Summary of Annual All-hands Meeting for FLRACEP Centers of Excellence (CE) Grantees & Program Management Team (PMT)
November 5-6, 2015, TradeWinds Island Resort, St. Pete Beach, FL

Contents

ACTION ITEMS SUMMARY (*italics* in notes; progress and related post-meeting info in red)

- *Follow up with UM CE after meeting with Libby Fetherston (Ocean Conservancy) & Steve Giordano (NOAA) about comprehensive fisheries survey database to have a requirements discussion.*
- *Information to share:*
  - *Peebles share paper describing DEPM applications (See also Peebles grant's references cited and review by* Stratoudakis et al. 2006*).*
  - *NRDA Restoration Plan summary to all participants (*Done; also available on-line*)*
  - *Lembke share mapping service proposed to integrate various products.*
  - *FIO share draft list of improvements for FLRACEP RFP process and ask for feedback*
- *PIs provide following contacts to FIO: appropriate admin contact if this person was previously unclear; if desired, 1 co-PI to include on all communications; news media specialist*
- *Create shared "post-award" folder to box.com open to all contacts that will include materials not accessible via the Web site, but not be limited to: final contact list, Program Information Management Plan, GRIIDC DMP, Admin FAQs, logos.* (Will do after confirming all post-award contacts.)

- *First quarterly report and invoice due Jan 16, date of first quarterly webinar.*
- *Consider creation of program dashboard after FIO IT position filled.*
- *Gather FL Sea Grant extension reps names and contact info and share Web site/fact sheets.* [County Extension offices; Monica Wilson (monicawilson447@ufl.edu) is SG specialist funded by GOMRI to do extension related to oil spill.]
- *Set up meeting with fisheries managers and PMT to get their monitoring priorities*. (Done—set for Jan 11 with GMFMC, NOAA, FWRI and PMT).

Notes from Meetings

The following notes are not intended to be meeting minutes. They are only intended to capture highlights with emphasis on actions (*in italics*). Progress and related post-meeting info is highlighted in red.

November 5, 2015

Introduction

Bill Hogarth (part of FIO presentation) (8:30am):

- Funds: Program has $4 million+ from Transocean; anticipating $22 million more over the next 15 years from BP settlement
- FIO is not Center of Excellence (CE) for FL; it is Gulf Coast State Entity responsible for Florida CERGP. So far, FL has 8 CEs funded by RFP I.
- Key roles for FIO include coordination activities with other Gulf restoration programs, liaison with Treasury, and performance evaluation (including reports to Treasury and Council).
- FIO developed Information Management Plan, including FIO Data Manager who will assist CEs with creation of Data Management Plan, Dataset Inventory Forms, and inclusion of related products (metadata records) in GRIIDC.
- Also, currently hiring a webmaster to handle website (NOTE NEW SITE URL—http://fio.usf.edu/flracep); previously shared with USF/CMS, but can no longer due to perceived conflict of interest.
- PMT and participant introductions.

Andrew Shepard, Overview (FIO presentation)

- First Annual Meeting purpose:
    - Engage PMT and PIs
    - CE progress reports—objectives, progress, efforts to coordinate and disseminate
    - Review grant requirements (terms and conditions)
    - Ideas to promote in-reach and outreach with other restoration programs
    - Ideas for future directions (RFP II feedback).
- CEs funded by RFP 1: Transocean money ($2.8M) dedicated to discipline 2 (coastal fisheries and wildlife research and monitoring in the Gulf Coast Region). Priorities informed by public scoping. Projects judged/selected based on Science Review Panel scoring results, how important there are to FL ecosystem, and how they complement other restoration programs, as evaluated by PMT.

CE Presentations

9:00am; 20 min/10 min Q&A per presentation. Please see ppts for details of presentations (these will be posted on-line at http://www.fio.usf.edu/outreach-flracep/events); following notes focused on Q&A:

Dr. Dave Chagaris (UF), Examining Fisheries Impact of Invasive Lionfish (9:05am):

- Are there observations of potential predator species? Yes, consumed by grouper in the Caribbean and Bahamas but not observed in the Gulf yet. Diet matrix model also does not yet show any significant predators.
- Have you considered focusing researching on breeding ground characteristics to target eradications? They are fecund and appear to spawn constantly wherever they are, so focusing on distribution based on surveys and harvest rates.

- How does density observed in GoM compare to Indo-Pacific and other regions? Have not done that comparison yet; based on team data, appears to be at or close to carrying capacity on reefs studied in GoM. NOAA/NCCOS/NMFS lab in Beaufort began documenting expansion in S. Atlantic (NC to FL) in early 1990s (see work of Whitfield et al. -- http://coastalscience.noaa.gov/research/pollution/invasive/lionfish). During a large scale diving survey through South FL system out to Tortugas, lionfish first picked up in 2009, with population explosion in 2010-2013 (per S. Smith). Interestingly, density is an order of magnitude lower on natural reefs than on artificial reefs. Natural habitat may be more adapted to control populations (e.g., predators, resource competition) (per S. Smith). Many restoration projects now creating new artificial reefs, which may actually provide more room for lionfish expansion, perhaps countering intent to promote fish production and opportunities. Lionfish also found on deep artificial reefs which are beyond diver capabilities; should consider using occupied subs to look at lion fish populations there as visibility and sampling capabilities are better than ROVs (B. Walker).
- What are expected final products that will benefit managers? Multiple scientific papers expected. Management efforts using modeling include answering question of what level of eradication/catch is required to control and reduce population, and how these levels may impact other fish species and reef community. Public outreach workshop is planned for later in project in panhandle region (according to Att. 3 of T&C, scheduled by 6/30/17).

Dr. Steve Smith (UM), Biological & Economic Indicators for Assessing Recreational Fisheries (9:42am):

- What defines valid vs non-valid assessment data? Based on biogeography and likely misidentifications; if you have a species record off N. FL and species doesn't live there, than you do not need to include the panhandle effort estimates into that species CPUE calculation.
- Are you only using only MRFSS/MRIP dbase for effort estimates? Yes, project is based on work UM investigators have done previously using these data that worked well off S. Fla. This project will expand to more species in a larger region.
- How will project support management? Intent is to facilitate stock assessment science by providing accurate effort estimates for more species, especially for recreational fisheries CPUE levels which have higher uncertainty. CPUE is key indicator of need for expensive and time-consuming full stock assessments. Project will not be running assessments, but producing data for use in SEDAR assessments.
- Link length frequencies between MRIP/MRFSS and other sampling programs for recreational fishing, like tournaments? Space issue. Large scale estimates from MRIP, smaller scale sampling from tournaments. Would need something like an area-habitat weighting to be able to combine the different datasets, but at present we do not have the necessary habitat maps to do that.

Mr. Chad Lembke (USF), Demonstration of Fisheries Assessment Applications for Underwater Gliders (10:16am):

- Can tags be used to track individual fish? Yes, frequencies/signals differ.
- What is depth range of gliders? Most gliders max depth is 1000 meters, but this is also determined by payloads; this project is mostly geared for <200 meters.
- Can gliders avoid ships and stay on a trackline? These gliders do not have avoidance capability; they are driven by buoyancy and correct course (waypoint) each time they surface for a fix (every 4 hrs or so), so heavily current dependent.
- How much do they cost? $150K range per glider. Survivability is generally high. Rutgers Lab lost 7 gliders during over 800 missions and those losses were due to pushing their limits. Annual operating costs add another $200-250K a year for constant year-round operation including things like personnel, vessel deployment and data management.

- What are management benefits? This type of technology could benefit stock assessments in several ways. This is test-bed project to compare bio-assessment data and capabilities and to data collected using more established survey methods. Cost per observation is much lower than research vessel cruises. If gliders are deployed, they should carry different technologies to benefit more stakeholders, so provide potential data to determine what fish are doing in between stock assessments (B. Hogarth).

Dr. Arnaud Gruss (UM), Improving the Use of Products Derived From Monitoring Data in Ecosystem Models in the Gulf of Mexico (11:03am):

- How do you plan to import comprehensive dbase to other models and ensure it is maintained & updated? Fisheries dependent data are challenging and it will take time to figure out to how to structure and populate database, but goal is to provide public access and maintain for long-term. Development requirements should include ability to import established survey data automatically.
- Do you plan to expand application and engagement activities into other international waters (Cuba, Mexico)? Immediate challenge is lack of assessment data from Cuba and Mexico; Atlantis model uses only U.S. data. Will have to use generic models to make predictions, or expand efforts to access related surveys.
- How would these products be translated and exposed to general public? Have not discussed that yet. Need to make these products available in a user friendly way and this may be key role for FIO (J. Holbrook). Stakeholders vary as should products, ranging from fishermen to other modelers. Important to make sure the database is widely known.

Dr. Kevin Boswell (FIU), Informing Fishery–Independent Reef Fish Surveys Through Advanced Survey Techniques (11:34am):

- Is benthic habitat type recorded? Yes, via ROV coupled with acoustic mapping data.
- When using multibeam sonar for fish work, can you also collect benthic data at the same time? Yes, you can extract information on pelagic fish and substrate from same transects.
- Have you evaluated the characteristics of various sizes of fish during CT scans? Not yet, but planned as more observations by species are made.
- Are there any issues for operating ROV in target areas? Will Patterson has experience operating in that region's conditions, but unsure of the method he uses. The ROV does have slant-range positioning system. There were issues in the past with power using the proposed ROV model, but later models have been refitted and vastly improved (L. McKinney).

Dr. Jane Caffrey (UWF), Evaluating Fish Production and Ecosystem Impacts of Artificial Reefs (11:57am):

- How long does it take for fish to arrive once artificial reefs placed? Unsure. In NY, in as little as 4 month there was enough of a concentration for recreational fishing (T. DiLernia). In TX project, within 24 hours they had fish on the reef (L. McKinney).
- Will fishing effort on the reef be monitored? Not proposed. Passive acoustics could be used to monitor visitation (S. Giordano) (used to assess fishing effort in Sanctuaries along with various other approaches, see Basta et al. 2015)

Dr. Chip Cotton (FSU), Monitoring Oil Spill Effects and Recovery in Large Deep-Sea Fishes (1:28pm):

- According to recent literature majority of deep plume move SW from well site, so why does it appear that sampling is not being done there? GOMRI funded mud and fish sampling is and will be done there; this proposal expands to FL slope as required by RFP.
- How connected have you been to the NRDA assessment work? Have been in touch with Tracey Sutton (VIMS; Cotton was involved in curating specimens collected in Sutton's 2011 sampling program, which was focused in the mesopelagic, not benthic). Have not been in touch more recently, but not aware of anyone

besides Grubbs team doing benthic vertebrate sampling work this deep, although Murawski et al. (C-IMAGE) have overlapped our shallowest strata. Administrative record (see section 5.3.1) should describe all work done (L. Fetherston).

Dr. Ernst Peebles (USF), Egg and Larval DNA Barcoding to Support Gulf Reef-Fish Stock Assessments (1:55pm):

- Are there replicate samples needed to assess variability/uncertainty? In the past, we have collected replicates at each station in order to calculate coefficients of variation (CV). The samples in the present study are single samples with no replicates.
- Have Daily Egg Production Method (DEPM) estimates been compared to other spawning biomass estimates? Yes, ranges on large scale are comparable, but estimates are site specific and CV can be relatively high. The DEPM method has been questioned—for example, in clupeoid fish, DEPM-based biomass estimates did not always agree with estimates based on acoustics; in another case, >30% of visual identifications of cod eggs were found to be wrong, and these cases gave the method a bad reputation (see Armstrong et al. 2000 and Stratoudakis et al. 2006). This misidentification would not have happened with DNA barcoding.
- How quickly after each survey would you develop your estimate of biomass? Realistically, it's in the order of months.
- Can this be applied to tweak management? In other places, they have based entire assessments on this method. This mostly occurs when eggs can be identified visually (i.e., no barcoding needed), in which case it's just ship work.
- Does your work incorporate physics and spatial variance models? Particle trajectories are used to guide sampling and to help explain spatial variance, which also reflects variable egg mortality at different times of sample collection.
- Where is this being used to replace traditional stock assessment? *ACTION: Ernst said he would send paper supporting this to T. DiLernia—we asked to have him send to us so we can share with PMT (See also Peebles references cited and review by* Stratoudakis et al. 2006*).*

Dr. Kate Mansfield (UCF), Ontogenetic Shifts in Sea Turtle Habitat (2:23pm):

- What is the stable isotope work and what do you hope it will reveal? We will be analyzing tissue and skin samples to look at nitrogen and carbon isotopes. These provide clues about what they eat and where they live. Also, collecting and doing isotopes on Sargassum samples where we collect the turtles. There are significant differences in stable isotope signatures between turtles living inshore and offshore.
- What is cost of transponders? Historically used transponders run about $3,100 plus satellite time. The Icarus transponders being used for this project are free because they're beta testing with us. This presents public engagement and funding opportunity; for example, Guy Harvey Foundation offered people the chance to go out with Mr. Harvey and participate in shark tagging for a set donation amount. (K. Overton). There is large public interest in conserving sea turtles.
- How do attach tags and keep them on young growing turtles? Turtle shells are made of keratin, just like fingernails, which spawned the idea of using acrylic base, just like that found in nail salons, for the attachment of tags. They do fall off but last 10 times longer (up to 9 months).
- What is mortality rate of oceanic stage? Still unsure; have to factor in orientation, dispersal and behavior. Mortality studies to assess causes are challenging as you don't necessarily know the reason for tag loss—were they eaten or did they fall off? Have to use a more theoretical approach with mortality.
- How are you sharing results? Working with an animation department at UCF to create tracking web site. Students will be making a film documentary about this sea turtle work.

- Are drifters put in the water with each turtle release? Yes, at least 2 with each deployment, a standard submerged cross-blade drifter that tracks currents and bucket drifter that is more impacted by wind.
- Are you limited on how many turtles you can tag? Yes, permits limit the number of turtles allowed to be tagged, but mostly funding is the limiting factor.

Dr. Brian Walker (NSU), Habitat Mapping to Inform Future Survey Efficiencies, Management Strategies and Climate Change Research (3:00pm):

- Why did you choose target areas to map? Very popular rec fishing grounds. Little information in the shallow shelf waters off the gulf coast of FL. (S. Giordano). Close to port and covered by HF radars. So, not only for survey efficiencies, but also to support modeling.
- Will the maps be available to public? Yes, using system currently set up through their work on the East coast (see proposal, Our Florida Reefs).
- Do you see footprint of available habitat maps expanding as technology improves? Yes. Actually seeing this being able to expand now as more platforms deploy sonars and optical sensors.
- Are you coordinating with many others doing bottom mapping in the eastern gulf? Only informally at this point; other activities like Council projects for GOMA PIT teams and Council NOAA/USGS-led monitoring project are bringing folks together (see Fact Sheets on all Council FPL projects on Council web site). Group needs to go beyond bathymetry; habitat mapping requires more effort and complex tools. Habitat mapping community in SE region has recently shown up at South East Acoustic Consortium (SEAC) (K. Boswell).

PMT Q&A with Centers of Excellence **(3:30pm):**

Feedback to FIO on the proposal process? (B. Hogarth):

- Efficient process in terms of the turn around and timeliness. Getting into the website was a little bit of a challenge. (J. Caffrey).
- Fastest turn around he's ever gotten from grant review process (S. Smith).
- We are working to improve the website for the future. It was a previously created site for oil spill block grants and we tried to adapt for our purposes (A. Shepard). *We welcome feedback. Andy will share list we are currently working on.*

Comments on RFP I grant presentations:

- After hearing the presentations, very impressed with the quality of work. Was happy with the projects at time of selection, now even happier with the projects (T. DiLernia)
- Impressed with the possibility and eagerness of CEs in collaborating, especially now after hearing each other's presentations (E. Field).
- "So what?" must be answered by all grants for public understanding. B. Hogarth described GOMRI program planning: Research Board is looking at each theme to ensure continuity and integration. They are concerned that after 10 years program be able to answer "so what?" Public wants to know the money was spent to make things better or prevent future disaster. Metrics such as students involved and papers written are important, but public perception of doing something relevant is possibly more important. PMT felt presentations and engagement with PIs helped understand value of CE grants. FIO needs to help with coordinating with "neighbors across the fence," getting products being created out to managers and general public, and answering "so what?" (J. Holbrook).

- Consider having PIs give in-person presentations before PMT and Science Review Panel (?) rank and award final grants.

Comments on Collaborations and Outreach:

- What typically prohibits science collaboration and info sharing from happening? (G. Morgan)
    - Large meetings: This is a smaller meeting than most, which facilitates communication (E. Peebles).
    - Narrow focus: This program represents multidisciplinary topics in a similar theme area, offering chances to exchange ideas and collaborate. Typical conference, you go to your focused area and may not be exposed to the wider group (B. Walker).
    - Not collaborating may be more relevant in other areas of science and technology when patents are involved. Marine science seems to be more open (S. Smith).
- The media event surrounding spill exposed the need for academia to engage as partners in incident response; their expertise and leveraging contributions are critical assets (E. Peebles). It was significant perception moment for academia, put them in a different light as they were such an important part of response and science required (B. Hogarth).
- Will CEs meet annually? How do we collaborate and continue in-reach in addition to in-person meetings? We will meet f-2-f annually with PMT. We will host quarterly webinars. This question is part of further focus for tomorrow morning. (A. Shepard).
- Hearing about projects has been very useful for Treasury. Question—how were your grant funds leveraged and what is potential for future leveraging? (N. Comisky)
    - Funding from NOAA for integration of echosounder (C. Lembke/USF).
    - Project's strength is longevity supported by GOMRI (C. Cotton to Allen/UF).
    - Hopes to expand to more sites throughout GoM with funding from other restoration programs and on-going NOAA and FWC/FWRI programs (K. Mansfield/UCF).
    - Success of work was built on DISL on-going exploration program. This program is already generating new ideas and research avenues (e.g., lionfish on natural versus artificial reefs) (J. Caffrey/UWF).
    - Leveraging will occur through integration of other regional mapping efforts. Maps are foundational for many other activities (research projects and proposals). Discoveries drive future collaborations, e.g, new areas of endangered corals will drive management and research attention (B. Walker).
    - Ship time from GOMRI/CIMAGE had a huge impact on project. Approach has long-term implications for stock assessment; successful transition to management application is critical element of all innovations (E. Peebles/USF).
    - Without past work off S. FL, this project would not have been funded. Hoping approach inspires fruitful pairings of economists and scientists to drive valuation of and appreciation for ecosystem services (S. Smith).
    - We are building off past funded work to develop new tools and techniques for rapid, non-destructive fisheries assessment tools that are globally and critically needed now; especially given how far behind most regions are in stock assessments (K. Boswell/FIU).
- What is future for current CEs, what happens after 2017? (K. Boswell)
    - This pot of money is from the Transocean penalty funds. Settlement money will be handled separately. (B. Hogarth)
    - During this meeting, we already saw team-work established between CEs, a mandated and desired element of the RESTORE Act. This is important element, e.g., in building ecosystem approach to fisheries and wildlife management (E. Babcock).

- Many modeling efforts in this program and other restoration programs. We need a synthesis effort to determine most effective models and integrate them (B. Hogarth).

Terms & Conditions (4:30pm)

See FIO presentation for ANS comments. Note—all these Questions will be included in the Admin FAQs document. Q&A notes:

Grant management:

- Do students have to submit CoI forms? Any students who are paid (salary) by CE grant must sign COI. If student volunteers, but their travel is paid, COI not required. *An admin FAQ was created with these types of Q/A and will be included in shared box.com folder.*
- Who will program communicate with at CEs during post-award activities? There should be at least 2 contact people in total: PI and 1 admin. Please note that there needs to be only **1 admin point of contact**; we were contacted by several for some CEs during pre-award and even encountered conflicts among them as to who was in charge. *The PI should select and notify Andy of this person*. In addition, CEs asked if a co-PI could be included as often they handle grant activities more than lead PI. *All PIs should let Andy know which co-PI should be included in post-award communications. Andy will add shared "post-award" folder to box.com open to all contacts that will contain materials not on Web site including but not limited to: final contact list, Program Information Management Plan, GRIIDC DMP, Admin FAQs.*
- What information is submitted to GCER Council annually? Although we have not heard directly from Council, Treasury Guidance for CERGPs specifies that report must be submitted to Council 60 days after end of Fiscal Year (Nov 30, see section 7, p. 23). The Treasury RESTORE Act regulations (Rulemaking), section § 34.706 Reports—Centers of Excellence Research Grants Program, states that "Each Gulf Coast State entity must submit the following reports:

  (a) An annual report to the Council in a form set by the Council that includes information on subrecipients, subaward amounts, disciplines addressed, and any other information required by the Council. When the subrecipient is a consortium, the annual report must also identify the consortium members. This information will be included in the Council's annual report to Congress."

  Because of our unique situation, FIO will handle coordination activities on behalf of all FL CEs, including this report. FIO will engage all CEs in all reporting activities and notify them of any coordination meetings. FIO also submits semi-annual reports to Treasury, also described in the Guidance section 7.
- When can CEs begin spending? First quarterly report and invoice due Jan 16 in time for first quarterly webinar. FIO is now working with USF to establish accounts and send out Purchase Orders to charge; plan to be done by end of this year.
- Where is format for Quarterly reports? Attachment 3 of Sub-agreements. The format is set in order to: 1) be able to import reports into PIMS, and 2) use PIMS to create Treasury reports FIO must complete.
- When do grants end? CE grants end November 30, 2017 and have 90 days to submit final deliverables (e.g., data products, final invoice, final quarterly report). FLRACEP grant ends Feb 28, 2018, but program will continue beyond then funded by subsequent BP settlement award.

Data Management

- Who will FLRACEP data manager be for GRIIDC? FIO is now in process of hiring Webmaster/database specialist. They will work with program staff to serve as FLRACEP data manager for GRIIDC, and to develop and maintain Project Information Management System (PIMS); this is described in the Program IM Plan that will be included in the shared box.com folder. Per feedback from PIs, FIO will submit all required information to GRIIDC portal (i.e., use one login id). Most important-- PIs will not be able to hold on to data for multiple years (L. McKinney). HRI intends to ensure GRIIDC is always available and we don't lose what

we're investing (L. McKinney). FIO's draft GRIIDC Data Management Plan and Dataset Inventory Form template are currently being reviewed by GRIIDC; shouldn't take too long to get to final version. DMP is due at end of November. We expect to begin GRIIDC contract in January and to then submit DIFs. Get in touch with William Nichols (william.nichols@tamucc.edu) at GRIIDC with any data management/requirement questions.

- How do you deal with data you may not be able to share? GRIIDC enables levels of accessibility as this issue has been common among GOMRI consortia. Talk with William Nichols for more.
- What datasets are required to be shared (included in GRIIDC)? Not just the data that will be used in publications delivered for this grant, but also any data that may be useful for potential future publications as judged by CE PIs.
- Where should datasets included in the GRIIDC DMP be archived? It is encouraged but not necessary to have your datasets archived in GRIIDC. Datasets do need to be archived responsibly in repositories that are publically accessible and expected to be in existence for long-term (in case of this program, at least until 2031). GRIIDC does need to review all datasets that have metatadata records to ensure validity of records. With gene sequence, acoustics, and seafloor mapping data, GRIIDC prefers not to archive raw datasets.

November 6, 2015

Coordination Ideas (9:00am)

Ecosystem Monitoring

- Nov. 2015 Observing science workshop in Cuba to build relationships between USA, Mexico and Cuba. *Get in touch with L. McKinney if you have a project that would benefit from combining with Cuban research data.* Bill met with State Department on how FIO and other groups can work jointly with Cuba. Won't be CE related.
- NOAA & USGS leading GCERC Council funded 3-yr project developing a framework for monitoring needs in the Gulf (see summary here). S. Giordano will be reaching out to virtually everyone working on this issue.
    - No one group/funder has enough money to do all required monitoring at ecosystem scale. Coordinating with: NAS Gulf Research Program working group; GOMRI working group; Ocean Conservancy Inventory gap analysis; USCG; GOMA Water Quality Monitoring group; GOMA Monitoring Community of Practice (also funded by GCERC)
    - Metrics not yet developed. Currently building a coordination structure with a number of different groups. One of the first tasks will be developing standards and measures.

Program In-reach

- Develop FLRACEP Cruise Sampling matrix: Include who, what, where, when, if room to take additional people, assets working with, and samples to be collected. Promote leveraging and shared sampling. Create interactive map to view planned and active cruises with cruise metadata. Share map and matrix with other funding programs to further support collaboration.
- Add Co-PIs to be additional point of contact for post-award communications.
- Provide information on research vessel availability. FIO is working on for members assets (vessels and major capital equipment as well). (Note that Gulfbase.org has on-line database for ocean assets created by GOMURC and HRI; you can query or enter new assets.)
- Develop framework for federation of relational databases that can integrate information across programs. *Follow up with Arnaud after his meeting with Libby & Steve about comprehensive survey database to have a requirements discussion.*
- FLRACEP meeting at GOMOSES conference, Feb 1-4. Tampa, FL? Not supported given quarterly report webinar is two weeks prior. May arrange informal gathering for those at conference. FLRACEP will be attending a restoration funders meeting to discuss how to continue GOMOSES after GOMRI stops sponsoring (likely by 2018).
- *Shared box.com folder should include program and CE logos.*

Outreach

- FIO must address issue: results must be translated for decision makers and transitioned to practical application.

Program Dashboard for sharing progress. Simplest suggestion is to take measures proposed in Treasury reports and follow progress graphically by CE grants. DEP and FIO, for example, have both used to display graphics that demonstrate progress and accomplishments. *Kevin B. please send Arctic dashboard URL – Ocean Workspace Portal:* http://www.aoos.org/aoos-ocean-workspace/

*(*We will not move on new IT activities until we hire FIO IT position and get PMT approval to move forward.*)*

- Mapping efforts are very valuable for many applications and provide an effective public outreach tool.
    - C. Lembke would like to partner with other programs collecting mapping information, combining and making it available online. West FL shelf focus. Hoping for NOAA to house these maps. Currently housed on USF website; *Chad please share*.
    - Our Florida Reefs is existing publicly accessible online portal is intuitive, expandable and easy-to-use platform for public. Does require support for effort, management and planning.
    - NOAA: Council project mentioned earlier; NOAA DWH DIVER; NCEI (formerly NODC, NCDC and NGDC)
    - FWRI portals for mapping data.
- Social networking: Establish FB and Twitter pages; promote public awareness through use of hashtags and logos. (Action once FIO IT person is hired.)
- News media: Improve coordination on press releases and establish network of media contacts. *CEs send appropriate media contact person.* Consider creating electronic Newsletter to feature CE grant stories ("So what?"). Discuss doing Guy Harvey Mag piece on the projects.
- Manager collaborations: Work more proactively with: GMFMC; DEP and FWC; other state and federal agencies in state; Gulf Consortium counties; FL Sea Grant extension specialists. *Share extension reps names and contact info.* (County Extension offices; Monica Wilson (monicawilson447@ufl.edu) is SG specialist funded by GOMRI to do extension related to oil spill.) Need to solicit feedback from management community on what they feel is most important needs; requires 2-way conversation, preferably face-to-face versus virtual. Webinars may be useful to engage individuals with PIs (e.g., invite to participate in quarterly webinar). *Set up meeting with fisheries managers and PMT to get their monitoring priorities.*
- Fishermen: Need to meet them where they go or via dedicated workshops. Do info pieces in magazines they read, e.g., FL Sportsman & Guy Harvey Mag.
- Web site development:
    - Salary for webmaster/dbase specialist is too low, should increase to get more qualified person.
    - Reference Mote ML model on use of volunteers; many IT specialists with web/dbase skills in business sector; advertise intensely in local venues, not just college.
    - Consider doing student project with USF or other FIO member; down-side is not finishing or being around to trouble-shoot or maintain (requirement has to deal with).
    - Better paid web person and data manager should work with and supervise volunteers and student programs.
    - Contracting companies can create the creative modules, but too expensive to set-up and maintain site. Need someone that can do the day to day tasks.

FLRACEP Strategy for the Future (10:30a)

Focus of discussion and notes is on RFP II to be directed to RA discipline 5 (comprehensive ecosystem monitoring). There were many related questions that all point to what needs to be monitored: What do you wish you knew and did before and during the DWH disaster that would have informed your research today? What is needed to prepare for the next disaster? What needs to be monitored, first to last, at what scales? What has not recovered in the Gulf?

Indicators

- Specific damaged resources mentioned include: fishes, Sargassum habitats, marine mammals, birds, many individual non-commercial species, turtles, marsh/wetlands, deep corals, benthos under plume
- NRDA Restoration Plan summary provides starting point for restoration types and resources. *Libby send Kristy NRDA overview doc. Kristy circulate to full group.* However, CERGPs are not limited to studying only oiled species/habitats. Also, plan is very short on plans for some habitats such as deep sea.
- Still a lot of evidence of oil down deep. We need to continue monitoring it and tracking movement up the food web. There may be long delayed effects; many species (sharks, turtles) have long gestation cycles. Need to research effect of dispersant on the animals as well.
- Indicators – TX OneGulf working on Gulf report card. They brought together risk assessment people. NOAA funding a portion of it. Putting together an indicator model.
- Need map of sea floor characteristics for comprehensive monitoring. Leverage that this should be a high priority and maybe each agency could contribute different portions.

Coordination

- Money needs to be invested wisely, which includes integration with other activities. We need to see what is being done by other programs and make sure we're not duplicating work.
- Lack of communication among agencies has hindered ecosystem monitoring, not to mention a Gulf-wide ocean observing system that is short on and losing assets every year. A better coordination effort is key that is driven both from bottom-up (building on what is existing) and top-down to ensure coordination.
- By design, this is a part of what the GOMA and NOAA/USGS Council-funded projects are addressing. Latter should be holding initial meetings with funders by March 2016.
- GOMRI has a related working group that is planning to do regional (not just GOMRI projects) gap analysis via thematic workshops to inform investment of its final dollars. These should help prioritize monitoring efforts. Effort will begin with a related meeting with restoration funders during GOMOSES.
- RA Sec. 1604 NOAA Science Program should be addressing ecosystem-scale long time recovery; they are funding two ecosystem indicator projects led by HRI and NatureServe.
- NAS Gulf Research Program is funding at least two exploratory research grants on ecosystem service indicators and restoration.
- GCOOS and other groups (Navy/NRL, NOAA) have focused on physical oceanography, which is critical but most systems are thin on biological observations needed to evaluate fisheries and wildlife.
- In SE FL 4 major partners contributed to create one big picture: state, NMFS, DEP, and Nova. Grass roots effort. Had a need and then built capacity. We had a disaster happen on an already heavily impacted system. This comes back to needing to understand the baseline thoroughly.
- Continued need for physio-toxicology monitoring.
- With turtle work, it's mostly inshore. There's a huge offshore gap. The few folks working offshore: Kate Mansfield, Blair Witherington, Robert Hardy with FWC, In Water Research Group. Shortly after spill, the key questions and data points were: how many are there, where are they and are they moving through this area. We still do not have this information. These gaps apply to marine mammals, seabirds and highly migratory pelagic species, too.
- Ocean Conservancy gap analysis (expected release very soon) there are huge gaps in migratory species. We don't understand the day to day movement of these species. We need to know more about how a species responds to a disturbance in a part of its range that may be far away. We need to understand

more about the habitat system as a whole to fully understand why a species moves. We'll never know why something is not recovering if we don't know baseline behaviors.

- FL & TX CEs both plan on setting aside money to do a joint project. Others may follow if idea resonates with their plans and state entities.

Adjourned at noon.

12:00-1:00 Lunch

1:00-2:30 Closed meeting of PMT (notes separate)

APPENDIX A: PRE-MEETING AGENDA

PURPOSE: First FLRACEP annual all-hands, inform progress reports, promote collaborations, develop strategies

PARTICIPANTS (Appendix B): FIO and FLRACEP staff; at least one PI from each of 10 CE grantees, plus NO MORE than one other participant; FLRACEP Program Management Team; Treasury Office of RESTORE Act Representative; invited guests (partners and VIPs).

Meeting or travel logistics: Lieu Huynh, ldhuynh@usf.edu, 727-553-1100.
Program purpose or agenda: Andy Shepard, sheparda@usf.edu, 727-553-3374.
Media contact: Mark Collins, markcollins@usf.edu, 727-553-3388

WEBINAR:

Thu, Nov 5, 2015 9:00 AM - 1:00 PM Eastern Daylight Time-- https://global.gotomeeting.com/join/180587797; Conf #: 1-888-670-3525, Code: 2880645304

AGENDA:

Nov 4: arrivals

Nov 5:

8:30a: Dr. William Hogarth, FIO Dir.: Welcome, Introductions, FLRACEP Mission and RFP I
9:00: Andrew Shepard, FLRACEP Dir.: Overview of 2015-2017 Centers of Excellence Grantees
9:15: Media session (Q/A and interviews)
10:00 CE grant overviews (20 mins followed by 10 min Q/A); Fact Sheets available here; science, technology innovations and broader impact activities

- Examining Fisheries Impact of Invasive Lionfish; Dr. Dave Chagaris (UF)
- Biological & Economic Indicators for Assessing Recreational Fisheries; Dr. Steve Smith (UM)
- Demonstration of Fisheries Assessment Applications for Underwater Gliders; Mr. Chad Lembke (USF)
- Improving the Use of Products Derived From Monitoring Data in Ecosystem Models in the Gulf of Mexico; Dr. Arnaud Gruss (UM)
- Informing Fishery–Independent Reef Fish Surveys Through Advanced Survey Techniques; Dr. Kevin Boswell (FIU)
- Evaluating Fish Production and Ecosystem Impacts of Artificial Reefs; Dr. Jane Caffrey (UWF)

12:30p: Lunch
1:30: CE grant overviews (cont.)

- Monitoring Oil Spill Effects and Recovery in Large Deep-Sea Fishes; Dr. Chip Cotton (FSU),
- Egg and Larval DNA Barcoding to Support Gulf Reef-Fish Stock Assessments; Dr. Ernst Peebles (USF)
- Ontogenetic Shifts in Sea Turtle Habitat; Dr. Kate Mansfield (UCF)
- Habitat Mapping to Inform Future Survey Efficiencies, Management Strategies and Climate Change Research; Dr. Brian Walker (NSU)

3:00: Break
3:30: Program Management Team Q/A with CEs
4:30: A. Shepard, FLRACEP: CE grant terms and conditions, required deliverables, data management plan followed by Q/A
5:30p: adjourn
6:00-7:30p: Reception

Nov 6:

8:30a: Coffee
9:00: A. Shepard, outreach strategy -- ways to promote FLRACEP collaboration and coordination; output = ideas for how to integrate program projects and outreach to other restoration programs
10:30: Break
11:00: W. Hogarth, Future Directions; input from Grantees on FLRACEP strategy for future RFPs
Noon: Lunch (Grantees adjourn)
1:30p: PMT Strategic Planning: A. Shepard, Strategic plan overview
2:00: Input on RFP II, draft elements
3:00: Break
3:15: Strategy for BP Settlement
5:00p Adjourn

APPENDIX B: FLRACEP All-hands Meeting Participants

TradeWinds Resort, St. Pete Beach, FL, November 5-6, 2015

Key: Invitees who could not attend

* Called in to conference

Last Name	First Name	Affiliation	Representing
Boswell	Kevin	FL Internat. U. (FIU)	CE-FIU
Grubbs	Dean	FL State U. (FSU)	CE-FSU
Cotton	Chip	FSU	CE-FSU
Keenan	Sean	FWRI	CE-NSU
Baumstark	Rene	FWRI	CE-NSU
Walker	Brian	Nova SE U. (NSU)	CE-NSU
Mansfield	Kate	U. Central FL (UCF)	CE-UCF
Phillips	Katrina	UCF	CE-UCF
Allen	Michael	U. FL (UF)	CE-UF
Chagaris	David	FWRI	CE-UF
Patterson	William	Dauphin Island Sea Lab/USA	CE-UF/FIU/UWF
Babcock	Elizabeth	U. Miami (UM)	CE-UM
Gruss	Arnaud	UM	CE-UM
Ault	Jerry	UM RSMAS	CE-UM
Smith	Steven	UM RSMAS	CE-UM
Barbieri	Susan	FWRI	CE-USF
Browning	Jeremy	U. S. FL (USF)	CE-USF
Lembke	Chad	USF	CE-USF
Murawski	Steve	USF	CE-USF
Peebles	Ernst	USF	CE-USF
Breitbart	Mya	USF	CE-USF
Caffrey	Jane	U. W. FL (UWF)	CE-UWF
Anderson	Lori	FIO	FIO
Collins	Mark	FIO	FIO
Hogarth	William	FIO	FIO
Huynh	Lieu	FIO	FIO
Ngo	Cam	FIO	FIO
Shepard	Andrew	FLRACEP	FIO
Tavano	Kristy	GOMURC	FIO
Thompson	Nancy	FIO/KML	FIO
Claridge	Kevin	DEP	Partner
Comisky	Nicole	US Dept. Treasury	Partner
Crabtree	Roy	NOAA/NMFS	Partner
Fetherston	Libby	Ocean Conservancy	Partner

Last Name	First Name	Affiliation	Representing
Gibeaut*	Jim	HRI GRIIDC	Partner
Giordano	Steve	NOAA/NOS Gulf Restoration Team	Partner
McRae	Gil	FWRI	Partner
Nichols*	William	HRI GRIIDC	Partner
Reed	David	FWRI	Partner
Squires	Andy	Gulf Consortium	Partner
Whittle	Amber	FWC	Partner
DiLernia	Tony	Kingsborough Community College	PMT
Fields	Evelyn	NOAA Rear Admiral, Retired	PMT
Holbrook	Jim	NOAA, Retired	PMT
McKinney	Larry	Harte Research Institute	PMT
Morgan	George	Healthcare Provider, Retired	PMT
Nixon	Dennis	RI Sea Grant	PMT
Overton	Keith	TradeWinds Island Resorts	PMT
Anderson	Shahra	Senator Nelson Staff	VIP
Angiotti	Steven	Rep Castor Staff	VIP
Matthews	Paul	Rep Jolly Staff	VIP