

FLOWER GARDEN BANKS NATIONAL MARINE SANCTUARY
Sanctuary Advisory Council
Meeting Minutes
November 15, 2022

HYBRID MEETING

Meeting Attendance Roster:

Chris Ledford, Recreational Diving, Present
Janavi Mahimtura Folmsbee, Recreational Diving, Present virtually
Andy Lewis, Diving Operations, Present virtually
Kristen Maples, Diving Operations, Present virtually
Don Craig, Oil and Gas Industry, Present
Steve Hamm, Oil and Gas Industry, Present virtually
Scott Hickman, Fishing - Recreational, Present
Sepp Haukebo, Fishing - Recreational, Absent
Shane Cantrell, Fishing - Commercial, Present
Harris “HD” Pappas, Fishing - Commercial, Absent
Diego Gil-Agudelo, Research, Present virtually
Michael Dance, Research, Present virtually
Brian Shmaefsky, Education, Absent
Leia Simelton, Education, Absent
Joanie Steinhaus, Conservation, Present
Jake Emmert, Conservation, Present
James Sinclair, BSEE (non-voting), Present virtually
Alicia Caporaso, BOEM (non-voting), Present virtually
Adam Peterson, USCG (non-voting), Absent
Rusty Swafford, NOAA Fisheries (non-voting), Absent
Emma Clarkson, TPWD (non-voting), Present virtually
John O’Malley (NOAA OLE (non-voting)), Present
G.P. Schmahl, Sanctuary Superintendent (non-voting), Present

Total voting member attendance: 11 of 16 voting members

Others in Attendance:

Leslie Clift, Kelly Drinnen, Michelle Johnston, Ryan Hannum, Kelly Martin, Justin Blake, Olivia Eisenbach, Donavon French, Sasha Francis, Josh Harvey, Sam Davidson (volunteer), Amu Bui, Colin Nelson, Cory Compton, Duane Smith, Frank Burek, Greg Boland, Tarice Taylor, Tristan Baurick (reporter, *The Advocate*), Emily Foxhall (*Houston Chronicle*), Duane Smith, Lisa Motoi, Matthew Walia, David Wilde, Ian Zink, George Cummings, Kelly Dunning, Shamika Sawant, SIMI KK, John Embesi

9:10 Welcome and Announcements – Kelly Drinnen/Leslie Clift

Today’s hybrid meeting, located at NOAA Galveston Lab’s Building 305, is being run through a webinar and is not being recorded.

9:20 Administrative Business – Sepp Haukebo (Vice-Chair, Recreational Diving)

Adoption of Agenda – Motion from Scott Hickman (Recreational Fishing), second from Don Craig (Oil & Gas Industry). No objections on the draft agenda, motion approved.

Adoption of Minutes – Motion to approve minutes from September 14, 2022 meeting from Scott Hickman, second from Chris Ledford (Recreational Diving). No objections on the draft minutes, motion approved.

9:30 Constituent Updates

Joanie Steinhaus (Conservation) – additional Turtles About Town have been installed (62 total); TIRN has a new location at 1028 Broadway and offered to host a future advisory council meeting.

Don Craig (Oil & Gas Industry) – has worked with BP last 10 years, previously in their offshore underwater sector but now with their oil & gas energy sector, focused on technology (e.g., wave energy, autonomous underwater vehicle (AUV)).

Chris Ledford (Recreational Diving) – has been recreationally diving for 27 years; previously worked with Texas Parks & Wildlife Department but now is with Texas A&M University Galveston; assisted with partial platform removal of HIA389A.

Jake Emmert (Conservation) – Moody Gardens hosted a Big Brothers Big Sisters event in mid-October; future Dive Into the Gulf expo will incorporate more diving and fishing opportunities; Moody Gardens Aquarium increased their coral husbandry capacity; attended advisory council chairs' virtual meeting in November.

Scott Hickman (Recreational Fishing) – his seat is expiring; has enjoyed last 9 years; plans to remain involved with Sea Grant and Gulf of Mexico Fishery Management Council (GMFMC) advisory committees, and Charter Association. Attended the Gulf and Caribbean Fisheries Institute (GCFI) conference in Ft. Myers, FL and as former Gladding Memorial Recipient, awarded this year's honor to two fishers (Prescott Smith (Bahamas) & Mimi Stafford).

John O'Malley (NOAA OLE) – manages OLE special agents in Gulf region; introduced Zach Salinas who is currently the only NOAA OLE in the greater Houston region.

Zach Salinas (NOAA OLE) – investigated commercial fishing vessel at Elvers Bank regarding bottom line-line violations.

Discussion followed. Scott asked if NOAA charts have been updated. ENS Kait Brogan (NOAA Corps, FGBNMS) responded charts have updated all charts electronically but paper charts are no longer supported by NOAA and will not be updated or printed. John O'Malley (NOAA OLE) added Fishing Notices were issued. Shane Cantrell (Commercial Fishing) mentioned private industry (e.g., Garmin, Furuno) does not have updated information regarding the expanded sanctuary. Jake asked Shane to assist by creating a list of companies and possible contacts. Shane suggested National Marine Manufacturers Association be contacted. Scott Hickman

(Recreational Fishing) suggested the advisory council write a letter. Joanie Steinhaus (Conservation) asked about enforcement and how active it can be since OLE is short-staffed. Zach replied electronic monitoring is constant, but his primary focus is seafood imports, although he has routine contact with local fishers. Shane said charter boats must now be electronically tracked. James Sinclair (BSSE) suggested the Sanctuary website could help by having links to the updated NOAA Electronic Navigation Charts.

Shane Cantrell (Commercial Fishing) – has been fishing mostly at Stetson Bank recently and spoke in favor of Stetson’s outer rings recently added to the sanctuary; due to the new sanctuary borders, new areas of low relief natural bottom are now incorporated; though protected from anchoring, Shane can access these areas due to the gps enabled trolling motor on his vessel.

Alicia Caporaso (BOEM) – two Wind Energy Areas for the Gulf of Mexico have been finalized with one off Galveston and the other area off Louisiana. The Call for Stakeholder input for the 2024 Environmental Studies Program is active. BOEM continues to analyze public comments from the draft environmental impact statement (EIS), with the final EIS released soon. BOEM’s Interagency Agreement with Flower Garden Banks National Marine Sanctuary (FGBNMS) for 4-year, long-term monitoring was finalized today for East and West Flower Garden Banks. Lastly, BOEM’s regional director is retiring and Dr. James Kendall will replace him who has experience with the sanctuary.

Andy Lewis (Dive Operations) – has been working on the M/V *Fling* as divemaster for 10 years but recently became the liveaboard’s owner which takes ~1,000 divers each year to FGBNMS; the M/V *Fling* continues to resolve mechanical issues expected through the end of this year; has been attending dive and photography meetings around Houston and presenting about FGBNMS.

Diego Gil-Agudelo (Research) – has been diving for many decades as a coral reef ecologist; in Columbia until 2010, when he became an offshore environmental specialist on mesophotic corals during the Deepwater Horizon spill; worked @ Texas A&M University Galveston for the last five years but is now employed as Director of Conservation with LightHawk, a nonprofit that conducts conservation via aviation (e.g., environmental assessments using planes); became volunteer diver with FGBNMS four years ago.

Emma Clarkson (TPWD) – artificial reef program has no staff but are filling positions quickly; 14 rigs to reef projects are proposed with a couple near some natural banks (not the sanctuary); HIA389A buoy maintenance hasn’t been serviced but will be replaced soon.

Discussion followed. Scott Hickman said as BOEM moves forward with wind energy lease sale, he suggested conversations begin regarding the reefing of those structures. Emma responded 1 nm buffer was requested for the reefing of structures. Return to natural bottom will be encouraged and is preferred. Alicia added decommissioning will go through its own legal NEPA process.

Janavi Mahimtura Folmsbee (Education) – just installed 240’ tunnel art installation “Aquarius Art Tunnel” at Houston’s Intercontinental Airport, inspired by her experiences in FGBNMS; artwork includes representation of the mesophotic region of the sanctuary and has a 26-minute

sound component and augmented reality; ribbon-cutting event will be held on November 30, 2022.

James Sinclair (BSEE) – marine ecologist; focusing on offshore renewable (i.e., wind) energy projects in Gulf of Mexico; BSEE sponsors Stetson Bank monitoring each year and is working on the Interagency Agreement process for 2023.

Michael Dance (Research) – tagged 50 greater amberjack at several of the sanctuary banks over several offshore cruises; tagged 10 yellowmouth grouper to look at fine-scale movement across reefs; will soon hold meeting regarding management transition; recently published a paper with Phillip Sanchez regarding work at Sonnier and McGrail Banks with remotely operated vehicle (ROV) work.

Steve Hamm (Oil & Gas Industry) – manages health, safety, environment for W&T Offshore, Inc., with recent focus on reducing methane emissions from platforms in the Gulf of Mexico; EPA is renewing permits for water discharge in the Gulf of Mexico within the next month or two; new technology guidance was issued regarding the installation of well sentinels (cone device) used for temporarily abandoned wells with a plug that notifies via satellite of any oil leaks.

10:22 Sanctuary Update – G.P. Schmahl (FGBNMS Superintendent)

G.P. Schmahl began by recognizing the long history of people on Galveston island including the Atakapa, and the Atakapan People cemetery at the Mitchell Ridge Burial Site.

ONMS is celebrating their 50th anniversary throughout 2022, with a series of posters created for each of the sites. FGBNMS is celebrating its 30th anniversary, with its poster projected in early 2023. National Marine Sanctuary's *Forever* Stamps were introduced this year.

Avery Minasi, from Dickinson High School, represented NOAA's Ocean Guardian Schools in a recent NOAA webstory.

New proposed sanctuary designations: Hudson Canyon off New York, Lake Ontario, Chumash Heritage (first sanctuary proposed and nominated by a tribal council, the Northern Chumash Council in northern California), and the conversion of Papahānaumokuākea Marine National Monument to a national marine sanctuary. Scott asked about executive orders and if they expire with a new presidency, and GP responded it can vary with the executive order.

Outreach/Education

- Maite Rodriguez, a student killed in the Uvalde school shooting in Texas, was honored by FGBNMS with the naming of a female manta ray (M18) observed and photographed (by Jesse Cancelmo) within the sanctuary.
- NOAA's Ocean Guardian Schools – 3 schools in this area are undergoing hands-on stewardship project related to national marine sanctuaries
- FGBNMS developed and conducted a Big Brothers Big Sisters, hosted at Moody Gardens Aquarium, via an ONMS' Diversity & Inclusion mini-grant program wherein approximately 20 children were treated to a presentation, lunch, scavenger hunt, and tour

of the aquarium.

- Recent FGBNMS programs and presentations:
 - Dickinson “Market on the Bayou” in November
 - “Aquarius Art Tunnel” art installation within Houston Intercontinental airport by Janavi Mahimtura Folmsbee

Monitoring/Research

- Stetson Bank mesophotic long-term monitoring was conducted in September, with collection and propagation of *Swiftia exserta*.
- Stony Coral Tissue Loss Disease Response Plan cruises.
- East and West Flower Garden Bank coral reef long-term monitoring in September
- NOAA’s National Coral Reef Monitoring Program (NCRMP) and NOAA’s Atlantic Oceanographic and Meteorological Laboratory (AOML) conducted climate impact monitoring in October with Ian Enochs and Nicole Besemer as lead investigators; included a photo mosaic from NCRMP’s Climate Lab Photomosaic for FGBNMS.
- HIA389A assessment – FGBNMS recently published in *Journal of Environmental Management* and also a report, representing what most likely is the only study of its type with this much detail.
- Determining Habitat Requirements and Connectivity for Reef Fishes in the Gulf of Mexico with Dr. Jay Rooker (TAMUG) and Marissa Nutall (PhD researcher; FGBNMS) 2021-2025, \$740,620 grant project; fine scale movements of reef fish on the reef caps
- WAVES Project, a veterans group that will help with lionfish management at FGBNMS, had to again postpone (due to bad weather) their Lionfish Removal Cruise using Tre Charters out of Galveston.
- Lionfish Invitationals – one was conducted, one was canceled due to the M/V *Fling*’s mechanical issues.

Reports emanating from the updated FGBNMS Condition Report workshops and the FGBNMS rapid Climate Vulnerability Assessment workshops will feed into the next management plan review. Scott Hickman remarked on the scope of work the sanctuary now has, and congratulated GP on the multi-year effort.

Discussion followed. Kelly Drinnen reported on the tree decoration for Museum of Natural Science that will be decorated using the different depth zones of FGBNMS and representative creatures from each zone. G.P. explained today’s meeting location. Though NOAA offices have returned to normal, the HVAC system is not working in the FGBNMS office. Scott Hickman urged advisory council members to ask for more money allocated to ONMS. Jake requested information on how to do that. G.P. responded the National Marine Sanctuary Foundation’s work has produced increases in the ONMS budget.

11:05 Deepwater Horizon Mesophotic & Deep Benthic Communities Restoration Status Update – Kelly Martin (NOAA/NOS/ONMS)

Kelly Martin (NOAA) reviewed background information on Deepwater Horizon oil spill and subsequent restoration. Mesophotic Deep Benthic Community (MDBC) Restoration Type Goals include active management to protect valuable mesophotic and deep-sea communities against multiple threats. The four MDBC projects receiving \$126 million over 8 years are: 1) Mapping,

Ground-Truthing, and Predictive Habitat Modeling (MGM); 2) Habitat Assessment and Evaluation (HAE); 3) Coral Propagation Technique (CPT) Development; and 4) Active Management and Protection (AMP). AMP objectives are education & outreach, threat reduction, and provide science to management. Kelly shared an overview of the MDBC Restoration Schedule with field work plans for 2023. Planning Phase highlights: release of MGM Geospatial Inventory (most comprehensive database of MDBC in this area); MGM Spatial Prioritization completed; HAE Bibliography + Data Inventory = Gap Analysis; CPT 2021 Field Work (34 live corals to 2 federal labs, spawning events); project workshops to engage subject matter experts, with feedback on planning phase activities leading to report publications; hiring AMP team members; development of project management plans and adaptive management plans; establishment of partnerships (e.g., Navy). The MGM cruise on NOAA's ship *Ferdinand R. Hassler* led to mapping of ~1,000 km² at four times higher resolution than previous maps. Three HAE cruises were conducted on three different vessels. After four CPT cruises in 2022, there are now 213 coral colonies of 6 different species in three federal labs (Charleston, Gainesville, and Galveston). Coral spawning occurred in the labs in 2021 and 2022 but only in individuals collected from the field that same year. Next steps for CPT are working with aquarium partners, conducting lab experiments, and outplanting corals. Next steps for AMP are bringing science to management through engagement (e.g., will provide regular updates at future advisory council meetings), threat reduction (e.g., marine debris removal, mooring buoy installation), and education and outreach (e.g., development of partnerships with public venues such as Audubon Aquarium in New Orleans with a permanent mesophotic display).

Discussion followed. Jake a demonstration at a previous advisory council meeting during which G.P. Schmahl displayed a mock quadrat of MDBC (e.g., 29 coral colonies/m²; the highest found in any literature at that time). Scott urged identification and protection of spawning aggregations. ENS Kait Brogan (NOAA Corps) asked about saturation diving operations and potential vessels to conduct that work. Kelly responded about upgrading ROVs (none can currently reach the depth needed). Kait mentioned two new NOAA vessels are being built with a suggestion that preliminary testing of the ship *Oceanographer* (with dive chamber) could be conducted in the Gulf of Mexico since the ship is being built in Houma, Louisiana and is destined for Hawai'i. Don Craig (Oil & Gas Industry), once a commercial diver, wrote the saturation diving plan for the *USS Monitor* during its designation. He asked about which Navy department that NOAA is working with. Kelly responded the Navy Experimental Diving Unit out of Panama City, Florida, and that Jake Emmert is going to be leading the technical diving operations through an agreement with the National Marine Sanctuary Foundation. Don asked if commercial dive suits are still being used. Jake responded their daily operational cost is \$75,000. Don suggested Navy's diving program in San Diego, California with 1 atmosphere diving suits could be contacted regarding mobilization and activity. Scott asked about the differentiation between technical versus saturation diving. Jake explained saturation diving and added examples of the Aquarius Habitat in the Florida Keys (can work 24 hours/day vs technical dives are limited to mere minutes each dive) but have large decompression complexities (e.g., 10 days for saturation). Kelly said saturation diving is expected to begin late 2023 or early 2024. Diego Gil-Agudelo asked about the cost related to benefits. Kelly answered budget planning allocations are taking into account a variety of technologies (ROV, AUV, diving, etc.). Jake urges cautious pragmatism for moving forward with deepwater dive operations. G.P. connected the needs of the

sanctuary (e.g., mooring installations), and Scott followed with two mooring buoy requests at Sonnier Bank.

LUNCH & NOAA Coral Lab Tour (Building 303)

Advisory council meeting dates for 2023 were finalized: Thursday, Feb 2; Thursday, May 4; Wednesday, September 20; Thursday, November 9

1:37 Public Comment

No public comments.

1:47 Update Regarding an Ongoing Unusual Coral Mortality Event in Flower Garden Banks National Marine Sanctuary– Dr. Michelle Johnston (FGBNMS)

Observations of symptoms similar to Stony Coral Tissue Loss Disease (SCTLD) began at East and West Flower Garden Banks (FGB) during the week of August 30 – September 2, 2022. Due to the rampant spread of this disease, FGBNMS finalized its SCTLD preparedness plan in 2021. After initial observations of symptoms in Sept. 2022, this plan was activated with multiple key partners. Within three days of observations, a FGBNMS response cruise was planned and mobilized. Florida Atlantic University (FAU) contributed treatment supplies and trained FGBNMS divers on treatment techniques. During three separate cruises (2 in September, 1 in early October), samples were collected including mucus samples for probiotic screening, RNA extraction, histology, Transmission Electron Microscopy (TEM), and genomics. Repeat observations were made of lesion progression on individual coral colonies. Diver propulsion vehicle (DPV) surveys were completed. Benthic photo surveys were conducted for time-series monitoring. Photomosaics were collected and assembled. Many lesions were small in nature, mostly on the edges of brain coral colonies, but many with multiple lesions. Three species of coral were targeted for treatment for the application of antibiotic paste. Approximately 120 coral colonies were treated within the long-term monitoring sites at East and West FGB. Photostation monitoring determined many small lesions with a 2.5% disease prevalence. Fourteen coral colonies from FGBNMS were permitted for removal and “banked” at Moody Gardens Aquarium. Other colonies with active lesions were also removed and are being housed in Florida for a month of observation to monitor lesion progression. Disease transmission experiments have halted because lesions on corals in aquaria have stalled (not abnormal for afflicted coral colonies to experience in aquaria with clean water and no pathogens). Samples for histology are with Dan. Holstein at Louisiana State University. Additional samples are with Adrienne Correa at University of Rice and Michael Studivan at University of Miami for genetic studies. According to an article published by Eric Borneman and Gerard Wellington in 2005 on the baseline disease history at FGBNMS, not many diseases have historically been observed within the sanctuary. Additionally, diseases have not presented normally at FGBNMS in reference to how diseases present elsewhere in the Caribbean. Michelle acknowledged the National Marine Sanctuary Foundation for \$25,000 for coral husbandry support, \$14,000 to research partners (e.g., Univ of Rice), \$10,000 for treatment supplies, and new scooters for reef-wide surveys. Next steps are to conduct more monitoring, draft a manuscript of observations and prevalence; process samples with partners; and explore other funding sources with partners (e.g., Texas SeaGrant).

Discussion followed. Scott Hickman said as a professional fisher watching the container shipping industry multiply year after year with more cruise ship terminals, he recommends a

closer look at ballast water and how marine transportation impacts water quality and the spread of disease. Michelle responded Michael Studivan's recent paper shows ballast water can spread, and recent expansion banks have shipping fairways over them. Diego Gil-Agudelo commented the symptoms appear to be White Plague Disease. Michelle responded that many experts are reviewing photographs since it is difficult to discern SCTL D from White Plague Disease. Diego is interested to see the disease progression. Michelle's main concern is this disease is primarily displayed in brain corals, the most susceptible species for SCTL D. Joanie Steinhaus asked when the next round of monitoring will occur. Michelle answered after Stetson Bank work is completed, but hopefully before the end of the year, pending weather. Jake Emmert asked how the advisory council can engage the marine transportation community. Michelle replied engagement from U.S. Coast Guard resulted in information suggesting vessel hull biofilms, among other things. G.P. mentioned regulatory rules in place are addressing this issue to some extent. G.P. doesn't think ballast water is the vector at FGBNMS because most ships are not exchanging ballast water whilst underway which is when they'd transit over/near FGBNMS. Rather, pathogen circulation in the Gulf of Mexico is the cause, he speculated. However, some strong evidence in the U.S. Virgin Islands suggests otherwise. Scott spoke about the benefits of ecosystem-based management (e.g., incorporating climate change, health of FGBNMS), something he wants to see for the Gulf of Mexico. Michelle mentioned the difficulty in working at FGBNMS and gave accolades to all involved with the response. Histology samples will take 4-5 months for processing. Joanie thanked all teams for the plan and the response, and asked about water quality stopping disease progression and if any components of water quality monitoring have elevated values/levels. Michelle responded *in situ* water quality monitoring showed no elevated levels. However, data buoys transmitting real-time data are needed and that while *in situ* sensors are nice, they need to be retrieved, delaying analysis. Also, not having funding for instrumentation has hurt. Additionally, satellite data had glitches that had to be sorted out by NOAA. SCTL D started in 2014 and its histology remains uncertain. Don Craig said one area of wave energy technology is to look at docked AUVs (e.g., deepwater subsea) for increased residency times. He mentioned a Department of Energy project in Hawai'i with the Navy for a wave energy test site off Oahu, and also in the North Sea. Michelle added that an ocean acidification buoy within the sanctuary was demolished by a hurricane and became marine debris in 2021. Thus, the sanctuary is hesitant to install sensitive equipment again on the reef cap. At a future advisory council meeting, Don will provide information on two BP projects (subsea battery and supercharger (hydrogen fuel cell with NOAA testing one in Lake Michigan soon)). Jake mentioned Jesse Cancelmo's previous work with wave energy and webcam buoy.

2:45 New Business

Scott Hickman made a motion to reclassify the Oil & Gas seats as Energy seats in the FGBNMS advisory council charter, seconded by Don Craig. Discussion followed. Don added BP America will be reducing oil and gas production, and ramping up cleaner energy (e.g., wind, hydrogen), as will other companies. Janavi Mahimtura Folmsbee (Recreational Diving) and Diego Gil-Agudelo (Research) supported the motion. Steve Hamm (Oil & Gas Industry) spoke in support, though he noted oil & gas has higher potential of impact on FGBNMS. Chris Ledford (Recreational Diving) recommended one of the seats be representative of the oil & gas industry. Scott recommended changing both seats to energy, with Don in agreement. James Sinclair suggested one O&G seat, one Energy seat. Joanie mentioned the revised energy seat can also encompass solar energy even though it would likely be land-based. No objections, motion

approved.

3:09 Meeting Adjourned

Meeting adjourned at 3:09pm by Jake Emmert.

Next SAC Meeting scheduled for Thursday, February 2, 2023.