Agenda Item # 3K-8

PALM BEACH COUNTY BOARD OF COUNTY COMMISSIONERS AGENDA ITEM SUMMARY

Meeting Date:	August 14, 2012	Consent [X] Public Hearing []	Regular []
Department:	Water Utilities Department		

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: a Consultant Services Authorization No. 7 for a Glades Water Master Plan Report in the amount of \$186,000 to the Water Plant and Water Resources Engineering Services Contract with Carollo Engineers, Inc. (R2011-0630).

Summary: On November 21, 2011, the United States Department of Housing and Urban Development (HUD) announced that Palm Beach County, through its Department of Economic Sustainability, was selected to receive \$1.98 Million from the Sustainable Competitive Regional Planning and Communities Challenge Competitive Grant for the creation of a Glades Region Master Plan. One of the deliverables required by HUD under the approved Grant includes the creation of a Glades Region Water and Wastewater Capital Master Plan. This Consultant Services Authorization will provide for a Glades Water Master Plan which includes updates to water demand projections, water distribution system hydraulic model development, water treatment plant capacity evaluation, and development of a Capital Improvements Program for the entire Glades Region consisting of 25,634 acres of which 74% is located in unincorporated Palm Beach County and 26% within Tri-Cities. The Small Business Enterprise (SBE) participation goal established by the SBE Ordinance (R2002-0064) is 15% overall. The contract with Carollo Engineers, Inc. provides for SBE participation of 26% overall. This authorization includes 42.40% overall participation. The cumulative SBE participation, including this CSA is 26.16% overall. Carollo Engineers, Inc. is a Palm Beach County company (WUD Project No. WUD 12-068) District 6 (JM)

Background and Justification: On May 3, 2011, the Palm Beach County Board of County Commissioners approved the Continuing Contract for Wastewater Consulting Services with Carollo Engineers, Inc. (R2011-0630). On March 20, 2012, the Palm Beach County Board of County Commissioners approved a Receive and File for a Cooperative Agreement with the U.S. Department of Housing and Urban Development (HUD) for the Community Challenge Planning Grant and approved a Budget Amendment of \$1,980,504. The Glades Wastewater and Water Master Plan Reports will be funded by the Community Challenge Planning Grant. The Grant requires a 20 percent match which will be met through in-kind service by the Water Utilities Department.

Attachments:

- 1. Location Map
- 2. Two (2) Originals Consultant Services Authorizations No. 7

Recommended By:	Bullbeaule	8/7/12
,	Department Director	Date
Approved By:	Sharn 2 Br	8/9/,2
· · · · · · · · · · · · · · · · · · ·	Assistant County Administrator	/ Date
	-0	,

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2012	2013	2014	2015	2016
Capital Expenditures	<u>\$ 186,000.00</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
External Revenues Program Income (County) In-Kind Match County	<u>\$ (186,000.00)</u> <u>0</u> <u>0</u>			0 0 0	
NET FISCAL IMPACT	ot see	eloos.	<u>0</u>	<u>0</u>	<u>0</u>
# ADDITIONAL FTE POSITIONS (Cumulative)	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Budget Account No.: <u>F</u>	<u>und 1542</u> Dept	t <u>720</u> Ur	nit <u>1GUA</u> O	bject <u>3401</u>	

Is Item Included in Current Budget?

Yes X No ____

Reporting Category N/A

B. Recommended Sources of Funds/Summary of Fiscal Impact:

* Community Challenge Planning Grant

C. Department Fiscal Review:

Della movest

III. REVIEW COMMENTS

A. OFMB Fiscal and/or Contract Development and Control Comments:

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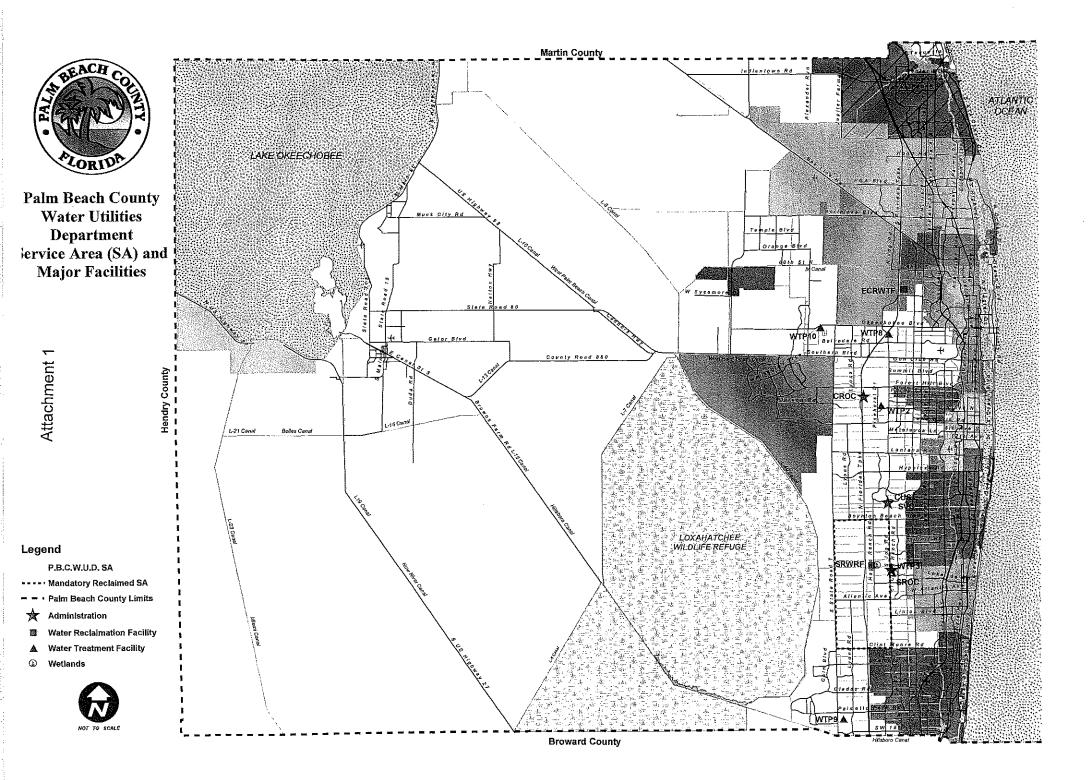
B. Legal Sufficiency:

Assistant County Attorney

C. Other Department Review:

Department Director

This summary is not to be used as a basis for payment.



CONSULTANT SERVICES AUTHORIZATION NO. 7

Project No. WUD <u>12-068</u>

Budget Line Item No. 1542 - 720- I GUA - 3401

Project Title Glades Region Water Master Plan

District No.: District 6

THIS AUTHORIZATION # 7 to the Contract for Consulting/Professional Services dated 5/3/2011 with an effective date of 6/3/2011 (Resolution/Document R2011-0630), by and between Palm Beach County and the Consultant identified herein, is for the Consultant Services described in Item 3 of this Authorization. The Contract provides for 26% SBE participation overall. This Consultant Services Authorization includes <u>42.40</u>% overall. The cumulative SBE participation, including this authorization is <u>26.16</u>% overall. Additional authorization will be utilized to meet or exceed the stated overall participation goal.

- 1. CONSULTANT: Carollo Engineers, Inc.
- 2. ADDRESS: <u>8401 Lake Worth Rd., Suite 224, Lake Worth, FL 33467</u>
- 3. Description of Services to be provided by the Consultant: <u>Prepare a Water Master Plan for the Glades Region of the County's water system, including development of water demand projections; hydraulic distribution system model updates, calibration, and evaluations; and development of a Capital Improvements Plan for the Glades water system. This project is one component of the comprehensive Glades Region Master Plan that will be funded under the County's recently awarded U.S. Department of Housing and Urban Development (HUD) Community Challenge Planning Grant.</u>

See EXHIBIT "A".

4. Services completed by the Consultant to date:

See EXHIBIT "B" and "C".

- 5. Consultant shall begin work promptly on the requested services.
- 6. The compensation to be paid to the Consultant for providing the requested services shall be:

A. Computation of time charges plus expenses, not to exceed \$ NA

B. Fixed price of \$ 186,000

PROJECT NO. WUD 12-068

AUTHORIZATION NO. <u>7</u>

Budget Line Item No.

- 7. This Authorization may be terminated by the County without cause or prior notice. In the event of termination not the fault of the Consultant, the Consultant shall be compensated for all services performed through the date of termination, together with reimbursable expenses (if applicable) then due.
- EXCEPT AS HEREBY AMENDED, CHANGED OR MODIFIED, all other terms, 8. conditions and obligations of the Contract dated 5/3/2011 with an effective date of 6/3/2011 remain in full force and effect.

IN WITNESS WHEREOF, this Authorization is accepted, subject to the terms, conditions and obligations of the aforementioned Contract.

CONSULTANT:

PALM BEACH COUNTY

FIRM: Carollo Engineers	
Signed: <u>Ly le Munice</u>	Signed:
Typed Name: Lyle Munce, P.E.	Typed Na
Title: Vice President	Title: Ch <u>Bo</u>
Signed:	Date:
Typed Name: Thomas Gillogly, Ph.D., P.E.	
Title: Vice President	
Date: June 21, 2012	
· .	

ATTEST:

(Signed)

<u>Carollo Engineers Inc. is a</u> Delaware Corporation qualified to do business in the State of Florida. By corporate resolution, all shareholders, including Lyle Munce and Thomas Gillogly, are authorized to execute contracts relating to the firm's usual and customary engineering business on behalf of Carollo Engineers, Inc.

ame: Shelley Vana

airman Palm Beach County ard of County Commissioners

Barts

EXHIBIT A

3K-8

CONSULTANT SERVICE AUTHORIZATION NO. 7

PALM BEACH COUNTY WATER UTILITIES DEPARTMENT ENGINEERING/PROFESSIONAL SERVICES

SCOPE OF WORK

INTRODUCTION

Palm Beach County (COUNTY) entered into an agreement entitled Contract for Engineering/ Professional Services - Palm Beach County Utilities Department Project No. WUD <u>11-001</u> (CONTRACT) with. <u>Carollo Engineers</u> (CONSULTANT) to provide engineering services for various general activities on (Reference Document R2011-0630). This Consultant Service Authorization will be performed under that CONTRACT.

BACKGROUND

The COUNTY recently received a Community Challenge Planning Grant from HUD to develop a comprehensive Glades Region Master Plan. The COUNTY Utilities Department has requested that the CONSULTANT develop a Water Master Plan for the Glades Region of the COUNTY, which is operated by the COUNTY's Utilities Department. The Glades Region Water Master Plan will become part of the comprehensive Glades Region Master Plan. The planning area is for the entire Glades Region consisting of 25,634 acres of which 74% is located in unincorporated Palm Beach County and 26% within the Tri-Cities. The CONSULTANT will update and calibrate the COUNTY's Lake Region water distribution system model and will develop a Water Master Plan for the Glades system. The project will include development of updated water demand projections for the Glades Region, hydraulic distribution system modeling, and development of a Capital Improvements Plan (CIP) through 2035.

SCOPE OF SERVICES

CONSULTANT shall perform the engineering Scope of Services as described herein.

GLADES REGION WATER MASTER PLAN

The CONSULTANT shall perform the following engineering services to develop the Glades Region Water Master Plan. This authorization includes hydraulic modeling and development of a Capital Improvements Plan and Water Master Plan Report. Because of the nature of this project, certain assumptions apply to this Scope of Services. To the extent possible, these assumptions are stated within this document and are reflected in the CONSULTANT fee.

The engineering services described herein have been based upon the understanding of the direction provided by COUNTY staff. Assumptions include:

- COUNTY staff will provide all previous reports, data, model, and information available to assist in the development of the Glades Region Water Master Plan.
- The COUNTY shall collect and compile all data necessary to complete the project and provide it to the CONSULTANT.
- The CONSULTANT shall be entitled to rely upon the accuracy of the data and information supplied by the COUNTY without independent review or evaluation.
- The COUNTY shall attend all workshops and review meetings to maintain the progress of the project according to the schedule.
- The COUNTY shall review Draft deliverables and provide comments to the CONSULTANT within a two-week period.
- The COUNTY shall provide GIS data requested by the CONSULTANT when available.
- The COUNTY shall provide the data and information requested to compute the water demand projections and peaking factors.
- The CONSULTANT will perform all necessary model development, calibration, and analyses. The complete model will be turned over to the COUNTY at the end of the project.
- The CONSULTANT will use InfoWater modeling software.
- The Glades Region Water Master Plan includes evaluation of infrastructure necessary for future growth and development only, and does not include replacement of pipes due to age or condition. It is understood that necessary renewal and replacement (R&R) projects were developed by the COUNTY under a separate project. The COUNTY will provide a list of R&R projects and cost estimates to include in the Glades Region Water Master Plan CIP.

Task 1 Project Management, Communication, and Meetings

The CONSULTANT's project manager will direct and coordinate the efforts of the project team members in order to deliver the project. Work under this task includes the following:

- 1.1 <u>Project Management/Communication</u>: The project manager will make staffing assignments, review work progress, and coordinate quality assurance and review procedures. The project manager will manage the budget, schedule, and invoicing.
- 1.2 <u>Meetings and Workshops</u>: The CONSULTANT will schedule progress meetings with COUNTY staff to keep staff informed of the project status, discuss upcoming tasks and deliverables, and to address issues relating to the project. It is estimated that the project will require a Kickoff Meeting and four (4) progress meetings. Regular communication will be achieved through email and phone correspondence between progress meetings. The progress meetings will be combined with deliverable review meetings when possible. The CONSULTANT will prepare meeting agendas and meeting notes to document discussions, decisions, and work progress. The CONSULTANT will not attend additional meetings such as countywide meetings to discuss the comprehensive Glades Region Master Plan unless they are substituted for one of the Water Master Plan progress meetings.

The CONSULTANT will participate in the following meetings:

- Project kick-off meeting
- Four (4) progress meetings

Task 1 Deliverables

The following deliverables shall be provided:

Meeting agendas and notes

Task 2 Data Collection and Planning Framework

The COUNTY will collect all data necessary to complete the project and provide it to the CONSULTANT. The CONSULTANT will provide a data request list and format outlining how the data should be compiled. The CONSULTANT will review the data and available past reports to understand the County's Lake Region Water Treatment Plant (WTP) and distribution system. The CONSULTANT will use data and population projections provided by the County to develop updated water demand projections for the Glades Region. This task also includes a review of the performance criteria selected for the Glades Region. This task serves as the basis of all future master planning tasks. Items included in this task are:

- 2.1 <u>Water Data Review:</u> The CONSULTANT will review past reports and data from COUNTY to develop a thorough understanding of the County's Lake Region system. Data requests may include past reports, customer billing records, major customer consumption, traffic analysis zone (TAZ) population projections, water production records, and peaking factor information. In addition, the following GIS data will be required: property parcels, street centerlines, service area boundaries, TAZ areas, land use, and zoning. The CONSULTANT will review the water system performance criteria selected as part of the County's Water Master Plan Update (eastern system) with COUNTY staff and discuss any potential changes that need to be made for the Lake Region.
- 2.2 <u>Water Demand Projections:</u> The CONSULTANT will evaluate historical water production and population data for the Lake Region to develop a per capita demand factor for the region. The County will review water sales data for any large or bulk customers and provide insight on any potential changes in future demand trends. As discuss in Task 3.2, the County will provide a spreadsheet of large water user demands that should be allocated separately in the model. The CONSULTANT will use population projections provided by the County's Planning Department (by TAZ) and the calculated per capita demand factor to develop annual average water demand projections for the Lake Region through 2035.
- 2.3 <u>Peaking Factor Development:</u> The CONSULTANT will analyze historical data to determine maximum month, maximum day, and peak hour demand factors for the Lake Region water system. One year of past SCADA data will be analyzed to develop average and maximum day diurnal curves for the Lake Region. Diurnal curves may be different in the Lake Region than in other areas of the COUNTY and are necessary for the extended period simulation modeling analyses.

2.4 <u>Technical Memorandum No. 1:</u> The CONSULTANT will develop Technical Memorandum (TM) No. 1 to present the planning and performance information that will be the foundation of the modeling studies. TM1 will include a summary of the population and water demand projection development. Peaking factors, diurnal curves, and performance criteria will be documented. COUNTY staff will be asked to provide comments on TM1. These comments will be incorporated into the Glades Region Water Master Plan.

Task 2 Deliverables

Ten (10) copies of TM1 and electronic pdf version.

Task 3 Water Model Development and Calibration

The CONSULTANT will update and calibrate the COUNTY's Lake Region water distribution system hydraulic model for the purpose of planning future infrastructure. The primary objective of the calibration task is to give the COUNTY confidence that the model is a reasonable representation of the water distribution system so that capital improvement decisions can be made based on model results.

The CONSULTANT will update the water system model. The County will provide all information necessary to complete the update. Some of these items have already been developed by the COUNTY, such as GIS data. The County will work with distribution system staff and/or staff at the Lake Region WTP to fill all data gaps in order to provide a complete set of necessary data to the CONSULTANT for developing the model, including:

- <u>GIS Data</u>: Water mains, hydrant locations, service area boundary, and pump station and tank data.
- <u>Infrastructure Data</u>: Elevations of facilities; storage tank size and height; pump number, size, and performance curves.
- <u>Operational Information</u>: SCADA data, infrastructure control schemes and setpoints, and location and use of control valves, if any.

Model creation and calibration will include the following tasks:

3.1 <u>Water Model Development:</u> The CONSULTANT will update the model using GIS data, as-built drawings, and other available information. Development of the model also includes establishing pipe connectivity and entering hydraulic infrastructure data for pumps and tanks, including control information. The CONSULTANT will discuss each pump and storage tank site with COUNTY staff to obtain an understanding of the system and to give guidance on how to incorporate pertinent data into the model. Model development also includes assigning node elevations, incorporating diurnal curves, allocating demands, and other data that is used by the model for calculations. It is assumed that the County will gather and provide all necessary data to the CONSULTANT for input into the model.

The CONSULTANT will provide a check of the model using GIS and InfoWater tools. This check will include pipe connectivity, topology checks such, and data entry of pump curves, tank dimensions, and diurnal curves.

- 3.2 <u>Water Demand Allocation</u>: The CONSULTANT will allocate water demands in the model based on the projections developed by TAZ as part of Task 2.2. The County will review bulk user consumption records and provide the CONSULTANT with a summary spreadsheet of large users with demands that should be allocated individually.
- 3.3 <u>Calibration Plan and Data Compilation</u>: The CONSULTANT will develop a calibration plan that identifies calibration scenario days (two days); necessary SCADA data including WTP flow, tank level, and WTP and remote pressure data; and necessary data that will need to be captured in the field during the calibration process. While the majority of the data necessary for model calibration can be obtained from the County's SCADA, the SCADA does not capture pump on/off or variable frequency drive (VFD) speed data. Therefore, the CONSULTANT will provide a plan with instructions for WTP staff to capture hourly pump speed data for up to a 48-hour period.

The calibration plan will include an approach to simulate two different demand conditions. One day will be selected from the project duration so that VFD speed can be captured. This day will be selected for as high of a demand condition as possible, such as in April or May, which are typically the highest demand months in the COUNTY. The second day will be selected from the past one-year period and will use available SCADA data only.

Data from the COUNTY's existing remote pressure nodes will be used to evaluate model results. Model calibration will not include capture of any additional pressure data in the field.

- 3.4 <u>Water Model Calibration</u>: Using data collected from SCADA and the field, the CONSULTANT will calibrate the Lake Region water model by comparing model results with field data. The model will be calibrated for extended period simulation (EPS) conditions for two 24-hour periods. Calibration will be conducted in a two-step process. The first calibration scenario will be developed using data captured during this project including manual readings of pump VFD speed. The InfoWater Calibrator tool will be used on this scenario. The second step will be to develop an additional calibration scenario for verification of the Calibrator results. The second day will be use available SCADA data only, and pump speeds will be estimated. Throughout the calibration process for both scenarios, the CONSULTANT will recommend modification of data parameters such as infrastructure, controls, demands, or friction factors until there is a reasonable correlation between the model and the test data.
- 3.5 <u>Technical Memorandum No. 2</u>: The CONSULTANT will prepare TM2 describing the model development and calibration. Maps showing pipe infrastructure data will be provided, along with tables of data describing infrastructure parameters such as storage tank sizes and elevations, pump design points and curves, and control information. TM2 will provide a location to document all data used in the model. TM2 will also include the calibration plan, model calibration results, and a discussion of additional investigations that may be needed to resolve anomalies that have been discovered during the model calibration process. The CONSULTANT will review the calibration results in a meeting with COUNTY staff. Staff will be asked to provide comments on TM2. These comments will be incorporated into the Glades Region Water Master Plan.

Task 3 Deliverables

Ten (10) copies of TM2 and electronic pdf version.

Task 4 Water System Evaluations and CIP

The CONSULTANT will conduct evaluations and develop scenarios for the COUNTY to meet the selected performance criteria and projected water demands in the 2012, 2015, 2020, and 2035 planning periods. These evaluations and scenarios will become the basis for the recommended projects in the Glades Region Water Master Plan. This task includes the following:

- 4.1 <u>Evaluate Existing Water Distribution System:</u> The CONSULTANT will evaluate the existing water distribution system to identify deficiencies, evaluate fire flow capabilities, and determine the adequacy of existing pumps and storage tanks. The CONSULTANT will also evaluate the redundancy in the system to identify any critical pipes that are crucial to system operation, as well as typical water age throughout the distribution system under average annual demand conditions.
- 4.2 <u>Develop Master Plan for Future Water Infrastructure</u>: The CONSULTANT will develop a master plan for future water infrastructure to meet the projected water demands. Recommendation of future infrastructure will include an alternatives analysis that will evaluate the benefits of various configurations and sizes of water distribution mains. The pipes will be sized and configured to maintain adequate pressure and fire flow availability. Future infrastructure will be designed to achieve system operation that maintains the performance criteria selected in Task 2.0.

Model scenarios will include steady-state peak hour analyses and fire flow evaluations for each time period being evaluated (2015, 2020, and 2035). Extended period simulation (EPS) scenarios will be developed for average day and maximum day demand conditions to evaluate storage fluctuations and water age/quality considerations at each time period. The CONSULTANT will also evaluate the redundancy in the system to identify any pipes that are currently or may become critical to system operation.

- 4.3 <u>WTP and Storage Analysis:</u> The CONSULTANT will compare the capacity of the Lake Region WTP with projected water demands and determine the timing when new sources or a WTP expansion is required. The CONSULTANT will also complete a storage volume assessment for each time period under evaluation (2015, 2020, and 2035) to determine the adequacy of finished water storage. The CONSULTANT will recommend sizes and locations of additional water storage tanks and/or booster pump stations if necessary.
- 4.4 <u>Develop Water Capital Improvements Plan</u>: The CONSULTANT will establish unit costs for water infrastructure (plant and distribution system) and will develop cost estimates of the recommended capital improvements projects for pipelines and/or WTP expansions. The costs will be based on Class 5 (conceptual level) cost estimates. The CONSULTANT will develop a CIP through 2035 with a detailed implementation schedule for the first five years. The COUNTY will provide R&R programmed projects and cost estimates to include in the CIP (R&R projects will be developed by the COUNTY in a separate project.) The Glades Region Water Master Plan includes evaluation of infrastructure necessary for future growth and development and does not include replacement of pipes due to age or condition.

Task 5 Glades Region Water Master Plan Report

The results of the project will be summarized in the Glades Region Water Master Plan Report. The Glades Region Water Master Plan Report will include the following sections:

- Standard Executive Summary.
- Introduction including background information, general purpose and scope, and description of factors affecting the Lake Region water planning efforts such as the comprehensive Glades Region Master Plan being completed by the County, permitting regulations, population shifts, and/or global warming.
- Summary of existing water facilities including treatment plant, wells, water distribution system, and storage facilities.
- Population estimates as provided in the COUNTY's TAZ data.
- Water demand projections including raw water, finished water, peaking factors and diurnal curves specific to the Lake Region.
- Description of the water transmission system including pumping, storage, and pipeline infrastructure.
- Model description and documentation including model elements, demand allocations, and calibration efforts.
- Model scenarios including 2012, 2015, 2020, and 2035 scenarios for both steady state and EPS evaluations.
- Capital improvements plan through 2035 including cost estimates and timing.
- 5.1 <u>Draft Water Master Plan Report</u>: The CONSULTANT will prepare a Draft Glades Region Water Master Plan that summarizes the analyses completed throughout the project. This document will include tables of existing system operational parameters, maps of existing and recommended future infrastructure, and breakdown of costs for the capital improvements plan. It is assumed that the organization and format of the Glades Region Water Master Plan will be similar to the County's eastern system Water Master Plan Update (project currently nearing completion). A similar format will provide efficiency in developing the Glades Region Water Master Plan. The CONSULTANT will review the results of the Glades Region Water Master Plan in a meeting with COUNTY staff. COUNTY staff will be asked to provide comments on the Draft Glades Region Water Master Plan. These comments will be incorporated into the Final Glades Region Water Master Plan.
 - 5.2 <u>Draft Report Review Meeting:</u> The CONSULTANT will attend a meeting to discuss comments on the Draft Glades Region Water Master Plan. This meeting will be combined with one of the progress meetings described in Task 1.2.
 - 5.3 <u>Final Water Master Plan Report:</u> Upon receipt of COUNTY comments, the document will be revised and a final version will be issued.

Task 5 Deliverables

Ten (10) copies of the Draft Glades Region Water Master Plan.

Minutes from Draft Report Review Meeting.

Ten (10) copies of the Final Glades Region Water Master Plan and electronic pdf version.

Items Not Included In Scope of Services

- Field verification or as-built/record drawing research to verify or confirm existing hydraulic model.
- Hydrant flow testing for determining C-factors. Typical values for friction C-factors can normally be used to achieve adequate modeling results. However, if throughout the course of the project it becomes evident that hydrant flow testing is necessary for calibration, additional project effort will be required (in addition to what is currently included).
- Evaluations, plans, and/or scheduling of repair and replacement (R&R) programs for water system assets. The COUNTY will provide existing R&R programs and schedules for all other water system assets to be documented in the Glades Region Water Master Plan.
- Additional services not otherwise provided for in this Scope of Services.

Compensation

Lump Sum - \$186,000

M/WBE Participation

As prescribed under Section 7.5 of the CONTRACT, SBE participation is included in Attachment \bar{C} under this Authorization. The attached Schedule 1 defines the SBE participation.

ATTACHMENT – A	Budget Summary
ATTACHMENT – B	Project Schedule
ATTACHMENT - C	SBE Schedules 1 & 2
ATTACHMENT – D	Location Map

ATTACHMENT A

Labor Classification and Hourly Rate

Tack	Labor Classification	Paris	Badlet	257 (VG 🗛 Land 1977)	100 B			Total
Task		Senior Project Manager		Civil	Senior	Lead GIS	Senior	Labor
umben	lask Description	Manager 🖉	Sr. Engineer	Engineerili	Specialist	Technician	Clerical	Hours
	Depingt Management Communication Martings							
	Project Management, Communication, Meetings							
	Project Management (10 months)	5	40			· · · · · ·		45
	Decision Log		0					0
	Kickoff Meeting	3	8	3			1	15
	Progress Meetings (4)	8	32	18				58
	Meeting Minutes		4				4	8
	Quality Management	4			54			58
2	Data Collection and Planning Framework				j			
	Data Collection		2					2
	Previous Reports/Data Review		8	8				16
	Review Water Demand Projections	1	6					6
1	Peaking Factors and Diurnal Curves		8					8
	Technical Memorandum No. 1	2	24	4			16	46
		··· , ⁻	u /					
3	Water Model Development and Calibration							
	Water Model Development Assistance		8	2				10
	Viator Model Development Assistance	ļ ·	8	0				10
-	Water Model QA/QC Check Water Demand Projections/Allocation	i	8	U				
		2		^				8
	Calibration Plan	2	8	2				12
	Water Model Calibration		24	12	24			60
	Technical Memorandum No. 2	2	24	8		·	16	50
	Water System Evaluations and CIP							
	Scenario Development and Management		8	2				10
	Evaluate Existing System against Performance Criteria	1	8	2	•			11
	Evaluate Existing System Water Age and Fire Flow	1	4	2				. 7
	Determine Adequacy of Storage and Pumping Capacity	1	4	2				. 7
	Develop and Evaluate Future Scenarios for 5-, 10-, and 20-year Periods							0
	- Average Annual EPS	1	6	2			*****	9
	- Maximum Day EPS	1	6	2				9
	- Peak Hour Steady-State	1	6	2				9
	- Fire Flow Steady-State	1	6	2				9
	Redundancy Analysis to Determine Critical Pipes	1	4					5
	Water Treatment Plant Capacity Analysis	0	0	0				Õ
	Capital Improvements Plan Projects and Timing	2	8.	4				14
	Cost Estimates	2	8	4				· 14
	Funding/Financing Options	0	0					0
5	GUA Region Water Master Plan Report							
	Draft Water Master Plan Report	4	32	24			24	. 84
	Draft Report Review Meeting	0	0	0				0
	Final Water Master Plan Report	4	16	8			15	44
	Labor Subtotal hours	46	324	113	78	0	77	638
	Labor Raw costs	\$75.00	\$54.00	\$39.00	\$60.00	\$47.00	\$26.00	
	Labor Multiplier	3	3	3	3	3	3	
	Labor Subtotal	\$10,350	\$52,488	\$13,221	\$14,040	\$O	\$6,006	\$96,105
	Labor Total							
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	SBA Subconsultant Labor Total (1)							\$78,875
	SBA Subconsultant Mulitplier					ļ		1.1
	SBA Subcontract Total							\$86,763
f								
	Other Direct Costs							\$3,132
f								1 1 MA
			-					
	Project Total			1. gen en e				\$186,000

1) SBE firm: Chen-Moore & Associates

SBE 42,406%

ATTACHMENT - B

PROJECT SCHEDULE

The completion dates for this work will be as follows.

<u>Services</u>

Completion Date

From Receipt of PBCWUD Supplied Project Information

Task 1 - Project Management, Communication, Meetings	8 months
Task 2 - Data Collection and Planning Framework	2 months
Task 3 - Water Model Development and Calibration	5 months
Task 4 - Water System Evaluations and CIP	7 months
Task 5 – Glades Region Water Master Plan Report	9 months

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LETTER OF INTENT TO PERFORM AS AN SBE-M/WBE SUBCONTRACTOR This document must be completed by the SBE-M/WBE Subcontractor and submitted with bid packet. Specify in detail, the particular work items to be performed and the dollar amount and/or percentage for each work item. SBE credit will only be given for items which the SBE-M/WBE Subcontractor are SBE certified to perform. Failure to properly complete Schedule 2 may result in your SBE participation not being counted. PROJECT NUMBER: WUD 12-068 PROJECT NAME: Glades Regional Water Master Plan TO: Carollo Engineers, Inc. (Name of Prime Bidder) The undersigned is certified by Palm Beach County as a - (check one or more, as applicable): Small Business Enterprise _____ Minority Business Enterprise _____ Minority Business Enterprise ______ Black _____ Hispanic ______ Women ____ Caucasian ______ Other (Please Specify) Asian American

OSBA SCHEDULE 2

Date of Palm Beach County Certification: May 2, 2011

The undersigned is prepared to perform the following described work in connection with the above project. Additional Sheets May Be Used As Necessary

Line Item/ Lot No.	Item Description Modeling & Support Services	Qty/Units <u>1</u>	Unit Price <u>\$78,875</u>	Percentage <u>\$78,875</u>
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at the following price or percentage <u>seventy eight thousand, eight hundred and seventy five.</u> (Subcontractor's quote)

\$0

and will enter into a formal agreement for work with you conditioned upon your execution of a contract with Palm Beach County.

If undersigned intends to sub-subcontract any portion of this job to a certified SBE or a non-SBE subcontractor, please list the name of that subcontractor and the amount below.

Price or Percentage_____

	N/A_	
(Name	of Subcont	ractor)

The undersigned affirms that it has the resources necessary to perform the work listed without subcontracting to non-certified SBE or any other certified SBE subcontractors except as noted above.

The undersigned subcontractor understands that the provision of this form to Prime Bidder does not prevent Subcontractor from providing quotations to other bidders.

By:

Date:

ociàtes, Inc. Chen Moore & (Print name SBE-MWB Subcontractor) \mathcal{O}

James Barton, P.E., Office Manager (Print name/title of person executing on behalf of SBE-M/WBE Subcontractor)

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Revised 9/7/2011

ATTACHMENT C - SCHEDULE 1

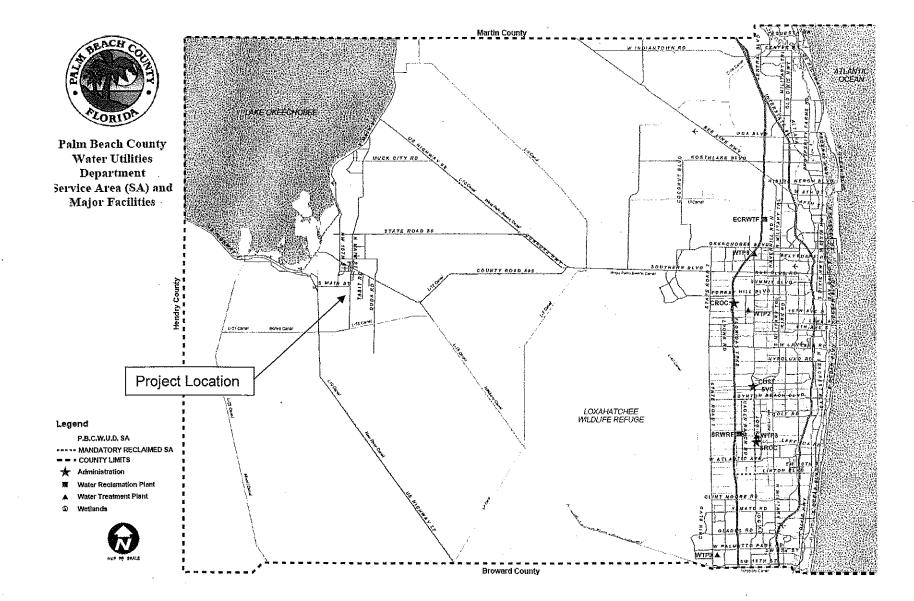
LIST OF PROPOSED SBE-M/WBE PRIME AND/OR SUBCONTRACTOR PARTICIPATION

PROJECT NAME OR BID NAME: Glades Region Water Master Plan	PROJECT NO. OR BID NO.: WUD 12-068
NAME OF PRIME BIDDER: Carollo Engineers, Inc.	ADDRESS: 8401 Lake Worth Rd., Suite 224, Lake Worth, FL, 33467
CONTACT PERSON: Lyle Munce, P.E.	PHONE NO.: (561) 209-6004 FAX NO.: (561) 340-1487
BID OPENING DATE: <u>N/A</u>	USER DEPARTMENT: Water Utilities

THIS DOCUMENT IS TO BE COMPLETED BY THE PRIME CONTRACTOR AND SUMBITTED WITH BID PACKET. PLEASE LIST THE NAME, CONTACT INFORMATION AND DOLLAR AMOUNT AND/OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SBE -M/WBE SUBCONTRACTORS ON THIS PROJECT. IF THE PRIME IS AN SBE-M/WBE, PLEASE ALSO LIST THE NAME, CONTACT INFORMATION AND DOLLAR AMOUNT AND/OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME ON THIS PROJECT. THE PRIME AFFIRMS THAT IT WILL MONITOR THE SBES LISTED TO ENSURE THE SBES PERFORM THE WORK WITH ITS OWN FORCES.

	(Check one or both <u>M/WBE</u>	1 Categories) <u>SBE</u>	<u>I</u>	OLLAR AMOUN	r and/or perci	NTAGE OF WOR	<u>K</u>
Name, Address and Phone Number	Minority Business	Small Business	Black	Hispanic	Women	Caucasian	Other (Asian Amer.)
Chen-Moore & Associates, Inc. 500 Australian Ave. S., Suite 624 1. West Palm Beach, FL (561) 746-6900		\boxtimes					<u>\$78,875</u>
			· · · · · · · · · · · · · · · · · · ·				
				······································			
(Please use additional sheets if necessary)	To	otal					\$78,875
Total Bid Price <u>\$185,868</u> Total SBE-M/WBI	E Participation Dollar	Amount and/of Pe	rcentage of Wor	k <u>\$78.875</u>		. ·	
I hereby certify that the above information accurate to the best of	f my knowledge:	Signature	Le M	ime	<u>L</u>	<u>yle Munce, P.E., Vice</u> Title	President
 Note: 1.The amount listed on this form for a sulattainment. 2. Firms may be certified by Palm Beach under the appropriate category. 3. M/WBE information is being collected 	County as an SBE ai	nd/or and M/WBE				ease indicate the do	

ATTACHMENT D – LOCATION MAP



AUTHORIZATION STATUS REPORT

REQUESTS FOR AUTHORIZATIONS

Auth.	······		Project	Date	WUD No.	Carollo
No.	Description	Status	Total Amount	Approved	Assigned	Project No.
1	WTP 8 High Service Pump Evaluation	Approved	\$29,280	06/10/11	11-075	8684B.00
2	Distribution System Security Enhancement Program Pilot Test of Distribution System Security Monitoring Technologies	Approved	\$98,900	06/08/11	10-072	8645A.00
3	Water Masterplan Update	Approved	\$254,708	08/16/11	11-118	8558C.00
3.1	Water Masterplan Update – Supplement No. 1	Approved	\$15,001	03/14/12	11-118	8558C.00
4	Distribution System Blending Water Quality and Organoleptic Evaluation	Approved	\$36,029	08/29/11	11-142	8558D.00
5	WTP 3 Permeate Pipeline Replacement Engineering During Construction	Approved	\$85,270	04/27/12	11-074	8685A.20
6	WTP 2 Filter Replacement Conceptual Plan	Pending	\$96,657	Pending	12-066	8241B.00
7	Glades Region Water Master Plan	Pending	\$186,000	Pending	12-068	Pending
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	t Total		\$801.845		L	I
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	Total		\$801,845			

(CONTINUED) SUMMARY AND STATUS OF

EXHIBIT - B

EXHIBIT - C

AUTHORIZATION STATUS REPORT

SUMMARY OF

SMALL BUSINESS TRACKING SYSTEM

	Total	SBE	
Current Proposal			
Value of Authorization No. 7	\$186,000		
Value of M/WBE Letters of Intent	\$78,875	\$78,875	
Actual Percentage	42.40	42.40	
Signed / Approved Authorizations			
Total Value of Authorizations	\$615,845		
Total Value of M/WBE Signed Subcontracts	\$130,926	\$130,926	
Actual Percentage	21.25%	21.25%	
Approved Authorizations Plus Current Proposal			
Total Value of Authorizations	\$801,845	,	
Total Value of Subcontracts & Letters of Intent	\$209,801	\$209,801	
Actual Percentage	26.16%	26.16%	
	20.14		
GOAL	26 %		

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