

**WATER QUALITY PROTECTION PROGRAM  
FOR THE  
FLORIDA KEYS NATIONAL MARINE SANCTUARY**

**STEERING COMMITTEE MEETING**

**January 29, 2004  
Marathon Garden Club**

**DRAFT MINUTES**

**Steering Committee Members In Attendance:** Dan Basta, Clyde Burnett, Mike Collins, Jim Duck, George Geisler, Andrew Gude, Richard Harvey, Jon Iglehart, George Neugent, Bill Perry, Jim Quinn, Jim Reynolds, David Rice, Jody Thomas, Gerald Briggs, Sandra Walters, Pete Worthington

- I. Opening Remarks:** Mr. Richard Harvey, Director, South Florida Office, U.S. Environmental Protection Agency, Region 4 and Mr. Jon Iglehart, Acting Director, South Florida District, Florida Department of Environmental Protection.

Chair Harvey welcomed Committee members and the public. He presented Karl Lessard with a certificate of appreciation for 12 years of dedicated service on the Committee signed by Jimmy Palmer, U.S. Environmental Protection Agency (EPA) Regional Administrator and Alan Bedwell of Florida Department of Environmental Protection (DEP). Mr. Lessard expressed his gratitude and noted that there is still much to be accomplished in protecting the resource.

**A. Discussion and Approval of Minutes**

Chair Harvey deferred discussion of the Minutes until later in the agenda.

**B. Review Agenda**

Chair Harvey gave an overview of the Steering Committee and reported that Mike Collins will present a Resolution to the Committee.

- II. Annual Reports on the Comprehensive Monitoring Projects for the Florida Keys National Marine Sanctuary:** Mr. Fred McManus – U.S. EPA, Region 4

Mr. McManus introduced the principal investigators for the status and trends monitoring projects in the Sanctuary and emphasized the importance of long-term monitoring to the success of the program.

- A. Water Quality Monitoring Projects:** Dr. Joe Boyer – Florida International University (FIU)

Dr. Boyer reported that Dr. Ron Jones has left FIU and is no longer associated with the water quality monitoring program. He presented results from the long-term and spatially large water quality monitoring project. Data are available and continually updated on the website. There is a gradient of nutrients from nearshore to offshore and a small, but statistically significant, increasing trend in total phosphorus, which may be attributable to upstream sources. He said that there are declines in dissolved oxygen (DO) and organic carbonate over time which may be caused by different factors.

Dr. Boyer reported on the Little Venice project which is sampling enterococcus bacteria as well as the routine indicators of sewage in seawater. There have been 60 exceedences for enterococcus since sampling began in May 2001, mostly at the head of closed canals.

Discussion concerned the collection of more extensive terrestrial source and physical circulation data to aid understanding of trends observed. Dr. Boyer said that additional information on the movement of bodies of water would be useful, as would episodic monitoring at selected sites. Further discussion concerned the integration of remote sensing techniques with *in situ* monitoring as part of ocean observing systems.

**B. Seagrass Monitoring Project:** Dr. Jim Fourqurean – Florida International University

Dr. Fourqurean reported that there are about 15,000 square kilometers of seagrass bed in the South Florida ecosystem, which is the largest documented semi-continuous seagrass bed in the world. In quality and spatial extent, there is no other comparable seagrass/benthic habitat monitoring program in the world and it is showing troubling trends indicative of eutrophication. He presented data from monitoring designed to aid management in determining when and where change in species distributions are taking place. This project is closely coordinated with the Water Quality Monitoring Project and the data is disseminated rapidly on the website.

Dr. Fourqurean described experimental work that shows that nearshore areas are phosphorus limited whereas the reef tract is nitrogen limited. He discussed the use of carbon and nitrogen isotopes as indicators of bacterial activity not related to anthropogenic sources, particularly in Florida Bay. Where there are recorded changes in the nitrogen to phosphorus ratio, there are recorded changes in seagrass community structure and there are regionally distinct clusters. He said that with Dr. Boyer's project he and his graduate students have come up with some very innovative models relating water quality to benthic habitat composition

Discussion concerned the changes brought about to the system by the addition of nutrients, and the localized effects on seagrass beds by canal developments.

Dr. Fourqurean said that the evidence for what proportion of observed change is human is inconclusive at this point.

Further discussion concerned competition for funding and the fact that the monitoring program is documenting the slow demise of the ecosystem.

**C. Coral Reef Evaluation and Monitoring Project:** Dr. Carl Beaver and Mr. Walt Jaap – Florida Marine Research Institute

Dr. Beaver gave an overview of the project, which began in 1994 and documents stony coral diversity, stony coral cover and stony coral disease at fixed sites. There has been a decrease in the amount of coral cover at 64% of these sites since 1996.

Dr. Beaver said that not only has the living tissue gone from *Acropora palmata* thickets, but the calcium carbonate substrate that is the reef base is also eroding away.

Mr. Jaap reported on results since 2002 from nine sites that have thermographs deployed to detect thermal stress. One consistent pattern is that shallow sites have the highest temperature in the summer and the lowest in the winter. He said that patch reefs tend to show higher diversity and live coral cover. The majority of colonies exhibiting dark spot syndrome in one year had recovered the following year.

Mr. Jaap summarized the monitoring project since 1999. Coral richness or number of species has declined, coral cover has declined but appears to have stabilized and there is an increase in reported incidences of coral diseases. Coral mucus samples are being analyzed by the U.S. Geological Survey for enteroviruses.

Discussion concerned the strength of the message from the scientific community through management to law makers. There is a need to integrate results from all the monitoring projects in order to strengthen the message to managers, law makers, and organizations such as the U.S. Coral Reef Task Force. Funding was discussed. The influence of the Gulf of Mexico on the Florida Keys was noted, as was the need for all stakeholders to take a regional perspective on managing the resource. The Florida Keys/Florida Bay Feasibility Study was mentioned as a possible starting point for such a synthesis.

Dr. Kruczynski said that despite the clear messages produced by the monitoring and science, there are a limited number of things that can be done to improve ecosystem decline in the Sanctuary. One is to improve nearshore water quality. Another is to preserve or add more natural habitat. He said that fisheries could be better managed, as could the multiple users of finite resources. He added that if

the existing scientific information is summarized and effectively presented to the public in a form that they can understand, more money could go into actually solving problems rather than on supporting more scientific studies.

Chair Harvey suggested that a group from NOAA, EPA and the Corps convene to identify a way of putting such a paper together.

**III. Report on Florida Bay Watch and Florida Keys Watch Programs: Mr. Brad Rosov – The Nature Conservancy**

Mr. Rosov gave a presentation on a nearshore nutrient monitoring program started a decade ago called Florida Bay Watch, run by volunteers and funded by EPA. The Nature Conservancy changed the mission and the name of the program in 2002 to Florida Keys Watch. This program examines the condition of canal water and possible sources of contamination. Mr. Rosov noted that rainfall events affect the amount of bacteria found in the water, and that overall water quality in canals is poor. No discernible correlation was found between presence of human viral pathogens and enterococcus.

**IV. Public Comment**

Nancy Klingener, Florida Keys Program Manager for The Ocean Conservancy and member of the Sanctuary Advisory Council, thanked the Committee and particularly elected officials for their efforts to grapple with the difficult issues facing the Keys. She said that it is the responsibility of those that make a living and spend their lives in the Keys to make the commitment to improve water quality.

Captain Ed Davidson, former Chairman of the Florida Audubon Society, warned of the danger of ending up with a finely detailed and definitive study of failed systems and vanished species. He observed that since the 1970s, water visibility at the reef tract has dropped significantly and has impacted those businesses that depend on water clarity. He added that there is enough science already that needs to be turned into a compelling presentation for decision makers.

**V. Resolution to the Governor Concerning 2010 Water Quality Standards: Mr. Mike Collins – Board, South Florida Water Management District**

Mr. Collins said that there is currently an effort being made by State representative Ken Sorensen to remove the 2010 water quality standards from Florida statutes. The Steering Committee is on record unanimously supporting those standards and should send a strong message to the Governor reaffirming that support.

Mr. Collins recommended that for the Steering Committee to become more efficient and effective as an organization it needs to meet at a minimum of twice a year. He said that more staff contact is necessary between the agencies to prevent conflicting

agendas. He suggested that more time on the Steering Committee agenda be reserved for action items and that the Steering Committee should become more proactive on issues.

Mr. Collins presented two resolutions, one from the Department of Community Affairs (DCA) and one from the South Florida Water Management District (SFWMD). Gus Rios from the Marathon office of the Department of Environmental Protection (DEP) discussed a letter from Geof Mansfield establishing that DEP strongly supports the current standards in Section 6, 99-395 and does not recommend any changes. After discussion and supportive remarks by Committee members, a unanimous vote in favor of the Resolutions was passed.

**VI. Update on the FY 2004/2005 and FY 2005/2006 Round of Special Studies Associated with the Water Quality Protection Program for the Florida Keys National Marine Sanctuary:** Dr. Bill Kruczynski - U.S. EPA Region 4

Dr. Kruczynski gave an overview of the cause-and-effect focus of the Special Studies program. He said that political and social actions are necessary to address resource decline before all the science is in place. He gave brief summaries of all the projects that EPA has funded since 1995. Dr. Kruczynski listed the four topic areas recommended by the Technical Advisory Committee for future Special Studies projects:

1. Recruitment and survival of marine species.
2. Causes of coral decline in abundance, coverage, diversity.
3. Distribution and abundance of pathogenic bacteria, viruses, and other pathogens
4. Effects of management actions on abundance and distribution of marine organisms.

External peer review identified eight projects after an RFP, following these recommendations, to be funded by EPA, NOAA and Sanctuary Friends with over half a million dollars, starting in October 2003. Dr. Kruczynski briefly described each of the projects. The next two-year cycle of funding for both monitoring and special studies will be put out competitively through an RFP.

**VII. Review the Revised FY 2004 and the Proposed FY 2005 Budgets for the Water Quality Protection Program:** Mr. Fred McManus – U.S. EPA, Region 4

Mr. McManus reviewed the FY 2004 Proposed Budget presented at the April 3, 2003 meeting of the Steering Committee. He said that the South Florida Geographic Initiative did not receive the full amount of funding from Congress, leading to some budget adjustments for the Water Quality Protection Program. He detailed the adjustments and presented the cumulative levels of funding over the years, amounting to almost \$14 million to implement the Water Quality Protection Program since 1995. He outlined the Proposed FY 2005 Budget. Discussion concerned the time-frame for

continued monitoring at Little Venice. Mr. Quinn, seconded by Councilman Neugent, proposed that the Budget be endorsed. The FY 2005 Budget was unanimously approved.

**VIII. Report on Islamorada's Wastewater and Storm Water Activities:**

Councilman George Geisler – Islamorada, Village of Islands

Councilman Geisler gave the status on proposal for Plantation Key wastewater treatment plant. He outlined future projects which will meet 2010 standards. He reported that high school biology students are being involved in collecting water samples which are sent to the FIU/SERC laboratory for analysis, and requested that EPA and DEP participate in this project. He said that this will be his last Steering Committee meeting.

**IX. Status of State Funding for Wastewater Upgrades in the Florida Keys:**

Mr. Tim Banks – Florida Department of Environmental Protection

Mr. Banks, who has replaced Dick Smith due to his retirement, summarized the status of DEP projects. He said that proviso language has been attached to the Governor's Budget, giving a deadline of September 1st, 2004 for getting contracts and user charge systems in place. These projects must meet all requirements of both statutes and 99-395 and will require a 25% match. If the money is not used, it will be made available to economically disadvantaged wastewater customers, and if it is not used for that, it will go into the wastewater SRF program. The interest rate is 2.96%. \$300 million is available for loan per year, which is restricted to \$20 million per sponsor per year.

**X. Status of EPA Grant (\$3.8 Million) to Monroe County for Innovative**

**Decentralized Wastewater Demonstration Project:** Mr. Bob Freeman - U.S. EPA, Region 4

Mr. Freeman gave a historical review of the money that Congress appropriated in FY 1999. Grassy Key, within the City of Marathon, is a possible candidate for a decentralized wastewater treatment project, provided that the City comes up with a 25% matching share. Pigeon Key, within Monroe County is another possible candidate, with an onsite reuse and educational element added. This calls for an agreement between the City and the County. He said that under a 75% grant, all these systems must be seen to be permanent solutions, with centralized management and consistent with Monroe County Comprehensive Plan. Discussion concerned funding and different ways of achieving high levels of treatment.

**XI. Status of the Key Largo Sewer Board and Associated Activities:** Mr. Robert

Sheets – Key Largo Wastewater District

Mr. Sheets gave an update on the two major projects at Key Largo Trailer Park and Key Largo Trailer Village. Completion of both projects should meet the September 2005 deadline.

**XII. Status of Implementation of the Monroe County Wastewater Master Plan:** Mr. George Garrett – Director, Monroe County Department of Marine Resources

Mr. Garrett handed out a spreadsheet giving an indication of the committed project funds. Secretary of DCA has been instrumental in bringing local funding for projects. The implementation of the Master Plan has not changed much since the last Steering Committee meeting.

**XIII. Discussion on Action Items:** Mr. Richard Harvey – U.S. EPA, Region 4

Mr. Harvey proposed that NOAA and EPA take the lead in preparing a document that pulls together what is known about the dire condition of the resources, with the help of the Corps, the Water Management District and DEP, and have a draft of the report before the next meeting. Discussion concerned process and strategy for achieving this goal, with a summit proposed in addition to the document.

Ms. Thomas moved that an additional seat be created for South Florida Ecosystem Restoration Task Force. Ms. Walters seconded the motion. Discussion concerned the protocol for establishing this seat, and it was determined that the Governor of Florida and the Regional Administrator for U.S. EPA, Region 4 are the appropriate persons to approach Colonel Greg May, Director of the Task Force on this matter. The Motion passed unanimously.

Mr. Basta raised the question of how to make the Steering Committee more efficient and effective, including simplifying technical and scientific presentations. Discussion concerned devoting more time on the agenda to development of action items, holding more frequent meetings and holding two-day meetings to maximize time and expenditure of resources.

Mr. Quinn noted the strengths and experience of Committee members. It was agreed that there is a need to harness this “horsepower” in order to educate people about the state of the resource and build strong support for scientifically-based management strategies. It was noted that a paradigm shift towards consensus and a common vision has taken place on the Committee, which is now in a position to focus on how to enhance the qualities of the resource.

**XIV. Discussion and Approval of Minutes:** Mr. Richard Harvey – Acting Chair

Commissioner Neugent voted approval of the Minutes, seconded by Ms. Walters. The Motion passed unanimously.

It was noted that a replacement for Greg DiDomenico on the Committee needs to be found.

**XV. Report on Activities of the Florida Keys Water Quality Improvements Program Delivery Team:** Ms. Cecelia Weaver – South Florida Water Management District and Ms. Shelley Trulock – U.S. Army Corps of Engineers

Ms. Trulock presented the status of programs in the Corps to provide financial and technical assistance to implement storm water and wastewater projects in the Florida Keys. All the information is available on the Corps' website.

Ms. Weaver presented a listing of storm water and wastewater projects within the Keys. She discussed funding allocation and the distribution formula for the \$100 million authorized by Congress to the Corps at a project level and distributed corresponding materials to the Committee. Discussion concerned the relationship between state and federal funding for storm water and wastewater projects in Monroe County and decision-making related to allocation of funds. Ms. Weaver clarified that Environmental Impact Statements will be prepared for each project in advance of implementation.

**XVI. Status of Request for Proposals (RFP) for a Wastewater Management System for the City of Marathon:** Mr. Scott Janke – City Manager, City of Marathon

Mr. Janke said that the City Council is committed to building a central sewage system by 2010, but is still seeking funding.

**XVII. Update on Status of F.S. Chapter 99-395 (Wastewater Treatment Requirements – 10-10-10-1 and 5-5-3-1):** Ms. Bobbie Sleghter – Florida Department of Health and Mr. Gus Rios – Florida Department of Environmental Protection

Ms. Slater, representing Gerald Briggs, said that the Department of Health has gone on record to the Governor supporting the 10-10-10-1 standard and opposes any change to that standard. She gave an update on permitting in cold spots. Mr. Briggs asked her to say that Monroe County should give consideration to piloting a utility district for systems where monetary fees could support maintenance, repair and upgrades.

Mr. Rios discussed the history of development of wastewater treatment standards in 99-395, including nutrient removal, and criteria for meeting these standards in the future. There are currently two facilities meeting AWT standards in the Keys, Ocean Reef and the City of Key West. He said that based on available evidence, FDEP

recommends maintaining and enforcing the existing wastewater treatment regulations. Discussion concerned the DEP provision which allows secondary treatment plants to operate unmodified until 2010, but also requires them to upgrade if they expand. Further discussion concerned observed bodies of iridescent lime green water and a potential link with injection well testing in south Florida.

**XVIII. Update on the Little Venice Wastewater Management System for the City of Marathon:** Mr. Jim Reynolds – Florida Keys Aqueduct Authority

Mr. Reynolds introduced Ray Shimokubo the Director of the Environmental Services Department and gave a status update on the Little Venice Project. Discussion concerned difficulties in completing construction of the plant, which should be functional by late summer and ready for post-implementation monitoring.

**XIX. Update on the Implementation of the NPDES Storm Water Program in the Florida Keys, Including Designation of Key West as an NPDES Phase II Storm Water Sewer System:** Mr. Michael Bateman – Florida Department of Environmental Protection

Mr. Bateman gave a presentation on the federal NPDES storm water program. EPA recently delegated to FDEP the Storm Water NPDES Program. This program requires NPDES permits for construction projects over 1 acre in size. The industrial areas of concern for compliance in the Keys are marinas and boatyards and an outreach program of inspections and enforcements is scheduled to take place in the spring. He said that coverage is mandatory for all construction, existing or new, as part of a pollution prevention program and that municipalities and counties need to develop a Storm Water Management Plan. Details are available at [www.dep.state.fl.us/water/stormwater/npdes](http://www.dep.state.fl.us/water/stormwater/npdes). Key West is designated under the most recent census data as an “Urbanized Area”. Discussion concerned the projected cost to bring a marina into compliance.

**XX. Update on the Florida Bay/Florida Keys Feasibility Study – Water Circulation and Flagler Fill:** Mr. Erwin Wunderlich – U.S. Army Corps of Engineers

Mr. Wunderlich gave presentation on the Feasibility Study. He said that the RESTUDY and CERP required a comprehensive study of Florida Bay and computer modeling is being undertaken to evaluate connections between the Everglades, the Bay, the Gulf and the Florida Keys reef ecosystem. Among the objectives identified by the multi-agency PDT is to restore water quality in the Bay and historical connectivity between the Bay and the reef ecosystem disrupted by Flagler’s railroad bed. Full details of the project can be found at [http://www.evergladesplan.org/pm/studies/fl\\_bay.cfm](http://www.evergladesplan.org/pm/studies/fl_bay.cfm)

**XXI. Briefing on the 2002 “Black Water” Event:** Dr. Merrie Beth Neely – Florida Marine Research Institute

Dr. Neely gave a presentation on the dinoflagellate bloom, coincident with a red tide that caused coral and sponge die-offs in Florida Bay in the winter and spring 2001-2002. Comb jellies, found abundantly at sample sites off southwest Florida, are implicated in disrupting the food web, contributing to the bloom. She detailed the scientific methodologies used to determine the causes of the bloom. Discussion concerned the effect of the “black water” event on the stone crab fishery.

**XXII. Presentation on Piney Point Emergency Ocean Dumping Permit:** Mr. Charles Kovach – Florida Department of Environmental Protection

Mr. Kovach presented a summary of the circumstances leading to, and the monitoring efforts after, issuance of a U.S. EPA permit to dump treated effluent from the defunct Piney Point phosphate facility site into the Gulf of Mexico. He described the potentially catastrophic nature of the situation that prompted DEP to request such a permit, and the detailed planning and execution of the removal of the effluent. Twice monthly monitoring has revealed no significant environmental impacts in the region as a result. Discussion concerned the tax-payer funded clean-up of the site as opposed to the phosphate industry taking responsibility.

**XXIII. Public Comment Period**

Captain Ed Davidson opined that somebody should be in jail for Piney Point. It is a travesty in the public domain.

**XXIV. Adjourn**