

DEP AGREEMENT NO. R1904
CHANGE ORDER NO. 001

GRANTEE

Town of Lake Park
535 Park Ave.
Lake Park, FL 33403

DEP Agreement No. **R1904** as entered into on the 22nd day of July 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	Data Collection/Management	8/23/2019	\$7,500
2	Community Rating System (CRS) Program Review	12/31/2019	\$7,500
3	Outreach & Communication	1/31/2020	\$7,500
4	Climate Change and Sea Level Rise Assessment	2/21/2020	\$7,500
5	Operations and Maintenance (O&M) Program Review	5/20/2020	\$7,500
6	Water Resources Engineering Modeling Science	6/03/2020	\$7,500
7	Project Management	6/22/2020	\$7,500
8	Alternatives Analysis	6/22/2020	\$7,500
9	Stormwater Utility Administration and Funding Sources	6/24/2020	\$7,500
10	Stormwater Master Plan (SWMP) Report	6/28/2020	\$7,500
Total			\$75,000

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

TOWN OF LAKE PARK

STATE OF FLORIDA DEPARTMENT
OF ENVIRONMENTAL PROTECTION

Richard Scherle

Richard Scherle, Grantee Grant Manager

Whitney Gray, DEP Grant Manager

Date: 3/18/20

Date: _____

**STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
GRANT WORK PLAN
DEP AGREEMENT NO.: R1904**

ATTACHMENT 3

Project Title: Stormwater Master Plan

Grantee Contact Information:

Organization Name: Town of Lake Park
Authorized Signer for the Organization: John D'Agostino
Title: Town Manager
Address: 535 Park Avenue
City: Lake Park
Zip Code: 33403
Area Code and Telephone Number: 561-881-3304
E-mail Address: jdagostino@lakeparkflorida.gov

Grant Manager Contact Information:

Organization Name: Town of Lake Park
Name: Richard Scherle, Director of Public Works
Address: 650 Old Dixie Highway
City: Lake Park
Zip Code: 33403
Area Code and Telephone Number: 561-881-3345
E-mail Address: rscherle@lakeparkflorida.gov

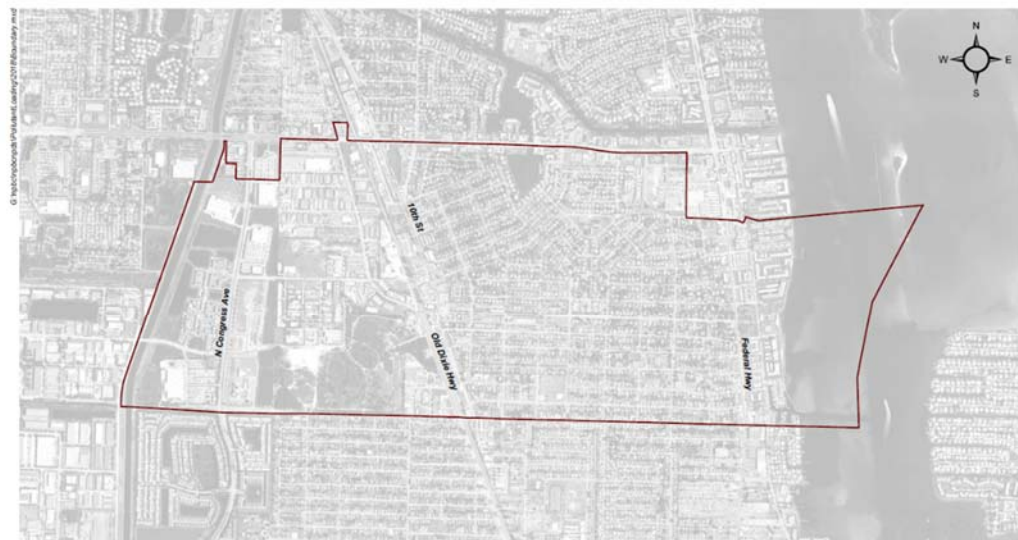
Fiscal Agent Contact Information:

Organization Name: Town of Lake Park
Name: Lourdes Cariseo, Finance Director
Address: 535 Park Avenue
City: Lake Park
Zip Code: 33403
Area Code and Telephone Number: 561-881-3351
E-mail Address: lcariseo@lakeparkflorida.gov

FEID No.: F596000355-001

DUNS No.: 025113747

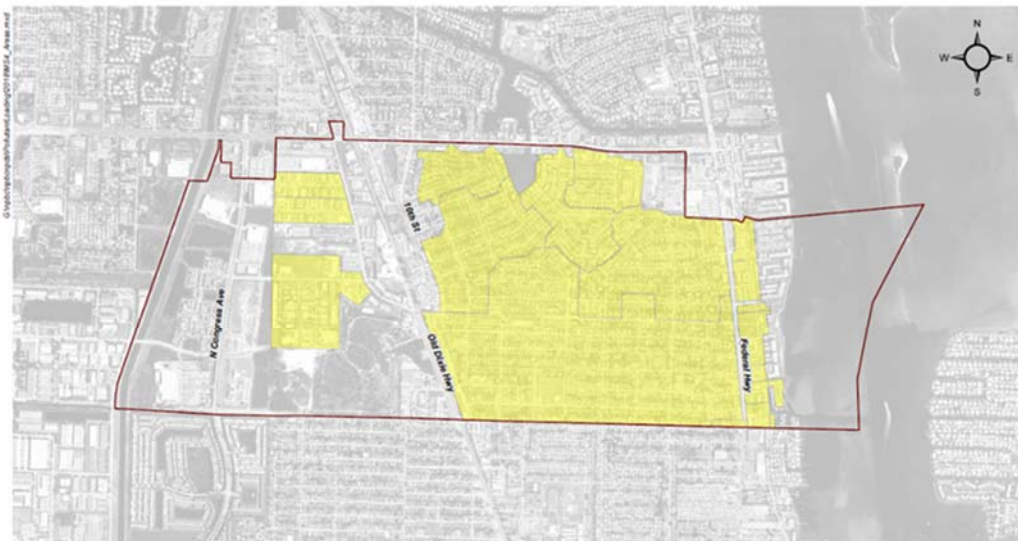
PROJECT LOCATION: The Town of Lake Park, which is home to approximately 9,000 residents, as well as robust business and arts communities, is located in the northern part of Palm Beach County. The Town's coordinates are 26.8003° N, 80.0664° W. The Town of Lake Park comprises approximately 2.4 miles; this project encompasses nearly all of the Town. The map below illustrates the Town's boundaries, followed by a map of the Town's stormwater system.



Legend

Boundary

**TOWN OF LAKE PARK
Jurisdictional Boundary**



Legend

Boundary

MS4 Areas

**TOWN OF LAKE PARK
MS4 Service Area**

WORK PLAN

- 1. Project Summary:** The contractor will create a Stormwater Master Plan to provide the Town of Lake Park with a stormwater management planning tool that will allow for the rehabilitation of the existing drainage system over 20 years and provide the Town with a forward-looking approach and a framework through which sustainable redevelopment practices can be deployed as the Town progresses through its natural growth and redevelopment cycle. To do so, the contractor

will examine existing data, analyze the performance of the storm sewer and drainage swale infrastructure, conceptualize alternatives, make recommendations for rehabilitation and develop a capital improvement program for project implementation.

2. **Project Description:** The Town of Lake Park will contract with Water Resources Management Associates, Inc. (WRMA) to undertake this project, which is expected to last 10.5 months. This project entails the creation of a Stormwater Master Plan for the Town of Lake Park. The Town, which is a coastal community, has been, and will continue to be, impacted by sea level rise, which has created conditions ripe for coastal flooding. In addition to the inherent transportation problems associated with significant drainage issues, this flooding creates obvious health hazards (the standing water that remains after floods attracts mosquitoes) and less apparent health hazards, including the inability of medical transportation vehicles to access the elderly individuals in the Town who need to get to appointments with their doctors or other health care providers. Further, the pollutants inherent in stormwater runoff lead to water pollution that is detrimental to the local ecosystem.

The goal of this project is to provide the Town of Lake Park with a plan designed to prevent future flooding issues that exist, in large part, due to sea level rise. The Stormwater Master Plan will include components that aim to capture as much water as possible on individual property sites in order to prevent or reduce discharges into the stormwater infrastructure system. This will limit downstream pollution while simultaneously allowing the system to better prevent flooding relating to sea level rise. This plan will include intense stakeholder engagement and public outreach, including ongoing meetings with community residents, local business owners, elected officials and more.

The Town of Lake Park is requesting \$75,000 from the Florida Department of Environmental Protection for this project. The Town will assume responsibility for the additional \$44,570 of the total \$119,570 cost of the undertaking.

3. **Project Need and Benefit:**

- a. *Demonstrated Need*

The Town of Lake Park (originally Kelsey City) was the first zoned municipality in Florida (1923). It comprises an area of 2.4 square miles and is home to a population just shy of 9,000 residents. The Town of Lake Park is composed of residential areas on its eastern boundary and an industrial area to the west.

The Town experienced significant development beginning in the early 1950s, and was considered fully developed by the 1980s, however town ordinances – specifically those related to the regulation of drainage – did not exist during this time. Drainage infrastructure was installed by developers and the Town as it became necessary. In early 1980, the Town identified a need for a comprehensive stormwater drainage improvement program, and in May of that year a Comprehensive Plan was adopted. In 1986, a Stormwater Master Plan was prepared with the objective of developing a stormwater “atlas” of drainage facilities and to assist the Town’s department of public works in prioritizing operations and maintenance activities. That plan was updated in 1993 and again in 1996 with recommended improvements to the system (at an estimated cost of \$6.37 million in 1996 dollars).

In 2008, the Town of Lake Park established a stormwater utility to partially finance the Town’s stormwater program. The dedicated utility established a user fee of \$6.50 per Equivalent Stormwater Unit (ESU) based on the amount of impervious surface area of a typical residential unit, which consists of approximately 5,202 square feet. The current user fee is \$10.00 per ESU, underscoring the Town’s strong commitment to dealing effectively with flooding.

The Town's current stormwater drainage system consists mostly of grassed swales for conveyance of runoff to catch basins and underground pipes discharging through 10 major outfalls to the Intracoastal Waterway Lake Worth Lagoon and the C-17 Canal. It has been more than two decades since the last drainage master plan was updated. The Town's Department of Public Works has noted that the aging drainage infrastructure is failing at an increasingly rapid rate. Development, climate change and environmental stressors pose a challenge to the drainage system's capacity to handle storm events, regardless of magnitude.

To address these new challenges, the Town has identified a need to update and/or develop a new Stormwater Master Plan using recently updated system infrastructure maps that are composed of field collected survey data, coupled with the application of new GIS-based LiDAR topography data, state-of-the-art hydrologic and hydraulic modeling technology and sustainable planning approaches, including green infrastructure best management practices and low impact development techniques for management of stormwater runoff.

The final project outcome will be the creation of a Stormwater Master Plan designed to serve as a tool for the Town of Lake Park to utilize over the next two decades to support the rehabilitation of the Town's existing drainage system and create a forward-looking approach to sustainable redevelopment in the future.

b. Purpose

The Town of Lake Park is part of Palm Beach County, which employs intergovernmental coordination (with the Town, as well as other local municipalities) as part of its Coastal Management Element in order to address the impacts and implications of development on the coastal and estuarine ecosystems. The Town's proposed project meets the purpose of Priority Area 3, which focuses on continuing resiliency planning. The proposed project will both utilize and promote green infrastructure and low impact development approaches in stormwater management design and drainage policy, rather than the standard end-of-pipe treatment approach, which typically requires vacant land for construction of detention/retention facilities. In order to address climate change, the Stormwater Master Plan will also include the performance of vulnerability and adaptability assessments for use in stormwater capital improvement program planning and implementation.

Specifically, as part of Task #5, Climate Change and Sea Level Rise Assessment (see below), WRMA will perform a vulnerability analysis to assess the impacts of climate change and sea level rise; these findings will be considered throughout the development of the Stormwater Master Plan. It will also conduct a sea level rise adaptation analysis and recommend tools for infrastructure mitigation, adaptation and policy formulation to address the impacts of sea level rise. As a result of these combined analyses, WRMA will produce a sustainability assessment report that it will provide to the Town.

c. Feasibility

The Town of Lake Park has engaged the specialized engineering firm of Water Resources Management Associates (WRMA) to execute this project. WRMA has been in business for more than a decade, and applied its experience and expertise to the creation of a comprehensive proposal it provided to the Town that includes the scope of services, project approach, price proposal and proposed project schedule necessary to create the Stormwater Master Plan. WRMA met with the Town's Director of Public Works, as well as other Town staff members, and reviewed as-built records and existing technical reports and documentation, in order to fully understand the Town's needs for this project and ensure its overall feasibility.

WRMA relied on its significant experience with similar projects when creating the timeline for the Town of Lake Park's endeavor. The proposed timeline associated with the project calls for the

completion of the project one month prior to the mandatory April 30, 2020 deadline. Although not expected to be needed, the additional month allows for the completion of any activities that may ultimately require more time than originally expected.

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

FIXED FEE Grant Amount Awarded	\$75,000
<i>Town's Funding Contributions</i>	\$44,570
AGREEMENT TOTAL	\$119,570

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.

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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 & DELIVERABLE

Task #1

A. Title: Data Collection/Management

B. Description: As part of this task, WRMA will review the adequacy of previously collected data to prepare the project's hydrologic and hydraulic (H&H) tasks and make recommendations, if necessary, for additional data acquisition. Other data collection and management activities to be performed by WRMA include data cataloguing using asset management principles for inventory and cataloguing of the stormwater management/drainage system linear and control structures assets; obtaining and processing Light Detection and Ranging (LiDAR) datasets for the development of a project base map inclusive of linear assets and control structures; and development of the base map (including location, type of structure, dimensions necessary for modeling, invert elevations necessary for modeling, general condition information and any other necessary data) to be incorporated into the H&H model. WRMA will identify data input parameters for the development of the H&H model to be prepared as part of Task 4, including parameters such as watershed boundaries, drainage basin delineation, FEMA flood profiles and floodplain maps, and identifying areas of known flooding, characteristics of land cover, stormwater sewer networks and potential inflow/infiltration points. These activities will be completed in accordance with the project timeline.

Deliverable: Data collection and management technical report.

Task #2

A. Title: Community Rating System (CRS) Program Review

B. Description: WRMA will review the Town's CRS program with regard to new guidelines/scoring and recent requirements, including the Town's 2017 DFIRM Floodplain Management Plan Update. WRMA will provide technical support and guidance to maximize the Town's CRS classification and effectively leverage SWMP activities for CRS points with the goal of achieving a lower rating (currently at 8). Additional activities will include assisting the Town's CRS administrator with public outreach and infrastructure recommendations, identifying key opportunities to increase the Town's use of green infrastructure and sustainable stormwater BMPs/low-impact development, and evaluating and identifying appropriate state-of-the-art BMPs including rain gardens, permeable pavements, infiltration strips, bio-swales and more for inclusion in the land development code. The BMPs

will address runoff, flooding and water quality issues. This task will be completed in accordance with the project timeline.

C. Deliverable: Community rating system program review technical report.

Task #3

A. Title: Outreach & Communication

B. Description: Outreach is an essential task, and effective communication will be necessary to the success of this project. The purpose of this task is to identify and engage the project's stakeholders and to provide a foundation and establish expectations for all project communications. This task will commence with the development of an outreach plan identifying stakeholders, agencies and methods for communicating with the public concerning development of the Town's Stormwater Master Plan (communication techniques may include development of marketing materials and social media campaigns, web pages on the Town's official website at www.lakeparkflorida.gov containing important information such as dates and times of outreach events, and educational materials). The task will also include one-on-one meetings with each Town Commissioner, who will be given the opportunity to appoint citizens to the Stormwater Technical Committees. WRMA will conduct meetings with regulatory agencies (including, but not limited to, the South Florida Waste Management District, FEMA, the Florida Department of Environmental Protection, Palm Beach County, and others), as necessary. Because stakeholder support is critical to the success of this project, WRMA will identify the key stakeholders at all levels (such as elected officials, Town employees, the general public/citizen committees, the Town's business owners, etc.), and will consult them, request their input, and obtain their support for the project. WRMA will develop educational materials regarding important project developments for dissemination to interested parties. These activities will be completed in accordance with the project timeline.

C. Deliverable: Agendas, notes, and sign in sheets from meetings; copies of any resolutions or ordinances proposed and/or passed by the Town's elected officials; outreach plan outline; copies of educational and outreach materials.

Task #4

A. Title: Climate Change and Sea Level Rise Assessment

B. Description: Activities associated with this task include a vulnerability analysis to assess the impacts of climate change and sea level rise, the results of which will be considered throughout the development of the Stormwater Master Plan. At least two of the scenarios/sea level rise projections defined by the Southeast Florida Climate Change Compact in the Southeast Florida Regional Climate Action Plan 2.0 will be used for this analysis. WRMA will identify vulnerable areas and assess the effectiveness and longevity of the Town's stormwater infrastructure as it relates to sea level rise. In addition, WRMA will recommend tools for infrastructure mitigation, adaptation and policy formulation to address sea level rise impacts. This will be done in accordance with the project timeline.

C. Deliverable: Stormwater system sustainability assessment report.

Task #5

A. Title: Operations and Maintenance (O&M) Program Review

B. Description: WRMA will review the Town's stormwater operations and maintenance program, including stormwater/drainage system standards details, construction methods, and

materials lists, and provide recommendations for enhanced standards. WRMA will apply asset management practices to assess the adequacy of the Town's operations and maintenance activities related to stormwater management and recommend proactive measures, and will review the Town's repair and replacement rehabilitation program including review of the process for acquisition of stormwater system condition assessment data. Activities associated with this task will be undertaken according to the project timeline.

C. Deliverable: Operations and maintenance program review technical report.

Task #6

A. Title: Water Resources Engineering Modeling Science

B. Description: In consultation with the Town's project manager, WRMA will select software and H&H models for the project. WRMA will also develop hydrologic parameters for stormwater modeling; select hydraulic parameters for cross-sections for swales and channels from survey and LiDAR; develop a preliminary H&H model and provide the modeling results for review to the Town project manager with an analysis of the results. WRMA will also assess model performance through calibration analysis; review the Town's MS4 NPDES permit, which establishes the Town's baseline approach to water quality; and perform a compliance review of the Town's stormwater management monitoring data. These activities will be performed in accordance with the project timeline.

C. Deliverable: 1) Hydrologic and hydraulic modeling technical report and 2) Water quality assessment technical report.

Task #7

A. Title: Project Management

B. Description: This task includes the various meetings required for project status updates or face-to-face meetings at the Town's request. The methods of progress updates will be chosen based on the Town's requirements, but may include periodic meetings and phone calls to the Town's project manager for notification of the project's progress. Other activities to be performed as part of this task include preparation of bi-weekly or monthly written progress reports to provide documented status of the project, performance of quality assurance and quality control review of all project deliverables by ensuring clear assignments of responsibilities to all project team members; and conducting regular project reviews to address critical issues and ensure the project design meets current standards, is appropriate for the project scope, and is cost-effective. These activities will take place according to the project timeline.

C. Deliverable: Copies of progress reports for every meeting held, to include a list of attendees present.

Task #8

A. Title: Alternatives Analysis

B. Description: As part of the alternatives analysis, WRMA will perform drainage level of service (LOS) analysis to assess the potential for flooding throughout the Town at the local level (nuisance flooding), at the basin level (flooding LOS), and as a function of climate change (coastal/sea level rise), as well as increasing storm event intensities (flooding frequency and duration). WRMA will perform a floodplain review utilizing updated FEMA DFIRMS maps, comparing FEMA DFIRM 100-year base flood elevations with WRMA calculated 100-year/three-day storm event elevations; perform analysis of proposed

rehabilitation alternatives based on a study of current and forecasted drainage LOS deficiencies; study areas where known drainage infrastructure is lacking; and identify problem areas. WRMA will evaluate alternatives by identifying priority areas where flooding or water quality problems exist and areas where intense growth is likely and where land uses will be changed in the future; working with Town staff to create a matrix and methodology for the analysis of project alternatives; and formulating potential stormwater/drainage system rehabilitation strategies. WRMA will also meet and discuss pertinent permitting issues with South Florida Water Management District regulatory staff to allow for conceptual permitting of projects that result from the project. Flood damage will be estimated and a priority ranking system will be developed for problem areas. This comprehensive array of activities will be performed in accordance with the project timeline.

- C. **Deliverable:** Meeting agendas, notes, and sign in sheets; LOS modeling technical report; FEMA floodplain review technical report; and Alternatives analysis technical report.

Task #9

- A. **Title:** Stormwater Utility Administration And Funding Sources
- B. **Description:** For this task, WRMA will review the structure of the current stormwater utility program including the number of users, the mechanism to assess the fee and the funding sources; review the Town's stormwater utility (including the fee) and make recommendations for adjusting the fee equivalent stormwater unit (ESU) calculation parameters and rate structure; and assist the program with identifying alternative funding opportunities. These tasks will be undertaken in accordance with the project timeline.
- C. **Deliverable:** Stormwater utility review technical report.

Task #10

- A. **Title:** Stormwater Master Plan (SWMP) Report
- B. **Description:** WRMA will prepare a draft report of the Stormwater Master Plan, including an executive summary, a summary list of recommendations, and a recommended action plan for implementation, including responsible parties, estimated budgets and schedule for completion. This report will be presented to Town management and officials, and a series of workshops will be scheduled with stormwater staff and the advisory committees to help further define the objectives and measures for the Stormwater Master Plan. Upon acceptance of a final draft report, WRMA will finalize the remaining sections and provide the report to the Town for comments. Ultimately, WRMA will finalize the Stormwater Master Plan and provide it to the Town. This will be completed during the final month of the project.
- C. **Deliverable:** Agendas, minutes/notes, and sign in sheets from workshops; Final Stormwater Master Plan report and supporting documentation; and Final H&H model data.