

Broward County Climate Change Element

The following policies are an extension of the 126 recommendations detailed in “Broward’s Climate Change Action Plan – Addressing our Changing Climate”, as developed by the Broward County Climate Change Task Force and approved by the Board of County Commissioners on May 4, 2010. The Broward County Climate Change Element provides a framework for integrating the economic, environmental, and social factors of climate change. A county-wide strategy, based on local vulnerability and consistent with regional efforts, the Element aims to mitigate the causes, and address the local implications, of global climate change. In doing so, we move one step closer to building a sustainable, climate resilient community.

Goal 19.0 Achieve a sustainable, climate resilient community by: promoting energy efficiency and greenhouse gas reduction strategies; protecting and adapting public infrastructure, services, natural systems and resources from climate change impacts; and continuing to coordinate and communicate locally and regionally to monitor and address the changing needs and conditions of the community.

Greenhouse Gas Emissions Reduction, Renewable Energy Production and Distribution

Objective 19.1 Mitigate the causes of climate change while providing for cleaner energy solutions and a more energy efficient way of life for visitors and residents.

Policy 19.1.1

Broward County shall mitigate its contribution to global climate change by reducing government operations greenhouse gas emissions to 7% below 1997 levels by 2015 and county-wide greenhouse gas emissions to 17% below 2005 levels by 2020 and 82% below 2010 levels by 2050. The County will continue to regularly monitor and track progress of programs and initiatives that contribute to the ultimate reaching of these goals.

Policy 19.1.2

Broward County shall encourage research for increasing the proportion of electricity generated by alternative and renewable energy sources within the County, such as solar, wind, geothermal and ocean energy technologies.

Policy 19.1.3

Broward County shall, by 2015 promote and support the expansion of alternative and renewable energy from residential, commercial and municipal properties by working

cooperatively with municipalities to reduce regulatory encumbrances and to develop incentives for renewable and alternative energy installations. ~~For instance, the County will review local codes and ordinances to ensure that residents have and retain the right to access sunlight and install solar energy systems.~~

Policy 19.1.4

Broward County should plan for and facilitate the development of infrastructure that provides public access to alternative fuels and electric vehicle charging stations by 2015. Actions should include:

- a) Planning for deployment and optimal distribution of a regional system;
- b) Negotiating interlocal agreements with County, State, municipal and private entities to share existing and proposed infrastructure; and
- c) Developing expedited permitting processes for private installation of alternative fuel and electric vehicle charging infrastructure.

Mitigation, Protection and Adaptation within the Transportation System

Objective 19.2 Advance transportation and land-use choices that: reduce fossil fuel use and vehicle miles travelled; improve the mobility of people, goods and services; provide a diverse, efficient and equitable choice of transportation options; and increase the County's resiliency to the impacts of climate change.

Policy 19.2.1

Broward County shall ~~support~~ promote efforts to create a regionally coordinated and effective public transportation system throughout Southeast Florida, in order to reduce vehicle miles travelled and carbon emissions by:

- a) Providing infrastructure and support facilities to encourage and enhance the use of public transit;
- b) ~~Supporting~~ Maintaining consistency with the Broward MPO 2035 Long Range Transportation Plan, which focuses on the enhancement of transit; and
- c) Establishing a regional vehicle miles travelled reduction target and a mechanism to annually evaluate progress toward the target.

Policy 19.2.2

Broward County shall continue to support and coordinate with local municipalities to further mixed land uses which promotes functional, walkable mixed-use development designs and projects by providing flexibility in development review for these projects, revising the zoning and land development codes to support such projects, and promoting the adoption of specific goals in local Comprehensive Plans to support and establish sustainable development

patterns, especially in areas at reduced risk to sea level rise, as defined by the Priority Planning Areas for Sea Level Rise Map in the Broward County Land Use Plan.

Policy 19.2.3

Broward County shall continue to support linking the broad range of local and state infrastructure investments to improve and integrate mixed land use patterns and transit corridors that promote multi-modal transportation options in order to encourage reductions in vehicle miles traveled and greenhouse gas emissions, improve energy efficiency, increase affordable housing proximate to urban work centers, and make progress toward other sustainability and quality of life measures.

Policy 19.2.4

Broward County shall support, and encourage all local ~~governments~~ municipalities to include, within their adopted comprehensive plans, policies and standards which encourage connectivity between all modes of transportation, and improve access to and availability of low carbon emission mobility options.

Policy 19.2.5

Broward County shall continue to work with the Department of Energy Florida Gold Coast Clean Cities Coalition to support initiatives which seek to diversify fuel options for public transit and fleet vehicles, expand infrastructure for charging electric and hybrid electric vehicles, and incentivize parking for alternative fuel vehicles.

Policy 19.2.6

Broward County should assist in coordinating transportation-related adaptation policies across jurisdictional boundaries and ensure consistency among broader planning and plan implementation efforts. Specifically, strategies for preparing for sea level rise, such as increasing road surface elevation standards, subsurface stabilization, stormwater management and drainage, and adjustment of bridge heights to allow for navigation, should be collaboratively assessed and implemented.

Policy 19.2.7

Broward County shall continue to coordinate regionally to implement an efficient public transit system, expand the network of pedestrianways and bikeways, meet county-wide greenhouse gas emission reduction goals, and promote the use of energy efficient and alternative fuel technologies, consistent with the Transportation Element of the County's Comprehensive Plan.

Mitigation, Protection and Adaptation within the Built Environment

Objective 19.3 Improve the climate resiliency and energy-efficiency of new and existing buildings and public infrastructure, and develop adaptation strategies for areas vulnerable to climate change-related impacts.

Policy 19.3.1

Broward County shall, by 2015, encourage greener, more efficient and climate resilient construction practices locally by:

- a) Building all new construction of county-owned facilities to Leadership in Energy and Environmental Design™ (LEED) ~~LEED~~ standards in accordance with resolution 2008-856 approved by the Board of County Commissioners;
- b) Encouraging all municipalities and commercial builders to adopt a policy of requiring ~~Leadership in Energy and Environmental Design™ (LEED)~~ LEED or acceptable green design standards on construction of all new and renovated public buildings and commercial space;
- c) Utilizing national guidelines and performance benchmarks for sustainable land design, construction and maintenance practices, as developed by The Sustainable Sites Initiative™ (SITES™);
- d) Encouraging licensed personnel in each building department to have at least 8 continuing education units (CEUs) of emerging energy efficiency and renewable energy technologies by 2014;
- e) Reevaluating base finish floor elevation standards with respect to projected sea level rise scenarios and flooding potential; and
- f) Incorporating building design specifications that increase resistance to impacts from more intense storm events.

Policy 19.3.2

Broward County, in conjunction with its municipalities, should work cooperatively to review and re-evaluate current zoning codes, regulations and policies according to sustainable community development practices, such as those outlined in the criteria recommended by the United States Green Building Council's Leadership in Energy and Environmental Design for Neighborhood Development (LEED-ND) certification, or by application of a national rating system for local governments, such as the STAR Community Index™ (STAR).

Policy 19.3.3

Broward County shall continue to review policies and promote programs which advance greenhouse gas reduction and energy conservation strategies; promote compact, transit-oriented, pedestrian-friendly development; further green construction practices and the design of climate sensitive and energy efficient buildings; encourage cluster development in order to retain or create native vegetative communities; and address the resilience and survivability of buildings and infrastructure to rising sea levels, tropical storms, storm surge, and other climate change impacts, consistent with the Community Design Guidebook and the Urban Design, Housing, and Future Unincorporated Area Land Use Elements of the County's Comprehensive Plan.

Policy 19.3.4

Broward County shall identify public investments and infrastructure at risk from sea level rise and other climate change related impacts by 2015, and update this assessment every 5 years. Specifically, the County shall analyze vulnerability to facilities and services, including but not limited to: buildings; water and wastewater treatment plants, transmission lines and pumping stations; stormwater systems; roads, rail, bridges, and all transportation and transit infrastructure; power generation facilities and power transmission infrastructure; critical airport and seaport infrastructure; hospitals; city halls, police and fire stations.

Policy 19.3.5

Broward County shall evaluate the costs and benefits of adaptation alternatives in the location and design of new infrastructure as well as the fortification or retrofitting of existing infrastructure.

Policy 19.3.6

Broward County should participate in the development and maintenance of a regional “Vital Signs” monitoring network of basic physical indicators of climate change specific to natural systems and the urban environment as regionally consistent documentation of long-term climate changes with relevance across Southeast Florida.

Policy 19.3.7

Broward County shall continue to improve analysis and mapping capabilities for identifying areas of the County vulnerable to sea level rise, tidal flooding, and other impacts of climate change. Acquire increasingly accurate Light Detection And Ranging (LiDAR) data, or other state-of-the-art elevation data, and other necessary modeling data and programs every 5 years to update the Priority Planning Area for Sea Level Rise Map in the County’s Land Use Plan and improve available information needed to make informed decisions regarding adapting to the impacts of climate change.

Policy 19.3.8

Broward County shall, by 2015, develop new 100 year stormwater elevation projections in the Broward County 100 year flood map for use in stormwater management permitting and other planning processes, which incorporate current and projected conditions for sea level rise.

Policy 19.3.9

Broward County, in conjunction with its municipalities and partner agencies, shall work to ensure that adaptation to climate change impacts, especially sea level rise, is incorporated into the planning, siting, construction, replacement and maintenance of public infrastructure in a manner that is cost-effective and that maximizes the use of the infrastructure throughout its expected life span.

Policy 19.3.10

Broward County, in conjunction with its municipalities and partner agencies, shall make the practice of adapting the built environment to the impacts of climate change an integral component of all planning processes, including but not limited to: comprehensive planning, building codes, life-safety codes, emergency management, land development and zoning regulations, water resource management, flood control and stormwater management, coastal management, and community development.

Policy 19.3.11

Broward County shall evaluate opportunities to protect coastal investments and infrastructure, as necessary and feasible, from the impacts of climate change. Specifically, the County will maintain shoreline protection and erosion control by:

- a) Continuing the appropriate use of beach nourishment and sand bypassing;
- b) Facilitating the installation and maintenance of native beach dune vegetation along appropriate areas of beach;
- c) Revisiting redevelopment policies with the objective of providing additional coastal buffer area between developed areas and the shoreline; and
- d) Considering hard structures, such as seawalls, only when alternative options are unavailable.

Policy 19.3.12

Broward County shall by 2012, designate areas that are at increased risk of flooding due to, or exacerbated by, sea level rise over the next 50 years within the Broward County Land Use Plan Priority Planning Areas for Sea Level Rise Map, and work to make these areas more climate resilient by discouraging density increases and encouraging the use of adaptation and mitigation strategies.

Policy 19.3.13

Broward County shall by 2017, work with its local municipalities to designate Adaptation Action Areas, per Florida State Law, using the Priority Planning Areas for Sea Level Rise Map as a basis for identifying areas especially vulnerable to sea level rise, in order to develop policies for adaptation and enhance the funding potential of infrastructure adaptation projects.

Policy 19.3.14

Broward County shall encourage local ~~governments—municipalities~~ to develop policies to improve resilience to coastal and inland flooding, salt water intrusion, and other related impacts of climate change and sea level rise in their Comprehensive Plans, Sustainability Action Plans, Vision Plans, Stormwater Master Plans, Adaptation Action Areas Plans, Climate Change Plans and other city-wide plans. ~~to improve resilience to coastal flooding, salt water intrusion, and other related impacts of climate change and sea level rise.~~

Mitigation, Protection and Adaptation within our Natural Systems

Objective 19.4 Protect and enhance local and regional ecosystems, optimizing the co-benefits of habitat restoration, coastal buffers, wetland mitigation, urban reforestation, and expanded green infrastructure, in order to create a healthy, enjoyable, and climate resilient environment.

Policy 19.4.1

Broward County shall, by 2015, assess the vulnerability of specific species, habitats, landscapes, and ecosystem functions that may be sensitive to climate change and develop coping strategies and contingency plans for their adaptation, such as identifying habitats that may be viable during climate disturbances and could potentially serve to give refuge to and sustain at-risk species.

Policy 19.4.2

Broward County shall review the management plans of public parks, forests, and wildlife areas every 10 years, conduct a climate change risk assessment for each area, and ensure that adaptation strategies consistent with assessment findings are included in those plans.

Policy 19.4.3

Broward County should incorporate species and habitat vulnerability to climate change into land use planning, land acquisition, and for deed of conservation easement consideration.

Policy 19.4.4

Broward County shall continue to support local environmental restoration, mitigation and adaptive management initiatives, including those related to Everglades restoration, and coordinate with other state, regional and national strategic planning efforts to improve the resiliency of natural lands and systems to climate variability and change.

Policy 19.4.5

Broward County, in conjunction with its municipalities, shall consider the climate adaption needs of native plants and animal species, and consider strategies for assisting in their natural migration.

Policy 19.4.6

Broward County, in conjunction with its municipalities, shall promote species diversity, the planting of native landscapes, and sustainable urban forest landscape practices in order to protect the health and resiliency of our natural resources to the impacts of climate change.

Policy 19.4.7

Broward County shall seek funds to develop and maintain an urban reforestation program, in order to expand green infrastructure, reduce the heat island effect and encourage local carbon sequestration and storage, with the goal of increasing tree canopy coverage toward the American Society of Foresters' suggested goal of 40% across the county.

Policy 19.4.8

Broward County, in cooperation with local academic, governmental and non-profit agencies, shall perform a tree canopy study by 2015 to determine canopy composition and extent, and seek funds to repeat study every five years in order to measure progress on the County's goal of expanding green infrastructure.

Policy 19.4.9

Broward County shall encourage planting of native trees known to sequester and store high levels of carbon on available public and private lands, including vacant or underutilized properties, school and government properties, and conservation lands. Pursue programs and funding strategies designed to create carbon emission offsets through tree plantings and/or carbon mitigation banks.

Policy 19.4.10

Broward County, in cooperation with local academic and governmental agencies, should perform a green roof pilot study to evaluate the feasibility of green roofs in Broward County and determine the appropriate plant palette, maintenance requirements, and potential water conservation benefits.

Policy 19.4.11

Broward County shall continue to implement the NatureScape Broward program and encourage the use of native and non-invasive, subtropical, and rare native plants in the urban landscape in order to promote water and energy conservation while creating a climate resilient landscape. Furthermore, these plants should be salt, wind and drought tolerant, where appropriate, and maintained consistent with NatureScape Broward and Florida-Friendly Landscaping™ Best Management Practices.

Policy 19.4.12

Broward County, in cooperation with its municipalities and appropriate local agencies, shall evaluate water and stormwater management operation strategies in the context of sea level rise, in order to lessen negative impacts to open spaces, wetland mitigation areas, and natural systems, improve the ability of these systems to adapt to climate change, and optimize the ability of these systems to create additional benefits to the County's residents and visitors.

Policy 19.4.13

Broward County should consider policies which would allow coastal and water dependent ecosystems to migrate or adapt to maintain healthy wildlife and fish populations consistent with new climate regimes.

Policy 19.4.14

Broward County should establish policies and regulations to protect coastal ecosystems from contamination resulting from inundation, structural failure, or abandonment of

residential, industrial, and municipal assets resulting from sea level rise, storm events, or other climate related impacts.

Policy 19.4.15

Broward County should support the efforts of state environmental and planning agencies to jointly develop, assess, and recommend a suite of planning tools and climate change adaptation strategies for local ~~governments-municipalities~~ to maximize opportunities to protect the beach and dune systems, coastal wetlands, and other coastal resources from the impacts of sea level rise.

Mitigation, Protection and Adaptation of Water Resources ~~and~~ Services

Objective 19.5 Ensure the resiliency of existing water resources, ~~and~~ water and wastewater infrastructure to the impacts of climate variability and change in order to protect future water quality and minimize the potential for flood damage and water shortages, while improving the energy efficiency of utilities and reducing water-related carbon emissions and climate impacts.

Policy 19.5.1

Broward County shall, by 2015, ensure that water and wastewater service planning and policy development considers methods for reducing utilities' "carbon footprint", including the best management practices recommended in American Waterworks Association Florida Vision 2030, which have been recognized by utilities as appropriate utility responses to climate change. Also, additional means of reducing demand for traditional energy sources at water and wastewater treatment facilities, such as through the production of energy through cogeneration systems, should be explored.

Policy 19.5.2

Broward County shall continue to develop, implement and coordinate regional water conservation initiatives, in partnership with local ~~governments-municipalities, and~~ water and wastewater utilities, as part of long-term water supply planning, and seek the continued support of the South Florida Water Management District and other agencies.

Policy 19.5.3

Broward County shall coordinate with local ~~municipalities-agencies, and~~ water and wastewater utilities by 2015, to develop policies and plans that set short-, intermediate-, and long-range goals and establish adaptive management implementation strategies for water and wastewater resources under their jurisdiction to address the potential impacts of climate change, and its operational, economic, and environmental effects.

Policy 19.5.4

Broward County shall coordinate with local municipalities, water providers and water managers to ensure the adequacy of water supply facilities and infrastructure to effectively capture, store, treat, and distribute potable water under variable climate conditions, including changes in rainfall patterns, sea level rise, and flooding, with potential water quality and quantity impacts.

Policy 19.5.5

Broward County shall coordinate with the South Florida Water Management District, local utilities and neighboring counties to develop regional water demand projection scenarios that account for potential changes in (1) population and rates of water consumption; (2) municipal, industrial, and agricultural demands as temperatures increase and drought (seasonal or intra-annual) persists; and (3) water demand for energy generation due to possible changes in fuel sources over a 100-year planning horizon.

Policy 19.5.6

Broward County shall collaborate with local, regional, state and federal partner agencies on developing the scientific and technical knowledge needed to understand the potential impacts of climate change on the region's water resources, evaluate various adaptation technologies available, and, by 2015, create an adaptive response plan. Advanced hydrological modeling and engineering evaluations by the South Florida Water Management District, U.S. Geological Survey, and U.S. Army Corps of Engineers will be especially critical to this effort.

Policy 19.5.7

Broward County shall support recurring and continued development of local integrated models and continuous data collection, to help predict and track the impacts of sea level rise on groundwater levels, saltwater intrusion, and drainage infrastructure through enhanced development and application of local hydrologic models and the use of down-scaled climate models.

Policy 19.5.8

Broward County shall work in coordination with local utilities and municipalities to maintain infrastructure protection and adaptation through infiltration and inflow program development to reduce the flow of groundwater and stormwater to wastewater collection and treatment facilities.

Policy 19.5.9

Broward County shall work to protect existing well fields, surface or subsurface storage facilities, control structures, water and wastewater treatment plants and transmission infrastructure from increased coastal flooding, sea level rise, saltwater intrusion, and other potential future climate change impacts, and plan for infrastructure replacement and relocation as needed.

Policy 19.5.10

Broward County shall continue source-water (well field) monitoring and protection programs to mitigate water supply loss due to saltwater intrusion. Specifically, Broward County should address potential impacts on the coastal aquifer from water quality changes and flooding of coastal and tidally influenced bodies of water that may occur due to more intense storms, higher surface water temperatures, and rising sea levels.

Policy 19.5.11

Broward County, in ~~coordination~~~~conjunction~~ with its municipalities, shall develop regulations, by 2015, ~~codes and regulations~~ that require new construction, redevelopment, additions, retrofits or modifications of property to incorporate porous materials, reduce total impervious area, and employ other techniques to reduce run-off, capture and reuse rain water, and recharge the Biscayne Aquifer.

Policy 19.5.12

Broward County shall pursue the establishment of mandatory reuse zones in order to require the use of reclaimed water for irrigation, when source water is available, with the goal of reducing demands on the Biscayne Aquifer.

Policy 19.5.13

Broward County shall study whether to build, modify or relocate water, ~~and~~ wastewater and stormwater transmission infrastructure to allow for strategic retreat from areas at risk to sea level rise.

Policy 19.5.14

Broward County and its municipalities should strongly encourage golf course to reduce their impacts on local water resources by ~~shall reduce the impact of golf courses to water resources by requiring the~~ incorporating ~~on of~~ Best Management Practices, such as efficient water usage and irrigation practices, minimizing fertilizer and pesticide use, and following sustainable design and maintenance criteria, as recommended by the County Environmental Protection and Growth Management Department and outlined in the Florida Department of Environment Protection January 2007 report "Best Management Practice for the Enhanced Environmental Quality on Florida Golf Courses".

Interagency Coordination

Objective 19.6

Create and maintain effective and ongoing paths for communicating the climate change preparedness needs of the County with the public and other local, regional, state, national and international agencies.

Policy 19.6.1

Broward County shall continue to create collaborative intergovernmental practices and mechanisms in order to coordinate and advance strategies, programs, and other sustainable initiatives throughout the County and region, that mitigate greenhouse gas emissions and protect and adapt the built and natural environments to the consequences of climate change.

Policy 19.6.2

Broward County shall coordinate regionally with other Southeast Florida counties, academia, and state and federal government agencies in the analysis of sea level rise, drainage and hurricanes impacts and the planning of adaptation measures.

Policy 19.6.3

Broward County shall continue to collaborate with municipalities, neighboring counties and other regional public and private entities to create, develop, and implement a suite of planning tools for climate change mitigation and adaptation.

Policy 19.6.4

Broward County shall continue to collaborate with and support local and regional planning entities to ensure that local ~~government-municipal~~ comprehensive plans, regional strategic plans, disaster mitigation plans, water management plans, and transportation plans are updated to provide for a sustainable environment and reflect the best available data and strategies for adapting to future climate change impacts.

Policy 19.6.5

Broward County shall continue to actively participate in the Southeast Florida Regional Climate Change Compact, working with our neighboring counties to make our region more climate change resilient by sharing technical expertise, ~~accessing-assessing~~ regional vulnerabilities, advancing agreed upon mitigation and adaptation strategies, and developing joint state and federal legislative policies and programs.

Policy 19.6.6

Broward County shall seek to engage the support of federal agencies, such as National Oceanic and Atmospheric Administration, U.S. Geological Survey, Federal Emergency Management Agency, Environmental Protection Agency, the U.S. Department of Interior, U.S. Department of Energy, and the U.S. Army Corps of Engineers, that can provide technological and logistical support to further state, regional, county, and local planning efforts in the assessment of climate change vulnerabilities and adaptation strategies.

Emergency Preparedness and Disaster Management

Objective 19.7 Ensure adequate planning and coordinated response for emergency preparedness and post-disaster management in the context of climate change.

Policy 19.7.1

Broward County shall ensure adequate planning and response for emergency management in the context of climate change by maximizing the resilience and self-sufficiency of, and providing access to, public structures, schools, hospitals and other shelters and critical facilities.

Policy 19.7.2

Broward County shall develop plans and monitoring programs to address the impacts of climate change on households and individuals especially vulnerable to health risks attributable to or exacerbated by rising temperatures, to include low income households and the elderly.

Policy 19.7.3

Broward County shall continue to communicate and collaboratively plan with other local, regional, state and federal agencies on emergency preparedness and disaster management strategies. This includes incorporating climate change impacts into updates of local mitigation plans, water management plans, shelter placement and capacity, review of major trafficways and evacuation routes, and cost analysis of post disaster redevelopment strategies.

Policy 19.7.4

Broward County shall work to encourage dialogue between residents, businesses, insurance companies and other stakeholders, through public education campaigns and workshops, in order to increase understanding regarding the potential impacts of climate change on our coastal communities and evaluate the shared costs of action or inaction in human, ecological and financial terms.

Policy 19.7.5

Broward County shall work with the Florida Division of Emergency Management and other agencies to incorporate sea level rise and increasing storm surge impacts into the remapping of potential hazard areas in coastal zones by 2015. Revised hazard area designations should better reflect the risks to communities associated with climate change and allow reevaluation of suitability for development or redevelopment in these areas.

Policy 19.7.6

Broward County shall cooperatively develop model codes and policies to encourage post-hazard redevelopment in areas with less vulnerability to storm surge, inundation, flooding, sea level rise and other impacts of climate change, and incentivize locally appropriate mitigation and adaptation strategies.

Social Considerations, Public Health and Education

Objective 19.8 Increase opportunities in the community to learn about climate change, participate in decision-making, engage in a green economy, utilize green infrastructure, ~~gain access to amenities, participate in decision-making,~~ ~~and~~ study health impacts and reduce population vulnerability.

Green Jobs/Economic Resiliency

Policy 19.8.1

Broward County and its municipalities shall encourage the development of “green” industry and business which diversify the local economy and contribute benefits towards a sustainable future.

Policy 19.8.2

Broward County shall continue to develop plans and programs in coordination with local municipalities, power companies, and private partners, in order to reduce greenhouse gas emissions and create “green” job opportunities throughout the community, by:

- a) Expanding the market for energy efficient products and services;
- b) Supporting alternative and renewable energy production through innovative financing; and
- c) Promoting and incentivizing energy conservation retrofits.

Policy 19.8.3

Broward County shall seek to strengthen the local economy by promoting green economic growth and green-collar work training programs in order to: create resiliency; reduce reliance on fossil-fuel-based economies; provide a positive focus for economic development; advance the use of sustainable materials, technologies and services; and encourage local jobs in sustainable businesses which offer a living wage and make it possible for local climate change goals to be met.

Policy 19.8.4

Broward County should review codes and regulations to enable and encourage eco-industrial development and business practices in line with the concept of the circular economy. Specifically, businesses models and land development patterns should be encouraged which promote by-product exchanges (so that one company’s waste stream is another’s source of raw materials) as to more efficiently use resources (materials, water, energy) throughout society.

Right to Healthy and Safe Environment

Policy 19.8.5

Broward County shall consider the public health consequences of climate change, such as extreme temperatures and vector-borne diseases, and take steps to build capacity to respond to or prevent those consequences. Specifically, the County should:

- a) Encourage research to better understand the public health consequences associated with climate change in Broward County
- b) Evaluate the capacity of existing public health and emergency response programs
- c) Work collaboratively to create a unified methodology to track and monitor health impacts, thereby developing appropriate health indicators
- d) Consider possible public health impacts of climate change in existing planning, programs, policies, and regulations
- e) Create a community-wide public health climate change adaptation plan
- f) Raise the awareness of policy makers, community leaders, businesses, institutions, health care providers, and the general public about the public health significance and related costs of climate change
- g) Help to expand responder training to include conditions of extreme weather such as heat waves and cold snaps
- h) Work with community groups to create effective outreach materials and mechanisms focused on vulnerable and/or hard-to-reach populations
- i) Regularly assess the effectiveness of adaptation policies and programs

Policy 19.8.6

Broward County should assess and quantify the multiple environmental, social, and economic benefits of green infrastructure in terms of climate change resiliency, considering that trees, forests, wetlands, and waterways provide natural protection against the forces of climate change by improving air quality, providing shade, reducing heat, storing surface water and filtering stormwater runoff. Furthermore, decisions regarding the conservation and expansion of green infrastructure should include their contribution to meeting greenhouse gas mitigation targets, public health and safety goals, and climate change adaptation priorities.

Resource Management (waste, materials economy, local food)

Policy 19.8.7

Broward County shall continue to pursue the source reduction, reuse, recycling, and recovery model of waste management, consistent with the Solid Waste Element of the Broward County Comprehensive Plan, in order to meet the State of Florida goal of recycling seventy-five percent of municipal solid waste (including net waste combusted) by 2030, work towards the zero waste by 2030 goal established in the Broward County Climate Change Action Plan, and

continue to provide the environmental and social benefits of lowering greenhouse gas emissions, producing alternative energy, and reducing toxins in our land and water.

Policy 19.8.8

Broward County should develop, in conjunction with local municipalities and businesses, a sustainable and energy-efficient materials economy through cooperative materials management systems and infrastructure, in order to maximize the recovery and reuse of waste, water, wastewater, and other materials in ways that capture their economic value, conserve embedded energy, and minimize net life-cycle emissions of greenhouse gases and other pollutants.

Policy 19.8.9

Broward County, in conjunction with its municipalities, should create programs and policies which encourage and support ~~backyard~~-composting, community garden networks and local food production, in order to meet the multiple goals of reduced emissions and energy consumption, while increasing the resiliency and long term food security of the community.

Equity (inclusive decision-making)

Policy 19.8.10

Broward County shall support community engagement in climate change adaptation and emergency response planning, especially concerning highly vulnerable and historically disadvantaged groups, in order to ensure equity in decision-making and strive to increase access to essential resources, reduce risk and health disparities, and increase resiliency throughout the entire community's capacity to adapt.

~~Access to amenities/g~~Green infrastructure, pedestrian access and community connectivity/mobility

Policy 19.8.11

Broward County, ~~in conjunction with~~ its municipalities and subdivisions, shall ~~encourage~~, when ~~never~~ possible, increase walking and bicycle and pedestrian ing the connectivity between of residential areas and to public/civic areas, such as schools, libraries and parks, infrastructure (schools, sidewalks, bus stops, parks, etc.) and enhance street networks for greater connectivity and multimodal use, in order to:

increase access to public services and facilities

~~increase access to amenities~~ enhance grid connectivity for bicycle users and pedestrians

a) ~~while~~ reduceing motor vehicle traffic;

b) reduce greenhouse gas emissions; and

a)c) and increaseing neighborhood health and safety.

Policy 19.8.12

Broward County and its municipalities should ~~encourage~~ modify urban canopy placement and enhancement ~~landscaping design standards and setback provisions to encourage new sidewalks and bike trails be placed in close proximity to the urban canopy in order to~~ that -contributes to quality walking environments ~~environments and maximize the benefits of these amenities~~ green infrastructure to the community.

Public Education/Community Engagement/Research Partnerships

Policy 19.8.13

Broward County shall continue to engage stakeholders, local municipalities, regional, state and federal partners, academia, practitioners and climate scientists, in exchanging information, best practices and policy solutions, regarding local climate change impacts and mitigation and adaptation strategies.

Policy 19.8.14

Broward County, through the Master Partnership Agreement with the School Board of Broward County, shall continue to support existing County and municipal education and outreach programs, including but not limited to: energy efficiency and water conservation; waste reduction and recycling; urban forests and native landscaping; and air quality and greenhouse gas reduction. The County will also support education and outreach programs on community gardens, food security, pedestrian and bicycle safety, exercise and health, and work cooperatively to link these overlapping themes and reinforce the interconnected nature and importance of these issues, especially related to climate change, in all educational materials and messages.

Policy 19.8.15

Broward County shall promote partnerships between local government agencies, universities, professionals and practitioners, to foster an environment for connecting scientific research and education with practical applications that will contribute to the resiliency and adaptation within the built and natural environments to the impacts of climate change.