Town of Fort Myers Beach
Agenda Item Summary Blue Sheet Number: **2014-001**

1. Requested Motion: **Meeting Date: January 6, 2014**

Approve the letter of support for the National Science Foundation Grant

Why the action is necessary:

Writing a letter of support for a grant requires Council approval

What the action accomplishes:

Endorses and supports the Southwest Florida Barrier Islands' Sustainability grant application which will benefit the Town by helping identify the vulnerability of island natural resources and infrastructure to impacts from storms and sea level rise to help plan future disaster mitigation and management. This will also allow Environmental Sciences staff to collaborate on data sharing and outreach/education efforts.

2. Agenda:	3. Requirement/Purpose:	4. Submitter of Information:
__ Consent	Resolution	_ Council
X Administrative	_ Ordinance	X Town Staff
	X Other	_ Town Attorney

5. Background:

Natural and social scientists, educators, and information professionals from the University of South Florida, Florida Gulf Coast University, and the Museum of Science and Industry are collaborating on a 5-year multi-disciplinary proposal that will investigate the sustainability and vulnerability of Southwest Florida's barrier islands in response to concurrent and future states of sea-level position and increased storminess, and increasing human impacts. The islands studied span the area from Anlcote (Pinellas County) to Marco Island (Collier County). Lee County, Collier County, Naples, and Sanibel are supporting these efforts as well. These efforts will leverage the work of the Coastal Management Plan and expand the knowledge gained from the Plan to better understand coastal processes that affect the island under potential impacts from sea level rise and storm impacts.

Attachments- #1-Southwest Florida Barrier Islands' Sustainability grant summary and request for support
#2- Draft letter of support

6. Alternative Action:

Do not support the grant application.

7. Management Recommendations:

Authorize the Mayor to sign the letter of support.

8. Recommended Approval:

Town Manager	Town Attorney	Finance Director	Public Works Director	Community Development Director	Parks & Recreation Director	Town Clerk

9. Council Action:

_ Approved _ Denied _Deferred _Other

Southwest Florida Barrier Islands' Sustainability

A National Science Foundation-proposed Project to Benefit the Coastal Resources and Peoples of Southwest Florida
A collaborative effort among professionals from University of South Florida Tampa, Florida Gulf Coast University, and the Museum of Science & Industry (Tampa)

Natural and social scientists, educators, and information professionals from our three organizations (University of South Florida, Tampa [USF]; Florida Gulf Coast University [FGCU]; and the Museum of Science and Industry [MOSI]) are collaborating on a 5-year multi-disciplinary proposal that will investigate the sustainability and vulnerability of Southwest Florida's barrier islands in response to concurrent and future states of sea-level position and increased storminess, and increasing human impacts. This proposal will be submitted to the National Science Foundation's Coastal SEES (Science, Engineering and Education in Sustainability) Program for its next round of competition on January 21, 2014. The spatial scope of the work will include 27 of our coast's major barrier islands from Marco Island in the south to Anclote Key in the north; these islands represent a continuum of development states, from pristine and undeveloped, to highly populated and constructed. The research effort will further our understanding of the physical processes associated with present sea-level, the rate of sea-level rise, and the intensity and frequency of tropical and winter storms, and then predict their effects upon the low-lying barrier island and inlet geomorphology; these results will be revealed through an interpretation of longer-term coastal geomorphologic history (using paleoenvironmental proxies and dateable materials from sediment cores) and through quantification of current environmental conditions. More importantly for the future of Southwest Florida, the potential effects of these processes will be determined: (1) upon barrier island and inlet response, through morphodynamic modeling; (2) upon residential, business, and other user communities on these islands; (3) upon the islands' built environments and infrastructures; and (4) upon the barrier island ecosystems that occur in natural and more-developed regions. Our findings will provide coastal resources managers with critical and interdisciplinary information for future planning and disaster management and mitigation. In addition, we are proposing a significant effort, in collaboration with MOSI, to inform the public of the risks associated with climate change on barrier island sustainability.

Success of this endeavor depends critically on the effective transfer of information to those throughout Southwest Florida with decision-making and managerial authority, as well as to the public. It is for this reason that we are reaching out to various agencies throughout our region for partners and collaborators. We ask for your support through the provision of a letter of endorsement. If interested, that letter should state the worthiness of this effort for a better understanding of the sustainability of the low-lying and densely populated Southwest Florida barrier islands, and your willingness to collaborate with us on, e.g., data and knowledge sharing, outreach and education efforts, and to help in the dissemination of the work's products.

If you are interested in more information about our proposed research, please feel free to contact Mike Savarese (msavares@fgcu.edu, 239-590-7165) or Ping Wang (pwang@usf.edu, 813-974-9170). Please email a digital version of your letter to either Savarese or Wang.

Thank you in advance for your support and we look forward to having the opportunity to work with you on this challenging project.

Barrier island vulnerability

Savarese, Dr. Michael <msavares@fgcu.edu>

Thu 12/12/2013 12:14 PM

To:Keith Laakkonen <kalaakko@eagle.fgcu.edu>;

Cc:Savarese, Dr. Michael <msavares@fgcu.edu>;

Importance: High

2 attachments

Broader impacts Coastal SEES white paper final.docx; list_of_barrier_islands.docx;

Dear Keith,

Florida Gulf Coast University, in collaboration with USF Tampa and the Museum of Science and Industry are proposing a barrier island vulnerability study to the National Science Foundation. That proposal will be submitted on January 21, 2014. The products should be of interest to your organization and help Southwest Florida manage its coastal resources in light of future climate and sea-level change. We're hoping you might provide a letter of support for this effort. The two attached files describe the proposed work and its value to Southwest Florida, and list the barrier islands included in the investigation.

Please let me know if you are willing and able to provide such a letter. Having a digital PDF sent via email to this address would be simplest. Please address the letter to me; a complete mailing address sits below.

Assuming the best and our proposal is successful, we will arrange a forum to brief agencies and to determine the best ways to be fully engaged.

Many thanks for your consideration and time.

Sincerely,

Michael Savarese

Michael Savarese

Professor of Marine Science, Coastal Watershed Institute
Department of Marine & Ecological Sciences
College of Arts & Sciences

Florida Gulf Coast University

10501 FGCU Blvd South
Ft. Myers, FL 33965-6565

239-590-7165
msavares@fgcu.edu

"He who joyfully marches in rank and file has already earned my contempt. He has been given a large brain by mistake, since for him the spinal cord would suffice." -Albert Einstein.

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From North to South

1) Anclote Key (state park. boat access only)
2) Three Rooker Island (not developed, boat access only)
3) Honeymoon Island (state park)
4) Caladesi Island (state park) and Clearwater Beach Island (very heavily developed) (connected)
5) Sand Key (heavily developed, several municipalities)
6) Treasure Island (heavily developed)
7) Long Key (or St. Pete Beach. heavily developed)
8) Shell Key (not developed, boat access only)
9) Mullet Key (County park)
10) Egmont Key (state park, not quite a barrier island, did not count this last time, boat access only)
11) Anna Maria Island (heavily developed)
12) Longboat Key (heavily developed)
13) Lido Key (heavily developed)
14) Siesta Key (heavily developed, several municipalities)
15) Venice Beach (heavily developed, several municipalities)
16) Don Pedro Island (heavily developed, several municipalities)
17) Gasparilla Island(heavily developed, several municipalities)
18) Cayo Costa (state park, boat access only)
19) North Captiva Island (partially developed: part of the island is developed, boat access only)
20) Captiva Island (medium developed: the entire island is developed but not too dense)
21) Sanibel Island (heavily developed)
22) Estero Island (Ft. Myers Beach: heavily developed)
23) Lovers Key (state park)
24) Big Hickory Island (not developed)
25) Little Hickory Island (heavily developed most of the island)
26) Naples Beach (heavily developed)
27) Keewaydin Island (not developed, boat access only)
28) Marco Island (heavily developed)

January 6th, 2014

Michael Savarese
Professor of Marine Science, Coastal Watershed Institute
Department of Marine & Ecological Sciences
College of Arts & Sciences
Florida Gulf Coast University
10501 FGCU Blvd South
Ft. Myers, FL 33965-6565

Dr. Savarese,

The Town of Fort Myers Beach supports your efforts to obtain a grant from the National Science Foundation for the Southwest Florida Barrier Islands' Sustainability study. The Town recognizes the potential impact of sea level rise and storms to our island and desires a better understanding of the level of these impacts and what actions we can undertake to minimize and mitigate these impacts. As you are aware, the entire Town of Fort Myers Beach lies within a Special Flood Hazard Area and we are subject to surge and wave action from storms which can greatly impact property values and the quality of life on the island. The Town has developed a comprehensive floodplain management program which lowers flood risk for residents and business owners. A better understanding of impacts based upon multiple future scenarios will allow Staff to better implement community planning and coastal management actions to increase community and natural resource resilience.

Our Town coastal engineering consultant is also nearing completion of a Coastal Management Plan which will perform engineering analysis and numerical modeling to quantify the coastal processes and test hypotheses on the causes of morphology and erosion. The Plan will also include the evaluation and determination of the performance and impacts of man-made structures on the coastal processes and morphology of the island's Gulf shoreline. The Southwest Florida Barrier Islands' Sustainability study will leverage this work and extend our understanding of the position of Estero Island and how it compares with other barrier islands which will allow us to plan for future impacts in a local and regional context.

Please accept this letter of support and please contact our Environmental Sciences Coordinator, Keith Laakkonen to coordinate partnership efforts on behalf of the Town.

Sincerely,

Alan Mandel, Mayor
Town of Fort Myers Beach

CC: Town Council