MEMORANDUM

DATE: March 29, 2007

TO: Sanibel City Councilmembers

FROM: Judie Zimomra, City Manager

SUBJECT: Supplemental Material for April 03, 2007 City Council Meeting

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Please find attached the following supplemental material for the April 03, 2007 Council Meeting:

- Agenda Item 9a3b – Final Approval of Algae Requests for Qualifications (RFQ)
- Agenda Item 9a4 - Communications update and mailing

JAZ/cm

Xc: Ken Cuyler, City Attorney
Pamela Smith, City Clerk

City of Sanibel

DRAFT REQUEST FOR QUALIFICATIONS AND PROPOSALS FISCAL YEAR 2007

SUBMITTALS MUST BE RECEIVED BY XXXXX XX, 2007

The City of Sanibel is a municipality in the County of Lee, located in southwest Florida. Additional information is available on the City's website at: www.mysanibel.com

Background:

Over the past few years Sanibel Island, as well as much of the Lee County coastline, has experienced an unprecedented explosion in drift algal biomass in the inshore, nearshore, and offshore waters. Recent studies attribute the increase in algal abundance to escalating coastal eutrophication in local waters (Lapointe and Bedford, In Press). Sanibel has a history of not clearing or raking beach flotsam, either by hand or mechanically, to conserve the beaches in their natural condition. This strategy leaves shells undisturbed, allows for undisturbed nesting by shorebirds and sea turtles, and conserves all other natural beach systems including the dunes. The drift rhodophyte bloom and its affects on Sanibel beaches threaten this conservation policy. In an effort to learn more about the abundance and distribution and dynamics of drift macroalgae, the City of Sanibel is seeking research qualifications and proposals to conduct algal research in the waters surrounding Sanibel Island and Lee County.

WE ARE SEEKING PROPOSALS ON THE FOLLOWING RESEARCH QUESTIONS*:

What is the spatial and temporal distribution of macroalgae biomass in the inshore, nearshore, and offshore waters of Lee County? What are the factors (physical, chemical, biological, meteorological) affecting the spatial and temporal variation of the macroalga blooms?

What are the macroalga species present in area waters and what is their relative abundance?

What is the fate of macroalga species once detached from the sea floor? Does growth and reproduction continue to occur?

Is there a relationship between macroalga abundance and parchment worms (*Chaetopterus sp.*)? If so, what is the relationship?

What is the spatial and temporal distribution of nutrients (including both organic and inorganic forms) in the water column and bottom sediments of the Caloosahatchee River and Estuary, and the nearshore and offshore waters of Lee County?

What are the sources of nutrients (including macro and micro nutrients in both organic and inorganic forms) in the water column and in the sediments that may contribute to the growth of macroalga within the study area? What other variables, such as turbidity and color and their relationship with light availability are critical to algal growth in local waters?

Is there a relationship between high volume discharges from the Caloosahatchee River on water column and sediment nutrient concentrations? Where do lake or river born sediments settle out within the estuary? Do they extend to the nearshore and offshore waters? What is their contribution to macroalga growth?

How do physical processes such as currents, wind, tidal cycles, and river flow affect the distribution and fate of nutrients in the estuary and nearshore waters of the study area?

What is the fate of nutrients contained in the macroalga on local beaches? How are these nutrients dispersed? Is gaseous dispersion of nitrogen from decaying algae on the beach significant? What is the potential for these nutrients to fuel future blooms?

What management actions are available to reduce the potential negative impacts from future blooms?

*We realize that the research questions listed above may not be all inclusive, but the Firms=s/Individual=s are encouraged to include any additional research questions that may help to provide insight to the overall scope of the project.

QUALIFICATION STATEMENT

EXECUTIVE SUMMARY

The Executive Summary shall not exceed two (2) pages. The Executive Summary shall include a brief description of the Firm=s/Individual=s understanding of the role and key responsibilities of the Firm/Individual in a potential contract.

PERSONNEL AND EQUIPMENT QUESTIONS

1. Organization – a brief Corporate (firm, partnership, etc.) history, number of personnel, table of organization, scope of operations, available resources including both physical and intellectual.

2. Personnel – list all persons authorized to negotiate for your Firm/Individual, provide the names of all Firm/Individual officers or directors, provide the names and credentials of all persons who will be especially committed to working for the Client. Submittals including a team of personnel with a combination of expertise is encouraged and will be considered favorably.

3. Provide the appointed name of person or persons to act as a primary contact for all client members.

4. Demonstrate that the team has qualifications that cover biological, chemical, and physical research disciplines.

OTHER PROJECT CRITERIA

1. Financial Disclosure – Firm/Individual shall provide a copy of its most recent Financial Disclosure filing if its work required such filing under the Florida Statutes.

2. The Firm/Individual shall identify available hours for Client Activities; examples of reports and analyses; and how the Client accounts will be managed.

3. Proposals that require federal, state, or local authorization, such as permits or permission to access or conduct activities on public and submerged lands, must demonstrate that they do or will have the authorizations necessary to complete the project.

4. The Firm/Individual shall provide proof of insurance and maintain such insurance as will protect them from claims under Worker's Compensation laws, disability benefit laws or other similar employee benefit laws; from claims from damages because of bodily injury, occupational sickness or disease, or death of their employees including claims insured by usual personal injury liability coverage; and from claims for injury to or destruction of tangible property including loss of use resulting therefrom any or all of which may arise out of or result from the Firm=s/Individual=s operations under the Documents, whether such operations be by itself or any subcontractor or anyone directly or indirectly employed by any of them or for whose acts any of them may be legally liable. This insurance shall be written for no less than the limits of liability specified in the Documents or required by law, whichever is greater, and shall include contractual liability insurance. As a prerequisite to the Client signing the Contract, the Firm/Individual will file with the Client certificates of such insurance, acceptance to the Client; these certificates shall contain a provision for cancellation.

PROPOSAL FORMAT:

Project Title:
Principal Investigator(s): Name/Affiliation, mailing address, phone, fax, and email address.
Project Location: Provide a detailed description of the proposed study area, a map of the project area, referencing regulatory authorization, as necessary. Maps must show where the proposed project will occur in relation to Sanibel Island and the rest of the

southwest Florida coastline
Objectives:
Study Design: Provide as much detail as possible, how the project objectives will be completed, methodology, type of raw data to be collected, how it will be analyzed, summarized and reported.
Deliverables: Clearly specify all deliverables to be provided.
Cooperators/Partners:
Timeline with Milestones: Project timeline will be one year from project initiation.
Project Cost/Budget Breakdown: The cost/budget breakdown will not be the primary factor used in the ranking process. Provide an itemized budget, including all indirect or overhead costs; identify funding from other sources and matching funds if applicable including in-kind matching funds and clearly indicate the amount of funding required to complete the work as described.
Literature Cited:

EVALUATION AND AWARD PROCESS:

Qualification Statements will be evaluated and ranked. Projects will be awarded on their scientific merit, anticipated efficacy in providing successful project completion, required deliverables, and available funding. We recommend minimizing overhead, indirect costs, and other expenses that will not contribute directly to accomplishing project objectives. We will contact the principal investigators to obtain additional details regarding their submittal if needed.

We do not have an approved budget for this project but anticipate full funding from a combination of local, state and federal sources.

EXPECTED MINIMUM DELIVERABLES:

Upon accepting a particular proposal, we will require:

1. Interim quarterly reports on project progress in accord with defined timelines and a final report upon project completion. Interim reports should include a summary of progress, methodology, results to date and interim discussion on findings. Final reports shall be in the standard form of scientific reporting including an abstract, project description, methodology, results, discussion, conclusions and literature cited.
2. Provision of all raw and summary data, including models, spatial data, digital data, maps, and photographs. We request that all manuscripts for publication that result from funded projects be submitted for review to our office prior to submission to a peer-reviewed journal or release to the press. Additionally, we request that the City and all funding partners be acknowledged in any publication or presentation of project results.
3. An explanation of how the research relates to specific management actions including tools to evaluate potential outcomes of alternative management strategies.

4. An executive summary in plain English and not scientific jargon for release to the public at the completion of the project.
5. Quarterly presentations and a final report at a regularly scheduled public meeting including the executive summary in writing and a detailed power-point presentation understandable by the lay person.

SUBMISSION:
Submit five (5) hard copies and one (1) digital copy (on a cd in pdf or Word for Windows format) to: The City of Sanibel Department of Natural Resources, 800 Dunlop Rd., Sanibel, Florida 33957; or preferably by e-mail to: James.Evans@mysanibel.com

Questions can be directed to: Rob Loflin, James Evans or Holly Downing of the Natural Resources Department at #(239) 472-3700.

References Cited

Lapointe, B.E. and B.J. Bedford. In Press. Drift Rhodophyte Blooms Emerge in Lee County, Florida, USA: Evidence of Escalating Coastal Eutrophication.

Enforcement

While the ordinance is effective immediately, no citations will be given during the 180-day transition period. After the 180-period, the City can elect one of several different options for enforcement including:

1) Violation of or refusal to comply with this ordinance shall be considered a 2nd degree misdemeanor. Upon conviction, punishment shall include a fine up to $500 or imprisonment up to 60 days in jail, or both.

2) The City could choose to pursue Code Enforcement proceedings pursuant to applicable City code provisions and Chapter 162, Florida Statutes.

The final approved Ordinance 07-003 is posted on the City's website at http://www.mysanibel.com and on the City's water quality website at http://www.sanibelh2o.com. For further information, contact the City of Sanibel Natural Resources Department at (239) 472-3700.

Algae Management

City Council has directed staff to have a plan prepared to remove algae from the beaches prior to next season. City staff is currently evaluating various beach cleaning techniques and identifying potential funding sources.

A technical Algae Management Task Force is working with the City to address the causes and management of red drift algae. The Algae Management Task Force includes representation from the J.N. "Ding" Darling National Wildlife Refuge, the Sanibel-Captiva Conservation Foundation, PURRE, The Sanibel Sea School, and Lee County Department of Natural Resources.

Utilizing aerial and underwater camera surveillance, the City's Department of Natural Resources is identifying the exact locations, size and density of the existing algae beds impacting Sanibel. Large, dense beds of algae have been identified and photographed approximately 2,000 feet offshore. The algae is most dense in the area where the water is approximately 11 feet deep. Due to the size and density of these algae beds, we anticipate further deposits of red drift algae on our beaches.

In April, the City is field evaluating two water-based methods of removing algae currently being utilized in Hawaii. The City is continuing to evaluate land-based methods of removing algae from the beaches. The focus of the evaluations is environmental impacts, efficiency and cost.

Regular updates regarding beach conditions and the Red Drift Algae Management Program are posted to the City website at http://www.mysanibel.com and www.sanibelh2omatters.com.

We invite you to subscribe to receive regular updates on issues important to Sanibel at: www.sanibelh2o.com

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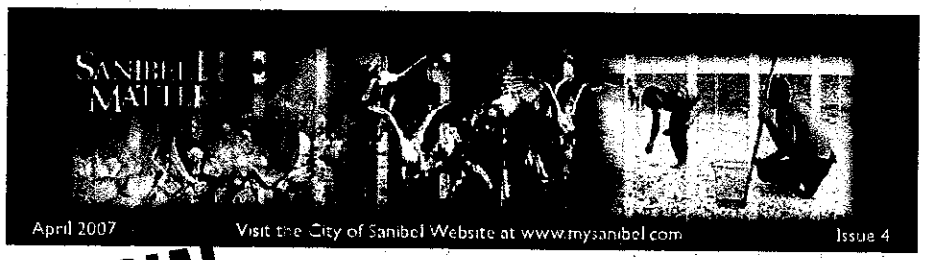

April 2007 Visit the City of Sanibel Website at www.mysanibel.com Issue 4

SPECIAL EDITION Sanibel Water Quality Update

Dear Citizens:
April 10, 2007

High levels of nutrients, sediment and algae in area waters have impacted our marine life, our beaches, and our economy. This update includes most recent actions and includes background information.

There is general consensus that the community would like to experience beaches clear of red drift algae, which has been particularly problematic and challenging this year. Sanibel's primary draw as a tourist destination, and the source of our local economic engine, is the island's natural beaches.

It is our goal to first eliminate the source of the nutrients feeding the algae from beyond our community; second, to eliminate nutrients feeding the algae from within our community; and third to evaluate all mechanisms available to remove algae deposits, preferably prior to landfall.

Sincerely,

Sanibel City Council

Background

Sanibel's beaches stretch for 11 miles along the Gulf of Mexico and for 3 ½ miles on the San Carlos Bay side of the island. Sanibel's beaches are worldwide renowned for their natural state and as a location to enjoy and appreciate rare and endangered wildlife. The citizens of Sanibel have invested significant resources in restoring the natural dune system and native vegetation at the beaches.

During the hurricane seasons of 2004 and 2005, water managers with the U.S. Army Corps of Engineers diverted a tremendous amount of polluted water from Lake Okeechobee into the Caloosahatchee River. The deadly impacts of the releases began to appear in the form of toxic blue green algae, red drift algae, dying seagrasses, sickened oyster and commercial clam beds, as well as increased instances of fish kills.

Sanibel beaches are habitat to various threatened and endangered species of wildlife; Federal, State and local laws protect Sanibel's beaches. These protections include prohibition in Sanibel's Comprehensive Plan, the Sanibel Plan, against the environmental damages resulting from raking the beaches.

As result of a high level of nutrients in the waters in and around Sanibel this season, island beaches are experiencing large deposits of algae on sections of beaches on a daily basis. Some of the key challenges in managing the algae include 1) the heavy weight of the water-logged material; 2) the migratory nature of the algae, washing ashore at different locations on a regular basis; 3) the expense of removal, and 4) the continual redeposit of red drift algae after removal, and 5) the consideration of removal from beaches in an environmentally sensitive manner.

In February, due to an unprecedented amount of red drift algae, the City of Sanibel authorized emergency hand raking of the beaches prior to the 2007 nesting season. In 15 days, over 6,600 bags of dried algae were removed from the public beach parks and private properties.

Top Priorities for Improving Sanibel Water Quality

The City has identified 4 specific priorities that can have a positive impact on Sanibel's water quality. Contact information for each of the officials who can make these priorities a reality is included.

ADD WATER QUALITY TREATMENT TO THE C-43 RESERVIOR UNDER CONSTRUCTION

The South Florida Water Management District (an entity of the State of Florida)

is working with the Army Corps of Engineers to build a reservoir, currently under construction near LaBelle, to store excess Lake Okeechobee water. As designed, **the reservoir will only store volumes of water but not treat the polluted water** in order to reduce the amount of damaging nutrients nitrogen and phosphorus and other pollutants released into the Caloosahatchee River waters surrounding Sanibel.

Extreme discharges of nutrients contribute substantially to the damaging algae blooms that Sanibel is experiencing. A Stormwater Treatment Area (STA) is essential for the C-43 reservoir project so that water quality improvements are made prior to any releases from the reservoir into the Caloosahatchee and the waters surrounding Sanibel. **Lands necessary for the STA adjacent to the C-43 Reservoir need to be acquired as soon as possible** to prevent conflicting land uses from blocking the project. Such action will also provide equity with those funding measures already initiated for similar storage reservoirs along the east coast of Florida that are, like C-43, part of the overall Comprehensive Everglades Restoration Project (CERP). All of the other reservoirs to be built throughout the State have a water quality component except for the Caloosahatchee reservoir.

Action Needed: The City of Sanibel's position is that sufficient acreage for the C-43 STA Treatment acreage needs to be purchased as soon as possible. The primary contacts to achieve this are Florida Governor Charles Crist charlie.crist@myflorida.com; Lieutenant Governor Jeff Kottkamp jeff.kottkamp@myflorida.com; ; Michael Sole, Florida Secretary of Environmental Protection michael.sole@dep.state.fl.us; Carol Wehle, Executive Director of The South Florida Water Management District cwehle@sfwmd.gov.

ACQUIRE LANDS TO STORE EXCESS WATER RELEASES

The mission of the Army Corps of Engineers Comprehensive Everglades Restoration Project (CERP) is to restore the Everglade's flow. As designed, the CERP has inadequate storage capacity to prevent excess releases of water towards Sanibel, due primarily to rapid land development along the Kissimmee River Basin.

An additional million acre feet of storage is needed to substantially reduce the likelihood of harmful "emergency" releases to the Caloosahatchee River.

New flow-ways through the Everglades Agricultural Areas and Water Conservation Areas (WCAs) south of the Lake and more storage throughout the watershed are needed.

Action Needed: One critical way to meet the need is to provide more storage north of Lake Okeechobee. Florida Governor Crist charlie.crist@myflorida.com; Carol Wehle, Executive Director of the South Florida Water Management District cwehle@sfwmd.gov; and Colonel Paul Grosskruger paul.l.grosskruger@saj02.usace.army.mil, of the Army Corps of Engineers.

REMOVE THE EXCESS NUTRIENTS, PARTICULARLY NITROGEN, FROM THE WATERS

In addition to the massive releases of nutrient-laden freshwater from Lake Okeechobee, excess nutrients, particularly nitrogen, are entering our local waters through a variety of sources including septic system leaching and runoff, agricultural runoff, treated wastewater plant discharges and fertilizer runoff. Increasingly, degraded water quality and nutrient loading appear to be linked to current coastal issues including, but not limited to, red drift algae blooms.

Action needed: Contact Florida Governor Crist, charlie.crist@myflorida.com; Lieutenant Governor Kottkamp jeff.kottkamp@myflorida.com; as well as our Florida legislators, State Senator Burt Saunders saunders.burt.web@flsenate.gov; and State Representative Trudi Williams trudi.williams@myfloridahouse.gov, and strongly urge them to accelerate the establishment of Total Maximum Daily Loads (TMDLs) for Lake Okeechobee, the Caloosahatchee River and estuary, and Charlotte Harbor and enact and implement stricter regulatory standards with respect to septic system leaching and runoff, agricultural runoff, sewer plant treated water discharges and fertilizer.

PRESS THE U.S. SENATE TO FULLY FUND THE "MOD-WATERS" PROJECT

The "Mod Waters" project is currently stalled in Congress. This project's purpose is to provide sufficient water to Everglades National Park. The Water Resources Development Act (WRDA), which authorized the Comprehensive Everglades Restoration Plan (CERP), provides that Mod Waters must be completed before several CERP projects that restore water flows to the Everglades can move forward.

The failure to fund this project constitutes a serious threat to the future of the Everglades and the ability to restore historic flows to the south, without which excessive water releases will continue to be made west to the Caloosahatchee River and sent towards Sanibel.

Action Needed: Our State Leadership, Governor Charlie Crist charlie.crist@myflorida.com, and Lieutenant Governor Jeff Kottkamp jeff.kottkamp@myflorida should strongly advocate our Federal Officials to pass this legislation. Particularly Sanibel residents, property owners and visitors should e-mail Congressional members (Representatives http://www.house.gov/ and Senators http://www.senate.gov/) from areas other than Sanibel, to educate the Legislators on the importance of the "Mod-Waters" Project and why it is critical to pass this federal legislation.

Strategies for reducing nutrient run-off from sanibel

SANITARY SEWER SYSTEM

The citizens of Sanibel have invested over $64 million dollars into developing a centralized sanitary sewer collection and treatment facility. The treatment facility has been upgraded and meets all standards. We are currently completing the final stages of installing the collection system.

The City of Sanibel is also investigating the release of nitrogen and phosphorous from its own Wastewater Treatment Facility. Though not required by the Department of Environmental Protection, the City is evaluating various filter mediums to identify the best technology available to reduce nitrogen and phosphorous releases from our Wastewater plant to the lowest possible level. We have established the goal of lowering nitrogen levels below 3 parts per million (DEP permit allows up to 12 ppm.) The City's goal for phosphorous is to achieve levels below .5 ppm.

CITY APPROVES ENVIRONMENTALLY FRIENDLY REGULATIONS FOR FERTILIZER USE ON ISLAND

On March 6th, Sanibel City Council approved a new City Ordinance regulating the use of fertilizers containing nitrogen and/or phosphorus within the City. This is not a ban on fertilizers, but will provide specific management guidelines for fertilization to minimize potential negative environmental impacts on waters in and around Sanibel Island.

New Regulations Geared to Protect Water Quality

The red drift algae washing ashore on Sanibel beaches is fed by increased nutrients in our waters. Fertilizer runoff is a clear source of nutrients that can be controlled. By changing to more environmentally friendly fertilizer use, we can all help to improve the water quality that represents the Sanibel we are working to preserve and protect.

Specific soil tests conducted at several locations on Sanibel indicate ample levels of naturally occurring phosphorus in the soil. Nitrogen from slow release sources is more likely to be used by plants and less likely to wash away in stormwater runoff. Thus minimal phosphorous is needed and Slow Release Nitrogen deemed more effective in environmentally friendly fertilization practices.

Ordinance Specifics

The following applies to fertilizer application to turf and/or landscape plants:

- Total Phosphorous content in fertilizer is limited to 2% or less.
- Total Nitrogen content in fertilizer is limited to 20% or less and at least 70% of the Total Nitrogen must be Slow Release Nitrogen
- An application rate of up to one pound of nitrogen per 1000 square feet per application is allowed.
- Up to 4 pounds of nitrogen per one thousand square feet can be applied to any turf/landscape area in any calendar year.
- Fertilizer can be applied up to six times during any one calendar year to a single area.
- Fertilizer will be applied only to turf/landscaping, not impervious surfaces (i.e., driveways, roads, other hard surfaces).
- A fertilizer-free buffer zone is required within 25' of any pond, stream, water course, lake or canal, or wetland.
- When using a broadcast (rotary) spreader, a spreader deflector shield is required.
- During the "rainy season" (July 1 through September 30), products containing only micronutrients, such as magnesium and iron will be allowed. Fertilizers containing any level of nitrogen or phosphorous are not to be applied during those months.

Notice to Retail Consumers

Retail businesses are required to post a City-developed notice near the Fertilizer notifying customers of the new limits on use. The City is developing a Surface and Groundwater Protection Brochure for retail businesses to distribute to help educate customers about the new requirements.

This ordinance will be implemented over the next 180 days in order to allow time to:

1) Establish a "Fertilizer Ordinance Only" ½ hour course to be given to current Vegetation Competency Certificate Holders wishing to obtain the Commercial Fertilizer Applicator endorsement.

2) Develop and produce public information tools.

3) For Commercial Fertilizer Applicators, Institutional Applicators and other users to become familiar with the provisions of the Ordinance and prepare for compliance.

4) Provide retailers sufficient time to order products that comply with the ordinance.

New Requirements for Commercial and Institutional Applicators

- Requires Commercial and Institutional Applicators to first obtain a Vegetation Certificate of Competency with a Commercial Fertilizer endorsement through the City. Those who already hold a Vegetation Certificate will soon be required to take a "Fertilizer Ordinance Only" course (~ ½ hour) through the City. The City will send out a mailing to notify citizens and businesses as soon as this course is available.

Once a Commercial Fertilizer endorsement is acquired, Commercial/Institutional applicators must:

- Maintain nitrogen records and appropriate soil test results.
- Permit City to obtain a fertilizer sample to analyze nitrogen/phosphorus content.
- Provide the City-developed Surface and Groundwater Protection brochure to customers at the time of their first fertilizer treatment after October 1 each year.
- Remain on-site at all times when fertilizers are being applied.

Exemptions

- Newly established turf and/or landscape plants for first 60 days after planting.
- Damaged turf and/or landscape plants for 60 days, only to damaged area.
- Areas where soil tests confirm that phosphorous levels are below 10 parts per million.
- Vegetable gardens, so long as the gardens are not within 25' of a water body or wetland.
- Yard waste compost, mulches, or other similar materials that are mainly organic in nature and are applied to improve the physical condition of the soil.
- Reclaimed water used for irrigation, provided that reclaimed water is not used within 25' of a water body or wetland.
- Golf Courses shall follow the Florida Department of Environmental Protection document "Best Management Practices for the Enhancement of Environmental Quality on Florida Golf Courses" (January 2007) as updated.