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# SHORES FORWARD

## *A Partnership to Protect the Magic City's Ocean and Coasts*

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*As a community, it's essential that we share the wonders of Miami's waterways, Biscayne Bay and ocean, the challenges facing them, and what we can do about it. Person to person, neighbor to neighbor, we have to spread the word!*

### WHAT IS SHORES FORWARD?

Shores Forward is a new Ocean Conservancy initiative to partner with local governments to protect Florida's oceans and coasts. Florida's environment is at an all-hands-on-deck moment. The state's beaches, waterways and wildlife are precious natural riches that are the beating heart of Florida's tourism industry, Florida's economy, Florida's culture and the Florida way of life. Solving Florida's ocean and coastal environmental challenges won't be easy and will require leadership from all levels of government. Through the Shores Forward initiative, Ocean Conservancy is partnering with forward-thinking local government leaders on ocean solutions in five key areas: water quality, marine wildlife, education & outreach, ocean trash, and carbon pollution.

### WHY MIAMI?

What better place to launch the first Shores Forward partnership than with the Magic City? In Miami, the connection between the ocean and the local community are inseparable. The health of Biscayne Bay, the Miami River, and our surrounding Ocean is critical to Miami's economy, sustainability and quality of life.

Miami is establishing itself as a trailblazer in protecting the ocean for future generations. City leadership is stepping up to lead the charge on these conservation issues that are near and dear to Miamians' hearts.

Every day new environmental challenges emerge that threaten Miami's special connection with the ocean. Fortunately, when it matters most, Floridians are resilient and come together to find ways to protect their home. It's exciting that the City of Miami is taking comprehensive action on behalf of our ocean.

### WHO IS OCEAN CONSERVANCY?

Ocean Conservancy is a science-based non-profit organization working to protect the ocean from today's greatest global challenges. Ocean Conservancy has worked to protect Florida's ocean and coastal environment for over 30 years, working to keep beaches clean and fisheries healthy. In early 2019, Ocean Conservancy released Currents Crossroads: A Vision for Florida's Oceans & Coasts, which details the challenges facing Florida's ocean and coastal environment and actions all Floridians can take to ensure healthy oceans and coasts.





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## EDUCATION & OUTREACH

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*As a community, it's essential that we share the wonders of Miami's waterways, Biscayne Bay and ocean, the challenges facing them, and what we can do about it. Person to person, neighbor to neighbor, we have to spread the word!*

### NEW INITIATIVES

**Green Schools Challenge:** The City of Miami and Ocean Conservancy have partnered with Dream in Green to launch a Mayor's Challenge that will encourage students in Miami to explore water quality and conservation. This will highlight and encourage schools within the City of Miami to participate in ocean conservation education. Ocean Conservancy worked with Dream in Green to develop classroom curriculum based on its Currents & Crossroads report, and city staff will add to this effort by making presentations in schools and classrooms on reducing waste and adopting storm drains that flow to Biscayne Bay. The city will also incorporate ocean education curriculum into programming for Parks afterschool programs and summer camps.

**Florida Friendly Fertilizer Usage:** The City of Miami will be launching an educational campaign around best management practices for fertilizer use. This campaign will be done in partnership with Ocean Conservancy and Miami Waterkeeper, and will include the development of materials to explain responsible fertilizer application methods to consumers and private users. Materials will be made available in English, Spanish and Kreyol.

**Storm Drain Markers:** The City's Department of Solid Waste will launch a stencil storm drain program to educate K-5 students on the importance of protecting Biscayne Bay. This will help mark the city's storm drains with 'no dumping' markers, also raising awareness for the general public about the connection between what happens on city streets and the health of the bay. The City and Ocean Conservancy are co-funding this effort.

### ONGOING INITIATIVES

**Keep Miami Beautiful:** Through its ongoing work with Keep Miami Beautiful, the city helps support zero waste education and outreach efforts, supporting over 91 events and reaching over 35,000 people.

**Miami River Commission Annual River Day Festival:** The City's continued engagement in the annual Riverday Festival helps spread awareness of the importance of the Miami River.

**Virginia Key Education and Ecosystem Restoration Partnership with Frost Science MUVE program:** The City's ongoing partnership with the Frost Science Center's MUVE program not only helps educate people about the important natural resources and wildlife habitats of Virginia Key – it does so in an engaging way that helps restore Virginia Key's ecosystems and natural habitats.



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# OCEAN TRASH

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*Tackling trash in our waterways, Biscayne Bay and ocean means both cleaning up what's already there and stopping trash and plastics at its source – preventing trash and plastic pollution from entering Miami's waterways, Biscayne Bay and beaches in the first place.*

## NEW INITIATIVES

**City-Wide Plastic Pollution Survey:** Miami will be first major U.S. city to conduct a comprehensive, city-wide plastic pollution survey. This survey will quantify the sources of plastic pollution across Miami, identify actions that can reduce the city's plastic pollution inputs and provide a data-driven set of policy guidance for solutions. Ocean Conservancy and the City will be working collaboratively with outside scientific experts to conduct this survey in 2020.

**Sustainable Events Summit:** Ocean Conservancy will be working with the City of Miami, Miami stakeholders and event planners to organize a Sustainable Events Summit that develops best practices and solutions to lessen or eliminate negative impacts of such events to the ocean and coastal environment that is Miami's backyard. The summit will be held in 2020.

**Collecting litter for Super Bowl 2020:** The City is committed to being part of "Team Ocean" by helping Ocean Conservancy meet its goal of collecting 54 tons of litter by Super Bowl 2020. Since March 2019, the City of Miami and volunteer groups have collected over 35 tons of litter at over 50 events.

## ONGOING INITIATIVES

**Scavenger 2000:** The City's water decontamination vessel, called Scavenger 2000, removes over 5,000 cubic feet of floating marine debris per year and significantly improves water quality by injecting 150,000 liters of oxygen into 600,000 gallons of water per hour into the Miami River.

**Keep Miami Beautiful:** The City's ongoing work with Keep Miami Beautiful helps clean neighborhoods across the city – ultimately helping our waterways, Biscayne Bay and the ocean. 2019 saw over 50 neighborhood cleanups with over 110,000 pounds of litter collected.

**Miami River:** The City continues to work with the Miami River Commission to conduct cleanups, invasive species removal & native plant habitat plantings.

**Polystyrene ordinance:** The City has implemented an ordinance which prohibits expanded polystyrene products in city parks and recreation facilities, including beaches.

**Underwater cleanup:** In July 2019, the City of Miami Police Department Marine Patrol held its first annual beach and underwater cleanup on Picnic Island. Cleanup participants used Ocean Conservancy's Clean Swell App to collect data on the debris that was found and cleaned up.

**Ocean Conservancy's Flagship International Coastal Clean-up on September 21, 2019:** The City hosted over 600 volunteers at 8 waterfront sites throughout Miami, collecting 3,394 pounds of marine debris.



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# WATER QUALITY

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*We need to restore clean, freshwater flows to our groundwater, canals and coastal habitats; improve water quality by reducing pollution (including nutrient pollution); and put an end to the human activities that are contributing to seagrass die-offs in Biscayne Bay.*

## NEW INITIATIVES

**Install curb inlet screens:** The City is partnering with SOP Technologies to install curb inlet screens on several stormwater inlets across the city. The pilot project will prevent over 1,000 pounds of debris per year from getting into the stormwater system and Biscayne Bay. This pilot project will evaluate the amount of pollutant reduction achieved and will help the City determine if it is cost effective to expand the use of such systems citywide.

**Fertilizer Ordinance:** The City is proposing an ordinance that would establish fertilizer application regulations city-wide. The proposed ordinance will be introduced on the December 12, 2019 City Commission meeting agenda.

**Fertilizer and Pesticide reduction campaign:** The City will launch a campaign encouraging private property owners to reduce amount of fertilizer and pesticides used on private property. The campaign will educate people on proper use of fertilizer and impacts on health of Biscayne Bay.

**Water Quality Testing:** The City in partnership with Miami Waterkeeper is increasing the frequency of water quality testing throughout the city and in Biscayne Bay. The city currently monitors 33 sites city-wide.

**Stormwater Master Plan:** The City's updated Stormwater Master Plan will update design guidelines and operations protocols to reduce the amount of pollutants going to Biscayne Bay.

## ONGOING INITIATIVES

**Biscayne Bay Marine Health Summit:** The City of Miami and Ocean Conservancy co-sponsored the 2019 Biscayne Bay Health Summit.

**Glyphosate ban on City property:** The City has banned use of herbicides containing glyphosate on City property.



# CARBON POLLUTION & CLIMATE

*Impacts from carbon pollution are touching virtually every aspect of Florida's ocean and coast – from sea level rise, ocean acidification, warming waters and coral die-offs. Tackling carbon pollution is essential for protecting the special Florida coastal places we love.*

## NEW INITIATIVES

**Carbon Mitigation Plan:** The City is conducting a greenhouse gas inventory and developing an action plan to reduce its greenhouse gas emissions.

**Educating Residents About Water and Energy Efficiency:**

The City has partnered with Dream in Green to offer a Homeowner & Renter Energy, Water Efficiency and Conservation Education Program.

**SolSmart Gold certification:** The City currently waives permit fees for solar installations and is pursuing a SolSmart certification. SolSmart is a new national technical assistance and designation program, funded by the U.S. Department of Energy SunShot Initiative, designed to recognize communities that have taken key steps to address local barriers to solar energy and foster the growth of mature local solar markets.

**EV Ready Ordinance:** The City is exploring possibility of requiring new developments to provide conduit for electric vehicle charging stations.

**BE305 County Partnership:** Part of the national City Energy Project initiative, Building Efficiency 305 (BE305) is Miami-Dade County's strategy to increase energy and water efficiency in large public and private buildings countywide.

## ONGOING INITIATIVES

**Miami Forever Climate Ready Strategy:** Over the summer of 2019, City of Miami hosted eight workshops designed to inform residents and businesses about the causes and impacts of climate change and determine collective priorities for both carbon mitigation and climate adaptation. The City's Climate Ready Strategy will be launched January 2020.

**Energy Efficiency Retro-commissioning:** By 2019, 8 of the City's parks will have their sports field lights upgraded to LEDs. A 0.5MW solar array will be added in Bayfront Park.

**LEED Silver Certification Requirement for Large Buildings:** The City requires all new construction over 50,000 square feet to attain LEED Silver certification.

**PACE:** The City partnered with 6 other municipalities in 2013 to launch the Green Corridor Property Assessed Clean Energy (PACE) program. This financing program makes weatherization, energy efficiency improvements and renewable energy installations more accessible for all property owners in the City. The City recently expanded the program to include four additional providers.

**Trolleys & other mobility enhancements:**

- The City's trolley is free and currently has 12 routes. The City is looking to expand on the public trolley system by adding additional routes, expanding existing routes and increasing the number of trolleys to the fleet.
- Citi Bike Share program currently has 58 stations with approximately 550 bikes citywide.
- The electric scooter program is currently being piloted in the downtown and Brickell Area to determine citywide feasibility.

**Electric vehicle charging ports installed in public parking garages:** The City's Parking Authority partnered with a local vendor to install 16 electric vehicle charging ports at various public parking garages across the City.



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## MARINE WILDLIFE

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*Stewardship of wildlife and fisheries means responsible resource management and taking care of habitats – the waterways, beaches, seagrass beds and mangroves that serve as their home. People and wildlife can coexist, but not if habitat destruction or overdevelopment are left unchecked.*

### NEW INITIATIVES

**Manatee Exclusion Devices:** The City requires manage exclusion devices on outfalls to protect manatees from entrapment. Any outfall pipe sized 8-inches to 8-feet in diameter, within tidally influenced waters, must include a manatee exclusion device (aka. manatee grate). Cross-members of such devices must be spaced no further apart than 6-inches to prevent manatee entrapment.

**Manatee Protection Signage:** The City will be increasing signage on City property that will help to protect manatee populations. Signs will be placed in locations such as Shrimper’s Lagoon on Virginia Key and along the Miami River.

**Living Shoreline Demonstration Project:** The City is pursuing grant funding and identifying waterfront park locations for living shoreline habitats.

**Virginia Key Habitats:** Miami Parks and Recreation, in partnership with Frost Science’s MUVE program, continue to restore wildlife habitat at Virginia Key through beach restoration, invasive species removal, beach cleanups and native tree planting. Ocean Conservancy will be supporting a City of Miami and MUVE volunteer habitat restoration event at Virginia Key on January 18, 2020.

### ONGOING INITIATIVES

**Ecosystem Restoration and Cleanups:** Many of the City-supported activities like beach cleanups, native plantings, invasive species removals and habitat restoration efforts all benefit coastal and marine wildlife.