

## Adaptation Action Area (AAA) Working Group Adaptation Planning Framework Worksheet – Approved Recommendations

### 1. CONTEXT

- The AAA boundary should be defined as, or take into consideration, the greater of the Cat 3 storm surge area or the FEMA 500-year flood plain as shown (2019) but not include those 500-year flood plains disconnected from the Cat 3 surge area, and implement adaptation strategies commensurate with the storm and flood risks.
- The City should establish a top-level position or authority, create an office, and/or assign tasks to oversee and coordinate the planning of interagency resiliency programs and public and private projects, engage stakeholders to promote public-private partnerships, and manage and leverage funding for resiliency initiatives. Tasks of such a position, authority, or office may include, but are not limited to, educational outreach, development of resiliency tools or resources for public and private use, and creation of a resource center to assist property owners.
- The City shall educate, inform, and disclose flood hazards to the public through various mechanisms such as real estate disclosures, public mapping resources, community or city-wide public information campaigns, or other innovative and effective approaches.
- The City, through educational campaigns, promotional materials, and partnerships with non-profit and for-profit entities, should promote and participate in the implementation of green infrastructure solutions to mitigate flooding within the AAA.

### 2. VULNERABILITY ASSESSMENT

- The City shall fund and conduct a coastal flooding and sea level rise vulnerability assessment that includes storm surge, tidal fluctuations, and extreme rainfall events and identifies populations, habitats, infrastructure, and functions that may be most sensitive to coastal flooding and sea level rise.

The assessment shall take into consideration that Jacksonville has both a coastal and riverine system and that currently accepted storm surge models do not adequately take into consideration the riverine system, particularly west and south of the Mathews Bridge. A Technical Advisory Committee (TAC) of subject matter experts shall be established prior to the assessment; they will be engaged throughout the assessment to ensure the data and analysis is accurate, thorough, and consistent with the scope of the project.

- Based on available data, the City should study or analyze the conditions preceding, and during, Hurricane Irma (2017) and the area affected by flood waters resulting from the storm.

- The City should fund and gather post-storm mitigation efforts to include comprehensive and immediate documentation of the spatial limits of upland flooding after a major storm event. A post-storm report and mapping should be formulated and be made publicly available.
- The Planning and Development Department shall consider demographic, socioeconomic, and development data such as, but not limited to, age (elderly and children); income; lack of personal transportation or transit-dependent; number of historic properties; government-owned properties; and locations connected to centralized water/sewer when evaluating the city's sensitivity to coastal flooding and sea level rise within the AAA.
- The City should explore the use of a resilience scorecard, matrix, rating system, or similar approach and user guidelines to assist local planners and emergency managers to integrate disaster risk into Land Use and Zoning decisions and the feasibility of incentivizing green infrastructure and hazard mitigation projects on residential and commercial properties.

### 3. ADAPTATION STRATEGIES

Adaptation strategies will likely be informed/developed based on outcomes of vulnerability assessment.

- The City shall coordinate with all applicable agencies to mitigate flood hazards on adjacent properties that may occur due to publicly funded actions.
- Adaptation strategies shall address, but are not limited to, roadways, stormwater systems and related infrastructure.

#### Classifications:

##### Protection

- The Land Development Regulations should be evaluated, and revised when feasible, to encourage and increase protection strategies for new development and significant redevelopment of properties within the AAA. Such protection strategies should consider nuisance flooding, tidal fluctuations, sea level rise, and storm surge and may include, but are not limited to, increasing buffers and setbacks; requiring or limiting (as appropriate) storm hardening or green infrastructure solutions; increasing freeboard requirements; requiring more stringent design standards for stormwater facilities; and exploring the use of a resilience scorecard, matrix, rating system, or similar approach and user guidelines.
- The City should assess and compare protection mechanisms, such as hard structural options like sea walls or other physical barriers and soft structural options like living shorelines and dune or wetland restoration, when designing and engineering such systems for capital improvement projects located within

the AAA. Factors to compare and consider include, but may not be limited to, a cost/benefit analysis and an analysis of the short and long-term impacts of these systems to the surrounding areas.

- In non-urban areas or low energy environments, discourage the permitting of bulkheads where bulkheads do not currently exist, and instead, encourage soft solutions to stabilize shorelines.
- The City should consider the feasibility of various options for requiring the repair and maintenance of private sea walls/bulkheads that are critical in the protection of private property, significant resources, or public infrastructure.
- The City should consider the repair, maintenance, and improvement of drainage infrastructure projects based on their location within the AAA and the frequency of nuisance flooding within the area. Planning for the probable occurrence of nuisance flooding in the future may also be considered.
- The City should develop and create systems and processes to safeguard local natural environments and ecosystems from an anticipated 2-foot sea level rise. Measures should include, but not be limited to promoting preservation, reforestation, and afforestation to increase soil moisture retention, provide shade and increase habitat for species under stress; and removing invasive non-native vegetation within the AAA to benefit shoreline stabilization.

#### Accommodation

- The City should evaluate the feasibility of updating the Master Stormwater Management Plan and prioritize areas related to mapping floodplains in areas of the City not yet mapped.
- The City should evaluate alternative stormwater storage solutions and natural groundwater storage solutions such as, but not limited to, low impact development features, trees, and wetland systems and evaluate and improve stormwater infrastructure to consider extreme storm events.
- In order to reduce or mitigate upstream flooding, the City should evaluate and prioritize opportunities to acquire lands located within major stormwater basins that can serve as both recreation and open space and flood water storage capacity during major storm and high tide events.

#### Managed Retreat

- The City shall evaluate the feasibility of providing incentives to the owners of existing structures located within the AAA for the removal of such structures or the renovation of such structures to bring them into compliance with City Ordinance Codes revised for adaptation and resiliency.

- The City should evaluate private and public development or redevelopment projects that are within the AAA prior to making public expenditures for these projects.

#### Avoidance

- In order to guide development away from the AAA towards areas that are already high, dry, and connected, the Planning and Development Department shall explore the feasibility of offering density bonuses, transfers of development rights, clustering development entitlements, or other similar types of strategies to limit new development within the AAA or environmentally sensitive or special flood hazard areas, or as an incentive for a development's use of low impact development stormwater solutions.

#### 4. IMPLEMENTATION

- The City should establish a technical advisory committee to provide expertise regarding the different aspects of sea level rise adaptation.
- If deemed appropriate by the City, a member of the technical advisory committee may be appointed as an ex-officio member of the Downtown Investment Authority (DIA), Downtown Development Review Board (DDRB), Planning Commission (PC) or similar organization in order to advise regarding the effects of sea level rise and storm surge effects on proposed projects and abutting properties in the AAA.
- The City should consider revising the City Ordinance Code and any other relevant Land Development Regulations to distinguish between properties within the AAA versus those outside of the AAA with regards to the current redevelopment or renovation threshold above which a structure must come into compliance with the City's Ordinance Code as regulations pertaining to properties within the AAA may be more stringent.
- The City's Emergency Preparedness Division shall consider collaborating with relevant entities and non-profit organizations in order to prepare for trauma associated with displacement and post-traumatic stress disorder following an extreme weather event.
- The City shall continue to strengthen its efforts towards equity and environmental justice. With regards to communities living within the AAA, the City should monitor demographic, socioeconomic, and housing data to prevent or manage any signs of climate gentrification.
- The City shall consider the impact of AAA strategies and regulations on economically distressed communities and seek opportunities to mitigate negative impacts in an equitable manner.

- The City Ordinance Code and any other relevant Land Development Regulations shall be amended to include requirements for disclosure of a property's location within the AAA along with an explanation of the AAA. At a minimum, these requirements shall address disclosure before final action or approval in the following processes or situations: sale, lease or transfer of property; issuance of building permits; requests for zoning and land use changes; and subdivision review and platting.
- The City shall coordinate and participate in any state or regional resiliency efforts.
- Update the Adaptation Action Area for sea level rise and infrastructure vulnerability assessments every five (5) years so that decisions regarding adaptation planning and investments can be based on best available data.