

**STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
GRANT WORK PLAN  
DEP AGREEMENT NO.: 22RRE09**

**ATTACHMENT 3**

**I. TITLE PAGE**

**1. PROJECT TITLE:** Coastal Resilience Partnership of Southeast Palm Beach County Vulnerability Assessment Update

**2. GRANTEE Contact Information:**

Organization Name: City of Boynton Beach

Name of Authorized Signer: Lori LaVerriere

Title: City Manager

Address: 100 E. Ocean Avenue

City: Boynton Beach

Zip Code: 33435

Area Code and Telephone Number: 561-742-6010

E-mail Address: LaVerriereL@bbfl.us

**3. GRANT MANAGER Contact Information:**

Organization Name: City of Boynton Beach

Name: Rebecca Harvey

Title: Sustainability Coordinator

Address: 100 E. Ocean Avenue

City: Boynton Beach

Zip Code: 33435

Area Code and Telephone Number: 561-742-6494

E-mail Address: HarveyR@bbfl.us

**4. FISCAL AGENT Contact Information:**

Organization Name: City of Boynton Beach

Name: Corinne Elliot

Title: Deputy Finance Director

Address: 100 E. Ocean Avenue

City: Boynton Beach

Zip Code: 33435

Area Code and Telephone Number: 561-742-6311

E-mail Address: ElliotC@bbfl.us

5. **WORK PERFORMED BY:** Sub-Contractor Only

6. **SUBCONTRACTOR'S CONTACT INFORMATION:** *(if applicable & known)*

Organization Name: Collective Water Resources, LLC

Name: Elizabeth Perez

Title: President

Address: 250 S. Australian Ave., Suite 1110

City: West Palm Beach

Zip Code: 33401

Area Code and Telephone Number: 561-779-3552

E-mail Address: LPerez@collectivewater.com

7. **PROJECT LOCATION:**

A. **List of County(ies):** Palm Beach County

B. **List of City(ies)/Town(s)/Village(s):** Cities of Boynton Beach, Boca Raton, Delray Beach, and Lake Worth Beach; Towns of Highland Beach, Ocean Ridge, and Lantana; and a portion of unincorporated Palm Beach County

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.*

*Remainder of this page intentionally left blank.*

## II. WORK PLAN

8. **PROJECT DESCRIPTION:** The Coastal Resilience Partnership of Southeast Palm Beach County (CRP) completed a Climate Change Vulnerability Assessment (CCVA) for the jurisdictions of Boynton Beach, Boca Raton, Delray Beach, Highland Beach, Ocean Ridge, Lantana, Lake Worth Beach, and a portion of unincorporated Palm Beach County in July 2021. The CCVA meets many of the requirements of the new Resilient Florida Grant Program (Section 380.093, Florida Statute (F.S.)), but the analysis needs to be expanded to include the National Oceanic and Atmospheric Administration (NOAA) intermediate-low and intermediate-high sea level rise projections for 2040 and 2070 to be compliant. The new analysis will update storm surge and tidal flooding for all critical assets per the statute for the entire Project Location as well as incorporate the updated Federal Emergency Management Agency (FEMA) coastal hazard maps for Palm Beach County, if available.
9. **BUDGET SUMMARY:** Allowable budget categories, form of payment, and cost for each task for this project are listed in the table below.

### ALLOWABLE PROJECT BUDGET DETAIL

Budget Categories	Payment	Task 1	Task 2	Task 3	Grant Amount Awarded
Contractual Services	Reimbursement	\$32,000	\$30,000	\$12,000	<b>\$74,000</b>
<b>GRANT AGREEMENT TOTAL</b>		<b>\$32,000</b>	<b>\$30,000</b>	<b>\$12,000</b>	<b>\$74,000</b>

#### A. CONTRACTUAL SERVICES:

### CONTRACTUAL SERVICES BUDGET DETAIL

Company Name*	Task 1	Task 2	Task 3	Total
Collective Water Resources, LLC.	\$32,000	\$30,000	\$12,000	<b>\$74,000</b>
<b>Contractual Total by Tasks</b>	<b>\$32,000</b>	<b>\$30,000</b>	<b>\$12,000</b>	<b>\$74,000</b>

10. **PROJECT TIMELINE:** The tasks must be completed by, and all deliverables received by, the corresponding task due date. Cost reimbursable grant funding must not exceed the budget amounts as indicated below. Requests for any change must be submitted prior to the current task 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	Task Due Date	Funding Amount
1	Tidal Flooding and Storm Surge Depth and Elevation Rasters	6/1/2022	\$32,000
2	Updated Asset Vulnerability Analysis	6/1/2022	\$30,000
3	Technical Memorandum	6/1/2022	\$12,000
<b>Grant Total</b>			<b>\$74,000</b>

11. **PERFORMANCE MEASURES:** The Grantee will submit all deliverables for each task via **one (1) PDF document** to the Department’s Grant Manager on or before the Task Due Date listed in the Project Timeline. 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 subcontractor(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.
12. **CONSEQUENCES FOR NON-PERFORMANCE:** The Department will reduce each Task Funding Amount by five percent (5%) for every day that the task deliverable(s) are not received on the specified due date listed in the Agreement’s most recent Project Timeline. Should a Change Order or Amendment be requested on the date of or after the most current task due date, the five percent (5%) reduction of that Task Funding Amount will be imposed until the date of the requested change is received, via email by the Department.
13. **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 one hundred percent (100%) completion of that task and must be submitted within forty-five (45) days of the task/deliverable due date. Please refer to Exhibit C for instructions on how to submit a payment request.

**Or**

Grantee may submit one request for the Grant Amount Awarded, by using the Exhibit C, after the project is one hundred percent (100%) completed. The request for the Grant Amount Awarded, must include an Exhibit A showing one hundred percent (100%) completion for all tasks, and must be submitted within forty-five (45) days of the last task/deliverable due date.

14. **FUNDING SOURCE:** Grantee agrees to include on all publications, printed reports, audiovisuals (including videos, slides, and websites except that unless required under the 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 the DEP logo (which can be found on the Department’s website at <https://floridadep.gov/> or by contacting the Grant Manager for a copy) as well as the following language:

“This work was funded in part through a grant agreement from the Florida Department of Environmental Protection, Resilient Florida 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: Tidal Flooding and Storm Surge Depth and Elevation Rasters**

- A. **Description:** Update the tidal flooding and storm surge analyses in the 2021 CCVA to comply with Section 380.093, F.S. The updates would include the 2017 NOAA intermediate-low and intermediate-high sea level rise projections for 2040 and 2070 as well as the updated FEMA coastal

hazard maps for Palm Beach County, if available. One (1) workshop (either held virtually or in person) will be held to present results of the update analyses.

**B. Deliverables:** The Grantee will submit all task/deliverables for each task to the Department's Grant Manager on or before the task/deliverable due date listed in the Project Timeline.

- 1) Summary report from the workshop, including attendee feedback and outcomes.
- 2) All materials created at the workshop (as applicable).
- 3) Report to include a summary of flood analysis results.
- 4) Raster data for each of the flood projections.

### **Task #2: Updated Asset Vulnerability Analysis**

**A. Description:** Update the existing asset vulnerability analyses in the 2021 CCVA to include the new tidal flooding and storm surge depth and elevation rasters to comply with Section 380.093, F.S. The update will include 32 analysis permutations (2 horizons x 2 scenarios x 2 threats x 4 asset categories) and include the following four asset categories: 1) transportation assets and evacuation routes; 2) critical infrastructure; 3) critical community and emergency facilities and 4) natural, cultural, and historic resources. One (1) workshop (either held virtually or in person) will be held to present results.

**B. Deliverables:** The Grantee will submit all task/deliverables for each task via to the Department's Grant Manager on or before the task/deliverable due date listed in the Project Timeline.

- 1) Summary report from the workshop, including attendee feedback and outcomes.
- 2) All materials created at the workshop (as applicable).
- 3) Summary report (PDF document) of the GIS data that was developed, and the data sets used to update the Vulnerability Assessment.
- 4) GIS shapefiles, file geodatabase, or ArcGIS Pro project package format of all electronic mapping data used to illustrate flooding and sea level rise impacts identified in the updated Vulnerability Assessment. The data will include 32 analysis permutations and will include compliant metadata and will be provided at the asset and census tract scales in the appropriate Florida State Plan projection as specified in s. 380.093, F.S.
- 5) List of critical assets (as defined in s. 380.093, F.S.) and regionally significant assets that are impacted by flooding and sea level rise as identified in the updated Vulnerability Assessment provided in GIS shapefiles, file geodatabase, or ArcGIS Pro project package format.

### **Task #3: Technical Memorandum**

**A. Description:** Develop a technical memorandum to include the methodology and results of the updated Vulnerability Assessment.

**B. Deliverables:** The Grantee will submit all task/deliverables for each task to the Department's Grant Manager on or before the task/deliverable due date listed in the Project Timeline.

- 1) Technical memorandum (PDF document) to summarize the updated CCVA methodology and resulting vulnerabilities to tidal flooding and storm surge for each of the four asset categories identified in Task #2. The memorandum will include each requirement of s. 380.093, F.S. that is addressed in the vulnerability analysis, to include the following:
  - a. The depth of:
    - i. Tidal flooding, including future high tide flooding, which must use thresholds published and provided by the Department. The analysis should also geographically display the number of tidal flood days

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- expected for each scenario and planning horizon (as applicable/practicable).
- ii. Current and future storm surge flooding using publicly available NOAA or FEMA storm surge data. The initial storm surge event used must equal or exceed the current 100-year flood event. Higher frequency storm events may be analyzed to understand the exposure of a critical asset.
- b. The following scenarios and standards:
- i. All analyses in North American Vertical Datum 88.
  - ii. At least two local sea level rise scenarios, including the 2017 NOAA Intermediate-Low and Intermediate-High sea level rise projections.
  - iii. At least two planning horizons that include planning horizons for the years 2040 and 2070.
  - iv. Local sea level data that has been interpolated between the two closest NOAA tide gauges. Local sea level data may be taken from one such gauge if the gauge has higher mean sea level. Data taken from an alternate gauge may be used with appropriate rationale and Department approval, as long as it is publicly available or submitted to the Department.
  - v. Encompassing the entire municipality of each municipality identified in the Project Location as well as an unincorporated area of Palm Beach County and including all critical assets owned or maintained by those jurisdictions within this designated scope.
  - vi. The most recent publicly available Digital Elevation Model and generally accepted modeling techniques.