

# ENVIRONMENT AND SUSTAINABILITY

## DEPARTMENT MISSION STATEMENT

We are dedicated to providing the highest quality services to our community by developing and implementing climate adaptation and mitigation initiatives and environmental program management to preserve, protect, and enhance our natural resources.

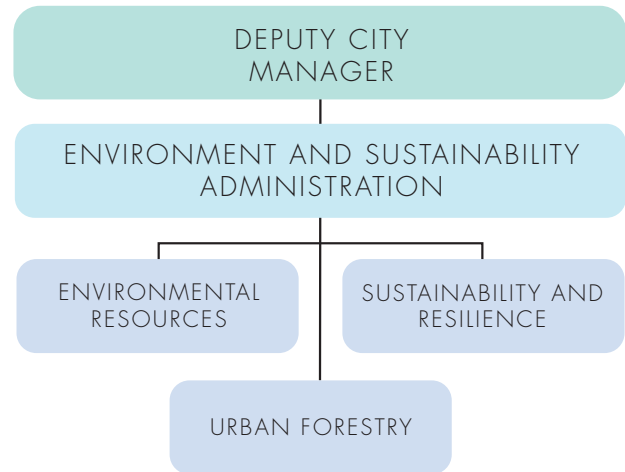
## DEPARTMENT DESCRIPTION

The Environment and Sustainability Department is represented by professional and licensed disciplines working in Environmental Resources Management, Sustainability and Resilience, and Urban Forestry.

The Environmental Resources Management Division provides expertise across city departments to ensure all public projects avoid, minimize, and mitigate environmental impacts while enhancing the natural environment and resilience through design. The division serves as the City's in-house environmental consultant and is the liaison between the City and other government agencies for environmental concerns and regulations. Services provided by this division include environmental complaint response, sampling, inspections, natural resource management, environmental permitting assistance, regulatory compliance oversight, plan review, and technical advice along with staff and community trainings.

The Sustainability and Resilience Division works across all City departments to advance climate change mitigation efforts with a focus on reducing greenhouse emissions from government operations and communitywide activities, reducing internal operational costs, and improving operational efficiencies. This team focuses on energy reduction, water conservation, recycling and waste reduction, education, and outreach. The resilience team focuses on climate change adaptation to help the City plan for, and bounce back from, sudden shocks and long-term stresses that are exacerbated by climate change. This team works through planning, policies, programs, and projects, particularly as it relates to flood risk reduction.

The Urban Forestry Division oversees the urban forest by providing regulatory management and strategically planting for the future. This includes citywide reforestation efforts, the citywide Geographical Information System Tree Inventory, and implementing the goals and recommendations established by the Urban Forestry Master Plan (adopted in October 2020). Since the inception of the City's Tree Preservation Ordinance on June 15, 2015, this division issues tree permits, oversees tree mitigation, conducts heritage tree evaluations, conducts tree protection barrier inspections, provides tree risk assessments, and reviews plans for citywide tree selection installations.



## FISCAL ENVIRONMENT

The Environment and Sustainability Department is primarily funded from the General Fund. The General Fund charges an administrative fee to Enterprise Fund departments, the Redevelopment Agency (RDA), the North Beach Community Redevelopment Agency, and the Resort Tax Fund to cover the cost of various administrative support functions provided by the General Fund.

The Department is also supported through revenues generated from Sustainable Initiatives Contributions from the franchisee waste haulers. This fund provides financial support to the department by partially funding personnel service costs, as well as environmental and sustainability initiatives and programs. The waste haulers franchisees and the beachfront concessionaires' agreements include provisions to provide environmental grants to non-profit organizations that leverage the work of the Department.

The Sustainability and Resiliency Fund was created in January 2016 through the leadership of the City Commission. The Fund generates revenues from developments that elect to pay a fee in lieu of providing electric vehicle charging stations and developments that elect to pay a fee in lieu of building to the City's green building standards. As of FY 2022, 101 projects are required to follow the green building ordinance and are being built as LEED Gold. By Ordinance, the Fund is required to be used for projects that increase the sustainability and resilience of the City. A majority of these funds have been allocated to water quality improvements."

An additional Resiliency Fund was created in 2020 by the City Commission, which allocates \$666,666 annually starting in FY 2020 through FY 2025, as amended by the City Commission in 2023, for the Private Property Adaptation Program. This program provides matching grant funds for private property flood mitigation projects.

# ENVIRONMENT AND SUSTAINABILITY

## FISCAL ENVIRONMENT CONT'D

The Environmental Resources Division manages the City's interest in Beach Renourishment and the Dune Management Plan. The 4th amendment to the RDA Interlocal Agreement with Miami Dade County included a requirement that the City set aside \$1.5 million (for each of the six years outlined in the agreement) to help fund county-led beach renourishment. The County provided the City \$75,000 to fund a dune enhancement study that will be completed in FY 2024 and \$300,000 match for a \$1 million Resilient Florida grant for dune restoration.

The Department received another Resilient Florida grant for \$454,000 to conduct the City's Vulnerability Assessment and an Adaptation Plan. This project will analyze the risk of City assets to flooding and sea level rise and will produce a comprehensive plan to address the risks.

The Urban Forestry Division is partially funded from the General Fund and the Tree Preservation Trust Fund, which generates revenues via the City's Tree Preservation Program, including fees associated with tree permit plan review, inspections, code violations, fines, contributions and mitigation. The Tree Preservation Trust Fund covers ancillary and personnel expenses related to the Tree Preservation Program such as reforestation efforts, tree giveaways, reforestation-related materials, and supplies.

## BUSINESS ENVIRONMENT

The Environment and Sustainability Department works with other City departments and local and regional partners to integrate a holistic resilience approach to climate change mitigation and adaptation efforts.



## STRATEGIC ALIGNMENT

Main Vision Area:

### Environment & Infrastructure



Management Objectives:

- **Environment & Infrastructure**
  - Work regionally and nationally to protect Biscayne Bay water quality and to maintain a healthy dune and beach system that provides storm protection, recreation, and vital habitat for the public good
  - Reduce greenhouse gas emissions and heat by strategically increasing energy efficiency, green space, tree canopy and pedestrian greenways, encouraging walkability and increasing storm water retention
  - Reduce risk from storms, high tides, groundwater, and sea level rise adaptation and integrated stormwater program through the best science and technology, including green and blue infrastructure and mobility priorities while minimizing construction disruption, optimizing design aesthetics, and community engagement. Keep the entire program on-time, on-budget, and moving forward with adequate financing.
  - Make existing and new government buildings assets, and fleet efficient, sustainable and resilient
- **Neighborhoods**
  - Enhance the beautification, physical appearance and cleanliness of neighborhoods especially North Beach, City rights-of-way, town center areas, parks and beaches
  - Prioritize historic gems and create opportunities to build resilience into historic places to protect our unique Miami Beach identity
- **Organization Innovation**
  - Support all objectives to improve strategic decision making and financial stewardship, making the city more business friendly and user friendly, with an employee culture of problem solving and engagement
  - Implement the General Obligation Bond
  - Increase intergovernmental cooperation
  - Waterway Restoration and Management

Strategic Plan Actions:

- **CONTINUE** to enhance and manage the dune system
- **CONTINUE** implementing the Park View Action Plan
- **CONTINUE** implementing the water quality educational campaign
- **OVERSEE** Waterway Cleaning Contractor
- **CONTINUE** implementing the Fight the Flood Private Property Adaptation Program
- **COMPLETE** G.O. Bond Waterway Restoration and Management Project
- **CONTINUE** implementing the Vulnerability Assessment of City assets

# ENVIRONMENT AND SUSTAINABILITY

## STRATEGIC ALIGNMENT CONT'D

- **CONTINUE** to address the contamination remediation in projects and parks
- **ADVANCE** the Miami Beach Mooring Field
- **RESTORE** Monument Island
- **REDUCE** environmental impacts by working with DERM — fats, oils and grease program and Class 1 and 2 permitting
- **COMPLETE** the energy assessment of municipal buildings to identify energy efficiency projects
- **IMPLEMENT** the Urban Forestry Master Plan and G.O. Bond Tree Planting
- **INCREASE** compliance with the Building Code by streamlining the process and providing continued training to the public and applicants on the process

### Budget Enhancement Actions:

- Mid Beach Compost Hub

## SIGNIFICANT ACCOMPLISHMENTS

- Began implementation of the City's Fertilizer Restriction Ordinance to help reduce nutrients from entering Biscayne Bay and established the Biscayne Bay Protection Trust Fund
- Began implementation of the City's Beach and Dune Protection Ordinance to protect the Dune System that is critical for storm surge protection
- Implemented an inspection program for compliance with the City's Water Quality Ordinance to require the use of sediment and erosion controls on construction sites and prohibit illicit discharge into the stormwater system and Biscayne Bay. The inspection program has revealed 70% non-compliance of best management practices for sediment and erosion controls; the compliance rate increased since staffing of the program.
- Began implementation of the Citywide Seawall Ordinance to standardize seawall height and encourage upgrading of low seawalls to reduce high tide back bay flooding
- Planted over 1,900 trees through grant initiatives and G.O. Bond Projects in line with the City's first Urban Forestry Master Plan to create a resilient tree canopy

***Implemented an inspection program at construction sites to prohibit runoff pollution into the stormwater system and Biscayne Bay, requiring correction of the 70% of sites in violation.***

## SIGNIFICANT ACCOMPLISHMENTS CONT'D

- Designated as a Tree City of the World for the 19<sup>th</sup> year by the Arbor Day Foundation and the Food and Agricultural Organization of the United Nations (FAO)
- Began implementation of adopted ordinance to phase out gas-powered leaf blowers citywide
- Maintained operation of the North Beach Compost Hub, that has over 400 registered users
- Supported the County in launching the PlasticFree305 program, which was modeled after our own successful #PlasticFreeMB program
- Executed 11 Rising Above grants for community organizations to carry out environmental and sustainability projects/programs
- Supported Grants Management in securing over \$76.9 million in Resilient Florida grant funds for ten City projects to address flood risk from sea level rise
- Launched the Private Property Adaptation (PPA) Program that provides grant funds for flood mitigation improvements on private property; 46 applications were accepted for its inaugural cohort
- Within the PPA Program, assisted two properties in applying for the FEMA Federal Mitigation Assistance program that may partially or fully fund home elevation
- Created a new Program for Public Information Plan, approved by City Commission, to help the City recertify for a Class 5 CRS Rating, providing the community with 25% savings on flood insurance
- Supported the Mayor's Office in hosting the first Aspen Climate Conference at the Miami Beach Convention Center, bringing in speakers and visitors from all over the world

## CRITICAL SUCCESS FACTORS

- Maintaining adequate expert staff resources to implement complex environmental permitting and capital projects
- Working closely with departments and consultants to integrate green and blue infrastructure and environmental protections within our neighborhood and capital projects
- Improving quality of life through better air, water, environmental resources management and preservation
- Protecting life and property through policies and programs that allow the City and the community to adapt to and mitigate the effects of climate change
- Reducing flood risk through innovative financial incentives like the PPA program
- Proactively managing the City's environmental regulatory compliance programs
- Balancing the City's natural habitat to enhance ecosystem function and biodiversity in a highly populated urban environment.
- Maintaining the recreation, environmental and storm protection functions of the beach/dune system



# ENVIRONMENT AND SUSTAINABILITY

## CRITICAL SUCCESS FACTORS CONT'D

- Increasing the quality and quantity of the City's urban tree canopy
- Increasing awareness of the benefits of the City's resilience and sustainability initiatives
- Demonstrating investments for the City's sustainability and resilience improvements that can lead to short-term and long-term benefits and savings for the City and its residents
- Improving the City's operational and environmental sustainability
- Working regionally through the Resilient305 partnership and the Southeast Florida Climate Change Compact to advance shared priorities
- Ability and commitment to share information and standardize data (integration), such as fleet assessment, greenhouse gas emissions, energy assessment and water quality data

## FUTURE OUTLOOK

As a dense, urban coastal city with unique and sensitive environmental resources, the department's role is critical to protect the very resources people came to live near and enjoy. As City assets and services evolve, the role of sustainability will continue to be important in guiding City operations.

Public and private development provides opportunities to integrate green infrastructure, reduce the risks of flooding, and address aging infrastructure such as water, sewers, public seawalls, and living shorelines.

At the Federal level, there is an unprecedented push to provide funding mechanisms to tackle the climate crisis. It is a critical time for the City to seek out and pursue these funding opportunities for programs that address a range of environmental, social, and economic challenges posed by climate change. The next years are key to create programs and opportunities to use this funding as it is being made available.



## FUTURE OUTLOOK CONT'D

Miami Beach residents have high expectations for sustainability and environmental protection. It will be important to implement adopted plans, policies, ordinances, and projects to create a sustainable and resilient City.

Critical projects in the coming years to note include:

- Working with Miami-Dade County and the U.S Army Corps of Engineers to bring resources and projects to minimize the impacts of storm surge erosion and sea level rise
- Advancing a regulated mooring field and G.O. Bond projects that include reforestation and waterway dredging
- Implementing channel markers, aids to navigation, and other markers to increase safety for those accessing our waterways and protect marine life
- Collaborating with the University of Miami Laboratory for Integrative Knowledge (U-Link) on the artificial reef pilot program to develop the standards for future artificial reef projects in Miami Beach
- Completing a dune enhancement study and citywide dune enhancement restoration project to increase the resilience of this critical asset
- Implementing hybrid living shorelines with our public seawall projects
- Supporting Facilities and Fleet in transitioning our city assets and fleet to be sustainable and create long-term savings and protections. This includes energy audits, developing EnergyCAP reporting, improving recycling and waste reduction, continuing education, and outreach as well as developing policies that enhance the community.
- Finalizing the Climate Action Plan, which will provide high-impact actions to be prioritized and implemented across City departments
- Conducting the grant-funded Vulnerability Assessment and Adaptation Plan to analyze flood risk posed by climate change and sea level rise, creating a plan, and engaging the community in this process
- Carrying through the first year of the PPA program, conducting all participant assessments, and beginning the implementation of their individual flood mitigation projects
- Creating sustainability guidelines as part of the special event permits to increase the sustainability of events and promote high-scale visibility of the City's sustainability measures
- Construction of the waterway markers in Meloy Channel to improve navigability and provide environmental protection of our waterways will be underway in FY 2023