CITY OF CORAL GABLES

--MEMORANDUM--



TO: City Commission

City Manager, Peter Iglesias

FROM: Mayor Vince Lago

DATE: October 6, 2025

SUBJECT: Biscayne Bay Watershed Management Advisory Board Meeting - Presentations

The purpose of this memo is to provide a summary of last week's Biscayne Bay Watershed Management Advisory Board Meeting (meeting agenda, June 6, 2025 meeting minutes and meeting presentations attached for reference).

The meeting included an update to the DEP Biscayne Bay Water Quality Improvement Grant projects and status of the RAP (Reasonable Assurance Plan) Dashboard project.

The grant projects, funded by a 5-year, \$50M grant from DEP, which began in 2020 focuses on 3 key areas: investigative, preventative and restorative. The data collected from the Task 3 investigative project will be used in the RAP Dashboard, which has been designed as a collaborative tool for use by state officials and the scientific community. Mayor Lago requested the County share the data at canal discharge sites within the city so we can track progress and understand areas for improvement including nutrient run-off and litter control.

Currently the bay is considered by the State to be 70% impaired. Turtle and manatee sea grasses continue to decline. The RAP dashboard will provide real time data, going back 40 years, on rain fall, nutrient concentrations, seabed sizes, and water quality. The reference period from when the bay was considered healthy is 1995-2009 and seagrasses are not recovering, despite efforts. The county is considering resetting the threshold of nutrient levels allowed.

It was noted that 26,000 lbs of trash were removed from the bay during the International Coastal Clean Up events. Over 60 organizations participated.

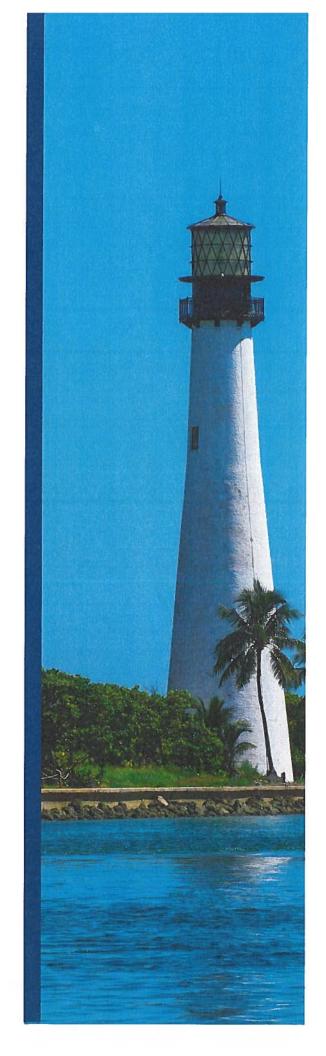
Biscayne Bay Watershed Management Advisory Board

Board Packet

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AGENDA

BISCAYNE BAY WATERSHED MANAGEMENT
ADVISORY BOARD (BBWMAB) MEETING
October 3, 2025 – 9:00 am – 12:00 pm
LOCATION – Stephen P. Clark Government Center, Commission Chambers, 2nd Floor
111 NW First Street, Miami, FL 33128

- Roll Call
 BBWMAB Chair, Commissioner Micky Steinberg
- 2. Reasonable Opportunity to be Heard
 BBWMAB Chair, Commissioner Micky Steinberg
- 3. Welcome New Board Members
 - Commissioner Natalie Milian Orbis
 - Jed Redwine, FIU, Institute of Environment
 - John Stieglitz, UM, Rosenstiel School of Marine and Atmospheric Science
- 5. Approval of Agenda Actionable Item
- 6. Approval of Minutes for June 6, 2025 Actionable Item
- Biscayne Bay Water Quality Improvement Grant Project Updates (Requested by OERR)

Pamela Sweeney, Chief, Water Resources Coordination Division, DERM

- 8. Reasonable Assurance Plan Dashboard (Requested by Commissioner Steinberg)
 Pamela Sweeney, Chief, Water Resources Coordination Division, DERM
 Mike Wessel, Sr. Environmental Scientist, ESA Associates (via Zoom)
- 2026 Florida Legislative Session (Requested by Commissioner Steinberg)
 Jess McCarty, Executive Assistant County Attorney, Miami-Dade County Attorney's Office

10. BBWMAB Recommendations Update (Requested by Dave Doebler)

Nancy Jackson, Resilience Program Director, OERR

- Mobile Vessel Pump Out Directive
- Marine Debris Plan

11. Future Agenda Items

12. Adjournment

Biscayne Bay Watershed Management Advisory Board

Stephen P. Clark Government Center Commission Chambers, 2nd Floor 111 NW First Street Miami, FL 33128

MINUTES June 6, 2025, 9:00 am

MEETING CALLED TO ORDER	Roll call was taken and quorum established. Members Absent: Jannek Cederberg, Spencer Crowley, Julissa Kepner, and Roberto Torres
	Vice-Chair – Mayor Vince Lago Commissioner Micky Steinberg Commissioner Alex Fernandez Mayor Tim Meerbott Mayor Rachel Streitfeld Dave Doebler Sam Accursio
MEMBER ATTENDEES	Jim Murley Jerry Menendez Gerald McGinley
	Kevin Cunniff
	Staff support for Biscayne Bay Watershed Management Advisory Board in attendance: Chief Resilience Officer, Loren Parra (OERR); Pamela Sweeney (RER-DERM); Nancy Jackson (OOR); Larissa Aploks (RER); Kathleen Oswald (OERR); and LaTousha Daniels, (OERR).

REASONABLE OPPORTUNITY TO BE HEARD

Mayor Vince Lago - Vice-Chair

PUBLIC COMMENT	Mariana Aziz, Miami Waterkeeper: Regarding RAP projects, proposed including an asset management system as we move toward implementation of the RAP. Miami Waterkeeper is available to help with implementation efforts. Steven Leidner, Sierra Club: Spoke about the importance of biodiversity in the Bay and need to focus on upland areas to allow more space for filtering water before it reaches Biscayne Bay. Scott Pollowitz, Friends of Biscayne Bay: Supports Boater Safety and Bay Education Task Force. Recommends including collisions between animals, and ecosystems including pelicans and seagrass. Promoted Derelict Trap Rodeo happening on July 12. Jackeline Bonilla, Urban Paradise Guild: Discussed the DERM Manatee Protection Plan. Recommended increasing signage on the Bay to further protect manatees. Francesca DiJulio, Everglades Law Center: Glad to see RAP moving forward. Questioned Stormwater MS4 permits being listed as new projects.
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Gene Carlson, Resident: Asked if there is any enforcement behind what's listed in the Biscayne Bay Friendly Campaign. Noted the presence of floating garbage and asked who to contact to report these issues. It was suggested that staff can provide that information. Adriana Gonzalez Fernandez, Miami Waterkeeper: Discussed RAP and the importance of robust monitoring.

ELECTION OF CHAIR

Mayor Vince Lago - Vice-Chair

BOARD ACTION

A motion was made to nominate Commissioner Micky Steinberg as the new Chair of the BBWMAB. Motion passed unanimously.

WELCOME NEW BOARD MEMBERS

Commissioner Micky Steinberg - Chair

Chair Micky Steinberg thanked Mayor Vince Lago for acting as Chair. She recognized Jim Murley, representative of the Miami River Commission and Sam Accursio, Dade Agriculture Board representative as new members to the Adivsory Board.

FLORIDA LEGISLATIVE SESSION 2025

Commissioner Micky Steinberg - Chair

Jess McCarty, Executive Assistant County Attorney, explained the Florida legislative session, typically 60 days, has extended to June 18 (Day 95) to focus solely on budget-related bills, as all other bills passed or died on May 2. A busy week and a half of budget conferencing is underway. The goal is to have the final budget on lawmakers' desks by Friday, June 13, with a potential vote on June 16. A key win includes the \$20 million allocation for Biscayne Bay grants, which is confirmed in both the House and Senate budgets. Statewide programs, including Water Quality and Resilience Florida, appear to be well-funded. Several local priorities have also been included in the budget packet. On the policy front, SB 1822 includes a preemption on local plastics regulation and did not pass. HB "Lucy's Law" is moving forward with sponsorship from Rep. Lopez and Sen. Ileana Garcia, and SB 1388, the Boater Freedom Act, could present challenges due to its limitations on law enforcement's ability to act without probable cause.

Board Comments:

Commissioner Alex Fernandez - commended Mayor Streitfeld for traveling to Tallahassee regarding HB 481. He stressed the importance of making sure local governments have more ability to protect our waterways.

APPROVAL OF AGENDA

Commissioner Micky Steinberg - Chair

BOARD ACTION

A motion was made to adopt the Agenda and was passed unanimously.

BOARD ACTION

A motion was made to approve the Minutes from December 6, 2024, Advisory Board meeting and was passed unanimously.

REASONABLE ASSURANCE PLAN (RAP) PROGRESS UPDATE

Pamela Sweeney, Sr. Water Scientist, RER-DERM

Chairwoman Steinberg requested Pamela Sweeney to provide the update on the RAP. Pamela Sweeney, DERM, shared a RAP updated focused on restoring Biscayne Bay's water quality by addressing key pollutants — nitrogen, phosphorus, and chlorophyll. A new water quality model, developed in collaboration with state and county agencies, analyzes historical conditions and pollution sources. It includes a data visualization tool to explore solutions. The final draft plan is expected by the end of 2026.

Board Comments:

PRESENTATION

Chair Steinberg - commented that she is happy to see municipalities involved. Kevin Cunniff - asked about the next steps following the acceptance of the plan, specifically how a regulatory framework would be developed and implemented. Pamela responded that this would involve following the EPA Secretary's order and that allocation details would emerge during the implementation phase. She also mentioned ongoing work on the County's CDMP, updates to Chapter 24 of the Miami-Dade County code, and the potential for municipalities to adjust their policies accordingly.

Mayor Streitfeld - raised concerns about enforcement, asking whether there is a mechanism to ensure all municipalities fulfill their responsibilities, and whether the South Florida Water Management District (SFWMD) has the authority to initiate projects that could support these efforts. Pamela explained that the SFWMD contributes valuable information about canal functions, which is being incorporated into the water quality modeling.

Streitfeld stressed the need for clear milestones and transparency, including data on which cities are implementing which projects and whether they are being carried out efficiently. Dave Doebler - expressed concern about long-standing stormwater issues, such as inadequate street sweeping and catch basins being cleaned only once every 10 years. He asked whether municipalities are being pushed to increase their stormwater budgets.

2025 PROGRESS UPDATE

Loren Parra, Chief Resilience Officer, OERR and Pamela Sweeney, Sr. Water Scientist, DERM

PRESENTATION

Chair Steinberg requested that Loren Parra and Pamela Sweeney approach the dais to share their presentation.

Loren Parra, Chief Resilience Officer, shared updates on the office's restructuring, with technical staff reassigned to key departments, while water and Biscayne Bay remain top priorities. She announced the Mayor's Boater Safety and Bay Education Task Force, inspired by the Lucy Fernandez family, with its first meeting expected in July and recommendations to follow. Loren also celebrated the success of the Biscayne Bay specialty license plate, which reached 3,000 pre-sale vouchers; plates will be available later this summer, with proceeds going to the Biscayne Bay Recovery Fund at the Miami Foundation.

Pamela Sweeney highlighted that the Biscayne Bay Report Card still shows nutrient-related challenges. She shared that FDEP grant opportunities open in mid-July, with \$20 million expected. She also provided updates on the Watershed Plan, which will address sea level rise and bay access, and noted continued work on the BBSEER Project Development Team.

Board Comments:

Jim Murley - praised the coordination efforts and emphasized the importance of boater safety.

Dave Doebler - noted the timing of the updated Aquatic Preserve Management Plan and called for a comprehensive governance framework, stressing the need for clear oversight and ownership, especially regarding illegal activities.

Commissioner Fernandez - highlighted the importance of increasing budgets for marine patrol, pointing out that responsibility should not fall solely on coastal municipalities since the bay is a shared resource. He suggested treating Biscayne Bay as Miami-Dade County's largest park and proposed an impact fee on new development to help fund bay protection efforts. Chairwoman Steinberg - added that the marine patrol budget is increasing and is now under the Sheriff's Department. She also acknowledged the Boater Freedom Act may complicate enforcement.

Commissioner Fernandez - raised concerns about declining water quality between the Julia Tuttle and MacArthur Causeways and asked whether technologies like aerators could be used especially given ongoing FDOT infrastructure projects. Loren shared that she plans to meet with DTPW Director Stacey Miller to discuss living shorelines, particularly near the Julia Tuttle Causeway. Doebler pointed out long-standing water flow issues near the causeways and called for more imaginative solutions. He suggested using a more nuanced numerical scale for the report card to make it easier to understand and better capture progress. Pamela explained that the report card was designed more for the broad public understanding, but agreed that as more projects come online, better data will support deeper analysis. Kevin Cunniff - brought up the loss of several board members and asked about progress in filling vacancies. Nancy Jackson responded that two new members - from FIU and University of Miami – are being onboarded, and they should be in place by the October meeting.

FUTURE AGENDA ITEMS

Commissioner Micky Steinberg - Chair

DISCUSSION

Dave Doebler requested the Biscayne Bay Aquatic Preserve Plan update from DEP, an update on previous motions made over the past year, and establishing a Marine Debris Working Group. Nancy noted that the Biscayne Bay Commission will meet on July 23 and that would be the appropriate venue for the draft plan's presentation. Chairwoman Steinberg requested that the next meeting also focus on the core elements of the watershed plan.

ADJOURN

Commissioner Micky Steinberg - Chair

DISCUSSION

The Chair thanked the BBWMAB and staff for their work. The meeting was adjourned.



DEP Biscayne Bay Water Quality Improvement Grant - Overview



Project: Water Quality Characterization and Pollution Reduction

Task / Type	Project Name	Description	Phase 1 ('20 -'21) (\$10M)	Phase 2 ('21-'22) (\$12.9M)	Phase 3 ('22-'23) (\$14.5M)	Phase 4 ('23-'24) (\$13.5M)	Phase 5 ('24-'25) (\$1.1M)
Task 3 Investigative	Water Quality Characterization	Identify sources of pollution in Biscayne Bay / Groundwater	\$2,150,000	\$2,250,000	\$0	\$800,000	\$0
Task 4 Preventative	Innovative Technology – Wastewater	- Prevent Sanitary Sewer Overflows with SmartCovers and Smart Rain Gauges - Distributed WW Treatment	\$1,159,544.36	\$2,000,000	\$0	\$50,000	\$0
Task 5 Preventative	Septic Education & Outreach - Connect2Protect	Education efforts in Little River Adaptation Action Area for Connect2Protect	\$500,000	\$0	\$0	\$0	\$0
Task 6 Restorative	Septic to Sewer Conversion*	Connect vulnerable properties to sewer	\$5,050,000	\$6,690,463	\$14,490,455.64	\$12,650,000	\$0
Task 7 Restorative	Stormwater Treatment	Implement green stormwater technology in the Little River area.	\$1,300,000	\$2,000,000	\$0	\$0	\$1,100,000
Task 8 Restorative	Biological Restoration to Enhance Water Quality	 Develop a "Living Shoreline" guide for the county. Sponge nursery(ies) host site and donor site characterization 	\$500,000	\$0	\$0	\$0	\$0

Total for 5 phases: \$52,690,463

BISCAYNE BAY WATER QUALITY IMPROVEMENT GRANT PROGRAM UPDATES

BISCAYNE BAY WATERSHED MANAGEMENT ADVISORY BOARD – OCTOBER 2025

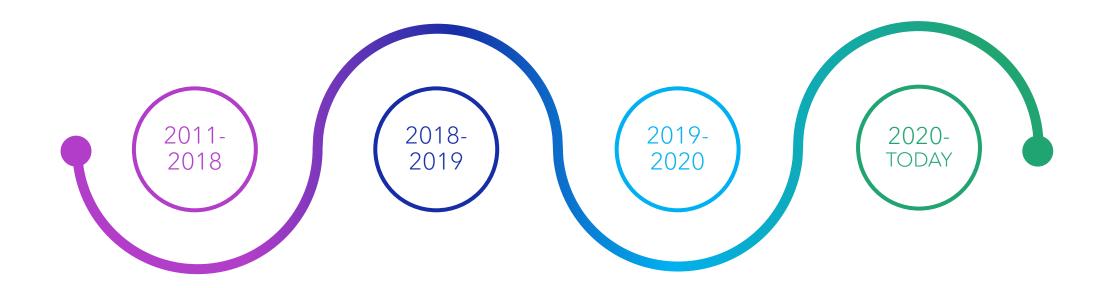








ARRIVING AT GREATER SUPPORT FOR BISCAYNE BAY



SEAGRASS DIE OFF

- Major changes to benthic habitat and water quality in north Biscayne Bay
- Algal blooms (beginning in 2005)

DIRECT ACTION

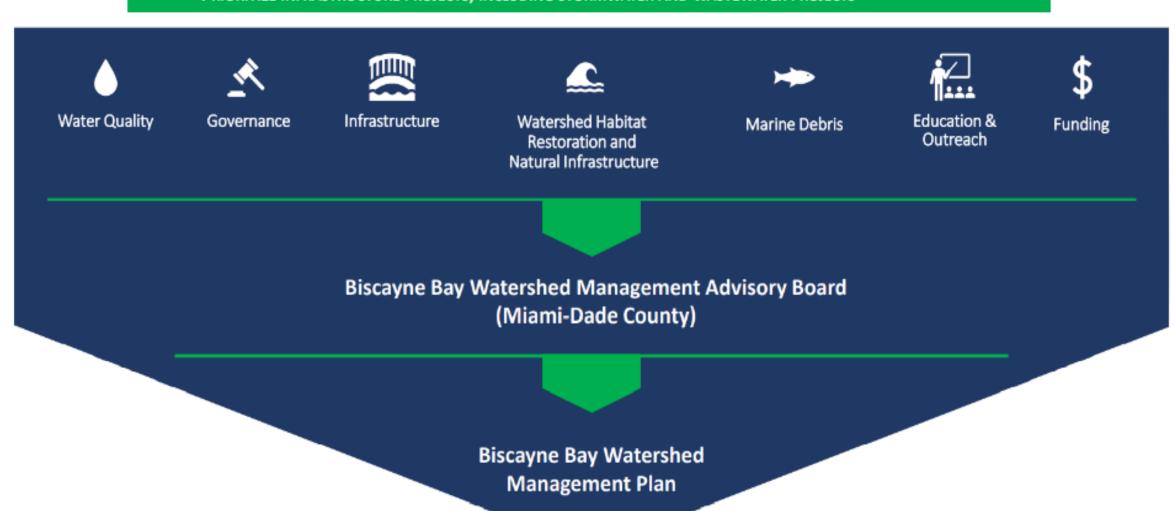
- County investigations, coordination with partner organizations
- Grand Jury Report
- Creation of Biscayne Bay Task Force (BBTF)

FISH KILL & FUNDING

- BBTF Report Finalized
- Major fish kill & algal bloom
- Creation of Watershed Board
- County receives first ever pot of DEP funding, implementing DERM's larger vision for nutrient reduction & BBTF Goals
- GOVERNANCE & RESTORATION
 - BBWMAB established
 - Water Resources Coordination
 - Reasonable Assurance Plan development
 - Grant funding is informing future RAP projects

Biscayne Bay Task Force Recommendations Allowed Us To:

- IDENTIFY DATA GAPS THAT WILL HELP US CREATE NUTRIENT REDUCTION PLANS AND HABITAT RESTORATION PLANS
- PRIORITIZE WATER QUALITY ISSUES AND HOT SPOTS
- PRIORITIZE INFRASTRUCTURE PROJECTS, INCLUDING STORMWATER AND WASTEWATER PROJECTS





DEP Biscayne Bay Water Quality Improvement Grant - Overview



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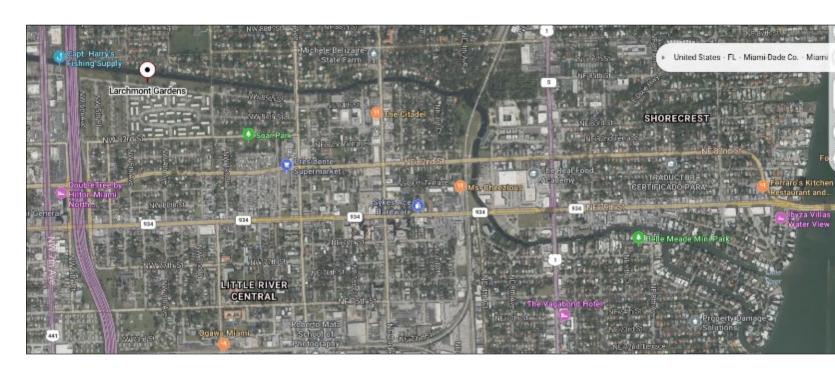
TASK 7 – STORMWATER TREATMENT

- Phase 1 nearly complete- Installation of stormwater treatment devices in over fifty (50) stormwater structures, in three areas of the Little River Basin

- Locations:

oNW 32 Av from NW 99 St - NW 106 St (Technology: SOP Stormwater Filter Basket, EcoVault Unit) oNW 22 Av from NW 94 St - NW 105 Ter (Technology: SOP Stormwater Filter Basket, Contech JellyFish) oNW 17 Av from NW 89 St - NW 98 St (Technology: SOP Stormwater Curb Inlet Screens, Hydro DryScreen) oNW 12 Av from NW 88 St - NW 83 St & NW 83 St from NW 15 Av to NW 12 Av (Technology: StormBasin Filter) oN Miami Av from NW 71 St - NW 91 St (Technology: SOP Stormwater Filter Basket, SOP Stormwater Curb Inlet Screens, EcoVault Unit)

- Phase 2 Underway
- Future Phases with new technologies have been funded





SOP - Inlet Screens and Filter Baskets

- To be installed on existing infrastructure to prevent sources of nutrients (leaves and vegetation) and street litter from entering stormwater systems
- The filter baskets are placed under existing storm grates
- Designed for maximum water flow
- Have Quick Response (QR) codes and web app to provide community engagement (share photos and their observations of storm drain filters & inlets) and learn about Miami-Dade County's efforts to protect Biscayne Bay
- Other cities using them include the City of Miami, City of South Miami, and City of Aventura since 2019.

Maintenance

Require a more frequent street cleaning schedule to keep grates free of debris

















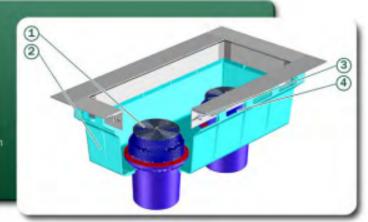
TECHNOLOGIES SELECTED

Fabco/Ferguson-StormBasin

- Cartridge filtration system with specific media (bacteria and nutrients)
- Cartridge is twist and lock which makes replacement simple
- Trash is removed by vactor truck

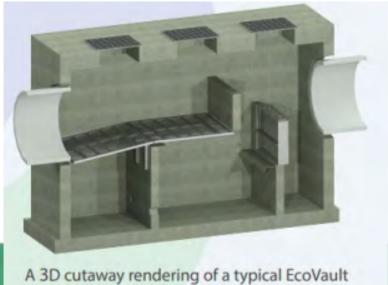
Features/Benefits

- Easily replaceable lightweight filter cartridges customized for targeted
- 2. Durable, UV safe co-polymer basin with aluminum mounting flange - has a 15 year
- 3. Patented dovetailed flange allows for 5" of length/width adjustment during installation
- 4. Baffled bypass traps floatables



EcoSence International -EcoVault Unit

- Provides separation, screening and filtration
- Removes grass clipping, leaves, litter, sediments, heavy metals, nitrogen, phosphorus, oil and grease
- Quarterly inspections recommended
- Filters should be replaced annually







TECHNOLOGIES SELECTED

Contech-Jellyfish

- Filters provide removal of fine sand and silt-sized particles, and particulate-bound pollutants such as nitrogen, phosphorus, metals, and hydrocarbons
- Provides high flow bypass
- Filters are reusable after rinsing
- Filter replacement every 2-5 year

Hydro International-Hydro Dryscreen

- Captures sediment, trash and suspended solids
- These structures work under low conditions, such as relatively flat drainage profiles, and high groundwater.







TECHNOLOGIES SELECTED

Abtech - SmartSponge Filters Insert

- Removes hydrocarbons, trash debris and sediments
- SmartSponge Filters Insert remove dissolved target contaminant
- Require annual inspection and maintenance

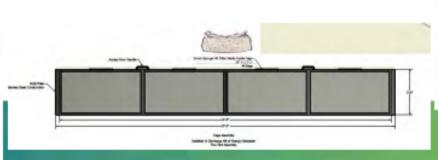
Abtech - SmartSponge Line Skimmers

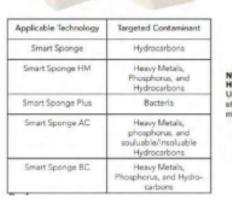
Absorb sheen hydrocarbons – will be used inside the pump station wet well

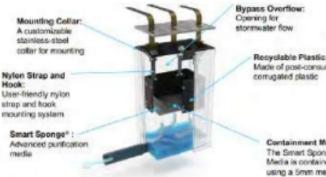
Abtech - Filter Cage

Designed in collaboration with DTPW for a stormwater pump station







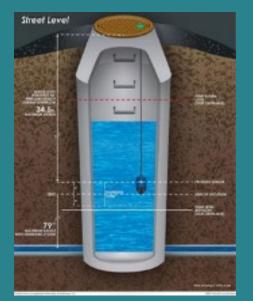


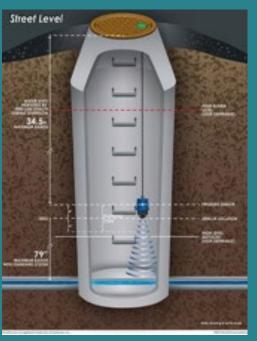
Recyclable Plastic: Made of post-consume

> Containment Mesi The Smart Sponge Media is contained

Smart Sponge® Media







TASK 4 – INNOVATIVE TECHNOLOGY

- Real-time collection system monitoring, reporting to PREDICT and PREVENT Sanitary Sewer Overflows (SSO)
 - "Smarten the grid" and use tech to utilities' advantage
- ➤ Analysis of Inflow & Infiltration (1&I)
- > Reliable during surcharges
- Satellite communications that are impervious to power or cell outages
- > Low maintenance
- 427 across northern coastal Miami-Dade County
- Predicted and prevented over 150 SSOs in first two years of operation
- State funding eliminatedcovered by MDC temporarily









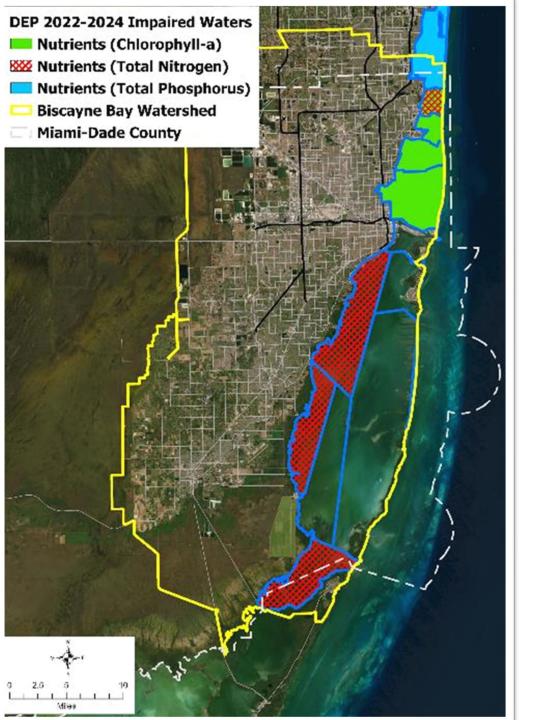
BISCAYNE BAY REASONABLE ASSURANCE PLAN (RAP)-

BISCAYNE BAY WATERSHED ADVISORY BOARD - OCTOBER 2025





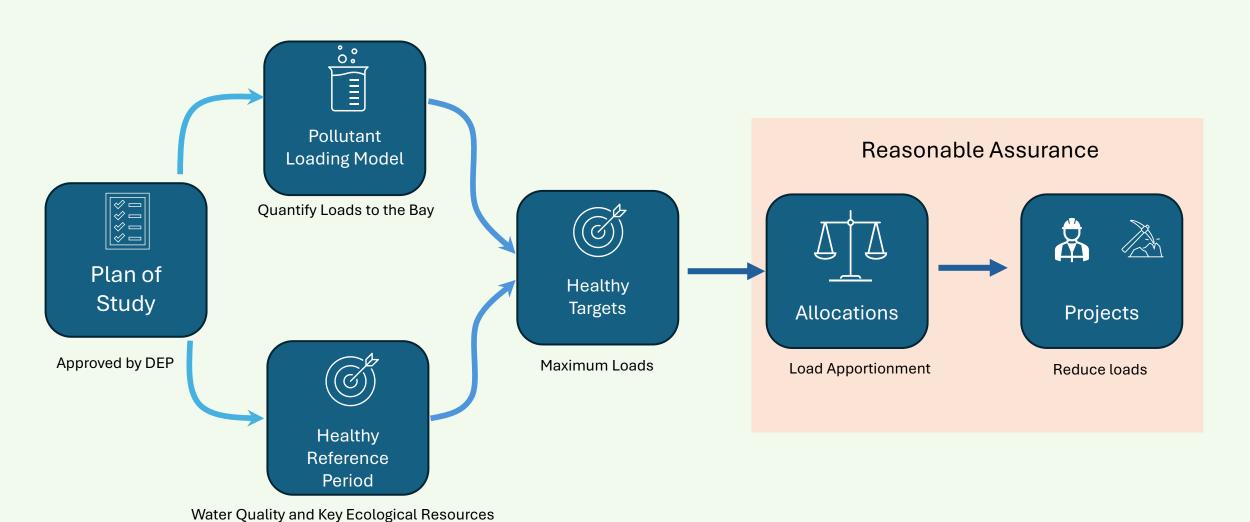




WHAT IS A RAP AND WHY A RAP?

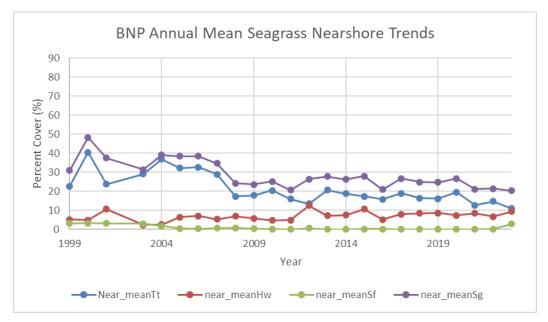
- ➤ 8 of 12 segments are designated impaired by the State for nutrients (TN, TP) and chlorophyll (Chl-a)
 - ➤ Biscayne Bay is not attaining standards to protect its designated uses as Class III Waters
- > Impairments are addressed one of two ways:
 - 1. Total Maximum Daily Load & Basin Management Action Plan; **OR**
 - 2. Alternative Restoration Plan
 - > Reasonable Assurance Plan RAP
 - > "4b Plan" under the Clean Water Act
 - "Cleaner water, Faster"
 - > RAPs are stakeholder led, not State led
 - > RAPs are adopted by final order of the DEP Secretary
- For RAP approval by DEP and EPA, we must demonstrate that we can meet nutrient reduction goals.
- The RAP will only provide reasonable assurance to the extent we work together to provide it.

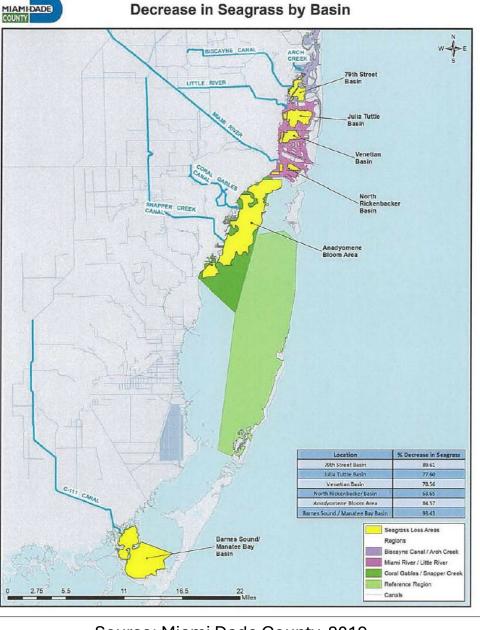
RAP Elements



Key Ecological Indicators

- Water Quality
- Seagrasses
- Sponges
- Hard Bottom Communities
- Fishes





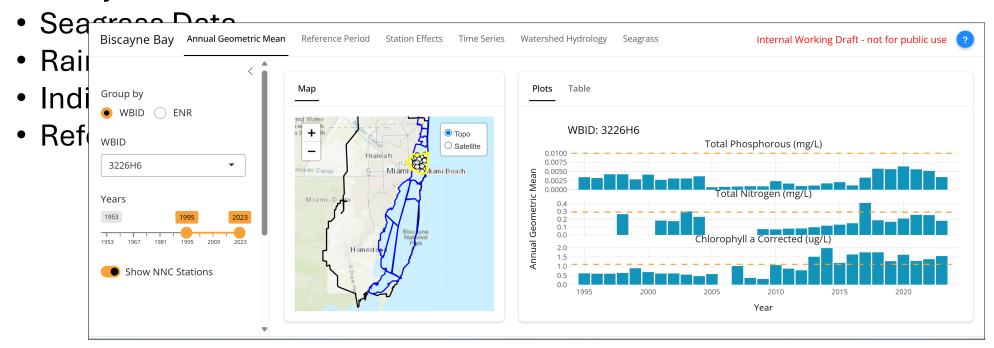
MIAMIDADE

Source: Reynolds et al. 2025

Source: Miami Dade County, 2019

Data Dashboard as a Collaborative Tool

- Interactive selection and spatial displays
- Effective and efficient for communicating with DEP and others
- Transparent process
- Data Evaluations
 - Verify DEP #'s



Go To Dashboard

Next Steps

Identify Reference Period

Identify Pollutant Loads

• Work with stakeholders to understand planned projects that have potential nutrient load reduction benefits.

• Continue communication with FDEP to document decisions associated with the analytical pathway.

THANK YOU

Pamela.Sweeney@miamidade.gov tjanicki@esassoc.com mwessel@esassoc.com

www.miamidade.gov/BiscayneBay

Concerned? Report it: Baywatch@miamidade.gov or 305-372-6955