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FACT SHEET: What Climate Change Means for Florida and the Southeast and Caribbean



Today, the Obama Administration released the third U.S. National Climate Assessment – the most comprehensive scientific assessment ever generated of climate change and its impacts across every region of America and major sectors of the U.S. economy. The findings in this National Climate Assessment underscore the need for urgent action to combat the threats from climate change, protect American citizens and communities today, and build a sustainable future for our kids and grandkids.

The National Climate Assessment is a key deliverable of President Obama’s Climate Action Plan to cut carbon pollution, prepare America’s communities for climate-change impacts, and lead international efforts to address this global challenge. Importantly, the plan acknowledges that even as we act to reduce the greenhouse-gas pollution that is driving climate change, we must also empower the Nation’s states, communities, businesses, and decision makers with the information they need prepare for climate impacts already underway.

The Obama Administration has already taken a number of steps to deliver on that commitment to states, regions, and communities across America. In the past year alone, these efforts have included: establishing a Task Force of State, Local, and Tribal Leaders on Climate Preparedness and Resilience to advise the Administration on how the Federal Government can respond to the needs of communities nationwide that are dealing with the impacts of climate change; launching a Climate Data Initiative to bring together extensive open government data with strong commitments from the private and philanthropic sectors to develop planning and resilience tools for communities; and establishing seven new “climate hubs” across the country to help farmers and ranchers adapt their operations to a changing climate.

FLORIDA is part of the National Climate Assessment’s U.S. Southeast and Caribbean Region. The regional phenomena identified by the Assessment may not occur in every state that is part of a particular region. According to the third U.S. National Climate Assessment Highlights report:

“The Southeast and Caribbean region is exceptionally vulnerable to sea level rise, extreme heat events, hurricanes, and decreased water availability. The geographic distribution of these impacts and vulnerabilities is uneven, since the region encompasses a wide range of environments, from the Appalachian Mountains to the coastal plains. The region is home to more than 80 million people and some of the fastest-growing metropolitan areas, three of which are along the coast and vulnerable to sea level rise and storm surge. The Gulf and Atlantic coasts are major producers of seafood and home to seven major ports that are also vulnerable.

The Southeast is a major energy producer of coal, crude oil, and natural gas, and is the highest energy user of any of the National Climate Assessment regions.

The Southeast warmed during the early part of last century, cooled for a few decades, and is now warming again. Temperatures across the region are expected to increase in the future. Major consequences include significant increases in the number of hot days (95°F or above) and decreases in freezing events. Higher temperatures contribute to the formation of harmful air pollutants and allergens. Higher temperatures are also projected to reduce livestock and crop productivity. Climate change is expected to increase harmful blooms of algae and several disease-causing agents in inland and coastal waters. The number of Category 4 and 5 hurricanes in the North Atlantic and the amount of rain falling in very heavy precipitation events have increased over recent decades, and further increases are projected.” (NCA Highlights, p. 72)

Regional Findings of the Third U.S. National Climate Assessment: SOUTHEAST

- “Sea level rise poses widespread and continuing threats to both natural and built environments and to the regional economy.
- Increasing temperatures and the associated increase in frequency, intensity, and duration of extreme heat events will affect public health, natural and built environments, energy, agriculture, and forestry.
- Decreased water availability, exacerbated by population growth and land-use change, will continue to increase competition for water and affect the region's economy and unique ecosystems.” (NCA, Ch. 17: Southeast)

Selected Findings and Information from the Third U.S. National Climate Assessment Relevant to FLORIDA

- **Tribes:** “Tribal communities in Florida are facing potential displacement due to the risk of rising sea levels and saltwater intrusion inundating their reservation lands.” (NCA, Ch. 12: Indigenous Peoples)
- **Tourism:** “Climate change impacts on tourism and recreation will vary significantly by region. For instance, some of Florida’s top tourist attractions, including the Everglades and Florida Keys, are threatened by sea level rise, with estimated revenue losses of \$9 billion by 2025 and \$40 billion by the 2050s.” (NCA, Ch. 14: Rural Communities)
- **Health:** “Atlanta, Miami, New Orleans, and Tampa have already had increases in the number of days with temperatures exceeding 95°F, during which the number of deaths is above average. Higher temperatures also contribute to the formation of harmful air pollutants and allergens. Ground-level ozone is projected to increase in the 19 largest urban areas of the Southeast, leading to an increase in deaths.” (NCA, Ch. 17: Southeast)
- **Sea Level Rise:** “Sea level rise presents major challenges to South Florida’s existing coastal water management system due to a combination of increasingly urbanized areas, aging flood control facilities, flat topography, and porous limestone aquifers. For instance, South Florida’s freshwater well field protection areas lie close to the current interface between

saltwater and freshwater, which will shift inland with rising sea level, affecting water managers' ability to draw drinking water from current resources. Coastal water control structures that were originally built about 60 years ago at the ends of drainage canals to keep saltwater out and to provide flood protection to urbanized areas along the coast are now threatened by sea level rise." (NCA, Ch. 17: Southeast)

- **Water:** "The Apalachicola-Chattahoochee-Flint (ACF) River basin in Georgia, Alabama, and Florida supports a wide range of water uses and the regional economy, creating challenging water sharing tradeoffs for the basin stakeholders. Climate change presents new stresses and uncertainties. ACF stakeholders are working to develop a management plan that balances economic, ecological, and social values." (NCA, Ch. 3: Water)
- **Flooding:** "There is an imminent threat of increased inland flooding during heavy rain events in low-lying coastal areas such as southeast Florida, where just inches of sea level rise will impair the capacity of stormwater drainage systems to empty into the ocean. Drainage problems are already being experienced in many locations during seasonal high tides, heavy rains, and storm surge events. Adaptation options that are being assessed in this region include the redesign and improvement of storm drainage canals, flood control structures, and stormwater pumps." (NCA, Ch. 17: Southeast)
- **Ecosystems:** "Coral reefs in the Southeast and Caribbean, as well as worldwide, are susceptible to climate change, especially warming waters and ocean acidification, whose impacts are exacerbated when coupled with other stressors, including disease, runoff, over-exploitation, and invasive species. (NCA, Ch. 17: Southeast)

Examples of Efforts Underway in FLORIDA to Address Climate Change

In **FLORIDA**, many efforts are already underway to mitigate and respond to the impacts of climate change, including:

Preparing Communities for the Consequences of Climate Change:

Many important preparedness, resilience, and adaptation efforts are already being led by local, state, and regional entities across the country. Mechanisms being used by local governments to prepare for climate change include: land-use planning; provisions to protect infrastructure and ecosystems; regulations related to the design and construction of buildings, road, and bridges; and preparation for emergency response and recovery. These local adaptation planning and actions are unfolding in municipalities of different sizes, and regional agencies and regional aggregations of governments are also taking actions. And States have also become important actors in efforts related to climate change.

- Commissioner Kristin Jacobs (Broward County, FL) serves on the President's State, Local and Tribal Leaders Task Force for Climate Preparedness and Resilience. Commissioner Jacobs has spearheaded the addition of the addition of a Climate Change Element into the county's comprehensive climate change plan, which prioritizes emissions reduction, as well as climate vulnerabilities in infrastructure planning, particularly with respect to sea level rise.

Cutting Carbon Pollution in FLORIDA:

In 2012, power plants and major industrial facilities in Florida emitted more than 130 million metric tons of carbon pollution – that's equal to the yearly pollution from more than 25 million cars. Through the Climate Action Plan and state initiatives, there are many efforts already underway to mitigate and respond to the impacts of climate change in Florida, including:

- ***Investing in Clean Energy:*** Since President Obama took office, the U.S. increased solar-electricity generation by more than ten-fold and tripled electricity production from wind power. Since 2009, the Administration has supported tens of thousands of renewable energy projects throughout the country, including more than 1,378 in Florida, generating enough energy to power more than 17,000 homes.
- ***Improving Efficiency:*** Using less energy to power our homes, businesses and vehicles is critical to building a clean and secure energy future. President Obama has made essential investments in research and development for energy efficiency advances, and set new standards to make the things we use every day – from cars to microwaves – more efficient.
 - President Obama established the toughest fuel economy standards for passenger vehicles in U.S. history. These standards will double the fuel efficiency of our cars and trucks by 2025, saving the average driver more than \$8,000 over the lifetime of a 2025 vehicle and cutting carbon pollution.
 - Since October 2009, the Department of Energy and the Department of Housing and Urban Development have jointly completed energy upgrades nearly two million homes across the country, saving many families more than \$400 on their heating and cooling bills in the first year alone.
 - As part of the President's Better Buildings Challenge, the cities of West Palm Beach and Margate committed to reducing energy intensity 20 percent by 2020 in a combined 1.28 million square feet of city-owned buildings. The Alachua County Public Schools have committed to the same goal in 4.19 million square feet of school facilities. The Housing Authority of City of Palatka has committed to the same goal in 22 thousand square feet of the buildings it administers. The Tampa Housing Authority has committed to 20 percent reduction in energy intensity within 10 years in 3.1 million square feet of buildings under its authority.

For more information about the third U.S. National Climate Assessment, please visit www.globalchange.gov or contact engagement@usgcrp.gov.

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