

WORKSHOP
APALACHICOLA CITY COMMISSION
TUESDAY, DECEMBER 2, 2025 – 5:00PM
COMMISSION MEETING ROOM
74 6TH STREET, APALACHICOLA, FLORIDA 32320

AGENDA

You are welcome to comment on any matter under consideration by the Apalachicola City Commission when recognized to do so by the Mayor. Once recognized please rise to the podium, state your name for the record and adhere to the five-minute time limit for public comment. Comments may also be sent by email to the City Manager or to Commissioners.

- I. Call to Order**
- II. Agenda Adoption**
- III. Public Comment**
- IV. Presentation of Draft Adaptation Action Plan by Bay Media Services, LLC.**

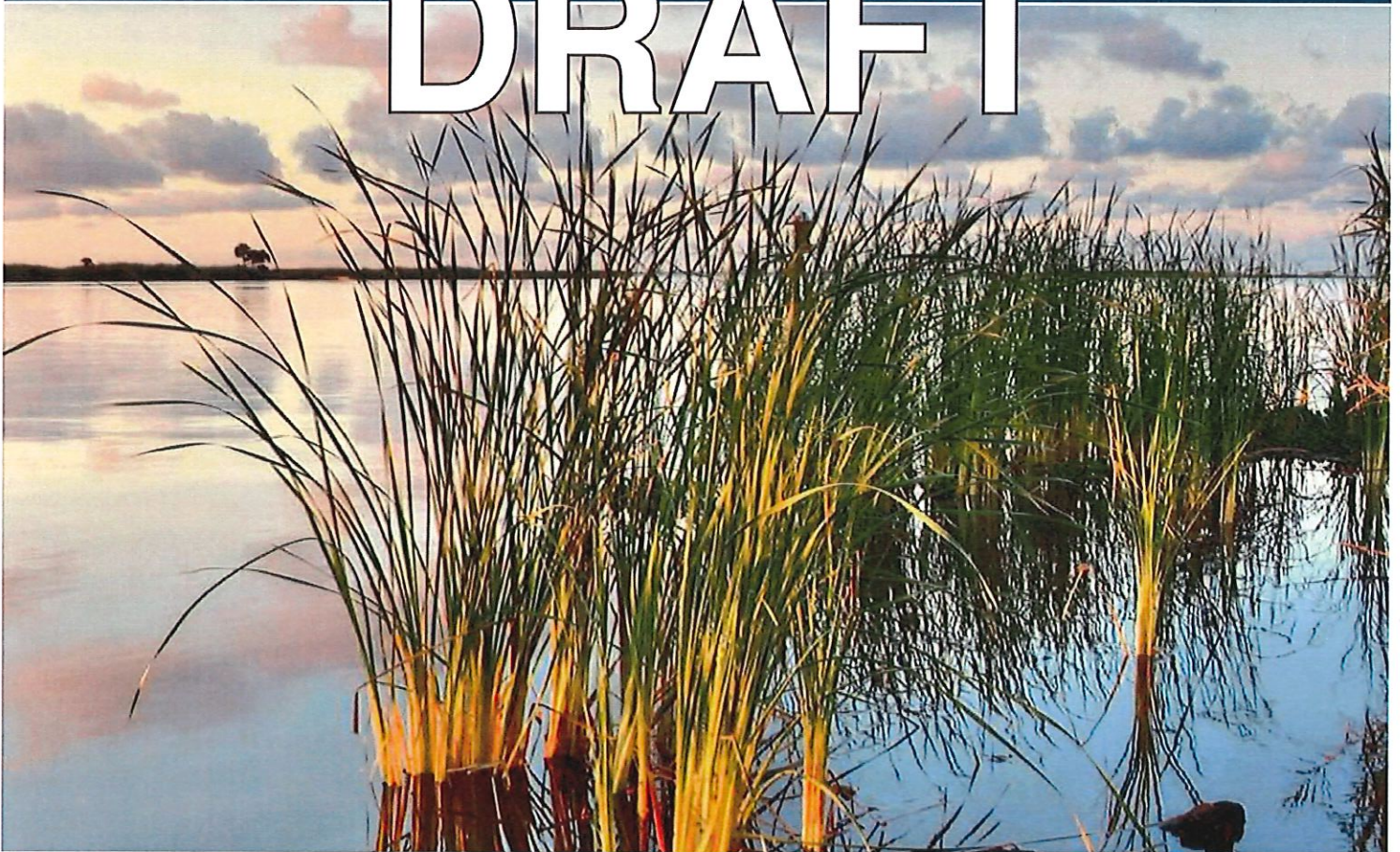
Adjournment

Any person who desires to appeal any decision at this meeting will need a record of the proceeding and for this purpose, may need to ensure that a verbatim record of the proceeding is made which includes testimony and evidence upon which the appeal is based. Persons with disabilities needing assistance to participate in any of these proceedings should contact the City Clerk's Office 48 hours in advance of the meeting.



City of
Apalachicola
Adaptation Analysis and Action Plan

DRAFT



Prepared for:
City of Apalachicola

Prepared by:
Bay Media Services, LLC

Funded by:
Florida Department of Environmental Protection
(FDEP) Grant #24PLN12

Disclaimer

The City of Apalachicola Adaptation Action Plan data and maps are for planning, education and awareness purposes only. The information contained herein should not be used for site-specific analysis, navigation and flood rates or permitting. The City of Apalachicola makes no warranty explicit or implied, regarding the accuracy or use of this information. The data and maps in this report illustrate the scale of potential flooding, not the exact location. The inundation areas depicted in the SLR analysis are not as precise as they may appear. The data, maps and information provided should be used only as a screening-level tool for management decisions.

This work was funded in part through a grant agreement from the Florida Department of Environmental Protection's Office of Resilience and Coastal Protection Resilient Florida Program. The views, statements, findings, conclusions, and recommendations expressed herein are those of the author(s) and do not necessarily reflect the views of the State of Florida or any of its subagencies.

Table of Contents

Executive Summary	4
Introduction	5
Objectives	6
Capacity Assessment	7
Needs by Focus Area	11
Needs and Key Strategies	21
Priorities by Focus Area	26
Incorporating Adaptation Policies	28
Potential Funding Solutions	30
Bibliography	32

TABLES

Table 1 - 2023 ACSC Work Plan Infrastructure List	11
Table 2 - Community Adaption Needs and Strategies	23
Table 3 - Prioritized Projects by Asset Class	28

MAPS

Map 1 - Focus Areas Citywide	11
Map 2 - Focus Area 1 Boundaries	12
Map 3 - Focus Area 1 CCEF/NCH Assets and Needs	13
Map 4 - Focus Area 1 Transportation Assets and Needs	13
Map 5 - Focus Area 1 Critical Infrastructure Assets and Needs	13
Map 6 - Focus Area 2 Boundaries	14
Map 7 - Focus Area 2 NCH/CCEF Assets and Needs	15
Map 8 - Focus Area 2 Critical Infrastructure Assets and Needs	15
Map 9 - Focus Area 2 Transportation Assets and Needs	15
Map 10 - Focus Area 3 Boundaries	16
Map 11 - Focus Area 3 Critical Infrastructure Assets and Needs	16
Map 12 - Focus Area 4 Boundaries	17
Map 13 - Focus Area 4 Assets and Needs	17
Map 14 - Focus Area 5 Boundaries	18
Map 15 - Focus Area 5 Transportation Needs	19
Map 16 - Focus Area 5 Critical Infrastructure Assets and Needs	19
Map 17 - Focus Area 5 NCH, CCEF Needs	19
Map 18 - Focus Area 6 Boundaries	20
Map 19 - Focus Area 6 Critical Infrastructure Needs	20

Executive Summary

Apalachicola is on the front line of climate change, facing the growing impacts of rising sea levels, hurricanes and storm surge. These challenges put homes, businesses, infrastructure and the natural resources at risk. As one of the most vulnerable municipalities in the state, Apalachicola's low-lying topography, reliance on coastal resources, and historical drainage infrastructure make it susceptible to the potential for flooding, rising insurance costs, and disruptions to the economy.

To address these pressing issues, the Apalachicola Adaptation Plan has been created to provide a clear and actionable roadmap for addressing those challenges. The plan combines natural solutions, such as swales and expanded green spaces, with engineered systems like upgraded drainage to protect critical infrastructure, manage stormwater, and reduce flooding. Grounded in data, thoughtful strategies, and community input, the Plan lays the foundation for a sustainable future.

Introduction

Apalachicola's Adaptation Plan is the City's next step toward mitigating challenges experienced from storm flooding and projected surge and sea level rise. The plan follows the 2025 Vulnerability Assessment (VA) in which the Exposure and Sensitivity Analyses identified specific focus areas and critical infrastructure most vulnerable to storm events.

The plan provides a framework to respond to the findings in the Vulnerability Analysis and incorporates recommended strategies originally proposed in the 2017 VA and updates them with data-informed recommendations relating to surge impacts on critical infrastructure.

The VA Exposure Analysis identifies specific areas within the City that are vulnerable to flooding. The needs of each area differ depending on the geographic location, topography and type of infrastructure. For example, areas adjacent to the river or bay with low elevation are more susceptible to direct storm surge while areas of higher elevation often struggle with nuisance flooding due to inadequate drainage and infrastructure.

The plan includes a framework for dealing with a diverse set of needs and includes adaptation recommendations ranging from those aimed at helping individual property owners to municipal-level strategies for funding and implementing infrastructure improvements.

The plan is based on both data from the 2025 VA and includes input from stakeholders including community members sharing flood events, City engineers and field staff to ensure that the measures are not just an infrastructure response to flood but incorporate the needs of the community.

The Apalachicola Adaptation Plan is organized into the following sections:

Objectives

Outlines the objectives that will guide the adaptation strategies

Capacity Assessment

Outlines existing regulatory and planning policies related to resilience along with administrative and technical expertise available to address adaptation needs.

Needs Identification

Defines the needs based on vulnerability assessment findings, infrastructure assessment, studies and stakeholder input. Identifies specific focus areas in need for adaptation.

Identifying Solution Strategies

Identifying recommended solution strategies to meet each general category need.

Prioritizing Needs by Focus Area

Each focus area identified in the Vulnerability Assessment is prioritized and then characterized by need and specific adaptation actions identified for each zone by critical asset category.

Incorporating Adaptation Policies

identification of City plans, regulations and programs where adaptation strategies can be integrated.

Potential Funding Solutions

Includes funding recommendations to support adaptation measures.

Objectives

The following objectives serve as the guiding framework on which the adaptation plan is based.

- **Improve resiliency of infrastructure in vulnerable storm surge areas**
- **Improve hydrologic conditions to reduce nuisance flooding**
- **Improve resilience of critical assets**
- **Improve community involvement and support for resiliency initiatives**

Capacity

Regulatory and Planning Capacity

Prior to official State Resilience legislation, the City of Apalachicola had already begun many planning initiatives aimed at making the City more resilient to flooding - both from storms and sea level rise even though those efforts were not recognized as adaptation planning.

Early Efforts

Apalachicola was designated an Area of Critical State Concern in 1985 with the legislative intent to protect the natural and economic resources of the Apalachicola Bay Area through comprehensive land planning, promoting compatible economic growth, improving water quality, and promoting resource protection.

As a part of this designation, the City was required to enact land development regulations to ensure adequate growth management and to protect the Apalachicola Bay Area from stormwater pollution. Subsequent to that designation, the City adopted strong Land Development Regulations, which included floodplain management regulations, as well as growth management goals, objectives and policies as part of the State's Comprehensive Planning process.

Additionally, the City was tasked with creating an ACSC work plan by which progress on the objectives of the designation is provided to the state on a semiannual basis.

Because many of the ACSC work plan projects are related to infrastructure projects directly connected to resilience-related issues, the ACSC work plan is an invaluable component of the City's resilience conversation.

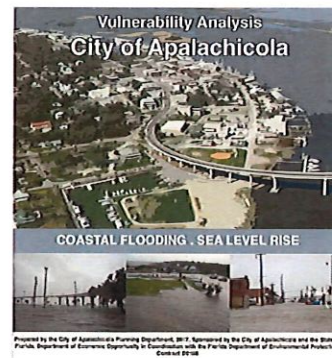
Beginning in 2017, Apalachicola initiated several important planning studies which have led to the development of regulatory measures designed to officially address resiliency planning in the City - but the conversation really began years ago with the Area of Critical State Concern program.

Apalachicola's early growth management efforts set the trajectory for Apalachicola's resilience efforts in that it put low density, lot coverage restrictions, stormwater management and floodplain management priorities into place to ensure water quality protection.

The following is a summary of resilience-related planning documents and policies, along with regulations that are in currently in effect.

2017 #DO108 - Vulnerability Analysis

One of the City's earliest resilience efforts, this grant



funded two important resilience planning initiatives which have set the stage for several implementation projects:

- Complete a vulnerability analysis for the entire City by utilizing NOAA sea level rise data and create an ArcGIS-compatible shapefile to analyze the anticipated impacts of low, moderate, and high levels of inundation

by flooding on all parcels in the City.

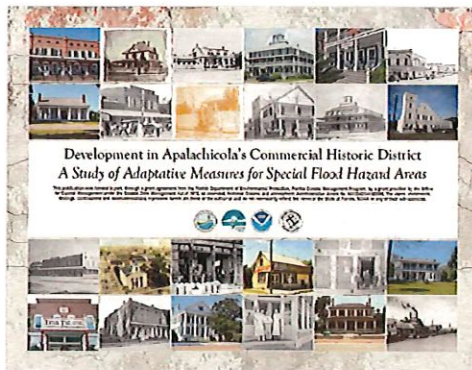
- Work with an architect experienced with historic preservation to create a brochure that includes illustrations of building facades (elevations) and examples of flood resistant techniques compatible with the goals of historic preservation.

Vulnerability Analysis. The City's initial vulnerability analysis included identification of critical facilities and applied sea level rise modeling to determine the level of expected inundation. In the 2017 Vulnerability Analysis, the City considered that the downtown commercial district could be considered a focus area for adaptation planning because the area was adjacent to the riverfront and susceptible to tidal and surge flooding during storm events.

The 2017 plan included a series of suggestions based on the need to protect vulnerable neighborhoods potentially impacted by flooding.

- Encourage Mixed land use that promotes functional and coastal flood resilient walkable mixed-use development design.
- Limit fill in Areas of Special Flood Hazard through the amendment of the land development code.
- Require an analysis of SLR impacts on proposed development in vulnerable coastal areas.
- Encourage natural shoreline armoring in floodprone areas
- Inventory stormwater outfall locations and prepare a plan for funding/installing backflow preventers on those outfall pipes that do not currently include them.

- Elevation of nonconforming structures
- Restrict high density residential development through land development regulation amendments.
- Consider transition of vulnerable lands from private to public ownership or consider a combination of other strategies such as transfer of development rights (TDRs), purchase of development rights and conservation easements. Examples include infrastructure relocation/removal and transfer of development rights to up land sending areas that are characterized by lower vulnerabilities to coastal hazards.



Historic Preservation Adaptation. This portion of the grant involved contracting with an architect experienced with historic preservation to create a brochure that

includes illustrations of building facades (elevations) and examples of flood resistant techniques compatible with the goals of historic preservation. The brochure included elevation illustrations, including a vernacular warehouse/commercial structure and a two-story vernacular structure with commercial use on first floor and residential use on the second floor; and, examples of how wet and dry floodproofing can be accomplished while maintaining the historic integrity of affected structures. The brochure included a list of the possible types of flood resistant materials that can be used in construction. It was intended that the City could use the data and the illustrations as the basis to draft land development regulations that could be used to minimize the impacts of coastal flooding hazards.

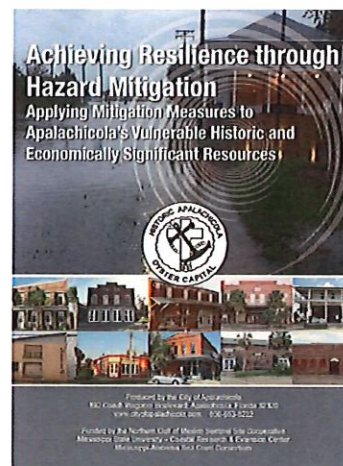
2018 - DEO PO295 - Community Planning Technical Assistance Grant

Intended to build on the City's initial resiliency planning efforts, this grant funded a multi-faceted planning project to update the City's comprehensive plan, draft land development regulations and implement a floodplain management permitting system. Components of the project included the following:

- Drafted amendments to the Coastal Management Element that incorporated relevant data and analysis and goals, objectives and policies as well as recommendations from the 2017 Vulnerability Analysis and to bring the City's comp plan into compliance with Peril of Flood requirements

in section 163.3178 (2)(f), Florida Statutes.

- Funded the implementation of a floodplain management permitting system
- Developed draft amendments to the City's Land Development Code to regulate the amount, type and location of fill within the City's flood-prone areas, address appropriate stormwater retention measures for small commercial and residential development within flood-prone areas.



2019 Acheiving Resilience Through Hazard Mitigation - MESC/Dauphin Island Sea Lab Subcontract 2667RE-003- Applying Mitigation Measures to Apalachicola's Vulnerable Historic and Economically Significant Resources
The City of Apalachicola received a hazard mitigation planning grant in 2019 from the Northern Gulf of Mexico Sentinel Site Cooperative to assess and prepare

site specific analysis and recommendations for 10 flood vulnerable and economically important historic structures in the City's commercial downtown district. The purpose of the grant was to study and recommend mitigation measures to floodproof and/or elevate publicly and privately-owned economically and historically-important structures identified as either repetitively flood-damaged or vulnerable to storm surge flooding based on FEMA documentation, data from the NCCOS Ecological Effects of Sea Level Rise in the Northern Gulf of Mexico and data from the City of Apalachicola's 2017 Vulnerability Analysis.

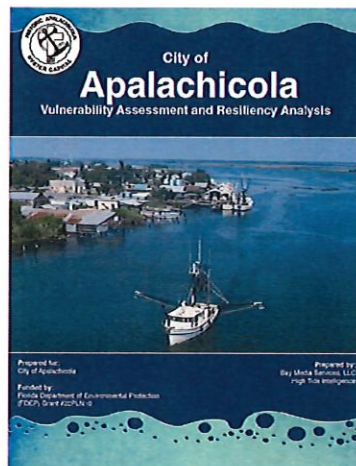
The overall purpose of the project was to enable Apalachicola to become more resilient to future sea level rise, seasonal flooding and to reduce flood insurance rates on historic buildings in the flood zone. It is hoped that the pilot project will also serve as a mitigation/historic preservation model for conducting similar analyses on vulnerable properties in coastal communities with similar challenges. The project was a collaborative effort between local and state government and private industry. Staff from the Apalachicola National Estuarine Research Reserve were instrumental in providing photography and videography services and for producing a video of the planning process.

The result of this project was funding from the National Park Service through the Florida Department of State Division of Historic Resources to repair and mitigate against future flooding four of Apalachicola's Historic publically-owned buildings, including two historic churches. The work also resulted in the City being named the prestigious Spirit of Community Award recipient in 2020 from the Gulf of Mexico Climate and Resilience Community of Practice (COP).

2019 Drainage Basin Analysis - DEO R1903

Funded a 208-acre drainage basin analysis with a block by block analysis of culvert size and conveyance descriptions which was used to develop recommendations for mitigating nuisance flooding in the basin. Recommended repairs from the 2019 report are being implemented as part of a DEP 2024 resilience grant #24SRP65. That list is identified as an appendix to this report.

The DEO grant also funded a Property Owner's Development Guide - with recommended strategies for minimizing stormwater runoff and nuisance flooding and two floodplain management planning projects to identify publicly-owned open space parcels and ownership research for the purpose of acceptance into the Community Rating System program.



2024-25 - DEP 22PLN10 Apalachicola Vulnerability Analysis update

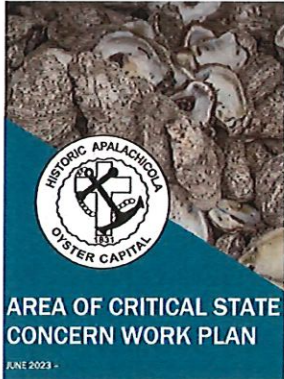
The 2024 updated analysis identifies six separate focus areas that encompass the entire City that contain important critical assets. Each focus area, ranked by vulnerability to storm surge flooding, has also been prioritized by the number and importance of the publicly-owned assets

contained within each area. The exposure and sensitivity analysis identified vulnerabilities for each of the City's asset categories for specific storm surge scenarios and within each of the City's six Focus Areas.

Coastal Management Element, City of Apalachicola Comprehensive Plan

Within the regulatory and planning capabilities, Apalachicola's Coastal Management Element in the Comprehensive Plan has defined goals for protecting coastal resources and addressing future development in relation to flood hazards. The main resilience goals of this element include the following:

- Protect and Prioritizes Repair and Construction of stormwater infrastructure projects and include recommendations into the City's annual Capital Improvements Element and updated ACSC plan. Supporting policies require regular cleanout of stormwater drains
- Enforcing Federal Flood Regulations. Requires all development in Areas of Special Flood Hazard to be elevated or floodproofed in accordance with FEMA flood regulations.
- Restrict public funding for facilities within coastal high-hazard areas. - Establishes a lower priority for the expenditure of City funds for public infrastructure in the Coastal High Hazard Area (CHHA), restricts density to the lowest level of service standard, requires sewer facilities to be floodproofed.
- Limit Density in CHHA - Directs population concentrations away from high-risk areas through land development regulations.
- Post-Disaster Redevelopment - Establishes coordination with county, state and federal agencies to implement redevelopment strategies to reduce future flood risk including abandonment, repair in place, relocation, and reconstruction with structural modifications.



2023 Area of Critical State Concern Work Plan

The Apalachicola Area of Critical State Concern (ASCS) Work Plan describes projects and actions that the City with support from the State and Federal Government, can take to address the intent of the Apalachicola Bay Protection Act (Section 350.055, Florida Statutes). The projects included in this plan specifically address

the intent of the legislation as it relates to upgrades and improvements needed to enhance wastewater and sewer infrastructure, promotion of water quality, affordable housing and economic development compatible with Apalachicola Bay resources. The 2023 Stewardship report includes specific resilience initiatives which are listed as needs in the following section. (Table 1 from that report is represented in the needs section and also in the appendix section. Priorities highlighted in blue.)

Administrative and Technical Capacity

Despite the State infrastructure funding, Apalachicola has limited in-house technical capabilities for storm resilience and flood adaptation. Because of budgetary restrictions, the City's planning department currently (October 2025) outsources its planning, floodplain management and building department inspection services.

Additionally, advanced projects such as resilience planning, flood modeling and infrastructure design are outsourced to external consultants.

FISCAL CAPACITY

Without State and Federal assistance, Apalachicola has limited fiscal capacity to fund flood and sea level rise adaptation projects. Tax revenues are insufficient to support comprehensive adaptation program implementation. The City does collect income from stormwater impact fees ((Ord. No. 2017-06, 8-7-2017) but it is not specifically designated for adaptation measures. Instead the \$1 - \$2 per month fee is used to financing necessary stormwater repairs, replacement, improvements and extensions.

The City relies exclusively on external funding sources for resiliency projects, a mix of grants and legislative appropriations through the Area of Critical State Concern program for funding support.

INFRASTRUCTURE

The City of Apalachicola has aging flood protection infrastructure. Part of the riverfront has reinforcement but it is related to the use such as dockage, marinas and boat ramps. The stormwater system in Apalachicola faces several deficiencies that involve aging conveyances, broken and undersized pipes.

Adaptation Needs by Focus Area

The City's adaptation needs are based on several sources including the City's updated Vulnerability Analysis which identified and prioritized focus areas with vulnerable critical assets and from the City's ACSC Work Plan, updated annually as part of the Area of Critical State Concern designation.

Area of Critical State Concern Work Plan

The Apalachicola Area of Critical State Concern (ACSC) Work Plan includes specific resilience initiatives which are listed as needs. Table 1 from that report is represented below. (Priorities highlighted in blue.)

VA Focus Area Needs and Priorities

Table 1 - 2023 ACSC Work Plan Infrastructure List

City of Apalachicola ACSC Work Plan

Table 1. Summary of Infrastructure Projects

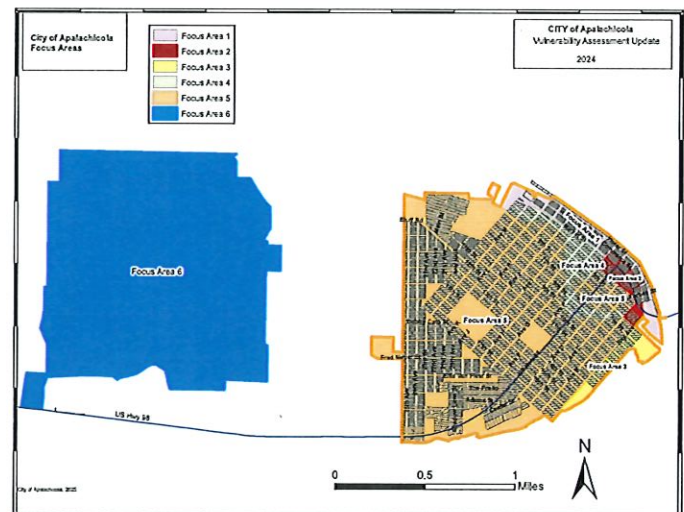
Project	Infrastructure	Water Quality	Housing	Economic Development
INFRASTRUCTURE				
WW.1A. Wastewater Treatment and Collection Systems Inflow and Infiltration Study	✓	✓	✓	✓
WW.1B. Wastewater Treatment Repair Design	✓	✓	✓	✓
WW.1C. Major Wastewater Pipe Replacement Project	✓	✓	✓	✓
WW.2. Construction of Wastewater Treatment Plant Headworks and Relocation	✓	✓	✓	✓
WW.3. Lift Station Rehabilitation	✓	✓	✓	✓
WW.4. Vacuum Station - Electronic Upgrades	✓	✓	✓	✓
WW.5. Water Plant - Electronic Upgrades	✓	✓	✓	✓
WW.6. Repair/Construction of Sprayfield	✓	✓	✓	✓
WW.7. Upgrades to the City's Irrigation System	✓	✓	✓	✓
WW.8. Flo-Vac Monitor Installations	✓	✓	✓	✓
WW.9A. Franklin Unincorporated - Septic to Sewer Conversion Project Feasibility Study	✓	✓	✓	✓
WW.9B. Franklin Unincorporated - Septic to Sewer Conversion Project Design	✓	✓	✓	✓
WW.9C. Franklin Unincorporated - Septic to Sewer Conversion Project Construction	✓	✓	✓	✓
WW.10. Operational Staffing Needs	✓	✓	✓	✓
PW.1. Fire Hydrant Replacement	✓	✓	✓	✓
PW.2. Potable Water Valve Replacements	✓	✓	✓	✓
PW.3. Potable Water Testing Site Installation	✓	✓	✓	✓

Source: City of Apalachicola 2023 Area of Critical State Concern Work Plan

The 2024 Vulnerability Analysis identified six focus areas which have been prioritized by the City Commission based on the number of publicly-owned vulnerable assets in need of protection. Each of the six focus areas identified in this section have been ranked in terms of the area's vulnerability to storm surge flooding and its priority in terms of vulnerable publicly-owned critical assets contained within each area. Maps of each focus area's critical assets (*Critical Infrastructure Assets, Natural, Cultural, and Historical Resources, Critical Community and Emergency Facilities and Transportation Facilities*) are included in this section. The needs of each focus area and critical asset therein are represented and identified in Table 2 as well as recommended strategies for resolution.

Note: each map within this section was created as part of a comprehensive map series created for the 2025 Vulnerability Assessment and Resiliency Analysis Map Series (Appendix 3), (DEP #21PLN10).

Map 1 Focus Areas Citywide

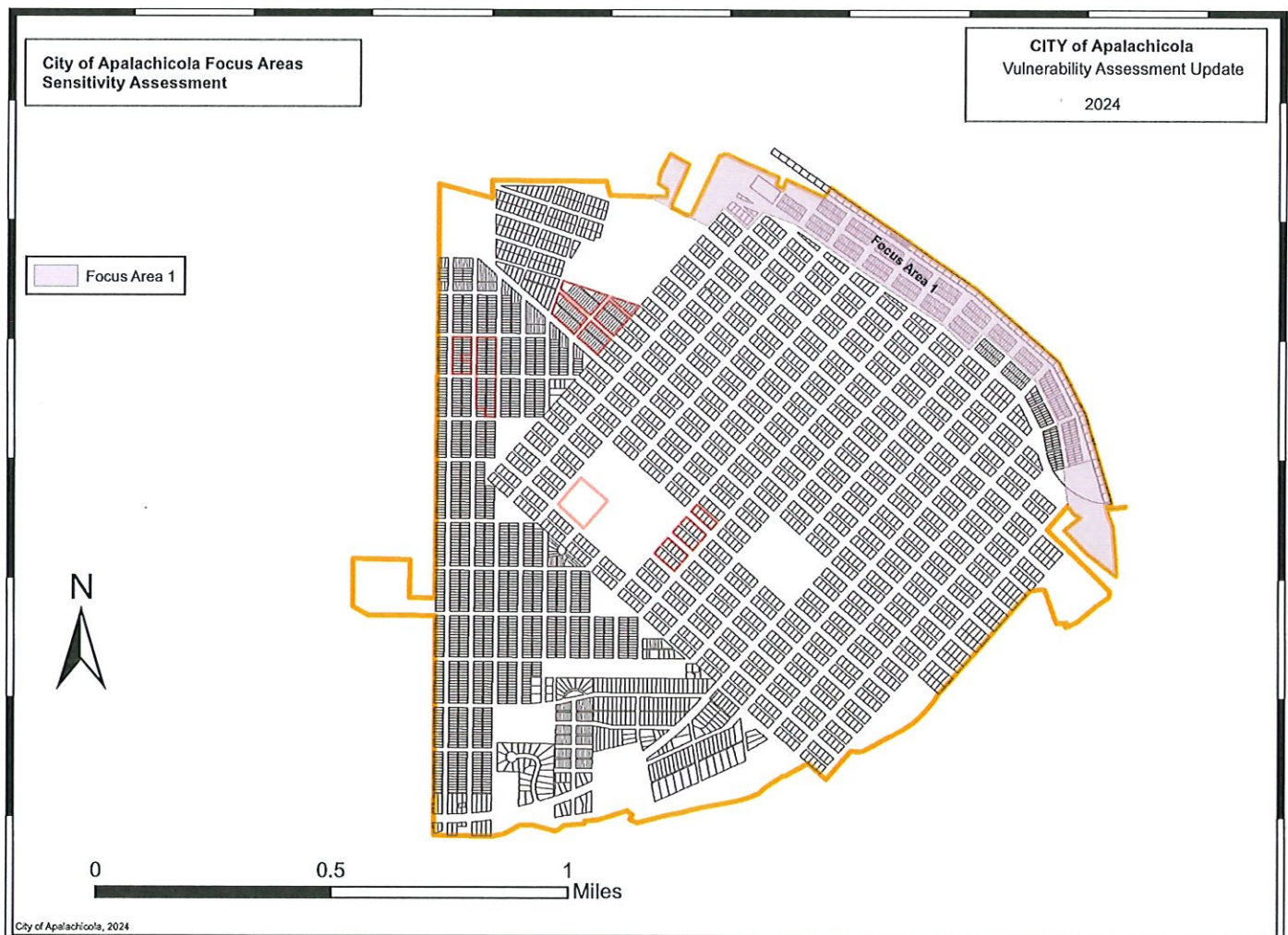


Focus Area 1 (73.4 acres) is the lower elevation commercial area located along the riverfront. The area is an Area of Special Flood Hazard and much of the riverfront is a rated velocity zone, which means it is subject to direct wave action. The area is projected to receive impacts from all storm surge and tidal events due to the low elevation and its location adjacent to the river. The area contains, Major Roads, Vacuum Lift Stations, Stormwater Outfalls, a Communication Tower, a Community Center, and six Historical and Cultural Assets. The topography, FEMA flood zones and repetitive flooding that has occurred within this area from past hurricanes makes this a particularly vulnerable area.

Focus Area 1 Critical Assets:

- 2905.1 LF of major roads;
- 60 vacuum sewage lift stations;
- 13 Stormwater outfalls;
- Community Center: Harbormaster's House
- Six Historic Structures: FR00288-Oyster Packing House; FR00339-Harrison and Raney Warehouse; FR00344-City Hall; FR00643-Franklin County Jail; FR02434-239 Water Street; FR02451-33 Commerce Street.
- 2 boat ramps (Scipio Creek and Battery Park)

Map 2 - Focus Area 1

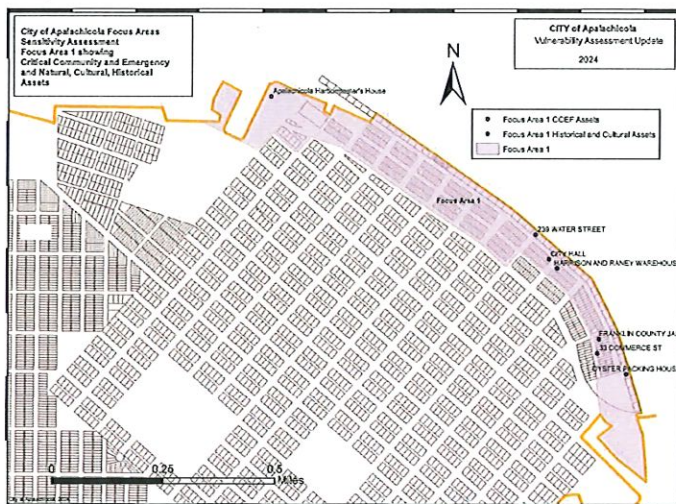


Focus Area 1 Prioritized Needs

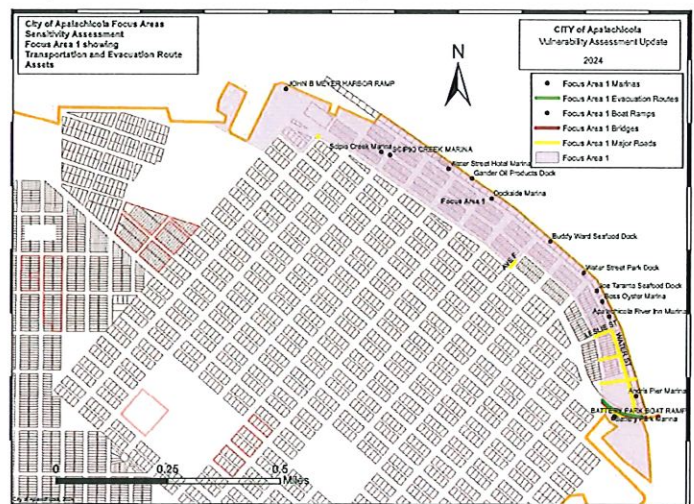
Protecting critical lift stations and historic non-conforming buildings from flood damage is essential in addition to ensuring functionality of boat ramps and emergency evacuation routes along Water Street. Specific prioritized needs within this area are as follows:

- Floodproofing the historic buildings along Water Street
- Maintaining functionality of boat ramps
- Elevate the lift stations
- Elevate utilities in buildings where structural elevation is not possible
- Ensure assessable emergency route in and out of riverfront area for evacuation during severe floods.
- Survey stormwater outfalls and install backflow preventers on all

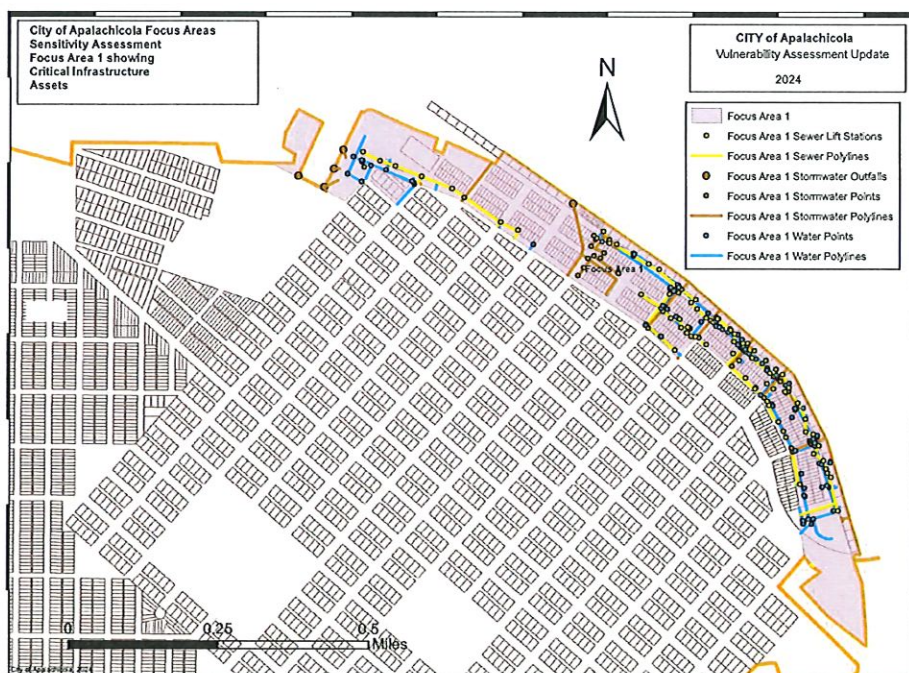
Map 3 - Focus Area 1 - CCEF NCH Assets and Needs



Map 4 - Focus Area 1 - Transportation Needs



Map 5 - Focus Area 1 - Critical Infrastructure Assets and Needs



Focus Area 2 Focus Area #2 is the main commerce district of downtown Apalachicola. It is located one block from the Apalachicola River is considered a low elevation area with much, if not most, falling within the Area of Special Flood Hazard rated A zones. It is slightly higher in elevation than focus area #1 and contains Major Roads, Vacuum Lift Stations, a Community Center, a Local Government Facility, an Emergency Medical Health Facility, and two Historical and Cultural Assets. In addition, it is the predominant commercial hub of the City.

Focus Area 2 Critical Assets:

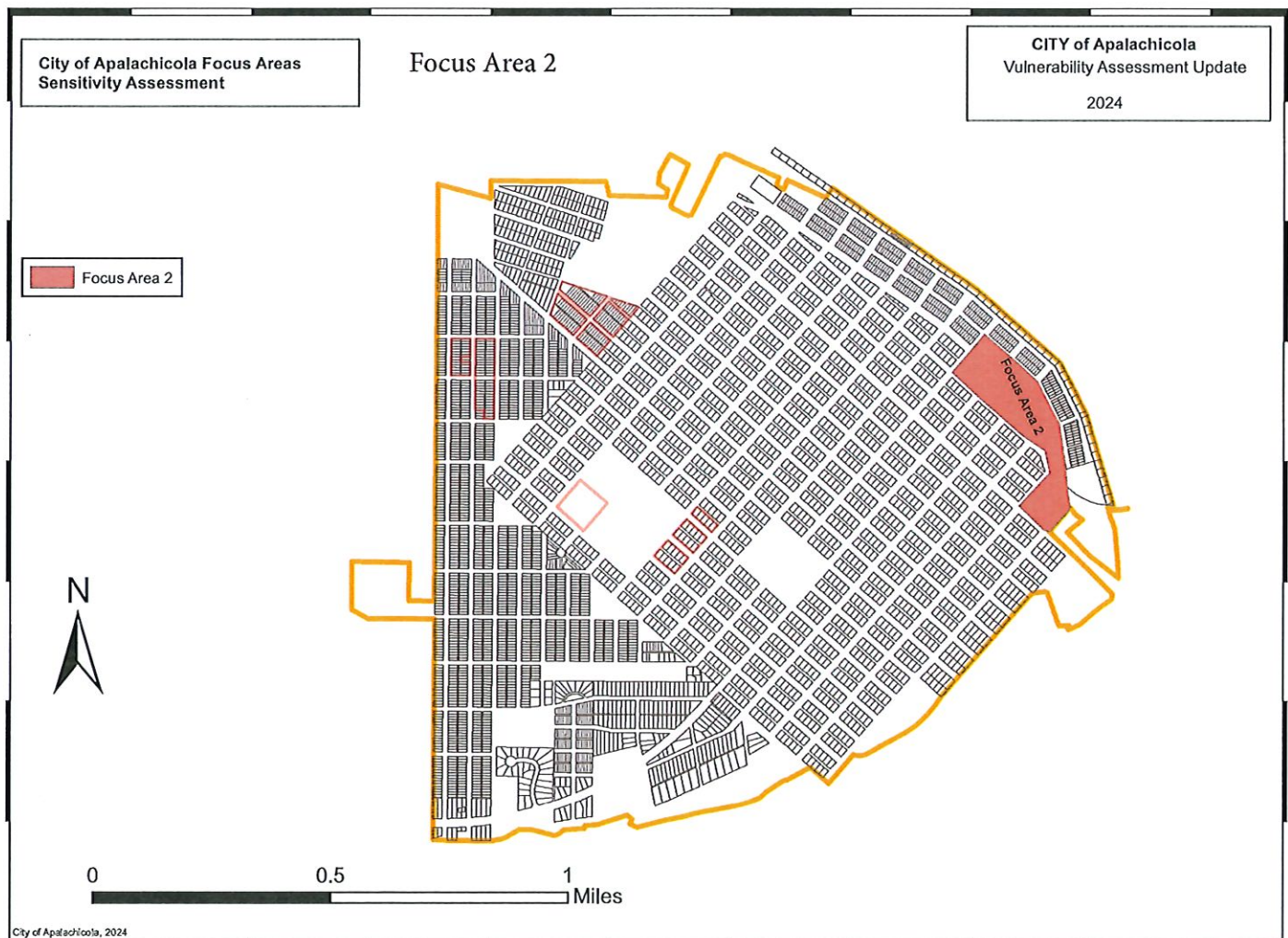
- 3794.7 LF Roads
- 26 Vacuum Lift Stations
- 2 Critical Community and Emergency Facilities
- 2 Natural, Cultural & Historical Assets

Focus Area 2 Prioritized Needs

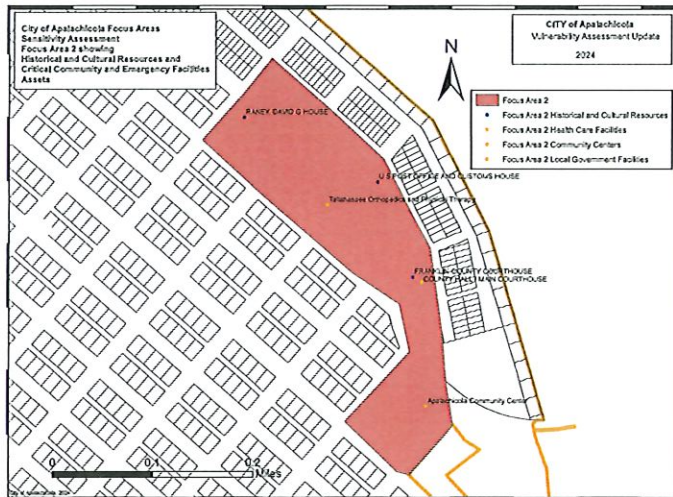
Protecting critical lift stations and ensuring assessable emergency routes out of the commercial district during severe floods is essential. Specific needs are as follows:

- Elevating and/or floodproofing 26 Vacuum Lift Stations
- Improve stormwater drainage along Commerce Street to reduce flooding
- Ensure U.S. Post Office is adequately protected in the event of severe flooding
- Elevate utilities in buildings where structural elevation is not possible
- Ensure accessible emergency routes along Commerce and Market Street for evacuation during severe floods.

Map 6 - Focus Area 2



Map 7 - Area 2 - NCH, CCEF Assets and Needs



Map 9 - Area 2 - Transportation Assets and Needs



Map 8 - Area 2 - Critical Infrastructure Assets and Needs



Focus Area #3 (34.9 acres) is the low elevation area along Bay Avenue, south of the sharp increase in elevation to the north of Bay Avenue. The area is entirely residential and subject to coastal flooding. Although there are several lift stations and outfalls that work to drain stormwater from the other basins in the City the area is prioritized low because it does not contain many public assets.

Focus Area 3 Critical Assets:

- 1890.1 LF Major Roads
- 9 Lift Stations
- 7 Outfalls

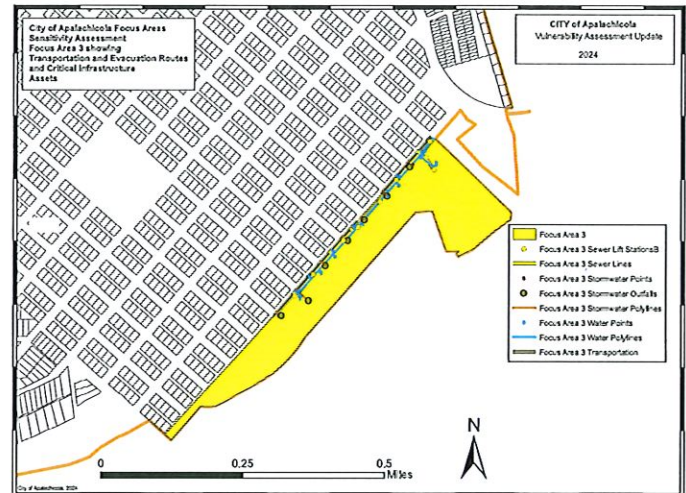
Focus Area 3 Prioritized Needs

Protecting critical lift stations and ensuring assessible emergency routes out of the vulnerable residential district during severe floods is essential. Specific needs are as follows:

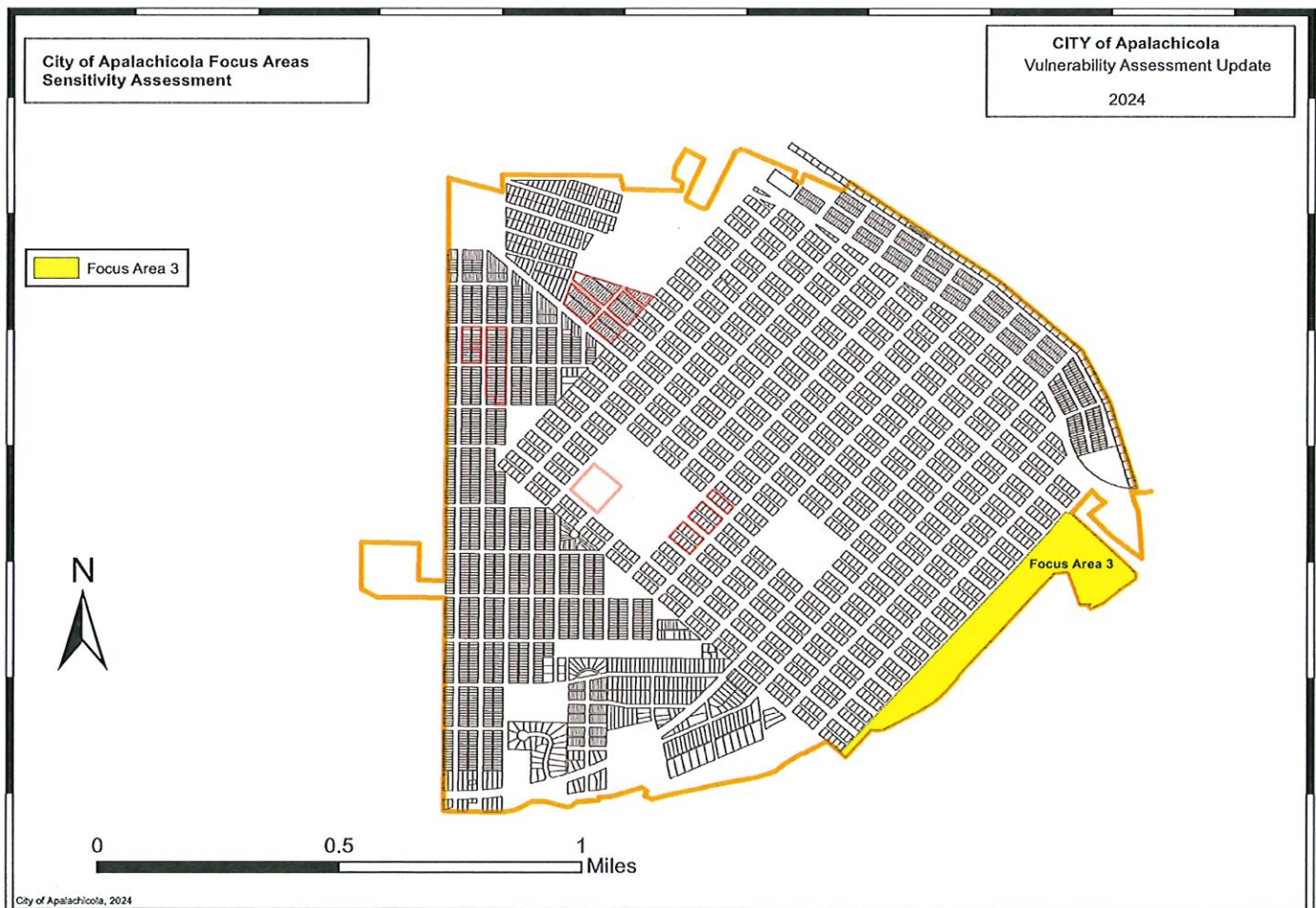
- Elevating and/or floodproofing 9 Vacuum Lift Stations
- Ensure accessible emergency routes along Bay Avenue for evacuation during severe floods.

- Improve stormwater drainage along Bay Avenue to reduce flooding and install backflow preventers on all outfall locations to reduce flooding during extreme tidal events.

Map 11 - Focus Area 3 - Critical Infrastructure Needs



Map108 - Focus Area 3 Boundaries



Focus Area #4

Focus Area #4 (55.3 acres) is the area of the relict creek bed that is roughly between Avenue B and Avenue M and 9th Street and Market Street. This area is significant because it is subject to nuisance flooding mainly due to haphazard filling of some areas that cause unfilled areas to flood. The area contains Major Roads, Vacuum Lift Stations, and one Historical and Cultural Asset. A special note of consideration is the Vacuum Pump Station, located at the intersection of Avenue F and 9th Street. The facility transports all of the sewerage effluent to the WWTP. The PS1 Sewage Pump Station is prioritized in this area.

Focus Area 4 Critical Assets:

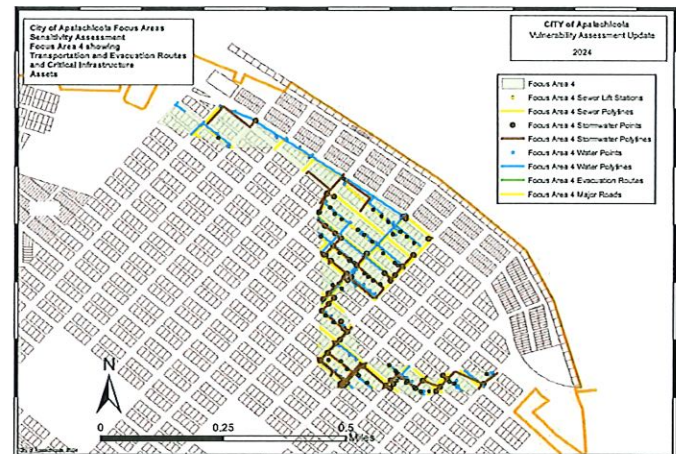
- 10,830.0 LF Major Roads
- 49 Lift Stations
- 1 Historical Resource: FR002617

Focus Area 4 Prioritized Needs

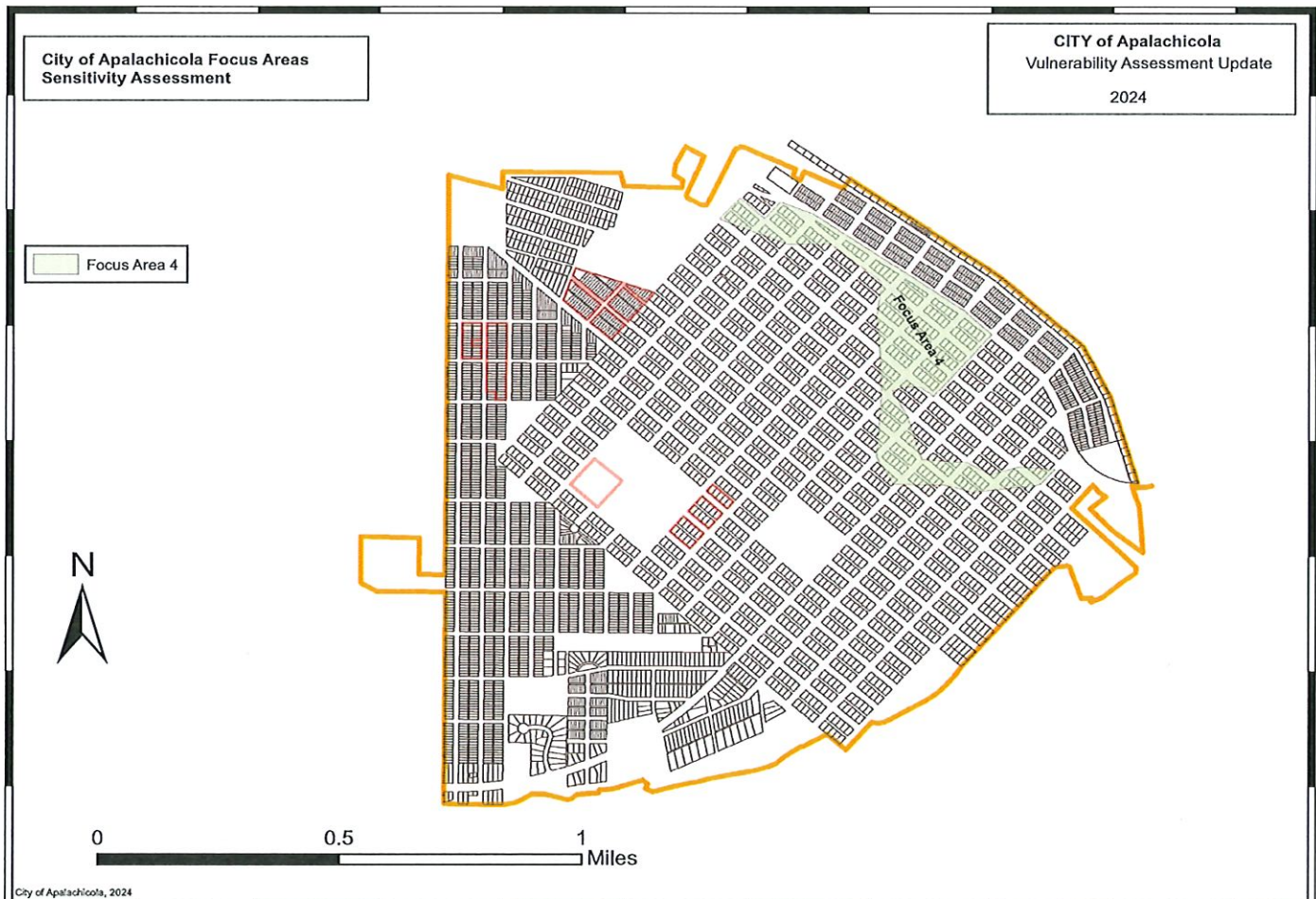
Protecting critical lift stations and ensuring assessable emergency routes out of the residential district during severe floods is essential. Specific needs are as follows:

- Elevating and/or floodproofing 49 Vacuum Lift Stations
- Ensure accessible emergency routes throughout the residential district for evacuation during severe floods.
- Improve stormwater drainage throughout the district through infrastructure rehabilitation to reduce flooding.
- Protect PS1 Sewage Pump Station through elevation

Map 13 - Focus Area 4 Assets and Needs



Map 12 - Focus Area 4 Boundaries

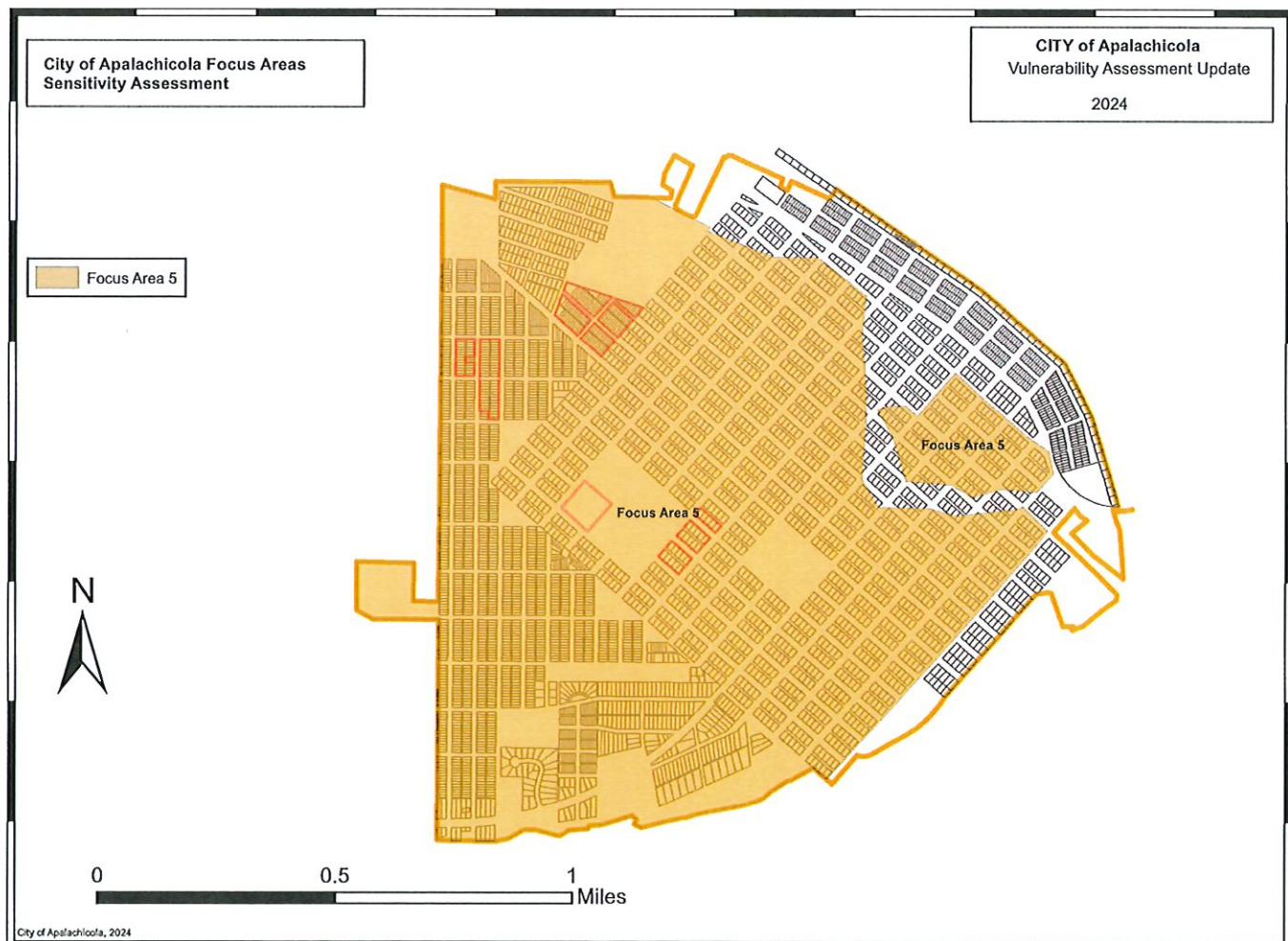


Focus Area #5

Focus Area 5 (829.1 acres) is the largest area and comprises a mix of both residential and commercial property. It is also the highest in elevation and contains the most critical assets. The area contains Major Roads, a hospital heliport, Vacuum Lift Stations, Stormwater Outfalls, a Communication Facility, Public Housing, a Community Center, an Emergency Medical Service Facility/Hospital, six government facilities, the Fire Station, the Law Enforcement Facility, four other Health Care Facilities besides the hospital, 2 schools, and 40 Historical and Cultural Assets. The Focus Area will rank very high.

Focus Area #5 Critical Assets

- 88,620.7 LF Major Roads
- 5 critical Health Care Facilities (Weems Heliport, Weems Memorial Hospital, Sacred Heart Health Care, 2 drug stores)
- 402 Lift Stations
- 12 Outfalls
- Communications Tower
- Affordable Public Housing
- Community Center for Seniors
- Municipal Library
- 5 Government buildings including Apalachicola Volunteer Fire Department, Police Department
- 2 schools
- Multiple Historic Resources - Public and Private

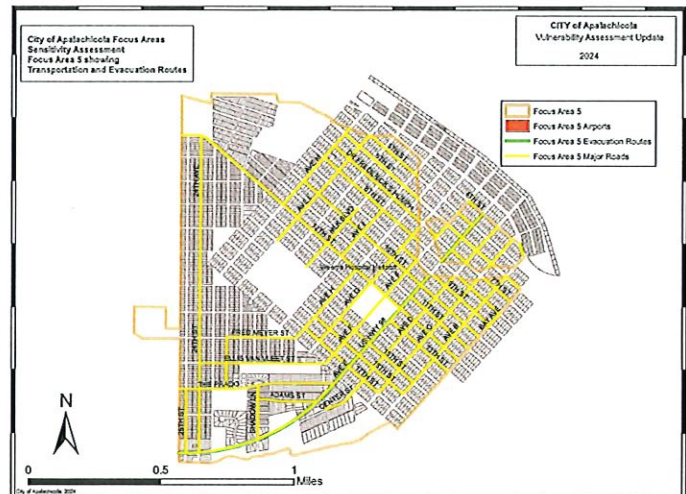
Map 14 - Focus Area 5 Boundaries

Focus Area #5 Prioritized Needs

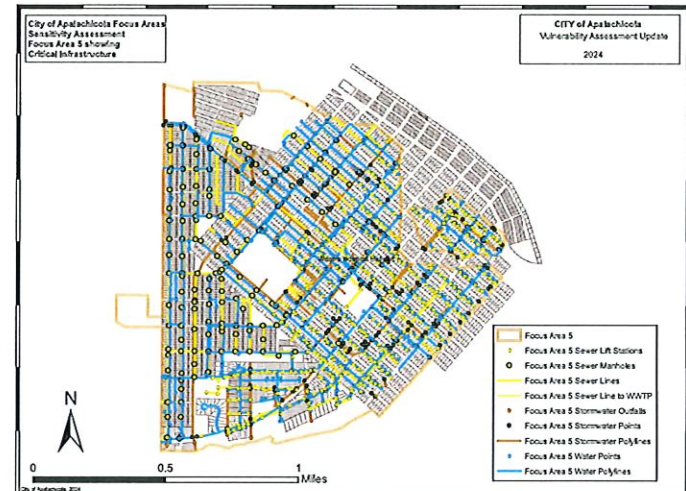
In spite of the area being the highest in elevation and least vulnerable from direct storm surge, this zone is subject to storm event flooding and contains the most critical infrastructure, community, healthcare, government, historical and cultural assets in the City. Specific needs are as follows:

- Protecting medical facilities
- Elevating and/or floodproofing 402 Vacuum Lift Stations
- Ensure accessible emergency routes throughout the residential district for evacuation during severe floods.
- Improve stormwater drainage throughout the district through infrastructure rehabilitation to reduce flooding.
- Improve stormwater drainage throughout the district to reduce flooding and install backflow preventers on all outfall locations to reduce flooding during extreme tidal events.
- Protecting healthcare facilities and ensuring access during storm events
- Assuring that adequate protections are in place to protect communications facilities.
- Assuring access to evacuation, emergency medical and services for public housing community
- Ensuring protection and adequate emergency access for education, library and social service facilities.
- Ensuring adequate protection to protect historic public facilities.

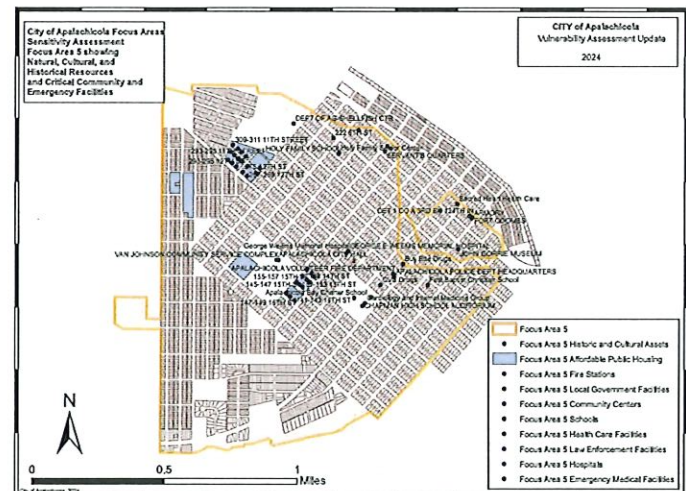
Map 15 - Focus Area 5 Transportation Needs



Map 16 - Focus Area 5 Critical Infrastructure Needs



Map 17 - Area 5 Historical, Cultural, CCEF Needs



Focus Area #6

Map 16 shows prioritized Focus Area 6. Focus Area 6 is a 985.7 acre parcel west of the City that houses the City's two main critical utility assets: the wastewater treatment plant and the City drinking water facility.

Focus Area 6 Critical Assets

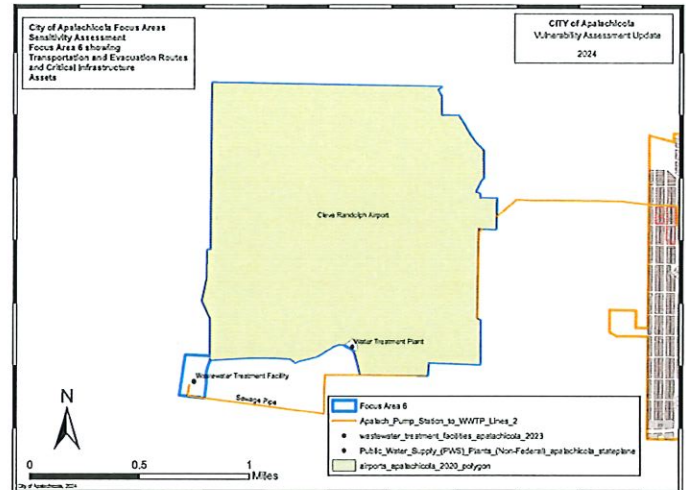
- Wastewater Treatment Facility
- Water Treatment Plant
- Airport
- Franklin County Emergency Management Facilities

Focus Area #6 Prioritized Needs

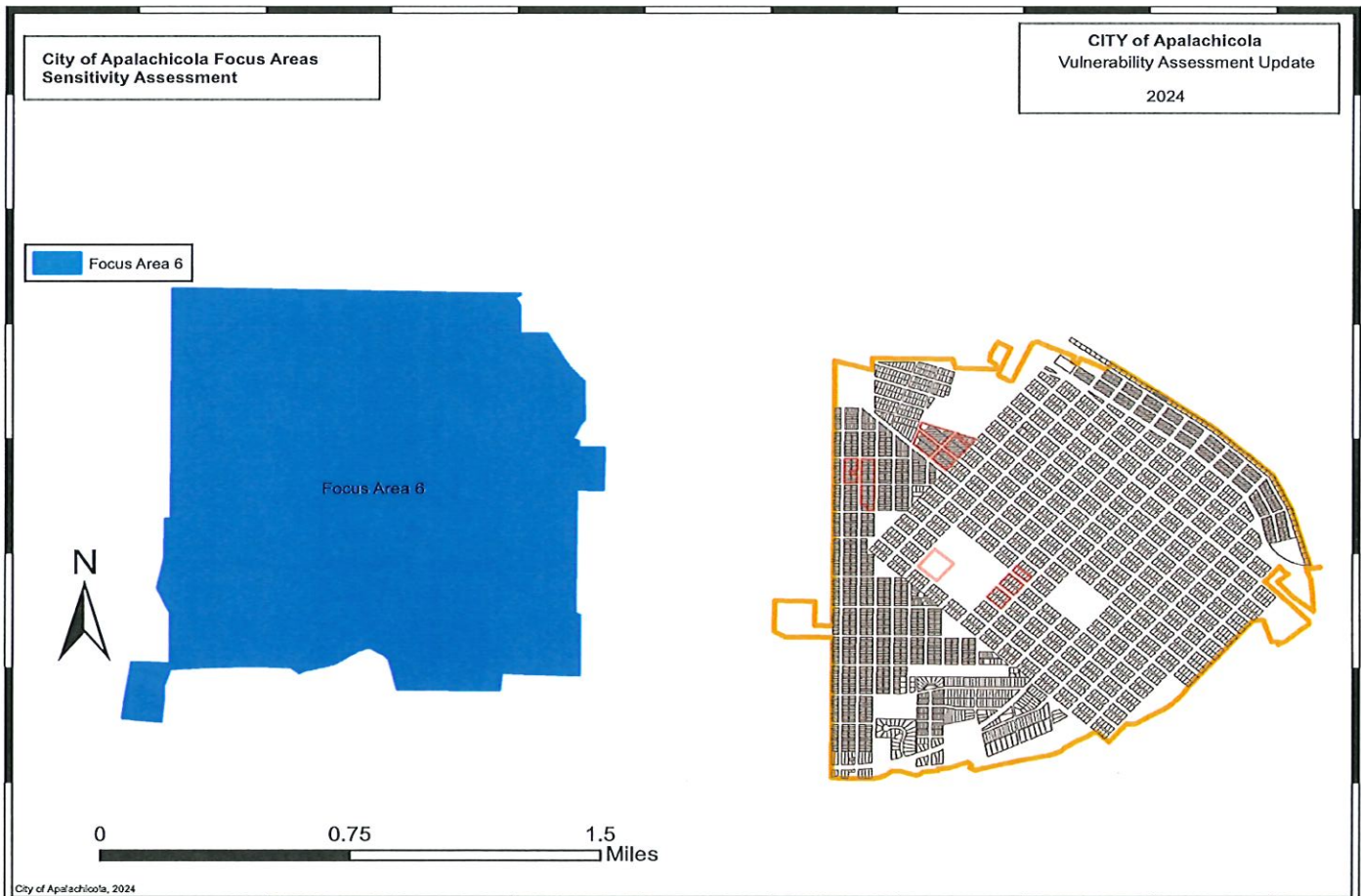
Focus area 6 is the least populated area but contains critical infrastructure including the Wastewater Treatment plant and water treatment plant. Portions of the wastewater treatment plant are vulnerable to potential flooding and plans are in place to relocate the facility pending continued funding. The water treatment plant was heavily damaged during storms in 2024 and as a result, the City's water system was damaged and experienced water quality problems in 2025. Specific needs of focus area #6 are as follows:

- Relocation of wastewater treatment facilities
- Replacement of water treatment facilities and new well
- Ensuring adequate emergency access to airport facilities
- Ensuring adequate access to emergency management facilities

Map 19 - Focus Area 6 Infrastructure Needs



Map 18 - Focus Area 6 Boundaries



Adaptation Needs and Key Strategies

Apalachicola's recommended strategies incorporate protection, accommodation, retreat and avoidance strategies that are socially, technologically, administratively, politically, logically, legally, economically and environmentally appropriate for each of the six focus areas in the City.

The strategies target individual measures to mitigate flood hazards across all of the focus areas identified in the City's Vulnerability Analysis and most focus on improving drainage issues, ensuring accessibility, repairing and replacing critical infrastructure, ensuring protection of natural resources and maintaining surface water quality, protection of community infrastructure and protection of homes and businesses. The strategies are components referenced in the individual focus areas and are consistent with strategies recommended by the Florida Adaptation Planning Guidebook.

The following represent the key needs and recommended solutions. Table 2 represents the needs and recommended strategies for each asset category and provide a variety of options to reduce flood risk.

WASTEWATER INFRASTRUCTURE

Need: Apalachicola's wastewater treatment facility is in need of replacement and relocation because it is located within a vulnerable area. Additionally, the wastewater distribution system, including vacuum sewage lift stations are in need of repair/replacement.

Solution Strategy: Develop a wastewater treatment management plan in which all distribution lines, lift station improvements and wastewater treatment facility needs are identified and scheduled, funded and included in the Capital Improvements Plan.

STORMWATER INFRASTRUCTURE

Need: Apalachicola's current stormwater system is comprised of open ditches, antiquated distribution lines and untreated discharge. The system is inadequate to manage the high volumes of water from prolonged and intense storms. The stormwater drains and often prone to clogging due to debris and sediment, limiting capacity and efficiency. Without regular maintenance, the systems are vulnerable to blockages that lead to flooding.

Solution Strategy: Update the City's stormwater management plan to include a capital improvements plan for repair and maintenance and include, where feasible, detention and retention basins and green infrastructure, such as bioswales and rain gardens to reduce flooding and management stormwater more effectively. Include maintenance of drains as part of the capital improvements plan for stormwater budgeting.

WATER TREATMENT INFRASTRUCTURE

Need: The water treatment plant was heavily damaged during storms in 2024 and as a result, the City's water system was damaged and experienced water quality problems in 2025.

Solution Strategy: Develop a water treatment management plan in which the water treatment facility repair needs, distribution lines and well maintenance are identified and scheduled, funded and included in the Capital Improvements Plan.

IMPROVED FLOOD PROTECTION FOR CRITICAL ASSETS

Need: Apalachicola's critical assets, including transportation networks, community resource buildings, and historic structures, require protection from flood damage to ensure they remain functional during and after storms.

Solution Strategy: Elevate or flood-proof essential infrastructure, invest in backup power supplies for key public facilities, and improve access to emergency resources to support quick recovery following storm events.

COMMUNITY EDUCATION AND ENGAGEMENT

Need: Effective adaptation requires active community involvement. Apalachicola's residents need to be informed and engage to support infrastructure improvements and participate in flood prevention efforts.

Solution Strategy: Develop and implement community outreach programs to educate residents on flood prevention and stormwater management practices.

FUNDING

Need: Addressing Apalachicola's adaptation needs requires significant funding and technical expertise.

Strategy Solution: Continue the ACSC program by which annual state support and partnership is made available through annual legislative appropriations. Explore additional funding with state and federal agencies to secure grants and other opportunities.

Table 2 represents the needs and recommended strategies for each asset category, address specific needs of each area and provide a variety of options to reduce flood risk.

Table 2 Community Adaptation Needs and Strategies

ASSET CATEGORY/ NEED	RECOMMENDED STRATEGY
CRITICAL INFRASTRUCTURE	
Repair/Replace/Protect damaged or vulnerable infrastructure	<p>Sewer <i>Sewage Lift Stations</i> Elevate Pump and Electrical Controls Floodproof Pump Facility with temporary barriers Protect with swales to divert water</p> <p><i>Wastewater Treatment Facility</i> Relocate Tanks and Instrument Controls Elevate Process Tanks Floodproof Tanks and Electrical Instrument Controls with Barriers</p> <p><i>Sewer Distribution Lines</i> Identify and repair/replace faulty sewer lines</p> <p>Drinking Water System <i>Pump Stations</i> Elevate or Relocate Pump station Floodproof pump facility wall or berm to protect Purchase backup pump equipment for redundancy Install flood barrier shields for door openings</p> <p>Stormwater <i>Outfalls</i> Install backflow preventors on outfalls Redesign outfall for better drainage Install baffle boxes for treatment Adopt maintenance plan for treatment facilities</p> <p>Stormwater <i>Distribution Lines</i> Identify and repair/replace faulty stormwater pipes Increase culvert size to increase capacity</p>
Increase pervious surface	<p><i>Green Infrastructure</i> Install bioswales, stormwater retention areas Identify and purchase vacant open space for stormwater retention</p>
Protect Infrastructure	<p>Electric Power Generation, Transmission/Distribution <i>Substations</i> Elevate control house Floodproof substation</p>

ASSET CATEGORY/ NEED	RECOMMENDED STRATEGY
CRITICAL INFRASTRUCTURE	
Protect Infrastructure	Communication Towers/Antennas <i>Equipment Shelter</i> Elevate or floodproof equipment Elevate or floodproof equipment shelter
TRANSPORTATION	
Reduce flood hazard	Roads <i>Increase roadway elevation</i> Adopt stormwater manhole maintenance schedule for cleanout
Protect Infrastructure	Piers and Boardwalks Repair and reinforcement (replace piles, decking) Boat Ramps Retrofit and reinforce structure
CRITICAL COMMUNITY AND EMERGENCY FACILITIES	
	Community and Emergency Buildings <i>Structures</i> Floodproof or elevate Install temporary flood barriers around perimeter Elevate interior electrical equipment Elevate interior floor if entire structure elevation not feasible Convert first floor for nonessential storage Retrofit structure and install hurricane anchors Upgrade windows and doors to storm resistant products Wet floodproof crawl space for water to enter/exit Install backflow control valves
NATURAL AND CULTURAL RESOURCES	
Protect/Maintain	Shoreline <i>Revetments</i> Living Shorelines, marsh restoration

ASSET CATEGORY/ NEED	RECOMMENDED STRATEGY
NATURAL AND CULTURAL RESOURCES	
Floodproof or elevate	<p>Historic Resources <i>Structures</i></p> <p>Install temporary flood barriers around perimeter Elevate interior electrical equipment Elevate interior floor if entire structure elevation not feasible Convert first floor for nonessential storage Retrofit structure and install hurricane anchors Upgrade windows and doors to storm resistant products Wet floodproof crawl space for water to enter/exit Install backflow control valves</p>
Elevate or floodproof	<p>Parks <i>Restrooms</i></p> <p>Install temporary flood barriers around perimeter Elevate interior electrical equipment</p>
Relocate Floodproof or elevate	<p>Public Housing <i>Structures</i></p> <p>Install temporary flood barriers around perimeter Elevate interior electrical equipment Elevate interior floor if entire structure elevation not feasible Convert first floor for nonessential storage Retrofit structure and install hurricane anchors Upgrade windows and doors to storm resistant products Wet floodproof crawl space for water to enter/exit Install backflow control valves</p>

Prioritized Projects by Focus Area

INFRASTRUCTURE PROTECTION

The City's 2024 Vulnerability Analysis includes updated analysis that identify six separate focus areas that contain critical assets important to the City. This data, along with elevation data, was used to establish the risk assessment ranking and used to update the focus areas first identified in the 2017 Vulnerability Assessment. Each focus area, ranked by vulnerability to storm surge flooding, has also been prioritized by the number and importance of the publicly-owned assets contained within each area.

Vulnerable assets that are contained within the Focus Areas drive the rankings. As all Focus Areas contain some assets such as Major Roads and Vacuum Lift Stations, these are of less consideration in ranking the Focus Areas than other assets. The City will have a plan to manage vacuum lift stations, regardless of which Focus Area is involved. The same applies to Major Roads and Stormwater Outfalls.

The Focus Areas are ranked from 1 to 6 in priority. The City has identified focus Area 5 as a priority area because of the vulnerable infrastructure located within this area that should be protected. The full ranking of focus areas is below.

- 1: Focus Area #5 As a result of Focus Area #5 containing so many of the City's assets, it ranks the highest. The area is impacted by major storm surge events.
- 2: Focus Area #6 As a result of Focus Area #6 containing 3 critical facilities, it also ranks highly. The area is impacted by major storm surge events.
- 3: Focus Area #2 Focus Area #2 contains assets that rank the area highly. The area is essentially tied with Focus Area #1.
- 4: Focus Area #1 Focus Area #1 contains assets that rank the area highly. The area is essentially tied with Focus Area #2.
- 5: Focus Area #4 Focus Area #4 contains 1 Historic and Cultural Asset and is ranked lower. As stated above the Vacuum Pump Station will be considered separately.
- 6: Focus Area #3 Even though the area is prone to storm surge, it contains no assets considered in this report.

Note: Public input may change specific project priorities in the final plan,

Focus Area 5 Prioritized Projects

In spite of the area being the highest in elevation and least vulnerable from direct storm surge, this zone is subject to storm event flooding and contains the most critical infrastructure, community, healthcare, government, historical and cultural assets in the City. Prioritized projects within this focus area as follows:

- Elevating and/or floodproofing 402 Vacuum Lift Stations
- Ensure accessible emergency routes throughout the residential district for evacuation during severe floods.
- Improve stormwater drainage throughout the district through infrastructure rehabilitation to reduce flooding.
- Improve stormwater drainage throughout the district to reduce flooding and install backflow preventers on all outfall locations to reduce flooding during extreme tidal events.
- Protecting healthcare facilities and ensuring access during storm events
- Assuring access to evacuation, emergency medical and services for public housing community
- Ensuring protection and adequate emergency access for education, library and social service facilities.
- Ensuring adequate protection to protect historic public facilities.

Focus Area 6 Prioritized Projects

Focus area 6 is the least populated area but contains critical infrastructure including the Wastewater Treatment plant and water treatment plant. Portions of the wastewater treatment plant are vulnerable to potential flooding and plans are in place to relocate the facility pending continued funding. The water treatment plant was heavily damaged during Hurricane Helene in 2024 and as a result, the City's water system was damaged and experienced water quality problems in 2025.

Specific needs of focus area #6 are as follows:

- Relocation of wastewater treatment facilities
- Replacement of water treatment facilities and new well
- Ensuring adequate emergency access to airport facilities
- Ensuring adequate access to emergency management facilities

Focus Area 2 Prioritized Projects

Protecting critical lift stations and ensuring assessable emergency routes out of the commercial district during severe floods is essential. Specific needs are as follows:

- Elevating and/or floodproofing 26 Vacuum Lift Stations
- Improve stormwater drainage along Commerce Street to reduce flooding

- Ensure U.S. Post Office is adequately protected in the event of severe flooding
- Elevate utilities in buildings where structural elevation is not possible
- Ensure accessible emergency routes along Commerce and Market Street for evacuation during severe floods.

Focus Area 1 Prioritized Projects

Protecting critical lift stations and historic non-conforming buildings from flood damage is essential in addition to ensuring functionality of boat ramps and emergency evacuation routes along Water Street. Specific prioritized needs within this area are as follows:

- Floodproofing the historic buildings along Water Street
- Maintaining functionality of boat ramps
- Floodproof the lift stations
- Elevate utilities in buildings where structural elevation is not possible
- Ensure assessible emergency route in and out of riverfront area for evacuation during severe floods.
- Survey stormwater outfalls and install backflow preventers on all

Focus Area 4 Prioritized Projects

Protecting critical lift stations and ensuring assessible emergency routes out of the residential district during severe floods is essential. Specific needs are as follows:

- Elevating and/or floodproofing 49 Vacuum Lift Stations
- Ensure accessible emergency routes throughout the residential district for evacuation during severe floods.
- Improve stormwater drainage throughout the district through infrastructure rehabilitation to reduce flooding.
- Protect PS1 Sewage Pump Station through elevation

Focus Area 3 Prioritized Projects

Protecting critical lift stations and ensuring assessible emergency routes out of the vulnerable residential district during severe floods is essential. Specific needs are as follows:

- Elevating and/or floodproofing 9 Vacuum Lift Stations
- Ensure accessible emergency routes along Bay Avenue for evacuation during severe floods.
- Improve stormwater drainage along Bay Avenue to reduce flooding and install backflow preventers on all outfall locations to reduce flooding during extreme tidal events.

FOCUS AREAS 1-6

CONSOLIDATED PROJECT PRIORITIES

Sewer

- Elevate and/or floodproof vulnerable Vacuum Lift Stations
- Relocate and floodproof wastewater treatment tanks
- Identify and repair/replace faulty distribution lines
- Protect PS1 Sewage Pump Station through elevation

Water

- Elevate or Relocate Pump station
- Repair/replace water treatment tank
- Drill new well and repair/replace faulty existing wells
- Purchase backup pump equipment for redundancy
- Identify and repair/replace faulty distribution lines

Stormwater

- Install backflow preventers on outfalls
- Redesign nonfunctioning outfalls for better drainage
- Install baffle boxes for treatment
- Identify and repair/replace faulty distribution lines
- Implement maintenance plan for treatment facilities

Roads/Marinas/Boat Ramps

- Ensure accessible emergency routes for evacuation during severe floods through road elevation
- Maintaining functionality of boat ramps

Community and Emergency Buildings

- Floodproof or elevate vulnerable structures
- Elevate utilities in buildings where structural elevation is not possible

Prioritized Projects by Asset Class

Table 3 - Prioritized Projects by Asset Class and Focus Area

Critical Infrastructure	<ul style="list-style-type: none"> • Elevating and/or floodproofing 402 Vacuum Lift Stations (FA5) • Improve stormwater drainage throughout the district through infrastructure rehabilitation to reduce flooding. (FA5) • Improve stormwater drainage throughout the district to reduce flooding and install backflow preventers on all outfall locations to reduce flooding during extreme tidal events. (FA5) • Relocation of wastewater treatment facilities (FA6) • Replacement of water treatment facilities and new well (FA6) • Elevating and/or floodproofing 26 Vacuum Lift Stations (FA2) • Floodproof the lift stations (FA1) • Survey stormwater outfalls and install backflow preventers on all • Elevating and/or floodproofing 49 Vacuum Lift Stations (FA4) • Improve stormwater drainage throughout the district through infrastructure rehabilitation to reduce flooding. (FA4) • Protect PS1 Sewage Pump Station through elevation (FA4) • Elevating and/or floodproofing 9 Vacuum Lift Stations (FA3) • Survey stormwater outfalls and install backflow preventers on all (FA1) • Improve stormwater drainage along Bay Avenue to reduce flooding and install backflow preventers on all outfall locations to reduce flooding during extreme tidal events. (FA3)
Transportation	<ul style="list-style-type: none"> • Assuring access to evacuation, emergency medical and services for public housing community (FA5) • Ensuring protection and adequate emergency access for education, library and social services (FA5) • Ensure accessible emergency routes throughout the residential district for evacuation during severe floods. (FA5) • Ensuring adequate emergency access to airport facilities (FA6) • Ensuring adequate access to emergency management facilities (FA6) • Ensure accessible emergency routes along Commerce and Market Street for evacuation during severe floods. (FA2) • Maintaining functionality of boat ramps (FA1) • Ensure assessible emergency route in and out of riverfront area for evacuation during severe floods. (FA1) • Ensure accessible emergency routes throughout the residential district for evacuation during severe floods. (FA4) • Ensure accessible emergency routes along Bay Avenue for evacuation during severe floods. (FA3)
Critical Community and Emergency Facilities	<ul style="list-style-type: none"> • Ensure U.S. Post Office is adequately protected in the event of severe flooding (FA2) • Elevate utilities in buildings where structural elevation is not possible (FA2), (FA1) •
Natural and Cultural Resources	<ul style="list-style-type: none"> • Ensuring adequate protection to protect historic public facilities. (FA5) • Floodproofing the historic buildings along Water Street (FA1)

Implementing Adaptation Policies

Adaptation policies can be incorporated, along with capital improvement projects, over a long period of time and in coordination with other ongoing infrastructure projects where possible. Many policies would be appropriate to include in the City's Comprehensive Plan along with actionable objectives. Many policies may require proper funding and, if adopted, need to be reflected in the City's Capital Improvements Plan.

The following represent options for adaptation strategy implementation into the City's Comprehensive Plan, Land Development Regulations, Public Works Management Plans and Public Engagement Programs.

COMPREHENSIVE PLAN

Promote Efficient Land Use

- Offer incentives to encourage property owners to replace asphalt parking lots with pervious solutions that maximize space and reduce impervious surfaces.
- Encourage mixed land use that promotes functional and coastal flood resilient walkable mixed use development designs.

Promote Resilient Land Use

- Adopt policies relating to Adaptation Action Area planning into the City's Comprehensive Plan.
- Consider transition of vulnerable lands from private to public ownership or consider a combination other strategies such as transfer of development rights (TDRs), purchase of development rights and conservation easements.

Prioritize Resilient Growth Priority Areas

- Conduct a study to identify and prioritize areas for development and redevelopment that align with the City's resilience objectives, promoting sustainable growth and community preparedness.

Mitigate Rising Insurance Costs

- Explore mechanisms to reduce the burden of rising windstorm and flood insurance costs such as the Community Rating System designation.

PUBLIC WORKS MANAGEMENT PLANS

Develop Green Streets Program

- Increase available greenspace for drainage along roadways, including bioswales and guidance to convert selected neighborhoods from two-lane to one-lane roads, widening drainage areas along the right-of-way.

Utilize Technology to Enhance Flood Protection

- Establish a framework for remote monitoring and control of newly adapted structures, enabling timely adjustments to water level changes and effective management before storm events.

Develop Cleaning/Maintenance/ Rehabilitation/Testing Program

- Require routine cleaning and maintenance of stormwater infrastructure.

LAND DEVELOPMENT REGULATIONS

Reduce Parking Minimums

- Revise and adjust parking space requirements for new developments and redevelopments to promote more efficient land use, encourage sustainable transportation options, reduce the footprint of parking areas, support community-oriented growth, and increase storage and pervious areas.

Incorporate Resilience into Complete Streets Design Standards

- Incorporate resilience standards into future complete streets projects and standard designs.

Improve Resilient Development Requirements

- Develop a resilient land development code to document requirements for compliance with the Resilience Plan.
- Limit fill in Areas of Special Flood Hazard through the amendment of the land development code.
- Require an analysis of SLR impacts on proposed development in the AAA.
- Review and modify, if needed, stormwater management regulations.
- Restrict high density residential development in AAA through land development regulations amendments.

Encourage Redevelopment in Overlay Districts

- Provide incentives for redevelopment in overlay areas where additional storage will reduce flooding.
- Consider designating the City's C-1, C-4 & RF districts as the City's Area of Adaptation planning.

Increase Stormwater Storage Management Requirements

- Enhance on-site storage capacity requirements for developed or redeveloped land to promote better stormwater management and resilience.
- Encourage natural shoreline armoring in floodprone areas.

COMMUNITY EDUCATION**Promote Resilient Home Construction and Retrofits**

- Provide tools, incentives, and resources for homeowners to make resilience improvements to their properties.

Increase Pervious Percentages

- Implement a program to incentivize property owners to convert impervious surfaces, such as concrete or asphalt, to pervious materials like uncompacted gravel or permeable pavers.

Improve Public Education Relating to Resilience

- Provide educational materials relating to resilience.

CAPITAL IMPROVEMENTS**Implement Resilient Improvements at Public Facilities**

- Develop a plan and then pursue funding to enhance resiliency of infrastructure within the AAA.
- Repair and maintain improvements to City facilities

Streamline Post-Disaster Redevelopment Planning and Processes

- Proactively plan for redevelopment after disasters by streamlining recovery programs that assist residents in rebuilding or relocating, ensuring a more efficient and supportive recovery process.

Potential Funding Solutions

Sustainable solutions for future growth, development, and resiliency begin with creating the means to finance these investments. Sufficient funding sources can be established using the support of multiple stakeholders and partnerships that, together, provide for feasible cost-sharing arrangements.

Many types of Federal and State funding programs are available to fund the City's Resilience Plan, depending on the nature of the investment.

FEDERAL FUNDING

Federal Emergency Management Agency (FEMA) Grants

FEMA offers Hazard Mitigation Assistance (HMA) grant programs designed to support communities as they build resilience against natural disasters. Grants are available for eligible mitigation activities that reduce disaster losses and protect life and property. HMA programs consist of Building Resilient Infrastructure and Communities (BRIC), Flood Mitigation Assistance (FMA), and the Hazard Mitigation Assistance Program (HMGP). The BRIC and FMA programs offer funding through an annually solicited Notice of Funding Opportunity (NOFO) and the HMGP program is offered after a Presidentially Declared Disaster.

Pre-Disaster Mitigation (PDM) Grant Program

This program is funded at the request of a Member of Congress to approve a specific amount of discretionary funding to a State or local government entity, or 501(c)(3) as provided for under "Congressionally Directed Spending" in the U.S. Senate and "Community Project Funding" in the U.S. House of Representatives. Under this grant program, Federal funds are made available to State, local, Tribal, and Territorial governments to plan for and implement sustainable cost-effective measures designed to reduce the risk to individuals and property from future natural hazards. The intent of this program is to reduce reliance on Federal funding from future disasters.

National Coastal Resilience Fund

This program is a partnership between the National Oceanic and Atmospheric Administration (NOAA) and the National Fish and Wildlife Foundation to enhance fish and wildlife habitat and protect coastal communities. In 2023, the Fund invested \$189 million across 136 coastal resilience projects. The funding is to restore, increase, and strengthen natural infrastructure to protect communities and enhance habitats for fish and wildlife.

Water Infrastructure Financing and Innovation Act (WIFIA)

The EPA manages this program and supports long-term strategies to create a more resilient water infrastructure to address the increasing impacts of extreme weather and help communities address water quantity and quality concerns. Eligible projects include those that address sustained or intermittent increases in water flow, such as projects that address food risks due to stormwater, and septic to sewer efforts where septic systems are undermined by rising groundwater.

Clean Water Act (CWA) Section 319(h) Funding

The CWA supports a variety of activities including technical assistance, financial assistance, education, training, technology transfer, demonstration projects and monitoring to assess the success of specific nonpoint source pollution reduction and elimination projects. In Florida, this program is managed by the Florida Department of Environmental Protection (FDEP). Section 319 (h) specifically authorizes the EPA to award grants to states with approved Nonpoint Source Assessment Reports and Nonpoint Source Management Programs. The funds are used to implement programs and projects designed to reduce nonpoint source pollution as identified in the State's Non-Point Source Management Plan (NPSMP).

Coastal Program

The U.S. Fish and Wildlife Service Coastal Program provides funding for habitat improvement projects. Eligible projects increase coastal resiliency by improving the ability of coastal ecosystems to adapt to environmental changes and by supporting natural and nature-based infrastructure projects to protect and enhance coastal habitats.

Disaster Supplemental Funding

The U.S. Economic Development Administration (EDA) solicits applications under the authority of its Economic Adjustment Assistance (EAA) program. The EAA program is intended to be flexible and responsive to the economic development needs and priorities of local and regional stakeholders, including those seeking assistance recovering from Federally declared disasters. EAA funds can be awarded to assist a wide variety of activities related to disaster recovery, including strategic planning grants, and public works construction assistance.

Public Works and Economic Adjustment Assistance Programs

EDA's Public Works Program funds the construction, expansion, or upgrade of public infrastructure and facilities. The Economic Adjustment Assistance program funds projects, such as long-term disaster recovery and resiliency plans and upgrades that make infrastructure more resilient, that address diverse economic development needs, and prioritize local and regional stakeholders.

STATE FUNDING

Resilient Florida Grant Program (RFGP)

This State program offers Planning grants and Implementation grants. The Planning grants are used to develop a vulnerability assessment (VA) that addresses SLR concerns for critical infrastructure assets. The Implementation grants are provided to assist communities with the construction and upgrade of the projects identified in the approved VA documents.

Clean Water State Revolving Fund Loan Program (CWSRF)

The CWSRF program, managed by the FDEP, provides low-interest loans to entities for the implementation of stormwater-related projects. The CWSRF fund provides up to \$20 million per community issued on a quarterly basis at priority list meetings held beginning in August. The loans issued by the State have a 20-year term and are offered at very low to zero percent interest rates.

State Water-quality Assistance Grant (SWAG)

Funding for this program is offered through the FDEP's NPSMP. Funding is available for projects that implement green stormwater infrastructure projects.

COMMUNITY-BASED FUNDING

Stormwater Utility Fees

Stormwater utility fees are charged to property owners to fund the construction, maintenance, and operation of stormwater infrastructure, including treatment and flood prevention projects. They are usually based on the square footage of impervious surfaces such as roofs, driveways, and parking lots. They can be collected using the monthly water bill or using the non-ad valorem assessment on the property tax bill.

Revenue Bonds

A revenue bond is a category of municipal bond secured with the revenue generated from a specific project or service. Bond financing terms are typically issued at a 40-year repayment period at current market interest rates.

General Obligation Bonds (GO Bond)

A GO bond is a type of municipal bond backed entirely by the issuer's creditworthiness and ability to levy taxes. GO bonds are not backed by collateral. However, the local government may need to pledge that property taxes would be levied to meet the local government's obligation to the bondholders.

Resilience Bond

This bond is a type of green bond because it would be pledged to finance specific climate resilient projects. Resilience bonds are attractive to investors who want to support certain impactful investments. The bond terms and processes are like traditional municipal bonds.

PUBLIC/PRIVATE COLLABORATION

Regional collaboration, including the creation of public-private partnerships. Efforts should focus on cost-efficient design of resiliency investments and equitable sharing of their costs. Public-private partnerships are based on creating a win-win situation between the public and the private entity and the specific projects and agreements should be identified on a case-by-case basis as opportunities arise.

Bibliography

2024 Vulnerability Analysis, City of Apalachicola

2023 - ACSC Area of Critical State Concern Work Plan

2098 - Apalachicola Drainage Basin Analysis

2019 Achieving Resilience Through Hazard Mitigation - MESC/Dauphin Island Sea Lab Subcontract 2667RE-003-
Applying Mitigation Measures to Apalachicola's Vulnerable Historic and Economically Significant Resources

Development in Apalachicola's Commercial Historic District: A Study Adaptive Measures for Special Flood Hazard Areas

2017 - Vulnerability Analysis, City of Apalachicola

City of Apalachicola Comprehensive Plan, Coastal Management Element

City of Apalachicola Schedule of Land Development Regulations