

JOINT WATER ADVISORY BOARD/TECHNICAL ADVISORY COMMITTEE
MEETING
November 19, 2021
Summary Minutes

A joint meeting of the Broward County Water Advisory Board, Technical Advisory Committee, and Water Resources Task Force was held virtually on WebEx on November 19, 2021, at 10:00 a.m.

(The WAB/TAC meeting minutes were summarized by Adrienne Aiken. A verbatim transcript and copies of the presentations are filed with the supplemental papers of the meeting.)

- I. **Call to Order**
- II. **Roll Call – Water Advisory Board (WAB)**

Roll call was taken by the Real Time Reporter. A quorum was present, and the record of attendance follows:

WAB MEMBERS PRESENT:

Commissioner Steve Geller, Broward County Board of County Commissioners, Chair
Vice Mayor Susan Starkey, Town of Davie
Commissioner Anthony Caggiano, City of Margate
Ron Bergeron, Governing Board, South Florida Water Management District
Pete Kwiatkowski, Alternate
Jack McClusky, Alternate
Gene Goldman
Kevin Hart, TAC Chair
Mark Peterson, Greater Fort Lauderdale Alliance
Councilmember Jim Allbritton, Alternate, Town of Davie
Vice Mayor Aisha Gordon, Alternate, City of Pembroke Pines
Commissioner Nancy Metayer, Alternate, City of Coral Springs

WAB MEMBERS ABSENT:

Commissioner Sandra Welch, City of Coconut Creek, Vice Chair
Commissioner Andrea McGee, Alternate, City of Pompano Beach
Commissioner Ben Sorensen, City of Fort Lauderdale, Alternate
Commissioner Doug Bell, CBWCD Board of Commissioners
Commissioner Kevin Biederman, City of Hollywood
Commissioner Mary Molina-Macfie, City of Weston
Commissioner Rhonda Eaton, City of Pompano Beach
Commissioner Tom Good, City of Pembroke Pines
Commissioner Tim Ryan, Broward County Board of County Commissioners
Mayor Greg Ross, South Florida Regional Planning Council
Vice Mayor Denise Grant, City of Tamarac
Mayor Michelle Gomez, Alternate, City of Tamarac

- III. **Roll Call Technical Advisory Committee**

TAC MEMBERS PRESENT

Albert Carbon

Randolph Brown, Vice Chair
Mike Bailey
Steve Urich
Talal Abi-Karam
Tim Welch
Heather Cunniff
Adolfo Gonzalez for Mike Crowley
Steve Holmes
Guillermo Regalado for Patrick Davis
Harold Aiken
Commissioner Doug Bell
Dr. Jennifer Jurado
Pete Kwiatkowski
Lisa Milenkovic
Jose Lopez
Isabel Botero for Rafael Frias
Stephanie Pearson
Brett Butler

TAC MEMBERS ABSENT:

Alan Garcia
Isabel Cosio Carballo
Leny Huaman
Mark Collins
Renuka Mohammed

IV. Public Comments

There were no public comments.

V. WAB Approval of Meeting Minutes from September 10th, 2021

For the Minutes of September 10, 2021, on Motion of Commissioner Welch, seconded by Commissioner Caggiano, and unanimously carried, the Board approved the Joint WAB/TAC Meeting Minutes from September 10, 2021.

VI. Updates and Announcements

Dr. Jurado announced that following the joint Water Advisory Board and Palm Beach Water Resources Task Force meeting there was a collective interest and benefit for both boards to meet annually. Dr. Jurado noted that since the meeting the Palm Beach Water Resources Task Force requested the Water Advisory Board to commence with scheduling. Dr. Jurado suggested a June timeframe for the meeting and recommended the meeting details be coordinated at the next WAB meeting.

Chair Geller announced that the meeting will have to end at 11:30 today as some members had to be at a noon function.

VII. Presentations

A. South Atlantic Coastal Study Update

Ashleigh Fountain, Project Manager; Gabriel Todaro, P.E., Coastal Engineer; and Kip Webber, E.I., Civil Engineer., United States Army Corps Of Engineers.

Chair Geller introduced Ashleigh Fountain, Gabiel Todaro, and Kip Webber and welcomed them to give their presentation. Ashleigh Fountain reintroduced herself and co-presenters and shared the intent to provide an update on the South Atlantic Coastal study as a continuation of earlier presentations made to the board by Eric Summa and Matt Schrader. Ashleigh introduced the study as a watershed planning study following the North Atlantic Coastal Comprehensive Study and as a product of Congress request to identify a long-term strategy which addresses storm damages resulting from sea level rise in high-risk areas.

Ashleigh Fountain conveyed that the study is in its final stages which will ultimately result in a watershed plan, and that a comprehensive risk assessment within the study area has been completed, along with a draft report of the findings and risk reduction actions. Ashleigh Fountain went on to further describe the scope of the study siting 18.4 million dollars for the study cost and a study area spanning the entire South Atlantic Division encompassing 65,000 miles of tidally influenced coastline from North Carolina to the Mississippi, including Puerto Rico and the USVI. Ashleigh Fountain described the online products and tools which examine coastal storm risk within the study area. She emphasized the collaborative nature of the study and encouraged board members to participate in stakeholder engagements and the public review process.

A timeline of August 2022 was provided for the completion of the main report and recommendations. Ms. Fountain highlighted the tiered analysis approach performed in the study with general assessments at larger scales and more detailed risk assessment at smaller scale. Ashleigh Fountain provided an at a glance look at the Focus Area Action Strategies (FAAS) presented in the Florida Appendix.

An overview of the regional findings from the study was provided and those most impactful to Broward County were emphasized. Regionally, a significant coastal storm risk exacerbated by sea level rise was reported, as well as significant risk in areas with dense infrastructure that has limited adaptive capacity. Ashleigh acknowledged the growing compact development in Broward County within tidally influenced areas exposed to king tide and stressed that critical risk management is a joint responsibility while recognizing Broward County's leadership on the issue statewide.

Ms. Fountain illustrated where the key products and shared tools from the study could be accessed and identified a few that were soon to be finalized. Ashleigh Fountain continued with the regional findings reporting that total avoidance of risk was impossible and that communities will need to adopt combinations of solutions including natural and nature-based solutions to address evolving coastal storm risk. The South Atlantic Coastal Study resulted in 202 recommendations which were categorized into near, mid-term and long-term recommendations. These were further categorized by implementation body, for example congress, multi-agency and USACE. Ashleigh Fountain highlighted the recommendations for Florida which accounted for 52 of the 202, and she pointed to where they could be found on the webpage. The recommendations were projected to be planned within the next five to 10 years. A few draft recommendations deemed pertinent to Broward County were

highlighted. These included: recommendation number 91 which proposed a study investigating vulnerable back bays in Broward, number 85 which proposed an extended period of federal participation and an ongoing construction project, and number 63 which advised a comprehensive C and SF study to enhance resiliency of all salinity structures.

Ashleigh Fountain then welcomed her co-presenter Gabriel Todaro who briefly introduced himself. Mr. Todaro highlighted the South Florida water control study as a South Florida Water Management District effort discussed in the FAAS which identifies control structures requiring modifications in the near future under different flooding conditions.

Mr. Todaro highlighted the South Florida water control study as a South Florida Water Management District effort discussed in the FAAS which identifies control structures that will require modifications in the near term under different flooding conditions. Approximately 7 structures were identified in Broward County. A HEC-RAS model was used to determine downstream water conditions for return periods of 2,5,10,25,50 and 100 years water levels based on statistical analysis of downstream gauges, while also adding sea level rise from 0.5 to 3 feet. Structures were analyzed for performance failure under these conditions and deemed a fail if the water level started to overtop the canal banks. Mr. Todaro presented 6 categories with declining vulnerability from category 1, and 5 of the 7 Broward County structures requiring modifications fell into categories 2 and 3 signaling failure under a 25-year storm surge event with minimal sea level change and emphasizing the need for improvement of these structures in the short term.

Approximately 7 need to be changed in Broward County. Mr. Todaro highlighted a feasibility analysis for a conceptual storm surge barrier project in Middle River, Broward County illustrating 2 proposed locations, and advised that pumps would likely be required to prevent flooding behind the structure where a large drainage basin is located. Mr. Todaro also pointed out that a new structure would add about 15 square miles of drainage and would therefore need to have the capacity to hold that extra water. Mr. Todaro advised that of the 2 proposed locations, the one further downstream may be a preferable site because of a lower chance of scouring, and the protections it could provide to a nearby evacuation route. Mr. Todaro presented the topography and suggested that flood walls may be necessary at the proposed locations to prevent failure/ flanking, and further downstream around Northeast 26th Street the elevation is low and high-water levels could contribute to flanking.

Mr. Todaro highlighted the study's Measure and Cost Library as a tool used for referencing regional cost estimates for various protection measures such as beach nourishment and floodwalls. The Coast library ranged from 69 million to 302 million dollars for the measures outlined and allows input of basic dimensions and outputs cost estimates facilitating planning.

Mr. Todaro went on to highlight the Tier 2 Economic Risk assessment as a tool which projects annual damages in an area. The current conditions annual damages were estimated at 78 million, and that rose to 250 million under a 3 ft sea level rise scenario. Mr. Todaro demonstrated how comparing the estimated cost of the measure from the Measure and Cost Library, to the projected annual damages from the Tier 2 Economic Risk assessment tool, can identify whether or not a project is feasible.

Chair Geller asked Mr. Todaro to explain the vast difference between the low and high estimates. Mr. Todaro explained that the tool adds a lot of contingency to estimated costs based on different scenarios, materials, dimensions, and wasn't sure whether or not real estate was factored in. A level of uncertainty was reiterated. Chair Geller advised that the presentation was running short on time. Ashleigh Fountain concluded by presenting a layout of the study's schedule and pictures from the King Tide event earlier that month. Ashleigh Fountain noted that they were addressing comments in the report and that it had another series of reviews to go through before the final report is submitted to Washington. The presenters contact information was provided and Ashleigh Fountain opened the floor to questions.

Chair Geller asked about Kip Webber being a part of the presentation. Ashleigh Fountain confirmed that he wasn't speaking for that presentation. Chair Geller thanked the presenters and asked for a realistic timeframe for a reef study to be completed probing if 15 to 20 years would be sufficient. Ms. Fountain advised that she would have to coordinate with project managers to answer that question. Chair Geller shared that he understood that 15 years was very optimistic while 20 years was more likely. Chair Geller continued to share that the County has between 18 and 22 salinity control barriers that need repair, estimating billions in repair costs and a low chance of getting all repairs funded. Chair Geller shared his concern that South Florida would be completely flooded in 15 to 20 years in heavy rainstorms considering the defective salinity control barriers, the gravity-fed drainage system which will not be able to drain due to sea level rise, and the large amounts of rainfall the subtropical area receives. Chair Geller fished for the presenters to contradict his gloomy forecast. Ashleigh Fountain responded that they did not have data to support or contradict his statement.

Chair Geller opened the floor to questions from the board members.

Dr. Jurado thanked the team for their presentation and asked if the extension or reauthorization of the segment 2 beach nourishment project was intentionally excluded from the recommendations. Ms. Fountain confirmed that it was not an intentional exclusion and suggested that edits could be made to the recommendation spreadsheet. Ms. Fountain shared that the public comment period had ended and they were in the final revision stage after which a final report would be sent to a contractor who would prepare it with editorial. Dr. Jurado committed to sending in the comments within a week.

In response to Dr. Jurado's question Mr. Webber added that the projects prioritized were those where federal participation was ending within the next 10 years, noting that should the expiration date be approaching, then Segment 2 will be added to that recommendation for extension. Dr. Jurado noted that both projects had a similar timeline which differed by 2 years at most, and she shared that the recommendations would be important to the process of pursuing both projects together. Dr. Jurado asked why additional structures, for example at Middle River were not included in the recommendations, inquiring whether the intension was for that to be addressed within the recommended back bay evaluation. Ms. Fountain confirmed that was the intension. Dr. Jurado mentioned the Water Management District's study referenced in the presentation and asked if any additional vulnerability measures were assessed apart from canal overtopping, particularly measures that incorporate the overall weakening of drainage capacity throughout the system that would cause flooding prior to canal overtopping. Dr. Jurado emphasized opportunities to explore more expansive risk and prioritize improvements that addresses that exposure. Ms.

Fountain reiterated that Dr. Jurado's comments would be considered. Talal Abi-Karam asked in light of the infrastructure bill signing how to leverage the study to direct federal dollars to South Florida. Ms. Fountain advised Mr. Abi-Karam to review the recommendations spreadsheet to find alignments with the funding pot. Chair Geller suggested that congressional delegation and Floridians in senate be considered as a resource for winning some of the funds. Mr. Webber noted that the infrastructure bill includes some allocation towards some smaller scale projects. Chair Geller reiterated the concern about rainfall impacts and reduced drainage resulting from sea level rise, and thanked the presenters again.

B. LOSOM UPDATE (30p 10d)

Dr. Rajendra Paudel, Senior Hydrologist, Everglades Foundation.

Dr. Paudel noted that on 11/16 the USACE gave the list of the final selected plan of the LOSOM, and he stated he would provide an overview of the planning process and how the plan benefits different regions of south Florida. Dr. Paudel began with an overview of the history of Lake Okeechobee hydrology and geography and highlighted some historical water management challenges. Similarities between the Herbert Hoover Dike (HHD) and the Lake Okeechobee schedules were outlined. Dr. Paudel also provided a history and details of the LOSOM planning process and described the extensive stakeholder engagement that was involved. The LOSOM process was started to accommodate the new infrastructure/repairs of the HHD and to be compatible with the new C-43, C-44 and C-51 reservoirs and basins. LOSOM will be used to manage Lake Okeechobee for roughly the next decade.

Dr. Paudel covered the main goals of the LOSOM project: So main objective of this LOSOM project was incorporate the flexibility of Lake Okeechobee operations while balancing congressionally authorized project purposes. There were four main objectives, and the first objection was to manage the risk to public health and safety, life, and property. And the second was to continue to meet authorized purposes of navigation, recreation, and flood control. And the third objective was to improve water supply performance. That includes Lake Okeechobee Service Area, Seminole Tribe of Florida, and Lower East Coast Service Area that include -- includes Palm Beach, Broward, and Miami-Dade counties. And the last objective was to enhance ecology of Lake Okeechobee, northern estuaries, and also across the south Florida ecosystem.

Dr. Paudel covered the main concepts of the different iterations, and the work that went into the plan and the performance metrics that were being tracked. After extensive stakeholder review and metric development, the modelers refined 240,000 model runs to 707 that met or exceeded specified performance measure criteria to achieve the optimization goal, and finally the optimized lake schedule. Dr. Paudel then went into the benefits of the optimized lake schedule by showing a spider web diagram. The next step is to develop the operation guidance, water control plan and the environmental impact assessment. The plan is slated to be completed by the end of 2022.

Dr. Paudel answered questions throughout and after the presentation. Chair Geller opined that he had interest in both the AA and CC plans and Dr. Jurado provided comment on the correspondence issued from the County that advocated for a balanced approach- the aligned with all of our best interests, water supply and an environmental standpoint.

C.BROWARD COUNTY CITIZEN SCIENCE FLOOD MONITORING PROGRAM

Katie Lelis and Adrienne Aiken, Environmental Protection and Growth Management Department/ Resilience Unit.

Chair Geller pushed this presentation to the next meeting.

VIII. New Business

No new business discussed.

IX. Discussion

Chair Geller shared that elected officials may not be able to follow the highly technical nature of some of the presentations, although he was certain water engineers were following. Councilmember Starkey shared that she was able to follow, but noted that the agenda may move a bit quicker if the presentations were a bit more simplified.

X. LAKE OKEECHOBEE WATER LEVELS:

This month 15.83; Last month 15.57; one year ago 16.30 (ft-NGVD)

XI. ADJOURN

There being no further business to discuss, the meeting adjourned at 11:27 pm.