

Lee County Board Of County Commissioners
Agenda Item Summary

Bluc Sheet No. **20040462**

1. REQUESTED MOTION:

ACTION REQUESTED: Approve Supplemental Task Authorization (STA) No. 1 to Contract #2315, to HSA Engineers & Scientists for CN-02-24 County-Wide Environmental Contract – Public Water Supply Wells, Waterway Estates WTP (North Cape Coral), in the amount of \$59,925.00.

WHY ACTION IS NECESSARY: Board approval is required.

WHAT ACTION ACCOMPLISHES: Environmental engineering of installation of additional potable water wells at the Waterway Estates Well Field.

2. DEPARTMENTAL CATEGORY:
10. Utilities
COMMISSION DISTRICT #: CW

CIDA

3. MEETING DATE:

05-04-2004

4. AGENDA:

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

5. REQUIREMENT/PURPOSE:
(Specify)

- STATUTE
- ORDINANCE
- ADMIN. CODE **AC-4-4**
- OTHER

6. REQUESTOR OF INFORMATION:

- A. COMMISSIONER
- B. DEPARTMENT **Public Works**
- C. DIVISION **Utilities**
- BY: **Rick Diaz, Director**

[Signature]
4/19/04

7. BACKGROUND:

On October 8, 2002, the Board of County Commissioners approved the award of CN-02-24 County-Wide Environmental Contract (Hydrological Impacts, Site Assessments & Remediation) to the following firms: American Management Resource Corporation; Ardaman & Associates Inc.; ECT Environmental Consulting & Technologies; GFA International; HSA Engineers & Scientists; Professional Services Industries (PSI); TKW Consulting Engineers; and Water Resource Solutions, for an initial two-year period with an option to renew for one additional year.

This Supplemental Task Authorization (STA) No. 1 provides environmental engineering of installation of additional potable water wells for Waterway Estates WTP.

Funds will be available from account string: 20714948720.506510

Attachment: Supplemental Task Authorization No. 1 for Execution (3)

8. MANAGEMENT RECOMMENDATIONS:

9. RECOMMENDED APPROVAL:

A Department Director	B Purchasing or Contracts	C Human Resources	D Other	E County Attorney	F Budget Services				G County Manager
					OA	OM	Risk	GC	
<i>[Signature]</i> 4-19-04	<i>[Signature]</i>	N/A	<i>[Signature]</i> 4-16-04	<i>[Signature]</i> 4/20/04	<i>[Signature]</i> 4/20/04	<i>[Signature]</i> 4/20/04	<i>[Signature]</i> 04/20/04	<i>[Signature]</i> 4-20-04	<i>[Signature]</i> 4-19-04

10. COMMISSION ACTION:

- APPROVED
- DENIED
- DEFERRED
- OTHER

Rec. by CoAtty
 Date: *4/20/04*
 Time: *12:30 pm*
 Forwarded to:
 Admin. *4/20/04*
liso

RECEIVED BY
 COUNTY ADMIN. *[Signature]*
04/20/04
2:00 pm 4/20
 COUNTY ADMIN
 FORWARDED TO:
4-22-04
11:25 am

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

Change Order
 Supplemental Task Authorization

NO.: 1

(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: County-Wide Environmental Contract (Hydrological Impacts, Site Assessments & Remediation
PUBLIC WATER SUPPLY WELLS, NORTH CAPE CORAL, FLORIDA

CONSULTANT: HSA PROJECT NO.: _____

SOLICIT NO.: CN-02-24 CONTRACT NO.: 2315 ACCOUNT NO.: 20714948720.506510

REQUESTED BY: Sergio Ivan Velez

DATE OF REQUEST: March 29, 2004

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: March 29, 2004

EXHIBIT "CO/STA-B: COMPENSATION & METHOD OF PAYMENT: DATED: March 29, 2004

EXHIBIT "CO/STA-C: TIME AND SCHEDULE OF PERFORMANCE: DATED: March 29, 2004

EXHIBIT "CO/STA-D: CONSULTANT'S/PROVIDERS ASSOCIATED
SUB-CONSULTANT(S)/SUB-CONTRACTORS: DATED: March 29, 2004

EXHIBIT "CO/STA-E: PROJECT GUIDELINES AND CRITERIA: DATED: March 29, 2004

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

RECOMMENDED: [Signature]
By: _____ Date: 4/7/04
Department Director
By: [Signature] Date: 4/13/04
Contracts Mgmt

ACCEPTED: [Signature]
By: _____
Consultant/Provider
Date Accepted: 4-1-04

Corporate Seal



COUNTY APPROVAL:
By: _____
Department Director
(Under \$25,000)
Date Approved: _____
By: _____
County Manager (Between
(\$25,000 and under \$50,000)
Date Approved: _____

APPROVED:
By: _____
*County Attorney's Office Date
*County Attorney signature needed
for over Board level expenditures only.
CMO:023
09/25/01

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

CHANGE ORDER AGREEMENT No. _____

or
 SUPPLEMENTAL TASK AUTHORIZATION No. 1

EXHIBIT "CO/STA-A"

Date: March 29, 2004

SCOPE OF PROFESSIONAL SERVICES

for County-Wide Environmental Contract (Hydrological Impacts, Site Assessments & Remediation)
PUBLIC WATER SUPPLY WELLS, NORTH CAPE CORAL, FLORIDA

(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 hereinbefore 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:

BASIC SERVICES

Section	1.GENERAL	SCOPE	OF	STATEMENT
Environmental engineering consists of installation of additional potable water wells at North Cape Coaral well fields.				

Section 2. TASKS

Pursuant to the GENERAL SCOPE of the BASIC SERVICES stated hereinabove, the CONSULTANT shall perform all services and/or work necessary to complete the following task(s) and/or provide the following item (s) which are enumerated to correspond to the task(s) and/or items set forth in EXHIBIT "B" entitled "COMPENSATION AND METHOD OF PAYMENT".

TASK 1.00 PERMITTING

Personnel at the South Florida Water Management Distirict (SFWMD) have been contacted to discuss the proposed well installations. It was explained that the total amount of water allocated for withdrawal under the existing Water Use Permit (WUP) will not be exceeded, but that different wells will be used to extract the same amount of water. The existing WUP was issued January 15, 2004 and expires January 15, 2024 and allocates 2276 million gallons annually with a maximum monthly withdrawal not to exceed 253.6 million gallons from the Lower and Mid-Hawthrone Aquifers and the Surficial Aquifer System. The WUP also requires that the monthly allocation from the Surficial Aquifer System and the Mid-Hawthorne Aquifer combined shall not exceed 46.5 million gallons. Upon completion of the wells, a Letter Revision to the WUP will be prepared detailing how the system has changed. The SFWMD did not raise any concerns during the initial contact, and agreed that a Letter Revision to the WUP detailing how the system has changed should be sufficient without needing to revise the entire permit.

TASK 2.00 TRANSMISSION SYSTEM CAPACITY ANALYSIS & DESIGN OF WELL THE HEAD, PUMP INSTALLATION AND WIRING AND PIPING CONNECTIONS TO THE EXISTING MAIN

Based on drawings and other information supplied by Lee County, HSA will evaluate the capacity of the existing transmission system with regards to the additional flows being brought on line from the existing wellfield. We cannot predict at this time whether improvements to the transmission system will be required. Should improvements be required we will determine the scope of the work and negotiate an acceptable fee for those services.

TASK 3.00 WELL CONSTRUCTION AND TEST BORING

HSA has requested estimates from three water well contractors to assure the best price for quality work. Troy Moore Well Drilling has been selected for this project. We will request Troy Moore Well Drilling to acquire the necessary permits to construct the new wells within the same tract of land with existing wells NC-1, NC-2, and NC-9. If the first well has more than ample yield, we will contact the County to discuss the need for the second well.

In order to provide the greatest quantity of good quality water, it is recommended that the stratigraphy be carefully logged to identify the most potentially productive zone(s), and to locate the position of the interface between the freshwater and brackish/saltwater. To accomplish these objectives, a five-inch diameter borehole will be drilled using reverse-air drilling technology. This drilling technique will facilitate the logging of the cuttings and testing the water quality in the well as it is advanced. The cuttings will be collected and examined by a field geologist, and the salinity of the groundwater at increasing depths will be measured using a conductivity meter and a Hach chloride field test kit. The information on the depth of the interface between the freshwater and the brackish/saltwater (i.e. 250 parts per million chloride will indicate how fragile or substantial the freshwater resources are above the underlying saltwater, and how likely it is that saltwater intrusion will be a concern for long term aquifer sustainability.

The report on the Waterways Estates Wellfield provided by the County, indicates that the lowest chlorides concentrations are found in the upper Mid-Hawthorne Formation (between approximately 165 and 240 feet below land surface). Salinity reportedly increases with depth in the Mid-Hawthorne and below. Interestingly, the report states that salinity is actually higher in the shallower Watertable and Sandstone Aquifers than in the Mid-Hawthorne. This occurrence is likely due to the proximity of the Waterways Wellfield to the Caloosahatchee River. The report also suggests that contamination of the water in the Water Table Aquifer may result from the presence of numerous septic tanks and drainfield in the area.

The Watertable Aquifer and Sandstone Aquifer (if it exists) at the North Cape Coral Wellfield is not as likely to be saline because of the greater distance from the Caloosahatchee River and the coast, and they could be a prolific supply of water. However, the numerous on-site septic systems in the area could cause contamination of the shallow groundwater. The chloride data provided by the County for wells NC-1, NC-2, and NC-9 between January and December 2003 did not show any significant changes in salinity, although NC-2 does report chloride levels approaching the standard of 250-mg/L chlorides. The data covers only a relatively short period of record and 2003 was a wet year, so we are not sure how near the saltwater interface is to the bottom of the well. If a chloride content of approximately 500 parts per million (ppm) chloride concentration is encountered or to the bottom of the Mid-Hawthorne formation is reached (approximately 550 deep below land surface).

There is a concern that, while an extensive open hole section in the well may produce more, good quality water, a well bridging more than one aquifer may not be permitted under SFWMD and Cape Coral guidelines. During the drilling, care will be taken to define the depths of the stratigraphic boundaries delineating the aquifer boundaries as accurately as feasible.

In order to support the upper part of the formation while drilling the five-inch borehole, approximately 20 feet of 14-inch diameter black iron surface casing will be installed and grouted in place. The five-inch borehole will then be advanced to the top of the limestone at the top of the Mid-Hawthorne formation and cuttings will be logged to describe the stratigraphy. In the event that prolific, good quality water is encountered above the limestone (in the Sandstone Aquifer, for example) consideration will be given to adjusting the plan to develop that supply. Assuming such flow is not encountered, the borehole will be reamed to 12 1/4 inches and a six-inch PVC casing will be grouted in place in the limestone.

Below the casing, the well will be drilled with a 5 7/8 inch bit, using reverse air. After the 500 ppm chloride concentration and/or the bottom of the Mid-Hawthorne Aquifer are documented, the open part of the well bore will be partially backfilled with neat Portland cement (with approximately 5% bentonite). The cement plug will extend up to the bottom of the selected productive zone that is considered to be safe distance above the saline ground water.

The well will be developed to provide clean water, free of sand and with a turbidity of less than 10 NTUs. Flowing development, a specific capacity test will be performed on the well to measure the drawdown at the well's maximum sustainable rate or 150 gallons per minute, whichever, is less. The specific capacity analysis, combined with the information on the stratigraphy and the depth of the interface between the freshwater and the brackish/saltwater will be used to calculate the safe yield of the well.

If the geologic formation within the production zone does not appear to be stable and may be subject to collapse, a four-inch screen can be set and sealed to the casing. The slot size of the screen will be specified based on the grain size distribution of the formation. The cost of such a screen is not included in this task.

If the first well will safely provide the required 100 gpm without the danger of saltwater intrusion or interfering with existing legal users (including individual wells, wetlands, and surface water bodies), the County will be notified and asked about the need for the second well. If the capacity of the first well is insufficient, or the County requires the redundancy of an additional well, then the second well will be constructed. Since it is unlikely that the depth to the saltwater interface will change significantly across the subject property, the second open borehole will not need to be continued as deep as the first one. However, because it is likely that the stratigraphy of the Surficial and Hawthorne Aquifers may vary across the site, the cutting will still need to be accurately logged. The second well will be completed as above. If the two wells still do not provide the required amount of water because of low yields, the County will be notified as soon as we suspect. This will be the case, to discuss other options.

TASK 4.00 WUP LETTER REVISION

A letter Revision to WUP will be prepared and submitted to the SFWMD and copied to the Lee County Department of Public Works, Utilities Division. The Letter Revision will detail the construction activities and as-built configuration of the well(s), and will present the results of the water quality analysis and final pumping test(s).

*Attach additional pages, if needed.

CHANGE ORDER AGREEMENT No.
or
 SUPPLEMENTAL TASK AUTHORIZATION No. 1_

EXHIBIT "CO/STA-B"

Date: March 29, 2004

COMPENSATION AND METHOD OF PAYMENT

for County-Wide Environmental Contract (Hydrological Impacts, Site Assessments & Remediation)
PUBLIC WATER SUPPLY WELLS, NORTH CAPE CORAL, FLORIDA

(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.)
1.00	Permitting	\$800.00	LS	WIPP
2.00	Analyze the Existing Transmission System	\$1,320.00		
	Design Required Improvements to transmission system	To be negotiated		
	Well-head design, hydraulic calculations and pump selection	\$1,980.00		
	Well-head Design	\$520.00		
	Permitting-LCHD 6 hours	\$510.00		
	Construction Phase Services	\$2,700.00		
3.00	Well Construction and Test Boring	\$50,695.00		
4.00	WUP Letter Revision	\$1,400.00		
TOTAL		\$59,925.00	LS	

(Unless list is continued on next page)

CHANGE ORDER AGREEMENT No. _____

or
 SUPPLEMENTAL TASK AUTHORIZATION No. 1

Exhibit "CO/STA-B"

Date: March 29, 2004

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. <u>2</u>	Adjustment(s) Due to this CO or STA	Summary of Changed Compensation
1-4	Public waterwells N. Cape Coral	\$59,925.00	0.00	\$59,925.00	\$59,925.00
TOTAL		\$59,925.00	0.00	\$59,925.00	\$59,925.00

CHANGE ORDER AGREEMENT No. _____

SUPPLEMENTAL TASK AUTHORIZATION No. 1

EXHIBIT "CO/STA-C"

Date: March 29, 2004

TIME AND SCHEDULE OF PERFORMANCE

for County-Wide Environmental Contract (Hydrological Impacts, Site Assessments & Remediation)
PUBLIC WATER SUPPLY WELLS, NORTH CAPE CORAL, FLORIDA

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

SECTION 1.00 CHANGES FOR THIS CHANGE ORDER OR SUPPLEMENTAL TASK
AUTHORIZATION AGREEMENT

The time and schedule of completion for the various phases or tasks required to provide and perform the services, tasks, or work set forth in this CHANGE ORDER or SUPPLEMENTAL TASK AUTHORIZATION AGREEMENT, Exhibit "CO/STA-A", entitled "Scope of Professional Services" attached hereto is as follows:

Phase and/or Task Reference as Enumerated in EXHIBIT AA@	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 For this CO or STA
Task 1.00	Permitting (1)	14	14
Task 2.00	Transmission System Capacity Analysis, Design of Well The Head, Piping Connctions to the Existing Main, and Pump Installation and Wiring	28	42
Task 3.00	Well Construction and Test Boring	14	56
Task 4.00	WUP Letter Revision	10	66
(1) Estimated -	Not under control of HSA		
(2) Estimated -	To be established by client		

CHANGE ORDER AGREEMENT No. _____
 or
 SUPPLEMENTAL TASK AUTHORIZATION No. 1

EXHIBIT "CO/STA-D"

Date: March 29, 2004

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

for County-Wide Environmental Contract (Hydrological Impacts, Site Assessments & Medication PUBLIC WATER SUPPLY WELLS, NORTH CAPE CORAL, FLORIDA

(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
Well Construction	Troy Moore Well Drilling 5681 Pangoli Drive Fort Myers, Florida 33965		X		X	

CHANGE ORDER AGREEMENT No. _____

or
 SUPPLEMENTAL TASK AUTHORIZATION No. 1

EXHIBIT "CO/STA-E"

Date: March 29, 2004

PROJECT GUIDELINES AND CRITERIA

for County-Wide Environmental Contract (Hydrological Impacts, Site Assessments & Remediation)
PUBLIC WATER SUPPLY WELLS, NORTH CAPE CORAL, FLORIDA

(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 hereinbefore 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