

FLORIDA KEYS NATIONAL MARINE SANCTUARY ADVISORY COUNCIL

**Harvey Government Center, Key West
Tuesday, June 15, 2010**

MINUTES

Members Present

Jason Bennis
Jack Curlett
Jon Fajans
Dolly Garlo
Richard Grathwohl
David Hawtof
Bob Holston
Don Kincaid

Jerry Lorenz
Rob Mitchell
Martin Moe
Ken Nedimyer
George Neugent
Bruce Popham
Brad Simonds
Jim Trice

Alternates Present

Clinton Barras
Alex Brylske
Heather Carruthers
Bill Chalfant
Walt Drabinski
Bruce Frerer

Peter Frezza
Susan Ford Hammaker
Jessica Pulfer
Bob Smith
David Vaughan

Call to Order/Pledge of Allegiance/Roll Call/Approve Minutes from April 20, 2010 Meeting/Adopt Agenda for this Meeting/Chairperson's Comments/Introductions

- Chairman Bruce Popham called the meeting to order at 9:01 A.M.
- He said the format would change in the afternoon, with speakers up front for panel presentations. He said was put together at the last minute and that it was a challenge to get the panel participants to the meeting; he said "hats off" to the staff, particularly Florida Keys National Marine Sanctuary (FKNMS) Acting Superintendent Sean Morton. Part of the role and mission of the Sanctuary Advisory Council (SAC) is to get information out to the community and to become better educated about what is going on, Chair Popham noted. He said there would be two public comment periods, and that public comment would be just that, to hear what they have to say. Chair Popham then asked if anyone saw Newsweek, with Stephen Frink's photograph of a sea turtle. He said he knew there was a lot of frustration in the community, trying to get some answers, and that there was no use in playing blame - we are all using the oil.
- Jack Curlett then led the group in the Pledge of Allegiance.
- After review of the draft minutes of the April 20, 2010 meeting, Dolly Garlo moved that they be approved, and Richard Grathwohl seconded the motion. As there were no suggested changes, Chair Popham deemed the minutes approved.
- After review of the draft agenda, Chair Popham asked if there were any additions or changes to the agenda. Lilli Ferguson, FKNMS SAC coordinator, said Bill Sharp would speak instead of John Hunt [during the agency report], and there would be no National Oceanic and Atmospheric Administration (NOAA) Southeast Region General Counsel agency report. Commissioner George Neugent moved that the minutes be approved, and Ken Nedimyer seconded the motion. Chair Popham then deemed the agenda approved with those changes.
- Chair Popham then brought up the locations of the October and December 2010 SAC meetings. He said Mr. Curlett was kind enough to offer to host the meeting in October at the Ocean Reef Club. He asked if

the SAC wanted to have it there again or somewhere, and the consensus was the Ocean Reef Club. Accordingly, Chair Popham announced the October SAC meeting would be held at the Ocean Reef Club, and the December SAC meeting would be at the Eco-Discovery Center in Keys West. He remarked it was good to have meetings at opposite ends of the Keys.

Superintendent's Report – Mr. Morton, Acting Superintendent, FKNMS

- Mr. Morton said a lot of the oil spill stuff would be covered later so he would not cover it much in his report. On the day of the oil spill, the NOAA Administrator, Dr. Jane Lubchenco, was here diving with Mr. Nedimyer, Mr. Morton said. It turned out to be a fantastic Earth Day event, getting a lot of recognition for Mr. Nedimyer and for the FKNMS and Mr. Morton thanked him for his hard work. Since the spill, the FKNMS staff has been working on oil spill response and Natural Resource Damage Assessment, Mr. Morton said.

- Mr. Morton said last week was Capitol Hill Oceans Week (CHOW), and there were a series of events, including a conference put on by the National Marine Sanctuary Foundation (NMSF). The topic, picked one year in advance, was energy, including energy offshore. As part of CHOW, FKNMS brings up [a candidate for] Volunteer of the Year [for work done the previous year]; this year it was John Bollinger, a volunteer in the Eco-Discovery Center. Acting Superintendent said he was proud to have Mr. Bollinger represent sanctuaries, and noted that Mr. Bollinger and his wife had a great time. He said they met Congresswoman Ileana Ros-Lehtinen and Senator Bill Nelson's staff; it was great recognition for him and he got to talk about his work at the Eco-Discovery Center.

- Congresswoman Ros-Lehtinen will be in town the week following the SAC meeting, Mr. Morton reported, and he said he was looking forward to talking with her.

- He announced Dr. Lubchenco would be coming back, and would visit the Atlantic Oceanographic and Meteorological Laboratory, the Hurricane Center, the Southeast Fisheries Science Center, and the Incident Command System (ICS) center in Miami. He said he and Bill Causey would probably see her there, adding she would be in Miami for a White House listening session on climate change June 23 from 9-1 at the Rosenstiel School of Marine and Atmospheric Science. He noted Dr. Causey would speak at that session also, and said he could provide information to anyone interested in attending.

- Mr. Morton said the buoy teams continued to go out and that damage assessment work not related to the oil spill continued to take place.

NOAA Office of National Marine Sanctuaries (ONMS) Southeast Region Report – Dr. Causey, ONMS

- Dr. Causey said during the Hill visits for CHOW, he and Mr. Morton attended a meeting with Congresswoman Ileana Ros-Lehtinen and Bill Senator Nelson's staff, and the focus of each visit was on the Deepwater Horizon and the Mississippi Canyon 252 blowout. He said he and G.P. Schmall, from Flower Gardens, also visited Congressman Gene Green, who is both a strong advocate of the sanctuaries and a pro-industry person. He said Congressman Green would be turning to the sanctuary program to provide more conservation and protection the Gulf in the future. Dr. Causey said he also met with Congressman John Barrow from Savannah, who he said was also concerned about marine conservation and oil impacts. Dr. Causey said, for a small program, we are continuing to build momentum, and that with 14 sites, there was a lot of geography, but that the program was small funding-wise. He said he was feeling some change, and thought Congress wanted to do something.

- On Saturday, Dr. Causey met with Tony Iarocci and others; the Gulf & South Atlantic Fisheries Foundation held a conference in Miami on fisheries and finding the way forward. He noted there were a lot of stakeholders around the table. Changes in the industry and unknowns with the oil blowout were topics of discussion, he noted. He said Roy [Crabtree] was there, and answered participants' questions well.

- Dr. Causey said they just received an 85-foot research vessel, SRVX. It was delivered to Port Everglades, and he said there was going to be an open house here, but as it was late, it had to be delivered to the *Monitor* National Marine Sanctuary. He said it is being shared with the Great Lakes region right

now, but eventually it will be shared up and down the East coast. He said there are already partners to use the vessel in the Beaufort and Charleston areas, and that more partners were sought.

- Dr. Causey announced that as part of his Executive Team duties he would be taking over the implementation of an enforcement strategy within the sanctuary system, which would be broken out into three years. He said he would be working with all the sites and would look for funding for all around the system. He concluded by briefly reviewing the law enforcement partnerships around the region, with NOAA Office of Law Enforcement (OLE), the U.S. Coast Guard, Florida Fish and Wildlife Conservation Commission (FWC) and others.

Agency Report Highlights:

Florida Fish and Wildlife Conservation Commission (FWC) Report -- Capt. Pat Langley, FWC and Mr. Sharp, FWC

Capt. Langley reported they were starting to make more cases on spearfishing, fishing in Sanctuary Preservation Areas (SPAs), and groundings.

- Lt. [Joe] Scarpa made a federal case in the Tortugas North Ecological Reserve on fishing and anchoring, which was settled (\$12,000 for fishing and \$5,000 for anchoring), Capt. Langley said.
- He said the oil spill was starting to affect FWC, and that Lt. Scarpa and Ed Maldonado were going to the Panhandle with their crews for ten days to relieve the crews on the big boats they use there, and he said officers from other parts of the state were being deployed to other vessels to All Terrain Vehicles on the panhandle. He noted FWC may have to send officers here in the future as the spills go on, and that these types of assignments may continue to November.

Mr. Sharp announced that Commission meeting was being held June 23-24 in Orlando. They will be hearing a few rule amendments pertinent to this area, bringing swordfish rules into compliance with federal rules, and also a rule amendment to allow harvest of lionfish in Pennekamp State Park.

- He reminded the group that the required shoreline fishing license was free to residents starting July 1.
- FWC has personnel at all the command posts, Mr. Sharp said, and he said one person from the Marathon lab was presently on call in Miami.

Florida Department of Environmental Protection (DEP) Report -- Kent Edwards, DEP

- Mr. Edwards noted there had been a lot of training and work related to the oil spill.
- On regular activities, he said dive safety training and OSHA safety training had been conducted.
- Mr. Curlett asked about an article in the *Miami Herald* describing inhabitants in the Card Sound Road area who been previously [living illegally in the area and were then moved out], who had moved to the Dade County side of the road. He said they were destroying mangroves, anchoring and coming in stern to, and putting a ramp to get to shore. He inquired what might be done about this.
- Mr. Edwards replied there had been a longstanding project in this area. He said would have to defer to FWC or John [Halas] to provide an answer.
- Mr. Halas said he had not heard of this.
- Capt. Langley said he saw an email that FWC was there about a week ago trying to address this, and had an officer from Homestead working in that area.
- Pete Frezza said he spoke with John Ricisak, with the Miami-Dade Department of Environmental Resources Management, and learned that Mr. Ricisak was organizing another cleanup there this summer.

National Park Service (NPS) Report -- Tracy Ziegler, NPS

- Dr. Ziegler reported that the National Parks in the region had been working collaboratively to plan for the oil spill and had been conducting baseline sampling.
- Chair Popham asked if sampling had been done in the Tortugas, and she replied that it had.
- Mr. Edwards said there were 34 sites that 18-20 individuals helped put together, using protocols for Natural Resource Damage Assessment (NRDA). Three were in the Dry Tortugas, he said. These were all

for water and sediment, and he said they were looking at protocols for other types of sampling. He noted NRDA sampling is a bit different from other types of research.

- Dr. Ziegler announced that the General Management Plan remained on track and was being reviewed internally.

South Florida Water Management District (SFWMD) Report -- Thomas Genovese, SFWMD

Mr. Genovese said the District's Emergency Operations Center had activated to level two, and had created an in-house, interdisciplinary oil spill task force, which was tasked with doing an assessment and running a number of scenarios for environmental impacts, storms, impacts to the District's infrastructure, potential responses, etc.

U.S. Navy Report – Edward Barham, U.S. Navy

Mr. Barham introduced himself as the environmental director at Naval Air Station Key West. He said that he was formerly with DEP in Marathon.

U.S. Environmental Protection Agency (USEPA) Report -- Patricia Bradley, USEPA

Mrs. Bradley said she had two updates on water quality criteria development in Florida: the USEPA extended the deadline for Florida to have nutrient criteria for coastal waters and would have a science advisory board review of the criteria, which would allow for public comment. She also said the coral reef biocriteria guidance document would be coming out in July.

Public Comment

There was none from the public.

Jon Fajans used this time to make a Sustained Ecological Research Related to Management of the Florida Keys Seascape (SEAKEYS) update. He said there was some funding interest from various agencies, and that the National Data Buoy Center (NDBC) recently committed to sending a team down in July to replace a communications package in the Tortugas that had failed to communicate with underwater sensors out there for last three years. NDBC also gave SEAKEYS an oceanographic buoy with oceanographic instruments that can be deployed near Sand Key Light. He said NDBC would fix infrastructure failures at Sombrero and Fowey Rocks lights and that they would switch out all the meteorological packages with recently calibrated materials. He said the monitoring station at Long Key would be down for a Coast Guard overhaul of the frame in July, then the entire monitoring package would be reinstalled. He said that Tennessee Reef site had been rebuilt, and had a suite of instruments on it including a crude oil spill detection sensor, compliments of the NOAA Atlantic Oceanographic and Meteorological Laboratory (AOML) in Miami. He expected that in a week or so the proprietors of the data would make them public.

- Chair Popham asked Dr. Causey about SEAKEYS and headquarters long term funding.

- Dr. Causey said it would have to come through Congressional action as they did not have the funding at ONMS headquarters.

- Mr. Grathwohl said he thought British Petroleum (BP) should be paying for monitoring, and that this was something that could be brought up later.

Dry Tortugas Research Natural Area (RNA) -- Dave Hallac, National Park Service (NPS)

Mr. Hallac said he had a three year report on the progress of the science plan for the Dry Tortugas RNA [which he provided to the SAC after his presentation]. He commented that Dr. Ziegler had mentioned some things related to the oil spill, and he added that they have a five-park incident team; that baseline samples of water, sediment and other resources had been taken throughout the parks so they could document no impact prior to any oil that might arrive; and that they were working on response plans. He noted that Dan Kimball was now the Department of the Interior Representative at the ICS in Miami.

Mr. Hallac said the Dry Tortugas RNA has been in place since 2007, and was a partnership between the NPS and FWC. He said he was presenting a three year progress report on the RNA. Dry Tortugas NP is 70 miles from Key West, and the RNA there provides for a variety of different science-related opportunities; it is no take and no anchoring area. Mr. Hallac said over half of the park was still open to recreational fishing, but that there was no commercial fishing, no spearfishing, and no lobstering in the Park.

In 2005, he said the FWC reviewed the proposed draft special regulations for the Dry Tortugas RNA, and 95% were in support. He said there had been a disagreement over who owned the submerged lands, and a lands management agreement was developed to “agree to disagree” as both agencies wanted to do the same things with the RNA. In 2006, the final special regulations were announced in the *Federal Register* and concurred on by the Governor and Cabinet, and they went into effect in January 2007, he said.

The NPS and the FWC approved the Memoranda of Understanding for the RNA in 2007, which specified that they had to engage in a number of science and research activities. He said an RNA science plan was developed with a lot of people in this room and there was a public workshop to review the plan, with the final plan completed in 2007. The topics in the plan are: quantifying changes in abundance and size-structure of exploited species; monitoring the immigration and emigration of targeted species; monitoring changes in species composition and catch rates of exploited species throughout the region; monitoring species composition and abundance of the benthic community; assessing reproductive potential of exploited species by evaluating egg production and larval dispersal; and incorporating social sciences into the research and monitoring program. Eighteen science and resource projects have gotten underway since approval of the science plan to demonstrate the efficacy of the RNA, he noted.

Mr. Hallac said Topic 1 had three projects, with Jerald S. Ault the principal investigator of the first one, which is a fishery independent visual assessment of resource status of the reef fish community in the Dry Tortugas National Park. The second project, led by Theodore S. Switzer, is examining the efficacy of the newly established RNA for protecting coral reef fishes within Dry Tortugas National Park. The third one, also led by Dr. Switzer, is a characterization of fish assemblages associated with seagrasses within the newly established RNA and adjacent open-use zones at the Park.

Topic 2 is on immigration and emigration of select fish species in the RNA, Mr. Hallac said. One project is led by Michael W. Feeley, on fine scale and net migration patterns of selected reef fish species from the RNA to adjacent fished areas in the Park region. Another is led by Nicholas A. Farmer, and is on reef fish movements and flux around the RNA. The third is on the use of protected areas by threatened and endangered marine turtles in the Dry Tortugas, and is led by Kristin M. Hart. Mr. Hallac said this is not the main focus of the RNA, but that she has highlighted the importance of marine reserves locally and regionally.

Mr. Hallac described that Topic 3 looks at benefits extending to fishermen inside the park and outside, and that an extended creel survey for the Park was in development (led by Dr. Ault). He noted that a vessel permit system has been instituted within Dry Tortugas National Park (led by Dave Walton).

There are four projects under Topic 4 looking at benthic ecology, Mr. Hallac described. Douglas Morrison is assessing the effects on corals of SCUBA and snorkeling use at RNA designated (mooring buoy) dive sites; Jeff Miller is doing coral reef community monitoring at Bird Key Reef and sites inside and outside of the RNA; Ilsa B. Kuffner is looking at trophic relationships on coral reefs of the Park, inside and outside of the RNA; and Mr. Morrison is assessing the effects of creating the RNA no-anchor zones on seagrass meadows.

Topic 5 looks at larval reproduction and connectivity and dispersal throughout the region, Mr. Hallac said. Dr. Switzer is looking at the reproductive potential of some exploited reef fish; Dr. Feeley is looking at immigration and emigration of select reef fish species in the RNA and between the RNA and the ecological reserves, Dr. Ault is looking at larval transport throughout the region.

Topic 6 is on the social sciences, Mr. Hallac said. He noted David Loomis is doing a survey of visitor demographics, attitudes, perceptions, and experiences in the Park; Mr. Walton is working on law enforcement in the RNA; and David L. Conlin is doing a shipwrecks condition assessment study, due to no anchoring, etc.

Mr. Hallac concluded by inviting everyone to the Linking Science to Management conference and workshop on the marine ecosystem of the Florida Keys, which would be a tribute to Brian Keller. Mr. Hallac said he was working with Mr. Hunt on this, and that it would be October 19-22, 2010 at Hawk's Cay. He said he would have a five year report, with lots of results, in two years.

Council Discussion, Questions and Answers on Dry Tortugas Research Natural Area -- Dave Hallac, National Park Service, Mr. Sharp, FWC, and SAC

- Mr. Moe asked if results from this research might be able to be used to document damage from the oil blowout.
- Mr. Hallac said the information would help in documenting baseline conditions and they would have a good restoration target.
- Mr. Moe said he was particularly concerned about cryptic benthic ecology and planktonic forms since it is generally unknown what happens to them and impacts of the oil blowout on the ecology of this area.
- Mr. Hallac said they did not have strong ichthyological sampling, and most of what they had now was models, but he mentioned that a researcher at the Fish and Wildlife Research Institute might be able to help on cryptic fish monitoring.
- Mr. Grathwohl said the ghost of Peter Gladding tapped him on the shoulder and said "I told you so" on migration patterns.
- Mr. Nedimyer asked if they had a policy on lionfish.
- Mr. Hallac said he believed they would try to control them. He said they may have five staff members at the most at any given time at the Park. He added Chris Ziegler had played an active role working with the Reef Environmental Education Foundation to develop a strategy, but they were not there yet.
- Mr. Trice asked how long this research program was, who had paid for it, and confidence about the budget for the research program being safe.
- Mr. Hallac said that much of the funding for the program was soft money, gained from submitting proposals, and that they had gotten a substantial amount of money from Kacky Andrews/the NOAA Coral Research Conservation Program (CRCP). Also, without the FWC and U.S. Geological Survey partnership, he said there would not be a research program. He said that the NPS was taking marine reserve planning and monitoring seriously, and they did just get a small base funding increase. However, he said they may not want to do all this research forever; the funding for the research was well over a million dollars, and not all of it may be needed. For example, he said some of the frequency of monitoring might be reduced.
- Dr. Causey asked how many on the SAC were involved in the Tortugas 2000 Working Group, and four people raised their hands. He said that Working Group was stood up in September 1998, and the NPS was a part of that. Monitoring began in the Tortugas Ecological Reserve and in the region, with Dr. Ault's and Jim Bohnsack's monitoring beginning in 1999, he said. He noted that in those meetings people stressed the importance of the connectivity between the nursery and spawning areas and the shallow areas where the fish grow up. Dr. Causey said there was equally great success to what is happening in the RNA in the Tortugas Ecological Reserve, and they have shown that this tool works. After some additional remarks, he Dr. Causey suggested that a letter to Ms. Andrews from the SAC to say thank you for all the

NOAA CRCP has done for research both in the FKNMS and in the Dry Tortugas would be extremely warmly received.

- Mr. Hallac commented that they had a bit of a gap in funding and they had called Ms. Andrews to see if she could help them out and she gave them that and then some, so that was wonderful support.

- Dr. Causey said the CRCP had kept [sanctuaries] afloat with much of the research, and that Ms. Andrews did a great job with the CRCP funding.

- Chair Popham said it was a good suggestion, and that, with the SAC's pleasure, he would be happy to draft and send something. He noted that Ms. Andrews formerly was part of DEP. *ACTION ITEM*: Chair Popham to draft and send a letter to Ms. Andrews on behalf of the SAC, expressing the SAC's appreciation to the NOAA CRCP for its support of research in the FKNMS and in the Dry Tortugas.

- Chair Popham asked for some anecdotal observations from Hallac, who said he did see a lot of big fish out there.

- Chair Popham asked if this information would be going to the Cabinet.

- Mr. Sharp said this was delivered to the Commissioners at their April meeting, and that they would be updated again at the five year mark.

- Mr. Grathwohl asked about feelings of the Governor, and Mr. Sharp said he was not sure, as he was not in that shop anymore and did not have that close of contact.

- Jason Bennis asked about the vessel permit system, and if it was being implemented within the five year time frame.

- Mr. Hallac replied that a database system had been developed and was in the process of being implemented. He said they hoped to use in a few months on the Dry Tortugas web site for boating, reserving designated dive sites, and perhaps for reserving camping sites.

Management Plan Implementation -- Mr. Morton, FKNMS

Regarding the marine sanitation device regulation for no discharge in the FKNMS, Mr. Morton mentioned that comments had been received, and that the FKNMS staff was working with ONMS staff and General Counsel attorneys on distilling them down and, in typical National Environmental Policy Act fashion, working on the response to comments process. Then, we will have discussions with the ONMS staff and senior leadership on any changes to the proposed regulations. He thought there may be some minor tweaks as there were a lot of good comments.

On marine zoning, he said he has continued to try to push forward to get that process started, and had talked to the CRCP folks and the Biogeography team. There is a proposal that will be submitted next year for funding for a high-level biogeographical analysis of the entire Florida reef tract. The Biogeography team will send some scientists to start on some of that mapping work. He said this was in anticipation of kicking off a policy/regulatory process. He noted FKNMS would be working with SAC, and that he wanted to be sure the SAC all of the information and data in front of it, collected in the Keys and up the Florida reef tract. This will include an overlay of some of the different management regimes that are in place right now, and looking at opportunities for changes, if some changes are necessary. The *Condition Report* for the FKNMS is another component of the baseline data. Mr. Morton noted it was close to being done, but the staff lead on it, Scott Donahue, had been pulled off on put on oil spill response. He added that with Brian Keller's passing, FKNMS had gotten a bit behind on the ten-year monitoring report. He said it had not left his mind, and there was a lot of interest with moving forward with it, per discussions he had with ONMS headquarters folks. He said we needed to get the funding, resources, and staff here, including a project manager and GIS staff (which the Biogeography team would help out with), and that the CRCP was interested in investing in that process. He added that the oil spill was tapping a lot of NOAA resources, especially on the mapping side.

Chair Popham thanked him, and wondered about fall to kick some things off for management review. Mr. Morton replied he was looking at the fall for some of those documents to have those discussion, and that the symposium would be an important marker. He hoped to have the *Condition Report* available then.

Chair Popham announced that he and Mr. Morton would be speaking to the Islamorada Fishing Club the day after the SAC meeting, discussing management and other topics.

Report on SAC Summit 2010 – Ms. Ferguson and Dr. Causey

Chair Popham noted he was unable to go to the SAC Summit at the last minute, but that Ms. Ferguson and Dr. Causey attended.

Ms. Ferguson provided a brief overview of the meeting, which took place May 11-13, and was hosted by the Olympic Coast National Marine Sanctuary. She noted that the meeting was attended by SAC Chairs or another SAC representative; SAC coordinators; the ONMS Director, Dan Basta, ONMS Regional Directors, and national ONMS staff members; an Intergovernmental Policy Council member, the Executive Director of the NMSF, and a representative of the Gully marine protected area (Nova Scotia, Canada). Some key topics were the state of the ONMS; climate change, advisory councils and the sanctuary system; a Council chair dinner with Dan Basta; regional cross-pollination between councils; and a potential sanctuary community mini-grants program.

During the state of the ONMS, she said Dan Basta hit on a number of issues, including ocean acidification and how all the SACs had passed resolutions on that; the West Coast Task Force; energy and the economy; cultural engagement and ONMS reaching out to build larger constituencies; coastal and marine spatial planning and SAC's involvement; attacks on SACs from a few individuals critical of member turnover and SAC members' knowledge of science; the possibility that ONMS may be instituting a policy for term limits for appointed SAC members and alternates; the fact that the administration is proposing a \$4 million increase in 2012; the need for the National Marine Sanctuaries Act to be reauthorized and the possibility for SAC Chairs to participate in a call with Congresswoman Lois' Capps office; and the idea that one way to build a bigger constituent base for the Sanctuary system is through new sites.

The climate change session covered a lot of ground and had multiple objectives, Ms. Ferguson noted. Some key points were that climate change is an opportunity for sanctuaries to serve as sentinel sites; NOAA is creating a Climate Service; the West Coast region's Ocean Acidification Task Force has had one meeting and will meet monthly via telephone; and Climate Smart Sanctuaries is one way that ONMS is addressing climate change. Regional breakout groups brainstormed input on questions such as challenges observed in the region, and challenges and strategies for engaging SACs, engaging constituencies.

The potential mini-grants program was raised as an idea by Dan Basta, in the context of grants to the recreational fishing community. In discussion, the group agreed that was an important constituency, but it might not make sense to single out just one community. Lots of input was received, and it remains to be seen where that idea will go in the future, Ms. Ferguson said.

Ms. Ferguson reviewed that the SAC Summit also included site specific presentations: an overview of the Olympic Coast National Marine Sanctuary, strategies for identifying community priorities and marketing for the Hawaiian Islands Humpback Whale National Marine Sanctuary, the Channel Islands National Marine Sanctuary's work on addressing ship strikes on endangered whales, and cultural engagement in management plan review and other issues at Fagatele Bay National Marine Sanctuary. There were also opportunities for socialization and information-sharing during meals and breaks, a NMSF reception, and on a field trip to the Makah reservation.

Ms. Ferguson noted that council coordinators and ONMS staff members met for an additional two days after the SAC Summit to discuss internal items related to running the SACs. Finally, she said plans were being made for Gray's Reef National Marine Sanctuary to host the 2011 SAC Summit.

Dr. Causey then talked about the Southeast Region breakout session held during the SAC Summit, noting who was there: Larry McKinney, the Chair of the Flower Garden Banks SAC; Jennifer Morgan, the SAC coordinator for the Flower Garden Banks; Clark Alexander, the Chair of the Grays's Reef SAC; Becky Shortland, the SAC coordinator for Gray's Reef; and Ms. Ferguson, the SAC coordinator for FKNMS. The idea of the breakout was to discuss issues of concern and connect within the region, he said. The Southeast Region does a quarterly conference call, Dr. Causey noted, and on the first call the group came up with a list of common things to work on: climate change/ocean acidification, ocean observing systems, marine spatial planning, lionfish, and National Marine Sanctuaries Act reauthorization.

During the breakout group session, a lot of time was spent talking about ocean acidification; there will be a public discussion on the topic in Texas, Dr. Causey said. The Flower Garden Banks has oil rigs within its boundary, and its SAC has oil and gas representatives. Dr. Causey said the public discussion on ocean acidification was going to be partly funded by Dr. McKinney, and that the ONMS region was willing to fund part of it. He mentioned who was lined up to speak already and that they were working on another speaker. He said that he asked the folks from that SAC to come up with names of folks who had done peer-reviewed science against ocean acidification, but they had not come up with any yet. Dr. Causey said the breakout group also talked about ocean observing systems and the existing state of them in the region's sanctuaries and desired upgrades such as a CO2 sensor at all sites. The breakout group also talked about lionfish, marine spatial planning, and connectivity among the sites in the region. Lionfish have not yet shown up at the Flower Garden Banks, he said, and Gray's Reef has had one sighting reported within the sanctuary.

- Ms. Garlo asked about the status of the National Marine Sanctuaries Act reauthorization bill.
- Dr. Causey replied that it was not moving, though it had been discussed with Congressional staffers. He said that perhaps when it became more of an issue within the agency or the administration, then it would move.
- Chair Popham said he participated in a two-hour conference call with Congresswoman Capps' office and about 11 SAC chairs, and that a draft of the bill was out, which they discussed on the call. He thought she would be pursuing it and that she had other cosponsors to sign onto it. Some things they talked about were adding education and outreach to the mission statement, funding, site expansion, and a review board. He said all the chairs said it should be a National Advisory Council.
- Dr. Causey commented that he thought the matter would have had a better chance prior to April 20, but now the attention was elsewhere, and that interest in the bill was needed in the administration as well as on the Hill.

New Bleaching Monitoring Products from NOAA Coral Reef Watch -- Tyler Christensen, I.M. Systems Group/NOAA Coral Reef Watch

Dr. Causey introduced Ms. Christensen. She is a contractor with NOAA Coral Reef Watch and normally works in Silver Spring, but has temporary office space at FKNMS for six months. Coral Reef Watch is part of the satellite service at NOAA, and the goal is to provide useful tools for conservation of coral reef ecosystems, linking satellite data to management.

Ms. Christensen said that most of a coral's food comes from photosynthesis, and when corals are exposed to high temperatures and high light, they eject their symbiotic algae and lose their food source. They are then stressed, and if the stress lasts a long time, they may experience mortality. She said temperature was one of the things that satellites routinely measure, and they want to start looking at if the temperature is unusual or average for a given time of year.

On an experimental basis, they use the temperature information to see if coral might be stressed, if that could lead to bleaching, and where the bleaching might occur, she said. They are looking at hot spots and at a degree heating week product, which adds up stressful temperatures over three months. NOAA Coral Reef Watch provides a free email alert status to coral reef managers, which is similar to hurricane alerts.

The program has almost 200 stations for coral reefs around the world, and there are 16 pixels around the Florida Keys region, she said, which allows users to focus on what is happening there. She said she thought this was the third season for the experimental bleaching outlook. She stated they have taken a sea surface temperature forecast to do a forecast over the next couple of months of bleaching potential, noting that they are just learning how the product behaves and how much they can trust it. She provided graphics of what is happening now in the region, and said there was potential for bleaching right now is along the Panama coast; there is the potential for bleaching in the coming months in the Florida Keys.

Since coming to Key West, Ms. Christensen has been working on a product that is not out yet. There is a weather forecast the National Weather Service Key West office produces daily, and several of the factors they report on can be useful to forecast coral bleaching, she noted, including low wind, sun, low waves, and tides (which may or may not be important). She said if they are able to come up with a bleaching weather outlook, the Weather Service would include a bleaching forecast as part of the normal forecast. An airport weather station is needed to get the correct cloud data; they used the cloud fraction from the Key West airport and water temperature data from the Sombrero Reef SEAKEYS station. When clouds are low, she said the water temperature was higher, and when clouds are high, the water temperature is lower. She noted bleaching is caused by high water temperature and high light, and that weather conditions of low wind, lots of sunshine, low waves, and possibly low tidal range set up bleaching conditions.

She simulated a seven day outlook forecast using buoy data from the summer of 2005, cloud and wind data. The simulated outlook and the daily temperature change resulted in a weekly temperature change. They asked the question, when the bleaching outlook was high, was the temperature high? She said this was showing some promise. She said they would work with the National Weather Service forecast office, and hoped to have the product on the Weather Service web site by July. She concluded by saying she hoped it might also go out on the NOAA weather radio.

Council Discussion, Questions and Answers on New Bleaching Monitoring Products from NOAA Coral Reef Watch Presentation – Ms. Christensen, I.M. Systems Group/NOAA Coral Reef Watch and SAC

- Mr. Moe asked if Ms. Christensen had plans to ground truth the bleaching forecast with things such as Mote's observations of bleaching.
- Ms. Christensen said she did plan to do that, noting that she is an ecologist by training, but not a forecaster. She hoped to get a forecaster to assist with this, and wanted to use Mote Bleachwatch and Florida Reef Resilience Program data for a season. If the ground truthing then shows promise, she would want to extend the forecast to other regions.
- Mr. Moe asked if salinity was considered in the bleaching forecast, and wondered if that was a causative factor or not.
- She said she knew of where low salinity after a rainfall had caused bleaching, but that was not something that was currently measured by satellites, and that the National Weather Service did not include salinity in its weather forecast. Fine scale data would be needed in order to plug it into the forecast, she said.
- Mrs. Bradley wondered if this could be done for cold events as well.
- Ms. Christensen said they have been talking about doing this for a while, but a cold event is a much rarer event. Due to the recent cold event, the idea is working its way back up the pile again, she said.

- Mr. Fajans asked how this product differed from AOML forecasts.
- She said they have been in contact with that group, and that they want to do a forecast that is site specific from their buoy, while NOAA Coral Watch is interested in regional and/or global scale. She said they can learn from each other.
- Dr. Causey noted that it was not possible to have C-MAN stations everywhere, and Ms. Christensen added that the Florida Keys is well-instrumented compared to other places, and that one strength of satellite data is global coverage.
- Mr. Grathwohl pointed out that in the summer, cloud cover at the Kew West airport could be different from cloud cover over the reef. He added that in Florida Bay, there were issues with the water being hypersaline and with temperature spikes.
- Ms. Christensen mentioned forecasts were done over land and over the reef, and that the cloud cover she had talked about was broad scale. She said she was doing experiments with in situ data, and she felt data problems should be taken care of once the product moved to the National Weather Service forecast.
- Dr. Causey mentioned the Bleachwatch program used a lot of the remote sensing products NOAA Coral Reef Watch produced, and that they are also looking at hot spots for ocean acidification and other things such as light.
- Ms. Christensen said the cause of coral bleaching was light, but that elevated temperatures make the corals more sensitive to light.
- Mr. Fajans asked if she had light data from SEAKEYS, and she said she did. She said there was interest in using it, but that the sensor needed to be cleaned nearly daily to get good measurements, so they are working on that.
- Jerry Lorenz asked what this information gets us in terms of what to do if we know in advance bleaching will occur.
- Ms. Christensen said that it was their job to deliver the information, and hoped it would be useful to sanctuary managers to take it and do something with it.
- Dr. Causey mentioned the need to take data and be more predictive. He felt two of the values of this were that people would believe it [coral bleaching] more, and that it was a huge outreach tool.
- Mr. Bennis said that Everglades and Dry Tortugas National Parks staffs identified when they need to close area seasonally, such as for nesting. He asked if managers have the tools, or are developing them, to offset predicted bleaching.
- Mr. Morton said that was right, and that they were looking at global stressors on the environment. He said that usually, damage was from cumulate impacts, from factors such as physical damage to discharges, and that it all feeds into the management discussions that would probably take place as part of the zoning review. He said temporal changes could be considered, and that maybe large zones need to be restricted from things that damage the reef tract during the bleaching season.
- Dr. Causey added that FKNMS had the ability to do emergency closures, but a lot of data was needed to do that. He added that voluntary compliance, such as going to dive shops and asking them to voluntarily stay out of a given area for a period of time (for example, because corals are susceptible to diseases when bleached), had been used in the past.

Deepwater Horizon Oil Spill Response -- Capt. Pat DeQuattro, United States Coast Guard (USCG), Irene Toner, Monroe County Office of Emergency Management, Lisa Gordon, DEP, Scott Donahue, FKNMS

Chair Popham noted there would be a public comment period at 2:30, and that people should fill out the public comment forms at the back of the room and provide them to Ms. Ferguson. Also, he said he wanted to recognize Representative Ron Saunders, who was in the audience; he appreciated his being at the meeting.

Mr. Morton said the FKNMS staff had been pretty busy over last two months since the Deepwater Horizon spill, both on preparations for response to the spill and for NRDA monitoring. He noted that NRDA had not been heard about a lot; there is a whole separate process going on to understand the

pollution in the gulf, and there is a framework for understanding impacts and what the restoration would be, he said. He has been part of the Unified Command (UC), part of the ICS, he said. He noted that, with some tarball incidents, they had a couple of practice runs in the last few weeks. He said that Capt. DeQuattro would explain what has been going on over the past couple of months, how the ICS works, and how the response has been going to get the spill oil correctly cleaned up, and he mentioned the other speakers would then follow.

Capt. DeQuattro, of the USCG's Sector Key West, mentioned the surge in pollution reports since tarballs came ashore at Fort Zachary Taylor on May 17. They established a UC following their Area Contingency Plan (ACP), to respond to the tarballs and clean them up when appropriate. All actions were funded through the oil spill liability trust fund, he said, and none of those tarballs were linked to the Deepwater Horizon incident. There were over 100, and no responsible parties have been identified. He also reviewed that in February, they held a major pollution response exercise, with the scenario of an event in the ship channel; a UC was established, and they worked on tactics and messaging. Finally, they had a report of an oily sheen that had tarred a boat off of Hawk's Key, and a boom was placed around the dolphin research facilities. The source of the spill was not identified but the UC was used to respond quickly to this very small spill.

The USCG, NOAA, Department of Interior, DEP and Monroe County have been the core of the UC, Capt. DeQuattro said. Preparations continue for a Deepwater Horizon event which may or may not impact this area, he said. No fresh tarballs have been seen, he said, and in many cases, singular tarballs have been reported. He said they would continue to respond to each of the reports. Lessons learned and team coordination are helping them to prepare for response to the Deepwater Horizon event and what the pollution threat might look like if this region is impacted, he noted.

The ACP did not include an annex for tarballs, or information on incidents that occurred hundreds of miles away, he said, so the plan is being adjusted. He said a strong team of scientists comprise the environmental unit, which is informing the UC, and the strategy will be to deploy the right resources at the right time. The ACP is built on the premise that we do not have all the resources needed in the Keys, but we will reach out to obtain them if needed. They are tied into the Florida Peninsula Command in Miami, he said.

Capt. DeQuattro said the USCG had three vessels, managed from Miami, getting out to the areas of the NOAA trajectories to sort through and verify what may be 200-300 miles away from this area. In addition, he noted aircraft and satellites were also being used to verify what the science trajectories are saying. This will help with strategy and with refinement of the plan. He said the loop current status and detachment of the eddy was good news, but that the current situation changes. In the plan, he noted that each area of the Keys was broken down with sensitive areas, booming strategies, etc., with a team assigned to each zone. He said that the NPS had been instrumental in getting contractors out to the sites and in ensuring cleaning does not damage resources more than necessary. He mentioned a countermeasures matrix for pollution threats to the different shoreline types, and that this tool and others would be used to decide upon the right course of action, using a scientific approach to cleanup.

Finally, Capt. DeQuattro noted that BP had established claims offices, and that the USCG had willingly brought them into the UC, in case the Deepwater Horizon oil reaches the Keys. He added that that boating community, mariners, scientists, etc. are important for reporting so timely action may be taken.

Ms. Toner said it was an honor to be part of UC and to provide any assistance at this event. She said her role was to be a liaison between UC, Monroe County, other municipalities, and the state of Florida. She said she was also keeping communication open with the Tourist Development Council (TDC), as it was important to keep the tourist industry and people looking to come to the Keys informed. She said they are

posting federal, state, and county actions on a website, updated every day. They also forward information to the USCG. The County also recognizes that volunteers are a big issue, and that residents want to be proactive. She said keeping beaches clean was important. The County is trying to bring everyone together, and a lot of organizations are doing things on their own; she said the best thing was to work together and communicate. She reiterated that Monroe County Emergency Management was working to keep the Commissioners, County Mayor, agencies and the public informed. She briefly described the Century program. Finally, she said some people had made accusations of a conspiracy, and that information was being hidden, and she said that was not the case. She said everything they knew was made available, and that people could also call the department with questions.

Mr. Morton commented that the SAC is also a liaison and that is part of the purpose of the afternoon session of this meeting, to liaison out to the community. He added that people could come to the FKNMS staff or himself with questions.

Ms. Gordon said she was one of 23 responders statewide and the only one in the Keys, for the DEP Bureau of Emergency Response. She noted her agency was the lead state agency, and that she was the representative in the UC. Sometimes she wears other hats in the UC as well, and she works with the CG, FKNMS and others, and serves as a conduit of information among partners. She said she was impressed with the knowledge of the people who came together on this incident. A lot of planning and effort has gone into the Sector Key West ACP, she affirmed, and she said the tarballs were good for activating the ACP and using the UC. She said the response for the panhandle was being coordinated out of Mobile, the response for mainland Florida was being coordinated out of Miami, and the center in Tallahassee was activated and running full tilt. While there have not been a lot of volunteer opportunities, she said there is a website, volunteerflorida.gov, which funnels people to keysspill.com; she said and BP also has a volunteer website, and she encouraged people to get registered.

Mr. Morton introduced Mr. Donahue, of the FKNMS staff. Mr. Donahue is leading the environmental unit, which is providing information to the UC that helps in deciding what response method to use, Mr. Morton noted. Mr. Morton said there were different alternatives to address oil in different environments, in mangroves, response for turtles, etc., and all were available online.

Mr. Donahue said he was one person who takes the consensus of a group of experts and feeds that into the greater chain of the planning cycle, to inform the USCG. He showed the group the first volume of the Florida Keys Area Contingency Plan, and noted there was a second volume, which contained the Environmental Sensitivity Index and the response plan. He said there was a map with cells depicting the different regions and strategies for them. The environmental unit takes what is already in the plan, then provides additional feedback, he said. The unit is a small community of experts, comprised of resource managers and trustee reps, FWC, FDEP, USFWS, NPS, and NOAA. NOAA has a Scientific Support Coordinator, Brad Benggio, who is assigned to work with the USCG on spill-related pollution, Mr. Donahue said.

Mr. Donahue reviewed how the unit had been responding to reports not involved with DP event, and said there were 22,000 ship transits past this area in a month. The ACP did not address whether booming was the appropriate response for tarballs, and boom is not always the most effective tool, he said. Tarballs can sink below the boom skirt. He said they wanted to avoid unnecessary booming of particular areas, as booming could damage areas such as hard bottom and seagrass, and could potentially become marine debris.

Mr. Donahue showed a shoreline countermeasure matrix, which they use as a decision tree. It shows the sensitivity of a particular habitat to oil; he said the most sensitive is mangrove habitat. One of the first countermeasures is no action, and then there are other recommendations; the recommendations help the

UC to make operational and other decisions. The ACP was developed to respond to smaller types of spills than what occurred with this spill, he said. He noted that the entire region of the plan was being looked at, rather than just one or more cells. He also asked people to bear in mind that if the oil reaches this area, it is expected that it will be in weathered tarballs, and not like the oil washing ashore in Louisiana.

BP Presentation – Spill Response and Community Communications -- Mark Stultz, BP

Mr. Stultz said BP was approaching this threefold: near the source, nearshore, and onshore. BP is looking to do everything it can to support the UC structure and is applying all appropriate resources to this effort, he said. He mentioned there had been 37 hours of controlled burns at the surface and they were collecting oil through the “top hat” device at the source; 150,000 barrels had been collected in total since the spill, he said. He said the most important thing was to capture as much oil as possible near the source, and to escalate the amount being collected. He hoped more would be collected through the facilities and through the risers as they were deployed, he said.

Mr. Stultz said BP recognized there were community consequences and economic impacts, and he said BP had set up two claims offices. People could obtain claim numbers there if they do not already have them; he recommended bringing tax returns or other documentation of previous and lost income. He said claims could be associated with loss of income from the fears to date of oil in Florida as well as oil actually washing ashore. He mentioned how much had been paid out in claims in the state: \$8.4 million. He also said people could volunteer to be a tourist here, and that BP was working to get that message out.

Mr. Stultz said that BP had an established a series of professionals, similar to those in the UC, trained in public affairs, response, etc., so they could get the right information to the media and the community, and that they were working with the UC. He said he didn’t want to have the perception that the Keys were at risk when everyone was saying that the risk here was low. He said the local media knew how to access the BP public affairs people.

BP also has programs ready to go to address further economic impacts, such as vessels of opportunity, which will be activated if the threat level changes, Mr. Stultz said. With that program, he said some training would be necessary, depending on the type of service the vessels would do; there would be a minimum of four hours of training, or more, depending on the needs. BP has also had discussions with the Florida Keys Community College about continuing to use their facilities for training, he said. He said BP would provide training at no cost to the community, and if, needed, could provide protective equipment for shoreline and offshore. He said they wanted to make sure they get the right training for the right task in the right place at the right time. Mr. Stultz said, should it be needed, BP also has a qualified community responder program for people who need work, for shoreline operations. BP would train them. The vessels program is for captains and crews, he said.

The volunteer program run by the state was a good place to start for those wanting to volunteer up front for beach cleaning where there is no oil, or as support to responders, Mr. Stultz said, noting that volunteerflorida.disaster.org was a good place to go. He said he would be happy to answer questions, and would work to get the answers if he did not have them, and to advocate [for the community] up the UC and BP chain.

Council Discussion, Questions and Answers on Deepwater Horizon Oil Spill Response and BP Presentation -- Capt. DeQuattro, USCG, Ms. Toner, Monroe County Office of Emergency Management, Ms. Gordon, DEP, Mr. Donahue, FKNMS, Mr. Stultz, BP, and SAC

Discussion ensued.

- Mr. Grathwohl said he felt for the fishermen of the Gulf coast who were out of business, and that the wolf was at our back door. He felt the use of dispersants in the gulf was despicable.

- Clinton Barras mentioned some of the things he had heard about dispersants, and said he was not sure why they were being used. He asked about dispersants breaking up the oil and making it sink.
- Mr. Stultz said he was not qualified to answer this, and would defer to the environmental community, but that he would work to get the answer.
- Ms. Gordon said she was not part of this decisionmaking, but that everything was a tradeoff.
- Mr. Donahue also said it was out of his league.
- Mr. Morton said this was a decision made at the command level where the spill is and that a consultation takes place among the federal agencies, the state, and the responsible party, and that it is a tradeoff. He said that the effects from using dispersants were still being studied. They are dispersing oil into the water column instead of having oil possibly come ashore on the shoreline. He said these decisions are constantly being thought out and re-thought out. Mr. Morton also noted that CDR David Score was driving one of the vessels out there trying to collect information.
- Mr. Barras said he was not sure what made it beneficial.
- Mr. Morton said it disperses oil into the water and increases microbial degradation.
- County Mayor Pro Tem Heather Carruthers asked for the URL to go for the documents mentioned.
- Mr. Morton said to go to noaa.gov, where it was a big part of that web site, with tools, updated forecasts, trajectories, and fact sheets about resources.
- County Mayor Pro Tem Carruthers asked Mr. Stultz about using local contractors, and said it was a unique environment here, with which people may not be familiar. She also asked if BP or someone else made the decision on who to engage.
- Mr. Stultz replied there was a bias to employ local responders, and that he saw the state of Florida was using 90% Florida people for the response. He said there may be some highly technical contractors that may not be from the state. Actual deployment locally would be a UC decision, led Capt. DeQuattro, he said.
- County Mayor Pro Tem Carruthers asked about the status of the two reliefs wells.
- Mr. Stultz reported that drilling continued at both relief wells and that he had not seen a timeline change from the beginning of August. He noted BP wanted to make sure they do both wells safely and right.
- Mr. Moe said there was no oil in the environment here as yet [from BP], but that it seemed inevitable. He wondered if there were any estimates as to when we might see oil products in our environment.
- Capt. DeQuattro replied that there was no estimated timeframe from Deepwater Horizon as of yet, but that the USCG responded to oil reports every day. He added they were continuing to try to verify and confirm what type of pollution was coming from the source at the Deepwater Horizon site, and that there were sheens and tarballs from the source. He said oil can weather and can sink, and becomes no longer visible, which was one of the most frustrating parts of this process.
- Mr. Moe said it seemed to depend on when the currently pinched loop current changes, and if the current brings it here.
- Capt. DeQuattro said that was good news for the Keys. He added that the oil breaks down, but is still out there.
- Mr. Frezza commented a tropical storm event could bring the affected water to our area.
- Don Kincaid said he was here in 1979 when the Ixtoc well blew out, and he thought it took about four months for the oil to get here, but that it was almost entirely tar balls. He recalled that they blew through [and were gone] in about two weeks.
- Bob Holston said he was in DC last week, where it was discussed there was a lack of accepting help from outside the area, such as the French offering to clean marshes, and he had been told the decision was deferred to BP.
- Capt. DeQuattro said he thought that would have up to the UC to consider this and make a decision, as they make operational decisions. He said Norwegian boom was brought in near the source, and they are bringing other outside resources to bear.
- Mr. Trice commented he was feeling better now than when the meeting started and that it was better news than he thought he would hear. On tourism impacts, he said he had heard money was coming to the Keys and wondered if it could get into the TDC's hands.

- Chair Popham asked Commissioner Neugent to respond.
- Commissioner Neugent said the TDC executive director was on top of this, and was getting out the message to people to come to the Keys. He said the TCD was mapping out strategies.
- County Mayor Pro Tem Carruthers said the TDC had a camera at Ft. Zachary Taylor and was getting information on the website about the waters still being clean and usable. She said they requested \$400,000 from BP and were waiting to hear about it from the Governor.
- Chair Popham noted that Ms. Toner had said she was reporting daily to the TDC.
- Dr. Causey said Andy Newman had been getting the word out on this, and that it was an issue getting the word turned around. He said there were similar problems on the Gulf Coast, where some parks were still open.
- Bruce Frerer asked about the deep oil. He did not think it could weather unless it surfaced.
- Mr. Morton noted on the NOAA web site there was an article about looking for the plumes, and that there had been an erroneous article in the New York Times on this.
- Capt. DeQuattro stated the UC across the Gulf was trying to use the best science and best sensors to figure it out.
- David Hawtof asked about cancellations of guides, commercial fishermen and hotels.
- Mr. Grathwohl said, for them in the Keys, it had been low, as the oil was not here yet, but that they had been ambassadors. He said he had only one cancellation, and it could not be determined why.
- Rob Mitchell said he hadn't had cancellations [in his dive business], but that they do not have reservations long term such as for July and August.
- Mr. Holston said he refunded money during the first two weeks of the spill. He noted last year during May they had the Vandenberg [so it was difficult to compare the amount of business to May this year].
- County Mayor Pro Tem Carruthers said she had had some cancellations in the hotel industry, but that the phones were not ringing as they should be.

Public Comment

Ed Russo said he was with the Florida Keys Environmental Coalition, which wants to protect the resources and provide a unified voice for the community. He said they meet regularly, and have a call in number for people who want to hear what is going on. He noted symbolism was also important, and that they would be wallpapering the Keys with blue and green ribbons.

- Chair Popham thanked him for commenting.

Patrick Rice, with FKCC, commented he was happy to hear about the Century program. He inquired about the type of water sampling that was being done, as mentioned by Ms. Toner.

- Chair Popham said he would get him an answer, and Dr. Rice said he would give Chair Popham his contact info. **ACTION ITEM:** Chair Popham to send Dr. Rice information on the type of quality sampling Ms. Toner is doing.
- Dr. Rice then commented he liked the matrix Mr. Donahue showed. He asked if one of the countermeasures was microbes.
- Mr. Donahue replied it was.
- Dr. Rice asked if anyone had considered other ways to keep the oil from hitting the shore besides booms.
- Mr. Morton said he would get him that information. **ACTION ITEM:** Mr. Morton to send Dr. Rice information on methods besides deploying boom to keep oil from reaching shorelines.
- Dr. Rice noted he was also part of the Florida Keys Environmental Coalition, and that he wanted to work in parallel with the UC, thinking outside the box.

Chair Popham called Candace Whitaker, who had submitted a request to speak during the public comment period, but as she was not present, the next requester spoke.

Joel Biddle applauded Mr. Russo and Dr. Rice for starting the Coalition, and said it was a powerful organization. He mentioned a major oil spill in 1993 in the Persian Gulf, which was forty times bigger than the Exxon Valdez. He said supertankers were able to collect 85% of the oil and, apparently, those services were also offered to BP. He wanted to know about the use of dispersants, which he said had been banned in Britain. He expressed concern about the upwelling and the oil that had been dispersed, the coral reef, and tourism. He felt with the shallow shelf, we have the potential to control what comes up on our shores, or contain it. He said we have to look beyond tourism, to the future, and to a hurricane pushing this up on shore, adding the impact of tar to hurricane salt damage to plants and houses and dispersants. He felt keeping the oil from coming to the Keys had to be the number one concern and pleaded for an international fleet of tankers outside the continental shelf to collect the oil. He said he also did not think BP had made sufficient plans to capture the oil and so was burning it.

- Chair Popham thanked him for commenting.

Skip Griffin said he was a commercial fisherman, and he commented that we are only going to get tarballs. He was concerned that a number of the fish caught here come from elsewhere and lobster larvae float in the plankton, and that they would be going through oil and dispersants. He wanted to know if any studies were being done on this.

Chair Popham asked if Mr. Morton wanted to try to address some of the comments in ten minutes. He noted some good water quality monitoring took place here, and Dr. Causey confirmed it had been going on for 16 years.

- Mr. Morton said the council would have some time at end of the meeting, and noted he would like advice from the council on how much information they would like him to send out to them, as there is a lot out there. He said for all the questions coming up during the meeting, he would provide links to best answer them. Just on water sampling, he said there were several efforts; in the BP effort, he said NOAA and other institutions were sampling at different depths. He also said that water sampling was going on as part of NRDA. He said the Century program used nets and plankton tows, and Karrie Carnes said people could listen to audio files on line.

- Chair Popham said the National Association of Charterboat Operators had a tremendous amount of information which came out daily.

- On microbes and other countermeasures, Mr. Morton said the countermeasures used in an oil spill situation were in a booklet he was passing around, including where to use them. He also noted there was a NOAA Alternative Response Technology Evaluation System, a system for submitting ideas on countermeasures that were not already in the booklet.

- Mr. Fajans noted he was an invertebrate biologist and he said just under a million gallons of two kinds dispersants had been applied near the wellhead in this case. He said dispersants were toxic to some invertebrates, but dispersants have a half life of 107 minutes. This, combined with the distance from the Keys, meant dispersants would not be seen in the water by the time it got here, he said. He relayed that research was underway about damage near the wellhead and larvae. He noted that dispersants increase the surface area of oil and the thought was so that it could break down faster.

- Mr. Moe asked if the vast plumes of oil at mid depths were from dispersants at the well head or not.

- Mr. Fajans did not think that could be answered yet; it was originally thought the oil would rise.

Natural Resource Damage Assessment for Deepwater Horizon Oil Spill -- Tom Brosnan, NOAA's Office of Response and Restoration and M.E. Rolle, NOAA's Office of General Counsel

Mr. Morton talked about people having questions about spill effects to local resources and the economy, and explained that, during a spill, there was a whole other coordinated process among the trustees to try to answer the questions about damage that had been done and to try to provide for restoration. He added there was also a legal process, and that it takes a long time. Mr. Morton welcomed Mr. Brosnan, from Silver Spring, and Ms. Rolle, from NOAA's Office of General Counsel, to talk about what has been going

on as part of BP Deepwater Horizon event, noting there had been many conference calls and people out in the field collecting data.

Mr. Brosnan thanked the SAC for an informative afternoon. He said he worked for the NOAA Office of Restoration and Response and that there were a number of others in the room that could also answer questions on NRDA. He noted it was early in the NRDA process.

Mr. Brosnan said the liability for the responsible party was to clean up and restore. In this case, he said the USCG was leading the cleanup, and the restoration was being led by the trustees. They will try to restore resources to baseline conditions, and compensate for lost use of those resources. A key feature of NRDA is proving the nexus or causality to the adverse effects to resources, he said. NRDA is first and foremost a legal process to compensate the public for damage to their resources, Mr. Brosnan stated, adding that the goal is to make the public whole. He said trustees were specifically designated, such as state governors, who may designate downwards. Other trustees may be tribes or other countries.

He went over the trustees in this case, and noted there were five state trustees. After an event, preassessment is done to quickly document the releases that occurred, the resources and the habitats on which they rely, the degree of exposure, and the severity of it, he said. Then there is an injury assessment and restoration planning phase, including things such as acres of marsh damaged, number of turtles injured, etc. They then try to craft a plan to restore those resources. He said the draft and final plans were out for comment. He said the documenting was currently being done, and that primary and compensatory restoration would be done in the future. The polluter pays in this scenario, he noted. Mr. Brosnan then provided examples of restoration done in other cases, and the benefits that flow from restoration done from a NRDA.

In the Deepwater Horizon case, he said currently the process was in the preassessment phase, and that multiple working groups were meeting by phone, or out in the field collecting ephemeral data. He mentioned there were groups on the water column; fisheries; submerged aquatic vegetation; shallow and deepwater corals; collection of water, sediment and tissue samples; and assessing impacts from the response itself. He said if damages were found, the responsible party would be held responsible. One example of preassessment was the Mussel Watch program, he described. In the first week of the spill, those folks got out and got baseline information prior to the oil hitting, collected information from fifty sites, and getting sediment, tissue and water samples. Mr. Brosnan encouraged meeting attendees to check out geoplatform.gov for information, which he said was just put up the day before the meeting.

In summary, Mr. Brosnan said that NRDA was restoration-focused, and that restoration would be done to offset losses that could be proven to come from the spill. The studies and assessments would play into how restoration projects will be done later, he said. This was being done under the Oil Pollution Act (OPA) and related regulations, and the polluter pays, he concluded.

Ms. Rolle thanked the group for being invited. She said that the statues direct making the public and the environment whole, and noted again that the polluter pays. She listed the major statutes related to restoration-based compensation, including OPA; the National Marine Sanctuaries Act (NMSA); the Comprehensive Environmental Response, Cleanup, and Liability Act; and the Park System Resources Protection Act.

The NMSA has natural resource damage provisions, which are to make the responsible party pay and that the liability goes to any person who injures or causes loss of sanctuary resources, Ms. Rolle said. Liability may be strict, joint or several; she said strict liability means the intent to do the damage does not need to be shown, it just needs to be shown that it happened, while joint several liability means that if more than one party is responsible, each is independently liable. Under the NMSA, damages are defined to include

the cost of replacing, restoring, or acquiring the equivalent of the sanctuary resource; and the value of the lost use of the sanctuary resource pending its restoration or replacement or the acquisition of an equivalent sanctuary resources. She said cultural and other resources, as laid out in the NMSA, were covered, along with natural resources. Damage assessment costs under NMSA include the reasonable costs of monitoring the injured, restored, or replaced resources; the cost of curation and conservation of cultural resources; and the cost of enforcement actions undertaken by the Secretary, Ms. Rolle stated.

Ms. Rolle said that OPA would be applied to the entirety of the spill, but the NMSA, the Park Act, and the Clean Water Act may apply in particular areas. All provisions of any statute applied to the incident, she said. Each statute may have unique benefits, or may have drawbacks, she said. For example, under NMSA, provisions are limited to geographic scope of sanctuary. She said they look to primary authority, which is OPA in this case, but they keep the other authorities in mind, and will apply whichever is relevant in the end.

Mr. Morton reemphasized that this was very complex, and that it would take a while just to understand the damages done. He said it would be a legal case, but restoration would be done, and the public and SAC would be involved.

Council Discussion, Questions and Answers on Natural Resource Damage Assessment for Deepwater Horizon Oil Spill -- Mr. Brosnan, Ms. Rolle, and SAC

- Mr. Barras asked about strict vs. limited liability.
- Ms. Rolle said it was strict, but there were some limits, such as a dollar amount.
- Mr. Barras asked what the cap was.
- Ms. Rolle replied there were a number of caps. \$75 million is the one she had heard cited the most, she said. She said it was not sure if any cap would apply in this case.
- Mr. Barras asked Mr. Brosnan how the loss to the reef could be quantified.
- Mr. Brosnan said restoration had been done in the past to reefs, such as from vessel groundings. He said there might be protection actions so additional injuries did not happen to remaining coral, noting that the best option was to prevent injury to the coral. He said they had to understand the condition of the coral now, and that they would have to tease out the injury to coral from the Deepwater Horizon event if it occurred. He said they would do toxicity testing, risk assessment, and try to estimate the percent lost.
- Ms. Rolle said all the statutes say what is broken must be fixed, and they look at compensatory restoration for the time to replacement/if the resource cannot be replaced.
- Mr. Barras asked for a dollar value of the reef.
- Chair Popham said that socioeconomic studies had put values on the reef, which are a benchmark from which to start.
- Mr. Barras asked about the marine life, including fish stocks.
- Mr. Morton agreed that it was difficult to put value on these, but it was done.
- Ms. Rolle said a lot of times a dollar value could not be put on, but that restoration actions were taken.
- Dr. Lorenz said he was working on a project for NOAA currently on modeling of the southwest coast to put value on it, and he said there were a number of studies out there on ecosystem services of all types, including coral.
- Mr. Frerer asked about the logic behind no punitive damages.
- Ms. Rolle said no one meant to say there was no punitive in these statutes, clarifying that they were separate from the NRDA sections. She said civil penalties may be brought. The Exxon Valdez spill took place before the OPA, she said.
- Mr. Grathwohl expressed concern about the Flower Gardens.
- Ms. Rolle said they were part of the NRDA studies.
- Bob Smith mentioned the British government rising to the occasion a few years ago (the battle of Dunkirk) and hoped the people of the Keys could similarly rise to the occasion.
- Mr. Moe asked how long legal action might last in this case.

- Ms. Rolle said she did not know if anyone knew, commenting the Exxon Valdez legal action was still ongoing 20 years later.
- Mr. Brosnan said they put a high priority on getting to restoration sooner rather than later, which is why they often work on settlements with the responsible party.
- Ms. Rolle added they do not need to recover from the responsible party to begin projects.
- Mr. Trice said everyone was pointing the finger at BP, but he had not heard anything from Transocean or Halliburton. He thinks the contractors were equally responsible.
- Ms. Rolle said she could not make any comments on this until she had all the information, but that they would be looking at information on all parties who may be liable.
- Dave Vaughan said recently he heard the Santa Barbara spill just finished some of its last legal work. He asked what the real quantity of the oil coming out each day from the Deepwater Horizon well was.
- Mr. Brosnan stated what the latest estimate was, and said that a new estimate would be made after the riser pipe was capped. He agreed the quantity was needed.
- Dr. Causey asked if penalties would kick in.
- Ms. Rolle said that the option was there, and the attorneys would be looking at this down the road.

Chair Popham thanked all of the speakers.

Possible SAC Action

Chair Popham asked how much information the SAC wanted, per Mr. Morton's earlier inquiry.

- Mr. Smith said there was much information about where the information was, and said that should be enough for this group.
- Mr. Frerer said the one that Mr. Brosnan talked about sounded like a good place to start.
- Mr. Brosnan agreed that was a good place to start on the response side.
- Mr. Morton said he would put together an email for the SAC with all the web site links that were talked about during the meeting; Ms. Ferguson said she could send them on to the SAC. **ACTION ITEM:** Mr. Morton to compile a list of web sites for the SAC with information related to the Deepwater Horizon oil spill.
- Someone asked about sublethal effects on recruitment, and wondered if there would be changes in the monitoring protocols to look at longer term effects of dispersants or hydrocarbons.
- Chair Popham said the sampling being done now was a little more legal based, and included sediment and water samples. He asked Mr. Edwards to respond further.
- Mr. Edwards said a lot of work was being done by different committees on this, and the important aspect was they wanted to prove the specific damage. He said there were 34 sites, just for water and sediment, but mangroves, seagrasses, and other flora and fauna were being examined.
- Dr. Causey said that baseline of existing information did not all the parameters being looked at, but that there was a baseline on water quality, on corals and coral cover, some on recruitment, and a comprehensive seagrass monitoring program, though these were not the baselines accepted for NRDA. He said FKNMS was blessed with a great damage assessment team and legal team, and that FKNMS was and could be prepared for anything.
- Chair Popham asked if the SAC wanted to take any action; none was suggested. He complimented Mr. Morton and the rest of the staff for getting this information out.

Adjourned, 3:52 PM.

Submitted by Lilli Ferguson