



Miami Forever Climate Ready Strategy

The Miami Forever Climate Ready strategy, if implemented as articulated, will significantly reduce the increasing risks of flood, heat, and storm impacts over the next 40 years. It will do so in ways our residents and other stakeholders have expressed support for, all the while maximizing social, environmental, and economic co-benefits. Many of the actions articulated here will inform the next steps we need to take, so this is also a living document that will be updated on an annual basis.

Situation at Hand

- We should expect to see 21-40 inches of sea-level rise by 2070.
- Here in Miami, we're seeing 0.2 inches of sea-level rise per year.
 - As a result of sea-level rise, one of the biggest issues we face is ocean water making its way up our storm drainage systems.
 - We're seeing Dry Day-Flooding more and more often and we're tackling these issues head-on--we're not running away from our problems.
- **After Hurricane Andrew, we made Miami the most wind-resilient City on the planet...now we're going to make Miami the most water-resilient City on the planet.**

Carbon Neutral Resolution

- The City of Miami passed a resolution to commit to carbon neutrality by 2050.
- Our goal to reach net-zero greenhouse gas emissions is necessary to prevent average global temperatures from increasing any further and creating a Miami that is truly resilient and lasts forever.

Draft GreenHouse Gas Plan

- In order to reach that long-term goal we're developing a greenhouse gas reduction plan, called Miami Forever Carbon Neutral, that details the actions the City and other key stakeholders need to take.



- Getting residents and visitors out of single-occupancy vehicles, leading on Electric Vehicle Infrastructure, bolstering our existing Energy Efficiency, and creating a Green Economy focused on job creation will position Miami to be a global leader over the next Century.

BE305

- BE305, an energy and water benchmarking and maintenance ordinance for public and private buildings 20,000 square feet or larger.
 - Buildings waste up to 30% of energy and water due to inefficiencies and poor operations.
 - BE305 will provide building owners and operators with the tools to assess their buildings' efficiency and give tenants a way to compare the places they potentially want to live or work.
- Aside from the climate benefits, the program will save owners and renters up to \$15 million dollars over the next 5 years by reducing their utility costs.

Stormwater Master Plan

- In April 2018, we announced our plan to update the city's Stormwater Master Plan (SWMP).
 - The last update to the plan was in 2012 and it was completely outdated.
- It also provides numerous recommendations for policy changes, upgrades to stormwater design standards, and operational/maintenance changes that will improve environmental compliance and water quality.
- The plan incorporates green infrastructure such as bioswales, natural drainage, and shoreline improvements, proposes additional infrastructure to counter Sea Level Rise, and recommends changes to stormwater infrastructure to filter and capture sediment, debris, and plastics before they can pollute the bay.

Heat Resilience

- Miami currently has about 25 dangerous heat days per year, days that feel 104 degrees or hotter.
 - By 2050 that could increase to over 100 days per year.



- Extreme heat and humidity is particularly dangerous for youth, elder adults, low-income individuals, and outdoor workers.
- We're all very aware of how impactful diseases can be, and a hotter, wetter climate will continue to increase the length of mosquito season which can make residents more susceptible to mosquito-borne viruses.
- the heat will be more oppressive during prolonged power outages that can follow hurricanes
 - Warming ocean temperatures are expected to make hurricanes more intense.

Heat Solutions

- One of the initial measures of the Miami Forever Climate Plan is to map urban heat islands and planting trees there, or taking other measures to make them cooler.
- Reducing greenhouse gases is critical to allowing heat to be released into the earth's atmosphere and the widespread adoption of electric cars will be a great first step in carbon mitigation.
- The City of Miami has committed to community-wide carbon neutrality by 2050.
 - Miami is a signatory on the pledge to uphold the goals set out by the Paris Climate Accords.

What We're Doing about it

- In 2017, our residents put their money where their mouth is and voted to approve the \$400M Miami Forever Bond...\$200M of which will go directly towards climate adaptation solutions.
 - Coming out of the Covid-19 crisis, our long term recovery strategy aims to support Miami businesses through policies and programs that will, at the same time, advance our transition to a clean energy economy.
- Just a few months ago, the City's Resilience Office released the **Stormwater Master Plan** which contains a 20-year plan on how to manage our stormwater capture capacity.
 - It will serve as a blueprint for infrastructure investment.
 - We will need 90-100 more pump stations than we currently have (13).
- We've made changes to our waterfront infrastructure standards such as increasing minimum seawall heights.



- We've made an effort to take on ecologically friendly measures as well.
 - We've planted roughly 4,000 trees in the past year.
 - A fully grown tree can absorb 100 gallons of water per day.
- Over the summer, we witnessed one of the most devastating fish kills in the history of Biscayne Bay.
 - We installed 1000 inlets from carrying any sediment or runoff into our Bay by placing cover filters over storm drains.
 -