

Memorandum



Date: May 3, 2023

Agenda Item No. 2(B)(1)

To: Honorable Chairman Oliver G. Gilbert, III
and Members, Board of County Commissioners

May 16, 2023

From: Daniella Levine Cava
Mayor

A handwritten signature in blue ink that reads "Daniella Levine Cava".

Subject: Transmittal of Biscayne Bay Watershed Management Advisory Board Annual Report Pursuant to Ordinance 21-72, Sec. 2-2426

The Chair of the Biscayne Bay Watershed Management Advisory Board (BBWMAB) has requested that the attached Annual Report be transmitted to the Board of County Commissioners (BCC) pursuant to Ordinance No. 14-65. The Annual Report reflects the activities and accomplishments of the Advisory Board toward the goal of improving and restoring the ecosystem of Biscayne Bay. Additionally, by request of the Chair of the BBWMAB, the 2023 Annual Biscayne Bay Report Card is being included with and incorporated as part of the report.

The Miami-Dade County Biscayne Bay Watershed Management Advisory Board (Advisory Board) was created by the Board of County Commissioners, through Ordinance No. 21-72, as recommended by the Biscayne Bay Task Force. The Advisory Board was created by newly enacted Article CLXIV of Chapter 2, Sections 2-2420 to 2-2426 of the Code of Miami-Dade County (Code) as a permanent board established to advise the Board of County Commissioners ("BCC") and the County Mayor on issues related to Biscayne Bay, including, but not limited to, (1) the long-term management of Biscayne Bay, (2) health of the marine community, (3) run-off and other impacts to water quality, (4) marine debris, (5) education and outreach, (6) economic development and vitality related to Biscayne Bay, and (7) how conditions in Biscayne Bay may affect residents and property owners. These recommendations to the Board of County Commissioners will be used to update chapter 24 of the Code of Miami-Dade County to incorporate a new management plan and prioritize projects for Biscayne Bay. In addition, the advisory board provides a local perspective on Biscayne Bay problems, issues, and solutions. The completed report required by this section shall be placed on an agenda of the Board pursuant to Ordinance No. 14-65.

Should you require additional information, please contact Irela Bagué, Chief Bay Officer, at (786) 812-1556 or Irela.Bague@miamidade.gov.

The Annual Report is found in Attachment A. The 2023 Biscayne Bay Report Card is incorporated as Attachment B.

c: Geri Bonzon-Keenan, County Attorney
Gerald Sanchez, First Assistant County Attorney
Jess McCarty, Executive Assistant County Attorney
Office of the Mayor Senior Staff
Irela Bagué, Chief Bay Officer
Yinka Majekodunmi, Commission Auditor
Jennifer Moon, Chief, Office of Policy and Budgetary Affairs
Basia Pruna, Director, Clerk of the Board

Memorandum



Date: May 3, 2023

To: Honorable Chairman Oliver G. Gilbert, III
and Members, Board of County Commissioners

From: Commissioner Danielle Cohen Higgins
District 8 – Biscayne Bay Watershed Management Advisory Board Chair

Subject: Biscayne Bay Watershed Management Advisory Board Annual Report

On July 20, 2021, the Board of County Commissioners (Board) approved Ordinance [No. 21-72](#), relating to Biscayne Bay Task Force Recommendation 2-A – Establish by ordinance a Biscayne Bay Watershed Management Board, creating CLXIV of Chapter 2 of the Code of Miami-Dade County. Per Section 2-2426 of the Ordinance, the Board of County Commissioners directed the Chair or Vice Chair of the Biscayne Bay Watershed Management Advisory Board (BBWMAB) to present to the Board on an annual basis a written report describing the BBWMAB's activities and appear as needed before the Board to present any matters pertinent to the BBWMAB. The completed report required by this section shall be placed on an agenda of the Board pursuant to Ordinance No. 14-65.

The BBWMAB is grateful for the support of the Board, State, and Federal partners as we continue to adopt policies and take other actions as recommended by the Biscayne Bay Task Force (Task Force), implement projects to improve the health of Biscayne Bay (Bay), and work with the Chief Bay Officer (CBO) and County staff to develop the Reasonable Assurance Plan (RAP) and Watershed Management Plan (WMP) for Biscayne Bay.

As Chair of the BBWMAB, I am pleased to provide the 2022 report describing our work and accomplishments in our inaugural year.

BBWMAB Meetings:

The BBWMAB held its inaugural meeting on December 6, 2021 and hosted a total of four meetings during 2022. Meeting agendas and recordings can be found here:

[Biscayne Bay Watershed Management Advisory Board \(miamidade.gov\)](https://miamidade.gov/bbwmab)

Biscayne Bay Task Force Recommendations & Related Legislation Adopted:

The Board adopted [R-165-19](#) on 02/05/2019 creating the Biscayne Bay Task Force. The Task Force was charged with reviewing prior studies, relevant data, evaluations, and management planning and policy documents related to the Bay and to receive recommendations for the Bay's health and management. The Task Force met 18 times and received approximately 35 presentations related to the health and management of Biscayne Bay from local and state regulatory agencies, municipalities, academia, community-based organizations, and other key stakeholders.

The Task Force submitted its final report in June 2020, recommending an overarching governing and administrative structure to implement recommendations under seven policy themes: water quality, governance, infrastructure, watershed habitat restoration, natural infrastructure, marine debris, education and outreach, and funding.

The Task Force acknowledged that some recommended policies and projects could be implemented immediately by the County to address the areas within the watershed with the most significant water

quality issues, based on the currently available water quality data. In addition, the Task Force recommended a review of existing funding sources and highlighted the infrastructure recommendations to help reduce excess nutrient pollution and help restore the Bay watershed.

The following policies have been adopted by the Board in FY2021 following the sunseting of the Task Force:

CREATE BISCAYNE BAY RECOVERY WEBPAGE

Resolution to create and promote a Biscayne Bay recovery webpage providing the Biscayne Bay task force's report and Miami-Dade County's actions resulting from the Biscayne Bay Task Force's recommendations.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

4/20/2021

REGULATION OF FERTILIZER

Ordinance relating to regulation of fertilizer; creating Chapter 18C of the code of Miami-Dade County, Florida; regulating fertilizer application and usage in the incorporated and unincorporated areas; adopting the Florida Department of Environmental Protection's (FDEP) model ordinance for Florida-Friendly fertilizer use for urban landscapes; providing for additional and more stringent standards than the model ordinance, including an annual period during which fertilizer application generally would be prohibited, limitations on types of fertilizer including use of slow-release products, and a year-round prohibition on use of fertilizer containing phosphorus without demonstrating a need through soil testing.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

4/20/2021

ROADWAY PAVEMENT & OVERLAY LOCATIONS OF SEPTIC SYSTEMS

Resolution to compile information and to identify the locations of roadway projects within Miami-Dade County which will require the cutting of roadway pavement within the next five years by Miami-Dade County, the state of Florida Department of Transportation, municipalities, and utility companies; to overlay the locations of septic systems which are vulnerable to failure or compromise in relation to the locations of the identified roadway projects; and to provide a report within 90 days.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

4/20/2021

STORMWATER RELATED PROJECTS TO PROTECT BISCAYNE BAY

Resolution urging the Florida Legislature to appropriate funding for stormwater-related projects to protect Biscayne Bay, including the upgrading of stormwater infrastructure, installation of additional stormwater grates, smart sensors, baffle boxes, and similar mechanisms and technologies, pilot projects, and research projects.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

4/20/2021

SEPTIC SYSTEM MAINTENANCE CAMPAIGN

Resolution to conduct an educational campaign as to septic system maintenance and to prepare reports.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

5/4/2021

COST-SHARE PARTNERSHIP WITH SFWMD

Resolution to negotiate a cost-share partnership with the South Florida Water Management District to update the 2005 Biscayne Bay Economic Study and to bring such partnership agreement to this board for approval.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

5/4/2021

BISCAYNE BAY FISH KILLS, OXYGEN LOSS, AND ALGAL BLOOMS

Develop proactive long-term measures that may help prevent fish kills, oxygen loss, and algal blooms in Biscayne Bay, develop an action plan to mitigate the negative consequences of any future fish kills, oxygen loss, or algal blooms in Biscayne Bay, collaborate with municipalities and universities, and provide reports.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

5/4/2021

PROMOTE AND IMPROVE AWARENESS REGARDING BISCAYNE BAY

Resolution to develop and implement a multilingual, multimedia public awareness campaign and educational outreach program to promote and improve awareness regarding Biscayne Bay.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

6/10/2021

SEPTIC TO SEWER TASK FORCE

Resolution creating a Septic to Sewer Task Force; setting forth powers and responsibilities of such task force; providing for a report; and providing for sunset.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

7/8/2021

CREATING BISCAYNE BAY PERMANENT BOARD

Ordinance creating the Miami-Dade County Biscayne Bay Watershed Management Advisory Board; creating Article CLXIV of Chapter 2 of the Code of Miami-Dade County, Florida; providing for the composition and duties of the board and other related matters; providing severability, inclusion in the code, and an effective date.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

7/20/2021

VOLUNTEER CERTIFICATION PROGRAM

Resolution to create the "Plastic Free 305" program, a volunteer certification program for businesses located within Miami-Dade County to be launched during Earth Month 2022; and to work with local nonprofit organizations in the development and implementation of the voluntary certification program and partner with the private sector and business organizations.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

12/8/2021

The following policies have been adopted by the Board in FY2022 following the creation of the BBWMAB:

WASTEWATER GRANT PROGRAM

Resolution to expeditiously develop a proposed reasonable assurance plan pursuant to state procedures and guidelines for such a plan; and urging the secretary of FDEP to expeditiously approve

such reasonable assurance plan, through the adoption of a final order, after the county submits such plan to FDEP for approval.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

3/1/2022

ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEM

Ordinance updating the Onsite Sewage Treatment and Disposal System (OSTDS). The ordinance provides requirements for new and replacement OSTDS; and provides effective dates for compliance for new and replacement OSTDS.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

6/7/2022

RECOGNIZE THE TOWN OF CUTLER BAY

Presentation on Town of Cutler Bay 8.4 Acres of land for conservation and resiliency project.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

7/19/2022

ORDINANCE RELATING TO ENVIRONMENTAL PROTECTION

Significant increase in fines for environmental violations with the potential to pollute the county's ground and surface waters, including Biscayne Bay. The penalties for these violations have remained unchanged for almost 20 years and have not been adjusted for inflation.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

7/19/2022

BBCW PHASE I RESTORATION PROJECT

Resolution approving amendment to agreement between Miami-Dade County and the South Florida Water Management District and attached certification of lands related to the dedication of the county's interests in approximately 322 acres of land owned by Miami-Dade County and located in the cutler wetlands area to the South Florida Water Management District for the Biscayne Bay Coastal Wetlands Phase I Restoration Project

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

7/19/2022

OPERATIONS AND MAINTENANCE OF MUNICIPAL STORMWATER SYSTEMS

Resolution to (1) develop proposed changes to the code of Miami-Dade County with respect to operations and maintenance of municipal stormwater systems, (2) develop new standards for design and construction of municipal stormwater systems, (3) expand the county's asset management system to include stormwater infrastructure, and (4) conduct educational campaigns related to Biscayne Bay, and to provide reports with respect to the foregoing; urging municipalities to conduct educational campaigns related to Biscayne Bay; and urging the Florida Department of Environmental Protection to strengthen requirements and increase auditing and enforcement of its National Pollutant Discharge Elimination System (NPDES) permits for municipal stormwater systems.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

9/1/2022

BISCAYNE BAY FRIENDLY DECALS AWARENESS CAMPAIGN

Resolution to manufacture a "Biscayne Bay friendly" decal, develop a program for entities to apply to purchase or receive decals, incorporate the promotion of such decal in the Biscayne Bay public

awareness campaign and educational outreach program, and collaborate with local nonprofit organizations.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

10/6/2022

BISCAYNE BAY AND FOR SEPTIC-TO-SEWER CONVERSION PROJECTS

Urging requesting the United States Congress and the United States Environmental Protection Agency to provide funding for the protection and enhancement of Biscayne Bay and for septic-to-sewer conversion projects. Urging the Florida Legislature to provide funding for the protection and enhancement of Biscayne Bay and for septic-to-sewer conversion projects and to modify the state wastewater grant program to enable Miami-Dade County to obtain wastewater grant funding.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

11/15/2022

FEASIBLE DISTANCE TO CONNECT TO PUBLIC SANITARY SEWER SYSTEMS

Ordinance relating to environmental protection revising standards related to feasible distance to connect to public sanitary sewers and public water mains. This ordinance amends Section 24-5 and Division 2 of Article III of Chapter 24 of the code of Miami-Dade County, Florida.

[Legislative Matter \(miamidade.gov\)](https://www.miamidade.gov/legislative-matter)

11/21/2022

Marine Debris Progress Update

Marine debris is one of the most widespread problems stressing the world's oceans, waterways, and coastlines. It can travel long distances and traverse territorial borders, and there are many difficulties in identifying its sources. There are two common sources of marine debris: the actions that take place on land (land-based sources) and the actions that take place in waterways and the marine environment (water-based sources). It is estimated that 80% of marine debris is from land-based sources.

The BBTF recommended the County create a comprehensive marine debris prevention, reduction, and removal program within the Department of Regulatory and Economic Resources – Division of Environmental Resources Management (RER-DERM) and adequately fund and staff the program and convene stakeholders to help further develop the program. In July 2022, RER-DERM hosted the first meeting of the Marine Debris Planning Team in support of creation of a comprehensive plan and discussed marine debris program development and goal setting. Members of the team include municipal, state, and federal partners as well as community organizations.

The following are additional highlights from the team's work throughout the year:

- Received nearly \$52,000K in grant funding for derelict vessel removal, removing 33 vessels totally more than 775 linear feet of bay bottom.
- Received \$31,000 in grant funding for derelict trap removal, removing over 270 traps from Bay waters.
- Completed monthly Surface Water Quality Monitoring Program, totaling over 34,000 water quality parameters collected.
- Two illegal structures were removed from the Environmentally Endangered Lands managed areas.
- Collected data from 460 stations across the entirety of the greater Biscayne Bay area.
- Completed multiple interagency efforts for disturbance response monitoring surveys at

31 locations to document coral diversity and density and the prevalence of coral bleaching and disease as part of the Florida Reef Resilience Program.

- Completed fish and benthic surveys at 31 locations to document the status and trends of the Florida Coral Reef ecosystems known as the National Coral Reef Monitoring Program and completed 23 field days treating 93 colonies for stony coral disease tissue loss disease.
- Successfully facilitated the deployment of 4 offshore artificial reefs with a combined footprint of 371 ft².
- An estimated 83.88 tons removed from the spoil islands. As of 2022, there is an average increase of 2.5 tons a year since 2013.

Biscayne Bay Grant Funding Update

All levels of government have a role in the management of the Bay; therefore, funding and investments for Bay restoration should come from local, state, and federal governments. The BBWMAB included regular funding updates at its meetings throughout the year. In addition, as recommended by the Task Force, the BBWMAB has made recommendations to the Board to make water quality restoration and public education an annual budget priority.

The County has been awarded funding through FDEP's Biscayne Bay Grant Program for projects including septic to sewer conversions, septic maintenance education, stormwater infrastructure advancements, innovative technology to predict and prevent sanitary sewer overflows, and intensive water quality investigations to identify sources of pollution entering the Miami River, Little River, and Biscayne Canal watersheds.

Phase 1 and Phase 2 Breakdown of the County's Awarded Projects

<https://www.miamidade.gov/environment/library/bbwmab/2022-12-15-fdep-grant-funding.pdf>

2022 – 2023 - FDEP Biscayne Bay Water Quality Awarded

The County has also been awarded funding through FDEP's Resilient Florida grant program, both through the state-funded initiative as well as the federal-funding initiative. The County received more than \$20 million dollars in state funding to complete stormwater projects that include retrofits and water quality improvements as well as land acquisition to promote and protect habitat and protect groundwater as well as hydrologic restoration in southern Miami-Dade to improve water quality received by the Bay. The County received an additional \$20 million in federal funding for stormwater improvements including elevating canal banks to allow for more storage to prevent flooding and retain more water versus releases to the Bay as well as additional land acquisition to support groundwater percolation and protection.

[Biscayne Bay Grant Program Fiscal Year 2022-23 11282022 OnlinePosted 0.pdf \(protectingfloridatogether.gov\)](#)

[2021-2022 Resilient Florida Grant Program Awards](#)

[2022-2023 Resilient Florida Grant Program Awards](#)

Biscayne Bay Commission Participation

In 2021, the Florida Legislature adopted [\(CS/HB 1177\)](#) creating the Biscayne Bay Commission (BBC). The BBC is required to monitor the state's strategic plan and create an associated financial plan to ensure its priorities are funded, using agencies representing the commission. BBC meetings provide a forum for exchange and serve as a clearinghouse for public information on all plans, programs and projects being conducted.

Honorable Chairman Oliver G. Gilbert, III
and Members, Board of County Commissioners

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The BBC is comprised of state agencies and three Board of County Commissioners who serve on the BBWMAB. BBWMAB Board members attended meetings, as well as the CBO and related County staff, who presented important updates, information, and facilitated BBC meeting coordination efforts.

The BBC held its inaugural meeting on January 04, 2022 and hosted a total of four meetings in 2022. Meeting agendas and recordings can be found here:

<https://protectingfloridatogether.gov/BiscayneBayCommission>

2022 Biscayne Bay Marine Health Summit

The BBTF recommendation 2C called for the organizing of a biannual Biscayne Bay Marine Health Summit. The CBO together with Miami-Dade County departments attended the Biscayne Bay Marine Health Summit. There was a total of 450 participants. A full recording of the summit can be found here: [2022 Biscayne Bay Marine Health Summit](#)

Biscayne Bay Reasonable Assurance Plan Update

The BBWMAB focus has been on the implementation of the recommendations of the Task Force, and the priority recommendation from the report is to establish science-based pollutant load reduction goals and interim targets to improve surface water and groundwater quality and, ultimately, restore seagrass and other natural habitats impacted by water quality issues.

A Reasonable Assurance Plan (RAP), also regarded as a Category 4b Plan, is a stakeholder-led initiative focused on achieving cleaner water faster than the traditional method of establishing regulatory Total Maximum Daily Loads and subsequent Basin Management

Action Plans to gain compliance with the state's estuarine numeric nutrient criteria. In partnership with key stakeholders, Miami-Dade County has identified the need for a RAP to most expeditiously address the water quality impairments that have recently characterized Biscayne Bay.

Earlier this year, the BBWMAB recommended the development of a RAP for consideration by the Board with the goal of setting nutrient reduction targets and seagrass restoration goals. Subsequently, the Board adopted a resolution [R-184-22](#) to expedite the development of the RAP.

The BBWMAB plans to continue to monitor and provide regular updates to the Board regarding the RAP process. The RAP will ultimately help form the roadmap to develop and be included in the new Biscayne Bay Watershed Management Plan to restore the health of the Bay and prevent future fish kills, algal blooms, seagrass and coral die-offs in the future.

The County working in collaboration with municipal partners, state agencies, community stakeholders, and environmental organizations expects a final Biscayne Bay RAP to be completed in 2024 and submitted to FDEP for Secretarial Adoption with final approval by the U.S. Department of Environmental Protection Agency (EPA).

BBWMAB Communications

To best keep the public advised on the work of the Biscayne Bay Watershed Management Advisory Board, the County created the following webpage. The webpage provides information about BBWMAB membership, meeting notices and agendas, meeting recordings, documents, and resources. [Biscayne Bay Watershed Management Advisory Board \(miamidade.gov\)](#) and can also be found on FDEP's webpage [Biscayne Bay Commission | Water Quality Dashboard \(protectingfloridatogether.gov\)](#).

Honorable Chairman Oliver G. Gilbert, III
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If you have any questions, please contact Irela Bagué, Chief Bay Officer at
Irela.Bague@miamidade.gov

cc: Geri Bonzon-Keenan, County Attorney
Gerald Sanchez, First Assistant County Attorney
Jess McCarty, Executive Assistant County Attorney
Office of the Mayor Senior Staff
Jimmy Morales, Chief Operations Officer
Lourdes M. Gomez, Director, Department of Regulatory and Economic Resources
Jennifer Moon, Chief, Office of Policy and Budgetary Affairs
Yinka Majekodunmi, Commission Auditor
Basia Pruna, Director, Clerk of the Board

Memorandum



Date: April 14, 2023

To: Honorable Chairman Oliver G. Gilbert, III
and Members, Board of County Commissioners

From: Daniella Levine Cava
Mayor

A handwritten signature in blue ink that reads "Daniella Levine Cava".

Subject: Report on the 2023 Annual Report Card Program on the Health of Biscayne Bay –
Directive No. 180799

This report is provided pursuant to Resolution No. R-463-18, which I sponsored as Commissioner, directing the County Mayor or County Mayor's designee to develop an annual "report card" program that evaluates the health of Biscayne Bay and employs a simple and easy-to-understand "stop-light" approach to reporting on the health of Biscayne Bay. The Resolution further directed that the health evaluation shall be data-driven, shall use sound scientific principles, shall incorporate information on water quality and habitat values throughout Biscayne Bay, shall include easy-to-read graphics suitable for the general public to understand, and that the results of the health evaluation shall be made publicly accessible.

The Biscayne Bay Report Card was developed by staff in the Department of Regulatory and Economic Resources, Division of Environmental Resources Management (DERM). The County has created a website dedicated to Biscayne Bay (www.miamidade.gov/BiscayneBay) which provides public access to the annual report card in an interactive online format. Please see the attached annual report, 2023 Biscayne Bay Report Card, for your review. Out of the 12 regions in the Bay, nine areas remained as rated in 2022, with three showing some deterioration. These results can vary from year to year, making it all the more important to continue our long-term commitment to ongoing Bay initiatives. The report card underscores our need to continue aggressive pursuit of the many positive actions that my administration has undertaken to restore the health of the Bay. These actions will require ongoing support and commitment from our state and municipal partners, since we know water quality is unaffected by jurisdictional boundaries.

Last year the Board supported the adoption of increased fines for over two dozen violations that can impact water quality. The County's enforcement actions in responding to incidents of pollution in the Bay received significant media attention and showcased this community's very serious commitment to Bay protection. These changes were made to address violations resulting in impacts to groundwater and surface waters. The increased fines serve as a deterrent such that over time, fewer of these offenses occur through greater awareness and education of the cost of negatively impacting environmental resources or threatening the health of the community. In the first six months since the increase in civil penalties, over 200 citations for various environmental violations were issued. I want to also applaud our municipal partners who joined us in being responsible custodians of construction sites along the Bay within their municipal boundaries and assisted in DERM's efforts to eradicate illegal connections to our stormwater system.

As you are aware, DERM's Water Management Division has been awarded \$23 million in grants from the Florida Department of Environmental Protection (FDEP) that are key to ensuring that our future stormwater efforts prioritize management of both water quality and quantity. Flood protection cannot sacrifice water quality if we are serious about Bay health. We have already awarded a contract to implement pilots to test three different innovative stormwater treatment technologies. We were also awarded federal funds to improve water quality in the 127th Street Canal which has been visibly affected for years from chemicals and nutrients emanating from adjacent land uses, and groundwater and stormwater runoff.

Funding from FDEP has also been awarded to identify sources of surface and groundwater pollution in the hardest hit basins, including the Miami River, Little River, and Biscayne Canal, and the County will be working with partners to develop a model that can help us understand how pollution may move through our water resources. In the coming weeks, as part of the same funding effort, pilots for smart cover technology will continue to be deployed to assist us in detecting and preventing sanitary sewer overflows before they occur. The Board also supported critical legislation requiring improved septic standards in areas where our community lacks sewer infrastructure in order to reduce the amount of nutrients migrating through the groundwater to Biscayne Bay. The Board also adopted more stringent regulations relative to feasible distance, ensuring that more sewer connections are made as development and redevelopment occur in our community. We continue to aggressively pursue grant opportunities to assist with implementing septic to sewer conversions, while advancing educational efforts through the "Connect 2 Protect" program. Many more homes will have access to sanitary sewers over the next few years, helping to eliminate pollution effluent to the Bay from septic systems.

Our Environmentally Endangered Lands (EEL) program was also awarded over \$5 million in state funding last year to match County dollars to acquire lands identified on its priority acquisition list. The EEL program conducts important restoration projects that serve to stave off saltwater intrusion and the effects of storm surge, help protect drinking water and provide aquifer recharge, and prevent polluted groundwater from reaching surface waters.

Three years ago, a massive fish kill became the flashpoint for renewed attention to the health of the Bay. This event was preceded by several basins in the Biscayne Bay watershed having experienced significant reductions in seagrass loss over the years. The fish kill made our entire community aware of the importance of water quality. It also put a spotlight on the role that our activity on the land plays in impacting Biscayne Bay. We learned that nutrients, caused by pollutants from our streets and neighborhoods flowing off our "watershed" as both stormwater and groundwater, were in large part to blame for the die off. That is why our continued attention and commitment to protecting Biscayne Bay is so important.

As our community continues to grow and develop, stewardship of our environment must remain a priority in our policy development. The real key to protecting the Bay is not actually out on the Bay, it is on land where we live and work. We know that the way we handle our waste, how we maintain our septic tanks, how we manage our yard waste or landscape, and even what we do with household goods all have the potential to impact our water on its journey from our land to the Bay.

We must continue to help the Bay by making responsible choices about the maintenance of our septic tanks, refraining from using fertilizer during rainy season, choosing to can our cooking oil and grease instead of dumping it down the drain, and making the conscious choice to not litter. For communities interested in educating their residents on responsible fertilizer use under the ordinance, please visit www.miamidade.gov/BiscayneBay and download our toolkit.

The health of Biscayne Bay is a reflection on our quality of life as a community. My administration will continue to prioritize water resource protection with the continued development of educational and legislative initiatives to this end, including better sanitation systems, better ways to manage water, and ensuring that we continue to invest in the expansion of our EEL program, since we all know that high quality regional preserve areas provide significant stormwater management that support enhanced water quality protection. Not only do natural areas provide a place for water to go, they also improve water quality as it journeys to the Bay, in addition to providing habitat benefits.

I will soon be proposing new criteria relative to preservation of pervious areas, which will amplify the benefits of last year's enactment of the new County Flood Criteria. This legislation provided further solutions to our future growth by updating minimum elevation requirements for roadways, canal banks, and individual lots as we develop and redevelop, creating storage capacity during rain events within our urban areas as we prepare for the rising groundwater levels that will accompany sea-level rise. Adoption of impervious area standards along with the implementation of additional water quality treatment standards for stormwater infrastructure will ensure that on site water quality and storage requirements are maintained in perpetuity over the life of a development.

I also want to recognize the work of our Chief Bay Officer, Irela Bague and the Biscayne Bay Watershed Management Advisory Board, whose work advising the Board included recommending that the County work with the state and federal government to develop a Reasonable Assurance Plan (RAP), in collaboration with municipalities, the state, and other bay stakeholders. The RAP will allow the County and our collaborators to address our numerous water quality impairments with a focus on nutrient loading reductions. It will establish pollutant loading allocations across the watershed to help reduce the amount of nutrients entering canals and the Bay. In turn, this will help the County and its collaborators to foster healthier water quality conditions for seagrass communities to rebound.

This weekend we are celebrating the 41st Anniversary of Baynanza, the County's signature annual cleanup of Biscayne Bay. Miami-Dade County has been committed to cleaning up the Bay for over four decades. During those 41 years, over 200,000 people have removed more than 1 million pounds of trash from our shoreline. And in that same time, our community has grown by over a million people and will continue to grow. That is why we must continue to provide solutions that will allow us to live in South Florida in a way that minimizes impacts on resources and preserves our quality of life. Clean water, clean air, streets that are not flooded – my administration, with continued strong support from the Board, will make progress in our mission to save Biscayne Bay.

In accordance with Ordinance 14-65, this memorandum and report will be placed on the next available Board meeting agenda. If you have any questions regarding this report, please contact Lourdes Gomez, RER Director, at 305-375-2886 or Lourdes.Gomez@miamidade.gov or Lisa Spadafina, Assistant Director, RER-DERM at 305-372-6754 or Lisa.Spadafina@miamidade.gov.

Attachment: Report- *2023 Biscayne Bay Report Card* (DERM)

c: Geri Bonzon-Keenan, County Attorney
 Gerald Sanchez, First Assistant County Attorney
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 Office of the Mayor Senior Staff
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 Yinka Majekodunmi, Commission Auditor
 Basia Pruna, Director, Clerk of the Board
 Eugene Love, Agenda Coordinator

2023 Biscayne Bay Report Card - Summary

From start to finish, 2022 was an important year for our community and Biscayne Bay. Last year marked year two since the onset of the COVID-19 pandemic, during which we were reminded of how resilient our community can be. We were also reminded of how important Biscayne Bay is to those who visit or call Miami-Dade County home. Whether it was finding solace in the outdoors with a walk along the Bay, going for a paddle, or assembling friends for a quick shoreline cleanup, Biscayne Bay provided an outlet.



Spiny lobsters use many habitats within Biscayne Bay and offshore as they grow. Photographed by DERM biologists, while assessing coverage of seagrass and sponges throughout the bay.

Months after the onset of the pandemic, the Biscayne Bay Task Force's efforts culminated in a report to the Board of County Commissioners (Board) in the summer of 2020 that was approved – and the work began. One key piece of legislation recommended by the Biscayne Bay Task Force that has since been implemented is the County's Fertilizer Ordinance. Spearheaded by then-commissioner Levine Cava and championed by local non-profits and later the Board, the goal of the fertilizer ordinance is to help reduce pollutant loading to Biscayne Bay and its tributaries. During the summer months, when rainfall is heaviest, fertilizer use is restricted to prevent fertilizer and its nutrients from potentially impacting the Bay, canals, and groundwater. Furthermore, the use of fertilizer containing phosphorus is prohibited year-round. The Biscayne Bay Watershed Management Advisory Board held its first full year of meetings in 2022. The Watershed Board is the governance structure envisioned by the Biscayne Bay Task Force to act as, for the first time, a body of stakeholders from diverse disciplines to oversee the implementation of Biscayne Bay restoration initiatives over time. Various policy initiatives were conceived of or advanced through the Watershed Board this past year as recommendations to the Board including policies related to stormwater and water quality. Additional state dollars also were received this year to further the County's restoration goals, with an additional \$14.5 million announced as part of the Florida Department of Environmental Protection's (FDEP) Water Quality Grant Program to specifically focus on septic-to-sewer conversions where septic systems are likely to or are already failing and may be contributing nutrients to the Bay.

Among the nine actions taken by the Board in 2022 in direct support of Biscayne Bay restoration, one of the most significant initiatives was to direct the County to develop a Reasonable Assurance Plan (RAP). The County, in collaboration with municipalities, the state, and other bay stakeholders, is developing a RAP for Biscayne Bay to address the Bay's water quality impairments with a focus on nutrient loading reductions. The RAP must be approved by FDEP, and it will establish pollutant loading allocations across the watershed to help reduce the amount of nutrients entering canals and the Bay. In turn, this will help the County and its collaborators to foster healthier water quality conditions for seagrasses to rebound.

Setting seagrass and restoration goals is on the horizon, and the results of the 2023 Biscayne Bay Report Card program strongly indicate why these goals and actions are needed. In 2018, then-Commissioner Levine Cava sponsored a resolution approved by the Board to direct DERM to develop and implement an annual report card program that would serve as a user-friendly update on the status of the Bay's overall health using a red, yellow, and green "stoplight" approach. A rigorous methodology was established to create a historic baseline that represents healthier Bay conditions against which each current year of data will be compared as well as a process for analyzing five water quality parameters and two habitat parameters. To evaluate current

conditions of the Bay, the annual geometric means for each parameter are assigned a stoplight score and are compared to the historic baseline. The evaluation presented provides an overall stoplight score per region. The table below provides a snapshot of changes from year to year without inferring any statistically significant trends. Trends will be evaluated over time when additional years of data analysis can be performed. It is noted that short-term changes between years are not uncommon as climatological patterns, changes in rainfall and incidence of severe storms, water management activities and other factors differ between years. Presented herein via the link below is the 2023 Biscayne Bay Report Card, reporting on the state of the Bay based on data collected during the 2022 calendar year. The online interactive tool showcasing the report card and a discussion of results can be found at www.miamidade.gov/BiscayneBay. More information on the methodology describing how the report card was developed can be found at the “Methodology” tab of the online tool. Information on what the public can do to help protect and restore Biscayne Bay can be found at the “Restoring Biscayne Bay” tab. Additional resources on the seagrass loss in northern Biscayne Bay can be found at a link on the “Submerged Aquatic Vegetation” tab.

The findings of the 2023 Biscayne Bay Report Card continue to support analyses from prior years indicating that nutrients and bacteria from within the watershed are documented in canals at concentrations that can ultimately impact Bay resources. Conditions noted in the 2023 Biscayne Bay Report Card are similar to those found in past report cards, with few notable changes and all regions in the overall score are either in “fair” or “poor” condition. Most regions of Biscayne Bay, including the highly compartmentalized basins of northern Biscayne Bay, are now or largely remain in the “poor” to “fair” range, with a decrease in sponge frequency in South North Bay-C noted. Reduced seagrass cover in the north, as well as nutrient inputs and elevated

chlorophyll concentrations across the bay relative to baseline conditions remain an issue. Total phosphorus conditions are generally “fair” or “poor” throughout northern Biscayne Bay and most tidal portions of tributaries across the watershed. Total nitrogen and chlorophyll-a remain largely “fair” or “poor” across Biscayne Bay and its tributaries, with South North Bay-A remaining in “poor” condition for several years, along with most coastal regions. This was the first year that all regions but for South North Bay – C are in “poor” condition for elevated chlorophyll levels. This aligns with the state’s recent designation of several regions in Biscayne Bay impaired for chlorophyll-a and/or total nitrogen.

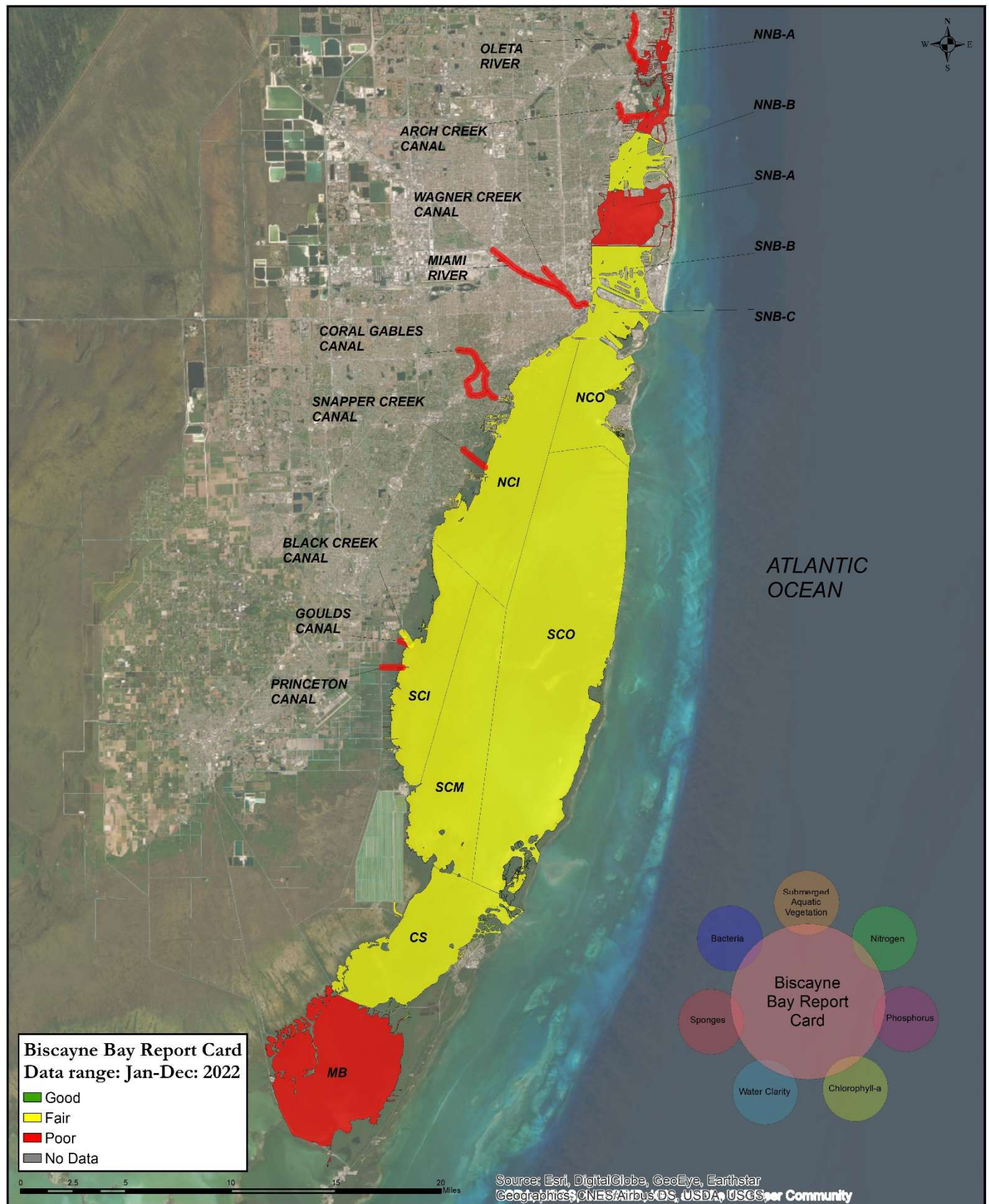


A cushion sea star in turtle grass, photographed by DERM biologists in northern Miami-Dade County.

The County and its partners are committed to accomplishing major goals established for

Biscayne Bay restoration in the coming years to restore the Bay’s health and resilience. The County will continue to engage with stakeholders, academic institutions, state and federal resource agencies and municipalities to set goals and priorities as well as undertake infrastructure projects and technical investigations that will help identify potential sources of pollution and continue our work to reduce or eliminate pollution reaching our Bay.

2023 Biscayne Bay Report Card



Report Card Region	2019 Score	2020 Score	2021 Score	2022 Score	2023 Score	2023 Biscayne Bay Health Status by Region*
						<div>0 – 2.90</div> <div>2.90 – 3.90</div> <div>>3.90</div>
NNB-A	Fair	Poor	Poor	Fair (3)	Poor (2.5)	Continued elevated nutrients and chlorophyll-a remains high. Additionally, <i>E. coli</i> concentrations increased substantially, and water clarity deteriorated.
NNB-B	Fair	Fair	Poor	Fair	Fair	Continued sparse seagrass cover following die-off events with little recovery, nutrient inputs and elevated chlorophyll-a concentrations relative to baseline conditions.
SNB-A	Poor	Poor	Poor	Poor	Poor	Continued decline relative to baseline conditions following seagrass die off with little recovery and continued elevated chlorophyll-a concentrations and nutrient inputs.
SNB-B	Poor	Fair	Fair	Fair	Fair	Continued sparse seagrass cover from the Julia Tuttle Causeway to MacArthur Causeway, and sustained nutrient inputs and elevated chlorophyll-a.
SNB-C	Fair	Fair	Fair	Good (4)	Fair (3.9)	Seagrass cover and sponge frequency declined while chlorophyll-a increased slightly.
NCI	Fair	Fair	Poor	Fair	Fair	Algal blooms have impacted seagrass cover, and elevated nutrient inputs and chlorophyll-a concentrations relative to baseline conditions.
NCO	Fair	Fair	Fair	Fair	Fair	Sustained high chlorophyll-a concentrations, and some elevated nutrient inputs relative to baseline conditions. Slight improvement in SAV and Total Nitrogen concentrations.
SCI	Poor	Fair	Fair	Fair	Fair	Sustained low sponge frequency, nutrient inputs and elevated chlorophyll-a concentrations relative to baseline conditions.
SCM	Fair	Good	Fair	Fair	Fair	While seagrass cover is consistent with historic conditions this basin has elevated nutrients, including nitrogen and chlorophyll-a as well as low sponge frequency.
SCO	Good	Fair	Fair	Fair	Fair	Seagrass cover continues to be consistent, however total nitrogen and chlorophyll-a continue to be elevated.
CS	Fair	Fair	Fair	Fair	Fair	Continued sparse seagrass cover with nutrient inputs and elevated chlorophyll-a concentrations relative to baseline conditions.
MB	Poor	Poor	Poor	Fair (3)	Poor (2.5)	Decline in seagrass cover and sponge frequency and increased chlorophyll-a

* The annual Biscayne Bay Report Card uses data from the prior calendar year, January through December.