

Memorandum



Date: April 30, 2014

To: Honorable Chairwoman Rebeca Sosa
and Members, Board of County Commissioners

From: Carlos A. Gimenez
Mayor

A handwritten signature in blue ink, appearing to read "Carlos A. Gimenez", written over the printed name.

Subject: Report Assessing Current Efforts to Identify and Promote Existing Bike Paths and Greenways and Offer Recommendations for Future Efforts

At the September 17, 2013 Board of County Commissioners (Board) meeting, the Board approved Resolution No. R-768-13 (Attachment 1) sponsored by Senator Javier D. Souto and co-sponsored by Commissioner Sally A. Heyman, directing the County Mayor or County Mayor's designee to prepare a report identifying and promoting existing bike paths and greenways as well as setting forth future plans for bicycle transportation within Miami-Dade County. Specifically, the resolution directed that the report address the following items:

- 1) identification of existing facilities; and
- 2) location of bike paths and greenways within Miami-Dade County; and
- 3) ownership, identification and markings of various bike paths and greenways, including branding and color schemes; and
- 4) description of shared bicycle rental programs and pilot programs within the various municipalities; and
- 5) description of the County's plan for promotion and future development of bike paths and greenways (vision) within Miami-Dade County.

Executive Summary and Recommended Next Steps:

The demands for bicycling in the County are growing on a daily basis. Through documents such as the Comprehensive Development Master Plan (CDMP), the Parks and Open Space Master Plan, the Long Range Transportation Plan and the GreenPrint Community-wide Sustainability Plan, the County's planning infrastructure calls for a comprehensive bicycle and greenway network. Actions such as the recommendations listed below create a systematic approach for all planning, projects and policies moving forward:

- Introduce Complete Streets legislation and guidelines (as cited in TE 4A of the CDMP) to use existing rights-of-way efficiently and address the growing population's alternative transportation needs;
- Implement the action steps from the MPO's Transit System Bicycle Master Plan and explore funding for those connections within a mile of a transit hub that will shift the greatest number of individuals out of their cars;
- Develop and implement a comprehensive community wide education campaign utilizing the Bike305 website as the primary electronic format;
- Emulate national best practices at the local level by expanding the Safe Routes to School program, developing safe routes to parks, and building upon the ThinkBike model;
- Study and report the economic benefits of investing in bike infrastructure to residents, employers and visitors;
- Ensure a seamless interface for users on all county bike-related information through the Bike305 Website and Application;
- Create "Bike Friendly Communities" by leveraging the success of Bike305 and pursuing the League of American Bicyclists Bike Friendly Community application;

- Partner with the South Florida Park Coalition and the Community Image Advisory Board to expand the Parks, Recreation and Open Spaces Department (PROS) shared-use trail wayfinding signage program;
- Leverage the existing and emerging bikeshare programs to have similar programs in high-traffic County parks and destinations; and
- Fund the construction of a pilot trail project that fills an existing gap and exemplifies the network that can be created through investments in a bike infrastructure (such as the unpaved portions of Old Cutler Trail.)

Introduction and Background:

Miami-Dade County and its communities are taking many steps to help make cycling a more viable mode of transportation. However, there is much work to be done. As the infographic by ChangeLab Solutions below indicates, a bikeable community can be created by investing in four areas:

1. **Convenience:** As mentioned later in this report, there are many existing planning documents urging changes in development to accommodate cyclists.
2. **Safety:** Traffic calming measures such as narrower lanes, designated bike lanes or special places for bikes at intersections provide more visibility for cyclists, allowing the motorists to plan for their presence.
3. **Acceptability:** Through partnerships with organizations like the University of Miami's BikeSafe and the Safe Routes to School program, the County can realize proven measures that help increase riding and balance the infrastructure to include all modes of transportation. At the state level, Florida is pursuing more bicycle and pedestrian related issues in driver's education and assessment.
4. **Access:** Through programs such as Miami Beach's DecoBike, bicycles can be made increasingly accessible. Furthermore, some jurisdictions and corporations have invested in bike fleets which encourage employees to use bicycles as an alternative to automobiles on short-trips.

Let's Ride!

4 Requirements for a Bikeable Community

To decide to bicycle, people need biking to be safe and convenient. They need access to a bicycle, and they won't bike unless it seems like something normal and worthwhile. Here are a few of the many policies that can help get people bicycling around town.

Safety

Travel by bicycle is sufficiently safe

POLICIES INCLUDE

- BIKE-FRIENDLY TRAFFIC CONTROL & STREET DESIGN** Special bike signals, lanes, and other features keep bicyclists safe
- COMPLETE STREETS** New and renovated streets are required to accommodate everyone, including bikes, cars, and pedestrians
- TRAFFIC CALMING** Streets include features like median islands, speed bumps, and roundabouts to reduce speed and other hazards

Convenience

Travel by bicycle is convenient

POLICIES INCLUDE

- BIKE PARKING** New housing and commercial developments must have bicycle parking
- BICYCLES ON BOARD** Bikes can be brought on public transit, and vehicles include storage racks
- 20 MINUTE NEIGHBORHOOD** Plans and zoning codes ensure that everyday destinations (work, school, stores, services) are within convenient biking distance

Access

People have access to bicycles

POLICIES INCLUDE

- BIKE SHARE** Affordable programs make bicycles available to people for short trips around town, especially to and from transit
- BIKE FLEETS FOR GOVERNMENT** Local government agencies provide employees with bikes for short-distance work travel

Share-a-Bike PROGRAM

Social Acceptability

Travel by bicycle is seen as socially acceptable and worthwhile

POLICIES INCLUDE

- OPEN STREETS** Communities designate certain roadways as "car-free" on select days
- SAFE ROUTES TO SCHOOLS** Kids are encouraged to bike and walk to school through education and infrastructure improvements
- DRIVERS' ED** Bike safety principles and rights are included in traffic school, drivers' manuals, and written license tests

STREET CLOSED TO CARS EVERY SAT & SUN

ChangoLab Solutions is a nonprofit organization that provides legal information on matters relating to public health. The legal information in this document does not constitute legal advice or legal representation. For legal advice, readers should consult a lawyer in their state. © 2013 ChangoLab Solutions

ChangoLab Solutions has developed model policies and other resources to support bicycle-friendly communities. To learn more, visit www.changolabsolutions.org

As Resolution No. R-768-13 stated, communities across the country are experiencing a rise in bicycling. Those metropolitan areas investing in the creation of a robust bike network are seeing returns on their investments. In a recently released study, *Protected Bike Lanes Mean Business*, published by the Alliance for Biking and Walking and People for Bikes, the authors cite four benefits to investing in protected bike lanes: (1) increased real estate value; (2) skilled workforce attraction and retention; (3) healthier and more productive workers; and (4) increased retail visibility and sales. Through increased investment in bike paths, bike lanes and greenways, Miami-Dade could join the ranks of bike friendly communities and experience these benefits as well.

The Miami-Dade Parks and Open Space Master Plan of 2008 states, "bicycle mode share is not likely to increase without a sufficient network in place." By realizing a combination of bike lanes, slow-streets and shared-use trails that connect residents to major destinations, a comprehensive bicycle infrastructure can be incrementally created throughout the county.

According to a 2009 report, *The Economic Benefits of Bicycle Infrastructure Investments* also published by the League of American Bicyclists and the Alliance for Biking and Walking, "The national bicycling industry contributes an estimated \$133 billion a year to the U.S. economy. It supports nearly 1.1 million jobs and generates \$17.7 billion in federal, state, and local taxes. Another \$46.9 billion is spent on meals, transportation, lodging, gifts and entertainment during bike trips and tours." Below is an excerpt from this study:

Notable Economic Impacts

"Regions that have invested in bicycling have seen a beneficial impact on their economies. Studies have shown that bicycle industry and bicycle tourism can boost local employment levels and economic activity.

Investing in bicycle infrastructure and promoting cycling can draw new money to a local economy by attracting visitors who may otherwise spend their vacation dollars elsewhere. Maine, which since 1991 has made a concerted effort to improve its bicycle infrastructure by widening shoulders and creating shared-use paths, generates \$66 million a year in bicycle tourism." (Maine Department of Transportation, "Bicycle Tourism in Maine," April 2001)

Demand for Bicycle Infrastructure

"Bicycling is popular across America among all types of people. Communities that have fostered that popularity by providing bicycle infrastructure for transportation and recreation have seen considerable economic benefits by attracting businesses, tourism, and active residents.

Neighborhoods become more desirable when traffic slows down and residents have more transportation choices. Businesses can encourage shopping among loyal, local customers by making getting there by bike more appealing. Individuals benefit from increased levels of fitness and health that result in real cost savings and employers have healthier employees who miss fewer days of work.

A modest mode shift from driving to riding has considerable impacts in savings on health, road construction, congestion, and environmental remediation. As examples in the U.S. and internationally demonstrate, this shift is possible – but unlikely without

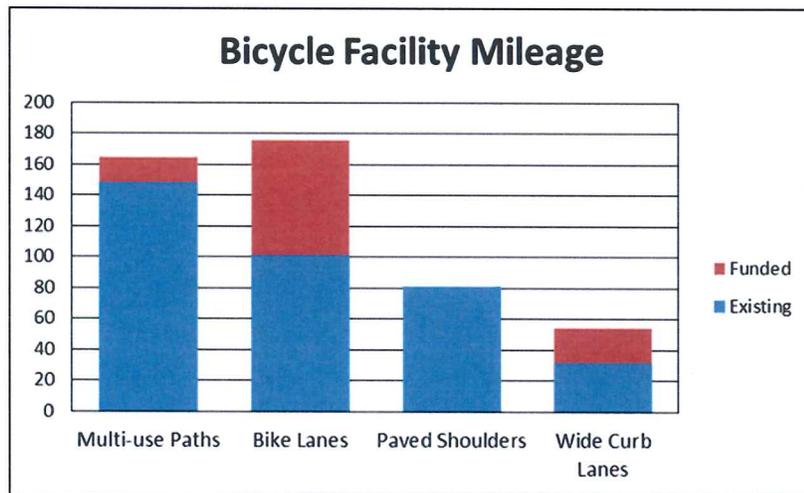
federal, state, and local investments in bicycle facilities to provide drivers with an appealing, safe alternative choice.” (League of American Bicyclists and the Alliance for Biking and Walking, “The Economic Benefits of Bicycle Infrastructure Investments,” June 2009)

No place in the nation stands to benefit more from a mode shift than the Miami Metro area. According to a 2012 report released by the Center for Housing Policy in Washington, D.C., on average, Miami Metro residents are spending 32 percent of their income on transportation costs (much higher than the national average of 19 percent). Investing in alternatives to the automobile can help reduce the cost of transportation for all users, thereby freeing up income for other necessities such as food and housing.

1. Identification of Existing Facilities

All public roads, except most limited access freeways, can be used by bicyclists. Bicycle facilities, such as bike lanes, paved shoulders and wide curb lanes, are included on roads that carry more traffic to improve bicycle safety. Shared-use trails, which are physically separated from the road and shared by bicyclists and pedestrians, can be built along linear features that have few intersections, driveways and other conflict points (a visual glossary is provided in Attachment 2). Like many communities nationwide, Miami-Dade County has experienced growth in demand for bicycle facilities. There are more than 450 miles of bicycle facilities in Miami-Dade County, including bicycle lanes, shared-use or multi-use trails, paved shoulders, and unpaved trails, representing an extensive transportation infrastructure that caters to non-motorized modes of travel. On the streets alone, the County has more than 210 miles of bike lanes, paved shoulders and wide curb lanes to improve safety and provide travel options to residents and visitors. The shared-use trails also strengthen our connections across county lines from Broward to Monroe and from the Atlantic to the Everglades. Approximately 143 miles of shared-use trails currently exist with another 16 miles of new and improved trails in development.

The graph below indicates the existing and funded planned bike-supportive facilities (unpaved trail mileage is not included). Please note that the paved shoulders are at times converted into bike lanes, thus there is no projected net growth in the mileage of paved shoulders.



Graph prepared by Miami-Dade Metropolitan Planning Organization

Over the last five years, 66 miles of bike lanes and 24 miles of multi-use paths have been built or improved. Recently completed PROS projects or projects underway include:

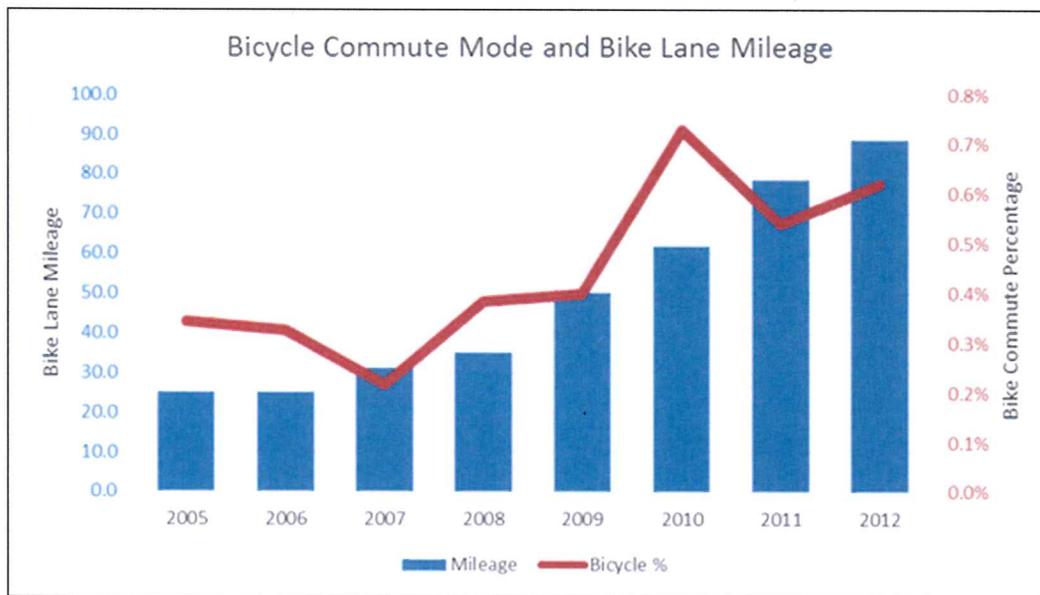
- Snake Creek Trail
- Black Creek Trail, Segment A
- Way finding signage (various trails)
- Bridges on the Black Creek and Biscayne Trail (underway)

Bicycle facility projects under design by PROS include:

- Biscayne Trail Segment C
- Biscayne Trail Segment D
- Ludlam Trail Trailhead Improvements at A.D. Barnes Park – Phase 1
- Ludlam Trail Trailhead Improvements at A.D. Barnes Park – Phase 2
- Amelia Earhart Park Mountain Bike Trail Improvements

Growth in Bicycling:

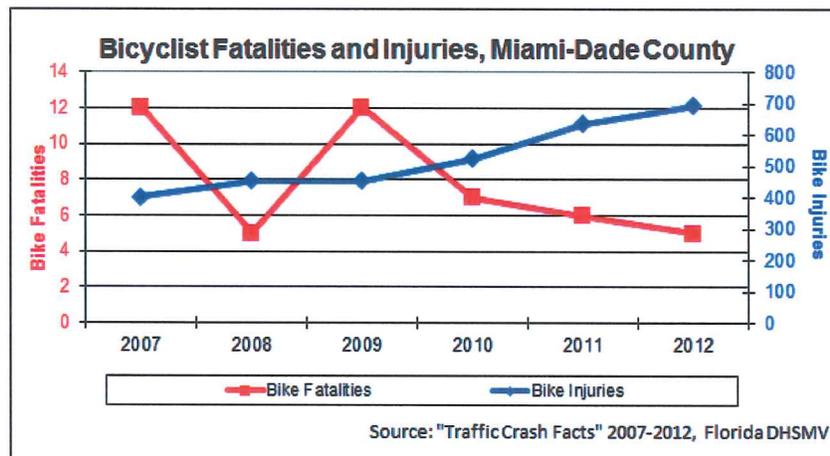
As the graph below indicates, the annual Census Bureau survey of commuters reports a doubling of workers that bike to work. Creating more bicycle facilities improves the options that the public has for all trip purposes.



Graph prepared by Miami-Dade Metropolitan Planning Organization

Safety:

During this same period of time, the number of bike-related fatalities has been almost cut in half. Unfortunately, the number of bike crashes continues to climb, which most likely represents the additional cyclists on the road and may also emphasize the need for additional safety measures to accommodate the growing number of cyclists.



Graph prepared by Miami-Dade Metropolitan Planning Organization

2. Location of Paths and Greenways Within Miami-Dade County

In an attempt to categorize existing and planned facilities, this report contains 4 maps as part of the attachments. Map A (Attachment 3) represents the existing Miami-Dade bicycle facilities. As the map indicates, the majority of facilities are owned and operated by the County. Map B (Attachment 4) reflects those planned facilities that have been funded. MAP C (Attachment 5) reflects the unpaved bike trails to show potential connection opportunities. These maps do not reflect where municipalities have painted “sharrows,” white painted arrows incorporating a bike symbol that remind motorists to share the road. Typically, these “sharrows” are placed on roads that don’t have bike facilities.

How Bike Facilities are Planned

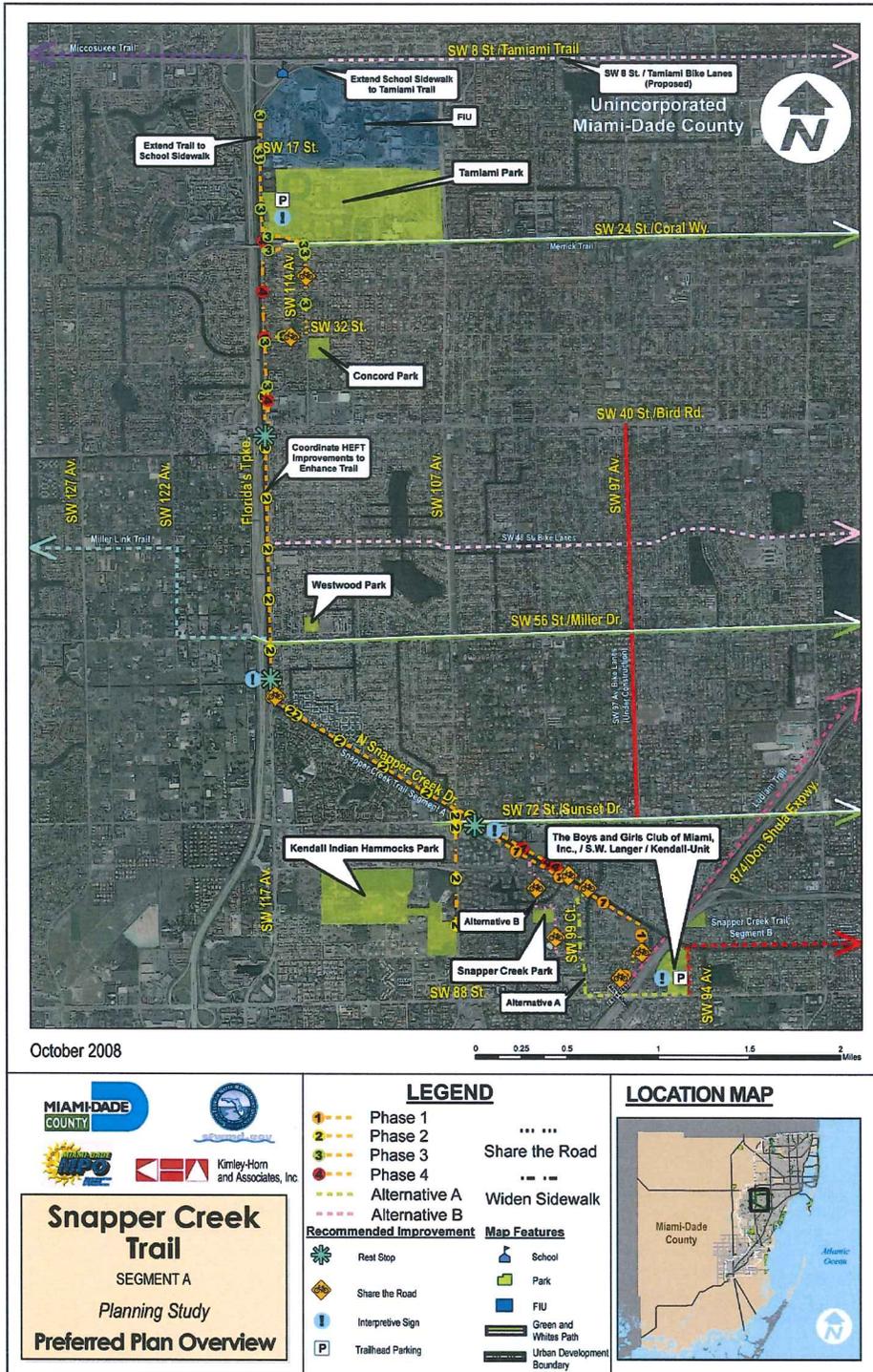
The construction of bike lanes and other on-road facilities are required by Miami-Dade County policy and state law that require “the creation of a countywide system of interconnected designated bicycle ways.” Five County agencies are responsible for planning bike facilities: (1) the Miami-Dade Metropolitan Planning Organization (MPO), which coordinates/maintains the Bike/Pedestrian infrastructure Map; develops education, awareness and safety programs and materials and conducts numerous studies to identify opportunities to increase bike connections and access; (2) Regulatory and Economic Resources (RER), which develops and manages the implementation of the County’s Comprehensive Development Master Plan (CDMP); (3) Public Works and Waste Management (PWWM), which manages some roadway maintenance and improvements; (4) PROS which manages the planning, design and construction for numerous trails in the South Florida Water Management District (SFWMD) or County right-of-ways in or adjacent to Parks; and (5) Miami-Dade Transit (MDT), which is responsible for those bicycle facilities located within their right-of-way. The Office of Sustainability, is tracking and promoting bike-related initiatives that are included in the GreenPrint.

Non-County agencies facilitating bicycle facilities include the Florida Department of Transportation, the Miami-Dade Expressway Authority, the Department of Environmental Protection and the National Park Service. Moving forward, other entities that might be partners include regional utilities or Florida East Coast Industries (FEC), which is in the process of planning the Florida All Aboard service. Municipal efforts are included later in this report.

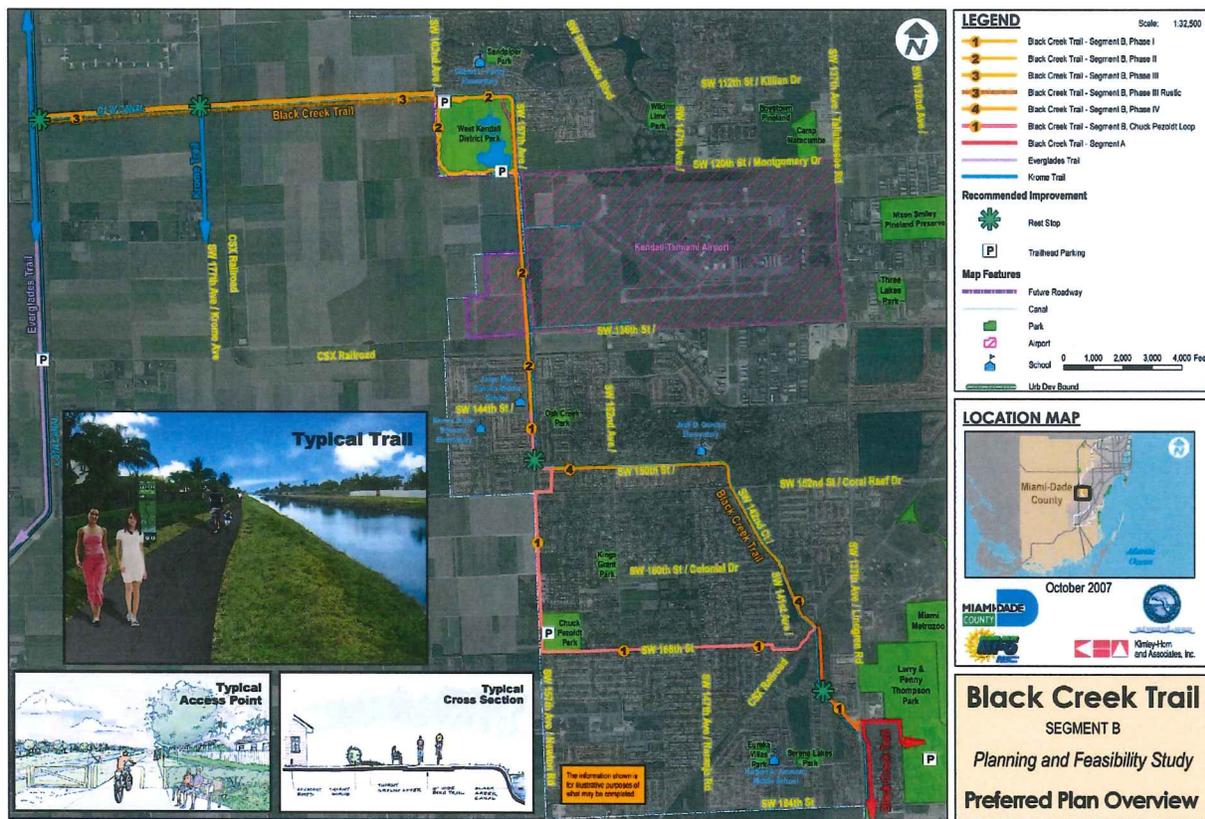
PROS' Role in Bicycle Facility Planning

At the regional level, PROS has worked with the MPO on numerous planning studies and various phases of projects over the years through the Unified Planning Work Program (UPWP) and Transportation Alternatives Program (TAP) and other sources like the Paul S. Sarbanes Transit in Parks (TRIP) Program. A sampling of past and current complementary projects includes:

- Snake Creek Bike Trail Planning and Feasibility Study
- Black Creek Trail Segment "B" Planning and Feasibility Study
- Snapper Creek Trail Segment "A" Planning Study
- Miami-Dade County Bicycle Boulevard Planning Study: Model City/Brownsville
- Miami-Dade County Trail Design Guidelines and Standards: Ludlam Trail Case Study
- Miami-Dade County Trail Benefits Study: Ludlam Trail Case Study
- River of Grass Greenway Planning and Feasibility Study (underway)



The Snapper Creek Trail Segment A plan connects the Westchester community to the FIU Madique campus, Tamiami Park and the Boys and Girls Club of Miami, Kendall Unit (formerly K-Land) Park along SW 117 Ave and Snapper Creek Drive. Partial funding for the implementation of the plan is included in the Building Better Communities general obligation bond program project #141.



The Black Creek Trail Segment B plan extends the recently completed Black Creek Trail Segment A to Chuck Pezoldt Park, West Kendall District Park and the proposed Krome Trail along SW 177 Street.

These trail additions were proposed in the 2008 Parks and Open Space Master Plan. This comprehensive plan looked at the opportunities to expand the existing bike network through the enhancement of greenways, waterways and the street network. The plan concluded that over 500 miles of greenways and trails envisioned for Miami-Dade County could be realized by enhancing existing open spaces.

The Metropolitan Planning Organization

The MPO Governing Board is the authority on all local transportation planning matters and ensures that all entities engaging in transportation related activities conform to federal and state requirements. Since its inception in 1977, it has developed dozens of bike plans and it ensures that planning for bike facilities is formalized in its Long-Range Transportation Planning (LRTP) process. The MPO conducts this work in coordination with the Bicycle Pedestrian Advisory Committee (BPAC). Additionally, the MPO partners with agencies, such as the Florida Department of Transportation (FDOT) and the Miami-Dade Expressway Authority (MDX), to coordinate bicycle planning for facilities in the County.

The Bicycle Pedestrian Advisory Committee (BPAC)

The BPAC advises the MPO Governing Board on bicycle and pedestrian-related issues within Miami-Dade County. Members are appointed by the MPO's Governing Board members. The BPAC also assists MPO staff in the development of the comprehensive bicycle transportation plan, a part of the

Long-Range Transportation Plan, and reviews plans and projects for bicycle and pedestrian mobility in the Transportation Improvement Program. The committee meets each month under the coordination of David Henderson, BPAC Coordinator and MPO Bicycle Pedestrian Specialist.

Other relevant non-motorized planning studies funded through the MPO include:

- Automated Bike Rental and Parking Plan
- Transit System Bicycle Master Plan
- Bicycle/Pedestrian Mobility Plan for the Miami Downtown Area
- Bicycle/Pedestrian Mobility Plan for Miami Gardens
- Bike Boulevard Master Plan: Model City/Brownsville
- M-Path Master Plan
- Miami Baywalk Mobility Plan
- North Miami Bike, Park and Ride Plan
- Palmetto Bay Bicycle/Pedestrian Master Plan

A summary of each study's purpose and status can be found on the following page:
<https://www.miamidade.gov/mpo/studies/>.

The CDMP also includes many strategies for making alternative modes of transportation a viable choice for residents, employees and visitors. Among the more notable policies are: a call for a Complete Streets program; expansion of the "Safe Routes to Schools" program; development of a countywide greenways network; and the designation of "Activity Corridors" to reflect a multimodal perspective. The relevant policies of the CDMP's Transportation element are listed in Attachment 6.

Additionally, the GreenPrint presented to the County Commission in 2010 offers many strategies and initiatives to help increase bicycling and walking. Among the 137 initiatives in GreenPrint, RER's Office of Sustainability is currently tracking the following bike-related initiatives:

- implementation of the Complete Streets initiative;
- implementation of the Bicycle and Pedestrian Facilities Plan, prioritizing projects and securing funding;
- conducting non-motorized planning studies for corridors and urban centers;
- increasing the number of safe walking and bicycling facilities as components of road improvement projects;
- funding and constructing prioritizing non-motorized multi-use trails;
- implementing signage plans for multi-use trail and bike routes;
- providing or requiring bicycle parking and other end-of-trip facilities at public and private destinations;
- encouraging municipalities to adopt the County's bicycle parking ordinance;
- expanding bicycle parking legislation to include showers and lockers for employees;
- increasing integration of transit with pedestrian and bicycle trips;
- including designated bicycle space within Metrorail cars; and
- improving bicycle parking at transit hubs.

A GreenPrint Progress Report was provided at the March 4, 2014 Board meeting (Attachment 11).

Moving forward, both PROS and the MPO have developed comprehensive bike facility plans, which are currently being coordinated. The MPO's annual "Call for Ideas" program gives the opportunity for agencies to propose transportation planning projects, including bicycle and pedestrian plans, for funding. This on-going planning process allows new information, opportunities and best practices to

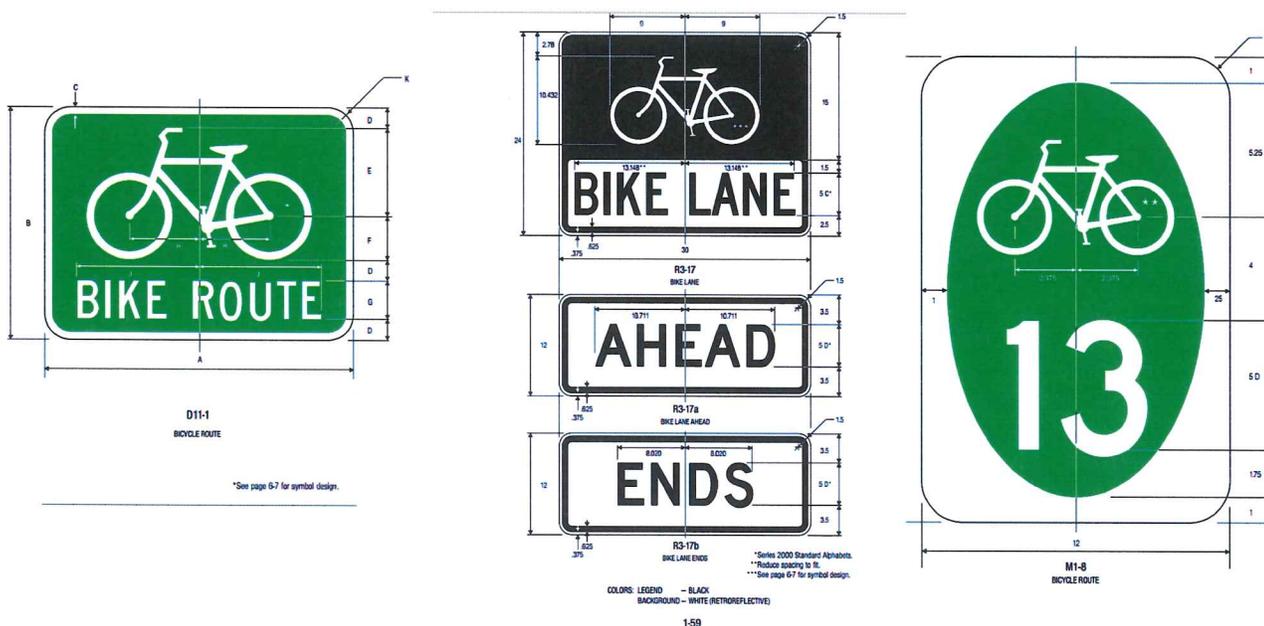
be developed and presented to the public and appropriate public agencies. The recommendations from trail master plans, municipal plans, and other bicycle and pedestrian studies are incorporated into the non-motorized section of the Long Range Transportation Plan. Participation by the agencies that construct bicycle facilities is essential so projects that are most critical to connecting people to practical destinations are implemented.

The County currently lacks legislation that updates all public rights-of-way to ensure planning for all users and abilities. Other counties across the state and country, including Broward and Lee counties, have passed Complete Streets policies to instill consistent planning, operations and construction of County owned and operated roadways. In order to facilitate a comprehensive approach to Complete Streets, both Lee and Broward counties created interdepartmental teams to review capital improvement projects to ensure that bike, pedestrian and transit users are considered.

3. The Ownership, Identification and Markings of Various Bike Paths and Greenways

To help convey which jurisdictions own the various bike facilities, Map D (Attachment 7) reflects existing facilities categorized by ownership. As for signage, the color schemes and “branding” for on-road bike signs is dictated by the Federal Highway Administration’s Manual on Uniform Traffic Calming Devices (MUTCD). Below is a sampling of the signs one will see throughout the County on State, County and local bike facilities.

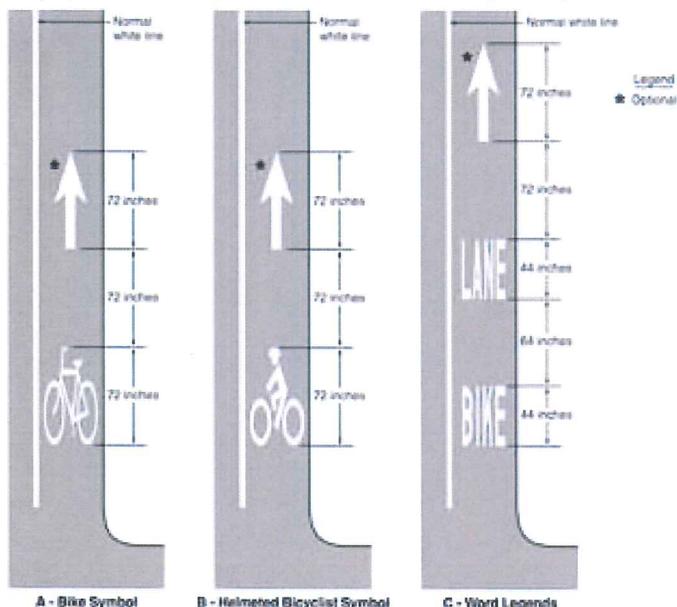
To date, Miami-Dade County has installed MUTCD approved signs or painted on the roadway to inform the motorists about the location of bike facilities. In other parts of the country, jurisdictions have begun installing bike signals and have created “bike boxes” a bike only space for cyclists at intersections.



Green and white signs along with black and white signs have been used to indicate the location of bike facilities. Note: the black and white signs are regulatory and the green and white signs provide guidance.

Accepted roadway markings for bicycles:

Figure 9C-3. Word, Symbol, and Arrow Pavement Markings for Bicycle Lanes



While all of the markings in the gray image above are approved by the MUTCD, Miami-Dade County has typically used the symbols in the middle for its bike lanes. FDOT has begun the use of green painted bike lanes to highlight conflict points between cyclists and motorists. A pilot project featuring a green lane can be found near Alton Road ramp to Julia Tuttle Causeway. The Public Works Waste Management Department (PWWM) has recently obtained permission from FHWA and will begin using green painted bike lanes in like manner.

In addition to the MUTCD signs, PROS, in coordination with PWWM, developed a wayfinding and signage implementation manual for use in parks, marinas and trails. The signs serve to:

- provide direction to facilities, activities and destinations;
- apply design consistency through all County park facilities;
- utilize universal symbology which is easily understood by multi-cultural residents and visitors;
- provide educational and interpretive signage for historical, ecological and cultural resources; and
- encourage safety in parks, marinas and trails.

As seen below, the bike trail signs incorporate the MUTCD symbols into a PROS specific brand. These signs can be seen on trails throughout the County. They have been so popular that four municipalities have already entered into a financial agreement with PROS to design, fabricate and install the signs on their shared-use trails.



04A-SIGN #4A EAST
 (04A-SNK_E1_SIGN#4A_EAST)
 18" x 24"



Miami-Dade PROS tailored the PWWM approved signs to create a branded, more user-friendly template for signs along its bike trails. Above, from right to left, are the trail route (type E2), facility directional, (type E1) and combination trail map (type D) and trail etiquette (type C1) signs. The last example to the far right shows how the signs can be used together to encourage positive behavior and to inform riders of their location.

PROS has developed a wayfinding program for parks, marinas and trails meant for use by all County agencies and municipalities. PROS will build upon existing municipal interest to promote a signage template to be adopted Countywide. Additionally, there are other opportunities to use signage to help build support and use of existing bicycle facilities, such as on unpaved trails on greenways and waterways. While these trails haven't been paved, they are being used by experienced cyclists and could be used by a broader population with adequate signage.

4. Shared Bicycle and Rental Programs and Pilot Programs Within Various Municipalities

In early 2011, the City of Miami Beach debuted a bike share program. After two years of operation, the program touted 1.8 million rides and expanded to the City of Surfside. This summer, the City of Miami is building upon this successful bike share program and launching its own DecoBike program, featuring at least 70 docking stations and 700 bikes in and nearby downtown, targeting major destinations and transit stations. With this major expansion, there may be opportunities for the County to also install bike-share facilities in destination parks and open spaces.

PROS also contracts with vendors to offer bike rentals in heavily traveled parks. The private sector provides bike rentals near major visitor destinations such as Bayfront Park.

Finally, the Miami Downtown Development Authority has recently partnered with the MPO to assess potential locations for bike parking and a bike commuter station, which is a facility for cyclists who commute to work on their bikes and is equipped with showers, lockers and bike storage. (In one 2013 study, more than 70 percent of the respondents indicated that they might bike to work if they had access to a facility that had showers, lockers and bike storage.)

5. Plan for Promotion and Future Development of Bike Paths and Greenways

Promotion/Education:

In March of 2013, the Mayor's new *Bike305* collaborative initiative was kicked off and aims to promote health and wellness through cycling, and proclaimed March as "Bike305 Month." The *Bike305* initiative included a Bike to Work Day ride and a calendar of events and activities for the public. *Bike305* originally featured a trail going through Village of Key Biscayne, City of Miami, City of Coral Gables, Village of Pinecrest, Village of Palmetto Bay, and Town of Cutler Bay. However, since the kickoff, various municipalities have begun highlighting their commitment to biking, including Coral Gables, South Miami, Palmetto Bay, Homestead, North Miami, Sunny Isles, Surfside, Miami Beach, Doral and Miami Shores.

The initiative's website (<http://bike305.miamidade.gov/events/bike305/>) is serving now as a one-stop shop for all things related to biking in Miami-Dade County. Municipalities and non-profit organizations can enter bike-related events or points of interest for cyclists.

The MPO has worked with Florida International University to develop an online bike route planner mapping tool named: Bike Knowledge Explorer (BiKE), <http://bikemiami.fiu.edu/>. Anyone with access to the internet can go to this site to plan a bike trip, depending on their goals—shortest distance, least interaction with automobile traffic, most scenic ride, etc. Similar systems have been created for Broward and Palm Beach Counties which could be integrated into a regional bike route planner that crosses county lines and includes transit options.

It should also be noted that the National Safe Routes to School program encourages youth and their parents to consider biking as an alternative to getting to school. Through events such as National Bike to School Day (May 7, 2014), participating schools provide tools and resources for families that can educate children how to safely bike to school. The University of Miami BikeSafe® program was developed to decrease the number of children injured as cyclists; improve pediatric bicycle safety; increase physical activity levels of children through encouraging children to bike to and from schools; and improve the ability to bike in and around middle schools.

In the future, there are many opportunities to build upon existing education efforts to create a community-wide bike safety and awareness campaign. For example, FDOT's *Alert Today Alive Tomorrow* Campaign focuses on motorist awareness of all of the users of the roadway.

Partnerships:

PROS has been coordinating an interdisciplinary group of key members of various advocacy groups to educate, support and raise awareness of the implementation and use of biking, walking and running facilities and programs throughout the County. In addition, PROS coordinates quarterly meetings for the Mayor's Bike Walk Run 305 Work Group, led by Chief of Staff Lisa Martinez and key members of County departments and outside agencies who are involved with planning, design, construction and maintenance of bicycle facilities. The goal of this group is to share project-related information, reduce obstacles and expedite projects when possible.

It should also be noted that several organizations exist to promote bicycling in Miami-Dade County, such as Green Mobility Network, South Florida Bicycle Coalition, Critical Mass, Everglades Bicycle Club and the University of Miami's BikeSafe program. These groups participate in the interdisciplinary group cited above and often represent the cyclists' interest and plan bike friendly events. *Bike305* has reached out to these groups to request their partnership for future activities.

At the state level, the Florida Office of Greenways and Trails Division of Recreation and Parks is spearheading the development of a statewide greenways/trails plan that highlights each region's priority trails. This office also issues grants for the construction of recreational trails. Both the MPO and PROS have helped secure recreational trail grants and are involved in the statewide plans.

For a long-term County perspective, the MPO and PROS have written a plan to capture a 30-year horizon. The update of the Miami-Dade County Long Range Transportation Plan to the Year 2040 is a primary activity in Miami-Dade County's transportation planning process to meet federal and state requirements for an update of the Transportation Plan every five years. The 2035 LRTP was approved by the Metropolitan Planning Organization (MPO) Governing Board in October of 2009.

"The 2040 plan update includes in-depth consideration of intermodal improvement opportunities... A major emphasis of the 2040 LRTP is the inclusion of projects that improve the operation of the existing system. This emphasis on increasing the efficiency of the current infrastructure, in light of soaring construction costs, is embodied in the Congestion Management Process, adopted concurrently and incorporated into the LRTP. The inclusion of non-motorized improvements in the plan promote quality of life issues for the County's residents and visitors and include sidewalk improvements, and pedestrian and bicycle trail improvements." (MPO Website)

In its Open Space Master Plan, PROS incorporated public feedback to create a Miami-Dade Greenways, Trails and Water Trails Vision—"an interconnected system that provides transportation alternatives and reduces traffic congestion, creates new recreational opportunities, increases property values, protects natural resources, and encourages tourism and business developments." The vision of building 500 miles of trails, as reflected in Map E (Attachment 8), builds upon the corridors described by the North Dade Greenways Master Plan and South Dade Greenway Network Master Plan, and goes further in linking these green fingers into a holistic, seamless system.

"Its corridors weave through new parks, tie into bike lanes and act as verdant channels that draw people into natural resource areas. Water Trails that have already been identified by previous plans are incorporated into the Vision, but greatly expanded upon: all major canals and waterways are accessible for recreation and strengthen physical and visual connections between the east and west edges of the County. Canals and levees managed by the South Florida Water Management District are converted into greenways and trails corridors, and provide an opportunity for public education on Everglades Restoration." (2008 PROS Parks and Open Space Master Plan)

Miami-Dade County Trail Design Guidelines and Standards and County Trail Benefits:

The Miami-Dade County Trail Design Guidelines and Standards and the Miami-Dade County Trail Benefits Study were established to help accomplish the following goals:

- promote consistency of standards and guidelines for County trails and greenways;
- increase user safety, comfort, and convenience by recommending appropriate design considerations for trails, signage, facilities, and landscaping;
- promote universal access to users with a broad range of skill levels and abilities, including children, older adults, and people with disabilities;
- recognize a variety of trail users including pedestrians, cyclists and in-line skaters;
- support the Parks, and Open Space System Master Plan system of trails; and
- provide uniform method and measures for quantifying the benefits of greenways and trails.

I transmitted a memo on March 5, 2013 approving these Guidelines and Standards.

As a reference for trail, greenway and linear park design and planning, PROS also developed *The Miami-Dade County Trail Design Guidelines and Standards: The Ludlam Trail Case Study*. The document develops a methodology to estimate quantifiable potential social, environmental and economic benefits of shared-use trails. PROS worked with department stakeholders including the MPO, RER Development Services Division, PWWM and MDT to create this document.

The Parks and Open Space Master Plan also identified the opportunities available through Greenways and Water Trails. "Greenways are about connections: they connect people and wildlife to places, to nature, and to each other."

Water trails add a distinct element to a Greenways system - a visual interest to a corridor and they provide opportunities for canoeing, kayaking, fishing and, in some cases, swimming. A water trail can be any linear body of water, but in South Florida are mostly on canals and artificial lakes.

Municipal Efforts:

In addition to these countywide plans, municipalities are embarking upon local biking and walking plans to make their public right-of-ways more convenient, accessible and safe for cyclists and pedestrians. For example, in an attempt to create a continuous facility in the central business district, the City of Miami requires that private residential and commercial developers along the waterfront construct sections of the Miami River Greenway and Baywalk. Additionally, through a Municipal Planning Grant program facilitated by the MPO, municipalities have now have adopted long-range plans and recommendations to create more bicycle and pedestrian friendly environments. They can use these plans as blueprints to help inform future investments.

Additionally, the MPO is developing Safe Routes to School plans for elementary schools that have been prioritized based on the number of children walking and biking to school living near the school, injuries from traffic crashes and other factors. These plans are used to support applications to FDOT for federal Safe Routes to School funds to make infrastructure improvements.

The PROS Bike305 Website and campaign, in conjunction with the MPO's partnership with FIU to create the Bike Knowledge Explorer (BiKE) tool online, have provided a foundation for future promotion efforts. Both agencies are working together to provide a seamless transition between the two resources so that the user can maximize the utility of both services.

To date, the County has not pursued an external assessment of its bike investments to help drive future priorities. One type of assessment might be an economic benefits study that shows the return on investment for bicycle facilities. Other metro areas have conducted similar studies and subsequently expanded their bicycle infrastructure. Another assessment could be achieved by submitting a League of American Bicyclists "Bike Friendly Community" Application. (Attachment 9)

Recommended Next Steps:

Plans

As Miami-Dade's population continues to increase, it will be critical to use existing right-of-ways as efficiently as possible. Thus, to advance a bike-friendly agenda, the Mayor's Office will continue to host the "The Mayor's Greenway and Bicycle Facilities Coordinating Workgroup," which facilitates coordination among PROS, the MPO, PWWM, RER, MDT the City of Miami and FDOT, to ensure that all departments are considering how to incorporate bike facilities into their capital improvement plans. Additionally, PROS will work with the MPO to coordinate future maps and visual guides to reflect their

joint priorities, strategies and implementation plans. As recommended in the CDMP and in the GreenPrint, the Mayor will introduce Complete Streets legislation that directs staff to ultimately develop Complete Streets Guidelines to update local design standards. This will help ensure public right-of-ways are being planned, designed, constructed, operated and maintained for all modes.

Already, PWWM has implemented several Complete Streets projects throughout the County, including the addition of sidewalks and bike lanes to the Venetian Causeway and the improvements underway on SW 27th Avenue in Coconut Grove, which will eventually add sidewalks and bike lanes.

The National Complete Streets Coalition offers dozens of model policies from which the County could choose and customize for its specific needs. Furthermore, the Broward MPO recently developed Model Complete Streets Guidelines, which were modified and adopted by Broward County and its municipalities. Should the Board choose to pursue Complete Streets, Miami-Dade County could follow a similar approach. (Attachment 10)

It is also recommended that the MPO implement the action steps from its Transit System Bicycle Master Plan and explore a grant program that funds those connections within a mile of a transit hub that will result in shifting the greatest number of individuals out of their cars. Often times, it is this relatively affordable "last mile" that is a barrier to changing auto-centric behaviors.

To help elevate awareness regarding the bike opportunities in Miami-Dade, it is recommended that the County emulate national best practices at the local level by expanding the MPO's efforts to realize Safe Routes to School, develop Safe Routes to Parks and building upon the ThinkBike model. It is proven that those communities that invest in Safe Routes to School reduce crashes of all types and thus experience a significant return on investment. To help elevate the awareness of the possibilities for bicycles in Greater Miami, the Consulate General of the Kingdom of the Netherlands sponsored the ThinkBike Workshop Miami in 2011. By engaging a mix of Dutch and local experts, Miami-Dade can assess areas of the County by bike and identify how streets, intersections and neighborhoods as a whole can be improved for optimal bicycle use. PROS intends to host a ThinkBike session by the end of the year and will include interested departments and public officials.

Furthermore, there is a strong national case for the economic development opportunities provided by bicycle infrastructure. It is recommended that the County fund research and report the economic benefits of investing in bike infrastructure to residents, employers and visitors. There are many examples nationwide that could help drive this type of study.

Finally, the County will seek grant funds for the construction of a pilot trail project that fills an existing gap and exemplifies the network that can be created through investments in a bike infrastructure. (ie, the unpaved portions of Old Cutler Trail.)

Signage

PROS will elevate the benefits of its way-finding template for shared-use trails to all Miami-Dade County municipalities. By engaging the Community Image Advisory Board (CIAB) and the South Florida Parks Coalition, the County can expand the PROS shared-use trail signage program. Additionally, the County will pursue funding for signage along unpaved trails. With this minimal investment, the County can extend its existing trail system, connect people to resources and offer users enhanced bicycling opportunities.

Promotions/Education

PROS will continue to work with the MPO to ensure a seamless interface for users on all county bike-related information through the *Bike305* website and application.

It is recommended the County create "Bike Friendly Communities" by leveraging the success of *Bike305* pursuing the League of American Bicyclists Bike Friendly Community application. Several communities in South Florida have used this process as an assessment of existing efforts and as a blueprint for future investments. The City of Miami recently achieved the Bike Friendly Community-Bronze Level designation after closely reviewing the application, applying twice and using the League's feedback as an action plan for future investments.

Furthermore, the County will seek out resources to build upon the existing education efforts and develop and implement a comprehensive community wide education campaign utilizing the *Bike305* website as the primary electronic format

The County will explore a bike-share program that expands upon the successful DecoBike program in Miami Beach and leverages the City of Miami's upcoming launch of DecoBike. In high-traffic destinations, such as County facilities and parks, this investment may enable people to take short trips via bicycles.

By building upon existing plans and promotions and executing the recommendations put forth in planning documents such as the CDMP, the Parks and Open Space Master Plan, the LRTP and the Miami-Dade GreenPrint, the County can propel itself into the nation's list of bike-friendly communities and diminish its auto-dominated reputation. Furthermore, by making these investments now, the County will be better positioned to accommodate population growth, grow economic development, attract and retain a skilled workforce, address safety issues and enhance its world-class image.

PROS is committed to working with partners in this effort. If additional information is needed, please contact Jack Kardys, Director, Parks, Recreation and Open Spaces Department at (305) 755-7903.

Attachments

Attachment 1: Copy of Resolution R-768-13

Attachment 2: MPO Visual Glossary of Bike Facilities

Attachment 3: Map A Existing Miami-Dade Bicycle Facilities

Attachment 4: Map B Funded Bicycle facilities

Attachment 5: Map C Unpaved Miami-Dade Bicycle Facilities

Attachment 6: Excerpts from the CDMP Transportation and Community Health and Design Elements

Attachment 7: Map D Miami-Dade Bicycle Facilities by Ownership

Attachment 8: Map E Miami-Dade Vision for Trails, Bike Lanes and Greenways

Attachment 9: Copy of a Bike Friendly Community Application

Attachment 10: Copy of Sample Complete Streets Resolutions

Attachment 11: GreenPrint Progress Report

c: Lisa M. Martinez, Chief of Staff, Office of the Mayor
Michael Spring, Senior Advisor, Office of the Mayor
Jack Kardys, Director, Parks, Recreation and Open Spaces Department

MEMORANDUM

Amended
Agenda Item No. 11(A)(17)

TO: Honorable Chairwoman Rebeca Sosa
and Members, Board of County Commissioners

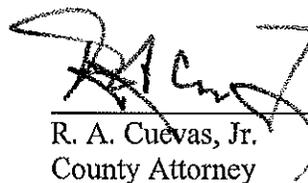
DATE: September 17, 2013

FROM: R. A. Cuevas, Jr.
County Attorney

SUBJECT: Resolution directing the County Mayor to prepare a report to the board within ninety days in order to accomplish the goals set forth herein including identifying and promoting existing bike paths and greenways as well as setting forth future plans for bicycle transportation within Miami-Dade County

Resolution No. R-768-13

The accompanying resolution was prepared and placed on the agenda at the request of Prime Sponsor Senator Javier D. Souto and Co-Sponsor Commissioner Sally A. Heyman.



R. A. Cuevas, Jr.
County Attorney

RAC/Imp



MEMORANDUM

(Revised)

TO: Honorable Chairwoman Rebeca Sosa
and Members, Board of County Commissioners

DATE: September 17, 2013

FROM: 
R. A. Cuevas, Jr.
County Attorney

Amended
SUBJECT: Agenda Item No. 11(A)(17)

Please note any items checked.

- "3-Day Rule" for committees applicable if raised
- 6 weeks required between first reading and public hearing
- 4 weeks notification to municipal officials required prior to public hearing
- Decreases revenues or increases expenditures without balancing budget
- Budget required
- Statement of fiscal impact required
- Ordinance creating a new board requires detailed County Mayor's report for public hearing
- No committee review
- Applicable legislation requires more than a majority vote (i.e., 2/3's ____, 3/5's ____, unanimous ____) to approve
- Current information regarding funding source, index code and available balance, and available capacity (if debt is contemplated) required

Approved _____ Mayor
Veto _____
Override _____

Amended
Agenda Item No. 11(A)(17)
9-17-13

RESOLUTION NO. R-768-13

RESOLUTION DIRECTING THE COUNTY MAYOR OR COUNTY MAYOR'S DESIGNEE TO PREPARE A REPORT TO THE BOARD WITHIN NINETY DAYS IN ORDER TO ACCOMPLISH THE GOALS SET FORTH HEREIN INCLUDING IDENTIFYING AND PROMOTING EXISTING BIKE PATHS AND GREENWAYS AS WELL AS SETTING FORTH FUTURE PLANS FOR BICYCLE TRANSPORTATION WITHIN MIAMI-DADE COUNTY

WHEREAS, this Board is committed to working with the citizens of Miami-Dade County and in partnership with municipal and state agencies in promoting a County-wide bikeways system for recreation as well as for increased and more efficient use of bicycles as a mode of transportation; and

WHEREAS, Miami-Dade County has numerous bike paths and greenways including but not limited to the Model Cities Bike Path, the U.S. 1 Busway Bike Path, the M-Path under and around the MetroRail guideway, Rickenbacker Trail, Snake Creek Trail, Commodore Trail, Old Cutler Trail, Biscayne Trail, Black Creek Trail, Biscayne-Everglades Greenway, Southern Glades Trail, Amelia Earhart Mountain Bike Trails; and

WHEREAS, these bike paths and greenways are under a variety of jurisdictions ranging from municipal to county to state and they serve the community in various ways including recreation, exercise, and promoting safe commutes; and

WHEREAS, various groups such as the Bicycle Pedestrian Advisory Committee to the Metropolitan Planning Organization exist to coordinate and promote bicycling as a healthy and eco-friendly alternative to automobile traffic; and

WHEREAS, this Board desires for the County Mayor or County Mayor's designee to prepare a report that compiles existing information as well as outline the vision for the future of bicycle transportation in the future; and

WHEREAS, it is important that Miami-Dade County be proactive in promoting and creating increased access for bicycle transportation as is occurring in the great cities and metropolitan areas throughout the world; and

WHEREAS, the identification of existing facilities as well as a clear vision for additional bike path and greenway development is vital for the rational and successful development and improvement of bicycle transportation in Miami-Dade County; and

WHEREAS, this Board desires that such report identify the location of bike paths and greenways within Miami-Dade County, describe the ownership, identification and markings of various bike paths and greenways including branding and color schemes; identify shared bicycle rental programs and pilot programs within the various municipalities; and describe the County's plan for promotion and future development of bike paths and greenways within Miami-Dade County including coordination with state and municipal efforts,

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF COUNTY COMMISSIONERS OF MIAMI-DADE COUNTY, FLORIDA, that the County Mayor or County Mayor's designee is directed to prepare a report to the Board within ninety days in order to accomplish the goals set forth herein including identifying and promoting existing bike paths and greenways as well as setting forth future plans for bicycle transportation within Miami-Dade County.

The Prime Sponsor of the foregoing resolution is Senator Javier D. Soto, and the Co-Sponsors is Commissioner Sally A. Heyman.

It was offered by Commissioner **Sen Javier D. Soto**, who moved its adoption. The motion was seconded by Commissioner **Audrey Edmonson** and upon being put to a vote, the vote was as follows:

| | | | |
|----------------------|-------------------------|----------------------|--------|
| | Rebeca Sosa, Chairwoman | aye | |
| | Lynda Bell, Vice Chair | absent | |
| Bruno A. Barreiro | absent | Esteban L. Bovo, Jr. | aye |
| Jose "Pepe" Diaz | absent | Audrey M. Edmonson | aye |
| Sally A. Heyman | aye | Barbara J. Jordan | absent |
| Jean Monestime | aye | Dennis C. Moss | aye |
| Sen. Javier D. Souto | aye | Xavier L. Suarez | aye |
| Juan C. Zapata | aye | | |

The Chairperson thereupon declared the resolution duly passed and adopted this 17th day of September, 2013. This resolution shall become effective ten (10) days after the date of its adoption unless vetoed by the Mayor, and if vetoed, shall become effective only upon an override by this Board.

MIAMI-DADE COUNTY, FLORIDA
BY ITS BOARD OF
COUNTY COMMISSIONERS



HARVEY RUVIN, CLERK

Christopher Agrippa

By: _____
Deputy Clerk

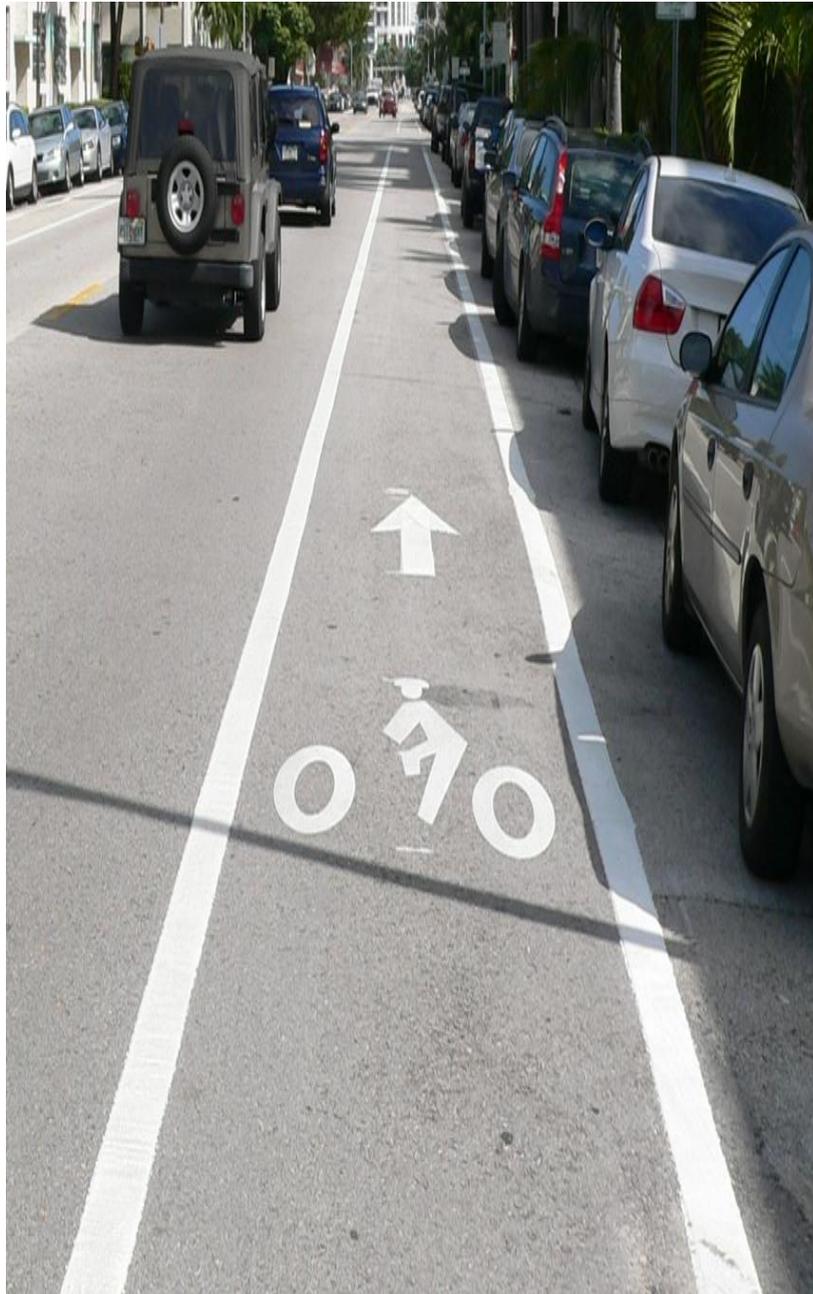
Approved by County Attorney as
to form and legal sufficiency.

A handwritten signature in black ink, appearing to read "ABOKOR".

Alex S. Bokor

Types of Bicycle Facilities

Bike Lane



Paved Path



Paved Shoulder

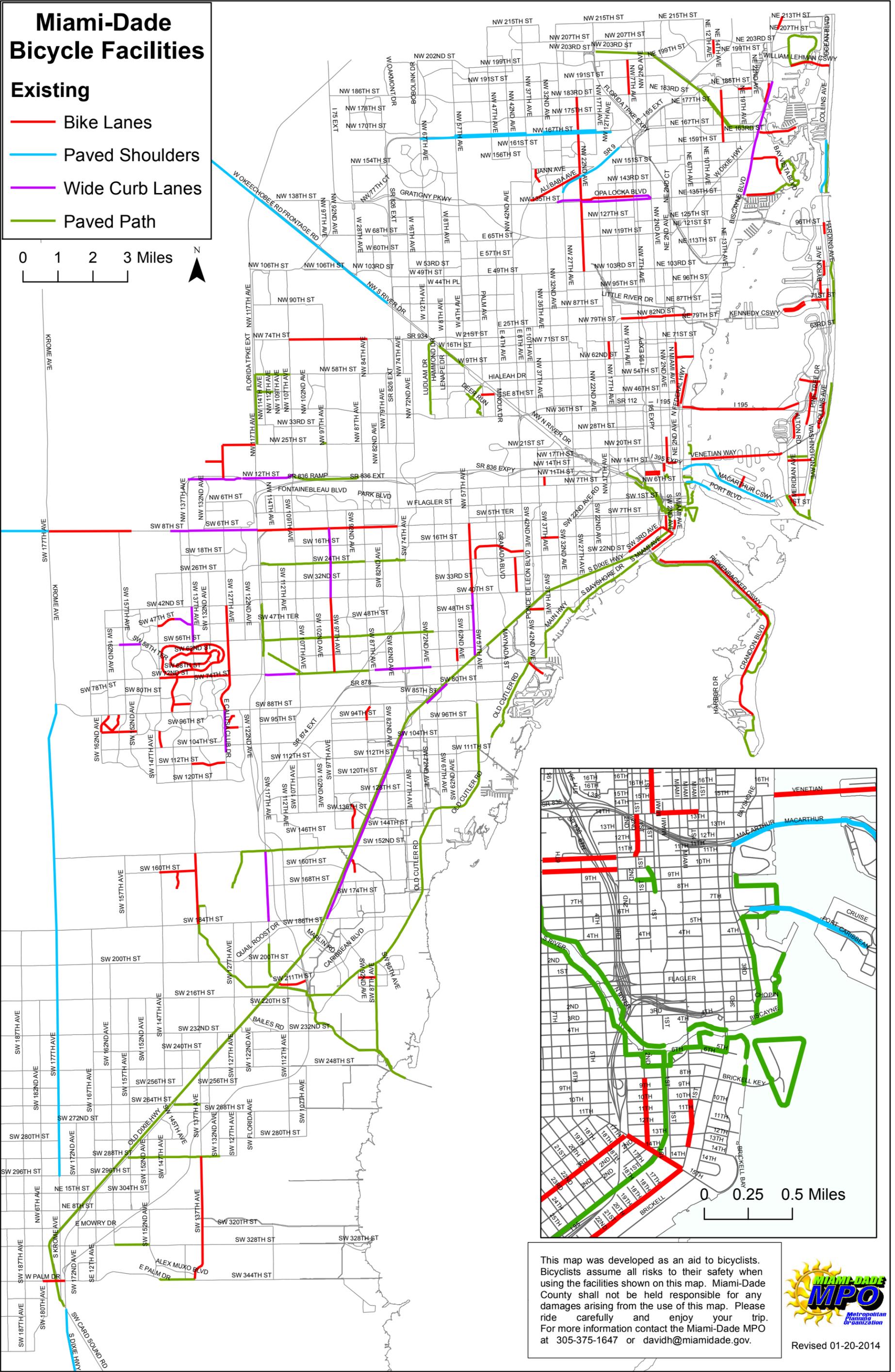


Wide Curb Lane



Shared Lane Marking

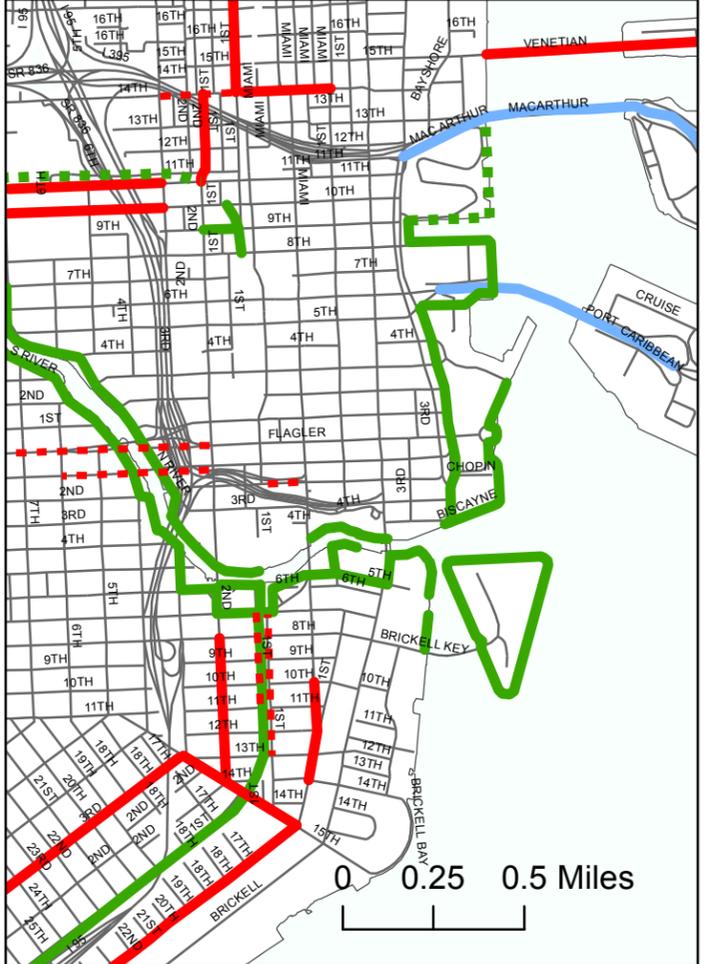
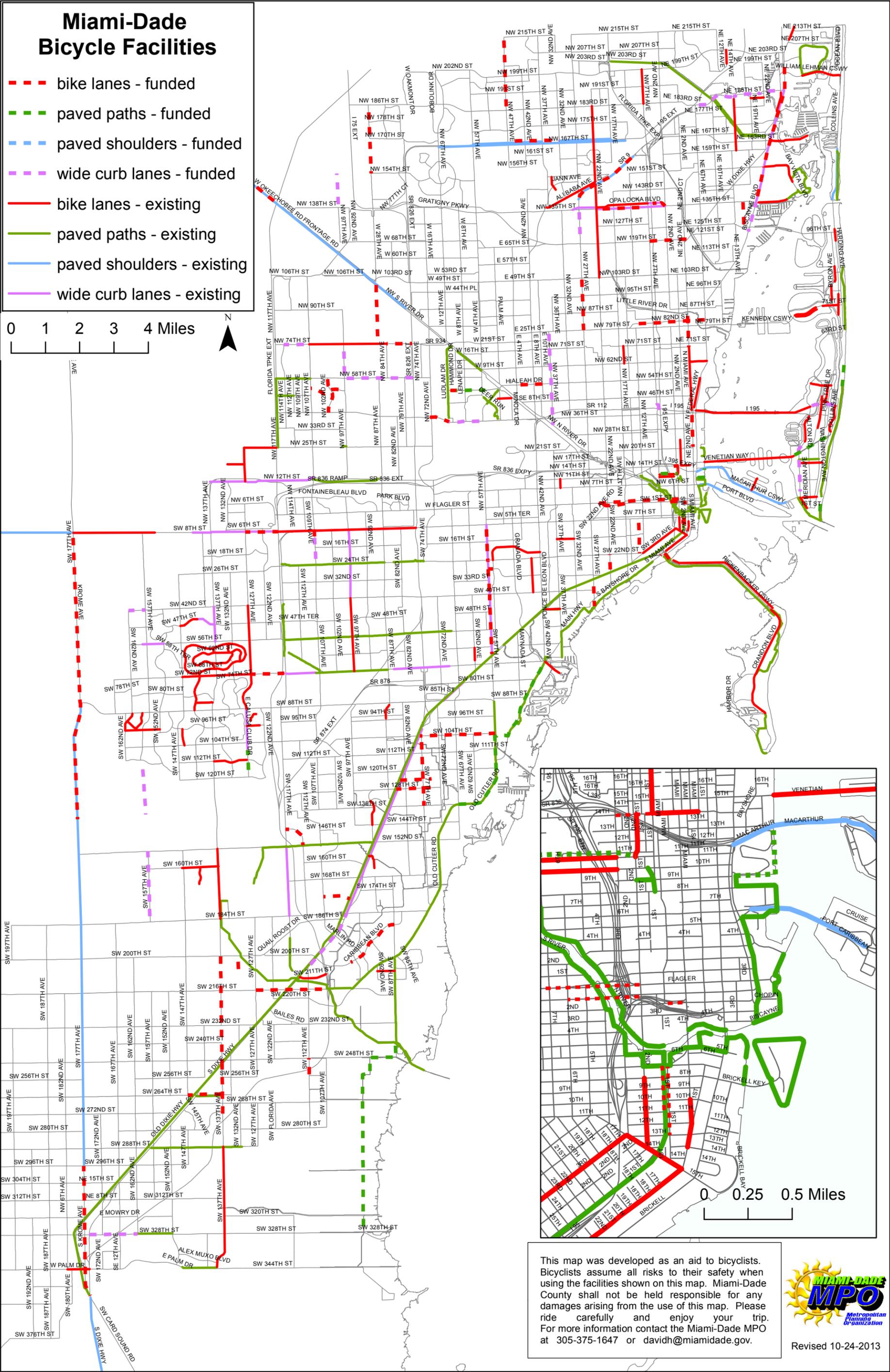




Miami-Dade Bicycle Facilities

- - - bike lanes - funded
- - - paved paths - funded
- - - paved shoulders - funded
- - - wide curb lanes - funded
- bike lanes - existing
- paved paths - existing
- paved shoulders - existing
- wide curb lanes - existing

0 1 2 3 4 Miles

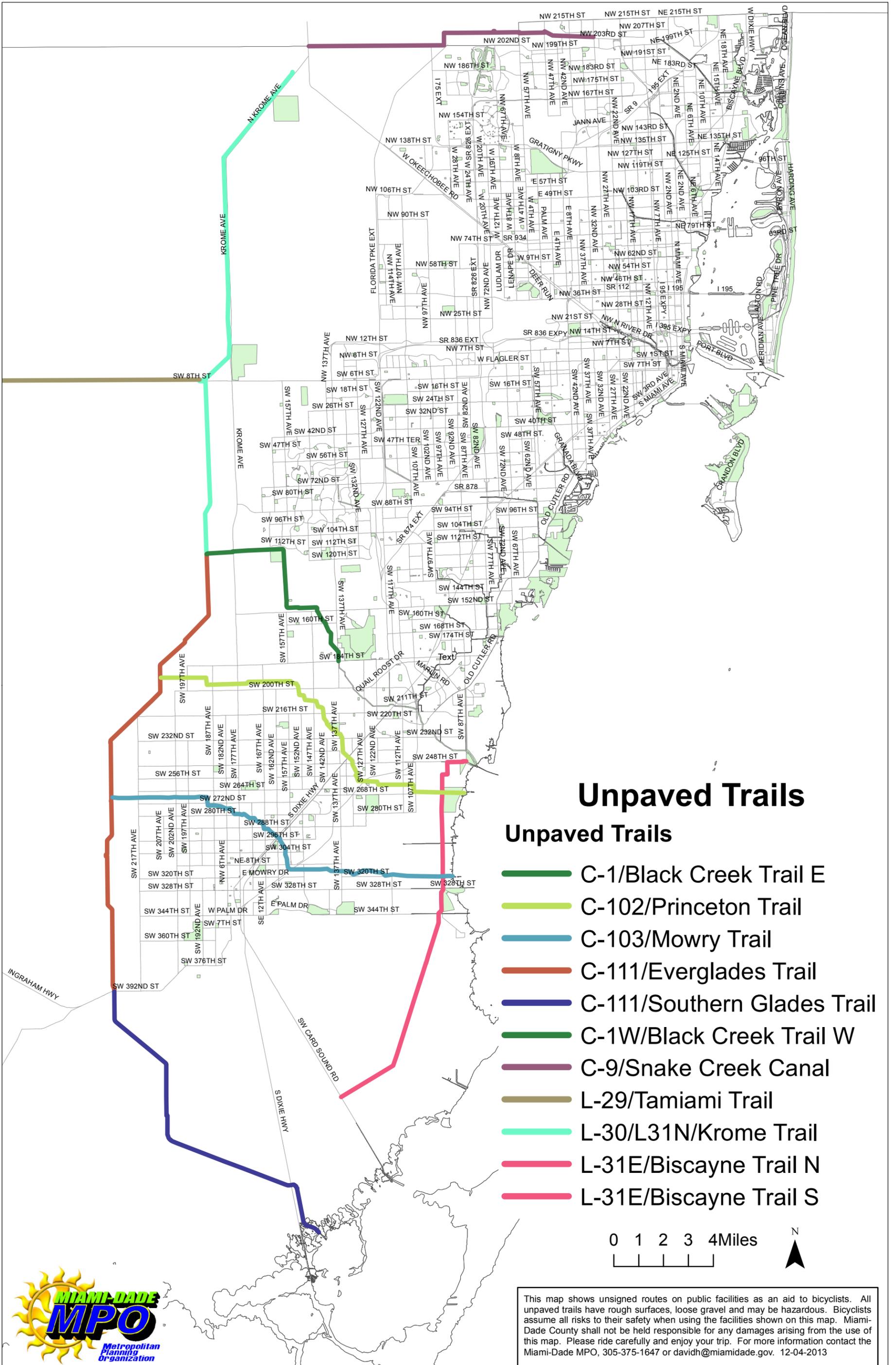


0 0.25 0.5 Miles

This map was developed as an aid to bicyclists. Bicyclists assume all risks to their safety when using the facilities shown on this map. Miami-Dade County shall not be held responsible for any damages arising from the use of this map. Please ride carefully and enjoy your trip. For more information contact the Miami-Dade MPO at 305-375-1647 or davidh@miamidade.gov.



Revised 10-24-2013



Unpaved Trails

Unpaved Trails

- C-1/Black Creek Trail E
- C-102/Princeton Trail
- C-103/Mowry Trail
- C-111/Everglades Trail
- C-111/Southern Glades Trail
- C-1W/Black Creek Trail W
- C-9/Snake Creek Canal
- L-29/Tamiami Trail
- L-30/L31N/Krome Trail
- L-31E/Biscayne Trail N
- L-31E/Biscayne Trail S

0 1 2 3 4 Miles



This map shows unsigned routes on public facilities as an aid to bicyclists. All unpaved trails have rough surfaces, loose gravel and may be hazardous. Bicyclists assume all risks to their safety when using the facilities shown on this map. Miami-Dade County shall not be held responsible for any damages arising from the use of this map. Please ride carefully and enjoy your trip. For more information contact the Miami-Dade MPO, 305-375-1647 or davidh@miamidade.gov. 12-04-2013



Attachment 6: Excerpts from the CDMP

Transportation and the Community Health and Design Elements of the CDMP

Objective TE-2

In furtherance of pedestrianism and other non-motorized modes of transportation in the planned urban area, Miami-Dade County shall enhance its transportation plans, programs and development regulations as necessary to accommodate the safe and convenient movement of pedestrians, non-motorized vehicles and motorized vehicles.

Policies

TE-2A. The County shall continue to promote and assist in the creation of a countywide system of interconnected designated bicycle ways, and promote the implementation of the *Miami-Dade Bicycle Facilities Plan*.

TE-2B. The County shall continue to develop a comprehensive countywide greenways network providing continuous corridors for travel by pedestrians and non-motorized vehicles incorporating elements of the adopted South Dade Greenway Network Master Plan and the North Dade Greenways Plan.

TE-2C. In road construction and reconstruction projects, roadway designs shall protect and promote pedestrian comfort, safety and attractiveness in locations where the Land Use Element seeks to promote activity along road frontages, such as in areas planned for community- or neighborhood-serving businesses, and all existing and planned Urban Center and rapid transit stations and mass transit corridors. Such measures should include, wherever feasible, on-street parking, wide sidewalks, and abundant landscaping at the street edge. Additionally, boulevard section designs should be utilized where appropriate, including central through lanes and frontage lanes for local traffic and parking, separated from the through lanes by landscaped areas, with frequent opportunities for pedestrians to safely cross the through lanes, and right of way to facilitate these designs should be reserved or acquired where necessary. Roadway pedestrian facility considerations shall also be consistent with the policies addressing pedestrianism contained in the Land Use Element.

TE-2D. Miami-Dade County's top priority for constructing new sidewalks and bicycle facilities after completion of the "Safe Routes to Schools" program shall be to provide continuous sidewalks and bicycle facilities along the following: a) existing rapid transit stations and transit centers, b) existing parks and recreation open spaces, c) both sides of all County collector and arterial roadways within 1/4 mile of all existing transit stations and centers, and d) at least one side of County collector and arterial roadways between 1/4 and 1/2 mile of all existing transit stations, centers and corridors. All new development and redevelopment in these areas shall be served by sidewalks and bicycle facilities. It is the policy of Miami-Dade County that municipalities in the County establish similar priorities for their jurisdictions, and that FDOT do the same with regard to State roads. In all new construction and reconstruction of collector and arterial roads inside the UDB served by Metrobus, sidewalks and bicycle facilities should be provided along all such roads between bus stops and any existing or planned intersecting residential or community-serving business streets within, at a minimum, 1/4 mile of the bus stops.

TE-2E. The County shall require accommodation of non-motorized transportation facilities in plans for future arterial and collector road construction, widening or reconstruction projects where designated by the Bicycle Facilities Plan, wherever feasible.

TE-2F. The County shall consider the use of utility easements and transit or railroad rights-of-way as locations for bicycle ways linking existing and planned major urban activity centers.

TE-2G. The County shall encourage inclusion in, and review, all plans and development proposals for provisions to accommodate safe movement of bicycle and pedestrian traffic, and facilities for securing non-motorized vehicles in all new development and redevelopment and shall address this as a consideration in development and site plan review.

Objective TE-4. By 2015, Miami-Dade County shall develop a "Complete Streets" program to be considered in the design and construction of new transportation corridors and reconstruction of existing corridors, wherever feasible.

Policy TE-4A. By 2015, Miami-Dade County shall develop a “Complete Streets” program which will be sensitive to the needs of the users of all modes of transportation including bicyclists and pedestrians and include the following components: street typology based on land use context due to how a roadway passing through different land uses will vary in character; hierarchy of street types and designs; provision of sidewalks and bicycle facilities; adequate landscaping and street furniture; bus lanes and transit facilities; improve aesthetics, and design for the safety of all users, including vulnerable populations such as children and seniors.

Policy TC-3C. By 2015, Miami-Dade County shall develop a “Complete Streets” program which will be sensitive to the needs of the users of all modes of transportation including bicyclists and pedestrians and include the following components: street typology based on land use context due to how a roadway passing through different land uses will vary in character; hierarchy of street types and designs; provision of sidewalks and bicycle facilities; adequate landscaping and street furniture; bus lanes and transit facilities; and improve aesthetics and design for the safety of all users, including vulnerable populations such as children and seniors.

Objective TE-5. By 2015, Miami-Dade County shall evaluate the designation of multimodal transportation corridors as “Activity Corridors” on the Land Use Plan Map, Land Use Element and Transportation Element.

Policy TE-5A. By 2015, Miami-Dade County shall evaluate the designation of multimodal transportation corridors as “Activity Corridors” on the Land Use Plan Map, Land Use Element and Transportation Element such as NW/SW 27, 42, 57, 87, 107 and 137 Avenues, and NW 103, 36/41 Streets, W. Flagler Street, Tamiami Trail (SW 8 St.), Coral Way (SW 24 St.), Bird Road Drive (SW 40/42 St.), Kendall Drive (SW 88 Street), Coral Reef Drive (SW 152 St.), and South Dixie Highway (US 1). The evaluation shall address the following objectives:

- a) Allowed uses,
- b) Development density and intensity,
- c) Urban design guidelines, and
- d) Multimodal components.

Additionally, the Community Health and Design Element also features policies to increase physical activity*:

CHD-1A. Miami-Dade County shall create a network of sidewalks, trails, accessible parks and recreation facilities that establishes a pedestrian-friendly environment, which encourages physical activity and links destinations, such as restaurants, shops, work places and neighborhood-based retail to each other and residential areas.

CHD-1B. Encourage all citizens to participate in physical activity by designing public space to universal access standards (ability of all people to have equal opportunity and access to services).

CHD-1C. Design and develop neighborhoods that provide a comfortable environment conducive for programs that integrate physical activity in the daily lives of children and adults.

Portions of the Land Use Element also include a call for bike-friendly planning

Policy LU-9U. By 2015, Miami-Dade County shall evaluate and propose update(s) to the Guidelines for Urban Form, Mixed Use Development and Urban Center provisions of this plan in coordination with the Complete Streets program to be developed pursuant to Transportation Element Objective TE-4. The updates shall address, as appropriate, the maximum allowable FARs, intensity and density of development, allowances that facilitate transit supportive mixed developments, and shall enhance and further the implementation of the County Area Planning Program and support the intent of the Complete Streets Program.

Policy LU-9K. By 2016, Miami-Dade County shall initiate the review and revision of its Subdivision Regulations to facilitate the development of better planned communities. The Public Works Department shall specifically review and update the Subdivision Regulations for urban design purposes. Changes to be considered shall include provisions for:

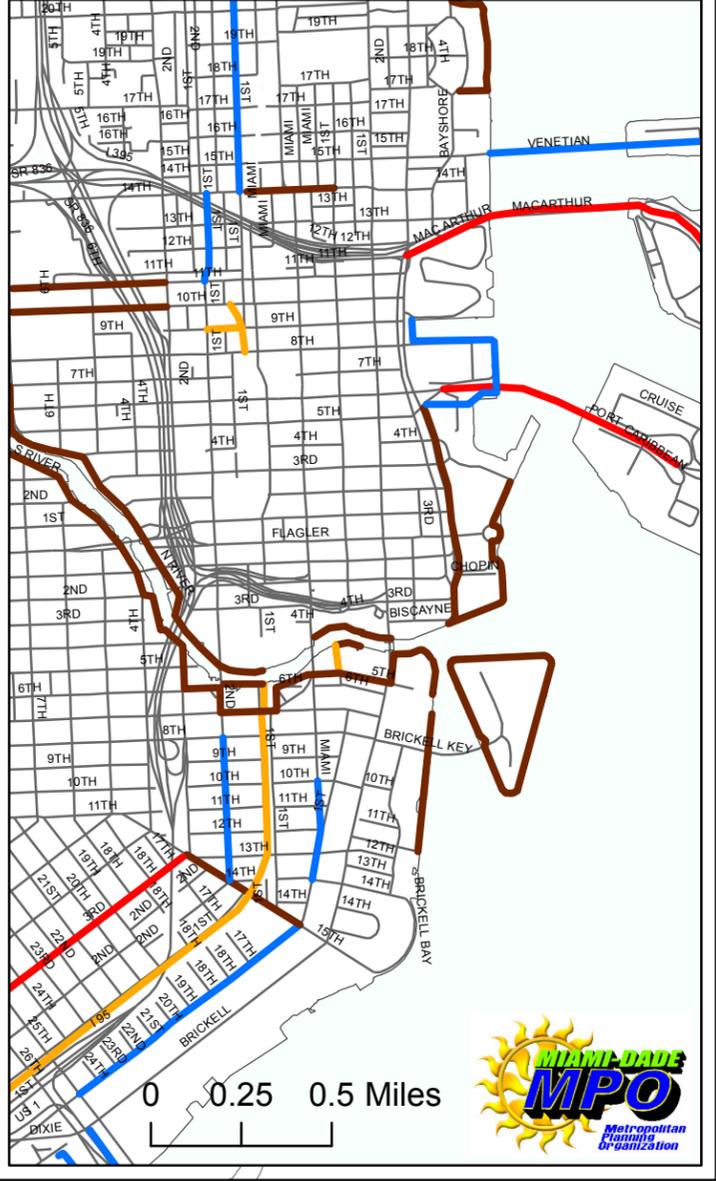
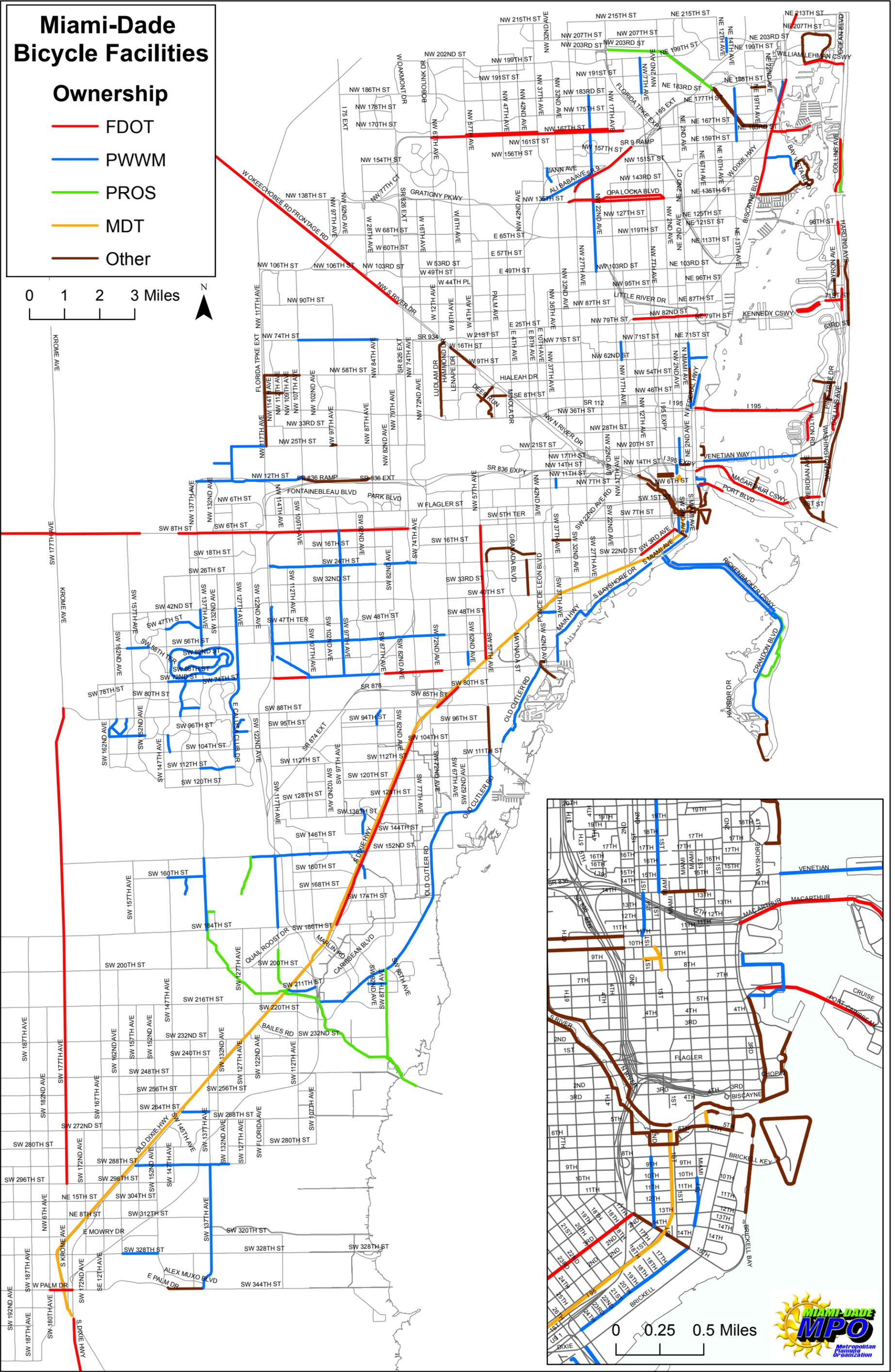
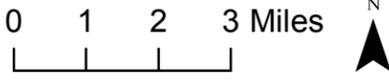
- i) Open space in the form of squares, plazas, or green areas in residential and commercial zoning categories; and
- ii) A hierarchy of street types and designs, ranging from pedestrian and bike paths to boulevards that serve both neighborhood and areawide vehicular and pedestrian trip making needs by addressing cross sections, corner radii, connectivity and rationality of street and pathway networks, and balanced accommodation of automobiles, pedestrians, bicyclists, and landscaping.

**(These policies are being updated by RER and are subject to change.)*

Miami-Dade Bicycle Facilities

Ownership

- FDOT
- PWWM
- PROS
- MDT
- Other



miami-dade parks

parks and open space system master plan

A 50-year, unifying vision for a livable, sustainable Miami-Dade County

principles

Equity

Every resident should be able to enjoy the same quality of public facilities and services regardless of income, age, race, ability or geographic location

Access

every resident should be able to safely and comfortably walk, bicycle, drive and/or ride transit from their home to work, school, parks, shopping and community facilities

Beauty

every public space, including streets, parks, plazas and civic buildings, should be designed to be as aesthetically pleasing as possible, and to compliment the natural and cultural landscape

Seamlessness

every element of the County, including neighborhoods, parks, natural areas, streets, civic centers and commercial areas, should be connected without regard to jurisdiction

Sustainability

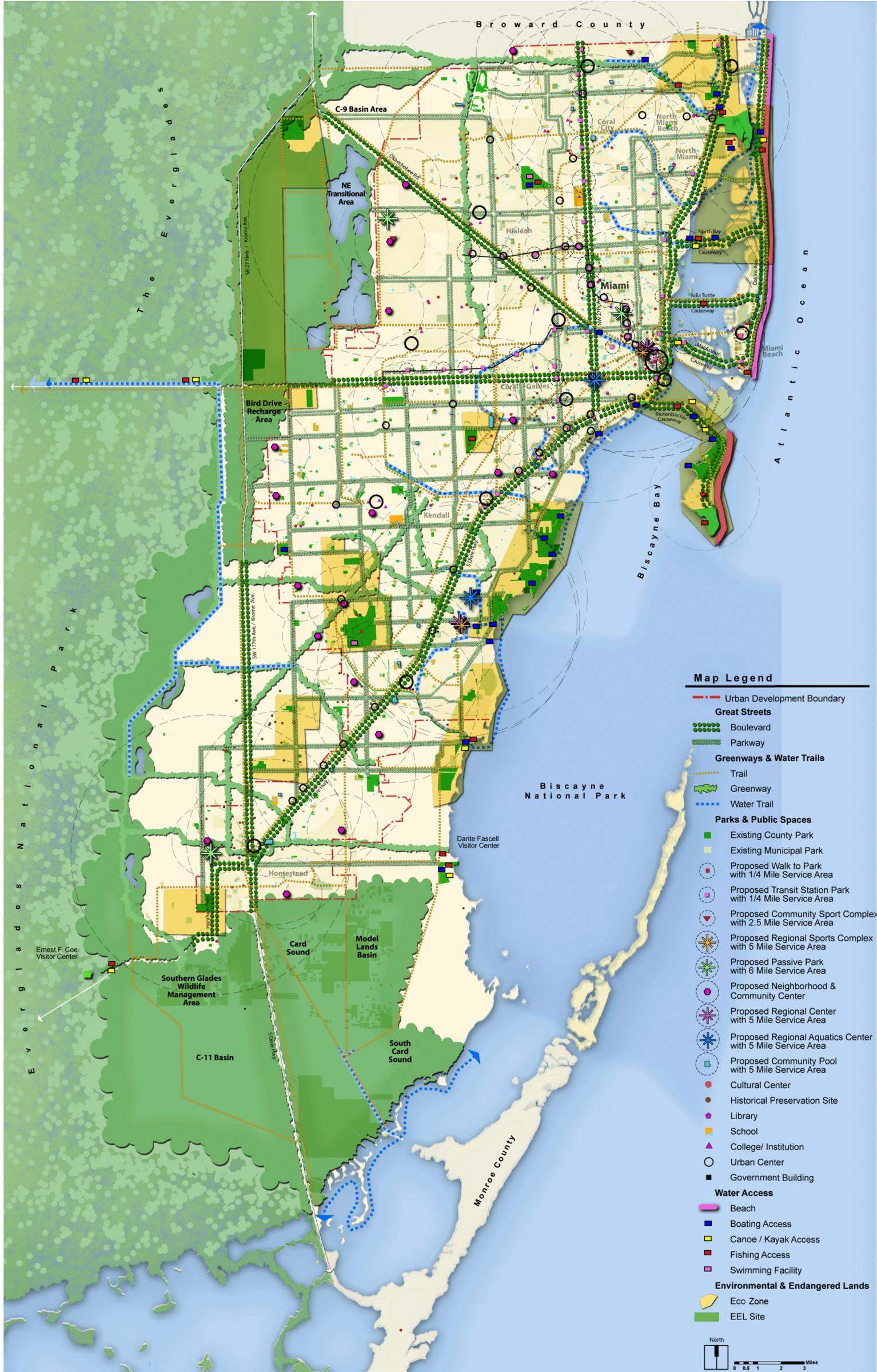
every action and improvement of the Park System, including facilities, programs, operations and management, should contribute to the economic, social and environmental prosperity of the County

Multiple Benefits

every single public action should generate multiple public benefits to maximize taxpayer dollars

"When we build let us think that we build forever. Let it not be for present delight, nor for present use alone; let it be such work as our descendants will thank us for, and let us think, as we lay stone on stone, that a time is to come when those stones will be held sacred because our hands have touched them."

-John Ruskin



Great parks are accessible to everyone regardless of age or ability

Great public spaces are designed to engage residents

Great natural and cultural places are planned and managed to balance access and resource protection

Great greenways and water trails connect every resident to places throughout the community

Great streets are designed as linear parks





BICYCLE FRIENDLY COMMUNITY

SPRING 2014 APPLICATION

For review only. Only applications submitted online will be considered for designation.

APPLICATION TIPS

The application will be referring to your type of jurisdiction as “community” throughout the application due to the great variety of types of jurisdictions applying, which does not include bicycle amenities, services and other resources outside your boundaries.

The word limits for open ended questions are just guidelines as the system is actually using a character limit. Ensure that your entered text does not get cut off, even if you stay within the word limit.

Ensure to log out using the Log Out button. Closing the browser will not log you out completely and will trigger a warning that another user is logged in next time you sign in. If this occurs, and you are certain that no other user is logged in at the same time, you can just disregard the warning and it will disappear within 24 hours.

At the end of the application, you can upload any documents that you would like to provide in support of your application, including at least five high resolution photos (1-2MB). You can submit up to 5 files at the time and there is no limit on how many files can be submitted. Please note that the files will upload immediately to a separate server and will not appear as an attachment.

NAME OF COMMUNITY

Name of Community

County

State

Has the community applied to the Bicycle Friendly Community program before?

If yes, what was the result of the last application?

If designated, what year was your community first awarded a Bronze or higher award?

Mayor or top elected official (include title)

Phone

Email

Address

Website

BFC CONTACT PROFILE

Note: This person will receive any future BFC related communication and will be listed as the contact person for the community on the award web profile, if designated.

Name of BFC contact

Title

Department

Employer

Address

City



BICYCLE FRIENDLY COMMUNITY

SPRING 2014 APPLICATION

For review only. Only applications submitted online will be considered for designation.

State
Zip
Phone
Email

Is the BFC contact also the Bicycle Program Manager?

Yes
No

If no, does your community have a Bicycle Program Manager?

Yes
No

If different from above, what is the Bicycle Program Manager's contact information (email and phone)?

COMMUNITY PROFILE

1. Type of Jurisdiction (*Note: The application will be referring to your type of jurisdiction as "community" throughout the application, which does not include bicycle amenities, services and other resources outside your boundaries.*)

- Town/City/Municipality**
- County**
- Metropolitan Planning Organization/Council of Governments**
- Regional Planning Organization**
- Rural Planning Organization**
- Census Designated Place**
- Indian Country**
- Military Base**
- Other**

If other, describe (*50 word limit*)

2. For purposes of comparison, would you describe your community as largely

- urban**
- suburban**
- rural**

3. Climate

Average daytime temperature (*in °F*)

January
April
July
October



BICYCLE FRIENDLY COMMUNITY

SPRING 2014 APPLICATION

For review only. Only applications submitted online will be considered for designation.

Average precipitation (*in inches*)

January

April

July

October

4. Size of community (*in sq. mi.*)

Total area

Water area

Land area

5. Total Population

5a. College/University student population (*during semester*)

10% or less

10-25%

25-50%

50-75%

more than 75%

N/A

6. Population Density (*Person per sq. mi. of land area*)

7. Median Household Income

8. Age distribution (in percent)

Under 5

Age 5-17

Age 18-64

Age 65+

Totals (*should equal 100*)

9. Race (in percent)

White

Black or African American

American Indian and Alaska Native

Asian

Native Hawaiian and Other Pacific Islander

Some other race

Two or more races

Totals (*should equal 100*)

Hispanic or Latino (*of any race*)

10. How many government employees (including the Bicycle Program Manager), *expressed in full-time equivalents*, work on bicycle issues in your community?



BICYCLE FRIENDLY COMMUNITY

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11. What percentage of the community's Bicycle Program Manager's time is spent on bicycling issues?

- 10% or less**
- 11-25%**
- 26-50%**
- 51-75%**
- 76-100%**
- N/A**

12. Do you have an officially recognized Bicycle Advisory Committee?

Yes

No

12a. How often does it meet?

- Monthly or more frequently**
- Every two months**
- Quarterly**
- Annually**

12b. How many members serve on the committee?

12c. Which of the following groups are represented or regularly attend the Bicycle Advisory Committee?

Check all that apply

- User Group**
- Law Enforcement**
- Chamber of Commerce**
- Public Health**
- Planning Department**
- Transportation Department**
- School Board**
- Parks Department**
- Recreation Department**
- Transit Agency**
- Other**

If other, describe (50 word limit)

12d. Name and email of Bicycle Advisory Committee Chair

13. List all [bicycle advocacy groups](#) in your community

13a. List the name and email of the primary contact for each bicycle advocacy group

13b. Do you contract with any advocacy groups for services or programs?

Check all that apply

- Paid**
- Volunteer**
- No**



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13c. List all advocacy groups that are working with you on this application

14. What are the primary reasons your community has invested in bicycling?

Check all that apply

- Improved quality of life**
- Improving public health**
- Community connectivity**
- Transportation options**
- Reduce car-parking demands**
- Climate change/environmental stewardship concerns**
- Decrease traffic congestion**
- Increase tourism**
- Increase property values**
- Cooperation with adjacent communities**
- Public demand**
- Economic development**
- Support Smart Growth or other growth management goals**
- Traffic and bicycle/pedestrian safety**
- Meet local or state requirements**
- Other**

If other, describe (*50 word limit*)

15. What was your community's most significant achievement for bicycling in the past 12 months? (*500 word limit*)

16. If you have applied to the BFC program before, describe any improvements that have occurred for cycling in your community since your last application. (*500 word limit*)

17. What specific improvements do you have planned for bicycling in the next 12 months? (*250 word limit*)

ENGINEERING

18. Does your community currently have any of the following policies in place?

Check all that apply

- Local complete streets policy**
- Local bicycle accommodation policy**
- Neither**

18a. When was it adopted?

18b. Provide a link or attach a copy of this legislation or policy

18c. What tools are in place to ensure implementation?

Check all that apply

- Implementation Guidance**
- Design Manual**



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- Training**
- Oversight by Bicycle Program Manager**
- Implementation checklist**
- None of the above**

19. Does your community currently have any of the following additional policies in place?
Check all that apply

- Design manual that ensures the safe and appropriate accommodation of bicyclists in every new road project**
- Streetscape design guidelines**
- Mixed-use zoning**
- Form-based/design-based codes**
- Connectivity policy or standards**
- Policy to preserve abandoned rail corridors for multi-use trails**
- Other**
- None of the above**

If other, describe (50 word limit)

20. How do you ensure your engineers and planners accommodate cyclists according to [AASHTO](#), [MUTCD](#) or [NACTO](#) standards?

Check all that apply

- Offer FHWA/NHI Training Course**
- Hire outside consultants to train staff**
- Send staff to bicycle-specific conferences/training**
- APBP webinars**
- Require project consultants to have bike/ped qualifications**
- Adopted a local design manual**
- Other**
- None of the above**

If other, describe (50 word limit)

21. Which of the following significant physical barriers to cycling exist in your community?

Check all that apply

- Major highways**
- Bridges that are inaccessible or unsafe for cyclists**
- Tunnels that are inaccessible or unsafe for cyclists**
- Large body of water (e.g. river)**
- Roads with bicycle bans**
- Railroad corridors**
- Other**
- No significant physical barriers**

If other, please describe (100 word limit)

22. How do you ensure that there are end-of-trip facilities for bicyclists?

Check all that apply

- Bike parking ordinance for existing buildings specifying amount and location**
- Bike parking ordinance for all new developments specifying amount and location**



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- Ordinance requiring showers and lockers in *existing* non-residential buildings
- Ordinance requiring showers and lockers in *new* non-residential buildings
- Building accessibility ordinance (Bicycles are allowed to be parked inside non-residential buildings)
- On-street bike parking/bicycle corrals
- Ordinance that allows bike parking to substitute for car parking
- Requirement for new developments to meet LEED-Neighborhood Development silver standards or higher
- Developers are eligible for density bonuses for providing end-of-trip facilities
- Other
- None

If other, describe (*250 word limit*)

23. Do your standards for bicycle parking conform with APBP guidelines?

Yes

No

No standards

24. What is the total number of public and private bike parking *spaces* in your community?

24a. What percentage of bike racks conform with APBP guidelines?

- 10% or less**
- 11-25%**
- 26-50%**
- 51-75%**
- more than 75%**

24b. Of the total bike parking available, please specify the percentage of bike parking spaces that are:

Bike lockers

In bike depots (i.e. Bikestation)

In bike corrals (on-street bike parking)

25. Approximately *what percentage* of the following locations has bike racks or storage units?

Answer all that apply (in percent)

Public & private schools

Higher Education Institutions

Libraries

Transit stations and major bus stops

Parks & recreation centers

Other government owned buildings and facilities

Event venues (e.g. convention center, movie complex)

Hotels & restaurants

Office buildings

Retail stores

Multi-family housing

Public housing



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26. Does your community have transit service (bus, light rail, heavy rail)?

Yes

No

26a. What percentage of buses are equipped with bike racks?

10% or less

11-25%

26-50%

51-75%

75-99%

All

26b. Are bikes allowed inside transit vehicles?

Yes

Sometimes

No

If yes or sometimes, describe (*50 word limit*)

27. What is the centerline mileage of the *existing* off-road bicycle network within your community?

27a. How many miles of the following off-road bicycle accommodations do you have?

Answer all that apply (in miles)

Paved shared use paths (≥ 10 feet)

Natural surface shared use paths (≥ 10 feet)

Singletrack

Other

If other, describe (*250 word limit*)

27b. What percentage of all natural surface trails and singletrack are open to bicyclists?

None

1-25%

26-50%

51-75%

76-99%

All

Not applicable

27c. What are the exceptions? (*100 word limit*)

28. What is the centerline mileage of your road network (including state owned and private roads)?

28a. What is the street network density? (*centerline miles of road per sq. mi. of land area*)

28b. What percentage of roads has posted or design speeds of 25mph and lower?



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28c. What percentage of roads has posted or design speeds of 35mph and higher?

28d. What percentage of the existing on-street bicycle network *meets or exceeds* current [AASHTO](#), [MUTCD](#) or [NACTO](#) standards?

28e. List your existing on-road bicycle accommodations that *meet or exceed* [AASHTO](#), [MUTCD](#) or [NACTO](#) standards.

Answer all that apply (in centerline miles)

Conventional bike lanes (*ridable surface* ≥ 4 feet)

Shared lane markings

Contra-flow bike lanes

Protected or buffered bike lanes (one-way)

Protected or buffered bike lanes (two-way)

Raised cycle tracks

Left-side bike lanes

Bike boulevards or Neighborhood Greenways

Signed bike routes

29. What other ways have you improved conditions for bicyclists?

Check all that apply

- Road diets**
- Area wide traffic calming**
- Speed limits 20 mph or less on residential streets**
- Bike cut-throughs**
- Signed bike routes**
- Off-street way-finding signage with distance and/or time information**
- On-street way-finding signage with distance and/or time information**
- Shared Space/Home Zone/Living Street/Woonerf**
- Roundabouts that accommodate bicycles**
- Colored bike lanes outside of conflict zones**
- Bike/pedestrian overpasses/underpasses**
- Removal of on-street car parking**
- Speed tables to calm traffic**
- Car-free/Car-restricted zones**
- Advisory bike lanes**
- Other**
- None**

If other, describe (*250 word limit*)

30. What percentage of arterial streets provides designated space for cyclists (*e.g. bike lanes or paved shoulders* ≥ 4 feet, *cycle tracks, etc*)?

- None**
- 1-25%**
- 26-50%**
- 51-75%**
- 76-99%**
- All**



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31. Which of the following broader transportation policies and programs are in place in your community?

Check all that apply

- Maximum car parking standards**
- No minimum car parking standards**
- Paid public parking**
- Shared-parking allowances**
- Congestion charges**
- Prioritization of active mobility in planning and design processes**
- Other**
- None**

If other, describe (250 words)

32. What maintenance policies or programs ensure the *on-street* bicycle network (including shoulders) remains usable and safe?

Select all that apply

32a. Street sweeping

- Before other travel lanes**
- Same time as other travel lanes**
- Weekly**
- Monthly**
- Quarterly**
- Annually**
- Never**

32b. Snow clearance

- No snow**
- Before other travel lanes**
- Same time as other travel lanes**
- Within 48 hours of storm**
- Never**

32c. Pothole maintenance

- Within 24 hours of complaint**
- Within one week of complaint**
- Within one month of complaint**
- Never**

32d. Describe any other maintenance policies or programs for the on-street bicycle network (including shoulders). *(100 word limit)*

33. What maintenance policies or programs ensure the *off-street* bicycle network remains usable and safe?

Check all that apply



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33a. Path sweeping

- Not applicable**
- Weekly**
- Monthly**
- Quarterly**
- Annually**
- Never**

33b. Vegetation maintenance

- Not applicable**
- Weekly**
- Monthly**
- Quarterly**
- Annually**
- Never**

33c. Snow clearance

- Not applicable**
- No snow**
- Before roadways**
- Same time as roadways**
- Within 48 hours of storm**
- Never**

33d. Surface repair

- Not applicable**
- Within 24 hours of complaint**
- Within one week of complaint**
- Within one month of complaint**
- Never**

33e. Describe any other maintenance policies or programs for the off-street bicycle network, if applicable. (100 word limit)

34. Is there a mechanism in place for cyclists to identify problem intersections or areas to traffic engineers and planners?

Check all that apply

- Online reporting**
- Hotline**
- Monthly meeting**
- Other**
- None**

If other, describe (100 word limit)

35. How do you accommodate cyclists at intersections in your community?

Check all that apply

- Most signals are timed**
- Most signals are timed for bicycle speeds**



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- Green wave for cyclists in some locations**
- Demand activated signals with loop detector (and marking) or bike accessible push-button**
- Video or microwave detection**
- Bicycle Signal Heads**
- Advanced Stop Line or Bike Box**
- Path crossing with high visibility markings or signs**
- Raised path crossings**
- Colored bike lanes in conflict areas**
- Other**
- None of the above**
- No signals**

If other, describe (100 word limit)

36. Describe any other amenities or infrastructure improvements that your community provides or requires that create a comfortable and attractive bicycling environment (e.g. human-scale building design guidelines, mixed-use zoning, public restrooms, etc). *(500 word limit)*

EDUCATION

37. What percentage of your public and private schools offer bicycle education, e.g. through a Safe Routes to School or similar program?

37a. Elementary

- None**
- 1-25%**
- 26-50%**
- 51-75%**
- 76-99%**
- All**
- Not applicable**

37b. Middle School

- None**
- 1-25%**
- 26-50%**
- 51-75%**
- 76-99%**
- All**
- Not applicable**

37c. High School

- None**
- 1-25%**
- 26-50%**
- 51-75%**
- 76-99%**
- All**



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Not applicable

38. Outside of schools, how are children taught safe cycling skills?

Check all that apply

- Youth bike clubs**
- Bike clinics or rodeos**
- Youth recreation programs**
- Helmet fit seminars**
- Safety town**
- Trail riding classes**
- Other**
- None of the above**

If other, describe (250 word limit)

39. Do you have a ticket diversion program?

Check all that apply

- For motorists**
- For cyclists**
- No**

40. What have you done in the last 18 months to educate motorists and bicyclists on sharing the road safely?

Check all that apply

- Public service announcements**
- Share the Road educational videos on community website/TV channel**
- Community newsletter/magazine article**
- Information in new resident packet**
- Utility bill insert**
- Flyer/handout**
- Info sessions/lunch seminars**
- Bicycle ambassador program**
- Newspaper column/blog on bicycling**
- Dedicated bike page on community website**
- Billboards**
- Share the Road Signs**
- Share the Road information in driver's education**
- Other**
- None of the above**

If other, describe (250 word limit)

41. How many times per year are the following adult bicycling education classes held within your community?

Answer all that apply (in numbers)

Traffic Skills 101 classes or equivalent (full-day training course, including classroom and on-bike instruction)

Cycling Skills classes (three to four hour classroom training courses)

Commuter classes (one to two hour classes)

Bicycle maintenance classes or workshops



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42. Do you offer regular [Smart Cycling](#) courses for your city engineers and planners that include on-bike instruction and in-traffic cycling?

Yes

No

43. Has your community hosted a League Cycling Instructor seminar in the past two years?

Yes

No

43a. How many League Cycling Instructors are there in your community?

43b. List League Cycling Instructors that have taught *at least one class during the past 12 months.* (250 word limit)

44. Which of the following groups of professional drivers have training that includes information on sharing the road with cyclists?

Check all that apply

- City staff**
- Taxi drivers**
- Transit operators**
- School bus operators**
- Delivery drivers**
- Other**
- None of the above**

If other, describe (100 word limit)

45. Describe any efforts your community has made to ensure your education programs reach traditionally underserved populations, particularly seniors, women, youth and adult minorities and non-English speakers, and persons with disabilities of all ages. (250 word limit)

46. Describe any other education efforts in your community that promote safe cycling. (500 word limit)

ENCOURAGEMENT

47. How do you promote National Bike Month/your own dedicated Bike Month?

Check all that apply

- Official Proclamation**
- Community Rides**
- Mayor-led/Council-led Ride**
- Public Service Announcements**
- Videos promoting bicycling on community website/TV channel**
- Publish a guide to Bike Month Events**
- Bike Month Website**
- Commuter Challenge**
- Bike Commuter energizer stations/breakfasts**
- Car-free days**



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- Open Streets/Ciclovia/Sunday Parkways**
- Mentoring program for new riders**
- Bike valet parking at events**
- Bike to School Day**
- Bicycle-themed festival/parade/show**
- Public education campaign relating to cycling (e.g. with a focus on public health or environmental benefits)**
- Trail construction or maintenance day**
- Other**
- No promotion**

If other, describe (*250 word limit*)

47a. What percentage of the population participate in Bike Month events?

47b. Do you actively promote Bike to Work Day or other bicycle commuting incentive programs?

Yes

No

If yes, describe (*500 word limit*)

47c. Approximately what percentage of the community workforce do you reach on Bike to Work Day?

- None**
- 1-25%**
- 26-50%**
- 51-75%**
- 76% or more**

48. How do you promote bicycling *outside* of your official Bike Month?

Check all that apply

- Community and charity rides**
- Mayor-led/Council-led Rides**
- Videos on bicycling on community website/TV channel**
- Public Service Announcements**
- Trail construction or maintenance day**
- Open Streets/Ciclovia/Sunday Parkways**
- Commuter Challenge**
- Business program that provides discounts for customers arriving by bicycle**
- Triathlons and bicycle races**
- Bike commuter events**
- Car-free days**
- Publish a guide to community bicycle events**
- Mentoring program for new riders**
- Bike valet parking at events**
- Bike to School Day**
- Bicycle-themed festivals/parades/shows**
- Public education campaign relating to cycling (e.g. with a focus on public health or environmental benefits)**
- Community celebration/ride each time a bicycle project is completed**



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Other

No promotion

If other, describe *(250 word limit)*

49. List the signature cycling events that occur in your community. *(250 word limit)*

49a. How does the municipality sponsor or actively support these events?

Check all that apply

Organize the event

Fund event

Contribute in-kind funding (i.e. police presence, closing roads, etc)

Assist in promoting the event

Other

No support/ Not applicable

If other, please describe *(100 word limit)*

50. Does your local tourism board or chamber of commerce promote bicycling in your area?

Yes

No

If yes, describe *(250 word limit)*

51. Are there cycling clubs in your community?

Check all that apply

Recreational bike clubs

Mountain bike clubs

Friends of the Trail groups

National Mountain Bike Patrol

Racing clubs or teams

Other

No

If other, describe *(100 word limit)*

51a. List the names of the clubs.

(500 word limit)

52. How many specialty bicycle retailers (shops dedicated primarily to selling bikes and bike-related equipment) are there in your community?

52a. List their names.

(250 word limit)

53. Which of these bicycling amenities do you have in your community?

Check all that apply

BMX track

Velodrome

Cyclocross course

Mountain bike park

Pump tracks



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- Themed Loop route(s) around the community**
- Other**
- None**

If other, describe *(100 word limit)*

53a. Is there a skate park in your community?

Yes

No

If yes, do bikes have access to the skate park?

- Always**
- Sometimes**
- Never**

54. Are there opportunities to rent bicycles in your community?

Yes

No

55. Does your community currently have a bike sharing program that is open to the general public?

Yes

No

Launching this year

55a. If yes, please provide details about the system below.

How many bikes are in the system?

How many stations are in the system?

How many trips are being made annually?

56. Do you have any current League of American Bicyclists designated [Bicycle Friendly Businesses](#) in your community?

Yes

No

If yes, list the names of the businesses and their award level. *(250 word limit)*

57. Do you have any current League of American Bicyclists designated [Bicycle Friendly Universities](#) in your community?

Yes

No

No institutions of higher education

If yes, list the names of the institutions and their award level. *(250 word limit)*

58. Does your community have a bike co-op or non-profit community bike shop?

Yes

No

If yes, describe its services *(250 word limit)*



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58a. If yes, does the co-op/non-profit community bike shop receive support from the local government?

- Grants
- Free or subsidized property/space
- Contracts for services, e.g. bicycle skills or maintenance education, event support, etc
- Other

If other, describe (*250 word limit*)

59. Does your community have youth recreation and/or intervention programs centered on bicycling?

Check all that apply

- Recycle a Bicycle**
- Trips for Kids chapter**
- Earn a Bike program**
- Bike co-op or Community Cycling Center
- Other**
- None**

If other, describe (*100 word limit*)

60. What mapping and route finding information is available for your community, which has been updated in the last 18 months?

Check all that apply

- Online route finding service**
- Online bike map outlining existing bike infrastructure (by type), public restrooms and other bicycle amenities**
- Printed bike map outlining existing bike infrastructure (by type), public restrooms and other bicycle amenities**
- Printed mountain bike trails map**
- Printed greenways and trails map**
- Smart phone app**
- None of the above**

61. Describe any other programs or policies your community has to encourage cycling. (*500 word limit*)

ENFORCEMENT

62. How does your police department interact with the local cycling community?

Check all that apply

- A police officer is an active member of bicycle advisory committee**
- Identified law-enforcement point person to interact with cyclists**
- No current formal interaction**
- Other**

If other, describe (*100 word limit*)



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63. What kind of training is offered to police officers regarding traffic law as it applies to bicyclists?

Check all that apply

- Basic academy training**
- International Police Mountain Bike Association training**
- Law Enforcement Bicycle Association training**
- National Highway Traffic Safety Administration Law Enforcement Training**
- Completion of Smart Cycling course by one or more officers**
- Presentation by League Cycling Instructor or local cyclist**
- Institute for Police Training and Development bicycle training**
- No training offered**

64. What enforcement programs that target improving cyclist safety are in place?

Check all that apply

- Helmet giveaways**
- Light giveaways**
- Bike lock giveaways**
- Targeting motorist infractions**
- Targeting cyclist infractions**
- Positive enforcement ticketing**
- Share the road campaigns**
- Other**
- None of the above**

If other, describe (100 word limit)

65. What percentage of patrol officers are on bikes?

None

1- 10%

10-20%

30-40%

40-50%

More than 50%

66. Are any other public safety (e.g. EMS) employees on bikes?

Yes

No

If yes, describe (50 word limit)

67. Do police officers report cyclist crash data or potential hazards to traffic engineers and planners to identify sites in need of safety improvements for cyclists?

Yes

No

68. Which of the following safety services and amenities are available in your community?

- Emergency call boxes/phones along trails**
- Trail watch programs/ Trail patrols**
- Street lighting on most arterials**
- Street lighting on most non-arterials**



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- Lighting of most shared-use paths**
- Stolen or impounded bikes recovery system or assistance**
- Non-mandatory bike registration**
- None of the above**

69. Are there any local or state ordinances that protect cyclists?

Check all that apply

- Specific penalties for failing to yield to a cyclist when turning**
- It is illegal to park or drive in a bike lane (intersections excepted)**
- Penalties for motor vehicle users that 'door' cyclists**
- Ban on cell phone use while driving**
- Ban on texting while driving**
- Photo enforcement for red lights and/or speed**
- Vulnerable road user law**
- Safe passing distance law**
- It is illegal to harass a cyclist**
- Other**
- None of the above**

If other, describe *(250 word limit)*

70. Do your local ordinances place any restrictions on cyclists?

Check all that apply

- Local law requires cyclists to use side paths regardless of their usability**
- Local law requires cyclists to use bike lanes when provided**
- Local law requires that cyclists are required to ride as far to the right of the road as practicable without exceptions**
- Local or school policies restrict youths from riding to school**
- Other**
- None of the above**

If other, describe *(100 word limit)*

71. Describe any other enforcement programs or policies relating to cycling.

(500 word limit)

EVALUATION AND PLANNING

72. Does your community have a comprehensive bicycle master plan or similar section in another document?

Yes

No

Currently under preparation

72a. If yes, please provide details about the plan below.

Provide a link to the plan or describe. *(250 word limit)*

When was it passed or most recently updated?

Is there a dedicated funding source for implementation?

- Yes**
- No**



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If yes, describe the funding source and designated amount (250 word limit)

What percentage of the current plan has been implemented?

Are you meeting annual target goals for implementation?

Yes

No

73. Do you have a trails master plan that addresses mountain bike access?

Yes

No

If yes, provide the link to the plan or describe. (250 word limit)

74. Is there formal cooperation between the mountain biking community and the community recreation and planning staff?

Yes

No

If yes, describe (100 word limit)

75. Does your community have an on-going bicycle counting and/or survey program that allows for long-term trend analysis of cycling trips (e.g. participation in the [National Bicycle and Pedestrian Documentation Project](#))?

Yes

No

If yes, please describe the most recent results. (250 word limit)

75a. If yes, do the counts capture the gender of cyclists?

Yes

No

If yes, please describe the most recent results. (100 word limit)

76. Does your community routinely conduct pre/post evaluations of bicycle-related road projects?

Yes

No

If yes, please describe the results. (250 word limit)

77. Does your community establish target goals for bicycle use, e.g. a certain bicycle mode share level?

Yes

No

If yes, please describe (250 word limit)

78. What is the most current journey-to-work data for your community? *Tip: Search for topic Bo8301 (Means of Transportation to Work) for your community on the [American FactFinder](#) website (Advanced Search). Choose the most recent data set available for your community. Divide the total number of bicycle/pedestrian/transit commuters by the total number of commuters and multiply the result by 100.*

Bicycling (in %)



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Percentage of bicycle commuters who are women (See topic B08006. Choose the most recent data set available for your community. Divide the total number of women bicycle commuters by the total number of bicycle commuters and multiply the result by 100.)

Walking (in %)

Transit (in %)

79. What is the average commuting distance to work for residents of your community? *Tip: This data is not available nationally and needs to be collected locally (or estimated).*

Less than 2 miles

2-5 miles

5-10 miles

Above 10 miles

80. What percent of children commute to school by bicycle? *Tip: This data is not available nationally and needs to be collected locally.*

Elementary (in %)

Middle School (in %)

High School (in %)

81. How many cyclists have been involved in a crash in your community in the past five years involving a motor vehicle?

81a. How many cyclist fatalities have occurred in your community in the past five years involving a motor vehicle?

81b. Do you have a specific plan or program to reduce these numbers?

Yes

No

If yes, describe (250 word limit)

82. Do you measure the Bicycle Level of Service of roads and/or intersections?

Yes

No

If yes, please describe your methodology and recent results. (250 word limit)

83. Do you have community-wide trip reduction policies or programs?

Yes

No

If yes, describe the policy/program and the results. (250 word limit)

83a. Does the program use individualized marketing to identify and support current and potential bike commuters in your community?

Yes

No

If yes, describe the program and the results. (250 word limit)



BICYCLE FRIENDLY COMMUNITY

SPRING 2014 APPLICATION

For review only. Only applications submitted online will be considered for designation.

84. Have you done an economic impact study on bicycling in your community?

Yes

No

If yes, describe the results. *(250 word limit)*

85. Do you have a mechanism to ensure bicycle facilities, programs and encouragement efforts are implemented in traditionally underserved neighborhoods?

Yes

No

Not applicable

If yes, describe *(250 word limit)*

86. Describe any other programs or policies that your community uses to evaluate and/or plan bicycling conditions, programs, and facilities. *(500 word limit)*

FINAL OVERVIEW

87. What are the three primary reasons your community deserves to be designated a Bicycle Friendly Community?

Reason One *(250 word limit)*

Reason Two *(250 word limit)*

Reason Three *(250 word limit)*

88. What are the three aspects of your community most in need of improvement in order to accommodate bicyclists?

Aspect One *(100 word limit)*

Aspect Two *(100 word limit)*

Aspect Three *(100 word limit)*

89. Has completing this application made you more aware of what your community needs to do to be bicycle friendly?

Yes

No

If yes, describe *(250 word limit)*

90. Are you planning any new projects based on your completion of the Bicycle Friendly Community application?

Yes

No

If yes, describe *(250 word limit)*

Submit any documents that you would like to provide in support of your application, including at least five high resolution photos (1-2MB) here. You can submit up to 5 files at the time and there is no limit on how many files can be submitted. By submitting photos, the League of American Bicyclists has the right to use your photos to promote bicycling. Please note that the files will submit immediately and will not appear as an attachment.



BICYCLE FRIENDLY COMMUNITY

SPRING 2014 APPLICATION

For review only. Only applications submitted online will be considered for designation.

We often get requests for model BFC applications from aspiring communities. Would you be willing to share your application?

Yes

No

How have you heard about the BFC program?

Item # 30
Replacement Agenda Report

ADDITIONAL MATERIAL
Regular Meeting
MARCH 12, 2013

SUBMITTED AT THE REQUEST OF

MAYOR KRISTIN JACOBS



AGENDA ITEM

#

Meeting Date

3/12/13

Page 1 of 3

Requested Action

(Identify appropriate Action or Motion, Authority or Requirement for Item and identify the outcome and/or purpose of item.)

Motion to Approve recommendations presented by Broward County staff at the February 19, 2013 Transportation Workshop of the Board of County Commissioners, including the following:

- Establish a Broward County "Complete Streets Team" consisting of staff from the County's Environmental Protection and Growth Management, Parks and Recreation, Public Works, Transportation, and Human Services Departments, to review and make recommendations regarding the County's road planning, design and construction standards and ordinances, and to draft the necessary amendments to create and implement Complete Street design guidelines;
- Draft an amendment to the Broward County Administrative Code to authorize suspension of the Broward County Trafficways Plan "Context Sensitive Corridor" application fee (\$6,798) for a two-year period, to promote municipal designation of such roadways;
- Initiate community and municipal outreach efforts to discuss the County's future transportation / land use plans and programs;
- Coordinate efforts with municipalities, Broward MPO, FDOT, U.S. Department of Housing and Urban Development and other interested entities; and
- Continue to work with partners to identify potential funding sources to finance improvements and operation and maintenance costs associated with Complete Streets / Context Sensitive Corridors.

Motion to Direct County staff to undertake all steps necessary to implement the foregoing items and to draft proposed amendments to the Trafficways Plan, Comprehensive Plan, Land Use Plan, Administrative Code, and any other appropriate documents to fully implement the Complete Street design guidelines.

Motion to Direct the Complete Streets Team to report progress toward implementation of the Complete Street design guidelines, including identifying pilot projects, potential funding sources, and outreach efforts, at the September 10, 2013, meeting of the Board of County Commissioners.

| Authorized Signature | | Scheduling |
|--|-------|---|
| (Signature confirms that required approvals from other agencies have been received – e.g. Purchasing, Budget, Risk Mgmt, Attorney) | | County Admin Initials |
| Signature:  | Date: | Type: Mayor Kristin Jacobs, Board of County Commissioners, District 2, 954-357-7002 |
| Source of additional information: Type Name, Agency, and Phone | | |

Why Action is Necessary:

What Action Accomplishes:

Is this Action Commission Goal Related?

Yes No

Is this Action related to the American Recovery and Reinvestment Act of 2009?

Yes No

Summary Explanation/Background

(The first sentence includes the Agency recommendation. Provide an executive summary of the action that gives an overview of the relevant details for the item. Identify how item meets Commission Challenge Goal.)

Complete Streets guidelines rethink road design and ensure use of the roadway for all users including bicyclists, pedestrians, public transportation vehicles and riders as well as the car. Complete Streets are for everyone regardless of age and ability.

As part of the Broward Complete Streets Initiatives over 2,000 Broward County residents participated in a survey, public workshop, presentation or a focus group related to Complete Streets from February through May, 2012. The majority of residents that responded indicated that they would like to see more sidewalks, public transportation options near their homes, clearly marked bike lanes, increased destinations within walking or bicycling distance and expressed a desire to feel safe while commuting without a car.

The adoption of Complete Street design guidelines would address issues relating to safe access for all users of Broward County rights of way by the addition of improvements related to overall roadway safety to reduce crashes, inclusion of enhancements for bicycles and pedestrians, and to encourage more walking and bicycling to generate health benefits.

The entire Community Engagement Report completed by Broward Complete Streets Initiative can be found at

<https://www.dropbox.com/sh/7m6rhx0m5ggy7vf/Let4VVC21C>

Fiscal Impact/Cost Summary

(Include projected cost, approved budget amount and account number, source of funds, and any future funding requirements.)

Exhibits Attached (copies of original agreements)

(Please number exhibits consecutively.)

Document Control

Commission Action

| | |
|--|---|
| <p>____ Executed original(s) for permanent record (Number)</p> | <p><input type="checkbox"/> APPROVED <input type="checkbox"/> DENIED</p> |
| <p>____ Executed copies return to: (Number)</p> | <p><input type="checkbox"/> DEFERRED</p> |
| <p>Other instructions (Include name, agency, and phone)</p> | <p>From: _____ To: _____</p> |

Attachment 10: Lee County Complete Streets Resolution

Resolution No. 09-11-13

**COMPLETE STREETS RESOLUTION
Lee County, Florida Board of County Commissioners**

A RESOLUTION OF THE LEE COUNTY BOARD OF COMMISSIONERS DIRECTING THE COUNTY MANAGER TO ESTABLISH A "COMPLETE STREETS PROGRAM," TO INTEGRATE BICYCLING, WALKING, AND PUBLIC TRANSIT WITH THE COUNTY'S TRANSPORTATION, CLIMATE, ENERGY, SMART GROWTH PROGRAMS, POLICY INITIATIVES, AND GOALS AND OBJECTIVES; FURTHER DIRECTING THE COUNTY MANAGER TO PRESENT GUIDELINES FOR INCORPORATING COMPLETE STREETS INTO COUNTY PROGRAMS, INITIATIVES, AND PRACTICES TO COUNTY COMMISSIONERS, AND TO REPORT ANNUALLY ON COMPLETE STREETS PROGRAM IMPLEMENTATION.

WHEREAS, the mobility afforded the individual is basic to the success of the County's land use and transportation system, where complete streets are designed and operated to assure safety and accessibility for all users of our roads, trails, and transit systems, including pedestrians, bicyclists, transit riders, motorists, commercial and emergency vehicles, and for people of all ages and abilities; and

WHEREAS, the early settlement patterns for Lee County demonstrated an innate understanding of the relationship between walking and land use, integrating slower moving vehicles with walking, and with walking and an easily accessible mixture of land uses, but a century of changing development types and standards has moved the scale of County's land use and transportation system from the convenience of a walk to the convenience of a drive, resulting in widespread dependence on the motor vehicle for basic travel; and

WHEREAS, without proper design and understanding of bicycle and pedestrian needs, road construction and traffic operations may increase hazardous conditions for the vulnerable modes of walking and cycling, as has been reported in various studies, and

WHEREAS, increasing the opportunity for cycling and pedestrian travel through better integration of land use and transportation does reduce reliance on fossil fuels, and places Lee County in a position to more effectively reduce greenhouse emissions; and

WHEREAS, recent data on obesity and public health identifies a relationship between land use, automobile dependency, and poor health, which can and has been improved for communities exercising the principles of complete streets; and

WHEREAS, various national movements have been promoting a return to a more balanced urban environment and streetscape, using terms such as "livable communities", "new urbanism," "smart growth," "complete streets," and "healthy communities," strategies, which reduce congestion, increase the overall capacity of the transportation network, decrease consumer transportation costs, improve air quality, support economic growth, increase community stability by providing accessible and efficient connections between home, school, work, recreation, and retail destinations by improving the land use and transportation connections; and

A1 a

11-10-09

WHEREAS, a 1999 study by the Urban Land Institute determined that homebuyers in four new pedestrian-friendly communities were willing to pay \$20,000 more than similar homes in surrounding areas; and the Victoria Transport Policy Institute cites studies showing that reductions in traffic speeds increased adjacent residential property values by approximately 20% and that a several-hundred-per-day car volume reduction on residential streets increased home values by 18% on average; and

WHEREAS, the USDOT/Federal Highway Administration (FHWA) Design Guidance for Accommodating Bicycle and Pedestrian Travel issued in 2000, stated that bicycle and pedestrian ways shall be established in new construction and reconstruction projects in all urbanized areas excluding projects where one or more of three narrow conditions are met; and

WHEREAS, the U.S. Congress is considering the Complete Streets Act of 2008 (S. 2686 and H.R. 1443), a landmark bill that would ensure that future transportation investments made by the State Departments of Transportation and Metropolitan Planning Organizations create appropriate and safe transportation facilities for all those using the road--motorists, transit vehicles and riders, bicyclists, and pedestrians of all ages and abilities; and

WHEREAS, Florida Statutes, Section 335.065, titled "Bicycle and pedestrian ways along state roads and transportation facilities" is part of the Florida Department of Transportation's (FDOT) Pedestrian and Bicycle Procedure and states that "Bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities...and bicycle and pedestrian ways shall be established in conjunction with the construction, reconstruction, or other change of any state transportation facility..."; and

WHEREAS, in 2005, the Florida Legislature directed FDOT to determine ways to increase the use of bicycles in order to conserve energy, reduce pollution, and improve health, and established FDOT's Conserve by Bicycle Program Study, which recommended that "public agencies accommodate bicycling on all non-limited access roadways in Florida"; and, warns that "the way Florida plans its development and roadways must change"; and

WHEREAS, Lee County has invested heavily in transportation systems to improve the balance in the community's mobility, but continues to experience practical difficulty in integrating mobility systems with each other and within the urban landscape through the current land development code; and

WHEREAS, functional classification of roadways is currently fragmented between the County Department of Transportation (DOT) and the County Department of Development Services (DDS), with the County DOT determining the classification for County roads, and the DDS determining classification for non-county roads, pending any Board of County Commission contrary action; and

WHEREAS, roadway classification defines the function of the roadway, where access on abutting properties on arterial and collector roads are currently determined to be of secondary consideration, despite that a balanced urban community requires that transportation routes and abutting properties be functionally integrated, since the purpose of a trip is for the person to reach the destination, regardless of mode; and

WHEREAS, the current classification system does not recognize that some arterials and collectors are themselves functioning as local roads for very short trips due to an absence of safe other modes and where a review of the currently identified arterials and collectors would identify which of those routes are dominated by local trips, and would identify those roads where access to abutting properties are not a secondary consideration; and

WHEREAS, the Lee County Board of County Commissioners expressed its support for the philosophy of complete streets for the safety, health and environmental integrity of all residents, visitors, and the community as a whole, in its Resolution/Proclamation dated March 24, 2009; and

WHEREAS, the Lee County Board of County Commissioners expressed its support for the National Start! Walking campaign to get Americans to become more physically active by walking, in its Resolution/Proclamation dated April 7, 2009; and

WHEREAS, the Lee County Board of County Commissioners further expressed support for complete streets by its vote in support of MPO Resolution 09-05, as adopted on August 21, 2009.

NOW, THEREFORE, BE IT RESOLVED THAT THE BOARD OF COUNTY COMMISSIONERS OF LEE COUNTY, FLORIDA, intend for street connectivity to be encouraged, with the aim of creating a comprehensive, integrated, and connected network for all modes of transportation.

RESOLVED, that the BoCC affirms that all road projects should be designed to accommodate all users; that bicycling, walking, and public transit accommodations is a routine part of the county planning, design, construction, maintenance, and operating activities, and will be included in the everyday operations of the transportation system in Lee County; and that bicycle and pedestrian ways should be established in new construction and reconstruction of road and bridge projects. In developing these accommodations, the latest, best, and context-sensitive design standards will be used, while recognizing the need for flexibility in balancing user needs.

RESOLVED, that very limited exceptions to these required accommodations are allowed under Florida Statutes, Section 335.065 and that the county manager will review the formal approval process -related to granting these exceptions along county roadways

RESOLVED, that by April 2010 the County Manager is directed to work with appropriate County staff to develop guidelines for Lee County's implementation of the "Complete Streets Program". Upon review and approval by the BoCC, county departments will incorporate these guidelines and Complete Streets principles into their work plans.

RESOLVED, that the BoCC directs the following actions be part of the County Commission Goals and Objectives for 2009-2010:

1. The County Manager direct the appropriate subordinate departments to review the functional classification of arterials and collectors, to designate a newly named or redefined subset of those facilities to meet the urban purpose of integrated modes and destinations, to be completed and recommendations brought to the Board for action during operational year 09-10, including whatever reforms are necessary to AC 11-1 and elsewhere. This review will identify those roadway facilities that will still, through necessity, have access to abutting land uses as a secondary consideration. Those facilities shall be assessed to the adequacy of current regulations and plans that will provide within, adjacent, or functionally present alternative modes available and safely designated, built, or planned to be built, and the degree of maintenance and operational signage needed that is different from that for the county roadway operating at that location.

2. The County Manager direct the Department of Community Development, as well as other appropriate departments, to review the Community Planning Program in AC 13-3, as well as other authorized staff initiated community planning programs, to ensure that a required component of future plan updates include the integration of modes and destinations at the human scale. This review will be undertaken complementary to the review taken for AC 11-1.
3. The County Manager directs the Department of Transit, and appropriate departments, to review current transit stops for their ability to integrate with other modes and destinations, existing and proposed, and for the Department to suggest changes to modes, and receive recommendations for changes to transit stops, that would improve this integration.
4. The County Manager directs the Department of Parks and Recreation, and other appropriate departments, to review the County's greenways and trails plan to assess the provision of alternative modes of transportation wherein access is a secondary consideration.
5. The County Manager is directed to work with the Lee County Department of Health to identify, measure, and report on indicators of human health that would be affected by the Complete Streets Program.

RESOLVED, that the County Manager shall facilitate and present a report to the Board by October 1, 2010 on the implementation status of its Complete Streets Program, including all the exception decisions made under this policy. This report shall be delivered annually thereafter. The County Manager shall include reports from participating departments identifying disconnections in routes within the transportation network that serve as barriers for effectively functioning alternative modes. This report will identify barriers that are proposed to be remedied as well as those that are not included in plans for remedy. This report will contain recommendations for the changes needed for that remedy, including non structural recommendations. Indicators measuring the impact of the Complete Streets Program shall also be included in this annual report.

RESOLVED, that it is the BoCC's intent that all appropriate sources of funding be drawn upon to implement complete streets.

RESOLVED, that these actions will enable Lee County to become a complete streets county, a leader in Florida, and the nation.

RESOLVED, that the Board of Commissioners urges the State of Florida, the Florida Department of Transportation, the Lee County Metropolitan Planning Organization, and all the other cities and towns within Lee County to embrace and adopt complete streets guidelines and policies and integrate them into their standard street design and operations. Specifically, the BoCC requests that the Lee MPO incorporate complete streets policies and principles in the countywide bike and pedestrian master plan currently under development.

RESOLVED, that the Board of Commissioners urges the President and the members of the United States Congress to support the Complete Streets Act legislation and the adoption of its principles throughout the development of the next transportation authorization bill.

RESOLVED, that the County Clerk is instructed to transmit a copy of this Resolution to the President of the United States, the United States Senate Majority Leader, the Speaker of the United States House of Representatives, the Secretaries of the United States and Florida Departments of Transportation, Lee County's congressional delegation in Washington [Senators Nelson & LeMieux, and Rep. Connie Mack], and the Director of the Lee County Metropolitan Planning Organization.

| | |
|-------------------------|---------------|
| ROBERT JANES | <u>Aye</u> |
| A. BRIAN BIGELOW | <u>Aye</u> |
| RAY JUDAH | <u>Aye</u> |
| TAMMARA HALL | <u>Absent</u> |
| FRANK MANN | <u>Aye</u> |

DULY PASSED AND ADOPTED THIS 10th DAY OF November, 2009.

**ATTEST:
CHARLIE GREEN, CLERK**

**BOARD OF COUNTY COMMISSIONERS
OF LEE COUNTY, FLORIDA**

By: Marcia Wilson
Deputy Clerk

By: [Signature]
Chair



APPROVED AS TO FORM:

By: [Signature]
Office of the County Attorney



MIAMI-DADE COUNTY greenPrint PROGRESS REPORT 001



SOCIAL



ENVIRONMENTAL



SUSTAINABLE

ECONOMIC



MIAMI-DADE COUNTY

Carlos A. Gimenez
Mayor

BOARD OF COUNTY COMMISSIONERS

Rebeca Sosa
Chairman

Lynda Bell
Vice Chairwoman

Barbara J. Jordan

District 1

Jean Monestime

District 2

Audrey M. Edmonson

District 3

Sally A. Heyman

District 4

Bruno A. Barreiro

District 5

Rebeca Sosa

District 6

Xavier L. Suarez

District 7

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District 8

Dennis C. Moss

District 9

Senator Javier D. Souto

District 10

Juan C. Zapata

District 11

José "Pepe" Díaz

District 12

Esteban Bovo, Jr.

District 13

Harvey Ruvin
Clerk of Courts

Carlos Lopez-Cantera
Property Appraiser

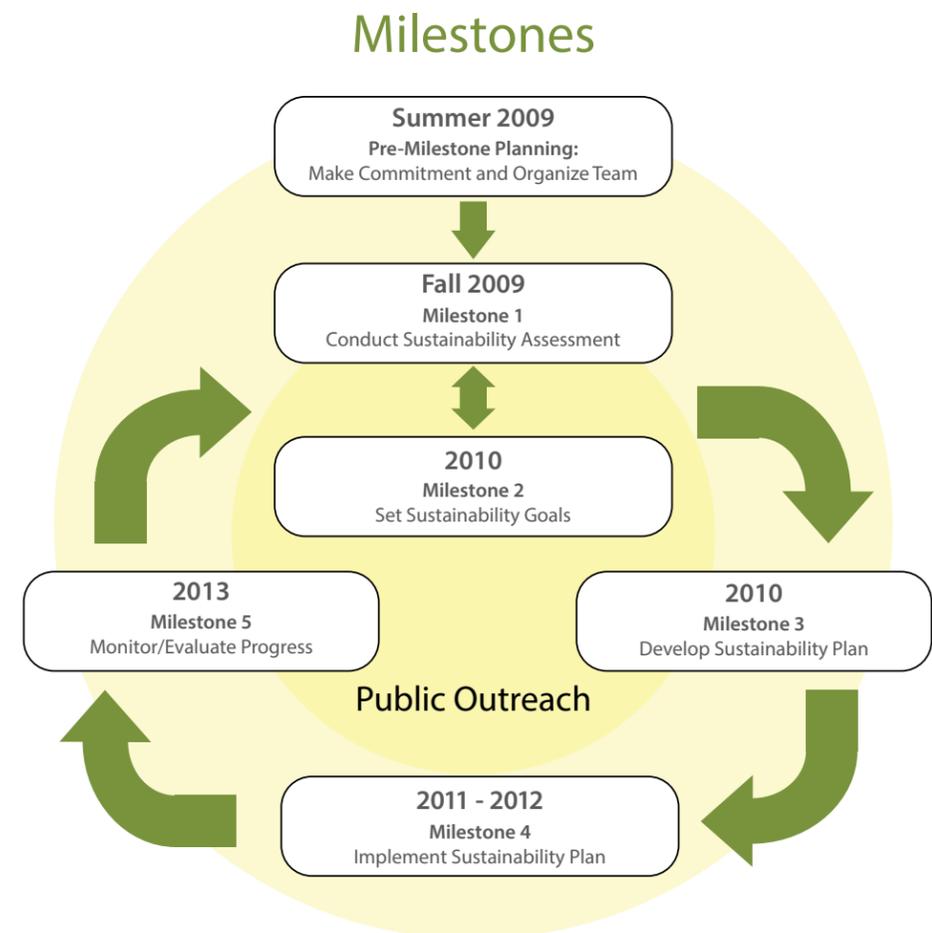
Robert A. Cuevas Jr.
County Attorney



Released January 2014

GreenPrint: Our Design for a Sustainable Future, lays out a vision for a community with a robust economy, a healthy environment, and a better quality of life for the people who live and visit Miami-Dade County. GreenPrint is also an action plan with 5-year cycles, focused on measurable goals and specific targets within its 7 interconnected goal areas and 137 initiatives. It contains many new initiatives, but also aims to elevate and intensify efforts related to existing initiatives and plans. Together, the existing and new initiatives strive to achieve aggressive water conservation, energy, climate change, and greenhouse gas reduction goals to sustain ourselves and our natural resources. GreenPrint was developed in collaboration with many community stakeholders: experts from the business community and academia, individual residents, nonprofit organizations, municipal representatives, and County staff. GreenPrint is a community-wide plan. It is a map to achieving goals that benefit the economy, the environment, and society – because that is what sustainability is all about!

The purpose of this specific report is to highlight the progress of a few key GreenPrint initiatives during the period 2011 - 2012. This was a period of recovery for the economy and housing market in Miami-Dade County, as well as a time of continued population growth. During this challenging time, GreenPrint stakeholders continued their hard work on behalf of our community. One important achievement since the initial release of GreenPrint in 2010, was the creation of an internal web-based tracking tool, developed with the assistance of the County's Information Technology Department. To measure such progress, the tracking tool maintains key information and records updates for each initiative. This tool allows us to more easily report on the progress of each initiative. As initiatives are completed and situations change, initiatives incorporated into GreenPrint will change as well.





Dear Fellow Residents of Miami-Dade County:

This Progress Report highlights some of the achievements we have been tracking as part of our community-wide sustainability plan, "GreenPrint, Our Design for a Sustainable Future." It is with great pleasure that I share with you our progress to date.

Over decades, visionary businesses, universities, nonprofits, individuals, and municipal and county agencies have helped shape our region for the better. The GreenPrint difference is to connect all of these individual efforts and weave them together into a strategic framework and plan of action to help ensure that our community attains even better and lasting economic, environmental, and community health. GreenPrint uses a "big picture," collaborative, and long-term approach that is helping us to keep moving in the right direction, as we turn the pressing challenges of today into opportunities for sustainable economic growth and a better quality of life.

Every initiative that you will read about in this report is being achieved through hard work, dedication, and collaboration. I am proud of all of the accomplishments in our community, and look forward to sharing additional achievements from other community stakeholders in the years ahead.

Sincerely,

Carlos A. Gimenez
Mayor

2012 SUSTAINABILITY HIGHLIGHTS

- 110 initiatives completed and in progress to enhance our community's sustainability
- \$1.2 million in energy efficiency rebates provided to 140 commercial businesses through the Miami-Dade County Commercial Rebate Program
- 8.3 million additional average annual boardings on County public transit system
- 1.74 million gallons of water conserved per day
- 33.6 miles of new bicycle trails and lanes
- 530 hybrids in our County fleet
- 70 Energy Star certified buildings in our community
- 23,600 acres preserved through our County Environmentally Endangered Lands program, storing over 5 million metric tons of carbon dioxide (CO₂)
- 88% days with an Air Quality Index best rating
- 358.8 pounds recycled per year per household through County curbside recycling

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| <p>Our Environment</p> | <ul style="list-style-type: none"> • Maintain exceptional quality of air, drinking water, and coastal waters used for recreation • Protect and enhance Biscayne Bay, the Everglades, and vital ecosystems • Reinvent our solid waste system22 |
| <p>Responsible Land Use & Smart Transportation</p> | <ul style="list-style-type: none"> • Use our land wisely, creating and connecting strong sustainable neighborhoods • Provide more transportation options, reducing the time we spend in our cars28 |
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In Recognition of our GreenPrint Partners

I would like to personally thank the many people who helped us prepare this report. Your passion and dedication are admirable. Each of you, including those who are not specifically on the GreenPrint Implementation Team yet provided important contributions nonetheless, helped ensure that our GreenPrint Progress Report was completed in a thorough and professional manner. I am thankful to have so many colleagues who are collectively committed to our sustainability goals. It is a pleasure to work with all of you and I look forward to our continued collaboration and success!

-Nichole Hefty, Office of Sustainability Chief, Regulatory and Economic Resources Dept.

GreenPrint Implementation Team

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Jerry Hall, Division Director, Internal Services Dept.

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Susan Schreiber, Transportation System Analyst, Metropolitan Planning Organization

Jaime Shycko, Web Publisher, Community Information and Outreach

Susannah Troner, Sustainability Initiatives Coordinator, Regulatory and Economic Resources Dept.

Suzy Trutrie, Assistant Communications Director, Office of the Mayor

Virginia Walsh, Senior Professional Geologist, Water and Sewer Dept.

Mark R. Woerner, Assistant Director, Regulatory and Economic Resources Dept.

Patrick Wong, Division Chief, Regulatory and Economic Resources Dept.

Ana Maria Zulueta, Graphic Designer, Community Outreach and Information



• Create the next generation of green leaders

Work with more than 100 GreenPrint partners to integrate sustainability into local, regional and national strategic decision-making, policies and operations.



• Use less water and energy

Reduce per capita non-renewable energy use to 20 percent below 2007 baseline by 2015. Reduce water consumption by 1.5 million gallons a day. Reduce government electricity use by 20 percent from 2007 to 2014 in accordance with Board of County Commissioners legislation.



• Maintain exceptional quality of air, drinking water, and coastal waters used for recreation

Continue to achieve the best air quality rating at least 90 percent of the year and exceed drinking water quality standards. Prevent degradation of our Outstanding Florida Waters.

• Protect and enhance Biscayne Bay, the Everglades, and vital ecosystems

Restore and enhance more than 500 acres of coastal habitats and wetlands, and preserve more than 24,000 acres of environmentally endangered lands.

• Reinvent our solid waste system

Reduce or divert 75 percent of our solid waste from landfills by 2020 through reusing, recycling, and generating electricity.



• Use our land wisely, creating and connecting strong sustainable neighborhoods

Develop 15 urban center area plans and six multi-modal corridor master plans. Create four transit-oriented developments on heavy rail and bus corridors. Develop level of service metrics to identify resident accessibility to parks and open space areas. Improve access through an interconnected network of shaded and safe bikeways and trails connected to neighborhoods, schools, employment centers, civic buildings, and other community destinations.

• Provide more transportation options, reducing the time we spend in our cars

Add 10 million boardings to our public transportation system through increased services, and enhancing convenience, comfort, and timely service. Increase the percentage of total trips taken by walking or bicycling from 10 percent to 16 percent of all travel trips. Increase resident satisfaction with the availability of sidewalks for pedestrians to 65 percent or more and add 40 miles of bicycle trails and lanes.



• Create green jobs

Cultivate an innovative and sustainable economic infrastructure that creates 20,000 green jobs by 2020 while building on our economic strengths and adding to our competitiveness in the global economy.

• Build on our international reputation to become a green enterprise destination

Increase the percentage of green hotels, eco-tourism, and hospitality related businesses.



• Raise awareness that sustainable living is healthy

Decrease our community's lifestyle disease rates such as diabetes and heart disease through healthy eating and exercise. Provide access to fresh, local and/or organic food in all neighborhoods through grocery stores, farmers markets and community gardens supported by local agriculture. Increase the number of short walking and biking trips through safety and other programs. Reduce barriers for disabled and elderly residents.

• Plant more Florida-friendly and native trees and landscapes

Plant half a million trees by 2015 to achieve a 30 percent tree canopy by 2020 and encourage native, drought-tolerant landscaping to cool our communities, capture greenhouse gas emissions, beautify our neighborhoods, and provide wildlife habitat.



• Understand and respond to current and future climate change impacts

Integrate local climate change indicators with existing emergency management, storm water planning, and infrastructure planning.

• Reduce greenhouse gas emissions

Reduce GHG emissions by 10 percent by 2015, working towards 80 percent reduction by 2050 to advance the Cool Counties Program commitment.



Strong Leadership, Connections & Commitment

The leadership goal area has connections to all goal areas, as leadership can make or break the success of an initiative. Leadership, connections, and commitment come into play whenever decision-makers are faced with competing environmental, social, and economic needs. Ideally, informed decisions are made in a way that ensures Miami-Dade County residents will have a sustainable, high quality of life for the long term.

Leadership and community commitment are essential to developing consistent, reliable, and enduring policies that can truly impact the sustainability of our community. Examining problems and potential solutions with the long-term approach and the broad and multi-faceted lens of sustainability is more complicated than normal decision-making strategies. However, the benefits of using this strategy to help make decisions is worth it – because it helps to ensure that solutions will benefit our people (society), planet (the environment), and profit (the economy) far into our future.

Climate change and sea level rise are relatively new challenges that leaders must grapple with in all coastal areas, including Miami-Dade County. Fortunately, decision-makers at all levels in our community have a strong record of environmental leadership and stewardship that dates back to the early 1990's. That rich history and local commitment in a community with obvious vulnerabilities to climate change has given Miami-Dade a voice on a national and international level, and we are there, at the global table, helping to shape policy. We must continue to work, not only at the level of international discussion, but also at the level of individual and personal commitments.

Goal

- *Create the next generation of green leaders*



STRONG LEADERSHIP, CONNECTIONS & COMMITMENT

Strengthen regional and local community partnerships *(4 in progress initiatives)*



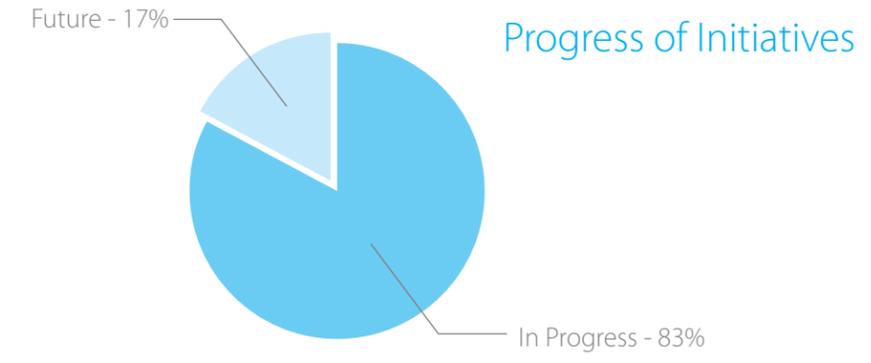
Integrate sustainability into all leadership systems *(2 in progress initiatives)*



Be green government role models *(3 in progress and 1 future initiative)*



Create ongoing outreach, education, and dialogue with the community about the implications of climate change and the benefits of sustainability *(1 in progress and 1 future initiative)*



Initiative 1: Implement the Southeast Florida Regional Climate Change Compact

The Southeast Florida Regional Climate Change Compact (Compact) represents a joint commitment of Miami-Dade, Monroe, Broward and Palm Beach Counties to partner in fostering sustainability and climate resilience at a regional scale. The Compact was formalized following the 2009 Southeast Florida Climate Leadership Summit, when elected officials came together to discuss challenges and strategies for responding to the impacts of climate change. It outlines goals and an ongoing collaborative effort among the Compact counties, and is guided by a Staff Steering Committee with representatives from each of the four counties and a municipality representative from each county. Non-voting advisors include the Institute for Sustainable Communities, the South Florida Water Management District, the South Florida Regional Planning Council and The Nature Conservancy. The efforts of the Compact Counties have garnered attention, collaboration and resources from a variety of local, national and international sources. The following are some of the accomplishments to date:



- Development of a regionally consistent unified sea level rise projection for the coming decades, preliminary inundation mapping, and a regional greenhouse gas baseline, all completed with assistance from local, regional, state, and federal agencies



The four county Regional Climate Action Plan, released in 2012.

- Creation of a Regional Climate Action Plan (RCAP) - the RCAP contains 110 action items aimed at reducing greenhouse gas emissions and adapting to the effects of climate change
- Obtaining a nearly \$1 million grant from the Kresge Foundation to implement recommendations in the RCAP through 2015
- Annual coordination and development of joint state and federal legislative policy
- Helping to amend the Florida Energy Act to allow commercial buildings to qualify for energy efficiency program funding through the Local Option Sales Tax

Another important accomplishment of the four-county Compact has been the successful creation of an amendment to Florida law creating "Adaptation Action Area (AAA)" designation for areas that experience coastal flooding and are uniquely vulnerable to climate impacts, including sea level rise. The Compact helped draft and lead joint legislative advocacy efforts to provide for this designation in order to help local governments identify areas that are vulnerable to coastal flooding from sea level rise. The new designation will prioritize infrastructure improvements, improve technical and funding assistance for increasing resilience, and serve as a planning tool. We are working with the State and Compact partners on initiatives to guide designation of Adaptation Action Areas, as called for in the County's Comprehensive Development Master Plan.

Initiative 3: Encourage all municipalities to adopt GreenPrint

Our municipalities continue to be an essential partner in achieving sustainability because neighborhood-level decisions often have the most direct impact on the quality of life of our residents and the success of our businesses. The Miami-Dade County League of Cities (League) has embraced this role with its recent adoption of a resolution encouraging member cities to formally adopt GreenPrint as a planning framework for each of their cities, and to work collaboratively with Miami-Dade County on sustainability initiatives. The resolution also urged members to sign on to the Mayor's Climate Action Pledge, in support of implementation of the Compact's SE Florida Regional Climate Action Plan. We would like to congratulate and thank the five municipalities that have adopted the Pledge as of this Progress Report:

- The Town of Surfside
- The City of Miami Beach
- The Village of Pinecrest
- The City of South Miami
- The Town of Bay Harbor Islands



The League's Energy, Environment and Natural Resources Committee is working in partnership with the County's Office of Sustainability to coordinate much of this increased collaboration, including:



Third annual Miami-Dade League of Cities Best Practices Workshop.

- Developing a panel for a two-day meeting of the National Energy, Environment and Natural Resources Committee that focused on developing key issues, positions, and legislative language for policy at the national level
- Developing two sustainability-themed speaker panels at the League's Third Annual Best Practices Workshop
- Developing a sustainability survey to inventory green initiatives taken by municipalities. The survey is intended to facilitate sharing of best practices and to target future collaborative opportunities, and therefore may be the achievement with the most long term benefits. The survey results will be posted online on the County's green webpage (<http://www.miamidade.gov/green/>) and presented in the next progress report.

Initiative 4: Pursue more public-private partnerships to implement policies identified in County plans that improve County services

Public-private partnerships (P3s) are becoming an effective strategy of choice in addressing the challenge of improving our community's infrastructure (such as canals, parks, bridges, public transit stations, and public housing), in the face of ever-shrinking municipal and County budgets. Below are three different examples of our P3 efforts.

Brickell CityCentre, a \$1.05 billion privately financed mixed-use development, is currently being constructed in the center of the Brickell financial district in downtown Miami. It has been the catalyst for two public private partnership projects and incorporates several sustainability aspects in the design and planning. Swire Properties and Arquitectonica, the development and architectural firms for the project, have actively worked with Miami-Dade Transit to incorporate the adjacent 8th Street Miami-Dade Transit Metromover station into the Brickell CityCentre project design. The Brickell Metromover station will undergo several modifications, designed and built by these private sector partners, in order to facilitate the use of public transportation by CityCentre residents and businesses, as well by the surrounding community. In addition, Miami-Dade Parks, Recreation, and Open Spaces Department (MDPROS) is developing Brickell Promenade, a linear park along the Metrorail guideway, connecting the Metrorail Brickell Station with the Miami River Greenway in the vicinity of Brickell CityCentre.



Brickell CityCentre is a new public private partnership that will benefit our local economy, public transportation, and parks and open spaces.

Working through public private partnerships, Miami-Dade Parks, Recreation and Open Spaces and the Parks Foundation of Miami, have improved facilities and expanded programming that supports children and adults, seniors, and people with disabilities. MDPROS has over 50 agreements with private for-profit organizations, generating over \$6.5 million dollars annually. Additionally, MDPROS has over 40 agreements with nonprofit organizations generating over \$150,000 annually. During the reporting period, the Parks Foundation, in partnership with MDPROS, has also successfully pursued and secured revenues from an additional 125 non-governmental sources to support their programs, projects, and special events. Agreements signed in the past two years include a variety of services to enhance the park experience for residents and visitors, including restaurants, mini soccer fields, cable wakeboarding and dry boat storage facilities.



As part of a Coca-Cola Troops for Fitness grant, veterans are being hired to enhance fitness and recreation programming. Army National Guard veteran and amputee Laura Ortiz is among the first veterans hired to help Miami-Dade residents get fit and rediscover the joys of being active.

The Miami-Dade County Clean Diesel Repower Program for local farmers is an example of smaller scale public private partnerships. For this program, local farmers invested their own money to replace their aging diesel irrigation engines with new less-polluting engines of similar horsepower.

Working through the Agricultural Manager of Miami-Dade County, the federal Environmental Protection Agency National Clean Diesel Program provided each participating farmer with up to 65 percent of the cost of the new engine and parts. The goals of this successful program were to reduce fuel consumption and air pollutants, and to improve the working environment of farmers and farm workers. In total, the federal government provided \$2 million in funding and the private farmers spent \$700,000 for the engine upgrades, successfully replacing 227 old engines with 223 new engines.

"The new engine's exhaust, compared to the old one that belched black smoke, is incredibly clean and its efficiency saves us thousands of dollars in fuel expenses every year because we simply burn less."

- Eric Tietig, Local Farmer and National Clean Diesel program rebate recipient

Additional public private partnerships are discussed in the Responsible Land Use and Smart Transportation Goal Area in the discussion of Miami-Dade County's Transportation-Oriented Developments (TODs). Existing Transit Oriented Developments bring the County an additional \$3 million in annual revenue that is critical to supporting operations and maintenance of our world-class public transportation system.

Challenges and Opportunities

Because sustainability is a relatively new, and somewhat complex, concept and problem-solving strategy, it will take time for our community to learn to recognize what sustainability is and begin to truly integrate this thinking into existing programs and future planning. An important next step would be for our community to dialogue and develop community consensus about the importance of investing in long-term sustainability-oriented solutions. Arriving at these solutions is rewarding, but can also be challenging because they require people to think and work across sectors, across jurisdictional boundaries, and across generations. This is no small task and can be further complicated if the decisions require tough choices for the present that will result in broader, more beneficial results for the longer term.

This is particularly true during difficult financial times, as we have been experiencing for several years now. However, during adversity, there is also opportunity. By looking at things through a sustainability lens, we can often find additional benefits and opportunities that can be quantified and factored into the overall equation, often justifying a trade-off in the present in order to obtain the additional, longer-term, benefits. GreenPrint provides an excellent platform upon which we can identify and build upon those additional opportunities, and it is through our leadership, connections, and commitment that we will lead the way by further engaging our community stakeholders and thinking outside of the box.



Water & Energy Efficiency

Detailed studies and analyses have proven that the cheapest way to securing a more stable supply of water and energy is by using less energy (fuel and electricity), and water (lowering demand) through efficiency and conservation. While we can and, in some cases, should seek to develop new, environmentally safe, and cost-effective alternatives to increase supply, the basic, common sense approach of using less is a more cost-effective approach that can be accomplished even in communities with growing populations like Miami-Dade County.

Water and energy are also linked to each other in terms of generation, supply and distribution. As we use less water, we use less energy, and vice versa. So, economically, the benefits of reducing demand are magnified whenever we reduce our use of water, energy, or both. Saving water and energy also has environmental and health benefits for our community. Using electricity requires electric companies to burn more fuel, and burning fuel releases pollutants into the air. Therefore, reducing these pollutants by lowering our electricity demand can benefit both public health and the health of our ecosystems on which we depend.

Goal

- *Use less water and energy*



WATER & ENERGY EFFICIENCY

Reduce energy and water consumption through increasing efficiency *(1 completed and 3 in progress initiatives)*



Improve energy planning through public-private partnerships *(1 future initiative)*



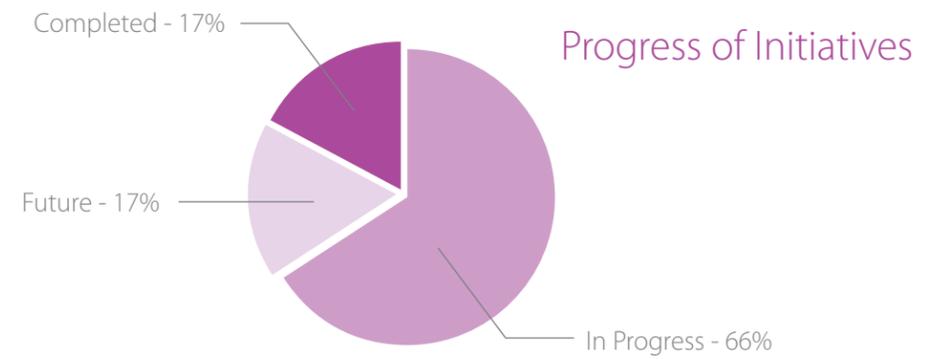
Continue water and energy efficiency and conservation campaigns *(1 in progress initiative)*



Expand alternative fuel (bio-diesel/waste-based bio-diesel) and renewable energy industries *(1 in progress and 1 future initiative)*



Be government leaders in energy, fuel and water efficiency *(2 completed, 7 in progress and 1 future initiative)*



Initiative 13: Continue to implement the Water Use Efficiency Plan and the Non-Revenue Water Loss Plan initiatives to meet established reduction targets

| Description | Unit of Measure | 2015 Target | Quantity to date |
|--|-----------------|-------------|------------------|
| Water efficiency reduction | MGD* | 1.50 | 3.66 |
| # of Residential landscape evaluations | number | 600 | 557 |
| # of Multifamily/Commercial landscape irrigation evaluations | number | 235 | 201 |

* million gallons per day

The County's Water Use Efficiency Plan and Non-Revenue Water Loss Plan are perfect examples of how conservation strategies can help our community use less water and cut costs for individual homeowner and public spending as well. Together, these two plans help the County implement and track different water conservation strategies such as (but not limited to):

- Comprehensive outreach campaigns including in-school education efforts to promote water conservation
- Permanent landscape irrigation restrictions that limit landscape irrigation to two days a week
- New construction standards that codify high efficiency plumbing fixtures in properties built in 2009 or after
- New landscaping ordinances that require the use of drought-tolerant plants
- A tiered water use fee structure which charges more for higher water usage
- High efficiency toilet, faucet and showerhead rebates
- High efficiency toilet and retrofit kits for seniors and low income residents
- High efficiency clothes washer rebates



A high efficiency shower head and lightbulb change for residents

- Exchange program for high efficiency showerheads
- Retrofit kit with high efficiency faucet aerators
- Landscape and irrigation evaluations with rebates for residents, commercial, and institutional entities
- Green restaurant and green lodging evaluations
- Leak detection and repairs in the water supply and distribution systems
- Reduction of water loss from water treatment plants
- Elimination of water theft

Through these conservation efforts and others, Miami-Dade residents have become more efficient in their water use, contributing to an unprecedented drop in water consumption. The current demand for treated water is 44 million gallons per day lower than what was projected in November 2007. Per person, usage has dropped from 158 to 134 gallons per day during the same period of time. Overall, the projected water savings for 2012 has exceeded expectations, with an annual savings of more than 1.74 million gallons per day (MGD). Estimated community-wide annual water savings are 3.2 billion gallons per year, associated with an estimated annual electricity savings of 3.6 million kilowatt hours (kWh) per year and average cash savings of \$324,000 in electricity costs alone.

As of now, Miami-Dade is on track to save more than 14.25 million gallons of water per day by 2017. By supplying water in a sustainable manner and reducing and controlling losses, our community will not have to invest in developing expensive new water supply sources. The Water and Sewer Department has been able to cancel or delay costly capital projects to provide alternative water supply. Fixing leaks and similar strategies also provides additional cost savings by decreasing water treatment and distribution costs. Local contractors and retail stores that provide water saving fixtures and devices also benefit economically from conservation programs. The adjacent table reflects the effectiveness of all of MDWASD's water efficiency strategies.

| Year | Water Savings (MGD*) | |
|------|----------------------|----------|
| | Planned | Reported |
| 2007 | 1.09 | 1.21 |
| 2008 | 2.24 | 3.48 |
| 2009 | 3.53 | 4.90 |
| 2010 | 4.82 | 6.54 |
| 2011 | 6.10 | 8.47 |
| 2012 | -- | 10.07 |
| 2016 | 11.7 | -- |
| 2021 | 15.67 | -- |
| 2026 | 19.6 | -- |

* million gallons per day

Miami-Dade's WASD's water efficiency strategies have exceeded expectations.



Solar panel roof systems were installed at three Miami-Dade County parks.

Initiative 15: Implement EECBG projects

Projects funded by the federal Energy Efficiency and Conservation Block Grant (EECBG) Program jump-started many of our governmental energy-savings initiatives and will continue to benefit the County by saving millions of dollars every year going forward. EECBG funding was coordinated through the Miami-Dade County Office of Sustainability to support twelve projects managed by eight county departments. These projects also aligned perfectly with the County's commitment to reduce electricity consumption in County facilities by 20 percent from 2007 levels by 2014. The complete list of projects benefiting our community, and the associated departments are listed in the table below:

| EECBG Project Name | County Lead Departments |
|--|-------------------------|
| 1 Energy Management Systems Upgrade for County facilities | ISD, ITD, CIAO, RER |
| 2 Public Energy Efficiency Education Campaign | CIAO, RER, PWWM, WASD |
| 3 Energy Efficiency Grants to Community and Faith-Based Organizations | OMB, RER |
| 4 Development of Procedures to Facilitate Sustainability in County Capital Investments | RER, ISD, OMB |
| 5 Using Methane to Power Government Facilities | WASD |
| 6 Evaluation Codes and Permitting Processes to Facilitate Energy Efficiency in Buildings | RER, ISD, OMB |
| 7 Daylight Harvesting Project | MDPLS |
| 8 Cool Roof Project | MDPLS |
| 9 Desktop Virtualization Project (Thin Clients) | ITD, RER |
| 10 "Green Roadway" Lighting Project | PWWM |
| 11 Solar Power Installations at Three County Parks | PROS |
| 12 Sustainable Technologies Demonstration Program | ISD |

Internal Services Department (ISD), Information Technology Department (ITD), Community Information and Outreach Department (CIAO), Regulatory and Economic Resources Department (RER), Office of Management and Budget (OMB), Water and Sewer Department (WASD), Miami-Dade Public Library System (MDPLS), Public Works and Waste Management Department (PWWM), Parks, Recreation and Open Spaces Department (PROS).

"I wanted to let you know how successful the [EECBG] grant to conserve energy was. In comparison for the same month last year, our electric bill has been reduced by approximately \$500 per month. This will result in about a \$6,000 reduction in energy costs per year! Again, thank you so much for everything, the program really made a substantial difference in our energy consumption. Hopefully they will fund this type of assistance again."

- Shelley Gottsagen, Center for Independent Living of South Florida, Inc.



The Center for Independent Living of South Florida received an EECBG grant to make their building more energy efficient.



Photographs showing lighting improvements at the gym of the Boys and Girls Club of Miami-Dade, made possible by an EECBG grant.

One of the most successful projects was the installation of utility billing management software across all County departments. This project is anticipated to save the county \$2 million in the first two years and to continue saving money and electricity every year from now on. Until this project was completed, Miami-Dade did not have a streamlined and homogenous process for dealing with the thousands of electricity invoices received every month (54,000 electricity bills each year) from our 4,500 electricity meters located at over 1,500 facilities. Miami-Dade is Florida Power and Light's (FPL) largest client in the State of Florida in terms of electricity consumption, with one billion kilowatt hours (kWh) of electricity consumption per year costing over \$100 million in annual electricity expenses.



For a solution to take hold, more than 200 employees across 24 County departments were trained on the new billing software. The software, known as EnergyCAP, provides a single billing management system for utility bills, such as electric bills. The software translates and audits the billing data and interfaces with all of the County's financial systems. In addition, EnergyCAP automatically uploads electricity consumption data to a U.S. Environmental Protection Agency's (EPA) system called ENERGY STAR Portfolio Manager, which calculates an energy performance score for registered buildings and sends it back to EnergyCAP. This allows the County to prioritize energy performance improvement projects, use actual data to measure savings resulting from energy performance improvement projects, and seek ENERGY STAR building certification for the highest scoring buildings. In the future, the County is planning to use this new system to track water and sewer utility bills and garbage bills.

Initiative 28: Continue to purchase hybrid-hydraulic diesel garbage trucks

| Description | Unit of Measure | 2015 Target | Quantity to date |
|--|-----------------|-------------|------------------|
| Hybrid-hydraulic diesel garbage trucks | Trucks | 126 | 35 |

The County has several initiatives related to alternative fuel vehicles that have helped the southeast Florida region to reduce the emission of carbon dioxide pollutants by approximately 3,500 tons over the past two years. Miami-Dade County operates the largest municipal hybrid fleet in the State of Florida and has the third largest municipal hybrid fleet in the United States, according to the U.S. Department of Energy. The county utilizes a variety of electric vehicles, including 441 hybrid-electric sedans, six hybrid pickups, three plug-in hybrid electric sedans, two electric sedans and 43 diesel-electric hybrid buses.

One focus of our fleet efforts has been our garbage trucks. In 2010, the County's Department of Public Works and Waste Management began to purchase hybrid hydraulic-diesel garbage trucks to replace diesel-only trucks. Federal funding from the U.S. Environmental Protection Agency helped to pay for the initial 15 trucks, and the County now owns 35 hybrid garbage trucks that are saving an average of 57,000 gallons of diesel fuel per year. The hybrid system stores energy captured during braking and releases that stored energy during acceleration, allowing the vehicle to run without using fuel. The application is most efficient during frequent stop-and-go use, such as trash pickup. These trucks also require fewer repairs, bringing additional savings into the equation. In addition to cost savings, this initiative also has health and environmental benefits because using less fuel means that these trucks generate less air pollution than traditional diesel-only trucks. These vehicles emit significantly less particulate matter, hydrocarbons, carbon monoxide, and carbon dioxide pollutants, and we estimate that each hybrid hydraulic garbage truck is reducing carbon dioxide emissions by as much as 40 tons per year.



"We still see about a 40% to 45% fuel reduction which allows us to save on our carbon footprint. The trucks run great."

- Daniel Diaz, Miami-Dade Public Works and Waste Management Department

Each garbage truck makes an average of about 1,000 stops per day, which is tough on brakes. A typical garbage truck requires new brakes every three months, but the hybrids only require new brakes once or twice a year. Additional savings are expected for tires.

Challenges and Opportunities

One of the primary challenges of this goal area is to make conservation and efficiency strategies for fuel, electricity, and water a priority, since they have been proven to be the most cost-effective and efficient techniques for reducing usage (demand). Many are unaware of the true advantages of these strategies, and instead tend to focus on repairs using traditional methods, supply-side solutions, such as building new water treatment facilities or looking to alternative fuels with unproven or short-term sustainability benefits. Supply-side solutions are seen as "cutting-edge" and "innovative" and since they require large financial investments, many businesses spend enormous sums of money on lobbying and marketing efforts to try to sway decision-makers to pursue these sometimes costly options. It is important for Miami-Dade to provide more education regarding the benefits of conservation. In addition, savings achieved through conservation should be prudently reinvested in further efficiency and conservation measures.

Technology can change very quickly and this can be both a challenge and an opportunity. Governments are typically very conservative about trying new technologies because of diligence in safeguarding the uninterrupted and consistent delivery of services, taxpayer dollars and reducing liability risks. Most governments do not have the resources to do the comprehensive, complex, multi-faceted analyses that are required to make sure that these new technologies are truly sustainable from an economic, environmental, and social perspective over the long-term. Collaborating with peers and sharing best practice experiences has helped to facilitate the implementation of new conservation techniques; however additional support from decision-makers is also critical.



Our Environment

At the most basic level, plentiful clean water, air, and land, are the foundation of Miami-Dade County's economy. Many businesses and people make Miami-Dade a destination to live, work, and play because of our clean breezes, abundant and clean drinking water, beautiful coastline and beaches, and unique ecosystems. Our ecosystems provide many economic, social, and environmental benefits that are often taken for granted. For example, coastal mangrove habitats help stabilize shoreline sediments, play a critical role as spawning and sheltering areas for many marine species (including those that are important to our commercial and recreational fisheries), and form a protective line of defense against storm surges. In addition to climate change, our natural systems remain vulnerable to other impacts from which they might not be able to recover. That is why many diverse stakeholders in our community are committed to monitoring, restoring, and protecting our invaluable natural resources and ecosystems.

Goals

- *Maintain exceptional quality of air, drinking water, and coastal waters used for recreation*
- *Protect and enhance Biscayne Bay, the Everglades, and vital ecosystems*
- *Reinvent our solid waste system*



Our Environment

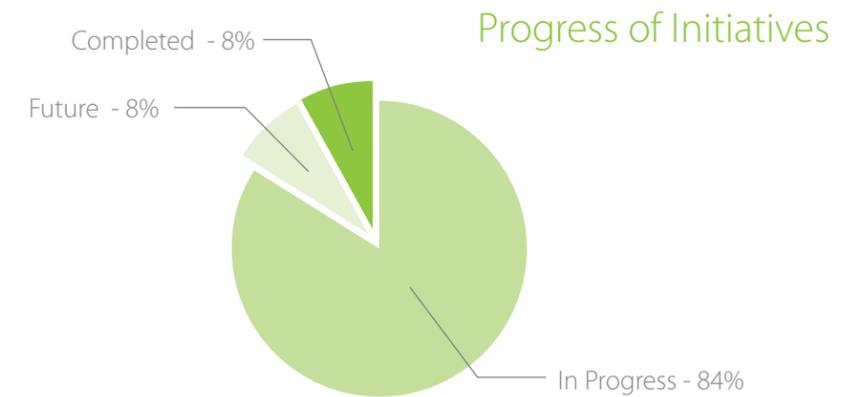
Implement wastewater reuse to provide future water supply and benefit the environment *(1 completed and 2 in progress initiatives)*

Address salt intrusion that threatens drinking water wellfields and sensitive natural areas *(1 completed, 2 in progress and 1 future initiative)*

Protect, enhance, and restore our natural resources *(6 in progress and 1 future initiative)*

Protect environmental and other lands that may be important for ecosystem and community resilience *(2 in progress initiatives)*

Develop a sustainable Solid Waste System and Master Plan, using waste to benefit our economy and environment *(8 in progress initiatives)*



Initiative 35: Monitor the isochlor line and address spatial gaps in salt intrusion data gathering

| Description | Unit of Measure | 2015 Target | Quantity to Date |
|---|--------------------------------|-------------|------------------|
| Monitoring well installations | Number of wells installed | 8 | 8 |
| Revision and publication of isochlor line | # of projects completed | 1 | 1 |
| Monitor chlorides | # of monthly monitoring events | 60 | 24 |

In our community, the source of our fresh drinking water lies under our feet. The Biscayne Aquifer, an underground shallow layer of limestone rock, contains enough tiny holes and cracks to hold billions of gallons of fresh water. This water is often referred to as groundwater, or the water table, and it provides virtually all of the fresh water that is used by South Florida residents, visitors, and businesses every day. One way to help protect this critical resource is to monitor potential impacts, which is why the County has been continuously tracking (for over 35 years) the extent that salt water has intruded from our surrounding coastlines into our fresh water supply. The extent of intrusion is known as the salt water front, or isochlor line. Miami-Dade County Water and Sewer Department (MDWASD), in conjunction with Miami-Dade Department of Regulatory and Economic Resources (RER), and the United States Geological Survey (USGS), are currently monitoring a network of 165 monitoring wells to identify movement of the salt front, and to map the location of the saltwater-freshwater interface.

Recent successfully completed efforts have included the installation of eight additional wells to help better track the salt water line, to publish an updated salt front line, and to make sure that monitoring data is accessible for online review by the public (<http://www.envirobase.usgs.gov/FLIMS/SaltFront/>). In general, there was no significant change between the 2008 and 2011 salt front line in the north and central areas of the County. However, the line has moved further inland in the south, compared to the original 1995 line. Chloride concentrations remained within historical range for most of the sampled stations.



Installation of a monitoring well for salt water front monitoring.

Initiative 45: Continue to acquire important lands through the Environmentally Endangered Lands (EEL) program

| Description | Unit of Measure | Target | Quantity |
|-----------------------------------|-----------------|--------|----------|
| Cumulative Acreage EEL properties | Acres | 24,000 | 23,600 |

Recognizing the historic loss, fragmentation, and degradation of native ecosystems, Miami-Dade voters approved a referendum in 1990 that established the Environmentally Endangered Lands (EEL) Program. This program works to acquire, restore, and maintain important natural lands for the benefit of present and future generations. Since the program was created, the value of our natural areas has been recognized to provide many other critical public services to our residents and visitors, such as:

- Replenishing our drinking water supply
- Protecting against saltwater intrusion
- Reducing stormwater runoff
- Helping regional restoration efforts
- Conserving native wildlife and habitats and helping species migrate from one part of the world to another
- Supplying services and products such as shading, pollination, and food
- Providing recreational space
- Increasing property values
- Helping maintain options to adapt to climate change effects over the long-term
- Providing carbon sequestration



Participants at an Environmentally Endangered Lands volunteer work day.

As of July 2013, the EEL Program funds active management of over 23,600 acres of natural habitat that have been purchased or designated under the EEL program. In 2004, \$40 million was approved for EEL acquisitions as part of the Building Better Communities Bond (GOB). However, the \$13 million remaining in the 2004 allocation will not be available until FY 2016-17 at the earliest because other bond funded projects now have higher priority. Therefore, while the 2015 GreenPrint target of 24,000 acres by 2015 may not be met, funding should be available for additional land acquisition in the next 5 to 10 years. Unfortunately the ecosystem, health, and economic benefits of these un-acquired lands remain vulnerable to conversion to other uses or development as long as they are not in public ownership.

Initiative 51: Continue to increase participation in the residential recycling program

| Description | Unit of Measure | 2015 Target | Quantity to Date |
|--|-----------------|-------------|------------------|
| Cumulative tons of recyclables collected | Tons | 303,282 | 167,187 |
| Pounds per household annually 2011 | Pounds | 375 | 352 |
| Pounds per household annually 2012 | Pounds | 375 | 359 |

How we manage and treat the waste we generate in our community greatly affects human health and the health of our environment (land, water, and air resources). In 2010, a bill was passed by the Florida Legislature which sets a goal for all counties in Florida to recycle 75 percent of their solid waste by 2020. One of the primary ways to achieve this goal is through our Miami-Dade Public Works and Waste Management (PWWM) recycling programs. In 2008 Miami-Dade introduced a new program that collected all residential recyclable materials mixed together, otherwise known as a single-stream approach. This new curbside residential recycling program has been steadily increasing the amount of our waste stream that is recycled every year. Under this initiative, the County is tracking the total number of tons of materials being recycled by unincorporated areas and the 20 municipalities to which we provide recycling services. In addition, the County is tracking monthly recycling rates per household. During the reporting period, the average pounds of recycled materials being collected per household per month went up from 29.31 pounds in 2011 to 29.90 pounds in 2012.



Challenges and Opportunities

One of the main challenges in this area is simply lack of awareness. Many people in our community take our natural resources for granted and do not understand that they are the basis for the livability and sustainability of our community and economy. Our population continues to grow steadily, thereby increasing pressure on these natural resources that support our region's unique quality of life. Our natural systems have historically been impacted over the years by flood control canals and other infrastructure that have altered natural freshwater flow and ecosystem functioning. Our porous high quality aquifer is vulnerable to sea-level rise and contamination, and if weather patterns become much drier, freshwater supply in the aquifer could be depleted. Our natural ecosystems must contend with invasive species and piecemeal protection. Our solid waste management system is challenged by an ever increasing waste stream (exacerbated in the aftermath of tropical storms and hurricanes), that must be responsibly and effectively managed. A renewed focus on waste reduction and reuse would benefit County residents, businesses, and natural resources. Therefore, as we continue implementation of GreenPrint, a primary need and opportunity will be to provide more effective education and outreach to all sectors and stakeholders in the community, about the multi-faceted value of our unique natural resources.



Responsible Land Use & Smart Transportation

As our population continues to grow, so does our desire for a livable and vibrant community. The U.S. Dept. of Transportation estimates that most trips (72 percent) are not work-related, but are personal trips such as those for errands, shopping, socializing, or recreation. A third of these personal trips are a mile or less, making them ideal for shifting to walking or biking trips given supportive infrastructure and design. Through its Comprehensive Development Master Plan (CDMP), the County designates urban centers, which serve as hubs for development intensification in Miami-Dade County, around which a more compact and efficient urban structure will evolve.

The CDMP also establishes mixed-use corridors connecting the designated urban centers. We are witnessing the fruits of almost 20 years of this effort in land use planning policies. Our urban core is developing at a breakneck pace: more people are living, working and playing in an area that stretches roughly from Midtown down to Brickell, between Biscayne Bay and I-95. And this unprecedented growth is also beginning to spread around the balance of the County's infill area and along the urban centers and mixed-use corridors located on the eastern side of the County. The importance of community design in shifting automobile trips to transit, walking and biking trips can not be overstated, and the inclusion of complete streets supportive policies in the CDMP, as well as a current study are laying the groundwork for formalizing guidance and advancing our progress in this area. The initiatives in this goal area aim to plan, design, and prioritize walkable, affordable communities supported by multimodal transportation options.

Goals

- *Use our land wisely, creating and connecting strong sustainable neighborhoods*
- *Provide more transportation options, reducing the time we spend in our cars*

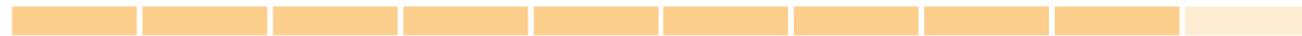


RESPONSIBLE LAND USE & SMART TRANSPORTATION

Better integrate planning and prioritize investments *(6 in progress and 2 future initiatives)*



Support existing communities and value neighborhoods *(9 in progress and 1 future initiative)*



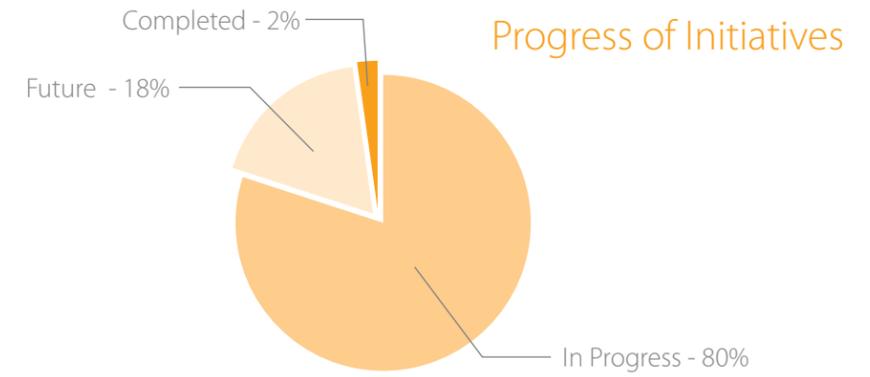
Increase bicycling & walking *(12 in progress and 2 future initiatives)*



Increase transit ridership *(1 completed and 6 in progress initiatives)*



Improve connectivity and mobility on the existing system *(3 in progress and 3 future initiatives)*



Initiative 56: Increase transit-oriented development (TOD)

The County is recognized nationally for its model of leasing land to create mixed-use developments around Metrorail and South Miami-Dade Busway stations. This type of development is commonly known as Transit Oriented Development (TOD), due to the relationship between a public transit facility and the surrounding development. TODs provide our residents and visitors with “one-stop-shops” – where they can live/stay, work, shop, recreate, and socialize. Roadways, landscaping, building orientation and building features within TODs establish the framework to support a higher density mix of land uses to create a bicycle and pedestrian friendly environment.

TODs provide more travel choices, save time, reduce household transportation costs, increase safety, reduce traffic congestion, and support our unique economic engines. A mix of housing, centers of employment, and shopping around transit allows residents to walk or bike for some short trips and encourages transit use to reach other destinations. Increasing populations living along these major transit corridors also helps support the cost of premium transit improvements. Zoning regulations specific to areas around transit hubs also promote the building of TODs by private developers, such as we see in areas like Downtown Dadeland and Brickell (see description of the CityCentre project in the Leadership Connections and Commitment Section).



Brownsville Transit Village residents benefit from their proximity to Metrorail.

Miami-Dade County, through its Transit Department, has been actively promoting Transit Oriented Development for over 27 years. As a whole, the County has twelve developments near transit stations that are either complete or currently under construction. Two of the four Transit Oriented Developments identified in the first 5-year cycle of GreenPrint are nearing completion or are under construction. The Brownsville Transit Village is a 5.8-acre joint development project that currently includes more than 400 workforce-housing units, with mid-rise apartment buildings, townhomes, a parking garage, ground-floor commercial space, and Metrorail station improvements. Residents benefit from immediate access to Metrorail and on-site amenities such as a community center, a computer lab and an exercise room. In addition, on-site community programs offer literacy training, health and nutrition classes, and first-time homebuyer seminars. The fifth and final project phase of the Brownsville Transit Village includes the addition of 65 more workforce-housing units.

Trip boardings at the Brownsville Metrorail station have increased by 29 percent.

Initiative 77: Fund and construct priority non-motorized multi-use trails

This initiative focuses on bringing enjoyable recreational areas and open spaces into more neighborhoods to help create closer-knit neighborhoods that are pedestrian and bicycle friendly. By making bicycling and walking viable options for everyday travel, we can cost-effectively improve our mobility, protect our climate, enhance energy security and improve public health. Multiple County and municipal agencies have designed and built many trails that lace our community together. Trails are one of the elements to creating a proper bicycle network which typically consists of bicycle lanes, bicycle boulevards, shared streets and off-street paths or trails. Bicycle mode-share is not likely to increase without a sufficient network in place.

Our Parks Recreation and Open Space Department, through the Open Space Master Plan, has built several miles of trails in the last few years, with 10 more miles planned by 2015. One such neighborhood improvement is the recent construction of the Snake Creek Trail, a 3.4 mile paved multi-use trail with enhanced landscaping designed for non-motorized use by cyclists, skaters, wheelchair users, walkers, runners, and people pushing baby strollers. This project is located on the south side of Snake Creek (C-9) Canal running from NE Miami Gardens Drive to Florida's Turnpike. The new trail is composed of a linear park and two mini-parks, each containing adult fitness stations, play climbers for tiny tots, bicycle racks, trash receptacles, a rain shelter, and benches. The new Snake Creek Trail connects to an existing 2 mile trail in North Miami Beach and to six other proposed trails. Investing in bicycling and walking projects like Snake Creek Trail offers unique opportunity to integrate physical activity into our daily routines.

The Miami-Dade Metropolitan Planning Organization's (MPO's) Complete Streets study will develop a Complete Streets Manual as well as apply the Complete Streets concepts to three corridors within the County.



Community members enjoying the newly opened Snake Creek Trail.

Challenges and Opportunities

One of the principal challenges in this goal area is the existing physical structure of our community. Like many regions across the United States, the advent of the automobile in combination with the availability of open land changed the urban form of our community to one of low density sprawling urban development. Although County policies and programs are beginning to re-institute sensible community designs of prior generations, vehicle trips are expected to increase by 47 percent over the next 25 years and there is a real need to alleviate congestion on our roads. However, projects to increase capacity by putting more cars on the road are the type receiving the majority of funding. Therefore, long term multi-modal mobility solutions are going to be essential in successfully accommodating our growing population.

In addition, new funding models are needed. Direct revenue streams are declining, primarily because gas tax collections in Florida were down \$1.2 billion as of 2012 and \$8 billion cumulatively since 2006. People are buying more fuel efficient vehicles, which is good in terms of air pollution emissions but not so good for infrastructure projects that rely on gas tax collections for funding. Another funding related challenge is the multi-year federal surface transportation bill known as Moving Ahead for Progress in the 21st Century, or MAP-21, which has significantly changed the way funding is provided for bike and pedestrian projects. Overall funding is 33 percent less than the funding previously provided for these types of programs.

While there are many challenges, there are also some positive trends that may begin impacting the types of infrastructure projects we fund. The first positive trend is the projections of where people will live versus where new jobs are expected. To understand the transportation needs of the county and identify and prioritize projects, the Long Range Transportation Planning (LRTP) process includes developing projections of where population and employment growth is expected to occur over the next thirty years. The recent projections show a considerable difference compared to those completed during the last planning cycle, five years ago. It conveys a shift in population growth to the urban core and other areas, indicating there may be fewer people than anticipated taking longer trips to work. Our transportation projects, including modes and locations, should be prioritized according to this shift in where we expect people to live and work.



Millennials are returning to walkable cities with multiple transportation options.

One of the causes of this shift, and the second "positive" trend, could be the new lifestyle preferences that are developing in our community. In addition to people seeking a generally more active lifestyle, the new generation, "millennials" favor an urban lifestyle. Respondents to a recent APTA survey described their generation as "financially strapped", and "happy with biking or walking, and see public transit as a way to meet people, connect, and have extra time to do work while commuting...and with smartphones it's easy to figure out bus schedules and keep connected while commuting" (American Public Transportation Association 2013).

Government by itself simply can't provide the multi-modal system these trends demand; federal dollars are drying up and the County is already doing more with less. Therefore, we should look for opportunities to collaborate and leverage resources, such as the Seven50 Prosperity Plan, a seven-county visioning plan for economic prosperity over the next 50 years. Another example is the recent "Compact" adopted by Miami-Dade, Broward and Palm Beach Counties, which formalized an agreement to work together on the issues of Transportation, Economic Development, Climate Change, and Everglades Restoration. Partnering with the private sector and other local governments in the region will help to deliver more efficient and effective solutions for our community.

Miami is ranked the 5th most congested metropolitan area in the nation, costing \$3.7 billion a year in time and fuel. \$250 million would be added to the cost of congestion if public transportation were not in place (Texas A&M Transportation Institute 2012).



Vibrant Economy

Global, national and local demand for green products and services, green buildings and infrastructure, green economic growth and green jobs is already impacting the business models and practices of Miami-Dade's businesses and industries. The local businesses and industries that drive Miami-Dade's economy can contribute to a more sustainable community through material selection, supply-chain management, businesses practices, and production of goods and services.

In addition to improving the sustainability of our community through its own procurement of environmentally preferable goods and services, government policies also have a direct impact on industry as well. For example, the County's Comprehensive Development Master Plan directs land development towards a more compact urban form, and we must effectively work with industry to implement that vision. These emerging trends that build local demand for sustainability will likely have a permanent impact on how businesses perceive their role in contributing to the welfare of the larger society beyond their own financial bottom line.

Goals

- *Create green jobs*
- *Build on our international reputation to become a green enterprise destination*



VIBRANT ECONOMY

Build a sustainable economy and promote green business (1 completed, 1 in progress and 2 future initiatives)



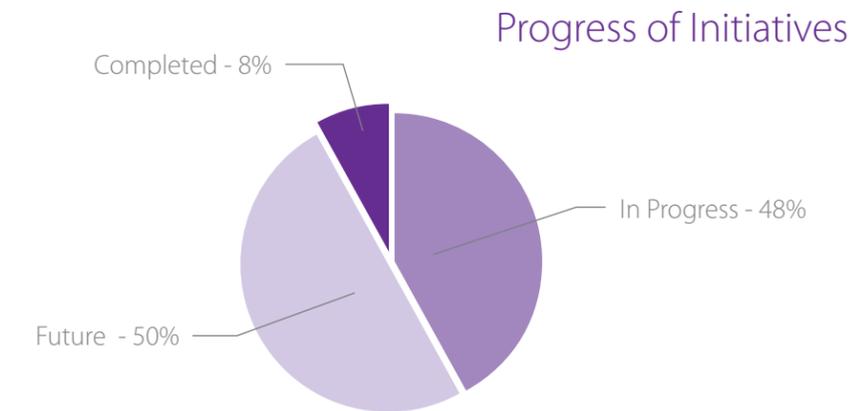
Expand our successful tourism and trade industries (2 in progress and 2 future initiatives)



Support educational institutions in their initiatives to develop a workforce for a sustainable economy (2 future initiatives)



Increase the sustainability of agricultural practices (2 in progress initiatives)



Initiative 101: Develop a Green Business Certification Program

| Description | Unit of Measure | 2015 Target | Quantity to date |
|---------------------------|-----------------|-------------|------------------|
| # of businesses certified | # of businesses | 750 | 15 |

The Miami-Dade County Green Business Certification (GBC) Program is a voluntary program designed to help and recognize local businesses that are comprehensively incorporating environmental stewardship into their operations. The program was launched the first quarter of 2011 with the goal of offering the Miami-Dade business community an opportunity to examine their current business practices and to implement green initiatives, such as minimizing waste, energy and water consumption, that will save money and increase their marketability while protecting natural resources (often referred as minimizing their ecological footprint). Certification from Miami-Dade's Green Business Program serves as an indicator that a particular business is considered to be a leader in developing more sustainable operations. Further benefits to going through the certification process include:

- Helps ensure efficient operations, thereby strengthening financial bottom line
- Improves employee morale, health, and productivity
- Provides a marketing edge over the competition
- Fosters compliance with current regulations and commitment to continue green practices after certification

The program's emphasis is on day-to-day operations and policies. The program's application involves an online, user-friendly process, and certification is based on a checklist of sustainability-related actions. At the end of the pilot program period, two hundred ninety-four (294) complete applications have been reviewed, and of these, 15 businesses qualified and were granted certification through our comprehensive process. Currently the Certification Program is designed for the restaurant, hotels, retail, office, and garment cleaning business sectors, but is anticipated to expand to other sectors during full-scale implementation.



Miami-Dade Green Business Certification steps



Cliffhanger Janitorial was proudly certified as a Miami-Dade Green Certified Business in 2012.

"We chose to set up our business and invest in Miami-Dade and raise our families here, so we think it is important to help protect the environment where we live and work. For example, our company uses rags that can be washed and reused instead of paper towels. Our decision helps the environment, but also helps to save us money. Going green and getting our certification is helping us to build on our success because it sets us apart from our competition."

-Yvonne Estrada, President Cliffhanger Janitorial

Initiative 107: Make our Airport and Seaport sustainability leaders

In size, the Miami International Airport (MIA) and PortMiami resemble small cities, meeting the needs of hundreds of thousands of travelers and the movement of thousands of tons of freight that pass through them each day. As two of the County's primary economic engines they can have a huge impact on the sustainability of our County. While both of these ports have achieved many green accomplishments over the years, this progress report focuses on activities implemented since 2010. However, our ports are not islands, therefore those who plan and build the roads and rail that connect our ports to our communities, and the private industries that move goods through them, are key partners in this endeavor.

Airport

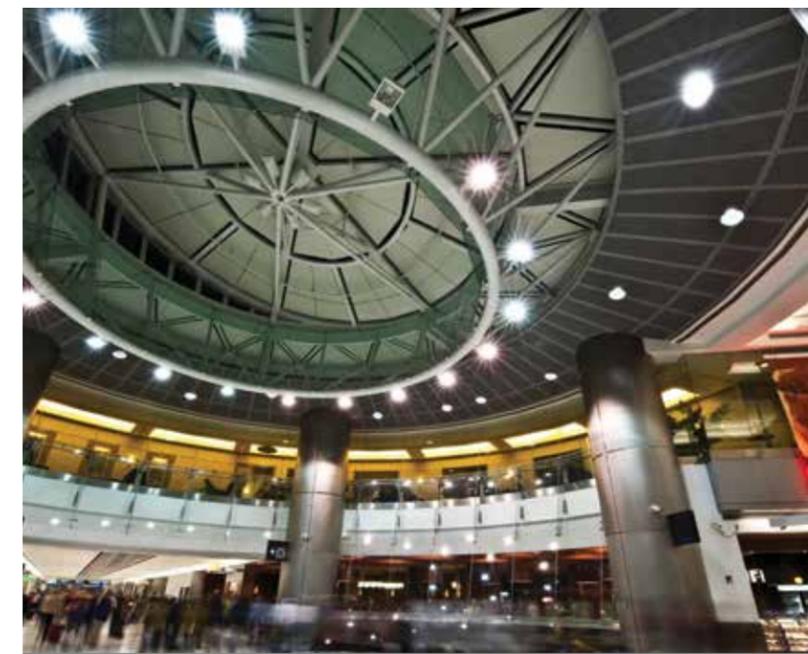
Several recent projects have increased the sustainability of airport operation, as well as reduced the emissions produced by the people and goods that move through it. The NW 25th Street Viaduct project is improving the movement of trucks carrying freight between Miami International Airport (MIA) and off-airport freight facilities, such as warehouse, and truck transfer stations. The project includes constructing a new viaduct (an elevated bridge) for dedicated air cargo transport. The first (eastern) phase of the project is completed and includes roadway improvements and partial viaduct construction. The second phase includes additional roadway improvements along the western part of the project and completes the viaduct construction. Phase 2 is expected to be complete by 2016.

Several advancements in the development of the Miami Intermodal Center (MIC), located just east of MIA, took place during this reporting period. The MIC is a massive \$2 billion ground transportation hub being built by the Florida Department of Transportation. The MIC consists of several components including the MIA Mover, the Rental Car Center, and the Miami Central Station (MCS). The MCS includes the AirportLink Metrorail extension, a Metrobus terminal, a Tri-Rail / Amtrak terminal, and an intercity bus terminal. The MIA Mover became operational in September 2011 and connects MIA to the MCS and the Rental Car Center. It is the first U.S. transit project to receive a Leadership in Energy and Environmental Design (LEED) Gold certification by the U.S. Green Building Council in March of 2012. The Mover has the capacity to transport more than 3,000 passengers per hour and eliminates more than half a million shuttle bus trips each year, reducing carbon emissions from Airport roadways by 30 percent.

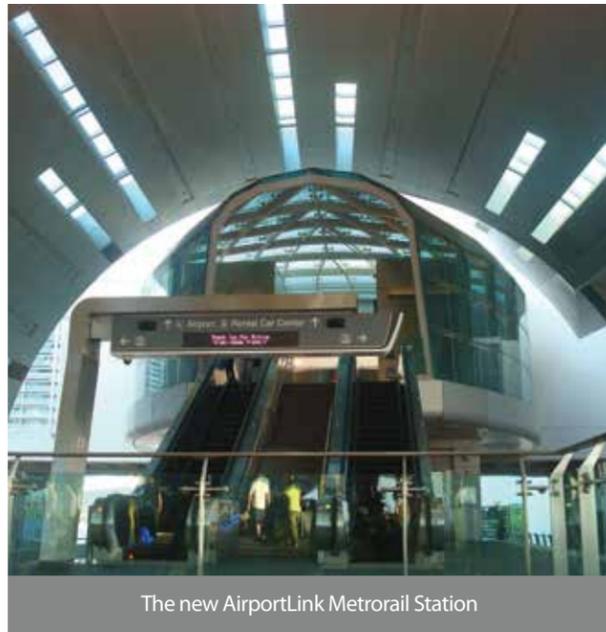
The NW 25th street viaduct is expected to reduce carbon emissions by more than 19,000 tons and save the freight industry \$630,000 annually in fuel costs. By 2035, this is expected to increase to 21,400 tons of carbon emissions reduced, with an associated fuel cost savings to the freight industry of \$705,000.

Another accomplishment is the completion of the AirportLink, a 2.4-mile extension of Miami-Dade Transit's Metrorail system to Miami International Airport. It was built using County and State funds and opened to the public in July 2012. This project provides our community with an affordable, car-free, and carefree option to travel to the airport, including the Airport's almost thirty-eight thousand public and private employees.

Construction of the AirportLink is estimated to have created over 2,000 jobs (95 percent in the private sector) and injected \$561 million into our local economy. Since opening in July 2012, the AirportLink Metrorail station is the gateway for over 1,300 additional daily Metrorail boardings.



Over the past ten years Miami-Dade Aviation Department has saved over \$12 million through energy performance contracting



The new AirportLink Metrorail Station

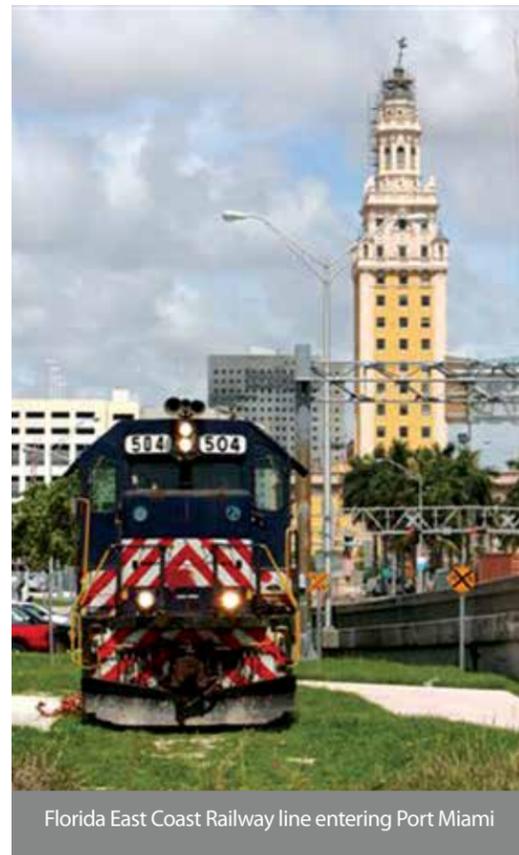
"We were impressed with the new MIA Metrorail extension. The train and station were clean and felt very safe. The trip was fast and we were able to relax and use the free Wi-Fi which performed well. The cost was a big savings compared to overnight parking. After returning from modern airports abroad I used to feel embarrassed by the lack of public transportation offered to visitors. Now I feel like Miami has finally taken a step toward becoming a modern world-class city."

-Daniel Benavides, Miami-Dade County resident

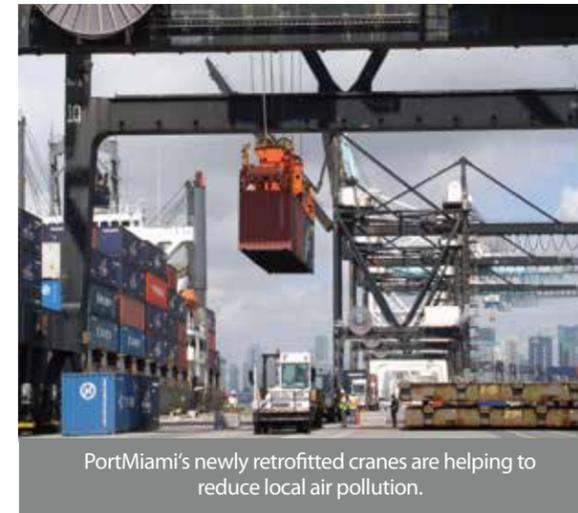
PortMiami

Several projects to facilitate freight movement were underway during this reporting period, including a \$50-million rail reconnection project funded in part by a \$23 million U.S. Department of Transportation grant (Transportation Investment Generating Economic Recovery - TIGER 2). Historically, a rail line was in use at the port since the 1960s, but was damaged in 2006 by Hurricane Wilma, and abandoned. Today shippers must rely solely on trucks to move containers in and out of the port. The rail reconnection project has three components, the first of which was completed in 2012. This phase involved upgrading a 4.5 mile long segment of a 12 mile long track line that leads from the port to the Hialeah intermodal rail yard terminal, owned by the Florida East Coast Railway LLC (FEC). Through the Hialeah intermodal rail yard terminal link, the completed project will have access to rail yards in Jacksonville, providing a tie-in to the national rail system. The second phase of the project will repair a damaged bascule bridge and the third phase will be to construct a new intermodal rail yard on the port island. This project is expected to be completed in 2014, contributing to several sustainability goals:

- Adding 822 construction jobs to the local economy
- Avoiding 34 million gallons of fuel and 200,000 tons CO₂ over the next 20 years
- Increasing container traffic by 15 percent through improved access
- Improving local redevelopment through increased pedestrian traffic and overall activity
- Increasing transportation choices with the potential future passenger rail service on the FEC corridor and linkage to the Metrorail



Florida East Coast Railway line entering Port Miami



PortMiami's newly retrofitted cranes are helping to reduce local air pollution.

Other freight related accomplishments during 2011 and 2012 were led by PortMiami and made possible by a partial grant from the National Clean Diesel Funding Assistance Program from the Environmental Protection Agency (EPA). The first project was the repowering of four existing Port gantry cranes that handle cargo containers. The diesel engines powering those cranes were removed and the units retrofitted to be run on electricity. In addition to the emissions benefit from eliminating diesel use by 100 percent, the project provides health benefits by reducing exposure to air pollutants and noise. An additional economic benefit is the reduced maintenance costs associated with diesel engines. The second project involved a partnership with Seaboard Marine, the Port's largest cargo tenant, to install diesel particulate filters (DPF) on twelve cargo container handler vehicles, known as mules. These are designed to achieve a 90 percent reduction in particulate matter from diesel emissions.

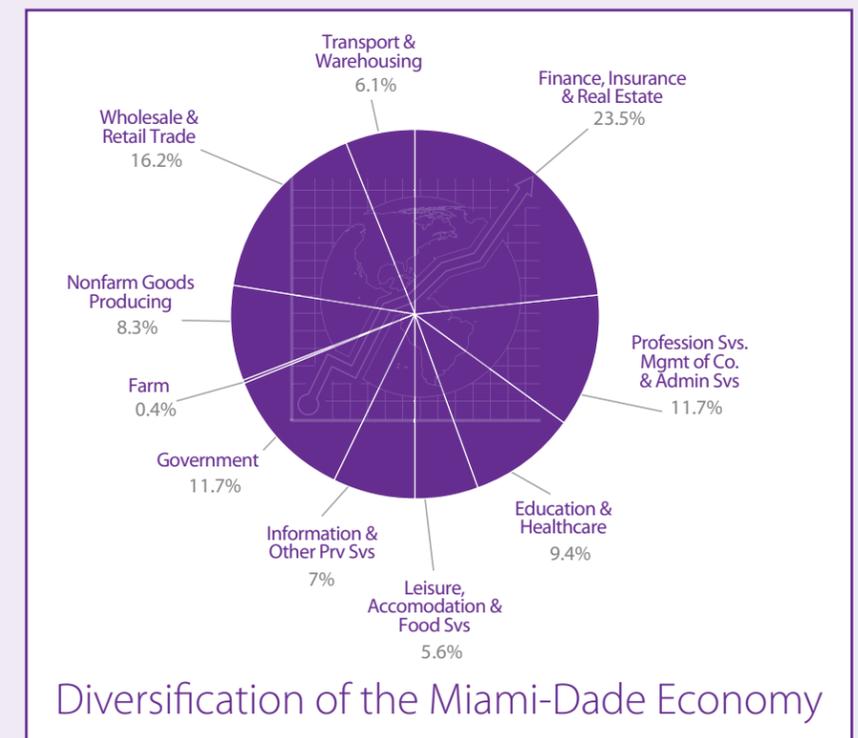
Challenges and Opportunities

Standard business plans project three to five years into the future. Sustainability planning uses lifecycle approaches and considers resources well into the future. Typical business plans focus on the financial bottom line. Sustainability plans focus on a triple bottom line that considers social, environmental, and economic factors. Reconciling the two models can be difficult.

The long-term perspective embraced by sustainability considers more factors including long-term livability, viability and prosperity of the community. But due to the newness of sustainability concepts and analysis, and general aversion to change, there is a tendency for business and government to continue to make short-term decisions and prioritize actions, without fully accounting for all benefits, even though these decisions may have long-term consequences. Therefore, one of the primary challenges is to transform the standard notion of economic impact, so that there is a broader understanding

of the basic connections between the health of our natural resources and the health of our economy and people. Once this recognition becomes widespread, it can foster a culture of change that will transform the economy. In terms of opportunities, Land use and zoning activities are also contributing to the sustainability of the airport area. In September of 2013, the Miami-Dade Board of County Commissioners rezoned a 220-acre area to create the Palmer Lake Metropolitan Urban Center (PLMUC). The Center will include the joint-development portion of the MIC and will contain a mix of residential, retail, hotel, office, and industrial uses.

The Airport and Seaport will continue to be hubs of increased economic development and will provide connectivity via various modes of transportation making regional travel for passengers and cargo easier.



Diversification of the Miami-Dade Economy



Healthy Communities

Being green is healthy, and this plan includes a focus on our daily quality of life as individuals. The growing cost of health care, especially preventable conditions associated with obesity and lifestyle disease, is an expensive problem for our community, and our nation. This plan also focuses on overall neighborhood-level health through community design initiatives that incorporate an abundance of trees and gardens, parks and open spaces, safe paths for biking and walking, and access to healthy foods. Focusing on and investing in the social aspects of personal health and quality of life are also beneficial to our local environment and economy. Diet and exercise have a clear link to reducing greenhouse gas emissions, by promoting walking and biking over driving, and by increasing consumption of locally grown food that requires little transportation for shipment.

Goals

- *Raise awareness that sustainable living is healthy*
- *Plant more Florida-friendly and native trees and landscapes*



HEALTHY COMMUNITIES

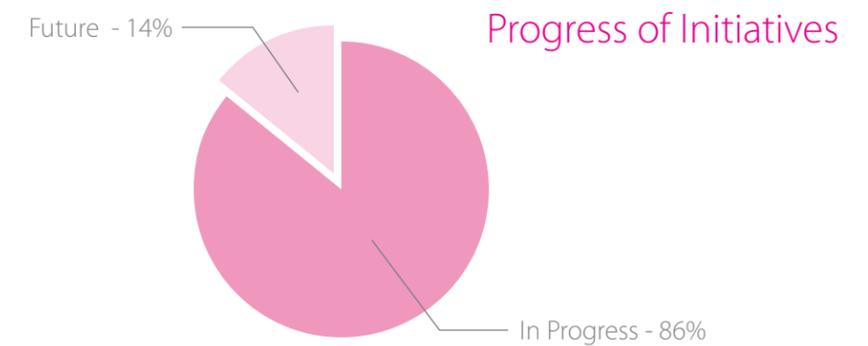
Facilitate active and safe lifestyles for residents through the Open Space Master Plan and other community initiatives
(5 in progress and 2 future initiatives)



Plant more trees (3 in progress initiatives)



Promote fresh, local, organic food in all neighborhoods through grocers, farmers' markets, and community gardens
(4 in progress initiatives)



Initiative 116: Increase safe walking, bicycling and driving behaviors through educational, public awareness and social marketing programs

| Description | Unit of Measure | 2015 Target | Quantity to Date |
|--|-------------------------------|-------------|------------------|
| Residents served through MDPD bike/pedestrian educational programs | # of residents | 599,000 | 308,149 |
| Annual average number of schools served | # of schools served (average) | 130 | 130 |

A community with safe, walkable and bikeable streets is a healthier community. These kinds of streets are still not the norm in Miami-Dade, which were built with the car in mind, and our culture still gives priority to cars for transportation. Fortunately, there are many stakeholders in our community advocating for pedestrians and bicyclists, such as the South Florida Bike Coalition and Miami Bike Scene. Novel ways to encourage more biking are being tried such as the 2013 New World Symphony's partnership with the Green Mobility Network and Emerge Miami to create a cycling-themed evening at the symphony, including complimentary valet bicycle parking! There are also many community partners providing education and outreach on bike and pedestrian safety, primarily to school age children, such as the University of Miami School of Medicine, the Miami-Dade Public School system, the Federal Department of Transportation, the U.S. Department of Health and Human Services, the Miami Dade Health Department, the Miami-Dade Police Department and the Miami-Dade Parks, Recreation and Open Space Department.

The Miami-Dade Police Department has three separate programs that provide bicycle and pedestrian safety trainings to students in private and public elementary schools and daycare centers, as well as to the general public. In addition, they provide school crossing guards at elementary schools and support pedestrian and bicyclist safety programs managed by other community partners such as local participation in International Walk to School Day. This type of education can encourage our community to participate in activities that can help combat hypertension, diabetes, and other medical conditions. In addition, every time our residents choose to walk or bike to a destination instead of driving, tail-pipe emissions are avoided.



Miami-Dade Police Department and other community organizations provide bicycle and pedestrian safety training to County residents.

Bike and Pedestrian Injuries and Fatalities



Bike and Pedestrian injuries and fatalities data (Florida Department of Highway Safety and Motor Vehicles 2013)

Initiative 121: Promote landscaping and gardening suitable for South Florida

| Description | Unit of Measure | 2015 Target | Quantity to date |
|--|-----------------|-------------|------------------|
| Classes about South Florida friendly gardening & landscaping | # of classes | 1,585 | 974 |
| Participation in classes referenced above | # of attendees | 55,000 | 18,416 |
| Educational contacts | # of contacts | 150,000 | 125,969 |

Planting more vegetation and taking care of our existing trees, landscapes, and gardens is another important initiative in this goal area. The Miami-Dade County Cooperative Extension is a partnership between the County's Department of Regulatory and Economic Resources and the University of Florida/Institute of Food and Agricultural Sciences Extension. It is an excellent community resource that educates homeowners about how to design, install, and maintain healthy landscapes in our South Florida climate by using a minimum of water, fertilizer, and pesticides. The result: low-cost, low-maintenance, attractive landscapes that add value to the sustainability of our community in the following ways:

- Plants make the outdoor environment shadier and cooler
- Landscaping can increase property values
- Cooler streets attract more neighbors to the outdoors which lowers crime rates
- Consumers spend more money and return more frequently to shopping areas with street trees
- Plants help retain rain water and reduce surface water runoff and erosion
- Vegetated areas help replenish our aquifer and help filter out some pollutants
- Vegetated areas create habitat for wildlife, including food pollinators
- Gardening activities provide cardiovascular exercise benefits



Teaching county residents about Florida-friendly landscape care

Summer daytime air temperatures can be 3–6 degrees cooler in tree-shaded neighborhoods compared to treeless areas (U.S. Department of Energy 2007).

The Cooperative Extension has many programs that serve a wide range of audiences including homeowners, commercial landscapers and nurseries, municipal departments, developers and builders, and pest control operators. Over one million website users accessed online educational materials provided by the Miami-Dade Cooperative Extension Service during the reporting period. A survey conducted by the Extension Service (University of Florida Institute of Food and Agricultural Sciences Extension 2013) indicated that interest in backyard vegetable gardens has increased significantly in recent years. The most important reason cited by the survey respondents was a desire for safe and healthy food.

Challenges and Opportunities



Miami-Dade County Extension staff educates homeowner about gardening techniques that save water

Carefully positioned trees can save up to 25% of the energy that a typical household uses for cooling (U.S. Department of Energy 2007).

One of our primary challenges in this goal area is tracking the progress of our initiatives. This is because many of the initiatives are led by nonprofit or community-based organizations that do not have the staff or technological resources to track the data needed to assess the progress. In addition, often there is not a designated entity that has been historically responsible for collecting data of interest.

For example, there is no individual group or entity in our community that tracks bike and pedestrian education and outreach activities that are conducted by all of the different individual organizations who coordinate them. Even though some

initiative-specific data is hard to come by, we have other data that help us to understand our overall progress. For example, we can look at broader data that is collected on pedestrian and bicyclist accidents to see whether injuries and fatalities are diminishing. This can be used as an indicator as to whether our community is successful in prioritizing pedestrian and bicyclist safety. Unfortunately, the South Florida metropolitan area (including Miami-Dade, Fort Lauderdale, and Pompano Beach) was ranked as the fourth most dangerous place to walk in the United States in 2011 (Transportation for America 2011), demonstrating that we need to make more progress in this area. Other important statistics to look at are the percent of local food production that stays local, currently assessed at less than 10 percent, and the percent of local food production that is organic, currently assessed at 1 percent (LaPradd 2013).

In 2012, Miami-Dade County's Office of Sustainability, nonprofit "ioby" (which stands for "in our back yards"), and the Health Foundation of South Florida partnered together and obtained grant funding from the Funders' Network for Smart Growth and Livable Communities. As part of the grant, ioby established a Miami office to bring a web-based crowd-resourcing platform that supports community-led, neighbor-funded projects such as the creation of community gardens, farmers markets, and mini parks for stronger, more sustainable neighborhoods. This organization's online tools allow a much broader audience (crowd) to see and access the projects via a web page, facilitating contributions of needed resources such as funds, supplies, and volunteer time. It is anticipated that this partnership will facilitate more community projects and involvement in support of the Healthy Communities goal area.



The Opa Locka Community Development Corporation has partnered with ioby to help develop a Kaboom! Playground at this location.



Climate Change Action Plan

Our community has long been recognized as one of the most vulnerable to the impacts of climate change. Some of our greatest challenges include sea level rise, more frequent extreme weather events, and changes in rain patterns and intensities. The good news is that Miami-Dade County is already familiar with planning for and addressing damages from severe thunderstorms, tropical storms, and hurricanes, and as a result, existing programs and initiatives position us well for addressing the challenges that climate change brings. Yet there is much more to do. As a community built essentially at sea level, rain and tidal events are current stressors that will worsen with rising seas, changing precipitation patterns, and extreme weather events. This Climate Action Plan was developed in recognition of the need for continued and coordinated action on this front. It was designed to help us use science as a foundation for planning, to fortify partnerships, and to lay the groundwork for well-informed and responsible capital, operational, and land use decision-making by both government and the business community.

As discussed in the Leadership, Commitments, and Communication Goal Area, there has been quite a bit of focus on organizing regionally and developing a framework that complements and enhances the actions of individual cities and counties. Much of the earlier efforts of task forces, advisory committees and plans from individual counties, such as this Miami-Dade Climate Action Plan, have been woven into the work being done at the regional level.

The initiatives presented here focus on adapting to change and building resiliency. Many of the initiatives highlighted in other GreenPrint goal area sections contribute to reducing our emissions. Both types of strategies are critical to a comprehensive Climate Action Plan.

Goals

- *Understand and respond to current and future climate change impacts*
- *Reduce greenhouse gas emissions*



CLIMATE CHANGE ACTION PLAN

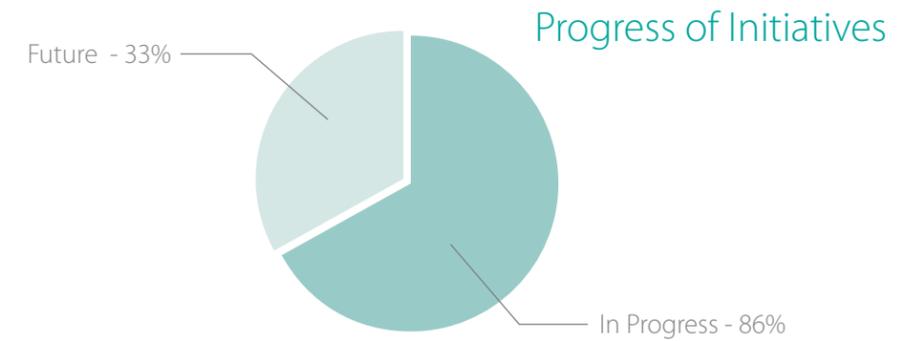
Track local and regional climate change indicators and trends *(2 in progress and 3 future initiatives)*



Develop local and regional climate change scenarios depicting various impacts and time frames *(3 in progress initiatives)*



Integrate future climate change impacts into community and government decision-making for capital, operational, and land-use issues *(3 in progress and 1 future initiative)*



Initiative 133: Continue existing local surface water, ground water, and salt water intrusion modeling projects, incorporating expected climate change impacts (i.e. changes in temperature, precipitation, sea level rise, etc.) and integrating with regional water modeling projects from the South Florida Water Management District and other SE FL Climate Change Compact partners.

This initiative captures the need for more robust modeling to better guide our responses as we continue to experience the effects of climate change. Our County has great expertise and skill in addressing flooding impacts, primarily through the development of our Stormwater Master Plan. Because maintenance of our stormwater infrastructure and the preservation of our coastal habitat play such a critical role in minimizing flooding impacts, they are both addressed in the Stormwater Master Plan. Saltwater intrusion, accelerated by sea level rise, is another concern that the County is already addressing because it affects the source of our drinking water, the Biscayne Aquifer.

The County has continued to work with local, regional, and federal partners to make progress on this initiative. As discussed briefly in the Leadership, Commitments and Connections Section, a preliminary analysis of vulnerability to sea level rise was developed in August 2012 through the four-county SE Florida Regional Climate Change Compact partnership. This analysis and others only take land elevation into account, and do not consider drainage systems or surface and groundwater interactions with rising seas or rain events. The preliminary analysis has value in identifying low-lying areas that are vulnerable to tidal influence and sea level rise. However, models that also incorporate interactions of surface water and ground water and their impacts on our infrastructure (canals, pump stations, drains) are necessary in order to better assess projected impacts. It is these projections that we need in order to guide capital investment decisions and develop long-range plans for providing services.

Miami is ranked number one in the world in terms of assets exposed to coastal flooding projected by 2070, and among the top ten for populations exposed to coastal flooding (Organisation for Economic Co-operation and Development 2007).



Severe local flooding from natural high tides will be exacerbated by sea level rise.



Typical canal salinity structure.

The United States Geological Survey (USGS), in partnership with the County, is in the final stages of developing such a model – one that assesses existing and future impacts on water resources in South Florida. The model, which is currently undergoing a rigorous peer review process as required by USGS, will more accurately represent surface water flow through the regional canal network and canal-aquifer interactions in future model scenarios. Studies indicate that rain will be concentrated in more storm events, with longer and drier periods in between, producing a considerable impact on water availability, drainage, and canal operations. The model was developed at a total cost of over three million dollars, and with the input of many organizations to ensure that it meets the expectations of the County, regulatory agencies, and other interested stakeholders. Once fully developed, the tool will become available for anyone to use. Some of the outputs, uses, and benefits of this project include:

- Modeling the effect of sea level rise on saltwater intrusion into the Biscayne Aquifer, our primary source of fresh drinking water
- Modeling canal system function and response that might change with different rain patterns and groundwater levels
- Identification of canals and structures at risk of exceeding operational capacity
- Evaluation of adaptive techniques that can be used on canal structures, such as increasing pump size, to compensate for impacts
- Evaluating how land use (agricultural, suburban, and urban) affects the model scenarios and outputs
- Providing a scientific basis for establishing new groundwater level conditions for use in the County's Storm Water Master Planning process
- Integrating with models being developed in Broward County, to better coordinate regional water resource planning.

Initiative 136: Develop mechanisms for organizations to integrate potential climate change impacts into capital and operational decision making

After policy analysis in 2011, the County completed a public engagement and policy analysis process known as Evaluation and Appraisal Report (EAR)-Based Amendments to address the issue of climate change in October 2012. The EAR Report maintains that issues known to impact the development and infrastructure investments of and within the County should be addressed, or at least duly considered, in the formulation of the County's policy statements regarding development. While there are some early examples of County departments factoring future sea level rise into planning and designing projects, this practice became official County policy on October 2, 2013, with the adoption of these amendments to the County's Comprehensive Development Master Plan (CDMP) by the Board of County Commissioners. Therefore, the following policies addressing climate change have been integrated throughout the CDMP in order to institutionalize its consideration:



- Analyze impacts on the built environment
- Address development standards and regulations to be used to guide investments in public infrastructure development, redevelopment, and operations in hazard prone areas
- Analyze the vulnerability of public infrastructure, such as public buildings, water utility facilities, roads, bridges, ports, and transit stations
- Determine the feasibility of designating areas as Adaptation Action Areas (AAA), a voluntary designation available in Florida Statutes that can be used by local governments in their coastal hazard management program for areas at risk for of coastal flooding and tidal inundation
- Engage and educate the public as well as use advocacy, and incentives to shift residents' everyday transportation decisions and housing choices to support transit-oriented development
- Consider climate change and sea level rise in public investment processes and decisions, specifically in fiscal decision-making and in project review, design, and funding prioritization



- Require all County departmental master plans and strategic business plans to include and prioritize different strategies to address climate change impacts and to create plans with longer time-frames (i.e. 30, 50, 75-year plans)
- Redirect future population concentrations away from vulnerable areas
- Continue active participation in the Southeast Florida Regional Climate Change Compact

These CDMP changes are the County's first formal step toward institutionalizing climate change considerations into County planning and operations, and are an important move toward developing a sustainable community.



A newly constructed earthen plug along Card Sound Road will help limit salt water intrusion

Challenges and Opportunities

The impacts of climate change are not always obvious, and our response to climate change might not be obvious either. Walls to keep out rising seas will not work in our community due to our porous geology. Therefore, we must adapt using different approaches. We can build resiliency into our landscape in more subtle ways, and weave it into policies, programs and practices, for example, continuing and enhancing acquisition and restoration of coastal wetlands and exploring refinements of the building code or flood criteria. In order to do so strategically, we must have a better understanding of the cost and timing of adaptation strategies, as well as the cost of taking delayed or no action at all.

A 2005 study found that on average, a dollar spent by the Federal Emergency Agency on hazard mitigation (actions to reduce disaster losses) provides the nation about \$4 in future benefits (Multihazard Mitigation Council 2005).



Sustainability Scorecard

Tracking the progress of initiatives is an important component of our data driven results-oriented sustainability plan. Measuring progress is crucial to GreenPrint's success. Other high-level key performance indicators were selected to be included below in some instances where initiative-specific data is not available, in order to better assess current progress. Stoplight indicator colors are included to provide an understanding of progress relative to targets and/or intermediate milestones.

sustainability scorecard

Strong Leadership, Connections, and Commitment

• Create the next generation of green leaders

| Indicators | 2015 Target | 2011/2012 | Progress |
|--|-----------------------|-----------|--------------------------------------|
| County sustainability legislation | >100 | >100 | ● |
| Stakeholder meetings | Quarterly | <4 | ● |
| Sustainability grant funding related to GreenPrint initiatives and scorecard measures (number of grants) | Based on availability | 118 | ● |

Water and Energy Efficiency

• Use less water and energy

| Indicators | 2015 Target | 2011/2012 | Progress |
|---|-----------------------------|---|---------------------------------------|
| Community water conservation (in Million Gallons per Day) | 1.5 million gallons | 2011-1.92 MGD 2012-1.74 MGD | ● |
| County government energy use (in Mega Watt Hours) | 20% reduction | 2011 – 1,202, 970,695 MWh 2012 – 1,243,609,792 MWh | ● |
| Renewable energy produced from County government operations | 5% increase | CY 2011 – 301,603 MWh CY 2012 – 330,159 MWh | ● |
| Community Energy Star facilities | >132 | 70 | ● |
| Combined Greenhouse Gas Emissions Reduction (metric tons) for the Energy Efficiency Block Grant (EECBG) in Carbon Dioxide Equivalents | 54,000 mt CO ₂ e | 36,442 mt CO ₂ e | ● |
| Energy Efficiency Block Grant (EECBG) funding | \$12,523,700 | \$12,523,700 | ● |

 Our Environment

• Maintain exceptional quality of air, drinking water, and coastal waters used for recreation

| Indicators | 2015 Target | 2011/2012 | Progress |
|-----------------------------------|-------------|----------------------------|---|
| Air quality index best rating | 90% | 2011 – 91% 2012 – 88% |  |
| Drinking water quality rating | 100% | 2011 – 100% 2012 – 100% |  |
| Biscayne Bay water quality rating | 95% to 100% | 2011 – 100% 2012 – 100% |  |

• Protect and Enhance Biscayne Bay, the Everglades, and vital ecosystems

| Indicators | 2015 Target | 2011/2012 | Progress |
|---|--------------|------------------------------|---|
| Coastal habitats and wetlands restored | 525 acres | FY2011 – 560 FY2012 – 577 |  |
| Environmentally endangered lands preserved (cumulative) | 24,000 acres | 23,600 acres |  |

• Reinvent our solid waste system

| Indicators | 2015 Target | 2011/2012 | Progress |
|------------------------------|-------------|--|---|
| Household curbside recycling | 375 lbs | 2011 – 351.69 lbs 2012 – 358.77 lbs |  |

 Responsible Land Use and Smart Transportation

• Use our land wisely, creating and connecting strong sustainable neighborhoods

| Indicators | 2015 Target | 2011/2012 | Progress |
|--|-------------|--------------------------------------|--|
| Urban center area plans | 15 | 4 |  |
| Multi-corridor master plans | 6 | 2 |  |
| Transit-oriented developments | 4 | 1 |  |
| Enhanced Bus Corridors and transit line improvements | 4 | 0 |  |
| Park and ride lots | 6 | 4 |  |
| Park and open spaces accessibility metrics | Develop | New Equity Access Criteria Developed |  |

• Provide more transportation options, reducing the time we spend in our cars

| Indicators | 2015 Target | 2011/2012 | Progress |
|---|----------------------|--|---|
| Transit ridership (Additional annual boardings) | 10 million boardings | 2011 – 7.1 million 2012 – 9.5 million |  |
| New bicycle trails and lanes | 40 miles | 2011 – 20.6 miles 2012 – 13.6 miles |  |

|  Vibrant Economy | | | |
|--|-------------|-------------------------------------|---|
| • Create Green Jobs | | | |
| Indicators | 2015 Target | 2011/2012 | Progress |
| Green Business Certifications | 750 | 15 |  |
| Unemployment rate | <12.5% | 2011 – 11.10% 2012 – 9.3% |  |
| Educational attainment | Improve | 2011 – 78% 2012 – 80.4% |  |
| • Build on our international reputation to become a green enterprise destination | | | |
| Indicators | 2015 Target | 2011/2012 | Progress |
| Green hotels | 132 | 2010 – 48 2011 – 49 2012 – 50 |  |

|  Healthy Communities | | | |
|---|-------------|--|---|
| • Raise awareness that sustainable living is healthy | | | |
| Indicators | 2015 Target | 2011/2012 | Progress |
| Diabetes rate | Decrease | 2007 – 9.1% 2012 – 10.8% |  |
| Heart disease death rate | Decrease | 2009 – 211.3 per 100K 2012 – 201.4 per 100K |  |
| Adult obesity rate | Decrease | 2008 – 22.3 per 100K 2012 – 24.8 per 100K |  |
| Farmers Markets | Increase | 2010 – 15 2012 – 16 |  |
| Community Gardens | Increase | 2012 – 18 |  |
| • Plant more Florida-friendly native trees and landscapes | | | |
| Indicators | 2015 Target | 2011/2012 | Progress |
| Tree plantings (cumulative) | 500,000 | 135,000 |  |

|  Climate Change Action Plan | | | |
|--|---|---|---|
| • Understand and respond to current and future climate change impacts (Adaptation) | | | |
| Indicators | 2015 Target | 2011/2012 | Progress |
| FEMA flood rating | 5 | 5 |  |
| Local & regional Sea Level Rise Maps for planning | Complete by 2012 | Completed |  |
| Initial sea level rise vulnerability assessment using agreed upon Climate Change Compact parameters | Complete by 2011 | Completed |  |
| Groundwater modeling projects | Complete by 2012 | In Progress |  |
| • Reduce greenhouse gas emissions (Mitigation) | | | |
| Indicators | 2015 Target Reduction (mt CO ₂ e)* | 2011 & 2012 Reduction (mt CO ₂ e)* | Progress |
| Strong Leadership, Connections, and Commitment | 17,000 | 0 |  |
| Water and Energy Efficiency | 574,000 | 28,402 |  |
| Our Environment | 20,400 | 4,888 |  |
| Responsible Land Use and Smart Transportation | 532,000 | 125,387 |  |
| Vibrant Economy | 326,000 | 958 |  |
| Note: There were no emissions reductions initially projected for the GreenPrint Healthy Communities Goal Area, so it is not represented in this table. | | | |

* Metric Tons Carbon Dioxide Equivalents (CO₂e)

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Check out the complete
GreenPrint Sustainability Plan
and list of initiatives at:





HELP US KEEP MOVING FORWARD!

Check out GreenPrint along with a complete list of initiatives at
www.green.miamidade.gov

