

**DEP AGREEMENT NO. R1908
CHANGE ORDER NO. 001**

GRANTEE

Village of Bal Harbour
655 96th Street
Bal Harbour, FL 33154

DEP Agreement No. **R1908** as entered into on the 30th day of December 2019, is hereby revised as follows:

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

PROJECT TIMELINE

Task No.	Task Title	Deliverable Due Date	Funding Amount
1	Council Presentation & Public Workshop – Introduction	01/08/2020	\$15,000
2	Inundation Modeling and Economic Impact Analyses	06/01/2020	\$45,000
3	Council Presentation & Public Workshop – Vulnerability Study Results	06/03/2020	\$15,000
Total			\$75,000

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

VILLAGE OF BAL HARBOUR

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION


Jorge Gonzalez, Grantee Grant Manager

Whitney Gray, DEP Grant Manager

Date: 3/18/2020

Date: _____

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
GRANT WORK PLAN
DEP AGREEMENT NO.: R1908**

ATTACHMENT 3

Project Title: Inundation and Economic Vulnerability Study

Grantee Contact Information:

Organization Name: Village of Bal Harbour
Authorized Signer for the Organization: Jorge Gonzalez
Title: City Manager
Address: 655 96th Street
City: Bal Harbour
Zip Code: 33154
Area Code and Telephone Number: (305)866-4633
E-mail Address: jgonzalez@balharbourfl.gov

Grant Manager Contact Information:

Organization Name: Village of Bal Harbour
Name: Jorge Gonzalez, City Manager
Address: 655 96th Street
City: Bal Harbour
Zip Code: 33154
Area Code and Telephone Number: (305)866-4633
E-mail Address: jgonzalez@balharbourfl.gov

Fiscal Agent Contact Information:

Organization Name: Village of Bal Harbour
Name: John Oldenburg, Public Works Director
Address: 655 96th Street
City: Bal Harbour
Zip Code: 33154
Area Code and Telephone Number: (305)993-7436
E-mail Address: joldenburg@balharbourfl.gov

FEID No.: 59-6000271

DUNS No.: _____

PROJECT LOCATION: The Village of Bal Harbour is located in Miami-Dade County, Florida. The Village sits on a barrier island between Haulover Beach and Sunny Isles Beach to the north, Surfside to the south, the Atlantic Ocean to the east, and Biscayne Bay to the west. A jetty separates the Village of Bal Harbor from Haulover Beach, and 96th Street (or Interstate 922) separates the Village from Surfside. The Village maintains an area of approximately 240 acres, and oversees approximately 4,500 linear feet of shoreline. The Village supports a vibrant beach community, consisting of a healthy beach and dune system, alongside a community of residential condominiums and retail.



Latitude/Longitude: 25.887309, -80.126769

WORK PLAN

- 1. Project Summary:** The grant-funded project proposes to conduct Inundation Modeling in order to determine the flooding risks for the Village of Bal Harbour associated with various interval storms (25-, 50-, and 100-year storms) and associated with increases in sea level elevations (over the next 20, 40, and 60 years). Using the results of the Modeling Analysis and the property valuation information, the project will analyze the potential economic impact associated with the aforementioned inundation scenarios. Public workshops and Council meetings will be held prior to and after the completion of the Study, to promote feedback from stakeholders.
- 2. Project Description:**
The Village of Bal Harbour is working toward development of a Resiliency Strategic Plan. They have engaged Coastal Systems International as staff support for the Village's fledgling coastal management and resiliency program. A three-year path has been outlined to bring the Village through the planning and analysis needed to generate their Resiliency Strategic Plan. This grant request is for one aspect of the multi-year effort – vulnerability mapping. The proposed Vulnerability Study will assess the Village's vulnerability to sea level rise and storm surge under various future scenarios and perform an economic impact assessment of the cost of doing nothing. Public engagement will bookend the project.

3. Project Need and Benefit:

EXPLAIN THE DEMONSTRATED NEED, WHICH THE PROJECT ADDRESSES.

a) The Village of Bal Harbour is an upscale community on a barrier island in South Florida. The Village is surrounded by water on three sides – the Atlantic Ocean to the east, Bakers Haulover Inlet to the north, and the Intracoastal Waterway to the west. Publicly available vulnerability mapping indicates that the Village will experience flood conditions in certain hot spots within the Village within the next 40 years, see below Figure. With severe storms and flooding events anticipated to increase over the next several decades, the Village recognizes the need to increase its resiliency and protect its assets.

NOAA Sea Level Rise Viewer



As the sea level rises two to three feet, the Village of Bal Harbour will begin to experience the impacts of flooding throughout their centrally located streets. The inundation will decrease the transportation potential within the Village and will disrupt municipal services. At four feet of sea level rise, access ways will experience significant flooding and will impede access to the beach, one of the Village's key amenities. Emergency evacuation routes will also be inundated, as a result of the increased sea level elevation.

The Village of Bal Harbour is looking to substantially increase their level of resiliency by preparing Village-specific vulnerability maps that include not just sea level rise but also storm surge and the related level of economic damage that could be expected with these future scenarios. The mapping and economic analysis will serve as the basis of the next project phase – adaptation planning (not included in this grant request).

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.

b) The Village's 1989 Comprehensive Plan includes a Coastal Management Element that is no longer suited for the foreseeable challenges associated with projected sea level rise. In addition, the existing Coastal Management Element does not currently comply with the 2015 "Peril of Flood" requirements (163.3178(2)(f) F.S.), as the Plan was last revised over two decades prior. This grant request addresses FDEP's Priority Area 1.

Per Priority Area 1.1, a Vulnerability Study will be conducted using publicly available data to determine the inundation impacts associated with sea level rise over time and in relation to various return-interval storms. Per Priority Area 1.3, the project proposes to conduct meetings with each the Village Council and the general public, to garner feedback and to keep all relevant stakeholders informed of the analysis.

A presentation will be made before the Village Council in advance of or in conjunction with a public workshop, which will provide a review of the Village's resilience efforts thus far (beach maintenance, dune enhancement, stormwater upgrades, etc.) and the next steps toward production of a Resilience Strategic Plan. The public workshop aims to gather feedback from stakeholders (residents and businesses) on their resiliency goals/expectations, and is intended to ensure that the public has an awareness of future inundation risks related to sea level rise and storm surge, what will (and will not) be analyzed in the Vulnerability Study, and ways in which Florida communities are handling adaptation and mitigation. The project proposes to conduct Inundation Modeling in order to determine the flooding risks for the Village associated with various interval storms (25-, 50-, and 100-year storms) and associated with increases in sea level elevations (over the next 20, 40, and 60 years). Using the results of the Modeling Analysis and the property valuation information, the project will analyze the potential economic impact associated with the aforementioned inundation scenarios. The second round of Council and public meetings will serve as a summary and presentation of the map series with discussion on the information gathered throughout the proposed project. The results of the economic impact analysis will serve as the basis for discussions on adaptation measures.

DISCUSS HOW THE PROJECT IS FEASIBLE AND CAN BE COMPLETED BY THE DEADLINE (JUNE 19, 2020 / DECEMBER 31, 2020).

c) This grant request is for a discrete project that can be entirely performed by the contracted staff to the Village and is estimated to take less than the time allotted under the grant. In 2018, a similar analysis was done by the same staff for another community in Miami-Dade County and presented at the 2018 Chamber Environmental Resource Permitting Summer School conference in Marco Island. The Village already has a good deal of data that enables such a study.

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

FIXED PRICE	Grant Amount Awarded
AGREEMENT TOTAL	\$ 75,000

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. 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	Funding Amount
1	Council Presentation & Public Workshop – Introduction	01/08/2020	\$15,000
2	Inundation Modeling and Economic Impact Analyses	04/01/2020	\$45,000
3	Council Presentation & Public Workshop – Vulnerability Study Results	04/03/2020	\$15,000

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.

TASK & DELIVERABLES

Task #1

A. Title: Council Presentation & Public Workshop – Introduction

B. Description: A critical part of resiliency planning for the Village is public outreach. The Vulnerability Study will benefit from achieving a shared understanding of stakeholder concerns and goals related to coastal resilience into the future. The public outreach begins with an introduction to the Vulnerability Study which will include Inundation Modeling and an Economic Impact Analysis. Two rounds of public meetings are proposed during the project. The first round of public meetings will serve as the commencement of the grant-funded project.

A presentation will be made before the Village Council in December 2019 in advance of or in conjunction with a public workshop. The Council presentation will provide a review of the Village's resilience efforts thus far (beach maintenance, dune enhancement, stormwater upgrades, etc.) and the next steps toward production of a Resilience Strategic Plan. The grant-funded Vulnerability Study will be introduced and feedback welcomed.

A December 2019 public workshop aims to gather feedback from stakeholders (residents and businesses) on their resiliency goals/expectations. This workshop is intended to ensure that the public has an awareness of future inundation risks related to sea level rise and storm surge, what will (and will not) be analyzed in the Vulnerability Study, and ways in which Florida communities are handling adaptation and mitigation.

The Village's consultant, Coastal Systems International, Inc. will perform this task under contract to the Village. Approximately seven Coastal Systems staff are anticipated to be involved to varying degrees in this task: Taylor Scheuermann, R. Harvey Sasso, Naeem Rahman, Sandra

Rahman, and Julio Olano. The task will be closely coordinated with John Oldenburg, Village of Bal Harbour Public Works Director.

- C. Deliverable:** A copy of the presentations, agenda and sign-in sheets from all public meetings, and a summary of public comments.

Task #2

- A. Title:** Inundation Modeling and Economic Impact Analyses

- B. Description:** The grant-funded project proposes to incorporate available elevation and drainage information into a Resilience GIS Database. The database will aim to include property value & elevation information (including roads/outfalls), stormwater infrastructure, LIDAR, groundwater/rainfall, critical infrastructure, and FEMA data including storm surge/wave crest elevations for various return-interval storms. Not all data will be utilized in the Inundation Modeling, described below. The project will identify gaps in the available data.

With the gathered information, the project proposes to conduct Inundation Modeling in order to determine the flooding risks for the Village associated with various interval storms (25-, 50-, and 100-year storms) and associated with increases in sea level elevations (over the next 20, 40, and 60 years).

Using the results of the Modeling Analysis and the property valuation information, the project will analyze the potential economic impact associated with the aforementioned inundation scenarios. The calculated costs will represent the cost of “doing nothing” against which future adaptation measures can be compared. This information will allow the Village to understand the community’s short-term and long-term inundation vulnerabilities.

The Village’s consultant, Coastal Systems International, Inc. will perform this task under contract to the Village. Approximately five Coastal Systems staff are anticipated to be involved to varying degrees in this task: Taylor Scheuermann, R. Harvey Sasso, Naeem Rahman, Sandra Rahman. The task will be closely coordinated with John Oldenburg, Village of Bal Harbour Public Works Director.

- C. Deliverable:** Resilience GIS Database and Map Series

Task #3

- A. Title:** Council Presentation & Public Workshop –Vulnerability Study Results

- B. Description:** The second round of public meetings will serve as a summary and a presentation of the map series, with discussion on the information gathered throughout the proposed project. The study results will be presented to the Village Council in March 2020 in advance of or in conjunction with a public workshop. The public workshop will be held in March 2020. The implications of the inundation associated with the various return-interval storms will be explored, as well as the impact on at-risk infrastructure during flood events. The results of the economic impact analysis serve as the basis for discussions on adaptation measures and to gather feedback from the Council and the public on their perspective on the study, as it relates to their community.

The Village’s consultant, Coastal Systems International, Inc. will perform this task under contract to the Village. Approximately seven Coastal Systems staff are anticipated to be involved to varying degrees in this task: Taylor Scheuermann, R. Harvey Sasso, Naeem Rahman, Sandra Rahman, and Julio Olano. The task will be closely coordinated with John Oldenburg, Village of Bal Harbour Public Works Director.

- C. Deliverable:** A copy of the presentations, agenda and all sign-in sheets for public meetings, and a summary of public comments.