Memorandum

Date: June 28, 2023

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

Agenda Item No. 2(B)(8)
July 18, 2023

From: Daniella Levine Cava
Mayor

Subject: Report on the County's Code Changes Related to Operations, Maintenance, Design and Construction of Municipal Stormwater Systems; Expanding the County's Asset Management System to Include Stormwater Infrastructure; and Conducting Educational Campaigns Related to Biscayne Bay- Directive No. 221513

Executive Summary

On July 7, 2022, the Board of County Commissioners (Board) adopted Resolution No. R-838-22, sponsored by Commissioners Cohen Higgins, Heyman, Monestime, Sosa, and Souto, directing the County Mayor or County Mayor's designee to prepare a report on developing proposed changes to the Code of Miami-Dade County related to the operations, maintenance, and design standards to be used in the construction of municipal stormwater systems; expansion of the County's asset management system to include stormwater infrastructure; and conducting educational campaigns related to Biscayne Bay.

Our County's total stormwater management strategy necessarily depends on the independent actions of a number of private and public entities that manage their own stormwater infrastructure. The actions of our state and federal partners and the choices made by private operators and our 34 municipal stormwater utility jurisdictions affect our ability to manage flooding while ensuring that such management does not adversely affect water quality. We see the result of any one entity's inability to invest in needed upgrades or maintenance when our community experiences extreme weather events. Localized flooding becomes the very visible signature of underinvestment or improper maintenance.

Although we must keep in mind that no stormwater infrastructure is designed to immediately clear water off the ground, there are many available strategies that intentionally rely on ground infiltration over several hours, conveyance, retention and limited direct discharges to control flooding. The best choice of applications depends on specific rain volumes and intensities as well as on local property conditions; however, prolonged periods of standing water are generally a sign that some form of additional mitigation is needed. Many of the flood events that we see in the news are caused by lack of infrastructure investment, proper maintenance, and at times, the localized need for existing development to be upgraded to current standards.

Ordinance Highlights:

With this reality in mind, the Department of Regulatory and Economic Resources, Division of Environmental Resources Management (RER-DERM) had been working on an ordinance prior to the issuance of the subject directive to ensure responsible stormwater system management and

maintenance within Miami-Dade County. The ordinance is summarized below and in the attached slides, with further details in the body of this report.

- System performance is addressed by requiring mapping and recordkeeping from municipalities and other public entities such as special taxing districts, community development districts (CDD's), and private property owners discharging to or operating infrastructure in the public right of way. Asset inventory and maintenance record keeping and reporting are critical to ensuring that all of our roadways are ready to responsibly handle rain events.

- Recertification of stormwater systems will also be required within three years of the adoption of the ordinance and in 10-year increments thereafter, as occurs today for buildings. The County may require shorter recertification cycles on a system-by system basis. Recertification of systems will ensure that the existing drainage protects from flooding impacts and does not adversely impact water quality in Biscayne Bay, and that systems continue to manage stormwater as originally designed. Jurisdictions will be responsible for timely implementing corrective actions for system deficiencies that are identified to ensure that flooding and pollution risks are minimized.

- These requirements for existing systems will be complemented by improved retention requirements on individual parcels to address water quality, and flood control. Parcels will be required to handle a minimum retention equivalent to a 10-year storm event (which improves the existing retention requirement by anywhere from 30 – almost 100percent compared to today's standard for individual lots depending on the specific locations and circumstances of a parcel). Higher retention requirements such as for a 25-year storm event are expanded to apply when outfall discharges are planned, and 100-year retention applicability is expanding beyond the Cut and Fill basins to include properties outside of the UDB.

- Minimum permeability requirements are also being codified and clarified to ensure that alterations to existing properties do not adversely impact their neighbors with respect to stormwater discharge. Minimum permeability is quantified as a standard to allow for new permeable materials and soils to be acceptable to meet pervious area requirements. This will be particularly significant in addressing neighbor to neighbor stormwater concerns that we know are received by all of your offices, where improvements to adjacent properties are blamed for flood concerns. Green infrastructure is also encouraged through this code as a best practice solution to meet new standards.

- In addition, any stormwater systems with direct discharge to surface water bodies must have no debris or sediment. We have all seen how sediment and debris smother water quality in our canals and the Bay. We cannot allow the quality of receiving surface water bodies to be degraded by drainage discharge if we are committed to water quality and the health of the Bay.

These changes will apply holistically to all development as well as to new or replacement municipal stormwater system infrastructure.

Outreach and Education

On June 22, 2023, RER-DERM in conjunction with the Chief Bay Officer (CBO), hosted the 2023 Municipal Water Quality Coordination Workshop. This was the second year that the County has brought together municipal partners to discuss Best Management Practices in preparation for the rainy season; FDEP Biscayne Bay water quality grants and projects being implemented; and provided an update on the Reasonable Assurance Plan. This proposed legislative change was also workshopped as the first of a series of planned outreach events which will solicit feedback from all stakeholders. If enacted, the changes will advance the goals outlined in Resolution No. R-838-22.

Many other outreach efforts have also been designed and initiated to engage our community into action while educating our citizens on the vital importance a healthy Biscayne Bay plays in the state of our environment and economy. The County is continuing its historic campaigns on the Bay and other related topics, in addition to launching new outreach initiatives as outlined below.

We look forward to enlisting all of our stormwater public and private partners in achieving our collective water quality and flood management goals. By codifying responsible infrastructure management strategies and stormwater solutions, we can prioritize water quality and maintain effective flood control. Together, these standards will ensure that existing and future drainage infrastructure keeps our community dry without sacrificing the health of our Bay.

Background

The Stormwater Regulatory Framework Stems from the Federal Clean Water Act (CWA)

Under Section 303(c)(2)(A) of the CWA, states and authorized tribes are responsible for adopting water quality standards that are consistent with the designated uses involved and the water quality criteria for such waters based upon such uses. These standards shall protect the public health and welfare and enhance the quality of water. Furthermore, the Water Quality Standards, 40 CFR, establishes the requirements for states and tribes to review, revise and adopt water quality standards. It also establishes the procedures for the U. S. Environmental Protection Agency (EPA) to review, approve, disapprove and promulgate water quality standards pursuant to section 303 (c) of the CWA.

The CWA establishes complementary technology-based and water quality-based approaches to control water pollution. The technology-based approach sets uniform minimum requirements through effluent limitation guidelines, where available, or "best professional judgement" for non-municipal dischargers and secondary treatment requirements for publicly owned facilities. These requirements are based on the known capabilities of available technologies to control pollutant

discharges. The water quality-based approach emphasizes the overall quality of water within a waterbody and provides a mechanism by which states and tribes may control the amount of pollution entering the waterbody.

In accordance with CWA Section 106(e)(1) and 40 CFR 130.4, states and tribes establish appropriate monitoring methods and procedures necessary to compile and analyze data on the quality of their waters. Monitoring is an important element in the water quality-based approach because state and tribal monitoring programs provide the data necessary to characterize waters and support the following:

- Assessing the extent to which waters meet water quality standards;
- Developing, reviewing, and revising water quality standards;
- Identifying impaired or threatened waters;
- Establishing total maximum daily loads;
- Developing water quality-based effluent limits;
- Tracking trends in water quality over time; and,
- Identifying emerging problems

States and tribes develop and maintain monitoring strategies that describe how monitoring objectives will be met as well as the necessary resources for implementation. For each waterbody type, these strategies include objectives, designs, indicators, quality assurance, data management, analysis and assessment, reporting, resources and infrastructure, and programmatic evaluation. Such state and tribal strategies generally identify monitoring gaps, help set monitoring priorities, and guide program enhancement funding such as for new state laboratory capacities, fish tissue monitoring, data management, and new biological monitoring protocols.

The National Pollutant Discharge Elimination System (NPDES) permit program is administered by the EPA. This program requires permits for stormwater discharges into waters of the United States from industrial activities as well as from large and medium municipal separate stormwater systems. In Florida, EPA has delegated authority to issue NPDES permits to the FDEP. The NPDES permits are issued separately to Miami-Dade County, municipalities and other agencies such as FDOT District VI, the FDOT Turnpike Enterprise, and MDX. The NPDES permit is issued pursuant to Section 403.0885, Florida Statutes, and rules promulgated thereunder. The FDEP implements the stormwater element of the federal NPDES mandate. Authorized by Section 403.0885, F.S., the FDEP NPDES Stormwater Program is set out in various provisions within Chapters 62-4, 62-620, 62-621 and 62-624 of the Florida Administrative Code (F.A.C.). Chapter 62-624, F.A.C., specifically addresses Municipal Separate Storm Sewer Systems (MS4s).

Under the NPDES permit, the County, municipalities and other agencies (individual permittees) are authorized to discharge stormwater, from all portions of the MS4s owned or operated by any of the permittees, to waters of the State in accordance with the approved Stormwater Management Programs, effluent limitations, monitoring requirements, and other provisions as set forth in the permit.

Per Chapter 24 of the Code of Miami-Dade County, the Board establishes "the reasonable control and regulation of activities which are causing or may cause pollution or contamination of air, water, soil" and properties as required "for the protection and preservation of the public health, safety and welfare." The Board finds that it is necessary to establish, within the unincorporated and incorporated areas of Miami-Dade County, countywide water control to maintain "adequate water levels, flood control, drainage, water conservation, and prevention of saltwater intrusion;" as well as provide "cooperation with federal, State and local agencies and authorities."

The Board further finds it necessary to maintain, within Miami-Dade County, a freshwater management program for "the purposes of providing adequate water levels, flood control, water conservation, protection of water quality, recharge to the Biscayne Aquifer, and prevention of saltwater intrusion," as well as for the protection of the "natural functions between Miami-Dade County's wetlands and the natural systems in Everglades National Park;" for managing freshwater resources in "accordance with environmental standards and management criteria as recommended by the Miami-Dade County Comprehensive Development Master Plan and Chapter 33B of the Code of Miami-Dade County."
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The provisions of Chapter 24 are not intended and shall not be construed as superseding or conflicting with any statutory provisions relating to, or rules and regulations promulgated by the FDEP but shall be construed as implementing and assisting the enforcement thereof. Lastly, as stated in Chapter 24, it is not the intent of the Board to preempt the authority of any municipality in the exercise of its authority or to restrict it from adopting more stringent standards. The Board shall adopt, revise, and amend appropriate rules and regulations as necessary for the implementation and effective enforcement, administration and interpretation of the provisions of Chapter 24, and to provide for the effective and continuing control and regulation of water pollution in the County.

Stormwater Management Design Standards

Effective stormwater management occurs by using a holistic system management approach. This approach takes into account the effectiveness of each stormwater strategy, the implementation and maintenance costs, and the resulting system effectiveness and performance. A successful stormwater management system looks at the universe of its components, rather than looking at each practice in isolation. Some individual strategies may not be effective alone but, in combination with others, may still provide a key function and system benefit.

Stormwater inlets consist essentially of two parts. The upper portion consists of a grate, and the lower portion has an underground vault, outlet trap, baffles, weirs and other components that allow water to run through, with any solid matter (debris, litter, etc.) settling in the lower portion of the vault. Grates can be removed to clean out collected solids that have accumulated to levels that could potentially inhibit the drainage infrastructure performance. Water entering through the grate will typically collect to a certain level before it is discharged into underground pipes to exfiltrate naturally into the ground.

Minimum inlet design standards are provided in the Miami-Dade County Public Works Manual, Section D4.04. The capacity of inlets, grates and openings must be at least equal to the capacity of the outlet pipe(s). Since accumulation of debris is anticipated at the grate, inlets are required to be oversized, i.e. the minimum opening area is to be increased by a minimum of 50%. In addition, the size of vaults or basins connected to inlets are designed in response to the drainage area being served and the ease and accessibility to perform maintenance. The critical operation of the infrastructure requires that the outlet exfiltration piping (underground) be free of obstructions and debris. This is accomplished with different sizing and configurations selected by the design engineer to best fit the location being served. Different combinations of inlet configurations are typically used to reduce potential clogging impacts. Stormwater infrastructure is designed to function with a maintenance cycle that is practical and will generally function well through a number of rain events, without needing continuous maintenance. Locations with heavier vegetation may require shorter cleaning cycles. Inlets in locations with high volume traffic patterns, may be much larger to provide sufficient storage thus allowing for longer maintenance cycles.

Outfalls which directly discharge onto surface waters, require a Class II permit in Miami-Dade County. This is a countywide requirement. Minimum standards for outfalls are found in the "Permit Information Manual IV" of the South Florida Water Management District, Chapter 24 of the Code of Miami-Dade County, and the County's Public Works Manual. For water quality concerns, pre-treatment is required for all outfalls, such as in the form of upstream structures designed and constructed to intercept debris and pollutants before they are discharged onto surface waters.

Stormwater Systems Maintenance

All stormwater management systems require maintenance. Appropriate operation and maintenance activities ensure that infrastructure will continue to function properly and yield expected water quantity and water quality benefits, protect public safety, meet legal standards, and protect communities' financial investment. Ensuring that infrastructure projects are planned and designed with maintenance in mind can help maximize environmental benefits and reduce the cost of the project over its life cycle.

Unlike the regional conveyance infrastructure in Miami-Dade County (primary and secondary canals), most of the local drainage infrastructure (tertiary systems) are designed to manage stormwater on individual properties or the local public right-of-way by retention and subsequent infiltration into the ground, directly recharging the Biscayne Aquifer. These local drainage systems are not connected to surface waters and, therefore, do not contribute to surface water pollution with direct discharges of debris and solid waste, although can provide a direct path for groundwater pollutants, which is why we educate the public not to dump chemicals into their neighborhood storm drain. Debris accumulated in these local drainage systems will mostly cause flooding impacts if left unattended.

Proper maintenance of any stormwater infrastructure begins with the understanding of the applicable Best Management Practices (BMPs). For stormwater management, BMPs are the

recommended ways to control the water quantity (particularly during storm events), and water quality by reducing the amount of pollution discharging from the system. BMPs support a cost-effective maintenance program and are separated into two categories: source control and treatment. Source control BMPs prevent pollution by controlling pollutants at their source. Treatment BMPs are used to treat stormwater that is already polluted.

The NPDES permit under state authority establishes a good framework of minimum inspections and maintenance activities required of each permittee. Except for non-stormwater discharges or spills, the NPDES permit authorizes all existing stormwater point source discharges to waters of the State from those portions of the MS4s owned or operated by the permittees. New stormwater discharges are authorized provided they meet all applicable requirements of the South Florida Water Management District (SFWMD) Environmental Resource Permitting (ERP) Program authorized pursuant to Part IV of Chapter 373, F.S.

Street sweeping reduces pollutants carried in runoff from street surfaces. The frequency of cleanings should reflect the rate of pollutant and debris buildup and should increase just before the rainy season. An effective program requires that street sweeping be conducted on a regular basis. Sweeper operators require training, and equipment needs to be maintained regularly to ensure that it is functioning as designed.

The practice of storm drain flushing is used to remove deposited materials from storm drain pipes to maintain their flow and/or their exfiltration capacity. The flushing schedule should be designed to prevent excessive buildup based on estimated inputs from the contributing drainage areas, cleaning history, and visual inspections. Storm drain flushing is used to collect and dispose of sediments and debris.

Catch basin cleaning removes excess pollutants and debris stored, thereby reducing high pollutant concentrations in a storm's first flush, preventing clogging, and restoring sediment-trapping capacity.

Maintenance should target areas with the greatest pollutant loading and those near sensitive water bodies. Treatment controls can also be used on-site to reduce the amount of polluted runoff that enters receiving waters. Runoff reduction, conveyance, and treatment practices (e.g., infiltration swales in median strips) can be incorporated into the design of new roadways and bridges to help contain pollutants from traffic as well as from catch basins.

Clean-up of debris and trash from conveyance infrastructure (canals) can reduce pollutant levels in surface waters downstream. Areas where dumping occurs frequently can be identified and inspected regularly. Maintenance and treatment controls require periodic inspection and maintenance to ensure that sediment, trash, and overgrown vegetation are not impeding the conveyance performance of the infrastructure.

Key Chapter 24 Code Changes Addressing Resolution No R-838-22

The proposed code changes outlined below are being presented to and discussed with municipalities, the development community, engineers, stakeholder groups and residents to ensure public input is received before finalizing requirements and presenting to the Board for adoption.

Development of proposed changes to chapter 24 of the Code of Miami-Dade County to create standards and requirements for the operation and maintenance of municipal stormwater systems located within Miami-Dade

1) The owner or operator of stormwater infrastructure installed or operating under the provisions of this chapter shall maintain it and keep records to indicate the operating efficiency of such facilities, and show whether or not such facilities are causing pollution.

2) Such records shall include the description of the operation, control tests, material usage, safety data sheets, equipment operation logs and records, maintenance records, repair receipts, disposal and manifest receipts, and other records as requested by the County.

3) Beginning in 2025, each owner or operator of a stormwater management system that serves the public right-of-way, community development district (CDD), or a special taxing district shall submit to the County each year, electronic files of the entire stormwater system asset inventory and annual maintenance report.

4) Public entities, special taxing districts, CDDs, and private property owners' associations, responsible for stormwater systems serving the public right-of-way or discharging onto the public right-of-way systems, will be responsible for obtaining recertification of all stormwater infrastructure that the respective entity owns or operates or that is owned, funded, or operated by or on behalf of the respective district or private property owners' association. Recertification of stormwater systems will ensure completion of periodic engineering performance assessments with respect to the management of water quality and flooding, and will provide a mechanism for failing systems to be upgraded or replaced.

Development of new proposed standards for the design and construction of new or replacement municipal stormwater system infrastructure with a focus on controls for pollutants such as nutrients from organic material, plastic, trash, chemicals, and sewer and septic runoff

The following changes will apply to all development, and not just to new or replacement municipal stormwater systems:

1) Setting minimum requirements and standards for development and other activities and actions that alter the storage, runoff volume or flow, course, treatment, discharge, disposal, ponding or flooding, or quality of stormwater.

2) Applications shall be evaluated to ensure prevention of stormwater seepage, runoff, and discharge onto adjacent and adjoining parcels. Evaluations shall be performed using generally accepted engineering and scientific standards and principles.

3) Detention facilities shall not collect or store a quantity of stormwater that exceeds the design limitation of the temporary storage area.

4) To protect stormwater quality, wastewater collection or transmission systems shall not be designed or constructed where stormwater can pond or flood, unless they are designed to be watertight.

5) Pre- and Post-development pollutant loading shall be calculated including existing and proposed drainage BMPs. Signed and sealed calculations shall be submitted for review and approval.

6) Post-development stormwater impacts and runoff shall be limited to pre-development levels at the site boundary.

7) Individual single-family and duplex residences that are not part of a subdivision shall meet stormwater quantity and quality standards such as a set minimum retention with zero off-site discharge. Site grading shall direct stormwater away from buildings and prevent stormwater from running off to or discharging onto an adjacent parcel. Green areas, swales, pervious pavers, pervious pavement, dry shallow exfiltration trenches, or retention shall be utilized to satisfy the minimum stormwater retention onsite.

8) Public right-of-way projects that are not part of a subdivision shall comply with stormwater quantity and quality standards. The right-of-way shall be graded to prevent stormwater to runoff or discharge onto adjacent parcels not approved for stormwater retention. Green areas, swales, retention or detention areas, and exfiltration trenches may be used when consistent with this Chapter, Chapter 2 of the Code of Miami-Dade County, and the County Public Works Manual.

9) Erosion and sedimentation controls shall be provided to limit impacts to existing drainage facilities and water bodies or natural preserve areas. The controls shall be included in the engineering plans to be submitted as part of permitting requirements. Construction projects involving more than one acre of impervious area shall include temporary structural stormwater features to handle stormwater runoff onsite from a 25-year, 3-day storm event. Open ground soils shall be stabilized or covered for protection from rainfall to prevent erosion and sedimentation into public rights-of-way, adjacent properties, water bodies, and natural preserved areas.

In addition, the Board recently adopted regulatory changes related to stormwater management (updated County Flood Criteria and Water Control Maps) and to septic tanks. The County is also partnering with the SFWMD to install booms to collect floating debris in the secondary canals.

Expansion of the County's existing asset management system to also include stormwater infrastructure for all stormwater systems operating throughout Miami-Dade County, in order to better facilitate informed decision making with respect to such infrastructure

Miami-Dade County has a robust ARCGIS inventory system including stormwater infrastructure countywide. The County has established procedures for the mapping updates done for all infrastructure, and we have a long-standing partnership with FDOT District VI where the County performs mapping for the FDOT and has interlocal agreements for cost sharing. On a voluntary basis, some municipalities share their infrastructure information with the County which is subsequently used for mapping updates. Implementation of the above referenced code changes requiring infrastructure asset records and recertification of stormwater systems will ensure that the County has access to more complete infrastructure information from all of our area stormwater management jurisdictions and will use this information in future regional modeling updates. The County has a standing offer to municipalities to negotiate interlocal agreements for cost sharing if the municipalities desire for the County to implement mapping of their infrastructure.

The County has a system of location and maintenance activity codes used by the County maintenance crews to log in their time, equipment and materials. This system has been successfully used for over 15 years to document the maintenance efforts in the regional conveyance system of secondary canals.

The County has identified the use of QR codes as a mobile technology option to log in maintenance activities in the local drainage systems. This option will be implemented starting with a pilot in FY 23-24. Updates are done using an application for smart phones. Data can then be downloaded and interfaced with our current ARCGIS inventory system for stormwater infrastructure countywide.

In addition, the County is expanding the public roads asset management inventory to create an interface with the current EAMS (asset inventory system). EAMS will incorporate the roadway asset data collected with GIS-LIDAR technology. We are working internally (RER-DERM, DTPW, and ITD) to interface the stormwater infrastructure data with EAMS as well. When implemented, maintenance crews will be able to login local drainage maintenance activities using a mobile application.

Educational Outreach

Resolution No. R-838-22 directs the County Mayor or County Mayor's designee to conduct greater educational campaigns related to Biscayne Bay, which should include: (a) encouraging individuals and businesses in Miami-Dade County to properly maintain septic tanks and teaching how to recognize a failing septic tank; and (b) neighborhood-focused outreach and citizen involvement events, such as community clean-ups, storm drain stenciling, and community adopt-a-street efforts.

RER-DERM has initiated multiple outreach efforts designed to engage our community into action and to educate our citizens on the vital importance a healthy Biscayne Bay plays in the state of our environment and economy. RER-DERM has recently launched a new septic system care webpage

at www.miamidade.gov/septic-care. This fully developed informational resource emphasizes the importance of routine septic system maintenance, details how users can recognize signs of septic system malfunction and illustrates how septic systems are tied to the health of our environment and Biscayne Bay through the release of nutrients across our watershed. In conjunction with the webpage release, RER-DERM has begun highlighting the importance of septic system care through multiple unique and recurring posts on the department's social media platforms. To date, social media posts across RER-DERM's website, Twitter and Facebook feeds have achieved over 800 impressions (defined as the number of times a post has appeared in search, in a follower's timeline or as a result of someone liking the Tweet), and the new septic care webpage has garnered approximately 4,000 page views. RER-DERM will continue to widely promote septic system care through the developed webpage and across County social media platforms to minimize physical printing and maximize budgetary resources and community reach.

The "Connect 2 Protect" campaign is a related ongoing campaign promoting the County's approach to extending sanitary sewer service to residents with septic systems in order to protect properties, health, and natural areas such as Biscayne Bay. The first focus of the program has been on the approximately 12,000 properties that have existing sewer infrastructure available for connection. Work will then shift to expanding sewers to capture systems based on risk. Traditional and new funding mechanisms are being pursued to accomplish system expansion.

Additionally, RER-DERM has enacted robust and varied educational campaigns for the County's new fertilizer ordinance for our business and homeowner communities. These campaigns focus on the detrimental role fertilizer nutrients play in the health of our watershed and bay, and further highlight the fertilizer restricted period along with the importance of nutrient reduction through proper vegetative waste management near water bodies and our storm water drainage system. These widespread campaigns include mass educational fertilizer awareness mailers to all registered Miami-Dade County businesses, numerous and varied messaging across RER-DERM's and the county's various social media platforms, development of a comprehensive resource webpage at www.miamidade.gov/fertilizer, and partnerships with fertilizer retail outlets resulting in the display of informational signage at fertilizer point-of-sale in Lowes and Walmart Garden Centers. RER-DERM also continues to participate in industry seminars, small business workshops and Florida-friendly fertilizer training events with our University of Florida Institute of Food and Agricultural Sciences (UF-IFAS) academic partner to actively promote the fertilizer ordinance and proper vegetative waste management.

RER-DERM has also recently launched Miami-Dade County's first single-use plastic reduction initiative entitled "Plastic Free 305." This program highlights the detrimental impacts to our bay and ocean from plastic waste, and rewards participation though community promotion on the new Plastic Free 305 website (www.miamidade.gov/plasticfree305). RER-DERM continues to create and promote unique educational content across all County social media and web platforms to educate our community on how littering anywhere in our county can impact our marine resources by transport through wind, canals, and storm water conveyance systems.

RER-DERM sponsors events throughout the year such as Baynanza and Adopt-A-Tree, in addition to participating in various outreach events across our community and in conjunction with

municipal partners. On June 22, 2022, the Chief Bay Officer (CBO) in partnership with RER-DERM, hosted a first-of-its-kind Municipal Stormwater Workshop at Port Miami, specifically designed for municipal managers and public works staff. The workshop topics included review of Florida's NPDES stormwater program regulations for stormwater discharges, coordination of enforcement actions associated with industrial and construction sites, and Biscayne Bay Water Quality grant opportunities. Over fifty participants representing ten municipalities attended. Participants were provided a packet of information with the County's environmental reporting guide, public education toolkits for the Fertilizer ban and Derelict Vessel removal process, and a list of key County contacts available to provide guidance and support for their municipality. This year the event was repeated with 20 municipalities in attendance. RER-DERM and the CBO will continue to organize this annual event as one of many avenues to advance its partnership with the many stormwater jurisdictions in our community.

The CBO also recently met with Miami-Dade County Public Libraries (MDPLS) and the County's newly appointed Artist-in-Residence, Xavier Cortada, to discuss creating a community awareness pilot project in the 13 Commission Districts. The pilot project will be part of the "Mouths of the Bay" campaign that will incorporate art to educate the public that everything on land ends up in Biscayne Bay and we should all do our part to not "feed" storm drains. This is in development along with the "Trash Talk" campaign, which plans to place QR code decals near specific storm drains that link to various topics and tips. For example, links to information on keeping storm drains free of trash, microplastics, leaf and grass clippings, and how to report clogged drains.

Through all of the aforementioned campaigns, RER-DERM and the CBO seek to promote citizen involvement in protecting Biscayne Bay from the detrimental impacts of polluted stormwater runoff. RER-DERM will utilize these events to enhance the educational campaigns by providing relevant and concise signage containing QR codes to the septic system care, fertilizer ordinance, and Plastic Free 305 webpages, in addition to producing and providing marketing/educational collateral.

The County also provided $1.26 million over a 2-year period in Environmental Enhancement and Education Grants through the Miami Foundation for programing aimed at heightening our residents' awareness of Miami-Dade's fragile environment. By partnering with community-based organizations, this messaging is able to reach expanded audiences.

The actions of the Board of County Commissioners and the Biscayne Bay Watershed Management Advisory Board will also continue to play a critical role in supporting these campaigns by raising public awareness on water quality issues related to Biscayne Bay.

In accordance with Ordinance No. 14-65, this report will be placed on the next available Board meeting agenda, without committee review. If you have any questions or require additional information, please contact Lourdes M. Gomez, Director, Department of Regulatory and Economic Resources, at Lourdes.Gomez@miamidade.gov.

Attachment

c: Geri Bonzon-Keenan, County Attorney
Gerald Sanchez, First Assistant County Attorney
Jess McCarty, Executive Assistant County Attorney
Office of the Mayor Senior Staff
Lourdes M. Gomez, Director, Department of Regulatory and Economic Resources
Lisa M. Spadafina, Assistant Director, RER-DERM
Jennifer Moon, Chief, Office of Policy and Budgetary Affairs
Yinka Majekodunmi, Commission Auditor
Basia Pruna, Director, Clerk of the Board
Eugene Love, Agenda Coordinator

Scope

MIAMI-DADE COUNTY

Ordinance Relating To Environmental Protection And Zoning To Improve Water Quality and Increase Flood Control

MDC014

- Amending selected sections of Chapter 24, Chapter 33, and Chapter 8cc of the code of Miami-Dade County
- Revising development standards and procedures relating to drainage and impervious surfaces
- Revising definitions and cross-references
- Making technical changes
- Providing for enforcement by civil penalty

Best Management Practices

- County approvals for all non-structural impervious surface improvements, *residential*, multifamily, commercial, swimming pools, paving and drainage (m-permits currently used for DERM reviews)
- Municipalities may regulate non-structural impervious surface improvements if they adopt their own (same or stricter) ordinance, for *single-family and duplex properties only*
- County may *still review properties causing flooding* on adjacent property or on the public right-of-way
- County approvals for *all development, improvement, construction, or alteration* on parcels with stormwater infrastructure

MDC015

Key Updates

Requirements to address maintenance & operations

- Stormwater ***system records required*** from municipalities, public entities, special taxing districts, community development districts, and private property owners' associations operating infrastructure in the public right-of-way or discharging onto the public right-of-way

- Records include ***asset inventory and maintenance reports***

MDC016

Key Updates

Requirements to address system performance

- ***Recertification*** required for the same entities that maintain and submit system records, within the first 3 years from the adoption of the ordinance and every 10 years thereafter, unless the county determines that more frequent recertification is required

- ***Engineer's report*** to certify performance, identify deficiencies and recommend corrective action(s)/timeline

- Ensure ***system performance,*** that the system is not adversely impacting water quality in the Bay, and it is managing flooding

MDC017

Key Updates

Requirements to address water quality and flood control

- ***Retention*** **(all parcels, minimum 10 YR event)**
- ***Green infrastructure*** **as a strategy to meet retention requirements**
- **Setting *minimum permeability* requirements**
- **Updating *minimum quality* standards for direct discharges**

MDC018