Florida Keys Reasonable Assurance Documentation Technical Working Group Meeting 5 April 26, 2007 Meeting Minutes

This is a summary of the fifth Technical Working Group (TWG) Meeting help April 26th, 2007 at the Marathon Government Center with the Florida Department of Environmental Protection (FDEP) and representatives of stakeholders that comprise the TWG. The purpose of the meeting was to discuss Florida Keys Reasonable Assurance Document (FKRAD) progress, FKRAD management goals, stakeholder information, and to introduce the conceptual draft of the stakeholder agreement. The meeting was attended by representatives of the City of Layton, City of Key West, City of Key Largo, Monroe County, and FDEP. A copy of the agenda, sign-in sheet, and conceptual stakeholder agreement are appended to this memo along with a copy of the PowerPoint presentation.

DISCUSSION

Review of Recent Consensus Items

Scott McClelland presented a review of recent consensus items including information pertaining to impairments (closures) in the keys, the fate of wastewater effluent disposal flows, and the fate of stormwater runoff.

The question was raised as to whether threshold concentrations have been established for the Florida Keys. It was asserted that definitive limits do not exist, although there are indicators present that show definitive changes once pollutant levels pass certain thresholds. An example is the algae blooms that have recently occurred in Florida Bay when the area has historically had relatively low Nitrogen and Phosphorus levels. It is suspected that the recent hurricanes have released nutrients from the Florida Everglades, and they have migrated into Florida Bay, contributing to the algae blooms.

Another difficulty that exists with respect to threshold levels is that the water in the Florida Keys comes from many varied sources with an existing background concentration that likely already exceeds threshold concentrations. The point was raised that the keys are also unique in that any runoff that does not flow directly to BMPs (i.e. that which bypasses or infiltrates) is not treated and ends up being delivered to near shore waters.

Therefore the goal of the FKRAD to first identify, then minimize the impact of anthropogenicly introduced nutrients from the land, stormwater, and wastewater on the Florida Keys ecosystem.

A challenge exists when it comes to monitoring the inflow of nutrients, in that the majority of monitoring stations are located away from the islands, rather than in areas receiving direct inputs, such as residential canals. To date the monitoring effort has not shown any significant changes in the area grass beds. Canals and inshore areas are showing visual signs of impairment, yet due to the lack of near shore monitoring stations it has not been possible to establish a statistically significant linkage to pollutants.

The question was raised as to whether heavy metals and other insoluble pollutants were going to be addressed as part of the FKRAD. The answer is no. These constituents have not triggered the impaired waters rule, and have not been captured in data showing that established thresholds have been exceeded. The main focus of the FKRAD is nutrients, but many of the BMPs that are to be utilized have ancillary benefits regarding the removal of heavy metals and other detrimental constituents. The main focus of the FKRAD with respect to these issues is going to be prevention.

Identified Management Activities and Reductions

Steve Lienhart presented an overview wastewater treatment and stormwater management with a focus on:

- Current Practices
- Equivalent Development Units (EDUs)
- Potential Nutrient Load Reductions

Steve also discussed the status of the Water Body ID (WBID) models and the status of management actions information.

During the discussion regarding nutrient load reductions it was brought up that the removal efficiency numbers for both the Onsite Wastewater Nutrient Reduction Systems (OWNRS) and septic tanks are too high. It is believed that septic drain fields are not effective in the Florida Keys due to the lack of available land for percolation and nutrient uptake. It was also asserted that a unique challenge exists with respect to the design and implementation of retention-detention systems in the keys. The saltwater layer is very mobile, and often it will rise up into excavated stormwater management areas, killing all established vegetation. It was asserted by the model development team that all treatment efficiencies are averages, and can be manipulated for calibration purposes.

The total phosphorus (TP) inputs to the WBID models was discussed in depth. It was asserted that the inputs are measured in micrograms per liter, and that the input values are very close to the detection limits. For this reason the average values collected over the last ten years should be used as model inputs as the differences that exist between the first and last

five years are not statistically significant. Another difficulty lies in determining how much of the TP present is due to background levels, and the level of accuracy that can be achieved at such low levels.

The question was asked as to whether near shore models exist, and is it possible to quantify the extent of the effects of land-introduced pollutants. The answer is yes. There are currently 10 canal models that have been developed, ranging from simple straight line models representing one canal, to complex networks representing entire inshore areas. These models were developed to determine the direct effects of removing septic systems and cesspools. They can and will be used to help quantify the migration of near shore, land introduced pollutants and their effects on the Florida Keys ecosystem.

Sanctuary Advisory Council Presentation

Scott McClelland presented an overview of the presentation made to the Florida Keys National Marine Sanctuary Advisory Commission. The council was very interested in the progress of the FKRAD, and would like to be kept up to date with respect to future developments.

The question arose as to the potential consequences of not implementing the FKRAD once it is developed, and what the potential repercussions could be. It was stated that widespread implementation if Total Maximum Daily Load (TMDL) regulations would be the regulatory consequence of not implementing the BMPs set forth in the FKRAD.

Initial Draft of Stakeholder Agreement

The conceptual draft of the "Florida Keys Watersheds Management Plan Stakeholders Agreement" was presented and distributed by Steve Lienhart. After a brief overview several issues arose for discussion, including:

- How does the Environmental Protection Department deal with Reasonable Assurance Documents (RADs)?

The EPA has a protocol in place regarding systems where external effects typically dominate internal effects. The RAD process is particularly relevant to areas such as the keys and the everglades, although difficulties arise when there are times that pollutant reduction cannot be quantified.

There is going to be significant review of the RAD at multiple levels, due to the fact that if a RAD is implemented in the Florida Keys it has far reaching effects nationwide. The logic behind the heavy review is that if a RAD is introduced in the Keys, it sets the precedent for RADs elsewhere.

It has been determined that for the Florida Keys a RAD is the best possible path to pursue given the information available. Additionally, the complexity of the system makes TMDLs that much more difficult, therefore a "best available technology" approach will be pursued.

It is vital that all stakeholders band together to create a strong Stakeholders Agreement document that will stand up to scrutiny and help the program be successful.

Several additional concerns were raised including:

- Not all of the Keys are going to be on sewers in the near future, and how many more people and capital improvements will be required to become compliant?
- When are the Keys no longer going to be listed with a "critical" designation?

It was asserted that the concept needs to be introduced to ALL stakeholders and varying levels of government that the 2010 standards need to be met or there will be immediate consequences that are going to cost the people of the Keys money.

The stakeholder agreement will show the commitment that the players are willing to do what they can to the maximum extent practicable. The agreement will help ensure that commitments will be met within the timeframe specified. It also established a reporting agency, which will allow for documentation of the progress being made by different stakeholders.

Other ideas that were raised include:

- A work program exists for many areas as a Department of Community Affairs (DCA) requirement, is there a way for DEP and DCA to communicate on a combined process?
- Anything that can be used to show reporting and timelines being met can only help to strengthen the FKRAD process.
- Inter-local agreements, such as that between the aqueduct authority and the county regarding sewering areas, will be included in the RAD as they are only going to help strengthen the document.
- Permits will also help strengthen the RAD as they show an additional level of commitment.

After the stakeholder agreement was presented there were no immediate concerns raised, however a few key points arose:

- Individual stakeholders will have individual commitments.
- Having all signatures on a single document shows a united, area-wide commitment by all stakeholders.

- There is an uncertainty regarding the acceptance of the document if not all parties are on board. The document needs the commitment of the entire Florida Keys in order to be successful.

The strongest, most convincing arguments for compliance are going to come from the stakeholders themselves, and they need to encourage everyone to create a united Florida Keys for the RAD.

Action Items

- Draft Stakeholder Summary Review Comments
- Next Meeting: May 24th, 2007
- Future Meetings:
  - TWG Meeting 7 – June 29th, 2007
  - TWG Meeting 8 – July 26th, 2007

TECHNICAL WORKING GROUP MEETING NUMBER 5
Marathon Government Center
2796 Overseas Highway, Room 104
Marathon, Florida 33050
April 26, 2007 ❖ 9:30 AM – 1:30 PM

Agenda

I. **WELCOME** — Scott McClelland

A. Introductions and Sign-In

II. **REVIEW OF RECENT CONSENSUS ITEMS** — Scott McClelland

A. Impairments (Closure)
B. Fate of Wastewater Effluent Disposal Flows
C. Fate of Stormwater Runoff

III. **IDENTIFIED MANAGEMENT ACTIVITIES AND REDUCTIONS** — Steve Lienhart

A. Wastewater Treatment
- Practices
- EDUs
- Potential Wastewater Nutrient Load Reductions

B. Stormwater Management
- Practices
- EDUs
- Potential Stormwater Nutrient Load Reductions

C. Status of WBIDs Models
D. Status of Management Actions Information

IV. **SANCTUARY ADVISORY COUNCIL PRESENTATION** — Scott McClelland

A. Overview of Presentation
B. Council Questions and Comments

V. **INITIAL DRAFT OF STAKEHOLDER AGREEMENT** — Steve Lienhart

A. Intent
B. Form
C. Initial Draft Agreement
D. FKRAD Document

VI. **ACTION ITEMS** — Scott McClelland

A. Draft Stakeholder Summary Review Comments
B. Next Meeting: May 24, 2007
C. Future Meetings
- TWG Meeting 7 – June 29, 2007
- TWG Meeting 8 – July 26, 2007

VII. **ADDENDA AND ERRATA** — Scott McClelland

Florida Keys Reasonable Assurance Documentation (FKRAD)
Technical Working Group Meeting No. 5
Marathon Government Center
April 26, 2007 @ 9:30 AM

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Skip Harding	LAYTON	PO Box 778 Long Key FL 33001	305-664-4667	305-664-0105	skipharding@juno.com
Richard Harvey	USEPA	400 N. Congress Ave Suite 120 West Palm Beach, FL 33401	561-615-5242	561-615-6959	harvey.richard@epa.gov
Elizabeth Wood	MC County.	1100 Simonton St, Key West FL 33040	3052924525	45 4321	wood-liz@monroecounty-fl.gov
Margaret Blank	KLWA	POBox 491 Key Largo 33037	305-453-5804	453-5807	margaretblank@bellsouth.net
George Garrett	Monroe County	2798 Overseas Highway, Marathon, Fl	305 289 2507	289 2536	garrett-george@monroecounty-fl.gov

Florida Keys Watersheds Management Plan
Stakeholders Agreement

Background

Whereas, the Parties to this Agreement recognize that the Florida Keys are a unique and irreplaceable natural system that constitutes a local, State and National treasure; and

Whereas, the Parties to this Agreement recognize that the Florida Keys are a linear collection of small watersheds which are hydrologically connected at the local level by the nearshore waters of the Keys; and

Whereas, the Parties to this Agreement recognize that the Florida Keys are continuously impacted by nutrient concentrations in offshore waters associated with a wide range of natural sources and phenomena including deep ocean upwelling, micro-nutrient and viruses in African dust storms that reach the Keys; and

Whereas, the Parties to this Agreement recognize that water quality in the nearshore waters of the Florida Keys are continuously influenced by their interactions with offshore waters and loop currents that have elevated nutrient concentrations attributable to a wide range of anthropogenic activities far outside of the Florida Keys; and

Whereas, the Parties to this Agreement do not control the major sources of nutrient loading into the offshore and nearshore waters surrounding the Florida Keys; and

Whereas, the Parties to this Agreement wish, nevertheless, to control the nutrient loading derived from local wastewater, stormwater, and land development discharges to the extent practicable and

Whereas, the Parties to this Agreement recognize that elevated nutrient concentrations have contributed to the degradation of water quality in the Florida Keys; and

Whereas, the Parties to this Agreement recognize that a minor portion of the nutrients in the nearshore waters of the Florida Keys originate from anthropogenic activities occurring within the Florida Keys which are within the purview and scope of authority of the local Keys governments and agencies; and

Whereas, the Parties to this Agreement recognize that the major portions of the nutrients in the nearshore waters of the Florida Keys originate from anthropogenic activities outside of the Florida Keys and are not within the purview and scope of authority of the local Keys governments and agencies; and

Whereas, the Parties to this Agreement are interested in managing the water quality in the Florida Keys to preserve and improve the aquatic environment and living resources now existing in the Florida Keys; and

Whereas, the Parties to this Agreement recognize that a comprehensive watershed approach is needed to reduce nutrients and address water quality issues within the Florida Keys; and

Whereas, a multitude of regulatory, technical assistance, research, and education programs has been developed and are well coordinated but must be used in combination with incentives and other non-regulatory tools to form a comprehensive approach to address the full scope of water quality issues within the Florida Keys; and

Whereas, a substantial level of federal, state, regional, local and private resources are being sought and committed to and a new coordinated approach must recognize and build upon effort and progress from the work of all of these programs; and

Whereas, the resource management actions referenced in Table ____ (included herein and made part of this agreement) of the Florida Keys Reasonable Assurance Document are deemed effective in improving water quality within the Florida Keys watersheds.

Now therefore, in consideration of the foregoing premises, which are made part of this Agreement, the Parties hereby agree to the following.

I. Mission

The common mission of the signatories is to reduce the annual discharge of nutrients to the Florida Keys halo zone waters (WBIDs 6006A, 6006B, 6006C, 6009, 6010, 6011A, 6011B, 6011C, 6012A, 6012B, 6012D, 6012E, 6013A, 6013B, 6013C, 6013D, 6014A, 6014B, 6014C, 6016, 6017, 6018 AND 6019) in order to protect and enhance the unique marine environment of the nearshore waters of the Florida Keys. To this end the signatory stakeholders agree to:

1. Work together to assess anthropogenic sources of total nitrogen and total phosphorus being discharged to the halo zone waters;
2. Work individually to optimize reductions of locally generated nutrient concentrations in the local halo zones;
3. Work collaboratively to minimize discharges to waters of these watersheds emphasizing voluntary, incentive-based programs for protecting the environment and public health; and,
4. Coordinate and collaborate with federal, state, regional agencies/programs, local governments and interested parties to improve the coordination, use and benefits provided by existing regulatory, technical assistance, research, and education programs.

II. Guiding Principles

The signatory stakeholders agree to adopt the following guiding principles in achieving the mission:

1. Use a comprehensive, regionally integrated management approach to address Class III marine water quality standards for halo zone waters and encourage timely implementation of proposed and planned management actions within the Florida Keys watersheds.
2. Focus on management approaches which are technically feasible, economically practicable, and protective of the environment and public health.
3. Implement wastewater management actions – including wastewater collection, treatment and disposal practices – as required by Chapter 99-395 as a primary management practice for reducing nutrient discharges to the halo zone waters.
4. Implement stormwater management actions – including regulations, design standards and criteria, education programs, collection systems and treatment facilities, and O&M activities –

to the maximum extent practicable throughout their watersheds to achieve Class III water standards in the halo zone waters.

5. Maximize the efficient coordination of federal, state, and regional agency resources and programs, and local resources and avoid unnecessary duplication of efforts
6. Where appropriate, pursue opportunities for joint projects that provide more cost effective solutions and may make better use of consolidated and coordinated funding of projects.
7. Seek reasonable, incentive based solutions that can be embraced by leaders and stakeholders in the Keys communities and at all levels of government.
8. Develop consensus measures of success that include monitoring of the progress of management actions.
9. Achieve results that satisfy regulatory requirements.
10. Employ water quality monitoring to measure the effectiveness of implemented water quality improvement measures.
11. Continue to make good faith efforts in funding incentive-based programs.
12. Participate in annual reporting activities that demonstrate successful reduction of nutrient discharges.

III. Organization

The signatories, through their own individual efforts, combined with interlocal cooperation and the integrated efforts of numerous federal, state and local programs, have created a fabric of regulatory, operational, capital construction and educational programs that function collectively as an integrated management plan for the multiple watersheds in the Florida Keys.

While no designated leader or management committee exists for this informal watershed plan, there are a number of oversight entities that provide guidance and leadership including:

- DCA (by virtue of the Keys' designation as a Area of Critical State Concern);
- Florida Keys National Marine Sanctuary Steering Committee
- Sanctuary Advisory Committee

Primary planning activities have been accomplished by the individual stakeholder governments for their jurisdictional areas. These planning activities have received a defacto integration effort through a number of studies, regulations and overlay planning including:

- Monroe County Sanitary Wastewater Master Plan;
- Monroe County Stormwater Master Plan;
- Florida Keys Carrying Capacity Plan;
- FDEP's wastewater and stormwater management regulations;
- Chapter 9J-5, Comprehensive Growth Management (monitored by DCA); and
- Chapter 99-395, Florida Statutes.

The combination of wastewater and stormwater regulatory programs, supplemented by the multiple leadership entities, will continue to address the specific impairments to water quality recognized at the time of signature.

This agreement applies only to the currently identified nutrient impairment in the halo zone WBIDs. of the halo zone WBIDs will be addressed through a separate agreement(s) and the participation of .

IV. Education, Outreach and Implementation

For the signatory stakeholders to accomplish their mission, education on the issues and solutions, including effective transfer of knowledge and technology, are essential components of implementation of the efforts of the Technical Working Groups.

V. Stakeholder Involvement and Commitments

For the signatory stakeholders to be successful, the involvement of stakeholders is critical. As part of this framework agreement, a process for stakeholder involvement is developed and will be implemented by the signatories.

Specific commitments of the signatory stakeholders are referenced in Table ____ of the Florida Keys Reasonable Assurance Document by individual stakeholder.

VI. Measures of Success

Water quality issues in the Florida Keys watersheds have developed from various inputs over an extended period of time. Successfully addressing these issues will require sufficient time to implement management changes and evaluate their effect.

The signatories will make a good faith effort in implementing the projects and management activities referenced in the FKRAD to restore and maintain water quality conditions to the levels set forth in the FK Reasonable Assurance Documentation.

This commitment is based on mutual cooperation, shared objectives, fairness, and the support and participation from the Parties to this Agreement.

We the undersigned Stakeholders agree, on August XX, 2007 to the foregoing Florida Keys Watersheds Stakeholder Agreement:

City of Key Colony Beach
Name, Title

County of Marathon
Name, Title

City of Key West
Name, Title

Florida Parks Service
Name, Title

City of Layton
Name, Title

Islamorada, Village of the Islands
Name, Title

City of Marathon
Name, Title

United States Navy
Name, Title

Florida Keys Aqueduct Authority
Name, Title

Key Largo Wastewater Treatment District
Name, Title

We the undersigned Agencies and Programs agree, on August XX, 2007 to support the foregoing Florida Keys Watersheds Stakeholder Agreement:

Florida Department of Environmental Protection
Director, South District
Jon Inglehart

United States Environmental Protection Agency,
Region IV
Name, Title

Florida Department of Community Affairs
Name, Title

United States Army Corps of Engineers
Jacksonville District
Name, Title

Florida Department of Health
Bureau of Onsite Sewage Programs
Gerald Briggs, Title

South Florida Water Management District
Carol Whele, Executive Director

Agency or Program
Name, Title

Agency or Program
Name, Title

Agency or Program
Name, Title

Agency or Program
Name, Title

Agency or Program
Name, Title

Interested Party
Name, Title

Potential Candidates for Inclusion:

- Everglades & Dry Tortugas National Parks *
- Florida Keys Environmental Fund *
- Florida Keys National Marine Sanctuary *
- Florida Keys National Wildlife Refuges – USF&WS *
- Florida Freshwater Fish and Game Conservation Commission
- National Marine Sanctuaries Program - NOAA *
- Sanctuary Advisory Council - FKNMS *

We the undersigned Interested Parties agree, on August XX, 2007 to endorse the foregoing Florida Keys Watersheds Stakeholder Agreement:

Audubon of Florida
Name, Title

Sierra Club
Name, Title

Isaac Walton League of America
Michael Chenoweth, National Director

Florida International University
South Florida Ecosystem Restoration Task Force
Name, Title

Earth Justice
Name, Title

The Nature Conservancy
South Florida/Florida Keys Program
Name, Title

Florida Keys Visitors and Convention Bureau
Name, Title

Thousand Friends of Florida
Name, Title

Monroe County Commercial Fishermen
Name, Title

Interested Party
Name, Title

Reef Relief
Name, Title

Interested Party
Name, Title

U of M marine research
Dolphin research