

**PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS**

AGENDA ITEM SUMMARY

Meeting Date: September 19, 2023 **Consent [X]** **Regular []**
Public Hearing []

Department: Water Utilities Department

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: Consultant Services Authorization (CSA) No. 9 to the Contract for Consulting/Professional Services Water Treatment and Water Resources Engineering Services (Contract) with CDM Smith Inc., (Consultant) for the Water Treatment Plant (WTP) No. 11 Upgrades (Project) for a not to exceed amount of \$490,586.66.

Summary: On November 17, 2020, the Board of County Commissioners approved the Palm Beach County Water Utilities Department (PBCWUD) Contract (R2020-1719) with Consultant. CSA No. 9 provides for professional engineering services to perform a comprehensive analysis of WTP No. 11. The analysis will determine process improvements, expansion alternatives and planning level budget estimates. In addition, Consultant will perform a comprehensive analysis of WTP No. 11 focusing on raw water quality, future demands, treatment capacity, treatment technology and potential expansion implementation schedule for the identified improvements at WTP No. 11.

This Contract was procured under the requirements of the Equal Business Opportunity Ordinance. On September 18, 2019 the Goal Setting Committee applied an Affirmative Procurement Initiative (API) of a minimum mandatory 20% Small Business Enterprise (SBE) subcontracting goal and an evaluation preference for up to 15 points based upon the relative level of dollar participation by certified African American owned firms. The Contract provides for 21% SBE participation which includes 19% MBE participation, 19% MBE (B). CSA No. 9 includes 26.28% SBE participation, which includes 13.46% MBE participation, 13.46% MBE (B). The cumulative SBE participation including CSA No. 9 is 35.43% SBE participation, which includes 17.38% MBE participation, 14.20% MBE (B), and 3.18% MBE (A). Consultant is headquartered in Boston, Massachusetts, but maintains an office in Palm Beach County from which the majority of the work will be performed. The Project is included in the PBCWUD FY23 budget. (PBCWUD Project No. 23-024) District 6 (MWJ)

Background and Justification: WTP No. 11 is the sole drinking water source for the Western Communities including the Cities of Belle Glade, Pahokee and South Bay; therefore, it is critical that WTP No. 11 reliably and effectively treat drinking water for its customers. To this end, the recently completed Integrated Utility Master Plan recommended several studies and improvements be completed at WTP No. 11. The evaluation will include a review of the treatment processes and supporting systems and will make subsequent recommendations for improvements at WTP No. 11. These improvements include, but are not limited to, expansion of treatment capacity, installation of a new ground storage tank, clear well (complete with degasification, chemical dosing and odor control), deep injection well, dual zone monitoring well, future production well(s) and raw water pipelines. At the completion of the analysis the Consultant will prepare conceptual level design documentation detailing proposed improvements and a design-build criteria package to be used by PBCWUD for procurement of a design-build entity.

Attachments:

1. Two (2) Originals of Consultant Services Authorization No. 9
2. Location Map
3. Ebix Compliance Summary Report

Recommended By: _____

Ali Bayat
Department Director

8/21/23
Date

Approved By: _____

Walter G. Glavin
Assistant County Administrator

9/8/23
Date

II. FISCAL IMPACT ANALYSIS

A. Five Year Summary of Fiscal Impact:

Fiscal Years	2023	2024	2025	2026	2027
Capital Expenditures	\$490,587	0	0	0	0
Operating Costs	0	0	0	0	0
External Revenues	0	0	0	0	0
Program Income (County)	0	0	0	0	0
In-Kind Match County	0	0	0	0	0
NET FISCAL IMPACT	\$490,587	0	0	0	0
# ADDITIONAL FTE POSITIONS (Cumulative)	0	0	0	0	0

Budget Account No.: Fund 4011 Dept 721 Unit W026 Object 6541

Is Item Included in Current Budget? Yes X No

Does this item include the use of federal funds? Yes No X

Reporting Category N/A

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

One (1) time expenditure from user fees, connection fees and balance brought forward.

C. Department Fiscal Review: *[Signature]* *[Signature]* *[Signature]*

III. REVIEW COMMENTS

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

<p><u><i>[Signature]</i></u> 8/24/23 OFMB <i>ME</i> 8/23/23 <i>MG</i> 8/24</p>	<p><u><i>[Signature]</i></u> 9/11/23 Contract Development and Control <i>DM</i> 9/11/23</p>
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B. Legal Sufficiency:

[Signature] 9/7/23
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. 9
Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Water Treatment and Water Resources Engineering Services
Resolution No. R2020-1719 Contract Dated November 17, 2020

Project Title: Water Treatment Plant No.11 Upgrades

PBCWUD Project No.: 23-024

Consultant: CDM Smith Inc.

Address: 621 NW 53rd Street, Suite 265, Boca Raton, Florida 33487

Budget Line Item No.: 4001-720-2323-3120

District No.: 6

This Consultant Services Authorization provides for: performing an expansion study that will provide the COUNTY with a roadmap of future improvements at Water Treatment Plant No. 11. In addition the CONSULTANT will prepare a design-build criteria package that will be used to procure the services of a Design-Builder.

(See ATTACHMENT A for detailed scope of services)

The Contract provides for 21.0% SBE participation which includes 19.0% MBE participation, 19.0% MBE(B). This Consultant Services Authorization includes 26.28% overall participation which includes 13.46% MBE participation, 13.46% MBE(B). The cumulative SBE participation, including this authorization is 35.43% which includes 17.38% MBE participation, 14.20% MBE(B), and 3.18% MBE (A).

1. Services completed by the Consultant to date :
See ATTACHMENT B.
2. Consultant shall begin work upon receipt of Notice to Proceed correspondence.
3. 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 \$490,586.66
 - B. Fixed price of \$0.00
 - C. Total \$490,586.66
4. 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.

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Palm Beach County Water Utilities Department
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Project Title: Water Treatment Plant No.11 Upgrades

PBCWUD Project No.: 23-024

5. SBE participation is included in **ATTACHMENT C** under this Authorization. The attached Schedule 1 defines the SBE applied to this Authorization and Schedule 2 establishes the SBE contribution from each Sub-Consultant (Letter of Intent).
6. This Authorization does not amend, change, or modify the Contract dated November 17, 2020, which remains in full force and effect.
7. All Attachments to this Authorization are incorporated herein and made a part of this Consultant Services Authorization.

CONSULTANT SERVICES AUTHORIZATION NO. 9
Palm Beach County Water Utilities Department
Contract for Consulting/Professional Services
Water Treatment and Water Resources Engineering Services
Resolution No. R2020-1719 Contract Dated November 17, 2020

Project Title: Water Treatment Plant No.11 Upgrades

PBCWUD Project No.: 23-024

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

PALM BEACH COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF FLORIDA

Joseph Abruzzo, Clerk of the Circuit Court
& Comptroller, Palm Beach County

Palm Beach County, Board
of County Commissioners

ATTEST:

Signed: _____

NPG Signed: _____
AKB Gregg K. Weiss, Mayor

Typed Name: _____
Deputy Clerk

(Date)

Approved as to Form and Legal
Sufficiency

CDM Smith Inc.
(Consultant)

Signed: _____

Suzanne E. Mechler, P.E.
(Print Name)

Typed Name: Michael W. Jones
County Attorney

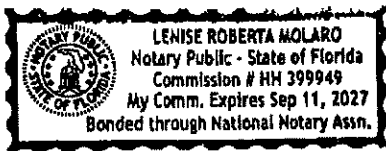
(Signature)

Vice President
(Title)

June 8, 2023
(Date)

STATE OF FLORIDA
COUNTY OF Palm Beach

The foregoing instrument was acknowledged before me by means of physical presence or online notarization,
this 8 day of June, 2023, by SUZANNE MECHLER who is personally
known to me or has produced _____ as identification.



(Signature of Notary Public - State of Florida)

(Print, Type, or Stamp Commissioned Name of Notary Public)



75 State Street, Suite 701
 Boston, Massachusetts 02109
 tel: 617 452-6000

CERTIFICATE

I, Paul T. Milligan, Secretary/Clerk of CDM Smith Inc., a Massachusetts corporation, do hereby certify that Suzanne E. Mechler holds the position of Client Service Leader, which entitles Ms. Mechler to execute and deliver proposals, contracts and agreements for the performance of professional services in the name and on behalf of CDM Smith Inc. Further, Ms. Mechler has the authority to execute and deliver proposals, contracts and agreements for the performance of professional services specifically for the project titled Palm Beach County Water Utilities Department (PBCWUD) Water Treatment and Water Resources Engineering Services, in Palm Beach County, Florida.

I further certify that the foregoing is consistent with the Contract Signing Authority Policy and with the By-laws of the said corporation.

IN WITNESS WHEREOF, I have executed this certificate and have caused the corporate seal of CDM Smith Inc. to be hereunder affixed on this 19th day of January, 2023.

Paul Milligan

Paul T. Milligan- Secretary/Clerk of the Corporation



LIST OF ATTACHMENTS

ATTACHMENT A	Scope of Services
ATTACHMENT B	Summary and Status of Consultant Services Authorizations
ATTACHMENT C	OEBO Schedules 1 and 2
ATTACHMENT D	Project Schedule
ATTACHMENT E	Budget Summary
ATTACHMENT F	Summary of SBE-M/WBE Business Tracking
ATTACHMENT G	Location Map

Attachment A

SCOPE OF SERVICES

PBCWUD Project No.: 23-024

PROJECT TITLE: Water Treatment Plant No.11 Upgrades

CONSULTANT shall perform:

PROJECT BACKGROUND

Palm Beach County (COUNTY) entered into an agreement entitled Consulting/Professional Services Water Treatment and Water Resources Engineering Services (R2020-1719) (CONTRACT), with CDM Smith Inc. (CONSULTANT) to provide engineering services in support of its water treatment plants and water resources. This Consultant Service Authorization (CSA) No. 9 will be performed under that CONTRACT.

CONSULTANT shall provide services to Palm Beach County Water Utilities Department (PBCWUD) to develop an Expansion Study for the existing Water Treatment Plant No.11 (WTP 11) (Project). The efforts of the CONSULTANT shall be focused on developing expansion alternatives, planning level opinion of probable cost and implementation schedule for the identified improvements associated with the expansion of water treatment facilities for WTP 11 based on flow projections by others. This scope excludes improvements related to finished water transmission and distribution. The potential expansion and improvement needs will consider the findings from the integrated Utility Master Plan (IUMP) for Water and the results of previous studies and plans provided by PBCWUD. As part of this project, PBCWUD is also looking to site two (2) Floridan Aquifer production wells, an additional deep injection well and raw water pipelines.

SCOPE OF WORK

The following is a description of the services to be provided by the CONSULTANT under this Scope of Services.

TASK 1 – PROJECT AND QUALITY MANAGEMENT

Project management includes activities related to initiating, planning, executing, controlling, and closing the project. Under this Task, the CONSULTANT will be responsible for overall coordination and oversight and will lead the Consultant Team during the project execution focusing on quality completion of the project tasks on schedule and budget.

Subtask 1.1 - Project Administration

The CONSULTANT will perform overall project management and coordination tasks such as project planning, project controls, subconsultant management, invoicing, reporting and oversight of quality assurance/quality control (QA/QC) activities. During this task, the CONSULTANT will perform the following activities or milestones.

Baseline Schedule: The CONSULTANT will develop a baseline progress schedule that will indicate key project activities for the overall project. The Baseline Schedule will contain the notice to proceed date, milestone dates, quality management activities, the project completion date and the sequence and interdependence of summary level activities showing starting and completion calendar dates for activities and activity duration in number of calendar days required to finish the project on schedule.

After acceptance of the CONSULTANT's baseline schedule by PBCWUD, the CONSULTANT will revise and update the progress schedule after each major milestone, depicting scheduled progress of key activities on a percent complete basis, progress to milestones and through completion.

Monthly Reporting and Invoicing: The CONSULTANT will prepare monthly progress reports in support of invoices to describe the work performed during the previous reporting period. The format and content of the invoice will be in accordance with direction to be provided by PBCWUD.

Deliverables (issued via electronic delivery in pdf format):

- Baseline Schedule
- Monthly Invoices with Monthly Progress Status Report inclusive of updated schedule

Subtask 1.2 - Project Meetings

The CONSULTANT will attend the following meetings during the project.

Initiation/Kickoff Meeting and Site Visit: The goal of the meeting is to confirm PBCWUD's goals and objectives, identify roles, responsibilities and communication protocols for project team members, discuss the scope of work and data needs and to discuss CONSULTANT's overall project execution plan, deliverables, schedule, and critical milestones. CONSULTANT assumes that Project Manager, Project Technical Lead, and key Design Team members (including subs) will attend this meeting.

Monthly Progress Meetings: CONSULTANT's (Project Manager and Project Technical Lead) will attend Monthly Progress Teleconference Meetings (up to 6 one-hour meetings) with the PBCWUD to discuss project progress, project issues and coordination. Other key team members may attend from time to time by phone or in person. Minutes will be distributed one (1) week after the meeting date.

Deliverables (issued via electronic delivery in pdf format):

- Meeting Agenda for each meeting (Initiation, Monthly, and Coordination)
- Meeting Minutes for each meeting (Initiation, Monthly, and Coordination)

TASK 2 – WTP 11 UPGRADES STUDY AND REPORT

Subtask 2.1 - Data Gathering and Data Review

The CONSULTANT will collect data from the COUNTY and other data that is not already possessed by the CONSULTANT from prior work with PBCWUD. The CONSULTANT will analyze the data to determine critical design parameters for the evaluation.

This task includes a preliminary subsurface exploration program consisting of three (3) Standard Penetration Test (SPT) borings to depths of 60 to 80 feet below grade, four (4) SPT borings to a depth of 20 feet, two (2) soil corrosivity tests and Ground Penetration Radar (GPR) to locate any private underground utilities existing in the exploratory area.

Also included in this task are professional surveying services consisting of topographic survey, tree survey and subsurface utility exploration utility targeting on the school property to the west side of WTP 11.

Deliverables (issued via electronic delivery in pdf format):

- Geotechnical Engineering Report
- Survey Drawing (signed and sealed)

Subtask 2.2 - Capacity Analysis

The goal of the capacity analysis is to review the demand projections completed by the recent IUMP for water and provide recommendations as to: (i) if additional treatment capacity is needed, (ii) if expansion is needed then an implementation schedule for the plant expansion, and (iii) how plant capacity should be expanded covering production wells, raw water mains (RWMs), treatment, electrical and Instrumentation & Control (I&C). If the capacity analysis shows that no expansion of the plant is needed then the analysis should include a review of the existing reverse osmosis (RO) treatment process and make recommendation(s) for improvements to maintain 10 million gallons per day (MGD) capacity, into the future, such as recovery rate, feed water production wells, feed water pumps, interstage boost, RO frame, required pressure rating of equipment to accommodate operating pressures.

The CONSULTANT will perform a capacity analysis of existing facilities and will summarize the results in a Technical Memorandum. The goal of the analysis will be to restore treatment capacity to the permitted 10 MGD total finished water and identify future demand with an estimate through 2050. The CONSULTANT will review existing flow projections and make a recommendation as to the future capacity of the plant needs. WTP 11 demand reported from prior studies will be used for the evaluation. The CONSULTANT will document the capacity analysis and recommendations for this Task using power point (ppt) slides for discussion and review with the County.

Deliverables (issued via electronic delivery in pdf format):

- Power Point (ppt) Slides

Subtask 2.3 - Raw Water Quality Projections and Regulatory Requirements

The CONSULTANT will perform a review and compilation of recent pumpage and water quality data that will include:

- Review, compilation, and evaluation of historical individual well pumpage, water quality, hydrogeologic, and geophysical data generated since December 2019. Pumpage and water

quality data provided by COUNTY will be added to existing spreadsheets and charts. Evaluate trends in chloride and total dissolved solids (TDS) and update.

- Update SEAWAT modeling to evaluate current operations and potential future operations. Simulations of historical withdrawals and evaluation of water quality changes observed in the wells since completion of the previous modeling effort which incorporated data through December 2019. Simulations will involve monthly stress periods, with averaged well withdrawals applied for the entire month based on data compiled in the bullet above.
- Simulations evaluating potential future conditions will be performed. Initially, a 5-year simulation will be performed, assuming uniform pumping rates equivalent to 540 gpm average monthly future well withdrawals from each existing well, except for PW-5. In addition, an alternate operational scenario is also anticipated to be completed, using higher rates than the recommended average monthly withdrawal rate of 540 gpm. Future simulations longer than the initial 5-year period may be performed based on results from the initial analyses, as well as potential future operating plans for the wellfield.
- It is anticipated that at least three (3) and up to nine (9) new supply wells may be necessary to meet the 2050 demand. Utilizing preliminary transects outlined in the COUNTY Raw Water Master Plan (RWMP), CONSULTANT will perform a preliminary evaluation of up to twenty (20) future supply well locations. Site evaluations will be limited by site constraints (site access, ingress-egress, laydown, formation water disposal options, proximity to residential, ELUs). It is anticipated that these locations will be reduced to nine (9) locations.

A Technical Memorandum will document the model development, simulations, conclusions, and recommendations for this Task. A draft Technical Memorandum will be submitted for COUNTY review, with comments incorporated into a final technical memorandum.

Deliverables (issued via electronic delivery in pdf format):

- Draft and Final Technical Memorandum

Subtask 2.4 - Water Quality and Feasibility in Shallow Aquifer

If the CONSULTANT determines under subtask 2.2 that additional water is required to meet future demands in Western Palm Beach County, CONSULTANT will provide a preliminary surficial aquifer system (SAS) feasibility study. This preliminary evaluation will include a review of available nearby data for the surficial aquifer system wells, including water quality and hydraulic data, and a discussion of the feasibility of adding the SAS as a source of public water supply for Water Use Permit No. 50-06857-W.

CONSULTANT will review and compile available data from in-house and publicly available sources, including the South Florida Water Management District and the United States Geological Survey. Available water quality data will be compiled to be used as part of Task 2.4 . Well construction and yield data will be compiled and used to determine the number and approximate depth of wells that may be necessary to supply WTP No. 11 with sufficient water to meet its required demand. No preliminary well siting is proposed at this time.

CONSULTANT will review and summarize applicable sections of the Florida Administrative Code and Applicants Handbook for Water Use Permit Applications Within the South Florida Water Management District (2015) that may impact the feasibility of permitting SAS withdrawals within Belle Glade. CONSULTANT will identify nearby existing users of the SAS, known sources of contamination, wetlands, and sources of saline water.

A Technical Memorandum will present the results of the water quality data review and feasibility of permitting SAS withdrawals evaluation under this Task. A draft Technical Memorandum will be submitted for COUNTY review, with comments incorporated into a final technical memorandum.

The COUNTY is also interested in the ability to acquire an additional 3-4 million gallons per day (MGD) of raw water supply after the aquifer storage recovery (ASR) programs are implemented by the South Florida Water Management District (SFWMD).

Deliverables (issued via electronic delivery in pdf format):

- Draft and Final Technical Memorandum

Subtask 2.5 - Development of Expansion Alternatives for Treatment

Following completion of Subtasks 2.1-2.4, CONSULTANT will identify and develop up to three (3) water treatment plant expansion alternatives.

The proposed alternatives to be evaluated will consist of:

- Alternative 1 - Plant Expansion Improvements within the existing Membrane Building
- Alternative 2 - Plant Expansion Improvements within a New Membrane Building within WTP 11 property.
- Alternative 3 – Plant Expansion Improvements within School District of Palm Beach County property land or Belle Glade demolition project area.

Alternatives include the following improvements:

- New RO skids
- New Clearwell and Transfer Pump Station
- Air Stripping Facilities and Odor Control/Blow-Down Disposal
- New Finished Water Ground Storage Tank (GST)
- Redundant Concentrate Injection Well and Associated Monitoring Wells
- Chemical Storage and Feed Facilities
- Access Roads, Stormwater, and Critical Yard Piping
- Piping/Utility Corridors

- Production Wells
- Other necessary plant expansion improvements

Evaluation of the alternatives will include:

- Preliminary facility layout of the alternative (plan view figures only).
- Preliminary recommendation of new membranes type required to support water quality projections. Incorporate consideration of interstage boost, addition of membrane vessels on the existing skids, and pressure needs.
- Review of electrical requirements inclusive of supply from Florida Power & Light and back-up power generation.
- Review of instrumentation and control requirements.
- Identification of applicable regulations and permits for implementing the alternative.
- Identification of applicable land development requirements (for School District of Palm Beach County property land, if acquired by COUNTY).
- Discussion of the risks associated with each alternative.
- Flood Protection Level of Service for improvement alternatives: For special flood hazard areas as defined in the Palm Beach County Land Development Code, build infrastructure to the 100-year base elevation, plus the projected sea level rise at the end of the structure's useful life plus one (1) foot or the 500-year base flood elevation, whichever is higher.
- Identification of pros and cons with respect to construction and operation and maintenance.
- Planning level opinion of probable construction cost (OPCC) for each alternative.
- Planning level project schedule for implementation of each alternative.

Subtask 2.6 - Draft Preliminary Expansion Report (PER)

The geotechnical work, completed in Task 2.1, will be considered a baseline and will be focused on the School District of Palm Beach County property to identify foundation requirements if an expansion is conducted on that site and along potential right-of-way locations. A recommendation for a full geotechnical investigation/ report will be identified as part of the Design-Build Criteria Package. For the existing WTP 11 site, existing geotechnical information will be utilized. The CONSULTANT will discuss the monetary penalty, if any, of constructing the clearwell and other improvements on the existing WTP 11 site or the neighboring School District of Palm Beach County site.

The CONSULTANT will prepare a PER for the WTP 11 facility to document the improvements required to expand potable water production with consideration for future expansions.

The CONSULTANT will prepare a concept layout showing a new clearwell, GST, transfer pumps, odor control, concentrate injection well (and dual zone monitoring well if needed), piping/utility corridors, access roads, stormwater. The preliminary expansion report will summarize the alternative evaluation and a Class IV OPCC for each alternative. A draft version of the preliminary expansion report will be submitted to PBCWUD for review and comment. CONSULTANT will reply to the COUNTY's quality review form comments spread sheet provided in Task 2.6 and will provide written responses. A review meeting workshop will be held with COUNTY to further discuss the Draft Preliminary Expansion Report. Once responses to comments are accepted by PBWUD, this task will be deemed complete. The selected alternative for expansion will be agreed upon by COUNTY and CONSULTANT at the review workshop.

Deliverables (issued via electronic delivery in pdf format):

- Draft Preliminary Expansion Study Report to include Draft Concept Layout, High-Level Implementation Schedule, and List of Major Permits
- Responses to COUNTY's Written Quality Review Form Comments (to be reviewed at the meeting)
- Meeting Minutes

Subtask 2.7 - Final Preliminary Expansion Report

The CONSULTANT will finalize OPCCs for the alternatives and will prepare a Final Preliminary Expansion Report.

Deliverables (issued via electronic delivery in pdf format):

- Final Preliminary Expansion Report for WTP 11
- Workshop Meeting Minutes

TASK 3 - PREPARATION AND COUNTY REVIEW AND APPROVAL OF DESIGN-BUILD CRITERIA PACKAGE (DCP)

The Design-Build Criteria Package (DCP) includes a more detailed scope, establishes the design criteria, performance requirements, and bid and contract parameters for the Project. This document will be based on the agreed upon expansion alternative established in the Final Preliminary Expansion Report (Task 2.7). The DCP, once finalized, will be used by the COUNTY to proceed with the procurement process. This task will end when the DCP is provided to the COUNTY ahead of procurement. An outline of the DCP and performance Sections are included below.

Subtask 3.1 – Prepare Draft DCP Sections 1, 2, 3 and 4

This subtask includes the activities to prepare and obtain COUNTY review of the design criteria and performance requirements. The following components of the DCP will be provided by the CONSULTANT under this subtask:

Prepare Design Criteria and Performance Requirements

- Section 1 – General Requirements
- Section 2 – Existing Conditions
- Section 3 - Design Criteria & Performance Requirements
- Section 4 – Submittals

Deliverables (issued via electronic delivery in pdf format):

- Draft Section 1, 2, 3 and 4 of the DCP

Subtask 3.2 – Prepare Draft DCP – Section 5

This subtask includes the activities to prepare and obtain COUNTY review of the DCP Attachments. The following components of the DCP will be provided by the CONSULTANT under this subtask:

- Aerial base maps and sketches depicting Overall Project Limits
- Legal description of site (provided by COUNTY)
- As-built Record Information
- Design Drawings (approximately a conceptual completion level)
- Available Geotechnical Reports
- Topographic Survey

Deliverables (issued via electronic delivery in pdf format):

- Draft Section 5 of the DCP

Subtask 3.3 – Prepare Final DCP

Address comments from the COUNTY and compile the final DCP for COUNTY's use in the procurement of a Design-Builder to implement the Project.

Deliverables (issued via electronic delivery in pdf format):

- Final DCP

TASK 4 – SOLICITATION SUPPORT

At the request of the COUNTY, CONSULTANT will perform additional engineering services to the COUNTY in assisting the Program Manager in responding to technical inquiries related to the DCP or for work expressly excluded from the scope of services as noted in the Assumptions herein or requested by the COUNTY during the Project.

Additional Engineering Services may include, but not be limited to, preparation of solicitation materials, assistance of assessment of proposals from respondents, analysis or preparation of design modifications, or additional limited services during the Design-Builder selection process. A not-to-exceed amount of \$8,000 is established for services related to this Task.

DATA OR COORDINATION ASSISTANCE TO BE PROVIDED BY THE COUNTY OR PROGRAM MANAGER

1. COUNTY to assign a Project/Program Manager and primary contact for CONSULTANT.
2. Provide timely COUNTY reviews of CONSULTANT submitted information. Review periods of 14 calendar days are anticipated for COUNTY review of draft deliverables prepared by CONSULTANT. CONSULTANT will submit final deliverables within three (3) weeks after receiving quality review form comments from COUNTY.
3. Furnish requested data/information in a timely manner to CONSULTANT for assignment to remain on schedule.
4. Provide a sample DCP used by COUNTY on a prior similar project for CONSULTANT to use as a sample guide in developing the required DCP under this CSA.

ASSUMPTIONS

The above-described professional services have been based upon the following assumptions:

1. CONSULTANT shall prepare all deliverables for review by PBCWUD. Deliverables shall be submitted electronically in native file format and pdf. PBCWUD shall provide written quality review form comments and CONSULTANT shall provide written responses for review by PBCWUD.
2. CONSULTANTS scope of work is limited to Water Treatment facilities and does not include evaluation of water supply or transmission or finished water transmission or distribution.
3. CONSULTANT shall rely on and incorporate applicable existing information from other reports, studies, and documents available to develop alternatives, including raw water quality data.
4. Scope excludes structural condition assessment of existing structures.
5. Scope excludes evaluation of interconnect to Water Treatment Plant Nos. 2, 3, 8 and 9.
6. Scope excludes pilot testing.
7. CONSULTANT will use its professional judgment to reasonably rely upon the information and data provided by COUNTY or obtained from generally acceptable sources within the industry.
8. Unless otherwise noted, it is assumed CONSULTANT will receive clear direction with quality review form comments from COUNTY on deliverables within two (2) weeks following delivery.

9. Meetings with citizens' groups, media and others are not included.
10. If a seismic field study is needed or required, then it will be conducted by others.
11. It is assumed that no Environmental Site Assessments (ESA) (Phase 1/Phase 2) shall be required. If it is determined that they are required, they can be provided as an Additional Engineering Service by the CONSULTANT.
12. It is understood that the CONSULTANT is responsible for the preparation of a Design-Build Criteria Package for the Design-Builder procurement and assisting with technical questions during the procurement of a Design-Builder.
13. It is understood that the COUNTY or its Program Manager will be responsible for administering and managing the procurement of a Design-Builder for the Project.
14. The Opinion of Probable Construction Cost to be developed under this scope of work will be prepared in accordance with the cost estimate classes defined by the Association for the Advancement of Cost Engineering (AACE), Class IV. The cost opinion for the Design-Builder firm will consider costs necessary for a design-build firm to provide a complete system, tested and ready to place in service including, but not limited to, professional fees (engineering, testing, construction inspections & administration), labor, equipment, and installation.
15. Permit applications are anticipated to be prepared by Design-Build firm for the Florida Department of Environmental Protection (FDEP)/Palm Beach County Health Department, South Florida Water Management District, Department of Environmental Resources Management (DERM) as needed for the various environmental permits that may be submitted at the design-build criteria package stage. Copies of the draft permit application(s) will be forwarded by the COUNTY for review. Exhibits, as required by the issuing agency, will be prepared, and furnished to the COUNTY in the required number of copies. Other permits required for construction of the Project shall be identified in the design-build criteria package and shall be the responsibility of the selected Design-Build team. The CONSULTANT anticipates that one (1) application will be required for each of the permits.
16. It is understood that this CSA includes preparation of design-build criteria and performance requirements and may contain technical specification requirements, as needed. This CSA assumes that a separate volume of technical specifications prepared in the 50 Division three-part Construction Specifications Institute (CSI) format will not be required as part of the DCP. The DCP (Section 4 – Technical Specifications – Division 2 through 50), if required, may be prepared by the CONSULTANT as an additional engineering service.
17. COUNTY shall be responsible for, and CONSULTANT may rely upon, the accuracy and completeness of instructions, reports, data, and other information furnished by COUNTY to CONSULTANT pursuant to this CSA. CONSULTANT may use such instructions, reports, data, and information in performing or furnishing services under this CSA. CONSULTANT's scope of work does not include verifying COUNTY Provided Information for accuracy or completeness. COUNTY

may request an independent review of COUNTY Provided Information by CONSULTANT and can be provided as an Additional Engineering Service.

PRELIMINARY

LIST OF DRAWINGS AND TECHNICAL SPECIFICATIONS

WUD Project No: 23-024

Project Title: WTP No.11 Upgrades

Sheet No.	Count	Description
G-0, 1, 2	3	Title Sheet, Drawing List, General Notes
V-1, 2, 3, 4, 5, 6	9	Topographic Survey
C-1, 2, 3, 4	12	Proposed Site Plan – Key Plan, Sheet 1, Sheet 2, Staging Area
M-1, 2, 3	15	Proposed Alternatives – Sheet 1, Sheet 2, Sheet 3
A-1	16	Existing Membrane Building Modifications
A-2	17	New Membrane Building Plans
A-3	18	New Membrane Building Exterior Elevations
A-4	19	Chemical Storage Plans and Elevations (canopy)
I-1	20	Legend I
I-2	21	Legend II
I-3	22	P&ID - Existing Membrane Building RO Skids
I-4	23	P&ID - New Membrane Building RO Skids
I-5	24	P&ID - Clearwell and Transfer Pump Station
I-6	25	P&ID - Finished Water Ground Storage Tank
I-7	26	P&ID - Air Stripping Facilities and Odor Control
I-8	27	P&ID - Chemical Storage and Feed Facility Expansion
E-1	28	Electrical Site
E-2	29	One Line Power Diagram
E-3	30	Electrical Room Layout Plan
Tech Spec	1	Membrane Requirements
Tech Spec	2	Bill of Materials Requirements
Tech Spec	3	MOPO Constraints

Tech Spec	4	List of Permits and Responsibilities
Tech Spec	5	List of Acceptable Manufacturers
Tech Specs	6	Geotechnical Report
Tech Specs	7	Design-Build Firm Qualifications

DRAFT OUTLINE

DESIGN BUILD CRITERIA PACKAGE – WTP No.11 UPGRADES

PART 1 General Requirements

1.1. Requirements

- 1.1.1. *Legal Description*
- 1.1.2. *Survey Information*
- 1.1.3. *Space Requirements*
- 1.1.4. *Material Qty Standards*
- 1.1.5. *Schematic Layouts and Conceptual Design Criteria*
- 1.1.6. *Site Development Requirements*
- 1.1.7. *Utility Locates and Protection of Utilities*

1.2. Summary of Work

1.2.1 *Proposed Site Plan Layouts*

- 1.3. General Conditions
- 1.4. Reference Standards / Documents
- 1.5. Quality Assurance and Quality Control
- 1.6. Safety Requirements
- 1.7. Security Requirements
- 1.8. Project Schedule
- 1.9. Execution
- 1.10. Closeout Procedures
- 1.11. Commissioning Requirements

PART 2 EXISTING CONDITIONS

- 2.1. Plant Site / Civil Requirements
- 2.2. Demolitions and Equipment Removal
- 2.3. Trenching, Excavation and Backfill

PART 3 TECHNICAL REQUIREMENTS

- 3.1. Cast-In-Place Concrete
 - 3.2. Miscellaneous Metals
 - 3.3. Painting and Coating
 - 3.4. Valves and Piping Requirements
 - 3.5. Electrical Requirements
 - 3.6. Instrumentation and Control Requirements
-

3.7 TBD

PART 4 SUBMITTALS

4.1 Reports

4.2 Drawings

4.3 Permits Submittals

4.4. Shop Drawings

4.5. Shutdown plans

4.6. Pre-Commissioning and Commissioning (startup and testing) Plan(s)

4.7. CPM Schedule

4.8 Quality Control and Assurance

4.9 Operations & Maintenance Manuals

4.10 Closeout

Attachments

Aerial base maps and sketches depicting Overall Project Limits

Legal description of site (provided by COUNTY)

As-built Record Information

Design Drawings (approximately a conceptual completion level)

Geotechnical Investigation Report(s)

Topographic Survey

ATTACHMENT B

SUMMARY AND STATUS OF CONSULTANT SERVICES AUTHORIZATIONS

Auth. No.	PBCWUD Project No.	Title	Status	Project Total Amount	SBE Total Amount	SBE Participation %	Approved	
							By	Date
1	21-015	Consumptive Use Permit Renewal Support	Approved	\$82,364.00	\$35,396.00	42.97%	CRC	1/13/21
1.1	21-015	Consumptive Use Permit Renewal Support	Approved	\$49,773.30	\$31,444.80	63.17%	DIR	5/27/21
1.2	21-015	Consumptive Use Permit Renewal Support	Approved	\$5,958.40	\$743.40	12.47%	DIR	5/01/21
2	21-045	Arsenic Treatment Options Assessment	Approved	\$98,733.00	\$0.00	0.00%	CRC	6/2/2021
3	21-046	Water Treatment Plant Nos. 3 and 9 Degasifier and Odor Control Systems Assessment	Approved	\$99,243.00	\$0.00	0.00%	CRC	5/26/21
4	21-051	Belle Glade Water Treatment Plant Demolition	Approved	\$286,495.20	\$196,785.20	68.68%	BCC	11/16/21
4.1	21-051	Belle Glade Water Treatment Plant Demolition	Approved	\$49,900.10	\$46,223.60	92.63%	DIR	2/17/23
5	21-049	Water Treatment Plant 11 Clearwell Recoating Evaluation	Approved	\$97,752.00	\$0.00	0.00%	CRC	6/2/21
6	21-015	Consumptive Use Permit Renewal Support	Approved	\$317,536.60	\$186,841.60	58.84%	BCC	6/15/21
7	21-080	New LCR Compliance Consulting and Associated Corrosion Control Study Analysis	Approved	\$83,584.50	\$0.00	0.00%	CRC	6/29/22
8	19-065	Integrated Utility Master Plan - Water	Approved	\$434,785.52	\$158,041.52	36.34%	BCC	1/4/22
9	23-024	Water Treatment Plant No.11 Upgrades	Pending	\$490,586.66	\$128,919.66	26.27%	BCC	Pending

Auth. No.	PBCWUD Project No.	Title	Status	Project Total Amount	SBE Total Amount	SBE Participation %	Approved	
							By	Date
10	23-040	Western Region Consumptive Use Permit Renewal	Pending	\$294,878.20	TBD	TBD	CRC	Pending
11	23-043	Water Treatment Plant No.2 Treatment Alternatives Analysis	Approved	\$96,467.00	\$0.00	0.00%	CRC	06/28/23
12	23-045	Water Treatment Plant Nos. 3 and 9 Expansion Study	Approved	\$99,874.00	\$26,776.00	26.80%	CRC	06/28/23

ATTACHMENT C

OEBO SCHEDULE 1

Office of Equal Business Opportunity Compliance Programs

OEBO SCHEDULE 1

SOLICITATION/PROJECT/BID NAME: Water Treatment Plant No.11 Upgrades
 SOLICITATION OPENING/SUBMITTAL DATE: June 9, 2023

SOLICITATION/PROJECT/BID NO.: PBCWUD Project No. 23-043
 COUNTY DEPARTMENT: Palm Beach County Water Utilities Department

Section A PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY THE PRIME CONTRACTOR/CONSULTANT* ON THE PROJECT:
 621 NW 53rd Street, Suite 265; Boca Raton, FL 33487

NAME OF PRIME RESPONDENT/BIDDER: CDM Smith Inc. ADDRESS: _____
 CONTACT PERSON: Suzanne E. Mechler, P.E. Vice President PHONE NO.: 561-571-3756 E-MAIL: mechlerse@cdmsmith.com

PRIME'S DOLLAR AMOUNT OR PERCENTAGE OF WORK: \$361,667.00
 *SMWBE Prime's must include their percentage or dollar amount in the Total Participation line under section B.

Non-SBE MBE WBE SBE

Section B PLEASE LIST THE DOLLAR AMOUNT OR PERCENTAGE OF WORK TO BE COMPLETED BY ALL SUBCONTRACTORS/SUBCONSULTANTS ON THE PROJECT BELOW:

Subcontractor/Sub consultant Name	(Check all Applicable Categories)				DOLLAR AMOUNT OR PERCENTAGE OF WORK					
	Non-SBE	MBE	WBE	SBE	Black	Hispanic	Women	Caucasian	Asian	Other
		Minority Business	Women Business	Small Business						
1. Pacifica Engineering Services, LLC	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$19,939.70					
2. JLA Geosciences, Inc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>				\$62,864.00		
3. Brown & Phillips, Inc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$16,415.96					
4. C Solutions, Inc.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	\$29,700.00					
5.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>						

(Please use additional sheets if necessary)

Total \$66,055.66

Total Bid/Offer Price \$ 490,586.66

Total Certified S/M/WBE Participation \$ 128,919.66

I hereby certify that the above information is accurate to the best of my knowledge: Suzanne E. Mechler Vice President
 Name & Authorized Signature _____ Title _____

- Note:
- The amount listed on this form for a Subcontractor/sub consultant must be supported by price or percentage listed on the properly executed Schedule 2 or attached signed proposal.
 - Only those firms certified by Palm Beach County at the time of solicitation due date are eligible to meet the established OEBO Affirmative Procurement Initiative (API). Please check the applicable box and list the dollar amount or percentage under the appropriate demographic category.
 - Modification of this form is not permitted and will be rejected upon submittal.

ATTACHMENT C

OEBO SCHEDULE 2

Office of Equal Business Opportunity Compliance Programs

Revised 12/20/2022

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD Project No. 23-024

SOLICITATION/PROJECT NAME: Water Treatment Plant No.11 Upgrades

Prime Contractor: CDM Smith Inc. Subcontractor: Pacifica Engineering Services, LLC

(Check box(es) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 10/25/2021-10/24/2024

The undersigned affirms they are the following (select one from each column if applicable):

<u>Column 1</u>	<u>Column 2</u>	<u>Column 3</u>
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input checked="" type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	


S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.


Line Item	Item Description	Unit Price	Quantity/Units	Contingencies/Allowances	Total Price/Percentage
	Geotechnical				\$19,939.70

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$19,939.70

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

N/A Price or Percentage: N/A
 Name of 2nd/3rd tier Subcontractor/subconsultant

CDM Smith Inc.
 Print Name of Prime
 By: 
 Authorized Signature
Suzanne Mechler, PE, BCEE
 Print Name
 Vice-President
 Title
 Date: 06/08/2023

Pacifica Engineering Services, LLC
 Print Name of Subcontractor/subconsultant
 By: 
 Authorized Signature
Javier Perez
 Print Name
 Director
 Title
 Date: 06/06/2023

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD Project No. 23-024
 SOLICITATION/PROJECT NAME: Water Treatment Plant No.11 Upgrades

Prime Contractor: CDM Smith Inc. Subcontractor: JLA Geosciences, Inc.

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 4/10/2023-4/9/2026

The undersigned affirms they are the following (select one from each column if applicable):

Column 1	Column 2	Column 3
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input checked="" type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

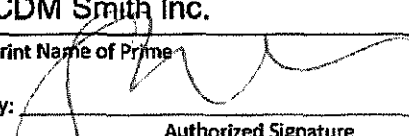
S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

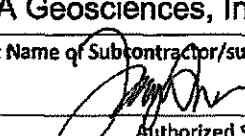
Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
	Hydrogeologic	\$62,864.00	1	-	\$62,864.00
	Commodity Codes: 91843, 91855, 92683, 96143, 96892				

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$62,864.00

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

N/A Price or Percentage: N/A
 Name of 2nd/3rd tier Subcontractor/subconsultant

CDM Smith Inc.
 Print Name of Prime
 By: 
 Authorized Signature
 Suzanne Mechler, PE, BCEE
 Print Name
 Vice-President
 Title
 Date: 06/08/2023

JLA Geosciences, Inc.
 Print Name of Subcontractor/subconsultant
 By: 
 Authorized Signature
 James L. Andersen
 Print Name
 President
 Title
 Date: 6/6/2023

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD Project No. 23-024

SOLICITATION/PROJECT NAME: Water Treatment Plant No. 11 Expansion Study

Prime Contractor: CDM Smith Inc. Subcontractor: Brown & Phillips, Inc.

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 1/31/22-1/30/25

The undersigned affirms they are the following (select one from each column if applicable):

Column 1	Column 2	Column 3
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input checked="" type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
	Surveying				\$16,415.96

The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$16,415.96

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

N/A Price or Percentage: N/A

Name of 2nd/3rd tier Subcontractor/subconsultant

CDM Smith Inc.
 Print Name of Prime
 By: [Signature]
 Authorized Signature
Suzanne Mechler, PE, BCEE
 Print Name
 Vice-President
 Title
 Date: 06/08/2023

Brown & Phillips, Inc.
 Print Name of Subcontractor/subconsultant
 By: [Signature]
 Authorized Signature
John E Phillips
 Print Name
 Principal
 Title
 Date: June 7, 2023

OEBO LETTER OF INTENT – SCHEDULE 2

A completed Schedule 2 is a binding document between the Prime Contractor/consultant and a Subcontractor/subconsultant (for any tier) and should be treated as such. The Schedule 2 shall contain bolded language indicating that by signing the Schedule 2, both parties recognize this Schedule as a binding document. All Subcontractors/subconsultants, including any tiered Subcontractors/subconsultants, must properly execute this document. Each properly executed Schedule 2 must be submitted with the bid/proposal.

SOLICITATION/PROJECT NUMBER: WUD Project No. 23-024

SOLICITATION/PROJECT NAME: Water Treatment Plant No. 11 Upgrades

Prime Contractor: CDM Smith Inc. Subcontractor: C Solutions, Inc.

(Check box(s) that apply)

SBE WBE MBE M/WBE Non-S/M/WBE Date of Palm Beach County Certification (if applicable): 2/10/2023 to 2/9/2026

The undersigned affirms they are the following (select one from each column if applicable):

Column 1	Column 2	Column 3
<input checked="" type="checkbox"/> Male <input type="checkbox"/> Female	<input checked="" type="checkbox"/> African-American/Black <input type="checkbox"/> Asian American <input type="checkbox"/> Caucasian American	<input type="checkbox"/> Supplier
	<input type="checkbox"/> Hispanic American <input type="checkbox"/> Native American	

S/M/WBE PARTICIPATION – S/M/WBE Primes must document all work to be performed by their own work force on this form. Failure to submit a properly executed Schedule 2 for any S/M/WBE participation may result in that participation not being counted. Specify in detail, the scope of work to be performed or items supplied with the dollar amount and/or percentage for each work item. S/M/WBE credit will only be given for the areas in which the S/M/WBE is certified. A detailed proposal may be attached to a properly executed Schedule 2.

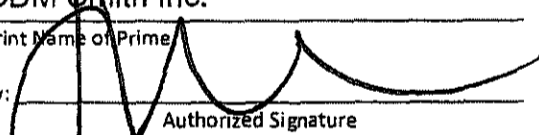
Line Item	Item Description	Unit Price	Quantity/ Units	Contingencies/ Allowances	Total Price/Percentage
					\$29,700.00

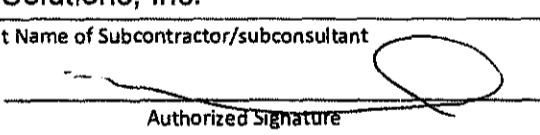
The undersigned Subcontractor/subconsultant is prepared to self-perform the above-described work in conjunction with the aforementioned project at the following total price or percentage: \$29,700.00

If the undersigned intends to subcontract any portion of this work to another Subcontractor/subconsultant, please list the business name and the amount below accompanied by a separate properly executed Schedule 2.

N/A Price or Percentage: N/A

Name of 2nd/3rd tier Subcontractor/subconsultant

CDM Smith Inc.
 Print Name of Prime
 By: 
 Authorized Signature
Suzanne Mechler, PE, BCEE
 Print Name
 Vice-President
 Title
 Date: 7/25/2023

C Solutions, Inc.
 Print Name of Subcontractor/subconsultant
 By: 
 Authorized Signature
Mark Drummond
 Print Name
 President
 Title
 Date: 7/21/2023

ATTACHMENT D

PROJECT SCHEDULE

The completion dates for this work will be as follows (starting from CONSULTANT'S receipt of Notice to Proceed).

Engineering Services

Completion Date from Notice to Proceed

(Calendar Days)

Task 1 Project and Subconsultant Management	370 Calendar Days (CD)
- Subtask 1.1 Project Administration	370 Calendar Days
- Subtask 1.2 Project Meetings	370 Calendar Days
Task 2 WTP 11 Expansion Study and Report	255 Calendar Days (CD)
- Subtask 2.1 Data Collection and Data Review	150 Calendar Days
- Subtask 2.2 Capacity Analysis	150 Calendar Days
- Subtask 2.3 Raw Water Quality Projections and Regulatory Requirements	150 Calendar Days
- Subtask 2.4 Water Quality and Feasibility in Shallow Aquifer	150 Calendar Days
- Subtask 2.5 Treatment Design Criteria and Option Development	150 Calendar Days
- Subtask 2.6 Preliminary Expansion Report	171 Calendar Days
- Subtask 2.7 Draft and Final OPCC and Preliminary Expansion Report for WTP 11	171 Calendar Days
Task 3 Preparation and County review and Approval of Design-Build Critical Package (DCP)	370 Calendar Days
- Subtask 3.1 Prepare Draft DCP Sections 1 and 2 (120 CD duration)	370 Calendar Days
- Subtask 3.2 Prepare Draft DCP Section 3 (120 CD duration)	370 Calendar Days
- Subtask 3.3 Prepare Final DCP (120 CD duration)	370 Calendar Days
Task 4 Solicitation Support: Additional Engineering Services (30 CD duration, CONSULTANT does not control duration)	Calendar Days (On-call As-needed)

Notes:

1. Anticipated 21 CD duration to sign sub agreements from notice to proceed
2. Anticipated 120 CD duration to complete survey from notice to proceed
3. Anticipated 21 CD duration for COUNTY review. CONSULTANT does not control duration.

Revised 12/20/2022

Palm Beach County Water Utilities Department
 Contract for Consulting /Professional Services Water Treatment and Water Resources Engineering!
 Resolution No. R2020-1719 Contract Dated November 17, 2020
 Consultant Services Authorization No.: 9
 Consultant: CDM Smith Inc.
 Project Title: Water Treatment Plant No.11 Upgrades
 PBCWUD Project No.: 23-024

Task Number	Task Description	Senior Officer [\$89.50-102.50]	Senior Technical Expert [\$86.00-95.50]	Officer [83.50-92.50]	Associate Specialist [\$73.00-88.50-36.00]	Document Control	Total Labor	Sub Consultant Services	Reimbursables	Total by Subtask
Task 1	Project and Quality Management									
1.1	Project Administration			52		20	\$ 45,276.00	\$ 36,355.66		\$ 81,631.66
1.2	Project Meetings	2		2			\$ 3,600.00	\$ -		\$ 3,600.00
Task 2	WTP 11 Expansion Study and Report						\$ -	\$ -		\$ -
2.1	Data Gathering and Data Review			16			\$ 7,998.00	\$ -		\$ 7,998.00
2.2	Capacity Analysis			16			\$ 9,894.00	\$ -		\$ 9,894.00
2.3	Raw Water Quality Projections and Regulatory Requirements						\$ 9,810.00	\$ 45,016.00		\$ 54,826.00
2.4	Water Quality and Feasibility in Shallow Aquifer						\$ 36,252.00	\$ 17,848.00		\$ 54,100.00
2.5	Development of Expansion Alternatives for Treatment						\$ 44,571.00	\$ -		\$ 44,571.00
2.6	Draft Preliminary Expansion Report			16			\$ 44,448.00	\$ 6,636.00		\$ 51,084.00
2.7	Final Preliminary Expansion Report						\$ 31,302.00	\$ 8,136.00		\$ 39,438.00
Task 3	Preparation and County Review and Approval of Design Criteria Package						\$ -	\$ -		\$ -
3.1	Prepare Draft DCP Sections 1, 2, 3 and 4						\$ 41,715.00	\$ 9,588.00		\$ 51,303.00
3.2	Prepare Draft DCP Section 5						\$ 37,170.00	\$ 5,340.00		\$ 42,510.00
3.3	Prepare Final DCP						\$ 41,436.00	\$ -		\$ 41,436.00
Task 4	Solicitation Support						\$ 8,000.00	\$ -	\$ 195.00	\$ 8,195.00
								\$ -		
	Subtotal	2		102		20	\$ 361,472.00	\$ 128,919.66	\$ 195.00	\$ 490,586.66

Labor Subtotal Hours	2		102		20	1811.51			
Labor Raw Costs	\$ 102.50	\$ 95.50	\$ 92.50	\$ 36.00					
Labor Multiplier	3	3	3	3					
Labor Sub Total	\$ 615.00		\$ 28,305.00	\$ 12,160.00					
Labor Total						\$ 361,472.00			
Out-of-Pocket Expenses [black and white printing (8.5"x11") x Rate \$0.25 x 780 pages = \$195.00]						\$ 195.00	\$ -		
Sub Consultant Labor Total									
Sub Consultant Multiplier									
Subcontract Total							\$ 128,919.66		
Project Total							\$ 490,586.66		

**ATTACHMENT E
BUDGET SUMMARY**

Palm Beach County Water Utilities Department
Contract for Consulting /Professional Services Water Treatment and Water Resources Engineering Services
Resolution No. R2020-1719 **Contract Dated November 17, 2020**
Consultant Services Authorization No.: 9
Consultant: CDM Smith Inc.
Project Title: Water Treatment Plant No.11 Upgrades
PBCWUD Project No.: 23-024

	SUBCONSULTANTS					Total
	CDM Smith Inc	C Solutions, Inc.	Pacifica Engineering Services, LLC	JLA Geosciences, Inc.	Brown and Phillips	
	Non-SBE	SBE + MBE	SBE + MBE	SBE + MBE	SBE + MBE	
LABOR	\$ 361,472.00	\$ 29,700.00	\$ 19,939.70	\$ 62,864.00	\$ 16,415.96	\$ 490,391.66
REIMBURSABLES	\$195	\$0	\$0	\$0	\$0	\$195
TOTAL	\$ 361,667.00	\$ 29,700.00	\$ 19,939.70	\$ 62,864.00	\$ 16,415.96	\$ 490,586.66

**CDM-Smith
Scope of Services
Palm Beach County Water Utilities Department
Water Treatment Plant No 11 Expansion Study and Design Criteria
Package (DCP)**

Scope of Services

I. BACKGROUND

Palm Beach County Water Utilities Department (COUNTY) has retained the CDM Smith Inc. (CONSULTANT) to provide consulting/professional services on its Water Treatment and Water Resources systems. The COUNTY owns and operates five water treatment plants and corresponding water supply wells. COUNTY has requested the CONSULTANT to provide services to develop an Expansion Study for the existing WTP 11. The efforts of the CONSULTANT shall be focused on developing expansion alternatives, planning level opinion of probable cost and implementation schedule for the identified improvements associated with the expansion of water treatment facilities for WTP 11 based on flow projections by others.

C Solutions, Inc. (SUBCONSULTANT) is serving as a subconsultant to CDM Smith Inc. (CONSULTANT) to assist in the provision of assigned services as defined below.

II. SCOPE OF SERVICES

The SUBCONSULTANT will perform the engineering scope of services as described herein. The task defined below will match those provided in the CONSULTANT's scope of services with COUNTY.

TASK 2 – WTP 11 EXPANSION STUDY AND REPORT

The CONSULTANT will prepare a Preliminary Expansion Report (PER) for the WTP 11 facility to evaluate the improvements required to expand potable water production with consideration for future expansions. The proposed improvements to be evaluated will include:

- New RO skids within the existing Membrane Building
- New RO skids within a New Membrane Building
- School Board Property Land Development requirements
- New Clearwell and Transfer Pump Station
- New Finished Water Ground Storage
- Air Stripping Facilities and Odor Control/ Blow-Down Disposal
- Chemical Storage and Feed Facilities
- Electrical and I&C
- Access Roads, Stormwater, and Critical Yard Piping
- Piping/ Utility Corridors

The CONSULTANT will evaluate up to three alternatives and will provide conceptual sketches describing the approximate sizes and locations of the assets required to implement the various alternatives inside the plant property.



Attachment E

Subtask 2.6 - Preliminary Expansion Study

The SUBCONSULTANT will prepare conceptual site plan layouts showing a new clearwell, GST, transfer pumps, odor control, DIW, piping/utility corridors, access roads, and stormwater. SUBCONSULTANT will create up to three conceptual site plan layouts, one for each of the three alternatives considered by CONSULTANT.

The conceptual site plan layouts are schematic and not intended for design.

Deliverables :

- Three (3) Conceptual Site Plan Layouts

Subtask 2.7 - Draft and Final OPCC and Expansion Report for WTP 11

CONSULTANT will hold a review meeting workshop with the COUNTY to receive comments and discuss the Preliminary Expansion report. Based on the PBCWUD comments, the SUBCONSULTANT will revise the previously provided conceptual site plan layouts to be included in the Expansion Study Report for WTP 11.

Deliverables:

- Conceptual Site Plan Layout for Draft Expansion Study Report
- Conceptual Site Plan Layout for Final Expansion Report for WTP 11

TASK 3 - PREPARATION AND COUNTY REVIEW AND APPROVAL OF DESIGN CRITERIA PACKAGE (DCP)

The Design Criteria Package (DCP) includes a more detailed scope, establishes the design criteria, performance requirements, and bid and contract parameters for the Project. This document will be based on the findings of the recommended expansion established in the Final Expansion Study report (Task 2). The DCP, once finalized, reviewed, and approved by the COUNTY will be used by the COUNTY to proceed with the procurement process. This task will end when the DCP is provided to the COUNTY ahead of procurement.

Subtask 3.2 – Prepare Draft DCP – Section 3

The following components of the DCP will be provided by the SUBCONSULTANT under this subtask:

- Aerial base maps and sketches depicting project limits including new clearwell, GST, transfer pumps, odor control, DIW, piping/utility corridors, access roads, and stormwater for the single recommended alternative.

Subtask 3.3 – Prepare Final DCP

CONSULTANT will compile the final DCP for COUNTY's use in the procurement of a Design-Builder to implement the Project. SUBCONSULTANT will issue conceptual civil drawing to be included into the DCP.

Deliverables :

- Conceptual civil drawing.

ASSUMPTIONS

This Authorization scope of services is based on the following:

- This scope of services does not include evaluating other facilities.

Attachment E

- CONSULTANT will provide existing as-builts of all civil and mechanical piping required for this study.
- CONSULTANT will provide any existing available AutoCAD drawings of WTP No. 11 site.
- CONSULTANT will provide a topographic site survey in AutoCAD format.
- The SUBCONSULTANT will provide up to three (3) conceptual sketches for the alternatives describing the approximate sizes and locations of the assets required to implement the various alternatives inside the plant property.
- No writeups for a technical memorandum or report are being provided as part of this scope of service.

III. Time of Completion

The Notice to Proceed (NTP) from the CONSULTANT defines the official commencement of the SUBCONSULTANT's amendment to the original contract. Task completion schedule is as identified in the following summarized schedule of deliverables given the assumed NTP.

Task	Deliverable Description	Completion (Days from NTP)
2	WTP 11 Expansion Study and Report	90
3	Preparation and County Review and Approval of Design Criteria Package (DCP)	210

IV. Proposed Compensation

The SUBCONSULTANT shall perform the services defined in this scope of work above for the not to exceed fee of \$29,400. Invoices will be submitted to the CONSULTANT monthly during the performance of services defined herein and define the current percent complete for the defined task. The breakdown of fees per task is summarized below and detailed in Attachment A.

Task	Task Description (NT-2C)	Lump Sum Amount
2	WTP 11 Expansion Study and Report	\$ 14,772.00
3	Preparation and County Review and Approval of Design Criteria Package (DCP)	\$ 14,928.00
	TOTAL (LUMP SUM)	\$ 29,700.00

AUTHORIZATION

C SOLUTIONS, INC.
(SUBCONSULTANT)



Authorized Signature
Mark Drummond, P.E., BCEE
President



Attachment E

ATTACHMENT A - BUDGET SUMMARY											
Palm Beach County Water Utilities Department -- Water Treatment Plant No.11 Upgrades											
Task	Task Description	Project Director	Senior Project Manager	Senior Engineer	Engineer	Designer	Administrative Assistant	Total Labor Hours	Total Labor Effort	Total Expenses	Total Effort
	Raw Labor Rate	\$ 95	\$ 80	\$ 58	\$ 32	\$ 25	\$ 30				
	Labor Rate with 3.0 Multiplier	\$ 285.00	\$ 240.00	\$ 169.00	\$ 96.00	\$ 75.00	\$ 90.00				
2.0	WTP 11 Expansion Study and Report	8	8	16	32	60	4	128	\$ 14,772.00	\$ -	\$ 14,772.00
2.6	<i>Preliminary Expansion Study</i>	4	4	8	16	20	2	54	\$ 6,636.00		
2.7	<i>Draft and Final OPCC and Expansion Report for WTP 11</i>	4	4	8	16	40	2	74	\$ 8,136.00		
3.0	Preparation And County Review and Approval Of Design Criteria Package	24	8	16	8	32	4	92	\$ 14,928.00	\$ -	\$ 14,928.00
3.2	<i>Prepare Draft DCP – Section 3</i>	16	4	8	8	24	2	62	\$ 9,588.00		
3.3	<i>Prepare Final DCP</i>	8	4	8		8	2	30	\$ 5,340.00		
	ODCs								\$ -	\$ -	\$ -
GRAND TOTAL		32	16	32	40	92	8	220	\$ 29,700.00	\$ -	\$ 29,700.00



Attachment E

February 21, 2023

CDM Smith

621 N.W. 53rd Street, Suite 265
Boca Raton, FL 33487
Phone: 561.571.3771
Email: MechlerSE@cdmsmith.com

Attention: Ms. Suzanne Mechler
Vice President, Client Service Leader

Re: Proposal for Preliminary Geotechnical Engineering Services
Water Treatment Plant 11
Palm Beach County, Florida
PACIFICA Proposal No: 610-12013875

Dear Ms. Mechler:

In accordance with your email dated February 15, 2023, **Pacifica Engineering Services, LLC (PACIFICA)**, is pleased to submit this proposal to perform a preliminary subsurface exploration program for the above referenced project. Included herein is our understanding of the proposed development along with a scope of services, cost estimate and anticipated schedule to conduct a geotechnical engineering study.

We understand that plans for this project include the WTP 11 Design-Build that is located Belle Glades Palm Beach County, Florida. The proposed project will include the following:

- New RO skids within the existing Membrane Building
- New RO skids within a New Membrane Building
- School Board Property Land Development requirements
- New Clearwell and Transfer Pump Station
- New Finished Water Ground Storage
- Air Stripping facilities
- Chemical Storage and feed facilities
- Critical Yard Piping

We assumed the site is open and accessible to our truck-mounted drill rig. If any of the above information is incorrect, please notify us so we can make any necessary changes to our proposal. We propose to perform the following services:

- Perform three (3) Standard Penetration Test (SPT) borings at the locations shown in the attachment to depths of 60 to 80 feet below grade.
- Perform four (4) SPT borings to a depth of 20 feet for Pipe location to be determined.
- Perform two (2) Soil Corrosivity Test per FDOT Standards.
- Perform Ground Penetration Radar (GPR) to locate any private underground utilities existing in the exploratory area.

The SPT borings will be performed with truck-mounted machinery using rotary drilling procedures, the approximate locations will be provided to the design team for review and approval prior to us mobilizing on-site. Samples of the in-place materials will be recovered

with a standard split barrel driven with a 140-pound hammer falling 30 inches (the Standard Penetration Test in accordance with ASTM D1586). After completion of drilling, all boreholes will be grouted and the site generally cleaned, as required.

Underground utility clearance will be required prior to commencing the drilling of the borings. Therefore, PACIFICA will contact "Sunshine One-Call" Service to obtain underground public utility clearance.

GEOTECHNICAL REPORT DELIVERABLES

After the geotechnical field exploration is completed, a geotechnical engineer will review the soil samples and representative samples will be tested for physical properties such as gradation, moisture content and organic content, if deemed necessary. The results of our work will be transmitted in a report which will specifically contain information listed below:

1. A plan of the site showing the location of the soil borings.
2. Profiles of the exploratory borings will be provided, which furnish the results of the SPT sampling.
3. Identification of Preliminary foundation systems which lend themselves to the site conditions and proposed construction.
4. Preliminary Recommendations for shallow foundation systems, and allowable soil bearing capacity.
5. Preliminary Criteria for construction of floor systems and modulus of subgrade reaction.
6. Preliminary Requirements for site preparation.
7. The existence of organic soils or any other soil conditions which would indicate the need for a structurally supported slab.
8. An anticipation of groundwater levels and methods for handling groundwater during construction.
9. Recommendations for pavement thicknesses.
10. Table Showing the Corrosivity Test results (pH, sulfate, chlorides & conductivity).

GEOTECHNICAL SCHEDULE

Our study can begin one day after we receive authorization to proceed. We will start drilling after underground utilities have been located and identified, which may take 2-4 business days. The field drilling should be completed in 4 workdays. The written report of the subsurface exploration will be available within two weeks following the field demobilization. We estimate that our study will be completed **within 4 weeks** from your notice to proceed. **Any Permits should be provided by others.**

Attachment: Proposed Boring location Plan



WTP 11

Legend

- Proposed boring locations
- Water Treatment Plant 11

15

15

Hooker Hwy

H55ker Hwy

Hooker Hwy

Hook

Belle Glade Water Office

B-3@60'

B-2@60'

Water Treatment Plant 11

B-1@80'

Pipe SPT boring locations on the ROW will be determined later

Google Earth

900 ft



Attachment E
Pacifica Engineering Services, LLC

COST BREAKDOWN

21-Feb-23

DESCRIPTION	UNIT	# OF UNITS	UNIT RATE	TOTAL
I. FIELD EXPLORATIONS				
Mobilization of Drill Equipment (50-mile travel)	each	1.0	\$420.00	\$420.00
Engineering Technician (Site Reconnaissance, Boring Layout and Underground Utility Clearance) (Raw Rate: \$31*3)	hour	6.0	\$93.00	\$558.00
Standard Penetration Tests - Truck Rig (0' - 50')	feet	230.0	\$16.00	\$3,680.00
Standard Penetration Tests - Truck Rig (51' - 100')	feet	50.0	\$19.00	\$950.00
Grout Bore Hole (0 to 50 Feet)	feet	230.0	\$6.40	\$1,472.00
Grout Bore Hole (51 to 100 Feet)	feet	50.0	\$7.50	\$375.00
Casing (0 to 50 Feet)	feet	230.0	\$9.80	\$2,254.00
Casing (51 to 100 Feet)	feet	50.0	\$10.00	\$500.00
II. SOIL & AGGREGATE TESTING				
Organic Content Test	each	6.0	\$55.00	\$330.00
Natural Sample Moisture Content	each	6.0	\$20.00	\$120.00
Grain size determination: Full grain size (8 sieves)	each	6.0	\$78.00	\$468.00
Grain size determination: Wash through (#200)	each	6.0	\$60.00	\$360.00
DOT Corrosivity - (pH, sulfate, chlorides & conductivity)	each	2.0	\$205.00	\$410.00
III. ENGINEERING SERVICES (MULTIPLIER: 3)				
Principal Engineer, P.E. (Raw Rate: \$84.10*3)	hour	2.0	\$252.30	\$504.60
Senior Geotechnical Engineer (Raw Rate: \$69.3*3)	hour	22.0	\$207.90	\$4,573.80
Drafter / CADD (Raw Rate: \$31.35*3)	hour	6.0	\$94.05	\$564.30
IV. REIMBURSABLES				
Ground Penetrating Radar (GPR)	each	1.0	\$2,400.00	\$2,400.00
ESTIMATED GEOTECHNICAL FEE FOR THE PROJECT				\$19,939.70

March 22, 2023

Via Electronic Mail

Suzanne Mechler
Vice President, Client Service Leader
CDM Smith
621 N.W. 53rd St, Suite 265
Boca Raton, Florida 33487

RE: *Proposal to provide Hydrogeologic Services for PBCWUD Water Treatment Plant No. 11 Expansion Study and Design Criteria Package (DCP)*

JLA Geosciences, Inc. (JLA) is pleased to have the opportunity to provide our services to CDM Smith (CDM) in assisting their client, Palm Beach County Water Utilities Department (PBCWUD) in development of an Expansion Study for the existing WTP No. 11, located in Belle Glade, Florida. JLA's efforts will be focused on raw water supply, including water quality projections, SEAWAT modeling, alternative surficial aquifer system (SAS) raw water feasibility, and future Upper Floridan Aquifer (UFA) supply well locations.

JLA Geosciences scope of work would include the following:

TASK 2.0 WTP 11 EXPANSION STUDY AND REPORT

Task 2.3 Raw Water Quality Projections and Regulatory Requirements

Task 2.3.1 Review and Compilation of Recent Pumpage and Water Quality Data

This task will include the review, compilation, and evaluation of historical individual well pumpage, water quality, hydrogeologic, and geophysical data generated since December 2019. Pumpage and water quality data provided by PBCWUD will be added to existing spreadsheets and charts. JLA will evaluate trends in chloride and total dissolved solids (TDS) and update Integrated Utility Master Plan (IUMP) generated projections of future water quality range based on historical data and assumed future operations.

Task 2.3.2 Updated SEAWAT Modeling to Evaluate Recent Operations and Potential Future Operations

This task will include simulations of historical well withdrawals and evaluation of water quality changes observed in the wells since completion of the previous modeling work, which incorporated data through December 2019. Simulations will involve monthly stress

periods, with averaged well withdrawals applied for the entire month, based on data compiled in Task 2.3.1.

Simulations evaluating potential future conditions will be performed. Initially, a 5-year simulation will be performed, assuming uniform pumping rates equivalent to 540 gpm average monthly future well withdrawals from each existing well, except for PW-5. In addition, an alternate operational scenario is also anticipated to be completed, using higher rates than the recommended average monthly withdrawal rate of 540 gpm. Future simulations longer than the initial 5-year period may be performed based on results from the initial analyses, as well as potential future operating plans for the wellfield.

A technical memorandum will be prepared documenting the model development, simulations, conclusions, and recommendations. A draft version will be submitted for review, with comments incorporated into a final version.

Task 2.3.3 Well Location Recommendations

As outlined in the IUMP, at least three (3) and up to nine (9) new supply wells may be necessary to meet the 2050 demand. Utilizing preliminary transects outlined in the Raw Water Master Plan (RWMP), JLA will provide assistance to CDM in the preliminary evaluation of up to twenty (20) future supply well locations. Site evaluations will be limited site constraints (site access, ingress-egress, laydown, formation water disposal options, proximity to residential, ELUs). It is assumed that these locations will be reduced to nine (9) locations based on a seismic field study (to be performed under a separate CSA).

Subtotal Task 2.3 **\$ 45,016.00**

Task 2.4 ADDITIONAL SAS FEASIBILITY STUDY

Following completion of CDM’s WTP 11 Expansion Study, if CDM determines that additional water is required to meet future demands in Western Palm Beach County, JLA will provide a preliminary surficial aquifer system (SAS) feasibility study. This preliminary evaluation will include a review of available nearby data for the surficial aquifer system wells, including water quality and hydraulic data, and a discussion of the feasibility of adding the SAS as a source of public water supply for Water Use Permit No. 50-06857-W. The proposed scope of work is outlined below.

Task 2.4.1 Data Review

JLA will review and compile available data from in-house and publicly available sources, including the South Florida Water Management District and the United States Geological Survey. Available water quality data will be compiled with the intention of aiding CDM in their evaluation of blend water quality. Well construction and yield data will be compiled and used to determine the number and approximate depth of wells that may be necessary

Proposal for PBCWUD WTP 11 Expansion
March 22, 2023
Page 3 of 3

to supply WTP No. 11 with sufficient water to meet its required demand. No preliminary well siting is proposed at this time.

Task 2.4.2 Feasibility of Permitting SAS Withdrawals

JLA will review and summarize applicable sections of the Florida Administrative Code and Applicants Handbook for Water Use Permit Applications Within the South Florida Water Management District (2015) that may impact the feasibility of permitting SAS withdrawals within Belle Glade. JLA will identify nearby existing users of the SAS, known sources of contamination, wetlands, and sources of saline water.

Task 2.4.3 Summary Technical Memorandum

Results of the data review and permitting evaluation will be summarized in graphical and tabular format and will be discussed in a technical memorandum. A draft memorandum will be prepared for review and comments. Task includes one review meeting prior to incorporation of comments and finalization of memorandum.


Subtotal Task 2.4 **\$ 17,848.00**

TOTAL NOT TO EXCEED COST ESTIMATE **\$62,864.00**

If this proposal is acceptable, please sign and return this document. A rate schedule has been attached for your reference. We are available to begin work immediately following authorization to proceed.

We thank you for this opportunity to provide CDM and PBCWUD with our services. If you have any questions, please don't hesitate to call me.

Sincerely,
JLA Geosciences, Inc.


James L. Andersen, P.G.
President, JLA Geosciences, Inc.

Attachments

BUDGET SUMMARY

Palm Beach County Water Utilities Department

Prime: CDM Smith, Inc.

Consultant: JLA Geosciences, Inc.

Project Title: PBCWUD Water Treatment Plant No. 11 Expansion Study and Design Criteria Package

Task 2 - WTP 11 EXPANSION STUDY AND REPORT		Labor Classification and Hourly Rate														TASK
Sub Task No.	Sub Task Description	President	Prin./Hydro Corp. Officer	Prj. Manager Sr Hydro III	Senior Hydro II	Senior Hydro I	Hydro III	Hydro II	Hydro I	Hydro Tech	Admin / Tech	Total Labor	Mileage (\$0.655/mi)	ODC	Sub Consultant Services	TASK TOTAL
2.0	WTP 11 EXPANSION STUDY AND REPORT															
2.3	Raw Water Quality Projections and Regulatory Requirements															
2.3.1	Review and Compilation of Recent Pumpage and Water Quality Data		24	40		24										
2.3.1	Updated SEAWAT Modeling to Evaluate Recent Operations and Potential Future Operations	8	60	50												
2.3.2	Well Location Recommendations	8	12	24		12										
	Subtotal Task 2.3	16	96	114	0	36	0	0	0	0	0	262.0	\$ -	\$ -	\$ -	\$ 45,016.00
2.4	ADDITIONAL SAS FEASIBILITY STUDY															
2.4.1	Data Review		8	24		8										
2.4.2	Feasibility of Permitting SAS Withdrawals	8		16												
2.4.3	Summary Technical Memorandum	8	12	12		8										
	Subtotal Task 2.4	16	20	52	0	16	0	0	0	0	0	104.0	\$ -	\$ -	\$ -	\$ 17,848.00
	Labor Subtotal Hours	32	116	166	0	52	0	0	0	0	0					
	Labor Hourly Billing Rates	\$ 190.00	\$ 180.00	\$ 174.00	\$ 153.70	\$ 135.00	\$ 120.00	\$ 110.00	\$ 90.00	\$ 70.00	\$ 70.00					
	Labor Raw Costs	\$ 65.52	\$ 62.07	\$ 60.00	\$ 53.00	\$ 46.55	\$ 41.38	\$ 37.93	\$ 31.03	\$ 24.14	\$ 24.14					
	Labor Multiplier	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9	2.9					
	Labor SubTotal	\$ 6,080.00	\$20,880.00	\$ 28,884.00	\$ -	\$ 7,020.00	\$ -	\$ -	\$ -	\$ -	\$ -					
	Labor Total															\$62,864.00
	Mileage/ODC															\$0.00
	Subconsultant Services Total															\$0.00
	Project Total															\$62,864.00

Mileage calculated based on current US Internal Revenue Service standard rates.

Attachment E



March 23, 2023

Ms. Suzanne Mechler
CDM Smith
621 N.W. 53rd Street, Suite 265
Boca Raton, FL 33487

**Re: Lake Region Water Treatment Plant (WTP) 11 in Belle Glade
Proposed Future Expansion to School Property on West Side - Specific Purpose Survey**

Dear Suzanne:

Thank you for the opportunity to provide you with the following services for the subject site. This proposal is based on documentation and information provided by your office. The scope of services is as follows:

SCOPE OF SERVICES

I. HORIZONTAL PROJECT NETWORK CONTROL

A traverse will be run through the site and all found monumentation will be tied in. The survey will be oriented to Palm Beach County horizontal control (NAD 83/11 Adjustment). We will obtain the sectional and geodetic control information from the Palm Beach County Survey Department. Not a boundary survey.

II. VERTICAL PROJECT NETWORK CONTROL

A level run will be performed onsite using the existing Palm Beach County benchmarks (NAVD 1988). At least two benchmarks will be set onsite.

III. TIE IN IMPROVEMENTS AND CROSS SECTIONS

A complete topographic survey will be done at the site, tying in all above ground features. This will include but not be limited to buildings, pavement, walks, utilities, lakes, canals and drainage structures. We will obtain elevations on the site on an approximate one hundred (100) foot grid. We will locate sufficient points to give an accurate representation of the lay of the land. The approximate limits of the survey are outlined in pink on Attachment 'B'.

IV. AS-BUILT

We will attempt to get as-built information on all the pipes leading out of any storm or sanitary sewer structures found. We will show invert elevations, pipe sizes and materials for all pipes located including outfall pipes.

V. SOUNDINGS

We will perform three (3) soundings across the pond in an east-west direction. These will be evenly spaced north to south.

1860 Old Okeechobee Road • Suite 509 • West Palm Beach, Florida 33409

(561) 615-3988 • Fax (561) 615-3991

M:\PROPOSALS\BY COMPANY\CDM Smith\BCo\WTP 11 Future Expansion\WTP 11 Lake Region Belle Glade Specific Purpose Survey.doc

Attachment E

Mechler
March 23, 2023
Page 2

VI. TREE SURVEY

We will locate and tag trees 4 inches in diameter or larger. Trees will be measured at breast height. Hedges and ground cover will not be located or shown on the survey. Exotic trees such as Melaleuca, Brazilian pepper and Australian pine will not be located or shown on the survey. We will identify the various types of trees located on this site based on common knowledge of tree species. A qualified landscape architect should be employed for positive identification of tree species. We will then produce a drawing showing all the trees located. We will provide you with signed and sealed hard copies and an AutoCAD file of the trees located.

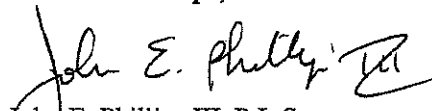
VII. UNDERGROUND UTILITIES

We will scan and designate the underground utilities within the limits of the survey. We will then locate the designates and add them to the survey. No test holes are proposed.

VIII. CLOSURE

A drawing will be produced which will show all the features located. We propose to provide CDM Smith with hard copies, a digitally signed PDF file, and an AutoCAD file in the version requested. Any additional work will be done on an hourly basis as approved by you. We will perform the scope of services for an **hourly, not to exceed fee of \$11,915.96 for the survey and \$4,500.00 for utility targeting** (see Attachment 'A' for an hourly breakdown). Please do not hesitate to call me with any questions you might have regarding this proposal. We look forward to working with you on this project.

Brown & Phillips, Inc.


John E. Phillips III, P.L.S.
Principal

Attachment

JEP/mb

This Proposal accepted this ____ day of _____, 2023

By: _____
CDM Smith

Print Name: _____

Title: _____

ATTACHMENT 'A'

**Lake Region Water Treatment Plant (WTP) 11 in Belle Glade
 Proposed Future Expansion to School Property on West Side**

Type of Survey: Topographic
 Size: 6.2± AC + Roadway
 Date: March 23, 2023

TASK	SURVEY CREW	CADD TECH	SURVEY TECH	PLS	COMMENTS
Meetings and Coordination				2	
Horizontal Project Network Control	4		3	1	Set control points
Vertical Project Network Control	6		1		Establish onsite benchmarks
Tie In Improvements and Cross Sections onsite	24		3	2	Locate above ground features, 100' cross sections & spot elevs.
Roadway Topography	10		2	1	
Asbuilt	2		0.5		Obtain asbuilt data
Soundings	4		1	0.5	
Trees	4		1		Locate trees over 4" in diameter (not exotics)
Underground Utilities	4		1		Field locate flagged utilities
Drawing		20	5	3	Prepare topographic survey
Address Comments					
Total Hours:	58	20	17.5	9.5	
Rate/Hour	\$42.17	\$30.12	\$30.12	\$41.75	
Subtotal:	\$2,445.86	\$602.40	\$527.10	\$396.63	
Total Labor Cost (unloaded):					\$3,971.99
Multiplier:					3.00
Total Labor Cost (loaded):					\$11,915.96

Optional Costs:	quantity	unit	cost/unit	total
Legal Description & Sketch		each	\$600.00	\$0.00
SUE Utility Targeting	1	LS	\$4,500.00	\$4,500.00
Other				\$0.00
Total Optional Costs:				\$4,500.00
TOTAL PRICE				\$16,415.96



5/2021 Drawing file#21-08021-000 W/F 11 Topographic Survey.dwg, 3/22/2023 3:59:24 PM

Attachment 'B'



ATTACHMENT F

Palm Beach County Water Utilities Department
 Contract for Consulting/Professional Services
Water Treatment and Water Resources Engineering Services
 Resolution No. R2020-1719 Contract Dated November 17, 2020

**SUMMARY OF
 SBE-M/WBE BUSINESS TRACKING**

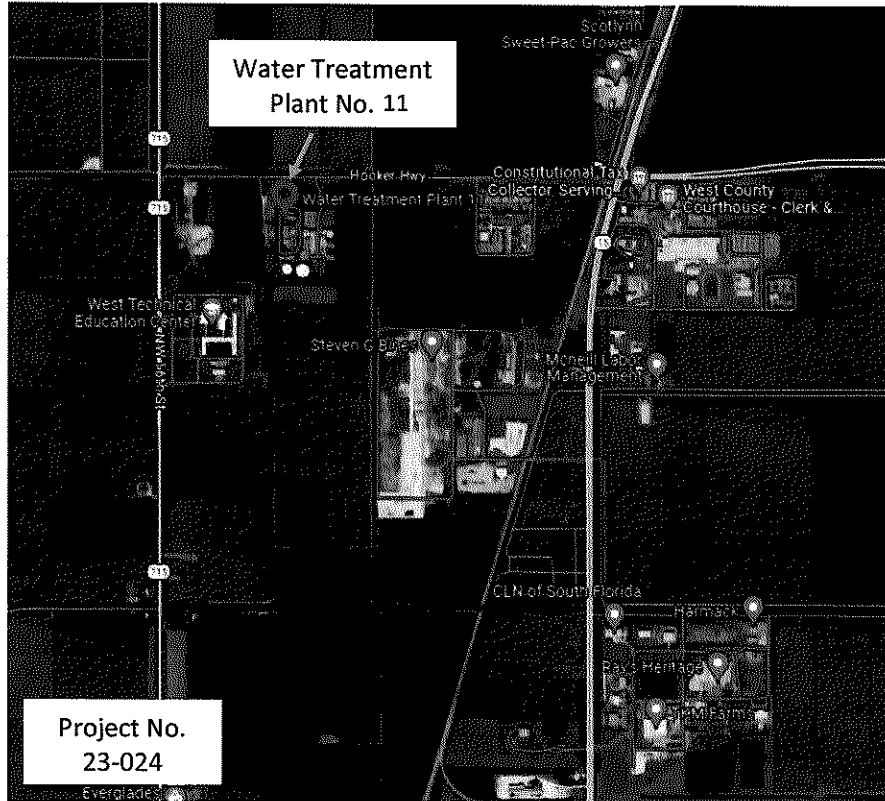
Master Contract Goals	SBE: 21.00%	MBE: 19.00%	MBE (B): 19.00%	MBE (A): 0.00%
Current Proposal				
Value of Authorization No. <u>9</u>	\$490,586.66			
Value of SBE-M/WBE Letters of Intent	\$128,919.66	\$66,055.56	\$66,055.56	\$0
Actual Percentage	26.27%	13.46%	13.46%	0%
Signed/Approved Authorizations				
Total Value of Authorizations	\$1,798,790.12			
Total Value of SBE-M/WBE Signed	\$682,252.12	\$332,012.32	\$259,160.80	\$72,851.52
Subcontractors				
Actual Percentage	37.92%	18.29%	14.38%	4.04%
Signed/Approved Authorizations Plus Current Proposal				
Total Value of Authorization	\$2,289,377.68			
Total Value of Subcontractors & Letters of Intent	\$811,171.78	\$398,067.88	\$325,216.36	\$72,851.52
Actual Percentage	35.43%	17.38%	14.20%	3.18%

Revised 12/20/2022

ATTACHMENT 2

Location Map

PBCWUD Project No. 23-024



Revised 12/20/2022



**Palm Beach County
Compliance Summary Report**

Vendor Number	Vendor Name	AM Best Rating	Insurance Carrier	Policy #	Eff. Date	Exp. Date	Coverage	Contract Number	Contract Name
DX00001205	CDM Smith Inc.	Modified	Compliant with Minor/Expiring Deficiencies					19-076R	Contract for Consulting/Professional Services Water Treatment and Water Resources Engineering Services
		Ap , XV	Liberty Mutual Fire Insurance Company	AS2611B8T8Z6063	1/1/2023	1/1/2024	Auto Liability		
		A++g , XV	ACE Property and Casualty Insurance Company	XEUG28194687007	1/1/2023	1/1/2024	Excess Liability		
		Ar , XV	Liberty Insurance Corporation	TB7611B8T8Z6043	1/1/2023	1/1/2024	General Liability		
		NR , 0	Underwriters at Lloyd's London (L)	PSDEF2300033	1/1/2023	1/1/2024	Professional Liability		
		Ar , XV	LM Insurance Corporation	WA561DB8T8Z6013	1/1/2023	1/1/2024	Workers Comp		

Risk Profile : Standard - General Services
Required Additional Insured : Palm Beach County Board of County Commissioners
Ownership Entity :