DESOTO COUNTY

ADAPTATION ACTION AREA PLAN #2 BROWNVILLE

Prepared By:

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DESOTO COUNTY CVA - AAA PROJECT

Adaptation Action Area Plan #2 Brownville

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Abbreviations

AAA	Adaptation Action Area
BFE	Base Flood Elevation
BMAP	Basin Management Action Plan
BOCC	Board of County Commissioners
CFRPC	Central Florida Regional Planning Council
CHNEP	Coastal & Heartland National Estuary Partnership
CIP	Capital Improvement Program
CVA	Comprehensive Vulnerability Assessment
DDCV	Double Detector Check Value
DOT	Department of Transportation
DRC	Disaster Recovery Centers
EPA	U.S. Environmental Protection Agency
FCMP	Florida Coastal Management Program
FDEP	Florida Department of Environmental Protection
FDEM	Florida Department of Emergency Management
FEDR	Florida Office of Economic and Demographic Research
FEMA	Federal Emergency Management Agency
FFE	Finished Floor Elevation
FHWA	Federal Highway Administration
FMA	Flood Mitigation Assistance
GIS	Geographic Information System
I&I	Inflow and Infiltration
LDC	Land Development Code
LF	Linear Feet
LID	Low Impact Development
LMI	Low- and Moderate-Income
LMS	Local Mitigation Strategy
LOS	Level of Service
NBI	National Bridge Inventory
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
PROTECT	Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation
RAP	Reasonable Assurance Plan
RPC	Regional Planning Council
SFHA	Special Flood Hazard Areas
SWFWMD	Southwest Florida Water Management District
TMDL	Total Maximum Daily Load
USDA	U.S. Department of Agriculture
WWTF	Wastewater Treatment Facility

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Introduction

DeSoto County (the County) received funding through the Coastal & Heartland National Estuary Partnership (CHNEP) to write three Adaptation Plans for the highest ranking Adaptation Action Areas (AAAs) within the County. This Adaptation Plan is a continuation of the work performed under the County Comprehensive Vulnerability Assessment (CVA) and the Identification and Ranking of AAAs. This Adaptation Plan has been developed for the Brownville AAA, the second highest ranked AAA in DeSoto County, to bridge the gap between identified vulnerable critical assets and the implementation of flood reduction solutions.

The County, Central Florida Regional Planning Council (CFRPC), and CHNEP staff assisted Kimley-Horn in each Adaptation Plan's development. This report outlines specific adaptive strategies, measures, and policies that were developed based on the Florida Adaptation Planning Guidebook and tailored to the unique needs and challenges of the Brownville AAA. A location map of the Brownville AAA is shown in **Figure 1**.

The objectives of this Adaptation Plan are:

- To highlight DeSoto County's current capacity to address flood resiliency in the Brownville AAA.
- To propose implementable adaptation strategies that would reduce flood risk of identified critical assets.
- To rank proposed adaptation strategies based on their anticipated flood resilience improvements, costs, and feasibility.
- To develop preliminary (planning level) costs, descriptions, and conceptual representations for proposed projects.
- To highlight funding opportunities for the proposed adaptation strategies.

This study utilized the latest Florida Adaptation Planning Guidebook published in collaboration between Florida Department of Environmental Protection (FDEP), the Florida Coastal Management Program (FCMP), and National Oceanic and Atmospheric Administration (NOAA), to guide the development of methodologies, criteria and strategies for this Adaptation Plan.

Background

Critical assets include infrastructure, community and emergency facilities, transportation and evacuation routes, and natural, cultural, and historical resources that are essential for community function, safety, and resiliency. During the DeSoto County CVA, critical assets were identified and evaluated for physical exposure to rainfall-driven flooding as well as for their social, environmental, and hazard sensitivity.

Based on the results of the CVA, the evaluated list of critical assets was refined to only include County-owned assets that experienced flooding in the 500-Year, 24-Hour 2040 Rainfall event, and did not currently have planned projects to improve flood resiliency. This refined asset list was used in the Identification and Ranking of AAAs project to define AAA boundaries that group critical assets most vulnerable to flooding. AAAs were geographically defined using ArcGIS based on flood extents, critical asset distribution, and municipal and parcel boundaries.

Once the AAA boundaries were identified, they were ranked using a multi-criterion weighted matrix. The criteria used in the matrix to rank the AAAs included:

- Exposure Analysis (100-Year, 24-Hour 2040 Rainfall)
- Exposure Analysis (500-Year, 24-Hour 2040 Rainfall)
- Sensitivity Analysis
- Asset Ownership
- Asset Relevancy
- Asset Group
- Length of Inundated Roadway
- Length of Inundated Bridges/Culverts
- Quantity of Public Comments

An explanation of the criteria, the scoring process, and the weighting factors applied to each criteria can be found in the DeSoto County Identification and Ranking of AAA Technical Memorandum is under separate cover in **APPENDIX 1**. A location map of the DeSoto County AAAs and their rank are shown in **Figure 2**. It should be noted that there were five AAAs identified but Adaptation Plans were only developed for the top three.

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Figure 1: Brownville AAA Boundary with Vulnerable Critical Assets

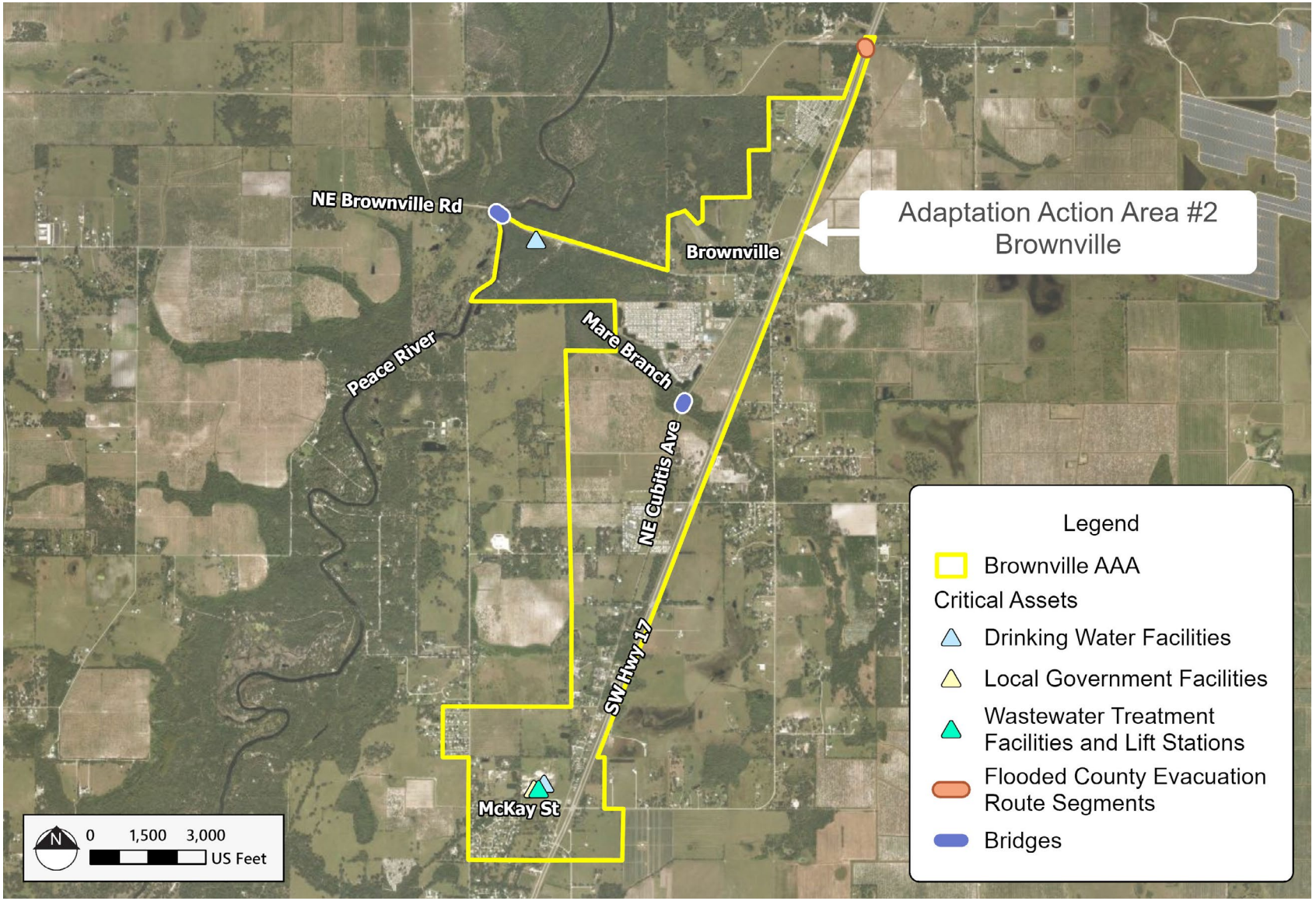

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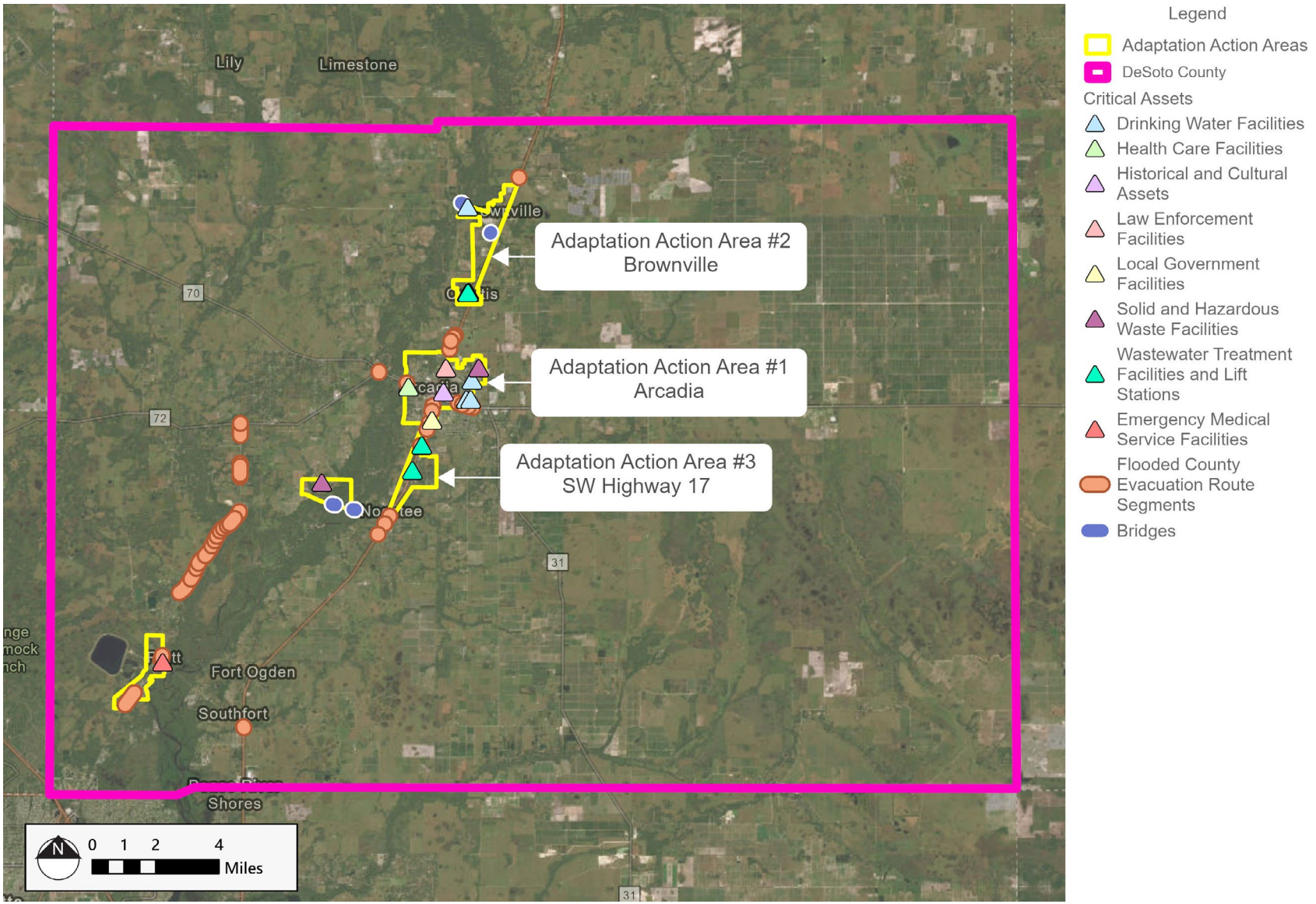
Figure 2: Location Map of DeSoto County AAAs



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Resiliency in DeSoto County

DeSoto County is a rural, non-coastal, agricultural hub situated in south-central Florida that encompasses approximately 497 square miles and has a population greater than 36,000. In recent years, Florida has seen more frequent and increasingly intense weather events, including heavy rainfall. Inland regions like the County are becoming more vulnerable to the effects of severe and prolonged rainfall. Such events lead to soil saturation, reduced infiltration, increased runoff, and general flooding. Severe flood events pose risks to property and public safety, while also causing disruptions to municipal infrastructure and affecting economic stability. DeSoto County is vulnerable to a range of flooding hazards, including rainfall-induced flooding, riverine flooding, storm surge, and the long-term effects of sea level rise. While the county is predominantly inland, storm surge and sea level rise can influence water levels within the lower reaches of the Peace River watershed and its tributaries.

Recognizing these vulnerabilities, the County has taken proactive steps to identify threats, propose strategic actions, and outline a roadmap for building a more resilient future. The County is actively collaborating to implement adaptation strategies that not only strengthen level of service and mitigate flood risks but also enhance the overall wellbeing and sustained growth of the community.

This Adaptation Plan outlines specific adaptive strategies, measures, and policies that are tailored to the unique needs and challenges of the Brownville AAA and build upon existing initiatives such as the DeSoto County Comprehensive Plan, DeSoto County CVA, and DeSoto County Local Mitigation Strategy (LMS).

Brownville

The Brownville AAA is located in northern DeSoto County on NE Highway 17 and adjacent to the Peace River. The AAA contains the unincorporated communities of Brownville and Cubitis, two rural, residential locations known for agriculture. The AAA also includes the County owned Brownville Park which features campsites, hiking trails, and kayaking on the Peace River.

The Brownville AAA includes eight critical assets: two drinking water facilities, a wastewater treatment facility, a local government facility, two bridges, and an evacuation route segment shown to flood in the 500-Year, 24-Hour 2040 Rainfall event modeled during the County CVA.

A map of the Brownville AAA and the 500-Year, 24-Hour 2040 Rainfall flood depths are shown in **Figure 4.**

Figure 3: Flooding in DeSoto County during Hurricane Ian

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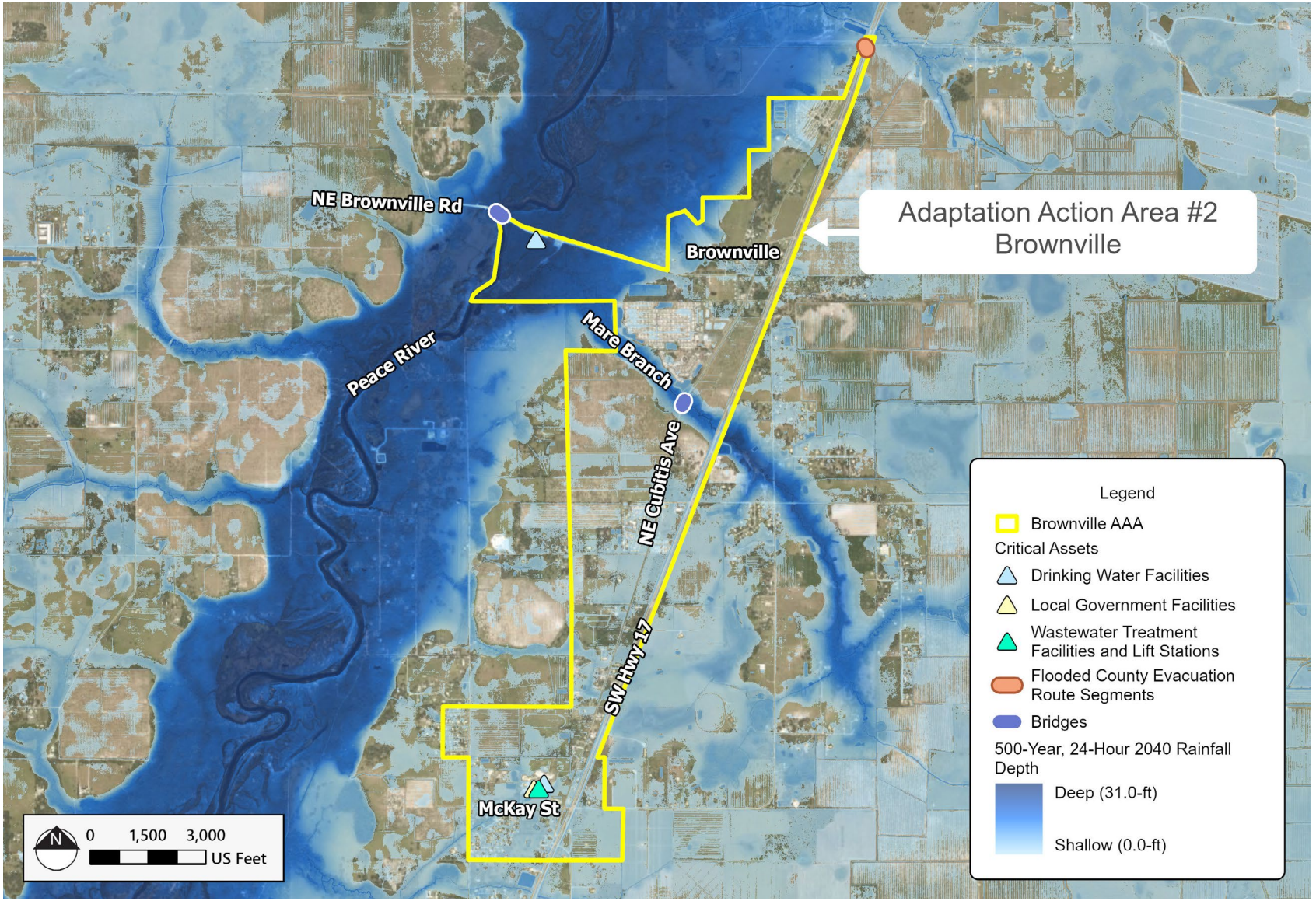
Figure 4: Brownville AAA 500-Year, 24-Hour 2040 Rainfall Flood Depths



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Assessment of Current Adaptive Capacity

Adaptive capacities are broadly defined by the Florida Adaptation Plan Guidebook to refer to how well a system can adjust and respond to changing conditions and challenges. Adaptive capacity for the County has been assessed in terms of:

- Regulatory and planning capacity,
- Administrative and technical capacity,
- Fiscal capacity, and
- Infrastructure status.

These four criteria capture the ability of the County to implement, fund, and maintain adaptative strategies and interventions as described in further detail below.

Regulatory and Planning Capabilities

Current regulatory and planning capabilities within the Brownville AAA are governed primarily by the City of Brownville, with additional jurisdictional oversight by DeSoto County in unincorporated portions of the AAA, together with applicable state and federal requirements. Primary regulatory and planning documents applicable to the AAA include:

- DeSoto County Comprehensive Plan (2007, as amended)
- DeSoto County Land Development Regulations (2017, as amended)
- DeSoto County Local Mitigation Plan
- City of Brownville and DeSoto County Capital Improvement Program and annual budgeting processes
- Florida Building Code
- Federal Emergency Management Agency floodplain management requirement

Comprehensive Plans

Long-range planning within the AAA is guided by the DeSoto County Comprehensive Plan, as the Brownville area and surrounding portions of the AAA are located within unincorporated DeSoto County. Adopted in accordance with Section 163.3177, Florida Statutes, the Comprehensive Plan establishes policy direction for land use, infrastructure, environmental protection, and growth management within the County's unincorporated areas.

The Comprehensive Plans support:

- Coordination between land use and infrastructure planning
- Intergovernmental coordination
- Consideration of environmental constraints in development decisions
- Planning for public facilities and infrastructure to maintain adopted level of service standards

DeSoto County's Comprehensive Plan includes a Conservation Overlay Designation that identifies environmentally sensitive areas, including floodplains, wetlands, hydric soils, and habitat areas, for careful consideration during development review.

Land Development Regulations

Land development within the AAA is regulated through the DeSoto County Land Development Regulations.

These County's land development regulations include but are not limited to:

- The elevation of structures within Special Flood Hazard Areas (SFHA) to be at least the Base Flood Elevation (BFE) as defined by the Federal Emergency Management Agency (FEMA)
- Limitations on development within designated floodways
- Flood-resistant construction standards consistent with FEMA and the Florida Building Code (FBC)

DeSoto County's regulatory framework addresses environmental constraints through its Conservation Overlay and floodplain management regulations, which guide development in environmentally sensitive and flood-prone areas. These standards are implemented through established development review processes, including staff review and coordination with advisory boards.

DeSoto County has adopted floodplain management regulations, administered through the County's Planning and Zoning functions, which rely on FEMA flood hazard mapping and support compliance with the National Flood Insurance Program (NFIP).

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Capital Improvement Program

DeSoto County maintains capital improvement planning and annual budgeting processes that support infrastructure investment and service delivery. Capital planning is guided by the Capital Improvements Elements within the Comprehensive Plan, which establishes the policy framework for capital improvements and links infrastructure planning to the adopted level of service standards.

The County advances capital projects through its annual budgeting processes, which allocate funding for infrastructure, public facilities, and service delivery.

These processes support the implementation of infrastructure improvements and public facility investments, including system upgrades, maintenance, and capacity improvements, and provide a mechanism for incorporating external funding sources such as state and federal grants.

Local Mitigation Strategy

The DeSoto County LMS (Effective February 25, 2025) is a multi-jurisdictional hazard mitigation plan developed and maintained at the local level in coordination with the Florida Division of Emergency Management (FDEM), consistent with FEMA requirements. The LMS includes participation from DeSoto County and other local stakeholders.

The LMS Working Group meets on a recurring basis to:

- Assess hazards and vulnerabilities affecting the county and municipalities
- Identify and prioritize mitigation projects
- Coordinate implementation across participating jurisdictions

The LMS documents hazard exposure, vulnerability assessments, and a prioritized list of mitigation projects, including drainage improvements, flood mitigation measures, infrastructure protection, and public facility improvements. It provides a framework for coordinating hazard mitigation activities across participating jurisdictions and supports implementation of mitigation projects identified in the plan.

Participation in the LMS is required to maintain eligibility for state and federal mitigation funding and supports implementation of capital-focused adaptation strategies, including flood protection measures, drainage improvements, and facility retrofits.

Administrative and Technical Capabilities

Administrative and technical capabilities of the County are demonstrated by their respective local government departments, divisions, and committees and are defined as the staff available to maintain County operations and perform work. At the time of this assessment, the County employs approximately 211 people across 23 total departments, 14 of which serve in infrastructure planning, capital investments, regulatory implementation, and long-term resilience decision-making roles.

In addition to public partnerships, like the CFRPC, the County maintains continuing service agreements with engineering and consulting firms for larger efforts including numerical modelling, design, permitting, and support services; grant writing and administration services; and GIS support for data and asset management.

Fiscal Capacity

Current fiscal capacity was reviewed to identify the current measures that can be taken to pay for adaptation strategies and resiliency efforts. The largest sources of revenue for the County are from taxes and miscellaneous non-operating revenue, which make up 49.3% and 32.7% respectively of the total revenue based on the Board of County Commissioners (BOCC) 2025-2026 Budget. Additionally, most funds are allocated to the sheriff's account and saved into a contingency fund which make up 32.3% and 14.7% of the total annual expenditure respectively.

A potential funding matrix has been included in this adaptation plan to provide the County with recommendations for optimal funding opportunities tailored to each strategy. The funding matrix can be found in the Potential Funding Opportunities section of this report.

Infrastructure

Current infrastructure capacity of the Brownville AAA was reviewed to identify potential assets that could benefit from adaptation strategies or interventions. The County identified eight critical assets within the Brownville AAA for inclusion in this study, two drinking water facilities, a wastewater treatment facility, a local government facility, two bridges, and two evacuation route segments.

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Drinking Water Facilities

Two drinking water facility critical assets were identified in the Brownville AAA, a well at Brownville Park (**Figure 5**), and a well at the DeSoto County Road and Bridge Department. The well at Brownville Park is less than 1,000-ft from the Peace River and was identified as having 19.05-ft of flood depth during the 500-Year, 24-Hour 2040 Rainfall event. The DeSoto County Road and Bridge well was identified as having 0.03-ft of flood depth during the 500-Year, 24-Hour 2040 Rainfall event.

Figure 5: Brownville Park Well

Local Government and Wastewater Treatment Facility

The DeSoto County Road and Bridge Department local government facility building is located on NE McKay St approximately 1.25-mi from the Peace River. The facility also includes the DeSoto County Road and Bridge Department wash bay critical asset identified as a wastewater treatment facility because it collects wastewater produced from vehicle washdowns. (**Figure 6**). Both assets have a low vulnerability and were identified as having less than 0.05-ft of flood depth in the 500-Year, 24-Hour, 2040 Rainfall event. However, the adjacent channel overtops in the 100-Year event and floods the surrounding roads, limiting access to the facilities.

Figure 6: DeSoto County Road & Bridge Department, Wash Bay, and Well

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Bridges, Roadways and Evacuation Routes

The primary roadway in the Brownville AAA is NE Highway 17 which crosses the full length of the AAA. There is one identified evacuation route segment at the intersection of NE Bobay Rd and NE Highway 17 (**Figure 7**). The evacuation route segment was identified as having 0.07-ft of flood depth in the 500-Year, 24-Hour 2040 Rainfall event. This segment of NE Highway 17 was included because of its intersection with a County road, and therefore impacts the accessibility of that County road.

Figure 7: Intersection of NE Bobay Rd and NE Highway 17

Two bridge assets were identified in the Brownville AAA, the Brownville St Bridge which crosses the Peace River (**Figure 8**) and the NE Cubitis Ave Bridge which crosses the Mare Branch (**Figure 9**). The Brownville St Bridge was identified as having 30.49-ft of flood depth and the NE Cubitis Ave Bridge as having 11.41-ft of flood depth in the 500-Year, 24-Hour 2040 Rainfall event.

It should be noted that these flood depths represent the depth of water within the channel the bridges cross, and not the depth of water above the bridges.

Based on bridge condition data provided by the Federal Highway Administration (FHWA), the NW Brownville St bridge (ID: 040005) was last inspected in January 2025, and the NE Cubitis Ave bridge (ID: 040009) was last inspected in May 2024. The National Bridge Inventory (NBI) operates on a scale of 0 to 9 with a value of 9 being "Excellent" and 0-3 being "Critical to Failed Condition". The NW Brownville St bridge received an overall condition rating of "7-Good", a structural evaluation condition of "6-Equal to Present Minimum Criteria", and a channel condition of "7-Channel Remediation is Satisfactory". The NE Cubitis Ave bridge received an overall condition rating of "5-Fair", a structural evaluation condition of "5-Better than Minimum Adequacy", and a channel condition of "7-Channel Remediation is Satisfactory".

Figure 8: NW Brownville St Bridge Crossing the Peace River

Figure 9: NE Cubitis Ave Bridge Crossing the Mare Branch

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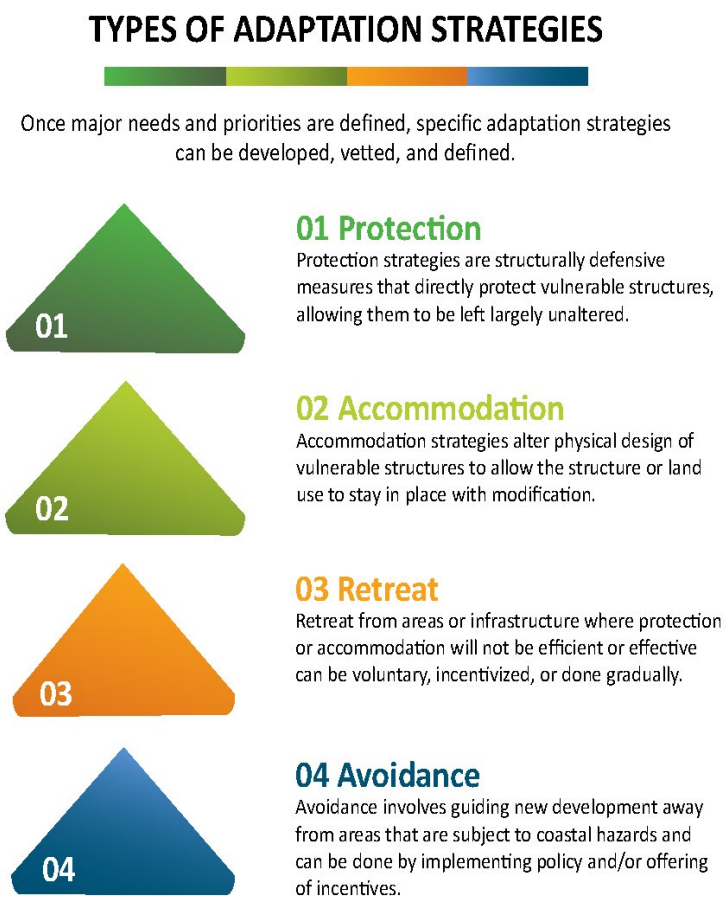
Identification of Adaptive Strategies

Adaptive strategies are proposed or planned solutions that aim to increase resiliency and strengthen the AAA against future high-intensity flooding events. Strategies were proposed based on the current adaptive capacity of the AAA and known threats and stressors. Per the Florida Adaptation Planning Guidebook, proposed adaptive strategies were classified as either protection, accommodation, retreat, or avoidance solutions **(Figure 10)**.

Figure 10: Types of Adaptation Strategies



Protection

Protection strategies are structurally defensive measures that directly protect vulnerable structures, allowing them to be left largely unaltered. By prioritizing the protection of vulnerable areas and assets, these strategies help mitigate potential damage, preserve vital resources, and ensure the stability of communities in the face of evolving threats. Ultimately, protection strategies form the first line of defense, enabling a buffer against immediate risks while working towards long-term adaptation and sustainability goals.

Table 1 lists the protection strategies identified for the Brownville AAA. Short-term projects are those that could be implemented in five years or less, and long-term projects are those that require longer than five years to complete.

Table 1: Protection Strategies

Strategy	Term	Description
Install Deployable Flood Barriers at DeSoto County Road & Bridge Department, Wash Bay, and Well	Short	Install portable flood barriers ahead of major storm events in front of/ around the DeSoto County Road & Bridge Department to prevent flooding from encroaching into the building finished floor.
Implement New Roadside Swales and Detention Pondsat the Intersection of NE Bobay Rd and NE Highway 17	Short	Implement engineered swales or detention areas that store runoff during peak storm events to protect major roadways.

Accommodation

Accommodation strategies modify systems and structures to better cope with the impacts of environmental changes. These strategies focus on adjusting current infrastructure via retrofitting or re-design to reduce vulnerability and enhance resilience. Accommodation strategies alter the physical design of vulnerable structures to allow the element to stay in place with modification. This may involve enhancing infiltration and drainage, increasing storage capacity, or providing maintenance to improve flow or conveyance.

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Table 2 lists the accommodation strategies identified for the Brownville AAA. Short-term projects are those that could be implemented in five years or less, and long-term projects are those that require longer than five years to complete.

Table 2: Accommodation Strategies

Strategy	Term	Description
Elevate Drinking Water Facility at Brownville Park	Short	Elevate infrastructure vulnerable to flooding to reduce flood service disruptions and protect utilities during major storm events.
Implement LID Improvements at the DeSoto County Road & Bridge Department, Wash Bay, and Well	Short	Utilize available space around the DeSoto County Road & Bridge Department to implement rain gardens, bioswales, and vegetated filter strips.
Expand Channels Adjacent to the DeSoto County Road & Bridge Department, Wash Bay, and Well	Short	Dredge and expand the ditches and pond at the DeSoto County Road & Bridge Department to increase stormwater storage.
Reinforce Brownville St Bridge to Withstand Unavoidable Flooding	Long	Reinforce Brownville St Bridge by armoring embankments and using more durable materials to withstand unavoidable flooding.

Retreat

Retreat strategies focus on relocating people, infrastructure and activities away from areas increasingly at risk due to environmental changes. Retreat strategies are often implemented where protection or accommodation will not be efficient or effective. These strategies involve phased retreat from vulnerable regions. By strategically withdrawing from high-risk areas, future damage can be mitigated, exposure hazards can be reduced, and lives and investments can be protected. These strategies can be voluntary, incentivized, or a phased combination of the two.

Table 3 lists retreat strategies identified for the Brownville AAA. Short-term projects are those that could be implemented in five years or less, and long-term projects are those that require longer than five years to complete.

Table 3: Retreat Strategies

Strategy	Term	Description
Managed Retreat of Brownville Park Drinking Water Facility Well	Short	Strategic relocation of vulnerable assets and equipment to higher elevations or locations on the property that are more resilient to flooding.
Elevate the NE Cubitis Ave Bridge that is Vulnerable to Flooding	Long	Elevate NE Cubitis Ave Bridge and roads vulnerable to flooding above the BFE to reduce flood service disruptions during major storm events.

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Avoidance and Planning

Avoidance strategies focus on limiting development or expansion of infrastructure in areas prone to environmental risks. These strategies are often implemented as policies and often incorporate an incentivization element to encourage participation and compliance. Common avoidance measures include revisions to land-use planning regulations and zoning laws, and enforcement of more restrictive building codes that direct new development away from vulnerable areas or hold them to a higher level of service. These proactive strategies not only help in minimizing future damage but also promote safer, more resilient community growth. By integrating avoidance strategies, adaptation plans can effectively manage risk and ensure that development aligns with long-term sustainability objectives.

Table 4 lists the Avoidance and Planning Strategies identified for the Brownville AAA. Short-term projects are those that could be implemented in five years or less, and long-term projects are those that require longer than five years to complete. It should be noted that certain updates to comprehensive plans, land development codes, and other land review processes may be subject to restrictions under F.S. 252.422 and 553.902 as amended by SB 180 (2025).

Table 4: Avoidance and Planning Strategies

Strategy	Term	Description
LID Ordinance	Short	Develop an ordinance supportive of LID and green infrastructure practices that will result in increased water storage, decreased runoff, and water quality improvements.
Develop a Stormwater Engineering Standards Manual	Short	Develop a stormwater engineering standards manual to provide consistent infrastructure planning with clear guidelines to minimize the risk of poorly designed stormwater systems that could lead to excessive flooding.
Future Installation of Resilient and Sustainable Infrastructure	Short	Increase level of service (LOS) and efficiency requirements on newly installed systems. Shift away from “Replace-in-Kind” and opt for systems with improved efficiency and/or resiliency. Raise elevations for existing backup systems (i.e. generators, etc.) and newly installed systems.
Finished Floor Elevation (FFE) Ordinance	Short	Increase the minimum FFE to 1-ft above the BFE such that any building foundation must be constructed to a minimum standard elevation.
Evacuation Route Drainage Infrastructure Inspections	Long	Phased inspections and improvements to drainage infrastructure adjacent to major roadways to identify areas of severe flooding and provide mitigation to the roadway.
County Land Acquisition Program	Long	Develop a program for the County to gradually acquire flood prone properties to limit development in locations vulnerable to flooding.

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Adaptive Capacity Scoring Criteria

Adaptive capacity scoring criteria were developed with guidance from the Florida Adaptation Planning Guidebook. Adaptive strategies with high scores are those that offer the maximum positive flooding resilience impact for the least cost. Definitions for the scoring criteria used are shown in **Table 5, Table 6, Table 7, Table 8,** and **Table 9**.

Figure 11: Severe flooding and road damage on SR 72 during Hurricane Ian

Table 5: Scoring Criteria – Resilience

	Resilience Criteria
3	Strategy is anticipated to greatly increase resilience to flooding
2	Strategy is anticipated to moderately increase resilience to flooding
1	Strategy is anticipated to minimally increase resilience to flooding

Table 6: Scoring Criteria – Implementation Costs

	Implementation Costs Criteria
3	Implementation costs are anticipated to be minimal
2	Implementation costs are anticipated to be moderate
1	Implementation costs are anticipated to be high

Table 7: Scoring Criteria – Life Cycle Costs

	Life Cycle Costs Criteria
3	Life cycle costs are balanced; provides significant resilience dividends
2	Life cycle costs are increased; provides significant resilience dividends
1	Life cycle costs are increased; provides minimal resilience dividends

Table 8: Scoring Criteria – Project Scale

	Project Scale Criteria
3	Strategy is anticipated to have a regional impact
2	Strategy is anticipated to have a local impact
1	Strategy is anticipated to only impact the target critical asset

Table 9: Scoring Criteria – Technically Feasible

	Technically Feasible Criteria
3	Strategy is anticipated to have minimal design constraints
2	Strategy is anticipated to have moderate design constraints
1	Strategy is anticipated to have high design constraints

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Ranking of Proposed Adaptive Strategies

A ranking matrix for proposed adaptive strategies is shown in **Table 10.**

Table 10: Ranking of Proposed Adaptive Strategies

Strategy Type	Strategy Name	Strategy Description	Resilience	Implementation Costs	Life Cycle Costs	Project Scale	Technically Feasible	Overall Score	Final Ranking
Avoidance and Planning	Evacuation Route Drainage Infrastructure Inspections	Phased inspections and improvements to drainage infrastructure adjacent to major roadways to identify areas of severe flooding and provide mitigation to the roadway.	2	3	3	3	3	14	1
Avoidance and Planning	Develop a Stormwater Engineering Standards Manual*	Develop a stormwater engineering standards manual to provide consistent infrastructure planning with clear guidelines to minimize the risk of poorly designed stormwater systems that could lead to excessive flooding.	3	3	3	3	2	14	1
Avoidance and Planning	FFE Ordinance*	Increase the minimum FFE to 1-ft above the BFE such that any building foundation must be constructed to a minimum standard elevation.	2	3	3	3	3	14	1
Avoidance and Planning	County Land Acquisition Program	Develop a program for the County to gradually acquire flood prone properties to limit development in locations vulnerable to flooding.	3	3	2	3	3	14	1
Protection	Install Deployable Flood Barriers at DeSoto County Road & Bridge Department, Wash Bay, and Well	Install portable flood barriers ahead of major storm events in front of/around the DeSoto County Road & Bridge Department to prevent flooding from encroaching into the building finished floor.	2	3	3	1	3	12	2
Avoidance and Planning	LID Ordinance*	Develop an ordinance supportive of LID and green infrastructure practices that will assist in water storage and control of runoff.	2	3	3	2	2	12	2
Accommodation	Expand Channels Adjacent to the DeSoto County Road & Bridge Department, Wash Bay, and Well	Dredge and expand the ditches and pond at the DeSoto County Road & Bridge Department to increase stormwater storage.	3	2	2	2	2	11	3
Accommodation	Implement LID Improvements at the DeSoto County Road & Bridge Department, Wash Bay, and Well	Utilize available space around the DeSoto County Road & Bridge Department to implement rain gardens, bioswales, and vegetated filter strips.	2	2	2	2	3	11	3
Accomodation	Reinforce Brownville St Bridge to Withstand Unavoidable Flooding	Reinforce bridges by armoring embankments and using more durable materials to withstand unavoidable flooding.	3	1	2	2	3	11	3
Avoidance and Planning	Future Installation of Resilient and Sustainable Infrastructure	Increase LOS and efficiency requirements on newly installed systems. Shift away from “Replace-in-Kind” and opt for systems with improved efficiency and/or resiliency.	2	1	3	3	2	11	3
Protection	Implement New Roadside Swales and Detention Pondsat the Intersection of NE Bobay Rd and NE Highway 17	Implement engineered swales or detention areas that store runoff during peak storm events to protect major roadways.	2	1	2	3	2	10	4
Accommodation	Elevate Drinking Water Facility Infrastructure at Brownville Park	Elevate infrastructure vulnerable to flooding to reduce flood service disruptions and protect utilities during major storm events.	3	1	2	1	3	10	4
Retreat	Elevate the NE Cubitis Ave Bridge that is Vulnerable to Flooding	Elevate bridges and roads vulnerable to flooding above the BFE to reduce flood service disruptions during major storm events.	3	1	3	1	2	10	4
Retreat	Managed Retreat of Brownville Park Drinking Water Facility Well	Strategic relocation of vulnerable assets and equipment to higher elevations or locations on the property that are more resilient to flooding.	3	2	3	1	1	10	4

* It should be noted that certain updates to comprehensive plans, land development codes, and other land review projects may be subject to restrictions under F.S. 252.422 and 553.902 as amended by SB 180 (2025).

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Conceptual Planning

This section refines the proposed adaptive strategies with associated construction projects to bridge the gap between identified vulnerable critical assets and the implementation of flood reduction strategies. Proposed strategy descriptions have been supplemented with preliminary costs, planning considerations, and conceptual representations. The adaptive strategies have been organized by the type of critical asset infrastructure they target.

These concepts are not intended to represent engineering designs, however, they provide a planning-level framework to support decision-making, prioritization, and future funding pursuits by translating high-level strategies into specific concepts that could be considered for design and implementation. Preliminary planning-level cost estimates for each strategy were derived from comparable completed projects and are presented as a conservative range encompassing construction costs. It should be noted that costs related to project design, required hydraulic modeling, and future assumptions of inflation, are not included in the cost estimates. A summary of the proposed adaptive strategy projects elaborated in this section is shown in **Table 11.** Short-term projects are those that could be implemented in five years or less, and long-term projects are those that require longer than five years to complete.

Figure 12: Flooding in DeSoto County during Hurricane Ian

Table 11: Summary of Proposed Adaptive Strategy Projects

Strategy Name	Term	Planning Construction Cost
Elevate Drinking Water Facility Infrastructure at Brownville Park	Short	$350,000-$600,000
Install Deployable Flood Barriers at DeSoto County Road & Bridge Department, Wash Bay, and Well	Short	$45,000-$75,000
Implement LID Improvements at the DeSoto County Road & Bridge Department, Wash Bay, and Well	Short	$50,000-$150,000
Expand Channels Adjacent to the DeSoto County Road & Bridge Department, Wash Bay, and Well	Short	$350,000-$750,000
Reinforce Brownville St Bridge to Withstand Unavoidable Flooding	Long	$500,000-$1,200,000
Elevate the NE Cubitis Ave Bridge that is Vulnerable to Flooding	Long	$3,000,000-$7,000,000
Implement New Roadside Swales and Detention Ponds at the Intersection of NE Bobay Rd and NE Highway 17	Short	$200,000-$500,000

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Adaptive Strategies: Drinking Water Facilities

Elevate Drinking Water Facility Infrastructure at Brownville Park

This strategy would include the elevation of drinking water well utilities at the Brownville Park to reduce flood-related damage and service interruptions during major storm events. The utilities are located on the Brownville Park groundskeeper property under a covered roof. Elevation methods may include reconstruction of utilities at a higher elevation, installation of raised structural platforms to support mechanical components, mounting electrical cabinets on elevated pedestals, or elevating the entire property to protect the park entrance from flooding. The boundary of the elevated Brownville Park Well and groundskeeper property is shown in **Figure 13**.

Considerations would include establishment of target elevation heights based on modeled flood depths and freeboard criteria, consideration of operational access for inspection and maintenance, and coordination of construction to minimize disruption to water service. The design must also ensure compatibility with existing piping connections, electrical conduits, and site constraints, while protecting elevated equipment from wind and debris impacts.

Preliminary planning-level costs are driven by the number of components elevated, required elevation height, and complexity of utility reconnections. Based on similar utility elevation projects estimated by the Florida Office of Economic and Demographic Research (FEDR), elevating critical equipment, utilities, and the home on the property is estimated to cost between $350,000 and $600,000. Ongoing maintenance costs are expected to be minimal, as elevating equipment increases resiliency and lowers the likelihood of future repairs following storm events.

Figure 13: Brownville Park Well Location

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Adaptive Strategies: Local Government and Wastewater Treatment Facility

Install Deployable Flood Barriers at DeSoto County Road & Bridge Department, Wash Bay, and Well

This strategy would include the installation of deployable flood barrier systems to protect the Road & Bridge Department, wash bay, and well during major storm events. These three identified critical assets are all located at the same facility, and could be protected with the same flood barrier system. Deployable flood barriers would be temporarily installed ahead of major storm events along identified entry points or portions of building perimeter vulnerable to flooding. These measures are intended to protect the finished floor elevation and interior spaces without relying on permanently installed flood walls. Barrier systems may include modular panelized flood barriers, water-filled barriers, or similar reusable temporary flood protection systems that can be rapidly deployed and removed as needed.

Considerations would include identification of appropriate barrier extents based on observed flood pathways, assessment of compatibility with the structure, and maintenance of safe access for emergency personnel during deployment and removal. When not in use, barrier components can be stored on-site or at a nearby County facility to allow for rapid deployment prior to storm events. A visual representation of the deployed flood barriers located at the DeSoto County Road & Bridge Department, wash bay, and well is shown in **Figure 14.** The top figure displays existing conditions; the bottom figure illustrates the adaptive strategy.

Preliminary planning level costs for deployable flood barriers are primarily driven by the total linear footage (LF) of barrier required, barrier height, and system style (panelized systems versus water filled barriers). Based on vendor pricing for deployable flood barrier systems, costs typically range from $35 to $75 per LF for panelized systems. Depending on the requirement for a partial or full perimeter protection system, a barrier system of 800 to 1,200 LF is estimated to cost between $45,000 and $100,000 inclusive of barrier materials, design, storage racks, and installation.

Ongoing maintenance costs are approximately $1,000 to $2,000 annually as maintenance efforts are generally limited to periodic inspections, cleaning, and replacement of worn seals or components. Deployable systems require operational costs for deployment and removal during storm events. These costs are substantially lower than permanent flood protection measures and provide a cost effective solution for reducing flood risk at the existing facility. If the barriers are unable to be stored on-site, additional costs related to storage and transportation to/from the facility would be incurred.

Figure 14: Visualization of Deployable Flood Barriers at the DeSoto County Road & Bridge Department, Wash Bay, and Well

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Adaptive Strategies: Local Government and Wastewater Treatment Facility

Implement LID Improvements at the DeSoto County Road & Bridge Department, Wash Bay, and Well

This strategy would include the implementation of LID improvements at the DeSoto County Road & Bridge Department, wash bay, and well critical assets that are all located at the same facility, to reduce stormwater runoff and localized flooding during major storm events. The strategy would focus on converting impervious surfaces and better utilizing open space to improve stormwater quality and create additional storage. LID improvements are recommended at this location over conventional stormwater collection systems due to the limited available open space.

Considerations would include installation of grass or landscaped bioswales, rain gardens, pervious pavement, or other LID features designed to capture, infiltrate, and treat stormwater closer to its source. These features would be integrated into existing landscaped areas or retrofit portions of paved surfaces to slow runoff, reduce peak flows, and improve overall site drainage performance. A visual representation of LID improvements located at the County Road and Bridge Department, wash bay, and well is shown in **Figure 15**. The top figure displays existing conditions; the bottom figure illustrates the adaptive strategy.

Planning considerations include evaluation of existing site grading and drainage patterns, identification of appropriate locations for LID features without impacting facility access, and selection of vegetation and materials suitable for periodic inundation and low maintenance. Design should ensure LID features are sized to provide meaningful runoff reduction while remaining compatible with existing utilities and building infrastructure.

Preliminary planning level costs for LID retrofits are driven by the type and extent of improvements, excavation requirements, and surface restoration needs. Based on similar LID retrofit projects in case studies published by the Environmental Protection Agency (EPA), costs are estimated to range from $50,000 to $150,000. Ongoing maintenance costs would involve routine inspections, vegetation management, and sediment removal.

Figure 15: Visualization of LID Improvements at the DeSoto County Road & Bridge Department, Wash Bay, and Well

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Adaptive Strategies: Local Government and Wastewater Treatment Facility

Expand Channels Adjacent to the DeSoto County Road & Bridge Department, Wash Bay, and Well

This strategy would include the dredging and stabilization of the drainage ditch and pond adjacent to the DeSoto County Road & Bridge Department , wash bay, and well to increase stormwater storage capacity. Improvements would include dredging accumulated sediment from the existing channels, reshaping channel cross-sections to increase conveyance and storage capacity, and stabilizing ditch banks to prevent erosion. Bank stabilization measures may include regrading and vegetative reinforcement through the implementation of a littoral shelf to stimulate plant growth that would provide water quality treatment. A visual representation of a widened section of the channel and pond located at the County Road & Bridge Department, wash bay, and well is shown in **Figure 16**. The top figure displays existing conditions; the bottom figure illustrates the adaptive strategy.

Considerations would include evaluation of downstream impacts, and review of environmental permitting requirements to verify proposed modifications would comply. The design should balance increased storage capacity with water quality, bank stability, and long-term maintenance needs, while minimizing disturbance to adjacent infrastructure and facility operations.

Preliminary planning-level costs are influenced by the length of channel improvements, excavation volumes, sediment disposal requirements, and stabilization methods. Based on FEMA-funded excavation and bank stabilization projects, costs are estimated to range from $350,000 to $750,000 to expand approximately 800 LF of pond and channel, and to implement a littoral shelf. Ongoing maintenance costs are expected to include periodic inspection and sediment removal.

Figure 16: Visualization of Widened Channels Adjacent to the DeSoto County Road & Bridge Department, Wash Bay, and Well

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Adaptive Strategies: Bridges, Roadways and Evacuation Routes

Reinforce Brownville St Bridge to Withstand Unavoidable Flooding

This strategy would include reinforcing existing bridges to withstand unavoidable flooding through embankment armoring and the use of flood-resilient structural materials. Improvements may include installation of articulated concrete blocks, riprap, or sheet piling along bridge approaches and abutments to reduce erosion and scour during high water events that could cause a structural failure of the bridge. Where feasible, bridge components could also be retrofitted with higher-durability materials designed to tolerate repeated inundation without compromising structural integrity. These enhancements would improve bridge reliability during major storm events and reduce the risk of structural failure.

Engineering evaluations would assess existing foundation conditions, hydraulic performance, anticipated flood depths, and flow velocities to determine appropriate armoring extents and material selection. Reinforcement measures would be designed to maintain conveyance capacity beneath the bridge while protecting embankments from erosion, and upgrade the strength or durability of the bridge without compromising structural integrity. Where possible, improvements could be phased or coordinated with scheduled bridge maintenance or rehabilitation projects to reduce overall costs. A visual representation of the reinforced Brownville St bridge crossing the Peace River is shown in **Figure 17**. The top figure displays existing conditions; the bottom figure illustrates the adaptive strategy.

Preliminary planning level costs for reinforcing bridge embankments are influenced by bridge size, armoring length, material selection, and construction access constraints. Based on similar FDOT bridge retrofit projects, embankment armoring using riprap typically costs between $150,000 to $400,000 per bridge. More extensive retrofits involving sheet piling, foundation improvements, or structural material upgrades may range from $400,000 to $1,000,000 per bridge, depending on-site conditions and hydraulic complexity. It should be noted that riprap or sheet piling improvements may be excessive for peak velocities in the creek during major storm events, other stabilization methods such as geotextiles or vegetated stabilization could be more suitable based on a hydraulic analysis.

For planning purposes, reinforcing the Brownville St bridge is estimated to cost between $500,000 and $1.2 million.

Ongoing maintenance costs are expected to be low, consisting primarily of periodic inspections following major storm events and localized repair of displaced armoring as needed.

Figure 17: Visualization of Brownville St Bridge Crossing the Peace River

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Adaptive Strategies: Bridges, Roadways and Evacuation Routes

Elevate NE Cubitis Ave Bridge that is Vulnerable to Flooding

This strategy would include elevating bridges and adjacent roadway approaches that are vulnerable to flooding to heights above the 500-Year, 24-Hour 2040 BFE. Elevation improvements would allow bridges to remain accessible during and after major rainfall events, improving emergency access and evacuation reliability. Where feasible, roadway approaches would be raised gradually to maintain proper transitions and minimize impacts to surrounding infrastructure.

Considerations would include the review of historical flood events to identify the extent of bridge overtopping during storm events, or limited clearance above predicted flood elevations. Engineering evaluations would assess existing bridge profiles, hydraulic capacity, design flood elevations, and right-of-way constraints to determine feasible elevation targets. Elevation designs would need to account for drainage continuity, maintaining or improving conveyance beneath bridges, and minimizing upstream flooding impacts. Coordination with FDOT standards and floodplain management requirements would be necessary. A visual representation of the elevated NE Cubitis Ave bridge crossing the Mare Branch is shown in **Figure 18**. The top figure displays existing conditions; the bottom figure illustrates the adaptive strategy.

Preliminary planning level costs for bridge and roadway elevation projects are influenced by bridge length, required elevation increase, approach roadway reconstruction, and utility relocation needs. Based on similar FDOT bridge replacement projects, elevating a small to mid-sized bridge and its approaches generally ranges from $2 million to $6 million per structure. Larger bridges or projects requiring substantial roadway realignment, extended approach fills, or drainage modifications may exceed $8 million.

For planning purposes, elevating the NE Cubitis Ave Bridge and associated roadway approaches is estimated at $3 million to $7 million. Ongoing maintenance costs are expected to be low, consisting primarily of periodic inspections following major storm events.

Figure 18: Visualization of Elevated NE Cubits Ave Bridge Crossing the Mare Branch

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Adaptive Strategies: Bridges, Roadways and Evacuation Routes

Implement New Roadside Swales and Detention Ponds at the Intersection of NE Bobay Rd and NE Highway 17

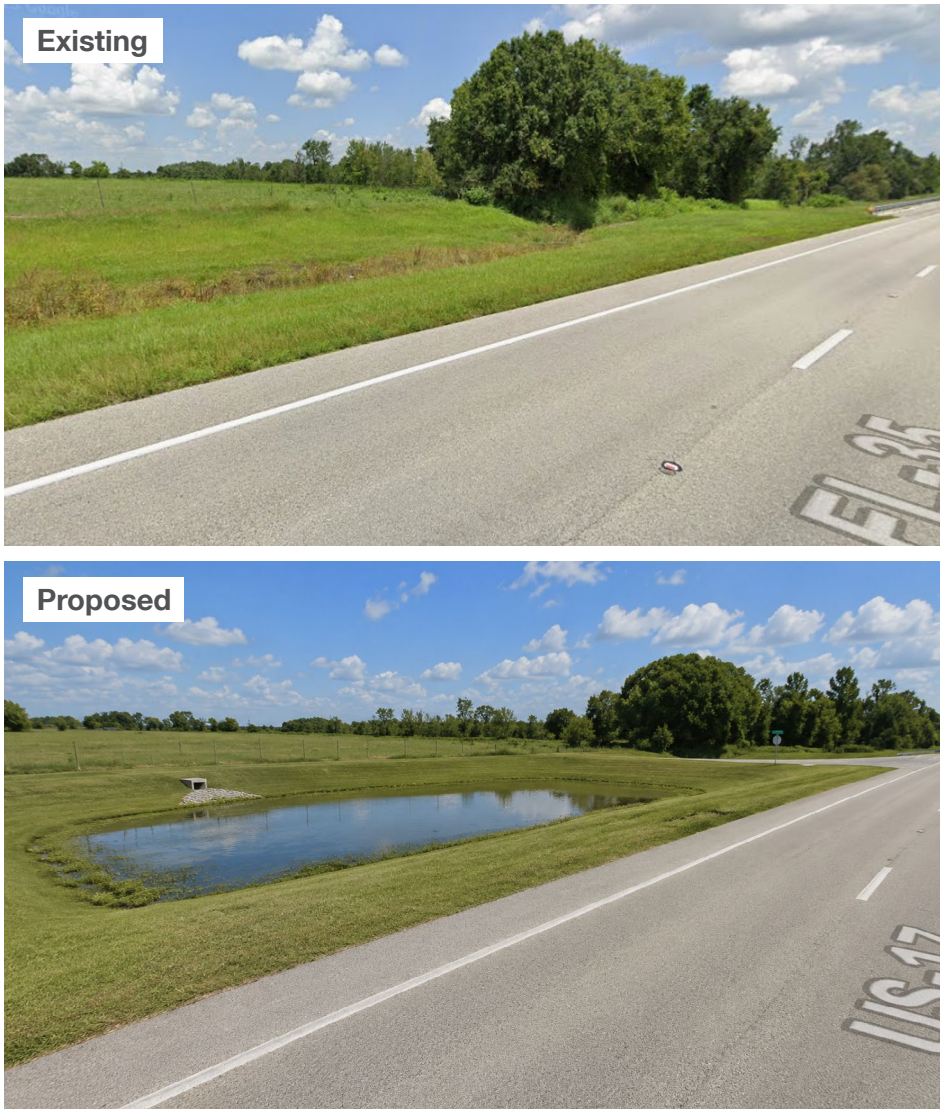
This strategy would include the implementation of roadside swales/detention ponds to temporarily store and attenuate stormwater runoff during major rainfall events. Open spaces adjacent to evacuation routes make for ideal pond locations so that flows can be directly routed away from roads. These features would be designed to slow flow velocities, reduce peak discharge rates, and provide storage during extreme rainfall events, thereby reducing the depth and duration of flooding on roadway surfaces.

Considerations would include identification of locations along evacuation routes with sufficient right of way or nearby County owned parcels to accommodate swales and detention systems, as well as evaluation of existing drainage patterns and contributing drainage areas. Swales would be graded to maintain positive drainage toward downstream conveyance systems, while detention ponds would be designed to release stored runoff at controlled rates that do not overwhelm downstream infrastructure. Where possible, these features could also be integrated with existing open drainage systems to improve overall network performance. A visual representation of a detention pond at the intersection of NE Bobay Rd and NE Highway 17 is shown in **Figure 19**. The top figure displays existing conditions; the bottom figure illustrates the adaptive strategy.

Preliminary planning level costs for implementing roadside swales and detention ponds are primarily driven by the size of the drainage areas served, required storage volume, and earthwork quantities. Based on similar FDOT stormwater infrastructure construction costs, small to mid sized detention ponds constructed adjacent to roadway corridors generally range from $45,000 to $150,000 per pond. Vegetated roadside swales are comparatively lower cost features, with construction costs typically ranging from $10,000 to $40,000 per installation, depending on length, grading complexity, and vegetation establishment.

For planning purposes, a combined program of strategically placed swales and one detention pond at the intersection of NE Bobay Rd and NE Highway 17 is estimated at $200,000 to $500,000, depending on-site specific conditions. Ongoing maintenance costs are expected to be moderate and consist primarily of lawn maintenance and mowing.

Figure 19: Visualization of a Detention Pond at the Intersection of NE Bobay Rd and NE Highway 17



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Next Steps

This AAA Plan was developed to highlight existing flood vulnerabilities within the Brownville AAA, evaluate local adaptive capacity, identify feasible adaptative strategies, and bridge the gap between identified vulnerable critical assets and the implementation of flood reduction solutions. This plan provides the County with conceptual adaptive strategies to guide near and long term flood resilience improvements.

To advance the implementation of this plan, it is recommended that the County reviews the high scoring, near term adaptive strategies that score favorably across the flood resilience, implementation cost, and feasibility criteria. Next steps include refining identified projects to be included in the County Capital Improvement Program (CIP), advancing planning level strategies, and coordinating with regional and state partners to position projects for upcoming grant cycles.

A potential funding opportunities matrix has been developed to support implementation of the recommended adaptive strategies by identifying federal, state, regional, and local funding programs. The matrix is intended to serve as a planning and decision making tool that includes funding pathways, highlights application cycles, competitiveness, match requirements, and eligibility considerations. Funding opportunities are organized by primary, supporting, planning level, and conditional sources to help the County pursue grants.

Figure 20: Flooding in DeSoto County during Hurricane Ian

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Potential Funding Opportunities

A funding matrix that highlights funding opportunities for the proposed adaptation strategies is shown in **Table 12, Table 13, Table 14, Table 15, Table 16, and Table 17.**

Table 12: Primary Funding Opportunities (Most Aligned with AAA Strategies)

Funding Opportunity	Funding Type	Funding Available	Competitiveness	Application Cycle	Match Requirements	Project Recommendations	Additional Considerations
FEMA - Building Resilient Infrastructure and Communities (BRIC)	Federal Grant	Up to tens of millions per project; varies based on national allocation and project type	High - Application requires cost-benefit analysis, and application process is exhaustive	Open: September Due to FDEM: November FDEM submits: January	30% Waived if under $200,000	Flood barriers; evacuation route drainage improvements; stormwater detention and swales; channel and conveyance improvements; critical facility protection; elevation of infrastructure	**Purpose:** To increase resilience and public safety; reduce injuries, loss of life, and damage to infrastructure from natural hazards. **Funding Types:** Mitigation Plans, Project Scoping, Infrastructure Projects, Flood Risk Reduction. **Eligibility:** Local governments via FDEM; must be in LMS and meet FEMA Benefit-Cost Analysis (BCA) requirements.
FDEP - Resilient Florida Grants Program	State Grant	Varies annually based on appropriations and project type	Medium - Requires readiness to proceed	Varies every year Open: July Due: September (approx.)	50% - Cost-share may be reduced for rural communities	Targeted vulnerability assessments; flood modeling; drainage system planning; infrastructure adaptation strategies; stormwater and flood mitigation projects	**Purpose:** Supports projects addressing flooding, rainfall, and climate impacts. **Funding Types:** Planning and Implementation tied to vulnerability assessments. **Eligibility:** Local governments; projects aligned with resilience priorities.
SWFWMD - Cooperative Funding Initiative	Regional Cost Share	Varies by project and funding cycle	Medium - Requires that project is ready for construction	Open: August Due: October	Typically ~50%	Roadside drainage improvements; channel expansion and stabilization; stormwater retrofits; conveyance system improvements; flood mitigation projects	**Purpose:** To provide funds for projects that assist in creating sustainable water resources and provide flood protection. **Funding Types:** Stormwater and watershed projects. **Eligibility:** Local sponsor required; must provide regional water resource benefit.
FDEP - Water Quality Improvement Grant Program	State Grant	Not reported	Medium - Requires that the project is ready to proceed and nutrient removal calculations	Varies every year Open: July Due: August (approx.)	Up to 50% (may be waived for rural communities)	Stormwater retrofits; water quality improvements; runoff reduction projects; Peace River and watershed protection improvements	**Purpose:** To address wastewater, stormwater, or nutrient sources in waterbodies. **Funding Types:** Implementation grants. **Eligibility:** Projects must improve waters not meeting standards, TMDLs, or within BMAP/RAP areas.
Florida Commerce - Small Cities CDBG	Federal (State-administered)	Varies based on state allocation and project type	Medium	Annual	Typically none or low	Drainage infrastructure; roadside drainage improvements; utilities; neighborhood-scale stormwater improvements	**Purpose:** Community development and infrastructure improvements. **Funding Types:** Public infrastructure and utilities. **Eligibility:** Non-entitlement communities; must meet Low- and Moderate-income (LMI) benefit criteria.

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Table 13: Supporting Funding Opportunities (Can fund portions of AAA projects depending on eligibility and project type)

Funding Opportunity	Funding Type	Funding Available	Competitiveness	Application Cycle	Match Requirements	Project Recommendations	Additional Considerations
Federal Emergency Management Agency - Flood Mitigation Assistance (FMA)	Federal Grant	Varies annually based on NFIP prioritization	High - Application requires cost-benefit analysis	Open: September Due to FDEM: November FDEM submits: January	Typically 30%	Elevation of drinking water facilities; floodproofing of critical structures; targeted facility protection	**Purpose:** Reduce repetitive flood damage to buildings and infrastructure. **Funding Types:** Planning, Infrastructure, Mitigation Projects. **Eligibility:** Must benefit NFIP-insured properties; must be in LMS.
FDEP - Non-Point Source Funds (319 Grants)	Federal and State Grants	Awards vary	Medium - Requires that project is ready to proceed and nutrient removal calculations	Rolling / periodic cycles	40% non-federal match (i.e., 60% federal share maximum)	Stormwater retrofits; LID/green infrastructure; runoff reduction projects; watershed improve-ments	**Purpose:** Reduce nonpoint source pollution from land use activities. **Funding Types:** Implementation grants. **Eligibility:** Local governments and water management entities; must demonstrate pollutant reduction.
US DOT - PROTECT Program	Federal Grant	Not reported	High - Application process is lengthy and detailed	Open: April Due: August (approx.)	Implementation: 20% Planning: 0%	Evacuation route drainage im-provements (e.g., US 17); road-way flood mitigation; resilience upgrades	**Purpose:** Strengthen transportation systems against flooding and extreme weather. **Funding Types:** Planning and infrastructure. **Eligibility:** All levels of government; must tie to transportation resilience.
US DOT - Rebuilding American Infrastructure with Sustainable and Equity (RAISE)	Federal Grant	Awards vary from $5,000,000 to $25,000,000	High - Application requires cost-benefit analysis	Open: November Due: February (approx.)	Typically 20%	Roadway drainage improvements; multimodal infrastructure sup-porting flood resilience	**Purpose:** Support transportation projects with regional impact. **Funding Types:** Planning and capital. **Eligibility:** Must demonstrate significant local or regional benefit.
Florida Commerce - Rural Infrastructure Fund (RIF)	State Grant	Funding awarded up to $300,000 - varies based on project scope and state funding availability	Medium	Opens: July Closes: September	Typically none	Water, wastewater, stormwater, and transportation infrastructure	**Purpose:** Support infrastructure tied to economic development. **Funding Types:** Planning, design, engineering, construction. **Eligibility:** Rural communities; must demonstrate economic benefit.

(Funds planning, policy, and regulatory updates supporting AAA strategies)

Table 14: Planning & Policy Funding Opportunities

Funding Opportunity	Funding Type	Funding Available	Competitiveness	Application Cycle	Match Requirements	Project Recommendations	Additional Considerations
Florida Commerce - Community Planning Technical Assistance (CPTA)	State Grant	Up to $75,000	Medium	Varies every year Due: May	Typically none	Engineering standards manual; LID ordinance; FFE ordinance updates; development policies for reduced flood exposure	**Purpose:** Planning and policy development for resilience and growth management. **Funding Types:** Planning grants. **Eligibility:** Counties, municipalities, and RPCs.

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Table 15: Local Implementation Funding Source (Used to implement projects and meet match requirements)

Funding Opportunity	Funding Type	Funding Available	Competitiveness	Application Cycle	Match Requirements	Project Recommendations	Additional Considerations
DeSoto County CIP/ Annual Budgeting	Local Funding / Implementation	Varies annually based on County budget	Low	Annual budgeting	N/A	Local match funding; phased implementation of drainage, stormwater, and infrastructure projects	**Purpose:** Implement local infrastructure priorities. **Funding Types:** Capital projects. **Eligibility:** Determined by County priorities and budget.

Table 16: Loans/Financing Programs (Used for large capital projects where grant funding is insufficient; requires repayment)

Funding Opportunity	Funding Type	Funding Available	Competitiveness	Application Cycle	Match Requirements	Project Recommendations	Additional Considerations
EPA - Water Infrastructure Finance and Innovation Act (WIFIA)	Federal Loan	Not reported	High - Requires credit worthiness analysis, pro-formas and extensive review	Rolling (Letters of Interest accepted year-round)	Finances up to 49% of total project cost; requires application fee (which is used as a down payment for the loan)	Large WWTF upgrades; major stormwater systems; regional conveyance and channel improvements	**Purpose:** Large-scale water infrastructure. **Funding Types:** Low-interest federal financing for large-scale water infrastructure (design, construction, rehabilitation) **Eligibility:** Typically, >$20M projects; requires strong financial capacity. Application fee: $100,000 for most applicants and $25,000 for small communities (with population less than 25,000.)
Florida Commerce - Rural Community Development Revolving Loan Fund	State Loan	Varies based on project type	Medium	Rolling; Requests accepted quarterly	0% match; interest rates ~1-2.5%; up to 30-year terms	Water, wastewater, stormwater, generators	**Purpose:** Infrastructure projects. **Funding Types:** Low-interest state financing for infrastructure projects (planning, design, engineering, construction) **Eligibility:** Rural communities; repayment required.
USDA Rural Development	Federal Grant/ Loan	Varies by program and eligibility	Medium	Rolling / Annual	Varies	Water systems; public facilities; rural infrastructure	**Purpose:** Support infrastructure in rural communities. **Funding Types:** Loan and grant combinations for rural infrastructure (water, wastewater, public facilities) **Eligibility:** Rural areas; income thresholds apply.

Table 17: Additional Conditional Funding Opportunities (Not consistently available; dependent on disasters, special allocations, or timing)

Funding Opportunity	Funding Type	Funding Available	Competitiveness	Application Cycle	Match Requirements	Project Recommendations	Additional Considerations
FEMA - Hazard Mitigation Grant Program (HMGP)	Federal Grant	Available only after federally declared disaster	Medium-High	Post-disaster only	Typically 25%	Property acquisition; relocation; elevation; drainage improvements (retreat strategies)	**Purpose:** Post-disaster mitigation funding. **Funding Types:** Post-disaster mitigation grants (property acquisition, elevation, infrastructure mitigation). **Eligibility:** Only available after disaster; must be in LMS.
Florida Commerce - CDBG-MIT	Federal (State-administered)	Varies based on federal disaster allocation	High	Periodic / Program-specific	Varies	Regional drainage; large-scale mitigation infrastructure	**Purpose:** Long-term mitigation after disasters. **Funding Types:** Large-scale mitigation and infrastructure projects (state-administered federal disaster recovery funds). **Eligibility:** Only during active funding cycles.
FDOT Work Program	State Program	Not reported at project level; programmed by FDOT priorities	Medium	Annual	None	Roadway drainage improvements along state corridors (e.g., US 17)	**Purpose:** Maintain and improve state transportation infrastructure. **Funding Types:** State-programmed transportation and drainage improvements (not a competitive grant program) **Eligibility:** Limited to FDOT facilities.

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APPENDIX 1

DESOTO COUNTY IDENTIFICATION AND RANKING OF AAA - TECHNICAL MEMORANDUM

Under Separate Cover

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