

Collier County Government



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January 12, 2009

FOR IMMEDIATE RELEASE

NOTICE OF PUBLIC MEETING WIGGINS PASS MODELING EVALUATION WORK GROUP COLLIER COUNTY, FLORIDA

**FRIDAY, FEBRUARY 20, 2009
1:00 P.M.**

A public meeting will be held to conduct Wiggins Pass Modeling Committee Meeting and Review Public Comment on *Friday, February 20*, at *1:00 p.m.* in the Coastal Zone Management conference room, located at 3300 Santa Barbara Boulevard, Naples.

Two or more members of the Coastal Advisory Committee may be present and may participate at the meeting. The subject matter of this meeting may be a future item for discussion and action at a Coastal Advisory Committee meeting.

Two or more members of the Pelican Bay Services Division Board may be present and may participate at the meeting. The subject matter of this meeting may be a future item for discussion and action at a Pelican Bay Services Division Board meeting.

Two or more members of the Tourist Development Council may be present and may participate at the meeting. The subject matter of this meeting may be a future item for discussion and action at a Tourist Development Council meeting.

This meeting is open to the public.

If you are a person with a disability who needs any accommodation in order to participate in this proceeding, you are entitled, at no cost to you, to the provision of certain assistance.

Please contact the Collier County Facilities Management Department located at 3301 E. Tamiami Trail, Naples, FL 34112, (239) 252-8380; assisted listening devices for the hearing impaired are available in the Board of County Commissioners Office.

For more information, call Gail Hambright in the Coastal Zone Management Office at 252-2966.

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MEETING AGENDA

MODELING EVALUATION WORK GROUP

FRIDAY, FEBRUARY 20, 2009 – 1:00 P.M.

COASTAL ZONE MANAGEMENT DEPARTMENT (3300 Santa Barbara Boulevard,
Naples)

- I. Call to Order
- II. Pledge of Allegiance
- III. Roll Call
- IV. Changes and Approval of Agenda
- V. Approval of Minutes
 1. October 22, 2008
- VI. Review of Modeling Progress and Recommendation by CP&E
- VII. Steering Committee Comments and Recommendations
- VIII. Public Comments *
- IX. Announcements
- X. Committee Member Discussion
- XI. Next Meeting Date/Location
To be determined
- XII. Adjournment

*** Public speakers must do the following for any items presented to the Board: Each document must display the presenter's name and title of document. Provide a total of 13 copies of each handout, to be distributed as follows: 9 Board Members; 1 Minute Taker; 1 County Attorney; 2 CZM Staff members.**

All interested parties are invited to attend, and to register to speak and to submit their objections, if any, in writing, to the board prior to the meeting if applicable.

For more information, please contact Gail D. Hambright at (239) 252-2966.

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Public comments will be limited to 3 minutes unless the Chairman grants permission for additional time.

Collier County Ordinance No. 99-22 requires that all lobbyists shall, before engaging in any lobbying activities (including, but not limited to, addressing the Board of County Commissioners) before the Board of County Commissioners and its advisory boards, register with the Clerk to the Board at the Board Minutes and Records Department.

October 22, 2008

**MINUTES OF THE MEETING OF THE WIGGINS PASS
MODELING EVALUATION WORK GROUP**

Naples, Florida, October 22, 2008

LET IT BE REMEMBERED, that the Wiggins Pass Modeling Evaluation Work Group in and for the County of Collier having conducted business herein, met on this date at 9:00 A.M. at Collier County Government Center, Health Department Building "H", 2nd Floor, Rm. 216. Naples, Florida with the following members present:

Group Leader: Heidi Kulpa
John Findley
Doug Finlay
Jon Staiger
Nicole Ryan
Mark Latch (Excused)
Donna Caron (Excused)
Paul Sullivan
Bryan Fluech (Excused)
Thomas Crowe

ALSO PRESENT: Gary McAlpin, Coastal Zone Management Director

- **Call To Order**
Group Leader Heidi Kulpa called the meeting to order at 9:00 a.m.
- **Roll Call**
Roll call was taken and a quorum was established.
Jeff Riley, Florida Park Service and Sally Cole Braem, Environmental Spec., Florida Park Service were also in attendance along with Consultants Stephen Keehn, PE and Lindino Benedet, Oceanographer of Coastal Planning and Engineering, Inc.
- **Sunshine Law Notification**
Gary McAlpin, Director, Coastal Zone Management stated the Discussion Group is subject to the Sunshine Law and two or more members of various County Boards may be present and the subject matter may be discussed at future Board meetings.
- **Approval of Minutes from 8/12/08 meeting**
Mr. Finlay moved to approve the minutes of the August 12, 2008 meeting. Second by Mr. Staiger. Carried unanimously 7-0.
- **Review significant insights to date**
 - **Do Nothing is not an option because of non-compliance to IMP**
 - **Sand transport in this area is hampered by the effects of Sanibel and appears to flow south to north**
 - **Dead zone for sand transport in the R15 area**

Gary McAlpin reviewed the previous findings referenced above.

Lindino Benedet of Coastal Planning and Engineering re-iterated the area in the immediate vicinity of the Pass is primarily affected by net sand transport from a South to North wave direction.

Group Leader Heidi Kulpa reviewed the Discussion Groups area of focus for the alternatives proposed:

- 1) *Analyze 20-year storm data (wave and currents patterns, etc.) for the model*
- 2) *Conduct a 4-5 year simulation for the morphology of the Pass based on each alternative*
- 3) *Analyze the concept of repairing Barefoot Beach to its natural condition and study its morphology over the 4-5 year simulation period of each alternative*
- 4) *Analyze impacts on Delnor-Wiggins State Park for each alternative*
- 5) *Obtain input regarding impacts on Snook habitats for each alternative*
- 6) *Analyze impact on the various environmental communities for each alternative*
- 7) *Incorporate any necessary geological considerations into the evaluation*

Stephen Keehn of Coastal Planning and Engineering provided an overview of the preliminary Environmental Resource Assessments regarding Sea Grasses and Snook Habitat.

He noted the following:

- ❑ Information was obtained from the National Marine Fisheries Service.
- ❑ Snook's habitat includes mangrove areas and congregates in inlets to spawn.
- ❑ Snook is listed as a species of concern with no specific conservation regulations for dredging activities.
- ❑ No particular conservation areas or critical habitats have been identified in the Wiggins Pass area.
- ❑ No habitats of concern (including Seagrasses) were identified in the area of proposed work.
- ❑ The Seagrass information was based on physical reconnaissance via divers.
- ❑ There are some mangrove "areas of concern" on the northern side of the Pass.
- ❑ There is no proposal to "bury this area" (mangrove areas).
- ❑ The initial reconnaissance work is preliminary and will be finalized under a subsequent contract.

He further indicated the following:

- ❑ Preliminary geological data has been collected and reviewed regarding the composition of the sea bottom in the area.
- ❑ Further investigation is necessary to determine any possible removal of limestone, etc.

Gary McAlpin summarized and Stephen Keehn agreed, the reconnaissance indicates none of the alternatives under consideration would be eliminated due to environmental or geo-technical reasons or concerns.

When finalized, this information will be incorporated into a report and posted on the Coastal Zone Management website.

- **Presentation of The three Modeling Alternatives**
 - **Model the effects of straightening the interior and exterior channels**
 - **Model the effects of straightening the interior channel but not the exterior channel**
 - **Model the effects of not straightening the interior channel but straightening the exterior channel**

A copy of this presentation (Wiggins Pass Delft3D Numerical Modeling and Calibration & Channel Enhancement Alternatives dated October 22, 2008) conducted by Lindino Benedet and Stephen Keehn will be available on the Collier County Coastal Advisory Committee Website at <http://www.colliergov.net/Index.aspx?page=2390>.

Lindino Benedet reviewed the data utilized in running the morphology models for the alternatives, which include wave conditions and current velocities, data from previous studies etc. This data is necessary to ensure the model depicts the morphology as accurately as possible.

Based on input from previous meetings and subsequent analysis their work has now been refined to study the following 4 alternatives:

4 Alternatives (for long term stabilization of Wiggins Pass)

- 1) Currently Permitted channel - (250 ft. wide, 13 ft. deep.)
- 2) New Straight Channel with Hydraulic Enhancements – Straight channel (200 ft. wide, 11 ft. deep), flood shoal cut, sand dikes to direct the flow.
- 3) Permitted Channel with Hydraulic Enhancements – Straight channel as permitted (250 ft wide, 13 ft deep), flood shoal cut, sand dikes to direct the flow.
- 4) New Realigned Channel – Realigned Channel following natural ebb jet, 200 ft wide, 11 ft. deep.

The 4 alternatives were modeled for the morphology of the Pass on 1 year, 2 year and 4 year time frames, as well as a significant Hurricane Event.

Lindino Benedet and Stephen Keehn provided a detailed technical overview of individual morphology models for the 4 alternatives proposed.

It was noted Stephen Keehn has completed a concept design which combines alternatives #2 and 3.

Group Leader, Heidi Kulpa, reviewed the purpose of the Mission given to the Group:

1. *Provide a safe channel for boating.*
2. *Address the erosion at Barefoot Beach.*
3. *Lengthen the dredge cycle and accomplish it with the least effect on the environment.*
4. *The solution needs to be economically effective.*

Speaker

Marcia Cravens, Mangrove Action Group, requested clarification on the data used to develop the models and if information such as tidal prisms, velocities of currents, etc. were taken into account.

Stephen Keehn and Lindino Benedet noted the model is calibrated utilizing numerous factors (sediment transport, wave velocities, etc.). It is a “state of the art” program for modeling the effects (including changing tidal prisms, current velocities, etc) created on the Pass by each of the proposed alternatives.

He provided a summary of the Group’s Decision Matrix shown on pages 60-63 of the presentation.

Among other conclusions in the presentation, he noted the following:

- Of all the alternatives tested (16 total), alternatives 2 and 3 were the only ones which accomplish the goals of the Discussion Group.
- Alternative #2 provides slightly more stability to the Pass than alternative #3.
- Alternative #4, provides a more long-term navigable channel, but noted without installation of a permanent structure, a significant amount of erosion on the south end of Barefoot Beach would occur.
- Sedimentation rates in the model decrease with time as expected, after 2 years, quasi-equilibrium is reached and there is minimal additional sedimentation.
- Beach fill between markers R-13 and R-15 is recommended (creating minimal effects on the channel and a net positive effect on Barefoot Beach.)
- During extreme hurricane years, no matter what steps are taken, (other than installations of permanent structures) the channel gets filled in at a 4 year “normal rate.” An emergency response plan for the event should be incorporated into the final solution.

Speaker

Marcia Cravens asked if the modeling takes environmental considerations into account (as well as navigation factors.)

Lindino Benedet noted the model does not address environmental considerations; however the Group’s area of focus includes environmental concerns.

Gary McAlpin read the approved Mission Statement into the Record “*Examine the modeling study results and recommend environmentally and economically sound methods to maintain Wiggins Pass as a safe navigable waterway by minimizing shoreline erosion and achieving long term stabilization of Wiggins Pass through a collaborative process involving Wiggins Pass stakeholders input.*”

He suggested returning the South End of Barefoot Beach to its “original condition” be considered in the final solution and polled the Group for their recommendations on narrowing the focus on the individual alternatives.

Mr. Findley – *Alternative #'s 2 and 3 appear to be the most optimal identified. Favors alternative #2 at this point.*

Ms. Kulpa – *Focus on alternative #2.*

Mr. Finlay – *Prefers alternatives #2 or 3.*

Ms. Ryan – *Alternative #1 eliminated; need final Environmental Assessment and Report for remaining alternatives to make final decision.*

Mr. Staiger – *Focus on alternatives #'s 2 or 3, favors #2 as it may be more cost effective based on less width and depth cut of channels, etc. to achieve solution.*

Jeff Riley, Florida Park Service favors alternative #2.

Mr. Sullivan – *Need for final Environmental Assessment, favors #2 based on cost effectiveness.*

Mr. Crowe – Favors alternatives #2 and 3, need final economic considerations for both alternatives.

It was noted the channel will require dredging in January as scheduled. This will be accomplished under the existing permit, or if possible a permit modification to place the dredged sand in a more strategic location.

Lindino Benedet noted an alternative solution involving the combination of #'s 2 and 3 will be analyzed in its relations to the goals set forth by the Group.

Lindino Benedet reviewed the future tasks:

- Refine the best alternative and simulate it for 1 year, 2 year and 4 year with beach fill placement. The final alternative will be a combination of #2 and 3.
- Write final modeling report and provide recommendations to the detailed design phase and new permit application.
- Refine Decision Matrix for scenarios of comparison.

- **Presentation of Results of the environmental resource assessment of The Wiggins Pass Flood shoal areas.**

Previously discussed.

- **Discussion of consideration for Snook habitat**

Previously discussed.

- **Public Comments**

Speakers

Marcia Cravens asked if there are any examples where a modeling solution has been constructed.

Lindino Benedet referenced Rich Inlet in North Carolina, North Topsail Beach, NC and Bogue Inlet, NC as examples.

Joe Moreland recognized the work being completed by the Discussion Group.

Doug Fee thanked the Consultants and the County. He noted the removal of rock that may be required for a particular alternative may have an impact on sand transports and erosion at Barefoot Beach.

Stephen Keehn noted the geologic considerations need to be finalized. Alternatives #2 and 3 seek to minimize the amount of rock removed.

Gary McAlpin stated they are unsure how much rock, if any, may need to be removed. He recommended the Consultants proceed on their work to make the determinations and provide the Final Reports necessary to make a decision. He noted the Final Reports are intended to be available 30 days prior to an applicable Group meeting.

October 22, 2008

The Group determined a combination solution utilizing elements of alternatives #2 and 3 should be presented for the Groups consideration.

Gary McAlpin requested the Consultants analyze the impact of restoring Barefoot Beach to its "original condition" as part of the final solution.

- **Next Meeting date**

It was noted the next meeting will tentatively be held in January, 2009.

Gary McAlpin reported Group Leader, Heidi Kulpa is re-locating out of the area and is resigning from the Group.

Mr. Staiger nominated John Findley for "Group Leader." Being no other nominations, Mr. Findley is Group Leader.

The Group recognized the efforts of Heidi Kulpa.

There being no further business for the good of the County, the meeting was adjourned by order of the chair at 11:59 A.M.

Wiggins Pass Modeling Evaluation Work Group

Heidi Kulpa, Group Leader

These minutes approved by the Work Group on _____
as presented _____ or as amended _____.