



Texas • Louisiana • Florida
Mississippi-Alabama

**Sea Grant College Programs
of the Gulf of Mexico
2015 Regional Meeting Report**

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Introduction

A Gulf of Mexico Regional Meeting Planning Committee worked since late 2014 to organize a two-day event for faculty and staff from all four Gulf of Mexico Sea Grant programs in order to discuss regional priorities and strengthen partnerships on current and future activities. The planning group consisted of representatives from all four programs, and also represented all network areas (Extension, Education, Legal, Communications, Administration, and Research). Several members of the Planning Committee took a leadership role in identifying a centralized location for the event, and efforts continued to develop a quality agenda that provided training and education on subjects that were identified in a pre-meeting survey that was sent to potential participants.

On October 20th and 21st, 2015, the Gulf of Mexico Regional Meeting was held on the University of Southern Mississippi's Gulf Park Campus in Gulfport, MS. Seventy-one faculty and staff from all four programs and representing all network areas travelled to this location to participate in the two-day professional development and networking event. This document summarizes the training delivered, the regional projects planned, and next steps to continue this type of work in the Gulf of Mexico Sea Grant Network. Additionally, this document can serve as a resource to all faculty and staff in the GOM SG Network who may or may not have attended the meeting.

The Gulf of Mexico Sea Grant Programs all work to address similar programmatic issues, including: the protection, enhancement, and restoration of habitats that are home to common flora and fauna; management and use of living and non-living resources; tourism and other recreational opportunities; and resilience to the risks from human-caused and natural coastal hazards. While there is still great diversity among ecosystems, communities and businesses found along the coast of the Gulf of Mexico, there are many similarities as well. Collaborative opportunities need to be pursued in order to improve both the understanding of how neighboring Sea Grant programs operate, as well as facilitate the coordination of regional activities. By adopting best practices from other programs and coordinating activities, each program could become more effective at targeting programming and efficient in their use of program resources.

Funds for travel and other support for the meeting were obtained through NOAA Sea Grant's 2015 Conferences and Meetings Support Funding Opportunity to each Sea Grant program (e.g. Award Number NA14OAR4170102 for Texas) and Gulf of Mexico Alliance/Gulf of Mexico Research Initiative awards to each Sea Grant program. Each of the four Gulf of Mexico Sea Grant College Programs also contributed financial and other support for the meeting.

Goals and Objectives of the Meeting

One of the goals of this meeting was to provide Sea Grant professionals with high-quality professional development and networking opportunities. Another goal was to develop multiple regional projects in multiple focus areas to prepare for future regional funding opportunities. Finally, a goal was to provide opportunities to discuss regional priorities and strengthen partnerships on current and future activities. By adopting best practices from other programs and coordinating activities, individuals and programs alike can become more effective at targeting programming and efficient in their use of program resources.

Specifically, this meeting provided approximately 70 faculty and staff with professional development on:

- 1) Best practices for regional programming;
- 2) Increased awareness of national-level activities and work being conducted by Sea Grant colleagues working on similar issues;
- 3) Identifying and overcoming challenges to working regionally across programs;
- 4) History of Gulf of Mexico Sea Grant Programs' work over the past 50 years; and
- 5) Opportunity to attend facilitator training on four Resilience Index tools developed regionally.

Additionally, the meeting resulted in the development of six potential regional projects as well as introduced people to one another across programs who shared topical interests.

Lastly, the meeting provided several opportunities for Sea Grant faculty and staff to network in informal and formal settings, including an outdoor seafood cooking demonstration and dinner the night prior to the meeting, as well as multiple breaks throughout the presentations and designated time to discuss potential regional projects.

Summary of Regional Projects

Six break-out groups worked on potential regional projects during the second and third days of the meeting. The groups worked on topics that included community resilience, fisheries, habitat restoration, environmental literacy, oil spill science, and clean marina/tourism/working waterfronts. The following are the summaries generated by each group.

Community Resilience Breakout Session Summary

Discussion:

- Help communities make better-informed decisions and plans to prepare for hazards and increase resilience.
- Lots of tools available to communities but they don't know of their existence, how to decide which tool would help them.
- Know what we want to do; need more time to develop framework for activities.
- Leverage GoM Climate COP to develop framework.
- Leverage existing programs (GOMA, SSC) for regional project coordination.
- Utilize collective and diverse experience to streamline and improve community assistance
- Expanding FEMA partnership
- Becoming a Coordinating Technical Partner (CTP) for FEMA Region 4
- CTP funding opportunities
- Other FEMA funding opportunities
- Next step: Call with interested groups, involve other NOAA partners to figure out how to be a CTP

Goal

- Create a more methodological framework to evaluate communities and how to identify the most effective and appropriate approaches to coastal resilience

Objectives

- Capture the institutional knowledge and collective experience of Sea Grant Extension Specialists with community resilience across the Gulf of Mexico
- Develop an adaptive framework that catalogs captured knowledge and is utilized to efficiently work with communities
- Meet at GoM Climate COP (April, 2016) Annual Meeting to further develop aspects of the project
 - Impact statements
 - Methods to synthesize collective knowledge
- Seek funding opportunities to support:
 - COP meetings
 - Travel
 - Additional meetings of the group
 - A coordinator
 - Partial funding for team members
 - Track progress on currently submitted proposals that can be leveraged

Session facilitators: Josh Gunn (TX SG) and Melissa Daigle (LA SG)

Fisheries Breakout Session Summary

Project I: **Collaboration on Use of Descending Devices by Gulf Recreational Fishermen**

Situation

Reef fish like snapper and grouper caught from deep water experience significant damage called barotrauma. There is no single or easy solution to the challenge of increasing the survival of fish that suffer from barotrauma. It is probably impossible to ensure all these fish will survive.

You can debate the value and/or flaws of fisheries science; you can debate the value and/or flaws of fishery regulations. But, we can all agree that floaters are not a pretty sight, and are a terrible waste of a fishery resource. They do not appeal to any sort of angler sense of environmental stewardship, and they really aren't good business for a charter/party boat operator.

There have been promising results from scientific studies conducted around the nation that survival of deep-water released fish can be improved if they are quickly returned to capture depth. At the same time, there have been a number of new approaches to descending fish that were not available years ago.

For several years now Florida Sea Grant has been working the Florida Fish and Wildlife Conservation Commission, NOAA Fisheries, and the FishSmart coalition to try and get recreational fishermen involved in the process of evaluating descending devices from a practical perspective. We want to find out if there are practical options that may assist anglers with improving the survival of deep-water fish. The hope is that in the long term, improved survival will result in more sustainable fisheries that result in less restrictive regulations, but that is well beyond the scope of the descending gear outreach Florida Sea Grant is conducting. It will also take substantially more comprehensive research on how effective these measures can be.

Next Steps

Florida Sea Grant is concluding a project that entails a 'familiarization tour' of descending devices with select outdoor writers from the Gulf region. The Panhandle area tour has not yet been finalized, and Texas Sea Grant fisheries agents have expressed interest in accompanying the Florida Sea Grant lead, Laura Tiu, on the demonstration charter trip. Details remain to be worked out.

Session facilitator: Andrew Ropicki (TX SG)

Session attendees: Tony Reisinger (TX SG), Bill Balboa (TX SG), John O'Connell (TX SG), Laura Tiu (FL SG)

Project II: Gulf of Mexico Premium Shrimp Program

This project is a direct need of the GoM shrimp industry in order to keep the industry alive in the face of imports. There is a need to separate the high and low quality as low quality shrimp showing up (due to the boat, docks, or retailer mishandling) results in a lower price and perception of all Gulf shrimp. Currently some buyers are paying attention to quality, but they are only docking price on negative quality- not a reward for premium quality; buyers need to reward high quality from the boats. With shrimp prices so low again, something needs to be done or fishermen can't afford to go out. The entire supply line needs to be addressed in order to create a program where we can entice a premium product. The premium includes sulfite-free product, uniform size, and high quality for several days after the shrimp reaches the dock.

To date other groups and entities have worked to promote a premium product, but most of these efforts by the state Promotion Boards, Gulf States Fisheries Marketing Coalition, and Gulf Trace have been top down with retailers. They have often been successful at creating or finding a demand from retailers, but then the premium product is not always available at the dock. Sea Grant can play a unique role by working with each sector so that the product is available when the demand is identified. In each Gulf state, specialists and agents within Sea Grant are connected with the fishermen, docks, and retailers as well as other industry partners such as the promotion boards, state fish and wildlife, and GULF Audubon.

Retailers can be approached with several enticements for paying at a premium for premium shrimp including passing a higher price to consumers, taking a lower markup but having the image of a high-end retailer, or lower loss of product in house. An important piece is to know the volume and size class that buyers want. A demand already exists for day boats, but is the demand there or can it be created for the large volume of the offshore vessels.

Another piece is consumer acceptance. LA and FL, as well as possible the other A & M campuses, have the capacity to run professional consumer acceptance and willingness to pay studies to understand what effects of quality on texture and appearance are actually important to consumers. Studies have been done, at least informally, that premium Gulf shrimp have a better taste than imports. However, quality needs to match that better taste.

Some of the easy issues to address negatively impacting quality are tow times, ice bath versus ice, penalties for violators, and collating the current success though formal and informal direct marketing.

Objectives:

1. Processes identified to produce quality shrimp including brine freezing, plate freezing, and ice boats.
2. Identify the retailers and buyers of the premium product including type/size, volume, and a summary of official and unofficial direct marketing occurring in each state.
3. Determine consumer acceptance and willingness to pay for a quality domestic Gulf shrimp
4. On board verification and case studies of success with a premium product

5. Outreach through workshops and training for each sector including fishermen, docks, and retailers. Outreach will be hands-on and on-board or on-site to ensure the recommended processes are being followed.

Specific funding needs: At least one other BMP trailer like LA's; funding to use the trailer(s) and move them around the Gulf; direct marketing needs;

Possible Funding: NOAA SK 2016; Regional Gulf Grant; Fisheries Improvement (maybe NFWF?)

Submitted by Julie Lively (LA SG).

Other participants included Mark Shirley (LA SG), Thu Bui (LA SG), Thomas Hymel (LA SG), Gary Graham (TX SG), Dave Burrage (MASGC), Russ Miget (TX SG), Anne Dugas (LA SG), and others.

Coastal Habitat Restoration Breakout Session Summary

The group discussed how and whether the Gulf Sea Grant programs might work together on regional programs associated with coastal restoration. In our conversation, we recognized that restoration projects come at different scales and that our educational efforts would differ accordingly.

At large scales, such as Corps of Engineers projects, there may not be lots of opportunity for citizen involvement but there is interest among different stakeholder groups that provides an educational opportunity to discuss why the restoration was done, how it was done, how well the project met objectives/provided benefits, and what were the pros and the cons associated with the restoration project.

At small scales, restoration projects often provide opportunities for citizen involvement including deployment and monitoring (citizen science). This type of project, which lends itself well to Master Naturalist programs and other citizen engagement programs also provides opportunities for education. As a group we discussed the opportunity to teach citizens the Why, How, and how well it worked (monitoring) elements. For example, the “why” could be about the importance of the natural community (e.g., importance of oyster reefs), how to restore at small scales and active engagement of citizen volunteers to implement the restoration, and how well it worked by training volunteers to monitor restoration projects (the citizen science element). Different states are working on small scale programs and there is the opportunity to share information and build multistate programs that capitalize on successful approaches and can demonstrate regional impacts.

Next steps

The group recognized that additional discussion is needed that includes other Program Leaders and specialists/agents engaged in restoration programming. Some topics identified to discuss in greater detail and potentially pursue included:

1. Conference call among Program Leaders and specialists/agents re: existing programs, plans and needs among Gulf states that may be regionally relevant and offer opportunities for collaboration,
2. Convening a regional meeting of the Gulf Sea Grant programs dedicated to collaboration/sharing of information and programmatic material related to coastal restoration, and
3. Developing a coastal restoration video that could be used by all Gulf programs to highlight/discuss case studies of different types of coastal restoration projects in different areas of the Gulf, which could be used whole or in segments for multiple applications (e.g., as an educational component included in a Master Naturalist special topics/coastal restoration module or other programs).

Session facilitator: Eric Sparks (MASGC)

Environmental Literacy Breakout Session Summary

Focus

After discussion of many possible project ideas, the Education Working group at the Regional Sea Grant meeting focused on developing a regional project on the topic of marine debris. Marine debris is an engaging (“sexy” according to one educator) topic for the K-12 audience: students can understand and connect with the problem and relate it to personal behavior. A regional project focusing on marine debris would likely be less difficult than other topics discussed. Each of the Gulf Sea Grant programs have conducted or are currently doing, marine debris projects. There is a great deal of background information, educational resources and activities on marine debris already developed. Additionally, there are potential sources of funding. While it was noted that education and outreach efforts on marine debris have taken place in the Gulf region for many years with little significant change in outcome (the problem of marine debris persists), this group felt that a focus on stopping debris before it comes to the marine environment by including ‘up the watershed’ and source tracking components brought a unique approach to this issue.

Project Details

The group agreed that there were several required aspects of any educational project. A project should include data collection and analysis by students, developing quantitative skills. A project should include a mapping component. Not only does this help students practice geographic and technology skills, but it may also produce data that allows the public in the region to better understand the magnitude of the problem of debris in watersheds. A mapping component also allows for the introduction of watershed education and the message that we all live downstream, tying the local focus to the larger problem of marine debris. A project should help students understand and practice the scientific method, including hypothesis formation, prediction and testing. Debris in school areas could be mapped and quantified before and after efforts incorporating prediction and testing but also providing positive feedback to student action. A project should include the opportunity for service projects, as action promotes stewardship and service hours are required in many schools. A project should include social media and technology. Scientists researching specific aspects of marine debris such as microplastics could present lectures through video-conferencing. Students could interact with each other, a Summit, using the same technology. Social media such as Twitter or Instagram could be used to highlight the problem (debris picture of the month, picture puzzles, etc.) as well as student actions and solutions. Videos could be used as training tools for teachers and students. Inclusion of an ‘up the watershed’ component allows implementation of the project state and region-wide and not just in the coastal zone. A focus on local sites may reduce barriers to field trips from school regulations but may also allow students to more directly see the connection between their actions and the problem. While it was agreed that methods should be standardized as much as possible across the states to facilitate comparison and cohesion, the project should allow for flexibility in implementation given differences in school resources, field trip logistics, available sites, environmental differences, etc. The group also agreed that any project should emphasize debris prevention and not simply collecting and

quantifying. Including these components allows the project to be considered a STEM activity, promoting its adoption by teachers and schools. Lastly, everyone in the group agreed that a train-the-teacher approach (teacher meetings) would have the greatest impact in terms of reaching students across the Gulf region.

Next steps

There are currently 2 requests for proposal (rfps) open that would be suitable for this potential project, the NOAA Marine Debris Education rfp and the Gulf of Mexico BWET rfp. Given the closing dates for these rfps, it was agreed that it may not be possible to submit this idea this year. However, it was noted that these programs have offered rfps annually in the last few years. It was also pointed out that industrial companies or similar organizations might be a source of materials (such as trash bags) required for the project. The group agreed to share emails and continue to discuss interest in and the potential for this project.

Session facilitators: Terrie Looney (TX SG) and Tina Miller-Way (MASGC)

Session attendees: Becca Burton (FL SG), Chris Verlinde (FL SG), Dianne Lindstedt (LA SG), Desi Bishop (MASGC), Sam Clardy (MASGC), Jenny Cook (MASGC), Greg Graeber (MASGC), Tina Miller-Way (MASGC), JoAnn Moody (MASGC), Chris Snyder (MASGC), Terrie Looney (TX SG), and Rhonda Patterson (TX SG)

Oil Spill Science Breakout Session Summary

Discussed potential items to include in a Phase II proposal for the GoMRI/Sea Grant oil spill science outreach program. Overall outcomes were:

- GoMRI/SG model replicated by others (NAS, RESTORE, NOAA, etc.)
- Every target audience will go to SG specialists first for oil spill info
- Broaden from regional to national scope
- Audience comes to team to be primary synthesizer and translator of oil spill science
- GoMRI technology adopted by others
- Emergency response incorporates oil spill science

There was also in-depth discussion about target audiences for phase II. The preliminary list of target audience members include:

- Fisheries
- Policy makers
- Emergency responders
- Tourism
- Public health
- Natural resource managers
- Environmental non-profit
- University researchers
- Sea Grant outreach
- GoMRI outreach

The phase II proposal will be outlined based on target audience. The outline will have the target audience needs, specific activities to reach the target audience and outcomes that the oil spill science outreach reach hopes to achieve.

The group also discussed expanding the outreach and extension products and tools beyond seminars and outreach publications. These ideas will be further refined in the coming weeks.

A timeline was developed:

- Four specialists and coordinator draft an outline for a proposal (October-November)
- Extension Program Leaders review and provide input on outline (December)
- Broader Sea Grant group reviews and comments (early January)
- Outline with buy-in from all four Gulf Sea Grant programs proposed to GOMRI (first week in February)

Session facilitator: Steve Sempier (MASGC)

Session attendees: Bethaney Mabee (NAS), Monica Wilson (FLSG), Bill Balboa (TXSG), Chris Hale (TXSG), Cindie Powell (TXSG), Emily Maung-Douglass (LASG), Rebekah Jones (LASG), Chandra Wright (MASGC), Jessie Kastler (MASGC), and Melissa Schneider (MASGC).

Clean Marina, Tourism & Working Waterfronts Breakout Session Summary

After introductions the group discussed a number of ideas covering our breakout session themes. They included:

- Cultural Histories
- Certified Nature Guides
- Dolphin Smart Program & NOAA Certification
- National Working Waterfront Coalition
- Clean Marinas – development outside planning areas
- Educate tourists on responsible nature tourism
- Regional - Natural Resource Leadership Institute training
- Seasonal fisheries issues – red snapper, scallops, regulations
- Charter boat ticket system to allow flexibility on days fished
- Oral Histories
- Seafish for Charter Boats
- Alternative fish species for red snapper (Jack cravelle)
- Waterfront signage development and issues
- Derelict vessels removal issues
- Charter boat Capt. training in ecotourism
- Boating & Community D-bases on waterfront issues
- Recreational fish catch reporting
- Common Intracoastal waterway issues
- Watershed Planning
- Nature/Eco Tourism
- Working Waterfront Designations & Overlays
- Identify waterfront access issues and solutions
- Climate Issues – cultural & tourism impacts
- Identify safe harbors for local and transient boaters
- Dredging ports, channels and funding issues
- In-water fish carcass disposal at marinas & H2O quality issues
- Gulf Heritage tourism & recreational opportunities

After discussing these ideas and how we could focus on our three broad theme topics a suggestion was made to focus on transient boaters/Loopers because they are a common thread stitching together our Clean Marina, Tourism & Working Waterfronts themes.

This lead to discussions on boater access in the Gulf Region and educating transient boaters/Loopers about available “trails” in the region to explore: canoe, kayak, paddleboard trails; The Oyster Trail; Maritime History Trail; Historical Working Waterfronts; Gulf Coast Maritime Heritage Trail.

In addition to the trails, a “guide” to regional boater resources could be developed including information on: boat access points; Clean Marinas; repair facilities; fuel; etc.

Additional background:

- “Loopers” are a new potential clientele group; they appear to be well organized and there are at least three associations; America’s Great Loop Cruiser Association (AGLCA); Seven Seas Cruising Association (SSCA); & Marine Trawler Owners Association (MTA)
- In 2014 the three associations formed a Political Action Committee - Maritime Heritage Freedom PAC. Recent battles in Florida, Georgia, Virginia, California, the Bahamas, and the EU have made it clear that having a seat at the political table is critical in maintaining the rights

boaters have been granted for years. Those who would restrict the right to navigate, live aboard, or anchor are well-funded. They have attempted to upend the cultural heritage of cruisers by raising large sums of money and hiring multiple teams of lobbyists to promote legislation that would erode the rights and freedoms of boaters in coastal waterways.

The initial focus will be on Florida waters, where trends tend to be established, and will expand as needed to other areas where cruisers' rights are threatened.

- Loopers who are members of the AGLCA meet two times a year in different locations along the Great Loop. The first reunion is on the east coast in the spring, and has been in Charleston, Myrtle Beach, and Norfolk over the past several years. The second reunion is traditionally in October at Joe Wheeler State Park in Alabama. In addition the AGLCA holds Looper seminars at marinas located along the Great Loop.

Future Work

- Learn more about the Looper/cruiser boater associations;
- What attracts transient boaters/Loopers?
- What are the needs of transient boaters/Loopers?
- Why do Loopers loop?
- Where do they go and how can local communities attract them?
- Research the economic impacts of transient boaters/Loopers in the Gulf Region;
- How can attracting/catering to transient boaters/Loopers benefit small rural communities?
- Work with local Tourist Development Councils on marketing plans to attract transient boaters/Loopers; Discuss regional transient boater/Looper marketing promotions among TX, LA, MS, AL & FL;
- Evaluate and seek funding to support future transient boater/Looper research and education Extension programming efforts

Session facilitators: Bill Mahan (FL SG) and Chandra Wright (MASGC)

Session attendees: Charles Sidman (FL SG), Chris Verlinde (FL SG), Christian Miller (MASGC), Jody Thompson (MASGC), and Chandra Wright (MASGC)

Summary of Evaluations

GULF OF MEXICO SEA GRANT REGIONAL MEETING EVALUATION

OCTOBER 19-21, 2015

Reflecting on this meeting

1. What was the primary reason you decided to attend this meeting? (% checked this box)

- Learn more about activities by other state programs (30%)
- Network with Sea Grant colleagues (64%)
- Receive national-level information (0%)
- Location (0%)
- Mandatory attendance (3%)
- Other (specify) _____ (3%--presented)

2. Please share your opinion on the quality of each agenda item by checking the box that corresponds to your answer.

Agenda Item	Poor	Fair	Avg.	Good	Excellent	N
Welcome event, Long Beach Pavilion	0%	0%	5%	16%	79%	19
National SG Office Update (Liffman, Otts)	0%	6%	3%	68%	23%	31
Regional programming I (Daigle, Gaude, Miller-Way, Otts)	0%	0%	10%	59%	31%	29
Regional programming II (Burrage, T. Sempier, Sidman, Twilley)	0%	0%	11%	52%	37%	27
Sharing Solutions to Barriers (Hanisko, Otts, Zimmerman)	0%	0%	11%	67%	22%	27
Topical Breakout Sessions	0%	0%	7%	40%	53%	30
Celebrating 50 years (Adams, Graham, Shirley)	0%	0%	3%	41%	55%	29
Oil Spill Science (Graham, Hale, Mabee, Maung-Douglass, S. Sempier, Wilson)	0%	0%	0%	17%	83%	30
Reception at Oyster Reef Club	0%	4%	24%	52%	20%	25

3. Please indicate your level of agreement or disagreement with the following statements.
 (% checked this box)

Statement	Strongly Disagree	Disagree	Agree	Strongly Agree
I benefitted from attending this meeting.	0%	0%	23%	77%
I will use information from this meeting to advance my Sea Grant work.	0%	0%	43%	57%
The meeting was well-organized.	0%	0%	20%	80%
I wish to attend a future Gulf Sea Grant regional meeting such as this one.	0%	0%	20%	80%
This meeting provided opportunities for networking.	0%	0%	17%	83%

4. What were the best things about the meeting?

- Learning about other projects being done around the Gulf and the Oil Spill Science update.
- Meeting with co-workers about projects across the Gulf.
- Experience of the panel that has 30+ years at Sea Grant.
- Mingling with other Sea Grant people.
- Facilitator was great! Snacks!
- Face-to-face interactions with Sea Grant colleagues
- Regional thinking
- 30 minutes breaks allowed time to discuss previous topic before the next section. Also this time allowed good networking.
- Time to talk with other Sea Grant people. Hear about others' expertise and experiences.
- Visit with colleagues in other programs.
- Networking.
- Topic breakouts. Location – really enjoyed location.
- Networking, breakout sessions & celebrating 50 years.
- Seeing former colleagues and discussing ways to collaborate regionally.
- Networking opportunities.
- Grant funding discussions/work time for focus groups.
- Getting together for planning and networking.
- Long break times.
- Shared information & networking.
- The Oil Spill session was fabulous. Love to get a regional perspective.
- Networking, talking about regional products.
- It was good to hear about some of the common challenges shared by each program.
- The networking opportunities.

- Feedback from others on our project, meeting others/Networking
- Networking & visiting with colleagues. Time for breakouts.

5. What could we have done to improve this meeting?

- More information on specific projects being done with the potential to expand to other states.
- Internal state communication was poor. Send everything (hotels & registration) from Gulf, not the state level.
- 1 ½'s days meeting or 2 full days. Ending at 2:00 p.m. is not convenience for those driving long distance.
- Signage, bar at restaurant.
- Better map of the campus was needed.
- Get more audience participation.
- Clearer focus on regionality; make sure all directors attend; show support of efforts.
- There was a lot of repetition. The ideal of partnerships between regions was the focus over and over again. This is important, but branching out into other topics would strengthen future meetings.
- Double lines for food.
- ? - Nicely done.
- Do another or more learning/icebreaker with others to get to know everyone better. Loved the Yatzee activity. Maybe even do something else like it at social.
- I would have done nothing different.
- The breakout sessions could have been a little more organized. We wasted a lot of time trying to figure out what we were doing.
- Push/Force more the issue of Regional collaboration. But, I thought this was a great start, great tone.
- Training on programs that we can implement into the counties.
- A field trip would have been nice.
- Maybe have a roundtable to discuss policy challenges unique to each state and then discuss broad issues or problems that arise from these challenges and how regional participation can be used to inform people day to day outreach.
- Nothing – that I can think of now.
- Yantzee game was fun & engaging. Another activity such as this in the middle of day 2 so not sitting in large group session for most of the day.

Looking to the future

6. How often should we get together for a regional meeting? (% checked this box)

Once a year	Once every 18 months	Once every 2 years	Other (specify)
26%	13%	58%	3%

Comment: 3-4 more

7. What specific topics or activities would you recommend for future regional meetings?

- 3 minutes, lighting round talks could cover a lot more ground and help with in-reach.
- More talking about specific projects being done and potential opportunities for expanding those Gulf-wide.

- Time in breakout/somehow to update others on the main projects by topic area in each state.
- Around the horn--agents briefly discussing a current project working on issues.
- National updates – budgets, plans, trends, etc.
- Emerging issues in the Gulf and beyond.
- Ones related to national priorities.
- Very similar – seeking to identify realistic collaborations.
- Gulf literacy – FAQ about the Gulf. Marine debris, Oil Spill update & information from GOMRI. History stories from older Sea Grant people.
- Field trips to designated projects.
- Follow-up on breakout groups.
- A bit more time for breakouts.
- Investigate ways to overcome funding challenges at the regional level.
- Addressing regional problems caused by SLR, climate change, etc.
- Discussion of outreach and policy approaches that pertain to unique ecosystems and place-bases contexts.
- Updates on regional collaborations.
- Other ways to engage in small groups. Examples of successful regional partnerships outside Gulf.

8. The previous two regional meeting were for Sea Grant-affiliated staff only. Would you prefer that the meeting be open to non-Sea Grant affiliated participants? (% checked this box)

Yes	No	Maybe
13%	37%	50%

Comments:

One person who said “yes” stated: stakeholders

One person who stated “maybe” stated: I lean towards no because I feel it throws outside opinion in the mix that might not be relevant.

If yes, what amount of the meeting would you like non-Sea Grant affiliated attendee participation? (% checked this box)

All of meeting open to Sea Grant staff and non-Sea Grant participants	About half of the meeting open for all and half of the meeting for Sea Grant staff only	Non-Sea Grant affiliated attendees participate in specific sessions
21%	21%	57%

Comment: several people still answered this question even though they indicated “no” or “maybe”

9. What best describes you? (% checked this box)

Administration	7%
Communications	3%
Education	20%
Extension	63%
Legal	3%
Research Coordination	0%
Other _____(research)_	3%

10. Other thoughts, comments, or suggestions about this meeting or future meetings?

- Great job! Very useful and good to learn and network with other programs.
- Regional projects was a good topic - but limiting every discussion to regional projects limited some discussions. The entire meeting does not have to have solo focus. Last time legal took part of the meeting, but not all.
- Have a discussion next time about: “What do we drop?” with budget cuts and loss of positions. We cannot maintain the same level of output. What will we agree to drop? Can we limit the “new” programs?
- I liked the pre-meeting survey and building the meeting from the results. The 30 minutes breaks were a real bonus for this meeting.
- Great job! Very beneficial! Thank you!
- Great job guys.
- Thanks much.
- Even though well organized, the food could have been better. Even through monitor was very good at keeping us on task & keeping our thoughts organized, it seemed lik we were in grade school – maybe a different way to present order in a more professional feeling way. Breakout groups & slide presentations were really good.
- Great job! Let’s do it again!
- I really like the fact that the breakout groups left with tasks to do.
- Can we develop a plan to promote current employees to regional specialist positions?
- Have hot tea as an option, it was cold.
- Excellent job by planning committee. Thank you for putting this together.

Next Steps

Based on the results from the feedback forms and informal feedback received during and after the meeting, such meetings are beneficial and desired among most Sea Grant professionals working in the Gulf of Mexico. Issues that need to be addressed in order to ensure regular regional meetings include: finding/allocating funding to support regular meetings, looking to other Sea Grant regions to learn some of their best practices with the funding and planning of regional meetings and assembling another planning committee for the next conference. The key to successful implementation of regular regional meetings is to continue to receive the support for such meetings from State Sea Grant program leadership, the NOAA Sea Grant National Office and others.

Acknowledgements

The 2015 Gulf of Mexico Sea Grant regional meeting planning committee members included:

- Dorothy Zimmerman, Florida Sea Grant
- Josh Gunn, Texas Sea Grant
- Matthew Bethel, Louisiana Sea Grant
- Stephanie Showalter Otts, Mississippi-Alabama Sea Grant Consortium
- Steve Sempier, Mississippi-Alabama Sea Grant Consortium
- Tina Miller Way, Mississippi-Alabama Sea Grant Consortium

The planning team would like to thank Marian Hanisko from NOAA for providing facilitation and final planning support. In addition, this meeting would not have been possible without funding provided by the National Sea Grant Office, GOMA/GoMRI and additional support from each of the four Sea Grant college programs in the Gulf of Mexico.

This is publication number **MASGP-15-036**.

Appendix A - List of Participants

List of Meeting Participants

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Invited Speakers and Facilitator

Marian	Hanisko	marian.hanisko@noaa.gov
Mike	Liffmann	michael.liffmann@noaa.gov
Bethany	Mabee	bmabee@nas.edu

Appendix B - Links of Importance (RFPs, photos taken during the meeting)

Funding Announcements:

NOAA Climate Program Office Funding Announcements: <http://cpo.noaa.gov/GrantsandProjects.aspx>

NOAA Fisheries Habitat Funding Announcements: <http://www.habitat.noaa.gov/funding/>

NOAA Fisheries Aquaculture Funding Announcements:
<http://www.nmfs.noaa.gov/aquaculture/funding/funding.html>

NOAA Office of Education Funding Announcements: <http://www.oesd.noaa.gov/grants/>

NOAA Office of Coastal Management Funding Announcements: <https://www.coast.noaa.gov/funding/>

Photos of Regional Meeting:

Photos of Regional Meeting:
<https://www.flickr.com/photos/126185895@N03/albums/72157660201782145>

Photos of Resilience Roundabout:
<https://www.flickr.com/photos/126185895@N03/albums/72157660168702752>

Appendix C - Agenda



Texas • Louisiana • Florida
Mississippi-Alabama

Gulf of Mexico Regional Sea Grant Meeting

University of Southern Mississippi, Gulf Park Campus, Hardy Hall Ballroom
Long Beach, MS
October 19-21, 2015

Objectives

- Develop strategies for Sea Grant staff to jointly work together on regional topics
- Facilitate networking across the four Gulf of Mexico Sea Grant programs
- Learn about activities being conducted by Sea Grant colleagues working on similar issues
- Identify challenges to working regionally across programs, and share ideas to help overcome them.

Agenda

Day 1 (Monday, Oct 19th)

5:00 p.m. – 7:00 p.m. Welcome Event – Long Beach Pavilion

Objective: Allow Sea Grant staff around region to get to know each other in an informal setting.

Day 2 (Tuesday, Oct 20th)

8:00 a.m. Registration Opens

9:00 a.m. Welcome and Introductions

Objectives:

- Set context for meeting.
- Provide opportunity for Sea Grant staff to become familiar with each other.

Speakers:

Steve Sempier, Mississippi-Alabama Sea Grant Consortium
Josh Gunn, Texas Sea Grant

National Updates

Objectives:

- Hear perspective from national office on regional collaboration.
- Learn about the variety of networking opportunities for Sea Grant staff.

Speakers:

Mike Liffman, National Sea Grant Office

Stephanie Showalter Otts, National Sea Grant Law Center

Regional Programming: The Good, The Bad, and The Ugly (Part I)

Objective:

- Learn about successful Sea Grant led/supported regional activities and how barriers were overcome.

Speakers:

Melissa Daigle, Louisiana Sea Grant

Stephanie Showalter Otts, National Sea Grant Law Center

Tina Miller-Way, Mississippi-Alabama Sea Grant Consortium

Rusty Gaudé, Louisiana Sea Grant

10:45 a.m.	Break
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11:15 a.m.	<p>Regional Programming: The Good, The Bad, and The Ugly (Part II)</p> <p><u>Objectives:</u></p> <ul style="list-style-type: none"> • Learn of more regional collaboration successes. • Share the direction of future regional partnerships. • Understand how regional activities are or could be incentivized. • Address some of the regional collaboration barriers that were previously identified by meeting participants.
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Speakers:

Tracie Sempier, Mississippi-Alabama Sea Grant Consortium

Charles Sidman, Florida Sea Grant

Robert Twilley, Louisiana Sea Grant

Dave Burrage, Mississippi-Alabama Sea Grant Consortium

12:00 p.m.	Lunch
-------------------	--------------

1:00 p.m. Sharing Solutions to Our Barriers

Objectives:

- Participants become aware of barriers to implementing regional activities as identified by their colleagues.
- Share resources (e.g., project management, communication, etc.) to help overcome barriers to working regionally.

Speakers:

Marian Hanisko, NOAA Office for Coastal Management

Stephanie Showalter Otts, Mississippi-Alabama Sea Grant Consortium

Dorothy Zimmerman, Florida Sea Grant

2:30 p.m. Break

3:00 p.m. Topical area breakout to write proposals or proposal outlines that support regional Sea Grant activities

Objective:

- Sea Grant staff with similar priorities collaborate to develop a regional proposal or frame a regional activity for future funding.

Speaker:

Josh Gunn, Texas Sea Grant

5:00 p.m. Adjourn!

6:00 p.m. – 8:00 p.m. Off-site reception at the Oyster Reef Club, Long Beach, MS

Day 3 (Wednesday, Oct 21st)

8:30 a.m. Welcome Back

Objective:

Participants will review what was done yesterday and what we are planning for the day.

Celebrating 50 years of Sea Grant in the Gulf of Mexico

Objective:

- Participants learn about history of Sea Grant in the Gulf from long serving Sea Grant staff.

Speakers:

Gary Graham, Texas Sea Grant

Mark Shirley, Louisiana Sea Grant

Chuck Adams, Florida Sea Grant

Oil Spill Science Seminar and Panel Q and A

Objectives:

- Participants learn about a new program, their outreach needs and where Sea Grant may fit.
- Participants learn about how the SG/GoMRI oil spill outreach program functions and how they overcome barriers.
- Participants become more aware of emerging science from GoMRI and other oil spill related science.

Speakers:

Bethaney Mabee, National Academies of Sciences

Steve Sempier, Mississippi-Alabama Sea Grant Consortium

Monica Wilson, Florida Sea Grant

Emily Maung-Douglass, Louisiana Sea Grant

Chris Hale, Texas Sea Grant

Larissa Graham, Mississippi-Alabama Sea Grant Consortium

10:30 a.m.

Break

11:00 a.m.

Topical Breakout Sessions (continued from previous day)

12:15 p.m.

Lunch

1:00 p.m.

Report out from topical breakout groups

Objective:

- Participants learn about proposal ideas from the Gulf Sea Grant network and charge to move forward in collaborating in future.

Wrap-Up

Objectives:

- Review action items from meeting
- Thank participants

Speakers:

Josh Gunn, Texas Sea Grant

Steve Sempier, Mississippi-Alabama Sea Grant Consortium

2:00 p.m.

Adjourn

2:30 p.m.

Coastal Resilience Round about

WiFi Access

Network: GuestAccess

Username: SeaGrantRegional

Password: GulfofMexico4SG

Topical Breakout Room Assignments

Topic	Breakout Room	Lead Facilitator(s)
Community Resilience	Ballroom (front)	Melissa Daigle and Josh Gunn
Clean Marinas, Tourism and Working Waterfronts	Ballroom (back)	Bill Mahan and Chandra Wright
Oil Spill Science	Room 242	Steve Sempier
Coastal Restoration	Room 214	Eric Sparks
Gulf Science Literacy	Room 316	Terrie Looney and Tina Miller-Way
Aquaculture/Fisheries	Room 346	Andrew Ropicki

Appendix D - Summary of Results from Meeting Registration

Summary Results from the Gulf of Mexico Sea Grant Regional Meeting Registration

Summary tables for two questions in the regional meeting registration are listed below. Specific responses to these questions are found in appendix A.

Identify up to three barriers to implementing a regional activity across multiple Sea Grant programs. (N=50)

Topic	Number of mentions
Lack of funding	29
Differing priorities	22
Not enough time or available effort	16
Personnel	13
Differing policies	9
Distance	6
Communications	5
Lack of coordination	5
Regional reporting challenges	5
Other	4
Limited networking opportunities	3
Lack of incentives	2

Besides funding, what would assist you in implementing one or more regional activities across multiple Sea Grant programs? (N=37)

Topic	Number of Mentions
More networking opportunities	8
Support from leadership	5
Similar priorities region-wide	5
Increased of staff support	5
More coordination	4
Other	4
Use of collaboration tools	4
Additional time/effort to allocate	3
Travel funds	2

Appendix A: Pre-Identified Barriers and Opportunities for Implementing Regional Work

Individual, raw responses to the registration form are arranged by broad topic.

Identify up to three barriers to implementing a regional activity across multiple Sea Grant programs. (N=50)

Lack of funding

- Finding out different sources of regional monies. We tend to do a lot with NOAA and Sea Grant, but not many other sources. Having a list of sources that may be beneficial either in the short-term or long-term would be great
- Funding-most RFPs do not have high enough budgets to compensate multiple people working across the region, taking into consideration there will be travel and salary/fringe from multiple universities; also makes it difficult when each institution has to take overhead
- Limited travel funds for regional travel
- The time and travel budget it takes to instigate that type of coordination is lacking. I hope this meeting is a chance to address this.
- Travel
- Travel costs/restrictions
- Amount of funding
- Funding (15 mentions)
- funding allocation issues, and getting adequate funding to support large regional efforts
- Funding amounts allocated by programs are not typically enough to support multi-state efforts and yield meaningful impacts.
- Funding is usually site specific with in a local community.
- Funding. It costs more.
- Local match
- Money
- Multiple subcontracts for individual programs Indirect, Fringe, etc. leaving little in total amount of funding to achieve anything

Differing priorities

- Cohesive idea/concepts that can be implemented across all programs - ie a needs assessment of things that all 5 programs need so that projects can be developed with that in mind
- common goals
- No regional goals/objectives (communications)
- Already very busy on local issues and responsibilities
- Commitment to local clientele
- Crisis seems to be the best catalyst for regional partnership. Without crisis, it's too easy to be distracted by parochial issues.
- Different local priorities
- Different state/local gov't SOPs/infrastructure
- Differing priorities among states
- Each state has specific issues that need addressing.
- Ensuring that projects yield impacts of benefit to communities in each of the participating Sea Grant states.
- Entrenched local interests, lack of regional mentality.
- Similarity in application to communities (different issues, different ecosystems)

- Although programs may be almost on the same page, enough differences in objectives exist that makes it difficult to approach a project as "one Sea Grant."
- Buy-in
- difference in prioritizing stakeholder groups
- Different interests in what should be funded
- Different priorities in each program
- Higher priority often given to non-collaborative projects because of ease of working on them compared to collaborative projects
- I don't think implementation is where the bottleneck is; I think it's instigation- bringing together people with different agendas and identifying several consensus projects.
- Making sure examples are pertinent for all Gulf states
- Regional differences in priorities

Not enough time or available effort

- available time - time needed above and beyond what are currently doing
- Coordinating busy schedules
- Lack of capacity to carry out similar programming in different regions; most peoples plates are already full
- Lack of staff FTE available to commit time to regional activities; focused on in-state programming
- Schedules
- spread thin across many topical areas
- Takes extra time to coordinate activities and funding across multiple SG programs
- Time (4 mentions)
- time commitment needed
- time commitments
- Time for planning
- Time to participate in additional regional scale projects
- Time. It takes a lot of time to work with multiple institutions, making sure things are coordinated and folks stay on the same page.

Personnel

- "turfish" of SG/Extension Admin
- Leadership
- Developing partnership
- Getting the right people involved. We end up going to the same people and that is wonderful, but getting more involvement and help from others only helps the proposal process
- Identifying the key personnel in each state
- Insufficient face time to collaboratively develop program materials. Feeling that collaborators don't get as much "credit" for programming developed collaboratively
- Interested partners
- Balance in-person planning and implementation with available funding
- Clearly spelled out responsibilities
- Heterogeneous expertise across states
- Lack of knowledge of interests of other Sea Granters across the Gulf
- lack of regional perspective amongst SG field staff
- staffing critical mass

Differing policies

- Uneven university rules and regulations across SG programs.
- differences in policy
- Differences in regulations

- Different university policies for subawards and contracts
- In the legal realm, many laws/topics are different from state to state, making collaboration and its benefits more challenging.
- Inconsistent permitting regulations
- It is difficult to run a regional research competition because each program has unique requirements and ways. Usually one program maintains the competition and it isn't a fair share of resources.
- Lack of context-sensitive solutions and novel approaches to local policymaking.
- Multiple institutions (universities, satellite campuses, sea grant, agrilife, etc.) have their individual protocols to produce things in a specific way/process/format, which makes creating regional products using shared resources, challenging.

Distance

- Ability to meet with researchers/extension staff from other areas.
- distance
- Driving distances for meetings
- Geographical Location as well as identifying those that want to work with you.
- Location
- physical distance

Communications

- Communication (two mentions)
- Communication and relationship development
- Have representation from all states (communications)
- overcoming communications technology

Lack of coordination

- Complex matrix programming in terms of reporting, supervisory and budgetary items.
- coordination & common interests/needs
- coordination among various institutions with varying policies/procedures
- LESS OR NO COORDINATION ACROSS STATES
- Logistics and coordinating schedules

Regional reporting challenges

- Reporting is not always clearly defined or understood (Ex. PIERS...)
- reporting methods and schedule
- Reporting responsibilities and fair division of report data, Impacts
- Reporting shared impacts from a project-currently there is not a systematic way to do this
- Separate module needed in PIER for reporting regional projects; Lack of NSGO/NOAA incentives and credit for supporting regional projects

Other

- An approach to risk mitigation, which emphasizes fortification and reliance on engineered solutions.
- Difference in approaches to resiliency
- different education standards, curricular timing among different states
- standardization of outputs/products across different programs while also maintaining local relevance

Limited networking opportunities

- Lack of a plan in advance of funding opportunities to prepare a joint, multi-state/program application.
- LACK OF NETWORKING ABOUT SHORT AND LONG-TERN NEEDS

- Trying to get connected. We don't have a system of sharing opportunities with each other formally and I think getting some connection with everyone is important to show collaboration

Lack of incentives

- Incentives-other than the obvious networking and learning from one another, there are no incentives offered by leadership for staff to work on collaborative projects across the region
- Mainly internal incentives for regional collaboration (right thing to do) keep regional programming going; limited national level incentives via PRP and limited individual incentives

Besides funding, what would assist you in implementing one or more regional activities across multiple Sea Grant programs? (N=37)

More networking opportunities

- Ability to network with people from other areas and develop relationships.
- Identifying other Sea Grant Specialists/Agents/staff working on common issues who have the time and willingness to broaden the area of their work.
- I'm relatively new to Sea Grant, so networking would help me out tremendously.
- Knowing who in other states/programs share interests with me. Knowing that, I could be in a better position to reach out to these prospective partners.
- Knowledge of specialized research and outreach capacities of other programs so that personnel can be best matched to funding priority and project needs. Regional projects are more complex to manage from administrative and reporting perspectives.
- More knowledge about what people do at other Sea Grants and getting with the ones to figure out what we could do together as well as knowing more about the funding opportunities that will fit in to what we are doing.
- Being involved. Many regional Sea Grant staff do not know who I am or what I do, therefore I am not the first or even the last person that someone comes to.
- Collaborators in other Sea Grant Programs.

Support from leadership

- Clear commitment and statement from leadership in all organizations that collaborative work is fully credited and valued, especially since it seems to often be more challenging to engage in.
- It would be helpful if there was more agreement among directors as to program priorities.
- SG Admin developing a stronger regional cooperative philosophy
- The NSGO needs to better recognize regional efforts by clarifying reporting expectations and editing PIER to be more region-friendly.
- time/focus by bosses to gather in person to work on regional projects

Similar priorities region-wide

- Making multi-state/regional Sea Grant programs a priority.
- Perhaps a more thorough understanding of the problems, as well as the individual success stories different states in the region have been witness to.
- A strong need from stakeholders.
- The existence of a regional plan that needs to be implemented. I'm not sure what "activities" we are talking about.
- understanding other stakeholder needs of other programs to be able to find the common issues/needs that can best be addressed at a regional scale

Increased of staff support

- An officially recognized Regional Office/Program that has its own resources and staff, would be ideal!
- A program assistant, less admin work
- Administrative assistance
- administrative support from Extension and Sea Grant
- Project management support. Someone to help schedule conference calls, keep project tasks on track, etc.

More coordination

- FUNDING, COORDINATION, SUPPORT
- It might be helpful for there to be a routine scheduled conference call between regional Sea Grant Programs and partners. Maybe on a quarterly basis, where upcoming opportunities could be discussed and regional partnerships and activities could be formed.
- periodic regional meetings and administrative conf calls
- We receive excellent support from all four Sea Grant programs on the oil spill science outreach program. Continued support and engagement by each program and dedicated staff to the project are essential for programmatic success.

Other

- Good communication network
- I'd like to develop a regional approach to the CRS/NFIP work that all the 4 programs are doing, developing an approach for networking/talking amongst ourselves to so that we can share ideas and concepts as we go.
- Not sure
- Performance review had an objective about how well I worked regionally on activities and it was therefore part of my work plan Travel throughout the region was supported by my organization

Use of collaboration tools

- Topical list serve
- Having something like a Basecamp
- Development and dissemination of tools and technologies that can be used (outreach pubs, curricula, tools like Resilience Index, etc.)
- An easily accessed keywords project database - or personnel data base again affiliated by keywords - to help me find counter parts in other programs

Additional time/effort to allocate

- More hours in the day :)
- More human power
- Time to travel to various locations across the coast for regional activities

Travel funds

- Agents and specialists are limited in their ability to travel and connect programmatically with out of state peers.
- Traveling to meeting like Gulf States Marine Fisheries Commission to discuss potential regional involvement

Appendix E – Recognizing Others

Meeting participants were asked to identify people from other Sea Grant college programs in the Gulf of Mexico that have helped them do their job better. The people that were identify and the description of how they have helped is listed below.



Identify one person from another Gulf of Mexico Sea Grant program that has helped you advance your work due to regional collaboration

Chuck Adams

Florida

How did they help?

- Helped Louisiana Sea Grant complete a "long overdue" regional report.

Matt Bethel

Louisiana

How did they help?

- Provide feedback on Louisiana programing and activities. Helped to generate new ideals and possibilities for programming in Texas.

Rex Caffey w/Andrew Ropicki - TX and Ben Posadas - MS- AL

Louisiana

How did they help?

- Helping in a team (Caffey, Ropicki, & Posadas) effort to provide guidance in better measures & communicating programs benefits

Melissa Daigle

Louisiana

How did they help? (three mentions)

- Melissa Daigle has been instrumental in helping me develop and implement outreach efforts on NFIP & CRS through by-state collaboration. We have also cohosted legal education meetings together, expanding our reach & leveraging resources to grow the program.
- Melissa has been our partner on numerous legal extension projects. Most recently, Melissa has offered to present on a legal bulletin I've been working on with the Oil Spill Specialists. Helps us extend information into Louisiana more cost effectively.

- Facilitated multiple Resilience Index meetings in Louisiana Communities and shared lessons learned so we could improve the tool. Works collaborative on NFP/CRS projects and communicates challenges as well as successes. We've written journal articles together, organized meetings (such as the Climate CoP), and the list goes on. I am better at what I do because of Melissa's support.

Rusty Gaudé

Louisiana

How did they help?

- The team helped our Texas team after Hurricane Ike. They shared the experiences and lessons learned from Katrina to help us help our clients during recovery.

Gary Graham

Texas

How did they help? (four mentions)

- Louisiana does not have a gear specialist (shrimp/ commercial fishing). Gary comes to Louisiana - the state with the largest commercial fishing float - once or twice a year
- Gary several times came to Florida to do educational programs for my local shrimp industry. (TEDS's BRD's)
- Gary provides Louisiana expertise on TEDs gear - fuel - efficiency
- He and Tony Reisinger welcomed me into the Fisheries Extension Group and introduced me to all the other state fishery specialists. This allowed me to quickly learn about the other fisheries across the Gulf.

Tony Reisinger

Texas

How did they help?

- They (Tony Reisinger & Gary Graham) welcomed me into the Fisheries Extension Group and introduced me to all the other state fishery specialists. This allowed me to quickly learn about the other fisheries across the Gulf.

Lauren Land

Louisiana

How did they help?

- A target audience that the Oil Spill Science outreach team is trying to reach out to are Ports and Harbors employees. When Lauren heard about this, she graciously invited me to attend her Ports and Harbors workgroup. I was able to connect with Port Directors from all around the Gulf and collect some much needed input this group

Bill Mahan

Florida

How did they help?

- Apalachicola is an isolated shrimping area that is often "under the radar", like so many of our grass roots Sea Grant Agents, Bill was able to take me around and introduce me to Industry members during TED outreach efforts. Long-term relationships evolved!

Russ Miget

Texas

How did they help?

- Provides Louisiana Sea Grant with expertise on Seafood Quality Procedures

Ben Posadas

Mississippi-Alabama

How did they help?

- Helping in a team (Caffey, Ropicki, & Posadas) effort to provide guidance in better measures & communicating programs benefits

Andrew Ropicki

Texas

How did they help? (two mentions)

- Helped Louisiana Sea Grant complete a "long overdue" regional report.
- Helping in a team (Caffey, Ropicki, & Posadas) effort to provide guidance in better measures & communicating programs benefits.

Mark Schexnayder

Louisiana

How did they help?

- Unselfishly allowed and encouraged teamwork between adjoining Louisiana Sea Grant territories for mutual benefit and productivity.

Tracie Sempier

Mississippi-Alabama

How did they help? (two mentions)

- Mentor us through process of hosting a Community Rating System (CRS), Floodplain Management meeting for local government.

- Tracie has always been a collaborator who is willing to take the time to include others, each on an individual level. After a couple years working together on the planning team for the Climate CoP, she reached out to me work together on a project for the Resilience Index. That project has allowed Sea Grant to make connections with ports and waterfront communities all across the Gulf.

Jodi Thompson

Mississippi-Alabama

How did they help?

- Community Resilience for local government, a decision support tool to plan for natural disasters.

Appendix F - Slides from the Presentations

Welcome and Introduction Slides

By Steve Sempier

Welcome



Texas • Louisiana • Florida
Mississippi-Alabama

Regional Meeting

October 19-21, 2015
Long Beach, Mississippi

WHO WOULD YOU LIKE TO RECOGNIZE?

- Identify one person from another Gulf of Mexico Sea Grant program that has helped you advance your work due to regional collaboration.
- Describe the work and how they helped you.

SUPPORT PROVIDED BY



THANK YOU—WELCOME EVENT

- Tom Hymel, Anne Dugas, Matt Seals
- Louisiana Sea Grant
- Greg Graeber
- Dorothy Zimmerman
- Deborah Jefferson
- Matt Bethel and Tina Miller-Way



YOUR PLANNING COMMITTEE



WHAT DID YOU ASK FOR?

FROM THE 2012 REGIONAL MEETING



- ✓ Broader participation
- ✓ Discuss regional issues
- ✓ Regional accomplishments
- ✓ Professional development
- ✓ Write proposals
- ✓ Historical context, oral histories

WHAT DID YOU ASK FOR?

FEBRUARY 2015 PLANNING QUESTIONNAIRE (N=63)

- ✓ October or August
- ✓ 1.5-2 day, stand-alone meeting
- ✓ Goals
 - ✓ Strategies to work together
 - ✓ Networking
 - ✓ Learn what others are doing
- ✓ Features
 - ✓ Time for informal networking
 - ✓ Breakout groups
 - ✓ Social event

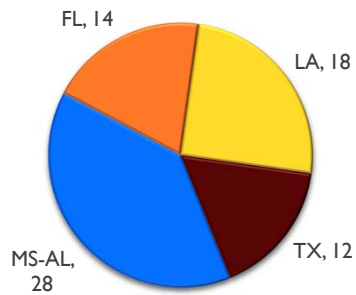


Photo: gulfmex.org

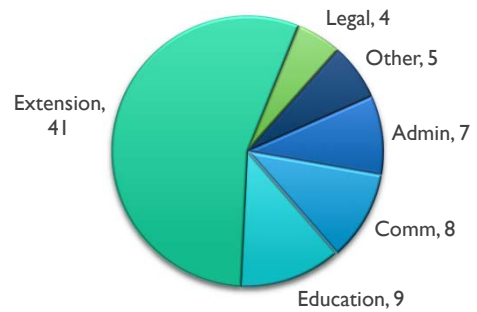
AGENDA

- National office and national-level networking
- Examples of regional successes
- Barriers to regional collaboration
- Professional development
- Topical breakouts
- Celebrating 50 years
- Oil spill science
- Networking throughout

WHO'S HERE?



WHO'S HERE?




OPENING ACTIVITY

JOSH GUNN



National Update Slides

By Mike Liffman



NSGO Update and Regional Perspectives

Mike Liffmann
National Sea Grant Office
Gulf of Mexico Sea Grant Network Meeting
October 20, 2015



National Sea Grant Advisory Board

Jonathan Eigen – Designated Federal Officer

Four nominees in process:


- Gordon Grau – Hawaii Sea Grant Program Director (retired)
- Judy Gray – Acting Deputy Director of OAR (retired)
- Brian Helmuth – Climate and resilience scientist, Northeastern University
- Jim Murray – Deputy Director, National Sea Grant College Program (retired)





This morning...

- Most recent changes in the NSGO and NSGAB
- PIE Updates
- FY 2016 Budget
- Regional...good, better, and best practices!






NSGO Summer/Fall Activities

- Site Visits – Done!
- Technical Review Panels-Done!
- Performance Review Panels-in progress
- Filling the office vacancies-ongoing
- Partnerships and networking-ongoing

5








Most recent changes in the NSGO

<http://seagrant.noaa.gov/WhoWeAre/Leadership/NationalSeaGrantOffice.aspx>



- August 2015:
 - + Sharon Aziz (contractor) – Assists with PIE activities including PRP and PIER information.
 - + David Chorney – contracts, climate & water issues, and NWS liaison
 - + Amanda McCarty – NOAA Leadership Competencies Development Program (LCDP) detail including recruiting Sea Grant hires
- September 2015:
 - Chris Hayes – to ½ time while working on his PhD
 - + David Kidwell – a 6-month detail from National Ocean Service (liaison) and HCE lead
- October 2015:
 - Sami Grimes – Division Chief for DOI Office of Surface Mining (Pittsburgh)
 - Kathleen Jamison – LCDP detail from Office of Coast Survey returning to OCS
 - + Katherine Porlles – Financial Analyst (1/3 time)

Sea Grant Budget

	FY15 Appropriation	FY16 Request	FY16 House Mark	FY16 Senate Mark
Base	\$62.8M	\$61.5M	\$62.8M	\$62.8M
Aquaculture	\$4.5M	\$7.0M	\$2.0M	\$10 M
STEM Education	[included in base]	[eliminated from Base]	[included in base]	[included in base]
Total	\$67.3M	\$68.5M	\$64.8M	\$72.8M

Historical Budgets
 FY 2012 – \$62.2M
 FY 2013 – \$57.3M (after sequester)
 FY 2014 – \$67.3M







Regional Initiatives




- Highly valued and encouraged; incentivized through regional NSIs and other means (special projects, multi-state priorities)
- Great tool to create and nurture internal and external partnerships
- Recommendations in *The Biennial Report to Congress by the NSGAB, 2014*:
 - Sea Grant should continue to focus on advancing national priorities and solving problems on a local and regional basis, while remaining sensitive to the needs of local communities.
 - Sea Grant should continue to emphasize partnerships and collaborative efforts within the Sea Grant network and with other federal, regional, state and local agencies and organizations.





Other SG regional models




- Great Lakes Network
 - Stimulated by zebra mussels nearly 25 years ago
 - Meet every 18 months with comprehensive agendas. Involve all eight program managers, educators, communicators and extension staffs
 - OHSG designated by other programs to receive regional grants and distribute; No additional O/H
 - Have applied for NSIs as a region
 - Joint research RFPs and review panels; each state funds its own investigators

Examples of Regional Efforts



<http://seagrants.noaa.gov/WhatWeDo/RegionalInitiatives/RegionalProjects.aspx>

- Old examples? Zebra mussels, TEDs and bycatch issues, HACCP, Fisheries Extension-regional projects
- Newer examples? Social science research (Pacific, Mid-Atlantic, Northeast), disaster response, mariculture in Pacific
- Newest examples? Ocean acidification, coastal storms and resilience, GL Clean Marinas, legal and policy approaches to ocean planning

Other SG regions (cont.)


- Northeast Consortium
 - MOU formally laying out expectations
 - Rotates leadership and biennial meeting among seven programs
 - Each sets aside \$25K/year to sponsor regional competition around theme (social science, OA, climate change adaptation)
 - Infrastructure enabled OA funding from NOAA/OAR/OA-\$750K


GofMX Regional Successes



- Gary's et al fisheries gear work; Fisheries Extension Enhancement regional project-sharks, Shrimp Sustainability Summit, derelict gear removal, methyl-mercury education HACCP;
- *Coastal Resilience Gulf of Mexico – Methods, Data and Web-Based Mapping Applications to Inform Coastal Communities on the Risks of Sea Level Rise*;
- 2004+hurricanes; Coastal Storms Program; DWH disaster response and aftermath;
- Regional Research Plan;
- RESTORE ACT, role of MS-AL Consortium, others?






Other SG regions (cont.)




- Mid-Atlantic Regional Research
 - 7 programs, each \$120K per two-year award
 - Administered by VASG
 - Priority topic areas: climate impacts and adaptation; coupled social-ecological science; land-estuarine syntheses
 - Staffs get together every 18 months at rotating location






Other SG regions (cont.)

- **South Atlantic Network**
 - Recently re-established among four programs;
 - Research competition involving PIs from each state; each Program funds its PIs avoiding issue of funding out-of-state; managed by FLSG
 - Regional Research on Coastal Community Resilience*
 - Project also involves NOAA/NOS/OCM and SGE staffs
 - \$450,000. Each state PI is limited to a maximum of \$100,000. Lead PI has additional \$25,000/year for project coordination and management




In Summary

- “Regional” is a tried-and-true SG practice;
- It helps when an infrastructure is in place to manage money and projects;
- It applies primarily to research, but also extension, education and communications;
- Requires trust and understanding among participants




Other SG regions (cont.)

- West Coast Regional**
 - Regional social science research involving four programs;
 - \$700,000 for two years; two projects funded for the 2014-2016 biennium. Individual projects should not request more than \$100,000 per year (including indirect costs) from any relevant state Sea Grant program.
 - Projects- governance, stakeholders and salmon recovery and socioeconomic effects of groundfish ITQs



Over to you...

- Questions, comments, factual errors...

Cross-Regional Efforts

- Sub-Tropical- Involves GU, HI, PR and FL
- Topical networks- primarily SGE; Climate, SCCD, FEN, Aquaculture, PPCP, Social Science
- Others???

COP Regional Meeting Slides

By Melissa Daigle

Examples of regional projects

Climate Community of Practice Overview



Melissa Daigle, Louisiana Sea Grant
Gulf of Mexico Regional Meeting
October 20, 2015

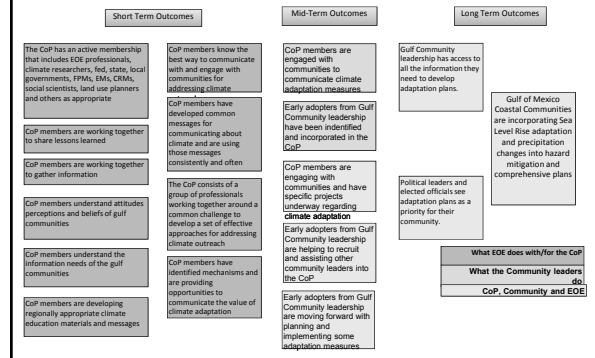
Who is the Gulf of Mexico Climate Community of Practice?

A network of outreach, extension, and education professionals and local community officials from Gulf states working together to:

1. Explore the state of climate science in the Gulf region;
2. Learn how coastal communities can adapt to climate change impacts; and,
3. Share lessons-learned related to climate communication.



Gulf of Mexico Climate Community of Practice Logic Model



What are we working towards?

Long Term

- Gulf of Mexico coastal communities are incorporating sea level rise adaptation and precipitation changes into hazard mitigation and comprehensive plans.



Mid Term

- CoP members are engaged with communities to communicate climate adaptation measures.
- Early adopters from Gulf communities are incorporated into the CoP.



Short Term

- The CoP has an active membership that includes a variety of partners.
- CoP members understand the attitudes, perceptions, and beliefs of Gulf communities.
- CoP members develop common messages for communicating about climate.

Accomplishments

- ✓ 6 annual meetings
- ✓ Climate resources toolkit
- ✓ Website
- ✓ Perceptions Survey
- ✓ Technical assistance for communities
- ✓ Working groups
- ✓ Webinars
- ✓ On-line forum for continued dialog and sharing of resources
- ✓ Published peer-reviewed article



Work Groups

1. Annual meeting planning
2. Webinars
3. Messaging
4. Formal and informal education engagement
5. Tools



Recognition of Accomplishments

Spirit of Community Award – Conditions for Nomination:

1. Why the local community is deserving of the Gulf of Mexico *Spirit of Community Award* (relevant to climate outreach to communities)
2. How the work benefits and helps reach the goals of the CoP
3. How the local community cooperates with various partners (public, private, community, business, or citizen groups)

Takings regional project

Stephanie Showalter-Otts

Professional development for educators on the Deepwater Horizon event

Tina Miller-Way, Mississippi-Alabama Sea Grant
Gulf of Mexico Regional Meeting
October 20, 2015

Goal

Using video conferencing technology to deliver information and teaching ideas to as many K-12 teachers and informal educators as possible



Driven by need...

- After the spill, an almost immediate request for credible information and relevant hands-on activities for K-12 students
 - LA SG conducted a needs assessment – 190 responses
- Problems
 - While were teacher workshops in 2010, not meeting need - not reaching large numbers of teachers
 - Time, budget available to teachers for PD limited, especially during school year
 - Scientists, while the experts, are very busy - time for outreach limited

Educator Workshops

- Single day workshops, educator and teachers at each of 10 locations which were networked via video conferencing technology (3/3/3/1)
- Delivered PD for ~400 teachers across 4 Gulf states on 2 dates (April 2011, Jan 2012)
- Structure
 - Research scientist presentations - 4 total; 1 per state
 - Selection of topics – driven by needs, state standards
 - Q&A session - rotated among sites
 - Block of time for hands-on activity (not done across state, but done within state)



Truly regional...

Thanks also to host facilities & their IT staff

- multiple SG programs involved
 - MS-AL SG – Sharon Walker, Tina Miller-Way, Jessie Kastler
 - Louisiana SG – Dianne Lindstedt
 - FL SG – Chris Verlinde
 - And a host of other folks – most notably Lee Yokel - GOMA, and NOAA Office of Education - funding
- Multiple venues within each state - 10 locations total
 - Coastal, mid-state, up-state; modified by population/pool of teachers, facilities w/video conferencing technology

Successes

- Teachers' opinions (survey results)
 - PD via video-conferencing
 - 61% - first exposure to video conferencing
 - 80% - would do again
 - What did teachers value most? - “three most valuable components of this workshop?”
 - “expertise of the presenters, hands-on activities, resources given
 - “knowledge-base of presenters, time for Q & A, example of activity applying content from workshop”
 - “1) Data from Experts, 2) Interaction with colleagues, 3) Eligibility to ask experts questions”
 - “Hands-on activities, take-home folder, and stipend”



Barriers

- Technological issues
 - Multipoint synchronous connection, with sufficient bandwidth, software
 - Most but not all sites had IP video-conferencing, other technologies did not work (Skype), were firewall issues
 - Other challenges
 - Sensitive to lighting, position of speaker, ambient sound
 - switching among sites for Q&A - very time consuming
- Planning, logistical issues
 - Not all could participate regularly in planning phone calls, email communication did not always compensate
 - Was not a clear set of expectations and approach given to participating scientists (assumptions)

Oh, and a tornado too

Hydrologic restoration

Rusty Gaudé

Hydrological Restoration Regional Meeting

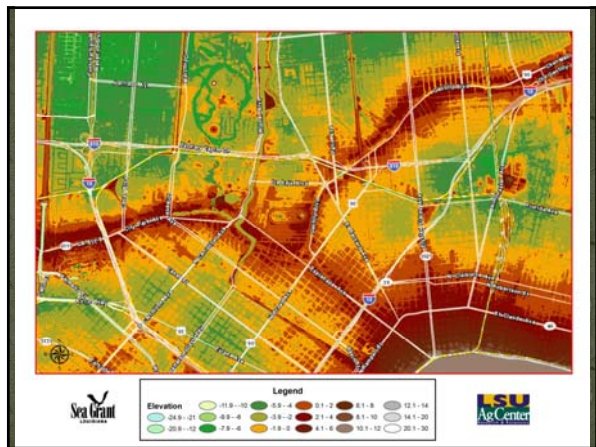
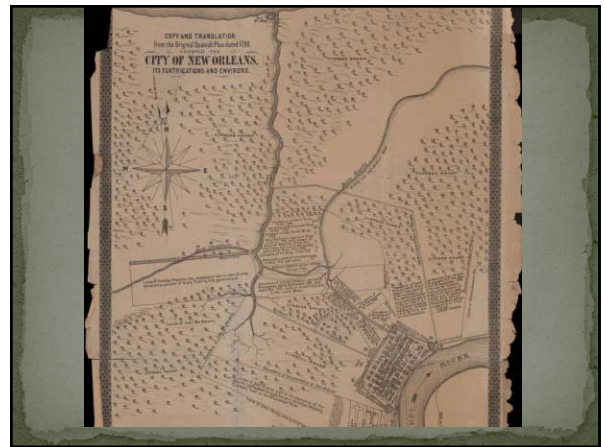
Slides

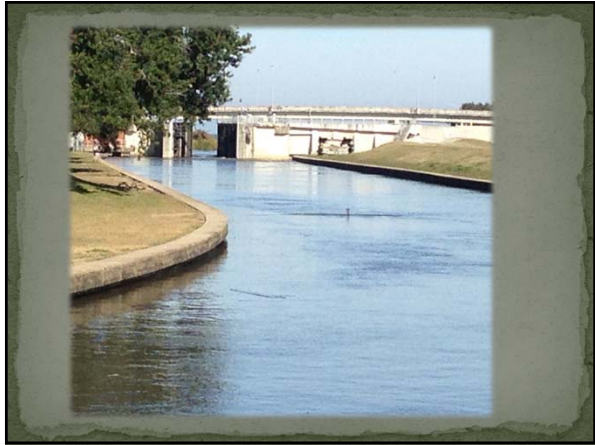
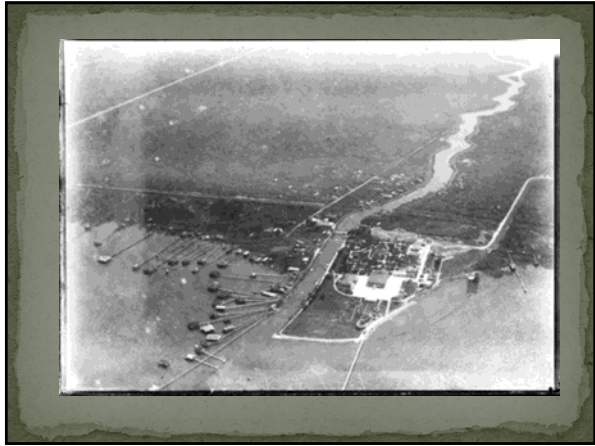
By Rusty Gaude'

**BAYOU ST. JOHN
WATER CONTROL STRUCTURE
REMOVAL**



CITY PARK PAVILION
APRIL 17, 2012



Regional Panel Slides

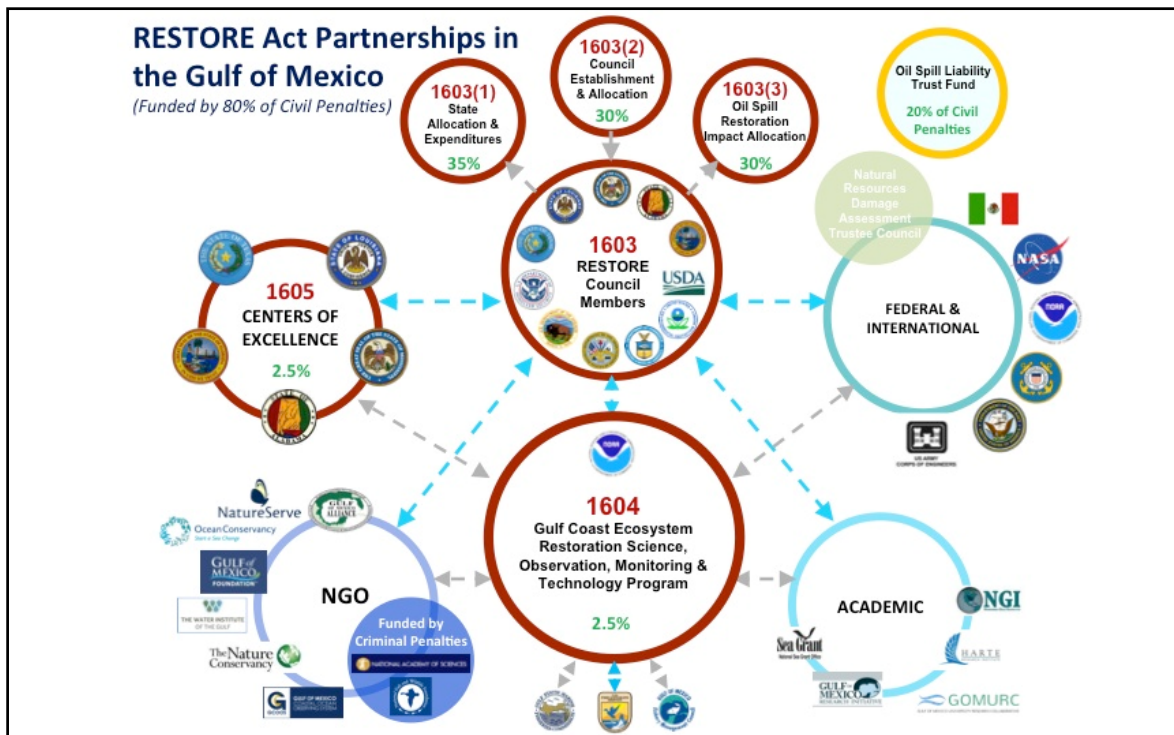
By Robert Twilley

Regional Programming



Texas • Louisiana • Florida
Mississippi-Alabama

October 19-21, 2015
Long Beach, Mississippi



Barriers Pre-Identified by Meeting Participants Slides

Barriers to Implementing Regional Activities (Summary results from meeting registration)

Topic	Number of mentions
Lack of funding	29
Differing priorities	22
Not enough time or available effort	16
Personnel	13
Differing policies	9
Distance	6
Improved communications	5
Lack of coordination	5
Regional reporting challenges	5
Other	4
Limited networking opportunities	3
Lack of incentives	2

Besides \$\$, what would help you in implementing one or more regional activities across multiple Sea Grant Programs?

Topic	Number of Mentions
More networking opportunities	8
Support from leadership	5
Similar priorities region-wide	5
Increased of staff support	5
More coordination	4
Other	4
Use of collaboration tools	4
Additional time/effort to allocate	3
Travel funds	2

National Academy Gulf Research Program Slides

By Bethaney Mabee

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

GULF RESEARCH PROGRAM

**The Gulf Research Program:
An Update**



Bethany Mabee
Communications Officer


GULF RESEARCH PROGRAM
INNOVATE | EDUCATE | COLLABORATE

Who We Are

The National Academies of Sciences, Engineering, and Medicine

- Provide independent advice to the Nation
- Private, nonprofit institution, not a government agency

The National Academy of Sciences was established by Congress in 1863 during the Lincoln Administration to provide independent advice to the Nation on science, engineering, and medicine




Intellectual leadership comes from volunteer experts, chosen for expertise, balance, and objectivity.

GULF RESEARCH PROGRAM
INNOVATE | EDUCATE | COLLABORATE

The Gulf Research Program

- A \$500 million, 30-year program managed by the National Academies of Sciences, Engineering, and Medicine
- Result of criminal court cases related to the *Deepwater Horizon* oil spill
- Directed to operate in three areas:
 - Oil system safety
 - Human health
 - Environmental resources
- Conduct activities in three categories:
 - Research & Development
 - Education & Training
 - Environmental monitoring
- Program funds arrive 2013-2018
- Guided by ~20+ member Advisory Board (pro bono service)



The National Academies of
SCIENCES • ENGINEERING • MEDICINE

GULF RESEARCH PROGRAM
INNOVATE | EDUCATE | COLLABORATE

Mission

Key program attributes:

- Long-term perspective
- Improving scientific understanding, especially at interconnections between the program's three areas of responsibility
- Applying insights to benefit the Gulf region and the nation as a whole

MISSION

Over its 30-year duration, the Gulf Research Program will work to enhance oil system safety and the protection of human health and the environment in the Gulf of Mexico and other U.S. outer continental shelf areas by seeking to improve understanding of the region's interconnecting human, environmental, and energy systems and fostering application of these insights to benefit Gulf communities, ecosystems, and the Nation.

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

GULF RESEARCH PROGRAM
INNOVATE | EDUCATE | COLLABORATE

2015 Exploratory Grants

Small "seed grants" to explore and catalyze innovative ideas, approaches, methodologies, and/or collaborations.

\$1.6M for 1-year grants intended to catalyze innovative thinking

- [Exploring Approaches for Effective Education and Training of Workers in the Offshore Oil and Gas Industry and Health Professions](#)
 - 6 awards totaling \$815,000
- [Linking Ecosystem Services Related to and Influenced by Oil and Gas Production to Human Health and Wellbeing](#)
 - 6 awards totaling \$774,000

AWARDS
ANNOUNCED
SEPTEMBER 9, 2015

DETAILS ON OUR
WEBSITE

The National Academies of
SCIENCES • ENGINEERING • MEDICINE

GULF RESEARCH PROGRAM
INNOVATE | EDUCATE | COLLABORATE

2015 Fellowships

To support capacity building in the Gulf - help prepare a future generation prepared to work at the intersections of oil system safety, environmental resources, and human health and to think holistically about the region's challenges.

- *Early-Career Research Fellowships*
- *Science Policy Fellowships*
- *Christine Mirzayan Science and Technology Policy Graduate Fellowship program at the GRP (2016 process underway)*

- Open to a broad range of disciplines.
- Includes mentoring and professional development
- Develop a network/cohort over time



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GULF RESEARCH PROGRAM
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2015 Data Synthesis Grants

Integration and synthesis of data to explore the value and untapped potential of existing long-term observations and monitoring data

Two-year grants for activities that synthesize existing data

2015 themes:

1. Restore and maintain the Gulf of Mexico's ecosystem services, or
2. Enhance understanding of the Deep Gulf or its physical and biological connectivity to coastal communities

LOI CLOSED:
JUNE 15, 2015

FULL PROPOSALS
CLOSED JULY 31,
2015

AWARDEES TO BE
ANNOUNCED
~DECEMBER 2015

2016 Information & Application Deadlines

Details about 2016 funding opportunities and application links will be available at <http://www.nas.edu/gulf/funding>

Opportunity	Tentative Deadlines
Exploratory grants (Topics announced Dec. 2015)	Late Feb. (required LOI) Late Apr. (full proposal)
Synthesis grants (Topics announced Jan. 2016)	Late Apr. (required LOI) Late June (full proposal)
Capacity-building grants (Topics announced Jan. 2016)	Late Apr. (required LOI) Late June (full proposal)
Early-career research fellowships (Applications open Dec. 1, 2015)	2/17/16
Science policy fellowships (Applications open Dec. 1, 2015)	2/17/16
Mirzayan fellowship	Sept. 2016

Visit www.nas.edu/gulf to sign up for e-updates and register for our

October 28 informational webinar

Evolving Areas of Focus

Advisory Board has identified four program initiatives/themes**:

1. **Comprehensive Risk Awareness for Safe Offshore Oil and Gas Operations**
2. **Observation and Monitoring Data for Informed Decision-Making**
3. **Informing Coastal Community Response & Adaptation to Environmental Change**
4. **Building Cross-Boundary Capacity and Leadership**

** These are preliminary and still under discussion; the initiatives are envisioned as areas of focus, ways to organize thinking and develop metrics.

Contact Information

Gulf Research Program
gulfprogram@nas.edu

To download a copy of our strategic plan, please visit
www.nas.edu/gulf/vision

To register to receive e-updates:
www.nas.edu/gulf

Oil Spill Science Slides

By Steve Sempier, Monica Wilson, Emily Maung Douglass, Christine Hale, and
Larissa Graham



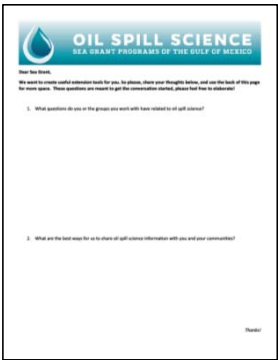
OIL SPILL SCIENCE
SEA GRANT PROGRAMS OF THE GULF OF MEXICO

Outreach Program and Emerging Science

Steve Sempier, Monica Wilson, Emily Maung-Douglass, Christine Hale and Larissa Graham


Gulf of Mexico Sea Grant Regional Meeting
Long Beach, Mississippi
October 21, 2015

We ask for your input today



Challenges

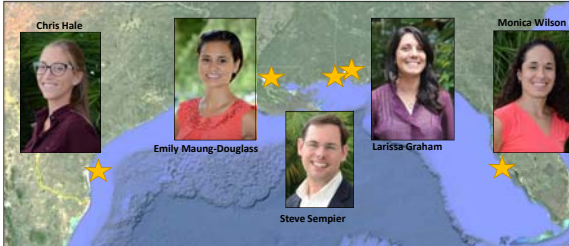
- Started from scratch
- Developed processes on the fly
 - Hiring
 - Regional outreach plan
 - Communications
 - Publications
 - Seminars



Challenge: 0




Challenge: 0 to 5 in 6 months



Challenges

- Universities \neq Rules
- Matrix management
 - Multiple reporting lines
 - In-state vs. regional demands
- Decentralized budget
- Distributed network and responsibilities (opportunity too!)
- Many reviewers



Strategies: Adaptive Management

- Four full-time, dedicated staff

- Leadership and communicators support

- Regular communication

- Daily email; weekly calls
- Quarterly calls with supervisors

- Shared database of contacts

- Clearly defined processes that are able to be refined

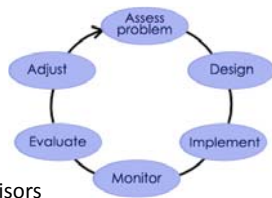


Figure: chesapeake.usgs.gov



The partnership between GoMRI and the Gulf Sea Grant Oil Spill outreach team represents a model for leveraging funds to synthesize and transition research to coastal communities. Each of the regional Sea Grant programs received funding from GoMRI to hire an outreach coordinator to connect the region's research enterprise to coastal citizens, a niche that Sea Grant is uniquely qualified to fill.

Opportunities



- Builds off of your Sea Grant work and reputation

Opportunities

- Shared credit and recognition
- Integrated within overall network
- Resources for all Sea Grant staff in Gulf and beyond
- Paths of least resistance to move forward
- Utilize unique strengths of each program

Accomplishments



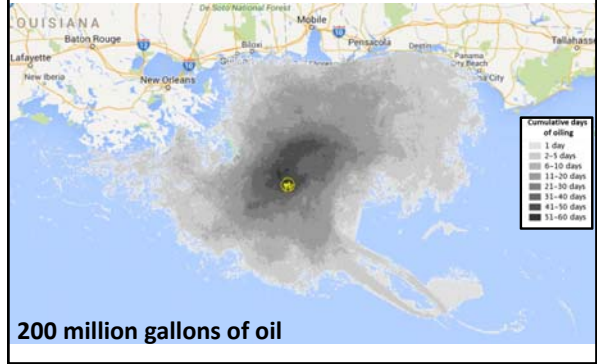
Emerging Science

Deepwater Horizon oil spill

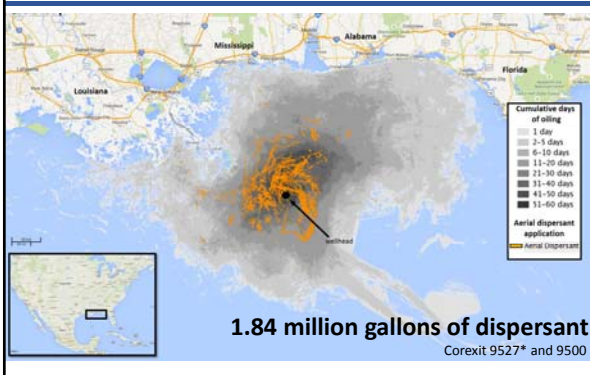
April 20, 2010
11 people killed
Oil flowed for 87 days



Deepwater Horizon oil spill

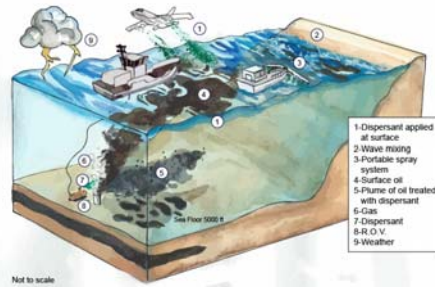


Deepwater Horizon oil spill

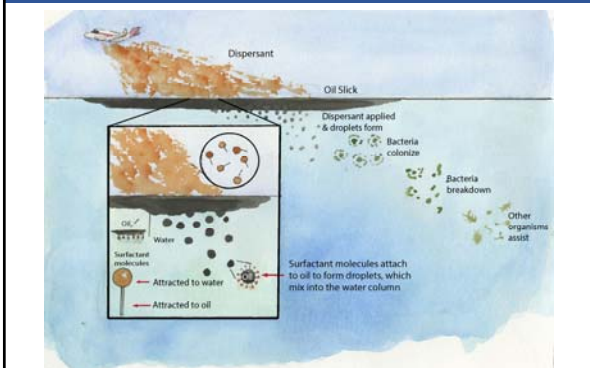


Deepwater Horizon oil spill

- On the surface:
- 29,000 square miles
 - 1.8 mil gallons of dispersant
- In the water column:
- Plume at 3,200-4,000 ft
 - Plume at 160-1,600 ft
 - 0.8 mil gallons of dispersant

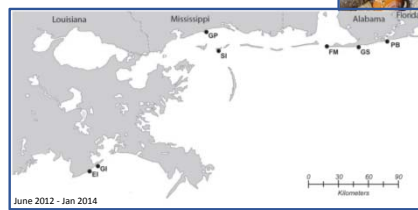


Oil spill science: Dispersants



Oil spill science: Dispersants

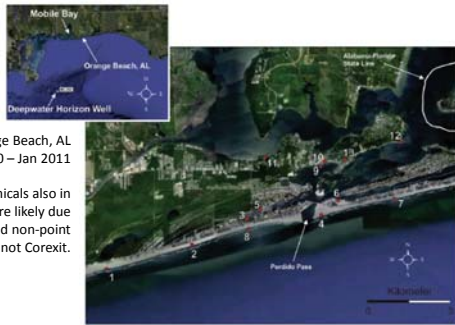
- Persistence of dispersants nearshore
- Patchy/inconsistent levels of oil and dioctyl sodium sulfosuccinate (DOSS)
 - Still found DOSS even four years after the spill in oiled beach samples



Tar balls and sand patties

White et. al 2014

Oil spill science: Dispersants

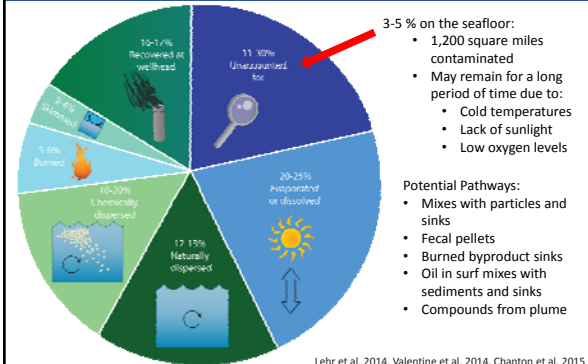


Orange Beach, AL
Sept 2010 – Jan 2011

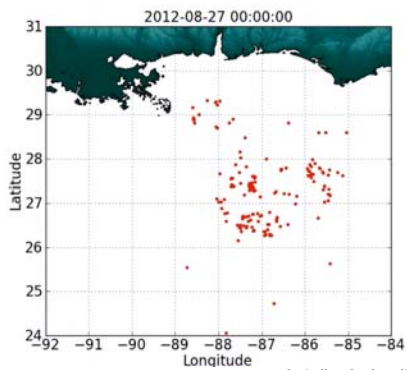
Found chemicals also in dispersant; more likely due to point and non-point sources, not Corexit.

Hayworth et. al 2012

Oil spill science: Lingering oil



Oil spill science: Transport

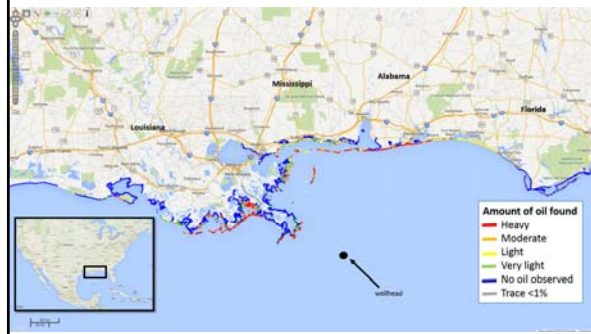


Oil spill science: Transport



Deepwater Horizon oil spill

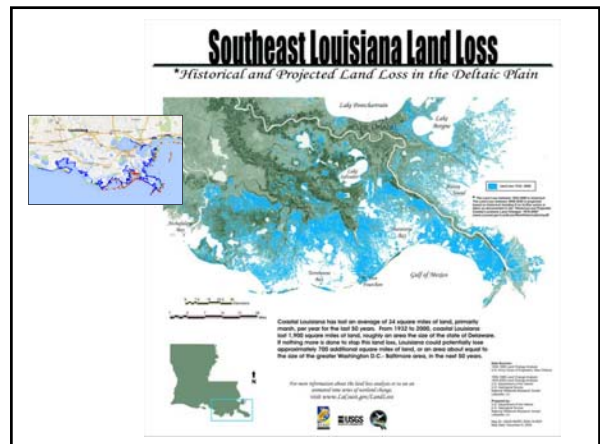
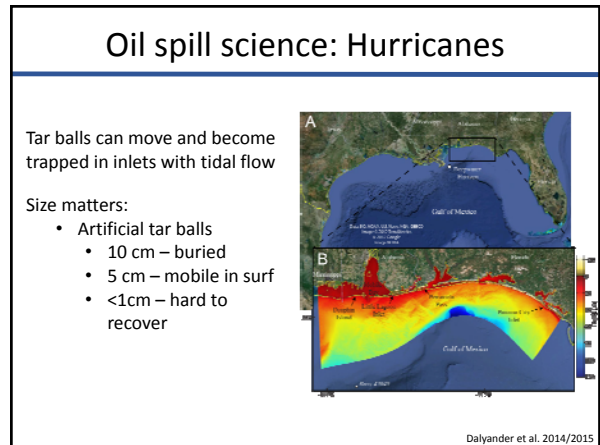
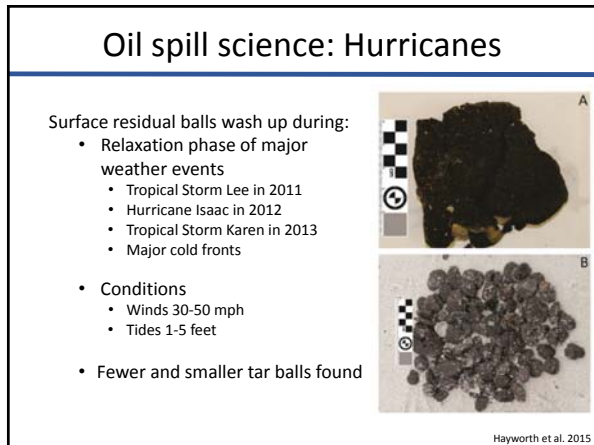
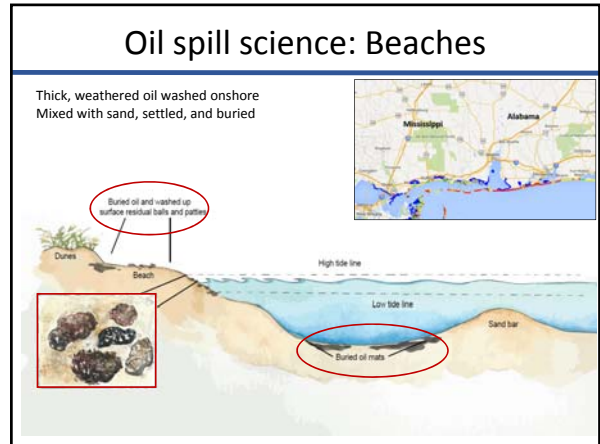
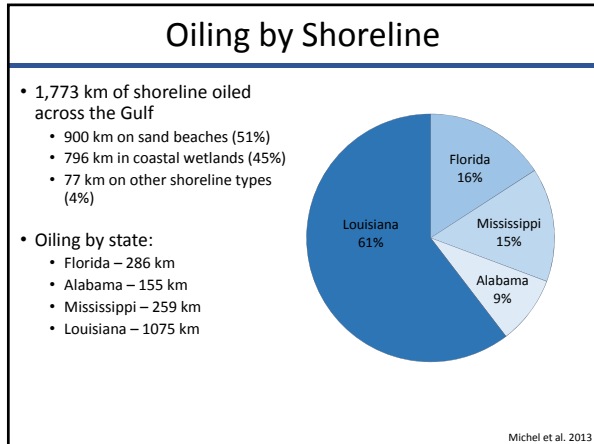
1,773 miles of shorelines were oiled

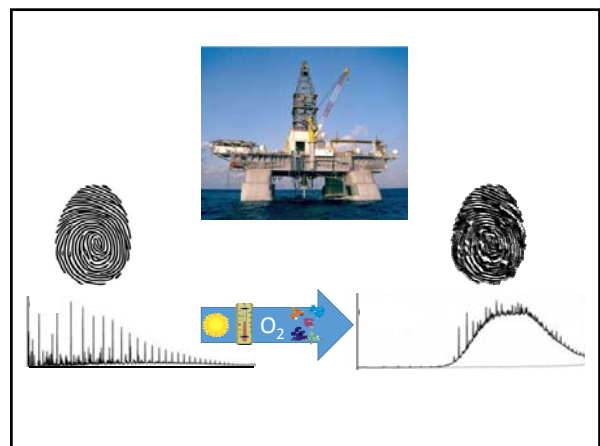
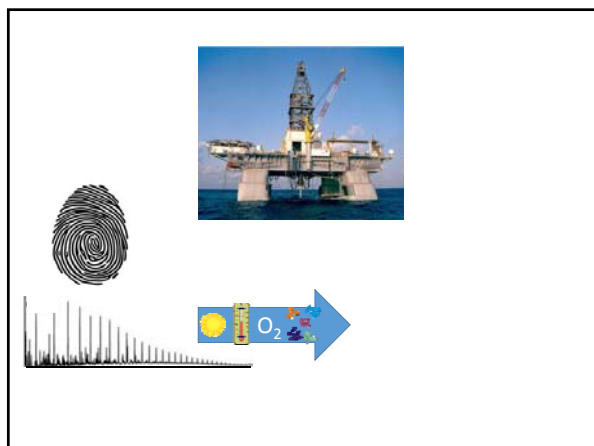
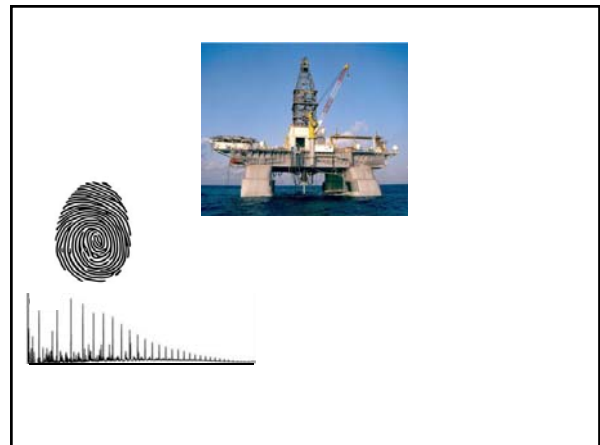
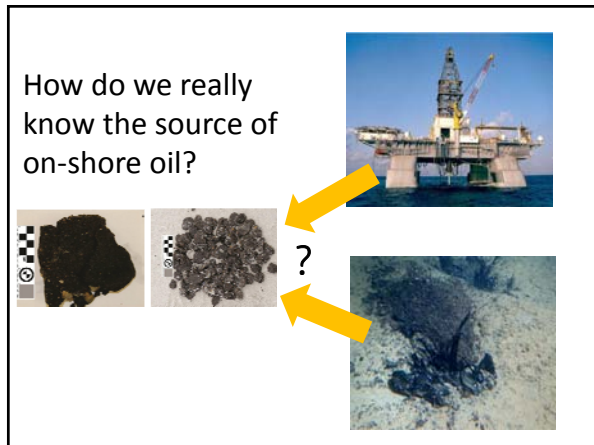
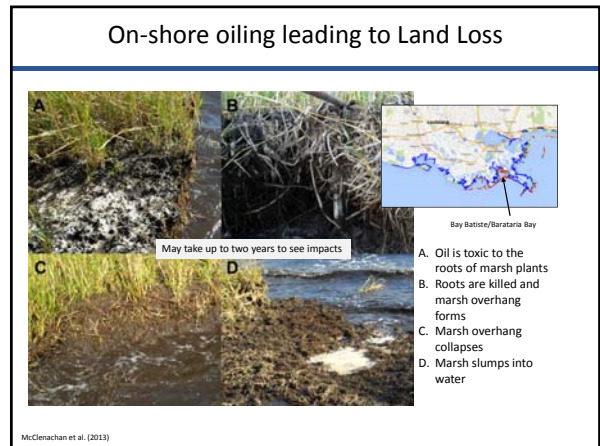


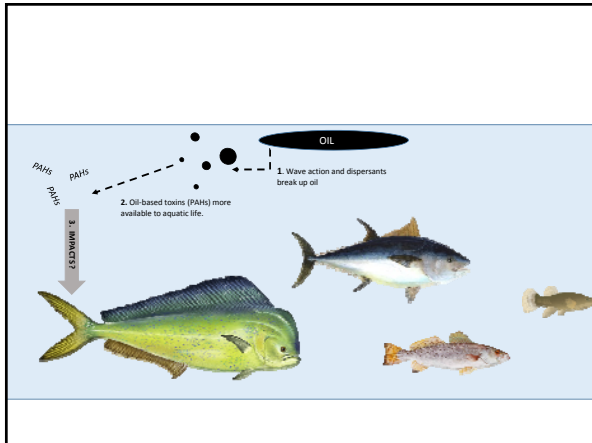
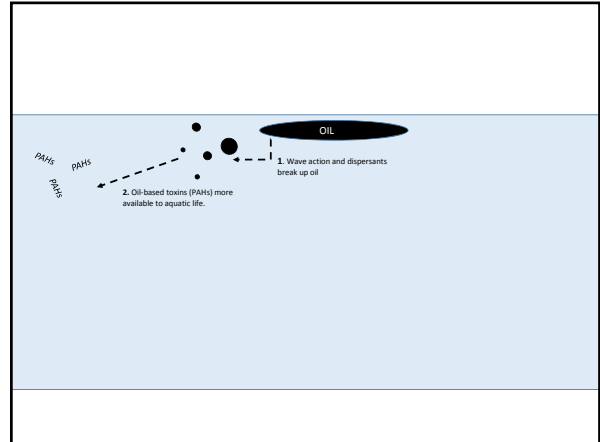
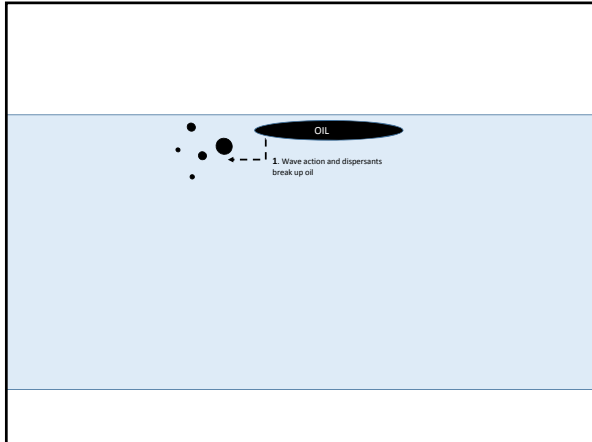
Oiling by Shoreline

- 1,773 km of shoreline oiled across the Gulf
 - 900 km on sand beaches (51%)
 - 796 km in coastal wetlands (45%)
 - 77 km on other shoreline types (4%)










Responses of aquatic life


Oil metabolizing gene (CYP1A) triggers production of proteins that will breakdown PAHs in fish

- Animals without CYP1A bioaccumulate
- Using microbes to 'fight back'
- Biomarker for oil exposure in fish



Chemicals in oil can cause:

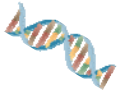
- Sensitivity and impact varies by life stage
- Decreased swimming speed
- Decreased size
- Deformities



Responses of aquatic life



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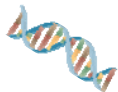
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Responses of aquatic life


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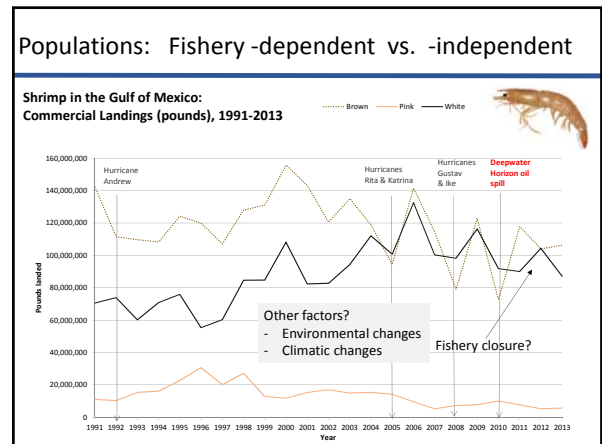
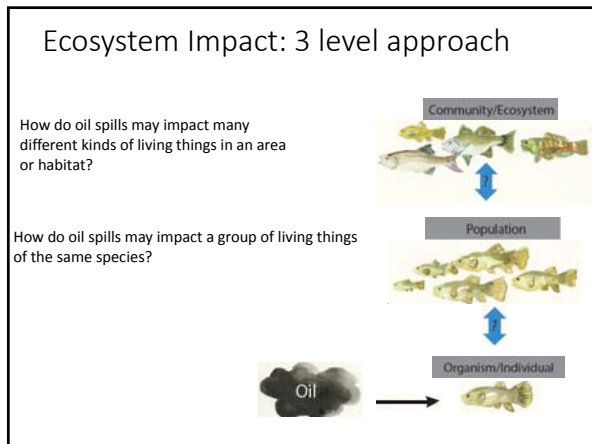
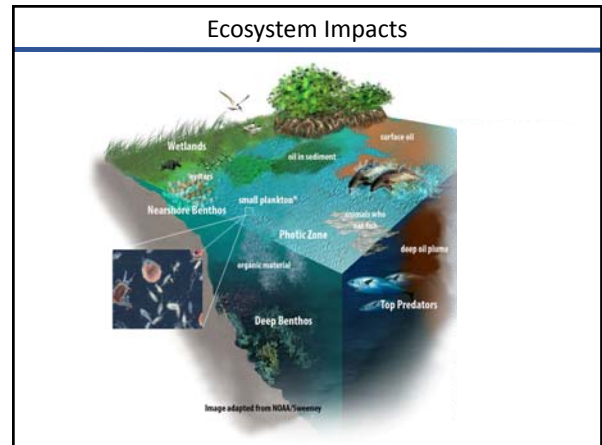
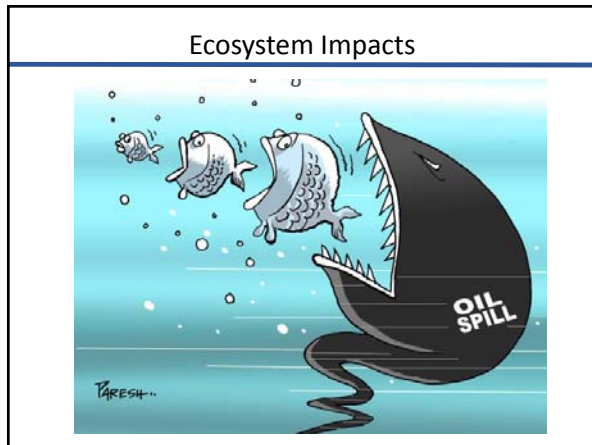
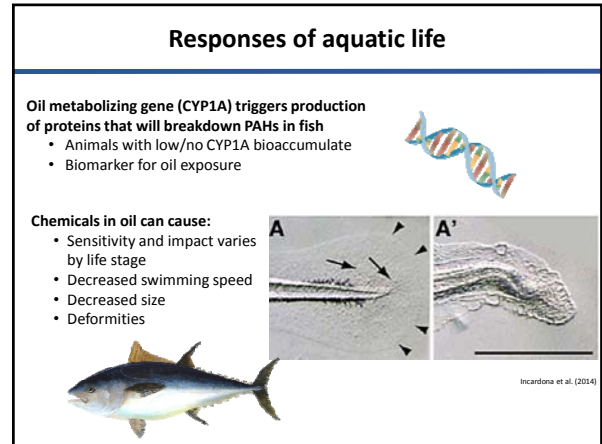
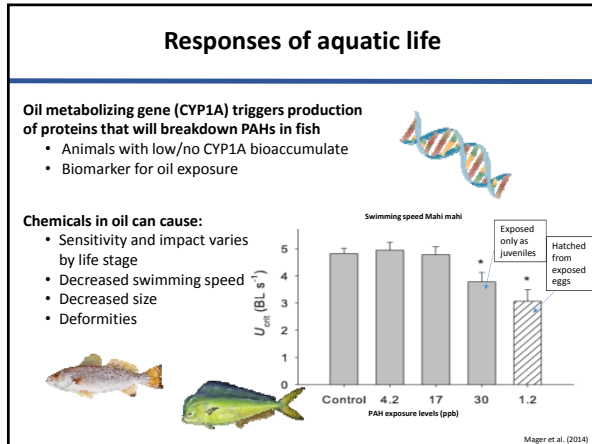
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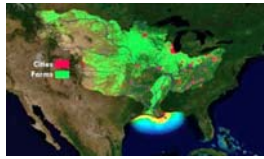




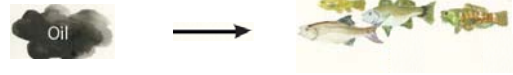
Ecosystem Impacts: Populations

Blue crab pop. modeling study

- larval dispersal & settlement
- blue crab larvae virtually exposed to DWH oil
- species specific & location specific results



Ecosystem Impacts: Communities



How do oil spills may impact many different kinds of living things in an area or habitat?

Communities

Pre-spill normal:

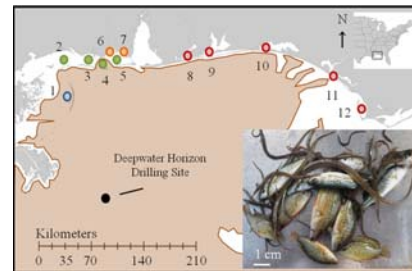
- shrimp, crabs, squid but also a 15 – 20% zooplankton



Post-spill diet shift attributed to DWH

- more fish & crustaceans and less zooplankton

Communities



Fodrie & Heck 2011

Communities: Deep sea

- Oil footprint on the deep benthos
- Coral communities are ecosystem indicators



Credit: Lophelia II 2010, BOEM & NOAA OER



Credit: Ian R. MacDonald

Communities

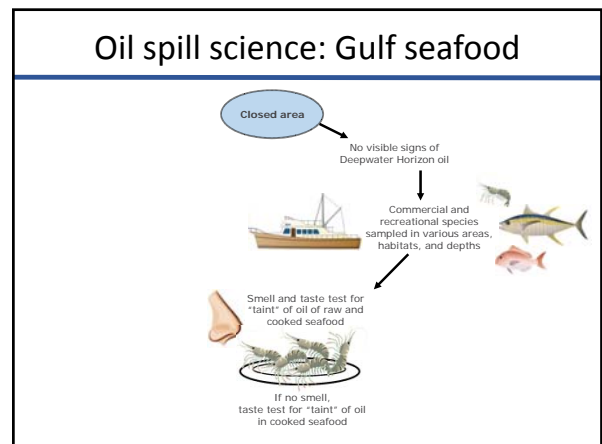
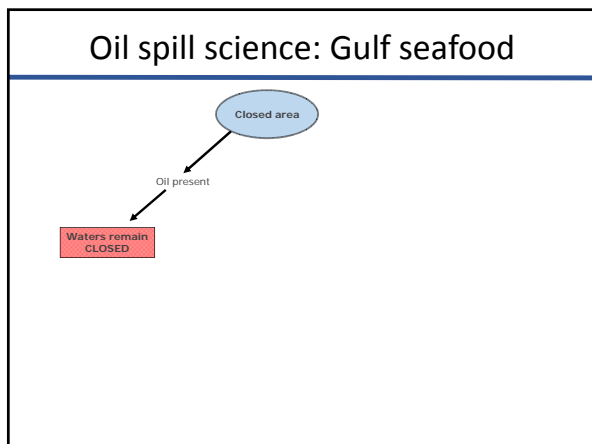
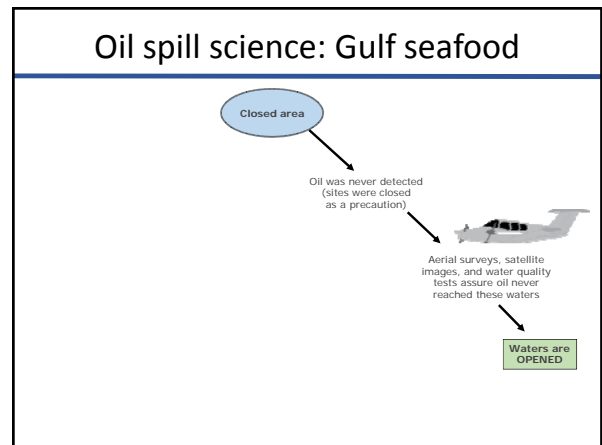
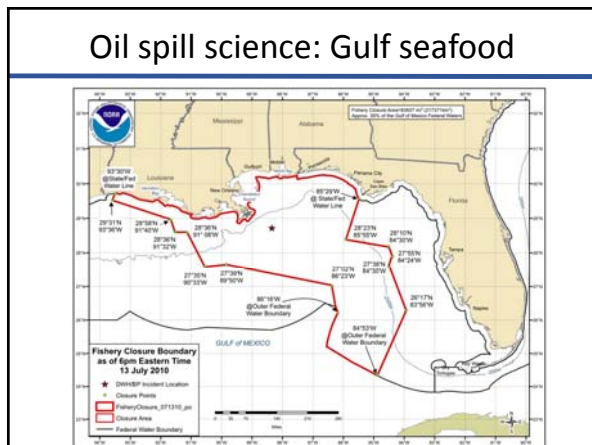
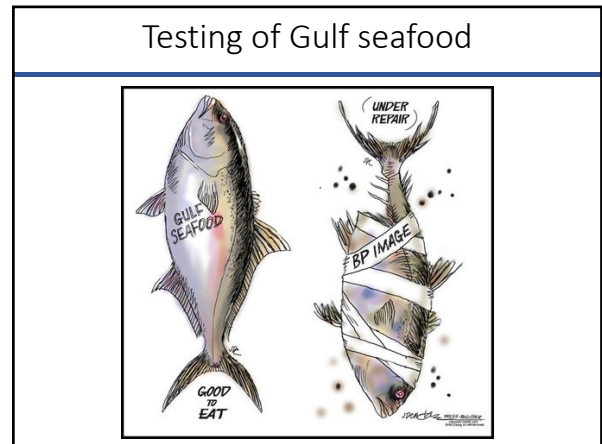
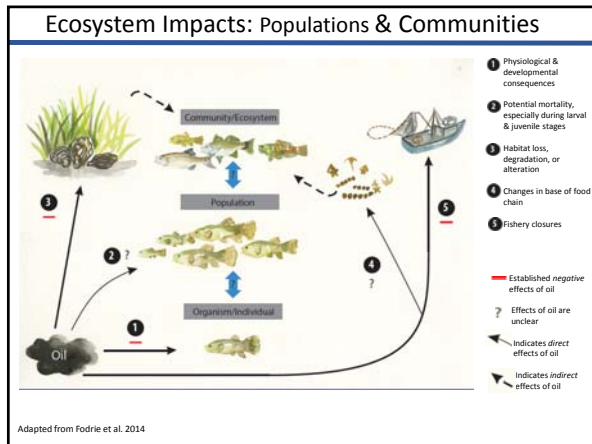


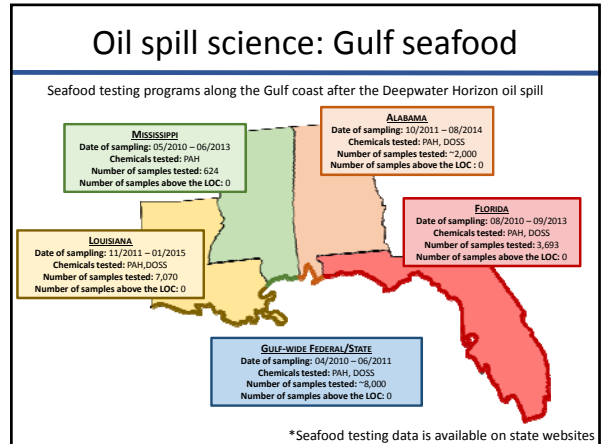
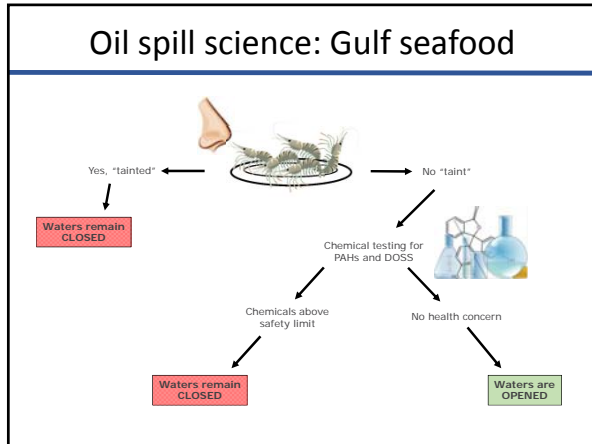
Deep sea fish are exposed to PAHs in different ways

Fish habitat and fish behavior play a key role

Golden tilefish







Oil spill science: Gulf seafood

Polycyclic aromatic hydrocarbon (PAH)	FDA Level of Concern (ppb)	Highest level of PAH (ppb)	
		Before Deepwater Horizon oil spill	After areas were reopened to fishing
Cancer-causing PAHs			
Benzo(k)fluoranthene	13,200	0.3	Too low to be detected
Benzo(b)fluoranthene	1,320	0.2	Too low to be detected
Benzo(a)anthracene	1,320	Too low to be detected	Too low to be detected
Indeno(1,2,3-cd)pyrene	1,320	Too low to be detected	Too low to be detected
Dibenzo(a,h)anthracene	132	Too low to be detected	Too low to be detected
Benzo(a)pyrene	132	Too low to be detected	Too low to be detected

Oil spill science: Gulf seafood

Polycyclic aromatic hydrocarbon (PAH)	FDA Level of Concern (ppb)	Highest level of PAH (ppb)	
		Before Deepwater Horizon oil spill	After areas were reopened to fishing
Non-cancer-causing PAHs			
Anthracene	1,846,000	0.4	Too low to be detected
Phenanthrene	1,846,000	3.9	1.7
Fluorene	246,000	1.7	0.3
Fluoranthene	246,000	1.0	0.1
Naphthalene	123,000	8.0	1.7
Pyrene	123,000	1.1	0.3
Chrysene	123,000	2.1	0.7

Oil spill science: Gulf seafood

How much is too much?

The average consumer could eat...

- 63 pounds of peeled shrimp
- 130 oysters
- 9 pounds of finfish

Every day for 5 years before reaching the FDA's level of concern for oil contamination

Oil spill science: Gulf seafood

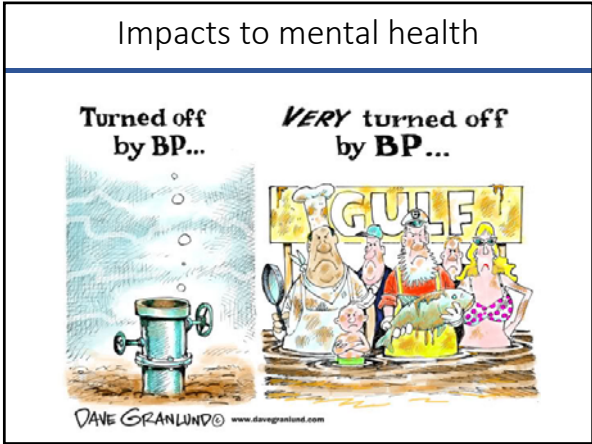
One size might not "fit all"

Problems with the level of concern

- Amount of seafood people ate
- Average body weight used
- Other concerns

Still, below more conservative levels of concern

Wilson et al. 2014



Income loss causes stress

Waters closed to fishing
Vacations canceled
Offshore drilling halted

This caused levels of stress and anxiety in residents along the Gulf coast that relied on these jobs.

Gill 2014, Morris 2013, Buttle 2011, Gill 2011, Gould 2015, Abramson 2013, Fan 2014, Grattan 2011, Cope 2013, Lee 2012, Cherry 2015, Mong 2012

Income loss causes stress

Supporting studies

Concerned about economic loss and the future
Negative quality of life, depression, anxiety

Residents that relied on the Gulf for income suffered more than other residents.

Buttle 2012, Gill 2011

Income loss causes stress

Supporting studies

High levels of depression (80%), anxiety (90%)

Residents that relied on the Gulf for income suffered more than other residents.

Grattan 2011

Income loss causes stress

Supporting studies

Increase in anxiety, depression, drinking, thoughts of suicide

Residents that relied on the Gulf for income suffered more than other residents.

Woodward 2010

Income loss causes stress

Supporting studies

Children 3x more likely to have mental or physical health problem

Residents that relied on the Gulf for income suffered more than other residents.

Abramson 2013


Income loss causes stress

Fishing industry was hit harder than other industries.

"I'm not sure what to do right now... [In the past], things will always seem like they pop up ... But [this time]...I see it coming to an end really, really fast here. And...I'm just...really kind of scared. I mean, it costs a lot of money to live..." – Study participant (Cherry 2015)

Faced with:

- Closed waters
- Public perception
- Long-term uncertainty





Cherry 2015, Gill 2011, Gill 2014, Cope 2012, Lee 2012, Mong 2015

Attachment can help or harm


Community attachment

How attached community members are to one another and to the place where they live.





Pro – Provides a strong and caring network in place which can help with recovery.




Con - Might not be willing to move somewhere else in order to make a new living; Fear the loss of their community.

Lee 2012, Cope 2013

Attachment can help or harm

Residents with high attachment

Feeling angry, worried, anxious, depressed, sad, nervous, afraid



Right after spill

→

Recovering better than others that were not attached to community

One year after spill


Their strong community networks and close personal relationships helped them overcome the disaster.

Lee 2012, Cope 2013

Attachment can help or harm

Residents with high attachment, in the fishing industry

Feeling angry, worried, anxious, depressed, sad, nervous, afraid



Right after spill

→

Still suffering, with some conditions worsening

One year after spill

Still facing hardships; Attachment made them less likely to want to leave home and pursue another livelihood. Social network contributes to a cycle of negative outlooks and stress.

Lee 2012, Cope 2013


Resilience and recovery

Technological, not a natural disaster.

"With Katrina, we knew what to do. We needed to rebuild. With the oil spill, we don't know how long the recovery will take or if we will be able to recover." – Study participant (Osofsky 2011)

Past disasters


- Residents in southeastern Louisiana who suffered during Katrina were:
 - **more vulnerable** to the effects of the oil spill
 - **rebound faster**




Scientists suggest that past disasters have taught these residents to adapt and cope with hard times.

Osofsky 2011, Schultz 2015

Ongoing work




Studying cleanup workers




Studying communities and developing action plans and risk communication strategies.

Deepwater Horizon Research Consortia



- The Women and Their Children's Health Study (WATCH) – LSU
- Gulf Resilience on Women's Health (GROWH) – Tulane
- Health Impact of Deepwater Horizon Spill in Eastern Gulf Coast Communities – Univ of FL
- Gulf Coast Health Alliance: Health Risks Related to the Macondo Spill (GC-HARMS) – Univ of TX Medical Branch

Gulf Region Health Outreach Program



- Primary Care Capacity Project – LPHI
- Mental and Behavioral Health Capacity Project – LSU, USM, USA, UWF
- Environmental Health Capacity and Literacy Project – Tulane
- Community Health Workers Training Project – USA

Wrap-up: What to Expect Next

- Three dispersant publications
- Seven additional publications
- Seminars
 - Seafood safety (Mississippi)
 - Emergency responders (Louisiana)
 - Deepwater habitats (Texas)
 - Special EO Session at Oil Spill Conference (Florida)
- 2016-2020 Proposal
 - Room 242

