

Broward County Climate Change Task Force

Scientific and Technical Subcommittee

February 24, 2009

Meeting Minutes

Members Present

Patrick Gleason, Chair
Nancy Craig
Michael Zygnerski
Rohit Goswami
Jon Brewer
Hector Samario
Barry Heimlich
Robert Renken
Elizabeth Quinn
Colin Hughes
Stewart Magenheimer

Participants

Ruth E. Burney, Minutes
Nancy Gassman, Subcommittee Coordinator

1. Welcome by Pat Gleason
2. Roll Call
3. Approval of February 3, 2009 meeting.
 - a. Motion by Nancy Craig, second by Rohit Goswami. Motion passed.
4. Presentation of sea level rise matrix by Nancy Gassman and discussion.
 - a. Presentation outline:
 - i. Existing Recommendations
 - ii. Current Rise Rates
 - iii. Future Projections
 - iv. Modeling Issues
 - v. Uncertainty
 - b. Nancy Gassman noted that the amount of published analysis on sea level rise is limited, but the amount of discussion is extensive. She also referenced the handouts from the Intergovernmental Panel on Climate Change, Miami-Dade CCATF's Statement on Sea Level Rise in the Coming Century, and Robert Renken's email commentary.

- c. Robert Renken noted that the current rise rate on the Gulf Coast is influenced by subsidence, and he cautioned that relative sea level should be considered when assessing the data. Barry Heimlich and Rohit Goswami discussed the shortcomings of empirical relationships based on averages and trends which might be missing strong statistical correlation. Barry Heimlich pointed out the assumptions made in report by Dr. Wanless. He went on to state that the report was good for focusing attention on sea level rise, but that more realistic findings and conclusions should be made.
 - d. Subcommittee conclusions from this presentation were:
 - i. Sea level rise is occurring.
 - ii. The rate of sea level rise is accelerating.
 - iii. The limits of sea level rise are uncertain.
5. Discussion of work products and timelines.
- a. Colin Hughes mentioned that 100 years is not a typical scale for planning and that 20 or 50 years is more realistic, and typically more accurate, as the useful life of buildings and roads is not 100 years. Pat Gleason responded by asking what the Subcommittee's recommendations will be used for? Most likely the Task Force will use them to develop policies. Hector Samario later stated that political and financial aspects of climate change must be considered when making the Subcommittee's final recommendations to keep them plausible. Nancy Gassman will develop a list of planning horizons for reference during Subcommittee meetings.
 - b. Nancy Gassman noted that the Task Force will be interested in the results of the LIDAR data and the recommended scenarios to be applied (possibly including hydraulic modeling). Mike Zygnerski mentioned that the Broward County salt water intrusion model includes four trials:
 - i. no sea level rise
 - ii. 24 cm sea level rise (historic rate)
 - iii. 48 cm sea level rise (2001 IPCC mid range prediction)
 - iv. 88 cm sea level rise (2001 IPCC upper range prediction)The model does not include the effects of ocean outfall regulatory changes and the subsequent availability of reuse water for aquifer recharge in inland canals. It only included the changes in head in coastal canals to the nearest control structure. Barry Heimlich interjected that based on his understanding of hydrogeology, that an increase in head from the ocean will not decrease the flow of fresh water from the Everglades. He further stated that the system will create a new equilibrium potentially increasing the head from the Everglades to balance the increasing marine head, and that the rising water table may pose additional

flooding issues. Finally he pointed out the discrepancy between land surveys based on NVGD 29 taken at mean low tide in 1929 to graphics showing inundation based on elevations below current mean high tide levels.

- c. Discussion was held on ways of researching other leading scientific organization's views on sea level rise and/or climate change that were not presented by Nancy Gassman such as: USGS, NOAA, NASA, and the National Academy of Sciences (NAS). Robert Renken mentioned that USGS is in the process of issuing a report, but that he needed to look into whether or not it is ready for distribution. Barry Heimlich will distribute the NAS report, and circulate an analysis of the Miami-Dade CCATF report.
 - d. The Subcommittee is anticipated to present its findings on sea level rise at the May Task Force meeting. After sea level rise has been addressed, suggestions for the next topics of focus included hurricane patterns, rainfall patterns, and/or climate change in general.
 - e. Suggestions for future presenters to the Task Force and/or to the Subcommittee included:
 - i. Nancy Gassman to give condensed, general version of sealevel presentation.
 - ii. USGS to present official position on climate change; Eric Swain to present Everglades model.
 - iii. Hurricane specialists to publicly debate effects of climate change on windstorms through a regional forum.
 - iv. Brian Soden from UM marine school.
 - v. Charles Sinkl from FAU geology department.
 - vi. Fred Bloetcher from FAU civil engineering department.
 - vii. Mike Zygnerski to present Broward County model.
 - viii. John Pipoly to present regional position.
6. Next scheduled meeting is on March 24, 2009 at 10am. Location TBD.
7. Adjournment