

GOAL 2: COASTAL MANAGEMENT AND CONSERVATION (2030 GOAL 5)

NOTES:

1. All deadlines must be set once a timeline for approval is identified.
2. Highlighted policies or data indicate that existing updates on status need to be incorporated.

OBJECTIVES:

1. Floodplain Manager and Chief Resilience Officer
2. Coastal Protection
3. Dune preservation
4. Coastal High Hazard Areas
5. Wetlands protection
6. Tree preservation & urban forestry
7. Wildlife planning
8. Land Acquisition & Preservation
9. Water Quality & Conservation
10. Air Quality
11. Energy Conservation
12. Dredge, Fill, and Excavation Activities
13. Hazard Mitigation, disaster Preparedness, & Post-disaster Redevelopment
14. Waterfront planning
15. Public Access
16. Intergovernmental Coordination

INTRODUCTION:

Today, our social, economic and environmental sustainability are under threat from the hazards of global warming, changing storm patterns and sea level rise. These are concrete changes we see in evidence all over the world. These changes pose a devastating threat to a barrier island and necessitate aggressive and well-coordinated planning. Phase II of the Nassau County Vulnerability Assessment conducted in 2020 by the Balmoral Group clearly points out the threat of storm surge and sea level rise on Amelia Island. Based on satellite imagery, one map indicates a number of areas that have already had an increase in flooding during heavy rains, high tides and storm surge. Such increases and coastal inundation depths are shown in considerable detail in the FEMA Flood Risk Maps released in 2016. According to the Balmoral report, “most of Amelia Island is impacted by even the weakest and most frequent storms, Category 1,” and that is without considering sea level rise. NOAA projections do not combine sea level rise with storm surge projections, but the combination will gradually become increasingly problematic. Based on the City of Fernandina Beach 2016 Stormwater Master Plan Update conducted by GAI Consultants, data collected at our local NOAA Tide Station indicate a mean sea level rise of roughly .68 feet in 100 years. Assuming that

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this rate isn't increased by melting glacial and sea ice and warming sea water, the rate will be approximately 2 inches by 2040 and 4 inches by 2065.

It is essential for Fernandina Beach and Nassau County to focus on optimizing sustainability and resilience on Amelia Island. In addition to the Vulnerability Assessment, the County also convened a year-long panel of experts on floodplain resilience and land conservation, which we are just beginning to see results of in the Conservation Land Acquisition Management (CLAM) plan. Fernandina Beach is also working with North Florida Land Trust to increase land conservation in the city. Land Conservation is one of the most highly recommended strategies for maintaining and building sustainability. Environmental sustainability is particularly important because it is requisite for social and economic sustainability. Fernandina Beach is also in the process of upgrading its stormwater management infrastructure and building a sea wall at the waterfront.

Goal 5 of The Fernandina Beach Comprehensive Plan adopted in 2011, Conservation and Coastal Management, incorporated initial efforts to address this reality. The current update of Goal 5 must constitute a substantial advance toward more aggressive planning that is implemented in concrete LDC regulations and actions. The resilience of our community depends on our actions in updating this Comprehensive Plan and in revising the Land Development Code, and on our will to implement these policies and regulations. For this reason, Goal 5 has become Goal 2 in this draft, in order to signal its importance and its interrelationships with other goals.

While all objectives and policies in Goal 2 are important, this context requires prioritization that can then be readjusted or expanded in subsequent Comprehensive Plan updates. Thus, Objectives 1-8 focus on the most urgent areas of protection:

- Hiring of a full-time Floodplain Manager and Chief Resilience Officer to coordinate and implement our efforts
- Coastal protection:
 - Development and implementation of a long-term dune management plan and floodplain management plan
 - Designation of our dunes as an Adaptation Action Area (at least those dunes north of Atlantic) with a focus on dune building
 - Prohibiting new construction east of the CCCL
 - Designation of the CHHA as an Adaptation Action Area, except for the CRA
 - Designation of the CRA as a separate Adaptation Action Area and implementation of plans to prevent flooding in the downtown waterfront area
 - Prohibiting new construction in the CHHA, except for the CRA
 - Tighter controls on building and protection of the CUPZ, particularly the maritime hammock
 - Protection of our wetlands
 - Protection of our “green infrastructure”
 - Protection of wildlife habitat and corridors
 - Land conservation to provide these protections

Protection of our wetlands and our “green infrastructure” underlie all sustainability and resilience on our island, and these efforts interface with our protection of wildlife and habitat. Successful land conservation is

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critical to these objectives in building sustainability and resilience. Some of the priorities in these objectives are:

- City inventory and more accurate mapping of wetlands
- Expansion of buffers
- Increased tree protection
- Land conservation
- Planning for wildlife habitat and corridors, in collaboration with the County

Objectives 9-15 include additional conservation and coastal management policies that are important for our future.

Because Amelia Island is one barrier island, intergovernmental coordination between the City and County is essential for the future of the island, as well as development of the most effective strategies at the most reasonable costs. The most critical areas of coordination for the future of the island are:

- Development and implementation of effective long-term plans to promote sustainability and resilience
- Land conservation to protect remaining maritime hammock, upland wooded land, wetlands and land in and around the CHHA. Land conservation must also protect habitat and wildlife corridors.
- Effective dune management

Coordination with state and federal government agencies is also essential for fiscal support and research.

GOAL 2. COASTAL MANAGEMENT AND CONSERVATION

THE CITY MUST CONSERVE, PROTECT AND PLAN FOR THE NATURAL AND COASTAL RESOURCES OF THE AREA TO ENSURE THAT RESOURCES ARE PROTECTED AND AVAILABLE FOR FUTURE GENERATIONS. THE CONTEXT OF CHANGING STORM PATTERNS AND SEA LEVEL RISE IS A DOMINANT FACTOR IN COASTAL MANAGEMENT AND NECESSITATES A SERIOUS FOCUS ON THE PROTECTION OF DUNES, WETLANDS AND WOODED PARCELS IN SUPPORT OF SUSTAINABILITY AND COMMUNITY RESILIENCE.

OBJECTIVE 2.01. FLOODPLAIN MANAGER AND CHIEF RESILIENCE OFFICER

In the context of the hazards of storm surge, sea level rise and other flooding, the City must designate related responsibilities to a professional Floodplain Manager and Chief Resilience Officer. This is conceptualized as one combined position because of the overlap in types of expertise and activities, but could be split into two positions in the future if warranted by need. Along with the aspects of coastal management, this is of primary importance and urgency for the future of our barrier island.

Policy 2.01.01.

In consideration of the level of complexity of this task and the level of coordination required with all City departments, County, State and Federal agencies, the City must establish a full-time flood management/chief resilience position.

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Policy 2.01.02.

The City Floodplain Manager and Chief Resilience Officer must have at least five years of relevant professional experience and a relevant education in civil engineering, hydrology, or environmental sciences related to coastal processes, water resources and natural resources management and be an Association of State Floodplain Managers Certified Floodplain Manager.

Policy 2.01.03.

Responsibilities of the Floodplain Manager and Chief Resilience Officer must include, but not be limited to, the following:

- a) Assess all projects and plans that are located in or impact any part of the floodplain. Floodplain/Resilience signoff must be required for a project to move forward. In Fernandina Beach, the purview of the Floodplain Manager includes the area within the 100-year flood incidence zone as defined by FEMA on the most recent Flood Insurance Rate Map, the area east of the Coastal Control Construction Line (CCCL), and the Coastal Upland Protection Zone (CUPZ), which extends 1000 feet inland from the CCCL.
- b) Coordinate any project related to any or all parts of the floodplain that requires participation of multiple departments.
- c) Coordinate programs and policies with Nassau County, SJRWDM, FDEP and relevant federal agencies.
- d) Provide the leadership for the development and implementation of an effective dune management plan and a broader floodplain management plan.
- e) Provide the leadership for the development and implementation of an effective City resilience plan, including data collection and analysis, prioritization and documentation.
- f) Provide leadership in planning projects that address sustainability and resilience. Identify areas that need to be designated as Adaptation Action Areas. Develop and coordinate programs to address needs in Adaptation Action Areas.
- g) Provide leadership in aligning City policy and strategies and aligning City and County policy and strategies relevant to Amelia Island
- h) Coordinate closely with the City Grants Administrator to develop funding to support aggressive progress in protection, sustainability and resilience.
- i) Ensure the incorporation of the dune management plan and the floodplain management plan in the City GIS.
- j) Oversee storm preparation and cleanup in the floodplain.
- k) Manage dune and beach renourishment, coordinating with the outside agencies involved
- l) Assessment of proposals for FLUM or zoning changes related to the floodplain. Floodplain manager/Chief Resilience Officer signoff must be a requirement for a project to move forward.
- m) Incorporate enforceable measures that ensure shoreline protection into the LDC and other city codes.
- n) In collaboration with other department directors, develop a stakeholder outreach program to educate and engage the public on floodplain management and resilience issues. The goal must be to ensure robust and diverse stakeholder input and buy-in.

OBJECTIVE 2.02. COASTAL PROTECTION

In order to maintain the City's sustainability and prepare a resilient community, the City must protect coastal dunes, native vegetation, wetlands, waterways, living marine resources, coastal barriers, maritime

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hammock and wildlife habitat by restricting development and activities which will cause an adverse impact to these natural resources. Furthermore, the City must enhance the protection provided by these natural resources using techniques such as land conservation, planting of native vegetation, dune building and living shorelines.

Policy 2.02.01.

The Floodplain Manager and Chief Resilience Officer and the Planning and Conservation Department must monitor and participate in permitting activities of City interdepartmental activity and other regulatory agencies for projects which may impact the quality of the coastal area, wildlife habitat, wetlands, water and waterways. The Floodplain Manager and Chief Resilience Officer and the Planning and Conservation Department must coordinate with permitting agencies on a regular basis in order to keep apprised of proposed activities requiring permitting.

Policy 2.02.02.

The Planning and Conservation Department and Floodplain Manager and Chief Resilience Officer must monitor proposed development for potential adverse impacts to the quality of natural resources in the coastal area. The Land Development Code must include procedures designed to ascertain potential impacts, such as the requirement of surveys or studies illustrating potential impacts. The City must require minimal to no adverse impacts. When impacts are predicted, an in-dept environmental impact report prepared by a qualified and reputable expert will be required. When impacts are allowable to marine life, wildlife, water quality, and other natural resources based on state or federal authority, the impacts must be mitigated according to the rules and regulations of the DEP and the SJRWMD.

Policy 2.02.03.

The City must continue to coordinate with all relevant regulatory agencies to ensure all new development or redevelopment activities, which have the potential to impact aquatic preserves, have been properly reviewed and permitted within the guidelines of the Ft. Clinch State Park and the Nassau/St. Johns River management plans set forth by the DEP.

Policy 2.02.04.

The City must update the Land Development Code with standards to ensure docks, piers, seawalls, jetties, wharves, boat ramps, boardwalks and boat houses do not obstruct or materially alter natural water flow or restrict navigation. The City must coordinate with the Florida Department of Environmental Protection and the United States Army Corps of Engineers through agency permitting processes for construction of these structures to ensure water flow and navigation are not restricted.

Policy 2.02.05.

The City must coordinate with the DEP regarding any new regulations regarding coastal development, coastal wildlife, and marine resources. All projects east of the DEP's Coastal Construction Control Line must be approved first by the DEP and all permits 1000' west need to be reviewed the DEP to assure they will not damage the entire barrier island dune system.

Policy 2.02.06.

The Land Development Code must specify that development of all types a) perform and submit a formal ecological systems inventory based on on-site observation that is conducted by a credentialed expert in the field (including flora, fauna, soil and hydrology) and b) use the results to implement conservation site design

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or other approaches that design the building around the existing ecological systems. Due to the vulnerability of Amelia Island, all development must design around existing ecological systems.

Policy 2.02.07.

All approaches to development that attempt to protect the environment are complex combinations of multiple methods. The Land Development Code must specify that use of approaches such as Conservation Site Design and Low-Impact Development require adoption of a combination of methods that constitute that approach. Use of one or two elements from a broader approach do not qualify as use of these approaches.

OBJECTIVE 2.03. DUNE PRESERVATION

The City must implement a beach and dune management program to ensure the protection, conservation and enhancement of the coastal barrier dunes and beaches within the City under the oversight of the Floodplain Manager and Chief Resilience Officer. This program must address both current conditions and the impacts of sea level rise and changing weather patterns. Dune protection is the responsibility of Commissioners, the City Manager, the Director of the Planning and Conservation Department and the Floodplain Manager/Chief Resilience Officer. However, it is the responsibility of the Floodplain Manager and Chief Resilience Officer to take the lead in organizing, coordinating and managing this area of vital concern.

Policy 2.03.01.

In order to prepare for future conditions, the City must establish the City dunes east of the Coastal Control Construction Line as an Adaptation Action Area. The Floodplain Manager and Chief Resilience Officer, The Planning and Conservation Department and the City Grants Administrator must collaborate to a) define the Adaptation Action Area, b) research and identify optimal actions for addressing existing vulnerabilities, c) identify appropriate sources of funding to support these efforts, and d) implement the programs designed. The following policies must be incorporated in the plan for addressing this Adaptation Action Area.

Policy 2.03.02.

The Floodplain Manager and Chief Resilience Officer, in cooperation with the Florida DEP and other experts, must establish a dune management program by **December 2021**, including developing and implementing standards for the following:

1. Development of a system for classifying beach and dune systems and prioritizing them based on level of need for restoration, rehabilitation or protection.
2. Identification of dunes that do not meet current standards. For each of the beach and dune classifications and specific areas, detailed plans to achieve the restoration, rehabilitation, or protection must be developed and scheduled.
3. Identification of natural strategies to achieve the following:
 - a. dune stabilization to meet current FEMA standards
 - b. dune rehabilitation and closing gaps in dunes
 - c. restoration of native vegetation
 - d. regularized schedule for upgrading walkovers and drive overs
 - e. regularized schedule for assessing, maintaining and growing dunes
4. Sand fencing and proper signage must be an integral part of dune management to direct people away from walking on the dunes.

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5. The dune management program must prohibit excavation, destruction of native vegetation, disruption of natural water paths, and other activities ~~which~~ that cumulatively or separately interfere with the normal transport of dune sediments or interfere with the natural protection afforded by natural beach dunes and dune systems.

Policy 2.03.03.

Dune restoration, rehabilitation, enhancement or protection projects must include the following elements:

- Access will be restricted by the placement of fencing or other effective barriers.
- Signage will be placed at practical intervals to explain the project and restricted access.
- Any building permit issued to private property owners adjacent to dune and beach areas will include the requirement for an approved elevated walk-over system above the dune or beach surface to provide access to the designated eastern toe line of the dune, or a fence to prevent direct access to the dune or beach area from the property.

Policy 2.03.04.

The Floodplain Manager and Chief Resilience Officer must utilize the latest public domain LiDAR data to compare surveys and monitor the health of the dunes and beach and make an annual report on the status of the beach and dunes to the City Commission and the public. This report must include any recommended changes to the program to better achieve the goals.

Policy 2.03.05.

The City recognizes that the beach wrack, sea vegetation and other organics cast ashore by the waves, provide valuable nutrients to the dune vegetation, the sea birds and other resident and visiting fauna, including those down the food chain. Therefore, removal or relocation of the wrack or deliberate driving over wrack is prohibited and subject to fine unless approved by the Floodplain Manager and Chief Resilience Officer.

Any cleaning of wrack must be by or under contract to the City and supervised by the Floodplain Manager and Chief Resilience Officer as a response to a storm or emergency response action. The City must prohibit private parties from cleaning wrack from the beach. In the case of future FEMA, State or County led post-storm emergency cleanup efforts, the City Floodplain Manager and Chief Resilience Officer must be the designated senior representative to the incident command structure of the cleanup.

Policy 2.03.06.

Motorized vehicles must not be allowed on dune systems except in an emergency situation as designated by the local law enforcement and emergency management agencies. The City must enforce this policy through the City Police Department.

Beach driving is prohibited except in designated areas as defined by City ordinances. The fine for violation must be increased to \$250 and impoundment of the vehicle until the fine is paid. The fine must be doubled for vehicles without functioning four-wheel drive capability.

Except in an emergency, City police and Beach Rangers, lifeguards and trash cleaning contractors must be limited to drivers who have successfully completed the City's beach driving training program and have passed the annual refresher test. Drivers of public vehicles violating the beach driving regulations must face disciplinary action, up to and including termination.

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The City Commission must work with the Nassau County Sheriff's office to provide proper training for county employees required to drive on the beach.

Policy 2.03.07.

Storage of vehicles, boats, trailers, materials, beach equipment, etc., must not be permitted on the dune or beach of Fernandina Beach except for lifeguard stands and equipment and materials associate with beach nourishment.

Policy 2.03.08.

The City must continue to fund and implement projects associated with the Nassau County Shore Protection Project. The City recognizes that the beach renourishment activities of the Nassau County Shore Protection Project are critical to replace the natural littoral sand movement process that navigation channel maintenance precludes on our beaches. The City is committed to continuing to work and pay for its contracted share of this process. It also will work with coastal scientists as well as coastal engineers of the partner agencies to promote a renourishment effort that develops the entire nearshore-beach-dune system.

The City Floodplain Manager and Chief Resilience Officer must monitor and participate in initiatives to improve beach protocols of the US Army Corps of Engineers, the Florida Department of Environmental Protection, the American Shore and Beach Preservation Association, the National Research Council and others. Of particular concern in the 2020-to-2022 time frame will be the South Atlantic Coastal Study headed by the USACE.

The City Floodplain Manager and Chief Resilience Officer must initiate programs to better understand the nature of the beach-compatible sand on the beaches and dunes of the city. The city must by **January 1, 2021**, convert to monitoring the state of the offshore-beach-dune system to determine when and where renourishment is scheduled and how to adjust the program:

Policy 2.03.09.

The beach and dunes must be managed proactively to protect and provide habitat to a variety of endangered and threatened species of flora and fauna, as identified in The Florida Imperiled Species Management Plan 2016 and the Florida Beaches Habitat Conservation Plan. All dune and beach management efforts must be consistent with these plans to protect such species as the Right Whales, Gopher Tortoise, Beach Mice, Sea Turtles, Piping Plovers, Rednots and other shorebirds. The City must continue to work with and support the highly successful Amelia Island Sea Turtle Watch, Inc., in the protection of these important species.

Policy 2.03.10.

The Floodplain Manager and Chief Resilience Officer must coordinate with FDEP and FEMA to reconcile the location of the CCCL and implement the update in GIS.

Policy 2.03.11.

In order to direct populations away from storm, flood and sea level rise hazard areas, the City must prohibit new construction east of the CCCL. The City must purchase properties in areas most vulnerable to destructive storm surge, sea level rise and flooding for recreational uses and land conservation, subject to

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available financial resources and priorities. Transfer of development rights, conservation easements and acquisition by a land trust are among the options.

Policy 2.03.12.

The City must continue implementation of the Coastal Upland Protection Zone (CUPZ) in the Land Development Regulations and must monitor and evaluate the CUPZ regulations for changes as needed to best support sustainability and resilience. Any changes to the Future Land Use Map (FLUM) or zoning change in the CUPZ require review by the Floodplain Manager and Chief Resilience Officer for recommendation to the City Commission. Because of rapid development in the CUPZ and loss of rare and protective maritime hammock, the City must consider establishment of an Adaptation Action Area to prevent complete loss of this asset and its protective features. The Floodplain Manager and Chief Resilience Officer, The Planning and Conservation Department and the City Grants Administrator must collaborate to a) define the Adaptation Action Area, b) research and identify optimal actions for addressing existing vulnerabilities, c) identify appropriate sources of funding to support these efforts, and d) implement the programs designed. The following policies must be incorporated in the plan for addressing this Adaptation Action Area.

Policy 2.03.13.

The City must adopt Land Development Code regulations requiring documentation of the evaluation of the potential for erosion as part of the site plan and permitting process for any CUPZ or CHHA structure.

Policy 2.03.14.

The City must guide and direct the location, construction and maintenance of development adjacent to the Atlantic shoreline, from 1,000 feet landward of the CCCL to the Atlantic, and must maintain standards to address the following issues:

- a. Avoid adverse impacts on the contours and topography 1,000 feet landward of the CCCL; no excavation, cutting or filling of land from 1000' landward of the CCCL to the Atlantic
- b. Preserve existing non-invasive vegetation; the City Land Development Code must prohibit destruction of existing non-invasive vegetation in the active dune or dune restoration area. Non-invasive disturbed beach or dune vegetation must be restored by the responsible party. A restoration plan must be prepared and submitted to the Floodplain Manager within four (4) months of the disturbance. The restoration must be complete within two (2) months of plan approval by the Floodplain Manager and Chief Resilience Officer and the completed restoration is subject to inspection and approval by the Floodplain Manager and Chief Resilience Officer.
- c. Remove invasive and replace with non-invasive vegetation;
- d. Set maximum impervious surface ratios;
- e. Allowance or removal of shore-hardening structures;
- f. Setbacks for shoreline protection; no structure, building, impervious service, lawn, retaining wall, swimming pool, spa, deck or other appurtenances will be permitted within 110 feet of the target dune line with the exception of walkovers.
- g. No building permit for beachfront property will be issued for any new or modified structure that does not include a dune walkover from the rear of the structure to the front of the dune target or maintenance line, clearing the dune surface by at least 24 inches. Such walkovers must not be more than 4 feet wide. Until such walkover is completed, the property must be fenced to restrict access

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to the beach directly from the structure. The city must encourage and support sharing of walkover accesses between multiple property owners.

- h. Construction standards in hurricane vulnerability zones;
- i. Use of living shoreline strategies for erosion management;
- j. Prohibition of new underground storage tanks; and
- k. Prohibition and replacement of septic systems.

Policy 2.03.15.

The City must identify existing hard erosion control structures and incorporate them into the City's GIS mapping system by July 1, 2021.

Policy 2.03.16.

The City must identify any shoreline areas that are exposed to erosion and lack appropriate living shoreline protection, incorporate them into the City's GIS mapping system and develop a corrective strategy by July 1, 2021. Such areas must be considered for designation as Adaptation Action Areas.

Policy 2.03.17.

The City must prohibit the use of habitat-destroying vertical seawalls or retaining walls along natural water body shorelines.

Policy 2.03.18.

The City must request that the FDEP promptly notify the City of all applications within the City seeking variances or other relief from the CCCL. The City reserves its right under State law to impose additional requirements to protect the beach-dune system east of the CCCL. More stringent City requirements or restrictions may not be overridden.

Policy 2.03.19.

The Floodplain Manager and Chief Resilience Officer must develop a stakeholder outreach program to obtain community input and buy-in and to educate residents and visitors about need and advantages of a healthy dune and beach.

OBJECTIVE 2.04. COASTAL HIGH HAZARD AREA (CHHA)

The City must protect property, residents and visitors within the Coastal High Hazard Area. Protection must be provided through appropriate designations on the Future Land Use Map to ensure that population is directed away from the coastal high hazard area, limitations on construction of infrastructure in the Coastal High Hazard Area, limitations on commercial or residential construction in the Coastal High Hazard Area and coordination with hazard mitigation and post-disaster plans. Some of these areas already experience flooding during a storm in Fernandina Beach, but these policies must address both current conditions and the impacts of sea level rise, rising storm surge and changing weather patterns. Protection of residents in the CHHA is the responsibility of Commissioners, the City Manager, the Director of the Planning and Conservation Department and the Floodplain Manager and Chief Resilience Officer. However, it is the responsibility of the Floodplain Manager and Chief Resilience Officer to take the lead in organizing and managing this area of vital concern.

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Policy 2.04.01.

The City must designate Coastal High Hazard Areas (CHHA) on the Future Land Use Map (FLUM) series and ensure the criteria for mitigation found in a coastal high-hazard area are met, as defined in F.S. 163.3178(9). The CHHA is the area below the elevation of the Category 1 storm surge line as established by a Sea, Lake, and Overland Surges from Hurricanes (SLOSH) computerized storm surge model.

Policy 2.04.02.

In order to prepare for future conditions of sea level rise, storm surge and flooding, the City must establish the CHHA as an Adaptation Action Area or set of smaller Adaptation Action Areas. The Floodplain Manager and Chief Resilience Officer, The Planning and Conservation Department and the City Grants Administrator must collaborate to a) define the Adaptation Action Area(s), b) research and identify optimal actions for addressing existing vulnerabilities, c) identify appropriate sources of funding to support these efforts, and d) implement the programs designed. The following policies must be incorporated in the plan for addressing these Adaptation Action Areas.

Policy 2.04.03.

The City must not allow public expenditures for infrastructure improvements which subsidize increases in development in the CHHA except within the Community Redevelopment Area. An increase in development means any new development. Improvements to a public facility which are necessary to address a deficiency, necessary to serve the existing population, and constructed in a manner that minimizes impacts from storm events may be allowable.

Policy 2.04.04.

Where public facilities are proposed for renovation or expansion, relocation must be considered as an option. If construction of public facilities in the CHHA occurs, all facilities must be proofed to ensure minimum damage from storms and hurricanes.

Policy 2.05.05.

The City must identify and assess all infrastructure located within the CHHA to determine its vulnerability. This vulnerability assessment must be based on the most recent City, County, State and FEMA data. It is the City's intent to relocate, replace or mitigate impacts to listed infrastructure facilities as funds become available.

Policy 2.04.06.

All new permanent building construction must meet the standards of the National Flood Insurance Program (NFIP) and the City's floodplain protection regulations, including nonresidential construction within the coastal high hazard area meeting storm and flood proofing standards exceeding those required for a 1%-annual-chance flood event.

Policy 2.04.07.

The City must prohibit amendments to the FLUM which result in a net increase in residential development or density in the CHHA except within the Community Redevelopment Area. Density increases are permitted within the CHHA for parcels in the WMU Future Land Use category if the criteria in Policy 1.06.09(e) (update when FLUE complete) are met.

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Policy 2.04.08.

The City must direct population concentrations, including nonresidential development, away from the CHHA except within the Community Redevelopment Area by not accepting applications for new development in those areas. Redevelopment in the CHHA must not increase the intensity currently allowed by the Comprehensive Plan.

Policy 2.04.09.

The City must prohibit the location of new assisted living facilities, nursing homes, hospitals, or other similar facilities that provide critical health services or serve special needs populations within the CHHA.

Policy 2.04.10.

Proposed development in the CHHA must be evaluated for impacts on traffic circulation, evacuation routes, and proximity to off-island shelter facilities.

Policy 2.04.11.

The City recognizes sea-level rise as a potential coastal hazard and must work with Nassau County and state and regional entities as appropriate to develop strategies for responding to sea-level rise, including:

- a. Analysis of the estimated sea-level rise and its effects on estuaries, wetlands, beaches, and uplands;
- b. Identification of structures and areas of possible risk;
- c. Determination of additional data and research needed;
- d. Assistance from state and federal agencies;
- e. Analysis of City and County buffer requirements and whether additional buffering should be required;
- f. Evaluation of locating public facilities in areas projected to be affected by rising sea level;
- g. Consideration of the effects of sea-level rise on potable water sources, saltwater intrusion, septic systems, wastewater treatment facilities and the water table; and
- h. Creation of Adaptation Action Areas, as permitted by state statute.

POLICY 2.04.12.

The City must review the FEMA FIRM within one-year of enactment or issuance of new FIRM and use its LiDAR-based GIS system to review the local details to determine the accuracy of the FEMA maps. If an area is not designated as being in the 100-year flood zone but the City feels that it should using FEMA criteria, the City policy will be to include it in the FEMA Special Flood Hazard zone for City policies. Likewise, if the City determines that an area of the City should no longer be in the FEMA Special Flood Hazard zone, it may apply through established FEMA processes to get the area re-designated.

OBJECTIVE 2.05. WETLANDS PROTECTION AND PRESERVATION

Like all barrier islands in Florida, Amelia Island is facing the hazards of storm surge, sea level rise, flooding and changes in weather patterns. The most fundamental steps in establishing sustainability and community resilience are preservation and enhancement of its wetlands, dunes, the Coastal High Hazard Area, the Coastal Upland Protection Zone and its wooded areas.

To protect wetlands, the City must direct incompatible land uses away from wetlands, and protect and preserve wetlands from physical and hydrologic alterations, in order to maintain the following functions: natural biological functions, including food chain production; general habitat; nesting, spawning, rearing,

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and resting sites for aquatic or land species; natural drainage systems impacting sedimentation patterns, salinity distribution, flushing characteristics, current patterns, and other environmental characteristics; shielding other areas from wave action, erosion, or storm damage; storage areas for stormwater and flood waters; natural recharge areas; and natural water filtration processes that serve to purify water.

Policy 2.05.01.

The City recognizes that the identification of potential wetlands on the current FLUM and GIS is inaccurate and inadequate for planning, zoning, and permitting purposes to protect our wetland resources. The City must perform an inventory and mapping of potential wetlands using the most recent available LiDAR topographic information and aerial image interpretation using the most recent available and appropriate aerial images with ground-proofing where possible. This inventory and mapping must be completed by the end of 2021. The results of this inventory and mapping must be recorded in the GIS and FLUM. The Land Development Code must be revised to include the requirement that any proposed development, construction, or activity that could impact a designated potential wetland, including an impact within the designated buffer zone of a wetland, must first have a formal wetland delineation performed, to be reviewed and approved by the SJRWMD. After approval of a formal wetland delineation by SJRWMD, such wetland delineation must be used by the City for permitting and wetland protection actions. Any change or adjustment in the boundary following the formal delineation of a wetland that differs from the potential wetland boundaries recorded in the GIS and FLUM must be used to correct the corresponding wetland boundaries in the GIS and FLUM. All wetlands as delineated must be designated as limited development overlays in the GIS and must be protected by policies contained within this plan.

Policy 2.05.02.

The Planning and Conservation Department must ensure wetland protection, in part, through a review process that includes the following:

- a. Use of its own inventory and mapping, confirmed by site analysis
- b. Coordination with the agencies with regulatory jurisdiction over wetlands for purposes of identifying and delineating wetlands and rendering determinations of the development rights to be permitted on such wetlands and/or lands under the jurisdiction of the state or federal government;
- c. Requiring review of applications for development proposing encroachment or disturbance to wetlands through the site plan and permitting process. The applicant must bear the burden of proof in demonstrating that development will not adversely impact wetlands, wetland transition areas and other environmentally sensitive lands.
- d. Approval of the City Floodplain Manager and Chief Resilience Officer.

Policy 2.05.03.

The delineation of any wetlands on any proposed development must be determined prior to the issuance of development orders which permit site alteration. The City's land development regulations must require that any application for a local development order for sites containing wetlands must include wetland delineation. A delineation of the upland wetland boundary must be established based upon an on-site field survey by a certified wetland delineator provided by the applicant and coordinated with the SJRWMD, the DEP, and/or the U.S. Army Corps of Engineers. The delineation and determination of these areas must be in accordance with SJRWMD and City rules.

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Policy 2.05.04.

No public or private development shall be permitted in wetlands. However, approved passive recreation areas, open space, restricted access ways, bird sanctuaries, natural vegetated stormwater retention/detention areas, natural preserves, or other similar uses may be permissible.

Policy 2.05.05.

The City must protect wetlands from impacts of adjacent development, and must ensure this protection through regulations included in the Land Development Code:

- a. Proper siting of development structures and infrastructure, including clustering of development away from wetlands;
- b. Location of buffer zones of native vegetation around wetlands and any waterway that drains to a wetland and surface water bodies to prevent erosion, retard runoff, promote infiltration and provide habitat. If a body of water is involved (Egans Creek, Escambia Slough/Alligator Creek, the Amelia River), the buffer must be at least 100 feet, measured horizontally. A buffer of at least 50 feet, measured horizontally, must be established around other wetlands and any waterway that drains to a wetland. Such buffer must ensure existing vegetation is not disturbed; where new vegetation is required, plants or ground cover native or appropriate to a wetlands or shoreline transition area must be used.
- c. Setback of buildings and other structures from wetlands and water bodies.
- d. No septic fields within 50 feet of the wetland buffer.

Policy 2.05.06.

The City must consider use of a system of density bonuses, cluster development, low-impact development, and/or other incentives in appropriate areas of the City and require placement of wetlands and other environmentally sensitive lands in a conservation land use designation.

Policy 2.05.07.

The Land Development Code must prohibit the following uses within the wetland transition areas:

- a. Industrial uses;
- b. Sanitary landfills;
- c. Wastewater treatment facilities;
- d. Animal feedlots;
- e. Incinerators;
- f. Petroleum, or pesticide or other hazardous substance storage facilities;
- g. Above-ground or below-ground pipes for pollutants or contaminants, excluding pipes carrying treated stormwater runoff or wastewater effluent;
- h. Septic tanks;
- i. Any land use that stores, handles, or generates hazardous material or waste;
- j. Removal, excavation, or disturbance of the soil;
- k. Dumping or filling with any material;
- l. Erection of structures;
- m. Placement of pavements;
- n. Destruction of plant life which would alter the existing pattern of vegetation; and
- o. Placement of any portion of a development project.

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Policy 2.05.08.

The City must acquire the wetland, transition area and adjacent upland when adequate resources are available. The City must require, when appropriate, the dedication of conservation easements where the City finds that the dedication is reasonable in order to protect the value and function of a wetland. The City must establish an ordinance determining, at a minimum, in what instances dedication would be appropriate, what methodology will determine that dedication is reasonable in order to protect the value and function of a wetland, and indicate the entity or entities that will hold the conservation easements.

Policy 2.05.09.

The City must coordinate with the DEP and the SJRWMD to prohibit illegal development in wetland areas and require that these areas be restored. The wetlands must be restored to a condition with the same area, elevations, topographic gradients, hydrologic functions, native vegetation and habitat values as the pre-disturbance wetland.

Policy 2.05.10.

The Planning and Conservation Department must identify wetlands and other environmentally sensitive lands that cross City/County limits or are adjacent to City/County limits. The City must pursue an interlocal agreement regarding the regulation, acquisition and/or preservation of wetlands that cross or are adjacent to the City/County limits in order to cooperatively work towards the preservation of these properties.

OBJECTIVE 2.06. TREE PRESERVATION AND URBAN FORESTRY

Like all barrier islands in Florida, Amelia Island is facing the hazards of storm surge, sea level rise, flooding and changes in weather patterns. The most fundamental steps in establishing sustainability and community resiliency are protection and development of the dunes, protection of the Coastal High Hazard Area, and protection of the Coastal Upland Protection Zone. In order to protect these areas, the City must protect and preserve its wetlands, maritime hammocks and wooded areas.

The City must commit to preservation of community trees and the urban forest to advance sustainability and community resiliency. Our tree canopy also improves air quality, temperature, community health, quality of life, aesthetics, and energy conservation.

Policy 2.06.01.

The City Arborist must develop a detailed and expert urban forest management plan to include inventory updates, assessment, protection, succession planning, planting of native trees and understory and vine management to restore our tree canopy by **December 31, 2020**.

Policy 2.06.02.

The City Arborist must develop and maintain an inventory of the location, condition, and size of live oaks on both public and private land by **December 31, 2021**, which must be integrated into City GIS.

Policy 2.06.03.

The City arborist must develop a training program for all maintenance staff who maintain the grounds of Bosque Bello or any of the City's parks or rights of way by **December 31, 2020** to prevent the killing of our

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community trees. Any maintenance staff who damage trees by using substandard methods must not be retained.

Policy 2.06.04.

The City Arborist must increase the City's existing tree canopy by 5% each year through 2030, and the total tree canopy coverage shall must not fall below 37%, as established in the 2009 Street Tree Management Plan. This may be achieved by City staff or in collaboration with local nonprofits.

Policy 2.06.05.

As part of the urban forest management plan, the City Arborist must establish a tree planting and replacement strategy for street and public trees, including scheduling and goals for maintenance trimming and pruning and use of the Tree Fund to facilitate planting efforts. All maintenance must follow International Society of Arboriculture pruning standards.

Policy 2.06.06.

The City must exclude invasive vegetation from plant materials permitted in public or private landscape plans. The City must remove invasive vegetation from rights-of-way and public property, and inform private property owners of the benefits of removing invasive vegetation through informational materials, presentations and events, and partnering with local nonprofits.

Policy 2.06.07.

In order to prevent catastrophic loss to the City's public trees due to insect or disease, the City must diversify public tree species when planting new or replacement trees. However, it must choose from native species and select trees and understory appropriate to the particular type of ecological niche under consideration.

Policy 2.06.08.

The City Arborist must monitor data on invasive insects and diseases entering the country at southeastern ports or the Port of Fernandina and prepare the city for any possible local infestation that would damage native vegetation. The City Arborist must develop a detection and monitoring plan for invasive insects and disease.

Policy 2.06.09.

The City Arborist must implement tree and landscaping plans for specific public areas and rights-of-way.

Policy 2.06.10.

The Planning and Conservation Department and the City Arborist must continue to seek Tree City USA designation on an annual basis and participate in Arbor Day commemoration. In this effort, they must strive to excel and set an example for other coastal cities.

Policy 2.06.11.

The City must protect and retain existing trees and require replacement of trees lost to land clearing. The objectives must be to design new structures around the existing ecological systems on site and to achieve no net loss of trees per development site. The City's Land Development Code must continue to address, at a minimum, the following by **July 2021**:

- a. A permitting process for the removal of protected trees;
- b. Requiring measures such as protective barriers around trees during construction, including construction by utility companies and government agencies;

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- c. Allowing the number of required parking spaces to be reduced in order to preserve existing trees which are at least six (6) inches in diameter at breast height;
- d. Allowing modifications in siting or design that will protect trees and other existing ecological features without establishing a precedent for future parcel development;
- e. Creating incentives for retaining and/or planting additional landscaping;
- f. Allowing existing healthy trees to be counted in meeting landscaping requirements;
- g. Updating how the development approval process will take into account retaining the overall City tree canopy;
- h. Implementing tree and shrub requirements that result in shade for buildings, pavement or other exposed areas of a site;
- i. Requiring tree and landscape area plantings within: residential areas, front yards, designated rights-of-way, perimeter boundaries of parcels, off-street parking and vehicular circulation areas and buffers;
- j. Requiring that seventy-five (75) percent of all landscaped areas consist of native or drought-tolerant vegetation and that plans for removal of invasive species are demonstrated prior to development approval; and
- k. Maintenance of a Tree Fund for payments in lieu of replanting or mitigation of protected trees;
- l. Penalties, including mitigation requirements located in the city as close to the site as possible, fines, and withholding of building and development permits, for violation of the landscaping and tree protection regulations.
- m. Incentives for redevelopment and disincentives for development of wooded parcels.
- n. Requirement for both residential and commercial development to perform and submit a formal ecological inventory based on on-site observation and use the results to demonstrate conservation site design or other approaches that design the building around the existing ecological system.
- o. Protection of mature trees: The limbs and roots of our oldest trees and our Heritage Trees extend beyond property lines, particularly in the historic districts. These trees are critical to the character of the City. These limbs and roots were present when the parcel was purchased, which means that it was the choice of the buyer to purchase the parcel in that condition. Therefore, property owners must not cut limbs larger than five inches in diameter on trees that extend over their property. Also, property owners must not cut roots larger than three inches in diameter that cross property lines into their yard.
- p. Utility easements, including drainage easements, and utility lines must not be placed within the dripline of existing trees or the theoretical future dripline at maturity of newly planted trees.

Policy 2.06.12.

The City must continue to implement the heritage tree program through the Land Development Code and encourage private property owners to apply for heritage tree designation. The Planning and Conservation Department must develop and distribute informational material to the public on this program annually and must review and update the program by 2023.

Policy 2.06.13.

The Planning and Conservation Department ~~shall~~ must regularly monitor the Land Development Code requirements regarding tree and landscaping requirements in order to assess their ability to best protect the City's existing trees.

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Policy 2.06.14.

The City Arborist must conduct community outreach and education annually, encouraging property owners to maintain existing native shade trees and plant new trees. Elements of this program may include informational publications online and in hard copy, presentations and planting events, and partnering with local nonprofits.

Policy 2.06.15.

Any company hired for grounds maintenance or tree trimming must have an International Society of Arboriculture (ISA)-certified arborist on site. Maintenance staff must have appropriate training credentials, and the operation must be monitored by the City Arborist.

Policy 2.06.16.

Fernandina Beach must establish a canopy street program to encourage communities to have their streets, or sections of streets (at least one block), certified as canopy streets. In order to be certified as a canopy street, 40% of the designated street area must be covered by tree canopy. Certification requires support of 50% of the property owners in the designated area. The City and County must negotiate with utilities to prevent damage to this canopy.

Policy 2.06.15.

By **April 2022**, the Fernandina Beach City Arborist must plan and implement a program to partner with residents on street tree or right-of-way planting. Residents will request the plantings. The City or a local nonprofit will plant the trees and neighboring residents will be trained to care for the trees, similar to the program established by the Urban Forestry Department in Jacksonville ([https://www.coj.net/getattachment/Departments/Public-Works/Urban-Forestry/Resources/630CITY-WEBSITE-INFORMATION-FLYER-FINAL-Update127-\(1\).docx.aspx?lang=en-US](https://www.coj.net/getattachment/Departments/Public-Works/Urban-Forestry/Resources/630CITY-WEBSITE-INFORMATION-FLYER-FINAL-Update127-(1).docx.aspx?lang=en-US)).

Policy 2.06.16.

A natural features site inventory and map must be required in the Land Development Code as the initial step in the development and design process for all parcels and all types of development. This must include elevations, tree and understory features, water flow and features and wildlife habitat and corridors. This inventory and map must serve as one of the bases for the Development Review Committee analysis.

OBJECTIVE 2.07. WILDLIFE PLANNING

The City must require development and management of resources in a manner which sustains local wildlife, their habitat and corridors, and the ecological values of the land, and must protect habitats of populations of threatened or endangered species in accordance with the provisions of the Endangered Species Act (ESA) 16 USC 1531, and Florida Administrative Code Division 68A.

Policy 2.07.01.

When reviewing development proposals for public or private development, the Planning and Conservation Department must take into account the following strategies:

- a. A site-specific ecological systems inventory based on on-site observations and use the results to demonstrate conservation site design or other approaches that design the developments around the existing ecological system.

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- b. When planning for a larger parcel or contiguous smaller parcels, emphasize a compact, clustered development pattern over a sprawling one in order to protect habitat and wildlife corridors.
- c. Preserve water body and riverine green edges in order to conserve an upland buffer that links the water to larger habitat patches;
- d. Where possible do not subdivide properties in a manner that creates multiple lots to the water's edge; instead, maintain a common community shoreline corridor with an upland component that links to larger habitat patches;
- e. Preserve native vegetation and habitat types;
- f. Preserve forested areas, the understory and native soil associations; and
- g. Avoid activities that dehydrate landscape features or alter the seasonal water flows or duration of inundation to wetlands, hammocks or water bodies.

Policy 2.07.02.

The City must protect significant habitats for native wildlife and vegetation in areas of known environmentally sensitive habitats, including but not limited to habitats of endangered species. The Land Development Code must be updated with regulations to ensure that prior to the issuance of development permits in such areas, thorough, detailed inventories and assessments of impacts of development must be conducted. If on-site habitat will be disturbed by new development, the permit must be denied or the impacts must be mitigated, if viable by virtue of its size, configuration and connecting habitat. The City must ensure an enforcement mechanism is in place to monitor inventories and assessments, and any required mitigation. The City must seek assistance from the Florida Department of Environmental Protection and the Florida Fish and Wildlife Conservation Commission in assessing identification of habitat, and any needed mitigation.

Policy 2.07.03.

The Planning and Conservation Department must identify and maintain an inventory of any "Outstanding Florida Waters"; aquatic preserves; wetlands; wildlife sanctuaries; wildlife refuges; State preserves; sanctuaries; forested lands; oak hammocks; and publicly owned parks, gardens, and wildlife management areas within or adjacent to the City. Proposed development adjacent to any of these areas must be limited by type and intensity through the Land Development Code in order to conserve wildlife populations and habitat.

Policy 2.07.04.

The City must plan for the provision of wildlife corridors to allow for survival of species, prevent isolation of natural communities and decrease fragmentation of habitat. In collaboration with Nassau County, the Planning and Conservation Department must study and compile data on island wildlife species (endangered/threatened, migratory and other species) and identify wildlife corridors by Dec. 30, 2021. In planning for wildlife corridors, the City must maintain large, connected patches of natural vegetation, wide vegetation corridors along major water courses and connectivity for movement of key species among the large patches.

Policy 2.07.05.

The Planning and Conservation Department must evaluate the presence of native upland habitats and their linkages to contiguous or related lowland and wetland habitats, and develop regulations to protect these native upland habitats including strategies such as retaining native vegetation, providing for undeveloped habitat buffers around waterways, protecting areas of temporary or seasonal wetlands and ponds, and

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identifying opportunities for linking open space, stormwater facilities and buffers to create separation from human and wildlife communities.

Policy 2.07.06.

The Planning and Conservation Department must coordinate with Nassau County regarding the County's Conservation and Habitat Network and how it may be connected to lands within City limits as a means of furthering protection of wildlife habitat. The City and County must create joint policies to plan for protection of this network and appropriately plan for adjacent development.

Policy 2.07.07.

The Planning and Conservation Department must identify areas conducive to wildlife corridors and incorporate acquisition and protection of these lands and waterways as a high priority into any land acquisition priority assessment. The City must encourage the use of conservation easements where feasible.

Policy 2.07.08.

The City must identify areas of outdoor lighting along natural resource areas and ensure this lighting is minimized to limit impacts to wildlife, particularly along the beach during sea turtle nesting season. The City must explore implementation of a "dark sky" ordinance for areas adjacent to natural resource areas that includes keeping lights low to the ground and shielded in order to reduce light trespass. The City must work with County and State managed land officials to limit light pollution.

Policy 2.07.09.

The City must evaluate proposed transportation improvements and related facilities for potential impacts on wildlife and their habitat. The City must further evaluate opportunities for wildlife ecopassages in areas of known wildlife migration and movement routes and coordinate with County and State officials regarding possibilities for construction or maintenance of Eco passages on or adjacent to highly trafficked roadways.

Policy 2.07.10.

The City must strive to integrate stormwater, transportation and recreational infrastructure networks and proposed projects for wildlife integration opportunities, including coordination with the City Golf Course regarding wildlife-friendly golf course management.

Policy 2.07.11.

The City must restore impaired dunes and coastal wetlands ecosystems and habitats, including submerged aquatic vegetation, through natural and nature-based dune rehabilitation and living shoreline approaches.

Policy 2.07.12.

The City must maintain GIS maps identifying manatee habitat in or adjacent to the waters of the City. New and modified marinas and ports must not be located in or adjacent to designated manatee sanctuaries, areas of essential manatee habitat, manatee foraging areas, aquatic preserves, or Class II waters. Existing marinas and the Port of Fernandina ~~shall~~ must comply with all applicable rules and requirements as established in Florida Statutes and the Florida Administrative Code regarding manatee protection. The City, in coordination with City Marina management, must continue to provide informative signage and brochures about manatees to increase public awareness and compliance with laws. Signs must be placed at all public access points in the vicinity of areas known to be frequented by manatees.

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Policy 2.07.13.

All species of sea turtles must be protected from human interference, including activities such as beach re-nourishment, beachfront lighting, coastal construction, and mechanical beach cleaning during nesting season, in accordance with F.S. 379.2431.

Policy 2.07.14.

The City must seek assistance from the Florida Fish and Wildlife Conservation Commission, the Florida Department of Environmental Protection, the U.S. Fish and Wildlife Service, and any other appropriate entity for the identification and protection of species of special concern, or threatened and endangered species. These agencies must also be requested to assist in updates to and the development of the City's land development regulations and future ordinances for the protection of these resources, especially the manatee, sea turtle, gopher tortoise, shorebirds, and other identified species of special concern or threatened or endangered species within the City. The City must maintain GIS maps illustrating the presence of species of special concern and endangered or threatened species habitat and incorporate these into wildlife corridor planning and coordination with the County's Conservation and Habitat Network.

Policy 2.07.15.

The City must ensure that wildlife have clean water to drink by providing and maintaining freshwater areas that are separate from retention ponds and that hold rainwater and spring waters that are not contaminated with effluents from developed areas.

OBJECTIVE 2.08. LAND ACQUISITION AND PRESERVATION

The City must maintain or increase the quality of natural assets/resources, including coastal wetlands, marine habitats, Egan's Creek and associated wetlands and uplands, dunes, and wildlife habitat through ongoing programs for preservation or acquisition of lands containing important environmental resources. Land acquisition and preservation are essential to environmental sustainability and ecological resiliency on this barrier island in the face of storm surge, flooding and sea level rise hazards. In turn, environment sustainability is the foundation of social and economic sustainability and community resiliency in this context.

Policy 2.08.01.

In collaboration with North Florida Land Trust, Amelia Tree Conservancy and Nassau County, the Planning and Conservation Department must inventory and identify environmentally sensitive lands and all lands critical to the environmental sustainability and resiliency of the City, targeting particularly upland wooded parcels, wetlands, coastal land and maritime forest, and include these lands in the City's GIS mapping system. This project must be undertaken by the Planning and Conservation Department and completed by Dec. 21, 2020.

Policy 2.08.02.

The Planning and Conservation Department must maintain an inventory of unique coastal, wetland, and upland systems for inclusion in land purchase programs for undisturbed wetlands, beach access, and other conservation or recreational lands, to be updated annually. In addition, the Planning and Conservation Department must develop and periodically update an inventory of all of the City's natural assets/resources. This inventory must examine the quantity, quality and vulnerability of each natural asset/resource, as well as identify and prioritize conservation lands for purchase either through federal, State, regional, local, or private initiatives.

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Policy 2.08.03.

The Grants Manager must develop and periodically update a list of potential federal, state, regional, and local funding sources, as well as private resources that can be used to acquire conservation lands. The Planning and Conservation Department must identify the amount of funding needed to purchase the areas with the highest priority and collaborate with the Grants Manager to submit applications when funds become available.

Policy 2.08.04.

The City must cooperate with the State and the County in efforts to acquire and/or preserve environmentally sensitive lands to ensure their conservation and protect their availability for future generations as well as to maintain the sustainability of the City and Amelia Island. The City must coordinate with the County regarding identification of lands that could be included in the County Conservation and Habitat Network.

Policy 2.08.05.

The City must actively pursue grant funding to acquire and establish conservation land, natural pedestrian pathways, scenic corridors and wildlife corridors between nature preserves, parks and historical sites. The Grants Administrator must develop a grant acquisition strategy to meet this need by **December 31, 2020**.

Policy 2.08.06.

The City must encourage the dedication of conservation easements for natural pedestrian or bicycle pathways between new developments and surrounding development, especially between commercial and activity centers, recreation centers and schools.

Policy 2.08.07.

The City must identify, determine feasibility, and implement alternative methods to acquire conservation or environmentally sensitive lands. Alternative methods must include, but are not limited to, transfer of development rights, conservation dedications, conservation easements and donations to private conservation groups.

Policy 2.08.08.

Conservation lands must be evaluated for potential use and a management plan must be developed within the first year after acquisition. Maritime hammock and other sensitive lands that are rare and provide protective functions must not be utilized for passive recreation. Lands that are assessed as less fragile may be used for limited passive recreation.

Policy 2.08.09.

The City's land development regulations must include special requirements for environmentally sensitive lands. Such special requirements must limit development and activities that will destroy or harm the natural functions of the river, lakes, floodplains, wetlands, groundwater, harbors, beaches and shores, upland forests and identified wildlife habitats.

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Policy 2.08.10.

The City must protect environmentally sensitive lands, including but not limited to maritime hammock, wetlands and conservation lands by developing standards within the Land Development Code related to development in these areas that will either prohibit the land use activities, or will allow them provided they are developed, constructed and/or operated in a manner that will protect the existing natural functions of said environmentally sensitive lands and otherwise comply with Local, Regional, State and Federal environmental requirements.

Policy 2.08.11.

The City must comply with its land conservation ordinance (https://library.municode.com/fl/fernandina_beach/codes/code_of_ordinances?nodeId=PTIICOR_C H42EN_ARTVIIIICOPRLA_____).

Policy 2.08.12.

The City must have management plans developed by credentialed experts for each of its acquisitions. Land management must be assigned or contracted to credentialed individuals. Assessment must be conducted on at least an annual basis.

Policy 2.08.13.

The City must comply with its memorandum of understanding (MOU) with North Florida Land Trust and attempt to renew the agreement when it expires.

OBJECTIVE 2.09. WATER QUALITY AND CONSERVATION

Water quality and availability are critical to sustainability. The City must protect water quality within and adjacent to City limits by restricting development and activities which will cause an adverse impact to these resources, and must encourage practices which promote water conservation.

Policy 2.09.01.

The Utilities Department must identify water quality testing sites maintained by public and private entities that are within or adjacent to City limits, and serve as a repository for this testing information for purposes of public review.

Policy 2.09.02.

The Utilities Department must maintain water quality at the designated standards for the appropriate water body classification, and must regularly assess water quality, including coordinating with FDEP and other public and private entities to assess the need for additional water quality testing sites.

Policy 2.09.03.

The City must actively pursue the protection and enhancement of water quality and quantity for wildlife propagation, fishing, shell fishing, recreation, navigation and other related activities, and in particular must restore waters to Class II waters (as defined by the Florida Department of Environmental Protection) for purposes of shellfish harvesting. Activities to accomplish this policy must include the following:

- a. Continue the proper maintenance of the City's wastewater treatment plant to ensure its operating procedures and effluent disposal continue to meet or exceed all State and federal water quality standards;

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- b. Continue to encourage the pulp mills located in the City to conduct regular testing of waters at their outfalls and to meet or exceed all State and federal water quality standards;
- c. Encourage Nassau County to continue participation in water testing and ensuring state and federal water quality standards are met or exceeded;
- d. Coordinate with state and federal agencies and non-profit organizations to explore projects related to enhancing and restoring water quality; and
- e. Prohibit future development and activities which would degrade existing or potential Class II waters or impede the restoration of existing Class III waters to Class II waters.
- f. Develop expanded buffer requirements and specify in the Land Development Code.
- g. The Stormwater Management Department must develop a program to educate the public regarding nonpoint pollution and the importance of eliminating it. These programs must include online information, hard copy publications, presentations and personal contact.
- h. The Stormwater Management Department must develop a program to educate the public on the importance of upkeep of septic systems and encourage connection to the City sewer system. The program must include online information, hard copy publications, presentations and personal contact.
- i. Eliminate the use of fertilizers, pesticides, herbicides, fungicides and other lawn and garden chemicals on city properties, including the airport and golf courses. Leased properties must be required to meet the same standard.
- j. The Stormwater Management Department must develop a program to monitor and decrease the level of E. coli and other pollutants in Egan's Creek and Escambia Slough/Alligator Creek.
- k. In collaboration with Nassau County and FDEP, the Utilities Director must develop and implement a program for monitoring the adequacy of wastewater treatment in septic systems in and adjacent to the City. Those with inadequately treated wastewater will be urged to convert to City water and sewer. Anyone not converting will be fined severely for each day the system performance remains substandard.

Policy 2.09.04.

The City must identify developable parcels adjacent to Class II or III waters and update the Land Development Code regarding development activities on these parcels to ensure maintenance of water quality. The City must also coordinate with the Florida Department of Environmental Protection regarding any potential reclassification or redefinition of waters within or adjacent to City limits.

Policy 2.09.05.

The City must coordinate with Nassau County and the State to ensure water quality is maintained in the Fort Clinch State Park Aquatic Preserve and the Nassau River-St. Johns River Marshes Aquatic Preserve.

Policy 2.09.06.

The City must expand the Coastal Upland Protection Zone and implement upland protection zones for areas adjacent to Egan's Creek in order to protect and improve water quality.

Policy 2.09.07.

The City must eliminate septic tanks as outlined in the Public Facilities element, especially in areas adjacent to the beach, river, Escambia Slough and Egans Creek in order to maintain healthy, functioning waterways. The Stormwater Director must establish a program for testing of septic tanks along with accompanying records to be added to the GIS system.

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Policy 2.09.08.

The City must locate existing underground storage tanks and septic tanks and incorporate those locations into the City's GIS mapping system.

Policy 2.09.09.

The City must prohibit any development activity that would potentially endanger lives and/or harm property, water quality and quantity, or any other valued environmental system resulting from an alteration to existing drainage structures and natural drainage patterns.

Policy 2.09.10.

The City must include water efficient landscaping at all City facilities by using Florida-Friendly, native and drought-tolerant plants, reducing potable water consumption and using micro-irrigation systems and efficient watering methods to reduce energy expenditures and maximize water conservation.

Policy 2.09.11.

The City must use Florida-Friendly or native plant species as landscaping at all City facilities and must not use invasive species. The City must implement xeriscaping and native plant ordinances.

Policy 2.09.12.

The City must require low-impact development strategies or conservation-based landscape planning and installation, water efficient irrigation and appropriate measures that promote conservation of water resources and reduction of non-point source pollution as part of sustainable water management for new public and private development. New waterfront development must be designed so that stormwater runoff and erosion are retained on-site or are channeled so as to not degrade water quality of adjacent waters.

Policy 2.09.13.

The City must change its philosophy of stormwater management from concentrated detention, retention and infiltration to distributed detention, retention and infiltration while incorporating methods to decrease the generation of run-off thereby decreasing the need or size of detention, retention, and infiltration ponds.

Policy 2.09.14.

The City must prohibit direct wastewater discharges to surface waters, unless it is part of a wetland treatment process certified by the DEP and a permit has been obtained.

Policy 2.09.15.

The City must assist the SJRWMD in eliminating the discharge of inadequately treated wastewater and stormwater into waters of the State. The City must require all discharge to waters of the State to be consistent with State standards as stated in the Florida Administrative Code.

Policy 2.09.16.

The City must develop community outreach materials and/or programs in coordination with the SJRWMD to educate the public on water conservation and personal pollution reduction measures.

Policy 2.09.17.

The City must implement a landscaping ordinance that seeks reduction in the use of fertilizers as a source of non-point source pollution.

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Policy 2.09.18.

The City must advise its citizens of the dangers associated with non-point source pollution addressing, at a minimum, the following:

- a. Proper pesticide, herbicide and fertilizer application practices;
- b. Use of turf blocks for patios, sidewalks, driveways, etc., to prevent increasing impervious surface area;
- c. The importance of maintaining motor vehicles to prevent the accumulations of oils, grease, transmission fluid etc., on driveways; and
- d. The importance of regularly collecting and properly composting yard debris to prevent the accumulation of other debris which can adversely affect surface water quality.

Policy 2.09.19.

The City must utilize the most recent SJRWMD data for determining areas in the City with the potential for aquifer recharge and maintain maps of these areas in the City's GIS database. If areas in the City are identified as aquifer recharge areas, the City must then develop and implement protection measures which will protect the areas from development impacts.

Policy 2.09.20.

During the site plan review process, the Planning and Conservation Department must ensure the protection of groundwater recharge through the following low-impact development techniques:

- a. Minimum open space standards;
- b. Maximum impervious surface standards, including requiring the use of pervious paving materials to reduce the extent of impervious surfaces;
- c. Drainage bio-swales, micro-detention, bio-retention, rain gardens and similar techniques;
- d. Requiring French drains, slab-covered trenches or drainage wells, and limitations on overflows;
- e. Allowing direct overland flow discharge to surface waters only when no other practical or effective method of stormwater discharge is possible; and
- f. Allowing positive drainage discharge to surface waters only when other methods are impractical or impossible, and only when adequate pollution control (grit and grease) is provided.

Policy 2.09.21.

The City's land development regulations must include land use controls, performance criteria, special erosion controls, stormwater management and water quality controls, landscaping and flood management regulations that ensure adequate on-site retention and ground water recharge. These regulations must also ensure that surplus runoff is directed to receiving waterways in a manner that prevents imbalance to their ecosystems. The programs must be continually updated based on improved knowledge of problems, issues, and best management practices.

Policy 2.09.22.

The Planning and Conservation Department must ensure coordination of watershed management plans and policies, with appropriate local, regional, State and federal agencies. These agencies must include but are not limited to Nassau County, SJRWMD, the NEFRC, the DEP, the Agricultural Extension Service, the United States Army Corps of Engineers and the U.S. Fish and Wildlife Service.

Policy 2.09.23.

In the event that mineral and/or oil exploration is undertaken off the Northeast Florida coast, a contingency plan must be developed within one (1) year of announced exploration. The contingency plan must address:

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- a. Identification of the City's natural and cultural resources that could be potentially impacted;
- b. Identification of potential impacts to the City's natural and cultural resources;
- c. Methods of mitigation;
- d. Means of coordinating with permitting agencies; and
- e. Responses to hazardous events.

Policy 2.09.24.

The City must enact stormwater management strategies as outlined in the Public Facilities Element.

Policy 2.09.25.

The City must work with the local fiber and chemical plants and the Port of Fernandina to identify any and all hazardous materials used, stored or manufactured within the facilities and develop a contingency plan. The contingency plan must be developed within one (1) year of this Policy going into effect or a new facility being announced. The contingency plan must address:

- a. Identification of the City's natural and cultural resources that could be potentially impacted;
- b. Identification of potential impacts to the City's natural and cultural resources;
- c. Methods of mitigation;
- d. Means of coordinating with permitting agencies; and
- e. Responses to hazardous events.

Policy 2.09.26.

The Floodplain Manager and Chief Resilience Officer and the Utilities Director, in collaboration with Nassau County, must monitor the various paths of saltwater intrusion on Amelia Island and when identified, initiate appropriate research and implement proactive measures to address the problem.

OBJECTIVE 2.10. AIR QUALITY

Air quality is also critical to sustainability. The City must meet air quality standards established by the EPA and the DEP.

Policy 2.10.01.

The City must designate a City Department to coordinate with Nassau County, DEP and the EPA on an annual basis to ensure enforcement of air quality regulations by reporting all known violations of air quality standards. The designated department must establish a program of air quality monitoring.

Policy 2.10.02.

The City must coordinate with federal and state agencies to obtain information about air quality within City limits.

Policy 2.10.03.

The City must coordinate with major industrial operators within the City such as Rayonier, WestRock, First Coast Railroad and the Port regarding air quality information and advocate for higher standards.

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Policy 2.10.04.

The City acknowledges changes in air quality associated with climate change and must seek to reduce greenhouse gases and carbon dioxide emissions through policies in the Future Land Use and Transportation Elements and within Energy Conservation Objective 2.11.

Policy 2.10.05.

The Planning and Conservation Department must maintain tree preservation and protection as well as planting, as outlined in Objective 2.06, as a significant component of improved air quality.

Policy 2.10.06.

The Planning and Conservation Department must provide educational materials to the community regarding strategies for increasing air quality with the City.

Policy 2.10.07.

To minimize the impact of motor vehicle traffic on air quality, the City must implement strategies as outlined in the Multi-modal Transportation Element that reduce motor vehicle traffic and encourage biking, walking and other alternative modes of transport.

OBJECTIVE 2.11. ENERGY CONSERVATION

Energy conservation contributes to climate stability and sustainability in a number of ways. The City must promote and encourage energy conservation in an effort to reduce greenhouse gas emissions and protect the environment through responsible management of energy, promotion of energy conservation programs and implementation of tools and evaluation of opportunities to further energy conservation.

Policy 2.11.01.

The City must continue to implement its **energy conservation plan** and update the plan every five years.

Policy 2.11.02.

In accordance with F.S. 255.2575, all new City facilities and major improvements to existing facilities must be designed, constructed, operated, and maintained according to the standards outlined by a recognized sustainable development rating system such as, but not limited to, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED).

Policy 2.11.03.

The City must improve energy conservation and efficiency in City buildings and facilities, and must pursue renewable and alternative energy projects and programs. Life-cycle assessments must be conducted for proposed retrofits or upgrades to energy systems.

Policy 2.11.04.

The City must replace light-duty vehicles in need of replacement with hybrids, alternative fuel vehicles, or the most fuel-efficient and least-polluting vehicles available for specific functions whenever cost and reliability are similar to traditional vehicles. The City must follow standards outlined by a recognized sustainable development rating system such as, but not limited to, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED).

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Policy 2.11.05.

The City Utilities Department must coordinate with Florida Public Utilities to educate the public on energy saving opportunities in their homes and businesses. New homeowners and renters must receive information on energy conservation in hard copy within their first month of residency. All residents must receive energy conservation information once a year. These publications must follow the standards outlined by a recognized sustainable development rating system such as, but not limited to, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED).

Policy 2.11.06.

The City and Florida Public Utilities must provide educational offerings for the community highlighting the energy conservation benefits of bicycling, walking and carpooling, in addition to other energy saving strategies. These educational offerings must represent standards outlined by a recognized sustainable development rating system such as, but not limited to, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED).

Policy 2.11.07.

The Planning and Conservation and Building Departments must review the Land Development Code for opportunities to promote energy conservation standards outlined by a recognized sustainable development rating system such as, but not limited to, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) through evaluation of the following, including but not limited to:

- a. site design and building orientation;
- b. incentives for sustainable construction;
- c. incentives for infill projects and reuse of existing buildings;
- d. integration of multimodal transportation infrastructure requirements; and
- e. Native shade tree protection

Policy 2.11.08.

The Planning and Conservation Department must collaborate with the County Planning and Economic Opportunity Department to study transportation needs and develop and implement a multi-modal system for the County and City, as mandated in the Future Land Use and Multi-modal Transportation Elements of this comprehensive plan. This system must follow standards outlined by a recognized sustainable development rating system such as, but not limited to, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED).

Policy 2.11.09.

The Planning and Conservation Department must maintain tree preservation and protection as outlined in Objective 2.06 and tree planting as a means of contributing to increased energy efficiency through the City.

Policy 2.11.10.

Energy conservation efforts must be maximized through coordination and implementation of other energy conservation programs, tools and strategies outlined in the objectives and policies of all other elements of this comprehensive plan, following standards outlined by a recognized sustainable development rating system such as, but not limited to, the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED).

OBJECTIVE 2.12. DREDGE, FILL AND EXCAVATION ACTIVITIES

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The City must ensure that all approved dredge and/or fill activities are conducted in a manner which prevents adverse impacts on water quality, allows for adequate flushing of a newly constructed waterway, maintains water circulation patterns within estuaries and tributaries, does not create excessive drainage onto adjacent properties, and does not impact wildlife habitat or natural ecosystems, such as wetlands and dunes.

Policy 2.12.01.

The construction of canals, man-made waterways, drainage ditches, and stormwater ponds or retention facilities must not be permitted within City limits unless approved by all agencies with regulatory jurisdiction, the Planning and Conservation Department, Stormwater Management and the City Floodplain Manager and Chief Resilience Officer.

Policy 5.12.02.

The City must evaluate the need for dredging the City Marina on a regular basis. Any waterway dredging, particularly within the City Marina, must account for water quality, adequate flushing, water and boat circulation and wildlife habitat, especially Florida manatee habitat.

Policy 2.12.03.

All dredge spoil material must be placed on suitable disposal sites approved by all agencies with regulatory jurisdiction.

Policy 2.12.04.

Approved best management practices, as published by the DEP, must be used before, during and after construction to reduce siltation and erosion, and must be included in the Land Development Code as reference for pre-construction, construction and post-construction activities. These practices must be monitored by the Planning and Conservation Department, Stormwater Management and the Floodplain Manager and Chief Resilience Officer.

Policy 2.12.05.

The City's land development regulations must provide for control and permitting of all on-site changes in land contours associated with dredging, excavating and filling activities in order to ensure excessive drainage does not impact adjacent properties and to ensure protection of natural ecosystems and habitat. The City must include strategies for excavation and fill activities within the Coastal Upland Protection Zone and in remaining areas of the City, to be included in the Land Development Code, including but not limited to:

- a. calculating maximum height for structures based on pre-development grade;
- b. evaluating the grade of adjacent properties;
- c. requiring pier/piling construction within the Coastal Upland Protection Zone (FH-FEMA 100 Year flood hazard zone) and eastward of the Coastal Construction Control Line; and
- d. creating policies for fill assessment and evaluation in coordination with DEP.

Practices that relate to these regulations and strategies must be monitored by the Planning and Conservation Department, the Building Department, Stormwater Management and the Floodplain Manager and Chief Resilience Officer.

Policy 2.12.06.

Dredging operations and dredge spoil operations must monitor air quality and use odor control.

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Policy 2.12.07.

The Floodplain Manager and Chief Resilience Officer must examine the effects of excavation on dune system stability and determine that over time no net effect will occur before approval of the excavation.

OBJECTIVE 2.13. HAZARD MITIGATION, DISASTER PREPAREDNESS AND POST-DISASTER REDEVELOPMENT

The City must protect the safety of residents and visitors through limitations on development within the Coastal High Hazard Area, preparation of a post-disaster plan, maintaining evacuation routes and standards for evacuation times and by implementing regulations which serve to reduce risks to human life and property from the effects of coastal flooding, erosion, storm surge, sea level rise, or damage to environmental systems and other natural hazards in the coastal and riverine areas through sound planning practices.

Policy 2.13.01.

The Floodplain Manager and Chief Resilience Officer must coordinate with Nassau County for the safe evacuation of the coastal population in accordance with Nassau County's hurricane evacuation plan. All plans for development must address the impacts on hurricane evacuation and other emergency evacuation plans. All emergency evacuation plans must accommodate pets and domestic animals.

Policy 2.13.02.

The City must prioritize the improvement of City transportation facilities to give special consideration to routes for hurricane evacuation, and must coordinate with the State and Nassau County to prioritize improvement of State and County transportation facilities necessary for hurricane evacuation.

Policy 2.13.03.

The Floodplain Manager and Chief Resilience Officer must coordinate with the County's Emergency Management Director whenever the County updates its hurricane evacuation plan, disaster preparedness plan, Local Mitigation Strategy and Post-Disaster Redevelopment Plan. An analysis of the existing plans must include the following:

- a. Road carrying capacities as compared to the needs of the main evacuation routes, based upon population to be evacuated;
- b. Number and adequacy of shelters to serve the City's population;
- c. Methods of issuing evacuation orders to ensure all residents are adequately notified and, if necessary, assisted during evacuation;
- d. Adequacy of educational information available and reaching the public regarding shelters, evacuation routes, emergency assistance, and enforcement of evacuation orders;
- e. Resident and visiting population numbers; and
- f. Current information on the number and location of special needs population.

Policy 2.13.04.

The Floodplain Manager and Chief Resilience Officer must provide a hurricane guide, updated annually, showing evacuation routes, hurricane hazards, safety procedures, shelters, and other pertinent information for its citizens, including special needs populations.

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Policy 2.13.05.

The Floodplain Manager and Chief Resilience Officer must maintain and update a post-disaster redevelopment plan to address strategic actions necessary to establish order, communication, and basic service delivery systems necessary for health, safety, and welfare following a hurricane or other natural disaster. This plan must be reviewed with the County's Emergency Management Director for compliance with the local Comprehensive Emergency Management Plan. The post-disaster redevelopment plan must provide a basis for executing the following activities during times of natural disaster:

- a. Establishing a temporary moratorium on building activity;
- b. Reviewing and deciding upon emergency building permits;
- c. Coordinating with state and federal officials to prepare disaster assistance applications;
- d. Analyzing and recommending to the City Commission hazard mitigation options, including reconstruction or relocation of damaged public facilities;
- e. Re-establishment of water supply;
- f. Re-establishment of wastewater treatment facilities;
- g. Developing a redevelopment plan including limitations on redevelopment in areas which have historically experienced destruction or severe damage from storm surge, waves, erosion, or other manifestations of storm-driven waters;
- h. Discouraging the rebuilding and redevelopment of facilities which encourage growth in hazardous areas, except for necessary services for existing development
- i. Ensuring that land acquisition programs include provisions for the possible redirection of funds to acquire estuarine properties which should not be redeveloped following a major disaster;
- j. Recommending amendments to the local peacetime emergency plan and other appropriate policies and procedures;
- k. Distinguishing between immediate repair and cleanup action needed to protect public health and safety and long-term repair and redevelopment activities;
- l. Eliminating unsafe conditions and inappropriate uses;
- m. Incorporating applicable recommendations of interagency hazard mitigation reports into the FBCP;
- n. Identifying mechanisms for the removal, relocation, or structural modification of damaged and unsafe structures;
- o. Considering development credits or transfer of development rights for use as incentives to reduce rebuilding damaged structures in the coastal high hazard area;
- p. Recommending techniques and methods that lower densities along the oceanfront;
- q. Identifying areas needing redevelopment;
- r. Providing for strategies to address historic and cultural resources; and
- s. Developing a plan for dune and beach rehabilitation and recovery as part of the risk reduction strategy for post-disaster redevelopment.

Policy 2.13.06.

In the event that the City is included in a presidential disaster declaration, the City, under the leadership of the Floodplain Manager and Chief Resilience Officer, must use the interagency hazard mitigation report as the basis for prohibiting redevelopment of uses which are inconsistent with the report's recommendations. Additionally, the City must use the interagency hazard mitigation report to prevent new uses that are inconsistent with report's recommendations, from locating in the area included in the presidential disaster declaration. Finally, should an interagency hazard mitigation report be issued for the City, the City must consider adopting a program for eliminating existing uses which are inconsistent with the report's recommendations.

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Policy 2.13.07.

The City must require the removal or redevelopment of any structure that received storm-damage in excess of fifty (50) percent of the structure's appraised value, as determined by the County property appraiser to meet all current laws and ordinances, including those enacted since construction of the subject structure. The City must address potential exemptions for historic structures in relation to this policy.

Policy 2.13.08.

The City must coordinate coastal area population densities with hurricane evacuation plans. The City must enforce land development regulations which ensure that land use decisions impacting population density within the Level A evacuation zone, as delineated in the most recent Northeast Florida Regional Hurricane Evacuation Study, and the category 1 and 2 storm surge inundation zones are coordinated with the County's hurricane evacuation plan and applicable regional or State hurricane evacuation study. In no case may the City approve residential or commercial development beyond the capacity to evacuate the island within 18 hours.

Policy 2.13.09.

Disaster preparedness plans must address the needs of special needs populations, including evacuation and specific shelter requirements. The Floodplain Management Director and Chief Resilience Officer must assist the County and support County efforts to identify and maintain data on special needs populations.

Policy 2.13.10.

The Floodplain Manager and Chief Resilience Officer must continually coordinate with the County's Emergency Management Department to develop a plan for reducing the hurricane evacuation time for within the County.

Policy 2.13.11.

The Floodplain Manager and Chief Resilience Officer must continually coordinate with the County's Emergency Management Department to ensure that adequate off-island hurricane shelters are available to serve the City's residents and visitors.

Policy 2.13.12.

Construction in floodplains must adhere to local development standards in keeping with the requirements of the National Flood Insurance Program (NFIP). The Floodplain Manager and Chief Resilience Officer must maintain and update as needed maps of existing development and densities within the floodplain, FEMA flood zones and repetitive loss maps, storm surge/Coastal High Hazard Area maps and sea level rise impact maps – identifying current and potential future areas subject to inundation.

Policy 2.13.13.

Hazardous materials or hazardous waste must not be stored within an area of special flood hazard unless:

- a. Such hazardous materials or hazardous waste are limited to properties which carry the Industrial Future Land Use designation and are stored within tanks or vessels, the lowest extremity of which is located above the applicable base flood elevation in accordance with the City's Floodplain Management Ordinance; and
- b. All tanks or structures containing hazardous materials or hazardous waste must comply with all NFIP and FEMA anchoring and flood proofing requirements.

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In ALL cases a mutually developed emergency response plan (City and Owner) for response to potential release of these materials into the environment must be developed and tested within 24 months of the approval of this Plan.

The Land Development Code must be updated to reflect this policy.

Policy 2.13.14.

The Stormwater Management Director must document and maintain maps of extreme high tides (“king tides”), more frequent severe rainfall events, and newly revealed areas at risk of flooding to efficiently target mitigation efforts.

Policy 2.13.15.

The Floodplain Manager and Chief Resilience Officer must maintain and update a floodplain management ordinance that establishes requirements to safeguard the public health, safety and general welfare, and minimizes public and private losses due to flooding through regulation of development in flood hazard areas.

Policy 2.13.16.

The Floodplain Manager and Chief Resilience Officer must monitor the floodplain ordinance for consistency with the Florida Building Code and any needed updates, and must ensure that future modifications of flood-resistant construction requirements in the floodplain ordinance continue to be consistent with, or more stringent than, requirements of the Florida Building Code and applicable floodplain management regulations set forth in 44 C.F.R. part 60 and National Flood Insurance Program standards.

Policy 2.13.17.

The City Floodplain Manager and Chief Resilience Officer and the Building Official must review all permit applications and site development plans to determine whether proposed development sites will reasonably be safe from flooding. If a proposed development site is in a flood hazard area, all site development activities (including grading, filling, utility installation, and drainage modification), all new construction and substantial improvements must be designed and constructed with methods, practices and materials that minimize flood damage and that are in accordance with the City floodplain ordinance.

Policy 2.13.18.

The City must continue to upgrade stormwater infrastructure through drainage improvements, installation of tidal backflow preventers, and seawall/bulkhead repair in addition to sustainable flood management actions such as installation of bioswales, recharge through drainage wells, use of pervious pavement, maintenance of natural preserve and open space areas, development of living shorelines and protection of tidal beaches and wetlands that will be adaptable to future climate events.

Policy 2.13.19.

The City must consider purchasing properties in areas most vulnerable to destructive storm surge, sea level rise and flooding for recreational uses and open space land conservation, subject to available financial resources. Transfer of development rights, conservation easements and acquisition by a land trust are among the options for consideration.

Policy 2.13.20.

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The City must ensure that adequate debris staging areas exist and that such staging areas are not in the CHHA, the floodplain, wetlands, other environmentally sensitive area, or area with known cultural or archaeological resources.

Policy 2.13.21.

The City must continue participation in the National Flood Insurance Program Community Rating System to reduce flood losses, achieve flood insurance premium discounts for residents, and strive toward Higher Regulatory Standards in order to improve the City's score with each recertification process. The Floodplain Manager and Chief Resilience Officer must oversee compliance.

Policy 2.13.22.

The City must pursue, through partnerships, hydrologic and hydraulic studies for areas of the City without known base flood elevation information. This information can be used as the basis for updates to Federal Emergency Management Agency (FEMA) flood insurance studies (FIS), flood insurance rate maps (FIRM), and the City's floodplain management ordinance.

Policy 2.13.23.

Every two years, the Planning and Conservation Department must review its Zoning and FLUM maps for accuracy and consistency, consistency with use and consistency with current conditions related to environmental hazards in collaboration with the Floodplain Manager and Chief Resilience Officer.

Policy 2.13.24.

The City and Nassau County must develop uniform standards to optimize environmental sustainability and resiliency for Amelia Island by May 31, 2021. Among other elements, these standards must include identification of lands critical to protection from hazards of storm surge, flooding, erosion and sea level rise; relevant policies regarding development; land conservation; and grants acquisition strategies. The City and County Floodplain Managers and Chief Resilience Officers must collaborate with the Planning and Conservation Department and the Department of Planning and Economic Opportunity, reporting outcomes to their respective planning boards and Commissioners. The City must incorporate Nassau County research on floodplain resiliency and vulnerability and other current research into its planning strategies and processes.

Policy 2.13.25.

The Floodplain Manager and Chief Resilience Officer and the Stormwater Management Director must work with Nassau County, FDEP and the federal government to develop a concrete plan to clean up E.Coli, pesticides, herbicides and other pollutants in Egans Creek and Escambia Slough/Alligator Creek.

Policy 2.13.26.

The City must incorporate into its Land Development Code regulations requiring at least a 50-foot horizontal buffer around wetlands and at least a 100-foot horizontal buffer along bodies of water for all new construction.

Policy 2.13.27.

The Planning and Conservation Department, the Stormwater Management Director, the Building Director, the Floodplain Manager and Chief Resilience Officer must develop a multi-pronged program to educate residents on the challenges and responsibilities of living on a barrier island by May 30, 2021.

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Policy 2.13.28.

Any ordinance or ordinance change that has the potential to negatively impact the City’s FEMA Community Rating for flood insurance must be reviewed by the City’s Floodplain Manager and Chief Resilience Officer prior to presentation to City Commissioners. The City’s Floodplain Manager and Chief Resilience Officer must confer with the FEMA Community Rating System Coordinator regarding the implications of the change under consideration. Such an ordinance requires a unanimous vote of the City Commission to be passed.

Policy 2.13.29.

The City must strive to improve its flood rating on the FEMA Community Rating System.

Policy 2.13.30.

The City must encourage all critical facilities utilizing hazardous chemicals reportable on MSDSs (or SDSs) to relocate the storage, disposal or transfer of those materials outside Coastal High Hazard Areas as identified in Zones V or SHFA on the most recent National Flood Insurance Maps.

Policy 2.13.31.

Any construction or expansion of critical facilities within Zone V or SHFA must submit as-built elevation certifications from a professional engineer to the Floodplain Manager and Chief Resilience Officer upon the completion of all projects.

Policy 2.13.32.

Any exception or variance to the community’s flood ordinances must require the approval of the Federal Insurance Administrator in accordance with CFR 60.6 (b)(2).

Policy 2.13.33.

Flood ordinances must be legally-enforceable, applied uniformly throughout the community to all privately and publicly owned land within flood-prone areas in compliance with CFR 60.1(b)

Policy 2.13.34.

Flood ordinances must provide that the flood regulations take precedence over any less restrictive conflicting local laws, ordinances or codes in compliance with CFR 60.1 (b).

OBJECTIVE 2.14. WATERFRONT PLANNING

The City must protect shorelines and waterfront lands in order to ensure adequate and appropriate locations for water-dependent, water-related and water-enhanced uses.

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Policy 2.14.01.

All shoreline and waterfront land uses must be approved by the Floodplain Manager and Chief Resilience Officer. Approval is required prior to permitting, and a program must be developed for periodic review and inspection every five years.

Policy 2.14.02.

It must be the policy of the City to utilize the following priority list in reviewing applications for shoreline uses, so as to provide increased priority for water-dependent uses. Uses listed first must generally be given the highest priority of all uses that may be proposed along the shoreline, with other, uses listed in the order of declining priority. Uses listed under (7) must be given the least preference for location along the shoreline.

1. Water-based law enforcement, rescue and Department of Defense
2. Water-dependent uses such as fish, and shellfish production;
3. Water-dependent recreation and commercial uses such as ports, marina-type uses, and navigation, particularly those that provide public access;
4. Water-related uses such as certain utilities and commercial;
5. Water-enhanced uses such as certain recreational and commercial uses;
6. Non-water dependent or related activities such as residential uses; and
7. Non-water dependent and non-water enhanced uses which result in an irretrievable commitment of coastal resources, or in a proposed alteration to the FLUM series that would prohibit or remove the permitted use of water-dependent, water-related or water-enhanced uses.

Policy 2.14.03.

The City must guide and direct the location of all future water-dependent and water-related uses according to the following criteria:

- a. Directing marinas to preferred locations, such as those adjacent to existing channels and passes, and in areas where little dredging and maintenance would be required;
- b. Directing the development of dry dock facilities to locations that are upland of marina sites;
- c. Requiring sewage pump-out facilities at all marinas and adequate fuel spill containment facilities measures at those facilities which sell petroleum products;
- d. Protecting shoreline and waterfront areas in order to provide locations for marine/estuarine related uses, such as commercial and recreational fishing, boating, and other water-dependent uses and activities;
- e. Prohibiting the construction of causeways within estuaries and requiring ~~bridges with pilings~~ instead, and
- f. Ensuring minimal environmental resource impacts or disruption.

Policy 2.14.04.

New marinas and multi-slip docking facilities must conform to the following criteria:

- a. marinas and multi-slip docking facilities must provide vehicular parking;
- b. all parking, dry storage, and non-water dependent facilities must be built on existing uplands;
- c. marinas and multi-slip docking facilities ~~shall~~ must prepare disaster preparedness plans which describe measures to be taken to minimize damage to marina sites, neighboring properties, and the environment; this plan must be reviewed and approved by the City Manager, Fire Department and the Planning Director;
- d. marina or multi-slip docking facilities must comply with the other policies of this plan;

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- e. marinas or multi-slip docking facilities which receive permits to disturb or destroy wetlands or grass beds must create new wetlands or grass beds in compliance with permitting agency requirements;
- f. dry slip use must be maximized in order to minimize impacts on water quality, and minimize the areas extent of disturbance of the estuary;
- g. fueling facilities associated with marinas must be designed to contain spills from on-land equipment and must be prepared to contain spills in the water. A fuel management/spill contingency plan must be developed. The plan must describe methods to be used in dispensing fuel and all the procedures, methods and materials to be used in the event of a spill; and
- h. must not have adverse impact on established commercial fishing, shell or shrimping activities.

Policy 2.14.05.

The City must require existing marinas and new marinas to seek and maintain Clean Marina designation, as operated by the Florida Department of Environmental Protection.

Policy 2.14.06.

The City must update standards for marinas and marine-related facilities in the Land Development Code which include setbacks, height limitations, parcel size, architectural guidelines, maintenance, containment of stormwater runoff, wastewater disposal, wash down water for dry storage areas, and requirements for Clean Marina designation or inclusion of Clean Marina standards as set by the Florida Department of Environmental Protection.

Policy 2.14.07.

Existing marina facilities that upon inspection fail to meet the City's operational standards must be shut down until they meet the operational standards.

Policy 2.14.08.

The City must encourage new and expanded marina facilities to utilize dry storage to the fullest extent possible.

Policy 2.14.09.

The City must prohibit any water-dependent or water related land-use which will lower the water quality standards below State water quality standards.

Policy 2.14.10.

The City must protect recreational and commercial working waterfronts by protecting environmental and cultural resources, providing public access, helping to prevent losses from disasters and enhancing the waterfront economy, and through participation in the Florida Waterfronts Partnership Program.

Policy 2.14.11.

The City must continue to maintain a mooring field for the needs of transient boaters and to reduce the need for additional marina use along the waterfront and its uplands.

Policy 2.14.12.

The City must continue to maintain an Industrial Waterfront zoning and future land use designation in order to support water-dependent activities such as commercial fishing, shell, and shrimping.

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Policy 2.14.13.

The City must evaluate potential exemptions in the Land Development Code to wetlands buffer requirements for resource-based recreational facilities such as trails, boardwalks, piers and boat ramps, and components of water-dependent commercial uses such as port facilities, marinas, fish camps, and commercial fishing operations to ensure that there is no erosion or damage to the wetland environment.

Policy 2.14.14.

The City must evaluate land development regulations that incentivize maintaining water-dependent uses such as marinas, fish camps, and commercial fishing operations to ensure there is no damage to the environment.

Policy 2.14.15.

The City must encourage waterfront property owners to offer the City the right of first refusal for properties that are proposed to be changed from recreational or commercial working waterfront uses to other uses.

Policy 2.14.16.

The City must establish a no net loss policy for the areas within the City that are zoned and/or included in the FLUM series as recreational and commercial working waterfront uses.

Policy 2.14.17.

The City must use living shoreline whenever practical.

OBJECTIVE 2.15. PUBLIC SHORE ACCESS

The City must continue to maintain, improve, and increase public access to waterways and shores through acquisition and other land use controls.

Policy 2.15.01.

The City Floodplain Manager and Chief Resilience Officer must maintain an inventory of public access points to shores, including the beach, river, and Egan's Creek, including number, location, design, accessibility, and availability of parking, and update this inventory on an annual basis. This data must be input on City GIS.

Policy 2.15.02.

The City must require, where appropriate, the dedication of public access to waterways and shores from private developments.

Policy 2.15.03.

The City must not vacate necessary existing rights-of-way, easements, walkways, and other properties available for public access to beaches, shores, and other waterways.

Policy 2.15.04.

The City must promote an increase in public access through dedication of land for new public access points, and through encouragement of dedication of land by private property owners adjacent to waterway access points.

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Policy 2.15.05.

The City must not allow private landowners adjacent to public beach access points, including easements, to restrict public access to the beaches through those access points.

Policy 2.15.06.

The City must maintain access to the water through beach accesses, public fishing piers, boat ramps, and marinas, as further defined in the Recreation and Open Space Element.

Policy 2.15.07.

The Floodplain Manager and Chief Resilience Officer must establish and maintain a regular schedule for updating walkovers and drive overs as well as way-finding signage for all public access points ~~by 2013~~.

Policy 2.15.08.

The City must require user-friendly and disabled-friendly accesses with all new structures and incorporate disabled-friendly accesses in repairs and modification if possible.

OBJECTIVE 2.16. INTERGOVERNMENTAL COORDINATION

Well-articulated intergovernmental coordination regarding coastal assets/resources and conservation is essential for the State, County and City to maintain the sustainability and resiliency of Amelia Island and Fernandina Beach. The City must play an active role in upgrading and refining this.

Policy 2.16.01.

The City must coordinate with Nassau County regarding coastal resources and conservation issues, and must coordinate with Nassau County should the potential arise for City or County activities to impact these resources.

Policy 2.16.02.

The City must continue to coordinate with federal and state agencies and Nassau County regarding the Nassau County Shore Protection Project, the Fernandina Harbor Navigation Project, the Conservation and Habitat Network, and activities in or adjacent to the Fort Clinch Park Aquatic Preserve and Nassau River-St. Johns River Marshes Aquatic Preserve.

Policy 2.16.03.

The City must coordinate with state agencies whose activities and regulations may impact coastal and natural resources in the area, including but not limited to the Department of Transportation, the Department of Environmental Protection, the Florida Fish and Wildlife Conservation Commission, and the St. Johns River Water Management District.

Policy 2.16.04.

The City must coordinate with federal agencies whose activities and regulations may impact coastal and natural resources in the area, including but not limited to the U.S. Fish and Wildlife Service, the Environmental Protection Agency, Federal Emergency Management Agency, Homeland Security and the United States Army Corps of Engineers.

Policy 2.16.05.

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In collaboration with the Nassau County Department of Planning and Economic Opportunity, the City Planning and Conservation Department must study, compile data and develop mapping on island wildlife species (endangered/threatened and other species) and identify wildlife corridors.

Policy 2.16.06.

The Planning and Conservation Department must coordinate with the County Department of Planning and Economic Opportunity to conserve lands that are critical to sustainability and resiliency or major wildlife corridors.

Policy 2.16.07.

The City must also cooperate with the State in efforts to acquire and/or preserve environmentally sensitive lands to ensure their conservation and protect their availability for future generations as well as to maintain the sustainability of the City and Amelia Island.

Policy 2.16.08.

The City must seek assistance from the Florida Fish and Wildlife Conservation Commission, the Florida Department of Environmental Protection, the U.S. Fish and Wildlife Service, and any other appropriate entity for the identification and protection of species of special concern, or threatened and endangered species.

Policy 2.16.09.

The City shall collaborate with Nassau County to develop a Floodplain Management Plan and a Dune Management Plan to focus on sustainability and resiliency for Amelia Island, to include land conservation, identification of sensitive lands and those critical to sustainability, policies regarding development, floodplain management and grants acquisition strategies. The City and County Floodplain Managers and Chief Resilience Officers must coordinate the project with full participation of the Planning and Conservation Department and the Department of Planning and Economic Opportunity, Building Departments and Stormwater Management, reporting to their respective Planning boards and Commissioners. An initial plan must be completed by **July 1 2021.**

Policy 2.16.10.

The City must review with the County, State DEP and USACE the option of managing beach renourishment projects on a littoral cell basis with the intent of having a single beach renourishment project for the Island. Any consultant involved in reviewing such a potential must be banned from participating in any subsequent beach nourishment or sand bypassing construction for at least one renourishment cycle.

Policy 2.16.11.

The City must continue to work with SJRWMD, the DEP, and/or the U.S. Army Corps of Engineers to ensure wetland protection.

Policy 2.16.12.

The City must coordinate with the Florida Department of Environmental Protection and the United States Army Corps of Engineers through agency permitting processes for construction of docks, piers, seawalls, jetties, wharves, boat ramps, boardwalks and boat houses to ensure water flow and navigation are not restricted.

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Policy 2.16.13.

The City must coordinate with the DEP regarding any new regulations regarding coastal development, coastal wildlife and marine resources. All projects east of the DEP's Coastal Construction Control Line must be approved first by the DEP and all permits 1000 feet west need to be reviewed the DEP to assure they will not damage the entire barrier island dune system.

Policy 2.16.14.

The City must continue to encourage Nassau County to continue its participation in water testing and ensuring that state and federal water quality standards are met or exceeded.

Policy 2.16.15.

The City must also coordinate with the Florida Department of Environmental Protection regarding any potential reclassification or redefinition of waters within or adjacent to City limits.

Policy 2.16.16.

The City must assist the SJRWMD in eliminating the discharge of inadequately treated wastewater and stormwater into waters of the State.

Policy 2.16.17.

The City must develop community outreach materials and/or programs in coordination with the SJRWMD to educate the public on water conservation and personal pollution reduction measures.

Policy 2.16.18.

The City Floodplain Manager and Chief Resilience Officer must ensure coordination of watershed management plans and policies, with appropriate local, regional, State and federal agencies. These agencies must include but are not limited to Nassau County, SJRWMD, the NEFRC, the DEP, the Agricultural Extension Service, the United States Army Corps of Engineers and the U.S. Fish and Wildlife Service.

Policy 2.16.19.

The City must designate a City Department to coordinate with Nassau County, DEP and the EPA on an annual basis to ensure enforcement of air quality regulations by reporting all known violations of air quality standards. The designated department must establish a program of air quality monitoring.

Policy 2.16.20.

The City must coordinate with federal and state agencies to obtain information about air quality within City limits.

Policy 2.16.21.

The Planning and Conservation Department must collaborate with the County Planning and Economic Opportunity Department to study transportation needs and develop and implement a multi-modal system for the County and City, as mandated in the multi-modal transportation element.

Policy 2.16.22.

The Floodplain Manager and Chief Resilience Officer must coordinate with Nassau County for the safe evacuation of the coastal population in accordance with Nassau County's hurricane evacuation plan. All

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plans for development must address the impacts on hurricane evacuation and other emergency evacuation plans. The City must enforce land development regulations which ensure that land use decisions impacting population density within the Level A evacuation zone, as delineated in the most recent Northeast Florida Regional Hurricane Evacuation Study, and the category 1 and 2 storm surge inundation zones are coordinated with the County's hurricane evacuation plan and applicable regional or State hurricane evacuation study. In no case may the City approve residential or commercial development beyond the capacity to evacuate the island within 18 hours.

Policy 2.16.23.

The City Floodplain Manager and Chief Resilience Officer must coordinate regularly with the County's Emergency Management Director regularly regarding its hurricane evacuation plan, disaster preparedness plan, Local Mitigation Strategy and Post-Disaster Redevelopment Plan.

Policy 2.16.24.

Disaster preparedness plans must address the needs of special needs populations, including evacuation and specific shelter requirements. The City must assist the County and support County efforts to identify and maintain data on special needs populations.

Policy 2.16.25

The City Floodplain Manager and Chief Resilience Officer must work with Nassau County, FDEP and the federal government to develop a concrete plan to clean up E.Coli, pesticides, herbicides and other pollutants in Egans Creek and Escambia Slough.

Policy 2.16.26.

The Floodplain Manager and Chief Resilience Officer and the Utilities Director, in collaboration with Nassau County, must monitor the various paths of saltwater intrusion on Amelia Island and, when identified, initiate appropriate research and implement proactive measures to address the problem.

MAPS THAT NEED TO BE PROVIDED TO SUPPORT GOAL 2:

- Potential wetlands—updated
- SLOSH—updated
- CCCL and 1000' CUPZ—updated; also overlaid on SLOSH map
- FEMA Risk Mapping, Assessment, Planning (Flood Risk Map) November 16, 2016 [**note posting problems with these maps**]—updated if possible
 - Increased Inundation Areas: Nassau County, Florida (2 maps)
 - <http://www.fbfl.us/DocumentCenter/View/17836>
 - <http://www.fbfl.us/DocumentCenter/View/17837>
 - Coastal Inundation Depths 1% Annual Chance Map: Nassau County, Florida (2 maps)
 - <http://www.fbfl.us/DocumentCenter/View/17833>
 - <http://www.fbfl.us/DocumentCenter/View/17834>

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- maps from County Vulnerability study
- Potential density within the 100-Year Floodplain (AE)—updated
- Potential density within wetlands--updated
- ? maps of dune systems, etc. from Frank’s earlier work
- Onsite sewage locations—updated
- Outstanding Florida Waters—updated?
- Groundwater recharge area—updated
- Soils map—updated
- Underground storage tanks

EXPERTS WHO PROVIDED INPUT ON COASTAL MANAGEMENT AND CONSERVATION:

Warren Buchanan, B.S. in Botany, M.A. in Land Resources
Pat Foster-Turley, Ph.D. in Zoology
Frank Hopf, Ph.D. in Coastal Geomorphology, P.E.
Len Kreger, City Commissioner
Munsell McPhillips, Ph.D. in Biomedical Engineering
Robert Prager, P.E.
Faith Ross, Environmentalist

ACRONYMS AND DEFINITIONS FOR GOAL 2:

ACRONYMS:

| | |
|---------|--|
| ADA: | Americans with Disabilities Act |
| CCCL: | Coastal Construction Control Line |
| CHHA: | Coastal High Hazard Area |
| CITY: | City of Fernandina Beach |
| CUPZ: | Coastal Upland Protection Zone |
| COUNTY: | Nassau County |
| CRA: | Community Redevelopment Area |
| DEP: | Florida Department of Environmental Protection |
| ESL: | Environmentally Sensitive Lands/Areas |
| FAC: | Florida Administrative Code |
| FEMA: | Federal Emergency Management Agency |
| FIRM: | Flood Insurance Rate Map |
| FLUM: | Future Land Use Map |
| FS: | Florida Statute |
| GIS | Geographic Information System |

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| | |
|---------|--|
| LOS: | Levels of Service |
| LID: | Low Impact Development: |
| NEFRC: | Northeast Florida Regional Council |
| NPS: | Non-Point Source Pollution |
| OFW: | Outstanding Florida Waters |
| SLOSH: | Sea, Lake and Overland Surges from Hurricane |
| SJRWMD: | St. Johns River Water Management District |
| STATE: | State of Florida |
| USACE: | United States Army Corps of Engineers |

DEFINITIONS

Buffer – Land area and landscaping provided to separate a use which may have a negative impact on an adjacent use or natural resource. Buffers may include physical barriers, vegetated berms, hedges, landscape cover, walls, fences and land area with dense vegetation and tree canopies.

Class II and III waters – Class II waters are waters suitable for shellfish propagation or harvesting. Class III waters are waters suitable for fish consumption; recreation, propagation and maintenance of a healthy, well-balanced population of fish and wildlife. Water quality classifications are arranged in order of the degree of protection required, with Class I water having generally the most stringent water quality criteria and Class V the least. However, Class I, II, and III surface waters share water quality criteria established to protect fish consumption, recreation and the propagation and maintenance of a healthy, well-balanced population of fish and wildlife.

Coastal Construction Control Line – establishes an area of jurisdiction in which special siting and design criteria are applied for construction and related activities. These standards may be more stringent than those already applied in the rest of the coastal building zone because of the greater forces expected to occur in the more seaward zone of the beach during a storm event. It is an essential element of Florida's coastal management program because it provides protection for Florida's beaches and dunes while assuring reasonable use of private property.

Coastal High Hazard Area – The area below the elevation of the Category 1 storm surge line as established by a Sea, Lake and Overland Surges from Hurricanes (SLOSH) computerized storm surge model.

Conservation – Activities or conditions designated for the purpose of conserving or protecting natural resources or environmental quality, including areas designated for such purposes as flood control, protection of quality or quantity of groundwater or surface water, floodplain management, commercially or recreationally valuable fish and shellfish, or protection of vegetative communities or wildlife habitats.

Conservation design or conservation site design -- “Conservation design” is most appropriate in areas having natural and open space resources to be protected and preserved in perpetuity. These include floodplains, groundwater recharge areas, wetlands, woodlands, streams, wildlife habitat and migratory nesting sites, severe slopes, relic dunes, maritime hammock and historic and cultural resources. It is a system that first considers the natural landscape and ecology of a development site rather than determining design features

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on the basis of pre-established assumptions or other locations. In other words, the developer/designer identifies the ecological features of the site and then designs the construction to accommodate those features, “building around” the existing ecological features. The main principles for conservation design are:

- flexibility in site design and lot size
- thoughtful protection and management of natural areas
- reduction of impervious surface areas
- sustainable storm water management

Conservation Lands – Areas designated Conservation in the City’s Future Land Use Map series.

Energy Efficiency – The implementation of practices, strategies and technologies that reduce the amount of energy consumed to achieve a desired effect (e.g. use of engines that provide more miles per gallon of gas, use of heating or cooling appliances that produce more BTU’s per watt of electricity consumed, patterns of land use that result in lower greenhouse gas emissions per household)

Environmentally Sensitive Lands/Areas – Any land area and/or water resources that may be determined to contain naturally occurring and relatively unaltered flora, fauna, or geologic conditions. Environmentally sensitive lands may include historical and archaeological resources, wetlands, wetland transition areas, estuarine shoreline areas, 100 year floodplains, maritime hammock, upland forests, open space, dune systems, wildlife habitat, aquifer recharge areas and all lands designated as Conservation on the Future Land Use Map.

Florida Friendly or Florida Friendly Landscape – means quality landscapes that conserve water, protect the environment, are adaptable to local conditions, and are drought tolerant. The principles of such landscaping include planting the right plant in the right place, efficient watering, appropriate fertilization, mulching, attraction of wildlife, responsible management of yard pests, recycling yard waste, reduction of stormwater runoff, and waterfront protection. Additional components include practices such as landscape planning and design, soil analysis, the appropriate use of solid waste compost, minimizing the use of irrigation, and proper maintenance.

Green Building /Sustainable Construction – Construction that promotes reduced energy consumption, utilizes renewable resources, conserves water, promotes the best use of building materials, encourages efficient waste management, conserves natural habitat and focuses on occupant health and environmental quality. On a barrier island, sustainable construction also contributes to the ability of the environment to withstand salt aerosol and the anticipated hazards of flooding, storm surge, and sea level rise. Sustainable construction is accomplished through emphasis on siting, design, construction, operation, maintenance, and analysis of the complete building life cycle.

Green Development /Sustainable Development – A development approach that integrates the following elements: environmental responsiveness, which benefits the surrounding environment; resource efficiency, which involves using resources in the construction and development and operations of buildings and/or communities in ways that are not wasteful; and sensitivity to culture and community, which is to foster a

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sense of community in design, construction, and operations. On a barrier island, sustainable development also contributes to the ability of the environment to withstand salt aerosol and the anticipated hazards of flooding, storm surge, and sea level rise.

Green (or Clean) Technology – Renewable energy and energy efficiency technologies plus other technologies that make use of resources more environmentally benign and/or reduce carbon emissions.

Greenhouse Gases (GHG) – Gases that trap heat in the atmosphere examples include: carbon dioxide (CO₂), Methane (CH₄), Nitrous Oxide (N₂O), and Fluorinated Gases such as hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Levels of Service – A qualitative and/or quantitative measure describing the operational conditions within a given public facility.

Low Impact Development (LID) – An approach to land development that uses various land planning and design practices and technologies to simultaneously conserve and protect natural resource systems and reduce infrastructure costs while managing stormwater runoff. LID still allows land to be developed, but in a cost-effective manner that helps mitigate potential environmental impacts. The approach includes using engineered small-scale hydrologic controls to replicate the pre-development hydrologic regime through infiltrating, filtering, storing, evaporating, and detaining runoff close to its source.

Natural Assets/Resources – Include a variety of ecological resources, including beaches, shores, shorelines, dune, estuary systems, rivers, harbors, floodplains, maritime hammock, upland forest, aquifer recharge areas, wetlands, minerals, wildlife habitat, marine habitat, vegetation, and fisheries.

Net Density – Determined by multiplying the “maximum allowable units per acre” by the “net buildable land area” expressed in acreage. “Net buildable land area” means those contiguous land areas under common ownership proposed for residential development, minus undevelopable environmentally sensitive areas, including wetlands, transitional wetlands, floodplains and waters of the state.

No net loss – No loss of trees, wetland, etc. may occur.

Non-point Source (NPS) Pollution – NPS pollution cannot be pinpointed to a single source. Over time, pollutants from our everyday activities accumulate on the land. Examples of NPS pollutants include gasoline, fertilizer, herbicides, pesticides and even soil. NPS pollution is a problem when rainfall or heavy irrigation carries sediments and dissolved chemicals to waterways in stormwater runoff and by leaching or percolating through soil.

Open Space – A parcel of land in a primarily open and/or undeveloped condition that may be suitable for any of the following: natural areas; wildlife and native plant habitat; important wetlands or watershed lands; wetland transition areas; stream or creek corridors; passive or low-impact activities; areas of little or no disturbance; and/or trails for non-motorized activities.

Parks – An area, in a natural or semi-natural state, set aside for recreation. Parks may include active and/or passive recreation opportunities, and may include open space.

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Passive Recreation – Passive recreation means those recreational opportunities afforded by such natural resources as the native flora, fauna, and aesthetic appeal of a natural setting and requiring minimum development to utilize and enjoy such resources, including nature study, hiking, canoeing, picnicking, birding, fishing and other activities which do not involve active disturbance of the environment or excessive clearing and re-contouring of the land. In beach areas, activities such as shelling, fishing, hiking, boating, swimming, picnicking, board sailing, sunbathing, scuba diving and snorkeling are considered passive recreation.

Pervious Paving Materials – Porous asphalt, concrete or other surface and a high-void aggregate base that allows for rapid infiltration and temporary storage of rain on, or runoff delivered to, paved surfaces.

Point Source Pollution – Water pollution that results from water discharges into receiving waters from easily identifiable points; common point sources are discharges from factories and municipal sewage treatment plants.

Public Access – The ability of the public to physically reach, enter or use recreation sites, including beaches, shores, and waterways.

Recreational and Commercial Working Waterfront – A parcel or parcels of real property that provide access for water-dependent commercial activities, including hotels and motels as defined in F.S. 509.242(1), or provide access for the public to the navigable waters of the state. Recreational and commercial working waterfronts require direct access to or a location on, over, or adjacent to a navigable body of water. The term includes water-dependent facilities that are open to the public and offer public access by vessels to the waters of the state or that are support facilities for recreational, commercial, research, or governmental vessels. These facilities include public lodging establishments, docks, wharfs, lifts, wet and dry marinas, boat ramps, boat hauling and repair facilities, commercial fishing facilities, boat construction facilities, and other support structures over the water. As used in this section, the term “vessel” has the same meaning as in F.S. 327.02(39). Seaports are excluded from the definition.

Resource-based Recreation – Recreation which cannot be located anywhere and instead depends on a combination of elements in the natural or cultural environment. Examples include hiking, fishing, camping, boating, surfing, biking, nature study, and visiting historical or archaeological sites

Stormwater or Stormwater Runoff – Water that runs off impervious or water-saturated surfaces such as rooftops or pavements during or after precipitation, transporting sediments and dissolved chemicals into nearby waters.

Sustainability – Range of activities or characteristics that meet the needs of the present without compromising the ability of future generations to meet their own needs, recognizing the interdependence and mutual importance of environmental, economic and social concerns to achieve these ends. Such activities include, but are not limited, to the following goals:

- Improved environmental protection or restoration efforts, and
- Improved social conditions for all kinds of people,
- Improved economic opportunities.

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Sustainable Construction/Green Building – Construction that promotes reduced energy consumption, utilizes renewable resources, conserves water, promotes the best use of building materials, encourages efficient waste management, conserves natural habitat and focuses on occupant health and environmental quality. Sustainable construction is accomplished through emphasis on siting, design, construction, operation, maintenance, and analysis of the complete building life cycle.

Sustainable Development/Green Development – A development approach that integrates the following elements: environmental responsiveness, which benefits the surrounding environment; resource efficiency, which involves using resources in the construction and development and operations of buildings and/or communities in ways that are not wasteful; and sensitivity to culture and community, which is to foster a sense of community in design, construction, and operations.

Transition Areas – Areas of the City that are intended to provide for the efficient and orderly shifts between a low intensity land use district and a higher intensity land use district. The transition area shall mitigate or minimize negative incompatible land use impacts by promoting visual and physical compatibility and harmony between adjacent areas. Examples include, where multifamily development is planned adjacent to existing single-family residential uses or where commercial development is planned adjacent to residential uses then, such development should incorporate elements in its site design and architecture which serve to soften its impact and result in an appropriate transition.

Water-enhanced Uses – Activities that benefit economically from being located on or near the water, but that are neither dependent on direct access to water nor provides goods or services directly related to water-dependent uses. Water-enhanced uses are specifically excluded from definitions of both water-dependent and water-related uses.

Water-related Uses – Activities which are not directly dependent upon access to a water body, but which provide goods and services that are directly associated with water-dependent or waterway uses. These include, but are not limited to, commercial resorts, campgrounds, fish camps, seafood processing operations, dive ships, and bait and tackle stores.

Wetlands – Those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soils. Soils present in wetlands generally are classified as hydric or alluvial, or possess characteristics that are associated with reducing soil conditions. The prevalent vegetation in wetlands generally consists of facultative or obligate hydrophytic macrophytes that are typically adapted to areas having soil conditions described above. These species, due to morphological, physiological, or reproductive adaptations, have the ability to grow, reproduce, or persist in aquatic environments or anaerobic soil conditions. Florida wetlands generally include swamps, marshes, bayheads, bogs, cypress domes and strands, sloughs, wet prairies, riverine swamps and marshes, hydric seepage slopes, tidal marshes, mangrove swamps and other similar areas. Florida wetlands generally do not include longleaf or slash pine flatwoods with an understory dominated by saw palmetto.

Wetland Transition Area – An ecological transition zone from uplands to wetlands which is an integral portion of the wetlands ecosystem, providing temporary refuge for wetlands fauna during high water episodes, critical habitat for animals dependent upon but not resident in wetlands, and slight variations of

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wetland boundaries over time due to hydrologic or climatologic effects; and a sediment and storm water control zone to reduce the impacts of development upon wetlands and wetlands species. Wetland transition areas are commonly protected through the use of buffer requirements.

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