



FWMD C-8 AND C-9 WATERSHEDS FLOOD PROTECTION LEVEL OF SERVICE ADAPTATION PLANNING AND MITIGATION PROJECTS STUDY

Date: August 29, 2022

Time: 2:30 PM – 3:30 PM

Subject: Bi-Weekly Meeting #31

Attendees Highlighted:

- Hongying Zhao, **SFWMD**
- Ana Carolina Maran, **SFWMD**
- Nicole Cortez, **SFWMD**
- Akin Owosina, **SFWMD**
- Ann Springston, **SFWMD**
- Lichun Zhang, **SFWMD**
- Matahel Ansar, **SFWMD**
- Larry Brion, **SFWMD**
- Carol Ballard, **SFWMD**
- Ruben Arteaga, **SFWMD**
- Sashi Nair, **SFWMD**
- Francisco Pena Guerra, **SFWMD**
- Shahana Mona, **SFWMD**
- Vijay Mishra, **SFWMD**
- Chris Carlson - **SFWMD**
- Irela Bague, **Miami Dade**
- Marina Blanco-Pape, **Miami Dade**
- Alberto Pisani, **Miami Dade**
- Gregory Mount, **Broward**
- Kevin Hart, **SBDD**
- Susan Bodmann, **Broward**
- Jennifer Jurado, **Broward**
- Rajendra Sishodia, **Broward**
- Virginia Walsh, **WASD**
- Omar Abdelrahman, **RER**
- Pamala Sweeney, **RER**
- Katherine Hageman, **RER**
- Laura Eldridge, **(RER)**
- Valentina Caccia, **RER**
- Michael Zygnerski, **Broward Co**
- Karina Cordero, **RER**
- Michael DelCharco, **Taylor Engineering**
- Angela Schedel, **Taylor Engineering**
- Pat Lawson, **Taylor Engineering**
- Joseph Wilder, **Taylor Engineering**
- Chris Moss, **Taylor Engineering**
- Michael Kabiling, **Taylor Engineering**
- Stephanie Massey, **Taylor Engineering**
- Lynette Cardoch, **Moffatt & Nichol**
- Peter Sahwell, **Nova Consulting**
- Juan Prieto, **Nova Consulting**
- Colin Henderson, **Nova Consulting**
- John Loper, **Anclote Consulting**
- Nathan Slaughter, **ESP – Florida**
- Lara Tomenchok, **Nova Consulting**
- Sarah Hamm, **Moffatt & Nichol**
- Elton Smith, **Taylor Engineering**

Notes:

1. **Meeting Kickoff**
 - Roll Call
2. **Task 2 B: Hydrodynamic Modeling to evaluate downstream coastal areas**
 - Overview of project. See slides.
 - Key elements:
 - i. Using MIKE SHE, MIKE 21, and ADCIRC models.
 - ii. Hydrodynamic modeling is performed with MIKE 21. This model developed for Haulover Inlet for Florida Inland Navigation District. The MIKE 21 model will be updated and boundary conditions refined for C8 and C9 modeling.
 - iii. Will model existing conditions and then tidal surge conditions. Once these are established, the team will add in the sea level rise. Then will model with and without mitigation projects.



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- iv. The ADCIRC model had 392 modeled hurricanes – the team will cull through those results to see if we find an event that created an elevation like the 10-yr event (2.8 ft) in the area of interest. Once we locate those storms, we'll review those storms and examine them a little more deeply to see which one is best to use.
 - NOAA did an extreme water level analysis to show that the 10-yr event in Miami beach is 2.8 ft. We will look for a surge event that creates a similar surge event in the area.

3. Task 4B: Water Quality Analysis of northern Biscayne Bay

- Overview of project slides by Juan Prieto and Peter Sahwell
- See slides for overview.
- After gathering existing data, the team will generate time series plots to evaluate constituents of concern.
- Have collected some data from County. There is limited TN data at BB09, so will use BB10 to supplement this data gap.
- Used DB Keys – S-28 91471 and S-29 91472
- Valentina – are you going to be looking at anything in the canal? No, just the data at the canal exit. Valentina – I think it would be good to know what is in the canal before it is mixed. Peter said we are collecting data at SK01 and BS01 – those are right at the canal mouth. Valentina thinks it should be on the upstream side of the control structure. Juan does not think there is a need to go upstream of the structure. Doesn't that represent the canal flow? Valentina thinks it should be upstream. Hongying, the sampling site we have is downstream of the structure. So, we are kind of stuck with that.
 - i. Valentina – SK02 and BS04 are in the canal.
- Alberto Pisani brought up the speece cone work done in Savannah Harbor. Maybe that could be done here. Some articles on the project:
 - i. <https://www.sas.usace.army.mil/Media/News-Stories/Article/1031983/speece-cones-arrive-at-mitigation-site/>
 - ii. <https://www.savannahnow.com/story/news/2007/08/07/cones-add-oxygen-savannah-harbor/13595544007/>
 - iii. <https://www.waterwaysjournal.net/2019/07/24/oxygenating-system-in-savannah-harbor/>

4. Additional action Items from Previous Meeting

- Report writing in full swing:
 - i. Task 2.2 – H&H Modeling Summary and Mitigation Project Costs
 - ii. Task 3 – Expected Annual Damage calculations and Present Value Analysis
 - iii. Task 4 – Adaptive Management Tool development and results

5. Questions/Comments

