

RESILIENCE!

MARCH 2024

NEWSLETTER OF THE
BROWARD COUNTY
RESILIENT
ENVIRONMENT
DEPARTMENT



MAGNIFICENT MANATEES

Broward County's
Manatee
Protection
Program
in Action



RESILIENT
ENVIRONMENT

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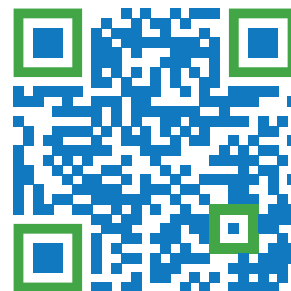
Storm floods in downtown Fort Lauderdale, 2023.

OUTREACH UPDATE

We have created an inclusive outreach strategy that is being implemented to engage different voices and perspectives as we advance resilience in Broward County. Listening sessions have been completed with community partners and representative stakeholder groups to gain insight on how flooding and heat already impact people, property, and work, and what mitigation strategies are most desired across our communities.

Initial adaptation model results have been presented to the Project Steering Committee, with additional stakeholder workshops to be conducted in the Spring months of 2024 to seek further input and refine the next phase of modeling and problem solving.

[broward.org/
ResiliencePlan](https://broward.org/ResiliencePlan)



EVENTS

WATER MATTERS DAY

WHERE:

Tree Tops Park, Davie

WHEN:

Saturday March 9th, 2024, 9 AM – 3 PM

Guest artist Xavier Cortada will be a mainstage presenter at 10:30AM when he will engage the audience on climate change through art. Throughout the duration of Water Matters Day, attendees can learn their elevation, and craft personalized elevation markers with the artist and team at the Underwater: Broward Booth.

CENTRAL COUNTY CLIMATE CONVERSATION

WHERE:

African American Research Library and Cultural Center, Washington Park

WHEN:

Saturday April 27th 2024, 1 PM – 3 PM

This is an opportunity to create a free personalized elevation marker with artist Xavier Cortada, join the climate conversation, learn about local vulnerabilities to climate change and resilience initiatives, and become a climate ambassador for your community.

THE UNDERWATER

A SOCIALLY ENGAGED ART PROJECT BY XAVIER CORTADA

UNDERWATER: BROWARD BEGINS TO FLOW IN 2024

THE UNDERWATER is a community-based climate action campaign launched by eco-artist Xavier Cortada, that uses interactive art installations to reveal South Florida's elevation, spark conversations, and urge civic engagement.



THE UNDERWATER: BROWARD is the latest edition of this campaign to enhance community engagement on climate change through art and has been jointly funded by the Community Foundation of Broward, and Broward County's Cultural Division and Resilient Environment Department. Through this initiative, 10 Broward County Public schools will participate in climate art workshops during February and March, engaging an estimated 1,000 students.

Public art installations illustrating local ground elevations will also be completed as part of the project, as well as several community engagement events open to all Broward residents and visitors. broward.org/climate/underwaterbroward

2023: A YEAR OF EXTREMES

With respect to climate, 2023 was an exceptional year for Broward County, South Florida, and globally. Many will recall that Fort Lauderdale experienced unprecedented rainfall during the April 12-13 storm event, causing widespread flooding and losses.

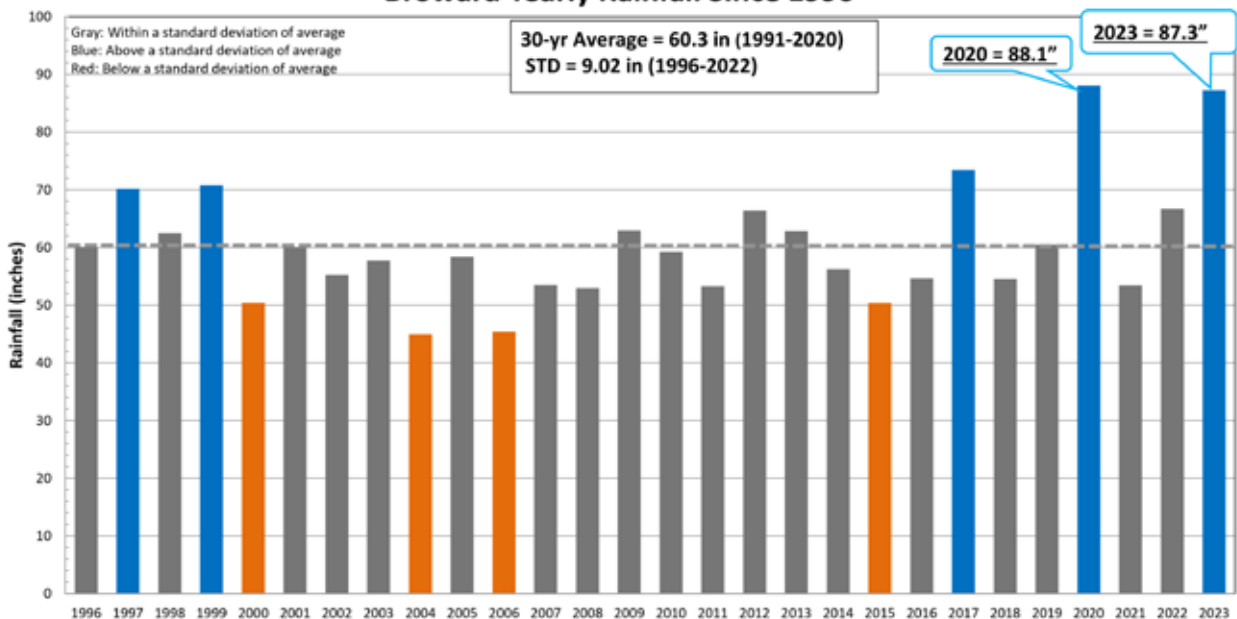
Rain gauges located at the Fort Lauderdale International Airport recorded a total of 25.9 inches of rain during this same 24-hr period, with rainfall intensity exceeding that of a 1-in-1000-year storm event. 2023 was also the wettest year on record for the Fort Lauderdale area, with a total of 114.5 inches of documented rainfall, breaking the previous annual record of 102.4 inches set in 1947. County-wide, 2023 produced

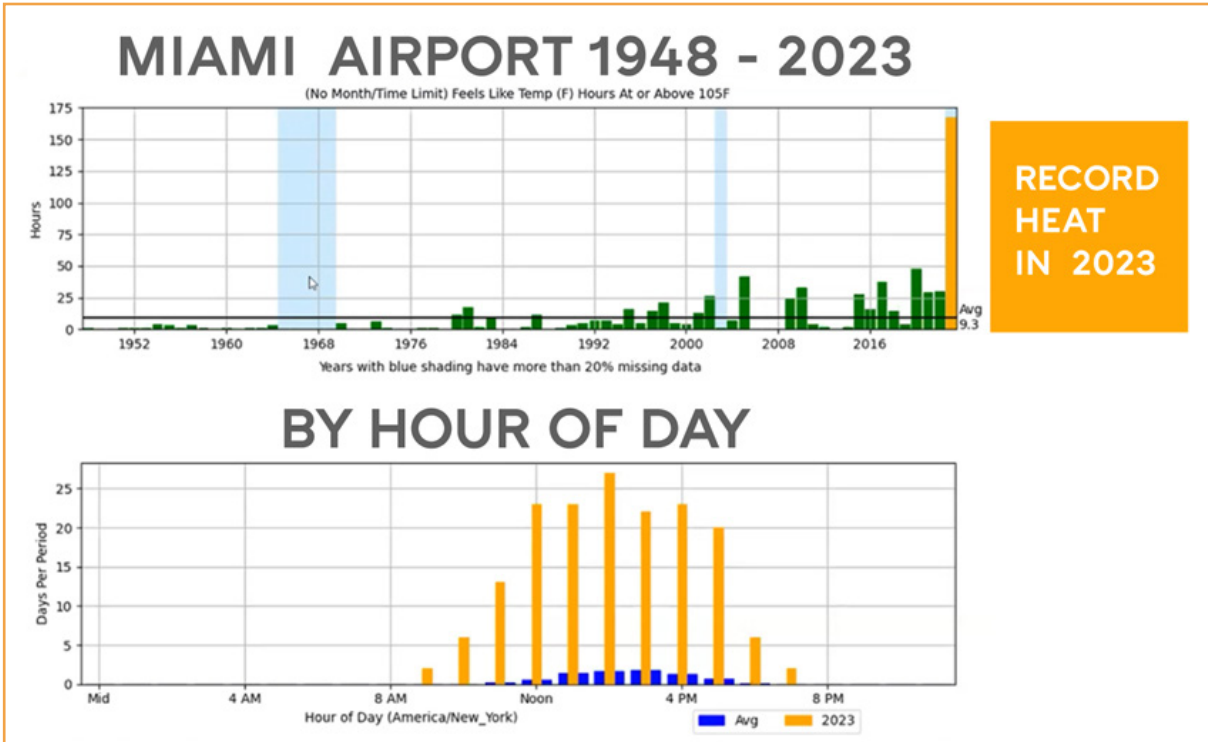
the second highest annual rainfall, with an average of 86.5 inches.

NOAA dubbed 2023 the warmest year on record by far, with persistent heat documented in Broward County and across the South Florida region. Local stations measured record-breaking temperatures at Miami International Airport with the total number of hours exceeding a heat index at or above 105°F surpassing 160 hours, compared to the historical average of just 9.3 hours across the period of record.

Here at home, in Broward County, we measured 37 days when the heat index exceeded 105°F. at the Fort Lauderdale-Hollywood International compared the historic average of just 5 days.

Broward Yearly Rainfall Since 1996



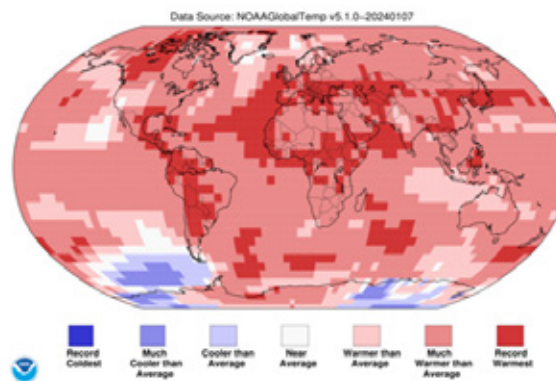


Hours With Heat Index At Or Above 105°. Source: NWS Miami/South Florida Forecast Office

Under current emission scenarios, the index is expected to climb to more than 60 days by mid-century.

Fortunately, despite the extreme heat, the South Florida area, including Broward County, experienced lower than average heat-related emergency services activations relative to other areas of the state experiencing similar conditions. The National Weather Center forecasters speculate that this may be due, in part, to enhanced extreme heat massaging and outreach by our region.

The outlook for 2024 includes a continuation of unseasonal temperatures and rainfall for South Florida, in part of a function



Land and ocean temperature percentiles, Jan-Dec 2023

of persistent El Niño conditions. The 2024 hurricane season in the Atlantic Basin could also be exceptionally active. These extremes are widely considered an example of the new norm as global temperatures continue to rise with increasing CO2 emissions.



Manatee gathering at the mangrove-rich canals close to a warm water outflow. A Broward County Manatee Survey in January 2024 counted 134 manatee in the cooling lakes of the Florida Power & Light plant west of Fort Lauderdale airport, where they bask in the plant's warm water discharge. In that day's survey 305 manatee were observed within Broward County waters.

THE MOMENT I KNEW...

ENVIRONMENTAL SPECIALIST SABRINA LADD SHARES HOW SHE BECAME A PASSIONATE ADVOCATE FOR MANATEES AND ALL MARINE WILDLIFE



The moment I knew wanted to be a marine biologist began on a humid spring morning in Marathon, Florida.

The day began, as they all did at my abuelo's Keys house, by waking up my sister and brother and racing downstairs to throw our fishing lines in the water to see who would reel in the fish first.

This morning, however, was different. As we hurried to the edge of our canal, commotion and splashing could be heard from the water a short distance away. Being curious children, we walked over to see that what looked like a small whale was partially washed up in the corner of the canal.

How did it get here? Was it stuck? What do we do?

We ran back home to tell our parents and my dad quickly followed us back to investigate. We learned that the neighbors had already called the Marine Mammal Conservancy and marine biologists should arrive soon.

In my head, I imagined someone in a scuba suit with a cape, but much to my surprise, it was simply two men and a woman in bathing suits who showed up. Marine Biologists, I remember thinking, are very casual marine mammal superheroes.



Pilot whale rescue in Marathon, FL. Shirtless man is Sabrina's father.



Above and right: Rescued manatee Reckless and her calf Churro being released to the wild on January 18th 2024, after treatment and rehabilitation at Seaworld. A near fatal boat collision in 2022 had left her with one less flipper and several deep scars. Reckless had wintered in Broward throughout her life so was released at the County's Port Everglades Law Enforcement boat launch.



MANATEE MORTALITY

Vessel collisions are historically the single greatest cause of manatee deaths. About one third of reported manatee deaths are attributed to these collisions each year.

Although propeller wounds do kill manatees, 50 percent of the watercraft-related deaths are because of blunt trauma caused by the impact of speeding boat hulls.

The FWC and the U.S. Fish and Wildlife Service (FWS) continue to investigate a high level of manatee mortalities and respond quickly to manatee rescues all along the Atlantic coast of Florida.

After arriving, two of the biologists immediately got into the water to assess the animal.

It was a pilot whale with a severe injury from a boat strike who was having trouble breathing and staying afloat. They asked for people to help to keep its blowhole above water, and without hesitating, my father jumped right in. Being too small to offer much help in that moment, I knew that when I grew up, I wanted to be able to help these animals.

When college came around, I chose Florida International University because it offered a B.S. in Marine Biology and because the Marine Biology campus was located on Biscayne Bay, which I assumed meant I would get hands on experience. I quickly



bull sharks, maintaining coral reef tanks, breeding fish for experiments, zipping around the Everglades in helicopters and airboats, and even got the opportunity to do some electrofishing throughout the Everglades.

My life came full circle in the spring and summer of 2011 when I attended a training at the Marine Mammal Conservancy to assist in stranding events, and was subsequently called upon to volunteer to hold a sick pilot whale just enough above water so that it could breathe. The first night I arrived for my shift, I knew that if little Sabrina could see me now, she would be so proud.

Fast forward to present day, and the little girl who watched in shock as a beautiful creature suffered from irresponsible boating is now an Environmental Specialist with Broward County's Manatee Protection Program, advocating on behalf of manatees

found that I had to seek these hands on experiences for myself and the best source I found was to ask graduate students if they needed volunteers. Spoiler alert, graduate students ALWAYS need volunteers.

During my time as an undergraduate and after graduation, I assisted in tagging



Broward County Environmental Specialist Sabrina Ladd inspects artificial reef units offshore at Port Everglades Inlet.

Manatees can often be found feeding on seagrass that only grow in shallow waters, floating vegetation in canals, along the canal banks, or on trees such as mangroves overhanging the canals. Residential and side canals provide resting and birthing places for manatees.

Canals with water control structures such as the Pompano Canal, Middle River, North Fork New River, North New River Canal, and Dania Cutoff Canal are sources of freshwater and freshwater aquatic vegetation on which manatees may feed, and these canals may serve as a secondary source of warm water in winter creating passive thermal basins when the water is warmed by the sun during the day and cools slowly at night. Manatees can go up to 2 weeks without drinking freshwater, and though they prefer not to, they can also drink brackish and saltwater.

and all marine wildlife. All these years later, I am happy to report that I never wavered from my dream of helping marine mammals.

BROWARD'S MANATEES

Many manatees from the southern Atlantic region migrate south into Broward County's warm coastal waters during the winter. As the manatees from the north arrive, the number of sea cows using South Florida waters may increase by 30 to 40 times to well over 1,000 animals.



During the time between cold fronts, manatees can be found in just about any waterway in the County at any given time. As winter comes to an

end, the majority of manatees in South Florida travel back north to their favorite warm season haunts, though some can be found in our waters all year round.

Learn more: [Broward.org/Manatees/](https://www.broward.org/Manatees/)

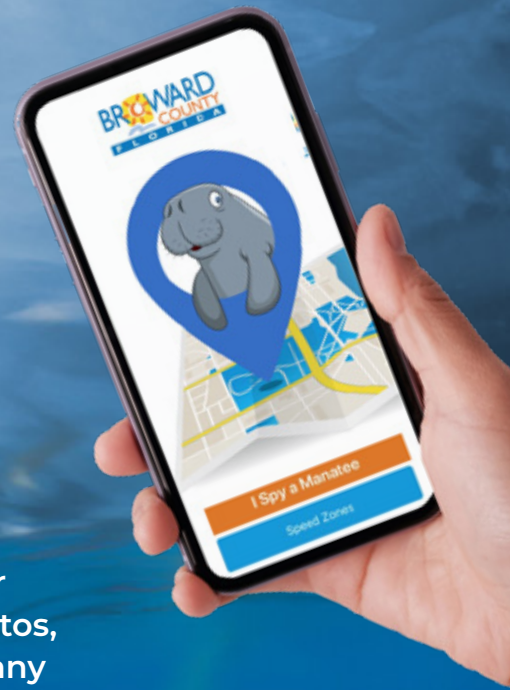
MANATEE SUPPORT AND PROTECTION

You can protect our vital resources, such as seagrass - a manatee's major food source - by applying for environmental permits for any in-water construction, using less fertilizer, and keeping trash out of our waterways.

Hopefully you never have to observe a sick or injured manatee or other marine mammal, but if you do, call the Florida Fish and Wildlife Conservation Commission's (FWC) 24-hour Wildlife Alert Number at (888) 404-FWCC (3922), *FWC or #FWC on a mobile phone. Do you want to assist County scientists in better understanding how manatees utilize our waterways? Be a citizen scientist by downloading the 'I Spy A Manatee' mobile app on your phone!

In addition to actively partaking in our conservation efforts, you can also view waterway speed zones, share your location and photos, and help report any injured manatees to Fish and Wildlife Conservation Commission all within the app.

Support the success of Florida's State Marine Mammal while on the water by going slowly, adhering to all posted nautical regulatory signs. Wear polarized glasses to better see any manatees and other wildlife that may be in shallow waters. Broward.org/Manatees/



A GLOBAL STAGE FOR CITIES AND REGIONS

Broward County's Vice Mayor Beam Furr and Chief Resilience Officer Dr. Jennifer Jurado attended the 28th United Nations (UN) Conference of the Parties (COP28) in Dubai, UAE from December 1 to December 8. Here's our report from the world climate action summit.

This year's COP was unique in providing an agenda and framework for prominent participation of sub-national governments with formal opportunities for engagement across the 2-week thematic agenda that specifically invited local and regional contributions.

Vice Mayor Furr was invited to join a delegation of local mayors from across the United States and abroad as part of a Local Action Summit sponsored by the Bloomberg Foundation on Days 1 and 2 of the Summit.



Jennifer Jurado, Chief Resilience Officer, Broward County, and Broward County Vice Mayor Beam Furr.



Dr. Jennifer Jurado, Chief Resilience Officer at Broward County Resilient Environment speaking at COP28 UAE today on a panel chaired by ICLEI USA. The topic was Climate Action in the Digital Age: Data-Driven Solutions for a Greener Future,

Vice Mayor Furr and Dr. Jurado both joined supported several roundtables and panel discussions sponsored by the Local Action Summit, ICLEI – Local Governments for Sustainability, the Under2 Coalition, and Resilient Cities Network focused on resilient water management strategies, clean energy and methane reduction, use of technology and data to inform decision-making, and equitable access to nature.

NOTABLE ENGAGEMENTS

The Local Action Summit provided an invaluable engagement opportunity with local leaders from across the nation, as well as leadership in D.C. including John Podesta, Senior Advisor to the President for Clean Energy Innovation and Implementation, and Gina McCarthy, former White House National Climate Advisor and Secretary of the EPA, and current Managing Co-Chair of America is All In. Discussions focused on key policy recommendations and investment needs of local leaders, as well as relevant federal programs and funding sources.

ICLEI maintained a permanent forum within COP, hosting panel discussion and roundtables throughout the Summit. Broward County was a featured participant in a live-streamed panel discussion on technology as part of resilience initiatives and in a closed roundtable discussion with funders focused on resilience, public access to nature, and equity.

TAKEAWAYS

Attendance of COP28 provided benefits well beyond what could have been envisioned or perhaps even anticipated given the unique emphasis on sub-national participation provided for at this particular COP - an approach that is now expected to become practice.

The COP forum is astonishing in scale and unparalleled in terms of engagement and learning opportunities, bringing together the entire global forum of climate and resilience leaders in a manner that allows direct engagement that could otherwise never be achieved.

The forum was inspirational in a massive way, revealing the scope, scale, and magnitude of action taking place by the collective universe of governments, private sector, scientists, practitioners and advocacy groups engaged in measuring, reporting, and reducing climate risk through mitigation and adaptation.

BROWARD OPPORTUNITIES

Discussion highlighted tipping points relating to climate as well as technology, and the dramatic transformation of communities and economies anticipated in just the

COP 28 KEY PLEDGES

LOSS AND DAMAGE FUND

Hundreds of millions of dollars were pledged for the Loss & Damage Fund. The UAE opened the pledges with US\$100 million, closely followed and matched by Germany. By the end of COP28, the Fund totalled US\$770.6 million



TRIPLE RENEWABLE ENERGY PRODUCTION

130 countries signed a deal to triple production of renewable energy and double energy efficiency.

SUSTAINABLE AGRICULTURE, RESILIENT FOOD SYSTEMS AND CLIMATE SECTION

Food and agriculture's major contribution to carbon emissions was addressed by the *Emirates Declaration on Sustainable Agriculture, Resilient Food Systems and Climate Section*, a pledge backed by more than 150 parties that represent more than three quarters of the world's total food emissions.

TROPICAL FORESTS FOREVER

A new fund announced by Brazil, to provide finance to 80 tropical countries forests maintained or restored.

'TRANSITION AWAY' FROM FOSSIL FUELS

COP28 is the first to explicitly state a 'transition away' from fossil fuels.



Jennifer Jurado, Chief Resilience Officer, Broward County, and Broward County Vice Mayor Beam Furr.

This time next year, the County will be positioned to share the details of this plan, and in two more years, we could be working with some of these same fostered partners to advance various priority elements of the plan.

In the meantime, more immediate opportunities include bringing the experience of COP to our current initiatives; development of a formal Broward agency resilience strategy to establish a clear, shared framework to how we approach and communicate our resilience priorities; and brainstorming to consider the wealth of new voices that might contribute to future regional climate summits hosted by our region.

next two decades. These exposures must provide inspiration as we consider how best to position our County, advance our resilience needs, and attract the partners key to our next steps.

Whether 3D print technologies and biological forms for coastal infrastructure, integration of solar materials in the whole of the building envelope, embedded carbon and/or sludge pellets to strengthen and green building materials, or simply a stronger commitment to a low carbon circular economy, we have much to assimilate in form and practice.

In addition to exceptional learning experience, COP attendance provided leadership and staff an opportunity to highlight and promote with potential partners, the County's own resilience efforts, including the intentional integration of robust economics and risk analytics, and inclusion of equity as part of a comprehensive, scenario-based County-wide Risk Assessment and Resilience Plan.

SUMMARY

COP attendance provides a critically important global forum for engagement. Given the global reach of Broward County in commerce and tourism, the advanced state of the County's own resilience efforts, and importance of delivering strong economic outcomes and futures for the whole of our community, it is highly recommended that Broward seek to maintain participation at COP, but also invest in strengthening partnerships with the national and global entities actively supporting local government resilience efforts on an on-going basis, and that the county take advantage of opportunities to elevate its profile by engaging in related national and international forums.



From left to right: Daniel Stander (Deputy Board Chair, R-Cities), Jennifer Jurado (Chief Resilience Officer, Broward County), Lauren Sorkin (Executive Director, R-Cities) and Vice Mayor Beam Furr (Broward County).

BROWARD COUNTY JOINS RESILIENT CITIES NETWORK

BROWARD COUNTY HAS BECOME THE 101ST MEMBER OF THE RESILIENCE CITIES (R-CITIES) NETWORK.

On December 6, 2023, at a forum attended by several of the member Chief Resilience Officers and R-Cities Leadership, R-Cities announced that Broward County would become 101st member of the R-Cities Network at a forum attended by several of the member Chief Resilience Officers and R-Cities Leadership.

R-Cities brings together global knowledge, practice, partnerships, and funding to empower member communities and strengthen

“It is a tremendous honor to join the Resilient Cities Network and the coalition of CRO’s working as peers to deliver resilient futures for our communities.”

DR. JENNIFER JURADO

Chief Resilience Officer, Broward County

urban resilience across its global network with a focus on future-proofing communities and critical infrastructure and the goal of a safer, more equitable, and sustainable future for all.

The County’s engagement with R-Cities at COP28 provided numerous additional exposures and networking opportunities within COP, including a Resilient Water Resources panel with the climate minister from Catalonia, Spain; an invited roundtable discussion on resilience performance measures to help inform forthcoming UN - IPCC (Intergovernmental Panel on Climate Change) efforts; an energy roundtable with Chief Resilience Officers, the private sector, and philanthropy; and direct engagement with global insurers, risk management entities, and related subject matter experts as part of additional panels and networking sessions.

Today, the County and R-Cities are preparing to implement a two-year program of activities that will enable the County to share its knowledge and collaborate with other network members on climate resilience solutions and expand its knowledge and skills on how to embed a strong equity lens within its resiliency efforts.



Broward County's Resilient Environment attendees at the Miami Beach Convention Center, Nov 16 - 17, 2023. Below, Michael Connor, Assistant Secretary of the Army for Civil Works U.S. Army Corps of Engineers

CLIMATE SUMMIT 2023

The 15th Annual Climate Leadership Summit, organized by the Southeast Florida Regional Climate Change Compact was hosted by Miami-Dade County and the City of Miami Beach.

This year's theme "*Transformative Climate Action*" was chosen to inspire innovation in every field ranging from electrification and equity, to engagement, green infrastructure and more. The summit convened hundreds of innovative thinkers and leaders from the business, government, academic, and nonprofit community.



Keynote speakers included Michael Connor (photographed above), Assistant Secretary of the Army for Civil Works U.S. Army Corps of Engineers, and Deputy FEMA Administrator Victoria Salinas.

Raul Moas, Senior Director of the Miami Knight Foundation also addressed the attendees. In 2023 The Foundation had announced grants totaling \$8 million in support of Miami-based organizations working to strengthen community climate resilience.

Dr. Benjamin Kirtman, Director of the University of Miami's



Dr. Jennifer Jurado, Chief Resilience Officer, Broward County chaired the discussion “Seaside Chat: Resilience in Regional Water Management” with panelists Colonel James L. Booth, Commander, Jacksonville District, US Army Corps of Engineers and Drew Bartlett, Executive Director, South Florida Water Management District.

Cooperative Institute for Marine and Atmospheric Studies, delivered a sobering State of the Climate address, shedding light on the harsh realities faced by Florida residents amidst rising sea levels and intensifying weather patterns. Broward County Vice Mayor Beam Furr took part in a panel discussion entitled *Transformative Climate Action: County Leaders on Winning Our Climate Challenge*.

DIVERSE PANELS DELVE INTO CRUCIAL TOPICS

Beyond the keynote speeches, the conference featured thought-provoking panels and seaside chats that delved into pressing issues facing communities across Florida. One such panel, *Weathering the Storm: The Critical Role of Insurance in Building More Resilient, Equitable Communities*, tackled the dire state of Florida’s insurance market in the wake of escalating natural disasters and losses exceeding \$600 billion in the past two decades.

Another panel, *On the Road to Resilience*, brought together experts including Palm Beach Chief Resilience Officer Megan Houston and Broward County’s own Dr. Jennifer Jurado to discuss ongoing

initiatives and looming challenges in bolstering community resilience. Their insights shed light on the practical tools and resources necessary to navigate the turbulent waters of climate change.

A seaside chat titled *Inspiring Climate Action and Activism Through Art* provided a unique perspective on the intersection of art and environmental activism. Renowned artist Xavier Cortada (photographed right) and Naomi Fisher, Director and Curator at Bas Fisher International, explored the pivotal role local artists play in expanding our horizons and driving meaningful change in our communities.



CONCLUSION

The Summit served as a rallying point for stakeholders committed to addressing the multifaceted challenges posed by climate change. From insightful keynote addresses to engaging panel discussions, attendees departed with a renewed sense of purpose and a deeper understanding of the path forward towards a more resilient future.



Clockwise from left: President/CEO at Greater Fort Lauderdale Chamber of Commerce; Nan Rich, County Commissioner District 1 at Broward County; Col. James L. Booth, District Commander, Jacksonville District, U.S. Army Corp of Engineers;

RESILIENCE ROUNDTABLE

Broward County Vice Mayor Beam Furr and Senator Nan H. Rich, co-chairs of the County’s Climate Change Task Force, convened the 2023 Broward Leaders Resilience Roundtable on Friday, October 6, 2023 at Long Key Nature Center in Davie.

Elected officials, senior administrators, and staff members representing Broward County’s 33 municipalities and tribes attended the 6th convening of what has become a near annual event.

The 2023 Resilience Roundtable highlighted several key themes, with an emphasis on collaboration,

planning at tiered geographic scales, and implementation. Of prominence was discussion of the County-wide Risk Assessment and Resilience Plan (Resilience Plan), an initiative prioritized by attendees in 2019 and nearing completion. Discussion emphasized the need for active municipal engagement, sharing of information and data, and technological advancements to facilitate coordinated decision-making.

The importance of effective communication for this project was underscored, particularly in conveying the significant need for timely investment supporting near and mid-term flood risk reduction. It was expressed that with the completion of the Broward County Resilience Plan in 2024 discussion will focus on results, outcomes and next steps.



Clockwise from left: Dr. Jennifer Jurado, Chief Resilience Officer, Broward County; Drew Bartlett, Executive Director, South Florida Water Management District; Broward County Vice Mayor Beam Furr; Chief Executive Officer of Broward County, Monica Cepero.

Discussion also emphasized the importance of fostering local relationships and partnerships to leverage each other’s strengths and aid coordination of operations, notably in water management.

Municipal and tribal updates revealed significant progress over the last year, including planning, policy, and implementation activities. These included active vulnerability assessments, stormwater and climate planning, water and drainage infrastructure investments, vehicle electrification projects, solar installations, and more.

Many tribal and municipal governments referenced use of the online Broward Resilience Dashboard, a resource developed

in response to priorities raised by attendees in 2019.

Roundtable participants acknowledged the need to deliver for lower income and disadvantaged communities (LIDAC) and to provide targeted investment benefiting socially vulnerable communities, or those expected to have disproportionate impacts related to flood and heat risk. The benefits of green infrastructure were underscored in delivering multiple co-benefits.

Although not extensively discussed, the concept of resilience hubs was mentioned, and the need for systems to provide support for individuals during severe climate-related events, particularly unanticipated shocks.

PRIVATE SECTOR SPOTLIGHT

Founders Ricardo
and Daniela

COFFEE KREIS

For this edition of our Private Sector Spotlight, we've spoken to a local startup company that is taking the circular economy to a whole new level.

Meet Ricardo Garcia, Co-Founder and CEO of Coffee Kreis (Kreis means "Circle" in German), a sustainable products company that transforms recycled coffee grounds into reusable, sustainable and compostable coffee cups.



Can you give us a brief rundown of the business and your products?

We are a team of 6 based both here in Broward and in Colombia with products available online and in-store across 5 countries. We currently offer a 12 oz Latte Cup and Saucer and we're working on a third product which is a 14 oz Travel Cup with a lid. We recycle coffee grounds from partner coffee shops in Colombia, process and bind them with a compostable bio-resin derived from food residue, and use an injection mold to create the finished product.

What are some of the metrics you use to measure your sustainability impact, and how has the progress come along so far?

3,560 KG coffee grounds diverted from landfills, 1,210 m³ methane emissions reduced and 9,600+ single-use cups displaced.





How has creating a company with sustainability at the heart of its mission differentiated you from other companies?

I believe it sets us apart in several ways. It helps us create a distinct brand identity that resonates with consumers who prioritize environmental responsibilities, provides us with a competitive advantage by using unique materials that have usually been seen as waste, and helps us stay at the forefront of innovation and regulations.

How does your process of turning grounds into cups compare to composting or other methods of reusing or disposing of spent grounds?

Currently there are couple more companies around the world that reuse coffee waste for several other products such as food ingredients, skin care, etc. However, few are transforming them into reusable

products tackling not only coffee waste but also reducing single-use products.

Your product details mention up to 30% of the end product is made of coffee grounds, is it possible to increase that number?

We combine the recycled coffee grounds with bio-resin in order to provide additional benefits and properties such as heat resistance and durability. We're constantly testing our materials to increase the percentage of coffee, but it is a work in progress.

How did you decide to go the crowdfunding route, and how has that worked out for you?

We decided to pursue a crowdfunding campaign to "kill two birds with one stone", where we could test the market and gauge interest, and in doing so raise some money to



raise \$10k and we ended up with a total of \$27k over 2 months across Kickstarter and Indiegogo.

How has being based in Broward County affected your business, are there any pros and cons you'd like to share about the local economy and community?

Broward is a great place to do business, due to its people and entrepreneurial spirit. The local economy is booming with tons of coffee shops opening, and the community is constantly supporting new projects. South Florida gathers many different cultures, mainly from Latin America, which makes us feel connected to our roots. We're part of Alan B. Levan NSU Broward Center of Innovation. We were a part of their accelerator program for around 2 months, where we got mentorship, networking, pitch sessions, and as part of the community we still attend events.

What message do you have for the Broward County community at large?

Our mission is to help reduce single-use plastics and recycling materials. Impactful changes can come from small habits, even drinking your coffee every morning, so why not start there?

Find out more at [coffeekreis.com](https://www.coffeekreis.com)

start acquiring the necessary equipment and tools to perform some testing. There was a lot of work, from creating an appealing campaign, reaching out to the right people, and providing as much information and story as possible.

Our campaign started in June of 2022, and was fully funded within 10 days. The initial goal was to

A SOLAR SLAM DUNK

Broward County has unveiled an innovative solar project at Reverend Samuel Delevoe Memorial Park in Fort Lauderdale.

This 112' x 123' canopy will not only provide energy to the nearby African American Research Library and Cultural Center (AARLCC), but it will also keep players cooler and out of the direct sunlight, and provide a place to shelter during inclement weather.

This project is part of Broward County's growing investment in solar and commitment to initiatives that help drive the County towards its Net Zero goal.



The 234kW capacity structure uses 175 panels at 395 watts each, and will offset 30% of the energy usage of AARLCC.

Future projects will include the Broward County Property Appraisers facility, Parks Administration, and West Regional Courthouse.

Two large-scale solar canopies over the basketball courts at Reverend Samuel Delevoe Memorial Park in Fort Lauderdale.



UPSTATE UPDATE

BY SARAH PARISEAU



The 2024 Legislative Session kicked off on January 9, marked by a Joint Session and a State of the State address from Governor DeSantis. With a 60-day timeline, this session is poised to wrap up on March 8.

Already, significant headway has been achieved across diverse issues, setting the tone for a very dynamic Legislative Session.

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BUDGET NEGOTIATIONS UNDERWAY

At the outset of the session, Governor DeSantis unveiled a \$114.4 billion budget proposal for 2024-2025, allocating substantial funds for initiatives such as Resilience Florida Planning Grants and Florida’s Coral Reef Restoration and Recovery Initiative.

Currently, the House and Senate are collaborating to finalize the state’s budget for the upcoming fiscal year. The House has proposed a \$115.5 billion budget (PCB APC 24-01), while the Senate has presented a \$115.9 billion plan (SB 2500), and efforts are underway to reconcile

differences between the two. Both chambers’ top budget committees have unanimously passed their primary budget bills, setting the stage for further discussions and negotiations.

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STATEWIDE RECYCLING & WASTE-REDUCTION PLAN:

Senate Bill 36 directs the Florida Department of Environmental Protection (DEP) to develop a comprehensive statewide recycling and waste-reduction plan by July 1, 2025. To develop the plan, DEP is to convene a technical assistance group to assess the conclusions and recommendations of the previous statewide recycling plan, which sunset in 2020.

- Among the minimum provisions of the plan are:
- A statewide recycling goal based on sustainable materials managements and waste diversion
 - A 3-year plan addressing recycling education and outreach, local recycling assistance, and market expansion strategies for recyclable materials
 - Reporting all requirements to the legislature.

Extruded aluminum waste in the form of a cube



MANGROVE REPLANTING AND RESTORATION

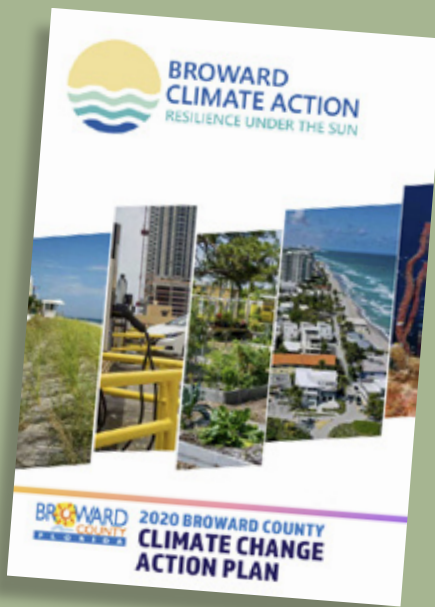
In an effort to bolster coastal flood risk reduction, House Bill 1581, focusing on mangrove replanting and restoration, has been introduced. The bill mandates a statewide feasibility study by the DEP to assess the value of mangroves and nature-based solutions.

Mangroves are known for shielding shorelines from storm-related damages, while also contributing significantly to ecological diversity, supporting various species of fish.

The bill requires DEP to:

- Protect barrier and spoil islands
- Assist Everglades restoration and Biscayne Bay revitalization efforts
- Promote public awareness of the value of mangroves
- Identify vulnerable properties along the coastline and encourage partnerships with local governmental entities
- Create permitting incentives and encourage the use of new strategies for living shorelines and nature-based features
- Encourage partnerships with local governmental entities to create projects for coastal protection through the Resilient Florida Grant Program

As we track these legislative developments, we look forward to witnessing how these proposals shape the future of Florida's environmental policies.



BROWARD CLIMATE ACTION

Broward County is currently undertaking the 4th iteration of the community-wide Climate Change Action Plan (CCAP), which builds on the 125 climate actions from the current 2020-2025 CCAP.

The CCAP actions focus on reducing local greenhouse gas emissions, increasing community resilience, and planning necessary adaptation measures to address local impacts.

We'd like to hear from the Broward community. Join Broward's Virtual Climate Action Conversation from February through April 2024 to help shape the 2026 update.



WATER & CLIMATE ACADEMY

The 9th Broward Leaders Water and Climate Academy held its last session on January 26th, with 35 elected and business leaders from across the community.

The Broward Leaders Water and Climate Academy was developed with staff and former Broward County Commissioner Kristin Jacobs to share critical water and climate information with our elected and business leaders across the County.

Over a series of sessions, that involves in class and field immersions, participants engage with subject matter experts who share knowledge covering topics of water management, Everglades restoration, resilience, stormwater, and green infrastructure, and more.

The Academy, offered every two years, provides useful and highly relevant water related topics focused on the diverse and complex challenges of addressing climate change and diverse water resources and issues fundamental to the



The South Broward Drainage District team explains the operation of the S-4 Pump Station and the basin it provides drainage to, and the recent acquisition of the portable pump.



Participants pose in front of Palm Beach County's Green Cay Wetlands a 100-acre constructed wetland and nature center in Boynton Beach, Florida.



Mr. Owosina, Chief of the Hydrology and Hydraulics Bureau at the South Florida Water Management District provides an overview of the primary canal system and the District's operations.

quality and health of the economy, community, and environment.

Participants use those experiences, insights, and key takeaways to better understand the interconnected nature of the South Florida environment and the importance of considering water as part of policy and planning.

We look forward to hosting our 10th Academy in the Fall of 2025. Contact us for details.

Visit broward.org/resilience/Coordination/

NEWS, OPPORTUNITIES AND UPDATES



GO ELECTRIC

Broward County Transit unveiled a new electric express coach service on route 110 between West Broward and Miami-Dade County, which began service on Monday, January 22. This service is a product of a visionary partnership with the Florida Department of Transportation, and represents a giant leap forward in providing sustainable and efficient transportation options for the region.

The ribbon-cutting ceremony unveiled the sleek, silent electric coach bus which boasts seating for up to 54 passengers, free Wi-Fi, and is estimated to travel up to 230 miles per charge.

Broward County Transit operates five Express Bus service Park and Ride locations where customers can park for free.

For information visit bit.ly/BCTMapsSchedules.

Broward County Transit (BCT) marked a historic milestone in its commitment to clean transportation with the ribbon-cutting ceremony for its inaugural electric express coach bus.



OPPORTUNITIES

Broward County Resilience is seeking qualified candidates for **Climate Resilience Coordinator** to play a key role in the County's climate resilience and sustainability efforts.

It is a role focused on adaptation to sea level rise, rainfall intensification, extreme heat, and other climate pressures. Activities may involve outreach, project support and coordination, planning, research, data collection, and reporting.

Responsibilities include engagement with internal/external stakeholders, and assisting to advance climate risk mitigation strategies.

The successful candidate will serve as a member of a multi-disciplinary team to further county-wide resilience planning.

Visit governmentjobs.com/careers/broward

MEET THE TEAM RED JACK



My name is RED Jack - my family and I joined the Resilience Department in October 2023. We were quickly put to work on post storm assessments, impacts, and recovery with internal capabilities of mapping of tree canopy, beach erosion, and flood depths; information vital to the County's resilience planning and adaptation needs.

I have skills and capabilities that I'm looking forward to getting to work with, including thermal sensors and visual cameras. My big brother, RED LIDAR2BIG is a huge fan of elevation surveys and can carry a LiDAR payload that can be adapted to different mission profiles. He really likes the beach and places where the County needs accurate surveys of the ground surface. I call him my big brother because he is over 6 feet wide and can lift over 35 pounds. Our cousin, RED Mapper also joined, and carries a high-resolution camera that is used to create remarkably accurate maps of the landscape and infrastructure.

Drones have been used for law enforcement and firefighting, for inspections, environmental monitoring and disaster management, but now our skills are really coming into their own. We can now be used to provide aerial surveys for rapid assessment, infrastructure inspection and damage assessment, and to provide real time data for informed decision making. With our help, Broward County is improving planning and our ability to respond under the most extreme of natural events. We are looking forward to playing a pivotal role in resilience work for the Broward County community.

"We use specialized sensors such as thermal cameras and LiDAR sensors, to inspect critical infrastructure like bridges, roads, and dams, identifying structural damage for timely repairs and minimizing further risks."

STAY IN TOUCH



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RESILIENT ENVIRONMENT