

FLORIDA KEYS NATIONAL MARINE SANCTUARY  
WATER QUALITY PROTECTION PROGRAM

STEERING COMMITTEE MEETING

July 25, 2006

Key Colony Beach City Hall

600 West Ocean Drive, Key Colony Beach, FL 33051

MINUTES

**Members Present:**

Jim Giattina	Greg May
Jon Iglehart	George Neugent
Dave Score	Jim Reynolds
Cecilia Weaver	Chris Sante
Gerald Biggs	Sandra Walters
Ralph Boragine	Chris Bergh
Charles Brooks	
Clyde Burnett	
Charles Causey	
Bob Johnson	

**I. Opening Remarks:** Mr. Jim Giattina — Director, Water Management Division, U.S. Environmental Protection Agency, Region 4.

Mr. Giattina explained that Secretary Castille could not attend the meeting due to an unexpected illness in her family. Jon Iglehart will take her place.

Mr. Giattina welcomed everyone. He extended his thanks to Dave Score's staff for helping with meeting preparation and to Mayor Clyde Burnett of Key Colony Beach for use of the City Hall for the meeting.

**A. Review Agenda:** Mr. Jim Giattina

**B. Discussion and Approval of Minutes:** Mr. Jim Giattina - Steering Committee Vote; the March 2005 meeting minutes were approved unanimously.

**C. Discuss the Possibility of Inviting a Representative of the Florida Keys Mosquito Control District to Sit as a Member of the Steering Committee:** A discussion was held regarding the addition of a new member from the Florida Keys Mosquito Control District. It was agreed by all that the committee should extend an invitation via a written letter that will be drafted by Fred McManus.

## **II. Review the FY 2007 Budget for the Water Quality Protection Program:**

Mr. Fred McManus - U.S. EPA, Region 4;

Mr. McManus presented the FY 2007 budget (funded with FY 2006 EPA money) for the WQPP and explained that EPA's grant process was fairly involved for those seeking these funds to continue the various projects (e.g., monitoring and data management).

Mr. McManus showed the total annual contribution made by EPA and other agencies. He then explained that the Sanctuary was short of funds this year for the Coral Reef Monitoring Program, but that the Army Corp of Engineers came through to fill that gap (\$180,000). He also noted that some of the WQPP funds (\$20,000) support public education/outreach efforts and that a description of all the funded projects was provided in the briefing book that was given to each committee member. The EPA considers the Florida Keys National Marine Sanctuary to be an important program and that not all EPA Regions receive federal funds to support geographic initiatives. There should be some undedicated/remaining FY 2006 funds (about \$125,000) and there are ideas on how these funds could be utilized. Richard Harvey noted that, in general, federal funding for geographic programs was being reduced and a discussion ensued as to how to plan for these changes in the future.

A motion was passed to approve the FY 07 budget with no opposing votes.

## **III. Review and Discuss –**

### **1) The Development of the Comprehensive Report Summarizing the State of Knowledge on the Florida Keys Ecosystem, Dr. Bill Kruczynski – U.S. EPA, Region 4.**

Dr. Kruczynski discussed the development of the EPA "white" paper that was published in 1999 that summarized everything known about water quality in the Florida Keys through 1997. This publication went a long way toward convincing people that there were water quality issues, but was too technical for most people to read. Dr. Kruczynski explained that this is one reason why we want to develop a new document that will get the message out to the public in a more understandable way. A book from Australia, *The Moreton Bay Study*, will serve as a model for this proposed publication. This book provides a factual statement on each page and then illustrates that concept and the information that supports it.

A draft outline for the booklet was presented. Topics included: monitoring in seagrasses, coral reefs and water quality, declines in queen conch, successes with lobster and snapper and grouper in the Sanctuary's protected zones. Each page will have an identified author that can bring others into the process. A contractor will be hired to edit the scientific content for the lay reader. Bill Denison was the illustrator for the Australian book and may be involved in illustrating this one. The Program Management Committee for Florida Bay would like to have a chapter on Florida Bay related topics.

A discussion about the cost of printing the book took place and possible different ways to print it. The idea of developing performance measures for each page and then producing a report card was put forth and was well received. It was suggested that the publication be available on the web for free. This concept has already been endorsed by the

Technical Advisory Committee (TAC), who will be involved in identifying topics and authors. The book will present a summary of what is known and may or may not identify recommendations as to how to address some of the ongoing issues.

A motion was put forth to have the Steering Committee endorse the idea of the TAC moving forward with this publication. The idea of whether or not to include recommendations in the publication will be revisited at a later time. This motion passed unanimously.

**2) The Evaluation of the Long-Term Monitoring and Special Studies Programs of the Water Quality Protection Program/Florida Keys National Marine Sanctuary: Dr. Bill Kruczynski – U.S. EPA, Region 4.**

The idea of having a comprehensive external scientific evaluation of the Water Quality Protection Program (WQPP) was presented. This review would be completed by an independent entity that would review existing scientific documents and results from the various studies and then make recommendations regarding how to integrate data sets and what demonstration projects are needed. Some of the information summarized in this process will also go into the publication designed for the public. The Science Advisory Panel needs to be part of this process as it moves forward. A suggestion was made to include more than just Florida Keys data in the review process. The point was made that funds from upstream areas might be available if the connection with the mainland and other adjacent ecosystems could be shown.

A motion was put forward to develop a scope of work for this independent scientific evaluation. This motion passed unanimously.

**IV. Discuss Future Priority Topics (e.g., Effects of Mosquito Spraying on the Biological Resources of the Florida Keys) for the Special Studies Program and Review Results of Previous Special Studies on Effects of Mosquito Spraying: Steering Committee and Management Committee (Dr. Bill Kruczynski)**

Dr. Kruczynski discussed how special study topics funded by the WQPP were selected. The selections are based on relevance to the WQPP document, the WQPP Management Committee and the Sanctuary's Comprehensive Science Plan 2000. The Science Plan is based on the recommendations of an oversight panel. The plan includes a list of priority research topics, including *Diadema* and coral declines, pathogenic bacteria, viruses, zone management, mosquito spraying, etc.

To apply for funding, scientists submit preproposals in response to a Request for Proposals (RFP) prepared by EPA Region 4 staff. Preproposals are reviewed by the Management committee for conformance with the RFP. Full proposals are sent to outside reviewers for evaluation and ranking. The rankings are reviewed by the TAC and the TAC finalizes the selections. The Steering Committee is then notified of the projects selected for funding. All funded projects must develop an approved EPA quality assurance project plan (QAPP).

Dr. Pierce from Mote Marine Lab gave a presentation on his special study concerning mosquito spraying and described how mosquito control chemicals may affect water quality and marine life. The study focused on truck and aerial spraying and concentrations of pesticides detected in the nearshore waters at different depths. There is very little known about how chemicals like Dibrom and Permethrin affect marine organisms. Dr. Pierce also pointed out that organisms can be affected differently during different stages of their life cycle. Some organisms are especially sensitive during larval development, but not during other stages of the life cycle.

Mr. Bob Glazer, Fish and Wildlife Research Institute, Marathon, Florida gave a presentation summarizing special studies conducted on queen conch reproduction and water quality. Queen conch living in nearshore waters do not reproduce, while those offshore do. Individuals that are relocated to offshore waters develop and reproduce normally while those transported from offshore to nearshore waters do not. Mr. Gabe Delgado is the technical expert on this study. Mr. Glazer also noted that research on endocrine disruption is taking place at the University of Florida. They are approaching it from the physiological and genetic standpoint.

**V. Status of Implementation of Monroe County Wastewater Master Plan and Wastewater Upgrades by Municipalities and Key Largo Wastewater Treatment District:** Mr. George Garrett - Monroe County Department of Marine Resources

Mr. Garrett provided an overview of County wastewater projects. In 1999, a law (State Statute 99-395) was passed that set standards for sewage treatment in the Florida Keys. There have been 10 projects from Ocean Reef to Stock Island that have been addressing the 2010 deadline for wastewater infrastructure upgrades. Some communities have provided their own funding. The Key Largo Park, Trailer Village project is complete and ready to operate, but the money will only cover the trailer park at this time. In the future, a line can be run to the north end of Key Largo to include people from Mile-Marker 100 to 106. Updates on the Village, Little Venice, Big Coppitt, Big Pine and Key West were also presented. Key West has completed its wastewater improvements and is currently working to upgrade storm water infrastructure.

Some Committee members expressed concerns that the monies promised to certain municipalities for sewage upgrades by the Army Corps of Engineers had not yet become available. The City of Layton and other municipalities went forth with the projects using borrowed funds and they have yet to get the money that was promised from the Corps.

A motion was put forth to have the Steering Committee send a letter to the Army Corps of Engineers to request information regarding the status of the funding and let the Corps know about the situation with the municipalities. The motion passed unanimously.

The amount of overhead taken out by the Army Corps when they administer federal funds to municipalities seems relatively high according to some committee members. These overhead funds go toward producing the program management plans and NEPA documentation. A suggestion was made to have the PDT provide an update to the Steering Committee at the next meeting.

**VI. Discuss Development of a Communication Strategy for the Water Quality Protection Program (Goal is to Communicate Effectively with All Stakeholders, Including the General Public and Elected Officials):** Steering Committee and Management Committee

The idea of producing a document summarizing the science of water quality in the Florida Keys was discussed by the committee. A draft of the *Communication Strategy* for the WQPP was put forth by Fred McManus. The objectives and project actions were discussed by the committee. Mr. McManus explained that the strategy will make use of the talents of the existing Sanctuary staff. Cheva Heck, Sanctuary Communications Manager, provided some comments on the draft strategy, including areas where federal employees will not be of assistance due to certain restrictions that apply to them. It was noted that this Committee needs to meet on a more regular basis and that these meetings are a forum to get the information out to the public. It was noted that the SAC represents the marine and tourism interests of the people in the Florida Keys and meets regularly.

The Committee decided to form a working group to revise the draft Communications Strategy. The working group will include Cheva Heck, Fred McManus, a representative from the Village, and others who are interested. The revised draft will be produced by late October, in time to be shown to the Florida Legislative Committee in November. It was pointed out that the SAC has an Education and Outreach Committee in existence. It was also noted that consensus on the controversial aspects of water quality and Florida Bay issues are essential for effective communications on this topic.

**VII. Discuss Future Budgets (e.g., FY 2008/FY 2009) of the Water Quality Protection Program and How Anticipated Declining Resources Could Impact the Ongoing Monitoring Projects and Other Activities Associated with the Water Quality Protection Program:** Steering Committee and Management Committee

Mayor Sante announced that the Village was designated to receive grant money from EPA, but because they may be cooperating with Key Largo in connecting to a Key Largo wastewater facility, their needs may change. Mr. Giattina acknowledged that this was important to know, since these funds could become available for other projects. Mayor Sante pointed out that they had not officially turned down the funds at this time.

Mr. Giattina explained that funding is expected to dwindle on the federal side in the future. As noted earlier, an alternative strategy for obtaining funding could be very useful. Committee members offered suggestions for alternative funding, including private foundations, the Friends of the Sanctuary of the Florida Keys, etc.

The Committee discussed and approved two resolutions, one to EPA and the other to NOAA. The resolutions requested that these agencies continue to provide funding for the implementation of the WQPP, including the long-term monitoring projects.

The two resolutions passed unanimously. Mr. Giattina and CMDR. Dave Score refrained from voting.

The Committee discussed the importance of storm water projects and how storm water contributes to the water quality issues in the Keys. Florida DOT is responsible for some of the storm water issues that are related to the bridges and roadways and perhaps DOT can assist in funding storm water projects.

It was also noted how important it is to meet the requirements of the Monroe County 2010 Comprehensive Plan in spite of the lack of subsidies to individual citizens. The goal is to meet the standards, whether or not people are subsidized, because it is much less expensive for both the community and the individual to pay for it now rather than later.

The PDT developed a Program Management Plan for the Florida Keys, which prioritized waste and storm water projects and goals. The SFWMD stated that storm water is often an overlooked problem in the Keys. There are also storm water projects identified in the County's Master Plan. Monroe County has prepared a comprehensive Storm Water Master Plan that identifies and prioritizes storm water projects.

The Committee unanimously passed a motion to form an ad hoc subgroup to evaluate the effects of wastewater and storm water projects and innovative funding alternatives.

## **VIII. Break**

## **IX. Working Lunch**

### **A. Annual Reports on the Comprehensive Monitoring Projects (Water Quality, Coral Reef, and Seagrass) for the Florida Keys National Marine Sanctuary: Project Principal Investigators**

Dr. Carl Beaver presented an overview of the coral monitoring program that has been in existence since 1995. The investigators use a video technique to measure percent coverage and species richness of stony corals throughout the Keys, by region and by coral community type. Declines have been noted in coverage and species richness for most sites. In 2004, new monitoring stations in the Dry Tortugas were added--these stations also show declines. Very recently stations were added along the reef tract in Dade, Broward, Palm Beach and Martin Counties so that the program now extends to the entire Florida reef tract. Diseased coral was also recorded and the trends for different diseases in different species and regions were presented. The coral reef monitoring program has a tremendous database that is being used by many scientists and managers and the techniques for this project are being duplicated in other areas of the world.

The effects of hurricanes were discussed briefly. Hurricanes have had a major affect on reefs of certain areas, especially in the Dry Tortugas.

Dr. Henry Briceno, with Florida International University, provided an overview of the Water Quality Monitoring Project and how it is integrated with nearby areas that are also being sampled. The water quality monitoring

program measures chlorophyll a, nutrients, salinity, temperature, etc.

Dr. Briceno discussed the Loop Current and explained how this current can affect water quality and salinity of waters in the Florida Keys. Low salinities in the Middle and Lower Keys can be related to the movement of the Loop Current. Land-based sources also affect salinity and other water quality parameters. Water quality responds to a complex interaction of factors, including climate, marine currents, terrestrial runoff and anthropogenic intervention. The database created from this project is being used by managers involved in restoration and is being used in modeling projects for the Florida Keys and Florida Bay.

Dr. Briceno also described the Little Venice Monitoring Project associated with the Little Venice Sewage Management System and explained that this project is designed to measure nutrients, human pathogens, and other water quality parameters in the canals and nearshore waters before and after the wastewater management system became operational.

Dr. Tom Frankovich, Florida International University, presented an overview of the Seagrass Monitoring Project in place of Dr. Jim Fourqurean. Models have been developed that will allow scientists to predict what species of seagrass will grow under certain environmental conditions, including nitrogen to phosphorus (N:P) ratios. The models will also enable managers to predict when losses will occur in seagrass communities, due to eutrophication (an over abundance of nutrients). This program also involves using a sampling method that shows losses and gains in seagrass coverage over time. This method has provided a baseline for seagrass coverage in the Florida Keys. A total of 21 peer-reviewed scientific papers have been published on the various aspects of this project.

**B. Review Completed Special Study Projects and Special Studies to be Funded in FY 2007: Dr. Bill Kruczynski**

Dr. Kruczynski shortened his presentation because of time considerations. In 2006, they funded a project that will study the origin of N14-15 and is designed to answer the question, “Does this ratio indicate the presence of outside sources of nitrogen or is heavy nitrogen produced as a by-product of the processes that take place in the plant itself?” Dr. Hallock-Muller will study reefs that she studied in 1978. This project will help establish biomarkers in corals.

The WQPP over the years has funded 30 special studies projects for about \$2 million. Many other agencies have contributed to the funding over the years.

**X. Review the Data Management Program for the Water Quality Protection Program/Florida Keys National Marine Sanctuary and Proposed Integrated Data Management Program for South Florida:** Chris Anderson - Florida Fish and Wildlife Research Institute

A great deal of information and data have been collected as part of the WQPP. These data are available to everyone on the following web site:

<http://ocean.floridamarine.org/fknms.wqpp>.

This web site contains raw files and metadata reports. It is updated regularly and can evolve to accommodate changes over time. Mr. Anderson provided everyone with a recent copy of a DVD containing the data for the WQPP.

**XI. Public Comments**— Alessandra Score, World Wildlife Fund, discussed the development of a report card for water quality issues. It is very confusing talking to the public about Florida Bay and some other water quality issues because of the lack of consensus and complexity of the issues. Consensus is essential to building support in the community. In addition, Ms. Score would like to see Monroe County examine ways it can address future changes in the coral reef ecosystem related to temperature and climate changes in projects that take place locally.

**XII. Discuss Next Steps and Propose Date for Next Steering Committee Meeting:** Steering Committee and Management Committee

The number of meetings per year was discussed in some detail. There is a need to meet more often than in the past and to focus on specific objectives. It was suggested that several days be offered as possible meeting dates so that as many people could attend as possible.

The committee agreed that it would plan for two face-to-face meetings coupled with two conference call meetings per year. The next conference call meeting is planned for October and the next face-to-face meeting is planned for January 2007.

**XIII. Closing Remarks:** Mr. Inglehart thanked everyone for attending and commented that he was glad to see the draft Communication Strategy. Mr. Harvey thanked those helping with the meeting on behalf of EPA and Mr. Giattina who had to leave at 3 p.m. for a conference call. He also extended his thanks to Mayor Burnett and wished everyone a safe trip.

**XIV. Adjourn**