MEETING SUMMARY
Environmental Advisory Committee
Southwest Florida Water Management District
April 9, 2019

The Environmental Advisory Committee (EAC) of the Southwest Florida Water Management District convened for a regular meeting at 1:30 p.m., April 9, 2019 at the Tampa Service Office, 7601 US Highway 301 North, Tampa, Florida 33637.

Committee Members Present
Ed Sherwood, Tampa Bay Estuary Program
Paul Crowell, Keystone Civic Association
Dave Kandz, Audubon Society
Alan Bailey, Florida Trail Association
Dwayne Carlton, Ocala/Marion County, Chamber & Economic Partnership
Jennifer Hecker, Charlotte Harbor National Estuary Program
Mark Alderson, Sarasota Bay National Estuary Program

Staff Members Present
Caroline Browning, Facilitator
Michael Molligan
Lizanne Garcia
Joseph Quinn
Will Vangelder
Randy Smith
Ross Morton
April Breton

Recording Secretary
Lauren Vossler

A list of others present who signed the attendance roster is filed in the permanent records of the District. Approved summaries from previous meetings can be found on the District's website at WaterMatters.org.

The numbers preceding the items below correspond to the order of presentation.

1. **Call to Order and Introductions**
   Ms. Jennifer Hecker called the meeting to order, welcomed members, staff, and interested persons and asked for member introductions.

2. **Additions and Deletions to the Agenda**
   The order of items 8 and 9 will be swapped.

3. **Approval of the January 8, 2019 Meeting Summary**
   The committee amended grammatical errors on items number 5 and 6. The committee unanimously approved the amended January 8, 2019 meeting minutes.

4. **Public Comments**
   There were no public comments presented.

5. **Sarasota Bay National Estuary Program**
   Mr. Mark Alderson, Sarasota Bay NEP executive director, provided a presentation on the Sarasota Bay NEP, which is a coastal lagoon system that has little interaction with the watershed, unlike the Charlotte Harbor and Tampa Bay Estuary Programs. Mr. Alderson explained the NEP focuses on restoration and reclamation projects, with upwards of 1,600 acres of wetlands restoration accomplished and artificial reefs created throughout the region. He discussed the NEP's outreach and education program as well.

   Mr. Ed Sherwood asked where the spoil from the island restoration projects goes and Mr. Alderson explained they expect the developers to voluntarily remove it.

6. Microplastics in Tampa Bay: Abundance, Distribution and Ecological Interactions

Dr. Shannon Gowans, Associate Professor of Biology and Marine Science at Eckerd College, provided information about research being conducted on the effects of microplastics in Tampa Bay. The main objectives of the project are to standardize the techniques, the methods for collecting, identifying and quantifying microplastics, and developing a cost-effective approach. The long-term goal is to establish a sustainable microplastic monitoring program for Tampa Bay. Dr. Gowans noted that the project has been funded through 2020.

Members asked whether samplings were collected during incoming, outgoing or slack tide. Dr. Gowans explained that it varies but they are looking at that piece especially when collecting intensive samples and recording the exact tidal height so that it can be tracked because they thought that may be a key piece. The discussed sample was taken from a channel near Eckerd college, where there is a good flow which will help find the impact of tide.

Members asked about the long-term impact of the plastics on organisms and the environment. Dr. Gowans explained they are not looking directly at those examples at this point, however, there is an increased interest in microplastics globally and there are a lot of groups trying to investigate what those impacts are. The potential impacts are similar to large plastics if crustaceans are able to digest them. There is also increasing concern about the toxin transfer between the microplastic particles if they can cross into the animal's body.

Members inquired about ways to avoid plastics getting into the water supply and if there are certain plastics that pose a greater risk. Dr. Gowans explained they are finding that inputs are coming from many different sources. Eckerd College is developing a partnership with researchers at the University of South Florida who have the instrumentation that will help determine the chemical composition of the larger particles, which will potentially give more information about where they are coming from.

Ms. Hecker asked whether the various types of plastics collected are classified as fragments, film or fibers. Dr. Gowans confirmed they do look at that and a lot of what they are collecting are very small particles, but there are some fibers.

Ms. Hecker inquired about drawing blood samples from the manatees to see if microplastics are carried in the manatee's blood sample. Dr. Gowans explained the challenge is these manatees reported are already deceased and those circulating levels may not be high enough to detect, but microplastics have been detected in humans, bottled water, fish, and it is ubiquitous.

7. 2017-2019 Red Tide Overview

Ms. Katherine Hubbard, research scientist with Florida Fish and Wildlife Conservation Commission (FWC), shared an overview of red tide. Ms. Hubbard explained the toxins found in red tide have known negative impacts on both humans and wildlife. Ms. Hubbard said the 2017-2019 bloom is the fifth longest lasting since the 1940s and has impacted birds, manatees, sea turtle (record mortality rate), dolphins and there were numerous reports of fish kills. Human health impacts included respiratory irritation, neurotoxic shellfish poisoning if consumed, and several long-lasting harvest closures.

Ms. Hubbard explained that red tide has been occurring for centuries and education is critical. FWC plans on sustaining observation networks and enhancing prediction capabilities.

Mr. Alderson asked about trichodesmium and Ms. Hubbard explained that iron dust is tied to the land usage in Lake Chad. Ms. Hubbard added that it might be potentially getting worse, but she does not know if there is any data that shows the variability of iron fluxes over time.

Members asked about the incident lighting when the bloom is at 30 meters depth. Ms. Hubbard replied that we must keep in mind that the organisms can vertically migrate and the light levels that it may be receiving throughout the water column can support some amount of photosynthesis.

Mr. Sherwood asked whether the gliders were an ongoing monitoring effort, or if it is something that would slow between blooms. Ms. Hubbard explained there are established deployments and additional deployments are dependent on funding sources.

Ms. Hecker discussed the increased cell count and the average being higher with the nearshore inputs than offshore and questioned how that might be exacerbating the blooms, making them more frequent and more severe or lasting longer than they normally would. She asked whether FWC has a position on these thoughts. Ms. Hubbard agreed that nutrients can make the blooms last longer. She explained routine sampling programs are trying to create the infrastructure to be able to address questions geared toward that information.

Ms. Hecker inquired about the rationale behind the 100,000 cells per liter threshold. Ms. Hubbard explained the threshold depends on the audience in terms of the overall biomass, which FWC typically considers 100,000 cells a bloom.

Members questioned if there were any studies on why there are not the same effects in the Big Bend area that there are in the Southwest region of Florida. Ms. Hubbard explained there is a combination of depth and the Springs systems that are constantly feeding that area, which tend to provide a source of near constant fresh water and that helps to prevent a low salinity buffer.

8. <u>Advisory Committee Governing Board Policies Update</u>

Mr. Michael Molligan, Employee and External Relations Director, provided an update on the advisory committee policies. He explained the Governing Board reviewed the policies at the December meeting and provided feedback. Mr. Molligan presented the updated changes to the Governing Board in February and received approval for changes. Policy updates include:

- Retaining term limits for officers
- Retaining the limit for officers to three-year terms
- Members can serve for multiple terms but require District and organization/member approval
- Retaining organization names in the policies
- Requesting representative change for non-attendance (retain right to remove member)
- Merging Agricultural and Green Industry Advisory Committees
- All votes will be determined by majority (quorum is no longer required)

Ms. Hecker informed Mr. Molligan the Charlotte Harbor National Estuary Program will become the Coastal and Heartland National Estuary Partnership as of June 1.

Members inquired about outreach for additional organizations not represented on the District's list and Mr. Molligan welcomed interested parties to contact the District.

Mr. Alderson asked about local governments participating and Mr. Molligan explained the District does collaborate and interact with local government, mostly through funding and the Cooperative Funding Initiative. Advisory committees are broken into types of stakeholders and types of water use/impacts. There has not been a local government committee established, however it is something the District is willing to look at. Mr. Alderson explained the District's basin boards were close with local governments and he felt the District could benefit from having local governments in the mix. Mr. Molligan responded that the District's Governing Board subcommittees that review proposed Cooperative Funding Initiative proposals take the place of those basin boards and there is also increased involvement with the Government Affairs Regional Managers to make sure District has that connection with local government.

9. Potable Reuse Overview

Mr. Thomas Kiger, Senior Professional Engineer, provided a brief summary of the Potable Water Reuse Program. Mr. Kiger explained that potable reuse is the process of turning treated wastewater into drinking water. He explained the two types of reuse, indirect and direct, and provided the urban water cycle for each. Mr. Kiger stated that advanced water reclamation facilities are designed to meet or exceed all primary drinking water standards to protect public health.

Mr. Kiger explained potable reuse has supported research to show the process is safe, reliable, and is environmentally friendly. It can also address water supply challenges and water resource challenges in an integrated fashion. Potable reuse is also cost-effective on a water supply standpoint. Mr. Kiger explained there is currently 700 million gallons per day (mgd) of potential reusable reclaimed water in Florida, and the District is projected to have over 150 mgd for reuse by 2020.

Members asked about the minimum treatment standards for direct potable reuse. Mr. Kiger explained that treatment standards have been discussed in detail and draft standards will be included in a draft report about direct potable reuse.

Mr. Kiger described the Potable Reuse Commission (PRC) and their efforts in developing a framework for potable reuse. PRC's next steps include developing a draft framework in May, holding a public workshop on May 23, and plans to publish by June and start communications outreach. Perhaps in 2020 additional rulemaking may develop for direct potable reuse.

Members asked if the PRC will be discussing minimum treatment standards for indirect potable reuse and feels it would be good to be a part of the conversation. Mr. Kiger replied there is a lot of material in the framework that addresses treatment standards and regulatory framework.

Mr. Alderson asked whether this is an alternative for the study near the I-4 corridor and Mr. Kiger explained Polk County already made the transition into reusing their resource. Members mentioned the pilot programs are a challenge with long term costs and maintenance and mentioned the assistance of funding opportunities.

Ms. Hecker asked about utilities and economic drivers and Mr. Kiger explained that potable reuse in general is a drought-proof supply, with wastewater plants tending to run at relatively consistent capacities throughout the year.

10. Next Meeting: July 9, 2019

Members suggested:

- Status of Caloosahatchee stormwater treatment areas/reservoirs. Mr. Molligan identified this as South Florida Water Management District and said he would check to see if someone is available to present.
- Follow-up on adding potential organizations to the committee
- Members suggested a legislative wrap-up, specifically water bills and the new Governor's policies and priorities.
- Algae blooms and Florida Gulf Coast University's study on human health impacts.

Ms. Caroline Browning suggested to hold elections at the next meeting.

11. Announcements and Other Business

None.

12. Adjournment

The meeting adjourned at 3:30 p.m.