

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
GRANT WORK PLAN
DEP AGREEMENT NO.: R2112

ATTACHMENT 3

I. TITLE PAGE

1. PROJECT TITLE: Planning for Resiliency

2. GRANTEE Contact Information:

Organization Name: Brevard County Board of County Commissioners

Name of Authorized Signer: Frank Abbate

Title: County Manager

Address: 2725 Judge Fran Jamieson Way

City: Viera

Zip Code: 32940

Area Code and Telephone Number: 321-633-2001

E-mail Address: Frank.Abbate@brevardfl.gov

3. GRANT MANAGER Contact Information:

Organization Name: Brevard County Planning and Development Department

Name: Jeffrey Ball

Title: Planning and Zoning Manager

Address: 2725 Judge Fran Jamieson Way, Building A-114

City: Viera

Zip Code: 32940

Area Code and Telephone Number: 321-633-2070

E-mail Address: Jeffrey.Ball@brevardfl.gov

4. FISCAL AGENT Contact Information:

Organization Name: Brevard County Natural Resources Management Department

Name: Robin Johnson

Title: Finance Manager

Address: 2725 Judge Fran Jamieson Way, Building A, Room 219

City: Viera

Zip Code: 32940

Area Code and Telephone Number: 321-633-2016

E-mail Address: Robin.Johnson@brevardfl.gov

5. FEID No. (a.k.a. Tax ID#): 59-6000523

Seq No. 206

6. WORK PERFORMED BY: (Select only one)

☐ Grantee ONLY
☒ Subcontractor ONLY
☐ BOTH the Grantee & Sub-Contractor
☐ To Be Determined

7. SUBCONTRACTORS CONTACT INFORMATION: *(If applicable & known)*

Organization Name: East Central Florida Regional Planning Council

Name: Tara McCue

Title: Director of Planning & Community Development

Address: 455 North Garland Avenue

City: Orlando

Zip Code: 32801

Area Code and Telephone Number: 407-245-0300 x327

E-mail Address: tara@ecfrpc.org

8. PROJECT LOCATION:

A. List of County(ies): Brevard County (unincorporated area)

B. List of City(ies)/Town(s)/Village(s): _____

C. State Lands Lease Agreement Number(s): N/A

Provide lease agreement number(s) for any work that will be performed on State Lands. If work will not be on any state lands, please indicate N/A.

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II. WORK PLAN

- 9. PROJECT SUMMARY:** This project is aimed at preparing Brevard County for resiliency through a robust process to include conducting a vulnerability analysis, engaging the public, and developing strategies and draft policies to enhance resilience which can then be implemented into the comprehensive plan. Project findings will aid in the preparation of comprehensive plan amendments as part of the County's current Evaluation and Appraisal Report update that will guide the decision-making process for future development, infrastructure projects and actions to support local economic growth and community resilience. Brevard County will partner with East Central Florida Regional Planning Council to achieve these goals.
- 10. PROJECT DESCRIPTION:** Climate change concerns have heightened the need to protect coastal communities against flooding and property loss resulting from increased severity of storm events and projected sea level rise. Coastal areas are especially vulnerable to the impacts of climate change as they are likely to experience increased flooding and storm surge due to extreme weather events, including tropical storms and rain-induced flooding. Additionally, projected sea level rise will subject beaches and coastal properties throughout the world to increased storm surge and erosion, while naturally protective coastal wetlands retreat landward. These issues, in combination with the continued rise in human population density in the coastal zone, highlight the necessity of significant planning and preparation to protect coastal communities from the effects of climate change, natural hazards and disasters.

Brevard County, a coastal community of nearly 600,000 people, is not unfamiliar to the tropical storm-related erosion and flooding challenges associated with coastal living. Bordered to the west by the Saint Johns River and to the east by the Atlantic Ocean, Brevard County extends 72 miles along Florida's eastern peninsula. Brevard County is also a majority stakeholder in the Indian River Lagoon (IRL), an estuary of national significance, containing over 70% of the IRL's area and nearly half its length. With hundreds of miles of beach, estuarine, and riverine shoreline, Brevard County faces increased risk to critical facilities, community assets, local/regional economics and the health/welfare of its residents as flooding and surge impacts become more common.

To prepare for the projected effects of climate change, it is imperative for local governments to take a comprehensive look at their vulnerabilities across multiple hazards, develop strategies to mitigate, adapt or retreat from impacts, and implement policies to guide decision-making process for future development, infrastructure projects and programs to assist economic growth and resilience. This project will prepare Brevard County for resilience by identifying the social, economic and functional vulnerabilities posed by natural hazards such as storm surge, flooding, projected sea level rise and shallow coastal flooding. The vulnerability assessment will provide a more comprehensive look than previously assessed through the Space Coast Transportation Organization's assessment of impacts on transportation infrastructure. This assessment will examine Brevard County's facilities, socio-demographics and land-uses that may be impacted by these hazards as well as new surge areas (using a tool developed by Tampa Bay Regional Planning Council for the ECFRPC and funded by FDEP) anticipated as a result from sea level rise. Community engagement during the project will help to identify additional concerns and facilitate discussion concerning future development and potential mitigation strategies. Policies drafted as a result of the outcomes of this project will aim to improve Brevard County's resilience to disasters consist with the intent of section 163.3178 of the Florida Statutes. The project will also work to align the Brevard County Comprehensive Plan with the recently completed Indian River Lagoon's Action Plan for Adaptation Planning and Risk-Based Vulnerability assessment to ensure allowance of implementation of identified strategies. Finally, the information derived from this process will be provided to the various municipalities and departments in the County including emergency preparedness, planning and development, utilities, natural resources, public works, solid waste, mosquito control and others to further incorporate strategies and principles into additional plans and processes.

11. PROJECT NEED AND BENEFIT:

- A. Explain the demonstrated need, which the project addresses.** Predicted increased occurrence, duration and intensity of storms and flooding associated with sea level rise threatens to impact vital infrastructure and resources in Brevard County. Frequent and prolonged flooding can result in malfunctioning drainage systems, insufficient stormwater storage, loss of access to facilities and economic losses to properties in the community and region (Council E. C., Space Coast Transportation Planning Organization Vulnerability Assessment, 2018).

To support collective efforts to make the region and state more resilient, Brevard County joined the East Central Florida Regional Resilience Collaborative in September 2019, as one of the counties in the East Central Florida region committed to implementing resilience measures as guiding principles for the future. As Brevard County is in the process of revising elements of its Comprehensive Plan, this proposed project provides a much-needed opportunity to broadly examine its vulnerabilities across hazards, develop strategies to reduce losses from flooding, and implement policies to guide decision-making processes for future development and redevelopment in Brevard County. This project will enable Brevard County to identify and incorporate sustainable solutions for the potential impacts from four natural hazards (i.e., storm surge, flooding, sea level rise and shallow coastal flooding) into guiding principles. By working with departments across the County to develop strategies and draft policies, outcomes of this project will increase resilience of the County's built and natural environment, economy, health and equity. A resilient Brevard County will not only benefit its current and future generations, but will also ultimately contribute to a stronger, more resilient region and state.

- B. Explain how the proposed project meets the purpose of one or more of the Goals and Priorities for FRCP.** This project meets the purpose of FRCP Priority 1: Coastal communities with a Coastal Management Element in their comprehensive plan can receive assistance in gaining compliance with the 2015 "Peril of Flood" requirements of Section 163.3178(2)(f) F.S.

Brevard County is currently in the process of revising its proposed Comprehensive Plan Amendment (DEO No. 17-3ER) to incorporate enhanced policies within the Coastal Management Element and Conservation Element to improve the County's resilience to flood hazards and disaster. The proposed project will enable Brevard County to formulate development and redevelopment principles, strategies and engineering solutions that address the "Peril of Flood" requirements in Section 163.3178(2)(f), Florida Statutes (implemented through the Brevard County Comprehensive Plan). Project goals will be accomplished through a robust process that includes a comprehensive vulnerability assessment, public engagement and draft policy development.

- C. Discuss how the project is feasible and can be completed by the grant period deadline.** Brevard County will contract with the East Central Florida Regional Planning Council (ECFRPC) who has expert staff familiar with the Peril of Flood requirements needed to address Section 163.3178 (2)(f) of the Florida Statutes. ECFRPC is experienced in resilience planning, having conducted vulnerability assessments for several municipalities in Brevard County since 2015 including the cities of Cape Canaveral, Cocoa, Melbourne Beach, Rockledge, Satellite Beach, and Titusville, as well as the Space Coast Transportation Planning Organization. ECFRPC staff possess the relevant knowledge and essential skills to complete the proposed project during the grant timeframe. The project team will also include Thomas Ruppert of Florida Sea Grant to provide technical legal expertise in the development of policies and strategies for the comprehensive plan. Finally, Randall Parkinson of RWParkinson, Inc. will assist in the development of strategies to ensure compatibility of the recently completed Indian River Lagoon's Action Plan for Adaptation Planning and Risk-Based Vulnerability assessment in which he was the primary contractor. Two main tasks will be completed by ECFRPC during this project: 1) Conduct a Vulnerability Assessment for Brevard County, and 2) Strategy and Policy

Development to satisfy the “Peril of Flood” requirements referenced above. Task 1 will begin upon project execution and finish on or prior to February 15, 2021. Task 2 will begin before completion of Task 1 and finish on or prior to April 30, 2021.

D. Explain how this project is addressing social vulnerability or vulnerability of historic resources or stormwater management systems. This project will identify the social, economic and functional vulnerabilities posed to the unincorporated areas of the County from hazards such as storm surge, flooding, projected sea level rise and shallow coastal flooding, as well as the combined impacts of projected sea level rise and storm surge. Historical resources and stormwater infrastructure, as available in GIS, will be assessed for vulnerabilities to these hazards. Using existing modeling such as Risk Finder and Mysidewalks, a socio-economic assessment will be conducted to determine demographics of highly vulnerable areas and populations. In addition, community engagement through an online community survey and public meetings will help to identify additional vulnerabilities and facilitate discussion concerning future development and potential strategies for mitigating vulnerabilities within the County. Draft policies developed as a result of the outcomes of this project will aim to improve Brevard County’s resilience to disasters and facilitate rapid post-disaster social and economic recovery actions.

12. DESCRIPTION OF PROJECT OUTCOMES: The over-arching goal of this project is to identify coastal vulnerabilities specific to the unincorporated areas of Brevard County, provide recommendations, and develop policies to minimize and mitigate the effects of flooding, sea level rise and storm surge. The outputs of Task 1 (including data, maps and report) that identify at-risk areas, facilities and resources will help Brevard County formulate strategies, best management practices, and engineering solutions aimed to increase resilience to flood hazard. Especially high-risk areas and areas with significant resources subject to flood hazard that may be identified during Task 1 will be further evaluated by Brevard County for consideration as Adaption Action Areas. Development and redevelopment principles produced through the completion of Task 2 will guide policy development to improve the County’s perseverance following disaster and will assist economic growth and business resilience. The ultimate outcome of the project will be enhanced community resilience through the integration of policies into the Coastal Management Element of Brevard County’s Comprehensive Plan that comply with “Peril of Flood” statute (Section 163.3178(2)(f) F.S.).

13. BUDGET SUMMARY: Allowable budget categories and form of payment with the costs for this project are listed in the table below.

BUDGET SUMMARY BREAKDOWN

Budget Categories	Payment	Task 1	Task 2	Grant Amount Awarded
Salaries & Fringe	Fixed Price	\$0	\$0	\$0
Contractual Services*	Fixed Price	\$35,000	\$35,000	\$70,000
GRANT AGREEMENT TOTAL		\$35,000	\$35,000	\$70,000

A. Describe how the project costs was determined: This cost was determined based upon factors including partnership expenses with Florida Sea Grant, RW Parkinson, Inc., and the costs associated with programs such as mySidewalk and online surveys, as well as meeting facilitation. Finally, the requested amount is also based on costs realized through similar projects in scope and adjusted for the scale of Brevard County data and facilities to be assessed.

B. Contractual Services Selection*: Upon a selected Sub-Contractor(s) (if applicable), the Grantee will Provide a signed certification statement giving a description of the procurement process that was utilized for the selection of the sub-contractors. The description must include:

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- a. What procurement process was utilized
- b. Justification as to how & why you made your final selection.
- c. For competitively obtained Sub-Contractor also include:
 - i. A list of all entities that you received bids/quotes from,
 - ii. Names and addresses of those entities that provided bids/quotes,
 - iii. Actual amounts of the bids/quotes that were submitted.

14. PROJECT TIMELINE: All tasks are to be completed and submitted no later than the task/deliverable due date listed in the table below. Requests for any change must be submitted prior to the current task/deliverable due date listed in the project timeline. Requests are to be sent via separate email to the Department's Grant Manager, with the details of the request being made and the reason for the request.

PROJECT TIMELINE

Task No.	Task Title	Deliverable Due Date	Task Amount
1	Vulnerability Assessment	02/15/2021	\$ 35,000
2	Strategy and Policy Development	04/30/2021	\$ 35,000
Total			\$70,000

15. PERFORMANCE MEASURES: The Grantee will submit all deliverables for each task via **one pdf document** to the Department's Grant Manager on or before the Task/Deliverable Due Date listed in the Project Timeline. The Department's Grant Manager will review the task/deliverables to verify that they meet the specifications in the Grant Work Plan and this task description, to include any work being performed by any sub-contractor(s). Upon review and written acceptance by the Department's Grant Manager of all deliverables under this task, the Grantee may proceed with payment request submittal.

16. CONSEQUENCES FOR NON-PERFORMANCE: The Department will reduce each Task Funding Amount by 5% for every day that the Deliverable(s) is not received on the specified due date in the most recent Project Timeline, for the Agreement. Should a Change Order or Amendment be requested on the date of or after the most current Deliverable Due Date, the 5% reduction of that Task Funding Amount will be imposed until the date of the requested change is received, via email by the Department.

17. PAYMENT REQUEST SCHEDULE: Grantee may submit a request for the Task Funding Amount to be paid using the Exhibit C, after all Deliverables for that Task have been approved by the Department. Request(s) for payment must include the Exhibit A showing 100% completion of that Task and must be submitted within 45 days of the Deliverable Due Date. Please refer to the [website Grants page](#) for "How to Request Payment", and "Checklist for Requesting Payment".

Or

Grantee may submit one request for the Grant Amount Awarded, by using the Exhibit C, after the project is 100% completed. The request for the Grant Amount Awarded, must include an Exhibit A showing 100% completion for all Tasks, and must be submitted within 45 days of the Deliverable Due Date.

18. FUNDING SOURCE: Grantee agrees to include on all publications, printed reports, audiovisuals (including videos, slides, and websites except that unless required under special terms of this Agreement, this requirement does not apply to audiovisuals produced as research instruments or for documenting experimentation or findings and which are not intended for presentation to the general public) or similar materials must include the DEP logo (which can be found on the Department's website at

<https://floridadep.gov/resilience> or by contacting the Department's Grant Manager for a copy) and the following statement on, the following language.

"This work was funded in part through a grant agreement from the Florida Department of Environmental Protection, Florida Resilient Coastlines Program, by a grant provided by the Office of Resilience and Coastal Protection. 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."

The next printed line shall identify the month and year of the publication.

III. TASKS & DELIVERABLES

Task #1

A. Title: Vulnerability Assessment

B. Goal: 1) identify the current and historic areas within Brevard County that are at-risk to flooding, storm surge and coastal inundation; 2) identify areas vulnerable to projected sea-level rise and anticipated new surge areas; and 3) identify assets of concern in the community. These goals will be achieved by conducting a vulnerability assessment and engaging the community through a public survey and public meetings to identify areas, facilities, and resources at risk to flood hazard within the County.

C. Description: Task 1 will analyze Brevard County's social, economic and functional vulnerability to current and future flooding resulting from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of projected sea level rise. For this project, Task 1 will build on a previous vulnerability assessment completed for the Space Coast Transportation Planning Organization (TPO) in 2018 by the East Central Florida Regional Planning Council (ECFRPC) that focused specifically on assets that contribute to transportation functionality within Brevard County. Cross-departmental collaboration during this project will augment the TPO study, adding appropriate data (e.g., floodplain data, areas of known nuisance flooding, recent drainage studies) and additional analyses where gaps are identified to best evaluate all areas, facilities and resources within unincorporated Brevard County. To maintain regional consistency, this project will utilize the East Central Florida Regional Resilience Action Plan's recommended approach to planning for sea level rise. Future sea level rise inundation impacts will be assessed at baseline planning horizons (2040, 2070 and 2100) utilizing U.S. Army Corps of Engineers (USACE) and National Oceanographic Atmospheric administration (NOAA) projection rate curves.

Community engagement during Task 1 will include conducting an interactive online public survey and presentation of findings at public meetings. The goal of the public survey is to assess community values regarding assets of concern in Brevard County that may be affected by flooding or projected sea level rise and potential strategies to mitigate such hazards. ECFRPC will present the results of the public survey along with findings of the vulnerability assessment at a minimum of two public meetings in Brevard County to gather additional information and comments.

Deliverables will include two written reports - a Vulnerability Analysis Report and a Public Engagement Report. The Vulnerability Analysis Report will incorporate the data and analyses produced by the vulnerability assessment, provide narrative descriptions and include maps showing at least two sea level rise scenarios in conjunction with current flooding events during high tide, storm

surge, flash floods, and stormwater runoff, as appropriate. The Public Engagement Report will summarize results of the interactive online public survey and also include sign in sheets from at least two public meetings, summaries of public comments and copies of any materials presented.

D. Deliverable(s): The Grantee will submit all deliverables for each task via **one pdf document** to the Department's Grant Manager on or before the Task/Deliverable Due Date listed in the Project Timeline.

- 1) Vulnerability Analysis Report
- 2) Public Engagement Report including:
 - a. Copies of announcements/advertisements of public workshops/meetings
 - b. Agendas and sign-in sheets from each workshop/meeting, indicating location, date, and time of workshop/meeting
- 3) Presentation(s) from each workshop/meeting
- 4) Brief summary report from each workshop/meeting including attendee input and workshop/meeting outcomes
- 5) Any materials created at each workshop/meeting (as applicable)
 - a. Results from online survey

Task #2

A. Title: Strategy and Policy Development

B. Goal: Develop strategies, principles, and engineering solutions to minimize impacts to facilities and resources identified during Task 1 as at-risk to flood hazard. Outputs will be integrated into draft policies that enhance resilience in Brevard County and can be implemented through comprehensive plan amendments compliant with 163.3178(2)(f) F.S. (Peril of Flood).

C. Description: Task 2 will focus on developing strategies and engineering solutions to minimize impacts of flood hazard to facilities and resources and improve community's resilience to disasters. Based on community values and Brevard County's capacity to act, including available and projected fiscal resources, draft policies that guide the decision-making process for future development, infrastructure projects and programs to assist local economic growth and community resilience will be developed for implementation in the comprehensive plan.

Specifically, draft proposed comprehensive plan amendments in strike-through and underline format will be produced through cross-departmental collaboration based on the information and data obtained through the vulnerability assessment and public engagement. The development of the amendments will also be based on strategies and input from RW Parkinson, Inc. to ensure compatibility with the actions and recommendations in the Indian River Lagoon Action Plan. Legal expertise from Florida Sea Grant will also be utilized to provide input from other locales, legal interpretations, guidance and other relevant input. Proposed amendments will include a minimum of four (4) examples each of strategies, principles, and related engineering solutions that reduce flood risk in coastal areas of Brevard County, and a minimum of four (4) site development techniques that may reduce losses to the local government and property owners due to coastal flooding.

Additionally, Draft policies and proposed comprehensive plan amendments resulting from findings of this project will be developed in coordination with Community Planning and Growth staff at the Florida Department of Economic Opportunity (DEO) to ensure consistency with Peril of Flood requirements needed to address Section 163.3178 (2)(f) 1., 2., and 3. of the Florida Statutes.

D. Deliverable(s): The Grantee will submit all deliverables for each task via **one pdf document** to the Department's Grant Manager on or before the Task/Deliverable Due Date listed in the Project Timeline.

- 1) Draft proposed comprehensive plan amendments in strike-through and underline format in electronic (pdf) format including a minimum of four (4) examples each of strategies, principles, and related engineering solutions that reduce flood risk in coastal areas of Brevard County, and a minimum of four (4) site development techniques that may reduce losses to the local government and property owners due to coastal flooding.