

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
REVISED GRANT WORK PLAN
DEP AGREEMENT NO.: R2131

ATTACHMENT 3-A

I. TITLE PAGE

1. PROJECT TITLE: Stormwater Management System – Infrastructure Adaptation Plan

2. GRANTEE Contact Information:

Organization Name: City of Hallandale Beach

Name of Authorized Signer: Jeremy Earle

Title: Interim City Manager

Address: 400 South Federal Highway

City: Hallandale Beach, FL

Zip Code: 33009

Area Code and Telephone Number: 954-457-1300

E-mail Address: jearle@hallandalebeachfl.gov

3. GRANT MANAGER Contact Information:

Organization Name: City of Hallandale Beach

Name: Noemy Sandoval

Title: Grants Manager

Address: 400 South Federal Highway

City: Hallandale Beach, FL

Zip Code: 33009

Area Code and Telephone Number: 954-457-3069

E-mail Address: nsandoval@Hallandalebeachfl.gov

4. FISCAL AGENT Contact Information:

Organization Name: City of Hallandale Beach

Name: Emil Lopez

Title: Finance Director

Address: 400 South Federal Highway

City: Hallandale Beach, FL

Zip Code: 33009

Area Code and Telephone Number: 954-457-1371

E-mail Address: elopez@Hallandalebeachfl.gov

5. FEID No. (a.k.a. Tax ID#): 59-6000333 Seq No. 017

6. WORK PERFORMED BY: (Select only one)

☐ Grantee ONLY
☒ Subcontractor ONLY
☐ BOTH the Grantee & Sub-Contractor
☐ To Be Determined

7. SUBCONTRACTORS CONTACT INFORMATION: *(If applicable & known)*

Organization Name: TBD
Name: _____
Title: _____
Address: _____
City: _____
Zip Code: _____
Area Code and Telephone Number: _____
E-mail Address: _____

8. PROJECT LOCATION:

A. List of County(ies): Broward County

B. List of City(ies)/Town(s)/Village(s): City of Hallandale Beach

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

9. **PROJECT SUMMARY:** Hallandale Beach is requesting \$75,000 for the development of a Stormwater Management System using Geographic Information System (GIS) technology. Following best practices recommended in the Adaptation Planning Guidebook (2018), the City will build upon lessons learned during the development of its Vulnerability Assessment and current municipal shapefile data. The new system will inform the way that the City adapts to sea-level rise and prioritizes engineering projects.
10. **PROJECT DESCRIPTION:** The American Society of Civil Engineers recommends the use of technology such as GIS systems due to its ability to analyze water quality (nonpoint source pollutant loading estimation), water quantity (stormwater flows and volumes, flood level calculations), stormwater and basin master planning (land use/development schemes, floodplain mapping), and best management practices specific to the drainage site.

The Hallandale Beach Stormwater Management System project builds upon recommendations from the City's Flood Risk Vulnerability Assessment to develop an infrastructure adaptation plan. Even though we cannot complete the entire city, the three areas we have selected will cover most of the vulnerable areas in the city. The final product will assist the City in determining where their critical utility infrastructure is vulnerable. The GIS will pinpoint each catch basin within the City and incorporate five-year data related to high flood areas. The project includes two public outreach presentations, a period of public input for residents to report drainage concerns, and mapping of the City's drainage system.

Funding will allow the City to;

- Map water, sewer and storm in GIS
- Build a 3D surface model of the City
- Perform GIS Analysis to create sea level rise scenarios
- Overlay GIS infrastructure
- Assess infrastructure in vulnerable areas
- Provide a database of vulnerable infrastructure

11. **PROJECT NEED AND BENEFIT:**

- A. **Explain the demonstrated need, which the project addresses.** The City of Hallandale Beach is a 4.4 square mile coastal community which is at risk from natural hazards, anthropogenic climate change, and extreme events (See map of municipal limits). To understand these risks, the City worked with the South Florida Regional Planning Council, funded by the Department of Economic Opportunity, in 2017 to do a brief vulnerability assessment and amend the City's Coastal Management element of the Comprehensive Plan to comply with Peril of Flood requirements.

The City continued to proactively prepare for sea level rise by adopting a Peril of Flood Comprehensive Plan Amendment in 2018 and developing a Sustainability Action Plan to provide a 5-year blueprint that tangibly and measurably advances sustainability in the City. The City is now in the process of completing a Vulnerability Assessment and Adaptation Plan, which informs the City's flood risk management strategies and identifies additional risks associated with climate change, including increased precipitation and groundwater resource availability. The Hallandale Beach Stormwater Management System project increases the administrative and technical capacity of the City to prioritize infrastructure improvement projects and conduct modeling to ensure protection of historical resources. The City does not currently have GIS data of the stormwater system. This limits the City's access to recommended tools and resources found in the Florida Adaptation Planning Guidebook.

- B. Explain how the proposed project meets the purpose of one or more of the Goals and Priorities for FRCP.** This project meets priority area three (3) “Vulnerability Assessments, Adaptation Plans or Resilience Plans other than that necessary for compliance with Peril of Flood requirements”. Specifically, the City seeks to develop a stormwater system that guides infrastructure adaptation planning. The City will follow best practices from the Florida Adaptation Planning Guidebook (2018) and build upon lessons learned and recommendations from the City’s Vulnerability Assessment.
- C. Discuss how the project is feasible and can be completed by the grant period deadline.** The City will be able to complete the GIS mapping by the grant period deadline because of the amended scope of work. By changing the focus to three vulnerable areas within the City, the City can obtain key data on critical infrastructure without sacrificing the project timeline. The project will be overseen by Aqeel Abdool-Ghany, Assistant City Engineer. Aqeel has in-depth knowledge of the City’s water facilities and will conduct the public involvement workshops. Compliance and financial oversight will be provided by the City’s Grants Office.
- D. Explain how this project is addressing social vulnerability or vulnerability of historic resources or stormwater management systems.** The primary goal of this project is to address the City’s lack of a stormwater management system. The development of the stormwater management system has great potential to address social vulnerability and vulnerability of historic resources. Hallandale Beach is an economically and ethnically diverse community located in Broward County, Florida. The City is bordered on the east by Atlantic Ocean. Housing in this community range from mobile home parks to luxury beach front condominiums. The community’s largest employer is the historic Gulfstream Park (founded 1939), which attracts tourists and locals with its horse racing, gaming, dining and shopping. The population is close to 38,000, and more than 70% of the City falls within the Community Redevelopment Agency (CRA) jurisdiction, which was recently recognized as a Federally Qualified Opportunity Zone.

The City will better track compliance, management performance, maintenance schedules, and pinpoint vulnerable locations. The engineering team will prioritize projects based on what yields favorable environmental impact, cost effectiveness of the proposed project, technical feasibility of the project, capacity of the City and administrative staff, and what is socially acceptable based on residents’ feedback.

12. DESCRIPTION OF PROJECT OUTCOMES:

- The City will be able to analyze stormwater runoff and system vulnerabilities throughout its municipal boundaries by the end of the project period.
- The City will have a system for evaluating and ranking adaptation strategies by the end of the project period.
- Residents and key stakeholders will have a better understanding of the City’s efforts to improve resiliency and how they can contribute to the sustainability of their community.

13. BUDGET SUMMARY: Allowable budget categories and form of payment with the costs for this project are listed in the table below.

BUDGET SUMMARY BREAKDOWN

Budget Categories	Payment	Task 1	Task 2	Task 3	Task 4	Task 5	Grant Amount Awarded
Salaries & Fringe	Fixed Price	\$0	\$0	\$0	\$0	\$0	\$0
Contractual Services	Fixed Price	\$5,000	\$40,000	\$5,000	\$15,000	\$10,000	\$75,000

GRANT AGREEMENT TOTAL	\$5,000	\$40,000	\$5,000	\$15,000	\$10,000	\$75,000
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A. Describe how the project costs was determined: The City estimates that it will cost \$100,000 to complete GIS mapping, and is able to fund the amount of the project over the requested \$75,000.

B. Other Project Funding Sources:

OTHER PROJECT FUNDING SOURCES BREAKDOWN

Source Name <i>(only if applicable)</i>	Task 3	Task 4	Task 5	TOTAL
<i>City of Hallandale Beach</i>	\$1,000	\$12,000	\$12,000	\$25,000
Total				\$25,000

C. SALARY BREAKDOWN: N/A

D. CONTRACTUAL SERVICES:

CONTRACTUAL SERVICES BREAKDOWN

Company Name	Task 1	Task 2	Task 3	Task 4	Task 5	Total
TBD	\$5,000	\$40,000	\$5,000	\$15,000	\$10,000	\$75,000
Contractual Total by Tasks	\$5,000	\$40,000	\$5,000	\$15,000	\$10,000	\$75,000

14. PROJECT TIMELINE: All tasks are to be completed and submitted no later than the task/deliverable due date listed in the table below. Requests for any change must be submitted prior to the current task/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	Task Amount
1	Project Kick-Off and First Public Information Workshop	3/30/2021	\$5,000
2	Stormwater System Mapping	4/30/2021	\$40,000
3	Host Second Public Workshop & 30-Day Period of Public Comment	4/30/2021	\$5,000
4	Perform GIS Analysis	4/30/2021	\$15,000
5	Develop database of vulnerabilities	4/30/2021	\$10,000
Total			\$75,000

15. PERFORMANCE MEASURES: The Grantee will submit all deliverables for each task via **one pdf document** to the Department's Grant Manager on or before the Task/Deliverable Due Date listed in the Project Timeline. The Department's Grant Manager will review the task/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.

16. CONSEQUENCES FOR NON-PERFORMANCE: The Department will reduce each Task Funding Amount by 5% for every day that the task/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 task/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.

- 17. PAYMENT REQUEST SCHEUDLE:** 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 task/deliverable due date. Please refer to the [website Grants page](#) for “How to Request Payment”, and “Checklist for Requesting Payment”.

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 last task/deliverable due date.

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

“This work was funded in part through a grant agreement from the Florida Department of Environmental Protection, Florida Resilient Coastlines 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

- A. Title:** Project Kick-Off and First Public Information Workshop
- B. Goal:** Residents will increase awareness of GIS process and how they can help improve the resiliency of the community.
- C. Description:** Departments responsible for overseeing the implementation of the project and managing the grant will meet to ensure contract compliance and adherence to timeline. A public workshop will be held to present the project concept, educate residents on the process and expectations, and receive feedback on drainage concerns from the public.
- D. Deliverable(s):** The Grantee will submit all deliverables for each task via **one pdf document** to the Department’s Grant Manager on or before the Task/Deliverable Due Date listed in the Project Timeline.
 - 1) Sign-in sheets from each workshop and meeting, indicating location, date, and time of workshop
 - 2) Presentation(s) from each workshop

Attachment 3-A, DEP Agreement #: R2131

6 of 8

- 3) Brief summary report from each workshop & meeting
- 4) Any materials created at each workshop (as applicable)

Task #2

E. Title: Stormwater System Mapping

F. Goal: Develop a GIS map of the City's stormwater assets.

G. Description: Mapping will identify the location of drains, channels, outfalls, catch basins, and debris basins owned and maintained by Hallandale Beach, using the shapefile format. Develop a 3-D model of the stormwater system, which will be used to perform a variety of storm water management tasks, including design, watershed analysis, modeling, and culvert, channel, and inlet analysis. This grant will focus on three critical areas of the City which are tidally influenced and have reported multiple flooding issues:

- 1) Northeast Drainage Basin
 - a. NE 14th Ave between Hallandale Beach Blvd and Atlantic Shores
- 2) Southwest Drainage Basin
 - a. Schafer Canal
- 3) Coastal Corridor
 - a. Barrier island infrastructure from Hallandale Beach Blvd to County Line Road

H. Deliverable(s): The Grantee will submit all deliverables for each task via **one pdf document** to the Department's Grant Manager on or before the Task/Deliverable Due Date listed in the Project Timeline.

- 1) PDF and GIS files for maps of current stormwater system including the locations of:
 - a. Drains
 - b. Channels
 - c. Outfalls
 - d. Catch basins
 - e. Debris basins
- 2) A brief report on the use of and methodology for developing the 3-D model of the stormwater system.
- 3) A representative depiction of or URL for the 3-D model of the stormwater system.

Task #3

A. Title: Host Second Public Workshop & 30- day Period of Public Comment

B. Goal: Identify socially acceptable and environmentally favorable adaptation strategies in the community. Increase community awareness of City process for prioritizing improvements.

C. Description: Presentation will be made on the progress of the project, vulnerable infrastructure within sites that are considered high flood areas, and potential adaptation strategies. Residents will have 30 days to provide feedback on presentation.

D. Deliverable(s): The Grantee will submit all deliverables for each task via **one pdf document** to the Department's Grant Manager on or before the Task/Deliverable Due Date listed in the Project Timeline.

- 1) Sign-in sheets from each workshop and meeting, indicating location, date, and time of workshop
- 2) Presentation(s) from each workshop

- 3) Brief summary report from each workshop & meeting
- 4) Any materials created at each workshop (as applicable)

Task #4

A. Title: Perform GIS Analysis

B. Goal: Develop sea level rise scenarios for critical areas within the City.

C. Description: Future sea level rise caused by climate change would disrupt the physical processes, economic activities, and social systems in coastal communities like Hallandale Beach. Based on sea level rise data from Broward County, the City will assess and visualize impacts of potential inundation within the identified critical areas.

D. Deliverable(s): The Grantee will submit all deliverables for each task via **one pdf document** to the Department's Grant Manager on or before the Task/Deliverable Due Date listed in the Project Timeline.

- 1) PDF and GIS files for maps of at least two future sea level rise scenarios over at least two timeframes

Task #5

A. Title: Develop database of vulnerabilities

B. Goal: The City will have a greater understanding of at-risk stormwater assets and vulnerabilities. The City will prioritize adaptation strategies.

C. Description: The City will prioritize adaptation strategies based on "risks identified and potential losses as a result of those risks and reviewed in relation to funding, ability to implement, and consistency with other plans" (Adaptation Planning Guidebook, Pg. 54).

D. Deliverable(s): The Grantee will submit all deliverables for each task via **one pdf document** to the Department's Grant Manager on or before the Task/Deliverable Due Date listed in the Project Timeline.

1. Analysis of vulnerabilities and prioritization of strategies.