

Memorandum



Date: October 30, 2024

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". The signature is written in a cursive, flowing style.

Subject: Recommendations Regarding Spoil Islands in Biscayne Bay – Directive No. 232190

Agenda Item No. 2(B)(3)
November 20, 2024

Executive Summary

The Board of County Commissioners (Board) adopted Resolution No. R-1157-23 sponsored by Commissioner Danielle Cohen Higgins and Co-Sponsored by Commissioner Micky Steinberg, directing the County Mayor or County Mayor’s designee to study information and data related to the spoil islands in Biscayne Bay within Miami-Dade County and make recommendations with respect to such spoil islands, which may include future policies, uses, incentives, and municipal coordination, as appropriate. Such recommendations shall be focused on the various issues related to the spoil islands, such as trash, marine debris, boating traffic, protection of wildlife, the overflow of garbage and debris, and illegal dumping. These recommendations shall also include, but not be limited to, recommendations on how best to coordinate and collaborate with the governmental entities that own or control the various spoil islands on issues and matters such as (a) informational campaigns related to trash such as “Pack it in, Pack it out” or “Leave No Trace,” (b) the creation of a program to encourage or incentivize the reporting of illegal dumping on spoil islands, (c) increasing land-based trash removal signage, trash cans, and dumpsters, and (d) engaging with and educating boaters as to regulations and the importance of these issues. In addition, these recommendations shall address how best to support and encourage each respective governmental entity to actively enforce such entity’s existing restrictions and regulations with respect to its spoil islands.

The attached report was prepared by the Department of Regulatory and Economic Resources, Division of Environmental Resources Management (RER-DERM). Recommendations outlined in the report are summarized below:

Recommendations

1. **Commitment to Habitat Restoration:** RER-DERM is reaffirming its longstanding commitment to restore and maintain habitat values on the islands. This involves ecological restoration activities aimed at preserving and enhancing natural habitats. The recommendations suggest that achieving these goals will require a more robust effort from all spoil island owners.
2. **Enhanced Public Participation:** There is a call for enhanced participation with the public. This should include community engagement, educational initiatives, and outreach programs to raise awareness about habitat conservation, proper trash disposal, and rules and regulations.

3. **Collaborative Management Approach:** RER-DERM emphasizes the need for a coordinated effort involving education and outreach, increased presence by park personnel, and heightened law enforcement on the islands. This involves working closely with spoil island owners, local communities, and possibly other governmental agencies to ensure a consistent management effort across all spoil islands.
4. **Policy Development and Enforcement:** RER-DERM is engaging in discussions with spoil island owners regarding new policies like "Leave No Trace." New policy developments must be accompanied by proper oversight and enforcement must be implemented to ensure sustainable management practices.
5. **Exploration of Management Pathways:** RER-DERM is exploring additional pathways for organized and collective management. This may include formal agreements between the County and each entity that owns the islands, outlining roles, responsibilities, and funding support for RER-DERM contracted services.

RER-DERM's comprehensive strategy enhances habitat restoration efforts on spoil islands through collaborative management, public engagement, policy development, and potential formal agreements with island owners. The goal is to ensure sustainable management practices that protect and restore natural habitats, while involving all relevant stakeholders in the process. By prioritizing these measures, we can ensure that Biscayne Bay and its spoil islands remain a vibrant and sustainable environment for future generations to enjoy.

Background

There are 23 spoil islands within Biscayne Bay, of which ownership and management vary by island. Miami-Dade County does not own any of the spoil islands. Owners include the State of Florida, City of Miami Beach, City of Miami, City of North Miami, and the American Legion. Miami-Dade County has a long-standing commitment to the health of Biscayne Bay, including significant investment in habitat restoration and management of bay spoil islands. RER-DERM's involvement in spoil island management includes weekly trash removal by a contracted maintenance company, inspections by RER-DERM staff every other month, eradication of invasive exotic vegetation on an as-needed basis, and supplemental planting of native coastal vegetation.

RER-DERM has successfully restored 97.5 acres of spoil island upland habitats on fourteen islands and stabilized their soils using a variety of vegetative and non-vegetative techniques at a cost of approximately \$5.7 million (not adjusted for inflation) using a combination of grants and Biscayne Bay Environmental Enhancement Trust Fund (BBEETF) monies. Per the existing trash removal maintenance contract, the RER-DERM vendor's responsibilities include providing and emptying trash receptacles, removing litter left behind by island users, and properly disposing of the collected solid waste after transporting it to land. The contracted trash and garbage removal has an annual budget of approximately \$60,000. The actual cost for the service may vary depending on the rate charged by the vendor, enhanced partnerships for island cleanups, and adjustments to the level of service provided. Funding for the trash and garbage removal services comes from the BBEETF. The current contract is set to expire in 2027.

The City of Miami launched a new “Leave No Trace” campaign on May 18, 2024, to encourage users of its waterfront and island parks to “pack out” all their trash. This campaign entails removing trash receptacles from all of the City’s spoil islands so that users are compelled to dispose of their trash on the mainland. Since the scope of work and conditions of RER-DERM’s contract with its trash removal vendor are not consistent with the “Leave No Trace” approach implemented by the City of Miami, it will be necessary for RER-DERM to modify its role in the routine removal of trash from Osprey, Morningside, and Teachers islands. This will likely require alterations to the existing contract or a new contract, while allowing for the transferring of trash removal responsibility of these three islands entirely to the City of Miami. Preliminary observations indicate that trash continues to be left on the islands, even though this policy is in place. RER-DERM will continue to monitor this ongoing situation and the “Leave No Trace” effort on the islands.

Despite RER-DERM’s efforts to provide trash removal and disposal service on as many as twelve spoil islands, the issue of trash and marine debris on the islands persists. Issues also include boating traffic, protection of wildlife, destruction of native vegetation, vandalism, and illegal dumping. A lack of resources, staff, law enforcement, oversight, and funding have exacerbated these issues. The proper management of solid waste on the islands is critical, along with greater physical presence by law enforcement and park personnel. Our recommendations strongly focus on more involvement of the entities that own the islands with RER-DERM providing a unifying role in bringing entities together to manage the islands. The spoil island property owners are encouraged to develop a collaborative approach and possible shared contract(s) to proactively maintain their public park lands.

In accordance with Ordinance No. 14-65, this report will be placed on the next available full Board meeting agenda, without committee review, as directed in Resolution No. R-1157-23. 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 or by phone at 305-375-2886.

Attachment– Report on Spoil Islands in Biscayne Bay

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MIAMI-DADE COUNTY



Report on Spoil Islands in Biscayne Bay

Department of Regulatory and Economic Resources
Division of Environmental Resources Management

RER-DERM

Background

In the 1920's, the U.S. Army Corps of Engineers began digging channels in northern Biscayne Bay and extended the Intracoastal Waterway. The dredged bay bottom material was discarded in various locations nearby, forming spoil islands both parallel and perpendicular to the channels. Over time, the smaller islands became opportunities for public use, while the longer, linear islands were utilized for cross-bay causeways for vehicular use. Because the islands' shorelines were unconsolidated, they were subject to erosion and were referred to as "walking islands" because their borders shifted due to the effects of winds and tides. The erosion of the islands initially limited their recreational use by the public and was a significant source of turbidity. The islands were eventually colonized by invasive, exotic vegetation that provided "green" relief in an increasingly urbanized Biscayne Bay.

In one notable instance, dredge spoil was used to mark an important occasion in the history of South Florida. Miami Beach pioneer developer Carl Fisher built Flagler Memorial Island aka "Monument Island" in honor of Henry Flagler's influence on the area's early development. However, the island's perfectly circular original form soon eroded and sediment along its edges was distributed back into the bay waters. A 110-foot obelisk monument placed at the center of the island with its Industry, Pioneer, Education, and Prosperity allegorical statues remains today.

Protection

In 1974 and 1975, the Biscayne Bay Aquatic Preserve and the Cape Florida to Monroe County Line Aquatic Preserve were designated by acts of the Florida Legislature to protect lands throughout the Biscayne Bay region from rampant dredging and filling practices that significantly altered the contours and natural resources of the Bay. Since the material used to create the spoil islands was dredged from the bay bottom of the preserves, the emergent spoil islands became protected by the Biscayne Bay Preserve Act (Chapter 18-18, Florida Administrative Code and 258.397 Florida Statute). As stated in the Act, only privately held uplands, such as Bird Key, are omitted from the Aquatic Preserves. Even though many of the islands have been deeded by the State to municipalities that have proprietary control over them, proprietary authorization, regulatory and management authority still resides with the State of Florida to protect the Aquatic Preserve for future generations.

In 1977, a Florida Sea Grant symposium led to the State appropriating funding for enhancements in northern Biscayne Bay. This resulted in Miami-Dade County's former Department of Environmental Resources Management creating the Biscayne Bay Restoration and Enhancement Program to lead a working group to discuss and rank enhancement projects in Biscayne Bay. Miami-Dade County's Biscayne Bay Management Plan (BBMP) was finalized and adopted by the Board of County Commissioners in 1981.

The primary goal of the BBMP is "to develop a unified, Countywide management plan for the entire bay system, including its adjacent wetlands, embayment and contiguous developed shorelands in a manner that will maintain or enhance where necessary, those physical, chemical, biological and aesthetic qualities that provide the basic character and value of this resource." The BBMP is intended to serve five basic purposes: (1) to define the scope of concerns and programs that should be addressed within a comprehensive, coordinated approach to bay management, (2) to recommend programs and actions that should be undertaken in order to move towards comprehensive and coordinated management of Biscayne

Bay, (3) to identify a coordinating committee structure to oversee the scope and direction of programs that are recommended, (4) to identify those agencies and community based groups that have responsibility for implementing certain management programs, and (5) to identify sources of funding or community based resources that can be utilized to achieve a coordinated approach to Bay management.



Flagler Monument Island photographed by RER-DERM during an island inspection.

The BBMP also calls for the stabilization of all spoil island shorelines where erosion is a concern. In order to reduce turbidity levels and improve water clarity in Biscayne Bay, the following guidelines are adopted in the plan: all fill, including spoil islands, which has been, or is, placed adjacent to or within Biscayne Bay and is causing a turbidity problem should be stabilized; and un-stabilized areas that cause turbidity should be stabilized through riprapping and/or the use of natural vegetation or other environmentally acceptable methods.

Major recommendations in the plan have been implemented, incorporated into the Code of Miami-Dade County or the Comprehensive Development Master Plan, or continue to be implemented through ongoing monitoring, restoration, recreation, water management and acquisition programs. RER-DERM's Biscayne Bay Restoration and Enhancement Program, a major implementation tool of the BBMP, has been funded over the years by Miami-Dade County with assistance from the State of Florida, the Florida Department of Environmental Protection (FDEP), Florida Inland Navigation District (FIND), and the South Florida Water Management District (SFWMD).

RER-DERM has successfully restored twenty-three islands and stabilized their soils using a variety of vegetative and non-vegetative techniques at a cost of approximately \$5.7 million (not adjusted for inflation) using a combination of grants and Biscayne Bay Environmental Enhancement Trust Fund (BBEETF) monies. Four habitat types, consisting of about 90 species, have been established using cost-effective methods. These habitats cover tropical hardwood hammock communities, mangrove communities, coastal strand communities, and dune communities on fourteen islands in Biscayne Bay, for a combined 97.50 acres of restored and enhanced spoil island upland habitats.

Ownership & Management

The 23 spoil islands within Biscayne Bay are depicted in the attached map (Attachment 1). Ownership and management vary by island, falling under the jurisdiction of either the State or a municipality. Miami-Dade County does not own any of the spoil islands, nor are there any formal agreements between the island owners and the County related to the islands' management. Ownership is as follows:

Florida Department of Environmental Protection (FDEP)

The State of Florida owns several of the spoil islands throughout northern Biscayne Bay. From north to south, these include Sandspur, Little Sandspur, Quayside, Tern, Sandpiper, Pelican, and Frigate Islands. Sandspur Island is also within the jurisdiction of Oleta River State Park and has proprietary, regulatory, and management authority from Florida's Division of State Parks and FDEP. The State of Florida also owns Chicken Key in southern Biscayne Bay.

City of Miami Beach

The City of Miami Beach was deeded ownership of Flagler Monument Island by Carl Fisher's Alton Beach Realty Company in 1939 (Deed No. 16801). The City Commission granted historic site status to the island on March 20, 2002. For many years, the former Environmental Coalition of Miami and the Beaches (ECOMB) led the charge to help maintain the island.

City of Miami

The City of Miami owns the greatest number of spoil islands in northern Biscayne Bay including the southern half of Legion Island, and all of Mangrove, Osprey, Morningside, Teachers (aka Pace), Willis, and the five Dinner Key Islands. The five Dinner Key Islands ("A-E") were deeded to the City by the State in 1949 (Deed No. 19448). By Resolution No. 36473, the City of Miami Commission requested permission from the State to use Mangrove, Osprey, Morningside, Teachers, and Willis islands for municipal park and recreation purposes in Biscayne Bay. The resolution also dedicated the islands within the Tuttle Basin as parks intended to be managed and maintained for use by the boating public. The resolution was approved, and the islands deeded to the City by the State in 1966 (Deed No. 24164).

City of North Miami

The City of North Miami owns three islands, Crescent A & B and Helker's Islands. By Resolution No. 1095, the City of North Miami requested the State dedicate the three spoil islands for public park and recreational purposes. The resolution was approved, and the islands deeded to the City by the State in 1965 (Deed No. 23991).

The American Legion

The northern half of Legion Island was deeded by the State to The American Legion in 1934 (Deed No. 182590). The island was historically used by the non-profit organization's members and their families who cleared the island, and installed picnic benches, toilets and fireplaces for recreational use.

Trash and Garbage Removal

Miami-Dade County has a long-standing commitment to the health of Biscayne Bay, including significant investment in habitat restoration and management of bay spoil islands. Although the County does not own any of the spoil islands, RER-DERM has continued to conduct various environmental restoration and enhancement activities on islands throughout Biscayne Bay as part of the Biscayne Bay Restoration and Enhancement Program. These activities include weekly trash removal by a contracted maintenance company, inspections by RER-DERM staff every other month, eradication of invasive exotic vegetation on an as-needed basis, and supplemental planting of native coastal vegetation. For decades, RER-DERM has maintained a contract with a vendor to perform trash and garbage removal services from as many as twelve spoil islands in northern Biscayne Bay. The City of North Miami recently took over maintenance of its three islands (Crescent A & B and Helker's), leaving nine that are still maintained by RER-DERM (Sandspur, Little Sandspur, Quayside, Tern, Sandpiper, Osprey, Morningside, Teachers, and Flagler Monument Islands). The removal services take place every Monday (after peak weekend use by boaters), except for Quayside Island, which is only serviced on the last Monday of the month. Per the existing maintenance contract, the RER-DERM vendor's responsibilities include providing and emptying trash receptacles, removing additional litter left behind by island users, and properly disposing of the collected solid waste after transporting it to land. The contracted trash and garbage removal has an annual budget of approximately \$60,000. The actual cost for the service may vary depending on the rate charged by the vendor, enhanced partnerships for island cleanups, and adjustments to the level of service provided. Funding for the trash and garbage removal services comes from the BBEETF. The current contract is set to expire in 2027.

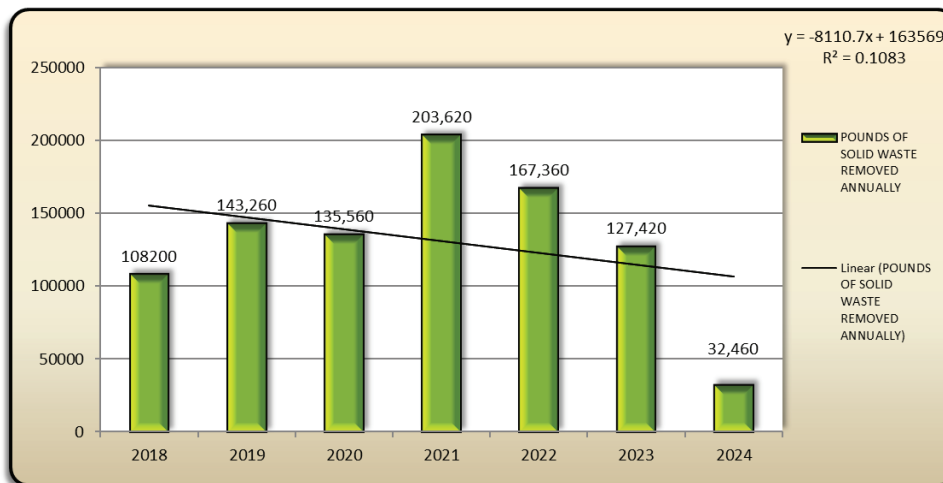


Figure 1. Pounds of solid waste removed from spoil islands by RER-DERM's vendor. The downward trend is due to an additional day of trash removal on Teachers Island initiated by the City of Miami in 2023 and the City of North Miami having taken over trash removal on its three islands last year, along with additional cleanup efforts on the islands.

In December 2015, FDEP's Biscayne Bay Aquatic Preserves (BBAP) initiated an Adopt-an-Island Program to engage the community in service actions that would benefit the island resources and inhabitants, while increasing awareness on the issues of trash that is left on the islands from recreational use and marine debris that washes onto the islands from other sources. This program has led to multiple islands being adopted by several entities including private citizens, scout troops, and student groups. Each

adoption is reviewed on an annual basis and requires that the entity conduct at least quarterly cleanups on the islands, compile data on the types and locations of collected debris and submit the data to BBAP staff for inclusion in a master marine debris spreadsheet. The island adoptions focused on the state-owned islands, but interest by the public and notifications to the municipal island owners led to additional adoptions on non-state-owned islands.

The City of Miami has “piggybacked” RER-DERM’s trash removal contract to include additional service days for a second trash pick-up on Fridays for Willis and Teachers Islands, and for trash removal on the five Dinner Key Islands on Tuesdays. The Coconut Gove Sailing Club has been a steward of Dinner Key Island "E" over the last century and the island has since been dedicated to Robert Clarington, the first dock master, now referred to as “Clarington Island”. In 2015, CGSC began working with VolunteerCleanup.org to engage and invite the community to get more involved in the island’s cleanup. Legion Island is maintained by the City of Miami Parks and Recreation Department and The American Legion. Mangrove Island does not currently have trash and garbage removal services, however City of Miami Resolution No. R-23-0514, adopted in November 2023, directed the City to limit harmful human activity on and around Mangrove Island to protect the nesting rookery.

The City of Miami launched a new “Leave No Trace” campaign on May 18, 2024, to encourage users of its waterfront and island parks to “pack out” all their trash. This entailed removing trash receptacles from all of the City’s spoil islands so that users would be compelled to dispose of their trash on the mainland. According to the City of Miami, boaters who continue to leave their trash on the islands will be subject to existing litter laws and may face fines or arrest for violations. The City of Miami Parks and Recreation Department plans to reinforce the new initiative with signage at city managed boat ramps. Additionally, on May 22, 2024, the City announced the temporary closure of Osprey, Morningside, Teachers, and Willis Islands, “to prevent contamination and littering in the bay and allow [the City of Miami] to assess and restore the natural beauty of our city and waterways.” The Miami Marine Patrol unit enforced a strict zero-tolerance policy for trespassers during the closure. The islands reopened on July 12, 2024.

Since the scope of work and conditions of RER-DERM’s contract with its trash removal vendor are not consistent with the “Leave No Trace” approach implemented by the City of Miami, it will be necessary for RER-DERM to modify its role in the routine removal of trash from Osprey, Morningside, and Teachers Islands. This will likely require alterations to the existing contract or a new contract, while allowing for the transferring of trash removal responsibility for these three islands entirely to the City of Miami, similarly to how the City of North Miami assumed responsibility over their three islands. Preliminary observations indicate that trash continues to be left on the islands, even though this policy is in place. RER-DERM will continue to monitor this ongoing situation and the “Leave No Trace” effort on the islands.



Garbage accumulated at spoil island, despite educational signage.

Out of the eight spoil islands owned and managed by FDEP, five of them are serviced by RER-DERM's vendor for trash and garbage removal. The three State-owned islands not serviced by RER-DERM are Frigate Island, Chicken Key, and Pelican Island, which are serviced by Miami-Dade County Department of Parks, Recreation, and Open Spaces (PROS). BBAP is currently considering the feasibility of a "Leave No Trace" policy on their islands. The three spoil islands owned by the City of North Miami were serviced by RER-DERM's vendor until May 2023 when the City took over maintenance of its islands utilizing the County's vendor. Crescent Islands A & B are serviced on the last Monday of each month, and Helker's Island is serviced weekly on Monday.

The deeds that convey ownership of the islands from the State to the respective municipalities require that the islands be maintained and used for public park and recreational purposes. If, for a period of three consecutive years, an island owner fails and neglects to maintain and use the deeded islands for public park and recreational purposes, the deed may be subject to termination.

Issues

Various issues related to the spoil islands include boating traffic, protection of wildlife, destruction of native vegetation, vandalism and illegal dumping, and the accumulation of trash, garbage, and marine debris. Despite RER-DERM's efforts to provide trash removal and disposal service on the aforementioned spoil islands, the issue of trash and marine debris on the islands remains problematic. Trash cans on the spoil islands are regularly found to be overflowing and solid waste of various kinds is routinely found spread all over these island parks. Regulatory and informational signs, including those directing the public not to litter, are frequently removed or vandalized. Wind, tides, and wildlife scatter uncontained trash all over the islands and into Biscayne Bay. There are also relatively few trash receptacles at locations from which boaters access the Bay and its spoil islands, such as at boat ramps and marinas. Aside from aesthetic impacts, litter and marine debris impact wildlife both on and off the spoil islands. Birds utilizing the

rookery on Mangrove Island, for example, have been found entangled in improperly discarded fishing line.

Boaters are often ignorant of, or willfully ignore existing regulations pertaining to the use of the spoil islands and surrounding waters. Besides failing to properly dispose of their trash, users stay on the islands past sunset when the island parks are closed, beach their vessels along the shoreline and/or tie up their vessels to island vegetation, cut down vegetation to use as firewood or for other purposes, sell and consume alcoholic beverages, build structures, abandon beach chairs, tents, barbecues, and other camping equipment, defecate in public areas, and destroy public property. The safety of boaters and bathers is also of concern, due to the high level of watercraft traffic and boating speed surrounding the spoil islands. Perhaps the major challenge in addressing all these problems is availability of resources to enforce existing laws and regulations. Adequate enforcement and oversight of the spoil islands is generally limited due to lack of staff. The City of Miami’s “Leave No Trace” initiative will prove difficult to enforce without proper oversight by marine law enforcement and/or park rangers maintaining a frequent physical presence at the islands. It will also require a consistent and wide-reaching educational component aimed at all actual and potential user groups and including all the spoil islands and the entities that own them. Enforcement is key to a successful program to disincentivize leaving trash on the islands by issuing fines and violations to those who continue to litter. Unfortunately, lack of enforcement is almost always a result of lack of funding.



Signage with city regulations blocked by branches, and trash at Teachers (Pace) Island.

Recommendations

RER-DERM’s recommendations include future policies, alteration of usage, and promotion of incentives to change behaviors of the public when enjoying the islands. These recommendations also include how

best to coordinate and collaborate with the governmental entities that own or control the various spoil islands and to support and encourage active enforcement of existing restrictions and regulations. RER-DERM will continue to monitor habitat health and conduct maintenance of invasive species and restoration activities as needed and in collaboration with island owners. The proper management of solid waste on the islands is critical, along with a greater physical presence by law enforcement and park personnel. Our recommendations focus on more involvement of the islands' owners, with regards to education and outreach, a presence on the islands, and enforcement, also in accordance with their legal obligations as owners to maintain the islands, while RER-DERM provides a unifying role. The spoil island property owners are encouraged to develop a collaborative approach and possible shared contract to proactively maintain their public park lands. RER-DERM is exploring additional pathways for organized and collective management, which may include the County entering into an agreement with each entity that owns the islands, to outline and establish these roles and responsibilities, including funding support for RER-DERM contracted services.

Informational Campaigns

Biscayne Bay is a source of sustenance and economic vitality in Miami-Dade County, while also providing a plethora of recreational opportunities enjoyed by residents and visitors alike. Protection of water quality in Biscayne Bay is of utmost importance to our community. Educating the public on how their actions at the spoil islands directly affect the environment is important to our efforts to protect the Bay. The islands can be protected by activities that bring attention to the problem of marine debris and the effects of improper trash disposal. A highly focused educational campaign that gets our residents and visitors to think about how their actions impact the health of the bay can bring awareness to this important issue and help address the proper means of trash disposal.

As a part of the Biscayne Bay spotlight "Leave No Trace" campaign, RER-DERM coordinated a "Leave No Trace" training event with other agencies on February 23, 2024. Following the training, a stewardship event was conducted at Pelican Harbor Marina, where the principles of minimum impact practices were shared, and reusable garbage bags were provided to the public to collect and dispose of their trash at the marina. The principles of this stewardship campaign can be expanded via additional education and outreach in the form of signage at marinas and other points of entry, reminding boaters to "pack in" and "pack out" everything they are bringing on the water and to the islands. The campaign's central messaging should be guided by the science of marine debris and include the effects of trash, where trash is generated (i.e. point of origin) and analyses of behavioral changes induced by educational campaigns.

The municipal and state owners of the respective spoil islands must be more engaged and active in their management, which should include proactive interaction with spoil island users and user groups. The proactive engagement should include various formats such as signage at prominent points of entry; printed materials in English, Spanish, and Haitian Creole, with uniform messaging to include the importance of the aquatic preserve and Biscayne Bay, maps of the islands including the boundary of the Bill Sadowski Critical Wildlife Area, and promoting tips to keeping litter and pollution out of the Bay; an established property owner hotline to report and address issues; and active park staff interactions with visitors on the spoil islands. Because the spoil islands are close to each other, have common hydrogeomorphology, experience similar usage, and may share the same visitors, we recommend a unified approach to the messaging and regulation of the islands. This unified approach could be facilitated by the Biscayne Bay Aquatic Preserves manager as FDEP owns eight of the spoil islands. All informational materials,

developed through this joint effort, should be disseminated to all marinas, marine patrol units, and the Greater Miami Chamber of Commerce.

Various initiatives have been developed by RER-DERM staff to inform the public of proper and improper ways to dispose of trash and the impacts of littering and marine debris to the health and management of Biscayne Bay. Baynanza, a series of environmental events including Biscayne Bay Cleanup Day, is part of the County's longstanding commitment to enhance public awareness of Biscayne Bay as a recreational, economic, historic, scientific, and environmental resource. The County also developed a website dedicated to Biscayne Bay for the public to easily access information on the health of the Bay and provides resources to get involved in its protection. Baynanza's tag line, "Do the Shore Thing" can easily be applied to new messages, which RER-DERM recommends continuing to focus on a unifying theme in a wide-ranging social media strategy by owners of the spoil islands. Public service announcements through radio and television were previously researched by RER-DERM staff, however due to costs it was concluded they were not the best approach for this type of campaign. Alternatively, the Department of Regulatory and Economic Resources (RER) Communications created the following video, for use in social media: <https://www.youtube.com/watch?v=oGwauYqbLjA>. Future educational campaigns and volunteer efforts on the islands could capitalize on the name recognition and central mission of the Baynanza Bay Cleanup program.

As part of this effort, it is recommended that the property owners organize routine outreach events such as cleanups, invasive vegetation removal, and restoration projects to promote environmental stewardship and a sense of ownership within the community. These efforts are already implemented at actively managed waterfront parks across multiple jurisdictions and are not novel. At minimum, the efforts to maintain these public lands should mirror the property owner's efforts at their other publicly owned and managed park lands.

It is also recommended that the governmental agencies adequately budget for the necessary oversight and management of the spoil islands, and stretch available funding through grants, partnerships, and philanthropic opportunities. Collaboration with FDEP to expand their Adopt-an-Island Program to motivate individual citizens, local organizations, and other groups interested in participating in litter prevention program activities, can also help achieve this goal.

Boater Education

RER-DERM has received preliminary grant funding through the U.S. Environmental Protection Agency (EPA) – Region 4, for the development and implementation of a *Biscayne Bay Boating Community Outreach and Education Campaign*. This project will engage the boating public through the creation of multilingual messaging broadcast across social media, through workshops to the boating community, and through in-person interactions at frequent vessel launching locations to promote "pack-in/pack-out" strategies for litter and marine debris prevention and environmental stewardship, and the distribution of durable, reusable, and branded marketing collateral to help facilitate responsible trash and solid waste management by the recreational boating public. The focus of the educational and outreach efforts is for the recreational boating public and litter and marine debris, specifically. The tonnage of solid waste removed through the spoil island trash removal contract and bimonthly monitoring at three spoil islands in northern Biscayne Bay will help shape the project's narrative and serve as proxies to gauge the effectiveness of the educational and outreach efforts.

RER-DERM recommends outreach efforts by the collective spoil island owners including engaging with and educating boaters as to rules and regulations. Various activities within Biscayne Bay, including on the spoil islands, are regulated by the Florida Administrative Code (F.A.C.), Florida Statutes (F.S.), the Code of Miami-Dade County, and other local ordinances.

Notable regulations are outlined below:

62D-2 F.A.C. Operation of Division Recreation Areas and Facilities

Provides for protection and preservation of parks' property and resources, regulations for recreational activities, and civil penalties for violations of the provisions.

18-18 F.A.C. / 258.397 F.S. Biscayne Bay Aquatic Preserve

Establishes the Biscayne Bay Aquatic Preserves and provides for protection, preservation and enhancement in Biscayne Bay and all natural waterways tidally connected to the bay, including regulation of human activities within the preserve.

18-14 F.A.C. Administrative Fines for Damaging State Lands or Products Thereof

Establishes violations for noncompliance with Chapter 253 F.S. related to damaging state lands including imposition and collection of fines.

18-21 F.A.C. Sovereignty Submerged Lands Management

Provides for management, protection, and enhancement of sovereignty lands so that the public may continue to enjoy traditional uses including, but not limited to, navigation, fishing and swimming. Includes provisions on spoil island development and structures constructed on spoil islands.

Miami-Dade County Code Chapter 7: Boats, Docks, and Waterways

Establishes rules and regulations regarding vessel mooring. Prohibits mooring to any publicly owned bank or shore unless under a lease or permit issued by the governmental body having jurisdiction thereof.

Miami-Dade County Code Chapter 24: Environmental Protection Ordinance

Establishes environmental protections for Biscayne Bay, the Biscayne Bay Management Plan, prohibitions against water pollution, and use of the BBEETF.

Miami-Dade County Code Chapter 8CC: Code Enforcement / Schedule of Civil Penalties

Provides penalties for violations of the Code. Including escalating penalties for second, third, or subsequent offenses for specified Chapter 24 violations, such as sanitary nuisances and waste dumping.

City of Miami Beach Code Section 118-593

Establishes historic preservation designation for the Flagler Memorial and Monument Island historic site.

City of Miami Code Chapter 50: Ships, Vessels, and Waterways

Prohibits the beaching of watercraft and mooring of watercraft on City owned lands without authorization. Establishes an exclusion/safety zone for the designated waters of and near the Dinner Key Spoil Islands and prohibits operation of any motorized vessel, boat or watercraft within the Dinner Key North Mooring Field motorized vessel exclusion zones.

City of North Miami Code Chapter 14: Parks and Recreation

Establishes rules and regulations for parks and recreation, including marine activities.

Reporting of Illegal Dumping

In order to encourage reporting of illegal dumping on spoil islands, it is recommended to install additional illegal dumping warning signage at the islands, including a QR code link or reference for how the public can report violations. While increased educational outreach and signage will be an important aspect of efforts to curtail the problems associated with the intensifying public use of the spoil islands, increased enforcement of existing regulations is necessary. Education is unlikely to deter individuals who are responsible for the more egregious incidents of littering, vandalism, and other unlawful activities. Although it isn't currently practical or possible to post a law enforcement officer at each island, consideration should be given to the random assignment of uniformed and plainclothes officers on the islands during their peak use. Citing, and arresting (if necessary) those responsible for despoiling the islands may be a more successful way to convey that such behavior is unacceptable.



Trash accumulated on a spoil island after weekend use.

Enforcement

As mentioned, trash and other issues are largely a result of not enough law enforcement personnel present on the islands which also impedes enforcement. To preserve and protect these natural resources, robust enforcement, increased funding, and enhanced management are crucial. Strategic actions can ensure the protection, cleanliness, and sustainable enjoyment of the spoil islands. Effective enforcement is fundamental to maintaining order and ensures that environmental laws and regulations are upheld, preventing illegal activities such as littering, unauthorized construction, and the destruction of habitats. Without adequate enforcement, these activities can proliferate, leading to the degradation of ecosystems and the loss of biodiversity. RER-DERM recommends engaging with municipalities and the state to prioritize increased contractual services for the islands, increased budget, increased park rangers, and increased law enforcement patrol on the water.

Moreover, consistent enforcement will foster responsible behavior on the islands. When rules are consistently applied and violators are held accountable, it reinforces the importance of respecting our natural resources. This creates a culture of stewardship, where individuals are more likely to engage in behaviors that protect and preserve the environment. To ensure cleanliness and order, increased patrols by park rangers and environmental officers can mitigate the problem of accumulation of trash and other pollutants. Their presence serves as an important educational function as well as a deterrent to potential violators and ensures that any infractions are swiftly addressed. Regular patrols also enable prompt responses to environmental hazards, such as oil spills or illegal dumping, minimizing their impact on the ecosystem.

To accomplish this goal, there is a need for increased funding and resources. To enhance enforcement and ensure the effective management of the spoil islands, municipalities must prioritize increased funding and resources. Allocating a larger budget for environmental protection will facilitate the hiring of more park rangers and the acquisition of necessary equipment, such as boats, to maintain a regular presence on the water. Contractual services can also be expanded to include specialized clean-up operations and habitat restoration projects. Increased budget allocations will not only improve enforcement capabilities, but also support educational programs that raise awareness about the importance of protecting Biscayne Bay's natural resources. Education initiatives can foster community involvement and encourage responsible behaviors, further complementing enforcement efforts.

Collaboration between the state, local governments, environmental organizations, and community stakeholders is essential to the successful implementation of enforcement actions. Municipalities should work together with the state to create comprehensive management plans that address the specific needs of the spoil islands. These plans should include strategies for regular monitoring, rapid response to environmental threats, and public education campaigns as recommended in this report. By engaging with municipalities and the state, stakeholders can advocate for policies that prioritize environmental protection and allocate sufficient resources for enforcement. This collaborative approach ensures that the spoil islands receive the attention and care needed to preserve their ecological integrity and recreational value.

The Biscayne Bay Management Plan (BBMP)

The BBMP's five fundamental purposes aim to develop a unified, countywide management plan for the entire bay system, including adjacent wetlands, embayments, and contiguous developed shorelands. The

plan focuses on maintaining or enhancing the physical, chemical, biological, and aesthetic qualities that define and add value to this critical resource.

A key recommendation of the BBMP is to stabilize all spoil island shorelines where erosion is a concern. To reduce turbidity levels and improve water clarity in Biscayne Bay, the plan adopts guidelines such as stabilizing all fill, including spoil islands that cause turbidity, through methods like riprapping, natural vegetation, or other environmentally acceptable techniques. Although significant recommendations from the BBMP have been integrated into the Code of Miami-Dade County and the Comprehensive Development Master Plan, and they continue to be implemented through ongoing monitoring, restoration, recreation, water management, and acquisition programs, there is still much to be done.



State endangered *Zanthoxylum spinosum* (Biscayne prickly ash) planted by RER-DERM staff on a spoil island in Biscayne Bay.

To ensure the continued health and sustainability of Biscayne Bay, it is recommended that policymakers:

1. **Continue to Support the BBMP:** Recognize and endorse the BBMP’s comprehensive approach and objectives.
2. **Ensure Ongoing Funding:** Secure and allocate necessary funds for ongoing and future BBMP-related programs.
3. **Promote Coordination:** Strengthen the coordinating committee structure and foster ownership actions to ensure effective oversight and implementation.
4. **Enhance Community Engagement:** Involve community-based groups and local agencies and owners in applying management and restoration efforts.
5. **Prioritize Environmental Stabilization:** Implement measures to stabilize spoil islands and reduce turbidity levels for improved water clarity.

By adopting these recommendations, policymakers can contribute significantly to the preservation and enhancement of Biscayne Bay's vital ecosystem.

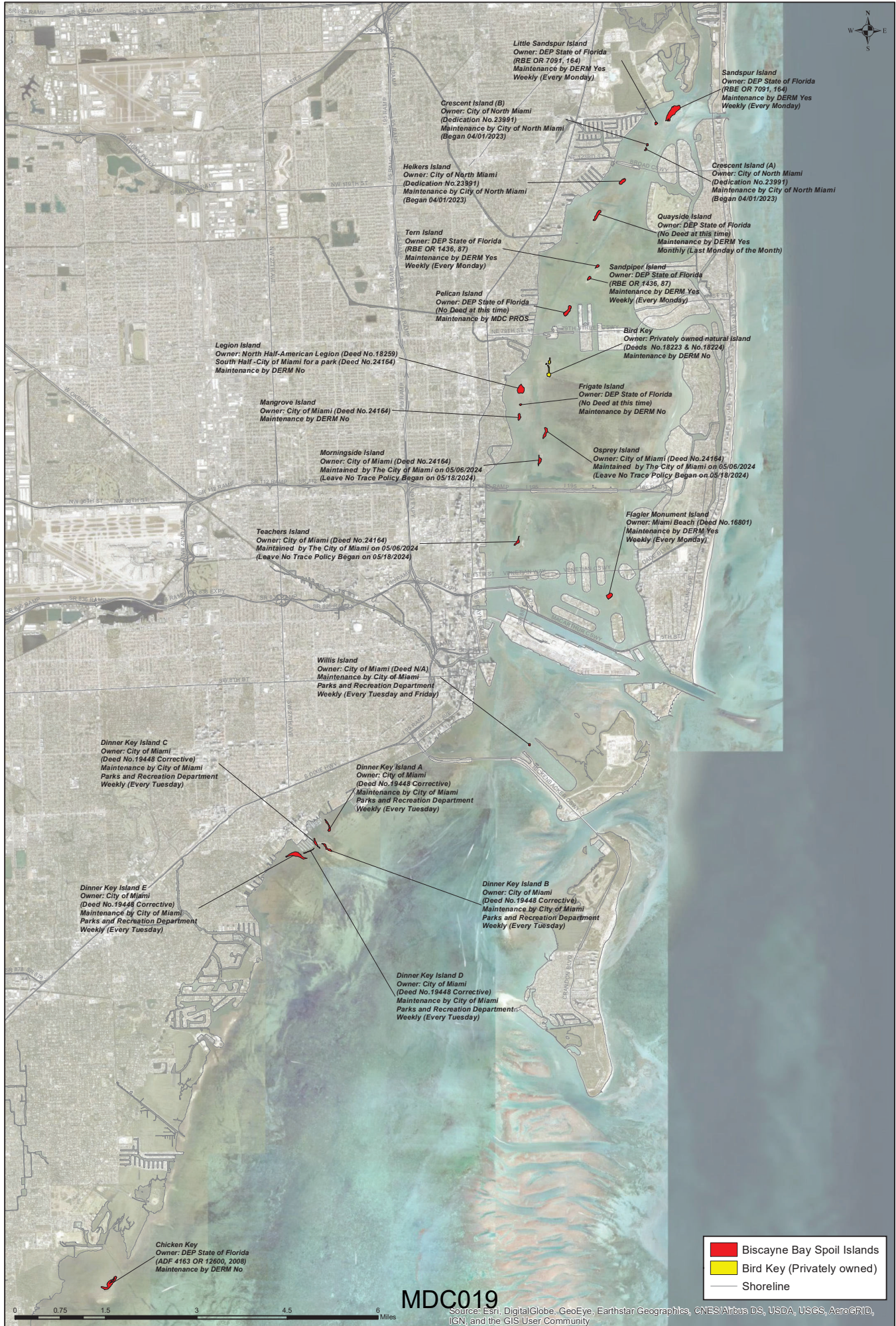
Conclusion

The spoil islands within Biscayne Bay are a priceless natural resource that require vigilant protection through robust enforcement actions and strategic implementation. Increased funding, enhanced enforcement presence, and collaborative efforts with municipalities are crucial to maintaining the cleanliness, order, and ecological health of these islands. By prioritizing these measures, we can ensure that Biscayne Bay remains a vibrant and sustainable environment for future generations to enjoy.

As RER-DERM continues our longstanding commitment to restore and maintain habitat values on the islands, the recommendations detailed in this report will require a dedicated effort by all spoil island owners and participation with the public. Through a coordinated effort on education and outreach, presence on the islands, and increased law enforcement, these goals can be accomplished. RER-DERM will focus on bringing all stakeholders together to manage the islands in a collaborative approach. Discussions with the spoil island owners are ongoing, particularly as new policies develop (i.e. Leave No Trace), while RER-DERM explores additional pathways for collective management. RER-DERM's objective will remain to enhance habitat restoration efforts on spoil islands through collaborative management, public engagement, and policy development with island owners, to ensure sustainable practices that protect and restore natural habitats.

Attachments:

Attachment 1 – Biscayne Bay Spoil Islands Map



MDC019