



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP15-024**

1. Agenda Item Number:
32
2. Council Meeting Date:
September 11, 2014

TO: MAYOR & CITY COUNCIL

3. Date Prepared: August 25, 2014

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Project Agreement with Southwest Ground-water Consultants for Hydrogeological Services for the Ocotillo Recharge & Recovery Facility installation Aquifer Storage and Recovery Wells 7, 8, 9, and 10 and Monitor Well OW-MW2A.

6. RECOMMENDATION: Staff recommends City Council award a Project Agreement to Southwest Ground-water Consultants, for Hydrogeological Services for the Ocotillo Recharge & Recovery Facility installation of Aquifer Storage and Recovery Wells 7, 8, 9, and 10 and Monitor Well OW-MW2A, pursuant to Annual Contract No. EN1203-101, Project No. WW1407.451, in an amount not to exceed \$113,845, contingent upon written notification from Intel and appropriate funding.

7. BACKGROUND/DISCUSSION: This project is to develop additional effluent recharge capacity as part of the Ocotillo Recharge & Recovery Facility expansion.

The project scope of work consists of construction management services associated with the drilling, installation, and testing of four Aquifer Storage and Recover (ASR) wells and one monitor well. Sub-tasks include: attending one on-site preconstruction meeting, analysis and documentation of drilling and logging, monitoring of well construction, oversight and documentation of well development, conducting pumping tests, evaluation of post-construction services, and a well completion report.

A Construction Contract, Project No. WW1407.401, to Arizona Beeman Drilling, for ASR Wells 7, 8, 9, and 10 and Monitor Well OW-MW2A, is also scheduled for this Council meeting.

8. EVALUATION: This project is being performed under the Annual Hydrogeological Services Contract No. EN1203-101, to Southwest Ground-water Consultants. The costs proposed for this project have been evaluated by Staff and are determined to be reasonable. The contract completion time is 120 calendar days following Notice to Proceed.

9. FINANCIAL IMPLICATIONS:

Cost: \$113,845
Savings: N/A
Long Term Costs: N/A

Fund Source:

Account No.:	Fund Name:	Program Name:	CIP Funded:	Amount:
615.3910.6817.6WW012	Wastewater Operating	Projects Supporting Intel Expansion	Yes	\$77,117
615.3910.6817.6WW189	Wastewater Operating	Effluent Reuse Storage & Recovery Wells	Yes	\$36,728
Total:				\$113,845

10. PROPOSED MOTION: Move City Council award a Project Agreement to Southwest Ground-water Consultants, for Hydrogeological Services for the Ocotillo Recharge & Recovery Facility installation of Aquifer Storage and Recovery Wells 7, 8, 9, and 10 and Monitor Well OW-MW2A, pursuant to Annual Contract No. EN1203-101, Project No. WW1407.451, in an amount not to exceed \$113,845, contingent upon written notification from Intel and appropriate funding.

ATTACHMENTS: Agreement, Location Map

APPROVALS

11. Requesting Department

John Knudson, Utilities Engineering Manager

13. Department Head

Dave Siegel, Municipal Utilities Director

12. Transportation & Development

Bob Fortier, Capital Projects Manager

14. City Manager

Rich Dlugas

**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1203-101**

PROJECT AGREEMENT NO: WW1407.451

This PROJECT AGREEMENT is made this ____ day of _____, 2014, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Southwest Ground-water Consultants, an Arizona corporation, (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN1203-101.

CITY and Southwest Ground-water Consultants, in consideration of the mutual covenants herein set forth, agree as follows:

ARTICLE 1 - DESCRIPTION OF WORK:

This project is Testing and Reporting for Ocotillo Recharge and Recovery Facility ASR and Monitor Well Construction Management Services, Project Number WW1407.451. The scope of work consists of construction management services for the installation, testing and reporting of four (4) ASR wells and one (1) monitor well at the Ocotillo Recharge and Recovery Facility, all as more particularly set forth in Exhibit A attached hereto and incorporated herein by reference.

The Annual Consultant shall not accept any change of scope, or change in contract provisions, unless issued in writing, as a contract amendment and signed by the Contract Administrator.

ARTICLE 2 - CONTRACT PRICE:

CITY shall pay Annual Consultant for completion of the Work in accordance with the Contract Documents a fee not to exceed One Hundred Thirteen Thousand Eight Hundred Forty Five Dollars (\$113,845) determined and payable as set forth in Annual Contract EN1203-101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3 - CONTRACT TIME:

The contract time is One Hundred Twenty calendar days and Annual Consultant agrees to complete all work within One Hundred Twenty (120) calendar days of the date CITY issues a Notice to Proceed.

ARTICLE 4 – GENERAL:

This Project Agreement is entered into pursuant to Annual Contract No. EN1203-101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

EXHIBIT A SCOPE OF WORK

Annual Consultant shall provide the following services:

TASK 1.0 - CONSTRUCTION MANAGEMENT AND TESTING

Construction management services provided by Annual Consultant will include the documentation of contractor activities for the drilling, installation, and testing of four (4) ASR wells and one (1) monitor well. In addition, in consultation with the City, Annual Consultant will also provide the contractor clarification and oversight for certain tasks which require response to evaluation of site specific conditions.

Sub-task 1.1 - Pre-Construction Meeting

Prior to drilling and well construction, Annual Consultant will attend one (1) on-site meeting with the City and contractor. The intent of pre-construction meeting is to develop a shared understanding between the City, Annual Consultant and contractor of the requirements of the project, the expectations of the City and to develop the lines of communication. Questions and comments regarding the scope of work, technical specification and contracting will be addressed.

Sub-task 1.2 - Drilling and Logging

During pilot borehole drilling activities Annual Consultant personnel will ensure that contractor activities are in compliance with the technical specifications. An Annual Consultant geologist will describe the drilled cuttings, review the drilling penetration rate log and analyze the geophysical logs to prepare a lithologic log of the each pilot borehole. These data will be used to identify the major water bearing intervals. Geophysical logging services of the pilot boreholes will be subcontracted by the drilling contractor.

Sub-task 1.3 - Well Construction

To verify borehole diameter prior to installation of the wells the contractor will subcontract geophysical logging services for a caliper log survey of the reamed borehole. Annual Consultant will monitor and document the installation of the well casing, screen, and annular materials at the well to ensure compliance with the well design and technical specification. Annual Consultant staff will be available during the installation of these materials to assist the contractor with questions regarding the well design and to provide oversight in meeting the requirements of the technical specifications.

Sub-task 1.4 - Well Development

Well development will be focused on maximizing well efficiency to reduce long-term pumping costs. Annual Consultant will provide oversight and document well development activities.

During swabbing and airlift development of the well field water quality parameters including Imhoff cone sand content, specific conductance, pH and visual turbidity measurements will be collected. This information will be evaluated by Annual Consultant during swab and airlift activities to assist in assessing the need for additional development effort. An estimated 10 to 20 minutes of swab and surge development per foot of perforated interval will be conducted. However, if more development time is necessary based on the observed and measured results, AC will review the data with the City for authorization to extend the development time.

Following swab and airlift development, the contractor will install temporary test pumping equipment. The maximum duration of pump and surge development at each well is anticipated to extend no longer than 50 hours per well. Actual duration of pump and surge activities will be based on field analysis of Rossum sand content and specific capacity results during testing, as recommended by Annual Consultant and approved by the City.

Sub-task 1.5 - Pumping Tests

Pumping tests at the wells will include a step-rate and constant-rate test. Following development, a 10-hour step-rate pumping test will be conducted. The rates for the step-rate test will be selected by Annual Consultant based on the results of pump and surge development. Following a 12-hour recovery period, a 24-hour constant-rate test and 24-hour recovery test will be conducted. The pumping rate for the constant-rate test will be based on the results of the step test.

During pumping test activities, Annual Consultant personnel will monitor water levels, discharge rates, Rossum sand content and field water quality parameters including pH, specific conductance and temperature. Water levels will be monitored with a data-logging transducer and a manual sounder. The pump contractor will be on-site during this period to ensure that the test pumping equipment functions as required. The test data will be evaluated to estimate well and aquifer parameters.

Sub-task 1.6 - Post-Construction Surveys

Post-construction surveys will include a final well video and plumbness and alignment surveys which will be subcontracted by the drilling contractor. Annual Consultant will be onsite to witness the surveys and evaluate the results for compliance with the final well design and requirements of the technical specification.

TASK 2.0 – WELL COMPLETION REPORT

Following the completion of the above tasks, Annual Consultant will prepare a well completion report on the four (4) ASR wells and one (1) monitor well. Report will document contractor activities and results of the above tasks. Of particular importance will be the recommended purging rate and estimated purging water level for the ASR wells. Additional information to be presented in the final report includes the following:

- ADWR permits
- Pilot borehole penetration rates and lithologic logs
- Geophysical logs
- Well completion forms and summaries
- As-built well diagrams of all wells
- Pumping test data and analysis
- Post-construction surveys
- Recommendations for the final pump design

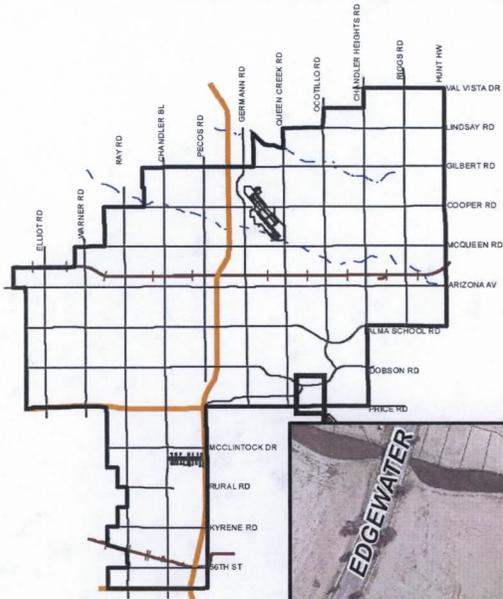
**EXHIBIT B
FEE SCHEDULE**

Annual Consultant shall provide all services as described in Exhibit A for an amount not to exceed \$113,845.

Task	Hours	Fees	Sub-Contract or Cost	Total
Task 1.0 Construction	927	\$92,085	\$3,000	\$95,085
Task 2.0 Well Completion	156	\$18,160	\$600	\$18,760
Total	1,083	\$110,245	\$3,600	\$113,845



**CONSTRUCTION MANAGEMENT, TESTING &
REPORTING FOR OCOTILLO
RECHARGE & RECOVERY FACILITY
ASR AND MONITOR WELLS
PROJECT NO. WW1407.451**



MEMO NO. CP15-024

 **PROJECT SITE**

