



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

**Date:** February 11, 2022

**Time:** 10:30 AM – 12:00 PM

**Subject:** Bi-Weekly Meeting

**Invited Attendees:**

- 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**
- 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**
- Valentina Caccia, **RER**
- Michael DelCharco, **Taylor Engineering**
- Angela Schedel, **Taylor Engineering**
- Pat Lawson, **Taylor Engineering**
- Joseph Wilder, **Taylor Engineering**
- Stephanie Massey, **Taylor Engineering**
- Lynette Cardoch, **Moffatt & Nichol**
- Peter Sahwell, **Nova Consulting**
- John Loper, **Anclote Consulting**
- David Key, **ESP – Florida**
- Nathan Slaughter, **ESP - Florida**

**Notes:**

**1. Meeting Kickoff**

- a. Hongying Zhao welcomed participants and identified the Stakeholders new to the meeting.
- b. Roll Call by “participant” list in TEAMS meeting.

**2. Welcome Partners**

- a. Akin welcomed everyone and thanked them for coming.

**3. Update Presentation**

- a. Lynette discussed the Task 1 efforts to date. She outlined how we captured the data from partners and how we’ll be using that data moving forward. She pointed out that all the reports and FAQs are available at the website. <http://www.buildcommunityresilience.com/SFWMD/FPLOS/c8c9/>
- b. Michael discussed how we gathered the project list and organized them. None of the projects are eliminated, we are just trying to organize them. We found organizing them by Regional, Local, and Micro scale works best. All of the projects are interconnected – they all matter to each other. They do not work in isolation.



- c. Part 1 of the modeling effort: Joseph discussed the modeling we've done to examine pumps and that there is a limit to how much pumps can do. There certainly is a level at which bigger pumps do not improve FPLOS. There is not enough conveyance capacity to handle the bigger pumps.
  - i. Key take-a-ways: we are not proposing these huge pumps; we are just looking at "could it be done" and "what would happen if;" and third, with a modest pump station, there is a pretty serious constraint on the system due to canal conveyance. This constraint is under investigation with this study and will be understood better with additional modeling.
  - ii. Presented table with pump station iterations with pump sizes needed to meet or equal current conditions.
- d. Part 2 of modeling effort: This modeling focuses on local scale adaptation/mitigation projects. We focused on the 25-yr SLR1 event.
  - i. Pamela Sweeney, RER, where we are at DERM is we are trying to think in integrated systems. Always have an eye toward WQ improvements. They have a \$10M grant to drive down pollution in C 5, 6, and 7 basins. Two questions: Is there a point in this process where we look at cost benefits? If a pump alone won't solve the problem, does that mean we open a universe of options we address?
    - 1. Akin – the District is certainly addressing these issues. Matahel is on the call and is very much aware that the paradigm of just moving water to tide is not longer the way to go. We must try and store the water and mix with the timing. And for WQ, we certainly are considering it. Akin has tasked us to figure out how to add the WQ piece.
  - ii. Katherine Hagemann – She has a lot of questions, but may deal with them offline. She asked about the overland flooding – is it shallow? Yes, it is. She said we should be sure to take out water bodies. (Which we do for FPLOS plots). Are we going to look at bank elevations on the primary canals? Joe – we did that for Carolina on the secondary canals. It is a problem for primary canals because you affect the drainage of overland flow to the canals. Katherine – maybe could raise the bank and add additional stormwater systems. Downstream of structures is very low – it is going to be challenging.
    - 1. Hongying, we will eventually have GIS files. The canal bank issues from the County is helpful.
    - 2. Akin said we'd be glad to give you the files and let you do some work to show us how things are impacted in your community.
  - iii. Omar asked if we would be doing an EIS?
    - 1. Akin – this is in the adaptation and mitigation planning stage only. Any potential solutions would be going to a design process and then to permitting.
    - 2. Matahel – currently we operate this system with existing authorizations. If we change that, then we would need an EIS.
  - iv. Joseph led a discussion on canal bank modifications. Some of the issue is just a modeling scale and approach issue. A technical nuance of how to do the work.
  - v. Local Scale Projects – Slide #33. Joseph showed a difference map and local scale projects. There are benefits in the local area, but that is it. Slide #34 shows what would happen if we could get 14 locations with 30 cfs withdrawals. The differences we see are limited to the local area and are small – all less than 0.1 ft.



1. Virginia – 30 cfs is about 20 MGD. Miami-Dade’s largest injection wells are 19.5 MGD. (So, good guess on our part.) Boulder zone is more tolerant of taking water.
2. Akin – this is perfect. We want you involved to give us more direction on how this project might work.
3. Valentina – what do you mean by WQ? Akin – you can change quality or load. This strategy is to reduce the load. Valentina – maybe we need to change the terminology? Akin – well, the goal is to consider the WQ in some way.
4. Lynette – Having served on the original Biscayne Bay Task Force that created recommendations for improvements in water quality, I welcome Valentina’s emphasis on water quality and helping us to keep that lens as we move forward. The health of the Bay is really personal for all of us. The intent is to continue to finesse how we can achieve that flood risk reduction and obtain water quality benefits. At this point, it seems to me that it is fair to use volume removed from the system as a fair start. Given that we are trying our best to incorporate the information, we welcome their input on how to best quantify.
  - i. Additional question in Chat: [11:54 AM] Hagemann, Katherine (RER): Roughly speaking water percent of the volume of water in these basins enters from the west/areas outside of the developed areas? Meaning does a significant volume of clean water enter from the west? Or is it negligible?
    - a. We don’t have an answer right now. We can look into it.
  - ii. Slide #36 – Adding conveyance to the canal really helped us reduce the pump size and give us good improvements. Even a SLR2 event can have a whole lot more capacity in the system.
- e. Part 3 Modeling looking at combinations of adaptation strategies with modeling approaches. Once we get that setup, we’ll run a full suite of models.
  - i. Carolina – In combining the runs/adaptation projects we will have to take in partner comments. Can we look at the schedule and make sure we have final runs lined up carefully?

**4. Discussion**

**5. Upcoming Meeting Schedule**

- a. Bi-Weekly continuing on February 28<sup>th</sup>, 2:30 – 3:30 pm, etc..

