

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
GRANT WORK PLAN
DEP AGREEMENT NO.: R1811

ATTACHMENT 3

Project Title: Resilient Planning for the Future of the City of Rockledge

Grantee Contact Information

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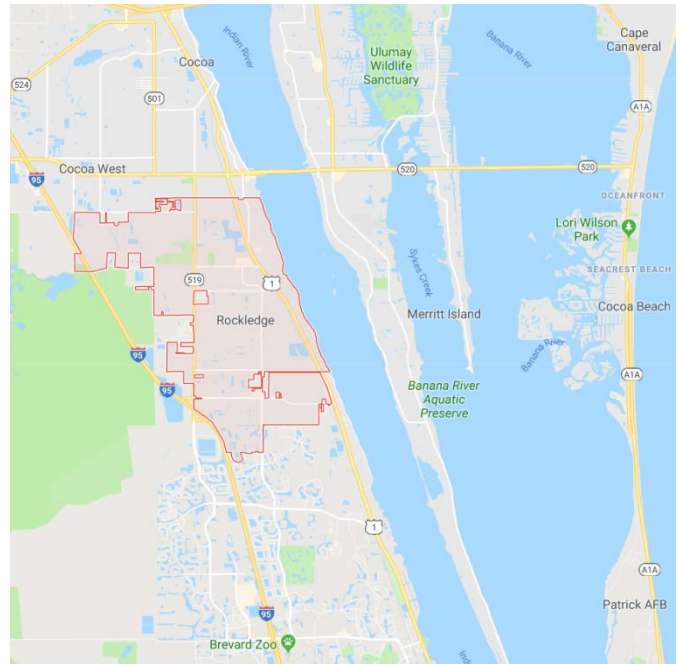
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Resilient Planning for the Future of the City of Rockledge

1. Project Location:

The City of Rockledge is Brevard County's First City, established in 1887, and is located along the intercoastal waterway of Brevard County, Florida. The City encompasses 11.5 square miles with an estimated 2018 population of 26,882. The city is within close proximity to Cape Canaveral, Port Canaveral, Cocoa Beach, NASA, Patrick Air Force Base and Canaveral Air Station. There are three major north-south roadways (U.S. 1, Fiske Boulevard/S.R.519, and Murrell Road), as well as an Interstate 95 interchange. These are major thoroughfares within the City that serve as, or connections to, emergency evacuation routes. While Rockledge is situated on the Indian River, it also contains some of the higher coastal areas in the county potentially making it a prime location for future population migration.

The City of Rockledge is a full-service community which provides law enforcement, fire and advanced medical life support, solid waste and recycling collection, building/permitting services, wastewater and water reclamation, stormwater management, and a Public Works Department. Rockledge contains numerous commercial centers, Rockledge Regional Medical Center, six public schools and three private schools. In addition, Professional & Business Services; Trade, Transportation & Utilities; Education & Health Services; and Construction are the main industries driving Rockledge's economy. A more resilient Rockledge is crucial to the safety and economic vitality of Central Space Coast residents, businesses, and visitors, especially as some areas begin to experience increased flooding and residents begin to look for higher ground.



2. Work Plan

Project Abstract:

This project is aimed at helping the City plan for resiliency through a variety of different means, such as, data and policy development, community engagement and vulnerability analysis, which can then be implemented into the comprehensive plan. The City has a goal to develop a Sustainability Plan, in which the findings of this work will help guide, as well as to plan for relocating vulnerable populations while avoiding or mitigating stormwater flooding issues.

The primary goals of this proposal are to perform a vulnerability analysis focused on sea level rise, floodzones, nuisance flooding and storm surge with a special focus on stormwater infrastructure; evaluate the City's Comprehensive plan and Stormwater Plan to identify strategies to enhance community resiliency; develop data, maps, analysis, goals, objectives and policies necessary to comply with the Peril of Flood Statute; and engage stakeholders through online surveys to obtain input on priorities and strategies for the future of the City and the implementation of a sustainability resiliency plan. The findings will aid in the preparation and process of comprehensive plan amendments as part of the City's current Evaluation and Appraisal Report (EAR) update process required by F.S. 163.3178 (2)(f) and will guide the decision-making process for future development, infrastructure projects and programs to assist local economic growth and business resilience. The City will partner with a variety of different agencies to achieve these goals.

Project Description:

The proposed project is comprised of several different, but related activities.

The first component is to develop the required Peril of Flood statute language. The City and its partners propose to develop visualizations of current and future flood risk through three existing data sources: 1) FEMA’s Digital Flood Insurance Rate Maps (DFIRMs), which provide outlines of the regulatory “100-year” floodplain and other flood risk categories for federal flood insurance; 2) NOAA’s Sea Level Rise Viewer tool, which provides estimates of frequent or “nuisance” tidal flooding under current and future conditions; and 3) storm surge modeling, with methods previously developed by the Tampa Bay Regional Planning Council, that evaluate new storm surge impacts as sea levels rise. A vulnerability assessment using these data and parameters will evaluate facilities critical to City function, health and safety, and evacuation support, as well as roadway facilities and land uses.

In addition, preliminary assessments by the City and its partners indicate that current and future vulnerabilities to current and planned stormwater infrastructure, including stormwater infrastructure located outside the City with hydrologic connections to the City’s stormwater systems, is one of the most critical links. The project team proposes to work in cooperation with the City’s Public Works Department and Floodplain Manager to develop enhanced data regarding existing and possible future vulnerabilities within the City’s stormwater system. This enhanced data will include solicitation of staff and public input to identify specific locations where road flooding currently occurs, as well as collation and collection of site-level location and elevation data for stormwater structures in areas identified as priority concern by staff and public input. The site-level data will be obtained through available survey and as-built information held by the City. In cases where such archival data may not be available, field collection will be performed using a precision GPS unit (iGage X900S-OPUS – GNSS). Field collected GPS location and elevation data will be collected by Stetson University in cooperation with the City’s Floodplain Manager and post-processed by Stetson University through the NOAA National Geodetic Survey Online Positioning User Service (OPUS).

Through this proposal, the project team will conduct two workshops and an online survey to engage citizens in a conversation about the future resilience of the City. The survey will focus on strategies to plan for the City’s response to resilience, which would include planning for relocating vulnerable populations, stormwater issues and develop a Sustainability Plan.

In partnership with UCF, the project team will systematically assess and test the quality, breadth, and depth of the City’s comprehensive plan, stormwater plan and other plans if determined applicable to the project, to determine the capacity of the plans to aid in the resiliency of the City. Research from the planning discipline highlights the importance of land use decisions and planning in implementing resiliency, sustainability, and hazard mitigation principles.

3. Budget Summary

	Grant
AGREEMENT TOTAL	\$ 55,000

Categories	Task 1	Task 2	Task 3	Task 4	Task 5	TOTAL BY CATEGORY
Contractual	\$14,350	6,800	17,050	11,000	5,800	55,000
SUB-TOTAL BY TASK	\$14,350	6,800	17,050	11,000	5,800	55,000

Salary Details

The work associated with this project will be contract to the ECFRPC who will subcontract with Stetson and UCF.

- 4. Project Timeline:** The tasks must be completed by the corresponding task end date and all deliverables must be received by the designated due date.

Task	Deliverable	Start Date	End Date	Deliverable Due Date	Amount
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1	Stakeholder Engagement – 2 workshops (agendas, sign in sheet, summary, presentations if applicable); survey findings report	1/1/2019	6/1/2019	6/15/2019	\$14,350
2	Vulnerability Assessment report to include text, maps, and figures/charts; GIS database	1/1/2019	6/1/2019	6/15/2019	\$6,800
3	Stormwater Assessment to include report and GIS database	1/1/2019	6/1/2019	6/15/2019	\$17,050
4	Plan Assessment and Strategy Report	1/1/2019	6/1/2019	6/15/2019	\$11,000
5	Peril of Flood goals, objectives, and policies with related data and figures.	1/1/2019	6/1/2019	6/15/2019	\$5,800

Tasks & Deliverables

Task 1

Title: Stakeholder Engagement

Description: Staff will conduct two workshops and an online survey to engage citizens in a conversation about the future resilience of the City. The first workshop will discuss the project, vulnerability findings, and conduct exercises to obtain information on strengths, opportunities and issues in the City as related to resilience and the future of the City. The team will then conduct the online survey to focus on values and priorities, and strategies to plan for the City's response to resilience, which would include planning for relocating vulnerable populations and stormwater issues. The final workshop will bring back the results of the survey and project findings to the community, and work to fill gaps or next steps as identified through the process.

Deliverables: 2 workshops (agendas, sign in sheet, summary, presentations if applicable); survey findings report.

Due Date: June 15, 2019

Funding Amount: \$14,350

Performance Measure: The Department will review the deliverable(s) to ensure it meets the specifications provided in the Task Description, above.

Task 2

Title: Vulnerability Assessment

Description: Assess the regional recommendation for sea level rise. The City will also utilize other data from NOAA to assess the potential for frequent or "nuisance" flooding as well as FEMA data and modeling previously developed from the Tampa Bay Regional Planning Council which evaluates new storm surge impacts as sea levels rise. A vulnerability assessment using these data and parameters will evaluate facilities critical to City function, health and safety, and evacuation support, as well as all roadway facilities, land use and social.

Deliverables: Provide the vulnerability assessment report to include text, maps, and figures/charts; GIS database

Due Date: June 15, 2019

Funding Amount: \$6,800

Performance Measure: The Department will review the deliverable(s) to ensure it meets the specifications provided in the Task Description, above.

Task 3

Title: Stormwater Assessment to include report and GIS database

Description: Develop enhanced stormwater GIS data to include staff and public observations of existing street flooding issues, elevation data for outfalls into the Indian River Lagoon and other priority structures, and a preliminary tidal backflow analysis using available stormwater infall elevation data. Provide planning and technical guidance into how future updates to the City's Stormwater Plan might include considerations about future hydrologic conditions, especially how sea-level rise can be expected to reduce the volumetric discharge capacity of current infrastructure with direct surface water connections into the Indian River Lagoon system.

Deliverables: Stormwater Plan report to include text, maps, and figures/charts; GIS database

Due Date: June 15, 2019

Funding Amount: \$17,050

Performance Measure: The Department will review the deliverable(s) to ensure it meets the specifications provided in the Task Description, above.

Task 4

Title: Plan Assessment and Strategy Report

Description: Two coders, trained students under the supervision of Dr. Claire Knox, will utilize a three-point coding mechanism from 0 to 2 generated from previous research (i.e., Brody, 2003; Tang et al. 2008; Knox, 2017). The students will code the selected plans to systematically assess at least 50 indicators within 5 components: Factual Basis; Goals and Objectives; Inter-organizational Coordination and Capabilities; Policies, Tools, and Strategies; and Implementation and Monitoring (see Table 1 for a description of each component).

Table 1: Description of Core Components

Component	Description
Factual Basis	Quality is dependent upon maps, videos, tables, checklists, and detailed plans and is critical in setting the direction for well-informed goals and policies.
Goals and Objectives	Specify ways to create a vision and evaluate its components in terms of thoroughness, clarity, long-term mindset, consistency, implementation strategies, and adoption protocols. Must value population safety, property, and the environment.
Policies, Tools and Strategies	Incorporates the actual means to realizing the goals and objectives. May include development regulations, land and property acquisition, information dissemination, and building standards.
Inter-organizational Coordination	Incorporate steps to ensure cooperation among specified levels of government, neighboring jurisdictions, and applicable agencies and organizations.
Implementation and Monitoring	Indicators include clarity of schedule, allocation of resources, and frameworks for program and process evaluation.

In addition to the results of this empirical analysis, Dr. Knox and her team will provide detailed recommendations for addressing any weaknesses or contradictions in the existing plans as a way to move forward in updating or modifying these plans.

Deliverable: Findings report with recommendations for Core Components for plan assessment and strategy.

Due Date: June 15, 2019

Funding Amount: \$11,000

Performance Measure: The Department will review the deliverable(s) to ensure it meets the specifications provided in the Task Description, above.

Task 5

Title: Peril of Flood Comprehensive Plan Language

Description: Develop goals, objectives and policies with related data and figures for compliance to the Peril of Flood act. Data and figures will be derived from the vulnerability analysis. Additional recommendations for policy language may be included for other areas of the plan based upon findings from Task 4 and the language developed for Task 5.

Deliverables: Peril of Flood goals, objectives, and policies with related data and figures.

Due Date: June 15, 2019

Funding Amount: \$5,800

Performance Measure: The Department will review the deliverable(s) to ensure it meets the specifications provided in the Task Description, above.