



BISCAYNE BAY COMMISSION

Semi-Annual Report

Jan. 14, 2022

ABOUT THE BISCAYNE BAY COMMISSION

On June 3, 2021, Governor Ron DeSantis took a major step forward in protecting vital natural resources within Biscayne Bay through the creation of the Biscayne Bay Commission. While Biscayne Bay is protected in its entirety by either a national park or state aquatic preserve, it faces global, regional and local stressors, including sea level rise, impaired water quality, habitat loss and human activity that conflicts with the bay's well-being. This legislation signed into law by Governor DeSantis enables direct action to address these issues in the bay.

The Biscayne Bay Commission will monitor the strategic plan and create an associated financial plan to ensure its priorities are funded, using agencies representing the commission.

Commission meetings will provide a forum for exchange and serve as a clearinghouse for public information on all plans, programs and projects being conducted.

On Jan. 4, 2022, the Biscayne Bay Commission held its inaugural meeting in North Miami. The commission's first order of business was to review and consolidate existing programs and projects into a strategic plan for bay improvement.

Per Committee Substitute/House Bill (CS/HB) 1177: "(7) The commission shall submit a semiannual report describing the accomplishments of the commission and each member agency, as well as the status of each pending task, to the Miami City Commission, the Miami-Dade County Board of County Commissioners, the Mayor of Miami, the Mayor of Miami-Dade County, the Governor, and the chair of the Miami-Dade County Legislative Delegation. The first report shall be submitted by January 15, 2022. The report shall also be made available on the Department of Environmental Protection's website and Miami-Dade County's website."

COMMISSION MEMBERS

Commission members were appointed to their seats between July and November 2021.

Commission members include Noah Valenstein, Jean Monestime, Rebeca Sosa, Danielle Cohen Higgins, Tim Meerbott, Charlie Martinez, Adam Blalock, Thomas Reinert and Spencer Crowley (Table 1 and Figure 1).

| CB/HB 1177 Appointment Requirements | Commission Member | Position Title |
|---|------------------------|---|
| 1. One member appointed by the Governor. | Noah Valenstein | Founder, Brightwater Strategies |
| 2. Three members of the Miami-Dade Board of County Commissioners, appointed by the board. | Jean Monestime | Commissioner District 2 (represents northern coastal bay) |
| | Rebeca Sosa | Commissioner District 6 (represents inland surrounding Miami River) |
| | Danielle Cohen Higgins | Commissioner District 8 (represents southern coastal bay) |
| 3. One member of the Miami-Dade County League of Cities who resides within the boundaries of a city that borders Biscayne Bay, nominated by the league and appointed by the secretary of the Florida Department of Environmental Protection. To the extent practicable, the league must nominate a member from each city that borders Biscayne Bay on a rotating basis. | Tim Meerbott | Mayor, Town of Cutler Bay |
| 4. One member of the South Florida Water Management District Governing Board who resides in Miami-Dade County, appointed by the board. | Charlie Martinez | Governing Board Member representing Miami-Dade County |
| 5. One representative of the Florida Department of Environmental Protection, appointed by the secretary of Environmental Protection. | Adam Blalock | Deputy Secretary of Ecosystem Restoration |
| 6. One representative of the Fish and Wildlife Conservation Commission, appointed by the commission. | Thomas Reinert | South Regional Director |
| 7. One representative of the Florida Inland Navigation District, appointed by the district. | Spencer Crowley | Commissioner representing Miami-Dade County |

Table 1. Biscayne Bay Commission member composition per establishing legislation.



Figure 1. Biscayne Bay Commission members, from left: **Dr. Tom Reinert**, Florida Fish and Wildlife Conservation Commission (FWC) South Region Director; **Spencer Crowley**, Florida Inland Navigation District (FIND) Commissioner for Miami-Dade County (MDC); **Noah Valenstein**, governor’s appointee and Brightwater Strategies founder; **Adam Blalock**, Florida Department of Environmental Protection (DEP) Deputy Secretary of Ecosystems Restoration; **Jean Monestime**, Miami-Dade County District 2 Commissioner; and **Charlie Martinez**, South Florida Water Management District (SFWMD) Governing Board Member for Miami-Dade County. Members who attended the meeting via webinar: **Rebecca Sosa**, Miami-Dade County District 6 Commissioner; **Danielle Cohen Higgins**, Miami-Dade County District 8 Commissioner; and **Tim Meerbott**, Town of Cutler Bay Mayor and League of Cities representative.

INAUGURAL MEETING

Jan. 4, 2022

The Biscayne Bay Commission held its inaugural meeting on Jan. 4, 2022, at the Florida Fish and Wildlife Conservation Commission's South B Regional Law Enforcement Office and via GoTo webinar, welcoming nearly 150 participants. The Florida Department of Environmental Protection Secretary Shawn Hamilton kicked off the meeting thanking the commissioners for answering the call for public service and encouraged them to remain action orientated.

The commission elected Noah Valenstein as chair and Adam Blalock as vice-chair; reviewed the commission's charge outlined in CS/HB 1177; defined the difference between the state's Biscayne Bay Commission and Miami-Dade County's Biscayne Bay Watershed Advisory Board; and reviewed Florida Sunshine and Public Records Law.

Commissioners viewed presentations on the *Current Water Quality in Biscayne Bay* by DEP acting director for the Division of Environmental Assessment and Restoration Greg DeAngelo, and *Work to Date in Biscayne Bay* and *Current Efforts in Biscayne Bay* by MDC's Chief Bay Officer Irela Bague and Chief Water Scientist Pamela Sweeney. The commission discussed the presentations as they relate to the commission's purpose; reviewed future meeting logistics; discussed and provided feedback on a draft of this report; heard oral public comments (two in person and 11 via webinar); and adjourned.

One written comment was provided in-person and 58 questions/comments were made using the chat function on the webinar; 20 were answered during the meeting and the remainder were answered after the meeting. Commissioners were provided a full meeting summary including all questions and comments, and that document is also available at ProtectingFloridaTogether.gov/BiscayneBayCommission.

WORK IN THE BAY TO DATE

Member agencies' Biscayne Bay Updates for 2021

ACCOMPLISHMENTS OF EACH MEMBER AGENCY

This first report includes information that benefits Biscayne Bay provided by each member's agency, conducted within calendar year 2021.

Current aggregated list of accomplishments provided by member agencies. Future reports will include both these overall activities as well as actions each agency has taken to assist with implementation of the charge included in the establishing legislation.

Miami-Dade County

Biscayne Bay plays a fundamental role in the quality of life in Miami-Dade County. The bay provides endless recreational opportunities, supports the local economy, and helps drive the area's tourism industry. However, recent changes in the bay's health led to a massive seagrass die-off, algal blooms and fish kills in August 2020 and September 2021.

The county commission has acted on these concerns by directing the mayor and their administration to establish the position of chief bay officer and called for implementation of the comprehensive set of recommendations in the recently completed Biscayne Bay Task Force Report (*Figure 4 and Table 2*).

The following information provides an update on Biscayne Bay issues and progress made to date.



Figure 4. MDC accomplishment overview during 2020 and 2021 for the Biscayne Bay Task Force report.

Additional Biscayne Bay Accomplishments

| Recommendation | Action |
|--|--|
| Water Quality | Activate additional MDC Department of Regulatory and Economic Resources' resource management functions. |
| Water Quality | Pass a county-wide fertilizer ordinance. |
| Water Quality | Continue to monitor the progress of the Oct. 7, 2015, Consent Agreement between FP&L and Miami-Dade County. |
| Governance | Establish by ordinance a Biscayne Bay Watershed Management Board. |
| Governance | The mayor should appoint a chief bay officer and request funding for the position. |
| Watershed Habitat Restoration and Natural Infrastructure | Continue to work with SFWMD and have the state of Florida allocate the funds necessary to ensure the timely commencement of construction of the Cutler Flow Way in accordance with the project timeline in the Integrated Delivery Schedule. |
| Watershed Habitat Restoration and Natural Infrastructure | Continue to advocate for funding to support the Biscayne Bay Southern Everglades Ecosystem Restoration project (also known as the BBCW/C-111). |
| Marine Debris | Create a comprehensive marine debris prevention, reduction and removal program within Miami-Dade County Environmental Resources Management and adequately fund and staff the program. |
| Marine Debris | Through the Miami-Dade County Police Department, direct the Marine Patrol Unit to prioritize its commitment to the enforcement of all applicable laws having a nexus to the environmental health of the bay and its tributaries. |
| Funding | Collaborate with Miami-Dade legislative and congressional delegation to secure annually appropriated funds to support Biscayne Bay watershed restoration. |
| Funding | Immediately engage in the legislative process to designate a Biscayne Bay license plate. |
| Funding | Immediately enter into a cost-share partnership with SFWMD. |

Table 2. Specific MDC accomplishments from the Biscayne Bay Task Force report, which includes 68 recommendations organized into seven policy themes.

Miami-Dade League of Cities

By coordinating and working with our partners at Miami-Dade County, we were able to control our land use and zoning and advocate for the provision of critical infrastructure that protects our environmental and economic resources. It is critical to maintain an open line of communication with all other governments to foster a productive, collaborative process. We are the closest level of government to the people, and we are committed to doing what it takes to maintain the character and quality of life in our cities.

Listed below are a few examples of the cities that have acted in 2021 to improve the health of Biscayne Bay.

Miami Beach

- Passed a plastic free ordinance, [a plastic straw ordinance](#) and [an expanded polystyrene ordinance](#), becoming the first municipality in Florida to do so and was the inspiration for county-wide passage of the [Plastic 305 initiative](#).
- Established a climate action goal to reach net zero emissions by 2050.
- Adopted DEP's model ordinance for fertilizer use for urban landscapes, alongside additional and more stringent standards related to the use of nitrogen and phosphorus-based fertilizers.

Cutler Bay

- Participates in the Biscayne Bay Coastal Wetlands Project, which is currently underway, and is a member of the Project Delivery Team for the Biscayne Bay Southeastern Everglades Restoration Project, the newest combined Everglades Restoration project that will benefit Biscayne Bay.
- The town has taken an active role in preventing incompatible development that would conflict with restoration plans, including purchasing land and passing resolutions to protect the Biscayne Bay Coastal Wetlands Project and Biscayne Bay Southern Everglades Ecosystem Restoration footprints.
- Purchased 8.45 acres of buffer land for conservation purposes adjacent to Biscayne Bay restoration projects.
- Replenishing funding for the [Environmentally Endangered Lands Program](#).
- Rated FEMA CRS Class 4 for improving the town's ability to mitigate potential flooding and set aside approximately \$4 million for stormwater management.
- Working to restore a 53-acre wetland adjacent to Biscayne Bay Coastal Wetlands in partnership with SFWMD.

Palmetto Bay

- Adopted the [Florida DEP Model Ordinance](#) for fertilizer use for urban landscapes, alongside additional and more stringent standards related to the use of nitrogen and phosphorus-based fertilizers.
- in support of the proposed county septic-to-sewer taskforce.

North Bay Village

- First municipality to pass the Florida Friendly Fertilizer Ordinance.
- Set aside \$500,000 for stormwater management.
- Developed a partnership with Florida International University and the University of Miami to find innovative research to help improve the health of Biscayne Bay and has set aside a [marine park](#) within its jurisdiction.
- Is working on rapid derelict vessel removal in partnership with the county.

Coral Gables

- Identified sustainability and climate resiliency as a [top priority](#) in 2021.
- Passed a new [Fertilizer Ordinance](#) establishing restrictions on the application of fertilizers.
- Allocated more than \$6 million to a sea-level rise mitigation fund and expects to set aside \$100 million by 2040.

Pinecrest

- Secured \$11.4 million in American Rescue Plan Act funding for the [Potable Water Project](#), which will connect 700 homes previously reliant on well water to the county water and sewer system.
- [Passed a resolution](#) urging the Florida Legislature to expand the list of qualifying improvements that may be financed through the city's Clean Energy Program to include septic-to-sewer conversion.
- [Passed a resolution](#) in support of the proposed county septic-to-sewer taskforce.

South Miami

- Added grates on storm drains to prevent trash from reaching Biscayne Bay.
- [Passed a resolution](#) to protect Biscayne Bay Southern Everglades Ecosystem Restoration from any industrial development that conflicts with current restoration alternatives.
- Funded a plan to get all residents on city water and is working to find funding to implement the septic-to-sewer plan, which already has the engineering component completed.

The Green Corridor Cities (Cutler Bay, Palmetto Bay, Pinecrest, South Miami, Coral Gables, Miami and Miami Shores) all support using [PACE Program](#) funding for water and sewer infrastructure improvements and are working toward bringing this to fruition. Collectively, the League of Cities recognizes there is a lot of collective action and support is needed in 2022 and beyond for implementing the recommendations of the Biscayne Bay Task Force.

As a league member, will encourage the passage of support for the task force recommendations collectively and individually; the passage of a local fertilizer ordinance individually; the passage of Plastics 305 initiatives within each municipality and supporting efforts to go plastic-free statewide; local protection of green space and purchase of conservation lands within each municipality; and helping find the to replenish our local land-buying program, the [Environmentally Endangered Lands Program](#) to help improve water quality and timing and distribution of water to Biscayne Bay. In addition, Commissioner Meerbott will work with other cities to urge the state to allocate more funds across the board for aging water and sewer infrastructure, tracking pollution, cleaning storm drains and canals, and supporting and expediting SEER, which is the Everglades project that would benefit Biscayne Bay.

South Florida Water Management District (SFWMD)

- **CERP-Biscayne Bay Coastal Wetlands** – The Biscayne Bay Coastal Wetlands (BBCW) project, a part of the Comprehensive Everglades Restoration Plan (CERP), was authorized by Congress in 2014. In 2021, the district continued to work with the U.S. Army Corps of Engineers to design and implement the components of this project to bring fresh water to the coastal wetlands along Biscayne Bay and improve timing and water quality within the bay.
 - Contract 4: S-709 Pump station – Under construction by the Corps. Construction completion expected late 2022.
 - Contract 5A: S-705 Pump station – Under construction by the Corps. Construction completion expected mid-2023.
 - Contract 5B: S-703 pump station and spreader – Contract awarded by the Corps in 2021. Completion expected mid-2023.
 - Contract 5C: S-710 and S-711 pump stations and North Canal Wetland restoration – Contract awarded by the Corps in 2021. Construction expected through 2024.
 - Contract 6: Cutler Wetlands Flow Way – Intermediate design completed. Final design, contract award and construction expected in 2022 with completion in 2025.
- **CERP-Biscayne Bay and Southeastern Everglades Ecosystem Restoration** – Biscayne Bay and Southeastern Everglades Ecosystem Restoration is a CERP study with multiple components to bring fresh water and improve timing of deliveries to Biscayne Bay, the Model Lands, Southern Glades and other areas, building on the work of the BBCW project. In 2021, the Project Delivery Team – consisting of the SFWMD, the Corps, Miami-Dade County, the U.S. Department of the Interior, and other federal state and local agencies – developed 10 alternatives that could yield benefits while adapting to sea level rise.
- **Biscayne Bay Economic Study Update** – In 2021, the SFWMD and Miami-Dade County drafted a memorandum of understanding and a statement of work for an update to the 2005 Biscayne Bay Economic Study that was conducted for the water management district. The purpose of the Biscayne Bay Economic Study Update is to estimate the economic contribution of Biscayne Bay as it is used for recreation, shipping, cruises and commercial fishing. Economic contribution is the output, resident income, employment and tax revenue generated from these activities. The study will also update the recreational uses and intensity of Biscayne Bay. This update of the economic role of Biscayne Bay in Florida could be used to justify investments and programs to protect the bay and its contributions to economic activity and community well-being.
- **Model Lands Restoration Project** - Miami-Dade County in cooperation with the SFWMD and DEP is implementing a concept for the construction, operation and monitoring of environmental pump stations to divert excess stormwater from the Florida City Canal and improve hydrology and reduce saltwater intrusion in the Model Lands. In 2021, the district facilitated development and documentation of the project benefits, design and regulatory requirements, including the project operating and monitoring plans.

Florida Department of Environmental Protection (DEP)

- The **Division of Environmental Assessment and Restoration (DEAR)** has been providing technical and analytical support in response to significant Biscayne Bay seagrass losses. Over the past year, DEP’s laboratory has performed almost 10,000 analyses in support of this effort. DEAR staff have also participated in Biscayne Bay fish kill and algal bloom response coordination calls. The Water Quality Standards Section has proposed revised turbidity criterion language as part of the department’s triennial review of the water quality standards. The proposed revised turbidity criterion would provide additional protections for corals and coral habitats. DEAR has additionally in recent years presented information on alternative restoration plans to various stakeholders surrounding the Bay and is continuing that direct outreach in 2022.

- The **Coral Protection and Restoration Program (CPR)** within DEP’s Office of Resilience and Coastal Protection administers state funds appropriated for the protection and restoration of Florida’s Coral Reef – including reduction of local stressors like land-based sources of pollution. In Fiscal Year (FY) 2020-21, \$10 million in grant funding was awarded to Miami-Dade County to support identification of pollution hotspots; construction solutions leading to reduced stormwater and wastewater-related nutrient inputs to surface waters of the Biscayne Bay Aquatic Preserves; and biological restoration in support of protecting Florida’s Coral Reef.
 - The Biscayne Bay Water Quality Improvement Grant was created in FY 2021-22. A total of \$20 million in Biscayne Bay Water Quality Improvement grant funding will support ongoing county efforts as well as priority nutrient reduction projects.

| Project Number | Partner | Project Name | DEP FY 2021-22 Funding Award |
|----------------|--|--|------------------------------|
| 1 | City of Coral Gables | Coral Gables Waterway / Biscayne Bay Water Quality Improvements - Construction | \$900,000 |
| 2 | City of Coral Gables | King's Bay Septic-to-Sewer Conversion | \$2,750,000 |
| 3 | Florida International University - Institute of Environment | Biscayne Bay and Reef Observation, Interpretation and Prediction System (B-BROIPS) | \$1,250,000 |
| 4 | Miami-Dade County | Phase 2 - Implementation of Biscayne Bay Task Force Recommendations | \$12,940,463 |
| 5 | Miami Shores Village | Miami Shores-NE 8th Avenue Drainage Improvement Project | \$300,000 |
| 6 | Miami Waterkeeper | Improving Water Quality in Biscayne Bay through Coordination, Outreach, Monitoring and Source Tracking | \$600,000 |
| 7 | North Bay Village | North Bay Village Stormwater Pump Station | \$600,000 |
| 8 | South Florida Water Management District with Tulane University | Biscayne Bay Water Quality Model Development and Application | \$500,000 |
| 9 | Village of Key Biscayne | Stormwater Sustainability Pilot Project | \$159,537 |
| Total | | | \$20,000,000 |

- **Oleta River State Park**

Oleta River State Park has performed 2.3 acres of seagrass restoration. A time zero benthic survey report is on file including the collected data in tabular format and a GIS map for visual representation of the existing seagrass resources within the project area. Park staff have also participated in Biscayne Bay cleanups. Three park facilities have been taken off septic and connected to sewer. In addition, staff are partnering with the Florida Fish and Wildlife Conservation Commission to restore two remnant mangrove systems in the park. These wetlands were impounded within the landscape during large-scale dredging and filling associated with coastal development in the 1950s and have been stressed due to failure of hydrologic connections to tidal flow. This project proposes to improve the function of the two die-off areas, totaling 26.7 acres of mangrove habitat, by reestablishing tidal flow through the maintenance or replacement of culverts.

- **Bill Baggs Cape Florida State Park**

Bill Baggs Cape Florida State Park is situated between Biscayne Bay and the Atlantic Ocean and is committed to the preservation and stewardship of the surrounding waters. The park's ongoing efforts to maintain native ecosystems through targeted invasive species removal and beneficial native species planting have helped create buffer habitat vital to shoreline stabilization. A post-Hurricane Andrew mangrove restoration area is maintained, serving as a bird rookery and fish nursery within the bay. Park rangers maintain trails and interpretive signage that have contributed to the preservation of vital dune habitat, even with the more than 1 million guests that visit park beaches annually. Over 4,000 volunteers have participated in coastal cleanups in the past year, removing tons of marine debris from the shorelines. The park harbor is a DEP designated Clean Boating/Clean Marina, offering free waste disposal, sewage pump-out and fresh water, as well as interpretive signs encouraging visitors to practice responsible boating and help improve water quality in Biscayne Bay. A deployable marine spill kit is available at the harbor in the event of a marine-related environmental accident. Parking lot and roadway stormwater controls are maintained throughout the park to provide safe drainage during storm events. The park has nurtured numerous partnerships with local universities, environmental organizations and governmental regulatory agencies to facilitate ongoing research on the bay, including subjects as varied as coral spawning, beach health, marine debris and water quality. Park rangers take every opportunity possible to educate visitors on the importance of Biscayne Bay and the role it has in Florida's past, present and future.

- **Barnacle Historic State Park**

The Barnacle Historic State Park conducted many natural resource and educational programs benefiting Biscayne Bay during 2021, including:

- Annual discussion with park district biologists to identify natural and cultural resource needs and goals for the park.
- Exotic plant removal.
- Coastal cleanups.
- Native plantings.
- The park's citizen support organization (CSO) hired a landscape architect to create a stormwater runoff and erosion plan. The Barnacle is now working with the Florida Park Service Bureau of Design and Construction and the city of Miami on permitting.
- From January to September, a dedicated exotic removal ranger worked to meet the park's removal goals. Upon his departure, rangers continued work on exotic removal.
- Park staff and the CSO worked with partners on educational programs and events.
- Park staff members routinely remove litter that floats in on the tide and hauls it to landfill.

- The CSO cut plastic usage. The majority of water and soft drinks sold at events is in aluminum cans.
- Researching installation of a water-bottle filling station to cut down single-use plastic.
- **Biscayne Bay Aquatic Preserves**
 - Biscayne Bay Aquatic Preserves (BBAP) within DEP's Office of Resilience and Coastal Protection operates as the managing and partial owning entity for almost 70,000 acres of submerged lands and emergent islands within Biscayne Bay. For the last 48 years, BBAP has managed the health of the aquatic preserves through four programmatic goals: restoration to natural condition; protection of ecological integrity; promoting public use and stewardship; and management through research-based sound science.
 - Restoring BBAP to its natural condition is being achieved via a multitude of programs. Assistance in derelict vessel reporting and illegal crab pot removals during the FWC 2021 crab pot closure assisted the restoration of submerged lands, while the bay's islands were targeted through three major efforts. BBAP continued its decades-long history of hosting an International Coastal Cleanup site, which has removed 1,000 pounds of marine debris. Secondly, BBAP's Adopt-an-Island Program saw 16 cleanups from its adopters, who removed almost 2,000 pounds of debris from the bay's islands. This past fall, BBAP initiated a NOAA Marine Debris grant funded contract to remove Hurricane Irma debris from 13 of BBAP's islands. Six islands have been cleaned with the removal of almost 10 tons of debris with the remaining seven to be completed in early 2022.
 - Protection of ecological integrity and promoting public use and stewardship included the permit review and meeting attendance for project planning totaling over 100 hours. Stakeholder engagement on the health of the bay, technical document review, report writing, grant application reviews, public outreach, and public presentations all contributed to hundreds of hours of dissemination of BBAP achievements and efforts to the public in support of these programmatic goals. BBAP staff also serve the public by representing DEP in the Comprehensive Everglades Restoration Plan's Biscayne Bay Coastal Wetlands and Biscayne Bay and Southeastern Everglades Ecosystem Restoration planning processes, on the Southeast Florida Coral Reef Initiative team, and providing assistance and guidance to BBAP's citizen support organization, the Friends of Biscayne Bay Inc. Planning for construction and environmental response efforts led to the completion of emergency response training under NOAA's Natural Resource Advisor Training certification program to prepare for future storm events, oil spill events and derelict vessel removals.
 - DEP continues as a leading agency in the monitoring and assessment of the Biscayne Bay area via BBAP's six main research programs. The central focus for BBAP is the study of the stressors and preceding ecological status after an expansive seagrass loss event a few years ago in northern Biscayne Bay. Benthic habitat mapping of 31 sites in northern Biscayne Bay has linked nearshore, human-induced nutrient levels to the eutrophication of the waters of BBAP, resulting in enhanced stressors and a large die off of economically and environmentally important submerged aquatic resources. Furthermore, seagrasses and macroalgae were collected to study the uptake of water quality nutrients to further link eutrophication to the seagrass loss event. Sediments were collected in association with seagrass areas to define the potential of sulfide intrusion

linking poor water quality and low oxygenation to the health of the bay and the seagrass losses.

- With an EPA funded grant in 2021, BBAP expanded its datasonde network into the Miami River, establishing two more sites along with the three existing datasonde sites in the Little River watershed. Across the five deployed continuously monitoring water quality sites, over 175,000 water quality data points were collected in 2021. Three more sites are planned in the Rickenbacker and Venetian basins for a programmatic total of eight continuously collecting water quality sites in the bay and its estuarine tributaries. With the current datasonde network, BBAP has attained the largest continuously monitoring network by an aquatic preserve in the state. DEP's Office of Environmental Accountability and Transparency is also providing funds for a staff position and water quality equipment to support this important effort.
 - Understanding the water quality of the bay requires source tracking of nutrients through the watershed, which is achieved by BBAP's monthly water quality bottle grab sampling of 24 sites for tracking of 39 nutrients, septic tracers, pharmaceuticals, herbicides, insecticides and fungicides. Supported by DEAR, this sampling effort totaled over 11,000 water quality analyte data points in 2021.
 - Newly implemented and established monitoring projects in 2021 included the only island-based bird count, BBAP's Rookery Island Bird Monitoring Program, which counted over 10,000 birds on 36 islands. BBAP staff also conducted emergency response monitoring for the September 2021 fish kill.
 - In 2022, the implementation of an EPA funded water quality restoration project achieved via sponge propagation will provide examples of water quality benefits from expanding the ecosystem services of a group of species that currently exist in the bay and provide benefits to other protected species, such as seagrasses and corals. This project, the first of its kind in Biscayne Bay, will be executed without disturbing seagrass habitat by utilizing existing bay resources and salvaging sponges removed during construction projects.
- **DEP Southeast District (SED)**

The Miami-Dade Water and Sewer Department (MDWASD) completed a treatment and collection system over the past seven years via a 2014 consent decree between the U.S. Department of Justice, DEP and MDWASD. The treatment plants and collection system are near Biscayne Bay and are one of the surface waters that benefits from these improvements. The following has been completed during the past five years as part of this consent decree:

 - Rehabilitation of a chlorine contact chamber at the South District treatment plant.
 - Miscellaneous electrical improvements at the Central District treatment plant.
 - Replacement of pumps at one of the effluent pump stations at the Central District treatment plant.
 - Rehabilitation of digesters at treatment plant 2 clusters 1-4 at the Central District treatment plant.
 - Construction of two 80-ton oxygen production units at the Central District treatment plant.
 - Add standby pumps and rehab outfall pump station wet well for effluent disposal at the North District treatment plant.
 - Rehabilitation of 3.5 miles of the south Dade 54-inch force main (collection system).
 - Rehabilitation of a 54-inch force main in city of Miami (collection system).

- Replacement of 30 miles of asbestos cement force main transmission system (collection system).
- Replacement of 231,731.01 linear feet (43.89 miles) of force mains (collection system).

Fish and Wildlife Conservation Commission (FWC)

The mission of the Florida Fish and Wildlife Conservation Commission is “managing fish and wildlife resources for their long-term well-being and the benefit of people.” Toward that end, the FWC has five divisions, the Fish and Wildlife Research Institute and multiple offices dedicated to furthering its mission. Multiple divisions and the research institute contribute to protecting, studying and preserving natural resources in Biscayne Bay. Examples from 2021 include:

Resource Management – The Division of Habitat and Species Conservation, Division of Marine Fisheries Management, Fish and Wildlife Research Institute, and Office of Strategic Initiatives all participated in resource management and enhancement or coordinated on interagency teams to benefit Biscayne Bay in 2021. Highlights include:

- FWC staff and scientists serve on many interagency teams and serve as subject matter experts engaged in Everglades restoration, marine fisheries, marine and estuarine resources, manatees and climate change, among other topics. Teams that FWC has served on or engaged with include:
 - Biscayne Bay and Southeastern Everglades Ecosystem Restoration (BBSEER).
 - Miami-Dade Back Bay Coastal Storm Risk Management Feasibility Study, promoting use of nature-based features (e.g., mangrove restoration and living shorelines).
 - U.S. Army Corps of Engineers South Atlantic Coastal Study.
 - Biscayne Bay science coordination calls, led by the Miami Waterkeeper, in response to 2019 fish kills in the northern bay.
- FWC staff monitor and maintain the Bill Sadowski Virginia Key Critical Wildlife Area, which protects approximately 700 acres of foraging habitat for shorebirds, wading birds, manatees and other marine life. It includes a no entry zone to ensure manatee and seagrass protection [Florida Administrative Code 68C-22.025(1)(e)1].
- Oleta River State Park Mangrove Restoration Project (total of 26.7 acres): Project engineering and design plans are 100% complete. Construction should be complete in 2022.
- FWC is a partner in the stony coral tissue loss disease response. Efforts include coral rescue, intervention experiments, coral restoration trials, coral disease monitoring, strategic sampling and laboratory analyses, and data management.
- FWC has multiple state-wide or regional programs that intersect with Biscayne Bay. These include:
 - Manatee Rescue and Carcass Salvage.
 - Sea Turtle Stranding and Salvage Network.
 - Statewide Nuisance Alligator Program: Crocodile Response Agents.
 - Nonnative Fish and Wildlife Program including early detection rapid response efforts and lionfish removal programs
 - Fisheries Dependent Monitoring, tracking recreational and commercial fisheries landings throughout the state.
 - Artificial Reef Program, providing annual financial grants to local governments and others for new reef construction and monitoring.

Law Enforcement – FWC’s Division of Law Enforcement patrols, protects and preserves Florida’s natural environment, with officers constantly “in the woods and on the water.” FWC law enforcement has a strong presence on the waters of Biscayne Bay.

- The Office of Boating and Waterways oversees and coordinates statewide regulatory waterway markers, manages the derelict vessel removal program, and coordinates certain marine debris response (e.g., derelict trap removal, hurricane debris).
 - Waterway markers are routinely surveyed for accuracy and for damage. Missing, damaged or incorrect signage can be reported to 866-405-BUOY or by emailing Waterway.Management@MyFWC.com.
 - The Derelict Vessel (DV) Removal Program provides a means for counties and municipalities to apply for grant funds to be used for removing such vessels from the waters of their communities. More information on the grants can be found at [FWC Derelict Vessel Removal Grant Program](#). In 2021 for Miami-Dade County, FWC grant funds helped close 45 DV cases, with 41 currently open. Most DV cases are in Biscayne Bay or attached waterways.
- In Miami-Dade County, through calendar year 2021, FWC officers issued the following boating and resource citations and warnings, a large portion of which were in Biscayne Bay (**Figure 5**):
 - 4,298 boating citations.
 - 1,017 resource citations.
 - 895 warnings

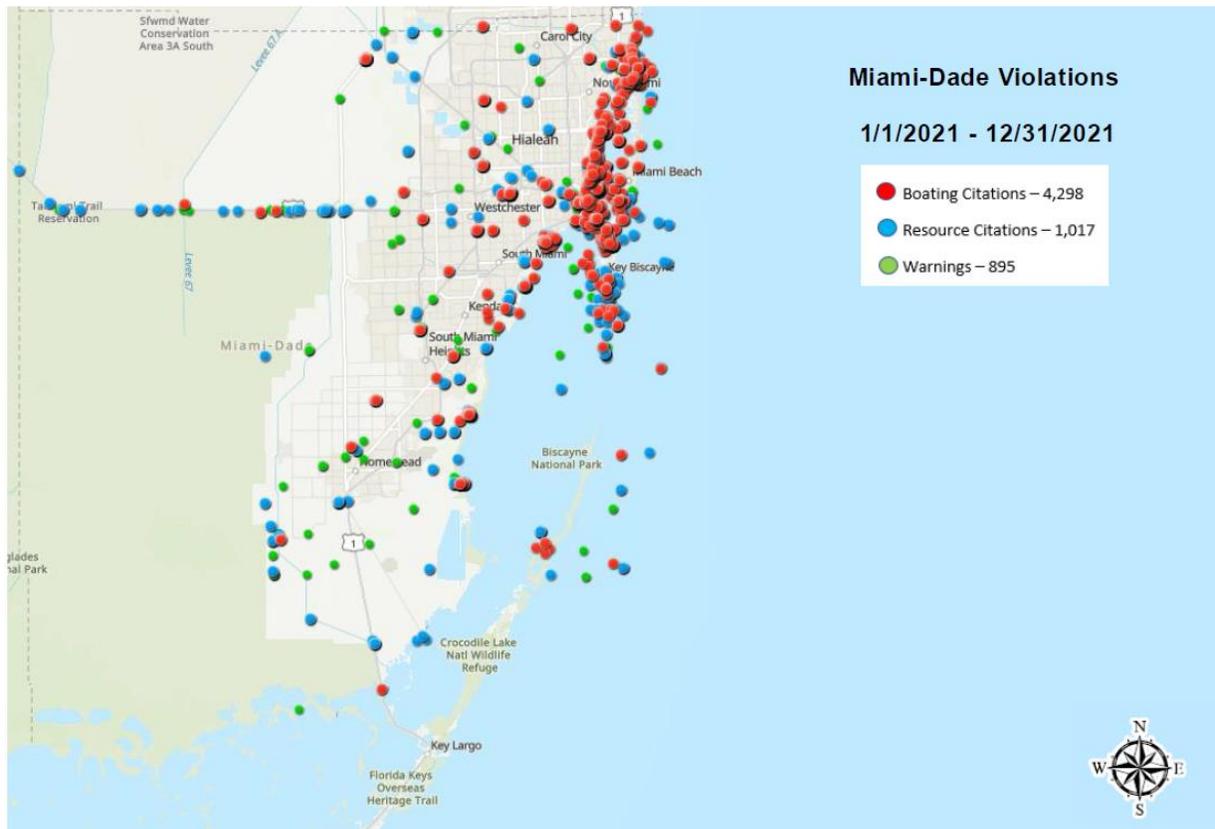


Figure 5. Boating and resource violations issued by FWC in Miami-Dade County during 2021, a large portion of which were in Biscayne Bay.

Florida Inland Navigation District (FIND)

- **Waterways Assistance Program**

Since 1986, the Florida Inland Navigation District has provided over \$86 million in Waterways Assistance Program funding to 267 projects in the county, with a total constructed value of \$229 million. The county and 14 cities have participated in the program. Notable projects include several spoil island management projects; the Marjorie Stoneman Douglas Biscayne Nature Center; Bicentennial Park improvements; improvement to most major public marinas (Dinner Key, Virginia Key, Crandon, Haulover, Pelican, Black Point, etc.); notable repairs to public facilities following several hurricanes; South Pointe Pier project; Alice Wainwright Park; and Parcel B Public Shoreline Stabilization.

In 2021, FIND awarded nine grants with a value of \$4.4 million, including Haulover Marina boat ramps, piers, parking renovations, Bal Harbour marine patrol boat engines replacement; Maurice Gibb Memorial Park seawall, living shoreline, overlook; Miami Beach mooring field near Belle Isle; civic park in North Bay Village; North Bay Village marine patrol vessel; dockage at the James L. Knight Center/Miami River Hyatt; and city of Miami Legion Park shoreline stabilization and kayak launch.

In 2021 the city of Miami completed three significant grant projects that have been in process – the [Virginia Key](#) seawall, dock and kayak launch at Shrimper’s Lagoon; [Spring Garden Park](#) seawall and kayak launch; and [Dinner Key Marina](#) redevelopment.

- **Small-Scale Derelict Vessel Removal Program**

Miami-Dade County and its municipalities have previously participated in the Small-Scale Derelict Vessel Removal Program with \$275,000 in district funding contributing for roughly 125 vessels removed. In 2021, FIND awarded \$100,000 in grants for derelict vessel removal in the city of Miami (**Figure 6**).

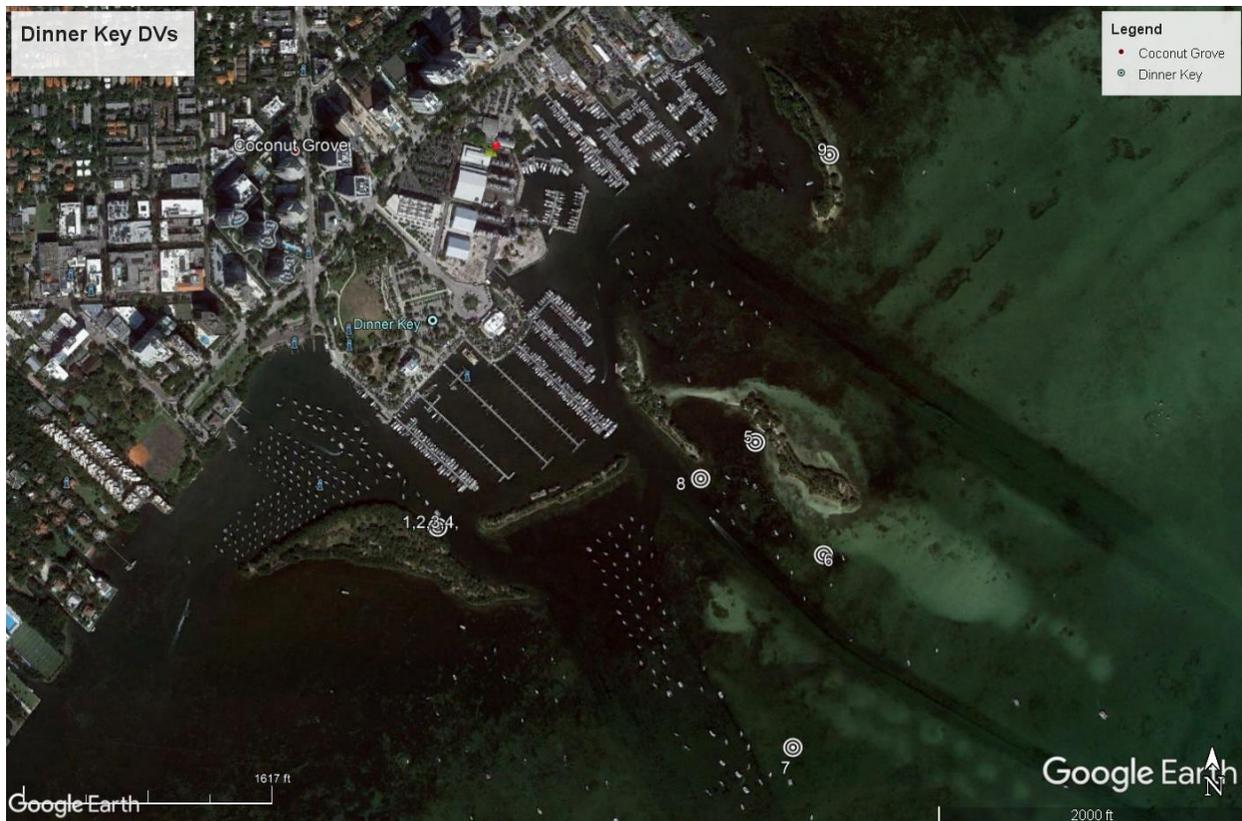


Figure 6. Derelict vessel locations within the city of Miami for which FIND grant funding has been awarded for removal.

- **Waterfront Recreational Access Plan**

In 2018, FIND awarded Miami-Dade County a \$100,000 grant to develop a master plan for public access to county waterways. The plan’s purpose is to “provide an interconnected blueways system with improved public access and recreational opportunities to Biscayne Bay and Miami-Dade County’s waterways in order to encourage residents and visitors to enjoy, responsibly use and protect these unique natural ecosystems.” The plan is nearing conclusion and will be finished in calendar year 2022. When complete, the access plan will provide local, state and regional governmental interests with a roadmap to increase public access to the bay.

- **Flood Shoal and IWW Channel at Haulover Inlet**

The Bal Harbor Shore Protection project includes 90k cy obtained from dredging and approximately 110k cy from truck haul. Material will be placed on the beach between R-27 and R-31.3. Out of the 90k cy being dredged, approximately 25% will be dredged from the Bakers Haulover reach of the Intracoastal Waterway. This material is located within a problematic flood shoal that is north of the inlet. The removal of this material from the flood shoal has multiple benefits. First, material removal from the flood shoal will act as advance maintenance, lessening the shoaling that would be expected to be deposited into the IWW. Second, the dredging of material from the IWW and placement on the beach is a prime example of beneficial use, removing material at the benefit of one project to benefit another.

- **Cooperative Assistance Program**

The district's Cooperative Assistance Program has provided funding assistance for the following projects with elements in Miami-Dade County: Blue Marlin construction at Oleta River State Park; No-Name Harbor boater access; Bill Baggs shoreline and fishing platform project; Florida Marine Patrol office building; Florida Marine Patrol officer funding; Miami River dredging; and the manatee acoustic study. The district's funding assistance for the Miami-Dade County portion of these projects has been over \$4.5 million.
- **Interlocal Agreement Program**

The district's Interlocal Agreement Program (a subset of the WAP and CAP programs) has provided funding assistance for the following projects with elements in Miami-Dade County: Miami River dredging; Clean Marina Program; Clean Vessel Act Program; and the Miami Circle Shoreline Rehabilitation Project. The district's funding assistance for the Miami-Dade County portion of these projects has been approximately \$5 million.
- **Waterway Cleanup Program**

Since 1998, the district has consistently partnered with Miami-Dade County in its annual Baynaza waterway cleanup event, providing up to \$10,000 per year.
- **Small-Scale Spoil Island Enhancement and Restoration Program**

To date, four spoil island enhancement or restoration projects have been funded in Miami-Dade County, including docks on Spoil Islands E and C plus Pelican Island signage.

 - Participated in Biscayne Bay tour with U.S. Rep. Maria Elvira Salazar.
 - Participated in tour of Merrill Stevens boatyard with the Miami River Commission.
 - Participated in design meetings related to Sewell Park shoreline restoration.

STATUS OF EACH PENDING TASK

Prior to the commission's inaugural meeting, initial steps were taken to make progress on the six tasks outlined below, taken from the establishing legislation. Additionally, at its first meeting, the commission discussed these tasks and planned how to address each, and they continue to make progress on each between their meetings. Tasks include:

- (a) Consolidate existing plans, programs and proposals, including the recommendations outlined in the June 2020 Biscayne Bay Task Force report, into a coordinated strategic plan for improvement of Biscayne Bay and the surrounding areas, addressing environmental, economic, social, recreational and aesthetic issues. The commission shall monitor the progress on each element of such plan and shall revise the plan regularly.
 - Each commissioner is tasked with bringing policy, ordinance and project ideas to their next meeting for discussion.
 - The commission discussed looking at the project lists provided by the MDC Watershed Advisory Board and determining where combinations of the two groups' ideas are effective or creating policies for MDC's ideas.
 - As a potential project, the commission discussed and will coordinate with the former Biscayne Bay Task Force members and current MDC Watershed Advisory Board to reach consensus on applying either the DEP Total Maximum Daily Load (TMDL)/Basin Management Action Plan (BMAP) or Reasonable Assurance Plan (RAP) process to the existing water quality impairments in Biscayne Bay.
 - A suggestion was made at the inaugural meeting to include a library (or link to one already existing) to provide access to the documents (e.g., Biscayne Bay Aquatic Preserve Management Plan, Biscayne Bay Task Force Recommendations, etc.) that the commission will consolidate on their website. Options are being explored by DEP's website developers.
- (b) Prepare a consolidated financial plan using the projected financial resources available from the different jurisdictional agencies. The commission shall monitor the progress on each element of such plan and revise the plan regularly.
 - The commission decided at its first meeting to bring information to the next meeting on the resources each member agency can bring to bear or is otherwise aware of (e.g., grant programs they don't administer).
 - A suggestion was made at the inaugural meeting for member agencies to coordinate their lobbying efforts in order to make their individual requests more effective. Members with lobbyists will follow up.
- (c) Provide technical assistance and support as needed to help implement each element of the strategic and financial plans.
 - After hearing the presentations at their first meeting, commissioners requested additional technical support and data from DEP DEAR regarding Biscayne Bay impairments, water quality hotspots maps, and analyses by basin.
 - Commissioner discussion at their inaugural meeting resulted in a request to the Florida Department of Transportation for technical support regarding the agency's plans to address sea level rise along the causeways transiting Biscayne Bay and discussion of ways to build resilience (e.g., living shorelines) and restoration (e.g., improved water flow) into their plans.
 - Commissioners also discussed calling upon the state of Florida's Clean Waterways Act Stormwater Rulemaking Technical Advisory Committee for technical assistance.
- (d) Work in consultation with the U.S. Department of the Interior.

- The commission has requested an update (similar to what is provided in Section 2 of this report) from Department of the Interior representatives for Biscayne National Park (BNP) and the Office of Everglades Restoration Initiatives. Their update includes:
 - The Department of Interior (DOI) and the National Park Service (NPS) are key partners in the Comprehensive Everglades Restoration Program, an effort to restore and improve the quantity, quality, timing, and distribution of freshwater flow to South Florida, including flows to Biscayne Bay and Biscayne National Park. During 2021, DOI and the NPS were partners to, consulted on, and otherwise guided, the operations of the South Florida Water Management District water management system, and multiple other projects meant for the benefit of the regional ecosystem. Specific projects for 2021 include:
 - The Working Group and the Science Coordination Group facilitated various briefings and updates to other government agencies and the public on various matters related to Biscayne Bay and connectivity to other restoration projects. The updates related to restoration construction progress, coral reef disease update, Biscayne Bay and Southeastern Everglades Restoration (BBSEER) project and fisheries.
 - Updates to the Lake Okeechobee System Operating Manual. DOI and NPS consulted on the selection of alternatives that maximize freshwater flow south while meeting water quality and other water use constraints. Increased flow south is anticipated to improve water availability to Biscayne Bay and BNP, particularly during the dry season.
 - Elevation of the Tamiami Trail roadbed. DOI and NPS consulted on and engaged in permitting and monitoring for a project to increase the elevation and improve flow structures under Tamiami Trail. Improved flow south and increased stage in the L29 canal allows for improved flow to Everglades National Park and increased availability of water for Biscayne Bay and BNP.
 - Consulting on water management operations. NPS scientists regularly consult on regional freshwater management operations to improve flows south and to the coast for the benefit of the contiguous Florida Bay and Biscayne Bay system.
 - Tracking installation of Biscayne Bay Coastal Wetlands Phase 1 implementation. NPS scientists regularly provide review and feedback on the operational changes that have been implemented to improve water levels in L31E, flow at the S-700 structure, and other actions that improve flow into the coastal wetlands of Biscayne Bay including features within Deering Estate.
 - Participating in the project delivery teams for the Biscayne Bay and Southeastern Everglades Restoration (BBSEER) project. DOI and NPS contributed to the process, providing input and suggesting features to be included in initial alternatives for the
 - BBSEER project. DOI has contributed to the selection of models, the development of performance metrics, and the initial array of features that may be built to improve flow through the Model Lands region and other coastal zones of Biscayne Bay and BNP.
 - Coordinated on construction of culverts to improve flow to the coast in Taylor Slough. This project, while not directly improving flow to Biscayne Bay, will increase freshwater flow across the connected coastal wetlands system in eastern Florida Bay, adjacent to southern Biscayne Bay and may have indirect benefits to the regional system.

- Seepage Barrier consultation, permitting, and construction monitoring. DOI and NPS have engaged on the installation of a seepage barrier along the 8.5 Square Mile Area along the border of Everglades National Park. This project was evaluated by NPS staff to assure that Biscayne Bay would experience no adverse impacts. The project is anticipated to provide a net benefit to the region, including Biscayne Bay, by allowing water levels to increase in Northeastern Shark Slough, thus increasing regional water availability.
- Miscellaneous consultation on regional issues. DOI and NPS have addressed multiple smaller regional issues, such as evaluating the potential benefits of acquiring donated lands adjacent to Biscayne National Park, that either benefit the Biscayne Bay now or set the stage to provide additional benefits to the bay in the future.

(e) Provide a forum for exchange of information.

- The forum occurred among commission members at their inaugural meeting, and with the public in the formal comment period and the webinar chat.
- A suggestion was made at the inaugural meeting for the commission to plan a site visit to Biscayne Bay.
- Each commissioner is tasked with providing their member agency's feedback on the items discussed at the first meeting (e.g., law enforcement capacity, septic-to-sewer conversions, etc.).
- The commission decided to exchange information with the MDC Watershed Advisory Board by linking to each other's websites and providing each other's meeting summaries to the other group. Options are being explored by DEP and MDC's website developers.
- The commission discussed the two groups using the same talking points for projects where all levels of government aggregate actions that focus on one basin in order to magnify awareness of the issue at hand and amplify the potential for environmental change.

(f) Act as a clearinghouse for public information.

- The Biscayne Bay Commission website serves as a clearinghouse of information on the bay and the commission.
- This and future reports will be posted on the commission's website. These reports serve as a clearinghouse for all work the member agencies are conducting regarding Biscayne Bay.

The Biscayne Bay Commission Meeting will meet again in Spring 2022.