,594.19	116,785.90 6,594.19
Passed through Alabama of Conservation and Natural Resources Conservation and Natural Resources Conservation Awards Administration Awards CZM Administration Awards	10.01/2009-02/15/2011 10.01/2009-02/15/2012 10/1/2010-32/5/2012 10/1/2010-32/5/2012 10/1/2010-32/5/2012 10/1/2010-02/25/2012 10/1/2010-02/25/2012 10/1/2010-02/25/2012	50,000.00 5,000.00 70,000.00 20,000.00 20,000.00 60,000.00 11,000.00 15,000.00	25,000,00 5,000,000.00 35,000.00 50,000.00 10,000.00 30,000.00 5,500.00 7,500.00	6,202,66 1,034,431.09 29,583.00 242,22 242.22 260.80 11,454.93 2,100.37 7,500.00	6.202.66 1,034,431.09 29,583.00 24,22 280.80 11,454.93 2,100.37 7,500.00 7,500.00

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Passed Through Mississippi State University NOAA Cooperative Institute Institute NOAA Cooperative Institute I		NOAA Cooperative Institute NOAA Cooperative Institute NOAA Cooperative Institute	NOAA Cooperative Institute	Nature Conservan	Habitat Conservation 02/01/2009-04/30/2011 ARRA-Habitat Conservation 08/01/2009-06/30/2012	Passed Through University of New Hampshire CZMAdministration Awards 9/15/2010-9/14/2013	Passed Through University of South Alabama Habitat Conservation 5/1/2010-4/30/2012	Passed Through Mississippi Department of Marine Resources Coastal Services Center 08/01/2009-12/31/2012		U. S. Department of Health and Human Services Direct Program FDA-Research 9/18/2009-9/17/2012 National Solence Foundation	Direct Programs Geosciences 6/1/2010-5/31/2012 National Science Foundation 8/1/2009-7/31/2012	d Through Bermuda te of Ocean Sciences (BIOS)	BIOS 10/01/2010-9/30/2013 Passed Through Results Group 9/07/2010-12/7/2012 ISIS Results Group 9/07/2010-12/7/2012	Passed Through University of Southern Mississippi Geosciences	Passed Through University of South Alabama Geosciences	Passed Through The University of Alabama In Hunisville Exp. Program to Stimulate Competitive Research	10/01/2010-08/31/2013 Other Federal Awards U.Shepartment of Commerce Direct Procarans	Congressionally Identified Awards And Projects 7 100/12009-09/30/2012 Congressionally Identified Awards And Projects 7 07/01/2006 - 01/31/2011	Congressionally7denti7ed7wards?and?Projects Congressionally7denti7ed7wards?and?Projects 09/01/2011-08/31/2012	Passed Through Alabama Department of Conservation and Natural Resources
									_						0.0	10	10			
4,657.50	11,675.58	*	22,540.16	3,749.81	86,806.65		22,635.78	51,056.65	4,385.83	2,023.42	35,794.00		55,055.99	407,825.29	86,096.90 10,500.00	29,276.05	8,293.75	270,000.00	6,959,749.91	
4,657.50	11,675.58	17:1+	22,540.16	3,749.81	86,806.65		22,635.78	51,056.65	4,285.83	2,023.42	35,794.00		55,055.99	407,825.29	86,096.90 10,500.00	29,276.05	8,293.75	270,000.00		
26,450.00	66,297.00	20,479,00	50,000.00	25,000.00	249,998.17		100,000.00	250,000.00	200,000.00	26,845.00	35,794.00		2,102,350.00	1,398,800.00	159,950.00 205,965.00	51,152.14	22,725.00	270,000.00		
56,493.00	66,297.00	20,47,02	50,000.00	53,877.00	249,998.17		100,000.00	250,000.00	200,000.00	26,845.00	53,906.00		4,204,701.00	2,797,600.00	239,822.00 229,765.00	51,152.14	22,725.00	338,117.00		
Vational 01/1/2008-03/25/2012	ch Foundation 01/01/2008 - 12/31/2011 06/01/2011_05/31/2012	2102/15/20-1-02/10/20	ce 07/01/2005 - 07/30/2011	09/01/2008 - 12/31/2010	lic Works nent m 07/21/2010-11/30/2012	ţ.	7	mmission ient m 10/01/2010-12/31/2012 n	04/20/2011-02/28/2013	sity 08/31/2011-01/31/2013	int of s heries 10/01/2010-9/30/2011		10/01/2006 -09/30/2012	10/01/2010-9/30/2013	05/01/2010-04/30/2013 12/01/2008-11/30/2011	partment 9/15/2010-9/30/2012	Carolina 12/15/2009-12/14/2011	nt of Economic 03/01/2011-9/30/2011		
Passed Through the Association of Nationa Estuary Programs, Inc. Habitat Conservation	Passed ThroughTexas A& M research Foundation 01/01/200 06/01/201	U. S. Department of the Interior Direct Program	Fish and Wildlife Management Service 07 Fish & Wildlife Coastal Programs	Habitat Restoration	Passed Through Mobile County Public Works Beureau of Ocean Energy Management Coastal Impact Assisstance Program 07/2'	Passed Through State of Alabama Reureau of Ocean Energy Management	Coastal Impact Assisstance Program	Passed Through Baldwin Countly Commission Beureau of Ocean Energy Management Coastal Impact Assissance Program 10/01/2010-12/31/2012 Coastal Impact Assissance Program	Shoreline/Habitat Restoration	Passed Through Texas A & M University Gulf Coast Cooperative Studies Unit National Parks Service Gulf Coast Inventory and Monitoring Network	Passed Through Alabama Department of Conservation and Natural Resources ADCNR-Wildlife and Freshwater Fisheries	Environmental Protection Agency	Direct Programs National Estuary Program	National Estuary Program	Gulf of Mexico Program Gulf of Mexico Program	Passed Through State of Florida Department of Environmental Protection Nonpoint Source Implementation 9/15.	National Aeronautics and Space Administration (NASA) Passed Through University of South Carolina Science 1215/2009-12/14/2011	U.S. Department of Energy Passed Through Alabama Deparment of Economic and Community Affairs State Energy Program 03/01/201	Total:	

103,707.64 74,500.60

103,707.64 74,500.60

199,867.00 258,552.00

199,867.00 545,289.00

34,362.11 19,443.35

34362.11

151,708.00 27,000.00

19,443.35

27,000.00 151,708.00

122,879.22

122,879.22

250,000.00

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75,785.39 175,212.41 84,658.81 115,131.49 115,396.17 136,881.53 30,841.80 5,000.00

75,785.39 175,212.41 84,658.81 115,131.49 115,396.17 136,881.53 30,841.80 5,000.00

184,076.46 320,845.63 154,472.00 259,362.00 141,064.86 200,600.00 65,000.00 5,000.00

184,076.46 320,845.63 154,472.00 259,362.00 160,415.86 261,157.00 65,000.00 5,000.00

1,141.49 10,049.64 153,425.66

1,141.49 10,049.64 153,425.66

44,533.00 54,278.50 563,705.00

70,021.00 54,278.50 563,705.00

5,553.34

5,553.34

64,122.65

64,122.65

224,223.00

224,223.00

69,905.77

69,905.77

354,750.00 29,503.00

354,750.00 29,503.00

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109.78

109.78

76,407.00

122,580.00

29,903.78 99,122.33

29,903.78

230,000.00

230,000.00

Passed Through Mississippi State University
National Oceanic and Amospheric Administration
(NOAA) Cooperative Institute 02/01/2007 - 01/31/2011
National Oceanic and Amospheric Administration
(NOAA) Cooperative Institute 02/01/2007 - 06/30/2012

99,122.33

950,439.00

950,439.00

454,483.40

454,483.40

1,500,000.00

1,500,000.00

07/1/2008 -06/30/2012

Unallied Management Projects (M)

Passed Through The Florida Aquarium Congresionally/denit/red/Awards/and/Projects/ 07/20/2010-8/20/201

4,343.54

4,343.54

214,848.30 640,935.73

12,010.54

12,010.54 214,848.30 640,935.73

295,246.00 4,411,204.00 2,151,837.00 74,388.00

377,264.00 4,411,204.00 2,151,837.00 106,386.00

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6,884.48

6,884.48 21,243.88

250,720.00 46,500.00

250,720.00 46,500.00

21,243.88

25.00

239,283.00

239,283.00



Marine Environmental Science Concertion Daughter Island Sec Lab Science of Set Law For the Sen Entel September 15, 1812

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Dauphin Island Sea Lab Participation Totals, and Graduate and Undergraduate Credit Hours Earned



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