



CONSERVATION PILLAR

Conservation
Programs in Parks
February 10, 2023



Miami Dade County Parks, Recreation and Opens Spaces Department

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*We create outstanding Recreational,
Natural and Cultural experiences to
enrich you and enhance the quality of life
for our community for this and future
generations.*

TODAY'S SHARED IDEAS

- Strategic Alignment with Your Community Goals
- Having a "Conservation Plan"
- Setting and Integrating KPI's
- Prioritizing Your Conservation Messages
- Fun Conservation Programming
- Posting with a Purpose



MIAMI DADE COUNTY PARKS, RECREATION, & OPEN SPACES

- Third Largest Park & Public Space System in the Nation
- Only Metropolitan Region Bordered by Two National Parks
- 270 + Parks, and over 13,500 Acres of Land, Greenways and Recreational Facilities
- 26,000 Acres of Environmentally Endangered Lands
- 17 miles of beaches
- 5 Golf Courses
- 6 Marinas
- 700 Acre Zoo Miami
- 444 Acre Deering Estate
- 50 Acre Fruit & Spice Park
- Crandon Tennis Stadium
- Causeways, Agricultural Extension, 260 miles of Roadways; SPTX Districts; Neat Streets Miami

Timeline

Miami-Dade County's Conservation Plan is intended to guide the Miami-Dade Parks, Recreation and Open Spaces Department and its partners in preserving, protecting and managing parks as well as historic and natural areas by teaching, advocating and implementing sustainable stewardship practices that enhance the resiliency and well-being of our community.

1990-99

Wildlife & Habitat Conservation

1991 – PROS Natural Areas Management Established

1998 – Miami EcoAdventures Established

2000-13

Preserving, Planning & Protecting

2004 – Park Preserves accepted into EEL Program

2007 – PROS OSMP voted unanimously by BCC & incorporated into the COMP

2014-15

Environmental Education in Parks

2014 – 1st Edition of PROS Conservation Plan *

2015 – UF/IFAS Cooperative Extension transferred to PROS

2016 – E.E.C.O. Division Established

2017-18

Restoration & Resiliency

2017 – Costal Conservation expanded (costal habitats, wildlife and conservation driven efforts)

2017 – Styrofoam Ban in Miami-Dade Parks

2019-21

Staying Relevant & Resilient

2019 – Revision of the PROS Conservation Plan

2019-20 – COVID pivot with emphasis on reduced capacity, increased nature based recreation, and virtual learning programs



From NRPA Task Force & the MDC GreenPrint four (4) focal goal areas developed: Leadership, Water/Energy, Environment, and Economy.

Coming Soon: Thrive 305, Heat Officer, Bay Officer

ALIGNMENT



PROS PILLARS



Sustainability

Secure parks future through community engagement, strong partnerships, and financial support



Placemaking

Achieve Memorable Experiences by Building Beautiful, Resilient Parks

Guiding Document: Open Space Master Plan



Health & Fitness

Achieve Health Equity through Evidence Based Programs and Education

Guiding Document: Recreation Plan



Conservation & Stewardship

Create Park Stewards through Evidence Based Conservation, Learning and Engagement

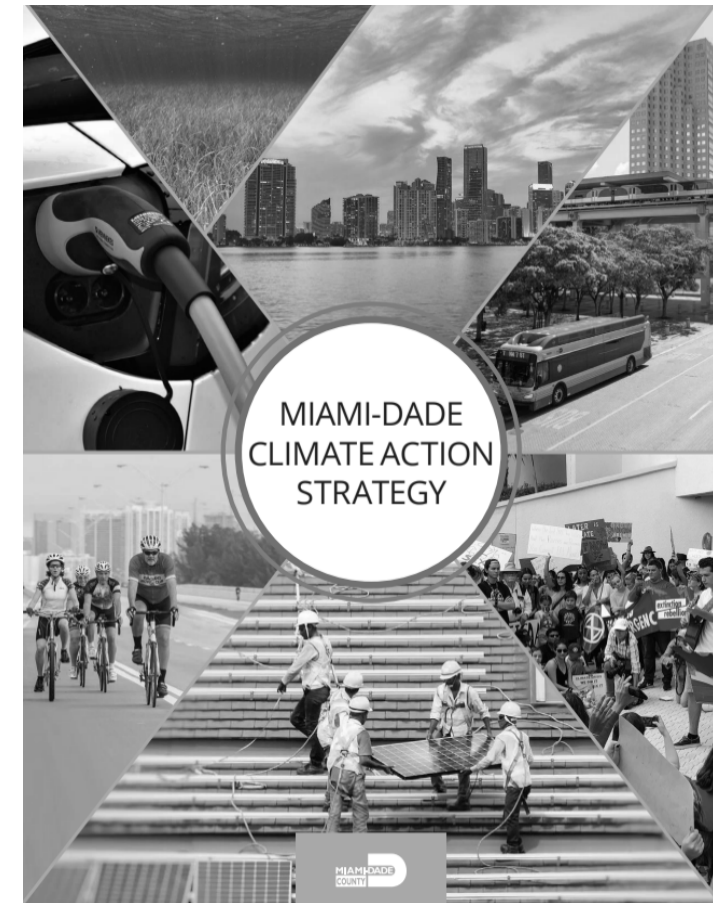
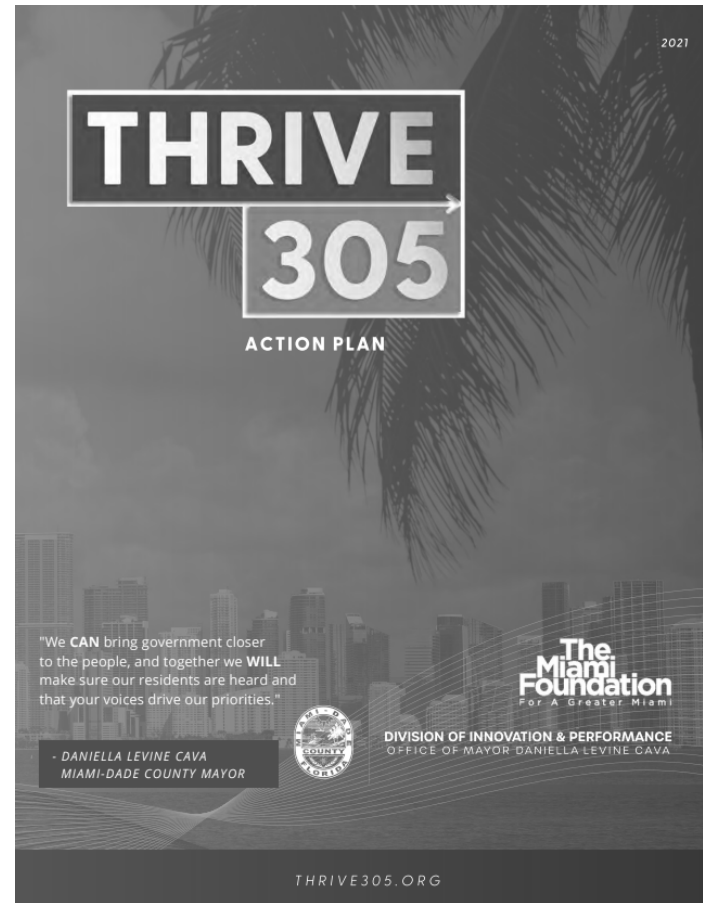
Guiding Document: Conservation Plan



Performance Excellence

Implement Sterling Baldrige management framework to drive organizational excellence, strong leadership focus on strategy and outcomes, workforce and operation focus on processes and measures that yield outstanding results

CONSERVATION PLAN – CROSSOVER - ALIGNMENT



CONSERVATION PLAN MISSION: Preserve, protect and manage parks historic and natural areas by teaching, advocating and implementing sustainable stewardship

GOAL 1	GOAL 2	GOAL 3	GOAL 4	GOAL 5	GOAL 6	GOAL 7
RESOURCE MANAGEMENT	ENGAGEMENT	GROW STEWARDS	PLANT 1 MILLION TREES	DESIGN EXCELLENCE	SUSTAINABILITY	PERFORMANCE EXCELLENCE
MANAGE, MAINTAIN & CONSERVE CLEAN, SAFE & ACCESSIBLE PARKS & RESILIENT NATURAL SYSTEMS	INCREASE ENVIRONMENTAL AWARENESS, LEARNING & ACTION	GROW STEWARDS OF PARKS THROUGH OUTREACH, TRAINING, AND VOLUNTEER PROGRAMS	PLANT TREES TO ACHIEVE A 30% URBAN TREE CANOPY	ACHIEVE MEMORABLE EXPERIENCES BY BUILDING BEAUTIFUL, RESILIENT PARKS	SECURE PARKS' FUTURE THROUGH COMMUNITY ENGAGEMENT, STRONG PARTNERSHIPS AND FINANCIAL SUPPORT	IMPLEMENT STERLING BALDRIDGE MANAGEMENT FRAMEWORK TO DRIVE ORGANIZATIONAL EXCELLENCE, STRONG LEADERSHIP FOCUS ON STRATEGY AND OUTCOMES, WORKFORCE AND OPERATION FOCUS ON PROCESSES AND MEASURES THAT YIELD OUTSTANDING RESULTS
Protect and Restore Wildlife and Wildlife Habitat (CDMP)	Develop Environmental Education Priorities for the Department (MDC Strategic Plan)	Expand the use of youth and conservation service corps to assist with the repair and maintenance of Parks (CDMP)	Develop and adopt a strategy to expand local forests and blue and green spaces in Miami-Dade County through inter-agency partnerships (MDC CAS; Thrive 305)	Great Parks & Programs - Accessible to everyone regardless of age or ability - Goal: Access to a park within a 10 minute walk (OSMP)	Increase resource funding to accomplish conservation objectives	Implement best practices in recycling and waste management (MDC Climate Action Strategy)
Protect & Restore Built and Natural Environments using Evidence Based Best Management Practices (Thrive 305)	Develop Conservation Messaging to Encourage Pro-Conservation Behaviors County-wide (PROS OSMP)	Engage Community Partners to work Cooperatively towards conservation (MDC Strategic Plan)	Update regulations to protect the environment and promote resilient growth (Thrive 305)	Great Public Spaces - providing diverse recreation opportunities throughout the public realm (OSMP)	Seek philanthropic grant funding for conservation of natural areas and local ecological systems.	Reduce transportation-related fuel consumption (MDC Climate Action Strategy)
Prevent pollution of Air, Water, and Land (Thrive 305)	Integrate conservation best practices into environmental learning, training & stewardship activities for internal & external audiences (PROS OSMP)	Elevate the Conservation Reputation of Miami-Dade County Parks by becoming a leader in Conservation (PROS OSMP)		Great Natural and Cultural Places - protecting and enhancing the natural and cultural heritage of the Region, as well as existing biological diversity, restoration and management (OSMP)	Strengthen in-kind services by developing a citizen science program to support natural resource management.	Hire locally to protect and rebuild our environment and infrastructure (Thrive 305)
Improve access to beaches and shores and protect coastal resources (CDMP)	Engage the public through interpretive elements, outreach, training, workshops, and volunteer involvement (Thrive 305)	Expand Youth Work Programs to focus on conservation and urban greening (Thrive 305)		Great Greenways and Blueways - providing wildlife habitat, scenic vistas, recreation and transportation opportunities that serve to connect parks to each other and to communities through open space corridors and waterways (OSMP)	Cultivate Business Sponsorships through (Park Foundation/Zoo Miami/ Deering Estate) to support specific park initiatives.	Develop Diversity, Equity & Access Plan for Marginalized and Special Needs Groups (Thrive 305)
	Partner with MDC Public Schools to continue and expand environmental programs so that ALL children in the public schools receive "hands on" experiences (Thrive 305)	Re-instate a Government-Wide internship program geared to young residents to embed within County Departments and learn about the workings of local government (Thrive 305)		Complete Streets - connecting parks and neighborhoods through tree lined boulevards, parkways, and complete streets that encourage people to walk, bicycle and live healthier lifestyles (OPSMP)	Develop a strategy to implement permanent dedicated funding sources for nature preserves (i.e. green tax, referendum).	



CONSERVATION & STEWARDSHIP

- Create Park Stewards through Evidence Based Conservation, Learning and Engagement
- Goal 1 – Model and manage clean, safe, and accessible parks and resilient natural systems
- Goal 2 - Increase environmental awareness, learning, and action
- Goal 3 - Grow stewards of parks through outreach, training and volunteer programs
- Goal 4 - Plant ONE MILLION TREES

CP GOAL 1

Model and manage clean, safe, and accessible parks and resilient natural systems

- Aligned with MDC Strategic Plan: RC3-2, NI3-6
- Aligned with CDMP and Thrive305 Goals

Initiatives:

- Protect and Restore Wildlife and Wildlife Habitat
- Protect & Restore Built and Natural Environments using Evidence Based Best Management Practices
- Prevent Pollution of Air, Water and Land
- Improve Access to beaches and shores and protect coastal resources



SAMPLE

KPIs, OFIs, Benchmarks, and Highlights

OPERATIONAL EFFICIENCY



25%
Cost Recovery
.5% Variance
47 Venue Rentals
\$400K Philanthropic
Support

RESOURCE STEWARDSHIP



380 Acres EEL
8 Research projects
20 Research
Internships
12 Education
Interns
Species Recovery
Plans (New)

STAFF ENGAGEMENT



19% Attrition
4.0+ Employee
Satisfaction Score
2 PRIDE SLPs

AUDIENCE ENGAGEMENT



78,519 Visitors
270,582 Website
19,465 FB Followers
15,789 Instagram
3,402 Twitter
2,999 Volunteers
17,199 Volunteer
Hours
= \$515,110

VISITOR EXPERIENCE



4.8 Customer
Satisfaction
> 80% NPS
TripAdvisor, Yelp,
Google, Facebook,
SecretShopper

SAMPLE SCORECARD

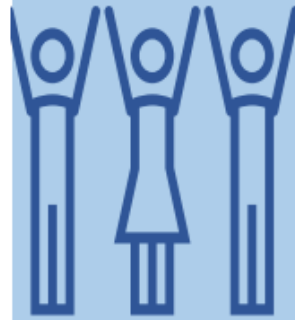
PROS PLANNING & DESIGN EXCELLENCE

Measure Name	As Of		Actual
Support and encourage health and fitness by implementing Nature Based Playgrounds that allow for more active play that leads to extended playtime	'23 FQ1	▼	0
Amount of Native Trees and Palms planted	'23 FQ1		21
Energy conservation through the implementation of EV chargers in PROS facilities	2022 FY		2
Acquire 36.4 acres of local park land to sustain mandated levels of service, improve walkability , and quality of life (RC1-2) P&R	'23 FQ1	▼	3%
% of Budget used on Conservation	2022 FY		38
Protect Natural Resources in line with the Department Mission by Conducting Semi-Annual Stewardship Audits:PDCE	'20 FH2	▲	1
# of Linear miles built greenways: P&R	'23 FQ1		197

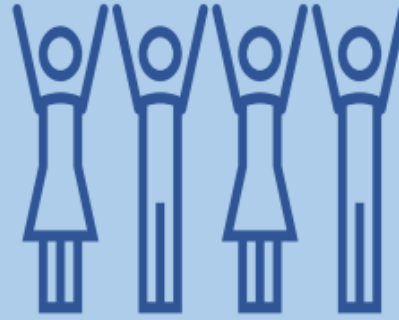
CONSERVATION MESSAGES



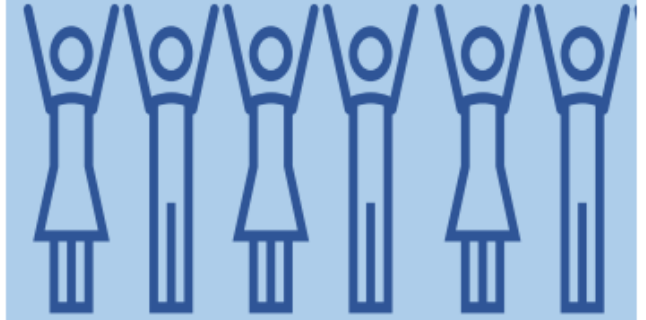
BROAD CONSERVATION AUDIENCES



INTERNAL



EXTERNAL
INFORMED

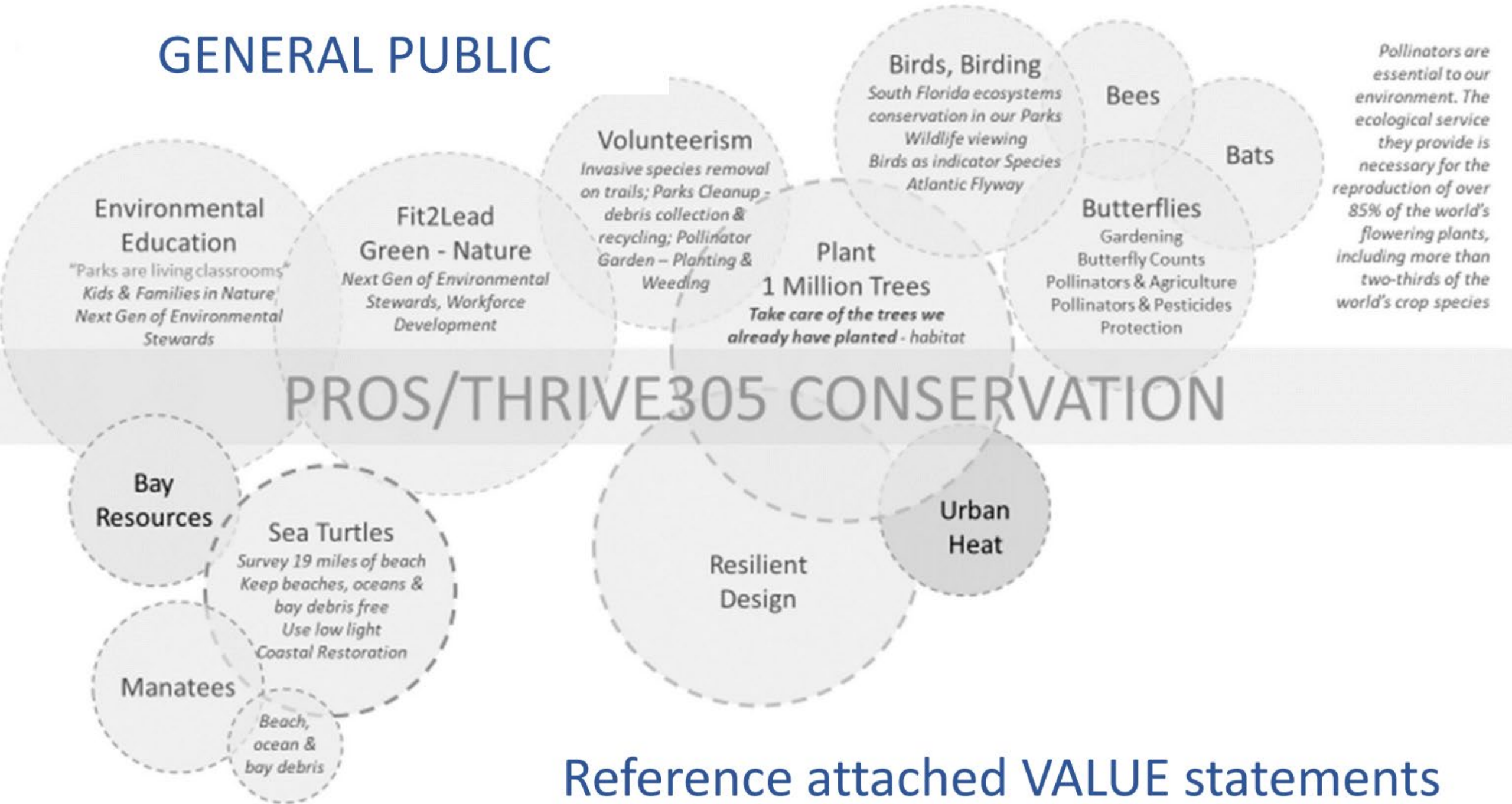


EXTERNAL
GENERAL

We create outstanding Recreational, Natural and Cultural experiences to enrich you and enhance the quality of life for our community for this and future generations.

Connecting People and Parks for Life.

GENERAL PUBLIC



Reference attached VALUE statements

BRAND PROMISE...*Parks Connect Us...We are Leaders*

BRAND VALUE	BRAND PERSONALITY	BRAND PROPOSITION	BRAND POSITION
Parks inspire Bring people together Learn together Play together Connect People & Nature Mental & Physical Health For Enjoyment Collaboration is powerful	Inclusive Thoughtful Lifelong Learning Inventive Committed Joyful Open-Minded Quality	I feel engaged and part of Parks because Conservation matters to me, and I am part of its care and a partner in the decision making to create solutions that benefit this and future generations	Parks works with me and others to champion conservation and steward the resources I care about and we all depend on

SEA TURTLES



WHAT PROS DOES for SEA TURTLES, HABITAT and PEOPLE

- MDC Parks through its Sea Turtle Conservation Program and Conservation units CHAMPION Sea Turtles. PROS preserves and improves nesting habitat for sea turtles, monitors sea turtle nests and hatchlings, and ensures the public can enjoy beaches while we protect this important species.
- MDC Parks educates youth and adult audiences about protective species such as sea turtles, manatees, and other important marine life, increasing awareness through nature-based recreation, Scout programs, K-12 field Study Trips, Marine Conservation Curriculum, Camps, Volunteer beach cleanups, Family Programs.
- This is supported by PROS conservation science from ZooMiami, NAM, UF/IFAS, the Sea Turtle Program and our academic partners.
- PROS Leads and Hosts Boater Education/Training and Outreach on Speed and No Wake Zones.
- SEE SPECIES AND HABITAT “GENERAL” METRICS

WHY ARE SEA TURTLES IMPORTANT to PEOPLE:

- Sea turtles play an important cultural role for many coastal communities around the world.
- Sea Turtles play a very important part within Marine ecosystems.
- Green Sea Turtles – Keep Seagrass Beds Healthy
- Hawksbill Sea Turtle – maintain the Foundation of Coral Reefs
- Leatherback Sea Turtle – Jellyfish Predator/Chompers
- Nesting Sea Turtles – Help to Preserve Sand Dune Ecosystems, all along our coasts
- Sea Turtles distribute Marine Diversity across the Worlds Oceans
- SEE EXPANDED “VALUE” STATEMENTS (Excel file)

POLLINATORS



WHAT PROS DOES for POLLINATORS, HABITAT and PEOPLE

- MDC Parks through its ZooMiami, Nature Centers, Deering Estate, Fruit & Spice Park, NAM, and UF/IFAS CHAMPION pollinators. PROS plants demonstration gardens and stewards natural areas in our parks and preserves that contain critical habitat for listed species. Parks provides wildlife viewing in our parks while we protect these important species.
- PROS does not implement low mow or no mow zones. PROS does not ban certain plants toxic to pollinators – certain milkweed, crotons, and lantana.
- MDC Parks educates youth and adult audiences about protective species such as Butterflies, Birds, Bees, and Bats and other important pollinators, increasing awareness through nature-based recreation, Scout programs, K-12 field Study Trips, Back-yard gardening and 4H Programs, Camps, Volunteer plantings, and Family Programs.
- This is supported by PROS conservation science from ZooMiami, NAM, and UF/IFAS and our academic partners.
- PROS Leads and Hosts Right Plant/Right Place Training and Outreach with the Native Plant Society and Fairchild Tropical Garden.
- SEE SPECIES AND HABITAT “GENERAL” METRICS

WHY ARE POLLINATORS IMPORTANT to PEOPLE:

- Pollinators provide food for our table - Birds, bats, bees, butterflies, beetles, and other small mammals that pollinate plants are responsible for bringing us 1 out of every 3 bites of food.
- Birds pollinate many of Florida’s wildflowers while also transporting seeds.
- Bats pollinate nighttime flowering plants like mangoes, bananas, and guava and transport their fruit laden with seeds to other areas to grow, expanding the spread of plant diversity.
- Birds and Bats keep insect levels down, naturally preventing outbreaks of disease carried by mosquitoes for example.
- SEE EXPANDED “VALUE” STATEMENTS (Excel file)

TREES



WHAT PROS DOES for TREES, URBAN FORESTS and PEOPLE

- MDC Parks through its Urban Forestry, Natural Areas Management, PLACE and Conservation units CHAMPION Trees.
- PROS is planting a million trees and taking care of the ones we have
- PROS supports the County's THRIVE305 to achieve a 30% tree canopy for MDC by 2030, prioritizing areas that are currently well below our current countywide average of 19%
- PROS Gives away trees to the public
- MDC Parks educates youth and adult audiences about trees, increasing awareness through nature-based recreation, Scout programs, K-12 field Study Trips, Marine Conservation Curriculum, Camps, Volunteer tree plantings, Family Programs.
- This is supported by PROS conservation science from ZooMiami, NAM, and UF/IFAS and our academic partners.
- PROS Leads and Hosts Education/Training and Outreach through UF/IFAS, Fruit & Spice Park and Neat Streets, .
- SEE SPECIES AND HABITAT "GENERAL" METRICS

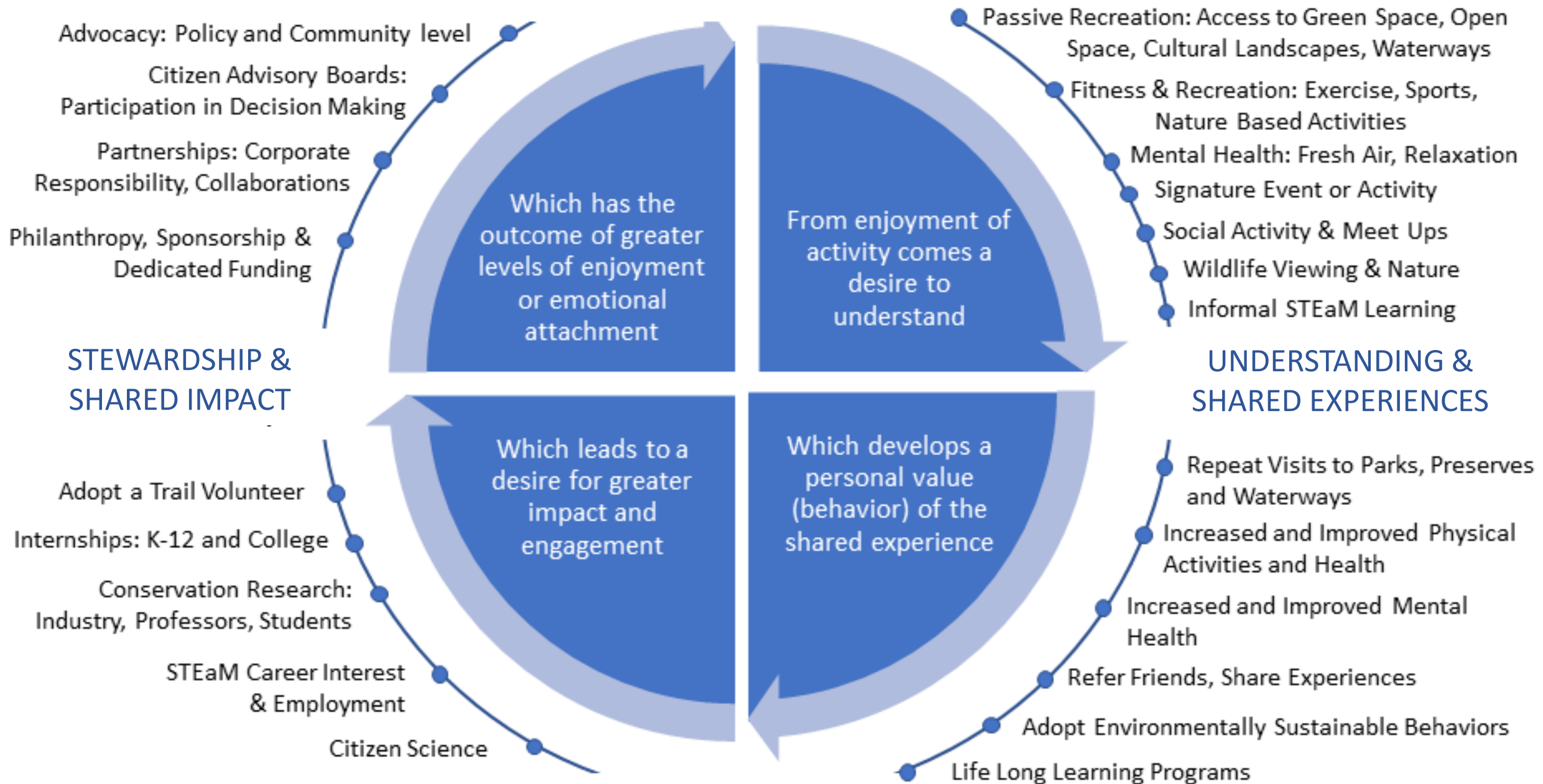
WHY ARE TREES IMPORTANT to PEOPLE:

- Trees...combat climate change, clean the air, provide oxygen, cool streets & the county, conserve energy, save water, save soil, help prevent water pollution, help prevent soil erosion, shield children from ultra-violet light, provide food, heal, rescue violence, create economic opportunities, are teachers and playmates, bring diverse groups of people together, promote unity, provide a canopy & habitat for wildlife, beautify spaces, increase property value, increase business traffic
- SEE EXPANDED "VALUE" STATEMENTS (Excel file)

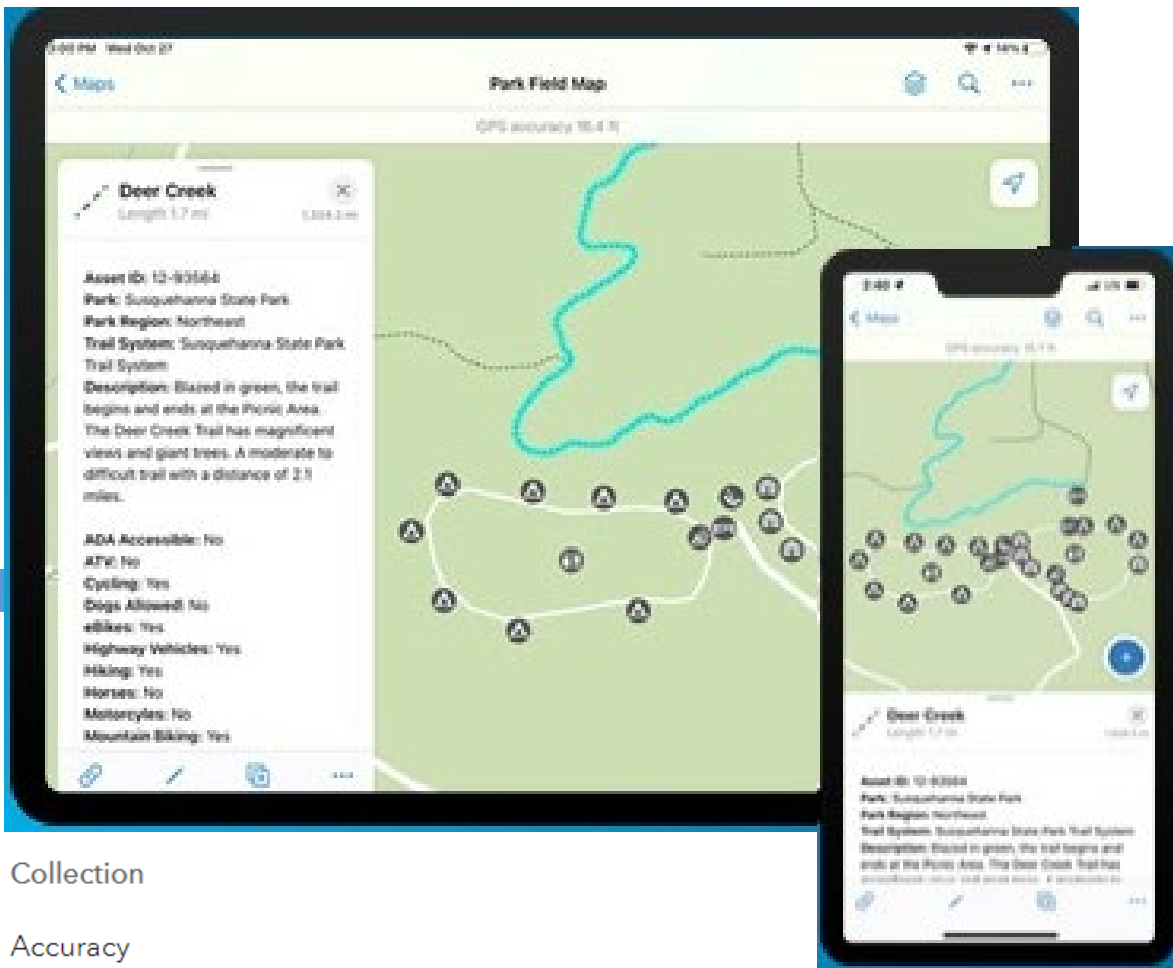
PROGRAMS



PARK ACTIVITIES



PERSONAL VALUE



Trails Data Collection and Management (Asset Mgt) – Pilot Project at Deering Estate

Vision:

The PROS Trails Data Collection and Management ongoing effort will successfully provide long-term solutions for trails geospatial data collection, data management, SOPs for maintaining data quality control, with streamlined analysis, viewing and reporting workflows.

Accomplishments:

- Established Subcommittee for Trails Asset Data management
- Onboarded interns for pilot project trails data capture at Deering Estate – expanded to other Conservation staff with cross training
- 85% completion for Deering Trails data collection in the field
- Expanded GPS accuracy thresholds to allow for data capture in dense tree canopy cover areas using existing devices
- Deployed Park Asset Inventory editing application

Collection

Accuracy

Set required location accuracy for data collection.

Distance

Report horizontal and vertical accuracy at a higher confidence level.

95% Confidence ☐


Streaming ☒

Set how often to collect a new point while streaming.

☒ Distance Feet

☐ Time

Park Asset Inventory Editing Application Design and Development

 Park Asset Inventory

Bookmarks

Details

Layers

Info

Edit

Filter

<< Collapse

Park Asset Inventory is a Sidebar app used by mapping technicians to create, edit, and review park assets.

To edit existing park assets, follow these steps:

1. Open the Edit panel and select Edit feature
2. Select a park asset on the map to start editing
3. Update asset information, adjust the geometry, or add/remove attachments
4. Click the Update button

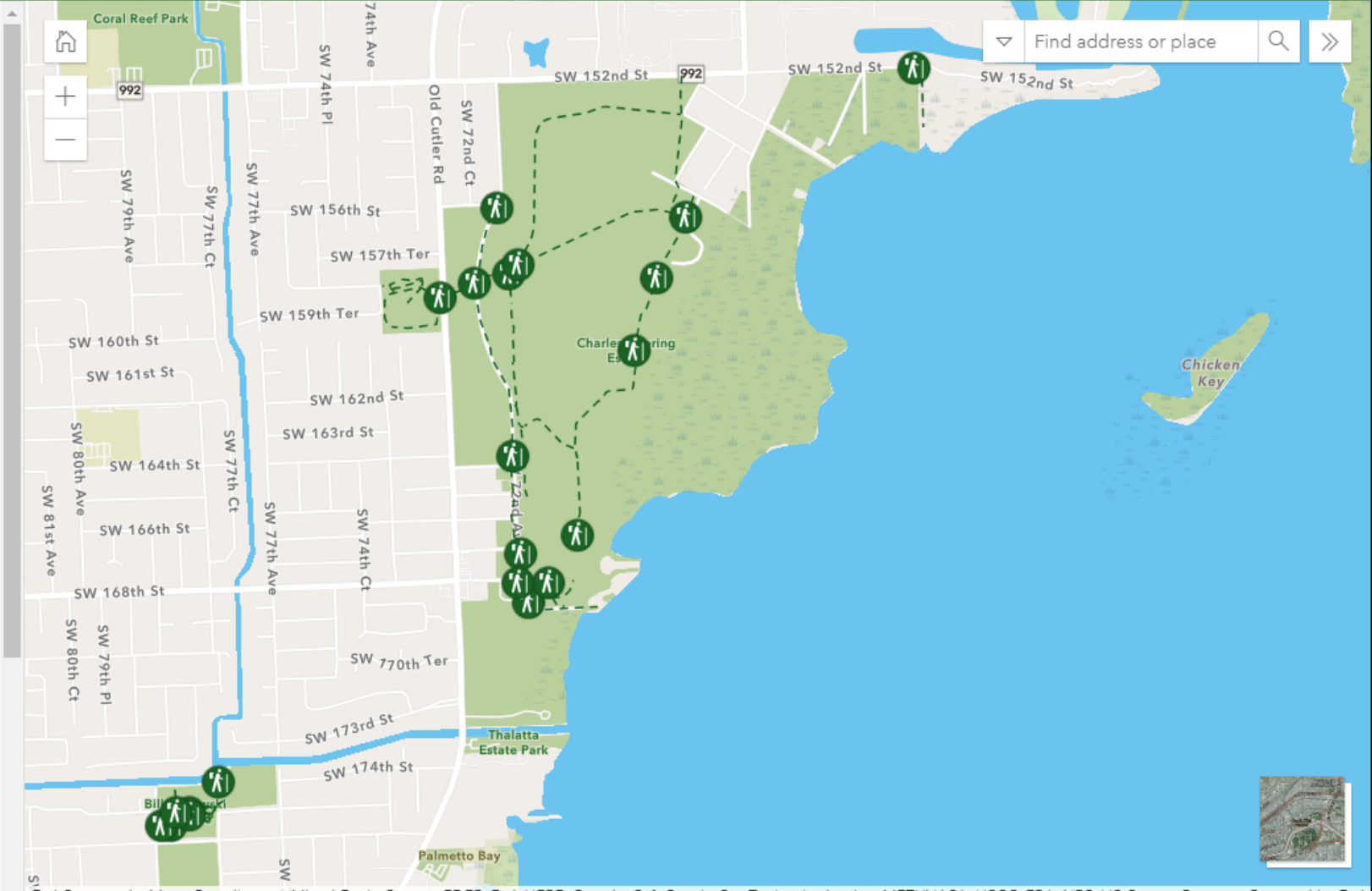
To create new park assets, follow these steps:

1. Open the Edit panel and select Add feature
2. Select a park asset template and add the asset to the map
3. Input asset information
4. Click the Add button

To show only park assets that require review, follow these steps:

1. Open the Filter panel and click the arrow to view the filter
2. Select the checkbox to enable the filter
3. Repeat steps 1 and 2 for all desired park asset layers

Park Asset Inventory editing tips:



Esri Community Maps Contributors, Miami-Dade County, FDEP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bure... Powered by Esri



Trails Data Collection and Management (Asset Mgt) – Pilot Project at Deering Estate

Next Steps:

- Develop Standard Operating Procedures for data collection (online and offline), editing, management, updates, reports
- Expand Trails Subcommittee to include Ops, Shops, PDCE
- Intern Students' Project StoryMap Presentation
- Deering Estate Research Symposium Presentation
- Design Dashboard
- Design public facing Outdoor Recreation Outreach Hub site with Trail Locator Application viewing our trail asset data



Field Study Trips



Camps



Youth Training



Night Programs



Nature Play



Education Partners



Hike Programs



Volunteer Days

AIR POTATO BEETLE



- ❑ *Benefits Tropical Hardwood Hammocks*
- ❑ *Over 700 acres at risk in MDC Parks & Preserves*
- ❑ *2022 Launch at 14 beta sites*

Using innovative, non-chemical methods of controlling invasive plants

Native to tropical Asia, air potato vine was introduced into southern Florida in the early 1900s. It has been considered one of Florida's most invasive plants since 1993. The vines, which can grow up to 8 inches per day, form dense blankets that smother native trees and understory plant species.

Also native to Asia, air potato beetles feed only on air potato plants. Parks, in partnership with the USDA, has raised and released a leaf-eating air potato beetle as a biocontrol agent since 2013. In 2021 the USDA released a new species that feeds and develops inside the air potato bulbils as a new biocontrol agent.

The bulbil-eating beetles are less impacted by mosquito spraying, are easier to raise, and are expected to exert greater control on air potato vines than leaf-eating beetles. Parks is the first agency, after the USDA, to raise and release bulbil-eating beetles.



TEAM HIGHLIGHT: SEA TURTLE PROGRAM

Protect and Restore Wildlife and Wildlife Habitat

■ **KPIs:**

- 19 Miles of Beach Monitoring (by Permit)
- # of engaged participants in environmental education & conservation programs focused on coastal habitats and marine wildlife

IMPACTS:

- Average # of Participants: 3,000
- Average Annual Nesting: 500
- Average Annual Stranding: 50
- In 2021 we educated 3,164 people and identified, marked, and protected 537 nests as part of a coordinated effort to promote the recovery of marine turtles who are indicators of the health of our oceans.
- Since December 2020, the Marine Debris Citizen Science program at Crandon Park has engaged over 250 volunteers who collected approximately 21,000 pieces (750 lbs.) of marine debris, preventing it from being ingested by our marine and coastal wildlife.

ZOO MIAMI

SEA TURTLE HOSPITAL



- ❑ **Timeframe:** 2018 planning, 2019 design, 2020 groundbreaking and July 6, 2022 Ribbon Cutting
- ❑ **Funded by:** Zoo Miami Foundation
- ❑ **Best Practice Highlight from:** Brevard Zoo, Loggerhead Marinelife Center, Gumbo Limbo Nature Center and the Turtle Hospital in the Florida Keys.

Sea Turtle Hospital

- Grand opening on Wed. July 6, 2022
- Working closely with the Florida Fish and Wildlife Conservation Commission (FWC), and with funding provided by the Zoo Miami Foundation, Zoo Miami construct a 1600 sq. ft. facility that consists of five saltwater enclosures which will serve as “recovery beds” for up to 16 sea turtles that are brought to the facility for treatment.
- This facility will be only the second sea turtle hospital in Miami-Dade County, and only one able to treat fibro papillomatosis (FP)
- Will play an invaluable role in providing world-class veterinary care with the primary goal of rehabilitating and releasing back to the wild.
- Partnering with the Miami-Dade Parks’ Sea Turtle Conservation Program team to accept stranded sea turtles.



TEAM HIGHLIGHT: UF/IFAS Cooperative Extension

- Foster “pro-conservation” behaviors and evidence-based understanding of nature and culture through a Parks lens in environmental learning, training, and stewardship programming for internal and external audiences.
- KPIs:
 - Number of Kids and Adults in UF/IFAS Extension Programs
 - # of Virtual and Onsite Programs
 - Client Satisfaction from Programs
 - Knowledge Gained
 - Intent of Practice Change or Actual Practice Change (for some programs)

Long-Term IMPACT focus: Achieve 10% of Miami Dade County Population (270.000) to participate in PROS learning program annually by 2030.



In 2020, 10.5% of U.S. households were food insecure at least some time during the year, including 3.9 percent (5.1 million households) that had very low food security.

FAMILY NUTRITION PROGRAM

The UF/IFAS Extension Family Nutrition Program (FNP) is a SNAP-Ed (Supplemental Nutrition Assistance Program Education) in Florida.

The goal of FNP is to educate SNAP-eligible Floridians, using evidence-based approaches, about eating healthier and being active on a budget, in order to reduce the risk of obesity and chronic disease.

FNP offers free nutrition education in SNAP-eligible communities. The free programs are offered in 40 Florida counties! FNP also works to improve access to healthy foods and change the environment in which adults and children make choices about food and fitness.



FAMILY NUTRITION PROGRAM

- ❑ *# of Programs*
- ❑ *Audience Served*
- ❑ *Beta Sites: Gould's, Gwen Cherry, and Oak Grove (05-06/2022 – 9 sessions, 3 topics, 210 kids)*

- 41,834 clients reached through nutrition education classes & Policy Systems & Environmental Changes (PSEs) (2021)
- FNP in Miami-Dade: No cost to the County
- 100 partners sites with FNP programs (2021)
- 878 classes taught (2021)
- 44% of evaluated youth and 58% of adults improved their consumption of fruit and vegetables
- Need for additional Nutrition Educators/2 positions open – difficult to recruit applicants (Pay \$15/h)



4-H is the nation's largest youth development organization. Over 230,000 members in the State of Florida help to make up the community of more than 6.5 million young people across America.

FIT2LEAD – 4-H PILOT PROGRAM

- 4-H Youth Development Program is a non-formal, practical educational program for youth. Florida 4-H is the youth development program of Florida Cooperative Extension, a part of the University of Florida IFAS.
- 4-H is open to all youth, ages 5-18, and serves youth from all backgrounds and interests. It reaches both boys and girls through 4-H clubs, projects, school-age childcare, individual and family learning, mentoring, camping, and school enrichment.
- Expansion of outreach capacity by training teens to lead afterschool programs.



Marine Conservation Science & Policy: Principles of Conservation and Environmental Stewardship

Grade Level:

4th-12th

Subject Area

Science
Ecology

Duration

1.5 Hrs.

Benchmarks:

Body of Knowledge

Life Science
Nature of Science
Physical Science

Big Idea

Organization and Development of
Living Organisms.
The Practice of Science

Standards

SC.4.L.17.4

Recognize ways that humans can
impact the environment.

SC912.L.17.16

Discuss the large-scale
environmental impacts resulting
from human activity.

SC.912.L.17.17

Assess the effectiveness of

Focus Question

What is conservation? Why is conservation important? How can we practice conservation in our communities?

Objectives

Students will explore the idea of conservation and environmental stewardship and plan a conservation project. Students will learn to:

- Identify natural resources and the principles of conservation.
- Analyze the importance of resource conservation.
- Work together to plan a conservation project for their school or community.

Student will discuss the importance of conservation ethics to protect our planet. This will be a project-based activity where students will work together to plan a conservation project for their school or community.

Background

Humans are completely dependent on nature, as the Earth provides all of the **natural resources** necessary to life, including air, water, soil, minerals, fuels, plants and animals. Because humans always have and always will need these supplies, these resources should be protected and cared for so that all living things can benefit from them now and in the future. This practice of protecting and managing resources is called **conservation**, and encourages the ethical preservation and wise use of the natural world.

Unfortunately, rapid population growth and careless management have endangered the very resources humans and all other organisms need to survive. Overfishing and overhunting, deforestation, pollution, habitat destruction and climate change have compromised the integrity of the planet's life-sustaining systems, sully water bodies, fouling the air, clearing trees, and sterilizing once-fertile soil. If these resources continue to be squandered away, future generations will struggle in a hotter, drier, barren world.

Because the decisions of humans have caused these looming environmental disasters, people must be responsible for resolving these problems. This idea has led to the conservation movement, which revolves around three core principles: human activity damaged the environment, there is a civic duty to restore and maintain the environment for future generations, and that scientific methods should be used to ensure that this duty is carried out effectively.

INITIATIVE HIGHLIGHT: K-12 STEAM LEARNING

Foster “pro-conservation” behaviors and evidence-based understanding of nature and culture through a Parks lens in environmental learning, training, and stewardship programming for internal and external audiences.

PROS MARINE CONSERVATION SCIENCE CURRICULUM

- Science and social studies marine themed curriculum with 120 informal lessons correlated to local, state and national standards, making them applicable to public, private, and home school settings.
- 5 Major Thematic Units: Ocean and Coastal Habitats, Marine Life, Ocean Connections, Marine Issues, and Management, Conservation, Research and Actions.

MOBILE EDUCATION UNIT

KEY MESSAGE – Educating Youth

Deering Estate operates over capacity for onsite field study trips and a high demand for our educational programs. Since COVID we have seen an increase in demand for doing reverse field study trips where we bring our field study trips to the schools. This is a result of the increase in bus costs and the bus driver shortage. Creating a mobile unit allows our educators to go to the schools and/or locations closer to that school reducing their costs. A cost reduction for the schools can lead to an even higher demand for our programs.

- 2022/23 School year we have 6 schools already booked for the mobile unit with more interested.
- Already scheduled 60+ mobile unit visits throughout the school year.
- 3,000+ students will be participating in multiple experiences.
- Allows for schools throughout the county to participate vs schools located closer to Deering. We can service schools further north that could not participate in our programs due to their location.





KEEP MIAMI-DADE COUNTY BEAUTIFUL

Goal 3: Grow stewards of parks through outreach, training, and volunteer programs

- Mission: We envision a County in which every community is a clean, green, and beautiful place to live.
- Aligned with MDC Strategic Plan: RC2-3, NI3-3, NI3-4
- Aligned with Million Trees Miami-Dade County, Resilient305, Thrive305
- Affiliation authorized by county resolution R-748-18

KPIs:

- # of trees and plants planted
- #of partnerships and events
- # of volunteers engaged
- # of trees plants, and compost given away to Miami-Dade County residents
- # of social media followers, @KeepMiamiDadeCountyBeautiful
- Goals of Keep Miami-Dade County Beautiful are accomplished through educating and engaging residents in litter prevention, recycling, beautification, and conservation projects.

MILLION TREES MIAMI-DADE COUNTY



Growing a healthy urban forest that provides a minimum of 30 percent tree canopy coverage and the maximum social, economic, and environmental benefits to the region.

Main activities to meet objectives:

- Leading tree planting projects with the support of local and national partners, prioritizing plantings in Miami-Dade County's lowest tree canopy communities, high heat neighborhoods, and natural areas.
- Hosting community tree giveaways (dependent on private funding) to promote tree plantings within the County's most abundant greenspace, residents' yards.
- Managing the Growing Roots for Environmentally Equitable Neighborhoods Miami-Dade County (GREEN MDC) Matching Grant Program to increase tree plantings throughout local municipalities and other public spaces.

KPIs:

- # of trees planted
- # of trees given away to Miami-Dade County residents
- # of trees planted (GREEN Miami-Dade County Matching Grant)

GROWING ROOTS FOR ENVIRONMENTALLY EQUITABLE NEIGHBORHOODS (GREEN) MIAMI-DADE COUNTY MATCHING GRANT

- Grant engages municipalities, agencies, non-profits, foundations, and community groups to plant trees on eligible public lands
- Aligned with MDC Strategic Plan: RC3-2, NI3-6
- Guiding document: Tree Trust Fund Legislation, GREEN Miami-Dade County Matching Grant Procedures
- Aligned with Million Trees Miami-Dade County, Resilient305, Thrive305
- Miami-Dade County's urban tree canopy is currently 20.1%

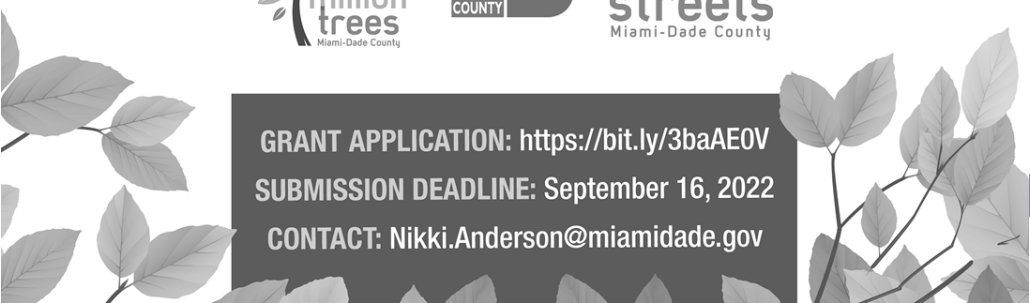
KPIs:

- # of contracts executed
- # of contracts executed (10% or less canopy)
- # of trees planted
- # of bus stops shaded
- # of playgrounds shaded
- # of connections shaded (corridors, gateways, to schools and/or parks)



Let's GROW some GREEN

Apply to receive up to **\$100,000** to plant trees in 2023 through our Growing Roots for Environmentally Equitable Neighborhoods **(GREEN) Miami-Dade County Matching Grant** in an effort to support environmental equity & help us achieve a 30% urban tree canopy for our community.



GRANT APPLICATION: <https://bit.ly/3baAE0V>
SUBMISSION DEADLINE: September 16, 2022
CONTACT: Nikki.Anderson@miamidade.gov

ADOPT-A-ROAD PROGRAM



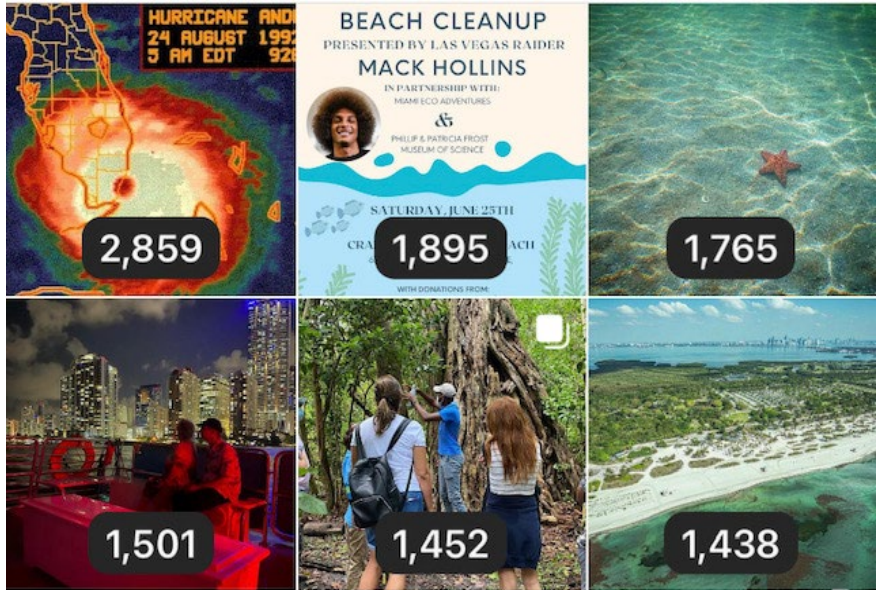
- Effort led by the County's Neat Streets Miami-Dade County board, housed within MDPROS's Community Forestry & Beautification Division
- Aligned with MDC Strategic Plan: RC3-2, NI3-6
- Aligned with Keep Miami-Dade County Beautiful, Resilient305, Thrive305, National Pollutant Discharge Elimination System (NPDES) Program

KPIs:

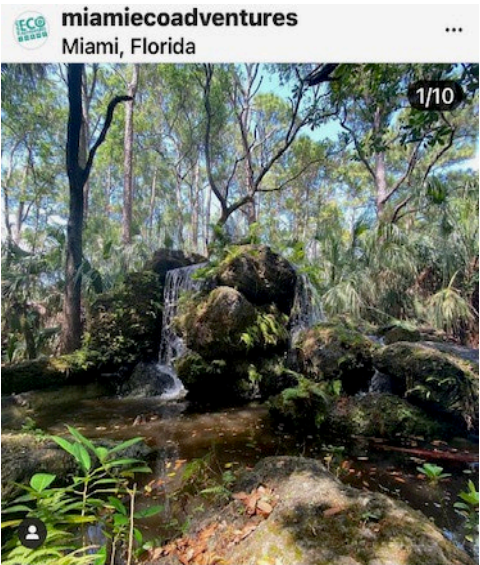
- # of contracts executed/participating groups
- # of miles of adopted Miami-Dade County maintained roadway
- # of bags of debris removed from roadways

The Miami-Dade County Adopt-a-Road Program is a public/private partnership program, which encourages volunteer involvement and community service in the control and reduction of litter to maintain the beautification and world class image of Miami-Dade County.

POSTING WITH A PURPOSE - TOP CONSERVATION POSTS



Instagram Stories With Most Views



View insights **Boost Post**

Liked by miamidadeparks and 110 others

miamiecoadventures This Black Friday, spend your day with Miami Ecoadventures! Skip the holiday shopping crowds and bring the family out

Accounts Reached: 1,430
Followers: 1,093
Content Interaction: 134



View insights **Boost Post**

Liked by edwardhpritchard and 133 others

miamiecoadventures //Hurricane Andrew

29 years ago today Hurricane Andrew made landfall and our community was forever changed. Where were you on this day?

Accounts Reached: 2,859
Followers: 1,805
Content Interaction: 169



View insights **Boost Post**

Liked by miamidadeparks and 155 others

miamiecoadventures // Discover Miami's Underwater World

Accounts Reached: 1,765
Followers: 1,094
Content Interaction: 171



*We create outstanding Recreational,
Natural and Cultural experiences to
enrich you and enhance the quality of life
for our community for this and future
generations.*

WRAP- UP

- Check your Strategic Alignment with local Government Frameworks
- Have a “Conservation Plan”
- Set and Integrate KPI’s into Scorecards
- Prioritize Your Key Conservation Messages
- Have Fun with Conservation Programming
- Post with a Purpose



THANK
YOU!



Miami Dade County Parks, Recreation and Opens Spaces Department



SOUND BITES - CONSERVATION BRAND

Words and short phrases that should be memorized by staff and partners, why Conservation through Parks MATTERS, is needed, and what happens as a result of Parks

1. Parks CONNECT kids, families, and people to nature; we educate future stewards of our earth and resources; we mentor the next generation of business and community leaders
2. Parks and green spaces PROMOTE wildlife and wildlife corridors for you to see and connect with nature
3. Parks CHAMPION green space, trail walks, nature-based recreation, play, and healthy tree canopy along our streets and in our Parks
4. Parks CARE FOR species and habitat by removing harmful plants and replacing them with sustainable natives in our landscaping
5. Parks STAND UP FOR our community, our economy and the environment
6. Parks ADVOCATE FOR air quality, bay resources, species and habitat diversity
7. Parks CONVENE diverse, inclusive perspectives to find solutions to what matters most to us; we foster equity and access to land held for all people
8. Parks STEWARD the resources we all depend on and matter most to us; Parks CELEBRATE the values of our community
9. Parks LOVES its pollinators; they are important for the planet
10. Parks IMPROVE our community's resiliency, adaptation, and quality of life

Presented by Jennifer Titshammer

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