

**DEP AGREEMENT NO. R1911
CHANGE ORDER NO. 002**

GRANTEE

Martin County Board of County Commissioners
2401 SE Monterey
Stuart, FL 34996

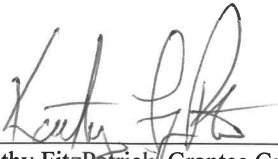
DEP Agreement No. **R1911** as entered into on the 15th day of August 2019, and as amended, is hereby revised as follows:

1. **Attachment 3, Grant Work Plan, Project Timeline** is hereby deleted in its entirety and replaced with the following:

Task No.	Task Title	Deliverable Due Date	Funding Amount
1	Kickoff Meeting/ Internal Engagement/ Data Owner Identification	10/10/2019	\$6,800
2	Gap Analysis for data collection/inventory/analysis	12/15/2019	\$10,000
3	External public engagement	06/08/2020	\$17,600
4	Vulnerability Analysis with Resiliency Plan development and CRS submittal	06/08/2020	\$40,600
Total			\$75,000

All other terms and conditions of the Agreement shall remain unchanged.

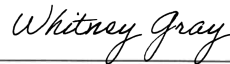
MARTIN COUNTY BOCC



Kathy FitzPatrick, Grantee Grant Manager

Date: 2-6-2020

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Whitney Gray, DEP Grant Manager

Date: _____

DEP AGREEMENT NO. R1911
CHANGE ORDER NO. #1

GRANTEE

Martin County Board of County Commissioners
2401 SE Monterey
Stuart, FL 34996

DEP Agreement No. R1911 as entered into on the 21st day of August 2019, is hereby revised as follows:

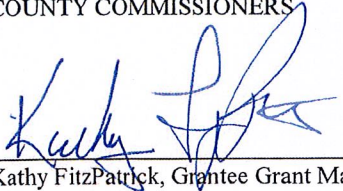
1. **Attachment 3, Grant Work Plan, 5. Project Timeline** is hereby deleted in its entirety and replaced with the following:

PROJECT TIMELINE

Task No.	Task Title	Deliverable Due Date	Funding Amount
1	Kickoff Meeting/ Internal Engagement/ Data Owner Identification	10/10/2019	\$6,800
2	Gap Analysis for data collection/inventory/analysis	12/15/2019	\$10,000
3	External public engagement	04/30/2020	\$17,600
4	Vulnerability Analysis with Resiliency Plan development and CRS submittal	04/30/2020	\$40,600
Total			\$75,000

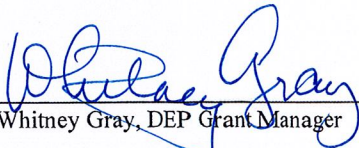
All other terms and conditions of the Agreement shall remain unchanged.

MARTIN COUNTY BOARD OF
COUNTY COMMISSIONERS


Kathy FitzPatrick, Grantee Grant Manager

Date: 8-29-19

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


Whitney Gray, DEP Grant Manager

Date: 8/30/19

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
GRANT WORK PLAN
DEP AGREEMENT NO.: R1911**

ATTACHMENT 3

Project Title: Resilient Coastlines Program

Grantee

Organization Name: Martin County Board of County Commissioners

Chief Elected Official or Agency Head: Taryn Kryzda

Title: County Administrator

Address: 2401 SE Monterey Rd

City: Stuart

Zip Code: 34996

Area Code and Telephone Number: 772 288 5400

E-Mail Address: tkryzda@martin.fl.us

Project Manager

Organization Name: Martin County Board of County Commissioners

Name: Kathy FitzPatrick

Address: 2401 SE Monterey Rd

City: Stuart

Zip Code: 34996

Area Code and Telephone Number: 772 288 5429

E-Mail Address: kfitzpat@martin.fl.us

Fiscal Agent

Organization Name: Martin County Board of County Commissioners

Name: Jennifer Manning

Address: 2401 SE Monterey Rd

City: Stuart

Zip Code: 34996

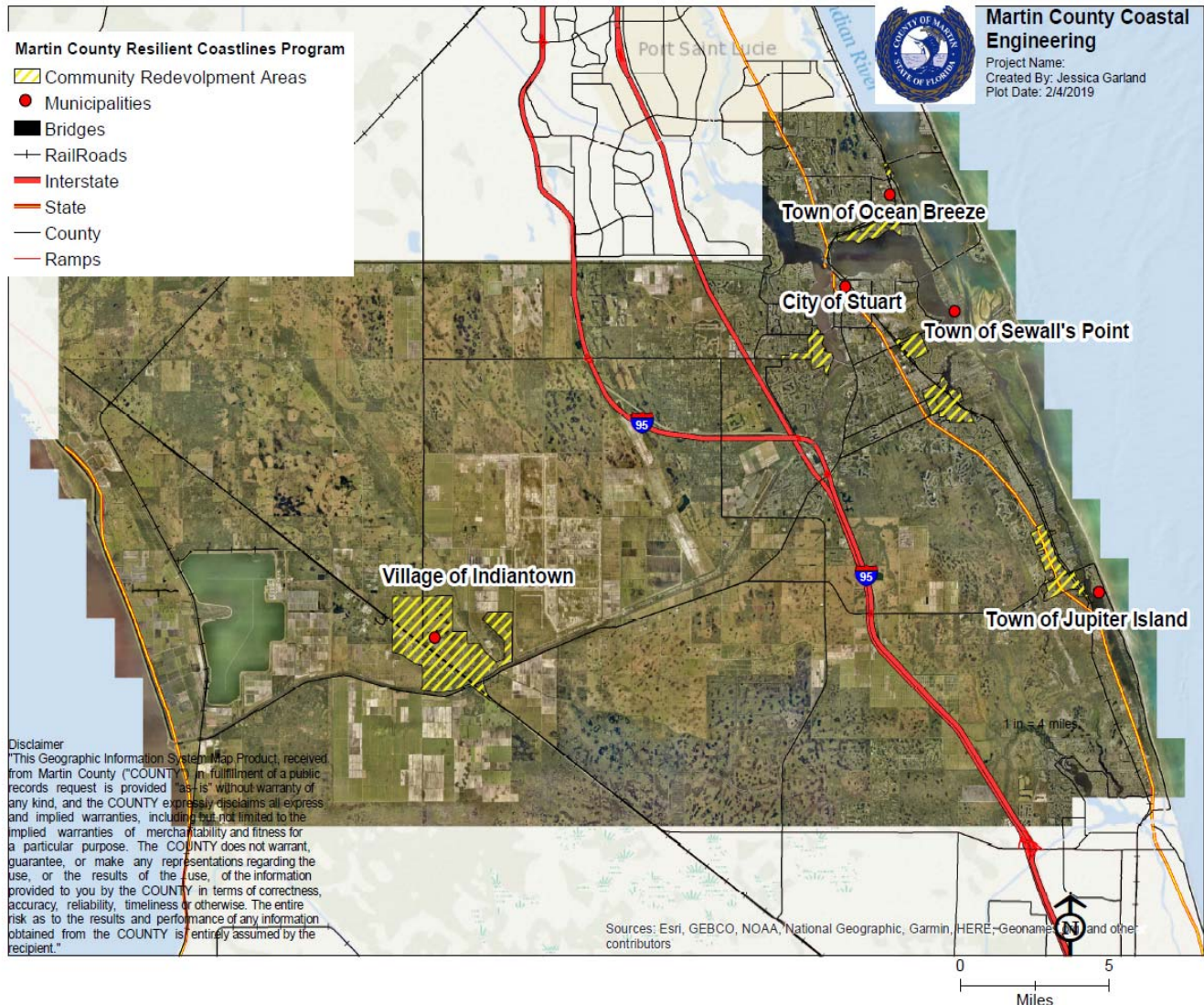
Area Code and Telephone Number: 772 288 5400

E-Mail Address: jmanning@martin.fl.us

FEID No.: 59-6000743

DUNS No.: 0713045620000

Location: Martin County, FL



WORK PLAN

- 1. Project Summary:** The proposed work continues Martin County's effort toward increased resiliency by conducting a vulnerability assessment. Work completed under grant #CM933 provided the foundation for the proposed vulnerability assessment and resiliency plan that will guide County capital improvements planning as well as fulfill the Community Rating System's sea level rise component for watershed master plan. The effort will include implementation strategies to improve future resiliency. Internal staff workshops and interviews will provide information necessary to coordinate diverse projects. Community meetings will inform the public about the potential for impacts (along with adaptation and mitigation options) to the natural and built environment.
- 2. Project Description:** Martin County is located immediately north of the Southeast Florida Compact Counties (Monroe, Miami-Dade, Broward and Palm Beach). Their work has provided the County with relevant examples of sound planning efforts with demonstrable results in this region. Martin County has also benefitted from prior state grant assistance (grant #CM933) for work (Phase 1) that moved the County toward sound planning efforts by establishing the technical basis necessary to now focus on sea level rise, coastal/tidal flooding, coastal erosion and shifting ecosystems and coordinate County responses through a comprehensive resiliency program. Work products also identified the

linkages between future sea level rise and opportunities to improve the County's score in FEMA's Community Rating System (CRS). The County is interested in building on this initial effort by leveraging resources (both expertise and funding) from the Coastal Resiliency Office, in combination with County staff, other agencies and subject matter experts, to continue this effort. Peril of Flood policies already incorporated in the Coastal Management Element of the Comprehensive Growth Management Plan, supports the County's efforts to address tasks identified in this proposal. Recommendations to improve and expand this language will be a work product from this project.

Critical decisions regarding the management of water – changing precipitation patterns and events, sea level rise, Lake Okeechobee releases – frequently face County leaders. Resiliency planning now requires that communities plan for future climate change impacts and disaster recovery. Martin County is requesting grant funds to update a 2010 vulnerability analysis and develop a Martin County vulnerability assessment with a resiliency plan. This analysis will provide an overview of the types of known and anticipated impacts from climate change and develop recommendations for consideration in future decision making. The work will use Phase 1 products (in particular mapping) to model the future conditions in coastal communities, low lying western communities, natural areas, areas with significant capital projects, vital infrastructure, mosquito prone areas and chronic flooding areas. Anecdotal knowledge of “problem areas,” impacts from Lake Okeechobee releases and years with extreme precipitation events will also be factored into the analysis. A climatological analysis of future precipitation patterns and events, being conducted in support of the County's Lake Okeechobee Regulation Schedule review, will be a valuable asset when addressing flooding in low lying areas in western communities. This proposed work is necessary to develop strategies that not only meet the needs of our community today but also pave the way for a resilient future.

Additionally, the work will conduct analysis and produce materials required to satisfy the Community Rating System Credit (CRS) 452.b and meet the requirement to address the 2100 intermediate high condition for sea level rise (Section 404 Guidance, CRS Coordinator's Manual). Points available in this category are sufficient to improve our CRS rating and will provide a clear near-term, tangible benefit to County residents' flood insurance rates.

Additionally, the vulnerability analysis with a resiliency plan will include an implementation strategy with recommendations that focus on strategies that may be implemented by Comprehensive Plan, Code and policy recommendations. This approach assures that the vulnerability analysis with a resiliency plan will integrate into current and future policy decision-making structures for planning, capital improvements, land acquisition and maintenance and other service delivery.

All work and work products will be shared with the municipalities in Martin County. While no formal agreements accompany this proposal, the City of Stuart has expressed keen interest in resiliency and working with the County toward that end. All municipalities in the County will be informed of this project and potential collaborations will be considered.

Public meetings during the process, and at the conclusion, will promote interest and awareness in the community. Information made available through the County website and on MCTV (Martin County's television station) will be accessible at all times. Work with school and civic groups, typically through living shoreline volunteer events, will increase knowledge of the challenges posed by a changing climate and foster buy-in for adaptation strategies required to meet those challenges.

The County will fulfill the tasks through a combination of in-kind services provided by County staff and contracted services.

3. Project Need and Benefit:

- a. Explain the demonstrated need, which the project addresses.

The southeast Florida region, including Martin County, has long been recognized as area that has acute and inherent vulnerabilities to climate-related hazards. The local climate naturally experiences wide variability that historically has included periods of extended drought and water shortages, periods of intense rain and associated threats of flooding, and severe wind and storm surge flooding associated with powerful hurricane strikes. Recent patterns indicate these events are becoming more pronounced, which increases the impacts that require additional County response. While the development of Southeast Florida over the past 100 years has been made possible by infrastructure and engineering interventions that have made our communities largely resilient to prior climate variability, it is widely acknowledged that accelerated climate change occurring now, and in the future, will require substantial adaptation of the region's infrastructure and built environment over the next several decades and beyond.

Sea-level rise is one of the most immediate and clear climate change stressors affecting communities within the Southeast Florida region. Martin County has many miles of direct ocean, estuarine, river coastlines and marsh habitats that are fundamentally at risk, along with infrastructure and natural lands. The County's infrastructure and natural resources serve communities and important resilience functions that stand to be severely impacted by future weather and climate variability. These areas also pose significant concerns for long-term floodplain management. The potential to increase and improve the County's existing living shoreline program will be an integral part of this investigation.

Martin County has the ability, and a demonstrated desire, to plan more resiliently for the future. Martin County has already begun to see the impacts from sea level rise and unpredictable weather patterns. This is manifested in nuisance flooding that is increasing in frequency and severity, extreme coastal erosion, recurring drainage issues, water quality degradation, ecosystem shifts and health impacts from mosquito borne illnesses – intensified by flooding and drainage issues. A direct outcome of work underway by the County is recognition of the added value from project management collaboration and efficient communication. This benefit can be created and enhanced through a vulnerability assessment with a resiliency plan.

b. Explain how the proposed project meets the purpose of one or more of the Goals and/or Priority Areas for the funding source you are applying for.

This scope of work addresses Resiliency Planning Grant Goal (or Priority Areas) 1 and 3.

The proposed project meets the purpose of Goals (or Priority Areas) 1 and 3 for Resiliency Planning Grants. The County has already successfully amended its Comprehensive Plan to include amendments that satisfy Section 163.3178(2)(f), F.S., but through the assistance of DEP's Resiliency Planning Grant funds, the County has also begun developing the technical basis to update the Coastal Element based on more accurate and precise data collection and vulnerability planning. Through its previous award, the County was able to develop a technical basis for its sea level rise projections, establish linkages with scenarios that will be accepted by the Community Rating System, and complete a high-level tabular identification of infrastructure at risk for low, medium and high timeframes. This proposed project will build on that information to create a vulnerability analysis with resiliency plan (and implementation framework) that will include recommendations for implementation within the Comprehensive Plan, Code and supporting policies.

Goal 1: Compliance with "Peril of Flood" statute (Sec. 163.3178(2)(f) F.S.) for communities with a Coastal Management Element in their comprehensive plan. Process components of Goal 1 included within this scope of work are:

1. Conducting a vulnerability assessment using publicly available, reliable data to identify coastal areas that are vulnerable to current and future flooding which results from high-tide events, storm surge, flash floods, stormwater runoff, and the related impacts of sea level rise. A minimum of 2 sea

level rise scenarios should be evaluated. Communities in Southeast Florida are advised to use the Southeast Florida Regional Climate Change Compact Unified Sea-Level Rise Projections.

2. Preparing a written report that incorporates the data and analysis produced by the vulnerability assessment, providing narrative descriptions and maps.
3. Conducting public meetings in the subject community to present the findings of the vulnerability assessment and to gather additional information and comments.

Goal 2: Vulnerability Assessments, Adaptation Plans or Resilience Plans other than that necessary for compliance with Peril of Flood requirements.

Using the sea level rise projections adopted in Phase 1 (which are those of the Southeast Florida Regional Climate Compact given the shared hydrologic watershed), a vulnerability analysis with a resiliency plan will determine the extent that hazards like sea level rise and general flooding may impact various elements of the County. In previous grant work, the County has developed 1) its sea level rise projections, 2) some basic sea level rise mapping, 3) a blueprint for how to integrate its sea level rise efforts with FEMA's Community Rating System and 4) a basic analysis on infrastructure vulnerability risk and timeframes (in tabular format). The vulnerability assessment with a resiliency plan will build upon this work and identify countywide vulnerabilities through modeling that will be enhanced with local and institutional knowledge. Map series will be developed with the use of models, including but not limited to, ADCIRC, the Sea Level Rise Scenario Sketch Planning Tool, SLAMM and comparable programs for adopted future scenarios consistent with those from previous grant work. For a series of future conditions based on projections used in Phase 1, the maps will show areas that are inundated (vulnerable) and the magnitude of that inundation in the future. A deeper dive into the data will pinpoint specific built or natural resources that are located within those vulnerable areas. Overlaying this information with institutional knowledge and documented recurring impacts, a vulnerability assessment with a resiliency plan will be formulated to identify strategies that address anticipated threats, and develop a prioritization for the resulting projects. This type of planning document will satisfy FEMA requirements for watershed planning in Credit 452.b of the Community Rating System. To date, no such plans have been developed and successfully submitted in Florida to receive this credit; therefore, its importance as a planning tool for other communities cannot be overstated.

Recently, Martin County has established a "resiliency group" with staff representing a wide range of departments and divisions. This has already improved lines of communication and information transfer necessary for efficient resiliency planning. As a result of these meetings, there has been interest in investigating additional peril of flood language, and other policy development, that would expand on the elements already in place. This effort would be one component of the implementation strategy identified in the vulnerability assessment with a resiliency plan. A goal of a future initiative is likely to be establishing Adaptation Action Areas, or a similar concept, based upon the vulnerability assessment with a resiliency plan, using criteria such as clustering of priority projects, impacted evacuation zones, identification of important natural resource areas that serve resiliency functions, the extreme importance of a single project or other standards. A vulnerability assessment with a resiliency plan would aid in determining the location of proposed Adaptation Action Areas, such as highly exposed, eroding shorelines throughout the County that are growing increasingly vulnerable to sea level rise. Living shoreline restoration projects would be a beneficial component in supporting coastal resiliency, protecting valued public lands, and preparing for increased coastal erosion from sea level rise.

- c. Discuss how the project is feasible and can be completed by the Deadline.
The project will be completed by June 19, 2020 as required for RPG projects.

County staff is prepared to move forward with this work upon contract execution and will begin preparatory work upon notice of pending award. The consultant selection process will be initiated upon notice of pending award so that a team is under contract and ready to proceed when the funds are available.

4. **Budget Summary:** Allowable budget categories and costs for this project are listed in the table below.

FIXED PRICE Grant Amount Awarded	\$75,000
<i>County's Funding Contributions</i>	<i>\$50,000</i>
AGREEMENT TOTAL	\$125,000

Martin County recognizes that total project costs will exceed the \$75,000 in grant funds requested. The estimated cost for this work is \$125,000. The County will assume responsibility for the additional \$50,000 needed to complete the project in the final deliverable.

5. **Project Timeline:** All tasks are to be completed and submitted no later than the Deliverable due date listed in the table below. Request for any change must be submitted prior to the current deliverable due date listed in the project timeline. Request 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	Funding Amount
1	Kickoff Meeting/ Internal Engagement/ Data Owner Identification	08/30/2019	\$6,800
2	Gap Analysis for data collection/inventory/analysis	11/15/2019	\$10,000
3	External public engagement	04/30/2020	\$17,600
4	Vulnerability Analysis with Resiliency Plan development and CRS submittal	04/30/2020	\$40,600
Total			\$75,000

6. **Performance Measure:** The Department's Grant Manager will review the 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. All deliverable documents must be provided in an electronic downloadable format.
7. **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.
8. **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.

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.

TASKS & DELIVERABLES

Task #1

A. Title: Kickoff Meeting/ Internal Engagement/ Data Owner Identification

B. Description: The requirements of this deliverable ensure the consultant (team) has a full understanding and agreement on scope specifications and coordinate project implementation through regular meetings with the County's project team (staff) to coordinate data needs, access staff expertise, engage internal stakeholders, and finalize deliverables. Specifically, the team will work with staff to develop the baseline analysis, goals, strategies to chart progress and a tracking methodology. 1 internal workshop is anticipated as part of this task for scope verification and identification of data sources.

Making sure stakeholders are engaged in the process is important for the development of an actionable plan. Common approaches to sustainability planning often miss the importance of internal engagement from County staff, departments and elected leadership. Only focusing on the external community stakeholders often misses the opportunity to develop the organizational commitment which is critical to not only launch but to maintain and implement the planning effort over time. The internal stakeholders are also the ambassadors of the effort and on the front line of communications with the constituency.

C. Deliverables: Copies of the notes from the kick-off workshop meeting, and listing of all determined data sources.

Task #2

A. Title: Gap Analysis for data collection/inventory/analysis

B. Description: This task addresses data collection and inventory development for both existing and future data requirements. It includes identifying data needs, potential sources and assisting with data compilation from public and private entities and builds on what the County has already collected. The data collection approach includes vulnerability, planning and capital project data. Other regional data sources may be helpful and will be reviewed for the year the data was collected and the accuracy of the data. All data currently available, needed and potentially valuable for future planning efforts will be identified and summarized in a Gap Analysis Memorandum that will be available for project and future use. A key component of the Gap Analysis will be to develop recommendations to streamline vulnerability data management in the future. This will simplify future updates to the Vulnerability Analysis and the Resiliency Plan.

C. Deliverables: Gap Analysis Memorandum with identification of existing data sources, those that can or cannot be generated within the scope and their necessity and recommendations for future data management to continually integrate best available data into County decision-making.

Task #3

A. Title: External public engagement

B. Description: Public outreach and education is a multi-faceted approach and includes community and business stakeholder meetings focusing on Community Redevelopment Areas (CRA) many having unique resiliency challenges, commission presentations, website development, social media, video – via the Martin County television station. There are 7 CRAs in Martin County, and presentations will be made at a minimum of four CRA meetings (four different CRAs), one tourism board meeting, the Stuart/Martin Chamber of Commerce and at least 1 commission meeting for a total of at least eight public meetings. Website content will be updated with new information as necessary, and information will be made available through the County Facebook and Twitter accounts.

C. Deliverables:

- 1) Providing the agenda, sign-in sheets, meeting notes, and presentation materials being used for each meeting held.
- 2) Website content for project
- 3) Social media content for all public meetings

Task #4

A. Title: Vulnerability Analysis with Resiliency Plan development and CRS submittal

B. Description: This task will include draft and final deliverables of the vulnerability assessment with the resiliency plan (and implementation strategy). There will be 1 round of comments from the County's internal Resiliency Group and a public comment period towards the end of the project. Coordination with FEMA on the submittal will be ongoing throughout the duration of the project to ensure the document meets the requirements of Credit 452.b for the Community Rating System. The plan will include an implementation strategy with recommendations for integration with the Comprehensive Plan, Code and any additional necessary policies for development.

C. Deliverables:

- 1) Draft of Vulnerability Analysis with Resiliency Plan.
- 2) Map series with vulnerable neighborhoods, capital infrastructure, natural areas and components to be determined by project team.
- 3) Plan Implementation Strategy with Comprehensive Plan, Code and policy recommendations.
- 4) Notes from coordination calls/web-based presentations with FEMA as necessary to hone project documents for CRS Credit submittal.
- 5) Final Vulnerability Analysis with Resiliency Plan with full graphical layout and integration of comment responses.
- 6) Project management meeting notes from each Bi-Monthly meeting held, from execution of the agreement to its completion.
- 7) 1 Board of County Commissioners meeting at the end of project, providing the agenda, sign-in sheets, meeting notes, and presentation materials being used for the meeting.