

**FLORIDA KEYS NATIONAL MARINE SANCTUARY ADVISORY COUNCIL**

**Marathon Garden Club, Marathon  
Tuesday, August 18, 2009**

**MINUTES**

**Members Present**

Jack Curlett  
Dolly Garlo  
Richard Grathwohl  
Susan Hammaker  
David Hawtof  
Bob Holston  
Don Kincaid

Rob Mitchell  
Martin Moe  
Ken Nedimyer  
George Neugent  
Bruce Popham  
Brad Simonds

**Alternates Present**

Clinton Barras  
Jason Bennis  
Jana Fly  
Bruce Frerer  
Peter Frezza

Corey Malcom  
Krueger Nicholson  
Bob Smith  
David Vaughan

**Call to Order/Pledge of Allegiance/Roll Call/ Approve Minutes from June 16, 2009 Meeting/ Adopt Agenda for this Meeting/Chairperson's Comments/Introductions**

- Chairman Bruce Popham called the meeting to order at 9:00 A.M. Martin Moe then led the group in the Pledge of Allegiance.

- After review of the draft minutes from the June 16 meeting, Susan Ford Hammaker moved that they be approved, and Ken Nedimyer seconded the motion; Chair Popham then deemed the minutes approved.

- Chair Popham asked if there were any additions or changes to the agenda and, as there were none, deemed the agenda for the meeting approved.

- Chair Popham congratulated Mr. Nedimyer and Mr. Moe for their recent breakthroughs in restoration projects. Mr. Nedimyer's corals spawned for the first time, and Mr. Moe got his *Diadema* urchins past the metamorphosis phase. Mr. Moe passed around a jar with some of the urchins, and talked about the work he had done for or years to get them to this stage. The ones that lived survived on a clean substrate with a biological film on them, and he felt the same thing would take place on the reef.

- Chair Popham shared two letters from Dan Basta, Director of the Office of National Marine Sanctuaries (ONMS) to the Sanctuary Advisory Council (SAC); one was in response to the resolution on climate change passed in June, and the other was in response to the motion reaffirming the SAC's opposition to offshore oil drilling in the Eastern Gulf of Mexico passed in June. Chair Popham noted he was pleased with the quick response, and summarized the letters for the group. Chair Popham asked Lilli Ferguson to send them to the SAC, and she said she would.

**ACTION ITEM:** Ms. Ferguson to provide letters from Dan Basta to the Sanctuary Advisory Council on the June 2009 resolution on climate change, and on the June 2009 motion reaffirming the SAC's opposition to oil drilling in the Eastern Gulf of Mexico.

**National Oceanic and Atmospheric Administration (NOAA) ONMS Southeast Region Report – Billy Causey, Ph.D. (Hon.) NOAA**

-Dr. Causey mentioned the Executive Team for sanctuaries met in July, and there were four goals for this year: reauthorization of the National Marine Sanctuaries Act, increasing the budget for the National Marine Sanctuary System, climate change, and marine spatial planning.

- He announced that Sarah Fangman, a biologist on the regional team, was selected as an ONMS employee of the year in the nonsupervisory category.

- He talked about how there was a lot of interest in Florida for national marine sanctuaries. He reviewed that, in the Saint Johns County area, he and George Sedberry (who he asked to lead the effort) met with the Friends of the [Guana Tolomata Matanzas National Estuarine Research Reserve], and they are interested in a sanctuary overlapping the Reserve offshore. Resources in the area include archeological reserves, pristine beaches, and sea turtle nesting areas. He noted it takes 2 - 8 years to get a sanctuary designation, but he committed to “not turning the key” on new sanctuaries until the existing sanctuaries are funded. Dr. Causey also mentioned he had had several discussions with Senator Bill Nelson about another potential sanctuary somewhere along the West coast of Florida.

-Dr. Causey encouraged people to go to the Southeast Region web site on the National Marine Sanctuaries web site, and said the 2008 accomplishments for the region had been posted there recently.

- He mentioned that G.P. Schmall and other staff from the Flower Garden Banks National Marine Sanctuary recently went to Mexico where research was being done on a congregation of whale sharks. One of the tagged sharks ended up back at that sanctuary, showing the connectivity of the areas. This sanctuary also had a well documented coral spawning this year.

Jack Curlett mentioned that marine spatial planning only worked if it had good information feeding into it. The SAC had heard before that SEAKEYS was shutting down since there was no funding there, and wondered what the SAC could do to help. Dr. Causey said the Sanctuary Friends Foundation of the Florida Keys (SFFFK) had gotten Congresswoman Ileana Ros-Lehtinen weigh in; Chair Popham added that SFFFK had voted on it, and gotten Dolly Garlo to write a letter about it. Dr. Causey said that NOAA was working on a mechanism to get the money, from the Coral Program to Florida Institute of Oceanography, as there was a Memorandum of Agreement (MOA) that had lapsed. The Coral [Reef Conservation] Program came up with enough money for four months. Also, there is an indication SEAKEYS will be getting a coral program grant, which, together, would bring funding to the program for a year and a half. The MOA was drafted and is now going through the approval process, Dr. Causey said. Mr. Curlett asked if this was a temporary fix, and Dr. Causey affirmed it was, and reviewed the varied sources of funding for the program back to its inception. Dr. Causey said he was working on getting to the NOAA Administrator, so the program could be adopted as one of the observing systems. The thing perhaps the SAC could do would be to let Mr. Basta and the Sanctuary Program know they are doing the right thing by pushing the issue up to the top, Dr. Causey said. Chair Popham asked if a resolution or a motion from the SAC would have some value, and there was agreement that it would. Chair Popham asked if Mr. Curlett would draft a motion for consideration by the SAC, and he agreed he would.

**ACTION ITEM:** Mr. Curlett to draft a motion for SAC consideration regarding SEAKEYS.

**Acting Superintendent's Report – Sean Morton, Acting Superintendent, Florida Keys National Marine Sanctuary (FKNMS)**

- Mr. Morton concurred that it was a good question about long term funding for SEAKEYS. He also talked about how FKNMS is always in three or four budget cycles at once, and NOAA was in a re-prioritization process right now. An amendment was put into the budget for SEAKEYS and other stations in Thunder Bay [Michigan]; they tried another strategy, to go through the Office of Oceanic and Atmospheric Research for long term funding, rather than in ONMS. He thought that would work for 2012, and that the Coral [Reef Conservation] Program would fund it in 2010 and 2011. The Coral [Reef Conservation] Program asked what Mr. Morton's top management priority was that the program could fund, and Mr. Morton said it was SEAKEYS.

- Regarding FKNMS, this is the end of the FY 09 budget cycle and planning is starting for the FY 10 budget, he said. He mentioned that in September, he would be attending a leadership team meeting in Portland, and the sanctuary superintendents would be getting a little more direction from Mr. Basta then. He added that the numbers were not looking good anywhere in the [National Marine Sanctuary] program. With any new administration, he noted they go through a review of the *Strategic Plan*, both internally and reaching out to stakeholders on what people think the priorities should be, and then they come up with a new vision and mission for NOAA. Mr. Morton did not think the new plan would be dramatically different. He said the planning group would not be coming to the Keys, but there is a website to provide comments. Mr. Morton said he would send the website address to the SAC. ***ACTION ITEM:*** Acting Superintendent Morton to send the website address for providing public comment on the new NOAA *Strategic Plan* to the SAC.

- Mr. Morton announced that Chad Stolka, an FKNMS employee, was named ONMS employee of the year for operations. Mr. Stolka is a marine mechanic, and a Yamaha master mechanic, who created a new way of organizing and tracking vessel maintenance for FKNMS. Mr. Stolka has pursued using “green lubes” for all the FKNMS Yamaha engines. He demonstrated to Yamaha that it could work (Yamaha had not been sure about how the use of the products might affect the warranties), and has been implementing this at FKNMS. Because of this award, \$5000 will come to the [FKNMS] program.

### **Agency Report Highlights:**

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

Mr. Edwards said that, regarding the budget, the number that came to DEP was reduced from previous years. Looking at the coming year, and considering the fact that the State is also in bad budget times, DEP had to notice six FKNMS staff on the DEP side (out of 29) of layoffs. These are good staff members working on important programs, he said, adding that these are terrible budget times, which would not be over soon. He asked people on the SAC were aware of [available] positions, to let him know. ***ACTION ITEM:*** Anyone on the SAC with knowledge of job openings, please let Mr. Edwards know. Chair Popham thanked Mr. Edwards, and agreed that the financial situation was a bad one, noting he had half the staff at his own business that he used to have two years ago.

#### **Florida Fish and Wildlife Conservation Commission (FWC) Report – Major Michael Edwards, FWC**

-Major Edwards reviewed law enforcement statistics from the lobster mini season. Some were: 2,567 vessels were inspected, and there were 96 resource citations, along with a bunch of warnings. Also, he said there were 105 calls for service, and one boating accident fatality. Twenty four officers were brought in to assist the existing officers in the Keys, and 15 in Miami-Dade County. There were also some search and rescue missions, including a rescue of a father and son the night before mini season.

-He said FWC continued to work with NOAA on investigations and compliance issues. He said that lobster casitas were still out front and work on this continued, but there were other issues to deal with related to mutton snapper, king mackerel, etc.

- Major Edwards talked about work being done in the Tortugas by the *Gladding*, including cases of people not having federal permits, tampering with the vessel monitoring system, salt water commercial licenses, etc.

- He reported that the *Seahawk* splits operations between the National Marine Fisheries Service and FKNMS, and added that Bill Burns broke his leg and ankle during a boarding recently.

- He said there were eight summary settlements (307 cases), with 16 Sanctuary Preservation Area (SPA) fishing violations. There were 8 more serious (312) cases, with two SPA fishing violations, and one Area to Be Avoided violation.

- He reported on a recent, extremely serious, case involving damage to seagrass.

- Regarding the budget, the news was bad, he said. In 2007-20087 his budget was about \$1.5 million; in 2009, it was reduced to \$1,065,000, then, for 2009-2010 it is being reduced to a total of \$700,000. **This**

will translate to 7 positions remaining out of 19 in the previous MOA (two of those were support positions, he said). FWC officers will continue to do the missions to the best of their ability, he affirmed. He added that it is understood that these are serious budget times, but he asked the public to understand that response times will be slower.

Dr. Causey added a footnote that when FKNMS was designated, there were four law enforcement officers in Key Largo and three at Looe Key. Chair Popham commented this information was shocking, and he commended FWC for the job that [the law enforcement officers] do.

#### **U.S. Environmental Protection Agency (USEPA) Report, Pat Bradley, USEPA**

Ms. Bradley said she had nothing to report for this meeting.

#### **NOAA Office of General Counsel for Enforcement and Litigation, Southeast Region -- Karen Raine, NOAA**

- Ms. Raine commented that the Florida officers were wonderful to work with. She said she handles civil administrative penalty cases, and this year, she had had mainly anchoring and grounding cases, and some associated fishing violations. There were four groundings; there was one case of harvesting live rock, and a spearfishing case that also involved a divers down violation. Another case in this area, which was not a sanctuary violation, involved a person not having a South Atlantic permit; he was assessed \$30,000, and that case will probably go to hearing.

- Major Edwards commended her for her responsiveness and her work, saying he appreciated it.

- Chair Popham said it was important to have her at the table, and for people to know they will be prosecuted.

#### **Everglades National Park Report – Tracy Ziegler, National Park Service (NPS)**

- Tracy Ziegler provided an update on the General Management Plan. She said sometime the next week, Park staff members would be sending emails and updating the web site on what the public input was to the Plan. They collected thousands of comments. She thanked the SAC for its comments and said the Park has incorporated them. They were working to develop the preferred alternative, she said, which would take about a year to develop.

- There was a massive fish kill in the park in July, mostly mullet and catfish, she reported, due to high temperatures and low oxygen in the water. There were concerns that it could be a precursor to a seagrass dieoff event, which happened in the past. They have been monitoring it, but have seen no signs of that yet.

- In the Dry Tortugas, she said little bleaching of the corals had been reported so far this year.

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

- Mr. Genovese reported that the bond validation hearings to purchase the sugar lands had concluded. The judge would rule soon, he said, and he predicted whichever way the judge ruled, the matter would go to the Supreme Court.

- On the C-111 project, the regulatory Environmental Impact Statement is out, the project is out for bid, and the permits would be coming out in September, with construction expected start in October, he said.

#### **FWC Report, cont. – John Hunt, FWC**

- Mr. Hunt said that February will be the three year anniversary of the signing of the agreement that created the Tortugas Research Natural Area (RNA), and a report is required. He has been in communication with Bob Johnson and Dave Hallac about it. He said a science workshop was being planned for some time this winter, and the plan was to release the report then. He said he would keep the SAC posted as that gets finalized. *ACTION ITEM*: Mr. Hunt to let the SAC know the details of a Tortugas Natural Area science workshop, planned for this coming winter, when they are finalized.

- On the topic of marine spatial planning, he talked about a major success story, observation of thousands of mutton snapper spawning during the full moons in June and July on Riley's Hump. He thanked Brian Keller as the unsung hero supporting this management effort; he and Mr. Hunt discussed moving receivers and research out to the Tortugas a few years before the Tortugas process started, and Dr. Keller also worked to keep money there for the research from the NOAA Coral [Reef] Conservation Program (CRCP). Mr. Hunt discussed the placement of the receivers, and the locations where tagged mutton snapper have been found, and that they travel between the Park and Riley's Hump. He said more thought should be done regarding corridors to spawning aggregations. He concluded by asking that, at some point, he or Mike Feeley be able to tell the SAC about this work. *ACTION ITEM:* Mr. Morton and Chair Popham to consider scheduling Mr. Hunt and/or Dr. Feeley to discuss mutton snapper research at a future SAC meeting. Dr. Causey agreed that the CRCP needed to be thanked and that Dr. Keller was helpful in getting the funds. He also talked about planning for a public meeting to report the results locally in the fall, then taking the information to Silver Spring and DC.
- Chair Popham asked if the RNA had to go to the Governor and Cabinet, and Mr. Hunt confirmed it did.

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

- Ms. Morkill said she had reported about a year ago on a draft comprehensive conservation plan for the Florida Keys refuges. This fifteen-year plan has been finalized [within the agency], and she said she hope to have it be public by this winter.
- She mentioned the refuge contains sovereign submerged lands and that the USFWS supports the State and the sanctuary in the management of those lands. During mini season, a number of officers participated on special details within the refuge boundaries, and the USFWS was also a partner in "Operation Freezer Burn."
- She reported their budgets are doing well, and that the new buzzword with the new Secretary of the Interior was "treasured landscapes". His priority for funding was National Wildlife Refuges, National Parks, and other areas, she said. Also, the newly appointed Director for the Fish and Wildlife Service, Sam Hamilton, had been the Southeast Regional Director, so she felt that boded well for continued support for the refuges. Ms. Morkill noted the USFWS was taking a lead role in an adaptation strategy, and was working on species vulnerability assessments. They have seen increases in funding, which were being used for research and monitoring, and since last week, she said they have put another \$75,000 into water quality protection. Also, she hoped they would fund bathymetric maps and habitat classification in all the backcountry areas that fall within the sanctuary, and she has talked to Steve Rohmann and the U.S. Geological Service about this. That information is important for tidal flats and wading bird foraging, the Florida Reef Resilience Program, the sanctuary, and the state.
- Ms. Morkill said they were also working with the FKNMS, DEP, and the County on addressing illegal mooring issues, especially in the Key West National Wildlife Refuge, and also activities like using jet skis, rock climbing and using trampolines. She mentioned she would be meeting with County to talk about how to work together to address these things.
- She concluded by saying she would hand out sheets on adapting to climate change in the southeast and climate change online resources, which she did.

### **Public Comment**

Frank Wasson, half owner of Spree Expeditions, spoke; he mentioned the vessel sometimes does research work, and sometimes charter operations. He said he was the original chair of the Flower Garden Banks SAC, but has moved his operations here full time. He mentioned he had a concern about budget cuts, and that the most important things for the reef were mooring buoys and law enforcement. He mentioned he had heard talk about budget cuts affecting buoys, and of taking mooring buoys out of the Tortugas. He said that would put the operators out of business there because they cannot anchor there. Also, he had heard the *Gladding* may only be able to do a one a month run there, and he would like to suggest to Dr. Causey's that the priorities were wrong. He mentioned some other points, including paying rent in

regional offices, and concluded that the budget cuts did not make sense and that he would be happy to help Dr. Causey write the letter or he would write it himself.

Dr. Causey replied that no rent was paid in St. Petersburg or any of the regional offices. They have a presence in the regional National Marine Fisheries Service office with Roy Crabtree and are not charged rent there. Regarding the offer of writing a letter, he said he appreciated it, and encouraged Mr. Wasson to let Mr. Basta know his views. Dr. Causey said he had other priorities he could share with Mr. Wasson as well.

### **Ocean Acidification – Dr. Causey**

Prior to beginning his presentation, Dr. Causey brought SAC members' attention to two climate change related publications in their meeting packets, *The Effects of Climate Change on Florida's Ocean & Coastal Resources* and a special issue of *Sanctuary Watch* featuring climate change. He noted that ocean acidification was an issue that many did not see coming. It is now an issue of concern at the national level of the ONMS, was brought up at the chairs/coordinators meeting, is a priority in the Southeast Region, and SACs are considering resolutions dealing with ocean acidification (the west coast sanctuaries have already passed some), he said.

Dr. Causey said that climate change was causing changes in the ocean, in sea surface temperature and ocean heat content; sea level rise; tropical storms; circulation patterns, currents and upwelling; likely effects on El Nino-Southern Oscillation and other oscillations; and carbon dioxide effects on ocean chemistry and calcification. One issue of particular concern he noted was that rising atmospheric carbon dioxide concentrations over the past two centuries have led to greater carbon dioxide uptake in the oceans. We have seen increasing acidity and decreasing carbonate for organisms that use it in shell building and other structures, he noted.

He then went over some data showing trends, and said there had been a great recent rise in carbon dioxide. In other times, there were great extinctions due to volcanic eruptions, but this is different, he said. The decrease in carbonate saturation state by the end of the century is projected to result in a 15-30% drop in coral/algal calcification, he reported. He added that the oceans are not uniformly saturated, and there will be hotspots of acidification. For example, where fresh water is dumping into the ocean, there will be an extra load of carbon. He also mentioned concerns he had related to freshwater flow in Southwest Florida. He said that both shallow and deep water corals were in trouble, and that some of the deep water corals were already "living on the edge". The impacts will be far-reaching for any marine organism that uses calcium carbonate, with challenges leading to direct and indirect effects, including effects to the plankton and upper food chain, he announced.

At FKNMS, corals, sponges, urchins, echinoderms, crinoids, and sea cucumbers would all be affected to some degree; Queen conch would have trouble laying down shells, and crustaceans would also be affected, Dr. Causey reviewed. He noted there were a lot of unknowns, including cascading effects. There are also some coccolithophores that were doing well and some that were not. He also said that the interaction between temperature and oceanic salinity was an unknown, that that a heated environment changes things.

There are a number of things people can do, including having confidence that scientists are not promoting a self serving agenda; lowering carbon dioxide emissions now; reducing, reusing, and recycling; and promoting research of the effects of carbon dioxide and pH on calcifiers, he said. He also reviewed a number of suggestions from Alex Score, when she was with the World Wildlife Fund, related to resilience, adaptation, reduction of greenhouse gases, etc. Dr. Causey concluded by mentioning some of the work underway with a number of different groups, and said we were moving in the right directions, but we needed to apply some of the other principles he mentioned.

### **Climate Change and the Keys -- Hans Hoegh-Guldberg, Economic Strategies Pty Ltd**

Mr. Hoegh-Guldberg began by mentioning his presentation was about a project for the sanctuary socioeconomic research and monitoring program. The origin of the project was a study he did with his son between 2002-2004 on the Australian Great Barrier Reef; his son is an expert on climate change and provided the coral/marine biology expertise, and Mr. Hoegh-Guldberg did scenarios, he said. NOAA funding resulted from that for a scoping report, which led to the current project. This project uses scenarios to help set boundaries for plausible futures for planning purposes, he said, adding that a report on this project is due at the end of October. The global futures all had to be extensively updated for this report, and local Keys scenarios are being derived with local participation, he reported. The main conclusion was that the climate change challenge could no longer be postponed. The Great Barrier Reef study concentrated on coral bleaching, but the threat is more ominous now than it was five years ago, he said.

He reviewed a series of scientific projections related to climate change, including greenhouse gas emissions, temperature rise, and the uncertainty of climate modeling. For example, he said that a rise in temperature of two degrees Celsius was becoming accepted as the “upper safe limit”, but that it was not known if it is. He added that models now included a number of positive feedback loops, with one type of change triggering another. He said that there was a significant risk that the trends would accelerate, leading to increasing risk of abrupt or irreversible climate change.

Mr. Hoegh-Guldberg then provided summaries of the four scenarios. One was about technology-driven global economic growth, with fossil fuel becoming unsustainable first; another was also about global economic growth; while more benign, it also showed risks of becoming unsustainable; a third was about regionalized economic growth, which could lead to armed conflict; and the last was a regionalized “green scenario, utilizing competitive small-scale agriculture. He said it was vital that the U.S. take a global leadership role, and that there needed to be a clear planning framework.

“Hard to shift” Keys issues from the 2008 workshops included climate change, water supply, carrying capacity, and other external influences; “easier to influence” issues included reef health, fisheries, local pollution control, the local economy, and education and outreach, he reviewed. In all the workshops he ran, he said climate change was the major Keys issue, with components of that being warming, sea level rise, ocean acidification, hurricanes, threats to fisheries, threats to real estate values, and skeptics to climate change.

Mr. Hoegh-Guldberg briefly mentioned other studies related to this issue, including predictions of what would happen to Big Pine Key with sea level rise (and he thanked Chris Bergh for the material); work to bring back both herbivores and coral, including *Diadema* and *Acropora* (done by Mr. Moe and Mr. Nedimyer); resilience work by The Nature Conservancy and World Wildlife Fund, and Mote; and other work.

Mr. Hoegh-Guldberg encouraged people to provide feedback to him on his presentation, and mentioned he was still seeking data, especially fisheries statistics, as well as research funding. He concluded by noting that the investigation would boil down to the real strengths and weaknesses of the Keys to cope with future risks and uncertainties.

Chair Popham thanked Mr. Hoegh-Guldberg, and then moved the SAC to the next topic, discussion on both his presentation and that of Dr. Causey.

### **SAC Discussion on Ocean Acidification and Climate Change and the Keys -- SAC**

The SAC discussed the previous two presentations. Ms. Hammaker asked what would happen if humans were used as the example of “canaries in the coal mine” when it came to these issues. Dr. Causey commented that it was about more than just humans, it was about the environment, and Ms. Hammaker acknowledged that, but said people were the ones affected and the ones who vote, and wondered how to get them to believe. Dr. Causey mentioned that there were a lot of skeptics, with the scientific skeptics hurting [having people accept that climate change is occurring] the most. He said it was important to discuss the issue as climate change, rather than global warming, and to rely on scientific facts, and measure and monitor as we go forward. He felt that coral reefs were the global canary. Mr. Hoegh-Guldberg said that humans could become the canaries, and that the economic growth scenarios predicted collapse unless people were careful in changing their ways. He felt people’s perception of humans as canaries could possibly change opinions. County Mayor George Neugent commented that there were a lot of elected officials that were overlooked in making positions. He said he had heard a concern from someone attending a meeting of electric cooperative executives from Florida that no one at the meeting believed in climate change and that dealing with emissions was causing economic problems. He said that skeptics in influential decisionmaking positions looked things to hold onto [that climate change was not occurring or was naturally occurring]. He said people should not just look at elected officials at the federal, state or county levels for decisions being made. Brad Simonds said Fox News was currently the cable channel with the largest viewership, and that all its anchors and commentators were dismissive of global climate change. He thought there was danger of people buying into the dismissive attitude.

Mr. Moe described a proposal from a University of South Florida professor to grow algae on ropes on the substrate, for reducing red tides. Mr. Moe wondered if the idea could be taken further to mitigate global warming, putting algae in carbon dioxide hot spots and harvesting the algae for biodiesel.

Ms. Garlo commented outreach was important. She also mentioned she had heard about global dimming and brightening, and that after September 11, a scientist had noticed a change in temperature in a particular region based on a decrease in jet vapor. She said there was research that cleaning up particulates in the atmosphere (brightening it) may worsen warming. Mr. Hoegh Guldberg said there was research on things like CFCs, ozone and carbon dioxide effects, and mentioned an article in *Science* on ozone issue in relation to climate change and the interaction between them. Dr. Causey said he had a graph on measurable carbon dioxide after September 11 which showed a decrease; he said he would try to find it and send it to her. **ACTION ITEM:** Dr. Causey to look for a graph related to carbon dioxide after September 11, and to send it to Ms. Garlo.

Richard Grathwohl commented that he heard recently on the news that the governor had canceled carbon workshops, which was disturbing.

Mr. Curlett mentioned a previous presentation to have a turbine in a channel [for generating electricity with currents], but one person on the SAC took an uncompromising position on the proposal. Dr. Causey said he had had some sidebar conversations with that person. This was a pilot project, proposing a turbine in Bahia Honda channel. Dr. Causey had asked a question about if [the test turbine] worked, how many more would be needed [for commercial electricity generation], and the answer was about a thousand. The idea seemed like a good one, but there were questions about the practicality of that particular proposal, and where they would be located, Dr. Causey said. He had said that a permit would be needed for the thousand turbines, and there would be a fight if they were proposed to be located in Bahia Honda channel. Mr. Edwards added that the staff tried to find a balance between supporting a project with innovation, while recognizing that the location for the larger project was not there. He felt the idea to could be exported to other areas. Don Kincaid commented things such as the design of the rotors and location of the project had changed since the SAC heard the presentation about it.



Joe Boyer, from the audience, was recognized by Chair Popham; Dr. Boyer said there was a failure of economic theory to incorporate [the environment/climate change into economic models], and that we would not have a chance until it was incorporated. Mr. Hoegh-Guldberg said there was now something called the economics of climate change, so he thought it was happening now. Chair Popham said that the information about Big Pine Key tied the issue directly to property values and reduced revenue, and got people's attention with that direct linkage.

Clinton Barras asked if there were other studies about getting carbon out of the air and water, such as the idea Mr. Moe had mentioned. Dr. Causey said he had not read about anything under water, and others commented that it was a matter of scale [not being able to do anything big enough to make a significant difference]. He felt identification of hot spots was a little bit encouraging, and that things should be done to assist the growth of marine vegetation in those areas.

Chair Popham said that at the SAC Summit in May, the ocean acidification issue came up because the West Coast SACs had passed resolutions on this issue, and Mr. Basta asked that this issue be brought before all of the SACs, and see if motions could be passed in support of paying more attention to this issue.

A draft resolution on ocean acidification was in the SAC meeting packets and was provided in advance, and Peter Frezza moved that it be passed, seconded by Bob Holston. Mr. Morton and Chair Popham urged the SAC to view this as a start, and to add as much as they wanted. The motion passed unanimously upon roll call vote.

The wording of the resolution follows.

**FLORIDA KEYS NATIONAL MARINE SANCTUARY ADVISORY COUNCIL  
RESOLUTION REGARDING ADDRESSING OCEAN ACIDIFICATION  
August 18, 2009**

Whereas, the Advisory Councils of the Gulf of the Farallones, Monterey Bay, Olympic Coast and Cordell Bank National Marine Sanctuaries have passed resolutions recognizing ocean acidification as a significant threat to the long-term conservation and health of sanctuary resources, warranting additional National Oceanic and Atmospheric Administration (NOAA) research, monitoring, education and outreach, and management action to reduce and mitigate its impacts; and

Whereas, ocean acidification is a significant threat to the marine resources of the Florida Keys National Marine Sanctuary;

Therefore be it resolved, the Advisory Council for the Florida Keys National Marine Sanctuary recommends to the Acting Superintendent that NOAA's Office of National Marine Sanctuaries support coordinated national and regional approaches to addressing ocean acidification throughout the National Marine Sanctuary System, and that the approaches be coordinated with the sanctuaries' research and community partners.

Passed unanimously on this date: August 18, 2009.

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The Council is an advisory body to the sanctuary superintendent. The opinions and findings of this publication do not necessarily reflect the position of the Florida Keys National Marine Sanctuary, the

National Oceanic and Atmospheric Administration, the Florida Department of Environmental Protection, or the Florida Fish and Wildlife Conservation Commission.

*ACTION ITEM:* Acting Superintendent Morton to consider/follow up on the recommendation of the SAC regarding supporting coordinated approaches to ocean acidification throughout the National Marine Sanctuary System.

***Management Plan Implementation and Proposal for No-Discharge Rule in Federal Waters – Mr. Morton, FKNMS***

Mr. Morton noted that *Management Plan* implementation would be a standing topic on the agenda, and every time it would include an update on management and budget issues, timelines, etc. One of the things he mentioned at the last meeting, the minor technical changes to the regulations, were published July 31 and would be final at the end of August, he announced. He said that the sanctuary staff would get these changes out to the SAC, and that Ms. Ferguson had already started on some of the outreach, to law enforcement and others. *ACTION ITEM:* Ms. Ferguson to send the minor changes in the FKNMS regulations to the SAC.

Regarding the discharge regulations, Mr. Morton said the draft rule was still in NOAA clearance; he had been told they would be out by August, but with the new Administration, other new regulations and new policies were slowed down downtown; he said he would keep the SAC updated. The proposed action would mirror state regulations for discharges and extend regulations to federal waters, and require that Marine Sanitation Devices be locked to prevent discharges. *ACTION ITEM:* Acting Superintendent Morton to keep the SAC updated on the status of the proposed sanctuary no discharge regulations.

In terms of implementing the *Management Plan*, Mr. Morton said he had been talking to other parts of NOAA and the people he spoke to were receptive to working in the Florida Keys; the original thinking was that the SAC could help facilitate this, but other parts of NOAA have [already] been very receptive. The first step for a marine zoning review would be to have something in hand, and he said he wanted to release the ten year zone monitoring report and the FKMS *Condition Report*. He said the ONMS staff estimated January as a time frame for getting them published and out to the public. Mr. Morton said doing this [public outreach] needs to be done first before a public process, scoping, and getting it in front of the SAC. He reviewed that resource issues include staff: policy, outreach, research, GIS, and facilitation; materials: printing, outreach, mapping and facilities; travel: meetings, experts and legal; and spatial analysis: software, hardware, and data collection and integration.

On the budget, Mr. Morton said FKNMS had been given a planning number, based on the Presidential budget, of \$4.7 million for next year for FKNMS, and the FKNMS staff was making the Annual Operating Plan based on that number. He mentioned that the staff did not normally bring the sanctuary budget before the SAC, since that was getting into the nitty gritty, but he said he was doing it now so the SAC could understand what the staff was faced with and the decisions made, and so the information would serve as background for the SAC's expectations and recommendations for what FKNMS should do. He reviewed the projected costs for Fiscal Year 2010 for salaries, rent, phone, utilities, and vehicles and vessels, which, when totaled, resulted in a negative balance of \$28,000. That balance did not include costs for computers, office supplies, travel, training, security upgrades, and educational and research programs; that balance also reflected a personnel shortfall of 11 positions, not including law enforcement. It did include the deep cuts Mr. Edwards talked about, he said. In Fiscal Year 2009, FKNMS had a Presidential budget of around \$5 million, and there is a negative balance of \$162,000; he said FKNMS has not figured out the total shortfall yet, as the bills were coming in, and funds for the shortfall were being requested from other programs. There was a personnel shortfall of five positions. He pointed out that FKNMS's peak funding was in fiscal year 2005, and since then, a lot of the costs were covered from

things like groundings, restoration, enforcement cases, etc. Mr. Morton said FKNMS had been breaking the piggy banks to maintain staff, but now “We are up against the wall,” he said. He showed a slide comparing 2005 vs. 2009 funding levels, noting many things had to be cut back, and certain things went up, such as utility bills, salaries, etc. He concluded by saying that a lot of the sanctuary programs would be affected in the next couple of months. FKNMS has had to cut staff members in education, the mooring buoy team, and damage assessment and restoration; and Major Edwards previously talked about cuts related to enforcement. He said FKNMS has tapped into other programs for funds, but other programs will not fund some things, so FKNMS needs to take care of those.

Dr. Causey mentioned 2004 and 2005 were “plus up” years, in which Congress provided an extra \$15 million to sanctuaries; he said the first year was a mistake, and the second year, Congress looked carefully at the funded activities. He said some sites used the funds to get to a higher level of functioning, and that, when the money was cut, some sites felt it more than others. He added that a number of the sites were going into “the red” this year, that the money had been very spread out, and that the pie could not be sliced any thinner. Fiscal Year 2011 will be the first chance the Administration has to “put their fingerprints on the budget”, as they inherited the Fiscal Year 2010 budget, he said. He said all were needed out there helping and focusing on this, which is why Mr. Morton had proposed bringing the budget before the SAC, which had not been done in the past. Mr. Morton said he felt the SAC needed to know this, so they could understand the news they were hearing about actions taken by the sanctuary.

Chair Popham asked if this meant that FKNMS would not to be able to do any *Management Plan* updates this year. Mr. Morton said he was not sure, but said that type of work was important to NOAA. He said that the early drafts of the zoning and *Condition* reports were coming in, and early drafts from scientists were showing successes. He said people knew it was a success, and that another part of the National Ocean Service was ready to detail someone here full time to help with biogeographical mapping. But, he said that depended on how things shook out, and in the meantime, FKNMS would need to restructure and reprioritize. He also added that the figure was a planning number and was not final, and that the House was showing indications it would provide more money for sanctuaries; the Senate had not included any, he said.

Bob Smith asked if there was any stimulus package money in the allocation; Mr. Morton replied there was not. He said the stimulus money went into another line office of NOAA, the Fisheries Restoration Center, and was distributed through grants to the public. FKNMS helped some grantees get some funding, but that none of the money would be coming to FKNMS’s operational bottom line.

Dr. Causey said that FKNMS was thinking about revisiting marine zoning, and when it does, the staff would be as careful as possible to mimic the Tortugas 2000 process. At that time, eight SAC members served on a working group, and then it was opened up to people from outside, to be about 25 people total, with every fishing group represented, he said. He and his state partner at the time chaired that group, he noted. The future marine zoning group would be chaired by Mr. Morton and Mr. Edward, and “tri-chaired” with FWC, Dr. Causey said. This could be a year from now, he reminded the group, as Mr. Morton pointed out. Mr. Curlett asked if there was talk about zoning anywhere in the sanctuary, and Dr. Causey replied yes. Mr. Curlett said the Biscayne National Park staff was talking about zoning on its outer edges, which FKNMS could tag onto. Mr. Curlett said there had been three public meetings, and that lines on the map were being discussed. Dr. Causey said he had talked to Mark Lewis about doing something jointly somewhere, but had not been aware of lines being proposed, and Dr. Causey would not put a line on a map. Dr. Causey said there could be some advantage to putting something there if it were done right, but he would not want to see people pitted against it before the process started.

### **Summary of 2009 SAC Summit—Chair Popham and Ms. Ferguson, FKNMS**

Ms. Ferguson provided an overview, from her perspective, on the 2009 SAC Summit, held in Alpena, Michigan (where the Thunder Bay National Marine Sanctuary headquarters is), May 4-7, 2009. It is an annual meeting (funding permitting) of Sanctuary Advisory Council chairs, coordinators, coordinators and other select national staff members and invited guests, including Mr. Basta. The very first of these types of meetings was just for SAC coordinators, she said; later, the focus changed, it has evolved to being the partnership of chairs and coordinators. She reported that this year she was on the committee that planned the meeting; she suggested a more descriptive name for the meeting (SAC Summit vs. SAC Chairs and Coordinators Meeting) and a meeting goal, which for 2009, was “To improve the effectiveness of ONMS sanctuary advisory councils.”

Ms. Ferguson reviewed the activities of the week. There was one day set aside just for staff members, during which the staff talked about things such as updates on national staffing for SAC coordination, the Thunder Bay Council and its history and operation, council member selection processes, the resolution process for councils, and the status of the volunteer program nationwide. The coordinators also had a brief amount of time to discuss council related ideas and concerns with Mr. Basta, she said. After the SAC chairs and other participants arrived, she reported that the group learned about the Thunder Bay National Marine Sanctuary, the Olympic Coast Intergovernmental Policy Council, recommendations for boundary expansion at Flower Garden Banks National Marine Sanctuary, Channel Island National Marine Sanctuary’s efforts regarding ocean acidification, and marine protected areas process within the Monterey Bay National Marine Sanctuary. There was a chairs-only dinner with Mr. Basta, and a field trip afternoon, to allow people to talk in a more informal setting (while visiting historic lighthouses). Other sessions included Mr. Basta’s State of the National Marine Sanctuaries overview; MPAs in Korea; education and youth; the Marine Protected Areas Center and the recent creation of a national, networked system of existing MPAs; enforcement; policy planning updates; and a special session on catalyzing the influence of SACs, which included breakout groups.

Several of these sessions generated good discussions on shared challenges, commonalities, and approaches for the future, particularly the sessions on enforcement and future work and influence of the SACs. Some of the things that sanctuary leadership touched upon were the appreciation we all have for our councils and council members, and the impact SAC participants may have both at SAC meetings and outside of them. Ms. Ferguson concluded that, overall, she found it to be a very good experience for thinking about broader issues than site level issues, meeting new people and reconnecting with others, and learning what ONMS leadership thinks is important. She noted that a number of issues for further discussion and implementation came out of the meeting, one of which was ocean acidification, which the FKNMS SAC dealt with in the morning session.

Chair Popham said he was struck by the commonalities between the councils, and that he has been to several of these national meetings. He added that he would not cover the same things that Ms. Ferguson talked about. He said that this year, there was representative from a native council from the Northwest there, and also a native Hawaiian, who brought interesting perspectives to the process.

He said two things came out of the meeting for the group to consider. One was a youth seat, where a high school student would be on the council for two years (junior and senior year), and then another one would take over. The student would have to get out of school to attend. He said there could be some value

there, and it could be an opportunity to get youth engaged in the council process and get that back to the schools. He was not sure how to go about establishing this or if the charter would need to be changed, but it was something to think about talking about at the next meeting. *ACTION ITEM*: Ms. Ferguson to include discussion of a youth seat as a potential topic on the planning calendar for the next SAC meeting. There were also sessions on ocean acidification and catalyzing the councils, he said, as Ms. Ferguson had mentioned. And, it was announced that collectively, SACs contributed approximately 25,000 volunteer hours.

Chair Popham said there never seemed to be enough education and outreach. He mentioned the Hawaiian concept of managing from the mountains to the reefs was brought up at that meeting, and he said perhaps FKNMs could be managed from the rocks to the reef. Ms. Morkill said that the pine forests were the highest point of land. Chair Popham asked rhetorically about how to reach out to the community on all the topics discussed at these meetings and how to get the messages out, and said a friend of his always talked about living at the end of an extension cord and garden hose in the Keys [the water and power comes from the mainland]. Chair Popham said he thought the council could try do a better job of reaching out to the community, and said he had made it a personnel commitment of his own. One way might be to use [items from] the Situation Reports to get out to chambers of commerce, clubs, schools, etc., he suggested. The only way to make change is to go out and make it happen, he concluded.

Mr. Kincaid referred to museum maritime artifacts allowing people to see from the sea to the soul, and Chair Popham agreed there were a lot of appropriate analogies that could be used. Ms. Hammaker said she did 30 second announcements at meetings up and down the Keys on information about the sanctuary.

#### **SEAKEYS Funding – Mr. Curlett, SAC**

Chair Popham called upon Mr. Curlett to bring forward a motion on SEAKEYS, as had been proposed during the morning session of the meeting.

Mr. Curlett read a motion on the topic and moved that it be passed, seconded by Ms. Hammaker. Discussion ensued. Corey Malcom suggested that wording be added regarding how the SEAKEYs information was indispensable and how it was used. Several wording suggestions were made. Mr. Curlett and Ms. Hammaker agreed to this friendly amendment, and “for safety, science, and local economy” was added. Chair Popham asked if Jane Lubchenco could also be included, in addition to Mr. Basta. Dr. Causey remarked that it was an excellent suggestion. Mr. Curlett and Ms. Hammaker agreed, and “NOAA Administrator, Dr. Jane Lubchenco” was added.

The motion passed unanimously upon roll call vote.

The wording of the motion follows.

### **FLORIDA KEYS NATIONAL MARINE SANCTUARY COUNCIL RESOLUTION August 18, 2009**

Whereas the Florida Keys National Marine Sanctuary (FKNMS) is widely recognized as the aquatic jewel of the Southeast United States, and

Whereas the FKNMS’s superintendent, staff and Sanctuary Advisory Council (SAC) are charged with maintaining and improving the marine habitat along with improving the visitor experience and balancing local economic impacts, and

Whereas the FKNMS has long managed this resource by adaptive management and marine spatial planning with the help and assistance of many other federal and state agencies and partners, and

Whereas one of these partners over the past decade, Florida Institute of Oceanography and the SEAKEYS program has worked with the FKNMS and NOAA staff with furnishing information and data from their offshore buoy and fixed monitoring stations that has been indispensable for safety, science and local economy, and

Whereas at the present time there appears to be no funding available to allow Florida Institute of Oceanography to continue the SEAKEYS monitoring system.

Therefore, be it resolved, the Advisory Council of the FKNMS recommends the Superintendent of the FKNMS seeks funding for this all too important program by whatever method and means might be available to him, including, but not limited to requesting assistance of the Director of the National Marine Sanctuary Program, Mr. Dan Basta, and NOAA Administrator, Dr. Jane Lubchenco.

Passed unanimously on this date: August 18, 2009.

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The Council is an advisory body to the sanctuary superintendent. The opinions and findings of this publication do not necessarily reflect the position of the Florida Keys National Marine Sanctuary, the National Oceanic and Atmospheric Administration, the Florida Department of Environmental Protection, or the Florida Fish and Wildlife Conservation Commission.

***ACTION ITEM:*** Acting Superintendent Morton to consider/follow up on the recommendation of the SAC regarding seeking funding for the SEAKEYS program.

Mr. Nedimyer commented that some of the data would still be circulated, whether SEAKEYS was funded or not. Dr. Causey agreed that the atmospheric array would still be there, but the underwater array, except for one researcher's data, would not. Mr. Hunt commented on the need to still maintain these stations, and that it was a safety issues. Mr. Nedimyer asked if other folks could be leaned on [for funding], and Dr. Causey said that they had leaned on everyone, and various angles had been tried. As Mr. Morton had said, the strategy was to try to get it funded long term.

Mr. Morton then updated the group on an email he had received during the lunch break. It said the Coral Reef Conservation Program would definitely make \$52,500 available to cover the next four months of SEAKEYS operation, and that the program staff were currently considering a fiscal year 2010 proposal for funding the program (to be decided upon by October 31). He reaffirmed that there is still an intention to find long term funding and that the sanctuary program was working with another NOAA line office on this. Dr. Causey added that the MOA for SEAKEYS was revised, and would be going through legal review.

Chair Popham thanked Mr. Morton and Mr. Curlett, and asked that someone let Jon Fajans know he had a reprieve. ***ACTION ITEM:*** Acting Superintendent Morton to ensure Mr. Fajans is provided with an update on the funding for the SEAKEYS program.

**Water Quality Protection Program—County Mayor Neugent, SAC and Chair Popham**

County Mayor Neugent reported on a joint meeting with the Florida Keys Aqueduct Authority, the County's partner [on water issues] in the southern part of the Keys. He said the County also has oversight

though the Water Quality Protection Program and other means. In 1999, they got a mandate to do the right thing on wastewater with very little money. He said now the impacts of unfunded mandates on Keys residents were starting to be seen, and there were discussions daily with decisionmakers at the state and federal levels about it. Since the money remaining was limited, they decided to do Duck Key as the next project, and put the lower Keys in a holding pattern until another funding source was determined, he said. He also mentioned a “full court press” on the legislature to recognize the situation here. He noted there was a desire to move forward, but not to have things such as \$231/month sewer bills in the Cudjoe region. He reviewed the things that have been accomplished, and what was in progress. He said Long Key and Duck Key would have their projects done next, and there was work being done with the state on extensions, since there were projects would not be finished. He also mentioned the other projects left after that, and said he hoped people would support legislation to be introduced appropriating funds via a one penny sales tax plus reauthorization/appropriation of \$200 million authorized last year. He said to finish the projects, the money from the state was needed, and it would be nice if the federal government provided the money it had authorized (there was an agreement for the county to put in 40% of the funds, and the federal government, 60%, but those funds were not appropriated, he said).

Mr. Moe reviewed some of the actions going on right now in Islamorada on this issues; things were in a turmoil over items such as the projected costs. Mr. Moe also commented about Monroe County was an area of critical concern, and that water quality in the county had been driving the push for sewers in the Keys. He said he had there were sewers in the Little Venice area, and yet the improvement in the canals had not been that great. Chair Popham said there had been a huge improvement in reducing the fecal coliform in the water in the Little Venice canals. County Mayor Neugent also said they were also trying to remove the nitrogen and phosphorus. Chair Popham said another piece of the puzzle was that untreated sewage had been dumped in porous rocks for forty years, and that things would not improve overnight. County Mayor Neugent said there were other issues with the design of the canals that affected the water quality.

Mr. Smith asked about the dialogue that with the federal government about not meeting a commitment. County Mayor Neugent said money is spent on lobbyists there, and that elected officials from the county go there 2-3 times a year.

Dr. David Hawtof asked if anyone had considered composting toilets like those at the Tortugas, which might simplify things and be cheaper. County Mayor Neugent replied that, politically, that would not work, and that it was tied to things like property values and community character, and would not sell well.

Chair Popham updated the SAC on the Water Quality Protection Program Steering Committee, which met in July. There were updates at the meeting on monitoring of water quality, coral, and seagrass, and across the board, these were all showing improvements, he reported. The group also talked about things like the data control, Little Venice canals, pesticides, and having that committee be more action-oriented. This committee had a long list of to-do items, and a huge amount was accomplished, but he observed that in the past few years, not a lot had not accomplished a lot. There was a challenge to the USEPA to come to the next meeting with more action-oriented things. Chair Popham also reviewed the mandates of the group, included that they were supposed to seek funding for projects.

Dr. Causey agreed that a lot had been accomplished, and said the Water Quality Protection Action Plan was about 60% complete. He acknowledged there was a lot more to do. He said some of the best leadership and accomplishments were when John Hankinson, who led the charge with Governor Jeb Bush to get a no discharge zone established in the Florida Keys, which was accomplished in less than nine months. Mr. Hankinson’s name was being floated for Region IV Administrator, Dr. Causey said, and he encouraged people to support this if they hear he is being considered. Dr. Causey also mentioned

linkages between the Technical Advisory Committee and the SAC, and the need for a nexus. Mr. Hunt said he was on the Management Committee and the Technical Advisory Committee.

### **Public Comment**

There was none.

### **Florida Fish and Wildlife Conservation Commission (FWC) Tarpon Genetic Recapture Program-- Kathryn Guindon, FWC**

Mr. Hunt introduced Ms. Guindon, a fish biologist from the Fish and Wildlife Research Institute in St. Petersburg, who discussed the FWC Tarpon Genetic Recapture Program. She said that the funding for the program came from the State of Florida, and that it had been picked up for the next five year cycle. She said there are tarpon everywhere in the Keys and that the recreational fishery is year round; she hoped by the end of her talk, people in the room or anglers they know would help with this program and help do outreach about it. She reviewed the limit per day for tarpon, and that a \$50 permit was required to harvest or possess a tarpon. She said an average of 345 permits were sold, but fewer than 50 were used. But a used permit does not mean a dead tarpon, as many tarpon are caught and released, she said.

Of 82 tarpon tagged with acoustic transmitters in an FWC study done between 2003-2007, 11 died, and FWC used the data to produce maps of tagged tarpon movements. She reviewed some other data on survival (most survive). She said the next logical question was how often a tarpon was caught, and FWC decided to use tarpon DNA as a natural tag. The DNA people gather from tarpon through this voluntary program is processed in an FWC lab for less than \$3/sample, she said. She described how to gather a skin cell sample from a tarpon, which she said was better than clipping fins because it was less costly, less invasive, and lasted forever.

Ms. Guindon said that FWC would mail kits to anyone who requested one, and that there were 152 shops statewide where a person could drop off sample and get a new kit. Kits may also be mailed to the Fish and Wildlife Research Institute in St. Petersburg, she said. The numbers of samples received at FWC have increase, with about 70 out of over 1250 coming from the Keys in 2008. Some samples have come from other Gulf states and from other countries. She said the goal for 2010 was to get 2500 samples, with 1000 coming from the East Coast and the Keys. She reviewed that there were incentive prizes (solicited by Mote) for returning a sample, and that there were also monthly challenges. She also reviewed the outreach done by the program. Ms. Guindon said that the study was being conducted to get recapture rates in the recreational fishery in Florida, and that FWC was also learning about tarpon movement patterns and homing tendencies, as well as the distribution of the fishery, long term survival, stock structure, familial relationships, etc. She thanked all those involved with the program, and said she would love to welcome Keys anglers to the program.

Bruce Frerer asked if she had been in touch with Aaron Adams of Mote about the research, and she replied that she had. Mr. Moe commented that with a cell scrape, it would not be possible to tell if the fish had been tagged or not, as was possible with earlier types of tags. He also inquired if a scale could be taken to look at things like age and growth; Ms. Guindon said that it had been done, but was pretty imprecise.

Ms. Guindon concluded her presentation with an announcement that she had brought a box of tagging kits; she encouraged people to take them.

### **Education/Outreach Presentation – Save-A-Turtle, Inc. of the Florida Keys--Pat Wells, Save-A-Turtle**

Pat Wells noted that he worked for Florida State Parks, but that this presentation was on Save-A-Turtle, for which he provides technical support.



Save-A-Turtle is a nonprofit organization which was incorporated in 1985, with some organizational efforts going on prior to that with others, he said. He said that before, people knew there were turtles in the waters of the Keys, but not much was known about size class, nesting, etc., and Larry Lawrence decided more information was needed, and that was the genesis of Save-A-Turtle was to get more data. Mr. Wells said that he dealt with the technical aspects of things like permits and proper training. Early work included developing endangered species habitat maps, identifying sea turtle nesting beaches, and identifying barriers to nesting, then moved to working to get information on how many sea turtles nested, the species, the problems they encountered, etc. The data revealed that sea turtles were nesting in the Keys, primarily loggerheads; most nest within 50 feet of the high tide line. There are also some green sea turtles, a few hawksbills, and a few years ago, there was a leatherback nest in the Tortugas.

Mr. Wells noted that he had trained a number of people in the room over the years, and asked who was currently permitted [to do work with sea turtles as volunteers for the organization]; Karrie Carnes, Ms. Ferguson, and Robert Keeley responded that they were. He said that volunteers are trained to walk the beach, looking for nest body pits. He pointed out that in the Keys, it can be more difficult to determine if there is a nest or if it is a false crawl, due to vegetation. Other problems include raccoon predation and beach lighting, but now the county and every municipality have lighting ordinances, he said. Nests are marked and protected with cages; nests have not been relocated for about the past 5-6 years, he mentioned. He also talked about how the group does crawl identifications as well as nest evaluations, to help give an idea of the success of nesting attempts and to determine the species. He said there may be some hybridization here.

Mr. Wells then briefly discussed another portion of the network, the sea turtle stranding and salvage network, in which individuals respond on an on-call status year round to calls. Turtles of all size classes and species are found throughout the Keys stranded (or dead) with problems such as: propeller damage, entanglement in lines, or infected with diseases, such as fibropapilloma. Save-A-Turtle also is committed to networking with others on research, including the Turtle Hospital, he noted.

Over the years, on education and outreach, Mr. Wells reviewed that Save-A-Turtle has worked with the school systems, providing them with books and materials; participated in Earth Day activities; did a Waterways program; worked with others to find homes for injured, rehabilitated sea turtles; and worked on exhibits. An exhibit was recently shipped to Dry Tortugas National Park, he said. Also, Mr. Wells mentioned that Save-A-Turtle was working with Floridakeys.com to put a camera at a remote location to watch a nest hatch out. Mr. Barras talked briefly about aspects of that project, which will entail moving the camera to cover three nests. Mr. Wells also reviewed the partners that Save-A-Turtle works with, and networking efforts of the group.

Mr. Wells concluded with an announced that Sue Schaft was the new coordinator for the marine turtle program in the Florida Keys. He added that there were a few other coordinators around the state. Chair Popham thanked Mr. Wells for his presentation.

Mr. Kincaid mentioned Mr. Malcom and the Mel Fisher Maritime Heritage Society and Museum had been working on opening a new exhibit in the old Turtle Kraals cannery, and that it would be open as a museum in a few weeks.

### **Other Announcements**

Chair Popham announced that the October 20 SAC meeting would be held at the Ocean Reef Club in Key Largo. He also encouraged people to support the Mote license program, and to become members of SFFFK. Ms. Garlo added that SFFFK now has a page on Facebook and encouraged people to visit it.

Adjourned, 3:43 PM.