



Summary of Meeting with FKNMS Technical Advisory and WQPP Management Committees

January 19th, 2011

Slides by Dr. W. Kruczynski, EPA

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Florida Keys National
Marine Sanctuary*





WQPP Management Committee



Sean Morton – FKNMS

Scott Donahue – FKNMS

Kent Edwards - FDEP

Gus Rios - FDEP

Tom Genovese – SFWMS

George Garrett – Marathon

John Hunt – FWC

Roman Gastesi – Monroe County

Steve Blackburn – EPA

Richard Harvey – EPA

Bill Kruczynski - EPA



Technical Advisory Committee



Jerry Ault	RSMAS
Bill Perry	NPS
John Hunt	FWC
Joe Boyer	FIU
Kim Ritchie	Mote
John Ogden	USF
Gus Rios	FDEP
Alina Szmant	UNCW
Dave Makepeace	Coral Shores HS
Carrollyn Cox	Marathon HS
Martin Moe	Citizen
Mark Chiappone	UNCW
Rob Ruzicka	FWC
Joshua Voss	HBOI
Ilsa Kuffner	USGS
Jim Fourqurean	FIU
George Garrett	City of Marathon
Dave Rudnick	SFWMD



Reasons For Meeting



- **WQPP Steering Committee has been told to expect level funding or less in the coming years...funding is usually around \$1.2M, which is what it takes to fund the three long-term monitoring programs “as-is.”**
- **Review recommendations of an EPA funded report from Battelle Memorial Institute (2007) regarding the monitoring programs.**
- **Plan to make changes to streamline and integrate the three monitoring programs, possibly leading to more special studies.**



Discussion Points



- **Increased demand for EPA South Florida funds- other agencies must “step up.”**
- **Need for post-doc to integrate and “mine” existing monitoring data...this will help develop hypotheses for testing.**
- **Seagrass will focus on detecting change at nearshore sites, and will evaluate reducing sampling frequency at fixed stations.**
- **Water Quality will add stations nearshore and evaluate others...given what we know today, may not need as many offshore stations.**



Discussion Point (continued)



- **CORAL – CREMP and the other coral monitoring programs (e.g., SCREAM, FRRP, FIO/FIT, FKNMS) should collaborate more effectively...are currently working on this.**
- **WQPP Steering Committee narrowly focused on wastewater. Needs to think broader now. Go through Science Plan to see what could be done to improve understanding of ecosystem.**
- **Need to reevaluate FKNMS Comprehensive Science Plan in light of what we have learned during the past 15 years.**



Discussion Point (continued)



- **Canals are Class III Waters*. How do we restore water quality in canals? Requires study and demonstration project.**
- **Showcase our WQPP program to EPA Atlanta and Headquarters. It is a world-class program that needs permanent funding without people looking to take a piece of it.**

***Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife**

The surface waters of the state are Class III unless described in rule 62-302.400 F.A.C.



Potential Topics for Special Studies



- **Quantify impacts of mosquito control activities on non-target marine organisms in the Florida Keys National Marine Sanctuary.**
- **Measure potential loadings of nutrients and contaminants from stormwater runoff from highways, bridges, and other impervious surfaces. Test methodologies to treat runoff before discharge into surface waters.**
- **Measure impacts of weed wrack on water quality in residential canals and boat basins. Test methods to reduce loading.**
- **Conduct a canal restoration demonstration project to improve circulation, tidal flushing, and water quality.**
- **Assess sources of viral contamination of groundwater at bank reef and the potential impacts to background microbial communities of corals.**



• Evaluate revised Monitoring Programs

• **Synthesis:** Fund a study to provide synthesis of data from all three monitoring programs.

Could result in:

- Identification of cause-effect interactions
- Generate hypotheses for future testing
- Evaluation the effectiveness of current sampling- what is missing to allow for more effective management?



FÍN

The background features several large, overlapping, colorful swirls in shades of green, purple, and blue. Scattered throughout are numerous small, yellow, triangular shapes that resemble sun rays or confetti.

WATER QUALITY PROTECTION PROGRAM

STEERING COMMITTEE MEETING

FEBRUARY 2, 2011

**SUMMARY OF MEETING
FKNMS TECHNICAL ADVISORY COMMITTEE AND
MANAGEMENT COMMITTEE
JANUARY 19, 2011**

By: Dr. W. Kruczynski (EPA)



MANAGEMENT COMMITTEE

Sean Morton – FKNMS

Scott Donahue – FKNMS

Kent Edwards - FDEP

Gus Rios - FDEP

Tom Genovese – SFWMS

George Garrett – Marathon

John Hunt – FWC

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RSMAS

NPS

FWC

FIU

Mote

USF

FDEP

UNCW

Coral Shores HS

Marathon HS

Citizen

MDCC

FWC

HBOI

USGS

FIU

Marathon

SFWMD

A decorative background on the left side of the slide features a large green balloon at the top, a blue balloon in the middle, and a purple balloon at the bottom. Yellow streamers and triangular flags are scattered around the balloons.

Important Dates

1990 Florida Keys National Marine Sanctuary Act, Pub. L. No. 101-605

1996. Water Quality Protection Program Plan

1995-1996. Long-term monitoring initiated

1997. Florida Keys National Marine Sanctuary Management Plan

Incorporated WQPP Plan as Water Quality Action Items

Incorporated Research and Monitoring

2000. Science Review Panel – 1

2002. Comprehensive Science Plan

2007. Battelle Review

2007. Science Review Panel - 2

Battelle Recommendations (2007)

- Improve collaboration between all stakeholders
- **Conduct rigorous statistical reviews of data sets to determine if and how monitoring can be streamlined spatially and temporally, followed by cost-benefit analysis**
- Each project should evaluate whether use of remotely sensed information can be incorporated and result in cost savings
- Convene a review including all science programs and research throughout the Keys and Florida Bay (not just those funded by EPA)
- Reevaluate current goals and objectives of Comprehensive Science Plan (Adaptive Management)
- Host an Information and Technology Transfer Workshop Conference around five broad themes- Goal Setting, Assessment, Adaptive Management, Restoration, Measuring Results- every 3 to 5 years

Outcomes of workshop- Information Sharing, Management Tool kit, Program Planning



2007 Science Review Panel

Jane Caffrey

John Hunt

Ronald Kneib

Marguerite Koch

Esther Peters

Rob van Woesik

General Recommendations

- **Monitoring of water quality, seagrass, and corals/hardbottom should be continued to understand spatial and temporal changes**
- **Special Studies are important to understand key processes that drive changes and assist in interpretation of monitoring data**

Communication Recommendations

- **Improve communication to public and managers (e.g., Bill and Pamela's book)**
 - **Use conceptual models as communication tools**
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Monitoring Recommendations

- Focus on integrating across monitoring programs
- Event-driven water quality monitoring is required
- Monitoring should be based on conceptual models
- Coral monitoring- quantify more than percent cover- e.g. size frequency, functional forms
- Use 10+ years of data to develop hypotheses to further define mechanisms causing declines
- Monitor mangroves

Special Studies Recommendations

- Link water quality data with remote sensing data
- Future studies- process-oriented and syntheses
- Hydrodynamic models should be integrated into interpretation of water quality data
- Interdisciplinary systems integrating project to synthesize long-term data and mechanistic results
- Sediment nutrient profiles from shore to reef
- Why are patch and hard bottoms responding differently than offshore reefs?
- Track pathogenic microorganisms

Key Discussion Points

- **Increased demand for EPA South Florida funds- SEFCRI, REMAP, other agencies must “step up.”**
- **Need for post-doc to integrate and “mine” existing monitoring data. Will develop hypotheses for testing.**
- **Seagrass will focus on detecting change at nearshore sites. Will evaluate reducing sampling frequency at fixed stations.**
- **Water Quality will add stations nearshore and evaluate others. Given what we know today, may not need as many offshore stations.**
- **CREMP quantifies changes in coral at fixed sites. Can not be effectively projected across entire Sanctuary. Will investigate reallocation of sites.**
- **Rapid Assessment Sampling using stratified random sites allows Sanctuary-wide assessments.**
- **Steering Committee narrowly focused on wastewater. Needs to think broader. Go through Science Plan to see what could be done to improve understanding of ecosystem.**



Discussion Points Continued

- **Canals are Class III Waters***. How do we restore water quality in canals? Requires study and demonstration project.
- **Need to reevaluate Science Plan in light of what we have learned during the past 15 years.**
- **Showcase our program to EPA Atlanta and Headquarters. It is world-class program. Needs permanent funding without people looking to take a piece of it.**
- **Are we getting anything useful for \$60K per year to FWCC for data management?**

***Recreation, Propagation and Maintenance of a Healthy, Well-Balanced Population of Fish and Wildlife**

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Potential Topics for Special Studies

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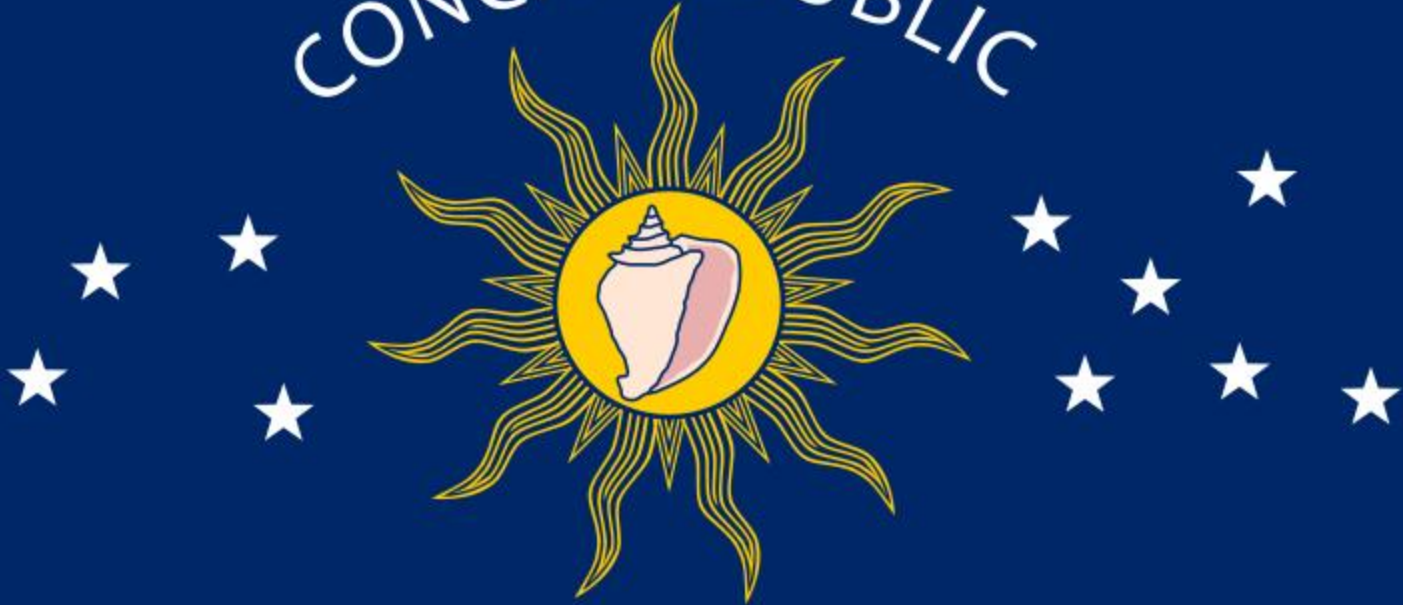


TAC RECOMMENDATIONS

- **Evaluate revised Monitoring Programs**
- **Synthesis:** Fund a study to provide synthesis of data from all three monitoring programs. Will result in:
 - Identification of cause-effect interactions
 - Generate hypotheses for future testing
 - Result in evaluation the effectiveness of current sampling- what is missing to allow for more effective management?

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CONCH REPUBLIC



"WE SECEDED WHERE OTHERS FAILED"