

# ENVIRONMENT AND SUSTAINABILITY

## DEPARTMENT MISSION STATEMENT

We are committed to providing the highest quality services to our community by building resilience through the development, implementation, and improvement of climate change mitigation and sea level rise adaptation initiatives that enhance our natural environment, protect and preserve our urban forest, and increase communitywide sustainability.

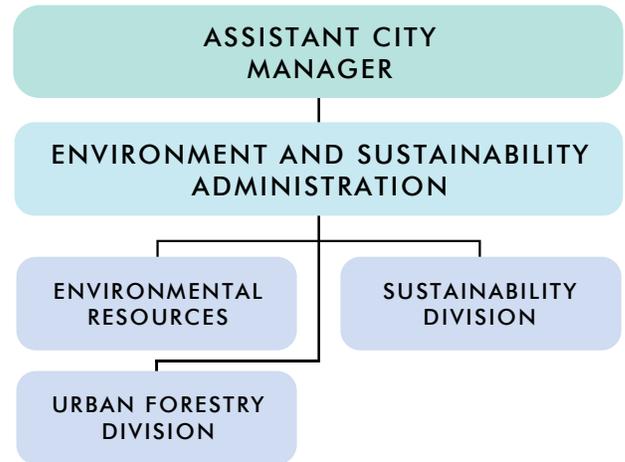
## DEPARTMENT DESCRIPTION

The Environment and Sustainability Department is represented by professional, semi-professional, and licensed disciplines working in Administration, Environmental Resources, Sustainability, and Urban Forestry.

The Environmental Resources Management Division provides internal support across City departments to ensure all public projects, not just those labeled as environmental, avoid, minimize, and mitigate environmental impacts, as well as enhance the natural environment through their design. This Division serves as the City's in-house environmental consultant and is the liaison between the City and other government agencies for environmental concerns. Services provided by this division include natural resource management, environmental permitting assistance, regulatory compliance oversight, plan review, technical advisory, and staff and community trainings.

The Sustainability Division works across all City departments to improve the sustainability of government operations to save money, improve processes, and enhance the environment. This Division handles climate change mitigation efforts with a focus on reducing greenhouse emissions from government operations and community-wide activities, reducing internal operational costs and improving operational efficiencies, and assisting with the development of the Resiliency Strategic Plan. This Division focuses on energy reduction, water conservation, recycling and waste reduction, and education and outreach.

The Urban Forestry Division oversees the urban forest by providing regulatory supervision and management. The division maintains the citywide Geographical Information System Tree Inventory and is in the process of developing the City's first Urban Forestry Master Plan. 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. The division also oversees the Commemorative Tree Program.



## 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), and the Resort Tax Fund to cover the cost of various administrative support functions provided by the General Fund.

The Environment and Sustainability Department is also supported through revenues generated from Sustainable Initiatives Contributions from the franchisee waste haulers.

In January 2016, the City Commission created the Sustainability and Resiliency Fund. This 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. By ordinance, this money is required to be used for projects that enhance the community's environmental sustainability.

Beachfront Concessions Initiatives - The beachfront concessions servicing the beaches adjacent to public property provide funds to the city to support environmental initiatives including grants for local non-profit organizations and programing for sea turtle education and outreach.

Beach Renourishment - 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) each year to help fund County led beach renourishment. For FY 2020, the County provided the City \$75,000 to fund a dune enhancement study.

The Urban Forestry Division is partially funded from the General Fund and the Tree Preservation Trust Fund. The Tree Preservation Trust Fund generates revenues via the City's Tree Preservation Program, which includes fees associated with tree permit plan review, inspections, code violations, fines, contributions, and mitigation. Additional revenue is generated through donations made



# ENVIRONMENT AND SUSTAINABILITY

## FISCAL ENVIRONMENT CONT'D

to the Commemorative Tree Program, which are then deposited into the Commemorative Tree Trust Fund. The Tree Preservation Trust Fund covers ancillary expenses related to the Tree Preservation Program such as reforestation efforts, tree giveaways, reforestation related brochures, and related supplies. The Commemorative Tree Trust Fund covers the expenses related to the Commemorative Tree Program such as commemorative tree plantings, one-time commemorative tree replacement costs, certificate issuance, and related supplies.

## BUSINESS ENVIRONMENT

The Environment and Sustainability Department works with other City departments to integrate a holistic resiliency approach to climate change mitigation and adaptation efforts. The department focuses on protecting and enhancing our natural environment through sea level rise adaption efforts, natural resource management, and environmental compliance.

## SIGNIFICANT ACCOMPLISHMENTS

### Environmental Resources

- Coordinated with local stakeholders, Miami-Dade County, the state of Florida and the U.S. Army Corps of Engineers to bring 305,000 cubic yards of sand to erosional hotspot beaches in the vicinity of 65th Street, 55th Street, 46th Street and 28th Street
- Received one of the first ever Florida Resilient Coastlines Programs grants to complete design and permitting of an in-water living shoreline in Lake Pancoast. DERM allowed the Lake Pancoast mangrove planter to serve as on-site mitigation for the Indian Creek Seawall Rehabilitation project, the first on-site mitigation project in Miami Beach
- Created an environmental permitting handbook as a resource for project managers citywide. The handbook will help staff better understand environmental permitting requirements and timeframes to ensure that all projects are properly permitted prior to construction, to reduce permitting delays of projects, and improve compliance with permits during construction.
- Secured a water quality grant from the Florida Department of Environmental Protection to transform Everglades Court, the city's last unpaved alley into the city's first green alley
- Developed clean-water strategy outlining city's efforts in protecting Biscayne Bay and sets goals for continued improvement
- Completed the government operations and community-wide Greenhouse Gas emissions inventory; government fleet assessment; energy assessment; and recycling assessment report
- Developed and implemented the resiliency portal with exclusive information on resiliency, sustainability, climate change, and sea level rise ([www.mbrisingabove.com](http://www.mbrisingabove.com)) and of the resiliency app/virtual tour with the additional of a kayak tour app funded by a grant awarded by the Miami Foundation

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**Developed and implemented the resiliency portal with exclusive information on resiliency, sustainability, climate change, and sea level rise.**

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## SIGNIFICANT ACCOMPLISHMENTS CONT'D

- Developed and implemented the PlasticfreeMB program. To date over 130 businesses have registered
- Planted over 500 trees within the last year as part of reforestation efforts through grant initiatives and GOB Projects
- Updated the City's Tree Preservation Ordinance on October 2019. The newly adopted ordinance has received an award from the Florida Urban Forestry Council for outstanding tree preservation ordinance.

## CRITICAL SUCCESS FACTORS

- Citywide cooperation and coordination supported by City Manager and City Commission in regards to technology solutions
- Realistic goals, strategies, and actions
- Willingness and commitment to share information and standardize data (integration)
- Improve quality of life through better air, water, and environmental quality
- Improve regulatory compliance
- Improve the City's ecosystem function and biodiversity
- Increase the City's amount of natural habitat
- Reduce impervious surfaces
- Maintain recreation, environmental, and storm protection functions of the beach/dune system
- Increase sustainable tree canopy
- Increase the City's staff capacity building and awareness regarding the City's resiliency and sustainability initiatives
- Look at investments for the City's sustainability and resiliency improvements that can lead to short and long term cost savings for the City's budget
- Improve the City's operational and environmental sustainability



# ENVIRONMENT AND SUSTAINABILITY

## FUTURE OUTLOOK

The Environment & Sustainability Department will continue to focus on protecting and enhancing our natural environment through sea level rise adaptation efforts, natural resource management, and environmental compliance. The Environmental Resources Division will continue providing internal support across City departments to ensure all public projects, not just those labeled as environmental, avoid, minimize, and mitigate environmental impacts, while enhancing the natural environment through their design. The Environmental Resources Division will also continue to serve as the in-house environmental consultant and liaison between the City and other government agencies for environmental concerns. Furthermore, the Environmental Resources Division will continue providing existing services to further improve the environmental compliance of the community, as well as protect, restore, and manage the City's natural resources.

Creating a more sustainable community includes improving resource efficiencies, preventing harm to the natural environment, and protecting human health, while benefiting the social, economic, and environmental well-being of the community for present and future generations. The Sustainability Division will continue working with all City departments in order to improve internal sustainability efforts to save money, improve processes, and enhance the environment. This Division handles internal and external climate change mitigation efforts with a focus on reducing greenhouse emissions from government operations and community-wide activities and reducing internal operational costs and improving operational efficiencies. This Division will continue to develop and implement specific initiatives including conducting energy audit, developing EnergyCAP, improving recycling and waste reduction, continuing education and outreach, and developing policies that enhancing the communities. The Division has accomplished the City's first recycling assessment and is in the process of finalizing the City's first municipal buildings' energy assessment and fleet assessment. These assessments will tremendously improve the City's sustainability operations.

Urban trees are a vital part of City infrastructure, providing numerous environmental, economic, social, and health benefits. Among the identified benefits are cleaner air, reduced energy usage, less storm water runoff, amelioration of high urban temperatures and UV Rays, higher property values, improved aesthetics, a greater sense of health and well-being, and lower crime rates. The Urban Forestry Division will begin the implementation of the City's first Urban Forestry Masterplan, continue to promote and enhance the Commemorative Tree Program, and continue to refine the Tree Preservation Program with increased resilient reforestation efforts.

## FUTURE OUTLOOK CONT'D

The Department will continue to collaborate with all City departments to enhance sustainability efforts throughout our government operations and our community, strengthen resilience, and explore innovative adaptation and mitigation solutions for the City through:

- Developing solutions to issues in public health and safety, real estate and historic properties, architectural standards, energy consumption, income inequality, affordable housing, disaster preparation and recovery, community building, governance, community diversity, etc.
- Focusing on flexible, low-regret strategies
- Capitalizing on adaptation opportunities that accommodate to a changing environment and protect the character of our diverse community
- Adapting to changes in the City landscape based on natural disasters
- Prioritizing natural infrastructure solutions to sea level rise, such as citywide beach & dune system restoration, the use of bioswales and tree plantings to mitigate stormwater runoff, and the enhancement and expansion of living shorelines
- Maintaining a high quality of life for all of Miami Beach's residents, businesses and visitors



# ENVIRONMENT AND SUSTAINABILITY



## 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
- Reduce greenhouse gas emissions and heat
- Make existing and new government buildings assets, and fleet efficient, sustainable and resilient

- **Mobility**

- Improve the walking and biking experience

- **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

### Strategic Plan Actions:

- **COMPLETE** the Beach walk
- **MAKE** substantial progress (towards completion of entire) Bay walk

### Budget Enhancement Actions:

- N/A

## STRATEGIC ALIGNMENT CONT'D

### Resilient305 Actions

- **PRESERVE** and Restore Biscayne Bay
- **BUILD** Reef Biodiversity and Defenses
- **NATURE-BASED** Infrastructure – More than Just Habitat!
- **IMPLEMENT** Sea Level Rise strategy
- **DEVELOP** Sea Level Rise Checklist for Capital Projects
- **REDUCE** “Back-Bay Flooding”
- **RESILIENT** Parks
- **RESILIENT** 35 in the 305 Network
- **STRENGTHEN** Resilience Planning
- **EXPAND** Renewable Energy
- **RISE** to the Rescue



# ENVIRONMENT AND SUSTAINABILITY

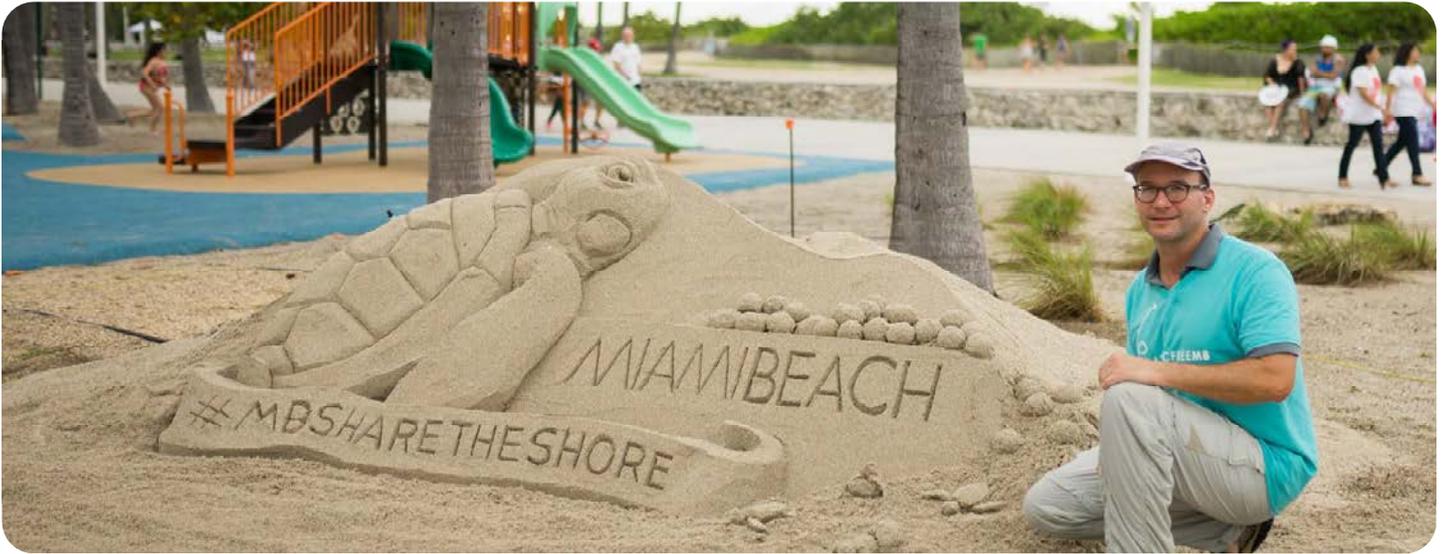
## PERFORMANCE PLAN HIGHLIGHTS

Performance Indicators	2017 Actuals	2018 Actuals	2019 Actuals	2020 Target	2021 Target
<b>Main Vision Area: Environment &amp; Infrastructure</b>					
# of canopy trees installed citywide in Right-Of-Ways (ROWs), parks and green spaces	44	139	257	300	300
Number of businesses joining PlasticFreeMB	*	60	120	170	170
Waterway Cleanliness - # of quarters where the average assessment score of 2.0 or better	*	*	3	4	4
Number of workshops/trainings provided per year:- In House (City Employees)	7	16	17	8	20

\*Indicates measure was not tracked and/or conducted during reporting period



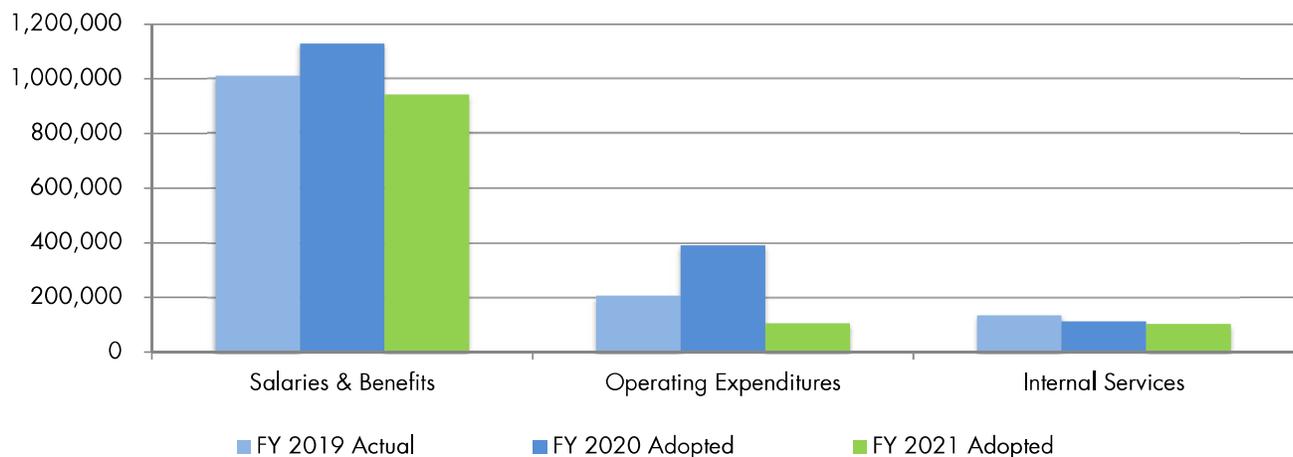
# ENVIRONMENT AND SUSTAINABILITY



## DEPARTMENT FINANCIAL SUMMARY - GENERAL FUND

Expenditure Area	FY 2018 Actual	FY 2019 Actual	FY 2020 Adopted	FY 2021 Adopted
Salaries & Benefits	961,549	1,011,828	1,129,000	<b>942,500</b>
Operating Expenditures	274,935	206,051	391,000	<b>105,500</b>
Internal Services	43,381	135,000	112,000	<b>104,000</b>
<b>Total</b>	<b>\$ 1,279,864</b>	<b>\$ 1,352,879</b>	<b>\$ 1,632,000</b>	<b>\$ 1,152,000</b>
General Fund	9.00 + 0.00 PT	9.00 + 0.00 PT	9.00 + 0.00 PT	<b>7.40 + 0.00 PT</b>
Sustainability Fund	1.00 + 0.00 PT	1.00 + 0.00 PT	1.00 + 0.00 PT	<b>1.50 + 0.00 PT</b>
Tree Preservation Fund	0.00 + 0.00 PT	0.00 + 0.00 PT	0.00 + 0.00 PT	<b>0.10 + 0.00 PT</b>
Other Funds - Building	2.00 + 0.00 PT	1.00 + 0.00 PT	1.00 + 0.00 PT	<b>1.00 + 0.00 PT</b>
<b>Total Budgeted Positions</b>	<b>12.00 + 0.00 PT</b>	<b>11.00 + 0.00 PT</b>	<b>11.00 + 0.00 PT</b>	<b>10.00 + 0.00 PT</b>

### Expenditure Summary

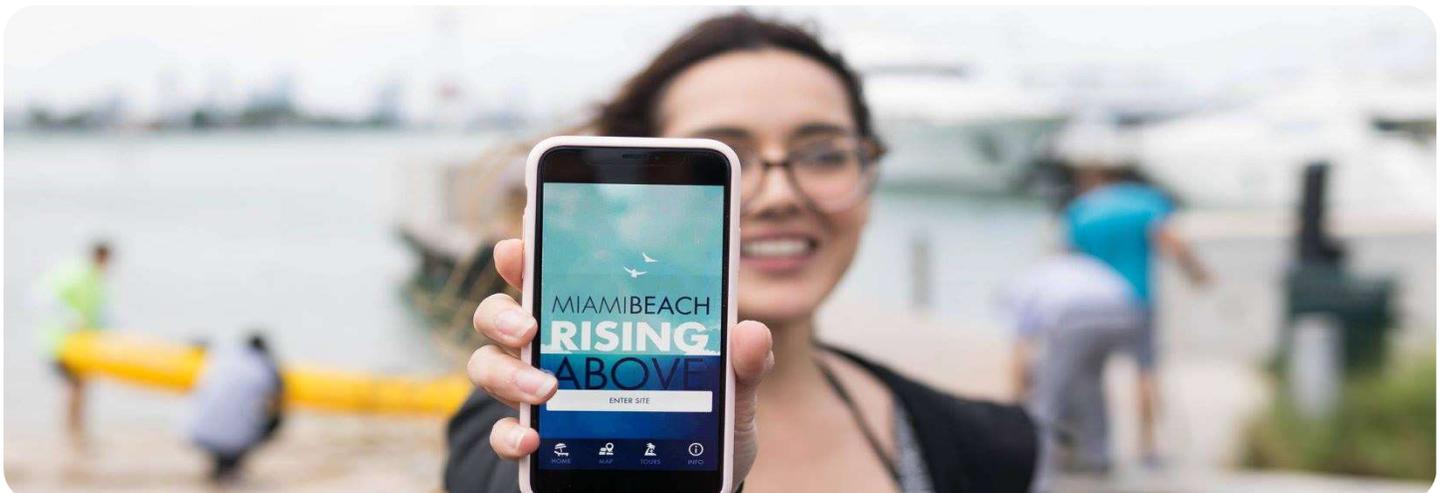
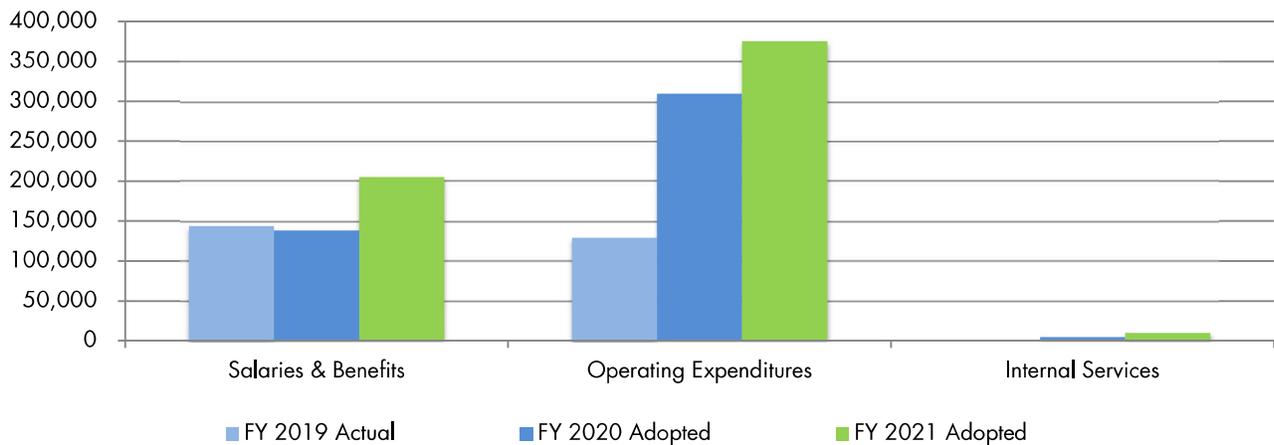


# ENVIRONMENT AND SUSTAINABILITY

## DEPARTMENT FINANCIAL SUMMARY - SUSTAINABILITY

<b>Revenue Area</b>	<b>FY 2018 Actual</b>	<b>FY 2019 Actual</b>	<b>FY 2020 Adopted</b>	<b>FY 2021 Adopted</b>
Contributions - Sustrn. Initiatives (Waste Haulers)	368,500	357,816	346,000	<b>478,000</b>
Fund Balance/Retained Earnings	0	0	107,000	<b>112,000</b>
<b>Total</b>	<b>\$ 368,500</b>	<b>\$ 357,816</b>	<b>\$ 453,000</b>	<b>\$ 590,000</b>
<b>Expenditure Area</b>				
Salaries & Benefits	131,839	143,741	138,300	<b>205,300</b>
Operating Expenditures	162,208	129,136	309,700	<b>375,200</b>
Internal Services	0	0	5,000	<b>9,500</b>
<b>Total</b>	<b>\$ 294,046</b>	<b>\$ 272,877</b>	<b>\$ 453,000</b>	<b>\$ 590,000</b>
<b>Revenue Less Expenditures</b>	<b>\$ 74,454</b>	<b>\$ 84,939</b>	<b>\$ 0</b>	<b>\$ 0</b>
<b>Total Budgeted Positions</b>	<b>1.00 + 0.00 PT</b>	<b>1.00 + 0.00 PT</b>	<b>1.00 + 0.00 PT</b>	<b>1.50 + 0.00 PT</b>

### Expenditure Summary



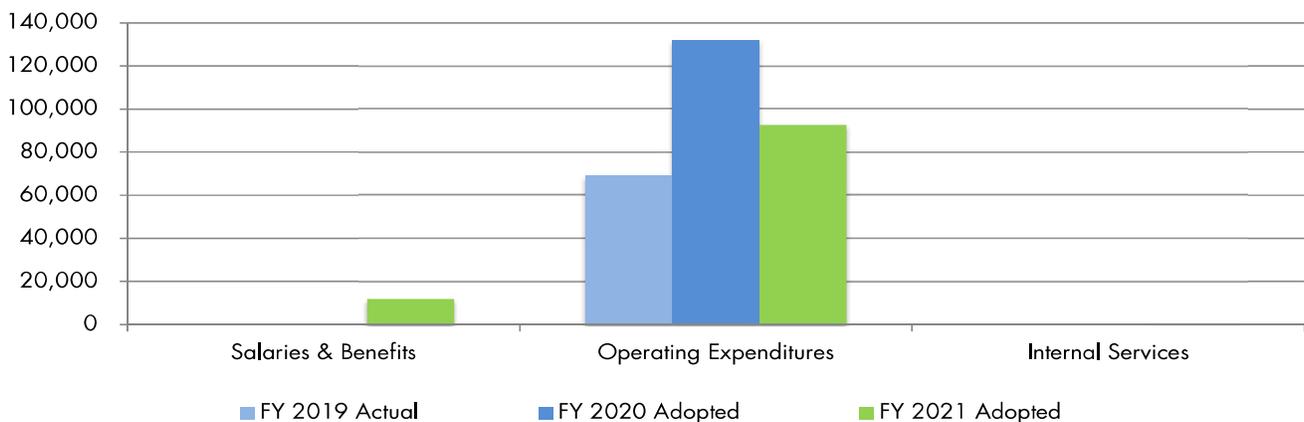
# ENVIRONMENT AND SUSTAINABILITY



## DEPARTMENT FINANCIAL SUMMARY - TREE PRESERVATION

<b>Revenue Area</b>	<b>FY 2018 Actual</b>	<b>FY 2019 Actual</b>	<b>FY 2020 Adopted</b>	<b>FY 2021 Adopted</b>
Permits (Tree Permits)	23,588	38,000	31,000	<b>31,000</b>
Fees-Other (Inspections)	67,680	91,984	44,000	<b>44,000</b>
Other Local Ordinances (Violations)	22,750	39,000	0	<b>0</b>
Contrib. & Donations Private Sources	31,993	135,315	30,000	<b>30,000</b>
Fund Balance/Retained Earnings	0	0	27,000	<b>0</b>
<b>Total</b>	<b>\$ 146,011</b>	<b>\$ 304,299</b>	<b>\$ 132,000</b>	<b>\$ 105,000</b>
<b>Expenditure Area</b>				
Salaries & Benefits	0	0	0	<b>12,000</b>
Operating Expenditures	60,728	69,009	132,000	<b>92,600</b>
Internal Services	0	0	0	<b>400</b>
<b>Total</b>	<b>\$ 60,728</b>	<b>\$ 69,009</b>	<b>\$ 132,000</b>	<b>\$ 105,000</b>
<b>Revenue Less Expenditures</b>	<b>\$ 85,284</b>	<b>\$ 235,290</b>	<b>\$ 0</b>	<b>\$ 0</b>
<b>Total Budgeted Positions</b>	<b>0.00 + 0.00 PT</b>	<b>0.00 + 0.00 PT</b>	<b>0.00 + 0.00 PT</b>	<b>0.10 + 0.00 PT</b>

### Expenditure Summary

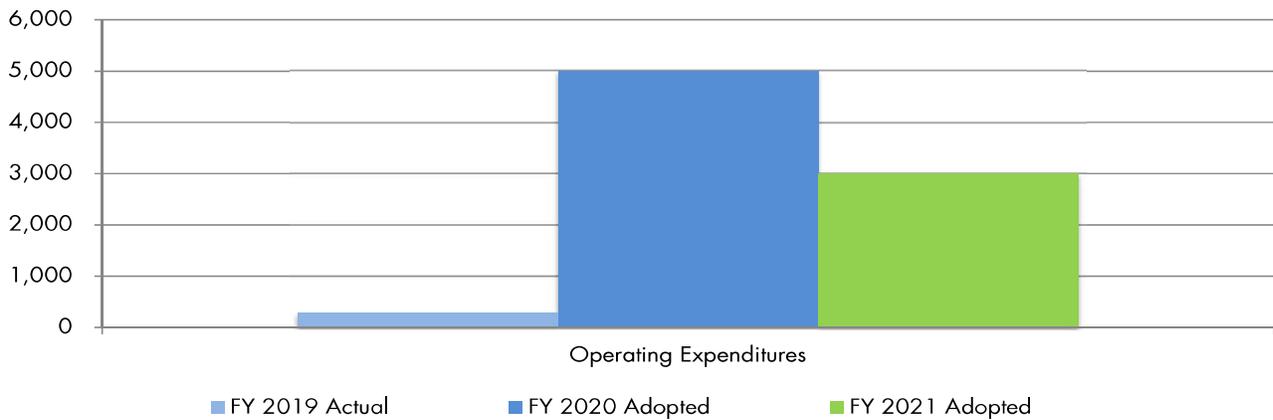


# ENVIRONMENT AND SUSTAINABILITY

## DEPARTMENT FINANCIAL SUMMARY - COMMEMORATIVE TREE TRUST

<b>Revenue Area</b>	<b>FY 2018 Actual</b>	<b>FY 2019 Actual</b>	<b>FY 2020 Adopted</b>	<b>FY 2021 Adopted</b>
Contributions & Donations	2,000	0	5,000	0
Fund Balance/Retained Earnings	0	0	0	3,000
<b>Total</b>	<b>\$ 2,000</b>	<b>\$ 0</b>	<b>\$ 5,000</b>	<b>\$ 3,000</b>
<b>Expenditure Area</b>				
Operating Expenditures	4,540	285	5,000	3,000
<b>Total</b>	<b>\$ 4,540</b>	<b>\$ 285</b>	<b>\$ 5,000</b>	<b>\$ 3,000</b>
<b>Revenue Less Expenditures</b>	<b>\$ (2,540)</b>	<b>\$ (285)</b>	<b>\$ 0</b>	<b>\$ 0</b>
<b>Total Budgeted Positions</b>	<b>0.00 + 0.00 PT</b>	<b>0.00 + 0.00 PT</b>	<b>0.00 + 0.00 PT</b>	<b>0.00 + 0.00 PT</b>

### Expenditure Summary



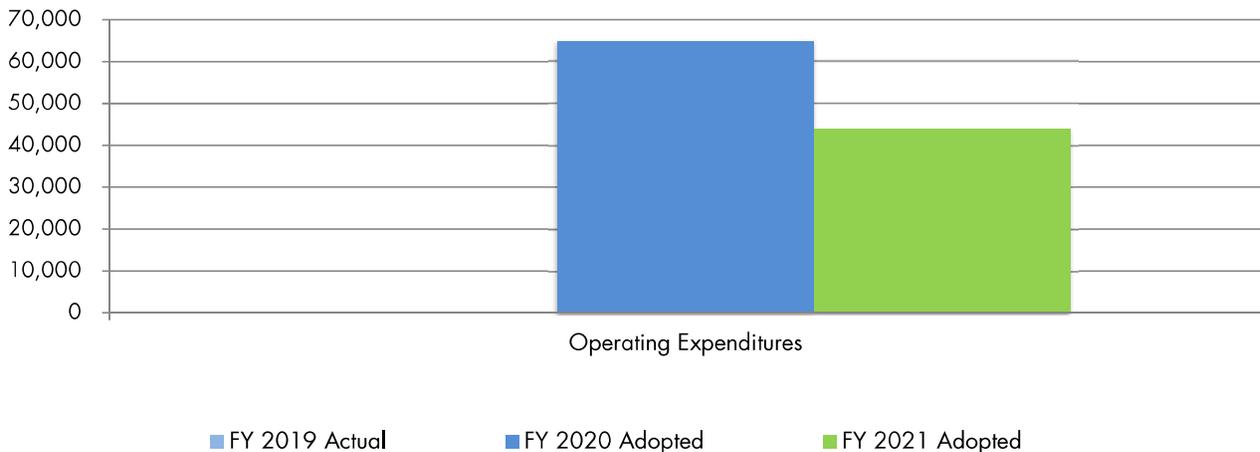
# ENVIRONMENT AND SUSTAINABILITY



## DEPARTMENT FINANCIAL SUMMARY - BEACHFRONT CONCESSION INITIATIVES

Revenue Area	FY 2018 Actual	FY 2019 Actual	FY 2020 Adopted	FY 2021 Adopted
Contribution & Donations Private	0	28,456	44,000	<b>44,000</b>
Fund Balance/Retained Earnings	0	0	21,000	<b>0</b>
<b>Total</b>	<b>\$ 0</b>	<b>\$ 28,456</b>	<b>\$ 65,000</b>	<b>\$ 44,000</b>
<b>Expenditure Area</b>				
Operating Expenditures	0	0	65,000	<b>44,000</b>
<b>Total</b>	<b>\$ 0</b>	<b>\$ 0</b>	<b>\$ 65,000</b>	<b>\$ 44,000</b>
<b>Revenue Less Expenditures</b>	<b>\$ 0</b>	<b>\$ 28,456</b>	<b>\$ 0</b>	<b>\$ 0</b>
<b>Total Budgeted Positions</b>	<b>0.00 + 0.00 PT</b>			

### Expenditure Summary

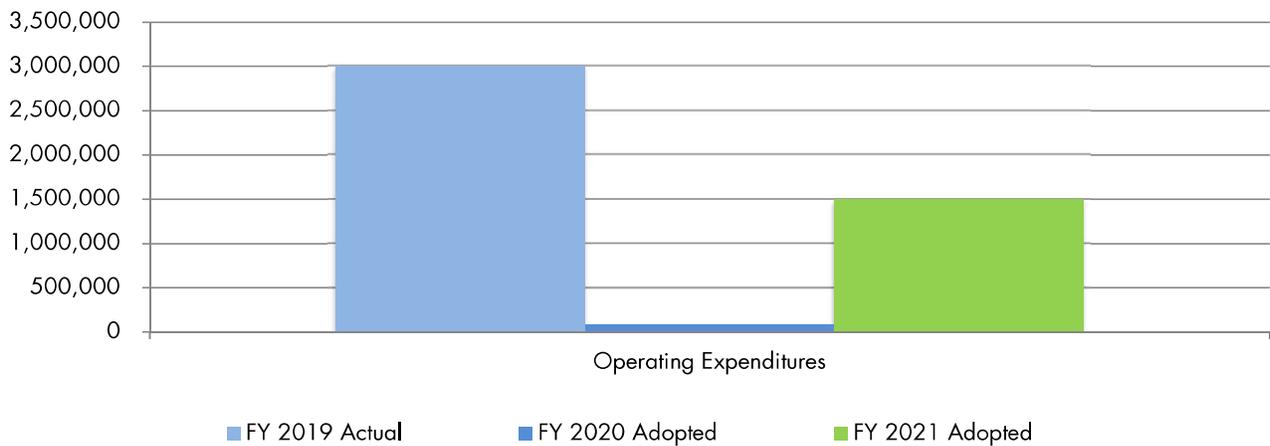


# ENVIRONMENT AND SUSTAINABILITY

## DEPARTMENT FINANCIAL SUMMARY - BEACH RENOURISMENT FUND

Revenue Area	FY 2018 Actual	FY 2019 Actual	FY 2020 Adopted	FY 2021 Adopted
Fund Balance/Retained Earnings	0	0	75,000	0
Transfers In	1,500,000	1,500,000	0	1,500,000
<b>Total</b>	<b>\$ 1,500,000</b>	<b>\$ 1,500,000</b>	<b>\$ 75,000</b>	<b>\$ 1,500,000</b>
<b>Expenditure Area</b>				
Operating Expenditures	0	3,000,000	75,000	1,500,000
<b>Total</b>	<b>\$ 0</b>	<b>\$ 3,000,000</b>	<b>\$ 75,000</b>	<b>\$ 1,500,000</b>
<b>Revenue Less Expenditures</b>	<b>\$ 1,500,000</b>	<b>\$ (1,500,000)</b>	<b>\$ 0</b>	<b>\$ 0</b>
<b>Total Budgeted Positions</b>	<b>0.00 + 0.00 PT</b>			

### Expenditure Summary



# ENVIRONMENT AND SUSTAINABILITY

## BUDGET HIGHLIGHTS

- A significant component of the increase in personnel expenditures for all departments are increases in employee-related costs including a one percent cost of living adjustment effective April 1, 2021 for all groups, except AFSCME (1.0% COLA effective July 1, 2021), GSA (1.0% COLA effective October 1, 2020), and CWA (2.0% COLA effective October 1, 2020), as well as a maximum of three percent merit increase for employees, except members of the Fraternal Order of Police (FOP) and International Association of Fire Fighters (IAFF) which include a five percent step increase. Merit, step, and cost of living increases apply within existing pay ranges. A five percent increase in the City's premiums for health insurance for all employees is also included, except for members of the Fraternal Order of Police (FOP) and International Association of Fire Fighters (IAFF) which includes an eight percent increase in the City's premium. These increases were, however, largely offset by the COVID-19 balancing plan reductions allocated across all departments that include furloughs for all bargaining units based on a tiered approach, a citywide freeze on all non-essential expenditures and training and travel, and a citywide hiring freeze.

### General Fund

- Personnel services expenditures decreased by \$186,500, or 16.5%. This is primarily due to decreases in salaries and wages of \$159,000, health and life insurance of \$23,000, and other personnel-related costs of \$4,500, resulting from the elimination of a Full-Time Assistant Director position, as well as portions of two existing positions reallocated to the Sustainability and Tree Preservation Funds for FY 2021.
- Operating expenditures decreased by \$285,500, or 73.0%. This is primarily due to the one-time decreases from the COVID-19 balancing plan reductions totaling \$133,000, as well as one-time expenditures budgeted in FY 2020 of \$123,000 for Pine Tree Drive Australian Pines Pruning and decreases in other professional services expenditures of \$29,500 based on anticipated department needs in FY 2021.
- Internal service expenditures decreased by \$8,000, or 7.1%. This is primarily due to a combined decrease of \$10,000 in Central Services and Information Technology services, partially offset by increases in Risk Management and OIG Funding services of \$2,000.

### Commemorative Tree Trust

- The Commemorative Tree Trust Fund decreased by \$2,000 based on projected costs in FY 2021.

## BUDGET HIGHLIGHTS CONT'D

### Sustainability

- The Sustainability Fund increased by \$137,000. This is primarily due to an increase of \$67,000 in personnel services expenditures resulting from a change in the funding allocation of the Sustainability Coordinator position, as well as an increase of \$65,500 in operating expenditures for independent contract agreements of \$40,000 and EnergyCAP annual maintenance costs of \$29,000 partially offset by a decrease in other miscellaneous operating expenditures of \$3,500. Lastly, internal services expenditures increased by \$4,500 based on increases in Information Technology and OIG Funding services.

### Tree Preservation

- The Tree Preservation Fund decreased by \$27,000, or 20.5%, primarily due to a decrease of \$40,400 in operating expenditures based on projected costs for FY 2021, partially offset by an increase of \$12,000 in personnel services expenditures resulting from a change in the funding allocation of the Urban Forester position that was previously fully funded in the General Fund.

### Beachfront Concession Initiatives

- The Beachfront Concession Initiatives Fund decreased by \$21,000, or 32%, based on a decrease in one-time funding available in FY 2020 from the previous Beachfront Concession Agreement.

### Beach Renourishment

- The Beach Renourishment Fund increased by \$1,425,000 based on funding allocated annually for Beach Renourishment projects and initiatives in accordance with the 4th Amendment to the City Center RDA Interlocal Agreement with Miami-Dade County.

## FY 2021 Efficiencies/Reductions

### General Fund

- The FY 2021 budget includes a \$136,000 efficiency for the elimination of a Full-Time Assistant Environment & Sustainability Director position.
- In addition, as part of the COVID-19 balancing plan, the FY 2021 reductions also include a one-time reduction of \$133,000, which is comprised of \$10,000 for furloughs for all bargaining units based on a tiered approach, \$20,000 for non-essential expenditures, \$5,000 for non-essential training and travel, and \$98,000 related to the citywide hiring freeze.