

PALM BEACH COUNTY
BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY

Meeting Date: January 24, 2012 Consent Regular
Public Hearing

Submitted By: Water Utilities Department
Submitted For: Water Utilities Department

I. EXECUTIVE BRIEF

Motion and Title: Staff recommends motion to approve: Consultant Services Authorization (CSA) No. 5 to MWH Americas, Inc. for new Production Wells at Water Treatment Plants No. 2, 3, and 8 in the amount of \$497,928.

Summary: On May 3, 2011, the Palm Beach County Board of County Commissioners approved the continuing Contract for Utility Hydrogeologic & Water Resources Engineering Services with MWH Americas, Inc. (R2011-0632). This CSA will provide for engineering and hydrogeological services to design and permit two (2) new wells at Treatment Plants No. 2 and 3, and four (4) new wells at Treatment Plant No. 8. These wells are needed to ensure system reliability by spreading pumping out during dry periods, no new water allocation is required. The Small Business Enterprise (SBE) participation goal established by the SBE Ordinance (R2002-0064) is 15% overall. The contract with MWH Americas, Inc. provides for SBE participation of 26% overall. This authorization includes 47.99% overall participation. The cumulative SBE participation, including this CSA is 34.09% overall. MWH Americas, Inc. is a Palm Beach County company. (WUD Project No. 12-006) Districts 2 and 5 (JM)

Background and Justification: Additional wells are needed at Water Treatment Plants No. 3 and 8 to maintain sustainable yields and to allow adequate rest periods during the well rotation cycle which will minimize future wellfield rehabilitation. Two (2) wells will be installed at Water Treatment Plant No. 2 as the treatment capacity is increasing from 14.5 MGD to 16.4 MGD under current construction of the Miex treatment process. Two (2) wells will be installed at Water Treatment Plant No. 3 in the Greystone residential development on sites platted by the developer. Four (4) wells will be installed at Water Treatment Plant No. 8 for Haverhill Park which is owned by the County.

Attachments:

1. Location Map
2. Two (2) Original Consultant Services Authorization No. 5

Recommended By: Bruce Beaubien Department Director 12/19/11 Date

Approved By: Shannon B. Lyerly Assistant County Administrator 1/9/12 Date

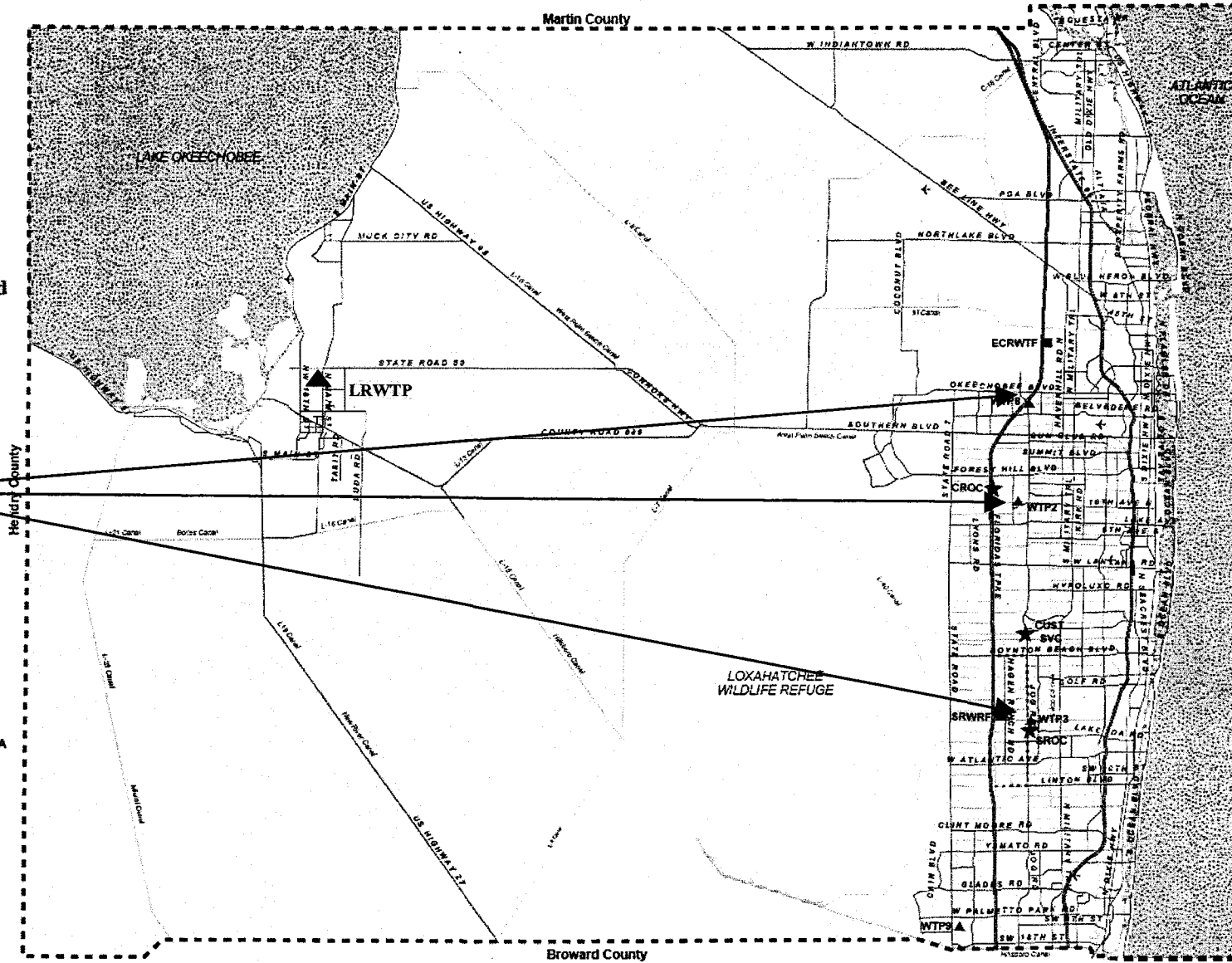


**Palm Beach County
Water Utilities
Department
Service Area (SA) and
Major Facilities**

**Project
Locations**

Legend

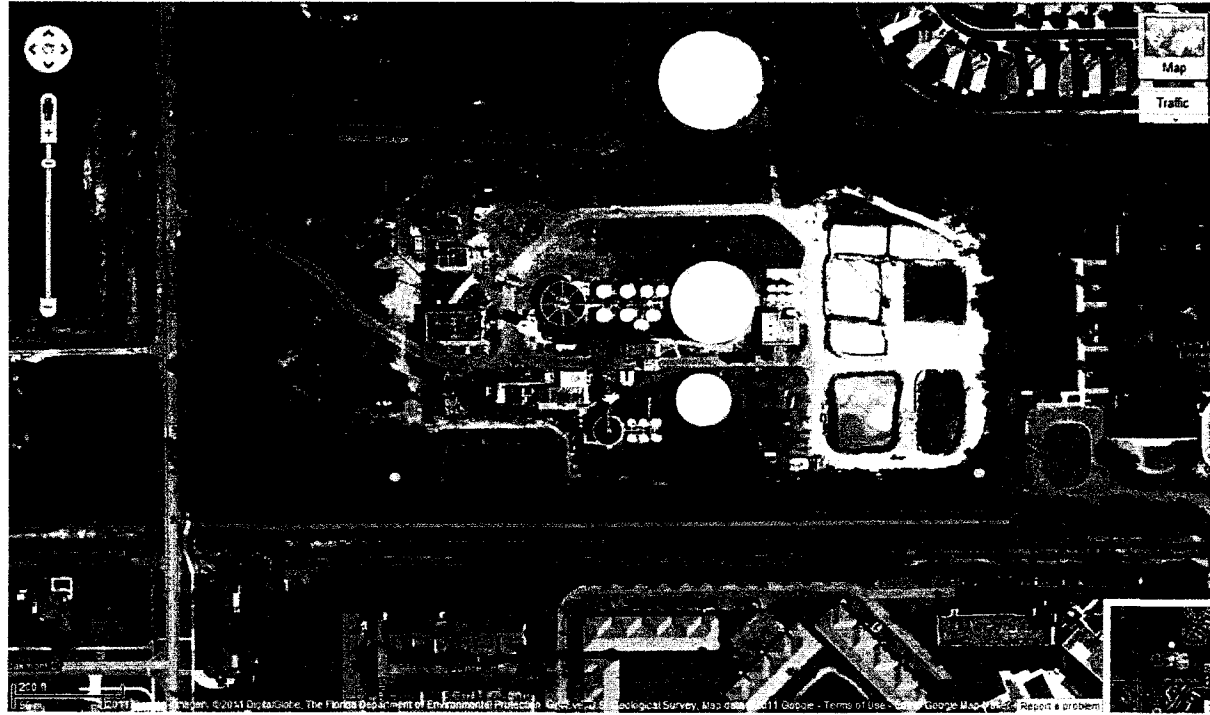
- P.B.C.W.U.D. SA
- - - MANDATORY RECLAIMED SA
- - - COUNTY LIMITS
- ★ Administration
- Water Reclamation Plant
- ▲ Water Treatment Plant
- ⊙ Wetlands



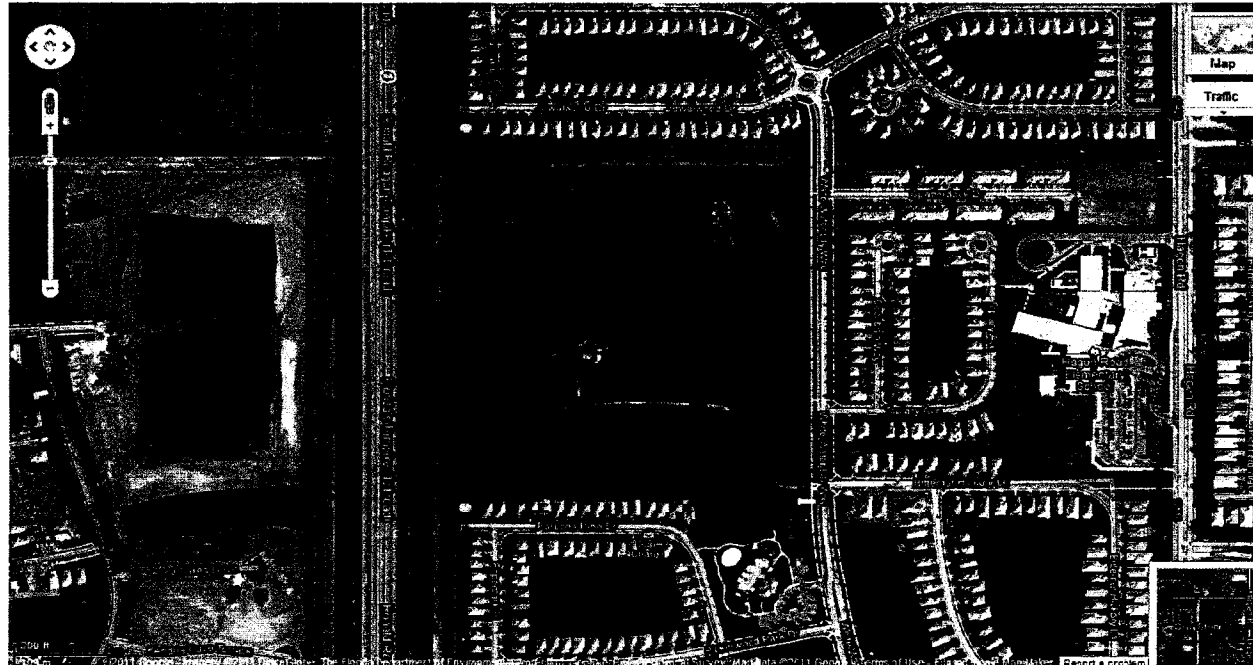
New Water Treatment Plant 2, 3, and 8 Production Wells

ATTACHMENT E – WELL LOCATION MAPS

New Water Treatment Plant 2 Production Well Locations



New Water Treatment Plant 3 Production Well Locations



New Water Treatment Plant 8 Production Well Locations



CONSULTANT SERVICES AUTHORIZATION NO. 5

**Project No. WUD 12-006
Budget Line Item No. 4011-721-W004-6541**

New Water Treatment Plant 2, 3, and 8 Production Wells

District Nos.: 2, 5

THIS AUTHORIZATION #5 to the Contract for Consulting/Professional Services dated May 3, 2011 with an effective date of June 3, 2011 (Resolution/Document R2011-0632), 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 47.99% overall. The cumulative SBE participation, including this authorization is 34.09% overall. Additional authorization will be utilized to meet or exceed the stated overall participation goal.

1. CONSULTANT: MWH Americas, Inc.
2. ADDRESS: 100 S. Dixie Highway, Suite 300, West Palm Beach, FL 33401
3. Description of Services to be provided by the Consultant:
Professional engineering services for eight new raw water supply production wells and associated raw water piping to provide additional well rotational capacity to the County's wellfield system. The eight new production wells will serve WTP Nos. 2, 3, and 8.

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 following written notice to proceed.
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 \$N/A
 - B. Fixed price of \$497,928.00
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.

PROJECT NO. WUD 12-006

AUTHORIZATION NO. 5

8. EXCEPT AS HEREBY AMENDED, CHANGED OR MODIFIED, all other terms, conditions and obligations of the Contract dated May 3, 2011 with an effective date of June 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.

ATTEST:
SHARON R. BOCK
CLERK AND COMPTROLLER

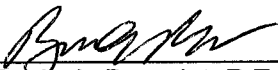
PALM BEACH COUNTY, FLORIDA, A
Political Subdivision of the State of Florida
BOARD OF COUNTY COMMISSIONERS

By: _____
Shelley Vana, Chair

APPROVED AS TO FORM AND LEGAL
SUFFICIENCY

APPROVED AS TO TERMS AND
CONDITIONS

Assistant County Attorney



Bevin A. Beaudet, P.E., Director
Water Utilities Department

CONSULTANT:

FIRM: MWH Americas, Inc.

Signed: 

Typed Name: Richard B Lewis

Title: Vice President

Date: 12/9/11

ATTEST:

Signed: 

Typed Name: Barbara Randazzo

EXHIBIT A

CONSULTANT SERVICE AUTHORIZATION NO. 5

PALM BEACH COUNTY WATER UTILITIES DEPARTMENT ENGINEERING/PROFESSIONAL SERVICES

SCOPE OF WORK FOR

New Water Treatment Plant 2, 3, and 8 Production Wells

INTRODUCTION

Palm Beach County (COUNTY) entered into an agreement entitled Contract for Engineering/Professional Services - Palm Beach County Water Utilities Department Project No. WUD 11-003 (CONTRACT) with MWH Americas, Inc. (CONSULTANT) to provide engineering services for various general activities (Reference Document R2011-0632). This Consultant Service Authorization will be performed under that CONTRACT.

This Consultant Services Authorization encompasses providing services related to the design and permitting of eight new production wells for WTP Nos. 2, 3, and 8.

BACKGROUND

In order to provide additional rotational well capacity, the Palm Beach County Water Utilities Department (PBCWUD) needs to expand the existing wellfields serving Water Treatment Plant Nos. 2, 3, and 8. PBCWUD has identified the need to install two new raw water supply wells and associated raw water piping at WTP No. 2, two new production wells for WTP No. 3, and four new production wells for WTP No. 8. See Attachment E for well locations.

This Scope of Work consists of the engineering, hydrogeological, and professional services for the following:

- Water quality testing and hydrogeologic evaluation at proposed well sites;
- Site survey, utility locates, and soft digs;
- Raw water main routing topographical survey and geotechnical survey at WTP 2;
- Plan drawings for approximately 2,300 linear feet of raw water pipeline;
- Raw water pipeline tie-ins of new production wells;
- Design of the production wells, wellhead assembly, pumping equipment, panels and appurtenances for future VFD's, hard-wired telemetry, well pads, fencing, lighting, and related local electrical and mechanical equipment required to enable these wells to be remotely monitored and controlled;
- Wellhead elevations for 100-year flood conditions;
- Compilation of support documentation for well construction permits;

- Preparation of design documents for bidding the construction of the wells and associated infrastructure;
- Development of an Opinion of Probable Construction Cost;
- Permitting submittals for the following: Palm Beach County Building Department, Palm Beach County Health Department for well heads and system 2 raw water mains, Palm Beach County ERM Vegetation Removal Permit, Lake Worth Drainage District Permit submittal; and FDEP NOI General Permit for Groundwater Discharge submittal;
- Bidding support.

SCOPE OF SERVICES

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

Task 1 - Project Management/Meetings/QA/QC

Project Management - The CONSULTANT will provide overall Project Management and QA/QC services as well as attend project progress meetings with COUNTY as follows:

- 1.1 **Kick-Off Meeting** - The CONSULTANT will lead one kick-off meeting with the County to review the project schedule, review work responsibilities, and identify information described elsewhere in this proposal to be provided by the COUNTY.
- 1.2 **Progress Meetings** - The CONSULTANT will prepare for and attend progress meetings at the 30%, 60%, and 90% design submittal phases, and one progress meeting prior to the scheduling of the pre-bid conference. The CONSULTANT will prepare and distribute minutes of these meetings. The purpose of these meetings will be to review drawings and specifications, discuss technical issues, review interim reports, review budget and cost status, identify and discuss unexpected or unplanned conditions or events, and discuss and resolve other project issues.
- 1.3 **Quality Assurance and Quality Control** - The CONSULTANT will perform internal Quality Assurance review in accordance with CONSULTANT's standard procedures. Comments and responses will be documented. In addition, the CONSULTANT will provide written response to comments provided by the COUNTY at each of the design phases listed below. The Design will be in general accordance with the Palm Beach County Water Utilities Minimum Engineering Standards and Design Guidelines.
 - 1.3.1 Schematic Design Phase (30% Design),
 - 1.3.2 Design Development Phase (60% Design),
 - 1.3.3 Contract Document Preparation Phase (90% design/final design phase).
 - 1.3.4 Issued for Bid Documents

Task 2 - Schematic Design Phase

The CONSULTANT will provide the following schematic design services related to the project:

- 2.1. **Production Well Siting** – The CONSULTANT will conduct reconnaissance to evaluate, based on visual inspection in the field, the suitability of the wellsites previously selected and identified by PBCWUD for well construction permitting, design, construction, and access (for construction and future maintenance).
 - 2.1.1. **Field Reconnaissance** - The CONSULTANT will conduct field reconnaissance of the area of the proposed wells to assess conditions that may affect the development of the final design.
 - 2.1.2. **Evaluation of Construction Requirements** - Based on inspection of each well site, the CONSULTANT will prepare a list of issues related to the drilling of a well at each location. These issues are expected to include:
 - Access to well site
 - Test Water Discharge Location
 - Electrical service to the site
 - Construction staging areas
 - 2.1.3. **Raw Water Pipeline Routing** - The locations of the eight proposed wells are shown on Attachment E. The CONSULTANT will identify routes for the raw water pipelines and/or well tie-in locations for each of the wells and provide recommendations to the COUNTY for review and approval. This scope of work assumes approximately 2,300 linear feet of raw water main will be required for WTP 2. The wells at WTP 3 will be connected to the existing pipeline. CONSULTANT understands this pipeline runs to each of the WTP 3 well sites property easements. The four wells at WTP 8 will be stubbed below grade immediately outside the well fence to the future raw water pipeline to be designed and constructed by the COUNTY. CONSULTANT understands that the wells and pipelines will be installed in easements currently owned by, or will be obtained by, the COUNTY. Accordingly, this scope of work does not include property acquisition assistance, including boundary surveys, Ownership and Encumbrances (O&E) investigations, appraisals or land negotiations. Should alternate well sites be required from those shown on Attachment E, the scope of work will be modified with the COUNTY to reflect the changed conditions. The COUNTY will provide available as-built drawings for utilities constructed within the proposed pipeline corridors to the CONSULTANT (AutoCAD format preferred). The CONSULTANT will provide the COUNTY with a recommended pipe diameter for the new pipeline and both static and dynamic head levels anticipated in the well. The COUNTY will model the hydraulics of the pipeline, wells, and pumps to confirm the CONSULTANT'S recommendation for use in the COUNTY'S system.
- 2.2. **Well Site Plans** – The CONSULTANT will create a base map of each of the proposed new well sites for WTPs 2 and 3 (total of 4) based on the COUNTY's GIS files showing the well locations relative to local roads and

water features. The COUNTY will provide a base map for the proposed new wells at Haverhill Park. These base maps will be used as part of permitting and design efforts discussed in subsequent tasks, and will encompass an area within 200 feet of each well.

- 2.3. **Schematic Design Report Technical Memorandum** – The CONSULTANT will compile the results of the schematic design tasks above and prepare a draft Technical Memorandum (TM) that briefly summarizes the well site locations and construction requirements; well pump ranges for sizing type and calculations; electrical load summary; electrical power sources; raw water main routes, sizing, and pipe material type; telemetry communications concept; site security concepts; overall control philosophy; and schematic layout for each well. Five draft copies of the TM will be delivered to the County for review. A review meeting will be scheduled with the COUNTY following a two-week review period to receive comments. The COUNTY will provide an electronic log of comments (MS EXCEL™ preferred) and the CONSULTANT will provide responses with the final TM. Five copies of the final TM will then be delivered.

Task 3 – Design Development Phase

- 3.1. **Well Site Survey** – The CONSULTANT will perform topographic survey for four well sites: two at WTP 3 and two at WTP 2 (each site estimated to be not more than 100'x100'). The CONSULTANT assumes that two new electric transformers will be required to support the new WTP 8 wells which will be surveyed by the County. The CONSULTANT will provide electric load calculations to FPL and coordinate with FPL and the County on location of poles and transformer pads. Tree locations within the proposed survey boundaries will be located with tags and tree species identified for the County's use in preparing a vegetation removal permit for ERM.
- 3.2. **Water Treatment Plant 2 Wells Route Survey** - Based on the final pipeline routing for the new wells at WTP 2, the CONSULTANT will establish a baseline survey and set site benchmarks for up to 2,300 linear feet of proposed raw water main. The CONSULTANT has assumed, based on conversations with the COUNTY, that the route for well 2W-17 is along the eastern boundary of the WTP to well 2W-7 and then westerly to the newly constructed MIEX basin. The CONSULTANT has assumed, based on conversations with the COUNTY that the route for well 2W-16 pipeline is north to the existing raw water main for the newly constructed MIEX basin. Tree locations within the proposed raw water main route will be located with tags and tree species identified for use in preparing a vegetation removal permit for ERM. The route survey will identify the visible improvements within a 40-foot wide corridor of the proposed alignment and provide cross sections at 50-foot intervals along the corridor including visible grade breaks. Locations to be included on survey will consist of above ground improvements, observation of utilities, structures including elevation of rims, inverts, pipe types and sizes. The route survey will be prepared as an AutoCAD base map showing the information located in state plane coordinate system for horizontal datum. Vertical datum will be NAVD 88.

- 3.3. **Utility Locates** - The CONSULTANT will perform up to 20 underground utility locations utilizing soft digs to locate and mark in the field the horizontal depth and direction of existing water, sewer, electric, communication, and storm drainage underground utilities. Underground utilities will not be located inside of buildings or where reasonable access is not possible. Radio frequency locators will be used to locate the underground utilities made of conductive and non-conductive materials. Utility location has limitations and some detected utilities may not be able to be identified. Located utilities will be marked in the field using blue paint and/or flags for water lines, green for sewer lines, red for electric lines, and orange for communications lines. A test hole report will be provided for each location and will within the above limitations, identify the amount of ground cover from the crown of the utility to the existing grade, utility material, shape and overall condition, approximate diameter of pipes, cables, conduits and the configuration of multiple conduit systems, thickness, type and condition of paving material, and general soil conditions. The CONSULTANT will provide X,Y,Z location of the proposed locates and restore excavations to their original conditions and repair and restore all pavement cuts.
- 3.4. **Geotechnical Investigations** - The CONSULTANT will perform four Standard Penetration Test (SPT) borings (approximately one boring every 700 feet) to depths of 10 feet below the existing ground surface along the pipeline routes for the WTP 2 wells. The CONSULTANT will also perform one SPT boring at each of the 8 well locations to confirm structural design criteria. Up to 12 total borings will be drilled using a geotechnical drill rig and samples of the in-place materials will be recovered at 2-foot intervals using the standard split barrel per ASTM D-1586 to the boring termination depth of 10 feet below the existing ground surface. Soil samples collected from the boring in the field will be visually classified per the Unified Soil Classification System and up to 4 samples will be taken back to the laboratory for sieve analyses in accordance with ASTM D 422 to aid in classifying the soils. At the completion of these field and laboratory geotechnical services subsurface anomalies that may impact standard construction methodologies will be identified and presented to the COUNTY. An engineer's report summarizing the gathered subsurface information will be completed and provided to the COUNTY for use as part of the bid document for this project. These boring locations will be surveyed and identified on the CONSULTANT design drawings.
- 3.5. **Install Temporary Test Wells** - The CONSULTANT will install temporary test wells at the eight proposed well locations. The temporary test wells will be used to determine the design criteria of the final production wells including casing depth, well depth, and gravel pack/screen design. The test wells will be drilled to depths ranging from 140 feet to 180 feet below land surface (bls). The wells will be 8 inches in diameter with 4-inch screen and gravel pack and will be drilled using mud rotary procedures. Samples of the in-place materials will be recovered at 5-foot intervals within the production zone. Up to 112 total soil samples will be obtained from the test wells and tested in the laboratory in accordance with ASTM D 422 (sieve analysis). The CONSULTANT will perform open borehole logging within each borehole from total depth to surface using caliper, gamma ray, and dual induction log. Water quality samples will be collected from three intervals at each well location and analyzed for treatment parameters to include temperature, pH,

Specific Conductance, Dissolved Oxygen, Turbidity, TDS, Calcium Hardness, Total Hardness, Iron, Hydrogen Sulfide, Alkalinity, Total Organic Carbon, and Color. At each of the four Haverhill Park wells, groundwater will be sampled near the top of the water table and analyzed by a state-certified laboratory for Primary and Secondary Drinking Water Standards-Tables 1-6 (excluding asbestos, dioxin, and radiochemicals). In addition, the water sample from the uppermost interval at each of the four Haverhill Park Wells will be sampled and analyzed for RCRA-8 Metals. The CONSULTANT will provide locking caps on the temporary test wells. Caps located in Haverhill Park will be flush with the ground surface to prevent a tripping hazard within the park. The CONSULTANT will provide field supervision of well drilling and testing contractors for up to 20 hours per well.

- 3.6. **Opinion of Probable Construction Cost Estimate** – The CONSULTANT will prepare a Class 2 opinion of probable construction costs (OPCC) estimate in accordance with AACE International. Pursuant to COUNTY requirements, the OPCC will be provided in MS Excel format with an expected accuracy range of +30 percent to -15 percent accuracy.
- 3.7. **Design Development Phase Documents and Review** - CONSULTANT will prepare and submit five copies of the design development phase (60%) documents for review by the COUNTY (drawings will be submitted four full size and one reduced 11 x 17" format for this review). A review meeting will be scheduled with the COUNTY following a two-week review period to receive comments. The COUNTY will provide an electronic log of comments (MS EXCEL™ preferred) and the CONSULTANT will incorporate the COUNTY's comments and preferences and then issue a design freeze notification. CONSULTANT will provide written response to comments (accept, reject with reason stated, or modify with description). The design will proceed to completion on the basis of the agreements reached at this stage of the project. Re-design after notification of CONSULTANT's design freeze, or redesign to meet the COUNTY's budget requirements or changed conditions will be accommodated by amendment to this CSA. The conclusion of the Design Development Phase will include:
 - Finalization of all major design decisions,
 - Sufficient design detail to convey the design intent to the County,
 - Completed P&ID diagrams
 - Equipment lists
 - Site plan, survey, and general civil drawings
 - Preliminary mechanical equipment and piping drawings
 - Preliminary electrical drawings including single-line diagrams, electrical site plans, panel boards, and schematic drawings
 - First draft of major equipment specifications from Sections 1 through 17; The specification nomenclature will follow CSI 1995 format
 - An updated drawing list for construction documents

Task 4 – Contract Document Preparation Phase

- 4.1. **Opinion of Probable Construction Cost Estimate** – The CONSULTANT will prepare a Class 1 opinion of probable construction costs (OPCC) estimate in accordance with AACE International. Pursuant to COUNTY

requirements, the OPCC will be provided in MS Excel format with an expected accuracy range of +15 percent to -5 percent accuracy.

- 4.2. **Contract Documentation Preparation Phase Documents and Review** - CONSULTANT will prepare and submit five copies of the contract document preparation phase (90%) documents for review by the COUNTY (drawings submitted will be four full size and one reduced 11 x 17" format for this review, and five sets of project specifications). A review meeting will be scheduled with the COUNTY following a two-week review period to receive comments. The COUNTY will provide an electronic log of comments (MS Excel preferred) and the CONSULTANT will provide responses to the COUNTY and issue the project bid-ready documents for confirmation (drawings submitted will be four full size, one reduced 11 x 17" format, one camera ready set, and one set of project specifications for reproduction). Generally the conclusion of the Contract Document Preparation Phase will include:

- Completion of the civil, mechanical, structural, electrical, instrumentation, and other design drawings outlined during the Design Development Phase for County reproduction and preparation of the project Bid Package (see Attachment F for proposed drawing list).
- Completion of the equipment and project specifications Sections 1 through 17 (the geotechnical report is also included for County reproduction of the project Bid Package).

Task 5 – Bidding Assistance

The CONSULTANT will assist the COUNTY with the bidding and award of a single construction contract for the project. The COUNTY will issue copies of the bid documents, maintain records of all plan holders, and receive questions from bidders. The following subtasks are included as part of this task:

- 5.1 **Addenda** - The CONSULTANT will respond to bidders' inquiries as requested by the COUNTY and assist the COUNTY with preparing an addendum to clarify the bidding documents prepared by the CONSULTANT. The addendum will be provided to the COUNTY for incorporation into the final bid package prepared by the COUNTY's procurement department and distribution to all plan holders of record. The CONSULTANT has budgeted for the preparation of one addendum to the bidding documents, after the advertisement date, to incorporate changes requested by the COUNTY.
- 5.2 **Pre-Bid Conference** - The CONSULTANT will attend one pre-bid conference. This task also includes conducting a single visit to the three sites of work with prospective bidders. The CONSULTANT will provide minutes of pre-construction meeting.

ASSUMPTIONS AND CLARIFICATIONS

CONSULTANT's scope of work is based on certain assumptions which determine the CONSULTANT's level of effort and therefore compensation, as follows:

- COUNTY will be responsible for System 8 raw water main design, permit, bid, and construction.
- Raw water main for the system 3 wells currently exists to the new well site locations. Only tie-in is required.
- CONSULTANT and all sub-consultants and surveyors shall comply with the Palm Beach County Water Utilities security requirements.
- Access will be provided by the COUNTY to the site of the work during design activities.
- All equipment will be furnished under the construction contract. Separate equipment procurements are not included in this scope of work.
- Any temporary or permanent construction easements or easement agreements necessary for access to or construction of the work will be provided by the COUNTY. This scope of work does not include assistance with property or easements acquisition, including boundary surveys, Ownership and Encumbrances (O&E) investigations, appraisals or land negotiations
- Public information, awareness, and involvement activities are not included in this scope of work.
- A copy of available record drawings, in CAD format, depicting the layout, construction and details of the existing wellfield, will be furnished by the COUNTY for the CONSULTANT's use in preparing the contract documents within 10 days of Notice-to-Proceed.
- Pigging, or otherwise cleaning, of the existing raw water piping system is not included in this scope of work.
- Not more than 2,500 lineal feet of raw water main will be required to connect the eight new wells to either the associated WTP or the existing raw water piping.
- Temporary test wells will remain in place until the production wells are constructed. The test wells for WTP 2 and 3 will be protected with a 4-inch locking cap and a 2-foot by 2-foot concrete pad at the well head. The test wells at Haverhill Park will be flush-mounted.
- Power and communication to new System 2 wells will be hardwired from the existing WTP 2 MCC Building 5 for well 2W-16 and from the Hypochlorite Building for well 2W-17.
- All new wells will be installed at above-grade and landscaping will not be required.
- Provide electrical conduit and raw water main tap for irrigation of landscaping to be designed and constructed by County for WTP 8 and WTP 3 wells. Consumptive use permitting for irrigation is not included.
- PBCWUD will pressure test and grout or otherwise improve existing sanitary sewers within the wellfield protection zones of influence, if required.
- Roadways will not be provided within this scope.

- Communications for remote control and monitoring of any new WTP 3 and WTP 8 wells will be provided by radio telemetry utilizing the COUNTY standards.
- Electronic files exchanged between the COUNTY and the CONSULTANT will be in a format compatible with MS Office 2007 and AutoCAD.
- COUNTY will coordinate and request sanitary surveys for new well sites from Palm Beach County Health Department.
- All permit application fees will be paid for by the COUNTY.
- The COUNTY will provide COUNTY standard engineering details to the CONSULTANT in CAD format.
- Hydraulic modeling and pump hydraulic selection will be performed by the COUNTY.
- This scope of work excludes coordination with funding agencies, meetings other than with the COUNTY or FDEP, redesign to meet COUNTY's budget requirements, or changed conditions following written notice to proceed.
- Schedule assumes that COUNTY will provide CONSULTANT with well coordinates and approval to commence test well construction within 10 days of notice to proceed.

COMPENSATION

The COUNTY shall pay the CONSULTANT a fee of \$497,928.00 for providing the services described in this scope of work, in accordance with Attachment A. Such fee shall be invoiced and paid for under the terms and conditions of the CONTRACT by the fixed price method of payment

SBE - M/WBE PARTICIPATION

As prescribed under Section 7.5 of the CONTRACT, SBE-M/WBE participation is included in Attachment B 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 – E	Well Site Location Map
ATTACHMENT – F	Proposed Drawing List

Task No.	Task Description	Company	Subtotal	Subconsultants	Subconsultants w/ 10% Markup	CAD (\$16.75/hr)	ODCs	TOTAL
Task 1	Project Management/ Meetings/QA/QC		182.00	\$3,588.00	\$3,938.00	\$0.00	\$1,570.00	\$73,340.00
Task 1.0	Project Management		126.00	\$0.00	\$0.00	\$0.00	\$300.00	\$33,776.00
Task 1.1	Kick-Off Meeting		23.00	\$400.00	\$440.00	\$0.00	\$20.00	\$2,248.00
Task 1.2	Progress Meetings (4)		43.00	\$3,180.00	\$3,498.00	\$0.00	\$200.00	\$10,044.00
Task 1.3	Quality Assurance and Quality Control							
Sub-Task 1.3.1	Schematic Design Phase (30% Design)		1.00	\$0.00	\$0.00	\$0.00	\$150.00	\$5,214.00
Sub-Task 1.3.2	Design Development Phase (60% Design)		3.00	\$0.00	\$0.00	\$0.00	\$300.00	\$9,208.00
Sub-Task 1.3.3	Contract Document Preparation Phase (80% Design/Final Design)		3.00	\$0.00	\$0.00	\$0.00	\$300.00	\$9,908.00
Sub-Task 1.3.4	Issued for Bid Documents		2.00	\$0.00	\$0.00	\$0.00	\$300.00	\$3,942.00
Task 2	Schematic Design Phase		212.00	\$13,680.00	\$15,048.00	\$428.80	\$950.00	\$48,458.80
Task 2.1	Production Well Siting							
Sub-Task 2.1.1	Field Reconnaissance		4.00	\$420.00	\$462.00	\$0.00	\$75.00	\$3,521.00
Sub-Task 2.1.2	Evaluation of Construction Requirements		3.00	\$0.00	\$0.00	\$0.00	\$75.00	\$5,991.00
Sub-Task 2.1.3	Raw Water Pipeline Routing		3.00	\$0.00	\$0.00	\$0.00	\$200.00	\$3,510.00
Task 2.2	Well Site Plans		0.00	\$0.00	\$0.00	\$0.00	\$250.00	\$984.00
Task 2.3	Schematic Design Report Technical Memorandum		28.00	\$13,260.00	\$14,586.00	\$428.80	\$350.00	\$34,452.80
Task 3	Design Development Phase		814.00	\$191,188.00	\$210,306.80	\$1,500.80	\$800.00	\$297,551.60
Task 3.1	Well Site Survey		2.00	\$9,314.00	\$10,245.40	\$26.80	\$100.00	\$12,944.20
Task 3.2	Water Treatment Plant 2 Raw Water Main Route Survey		2.00	\$5,906.00	\$6,496.60	\$26.80	\$25.00	\$7,900.40
Task 3.3	Utility Locates		4.00	\$11,921.00	\$13,113.10	\$0.00	\$25.00	\$16,012.10
Task 3.4	Geotechnical Investigations		4.00	\$11,665.00	\$12,831.50	\$0.00	\$0.00	\$15,435.50
Task 3.5	Install Temporary Test Wells and Field Supervision		2.00	\$132,320.00	\$145,552.00	\$0.00	\$250.00	\$166,604.00
Task 3.6	Opinion of Probable Construction Cost Estimate		4.00	\$2,112.00	\$2,323.20	\$0.00	\$0.00	\$12,517.20
Task 3.7	Design Development Phase Documents and Review		86.00	\$17,950.00	\$19,745.00	\$1,447.20	\$400.00	\$66,138.20
Task 4	Contract Document Preparation Phase		819.00	\$30,528.00	\$33,580.80	\$857.60	\$400.00	\$70,227.40
Task 4.1	Opinion of Probable Construction Cost Estimate		3.00	\$3,418.00	\$3,758.80	\$0.00	\$0.00	\$11,312.80
Task 4.2	Contract Documentation Preparation Phase Documents and Review		816.00	\$27,110.00	\$29,821.00	\$857.60	\$400.00	\$58,914.60
Task 5	Bidding Assistance		03.00	\$0.00	\$0.00	\$107.20	\$40.00	\$6,350.20
Task 5.1	Addenda (1)		6.00	\$0.00	\$0.00	\$107.20	\$0.00	\$4,973.20
Task 5.2	Pre-Bid Conference		7.00	\$0.00	\$0.00	\$0.00	\$40.00	\$3,377.00
Labor Subtotal Hours			36					
Direct Labor Rate			\$86.1					
Labor Hourly Billing Rates (Direct Labor Rate * 2.9)			\$250.					
TOTAL			\$9,000.00	\$238,976.00	\$262,873.60	\$2,894.40	\$3,760.00	\$497,928.00
Subconsultants								
Subconsultant	Engenuity Group Inc. - RWM and Wellsite Survey		\$16,83					
Subconsultant	Hillers Electrical Engineering, Inc. - Electrical/I&C		\$58,00					
Subconsultant	RADISE International - Test Wells and Soil Borings		\$128,73					
Subconsultant	High Tech Engineering, Inc - Engineering Utility Locates		\$8,908					
Subconsultant	Jupiter Environmental Laboratories, Inc - Lab Testing		\$16,51					
Subconsultant Subtotal			\$238,97					

ATTACHMENT - B

PROJECT SCHEDULE

SCHEDULE

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

<u>Engineering Services</u>	<u>Estimated Completion Date From Notice to Proceed (calendar days)</u>
Task 2 – 30 % Schematic Design Phase – Draft TM	60 days
Task 2 – Receive County Review Comments	75 days
Task 2 – Schematic Design Phase – Final TM	90 days
Task 2 – 60% Design Development Phase Submittal	210 days
Task 3 – Receive County Review Comments	225 days
Task 4 – 90% Contract Document Preparation Phase Submittal	270 days
Task 4 – Receive County Review Comments	285 days
Task 4 – 100% Final Design Submittal	300 days
Task 5 – Permitting*	320 days
Task 6 – Bidding Assistance	350 days

*Note: Permitting intervals are estimated. Actual permitting time may vary based on agency requirements.

SCHEDULE 1

LIST OF PROPOSED SBE-M/WBE SUBCONTRACTORS

PROJECT NAME: New Water Treatment Plant 2,3, and 8 Production Wells

PROJECT NO.: WUD 12-006

NAME OF PRIME BIDDER: MWH Americas, Inc.

ADDRESS 100 S. Dixie Highway, Suite 300, West Palm Beach, FL 33401

CONTACT PERSON: Becky Hachenburg, PE, PMP

PHONE NO: 561-650-0070

FAX NO: 561-650-0074

BID OPENING DATE: N/A

DEPARTMENT: Water Utilities Department

PLEASE IDENTIFY ALL APPLICABLE CATEGORIES OF SUBCONTRACTORS

Name, Address and Phone Number	(Check one or both Categories)		Subcontract Amount					
	Minority Business	Small Business	Black	Hispanic	Women	Caucasian	Other(Please Specify)	
1. Engenuity Group	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$ _____	\$ _____	\$16,831.00	\$ _____	\$ _____	
2. Hillers Electrical Engineering	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$ _____	\$68,000.00	\$ _____	\$ _____	\$ _____	
3. Radise International	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$ _____	\$ _____	\$128,731.00	\$ _____	\$ _____	
4. High Tech Engineering	<input checked="" type="checkbox"/>	<input type="checkbox"/>	\$ _____	\$8,900.00	\$ _____	\$ _____	\$ _____	
5. Jupiter Environmental Laboratory	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	\$ _____	\$ _____	\$16,514.00	\$ _____	\$ _____	
(Please use additional sheets if necessary)			Total	\$ _____	\$76,900.00	\$162,076.00	\$ _____	\$ _____

Total Bid Price \$497,928.00

Total Value of SBE Participation \$238,976.00

- NOTE:**
- The amounts listed on this form must be supported by the Subcontractors prices included on Schedule 2 in order to be counted toward goal attainment.
 - Firms may be certified by Palm Beach County as an SBE and/or an M/WBE. If firms are certified as both an SBE and M/WBE, please indicate the dollar amount under the appropriate category.
 - M/WBE information is being collected for tracking purposes only.

**SCHEDULE 2
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 the 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: WJ0 12-006 PROJECT NAME: New Water Treatment 2, 3 and 8 Production Wells
 TO: MWH AMERICAS, 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 _____
 Black _____ Hispanic _____ Women _____ Caucasian _____ Other (Please Specify) ASIAN

Date of Palm Beach County Certification: 11/1/2011

The services to be provided include the following - (Please check one.)
 Labor and Material _____ Materials Only _____

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

Line Item/ Lot No.	Item Description	Qty/Units	Unit Price	Total Price/ Percentage
	<u>(Site Reconnaissance & Utility Clearance)</u>			
	<u>Well Construction</u>			
	<u>Geophysical Logging</u>			
	<u>LABORATORY SIEVE ANALYSIS ON FORMATION SAMPLES</u>			
	<u>Soil Borings Along pipeline Route</u>			
	<u>PROJECT MANAGEMENT & ENGINEERING SUPPORT SERVICES</u>			

\$128,731.00

at the following price or percentage \$ 128,731.00
(Subcontractor's quote)

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 subcontract to a non-certified SBE subcontractor, the amount of any such subcontract must be stated.
 Price or Percentage _____

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

Radise International
(Print name of SBE-M/WBE Subcontractor)
 By: [Signature]
(Signature)
KUMAR ALLADY, P.E., President
(Print name/title of person executing on behalf of SBE-M/WBE Subcontractor)

Date: 12/8/11

ATTACHMENT C

SCHEDULE #2

PROJECT NO. WUD 12-006
LIAISON: _____

LETTER OF INTENT TO PERFORM AS A MINORITY SUBCONSULTANT

TO: MWH Americas, Inc.
(Name of Prime or General Bidder)

The undersigned intends to perform work in connection with the above project as (check one):

_____ an individual a corporation

_____ a partnership _____ a joint venture

The undersigned is certified by Palm Beach County as a MWBE.
Miami Dade

Certification date 2/26/10

Attach proof of MWBE certification, either letter of certificate from certifying agency if MWBE firm is not listed in current Palm Beach County Directory

OR

_____ The undersigned agrees to apply to Palm Beach County for certification as an MWBE within seven days of bid opening.

The undersigned is prepared to perform the following described work in connection with the above project (specify in detail particular work items or parts thereof to be performed): _____

View attached proposal

at the following price: \$ 8,900.00
(Amount must match subcontractor's quote)

You have projected the following commencement date of such work, and the undersigned is projecting completion of such work as follows:

<u>Items</u>	<u>Projected Commencement Date</u>	<u>Projected Completion Date</u>
See attached	February 1, 2012	February 1, 2013

0 % of the dollar value of the subcontract will be sublet and/or awarded to non-minority contractors and/or non-minority suppliers. The undersigned will enter into a formal agreement for the work with you conditioned upon your execution of a contract with Palm Beach County.

High Tech Engineering
(Name of Minority Consultant)

Date: 12/8/2011

By: [Signature]
Signature of Minority/Women Contractor

ATTACHMENT C

SCHEDULE #2

PROJECT NO. WUD 12-006

LIAISON: _____

LETTER OF INTENT TO PERFORM AS A MINORITY SUBCONSULTANT

TO: MWH Americas, Inc.
(Name of Prime or General Bidder)

The undersigned intends to perform work in connection with the above project as (check one):

_____ an individual _____ a corporation

_____ a partnership _____ a joint venture

_____ The undersigned is certified by Palm Beach County as a M/WBE.

Certification date Feb 2, 2010

Attach proof of M/WBE certification, either letter of certificate from certifying agency if M/WBE firm is not listed in current Palm Beach County Directory

OR

_____ The undersigned agrees to apply to Palm Beach County for certification as an M/WBE within seven days of bid opening.

The undersigned is prepared to perform the following described work in connection with the above project (specify in detail particular work items or parts thereof to be performed): _____
View attached proposal

at the following price: \$ 16,514.00
(Amount must match subcontractor's quote)

You have projected the following commencement date of such work, and the undersigned is projecting completion of such work as follows:

<u>Items</u>	<u>Projected Commencement Date</u>	<u>Projected Completion Date</u>
See attached	February 1, 2012	February 1, 2013

0 %, of the dollar value of the subcontract will be sublet and/or awarded to non-minority contractors and/or non-minority suppliers. The undersigned will enter into a formal agreement for the work with you conditioned upon your execution of a contract with Palm Beach County.

Date: 12/8/11

Jupiter Environmental Laboratory
(Name of Minority Consultant)

By: [Signature]
Signature of Minority/Women Contractor

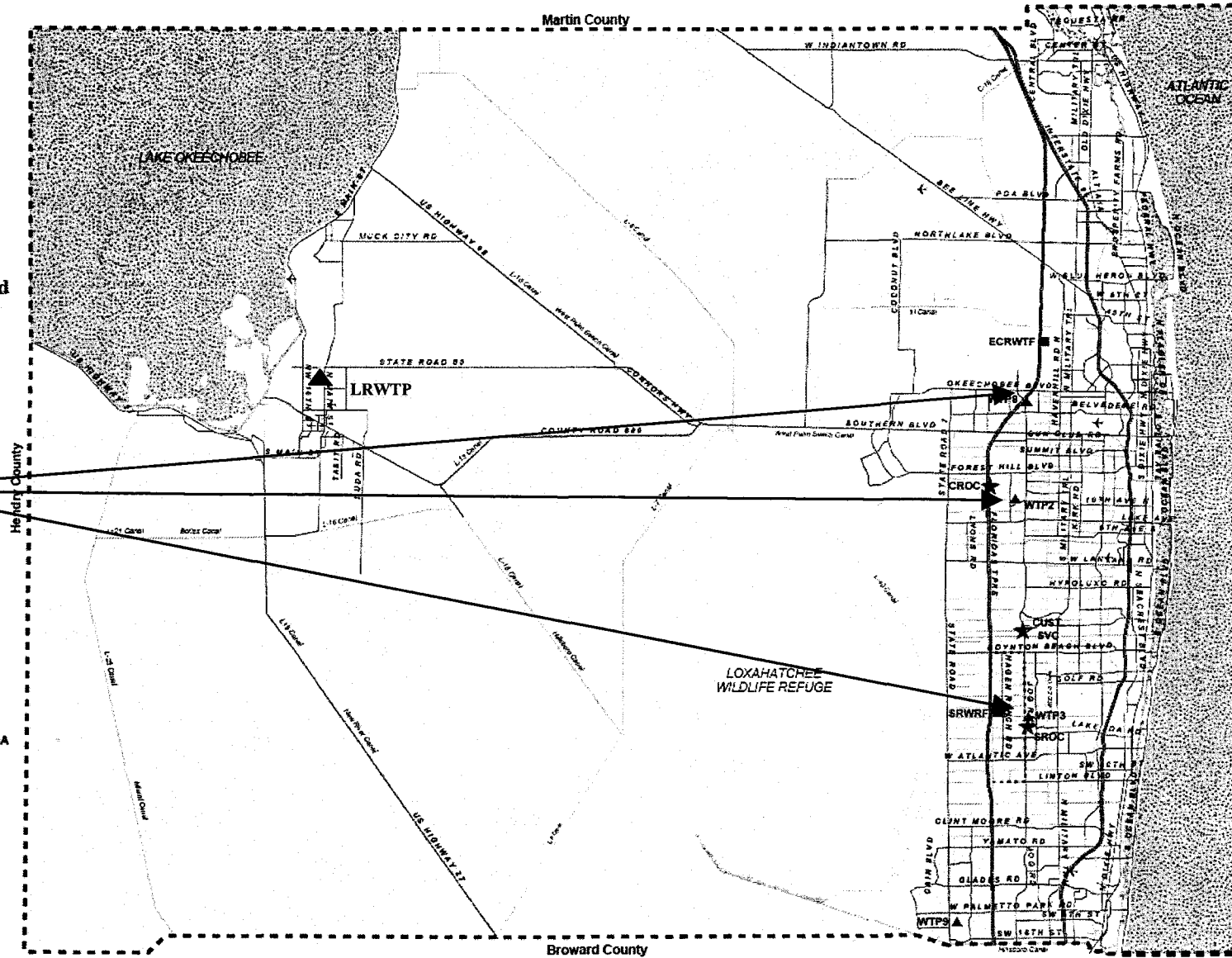


**Palm Beach County
Water Utilities
Department
Service Area (SA) and
Major Facilities**

**Project
Locations**

Legend

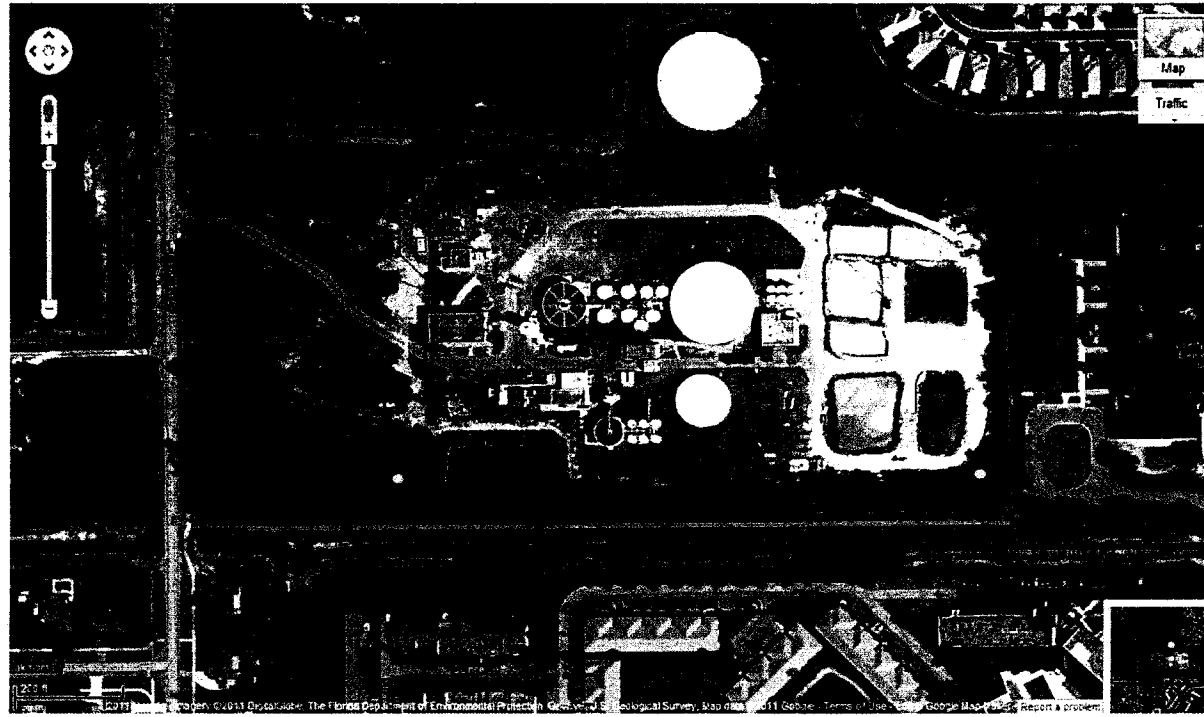
- P.B.C.W.U.D. SA
- MANDATORY RECLAIMED SA
- COUNTY LIMITS
- ★ Administration
- Water Reclamation Plant
- ▲ Water Treatment Plant
- ⊙ Wetlands



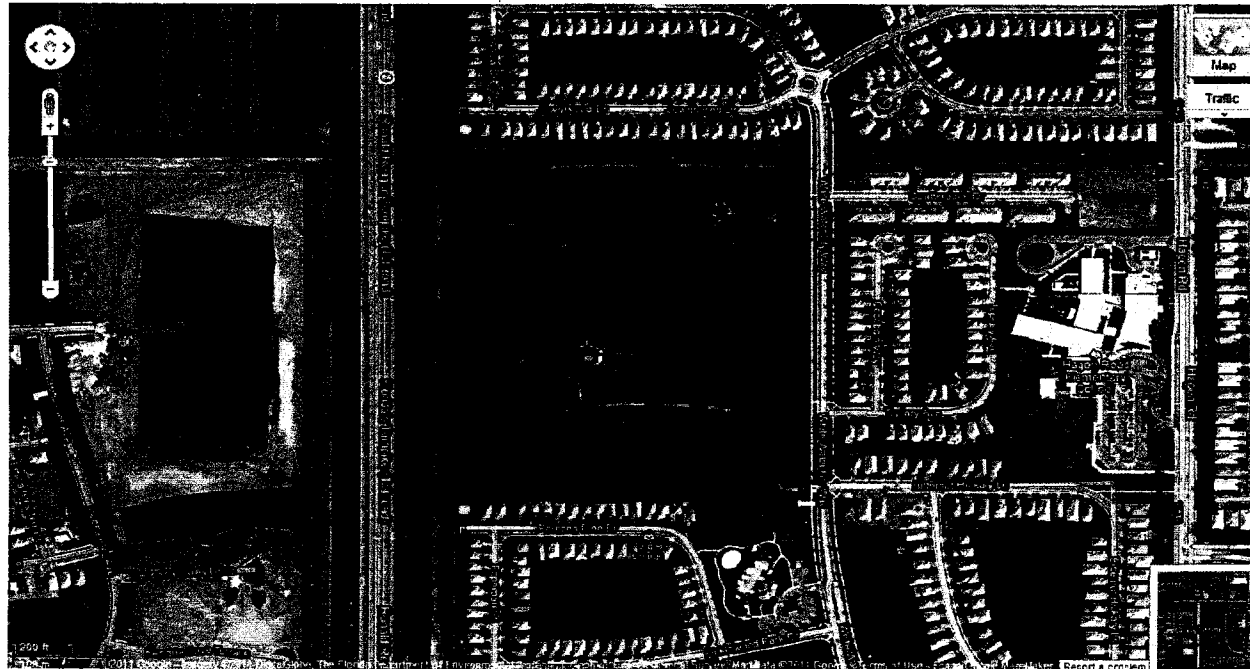
New Water Treatment Plant 2, 3, and 8 Production Wells

ATTACHMENT E – WELL LOCATION MAPS

New Water Treatment Plant 2 Production Well Locations



New Water Treatment Plant 3 Production Well Locations



New Water Treatment Plant 8 Production Well Locations



Attachment F - Proposed Drawing List

Dwg #	Dwg Title
G-1	Cover Sheet
G-2	Location Map, List of Drawings, and General Notes
G-3	Standard Details
C-1	Civil Standard Details 1
C-2	Civil Standard Details 2
C-3	Civil Standard Details 3
C-4	Site Plan WTP 2 Production Wells
C-5	Site Plan WTP 3 Production Wells
C-6	Site Plan WTP 8 Production Wells - I
C-7	Site Plan WTP 8 Production Wells - II
C-8	Key Map, Legend, and General Notes
C-9	Well 2W-16 Raw Water Main – Sheet 1
C-10	Well 2W-16 Raw Water Main – Sheet 2
C-11	Well 2W-17 Raw Water Main – Sheet 1
C-12	Well 2W-17 Raw Water Main – Sheet 2
S-1	General Notes and Standard Details 1
S-2	General Notes and Standard Details 2
S-3	Typical Well Pads – Plan(s)
S-4	Typical Well Pads – Plan(s) and Section(s)
M-1	Mechanical Standard Details 1
M-2	Mechanical Standard Details 2
M-3	Typical Well Plan and Section
M-4	Well Casing Schedule and Pump Data
E-1	ELECTRICAL LEGEND AND SYMBOLS
E-2	ELECTRICAL GENERAL NOTES
E-3	WTP#2 - ELECTRICAL SITE PLAN
E-4	WELL 2W-16 AND 2W-17 ELECTRICAL PLAN
E-5	WELL 2W-16 AND 2W-17 ONE LINE DIAGRAM
E-6	WELL 2W-16 AND 2W-17 CONTROL SCHEMATIC
E-7	WELL 2W-16 AND 2W-17 RISER DIAGRAMS
E-8	WELL 2W-16 AND 2W-17 SCHEDULES
E-9	WTP#3 - ELECTRICAL SITE PLAN
E-10	WELL 3W-X AND 3W-Y ELECTRICAL PLAN
E-11	WELL 3W-X AND 3W-Y ONE LINE DIAGRAM
E-12	WELL 3W-X AND 3W-Y CONTROL SCHEMATIC
E-13	WELL 3W-X AND 3W-Y RISER DIAGRAMS
E-14	WELL 3W-X AND 3W-Y SCHEDULES
E-15	WTP#8 - ELECTRICAL SITE PLAN - SHEET 1
E-16	WTP#8 - ELECTRICAL SITE PLAN - SHEET 2
E-17	WELL 8W-31 AND 8W-32 ELECTRICAL PLAN
E-18	WELL 8W-33 AND 8W-34 ELECTRICAL PLAN

E-19	WELL 8W-31, 32, 33, AND 34 ONE LINE DIAGRAM
E-20	WELL 8W-31, 32, 33, AND 34 CONTROL SCHEMATIC
E-21	WELL 8W-31, 32, 33, AND 34 RISER DIAGRAMS
E-22	WELL 8W-31, 32, 33, AND 34 SCHEDULES
E-23	ELECTRICAL DETAILS SHEET 1
E-24	ELECTRICAL DETAILS SHEET 2
I-1	INSTRUMENTATION LEGEND AND SYMBOLS
I-2	WTP#2 COMMUNICATION BLOCK DIAGRAM
I-3	P&ID WELL 2W-16 AND 2W-17
I-4	WTP#2 MAIN CONTROL PANEL MODIFICATOIN
I-5	WTP#3 COMMUNICATION BLOCK DIAGRAM
I-6	P&ID WELL 3W-X AND 3W-Y
I-7	WTP#3 MAIN CONTROL PANEL MODIFICATION
I-8	WTP#8 COMMUNICATION BLOCK DIAGRAM
I-9	P&ID WELL 8W-31, 32, 33, 34
I-10	WTP#8 MAIN CONTROL PANEL MODIFICATION
I-11	INSTRUMENTATION DETAILS

EXHIBIT - B

AUTHORIZATION STATUS REPORT

SUMMARY AND STATUS OF REQUESTS FOR AUTHORIZATIONS

Auth. No.	Description	Status	Project Total Amount	Date Approved	WUD No. Assigned	MWH Project No.
1	Miscellaneous Hydrogeology and Water Resources Services	Approved	\$30,026.00	8/30/11	WUD 11-141	1011867
2	Disinfection System Evaluation	Approved	\$90,813.00	7/20/11	WUD 11-117	1011641
3	Modification of Proposed System 8 and 3 Well Site Locations	Approved	\$72,261.00	9/7/11	WUD 11-137	1011957
4	WQBEL White Paper	Approved	\$9,915.00	9/2/11	WUD 11-147	1011856
5	New Water Treatment Plant 2,3, & 8 Production Wells	Pending	\$497,928.00	TBD	WUD 12-006	TBD
Total			\$700,943.00			

EXHIBIT - C
AUTHORIZATION STATUS REPORT
UTILITY HYDROGEOLOGIC AND WATER RESOURCES ENGINEERING SERVICES
SUMMARY OF
SMALL BUSINESS TRACKING SYSTEM

	Total	SBE
Current Proposal		
Value of Authorization No. 5	\$497,928.00	
Value of M/WBE Letters of Intent	\$238,976.00	\$238,976.00
Actual Percentage	47.99%	47.99%
Signed / Approved Authorizations		
Total Value of Authorizations	\$203,015.00	
Total Value of M/WBE Signed Subcontracts	\$0	\$0
Actual Percentage	0%	0%
Approved Authorizations Plus Current Proposal		
Total Value of Authorizations	\$700,943.00	
Total Value of Subcontracts & Letters of Intent	\$238,976.00	\$238,976.00
Actual Percentage	34.09%	34.09
GOAL	26%	