



INFRASTRUCTURE

CLIMATE CHANGE ELEMENT

PRINCIPLES

The City's Core Principles for the Climate Change Element are to:

- Address climate change and its impacts from a holistic and comprehensive standpoint.
- Take active ownership in reducing the magnitude of Climate Change Impacts through mitigation strategies.
- Protect the quality of life within the City through active management of, and preparation for, the needs posed by Climate Change.
- Coordinate Fort Lauderdale's efforts with regional efforts to resolve Climate Change impacts.
- Recognize and utilize the opportunities brought forth by climate change.



GOALS, POLICIES, AND EVALUATION MEASURES

GOAL 1: Develop mitigation and adaptation strategies to reduce emission that contribute to climate change.

OBJECTIVE CC 1.1: Greenhouse Gases and Emissions

Reduce greenhouse gas emissions to mitigate Fort Lauderdale's contribution to global climate change. Increase renewable energy production and distribution.

EVALUATION MEASURE CC 1.1.1: The City of Fort Lauderdale shall work city-wide to reduce greenhouse gas emissions generated by government operations with the goal of achieving 80% reduction below 2010 levels by 2050. The City will continue to regularly monitor and track progress of programs and initiatives that contribute to reaching this goal.



POLICY CC 1.1.2: The City of Fort Lauderdale shall consider greenhouse gas emissions when making decisions related to procurement, capital improvements, operations, programs, events, long-term planning, land-use, and City operations.

POLICY CC 1.1.3: Perform an annual greenhouse gas survey and review, track and report progress towards reduction goals.

POLICY CC 1.1.4: The City of Fort Lauderdale shall continue to encourage and require the planting of native and other drought-tolerant vegetation known to sequester carbon and reduce heat island impacts on available public and private lands, including school and government properties, and conservation lands and shall pursue programs and funding strategies designed to create carbon emission offsets through tree plantings and/or carbon mitigation programs.

POLICY CC 1.1.5: The City of Fort Lauderdale shall promote and support the expansion of alternative and renewable energy on residential, commercial and municipal properties by working to reduce regulatory encumbrances and to develop incentives for renewable and alternative energy installations.

EVALUATION MEASURE CC 1.1.6: The City shall promote alternative sources of energy with the goal of sourcing 20% of electricity from renewable energy by 2030. The City of Fort Lauderdale shall source electricity from renewable sources including solar, wind, and ocean current technologies.

EVALUATION MEASURE CC 1.1.7: Expand tree canopy citywide to help reduce the heat island effect. The City of Fort Lauderdale shall continue to expand tree canopy coverage to 33% by 2040 and reduce heat island effects.

POLICY CC 1.1.8: The City will explore and implement incentives for businesses successfully achieving emissions benchmarks to be set by the City.



POLICY CC 1.1.9: The City shall, through its land-use regulations, encourage the development of green industries within industrial land-uses.

POLICY CC 1.1.10: The City shall explore education and implementation incentives for business and residences in regard to solar power, energy efficiencies, and electric vehicle technology that can be incorporated on-site.

POLICY CC 1.1.11: The City shall explore opportunities to increase electric vehicle technology on and within City owned properties and buildings.

OBJECTIVE CC 1.2: Energy Efficient and Resilient Transportation Network

Assess and strengthen the transportation network in areas susceptible to climate change effects. Advance transportation and land-use options that reduce fossil fuel use, improve the mobility of people, goods and services; provide a diverse, efficient and equitable choice of public transportation options; and increase the City's resiliency to the impacts of climate change.

POLICY CC 1.2.1: The City shall maintain a list of roadway segments and transportation systems impacted by or at risk of flooding or adjacent to Adaptation Action Areas. Rehabilitation and adaption of these roadways shall be evaluated annually, and where financially feasible, prioritized in the City's CIP.

POLICY CC 1.2.2: Where feasible, the City shall investigate and implement innovative stormwater capture techniques within the public right of way, including, but not limited to, green and blue infrastructure, permeable surfaces, etc.

POLICY CC 1.2.3: Partner with agencies and businesses to increase commuter car-pooling and to incentivize and encourage alternative/public transit use. The City of Fort Lauderdale shall coordinate with the Florida Department of Transportation (FDOT) District IV Carpooling program encourage ride-sharing and carpooling practices throughout the City.

POLICY CC 1.2.4: Enhance availability of non-motorized mobility options, including bicycle and pedestrian modes of travel, through enhancement of facilities, safety, and connectivity via implementation of the City's multimodal mobility plans.





EVALUATION MEASURE CC 1.2.5: The City of Fort Lauderdale shall reduce its fossil fuel use for City vehicles by 20% below 2015 levels by 2025 through the replacement of City fleet with low emission vehicles and other fuel efficiency strategies.

POLICY CC 1.2.6: The City shall, through its land-use planning, encourage mixed-use and other land-use policies that will reduce vehicle miles traveled within the City.

POLICY CC 1.2.7: The City shall ensure multimodal options of transportation exist along key corridors, especially ones to be used as emergency evacuation routes or high priority post-disaster relief corridors.

GOAL 2: Achieve a climate-resilient community through the protection and adaptation of public infrastructure, services, and natural resources from adverse climate change impacts.

OBJECTIVE CC 2.1: Vulnerability Assessment

Conduct vulnerability assessment to identify at risk areas and population.

POLICY CC 2.1.1: The City shall update by 2022 a vulnerability assessment to further identify population groups, property, public investments and infrastructure at risk from sea level rise, storm surge, and other climate change-related impacts and shall update this assessment periodically as new projections are published. Specifically, and at a minimum, the assessment shall include municipal offices and facilities; 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; and hospitals and residential care facilities.

OBJECTIVE CC 2.2: Resiliency and Efficiency

Improve 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 where economically feasible.

POLICY CC 2.2.1: The City of Fort Lauderdale shall encourage greener, more efficient and climate resilient construction practices by:

POLICY CC 2.2.1a: Building all new construction of city-owned facilities to published Leadership in Energy and Environmental Design™ (LEED) standards; Florida Green Building Coalition (FGBC) green building standards, or Green Building Initiative (GBI) Green Globes rating standards or equivalent. The City shall incorporate design and operational policies and options where feasible to ensure city owned facilities are net-zero buildings.





POLICY CC 2.2.1b: Explore ordinances or regulations to require all new building construction projects over 10,000 square feet to meet LEED Silver performance standards, or pay into a Green Fund as a fee in lieu.

POLICY CC 2.2.1c: Coordinate with Broward County on community-wide flood map for future conditions which is being updated for sea level rise and ground water table change.

POLICY CC 2.2.1d: The City of Fort Lauderdale shall develop and maintain design guidelines for the public realm that emphasize sustainability and resiliency.

EVALUATION MEASURE CC 2.2.1e: Require licensed personnel in the Building Department to have at least 8 continuing education units (CEUs) of emerging energy efficiency and renewable energy technologies by 2025.

POLICY CC 2.2.1f: Reevaluate floodplain management ordinances as necessitated by updates to the *Southeast Florida Regional Climate Change Compact*, including building finish floor elevation standards (minimum City Freeboard) with respect to projected sea level rise scenarios and flooding potential.

POLICY CC 2.2.1g: Incorporate building design specifications that increase resilience to impacts from more intense storm and increasing flood events through available resilience strategies.



POLICY CC 2.2.2: Evaluate the capital costs with considerations for life cycle cost and benefits of adaptation alternatives in the siting and design of new infrastructure as well as the fortification or retrofitting of existing infrastructure.

POLICY CC 2.2.3: Ensure that adaptation to climate change impacts, especially sea level rise and flooding, is incorporated into the planning, siting, construction, replacement and maintenance of public infrastructure in a manner that is cost-effective, captures co-benefits of the investment and that maximizes the use of the infrastructure throughout its expected service life.

POLICY CC 2.2.3a: To ensure coordination, consistency and maximum effectiveness of coastal improvements necessary to mitigate high tide flooding associated with realized and additional sea level rise through the year 2070, the City will adopt and update as necessary regionally consistent top elevations standards for seawalls, banks and berms, and other appurtenant coastal infrastructure (e.g., boat ramps) consistent with the findings and recommendations of the United States Army Corps of Engineers/Broward County Flood Risk Management Study for Tidally Influenced Coastal Areas. These standards shall be consistent with Chapter 39, Article XXV – Resiliency Standards for Flood Protection - of the Broward County Code of Ordinances.

POLICY CC 2.2.3b: By 2022, the City shall produce an updated bridge infrastructure report that includes climate change effect as an evaluation criterion.



POLICY CC 2.2.4: Ensure the impacts of climate change are an integral component of all planning processes, including but not limited to: 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 CC 2.2.5: The City shall continuously evaluate and implement as appropriate, emerging technology that will improve local resiliency and/or reduces the impact on climate change created by the City, including water, energy, and transportation technologies.

OBJECTIVE CC 2.3: Stormwater Management

Ensure the resiliency of existing water resources, and stormwater, water and wastewater infrastructure to the impacts of climate variability and extremes to protect future water quality and minimize the potential for flood impacts, contamination and water shortages.

POLICY CC 2.3.1: Incorporate sea level rise projections and a resilience approach into the Stormwater Management Plan and Flood Hazard Mitigation program.

POLICY CC 2.3.2: Implement and maintain a Stormwater Management Plan and evaluate the potential for modified rate structure based on individual asset vulnerability.

POLICY CC 2.3.3: The City of Fort Lauderdale shall continue to develop regulations that require new construction, and redevelopment to manage stormwater as a resource and address runoff quality and quantity, by incorporating a low impact design approach that promotes best management practices to reduce runoff, capture and reuse rainwater, and recharge the Biscayne Aquifer.

OBJECTIVE CC 2.4: Protection of the Natural Environment

Protect and enhance the City's natural environment as necessary to maintain a healthy, enjoyable, and climate-resilient environment.

POLICY CC 2.4.1: Establish location-specific interventions to protect coastal ecosystems from adverse impacts resulting from sea level rise, storm events, or other climate-related impacts.

POLICY CC 2.4.2: The City will strive to ensure that adaptation does not come at the expense of natural environment. That adaptation strategies are reviewed with a sensitivity for dependent ecosystems with emphasis placed on efforts that preserve and enhance the adaptive capacity of these ecosystems.

POLICY CC 2.4.3: Develop and maintain a program to preserve a natural coastal environment, including the beach and dune system, coastal wetlands, and other coastal resources to promote ecosystem services as they pertain to climate change adaptation, including the impacts of sea level rise and wave energy during storm surge events.





GOAL 3: Preserve and enhance the quality of life through advance planning, improved coordination with businesses and local and regional governments, better monitoring of evolving conditions, and equitable provision of resources to address issues related to climate change, and hazard and natural disaster resiliency and recovery.

OBJECTIVE CC 3.1: Education, Outreach, and Monitoring

Continue to coordinate with the private sector, governmental agencies within the South Florida region, non-governmental entities, and academic institutions in the ongoing assessment of existing and projected conditions related to our changing climate and rising sea levels, and continue to collaborate as necessary in the identification and development of effective solutions and strategies to adapt and improve resiliency of the community. Work with other agencies and seek out new funding for implementation of programs.

POLICY CC 3.1.1: Provide regular communication, at least annually, that encourages public education of current policies, ideas, and sustainable practices to reduce household GHGs and energy waste and increase community resiliency.

POLICY CC 3.1.2: The City of Fort Lauderdale shall continue to promote, educate, and encourage participation of the community in programs such as the PACE financing for clean energy program, and other programs to set community mitigation goals and increase participation in the *Southeast Florida Regional Climate Change Compact*.

POLICY CC 3.1.3: Provide, as part of information at the beginning of the hurricane season, information on evacuation routes, sources of information in case of emergencies, and best practices and contact information for reporting of flood and debris post disaster.

POLICY CC 3.1.4: The City of Fort Lauderdale shall continue to coordinate regionally with Southeast Florida counties and municipalities, academia, and state and federal government agencies in the analysis of sea level rise, drainage, storm surge and hurricane impacts and the planning of mitigation and adaptation measures.

POLICY CC 3.1.5: The City of Fort Lauderdale shall continue to actively monitor the Southeast Florida Regional Climate Change Compact, and shall coordinate with neighboring and other municipalities to make our community more climate change resilient by sharing technical expertise, assessing regional vulnerabilities, advancing agreed upon mitigation and adaptation strategies such as through the Regional Climate Action Plan, and developing policies and programs.

POLICY CC 3.1.6: The City of Fort Lauderdale shall engage local stakeholders such as the Greater Fort Lauderdale Chamber of Commerce and other members of the business community in promoting mitigation and adaptation strategies, programs, and incorporating business roles and needs in resiliency planning.

POLICY CC 3.1.7: The City shall evaluate Zero Waste programs for inclusion in its Strategic Plan, and consider incentives and other policies which will encourage the location of Zero Waste businesses within the City.





OBJECTIVE CC 3.2: Incorporate With Other Plans

Acknowledge and incorporate Climate Change into Planning Documents.

POLICY CC 3.2.1: The City shall incorporate into its land-use planning considerations of sea level rise, elevation, areas of repetitive loss and high-risk areas for flooding identified through the Stormwater Management Plan and Flood Hazard Mitigation program.

EVALUATION MEASURE CC 3.2.2: The City shall assess by 2025, and within every five years thereafter, a revised prioritization program for infrastructure currently planned in repetitive loss and high flood risk areas, and consider deprioritizing new projects in these areas.

