

**VILLAGE OF ROYAL PALM BEACH**

Agenda Item Summary

**AGENDA ITEM:**

**Approval and authorization for the Village Manager to execute Consultant Services Authorization No. 04 with CDM Smith, to provide a Watershed Management Plan. The cost for said services shall not exceed \$150,000.00.**

**BACKGROUND:**

This CSA is for support in the preparation of a Watershed Management Plan. CDM Smith will build upon existing Village Stormwater Master Plans and updates which were completed in 1999, 2005, and 2015. Additional data will be incorporated from the Indian Trails review (2014), USEPA Stormwater Management Models (SWMMs) for the SWMPs and reviews, and FEMA FIRM review support for the Village (2017).

The Village will address the majority of the Community Rating System (CRS) documentation which is generally up to date with ordinances and standards, elevation certificates and other related items. The Watershed Management Plan will contribute to additional CRS points which will help secure the Village's current Category 6 CRS status and flood insurance discount for residents.

The Watershed Management Plan that will act as a framework for the Village's stormwater management program which will allow the Village to follow best practices regarding flood prevention and mitigation to protect the residents and their property and to plan for future capital improvements.

The Village has received a cost-reimbursement grant in the amount of \$112,500.00 from Florida Division of Emergency Management (FDEM) to contribute to the funding of this watershed planning initiative and the creation of the Watershed Management Plan.

**ISSUE:**

The proposed project is to provide the following tasks:

***Task 1 – Scoping, Flood Modeling, and Draft Watershed Management Plan (WMP): \$118,000***

Task 1.1 – Review Program Requirements and Refine Scope: \$3,000

Task 1.2 – Flood Modeling and Solutions for Present and Future Climate Conditions \$95,000

Task 1.3 – Draft WMP: \$20,000

***Task 2 – Final WMP and CRS Support: \$25,000***

Task 2.1 – Final WMP: \$10,000

Task 2.2 – CRS Support: \$15,000

***Task 3 – Meetings, Project Management and Quality Control: \$7,000***

**RECOMMENDED ACTION:**

Staff recommends a motion to approve.

Initiator:	Village Manager	Agenda Date:	Village Council
Village Engineer	Approval:	2/16/23	Action:

Consultant Services Authorization  
No. 04  
Village of Royal Palm Beach  
  
Watershed Planning Initiative

## **Introduction**

The Village of Royal Palm Beach (Village) entered into a Professional Services Agreement with CDM Smith, Inc. (CDM) dated October 4, 2019 and valid through October 3, 2021. First Addendum to agreement executed August 20, 2021 and valid October 4, 2021 through October 3, 2023. This Consultant Services Authorization (CSA) will be performed under the terms and conditions of that AGREEMENT.

## **Background**

CDM Smith originally developed the Village Stormwater Master Plan (SWMP) in 2000. This included a dynamic USEPA StormWater Management Model (SWMM) for the Primary Stormwater Management System, (PSWMS). Since the completion of the 2000 Study, three additional updates and studies have been completed. The first study was completed by the Indian Trails Improvement District (ITID, 2013) which recommends that their flood storage capacity be recovered more quickly by increasing discharges from their stormwater system to the Village's PSWMS. Second, the South Florida Water Management District (SFWMD) developed an updated study for the C-51 Canal that included flood modeling in 2014.

This study is for a Watershed Master Plan Update to meet the requirements of the Watershed Planning Initiative grant received by the Village

## **Scope of Services**

### **Task 1 – Scoping, Flood Modeling, and Draft Watershed Master Plan (WMP): \$118,000**

#### **Task 1.1 – Review Program Requirements and Refine Scope as Necessary: \$3,000**

CDM Smith will review the grant requirements for the watershed master plan program and advise the Village if any scope refinements need to be made. Refinement will be made for subsequent tasks. If this change affects the budget, CDM Smith will advise the Village accordingly.

#### **Task 1.2 – Flood Modeling and Solutions for Present and Future Climate Conditions: \$95,000**

CDM Smith will build upon the previous SWMP and provided PSMS data to update the existing SWMM flood model. The flood modeling will consider evaluations of the

watershed's runoff response from the 10-, 25-, 100-year 72-hour SFWMD design storms under current and predicted future land use conditions and perform an assessment of the potential impact of sea level rise and climate change using NOAA Atlas 14 rainfall and one future sea level rise elevation selected by the Village. Updates will include changes in land use (pervious area, PSMS, and topography) since the 2014 model and add provided build out land use for future conditions with an assumed pervious area and topography. Model refinements will include up to 10 hydrologic units, up to 15 junctions, and revised boundary conditions.

C-51 Canal stages and flows for existing conditions and sea level rise will be obtained from the SFWMD as available. CDM Smith will produce summary tables of peak stages by model junction, and peak flows and velocities by conduit and an inundation map for each scenario run. Changes in predicted flooding from the previous plan will be noted in the tables and Watershed Master Plan report. CDM Smith will analyze and identify one alternative comprised of potential mitigative measures to manage flood stages and flows to current levels to the extent practicable to meet the Village's desired flood management level of service (LOS).

**Task 1.3 – Draft WMP: \$20,000**

CDM Smith will develop a draft WMP which will include summary of the new or additional rainfall, sea level, water level, land use and hydrologic-hydraulic data in the SWMM. The report will include summaries of the results from the modeling of the 10-, 25- and 100-year storm events, an inventory of the ground characteristics and data availability, existing regulations and plans in place, a description of vulnerable areas or areas of interest, a list of potential mitigative solutions, and a brief description of recommended future actions plans.

**Task 2 – Final WMP and CRS Support: \$25,000**

**Task 2.1 – Final WMP: \$10,000**

CDM Smith will incorporate Village comments on the report and support the Village in the submission of the draft WMP to CRS officials for approval and will respond to one round of questions/comments. If the level of effort for the responses exceeds the estimated available budget, CDM Smith will advise the Village accordingly.

**Task 2.2 – CRS Support: \$15,000**

CDM Smith will support the Village with a CRS assessment and update with the Village taking the lead for majority of documentation. CDM Smith will provide a guidance memorandum on data and activities for the city to lead for CDM Smith review.

**Task 3 – Meetings, Project Management and Quality Control: \$7,000**

Activities performed under this task consist of those general functions required to maintain the project on schedule, within budget, and that the quality of the work products defined within this scope is consistent with CDM Smith's standards and Village's expectations. Specific activities included are identified below:

CDM Smith will prepare for and conduct a kick-off meeting for the project. Additionally, CDM Smith will attend three virtual progress meetings during the estimated nine-month project duration. CDM Smith will prepare and distribute summary meeting notes in e-mail form for each meeting. This task also includes periodic progress internal team meetings.

CDM Smith maintains a QC program on all projects. An internal project quality management planning session will be conducted at the start of the project. This action is required by CDM Smith's quality management system (QMS) guidelines. Technical Review Committee (TRC) meetings are budgeted for and will be performed to review various percent complete submittals. CDM Smith's project manager will prepare and submit monthly written status reports for an anticipated project duration of nine months.

### **Data to Be Provided by the Village**

The Village will provide CDM Smith with the following information:

- A copy of the most recent stormwater infrastructure GIS inventory that includes sufficient geometric information to include in the hydraulic component of the stormwater model updated in Task 1.
- A copy of its most recent GIS coverage of pervious/impervious coverage.
- A copy of its most recent LiDAR topographic coverage.
- A copy of its most recent GIS coverage of future land use.
- A digital copy of Palm Beach County future groundwater.
- A list of known flooding problems that have not been addressed through planning or design activities.
- High water marks, photographs, or other data sources (canal elevations, structure operations, etc.) for which to calibrate/validate the model with a recent historical storm, as available.
- Survey data as requested by CDM Smith.

### **Deliverables**

CDM Smith will provide the Village with:

- Three hardcopies and one digital (pdf) copy of the draft WMP.
- Three hardcopies and one digital (pdf) copy of the final WMP.
- A CRS guidance summary for Village support.
- Summary meeting notes from meetings attended by CDM Smith staff and monthly progress reports and invoices for fees incurred.

### **Time of Completion/Schedule**

CDM Smith will complete the WMP update within nine months following written notice-to-proceed (NTP) from the Village and receipt of data in Task 1.

Consultant Services Authorization No. 04

Date: \_\_\_\_\_

If you concur with this Consultant Services Authorization, please indicate by executing two copies and returning both to The Village of Royal Palm Beach. One original will be returned to the consultant upon execution by the Village Manager.

IN WITNESS WHEREOF, the parties have hereto set their hands the day and year first above written.

Witness:

CDM Smith, Inc.

1.

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Suzanne E. Mechler, P.E., BCEE  
Associate

2. \_\_\_\_\_

Village of Royal Palm Beach,  
A Florida Municipal Corp.

1. \_\_\_\_\_

\_\_\_\_\_  
Raymond C. Liggins, P.E.  
Village Manager

2. \_\_\_\_\_