

FLORIDA KEYS NATIONAL MARINE SANCTUARY ADVISORY COUNCIL

**Eco-Discovery Center, Key West
Tuesday, December 14, 2010**

MINUTES

Members Present

Jason Bennis	David Makepeace
Chris Bergh	Corey Malcom
Jack Curlett	Rob Mitchell
Dolly Garlo	Martin Moe
Richard Grathwohl	Ken Nedimyer
David Hawtof	George Neugent
Bob Holston	Bruce Popham
Debra Illes	David Vaughan
Steven Leopold	

Alternates Present

Joe Boyer	Ben Daughtry
Alex Brylske	Jessica Pulfer
Bill Chalfant	Bob Smith

**Call to Order/Pledge of Allegiance/Roll Call/ Approve Minutes from October 19, 2010 Meeting/
Adopt Agenda for this Meeting – Chair Bruce Popham, SAC**

- Chair Popham called the meeting to order at 9:07 A.M. and welcomed everyone. He thanked Lilli Ferguson and the staff for putting the meeting together.

- Jack Curlett led the group in the Pledge of Allegiance.

- After review of the draft minutes from the October 19 Sanctuary Advisory Council (SAC) meeting, Dolly Garlo moved that they be approved, and Ken Nedimyer seconded the motion; as there were no suggested changes, Chair Popham deemed the minutes approved.

Agenda: Chair Popham noted that a speaker was not secured to talk about reef fish, and so that was not on the agenda. Mr. Nedimyer moved and Alex Brylske seconded adopting the agenda, and Chair Popham deemed the agenda approved.

Chairperson’s Comments – Chair Popham, SAC

Chair Popham said he wanted to go around the room and hear from the SAC regarding things the SAC had done in 2010 and could be celebrated, which would help set up the discussion on goals in the afternoon. He remarked one of the good things was that there was no oil. He then opened it up to the SAC.

- Joe Boyer mentioned the SAC proactively voted against opening the offshore of Florida to oil.

- Ms. Garlo said, as a SAC member, Florida Keys National Marine Sanctuary (FKNMS) Team O.C.E.A.N. volunteer and as a Sanctuary Friends Foundation of the Florida Keys (SFFFK) board member, she wanted to talk about the environmental films they brought to the public. There was a 10/10/10 global event where they showed “The Age of Stupid” and provided some education, and there was a week of films for EcoWeek. Also, she said SFFFK started a Marathon films week along with the Power Squadron, which had gotten a great turnout, and there was a Sunday free film series in Key West. She mentioned the educational handouts provided at the films, and passed some around, along with a list

of the films to be shown in December and January in Key West. Finally, she noted there were nine FKNMS marine debris cleanup, with over 8,000 lbs. of debris collected.

- Mr. Nedimyer said he and others had been involved in coral restoration and nurseries this year, and some good things were coming up in the next year. He said a highlight was having Dr. [Jane] Lubchenco down for Earth Day, spotlighting what could be done about the coral problem.

- John Hunt said the SAC was the primary influence for him to get his laboratory involved in the [coral nursery] process, including hearing Mr. Nedimyer and Martin Moe talk about their fledging restoration projects. So, this was an accomplishment of the SAC and it deserves the credit for keeping that kind of vision moving, he said.

- Bob Smith said a series of things were owed to the U.S. Coast Guard (USCG), Sean Morton and Andy Newman for getting accurate information out to the Keys about the [Deepwater Horizon] oil spill. He said there was a question about what was going to transpire with drilling/[potential for oil spills] off of Cuba and he said he would like an update in coming year on it.

- Chair Popham agreed the SAC got a lot of good information out on the oil spill to the public.

- Martin Moe said he held the Education and Outreach seat and that it was not necessarily a good fit as he was not a professional educator. He gave thanks to Mary Tagliareni, Ms. Ferguson and Dr. Brylske, who are able to keep the SAC Education and Outreach Working Group going and do something. He felt it was critical to do something with teenagers/youth on education and outreach that a conservation ethic and understanding needed to be instilled within them. He said a letter had been sent to different schools to make people more aware of what the SAC does and try to get the teachers to interact more with the SAC process, to advise the FKNMS staff and help protect the environment. He said no replies had been received yet from the letter, but the group would keep trying.

- Dave Vaughan said this was a year of a lot of celebrations of anniversaries of managed areas. He said Sylvia Earle gave a talk at the John Pennekamp Coral Reef State Park anniversary, and it was observed to him that about 50 years ago, every scientist was doing exploration, then the last 25 years was experimentation, and now it is the dawn of a new era of restoration.

- Richard Grathwohl mentioned being part of the SAC Ecosystem Restoration Working Group and also that he had done work related to the permit fishery. He found the staff at the Florida Fish and Wildlife Conservation Commission (FWC) were attentive to them, and were willing to split permit and pompano into separate fisheries and to establish zones to manage different permit fisheries. He said more work needed to be done, and that the Bonefish and Tarpon Trust was working on some more recommendations. He said the final hearing was now in April in Tallahassee.

- Chair Popham thanked him for his efforts on this.

- Mr. Grathwohl also mentioned the hard work of the commercial fishermen on marine debris cleanups.

- Chris Bergh said the SAC had created an atmosphere of working across organizational boundaries to work together, and one example was working on the impact to corals from the cold snap (which ended up having a big impact). Many organizations around the table were instrumental in monitoring that, he noted. He said this forum was a great place to form collaborative bonds and that discussions in this group led to the creation, to a large extent, of the Florida Reef Resilience Program.

- Mr. Curlett said over last six years, this group now had less turf protection. There was a member in the past who did not want to think about coming to consensus and he said he did not see that now, and that the group had really matured.

- Ms. Garlo mentioned the collaboration with the Reef Environmental Education Foundation and getting the word out about lionfish.

- Chair Popham said the focus had been on education and outreach and ecological restoration, and that a lot of work got done after these meetings. Also, he said there had been a lot of work done on the sewers, through the Water Quality Protection Program Steering Committee.

Superintendent's Report – Mr. Morton, FKNMS

Mr. Morton said he would also report for Billy Causey and Kent Edwards, who were unable to be at the meeting.

- He said FKNMS had its 20th anniversary and this was the first SAC among all the sanctuaries. He noted the SAC had a lot to be proud of.
- Mr. Morton reviewed that the [marine sanitation device] discharge regulation was published in the Federal Register and would go into effect December 27.
- He said the lionfish derbies wrapped up, with over 600 caught, including one caught in Key West that was twelve inches. The events were successful in removing lionfish and getting the word out, and he said there was market saturation, which garnered a lot of attention, including from the *Wall Street Journal* and *New York Times*. He said inquiries came from across the nation about when the next derby would be, and that FKNMS would continue to work with the Reef Environmental Education Foundation on that.
- He noted it was a slower season, with Congress not passing a budget and not being out on the water as much due to things needing fixing and the cold weather.
- Mr. Morton introduced Emily Crum, who is here from Silver Spring, filling in for Karrie Carnes, who is up in St. Petersburg. Ms. Carnes is there helping the National Marine Fisheries Service on continuing operations for fisheries closures after the Deepwater Horizon oil spill. He said they were also going into the right whale season which involves other restrictions.

Mr. Morton then reported for Dr. Causey, saying he was at a second annual Sportfishing Conservation Alliance meeting.

- The sportfishing folks came to Dr. Causey wanting to open more discussion on marine protected areas (MPAs) and how marine preserves can benefit recreational fisheries.
 - Mr. Morton reported Dr. Causey wanted the SAC to look at what Flower Garden Banks National Marine Sanctuary was doing and send in some comments– they have a draft Management Plan and some regulations out for comment. He said he would send the information out to the SAC via an email.
- ACTION ITEM:* Mr. Morton to send Flower Garden Banks National Marine Sanctuary Management Plan and regulations information out for comment to the SAC. Mr. Morton said there was not time to get this on the FKNMS SAC agenda or have a vote.
- Mr. Morton said that Dr. Causey had also made a request to be on the SAC agenda in February to talk about what could be an MPA in the Sargasso Sea. Dr. Causey has worked with nongovernmental organizations in Bermuda and around the Caribbean has been discussing what would take to protect the Sargasso.

Mr. Morton also relayed some information on behalf of Mr. Edwards.

- He and others in the Department of Environmental Protection DEP have prepared a lot of transition documents for Governor-elect Rick Scott, and have been putting together papers on what their issues are.
- There is no news yet on management, staffing or structure for DEP. Mr. Edwards has been trying to get the Office of Coastal and Aquatic Managed Areas Director, Lee Edmiston, here for some time, but Mr. Edmiston is the Florida lead on the natural resources damage assessment for the Deepwater Horizon spill. Also, due to budget and travel restrictions, Mr. Edmiston probably will not come to the Florida Keys until after new administration comes in, Mr. Morton said.

There were a few comments and questions.

- Bob Holston said during a board conference call with the National Marine Sanctuary Foundation, he heard the British Petroleum (BP) Commission accepted the comments of the Foundation to go to Congress, including for full funding for the National Marine Sanctuary program.
- Mr. Morton said there could be a lot more coming out of that commission as it moves forward, including new sanctuaries as restoration and mitigation alternatives for any impacts to natural resources that occurred because of the spill. He said it will take time to quantify that damage and for the restoration to occur.
- Mr. Bergh asked when the public comments were due on the Flower Garden Banks.
- Mr. Morton thought it was January 30, but said he would get that information out to everyone.

- Mr. Bergh said we are connected via the Gulf and we share fish and potentially receive coral larvae and other invertebrate larvae from them, so it was worth a look.
- Mrs. Tagliareni said January 20 was when comments were due.
- Chair Popham agreed it was incumbent upon the SAC to look at regional and national issues and to offer up help when other sanctuaries were looking for comment.
- Mr. Bergh said those public comments really help.
- Mr. Nedimyer added, especially when they were not in a form letter.
- Mr. Grathwohl noted that recruitment stock also comes from our neighbors to the south.

Mr. Morton introduced staff members Alicia Farrer, Wayne Nowocien, Chad Stolka, Ben Sniffen, Hatsue Bailey, and Robert Keeley to the SAC.

Agency Report Highlights:

USCG Report – Capt. Pat DeQuattro, USCG

Capt. Pat DeQuattro reviewed there was a Preparedness for Response Exercise Program exercise in February, and they used the same formation of the Unified Command when the BP spill happened. He noted they had the entire Florida Keys in their command, whereas normally it is just a municipality. Since then, they had 83 tar ball samples tested at a USCG marine safety lab and found no direct [connection to the BP spill]. There was an 80% rise in pollution reports since last year, he said, which was a significant spike. He said they used federal funds, \$350,000 from federal Oil Spill Liability Trust Fund, to respond to those pollution reports, which was about a 300% increase. Just recently they had an aircraft investigate an incident at sunset south of the Everglades, he commented. This year they will have a program the third week of January in Marathon, with the trustees. They are broadening the scope to fisheries enforcement, and will work with FKNMS and FWC. He said they had taken FWC officers on some of their boats, trying to get the most out of limited resources, and that they would carry the momentum forward across all of their missions.

Discussion ensued.

- Chair Popham asked if the spill raised people's awareness for reporting spills, or if people just thought they had oil from the spill, or both.
- Both, Capt. DeQuattro replied. He mentioned the need to coordination plans with the Gulf of Mexico and Cuba due to the connections. The response structure is a Rapid Response Team for the southeastern U.S. and a separate Caribbean response team. He said he attended the last meeting of that team Cuba was on their radar.
- Dr. Vaughan Mote had corals in captivity for a long time, which would not have been affected by an oil spill. In addition, he said they did tests with oil and dispersants on larvae, brooding, and settlement. In the coral settlement test, there was 100% mortality after 72 hours, he said. He felt if the Loop Current had [brought the oil] here, there would have been mortality here too. He thought there needed to be research to find a less toxic dispersant.
- Mr. Curlett asked about Jon Fajans' remarks at an earlier meeting about Corexit being benign.
- Dr. Vaughn replied only two species were tested (one was a finfish), and it was not tested on corals. He said the tests Mote did were on swimming larvae and on settlement.
- Mr. Nedimyer clarified that the tests were not on the coral already in place [in the environment].
- Mr. Bergh asked if they were going to publish the Mote results.
- Dr. Vaughan described efforts to get the results publicized.

National Oceanic and Atmospheric Administration (NOAA) General Counsel Southeast Region Report– Karen Raine, NOAA

Ms. Raine said one thing her office had been working on was penalties. A new penalty schedule for each statute was put out for public comment, closing some time in December. She said they would find out next year sometime next year the end result.

- Mr. Morton said he thought the comment period closed today, but he noted the Office of National Marine Sanctuaries had commented, and said he could provide those comments. He said, essentially, the proposal was to standardize the schedule nationwide.

FWC Report – John Hunt and Capt. Pat Langley, FWC

Mr. Hunt provided the first part of the FWC report.

- He apologized for not being at last SAC meeting. He said he was focusing on the Linking Science to Management conference; he thanked NOAA, the National Park Service (NPS) and others for their financial support, which allowed them to put on that conference. He thought it was a great success.

- He said there were permit and pompano issues out there from the Commission standpoint and that would be ongoing for the next few months.

- Regarding lionfish, Mr. Hunt said had been working with others within FWC to try to raise the level of attention to lionfish, which had some success. He said the FWC invasive species group was working on it, and he hoped to report back more later. He said FWC had the potential to have a greater influence on lionfish control than any other agency out there as they have stakeholders, such as lobster license holders, who can help. He said they hope to engage their stakeholders in lionfish rule issues or at least in outreach. He also said there was interest from James Morris and a recognition that lionfish are here to stay. He said he wanted to learn more about the size of the population, and that he would get together with Bill Kelly in the future to see how they could develop quantitative information on that.

- Mr. Hunt stated that the Commission Chairman, Rodney Barreto was reelected for another year.

- Spiny lobster fishery management would be big in the coming year, Mr. Hunt said, and he noted there was angst about that locally among lobster fishers. He mentioned the federal management plan and that they were going through the stock assessment update process. He said the FWC assessment was rejected by the review panel, which would raise interesting questions about how to set catch limits in the federal process. He asked people who wanted more information to let him know.

There were a few questions and comments

- Mr. Curlett asked if Chairman Barreto was termed out after the end of this term.

- Yes, Mr. Hunt agreed he had one more year.

- Dr. Boyer said the Linking Science to Management conference was a high level meeting which made an impact in the science and management communities both in the Keys and outside. He thanked the FKNMS staff and Mr. Hunt, and added there was a wonderful memorial for Brian Keller.

- Mr. Morton agreed it was a great conference and said the posters were on the conference website.

- Mr. Hunt said he would send Ms. Ferguson the link for the conference web site for her to get it out to the SAC. *ACTION ITEM*: Mr. Hunt to provide the website address for the Linking Science to Management conference for her to then send to the SAC.

Public Comment

There was none.

FWC Report cont. – Capt. Langley, FWC

Capt. Langley gave a brief report.

- He said there would be a report on enforcement later.

- He noted Major Alfredo Escanio unable to make this meeting and was sorry not to be here.

- While the December statistics were not yet available, Capt. Langley said there were six citations or warnings for federal violations in October and 10 in November of different types.

NPS Report – Tracy Ziegler, NPS

The Snake Bight pole and troll zone markers would be going in this week, Ms. Ziegler noted, so the zone would become official by the end of the year.

- Mr. Curlett asked how big the zone was.
- Ms. Ziegler replied 8,000 acres.
- Mr. Curlett remarked that 8,500 acres was a big area.
- Jason Bennis said he had heard the NPS would solicit feedback in about a year, during ramp catch surveys, and there would be a public outreach component. He said his organization was excited this was going forward.
- Chair Popham said this SAC was very active in helping to develop the plans.

NOAA Office of Law Enforcement (OLE) Report – Kenneth Blackburn, OLE

Special Agent Blackburn said Jeff Radonski would be doing a presentation later during the enforcement agenda item. On the civil side, Special Agent Blackburn said they had a civil case against a shark dealer for failure to report. On the Joint Enforcement Agreement, they did some training with the USCG. He also said they were working with others, including the State of Florida to submit a case to the State's attorney on an undersized lobster case.

U.S. Fish and Wildlife Service (USFWS) Report – Anne Morkill, USFWS

Ms. Morkill said they were installing some new signs. She said the Great White Heron and Key West National Wildlife Refuges were both closed to jet skis and that they have backcountry signs at eleven boat ramps in the lower Keys that they were replacing. She passed around sheet showing what the new signs will look like. She said they were also working to install more signage at kiosks about recreational opportunities and restrictions in the backcountry. She said they could make them in any size if people had a place they wanted to display them.

South Florida Water Management District (SFWMD) Report – Tom Genovese, SFWMD

Mr. Genovese said Shannon Estenez resigned her position, but was taking a position as Director of Everglades Initiatives, reporting to Ken Salazar on the Everglades; he said there were now two vacancies on the District's governing board. Mr. Genovese added in March there would be two more vacancies when terms came up. He noted Governor-elect Scott would be able to influence the board with his appointments, but his interests are not yet clear. He said that Governor-elect Scott had shown up at a board meeting to oppose a \$200 million sugar lands purchase.

- Chair Popham asked if one seat was a Keys seat.
- Mr. Genovese replied that Glenn Waldman from Weston replaced the person who had been from the Keys, and now there was no one from Monroe County now on the board.

Update on Enforcement in the FKNMS – Capt. Langley and Capt. Christian Rodriguez, FWC; Assistant Special Agent in Charge Radonski, OLE; and Ms. Raine, NOAA

Mr. Morton said he had been wanting to get this topic on the agenda for some time, to have an update on enforcement cases throughout the year, review some things people are seeing out on the water, talk about some cases that are making the way through system, and discuss enforcement in a broader context. He said he wanted to hear what SAC members think the enforcement priorities should be. He added that FKNMS already provides some guidance to the law enforcement agencies on that.

Capt. Rodriguez and Capt. Langley provided a summary for fiscal year 2010 for FWC enforcement activities in the FKNMS. Capt. Rodriguez reviewed the history of FWC enforcement in the sanctuary up to today. In 1990, there were seven federally funded FWC sanctuary officers; were at Key Largo National

Marine Sanctuary and three were at Looe Key National Marine Sanctuary. In 1996, the Management Plan said 43 officers and 6 support people were needed; the plan was finalized in 1997 and included 23 no take areas. He reviewed other changes throughout the years, in number of staff and vessels – *the Peter Gladding* patrol vessel came to FKNMS in 2006. Capt. Langley commented that Lt. Joe Scarpa said there were supposed to be three officers for this vessel, but they had had trouble keeping those slots filled. In August 2010, a new JEA was signed by FWC and NOAA, providing federal funding for one Lieutenant, five officers and one dispatcher. The Lieutenant and three of the officers are assigned to the *Peter Gladding* for patrols of the Tortugas Ecological Reserve, and the remaining two officers are responsible for the rest of the FKNMS to include all Sanctuary Preservation Area patrols and responses to groundings, Capt. Rodriguez said.

Capt. Rodriguez reviewed that they deal with significant events during the year which take up a significant amount of their time. These include Hospitality Expo weekend, Memorial Day weekend, 4th of July weekend, Labor Day weekend, crawfish mini-season, the commercial crawfish /stone crab seasons, commercial marine life harvest, federal fishery closures/trip limits, groundings, derelict vessels, and boating accidents. He and Capt. Langley provided statistics for some of those events, and Capt. Langley reported there had been 264 reported groundings so far in 2010. For the groundings, there were 46 federal citations and 19 written warnings, and 47 were gone on arrival. The worst grounding one was at Key Largo Dry Rocks this year.

- Mr. Morton said the damage assessment on that grounding had not yet been released, but it did not hit an area with a lot of live coral.

- Capt. Langley said this grounding took a lot of work and they had to close down the area for diving that weekend, and had to pump off oil and wait for the right weather to get the vessel off.

Regarding derelict vessels in 2010, FWC marked 163 vessels as derelict in Monroe County, and by the end of the year 110 of those will have been removed. One person was arrested for four felonies, but the money for the removal is not likely to be recovered (owners have to have the money for that). For the other 53 vessels, the owners either removed them or brought them up to compliance. A new law allows the officers to mark vessels at risk, so the owners may contact them before the vessel becomes derelict.

Capt. Rodriguez said FWC had worked a lot this year on marine sanitation device (MSD) violations, and that FWC regularly checked MSDs for violations. In 2010, FWC targeted the upper and lower Keys in four details and there were 34 boating safety warning and 13 citations issued, and worked with the USCG and DEP on some of the details. Capt. Langley added that they also work with the cities on this. A bad example of an MSD was shown, and Mr. Morton commented that even with that example, to be charged, the person would have to be caught in the act of discharging.

Capt. Rodriguez stated the *Gladding* had completed its fourth year patrol, and had been down about five months with scheduled and unexpected maintenance. On November 10, the crew assisted with a case of 27 Cuban migrants off the Marquesas. During the year, they made numerous cases for state and federal fisheries, and there was one Area To Be Avoided case.

In 2010, FWC made commercial fisheries enforcement (trap robbing) a top priority, and Capt. Rodriguez said there had been great success working with their partners in the latter half of the year, with several cases made and several pending. In one case, 345 undersized lobsters were seized from a commercial vessel on Stock Island, he said.

Discussion followed.

- Assistant Special Agent in Charge Radonski asked about the success in sentencing from local judges on lobster cases.

- Capt. Langley said they have always had success, but recently the judges have definitely helped with the resources.
- Ms. Garlo asked how many derelict vessels came from the Marquesas.
- Capt. Langley did not recall any, but said there was one shrimp boat that broke up out there.
- Ms. Garlo said the last time she was there, there were a number of immigrants' vessels on shore, including fuel containers.
- Capt. Langley said if they received those reports, they tried to get them out of there.
- Mr. Moe asked if they kept records of what might have spilled in the environment from groundings.
- LCDR Michael Herring said that came to the USCG, which works with owners on a number of administrative steps. He explained if there was a potential for discharge, they used the Oil Spill Liability Trust Fund and got contractors to do the removal, supervised by the USCG. He said FWC then did the derelict vessel removal and/or the sanctuary, depending on the circumstances. He said they tried to estimate the amount of oil when they can.
- Mr. Moe asked if a biologist could go into the records and see if there was a point source in a particular area.
- Yes, Herring said. A person could that that via a Freedom of Information Act request.
- Mr. Grathwohl commended FWC and for doing a hard job with just a few officers.
- Capt. Langley commented that the state had no money for derelict vessel removal this year, so once FWC marked a vessel for removal, the county used their funding to remove it.
- Dr. Vaughan thanked them for the historical review and felt it was amazing what they accomplish with so few officers in such a large area. He asked if there was anything that could be done to help them out.
- Mr. Morton commented that some of the statistics included officers not funded with federal funds.
- Capt. Langley agreed that all officers, not just the federally-funded ones, were included in the statistics he had provided.
- In response to a question from Mr. Smith, Capt. Langley said two or three studies had been done saying they need 56 state officers in the Keys to do things right. Funding-wise, he said they may be a little lower than in the past, but right now all the state vacancies are filled, whereas in the past they have had vacancies.
- Mr. Bennis asked if FWC had 17 officers in the past (referring to one of the slides), and if so, for how long.
- Capt. Langley affirmed they did, and Lt. Scarpa said the numbers of officers went down about three or four years ago.
- Mr. Bennis inquired if the general boating population had gotten smarter about what they were supposed to be doing, and if there was a change in compliance, or if always a level of noncompliance.
- Capt. Langley said there was less boat traffic and that the economy had something to do with it, but he did think people had gotten better. He added the fines and everything else affected this, even statewide.
- John Halas said the number one complaint was violations were occurring, but the one officer in the region could not be at all places at all times. He felt it was a real problem not to have enough officers as in the past.
- Assistant Special Agent in Charge Radonski mentioned the difficulty of measuring compliance as do not have all the variables, but said they did have some fisheries-related information.
- Rob Mitchell asked if FWC should be contacted if infractions are seen, or if people should find someone else.
- Capt. Langley said FWC should be called, and that dispatchers may call the USCG if it is felt FWC cannot respond.
- Mr. Morton commented about a low number of calls to dispatch, and encouraged people to call in.
- Special Agent Blackburn said there used to be dispatch in Marathon and now it was in Miami-Dade. He felt that could have something to do with the lack of localized response.
- Capt. Langley said the Miami dispatchers were learning and getting better, but it would not be same as it was.
- Chair Popham asked what his enforcement priority was.

- Capt. Langley said it was to get more officers out in the sanctuary.
- Chair Popham said that the SAC had wanted more enforcement for a long time but the economy had put a de facto moratorium on funding. He then asked about the status of the county boater improvement program.
- Commissioner Neugent said Rich Jones was the one member left in the Marine Resource Department and those dollars were being used in the municipalities and county, and were being stretched thin. He said when there was more enforcement, they ended up with more derelict vessels.
- Chair Popham noted boater registration fees had been raised, and that money went back to the county.
- Jessica Pulfer asked about the Sheriff's Office.
- Capt. Langley said there were previously four in the county, and they now only use them on the holidays. He provided further details about some of the cities.

Assistant Special Agent in Charge Radonski then spoke. He said he was based out of Sunrise, but that he had other enforcement areas as well. He noted details of ongoing investigations were not included in his presentation. He explained that the 2010 Florida JEA is specific to the FKNMS, and goes from 8/1/10-6/30/11, he explained. It sets federal priorities for enforcement activities and sets reporting requirements. He noted they work with Mr. Morton and the National Marine Fisheries Service - all components within NOAA where patrol is needed. OLE does management and oversight of the JEA.

Roles under the JEA include OLE training, and Assistant Special Agent in Charge Radonski said they were trying to arrange training for officers in the Keys, including GPS training for court purposes. He said that OLE also does data entry and that cases made by FWC go into the OLE database.

FWC does the patrols, reporting and adding priorities, NOAA provides the funding, and the FKNMS works on priorities, coordinates efforts, and does outreach. He thought the SAC could be included in priority development, noting he wanted the SAC to understand that OLE was working on national priorities. He said SACs needed to help give sanctuaries more of a voice in these national priorities, which would trickle down to the regional and local levels. He said local outreach, including at the Florida Keys Eco-Discovery Center, was imp.

As part of the JEA, they have quarterly enforcement meetings specific to the Florida Keys. One was held in November, with participation by OLE, the office of General Counsel for Enforcement and Litigation (GCEL), FWC and FKNMS. Their goal is to try to develop a law enforcement management scheme for all of the Florida Keys, and they are working on addressing limited resources, reaching priorities and reporting needs, which will take teamwork among the partners. Soon they will look at formulating the next JEA. Some priorities for this JEA are: the Tortugas Ecological Reserve, short and mid range patrols, other Ecological Reserves and management areas, SPAs, grounding and discharge patrols, and land-based support with administrative and investigative assistance.

The majority of the cases in 2010 were summary settlement cases, meaning the violator got paperwork saying what the fine was, and could pay it or pursue due process with GCEL. There were 119 cases related to the National Marine Sanctuaries Act, and two cases related to the Magnuson-Stevens Fishery Conservation and Management Act.

There were a few questions.

- Mr. Curlett asked about the dates of the JEA.
- Mr. Morton said FKNMS moved onto the JEA in August, and prior to that were on a Memorandum of Agreement.
- Mr. Curlett asked if a renewed JEA would be for twelve months.
- Mr. Morton replied that a JEA [normally] runs July 1-June 30.

- Assistant Special Agent in Charge Radonski said this was an amendment to an existing JEA, and started in August as it was signed then.
- Mr. Morton said there was a JEA for whole state of Florida, with a lot of enforcement priorities.
- Assistant Special Agent in Charge Radonski said they get about \$25 million from Congress, for all states which have JEAs.
- Mr. Morton said...\$700,000 was added on with the amendment, plus the FKNMS budget provides another \$600,000-700,000 to that for vessels, fuel, etc. coming from the FKNMS budget. The total when added up is about \$1.6 million, he said.
- Assistant Special Agent in Charge Radonski said in the old way FKNMS did it, they bought vessels, cars ,etc., but under the JEA they do not get into that. The assistance helps states buy such things, but they remain owned by the state, he said.
- Popham thanked him and noted they were doing a good job.

Ms. Raine then made some remarks. She said when the law enforcement partners want a notice of violation and assessment, they come to her office. Many cases are settled another way, she added. She said she would talk about the 2009 and 2010 cases, noting that the SAC may not hear about the end results for a while.

One case from 2009 involved anchoring and fishing in Tortugas North by a charter vessel and the owner-operator was assessed \$5,000 for the anchoring violation, and \$12,000 for the unlawful fishing violation. A settlement of \$12,000 was reached in that case. Another 2009 case happened in the Keys but was not an FKNMS case, she said. It was a South Atlantic charter vessel fishing in the Keys. There was a hearing in February 2010, then in July, the administrative law judge imposed a \$1,500 penalty. That was appealed, so the case is not yet final, she stated.

In 2010, there were seven FKNMS final cases, she said. One was for anchoring in the Tortugas by a recreational vessel, and the anchoring violation was assessed at \$5,000, while the unlawful fishing was a written warning. They reached a settlement and the \$5,000 was paid. There were six grounding cases, one was charged at \$6, 500 and a settlement agreement for \$3,000 was reached, she said. Another was charged at \$6,000 for coral damage and a \$6,000 settlement was reached. Both were at Key Largo Dry Rocks. A seagrass case resulted in a written warning, while three other seagrass cases were assessed \$5,000 each and each paid \$5,000.

SAC discussion followed.

- Chair Popham asked where the money went.
- She replied it goes to a fund specific to FKNMS.
- Mr. Morton said civil penalty money went to a variety of places, and it varied by year. It was often used to fix vessels, or for damage assessment or coral restoration work, but may also be used for education purposes. Some of it goes back into the enforcement program to pay for officers' time or equipment.
- Ms. Raine pointed out this was not so for the Magnuson Act violations.
- Dr. Hawtof asked for the name of vessel on the Tortugas North case.
- The *That's Right*, Ms. Raine replied.
- Dr. Hawtof said a trip could still be profitable with a \$5,000 fine and was sure people spend more than that to go on a trip.
- Ms. Raine noted the passengers were not being charged, the owner was.
- Dr. Hawtof said the owner could charge each passenger several thousand dollars.
- Ms. Raine explained that when civil penalties were assessed under their system, people had the opportunity to present information on their ability to pay, to be taken into consideration. They then have to provide tax returns and such to help determine this, and it is not trip specific, she said.
- Mr. Grathwohl said when the captain goes to court, any federal license, including the captain's license is up for review, and in the state of Florida, the fishing license is also up for review.

- Dr. Hawtof asked if they will do something with the captain's license.
- The reply from LCDR Herring was that the USCG can, but in this case they did not. He said they can go after the license for various things, one of which is violation of law or regulation. The lead agency may not go through with a civil penalty, so often the USCG does not go after the license.
- Dr. Hawtof asked what happened when a person was caught doing something a third time.
- Ms. Raine said other factors may come up later that they do not know about when the case first comes up, and along with that, the ability to pay may be taken into account. For repeat offenders, the penalty may be raised, but it depends on the statute and sanction. Under some statutes, she said they have the ability to seize the vessel.
- Ben Daughy said he thought there was a \$12,000 fine for the catch as well as \$5,000 for anchoring; Ms. Raine agreed it was \$17,000 total.
- Mr. Hunt said he would be interested in hearing about enforcement and citations in Tortugas North vs. Tortugas South. He felt Tortugas North might be the single most important area in the FKNMS.
- Assistant Special Agent in Charge Radonski said they would fine tune their priorities at the quarterly meetings and that he had not presented them in ranked order.
- Special Agent Blackburn said in the case made against Mr. Hammer, he had three twin engines on his boat, and normally could see officers before they could catch him. He noted they have to think outside box to patrol large areas, including flights.
- Commissioner Neugent asked if they could work with the USCG.
- Special Agent Blackburn said they could on a target-specific basis, as sending aircraft out was expensive.
- Assistant Special Agent in Charge Radonski referred to finding out more information from investigation than patrol.
- John O'Malley said GPS downloads showed everyone was fishing Riley's Hump.
- Ms. Raine said there were nine cases at Tortugas North and two at Tortugas South among the cases she has charged over the last three years.
- Chair Popham said everyone seemed to be working together on the priorities. He felt they were doing the best they could with limited resources, and he asked the speakers to pass that on to the officers out there doing the work.

Introduction of Dr. Nancy Foster Scholar and Study —Assessing the Role of Scientific Information in SAC Recommendations & NMS Management Decisions” – Mr. Morton, FKNMS and Lauren Garske, University of California at Davis

Mr. Morton introduced Ms. Garske, He explained that she is a Dr. Nancy Foster Scholar, working with the national sanctuary program, going to different SACs and meeting with people. He also said she was open to meeting more council members during her visit here or over the telephone.

Ms. Garske thanked the SAC members for their time, and referred to the handout on her work in the SAC packets, encouraging people to contact her. She did her Bachelor's degree at U.C. Santa Cruz, then worked for seven years before going to graduate school at U.C. Davis; she said she was now in the fifth year of her dissertation, and was interested in applied issues. Her dissertation has a 2/3 focus on nearshore runoff and if effect on kelp habitats, a 1/3 focus on the SACs. Her interest with the SACs revolved around how to get scientific information to people who could use it. With the Nancy Foster scholarship, she initially thought she would just focus on Monterey Bay, but she is now looking at how SAC stakeholders in the 14 sites in the system are access science and using it to provide recommendations to management. She described the different stages of the project, and said she was now interviewing SAC and staff members, some based on their positions, and some unique to a SAC. Later she will send a quantitative survey to all SAC members and ONMS staff members. She concluded by saying she had already spoken to several people over the last few days, but encouraged people who were interested in her work to talk to her during the lunch.

Coral Restoration – Mr. Nedimyer, Coral Restoration Foundation; Caitlin Lustic, The Nature Conservancy (TNC); and Bill Sharp, FWC

Mr. Bergh introduced Ms. Lustic, the coral recovery coordinator for TNC, who is helping oversee the coral rest program in the Keys and on the mainland.

Ms. Lustic said she would talk about the threatened coral recovery project, why they are restoring coral reefs, and why *Acroporids* were chosen. She said historically, *Acroporids* were reef builders, but they have declined 80-90% since the 1980s, mainly due to bleaching, diseases and hurricanes. They were listed as threatened in 2006. These coral are fast growing and reproduce both sexually and asexually, she noted.

The project started with Mr. Nedimyer and his live rock farm, she reviewed. Approximately 25 colonies of staghorn coral settled into his farm and he and his daughter propagated them, for potential use in restoration. In 2004, TNC, NOAA and the Coral Restoration Foundation had a one year nursery project, and they found that corals were easily grown in a nursery and could then be outplanted. In 2006, there was a pilot study, expanding the project to other regions of south Florida, mostly on sandy bottom. The objectives were to compare genotypic fitness in staghorn coral across four sub-regions of the south Florida reef tract; to evaluate sub-regional and sub-zonal variation in growth and survivorship; to determine reef areas where large-scale restoration efforts would provide the greatest returns; and to establish a restoration network between universities, management agencies, and nongovernmental organizations. The conclusions from this study were each sub-region had significantly different growth and survivorship rates within different zones; zones with the highest mean growth rates didn't always have the highest percent survivorship; genotypes with significantly higher mean growth rates in the nursery didn't always have the highest mean growth rates when outplanted; and coral restoration could be successfully performed on a larger scale.

In 2009, there was an expansion project, with American Recovery and Reinvestment Act (ARRA) money, she said. It had short and long term objectives, including having 12,000 corals in the nursery and outplanting at least 5,000 to 34 sites in Florida and the U.S. Virgin Islands, restoring degraded reefs, increasing *Acroporid* larval production and genetic diversity, and determining the most resilient coral strains and optimum environmental factors.

Ms. Lustic explained that each nursery can collect three 10 cm. or smaller fragments from up to twenty parent colonies and they may get additional "fragments of opportunity" to use as well. She explained how the genetic analysis is done and how the nursery design has changed over time, from cinder blocks with pucks on top to three by three foot blocks with pucks and some experimental line nurseries. She also explained how the corals are maintained and monitored. Some challenges they faced were the winter 2010 cold snap and Hurricane Earl. She said the project was now in its second year and there were about 9,500 corals in the nurseries. She said there were 145 identified genotypes in the nurseries, and they were working to develop an outplanting plan.

She thanked all the partners for the program.

SAC discussion ensued.

- Mr. Smith asked if predation varied from one site to another.
- Yes, Ms. Lustic replied snails were a significant threat. She said they hoped to monitor the outplants as much as possible and to remove predators, and said they could do surveys to find out where predators were less prevalent before putting there.
- Dr. Boyer asked about water quality monitoring.
- She said besides light and temperature sensors at some sites, it was not being done.
- Dr. Ziegler asked if there were only working with one species.

- Ms. Lustic said they were mostly working with *Acropora cervicornis*, but mentioned some other species with which Mr. Nedimyer was working.
- Dr. Boyer asked about the status of funding.
- Ms. Lustic replied the funding was through June 2012 and they were looking for other funding.
- Dr. Boyer said the Technical Advisory Committee would meet in January to discuss redesigns of the monitoring program. He suggested they might want to think about doing water quality monitoring at the project sites if they were going to stay there a while.
- Mr. Hunt said that there could be value in that. He also asked if anyone had looked lately for cold effects on the corals.
- Mr. Morton said Long Key Light as of 7:00 AM the morning of the SAC meeting showed 59 degrees, that the last couple of days it was under that, and it was at 59 degrees the past Tuesday. Several researchers mentioned having been out in the field recently.
- Mr. Nedimyer remarked about the winter 2010 cold event being a prolonged one.
- Mr. Bergh agreed that there was cumulative cold stress then. He felt the water temperature would go up and down over the winter, and the corals should be fine according to past indications. He said the previous cold event was thirty years ago.
- Mr. Grathwohl commented sometimes the Gulf Stream will be in thirty feet of water.

Mr. Nedimyer presented next. He said he was a tropical fish collector, but last year he got his last paycheck from collecting tropical fish, and now he was in restoration full time. He said he was now working on elkhorn and staghorn coral. He talked about the elkhorn coral coverage in 1980, when it would have been dominant in certain areas, but he said now most of the elkhorn corals have died off, and that it was the same story with staghorn coral. He said hurricanes and the 1983 loss of *Diadema* sea urchins were factors. The *Diadema* formerly would have cleaned the areas where coral settled. Now those areas were covered with algae, he said.

He had three different corals settle in his nursery, and by 2000 they had grown a lot. He took lessons from how aquarists propagated coral. Initially, the first coral site outside the nursery they planted the coral was around the site of the *Wellwood*, which grounded in 1984 and damaged the bottom. Harold Hudson and Ken's daughter Kelly planted six there. After a few years the coral there had grown a lot, and they planted more next to the first module, then more farther away. He said they also replanted fragments from there on the reef. This is just one of 22 sites they now have, he explained.

Starting with those two types of coral, Mr. Nedimyer said they developed a plan to preserve and enhance genetic diversity, minimally extract native corals, reestablish genetically diverse thickets, enhance sexual and asexual reproduction success, and enhance habitat to improve larval settlement and survival. He mentioned the need to develop the will to change things through education, involvement, and results. To design a successful nursery required a cheap process that required no spec materials. They came up with an initial nursery design that changed every year, and now they use both disks and lines. He said on the lines, the corals grow faster, don't die from diseases, and are easier to maintain.

- Chair Popham asked how line-grown coral would be taken off the line and attached [at the planting site].
- Mr. Nedimyer said they would cut them off in the spring, or would take the whole thing glue down the points that touch.

Mr. Nedimyer said there are now over 6,000 corals in the nursery. He explained how they organize them, and said in three years, they grow significantly, and can spawn. In 2009, they got a permit for an elkhorn nursery; they took fragments of opportunity and corals at risk which would break off for this project. He talked about how they fragmented some of the original pieces in different ways, and said one piece will yield 125 with additional fragmentation by the third year. He talked about needing to have a perfect day to do this work, and that volunteers helped in the nursery (1,280 by 2010). He said over 1,000 corals had

been replanted at nine different reef sites and mentioning partnering with the Florida Keys Community College (FKCC).

In 2011, Mr. Nedimyer said they would begin a number of things, including, a large transplant project at Molasses Reef, projects at twenty other upper Keys reefs, elkhorn restoration projects, prepare for ARRA restoration projects, and produce an additional 5,000 corals in the upper Keys nursery and 500 in the Key West nursery. He said people could get involved [helping the Coral Restoration Foundation] by volunteering or adopting a coral with the Foundation, donating, or signing up for its newsletter. He also thanked all the partners, supporters and funders of the project.

- Chair Popham asked about the total number of corals.

- Mr. Nedimyer replied, 6,000, and said they would have another 5,000 by next May. He said they were waiting because they did not want to maintain them all winter. He said they had corals on the line nursery and did not lose any that were up above the cold, but they lost thousand of the other corals.

Mr. Bergh then introduced the next speakers, from FWC.

Kerry Maxwell of FWC said the FWC nursery in the middle Keys was new, and its corals were probably exposed to more variable conditions than at the other sites. This nursery is off of Marathon in about 25 feet of water; they are monitoring various things every hour. In December 2009, the first corals were installed, and in January 10, the cold snap killed every coral in the nursery, and 60% of the corals in the parent colonies. She noted the nearshore corals died, while the offshore corals fared better. They replaced the nursery corals with fragments of opportunity. They have 200 fragments now, representing 15 genets, and their growth rates are varying. They plan to collect five more corals of opportunity and have a goal of having 20 distinct genets. They will also fragment what they have and move some of the Coral Restoration Foundation corals that originated in the middle Keys to their nursery.

Mr. Hunt commented they had a little bit of luck in this case, with Mr. Nedimyer having middle Keys corals in his upper Keys nursery. He said it would make sense to include this as a strategy for the future, to have different genets in more than one location in the Keys. He said they should also outplant them back at their parent locations, and perhaps at other locations.

Mr. Sharp then talked about the Davis Reef project, which is funded through the Wildlife Foundation of Florida, the Charles Stroh Fund for the restoration of Davis Reef. He said the FWC vision was to use Davis reef as a living laboratory to conduct research projects that will aid broader restoration efforts of Florida's coral reef ecosystem. FWC has partnered with the Coral Restoration Foundation and NOAA to outplant staghorn coral to Davis reef, he said. They will monitor the growth and survival and they outplanted 48 fragments in October 2010. Besides monitoring these, they will clean and maintain half of them, and the other half will be a control, he said. They will also monitor effects on the surrounding benthos. He concluded by saying they would continue the project through 2012 and that they hoped to receive funds to continue beyond that.

- Chair Popham asked about the long term outlook.

- Mr. Nedimyer said he had corals in his nursery for fourteen years, and had corals on the reef for seven years.

- Mr. Hunt said the real vision was coral reef restoration. He felt this may be the beginning of a new era in the Keys, as one of the previous speakers mentioned. He commented Dr. Keller had said the whole spur and groove structure needed to be restored.

- Dr. Boyer mentioned the importance of an endowment to keep this going.

- Mr. talked about his efforts to get funding and that they would like to get donors for an endowment. He asked Dr. Boyer for suggestions.

- Dr. Boyer said they have naming opportunities. An example could be \$5 million to name the nursery.

- Mr. Nedimer said he was already doing that, but not at that level.
- Mr. Bergh said a diffusion of funding, grants, an endowment, etc. was needed.

Ms. Lusic provided an update on the lower Keys nursery and mentioned that people took off their fins there so as not to create unintended fragments of opportunity. She talked about the nursery design there, especially the lines, and said it included some NOAA rescue corals. The initial collections were done in December 2009, with 73 from the Big Pine shoals nursery, and 130 from wild colonies, from all habitat types and varying depths. Initially there was no mortality, she said, but only 10% survived the cold water event. All the near and midshore parent colonies died also, but only one offshore colony died. They collected an additional nineteen corals of opportunity, mostly from sites where monitoring was being done on the parent colonies, she said. Currently, there are 1,700 coral fragments representing 51 genotypes at the Looe Key nursery, she said. She added they may fragment them one more time before outplanting them. They are looking to exceed that nursery's outplanting requirement so they may provide material to neighboring nurseries, should the need arise, she said.

Mr. Bergh concluded this agenda item by mentioning the other nurseries that are part of the project, including in the Virgin Islands and Dry Tortugas, and mentioned after this work they would move onto next big challenge.

Coral Restoration and *Diadema* Research – Dr. Vaughan, Mote Marine Laboratory; Mr. Moe, SAC and Mr. Sharp, FWC

Dr. Vaughan began his talk by noting there are some of the same players and ideas in this topic. At what they call the FKNMS field nursery, they have 11 species of coral and 300 fragments, he said. Many of them were moved from the location off the FKNMS docks in Key West. In addition, for over 10 years, Mote has grown corals indoors as a coral gene bank. This was supported by groundings, the Ocean Reef Rod and Gun Club, and the Protect Our Reefs license plates. He said Mote did light and growth studies with them, and that now some are grown inside and some are grown outside in land-based nurseries. They grow other species besides staghorn coral, he noted. He said they also got the first permit to transplant them into the field. Four species and 130 colonies were outplanted in October, and to date there is 100% survival, he said. A decent period of maintenance is required, he observed. Also, he said they wanted to see how oils and dispersants might affect corals, and so they did several tests on swimming larvae and settlements. Anything with dispersants or oil plus dispersants had 100% mortality, he said. He felt less toxic dispersants needed to be explored. He added that reef restoration is not just coral, but that it has to be the whole ecosystem, including *Diadema*.

In terms of ecosystem rest, *Diadema* are thought to be the next thing, and several people are working on this. FWC is working to learn about *Diadema* behavior so they have a better chance of success when they are outplanted. Mr. Sharp covered plans for initial research. He said long-spined urchins were important to reef restoration, and their recovery was identified as a priority action by the FWC Florida Wildlife Legacy Initiative (FWLI). Recent advances to rearing *Diadema* in the laboratory suggest it may be possible to use hatchery-reared individuals as part of a coral reef restoration strategy, he said.

Mr. Sharp said they would conduct experiments to make sure when they stick the urchins out there, they will survive. He said as Mr. Moe noted, those reared in the laboratory tend to lose their predator-avoidance behavior. Other potential issues are the coral reefs are not same as they were several decades ago, so they may not provide sufficient habitat for urchins. FWLI funding begins in January 2011, he said. They will work to identify differences in predator-avoidance behavior between hatchery-reared and wild urchins, and to identify the optimum size and season that would assure the highest post-release survival rate of hatchery-reared individuals. He described the experiments they have planned, as well as initial laboratory experiments they have already done on a small scale. They found significant differences in shelter behavior. The hatchery-reared urchins remained in the open day and night, while the wild ones

shelter during the day. When they mixed wild and hatchery urchins they did not see a change in behavior, he said. Regarding predator avoidance, the wild urchins moved away, but the hatchery urchins moved towards a predator. He felt they had a long way to go to establish an ecologically functional population on the reefs. He said that Mr. Moe and another researcher continue to work on culture techniques, and FWC would continue to look at behavior and ecology to ensure outplanting success. Finally, he said they would work to identify health and genetic issues so as to not compromise the health of the wild population.

Mr. Moe mentioned the funding sources for his work, and said he would provide an overview of it. In 2005, no one was doing *Diadema* research. There had been some researchers doing some work in the late 1990s, but they were not able to raise them on a large scale, he said, so he undertook the project. He got all the brood stock he needed from the wild and has 45 large individuals. To spawn them, he turned them upside down over a bowl, and injected them with sodium chloride to get the eggs. Ten percent died; he said he then experimented and found if put them in a bath a certain temperature, which worked well.

Mr. Moe explained *Diadema* larvae are pelagic larvae, and go for 45 days plus in open ocean currents and they grow long arms to help them move in the water. In still water, they sink to the bottom and die, he said. In moderately turbid water, they tumble, break their arms, and die. He said it took him thirteen generations to resolve this, and can now keep them as long as necessary. He explained how he did this with the correct vessel shape, air circulation, tank cleaning, etc. The *Diadema* eat microalgae, which also must be cultured, he noted, and he said he used five different species of microalgae.

He then explained the early development of the larvae. From his rearing run of April 2010, none survived the early juvenile stage, he said, due to two problems. One was possibly a low pH which inhibited calcification. He said they are very soft when they first settle, and they need to calcify within five days. The adults he kept in the same room had respired, lowering the pH in all the tanks in the room. He was able to solve that problem, but the other problem was *Vorticella*, an invasive and hungry ciliate, overtook the culture, and reduced the amount of food he was trying to feed the larvae. He said he solved that problem by separating the algae and *Vorticella* from the larvae via swirling the water. The upshot is that large scale culture is quite possible, he said. He said all that remained to be done in this initial project was to put the basic elements together into a successful rearing run, which should be accomplished in 2011. He concluded by saying *Diadema* can clear the reefs of macroalgae.

Dr. Vaughan showed a few additional slides regarding additional *Diadema* experiments, and discussed things like going from small scale to large scale, including changes in tank size. He said would try to utilize some of Mr. Moe's brood stock. The bottom line is it was a big team effort, and he mentioned those involved. He said the *Diadema* strategy lags a year or two behind the coral restoration strategy, but it is necessary to restore the coral reefs. He said reef restoration was a rebuilding of the ecosystem, and it was a big job. He said he appreciated the support of the SAC and any ideas.

Chair Popham thanked Dr. Vaughan and Mr. Moe.

Public Comment

There was none.

Goals for SAC for 2011 – Chair Popham and SAC

Chair Popham asked for goals for the SAC for the coming year, and said he wanted the SAC to revisit this in February to focus down to a few goals. He said there was no such thing as a bad idea; however, he said he wanted the SAC to stay focused on things it could accomplish. He said there were a lot of things they were concerned about, but they should stay focused on things that can be changed. He noted that there was a SAC planning session a few years ago where the SAC decided to focus on ecological restoration,

education and outreach, and water quality, and that those themes also came up during the morning discussion.

- Dr. Hawtof said a year or two ago, Chair Popham suggested he talk to the legislature, and he said he would still like to see the SAC push to get the legislature to charge 10 cents beyond the cost of the drink for a water bottle, like the state of Michigan does. He thought it would be worth asking someone to write a letter.
- Sure, said Mr. Morton.
- Mr. Hunt said it was a great idea, but more than writing letter needed to be done; research building a strong case from other locations was needed.
- Mr. Morton said a letter would be passed up through the environmental protection side, through DEP, and he could see it being a combination of a lot of the data that Ms. Garlo referred to in the morning and direct impacts. He advised possibly making it bigger than the Governor and targeting the legislature. He said the SAC may want to invite Representative Ron Saunders in to provide advice.
- Chair Popham said this was the same legislature that said local municipalities could not pass rules about plastic bags. He thought it was a suggestion that could go up on the board and see where it goes.
- Mr. Curlett suggested a website where Dr. Hawtof could go for information. Mr. Curlett added there were two states that repealed those laws, Delaware and Missouri.
- Mr. Morton said sometimes if it is cheaper to go across state lines, it will be a business decision [to take the business to another state].
- Mr. Moe said he had three suggestions. The first was to create better outreach to youth in our community. The second was to establish a public conservation concept. The third was to increase the input of individual SAC members in education and outreach activities.
- Steve Leopold said he would like to see the SAC more involved in fisheries management issues.
- Mr. Bergh said they had discussed various focused workshops, and the SAC Ecosystem Restoration Working Group had put on that list to have a whole day or half a day to discuss fisheries issues, as there are so many agencies involved in it. He thought that would be one way to address what Mr. Leopold was talking about.
- Mr. Grathwohl suggested having Roy Crabtree come down and be part of a panel.
- Debra Illes said that might encourage more public attendance and the participation of people interested specifically in that issue. She added she would like to see more public comments.
- Chair Popham said the SAC was not doing anything controversial [currently], and would get more participation if it were.
- As a tourism representative, Ms. Illes said she would like to report back to her constituency, and she wondered if there were bullet points to take out of the minutes to reach out. She said she needed to know what Mr. Morton's overarching goals were to support what he is doing. In addition, she was interested in invasive species monitoring and remediation.
- Chair Popham said we [SAC members] could all do a better job of being more externally focused and was a challenge once people have left the meeting. He said he knew that people did reach out in various ways.
- Mr. Grathwohl said, on the permit fishery issue, people were emailing back and forth on it.
- Dr. Brylske said if focused outreach could be brought to tour operators, Dolphin SMART and Blue Star could be broadened, to show a broader constituency why sustainability is important and to provide best practices.
- Mr. Moe reminded the group that, when dealing with management issues, it was important to remember the FKNMS does not deal in management of fishery resources, so not much more could be done than being advisory to the agencies specifically in charge. He suggested they could look at fisheries management on more of an ecological/sustainable basis, and that he would like to build in concern for the environment into fisheries management as opposed to single species management.
- Mr. Bergh said FKNMS does manage fisheries habitat, and one management tool among many is marine zoning, and that it was time for that. He urged the SAC to take the bull by the horns and kick it

off. He said they would need to be careful about not creating expectations on the part of the public that would get in the way of the regulatory process, but to ask what people think about the current types of zones, their locations, and if any needed to be added, removed or lumped together, which would need to be done carefully so as not to raise expectations. He felt there was an expectation that there would [also] be a public meeting process.

- Mr. Moe said it was a great idea; he said the results of the establishment of the zones could definitely be put to use.

- Mr. Bergh agreed, acknowledging that the SAC had been working in this direction, and that he knew Mr. Morton wanted to have certain reports in place first, like the 10-year zoning report, but he said the SAC and staff had created an expectation in the past among the public that this dialogue was going to happen in an official public meeting process.

- Chair Popham said he had been hoping to get results from the Tortugas and the Research Natural Area (RNA) zones during the restoration portion of this meeting, and to learn the value of the zones, how the fish are doing, etc., and how that could be used for next steps. He asked Mr. Hunt for comment.

- Mr. Hunt said it was one of the themes of the Linking Science to Management conference, and people could go to the website for more information. He said if he wanted to go down that path, there was a lot of science. However, taking that and having it have value for the process, that would be where the SAC could participate and be ambassadors. Some of the science gave concrete recommendations for changes that would be better for the ecosystem, and he said the SAC would need to understand it first. He noted turning science into public policy was the major task when it came to the next generation of public planning.

- Chair Popham asked about the *Condition Report* status.

- Mr. Morton replied it would be out in 2011, and it would be a good summary of a lot of what was presented at the conference. A first step might be having the SAC get the best of what was presented at during Friday of that conference, he suggested. He said you had to go through that methodical approach. He felt there was still a lot of confusion out there about the main objectives behind why different areas were set up and the objectives they are meant to achieve. One main objective was user separation, for example, in SPAs, Mr. Morton said.

- Mr. Curlett said there also has to be a specific need to do it [set up an area].

- Correct, Mr. Morton affirmed, and that was done, he said.

- For any new ones, Mr. Curlett comment.

- Mr. Morton agreed. He said there may also be a possibility of making some SPAs larger or smaller and he mentioned the enforceability issue.

- Mr. Bergh commented that no change was also an option. He felt the marine zoning review was overdue.

- Mr. Morton agreed, and added that there were many things in the *Management Plan* that were overdue. He reviewed some of the education and research needs that were not getting implemented and reminded the SAC about the funding issues.

- Mr. Hunt felt an objective might be for SAC members to figure out their roles, as there was a lot of good science out there.

- Mr. Bergh said previous administrators had said the zoning process was going to take place, and he put a lot of time into it, engaging donors, etc. (without making promises about outcomes).

- Chair Popham explained he and Mr. Bergh had discussed this before, and that they may not necessarily need the results [described in] the *Management Plan* to get some things accomplished in the community, such as getting feedback from the community about what needs to be done. Regarding what to do and changes in operation, and said things like an annual business plan were needed.

- Mr. Grathwohl said Dr. Causey told them to run with Wildlife Management Areas and through the Marathon Guides Association, they held various workshops in the Marathon area with various fishing interest, and got a lot of the work done, with compromises, and they came out with different agreements. He said when [FKNMS] does put this out for hearings, it has already been cleared, except for with a few disgruntled people.

- Corey Malcom said there was a need to define how to go ahead with communicating with the public, including not just telling them what was happening, but hearing from them; there has to be some other way to do it, he said. He said SFFFK and the staff may already be doing some things the SAC wants to do. He noted the SAC needed to work at defining its public presence.
- Ms. Garlo brought up marine debris and single use plastics. She referred to remarks she had heard Bill Macdonald make previously, and about people not going out there anymore because it is too hazardous. She wondered if the SAC could recommend possible regulatory or voluntary changes. Also, she brought up a big picture issue of development of clean and renewable energy, and said she was concerned about what would happen with climate change and sea level rise.
- Mr. Hunt said the state of Florida was an FKNMS partner and also a NPS partner on the RNA in Dry Tortugas National Park, and that will come up at the Commission and Governor and cabinet levels. He said the state had had a sea change in leadership, and there was a huge educational effort that had to happen, from bodies such as this one.
- Mr. Bergh said some or all of those people did not know FKNMS existed.
- Mr. Hunt agreed, and said the issues the SAC was discussing were not discussed during the election.
- Mr. Bergh said would be a good idea to have a joint meeting between this body and the Water Quality Protection Program (WQPP) Steering Committee; generally, the two groups do not know what one another are up to, although there is a little overlap in membership, he said. He wanted to make sure the remaining areas of the Keys were sewerred, and said it would be good if the SAC and WQPP were moving in the same direction.
- Chair Popham said in 2004, there was some back in forth between the two groups.
- Mr. Bergh did not remember that.
- David Makepeace said he was also thinking about what would happen with this administration. The economy is high on their radar screen, and it is entwined with the environment here, he observed. He said to get a foot in the door, first you have to speak their language.
- Mr. Grathwohl suggested reaching out to this administration; one idea would be to invite the governor, his family, etc. here to see jobs at work, and to meet him, Mr. Leopold, Mr. Morton, etc. and take them out to the Tortugas. He felt if they approached them as citizens, and also the sanctuary [did so], they could get out on the water and see there are jobs to be had here.
- Mr. Morton said in their briefing with Tallahassee, that was repeated over and over, to not even raise the idea of regulation, it is all about jobs, jobs, jobs. Part of it is messaging and part is the Keys economy connection to the environment, he said. He felt they [the politicians] did not want to hear it from public servants, but from private business owners, and he encouraged people to run with that. He said FKNMS could certainly take them out on a sanctuary vessel, but it was imp they hear messages from business owners.
- Chair Popham said the chance was probably slim or none to get them here in first year of their administration, so there was a need to work on the messages from an economic point of view, focusing on the education process, which was a whole different strategy.
- Mr. Hunt remarked there would be new leadership in agencies, an education process could start to be built there.
- Mr. Morton said FKNMS was updating the website, and it was framed by Florida keys.com. He said FKNMS would be getting the content up over the next couple of months and he said he wanted to hear what else people might want up beyond what was there now. He also said FKNMS had launched a Facebook page, thanks to Ms. Crum. He encouraged folks to join in and wanted input on what people would like to see on that page.
- Mr. Bergh commented he would like it if the SAC could take a field trip, such as a half day during a SAC meeting day.
- Chair Popham wrapped up this topic by thanking everyone for their input. He commented he would be really happy if the SAC came down [at the February meeting] to three SAC priorities for the year.

Education/Outreach Presentation – FKCC Marine Sciences Program — Dr. Brylske and Dr. Bill Chalfant, FKCC

Dr. Brylske said with a change in the college administration a few years ago, now there is more focus on the ocean environment that surrounds the college, and they were poised to launch some interesting things. He felt the two most ideal locations in the world to study coral reefs were here and the Great Barrier Reef, and said they were wonderful natural laboratories.

The Department of Marine Science is within a larger marine science and technology division, Dr. Brylske noted. Within the Department of Marine Science, the college offers an Associate of Arts in Marine/Aquatic Biology, which allows students to transfer, and a terminal Associate of Science in Marine Environmental Technology degree, for those entering the workforce. He said many students opted to do both degrees in three years.

They want to give students a grounding in business, seamanship, marine research methods, marine science, and conservation and restoration, he said. They have general education requirements and core requirements and electives, many of which students would not normally get exposed to until graduate school, he observed. He said they have an agreement to use the *R/V Dante Fascell* [an FKNMS vessel] for basic research diving, and he noted they are working with Mr. Malcom and the Mel Fisher Maritime Heritage Museum on historic resources. He said they could not do this without what the sanctuary provides physically or without the organizations involved in managing the sanctuary.

Dr. Brylske described the coral reef curriculum cycle, in which students learn coral reef biology and management, coral reef restoration, and assessment of coral reef habitats. This summer the college will begin the assessing class to show students stressed and less stressed systems, including in places like Bonaire. He also said FKCC would like to provide a recreational ecology course.

Dr. Chalfant, the director of the James E. Lockwood Jr. School of Diving & Underwater Technology, spoke next. He said FKCC was 45 years old, and the first diving class was in 1965. Mr. Smith was his predecessor, and Mr. Smith took diving from a physical education activity to bringing in government contracts and a two year degree program. He said FKCC has a lagoon, classrooms, and docks designed to teach diving. Dr. Chalfant noted he joined the program in 1992.

Dr. Chalfant then listed a number of connections between those sitting around the SAC table and their program; Mr. Holston is on their advisory board; they have close relationship with the History of Diving Museum and they want to possibly integrate it as a venue in their curriculum; a number of people have taken classes for lifelong learning; and Dr. Vaughan previously was on their advisory board. As already explained, their department works with Mr. Nedimyer; DEP has interns from the college; also, the college has public safety and port security, aspects, which are related to the USCG. He said they got a grant for security issues, and help train Sector Key West folks to respond to marine accidents. They also teach public safety diving to officers throughout the state, and half of all the NOAA divers every year are hosted at FKCC in January. Dr. Chalfant noted his masters degree was in archaeology and cultural heritage and that he worked with Mr. Malcom. He said Dr. Brylske wrote the original encyclopedia of diving for the PADI system and the original Army Corps of Engineers syllabus. Also, he said there are historic shipwreck artifacts at the college lagoon. In addition, FKCC trains people to become proficient in the industry and also take people already working in the industry who want to get more education. He said they have two chambers, but they are not medical grade, though they are looking at getting one installed. They have not had one before due to cost, but hyperbaric medicine is important for wound care, and it could also be used for dive standby, he said. He concluded by saying there were five different tracks people could take, including research.

Dr. Brylske said among his duties was coordinating the FKCC research diving program, and he said they have a research diving class. He announced that FKCC hoped this March to become a member of the American Academy of Underwater Sciences. He thanked all the supporters of the program, and noted half of the courses were taught by guest lecturers. He said he would contact many people in the room to come speak or send someone from the staff to speak to their classes. He said SAC members could also host student interns in their organizations. He added that he required a term project of students, which takes a day, if people wanted to work with them on their projects. All of this is all possible because in they are located in the Florida Keys and because of the FKNMS, he finished.

Upcoming Meeting and Closing Remarks – Chair Popham, SAC

Chair Popham wrapped up the meeting by wishing everyone a Merry Christmas and Happy New Year, and thanked everyone for all that they do.

Adjourned, 4:38 PM.