

**AMENDMENT NO. 1
TO AGREEMENT NO. CM837
BETWEEN
FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
AND
CITY OF NEW SMYRNA BEACH**

This Amendment to Agreement No. CM837 (Agreement) is made by and between the Department of Environmental Protection (Department), an agency of the State of Florida, and City of New Smyrna Beach, 210 Sams Avenue, New Smyrna Beach, Florida 32168, (Grantee), on the date last signed below.

WHEREAS, the Department entered into the Agreement with the Grantee for the City of New Smyrna Beach to work with the East Central Florida Regional Planning Council to educate and engage its residents and businesses in the conversation of resiliency, effective September 4, 2018; and

WHEREAS, the parties wish to amend the Agreement as set forth herein due to the determination that it is necessary to extend the project period ending date to June 30, 2019; and

NOW THEREFORE, the parties agree as follows:

- 1) The Agreement is extended for a 6-month period to begin January 1, 2019, and remain in effect until June 30, 2019. The Department and the Grantee shall continue to perform their respective duties during this extension period pursuant to the same terms and conditions provided in the Agreement.
- 2) Attachment A, Project Work Plan, is hereby deleted in its entirety and replaced with Attachment A-1, Revised Project Work Plan, as attached to this Amendment and hereby incorporated into the Agreement. All references in the Agreement to Attachment A shall hereinafter refer to Attachment A-1, Revised Project Work Plan.
- 3) All other terms and conditions of the Agreement remain in effect. If and to the extent that any inconsistency may appear between the Agreement and this Amendment, the provisions of this Amendment shall control.

The parties agree to the terms and conditions of this Amendment and have duly authorized their respective representatives to sign it on the dates indicated below.

City of New Smyrna Beach

By: _____

Title: _____

Date: 12/5/18

**Florida Department of
Environmental Protection**

By: _____

Secretary or Designee

Date: 12/13/18

LIST OF ATTACHMENTS/EXHIBITS INCLUDED AS PART OF THIS AMENDMENT:

<u>Specify Type</u>	<u>Letter/Number</u>	<u>Description</u>
Attachment	A-1	Revised Project Work Plan (7 pages)

ATTACHMENT A-1

REVISED PROJECT WORK PLAN

Project Title: 2018FRCP-ECFRPC-NEW SMYRNA BEACH

Grantee

Organization Name: City of New Smyrna Beach
Chief Elected Official or Agency Head: Jim Hathaway
Title: Mayor
Address: 210 Sams Ave.
City: New Smyrna Beach
Zip Code: 32168
Area Code and Telephone Number: 386-410-2600
Area Code and Facsimile Machine Telephone Number:
E-Mail Address: jhathaway@cityofnsb.com

Project Manager

Organization Name: City of New Smyrna Beach
Name: Amye King
Address: 210 Sams Ave.
City: New Smyrna Beach
Zip Code: 32168
Area Code and Telephone Number: 386-410-2600
Area Code and Facsimile Machine Telephone Number:
E-Mail Address: aking@cityofnsb.com

Fiscal Agent

Organization Name: City of New Smyrna Beach
Name: Althea Philord
210 Sams Ave.
City: New Smyrna Beach
Zip Code: 32168
Area Code and Telephone Number: 407-410-2600
Area Code and Facsimile Machine Telephone Number:
E-Mail Address: aphilord@cityofnsb.com

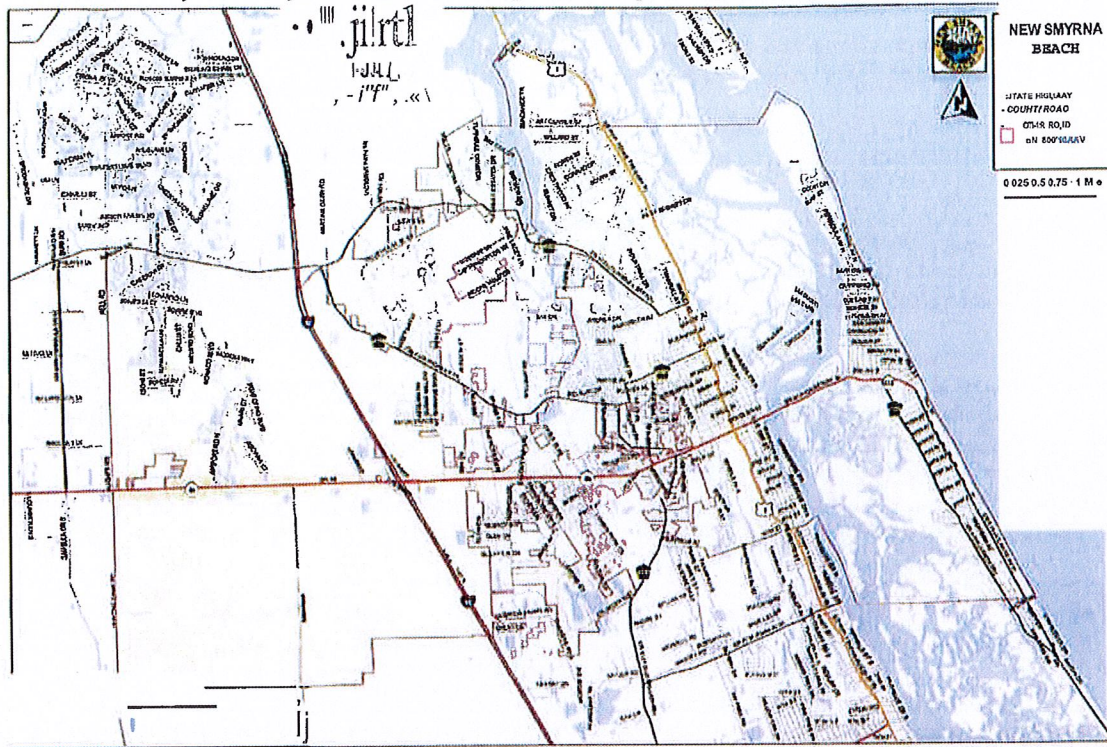
Mailing Address for Warrant (if other than the Grantee address):

FEID No.: 59-0993342

DUNS No.: 039893771

Location: This project will take place in New Smyrna Beach, a City of approximately 26,000 people located in Volusia County, Florida. The incorporated area of New Smyrna Beach is approximately 41.1 square miles. This includes portions of an Atlantic barrier island and popular oceanfront beaches, as well as coastal mainland areas that drain into the Indian River and Halifax River estuary complex. The northeastern boundary of the City is Ponce Inlet, which connects the Indian River and Halifax River to the Atlantic Ocean. Much of the western portions of New Smyrna Beach drains into Turnbull Bay, which is a sub-estuary system hydrologically connected into the Halifax River.

The key industry for the City is hospitality (hotels and restaurants) and retail sales, with both sectors indicating the strength of tourism in the City. New Smyrna Beach is well-recognized as a top surfing destination and has been ranked by National



Geographic as one of the top twenty surf towns in the world.¹ It is also recognized as a place for the arts and has been listed as among the top 100 small art towns in America.² The City also has a significant number of jobs in health care (Florida Hospital New Smyrna is the single largest employer in the City with over 600 employees) and construction. In addition, real estate and transportation related employment are strong. All of these sectors are prominent in location quotient listings, which identify the concentration of different industry sectors in the city to a larger reference group such as the county. The City also has a tower-controlled municipal airport, the back-up to Daytona International. The industrial area surrounding the airport is home to a full-service machine shop and several manufacturers, as well as several aircraft repair businesses.

Project Description:

The primary goal of this grant is for the City of New Smyrna Beach to work with the East Central Florida Regional Planning Council to educate and engage its residents and businesses in the conversation of resiliency. The East Central Florida Regional Planning Council and the City of New Smyrna Beach will partner with Stetson University's Institute for Water and Environmental Resilience, the University of Central Florida and Florida Sea Grant to develop background data and analyses to facilitate resilience discussions within the community. The public engagement activities will utilize cutting edge technologies to support the collection of input from diverse citizenry in an effort to drive current and future objectives of the City for policy and project development and identification of priorities, risks, vulnerabilities, and opportunities for resilience building within the City. This input will combine with a quantifiable assessment of the City's

¹ <http://www.news-journalonline.com/article/LK/20120718/News/605065000/DN/>

² <https://visitsnbfl.com/explore/arts-and-culture>

policies and plans as they relate to ensuring resiliency to hazards and changing climate conditions to power a final public presentation and workshop that will help guide the decision-making process for future development, infrastructure projects and various programs within the City.

Through this grant, the project team will:

- 1) Engage the residents and businesses in the City through online survey and public workshops to enhance education on vulnerabilities and obtain input on priorities, policies and resiliency and adaptation strategies for implementation
- 2) Conduct a vulnerability analysis and develop GIS Visualizations for public education and engagement as related to sea level rise, frequent or "nuisance" flooding and the 100-year coastal flood areas with rising sea levels;
- 3) Assess local plans as to capacity to plan for and implement resiliency strategies and identify strategies to enhance community resiliency as provided through research, best practices and public input.

Community literacy and engagement plays an important role in a City's quest to become more resilient. Literacy and engagement require understanding vulnerabilities and the capacity that current plans and policies have in planning for and implementing strategies that enhance resiliency in the community. For this reason, the ECFRPC, the City of New Smyrna Beach, Stetson University, the University of Central Florida and Florida Sea Grant will focus on increasing climate literacy, assessing capacity and identifying vulnerabilities and recommendations within the City through dissemination of educational materials, community workshops, on-line survey opportunities, GIS analysis and visualization techniques, and a specialized plan assessment methodology.

As a response to Hurricane Irma, the City began developing a framework to implement "12 Months of Resiliency" in 2018. This framework is intended to engage department staff, residents, businesses and other stakeholders about various aspects of resiliency, including disaster preparedness and response. This proposal is timely in that it will provide necessary information and engagement opportunities to enhance the conversation and begin to provide direction and assessment for the City staff. The efforts of this proposal will tie directly into the direction the City as it begins the discussion of resiliency. The public engagement process will transfer the ideas, lessons learned, and methodology established in the successful DEP Coastal Partnership Initiative funded pilot project "Community Resiliency in the City of Satellite Beach" to the City of New Smyrna Beach. Through the DEP CPI grant used in the City of Satellite Beach, the ECFRPC was able to forge essential and rewarding partnerships which have motivated other resiliency projects through the City of Satellite Beach. With the commitment of the City of New Smyrna Beach and the partnerships that the DEP grants help to promote, the City is in a position, through this grant, to accomplish more in one year than many communities have done to date in the State of Florida.

Through this proposal, staff will coordinate with the City to participate in at least two workshops with stakeholders and staff to discuss vulnerabilities and gather input about concerns, opportunities, and needs which will be used for inclusion in the MetroQuest parameters, or other online survey platform.

The outcome of the engagement tool will help the City to develop proposed strategies, priorities and efforts to address resiliency and actionable steps. These will form the core of the presentation at the final workshop. The presentation, in turn, will then lead into a discussion of considerations of technical feasibility, community character, fiscal impacts, public policy, and possible legal constraints inherent in the options presented.

Technical Methodologies

Using the regional framework established by the DEP funded City of Satellite Beach project, the project team will utilize the UF GeoPlan Sea Level Sketch Planning Tool to determine impacts to the City relative to the U.S. Army Corps of Engineers (USACE) projection rate curves. The team will also utilize NOAA's shallow coastal flooding layers to assess the potential for frequent or "nuisance" flooding, as well as data from the pilot project conducted by the ECFRPC, funded by FDEP, to assess coastal flooding from the 100-year storm plus inundation projections for 2040, 2070 and 2100 utilizing a minimum of the USACE High and maximum curve to be determined by the City. A vulnerability assessment using these data and parameters will assess facilities critical to City function, health and safety, and evacuation support, as well as all roadway facilities, land use and social characteristics to help identify social vulnerabilities to better assist in public services and response.

The full facilities inventory and vulnerability assessment will be compiled into a final report to include tables, charts, maps and text that follows a format similar to previous vulnerability assessments developed by Dr. Jason Evans for several

communities in the Florida Keys³ and Coastal Georgia.⁴ Undergraduate student workers trained in geographic information systems (GIS) methods by Dr. Evans at Stetson University will work in coordination with the ECFRPC to develop facility inventories and base GIS datasets. Technical flood analyses and specific infrastructure adaptation recommendations for consideration by the City of New Smyrna Beach will be developed by Dr. Evans and ECFRPC in coordination with the City's floodplain managers, stormwater engineers, and planning officials. This will continue an ongoing partnership between Stetson undergraduate interns and ECFRPC that has spanned multiple resilience-based projects for communities in Volusia and Brevard counties over the past three years.

To be truly effective to engage and educate the public about vulnerabilities and to use the information in messaging, visualization of the information in an easy to understand format is important. This is where ESRI's story maps and 3D visualization tools can be utilized. The project team will create at least one story map to tell the story of the data, analysis, findings and strategies. Additional visualization techniques may also be used in addition to the story map. Stetson University undergraduate students and Dr. Evans will work with ECFRPC to assist in development of the story map visualizations.

Finally, in partnership with UCF, the project team will systematically assess and test the quality, breadth, and depth of the City's comprehensive 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. Multiple case studies from Florida, Louisiana, Texas, and California conclude that plans often include policies and strategies that work against the resiliency and recovery efforts of a jurisdiction. In fact, the primary weakness of the analyzed plans is in the Policies, Tools, and Strategies component. This is why it is important to ensure that the plans are compatible and begin to promote strategies and practices that support resiliency and sustainability across the City. This lack of consistency in local government planning can contribute to exacerbating the negative effects of a disasters, as witnessed in the gulf coast states during hurricanes Katrina, Rita, and most recently Harvey.

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.

³ Evans, J.M. 2015. Village of Islamorada: GIS Vulnerability Assessment for Sea Level Rise Planning. Islamorada: Planning and Development Services Department. DOI: 10.13140/RG.2.1.3009.4326.

Evans, J.M. and C. Bergh. 2016. Sea Level Rise Vulnerability Assessment for Monroe County, Florida. Technical Appendix in Support of the GreenKeys Sustainability and Climate Action Plan. Key Largo: Monroe County Sustainability Program. DOI: 10.13140/RG.2.1.1198.3447/1.

⁴ Evans, J.M., J. Gambill, R.J. McDowell, P.W. Prichard, and C.S. Hopkinson. 2016. Tybee Island Sea-Level Rise Adaptation Plan. Athens: Georgia Sea Grant. DOI: 10.13140/RG.2.1.3825.9604/1.

Gambill, J., M Russell, K. Spratt, J. Whitehead, M. Alfonso, C.S. Hopkinson, and J.M. Evans. 2017. St. Marys Flood Resiliency Plan. Athens: Georgia Sea Grant. DOI 10.13140/RG.2.2.11257.26723.

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. The findings of this methodology and analysis will be included as a supplement to the final report with a summary section of major findings and recommendations included in the body of the final report. This will ensure that the City has all necessary information in one location.

Finally, using the resiliency portal developed by the ECFRPC and through other grant mechanisms, www.pelilofflood.org, the final repolis and links to the story maps will be made available for continued transference to other communities and public education. The City will have the ability to access these online services.

Total Budget Summary:

	Grant
AGREEMENT TOTAL	\$ 74,000

TOTAL GRANT FUNDS

Categories	Task 1	Task 2	TOTAL BY CATEGORY
Contractual	\$40,650	\$33,350	\$74,00
S UB-TOTAL BY TASK	\$40,650	\$33,350	\$74,000

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 No.	Task or Deliverable Title	Task Start Date	Task End Date	Deliverable Due Date/ Frequency	Amount
1	Workshop, final project report with appendixes, with links and story map per task 1	Upon Execution	5/15/19	5/31/19	\$40,650
2	GIS database, project poster, story map, plan methodology, vulnerability assessment, summary of local plan per task 2	Upon Execution	5/15/19	5/31/19	\$33,350

All materials created will include DEP, NOAA, and FCMP logos. A sample or electronic version is required to be sent to angel.baratta@floridadep.gov or 3900 Commonwealth Blvd, MS 235, Tallahassee, FL 32399-3000, to receive prior approval from the FCMP Administrator. (See paragraph 27(A) of the grant agreement for details.)

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Task 1 Description: Public Engagement and Policy Development: Engage the residents and businesses in the City through online survey and public workshops to enhance education on vulnerabilities and obtain input on priorities, policies and resiliency and adaptation strategies for implementation.

The project team will work with the City to review input from the current "12-months of resiliency" program to identify trends in comments, issues, etc. to help from the workshops to not repeat conversations but to move them further to resolution. Staff will coordinate with the City to participate in at least two workshops with stakeholders and staff to discuss vulnerabilities and gather input about concerns, opportunities, and needs which will be used for inclusion in the MetroQuest parameters, or other online survey platform. This survey platform will be made available to the community for engagement. The results of the survey will be compiled into a report and presented at a workshop. Strategies for implementation and policy recommendations will be developed based on the results of the survey and also through collaboration with the UF team on their findings from the assessment of the comprehensive plan.

The outcome of the engagement tool will help the City to develop proposed strategies, priorities and efforts to address resiliency and actionable steps. These will form the core of the presentation at the final workshop.

This information will be provided in a final report that will integrate all the deliverables into one report. The public engagement results will serve as an appendix to the report, while the process and recommendations and strategies will be developed in the main body of the report.

Deliverable:

Workshop agendas, sign-in sheet, presentations and summaries.

Final project report to include summary of public engagement process; major findings of engagement including survey summary; summary of comprehensive plan analysis; recommendations for strategies and policy development; vulnerability assessment. Appendixes will include full public survey results and detailed comprehensive plan analysis information and data.

Incorporate reports and links to the story map on the Peril Of Flood website for access across the state.

Due Date/Frequency/Performance Period: May 31, 2019

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

Funding for Task

Category	Grant Funds
Contractual:	\$40,650
TASK TOTAL:	\$ 40,650

Task 2 Description: This task will be ongoing in order to provide visualizations/maps with various public engagement activities and utilize the information from the comprehensive plan assessment to guide discussion on policy and strategy ideas.

The team will also utilize NOAA's shallow coastal flooding layers to assess the potential for frequent or "nuisance" flooding, as well as data from the pilot project conducted by the ECFRPC to assess coastal flooding from the 100-year storm plus sea-level rise rate curve inundation projections for 2040, 2070 and 2100, utilizing a minimum of the USACE High and maximum curve to be determined by the City. A vulnerability assessment using these data and parameters will assess facilities critical to City function, health and safety, and evacuation support, as well as all roadway facilities, land use and social characteristics to help identify social vulnerabilities to better assist in public services and response.

The full facilities inventory and vulnerability assessment will be compiled into the final report (Task I) to include tables, charts, maps and text.

The project team will create at least one story map to tell the story of the data, analysis, findings and strategies. Additional visualization techniques may also be used in addition to the story map.

The project team will work with the city to identify local plans or sections of the comprehensive plan to assess as to capacity to plan for and implement resiliency strategies and identify strategies to enhance community resiliency as provided through research, best practices and public input. Using a three-point coding mechanism selected plans will be

coded 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. Additionally, detailed recommendations for addressing any weaknesses or contradictions in the existing plans as a way to move forward in updating or modifying these plans will be developed and included in the final report. The findings of this methodology and analysis will be included as a supplement to the final report.

Deliverable:

GIS database of final GIS files

Project poster for use at workshops

Minimum of 1 story map

Plan methodology and analysis supplement report (appendix)

Vulnerability Assessment as chapter in final project report

Summary of local plan assessment and recommendations as chapter in the final report

Final project report (Task 1).

Due Date/Frequency/Performance Period: May 31, 2019

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

Funding for Task

Category	Grant Funds
Contractual:	\$33,350
TASK TOTAL:	\$ 33,350

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