

FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY
Sanctuary Advisory Council
Meeting Minutes
November 9, 2023

HYBRID MEETING

Meeting Attendance Roster:

Jake Emmert, Conservation, Present
Joanie Steinhaus, Conservation, Present
Andy Lewis, Dive Operations, Present
Kristen Maples, Dive Operations, Present
Janavi Mahimtura Folmsbee, Recreational Diving, Absent
Chris Ledford, Recreational Diving, Absent
Sandra Metoyer, Education, Absent
Michelle Sluis, Education, Present
Vacant, Commercial Fishing, Vacant
HD Pappas, Commercial Fishing, Absent
Sepp Haukebo, Recreational Fishing, Absent
Shane Cantrell, Recreational Fishing, Present
Don Craig, Energy, Present
Vacant, Energy, Vacant
Michael Dance, Research, Present
Diego Gil-Agudelo, Research, Present (virtually)

Alicia Caporaso, BOEM (non-voting), Present (virtually)
Tarice Taylor, BSEE (non-voting), Present (virtually)
Vacant, EPA (non-voting), Vacant
Rusty Swafford, NOAA Fisheries (non-voting), Absent
Terrell Bradford, NOAA OLE (non-voting), Present
Emma Clarkson, TPWD (non-voting), Present (virtually)
LTJG Carl Fuhs, USCG (non-voting), Present (virtually)
Michelle Johnston, Acting Sanctuary Superintendent (non-voting), Present

Total voting member attendance: 9 of 14 voting members; 8 votes needed

Others in Attendance:

Taylor Burley Galaviz, Kelly Drinnen, Ryan Hannum, Olivia Eisenbach, Kelly O'Connell, Donavon French, Aoife Toomey, Rachel Parmer, Josh Harvey (virtual), Kait Brogan (virtual),

Kelly Martin (virtual), Claire Mullaney (virtual), Idrissa Boube (virtual), Michelle Bromschwig (virtual), Grant Burdine (virtual), Ken Fountain (virtual), Morgan Huetten (virtual), Todd Jacobs (virtual), Hayley Karrigan (virtual), Patti Kirk Gross (virtual), Mike Lee (virtual), Gretchen Luchauer (virtual), Dr. Kakha Nadiradze (virtual), Desiree Ong (virtual), Mary Kate Rogener (virtual), Katharine Sell (virtual), Ruth Perry (virtual), Joel Southall (virtual), Mariana Steen (virtual), David Thompson (virtual), Glynda Oglesby (virtual), Tershara Matthews (virtual)

10:15 AM Welcome and Announcements- Kelly Drinnen

Today's hybrid meeting, located at and hosted by Flower Garden Banks National Marine Sanctuary (FGBNMS) on NOAA's Galveston Lab in Building 305, is being run through a webinar.

Roll call of council members by Kelly Drinnen.

10:20 AM Administrative Business and Announcements - Jake Emmert

Call to order at 10:20 AM.

Adoption of Agenda – Agenda times will flex due to late start. Public comment period and wind energy panel will stay at scheduled time, 1 PM and 1:15 PM respectively. Don Craig (Energy) moves to approve agenda, Shane Cantrell (Recreational Fishing) seconds. All in favor. Motion passes unanimously.

Adoption of Minutes from September 20, 2023 meeting – Kristen Maples (Dive Operations) motions to approve meeting minutes, Michelle Sluis (Education) seconds. All in favor. Motion passes unanimously.

10:30 AM Constituent Updates

Michael Dance, Research: Had a research trip to East Flower Garden Bank (EFGB) to tag grouper and creolefish for acoustic tagging project. He's hoping to get some good data from that trip.

Michelle Sluis, Education: Attended the Gulf of Mexico Coral Reef Symposium (GoMCRS) last week at Moody Gardens. She is excited for new collaborations and gave thanks to all involved in planning and execution.

Kristen Maples, Dive Operations: Hosted a successful "Try Scuba" event with Big Brothers Big Sisters Gulf Coast (BBBS-GC) dive group at the end of September. Texas Scuba Adventures is working on similar events to partner with the sanctuary.

Andy Lewis, Dive Operations: October was challenging month to get out on MV Fling, due to the weather. Thirty divers are going on a trip this weekend. Diving trips are running through November this year. Texas Caribbean Charters is going to try out winter trips. Andy has been attending local dive club meetings. American Charitable Water Sports Activities is getting off the ground and was started by Frank Burek. Last week, Andy attended the Gulf of Mexico Coral Reef Symposium and is going to the DEMA Show next week in New Orleans. Texas Caribbean

Charters is working on updating its website and connecting to the FGBNMS website. Jake Emmert and Andy are talking about setting up a SAC dive trip for next summer. Andy is also interested in informal trip to go see other sanctuary sites with SAC members.

Jake Emmert, Conservation: Enjoyed seeing everyone at the Gulf of Mexico Coral Reef Symposium. Jake is attending the Association of Dive Program Administrators (ADPA) annual symposium and training day. Jake is also putting together presentation about how zoos and aquariums can support conservation and restoration. After that the ADPA symposium, Jake will be attending the DEMA Show next week. Moody Gardens is updating its conservation program and will share updates as more information comes.

Shane Cantrell, Recreational Fishing: Attended Sea Grant Reef fish advisory panel meeting in New Orleans. Winter wahoo tournament registration opens on November 13th and tournament begins same day. Shane is attending a resource education program in Tampa and will be presenting at the meeting about sanctuaries.

Joanie Steinhaus, Conservation: Met with partners from five gulf states in Mississippi. Turtle Island Restoration Network (TIRN) is offering education programs at Oppe Elementary and is incorporating microplastics program. TIRN is updating all fishing line tubes on piers in Galveston with Texas Sea Grant funding.

Don Craig, Energy: Attended the Marine Technology Society's annual technology symposium in Hanover, Maryland in October. During the symposium, Don attended a panel discussion on uncrewed systems, on which NOAA Rear Admiral Chad Cary was a panelist. Don also presented an introduction of FGBNMS to BP's monthly biodiversity community call.

Alicia Caporaso, BOEM: Missed out on the Gulf of Mexico Coral Reef Symposium. No other updates.

LTJG Carl Fuhs, USCG: Arrived to U.S. Coast Guard District 8 and is looking forward to meeting with everyone.

Diego Gil-Agudelo, Research: Working with U.S. Fish and Wildlife Service (USFWS) on transport of corals.

Emma Clarkson, TPWD: Texas Parks and Wildlife Department (TPWD) dive program is back up and going. TPWD is working collaborative with FGBNMS to target invasive species near sanctuary. Next year, the field season will be reactivated. TPWD wrote letter in support of Rice's whale and rigs to reef program. Emma is be attending the DEMA Show next week.

Tarice Taylor, BSEE: No updates.

Terrell Bradford, NOAA OLE: Introduced by Zachary Salinas. Terrell took over John O'Malley's position, the former NOAA OLE representative on the advisory council. Both Zachary and Terrell are part of a special projects team that will expand technology resources at FGBNMS and would allow increased enforcement and see things from afar. Once this project is

complete, an update will be provided to council. Michelle Johnston asked if an update could be provided on the offshore company anchoring incident within the sanctuary. NOAA OLE is still investigating the incident so no update as it is an active investigation. Terrell is a formal EPA agent and offered the ability to point someone in the right direction with environmental protection questions.

10:55 AM 2024 SAC Meeting Date Selections – Taylor Galaviz

Advisory council meeting dates selected for 2024 are January 31st, April 24th, October 1st, and November 13th.

11:09 AM Sanctuary Updates – Michelle Johnston

We didn't shut down in September and we are waiting on November 17th for further updates. Staff has work plans in place if there is a shutdown. National Ocean Service (NOS) 2024-2028 strategic plan has been released. This plan serves as a framework for us to work together across NOS more efficiently and effectively, and will streamline NOS priorities in response to our nation's growing need for ocean and coastal products and services. It helps tell the NOS story and describes our critical role in filling important needs for our nation and our coastal communities. There are many connections to our work at the Office of National Marine Sanctuaries (ONMS). From enhancing equitable access to historically underserved communities, to ensuring coastal resilience and adaptation, and advancing stewardship of our public resources - the priorities for NOS are in clear alignment with our priorities at ONMS.

Six sanctuaries still in the designation process. The proposed Lake Ontario National Marine Sanctuary (LONMS) is the current focus for designation. During the last week of September, ONMS hosted an Advisory Council Chairs Summit along the shoreline of the proposed Lake Ontario National Marine Sanctuary. Advisory council representatives and advisory council coordinators from all designated and proposed sanctuaries, along with NOS and National Marine Sanctuary Foundation leadership, met to discuss and present relevant topics that impact our protected areas through council actions, membership, and community interaction and engagement. The first ever "National Marine Sanctuary Day", courtesy of resolutions in both the House and the Senate, recognizes October 23rd as a day to celebrate our underwater treasures. ONMS released 2024-2026 Climate Resilience Plan which emphasizes mitigation, adaptation, and resilience building activities, while maintaining and strengthening the science, education, and outreach programming that is foundational to climate-informed management.

The *RV Gannet*, a new vessel at Gray's Reef National Marine Sanctuary (GRNMS) is coming in winter 2023. GRNMS hired a new Captain, George Poole, and Education and Outreach Assistant, Katie Sandefer. It is still hot at the Florida Keys National Marine Sanctuary (FKNMS). Based on conversations with colleagues at the Gulf of Mexico Coral Reef Symposium, there is hope for recovery. The disturbance response monitoring surveys show some recovery at Cheeca Rocks. FKNMS is hiring for an Assistant Sanctuary Superintendent.

FGBNMS superintendent position has closed and we are waiting to let out official word. The research ecologist position is open. This position leads monitoring projects at East, West and

Stetson Banks. The education coordinator position still on the list of positions to be filled. LTJG Kait Brogan starts new assignment as Operations Officer on NOAA Nancy Foster in December 2023. JG Desda Sisson is the incoming Operations Officer for FGBNMS in December 2023. LT Dustin Picard, former Operations Officer with FGBNMS, will be Executive Officer on the Nancy Foster in Spring 2024.

HVAC demo for Building 216 starts in January 2024 and building prep will take place December 13th -15th. FGBNMS staff will move to Building 303 during the renovation. The door on Building 303 was repaired on November 6th. Jake Emmert asked for a timeline for HVAC completion, with future hopes to hold advisory council meetings in Building 216 ballroom. Renovations are scheduled to be completed by summer.

Weather has been bad and staff has not been offshore since September 21st. If there is open space this weekend, divers will go out to collect potential heat tolerant coral samples and conduct routine monitoring. The *RV Manta* is in the shipyard for essential repairs at Pier 77. The vessel is expected to be in shipyard for approximately six months and the main objectives are: disassembling, cleaning, and reassembling the twin jet propulsion, overhauling both main diesel engines, acquiring a new knuckle boom crane, installing an integrated fire/smoke detection system and upgrading the dive compressors. The new skiff, the *Mobula*, has arrived. There is coordination with Teichman Marine Group to provide an option for dive and ROV work while *RV Manta* is in the shipyard.

Data from reef depth, in near real time, is being collected from the Sofar spotter buoy at East Flower Garden Bank (EFGB). Based on that data, bleaching happened in late September. Temperatures have cooled down and no major mortality is expected.

Sofar spotter buoy at EFGB, “Bob”, has been joined by another Sofar buoy “Kevin”. Sanctuary researcher Ryan Hannum and Dr. Xinping Hu, from Texas A&M Corpus Christi (TAMUCC), submitted an application with Aqualink's Pioneer Program promoting their new Bristlemouth technology. Ryan and Dr. Hu were given a free Sofar buoy to test this new technology. Dr. Hu plans to use incorporate a dissolved oxygen sensor to promote his work specializing in hypoxic conditions and ocean acidification. The sanctuary and TAMUCC hope to get this second Sofar spotter buoy, “Kevin”, deployed at West Flower Garden Bank (WFGB) in summer 2024. FKNMS deployed seven new Sofar buoys at Mission: Iconic Reefs sites to support data collection for coral restoration efforts. Shane Cantrell asks Ryan Hannum about where the DO sensors would be located. Ryan responds that they could be placed anywhere but the goal is to have the DO sensor on the reef crest. The challenge is finding something to anchor it to at WFGB. Michelle Johnston commented that the DO data can be used for climate models in real time. Ryan included that there are Sea-Bird sensors located at EFGB, WFGB and Stetson Bank that are collecting data but need to be recovered routinely to download data collected.

National Coral Reef Monitoring Program (NCRMP) released the 2022 Biological Monitoring report. FGBNMS is working to align research methods with NCRMP. NCRMP found that coral cover in the sanctuary is at 58%.

Condition Report invited expert reviews were complete on November 1st and final edits have begun. Climate Vulnerability Assessment copy editing is in process, with a completion goal of December 2023.

Gulf of Mexico Coral Reef Symposium (GoMCRS) had over 130 participants to talk about research and education at FGBNMS. The planning committee was all women in science, plus Jake Emmert, to make it all come together. There were sessions on various science needs, an education panel and tour of aquarium. International partnerships were made with reef researchers in Veracruz, Mexico. It's estimated that we are missing half of diversity of cryptic fish on reef cap. Based on two different climate models for FGBNMS, the reef will start tanking in 2040. In the future, corals collected at FGBNMS could be used to replant other reefs. Science needs from 2010 were rehashed and new categories were added. From this symposium, a socioeconomic category needs to be added to science needs. Once the science needs are complete, they will be added to the website. Drafts of the science needs will be sent out to those at meeting and SAC members for review. Jake Emmert gave kudos to Frank Parker for facilitating meeting and to FGBNMS staff for manning breakout rooms during the symposium.

To prepare for the Final Management Plan that starts next year, we need to update the sanctuary's education needs and create an interpretive plan. Interpretive plan includes visitor center plan, signage, partnerships with cruise ships, lifeguard stand trail and other interpretive ideas to share messaging. It would be beneficial to create a SAC working group for an interpretive plan. FY 24 Research/ Monitoring and Education/ Outreach/ Communication Action Plans were distributed to SAC. There are more opportunities to collaborate with the SAC and keep them involved. Kristen Maples commented that FGBNMS needs a visitor center and that sanctuary one-pagers go out the door at Texas Scuba Adventures (located downtown Galveston) faster than any other information. Jake Emmert inquired if Kristen would be interested being a part of an interpretive working group. Kristen agreed.

SAC wahoo recommendation letter and FGBNMS letter sent to ONMS Eastern Regional Director, Matt Brookhart, on July 6, 2023. Those letters were passed on to ONMS Director, John Armor, on October 25, 2023.

FGBNMS has been busy with education and outreach programs this fall with nine public programs, two media interviews and lots of social media posts and web stories. Some highlights include a new echinoderm webpage, Yorkshire Academy receives Year 5 Ocean Guardian School recognition and visits FGBNMS headquarters for a lionfish dissection, Environmental Defense Fund (EDF) fishing program and Texas A&M University at Galveston (TAMUG) guest lectures. FGBNMS supported the "Try Scuba" event with Texas Scuba Adventures and Big Brothers Big Sisters Gulf Coast (BBBS-GC) at the end of September. Kelly Drinnen was inspired by the Sofar spotter buoy "Bob" and created a unique Halloween costume. This fall, FGBNMS attended three career events with Texas A&M University (TAMU), TAMUG, and Galveston College (GC).

Digital signage was added outside of the Coral Rescue Lab at Moody Gardens. This signage provides information to guests about FGBNMS corals that are housed at Moody Gardens. NOAA Teacher at Sea Program applications are now open until November 30th.

FGBNMS has a display in the headquarters that was originally displayed at the George H.W. Bush Presidential Library as part of the Texas Sea Grant 50th anniversary rotating exhibit. We have reached out to the Bryan Museum and Rosenberg Library. Shane Cantrell offered to connect sanctuary staff to the Galveston Island Convention & Visitors Bureau (CVB).

Jake Emmert inquired about the 50th Anniversary poster. Michelle Johnston said that it is almost ready and that it would be awesome to have the poster painted on building somewhere in Galveston.

11:55 AM FY24 Action Plans– Michelle Johnston and Kelly Drinnen

The purpose of the Fiscal Year 2024 (FY24) Education, Outreach, and Communications Action Plan (EOCAP) is to provide a guide for education, outreach and communication activities to be completed at FGBNMS during FY24 (October 2023 to September 2024). The plan is outlined through programs, events, outreach products, website, social media, exhibits, collaborations and trainings/ conferences. Programs include interpretive planning, on request presentations, Seaside Chats, fish ID classes, City Nature Challenge, summer library programs, Ocean Guardian schools, lionfish dissections, ROV explorations, telepresence from RV Manta, Moody Garden residency and partnering with cruise ships. Shane Cantrell noted that highlighting the City Nature Challenge is important because the gap within the Houston/ Galveston area is the offshore component. Community events are scheduled throughout the year and include yearly staples Get Into Your Sanctuary Day, Lionfish Invitationals, and World Ocean Day. New events include a fishing clinic funded through National Marine Sanctuary Foundation (NMSF), Brazos Bend Expo and Sea Center Texas Shark Celebration. Michael Dance offered fishing contacts in Louisiana that we could partner with for the fishing clinic.

Outreach products include anniversary poster, collectible decals, bilingual materials and reusable shopping bags. Hollings Scholar interns have been requested to create a coloring book (plus other outreach materials) and to archive sanctuary history. The website has planned updates to the science section, disease story and coral bleaching updates, as well as many new planned additions. An annual social media plan will be developed this year. Window shade and ballroom banners are currently in production to replace outdated versions. The Reef on the Road traveling exhibit evaluation is planned for this year. The sanctuary will continue to foster relationships with its aquarium sanctuary partners and the Mesophotic and Deep Benthic Communities (MDBC) restoration project. The Gulf of Mexico Coral Reef Symposium (GoMCRS), Informal Science Educators Association (ISEA) Conference and the Texas Association for Environmental Education (TAEE) are planned conferences for this fiscal year. Jake Emmert mentioned to include the annual Dive Into The Gulf: An Exposition at Moody Gardens, as it highlights FGBNMS.

The purpose of the Fiscal Year 2024 (FY24) Research, Monitoring, and Resource Protection Action Plan (RMRPAP) is to provide a guide for research activities to be completed at FGBNMS during FY24 (October 2023 to September 2024). The plan is divided into three sections: internal objectives, partner projects and trainings/conferences.

Internal objectives are items that are completed within the sanctuary staff with some outside input. The *RV Manta* will go through an extensive shipyard period from October 2023 to June 2024, where both engines will be rebuilt along with other critical repairs. Long-term monitoring at EFGB, WFGB and Stetson Bank will continue with interagency agreements from the Bureau of Ocean Energy Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE). A new study titled “Benthic Community Characterization of BOEM No Activity Zones within FGBNMS” will evaluate and recharacterize 13 No Activity Zones (NAZs) within the sanctuary and is funded through an interagency agreement between FGBNMS and BOEM. Staff will finalize a new FGBNMS Condition Report based on the sanctuary’s long-term monitoring data and information from Status and Trends workshops. Staff will work with headquarters personnel to finalize a FGBNMS Climate Vulnerability Assessment Report and is set to be complete by January 2024. Sanctuary staff will begin familiarizing themselves with the management plan review toolkit to prepare for management review to begin in fall 2024. In FY24, new volunteer divers will be screened and processed to increase this pool of divers and enable continued support for field operations. Staff aims to replace 10 broken or worn u-bolts for buoys at EFGB, WFGB, and Stetson Bank.

Partner projects are those that utilize outside partners and sanctuary staff to complete those projects. Texas A&M University at Galveston (TAMUG) and Louisiana State University (LSU) will continue tagging native and invasive mesopredators, foundation reef fish, and demersal/pelagic fishes that form aggregations to continue investigating migration, ecology, and habitat requirements. This is a continuation of work from 2023 and utilizes acoustic and satellite telemetry, biophysical modeling, and sound. Texas Caribbean Charters and Texas Parks and Wildlife (TPWD) to hold three (June, August, and September) permitted Lionfish Invitational three-day removal cruises on board the *M/V Fling*. Sanctuary staff will support National Coral Reef Monitoring Program (NCRMP) staff in final data synthesis and calibration for future collaborative monitoring efforts with NCRMP. Research partners, led by Dr. Santiago Herrera of Lehigh University, will continue working on population genomic studies to examine the connectivity of octocorals, black corals, fish and stony corals in the FGBNMS region and northern Gulf of Mexico. Soundscape monitoring at Stetson Bank in partnership with the Office of National Marine Sanctuary Sound Monitoring Project will continue. The sanctuary is working to integrate FGBNMS topics into classes at TAMUG. Sanctuary staff is working with Texas A&M University Corpus Christi (TAMUCC), Sofar Ocean, Aqualink, and Bristlemouth to add an additional Sofar Spotter Buoys to WFGB that will collect real time data to aid in monitoring efforts. Sanctuary staff will continue to assist research partner groups with sample collection for disease response. Mesophotic and Deep Benthic Communities (MDBC) will support the removal of marine debris targets within the deeper habitats of the sanctuary, as well as the installation of new deep mooring buoys at strategic locations across the sanctuary. The sanctuary will work with National Marine Sanctuary Foundation (NMSF) partners to contribute to a Transformational Habitat Restoration and Coastal Resilience grant. NMSF and Moody Gardens partners are working with sanctuary staff to remove marine debris from the sanctuary, as a part of a grant awarded to the Foundation for nationwide debris removal. Sanctuary staff will continue to build relationships with GRNMS and FKNMS to exchange knowledge.

FGBNMS research staff will attend multiple trainings and conferences throughout FY24. Trainings and conferences include: Primer PERMANOVA training, Gulf of Mexico Coral Reef

Symposium (GoMCRS), DEMA, DriftCast workshop, Diving Medical Technician course, Gulf Ecosystem Wind Assessment working group meeting, Gulf of Mexico Alliance conference, Ocean Sciences meeting, Dive Into The Gulf: An Exposition at Moody Gardens, Climate-Informed Ecosystem Restoration in Marine Protected Areas Symposium, and Marine Technology Society Buoy Workshop. It should be noted that travel funds for the majority of these meetings and trainings come from sources outside of FGBNMS.

Shane Cantrell gave kudos to the sanctuary staff for completing these action plans and keeping the advisory council informed. Jake Emmert noted that since these are not publicly available documents that advisory council members share the meeting minutes with their constituents and reach out to sanctuary staff with any questions or insight.

12:42 PM Cruise Ship Industry Discussion - Joanie Steinhaus

This discussion started because of a letter that Channel Island National Marine Sanctuary (CINMS) sent in regards to cruise ships. Based on feedback, it sounds like we want to take an education route. A bond just passed for a fourth cruise terminal in Galveston. This is a large number of vessels and a continuous number of vessels passing over or near the sanctuary. Joanie is concerned about the environmental impact that cruise ships have in the Gulf of Mexico. The Port of Galveston does have a green program and there is opportunity for a lunch and learn with the port. Joanie is open to ideas on moving forward.

Jake Emmert asks Michelle Johnston if it is okay to engage city officials in these conversations that the sanctuary and advisory council are having. Michelle J. responded that it is fine as long as you are sharing the vision for the future, increasing awareness and not making any promises on behalf of the sanctuary or NOAA.

Jake asks Joanie about who are the people we should be in contact with. Joanie wants to know if the council is going in an education route and what the goal of the contacts will be.

Jake says that in 17 years, the Gulf of Mexico could become inhabitable for corals. As we continue to see this challenge, opportunity grows as what are we doing to help. Bring that notion to people so that they are aware. The other side of this is a visitor center and that is more of an option for those going on cruise, especially as cruises are navigating over or near the sanctuary.

Joanie says that there are different concerns and have different approaches. Both have value. Some models are showing 7 years in climate change. As an advisory council, what are the concerns we want to share? Jake doesn't know where we include ocean impacts in the conversation. Jake's goal is to have an outcome from this discussion.

Kelly O'Connell thinks that it's a progression. We start with education and getting passengers excited about the sanctuary. The cruise industry may be inclined to make change from a public relations side, as its passengers see the value.

Andy Lewis says that if we are approaching cruise ship industry, there needs to be a focus. If we want to encourage a partnership, some of the tone of letter didn't fit together. The language may

hinder the relationship building portion. We need to understand the role of NOAA, sanctuary and advisory council. Andy feels comfortable sending out a letter that states advisory council is interested in educating cruise patrons. Cruise ships are a growing industry and people come to Texas to see something cool that's water related. This is definitely an opportunity for FGBNMS.

Shane Cantrell says that we can't sit back and do nothing. Shane is in support of a letter as it affects the sanctuary. A position needs to be stated because we are not in an environment that is going to slow down growth, as compared to the West Coast. Texas will not put barriers on growth in the port or on jobs. The cruise ship industry is doubling in the next two years. There needs to be something from the sanctuary to show concern. This impacts the sanctuary and needs to be taken into account. For 6 years, the Galveston CVB board has been working with cruises and have found it extremely difficult to change messaging.

Andy is unclear of the known impact of any ship to the sanctuary. How does increasing the terminals affect the sanctuary? Joanie says that the initial letter was drafted with cruise ships in general and included lots of citations. Cruise ships are mini floating cities that deposit waste into the ocean and have been sued because of that.

Andy says it's not the advisory council's job to tell a third-party industry how to do their job. When legal stuff is pulled into the conversation, that his concern. Michelle Sluis feels that the letter was a little harsh. She is concerned that it would not be well received as written and has similar feelings to Andy.

Jake says that Joanie has put a lot of work into this topic. He asks for input from sanctuary side because it looks like there is still a discussion to be had.

Michelle J. thoughts are that the original detailed version should come from Turtle Island Restoration Network (TIRN) itself. From the sanctuary perspective, we should go the education and outreach side. The conversation needs to be from a positive manner, starting from the dinner table conversations with students going home. If there was an education video, like this [Earth is Blue video](#), shown on the ship and having cruise patrons exposed to the fact that there is a sanctuary under them. This could then hold people accountable. The goal is to eventually have a presence downtown to cater to tourists going on those ships. There's a way to connect the community in a collaborative effort. The sanctuary program doesn't have the ability to tackle anything greater. The focus for ONMS is elsewhere with new sanctuary designation. Maybe we start with Disney cruise lines with the connections Michelle J. has.

Don Craig asks: What is the value that we can offer the cruise industry? He thinks that if we got in front of the right people and showed them the expansion areas, it could go a long way. Long lines at theme parks have become part of the attraction. If we turn that around and say that we can bring value to your attraction (cruise ships), we can make a partnership that way. We can't win a battle where we detract from their business.

Michelle J. says that passengers on the Thunder Bay Viking cruise environmental excursions are marketed that way. In general, people care about the ocean. If passengers care about something, then the cruise industry can work towards increasing their environmental standards.

Jake reminds the group that this is a candid discussion. Joanie, who are the people we should approach locally?

Joanie says that first contact is the Port Director. There is a Port Commission/ Committee with mayor and former mayor on that committee. Jake asks Michelle J. if she would be willing to be put in contact with those individuals. Michelle J. agrees.

Shane asks what are the next steps are because this discussion doesn't need to go away. Jake asks for Joanie to set up a meeting with Port.

Shane suggests that there could be something similar to the Aquarius Art Tunnel, but for the cruise industry. Jake asks the industry is required to mitigate their effects with the new expansion areas. Kelly Drinnen notes that the Reef on the Road traveling exhibit is currently in cruise terminal 2. Total visitation numbers to the terminal are collected but there aren't numbers for visitors interacting with the exhibit.

Jake gave thanks to Joanie and everyone for working on this. Jake reminded the council that we are here to advice the sanctuary and its superintendent.

1:00 PM Public Comment

No public comment.

1:15 PM Wind Energy- Tershara Matthews, Idrissa Buobe, Ruth Perry and Joel Southall

Ruth Perry, former advisory council member, brought together both government and industry professionals to discuss wind energy in the Gulf of Mexico, as it relates to the sanctuary. With offshore wind coming into the Gulf, it opens up a new wealth of opportunities. Ruth provides introductions for the presenters. Idrissa Buobe is representing the Bureau of Ocean Energy Management (BOEM) and their perspective in the Gulf and wind energy. Joel Southall is representing RWE, which obtained the Lake Charles offshore lease this summer. Tershara Matthews is representing WSP. Both Tershara and Idrissa worked on renewable energy with BOEM. Ruth notes that offshore wind is different from oil and gas.

Idrissa Buobe, from BOEM, presented the following:

BOEM has jurisdiction U.S. Outer Continental Shelf (OCS) energy and mineral resources from 3 to 200 nautical miles off the coast of Louisiana, Mississippi, Alabama, and Florida's seaward boundary in the Atlantic and from 9 to 200 nautical miles off the coast of Texas and Florida's seaward boundary in the Gulf of Mexico. Governor Edwards of Louisiana reached out to BOEM in 2020 requesting assistance with the formation of a Louisiana state Climate Initiatives Task Force. Rather than a pursuing a state-based task force, BOEM responded in December of that year by suggesting a region-based task force be developed. From that, the Gulf of Mexico (GOM) Regional Task Force was created, and the first meeting was held on June 15, 2021. The task force consists of all Gulf States except for Florida, as Florida is part of the Atlantic task force.

The task force was formed to conduct outreach and engagement and to collect data and information. One of the major advantages of pursuing offshore wind in the GOM is the proximity to the existing oil and gas supply chain and leveraging those capabilities. One of the challenges of developing offshore wind farms in the Gulf is withstanding major hurricanes, which could potentially increase the costs of turbines and associated substructures.

The renewable energy timeline is broken down into four parts. The planning and analysis period lasts for approximately two years and includes an intergovernmental task force, request for/ call for information and nominations, area identification and environmental factors. The next step is leasing, which can last 1 to 2 years. Leasing period includes publishing leasing notices, conducting auction/ negotiating lease terms and issue lease(s). After a lease is awarded, the site assessment can last up to five years, including site characterization and assessment plan. The final step is construction and operations. Construction can last approximately two years and the operations can last for up to 25 years. This phase includes the construction and operations plan, facility design report, fabrication and installation report, decommissioning and environmental and technical reviews.

BOEM utilized spatial modeling to shrink down to an area that leases could be selected from. By working with NOAA, BOEM used spatial suitability modeling to weigh a location based on suitable criteria. Fifty-four data sets and equally weighted submodels were used in a deconflicting model structure. BOEM looked at several layers, including 2015-2019 shrimp electronic logbook and USFWS pelagic bird considerations, to create the model. The model produced 13 deconflicted areas, totaling 2 million acres. Three areas were selected and put up for lease. A multi-factor auction format with ascending bidding combined cash and bidding credits as the bid variable was utilized.

Auction was on August 15, 2023 and fifteen companies qualified for auction. Two bids were made on Lake Charles lease and RWE became the lease holder on November 1st. This lease can produce and power 435,000 homes. On the renewable energy timeline, we are at the lease granted stage. The next stage is the pre-survey meetings and plans. Four new Wind Energy Areas (WEAs) in the Gulf were finalized in October 2023. There are currently a total of five final WEAs in the Gulf.

Joel Southall, from RWE, presented the following:

RWE is one of the largest global companies in renewables. In 2023, RWE celebrated its 125th anniversary. Offshore business has expanded recently with 24 gigawatts development pipeline for onshore wind, solar and batteries for the Americas. RWE has established a leading offshore wind platform in the U.S. 6 gigawatts of seabed lease capacity lies on the East, West, and Gulf Coasts. RWE thinks this isn't a long-term timeline, before a lease and the entire life of the project. These are long term time-frames (decades) and we are at the beginning.

Currently, RWE has 3 US offshore projects: California, New York and Lake Charles in GOM. GOM lease would be fixed bottom at 30-80 ft depth. RWE has tested various innovations and have the advantage of being a large company with experience.

Tershara Matthews, WSP, shares the following lessons learned:

While with BOEM, we reached out to NOAA Fisheries right off the bat or Atlantic offshore. The key to all models was the NOAA Fisheries data. That made us successful in understanding where the fisherman are fishing. When proposed sales are made, it's important for organizations (like the sanctuary) to send out a letter to provide input. Joel Southall will be reaching out as lease holder for stakeholder engagement, when RWE gets to that point.

Michelle Johnston is attending the Gulf Ecosystem Wind Assessment working group meeting in January. This wind energy panel was information gathering for Michelle. What concerns are there for the sanctuary? The lease blocks look far away from the boundaries. What should we be aware of? Idrissa responds that FBGNMS is considered a constraint when creating the model that selected areas for leases. Ruth notes that vessel operations and construction will have minimal effect. The acoustics from pile driving could have effect on marine mammals, turtles and fish, similar to other noise in GOM. Navigation to banks shouldn't be affected by the construction. Joel says that the large-scale area came from BOEMs modeling. Finer scale areas with design will come later. At this point, we know broad scale things just not specific. Construction and operation plans are long and dense but provide a lot of great information. For a fixed foundation installation, there are good examples from other parts of US. Some broad conclusions can be drawn from other sites.

Michelle J. asks why was the Lake Charles site was the only site bid on. Joel can't speak for other companies but there are many different factors with how auctions play out. Factors could include proximity to load centers, power contracts with states, wind resources, and other characteristics. Idrissa states that all BOEM can do is provide opportunities to developer. It is then up to those companies to make the decisions. Ruth added that the state of Texas put out politically controversially comments before lease opened. Texas was opposed to supporting transmission sites for offshore wind. Companies are working with Texas to educate on offshore wind and how transmission would work. Tershara noted that it's important for companies to have space to take out that power. These companies are global and Texas looked viable. If there is nowhere to offtake power, they will not bid on a lease and will take their money elsewhere.

Diego Gil-Agudelo asks how is the area for transmission lines taken into account because they may be placed through sensitive areas. Idrissa says that those areas are not taken into account when picking the sites by BOEM. It's up to the developer to do those studies and determine where would be a good place for lines.

Jake Emmert thanks the presenters and asks council to send direct questions to panels. Emails below:

Idrissa Boube: Idrissa.Boube@boem.gov

Ruth Perry: Ruth.Perry@shell.com

Tershara Matthews: Tershara.Matthews@wsp.com

Joel Southall: Joel.Southall@rwe.com

Cynthia Pyc: cynthia.pyc@rwe.com

2:12 PM Bleaching 101- Kelly O'Connell

Corals are made of three parts: polyp, skeleton, zooxanthellae (algae). Seventy-five percent of the coral's nutrition is supplied from zooxanthellae. Bleaching refers to the zooxanthellae leaving the coral polyp. Bleaching occurs in extreme conditions, like increased temperature, pollution stress, overexposed to sunlight, or low temperatures. The algae will become toxic to animal during these stress events and will leave the polyp. Polyps can still be used to feed but are essentially in a state of starvation. Paling or color changing is how we know that corals are starting to bleach. Algae is already leaving tissue at this point. Not all colonies pale or bleach at the same time and can have a patchiness. Different colonies of the same species can respond differently to bleaching stressors. Bleaching isn't a death sentence. Coral recovery is generally good at the sanctuary. The long-term effects include more susceptibility to disease, less energy for skeletal growth and reproduction and loss of habitat from mortality.

A bleaching curve for FGBNMS was created after 2016 bleaching event. We use 30°C (86°F) water temperature as a bleaching standard. Historically, there has been more bleaching at East Flower Garden Bank (EFGB) than West Flower Garden Bank (WFGB). However, WFGB does have a lower tolerance in terms of number of days for bleaching.

As of today, we are no longer at a dangerous temperature level and have time to recover. This year there were 66 continuous days over 29°C and 30 continuous days over 30°C. In 2016, instruments at EFGB on reef logged at total of 36 days above 30°C. Instruments on WFGB logged a total of 21 days above 30°C. These prolonged temperatures were not exhibited any other year from 1990-2015.

Shane Cantrell asks if the cycle of bleaching years predictable and are corals more susceptible after a bleaching year. Kelly O'Connell responds that bleaching years are looking to be more reoccurring. Compared to Florida Keys National Marine Sanctuary (FKNMS), we are more likely to recover year after year and over time. You have to look at the whole system, not just one aspect. EFGB and WFGB are good comparisons, Michelle Johnston included that there will be an overall bleaching summary for this year. Bleaching occurs about every 5 years since monitoring started. However, those increments are getting closer together and frequency is increasing.

2:35 PM Advisory Council Summit- Taylor Galaviz

In September 2023, after the last advisory council meeting, Sepp Haukebo, vice-chair, and Taylor Galaviz, advisory council coordinator, attended the SAC summit in Oswego, NY. This is the first time that coordinators and chairs have met in-person since 2018. Sepp and Taylor attended three days of presentations. Topics for the week included wind energy, connecting with indigenous and tribal communities, advisory council recruitment, barriers to entry for advisory council applicants, and how to make the most out of advisory council meetings. Taylor and Sepp were also able to network with the other council chairs and coordinators. The overarching theme was connection. There are many advisory councils and they all have their own agendas and site-specific issues. However, there are some topics that are overarching for the entire system, many voices banding together can have a greater impact.

2:50 PM New Business

For the next meeting, an interpretive working group should be set as an agenda item. Taylor Galaviz will send out example interpretive plans from other sites for the council to review.

The 2019 charter expires on April 4, 2024 and a new charter needs to be approved. The deadline to have the council approved charter to ONMS headquarters is March 4, 2024. The 2019 charter has been amended three times since its approval. A charter subcommittee will need to be selected at the next meeting. There have been talks about adding a non-voting Deep Water Horizon seat to council. This would be the opportunity to do so. Taylor will send out copies of the 2019 charter and its amendments to the council.

We are at two-year mark for chair and vice-chair. If anyone is interested in being either the chair or vice-chair, they can be nominated at the next meeting. We will also vote for chairs during that meeting.

Jake thanked everyone who attended in-person with the delays and lack of air conditioning.

2:56 PM Adjourn

Jake Emmert motioned to adjourn. All in favor. Motion approved.

Next meeting is scheduled for January 31, 2024