

LEE COUNTY BOARD OF COUNTY COMMISSIONERS
AGENDA ITEM SUMMARY **BLUE SHEET NO: 20040439-UTL**

1. REQUESTED MOTION:

ACTION REQUESTED:

Approve Supplemental Task Authorization No. 18 dated March 30, 2004 to Water Resource Solutions, Miscellaneous Utility Engineering Design and/or Inspection Services, Contract No. 1863 for the N-T-E amount of \$510,240.00 for the Olga Water Treatment Plant Aquifer Storage and Recovery (ASR) systems expansion. This work will be performed under CIP #7110.

WHY ACTION IS NECESSARY:

Projects over \$50,000 require BOCC approval.

WHAT ACTION ACCOMPLISHES:

Allows for the design and permitting of four (4) additional ASR wells, and the construction of one (1) of the four additional ASR Wells, to expand the Olga WTP ASR system as an Alternative Water Supply under the grant funding agreement between Lee County and the South Florida Water Management District (SFWMD).

2. DEPARTMENTAL CATEGORY: 10 - UTILITIES
COMMISSION DISTRICT #: 5

C10J

3. MEETING DATE:

04-27-2004

4. AGENDA:

- CONSENT
- ADMINISTRATIVE
- APPEALS
- PUBLIC
- WALK ON
- TIME REQUIRED: _____

5. REQUIREMENT/PURPOSE:

- (Specify)
- STATUTE _____
 - ORDINANCE _____
 - ADMIN. CODE _____
 - OTHER STA _____

6. REQUESTOR OF INFORMATION:

- A. COMMISSIONER: _____
- B. DEPARTMENT: Lee County-Public Works
- C. DIVISION/SECTION: Utilities Division
- BY: Rick Diaz P.E., Utilities Director
- DATE: _____

S. Lopez see PDiaz 4/13/04

7. BACKGROUND:

On November 19, 2002, under BS 20021228-UTL, the BOCC approved the South Florida Water Management District Funding Agreement for \$150,000 with the balance of the funding from CIP budgeted funds.

On February 12, 2004, the Governing Board of the South Florida Water Management District approved Amendment No. 1 in order to extend the period of performance twenty-four months, to December 15, 2005, which goes before the BOCC on April 13, 2004 under BS 20040338. Amendment No. 1 shall be effective as of December 16, 2003, regardless of the actual date of execution.

This STA No. 18 allows for the design of four additional wells, and the construction of one of the four wells, to expand the existing Olga WTP ASR system as an Alternative Water Supply. The total project cost is estimated at \$510,240.00. The SFWMD grant was approved for \$150,000.00 and the proposed balance is to be funded from Lee County Utilities approved Capital Improvement Program budget.

Funds are available in account numbers:
 20711048730.506540 (\$360,240)
 22726548730.506540 (\$150,000)

(Capital Projects/ASR Wells @ North Reservoir & Olga Water Treatment Plant/LCU Capital Improvement/Improvement Construc.)
 Attachments: 3 Original STA's w/attached Proposal #P04-11424.01

MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL

(A) DEPARTMENT DIRECTOR	(B) CONTRACTS	(C) HUMAN RESOURCES	(D) OTHER	(E) COUNTY ATTORNEY	(F) BUDGET SERVICES				(G) COUNTY MANAGER
					OA	OM	Risk	GC	
J. Lavender Date: 4/13/04	C. Logan Date: 4/13/04	N/A Date:	S.I. Velez Date: 4-13 B. Dearborn Date: 4-13	S. Board Date: 4/14/04	eblw 4-15-04	4/14/04	4/15/04	4/15/04	J. Lavender Date: 4/13/04

10. COMMISSION ACTION:

- _____ APPROVED
- _____ DENIED
- _____ DEFERRED
- _____ OTHER

Rec. by CoAtty

Date: 4/13/04

Time: 4:40

Forwarded To:

Admin 4/13/04

RECEIVED BY
COUNTY ADMIN:

4/14/04

8:50 am SLT

COUNTY ADMIN
FORWARDED TO:

4/15/04

1 am

LEE COUNTY PROFESSIONAL SERVICE/SERVICE PROVIDER AGREEMENT
CHANGE ORDER/SUPPLEMENTAL TASK AUTHORIZATION

Change Order
 Supplemental Task Authorization

NO.: 18

(A Change Order or Supplemental Task Authorization Requires Approval by the Department Director for Expenditures Under \$25,000 or Approval by the County Manager for Expenditures Between \$25,000 and \$50,000 or Approval by the Board of County Commissioners for Expenditures over \$50,000)

CONTRACT/PROJECT NAME: Misc. Utility Engineering
OLGA ASR EXPANSION PHASE I

CONSULTANT: WATER RESOURCE SOLUTIONS PROJECT NO.: 7110

SOLICIT NO.: CN-01-11 CONTRACT NO.: 1863 ACCOUNT NO.:

REQUESTED BY: IVAN VELEZ, P.E., LEE CO UTILITIES DATE OF REQUEST: 3/30/04

Upon the completion and execution of this Change Order or Supplemental Task Authorization by both parties the Consultant/Provider is authorized to and shall proceed with the following:

- EXHIBIT "CO/STA-A: SCOPE OF PROFESSIONAL SERVICE: DATED: 3/30/04
EXHIBIT "CO/STA-B: COMPENSATION & METHOD OF PAYMENT: DATED: 3/30/04
EXHIBIT "CO/STA-C: TIME AND SCHEDULE OF PERFORMANCE: DATED: 3/30/04
EXHIBIT "CO/STA-D: CONSULTANT'S/PROVIDERS ASSOCIATED
SUB-CONSULTANT(S)/SUB-CONTRACTORS: DATED: 3/30/04
EXHIBIT "CO/STA-E: PROJECT GUIDELINES AND CRITERIA: DATED: 3/30/04

It is understood and agreed that the acceptance of this modification by the CONSULTANT/PROVIDER constitutes an accord and satisfaction.

RECOMMENDED:
By: [Signature] 4/7/04
Date
Department Director

ACCEPTED:
By: [Signature]
Date Accepted: 3-30-04
Consultant/Provider
(Print Name) Don Mayne

COUNTY APPROVAL:
By: [Signature]
Date Approved: 4/7/04
Department Director
(Print Name)
(Under \$25,000)

By: [Signature] 4/13/04
Date
Contracts Mgmt

Date Accepted: 3-30-04
Corporate Seal

Date Approved: _____
By: _____
County Manager (Between
(\$25,000 and under \$50,000)
Date Approved: _____

APPROVED:
By: _____
*County Attorney's Office Date

By: _____
Chairman
Board of County Commissioners
Date Approved: _____

*County Attorney signature needed for over Board level expenditures only.

CHANGE ORDER AGREEMENT No. _____

or

SUPPLEMENTAL TASK AUTHORIZATION No. 18

EXHIBIT "CO/STA-A"

Date: 3/30/04

SCOPE OF PROFESSIONAL SERVICES

for OLGA ASR EXPANSION - PHASE I

(Enter Project Name from Page 1 of the
Change Order or Supplemental Task Authorization)

SECTION 1.00 CHANGE(S) TO PROFESSIONAL SERVICES

The "Scope of Professional Services" as set forth in Exhibit "A" of the Professional Services Agreement, or Service Provider Agreement, referred to herein before is hereby supplemented, changed or authorized, so that the CONSULTANT or SERVICE PROVIDER, shall provide and perform the following professional services, tasks, or work as a supplement to, change to, or authorized to, the scope of services previously agreed to and authorized:

The scope of work for this STA is to provide the consulting services for the design and permitting of four additional ASR wells and two storage zone monitoring wells at Olga. It also includes the turnkey drilling and well construction of one ASR well. A work scope is attached to this STA.

*Attach additional pages, if needed.

CHANGE ORDER AGREEMENT No.
 SUPPLEMENTAL TASK AUTHORIZATION No. 18

EXHIBIT "CO/STA-B"

Date: 3/30/04

COMPENSATION AND METHOD OF PAYMENT

for OLGA ASR EXPANSION - PHASE I

(Enter Project Name from Page 1 of the
Change Order or Supplemental Task Authorization)

SECTION 1.00 CHANGE(S) IN COMPENSATION

The compensation the CONSULTANT, or SERVICE PROVIDER, shall be entitled to receive for providing and performing the supplemented, changed or authorized services, tasks, or work as set forth and enumerated in the Scope of Services set forth in this CHANGE ORDER OR SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT, Exhibit "CO/STA-A", attached hereto shall be as follows:

NOTE: A Lump Sum (L.S.) or Not-to-Exceed (N.T.E.) amount of compensation to be paid the CONSULTANT should be established and set forth below for each task or sub-task described and authorized in Exhibit "S/COA-A". In accordance with Professional Services Agreement Article 5.03(2) "Method of Payment", tasks to be paid on a Work-in-Progress payment basis should be identified (WIPP).

Task Number	Task Title	Amount of Compensation	Indicate Basis of Compensation LS or NTE	If Applicable Indicate (W.I.P.P.)
11	HYDROGEOLOGICAL SERVICES	510,240.00	NTE	WIPP
TOTAL		510,240.00	NTE	

(Unless list is continued on next page)

B1 of B2

CHANGE ORDER AGREEMENT No. _____

SUPPLEMENTAL TASK AUTHORIZATION No. 18

SECTION 2.00 SUMMARY OF CHANGE(S) IN COMPENSATION

Pursuant to and in consideration of the change(s) in the Scope of Professional Services set forth in the CHANGE ORDER or AGREEMENT, Exhibit "CO/STA-A", the compensation the COUNTY has previously agreed to pay to the CONSULTANT, or SERVICE PROVIDER, as set forth in Exhibit "B" of the Professional Services Agreement, or Service Provider Agreement, shall be changed to be as follows:

Section/Task Number	Section/Task Name	Compensation In the Basic Agreement	Adjustment(s) by Previous CO or STA Nos. _____	Adjustment(s) Due to this CO or STA	Summary of Changed Compensation
STA'S 1-17			1,204,601.26		1,204,601.26
STA #18				510,240.00	1,714,841.20
TOTAL			1,204,601.26	510,240.00	1,714,841.20

CHANGE ORDER AGREEMENT No. _____
or
 SUPPLEMENTAL TASK AUTHORIZATION No. 18

EXHIBIT "CO/STA-C"

Date: 3/30/04

TIME AND SCHEDULE OF PERFORMANCE

for OLGA ASR EXPANSION - PHASE I

(Enter Project Name from Page 1 of the
Change Order or Supplemental Task Authorization Agreement)

SECTION 2.00 SUMMARY OF THE IMPACT OF CHANGE(S) IN PROFESSIONAL SERVICES ON THE
OVERALL PROJECT TIME AND SCHEDULE OF PERFORMANCE

Pursuant to and in consideration of the changes in the Scope of Professional Services in this CHANGE ORDER or SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT, Exhibit "CO/STA-A", the time and schedule the COUNTY and the CONSULTANT, or SERVICE PROVIDER, has previously agreed to for all of the work to be done under this Professional Services Agreement, or Service Provider Agreement, shall be changed to be as follows:

Phase and/or Task Reference As Enumerated in EXHIBIT 'A' and EXHIBIT 'CO/STA-A'	Name or Title of Phase and/or Task	Number of Calendar Days For Completion of Each Phase and/or Task	Cumulative Number Of Calendar Days For Completion From Date of Notice to Proceed
11	HYDROGEOLOGICAL SERVICES	200	200

CHANGE ORDER AGREEMENT No. _____

SUPPLEMENTAL TASK AUTHORIZATION No. 18

EXHIBIT "CO/STA-D"

Date: 3/30/04

CONSULTANT'S, OR SERVICE PROVIDER'S, ASSOCIATED SUB-CONSULTANT(S) AND SUBCONTRACTOR(S)

for OLGA ASR EXPANSION - PHASE I

(Enter Project Name from Page 1 of the Change Order or Supplemental Task Authorization Agreement)

CONSULTANT, or SERVICE PROVIDER, intends to engage the following sub-consultant(s) and/or sub-contractor(s) to assist the CONSULTANT, or SERVICE PROVIDER, in providing and performing the services, tasks, or work required under this CHANGE ORDER, or SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT.

(If none, enter the word "none" in the space below.)

Service and/or Work to be Provided or Performed	Name and Address of Individual or Firm	Disadvantaged, Minority or Women Business Enterprise, (If Yes, Indicate Type)			Sub-Consultant Services are Exempted from Prime Consultant's Insurance Coverage	
		Yes	No	Type	Yes	No
	Dufresne – Henry 630 Woodbury Drive Port Charlotte, FL 33954-1000		X		X	
	Troy Moore Drilling 5681 Pangola Drive Fort Myers, FL 33905		X		X	

DI of DI

CHANGE ORDER AGREEMENT No. _____

or

SUPPLEMENTAL TASK AUTHORIZATION No. 18

EXHIBIT "CO/STA-E"

Date: 3/30/04

PROJECT GUIDELINES AND CRITERIA

for OLGA ASR EXPANSION - PHASE I

(Enter Project Name from Page 1 of the
Change Order or Supplemental Task Authorization Agreement)

As a supplement, or change, to the Project Guidelines and Criteria set forth in the Professional Services Agreement, or Service Provider Agreement, Exhibit "E", the COUNTY has established the following Guidelines, Criteria, Goals, Objectives, Constraints, Schedule, Budget, and/or Requirements which shall serve as a guide to the CONSULTANT, or SERVICE PROVIDER, in performing the professional services, tasks, or work to be provided pursuant to the professional services set forth herein before in CHANGE ORDER or SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT, Exhibit "CO/STA-A", attached hereto:

(If none, enter the word "None" in the space below.)

ITEM No. 1

NONE

CMO:029
09/25/01

February 4, 2004
Revised March 30, 2004

Mr. Ivan Velez, P.E.
Deputy Utility Director
Lee County Utilities
1500 Monroe Street, 3rd Floor
Ft. Myers, FL 33902

Re: Olga ASR Expansion
WRS Proposal # P04-11424.01

Dear Ivan:

Pursuant to your request, please consider this correspondence as the Water Resource Solutions (WRS) proposal to expand the Olga ASR system. The design and permitting for the expansion will be for four additional ASR wells (ASR-2, 3, 4, and 5) and two storage zone observation wells (SZMW-2 and 4). This proposal does not include the design of a centralized pH adjustment system. However, such a system would be needed if the full Phase I expansion were to be implemented.

Per your instructions, the costs for supervising the installation and testing of only one ASR well, on a turnkey basis, are included herein. However, the turnkey cost does not include the well pump, surface facilities, piping, or instrumentation and controls. The proposal is subdivided into three parts: (1) design and permitting of the Phase I expansion, (2) construction supervision of one ASR well, and turnkey installation of that well, and (3) cycle testing for the first cycle.

A detailed proposed work scope and cost proposal are provided below.

Cost Proposal

Part 1 – Design and Permitting

Task 1. Project Kick-Off Meeting

The initial step in the project will be to hold a kick-off meeting with LCU at which the principal members of the project team will be present, along with LCU staff. The responsibilities of each team member, the means or routing communications, and the project schedule will be clearly defined at the kick-off meeting.

Task 2. Progress Meetings

It is anticipated that regularly scheduled progress meetings will be held on a monthly basis at the LCU office during the entire duration of the project. During the initial phases

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Revised March 30, 2004
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of the project, meetings will focus on design and permitting. Later, during construction, these meetings will be focused on construction progress.

Task 3. Design

Subtask 3.1 Preliminary Design

A Basis of Design report will be prepared for the four new ASR wells, the two storage zone monitoring wells, the surface facilities, electrical work, pipelines, and the pH adjustment system. This document will contain preliminary process flow diagrams, preliminary piping layouts, hydraulic and surge analyses, and anticipated casing setting depths for the ASR wells. Preliminary cost estimates will also be contained in this document.

Subtask 3.2 Final Design

Detailed technical specifications will be prepared for the ASR wells, the storage zone monitoring wells, the wellhead controls, instrumentation and SCADA, electrical service, piping, and other system appurtenances. These specifications will detail the construction sequence, the materials to be used, responsibilities of the construction contractors, payment items, and warranties.

Progress meetings will be held with LCU at the 30%, 60%, 90%, and final design stages. Input from LCU will be solicited at these meetings. Preliminary design drawings will be prepared and submitted to LCU prior to the meetings.

Cost estimates will be prepared for each component of the ASR well system.

Task 4. Permitting

Subtask 4.1 Underground Injection Control Permitting

A Class V underground injection control construction/operation permit must be obtained from the FDEP for construction of the new ASR wells. A pre-application meeting will be held with the FDEP at the approximate 30% design stage. This will allow for incorporation of any FDEP comments into the final design.

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After approval by LCU, the technical specifications will be submitted to the FDEP with other required items, along with the completed permit application forms and application fee. The application fee will be provided by LCU. Copies of the application package will also be provided to other members of the UIC technical advisory committee. These include the Environmental Protection Agency (EPA), the South Florida Water Management District (SFWMD), and the United States Geological Survey (USGS).

Other required elements of the permit application package include an area of review. The area of review prepared as part of the permit renewal for the existing ASR well (ASR-1) will be used for this purpose and thus there will be no duplication of effort or cost for this item.

Typically permitting of an ASR system expansion takes about six months. However, we believe that we can complete the permitting within four months. This is because of our familiarity with the regulatory personnel, the site, its subsurface geology, and the previous meetings held between the FDEP, LCU, and WRS. The permitting process entails not only technical review by the FDEP, but also two periods of public noticing. One public hearing is required as well as advertisement of the FDEP Notice of Intent to Issue in a local newspaper.

Subtask 4.2 Limited Development Review

A limited Development Review will likely be required by Lee County for the surface facilities. The necessary documents will be supplied to the County reviewing agency at the same time that the UIC permit application is submitted to the FDEP. Review and approval from Lee County should occur well before the UIC permit is issued.

Subtask 4.3 Modification of Operating Permit for WTP

In order for the new ASR wells to be designated by the FDEP as a part of the Olga WTP facilities, the FDEP operating permit will need to be modified. The necessary documents and supporting materials will be prepared and, after LCU review and approval, will be submitted to the FDEP for this purpose.

Subtask 4.4 LCDOH Permitting

A Lee County Department of Health (LCDOH) water facilities permit will be needed for the one new ASR well (ASR-2) that will be installed in the near future. The necessary permit application forms and supporting documentation will be prepared and, after LCU

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review and approval, submitted to LCDOH along with the appropriate application fee (made out by LCU to LCDOH).

Part 2 – Construction of One ASR Well

Task 5. Surveying

Detailed land surveying will be conducted of the area for the new ASR well (ASR-2) and associated facilities. The land surveying will be conducted by a LCU approved licensed land surveyor under contract to WRS.

Task 6. Turnkey Well Installation

WRS is herein providing a turnkey price for drilling and well construction services for installing one ASR well at the site. The well will be constructed similar to the initial ASR well (ASR-1), which was installed at the site in 1999. This will include a 24-inch diameter steel casing set into the upper portion of the Suwannee formation at a depth of about 740 feet below land surface. Setting this casing at that depth, rather than into the top of the Lower Hawthorn section of the Arcadia formation (at a depth of about 540 feet) is necessary to seal off a thick section of caving sands encountered in the Lower Hawthorn at the site. The production casing will be 16-inch diameter Certa-Lok SDR 17 PVC casing set at a depth of about 860 feet below land surface.

The new ASR well will be thoroughly developed and tested. A temporary test pump will be used for the testing. The generic NPDES permit for the site will be modified to allow the temporary short-term use of the storm drain system for disposal of the pumped formation water. Near the end of the pumping tests, water samples will be procured and transported to the Lee County Environmental Laboratory for analyses of Primary and Secondary Drinking Water parameters. In addition, field testing will be performed for sand content and silt density index; both of which are anticipated to be very low as a result of proper well construction techniques and selection of a proper casing setting depth and open-hole production interval.

The turnkey cost provided herein does not include the well pump, surface facilities, piping, or instrumentation and controls. The work necessary for the installation of those items will still need to be bid.

Task 7. Construction Supervision and Testing

Prior to the start of construction, a pre-construction conference will be scheduled with the contractor(s) to establish protocols, procedures, review working conditions, site access, regulatory compliance, and coordinate various construction-related activities.

Submittals from the contractor(s) will be reviewed by the project team and evaluated for consistency with the technical specifications. Punch lists of items that need attention for project completion will be prepared and final inspections will be performed.

During construction and testing of ASR-2, a well-trained and experienced wellsite geologist will be assigned to the project. The wellsite geologist will prepare daily reports and communicate those reports to the project manager on a daily basis. The wellsite geologist will analyze well cuttings, maintain a log of lithology, water quality, and drilling operations.

The project manager will be responsible for selecting all casing setting, coring, testing, and geophysical logging depths. He will be present for all important events such as packer testing, coring, geophysical logging, casing setting, and drilling through important intervals. Our proximity to the wellsite (i.e. less than 15 miles) will allow the project manager to frequently visit the site to discuss activities with the wellsite geologist and LCU staff, and reduces costs.

Task 8. Regulatory Compliance During Construction and Testing

During construction and testing, weekly progress reports are required to be sent to the FDEP and TAC. These reports contain copies of pertinent data such as daily drilling reports, lithologic logs, geophysical logs, core data, water quality data, aquifer test data, casing mill slips, casing cementing records, and casing pressure tests. In addition, FDEP approval must be obtained for casing setting depths. WRS will prepare and submit this information to the FDEP and LCU on a weekly basis.

Task 9. Completion Report, Certifications, and Operations and Maintenance Manual

Upon completion of construction and testing activities, a completion report will be prepared detailing the drilling and construction activities and the results of all testing and analyses of the new ASR well. These documents will address all conditions in the FDEP construction permits. Copies of the completion report for ASR-2 will be supplied to the TAC and the FDEP after LCU approval.

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We will update our previously prepared Operations and Maintenance Manual and work with the WTP operators to develop effective operating protocols and record keeping procedures for the system. Equipment data, as-built drawings, maintenance and operation recommendations, and regulatory compliance requirements will be detailed in the O&M manuals.

Task 10. Startup Services

The WRS project team will conduct a training session with LCU staff to provide instruction on the proper operation of the facilities and to facilitate commencement of use of the ASR system.

Task 11. Operational Testing Authorization

Subsequent to approval by LCU of the final report, record drawings, and operations and maintenance manual, copies of these documents will be forwarded to the FDEP and TAC with a request for authorization to commence operational testing of the new ASR well. Any further documentation requested by the FDEP will also be provided.

Part 3 – Extended Duration Testing

Task 12. Cycle 1 Testing

Detailed injection/storage/recovery protocols will be prepared for the first cycle testing of ASR-2. Because we will be on the site daily for the cycle testing of ASR-2, we would recommend that we also operate the existing ASR well (ASR-1) and conduct the monitoring of the two storage zone monitoring wells. The system should be operated as a whole to make adjustments for any pressure interference between the two ASR wells. The cost shown below for this task includes the daily operation of ASR-1 and ASR-2, as well as the storage zone monitoring wells.

NPDES sampling and operation of the hydrochloric acid system will be included in this item. The costs for purchase and delivery of hydrochloric acid are not included.

Data obtained for the Olga ASR system will be tabulated on a monthly basis. Monthly reports will be prepared and provided to Lee County Utilities, the FDEP, and TAC members. During recovery, reports will also be provided to LCDOH.

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A final report will be prepared for Olga ASR-2 Cycle 1/ASR-1 Cycle 4 with recommendations for optimizing the performance of the system by adhering to detailed injection protocols which will be developed and refined during the cycle testing.

COST PROPOSAL

<u>Item:</u>	<u>Amount:</u>
<i>Part 1 – Design and Permitting</i>	
1. Kickoff Meeting	\$ 775
2. Progress Meetings	4,705
3. ASR Well System Expansion Design	
A. ASR and Storage Zone Monitoring Wells	15,485
B. Surface Facilities and Piping	32,955
4. Permitting	<u>12,620</u>
	Part 1 Subtotal: \$66,540
<i>Part 2 - Construction</i>	
5. Surveying	2,475
6. Turnkey Well Drilling/Construction	324,950
7. Construction Supervision and Testing (One Well)	
A. ASR Well	27,240
B. Surface Facilities and Piping	16,740
8. Regulatory Compliance During Construction and Testing	4,475
9. Completion Report and Operations and Maintenance Manual Update	6,750
10. Start-Up Services	4,805
11. Operational Testing Authorization	1,720
	Part 2 Subtotal: \$389,155

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Part 3 – Extended Duration Testing

12. Cycle Testing

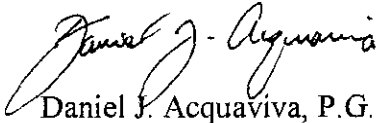
54,545

Total: \$510,240

Authorization

Water Resource Solutions is pleased to be of continuing service to Lee County Utilities. Do not hesitate to call should you have any questions or comments regarding any aspect of this matter. You may indicate your acceptance of this proposal by providing us with a Supplementary Task Authorization (STA) and referencing our proposal number. We have included only the cost for Part 1 of our proposal in the attached STA.

Sincerely,



Daniel J. Acquaviva, P.G.
Senior Project Manager/Principal
Licensed Professional Geologist # 1066

OLGA ASR WELL #2 DRILLING CONTRACTOR ITEMIZED COSTS

Item	Description	Estimated Quantity	Unit	Unit Price (\$)	Extended Amount (\$)
1	Mobilization	1	Lump Sum	30,000	30,000.00
2	Drill 44-inch hole to 35 feet	35	Linear Feet	150	5,250.00
3	Install and grout 34-inch diameter steel surface casing	35	Linear Feet	138	4,830.00
4	Drill 12.25-inch pilot hole by mud rotary to 740 feet	740	Linear Feet	30	22,200.00
5	Run geophysical logs	1	Lump Sum	3,000	3,000.00
6	Ream hole to 31-inch diameter	740	Linear Feet	90	66,600.00
7	Run Caliper log	1	Lump Sum	2,450	2,450.00
8	Install and grout 24-inch diameter steel intermediate casing	740	Linear Feet	86	63,640.00
9	Drill 12.25-inch pilothole to 860 feet by reverse air	120	Linear Feet	30	3,600.00
10	Run geophysical logs	1	Lump Sum	4,000	4,000.00
11	Ream pilot hole to 22.5 -inch diameter to 860 feet	120	Linear Feet	72	8,640.00
12	Run Caliper log	1	Lump Sum	2,450	2,450.00
13	Install 16-inch diameter SDR 17 Certa-Lok PVC Casing	855	Linear Feet	58	49,590.00
14	Cement first stage with neat cement	275	Cubic Feet	20	5,500.00
15	Cement subsequent stages with 6% gel cement	900	Cubic Feet	15	13,500.00
16	Drill 15.5-inch hole to 950 feet by reverse air	90	Linear Feet	60	5,400.00
17	Air develop well	10	hours	150	1,500.00
18	Run Geophysical Logs	1	Lump Sum	3,800	3,800.00
19	Install temporary pump and conduct specific capacity pumping test	1	Lump Sum	4,000	4,000.00
20	Cap well, install well pad, demobilize, and restore site	1	Lump Sum	25,000	25,000.00
				Total:	324,950.00