



**PURCHASING ITEM
FOR
COUNCIL AGENDA
Memo No. CP17-080**

1. Agenda Item Number:
24

2. Council Meeting Date:
October 13, 2016

TO: MAYOR AND COUNCIL

3. Date Prepared: September 28, 2016

THROUGH: CITY MANAGER

4. Requesting Department: Municipal Utilities

5. SUBJECT: Project Agreement with Wilson Engineers, LLC, for the Wastewater Treatability Evaluation

6. RECOMMENDATION: Staff recommends City Council award a Project Agreement to Wilson Engineers, LLC, for the Wastewater Treatability Evaluation, pursuant to Annual Water and Wastewater Services Contract No. EN1517.101, Project No. WW1703.101, in an amount not to exceed \$348,260.

7. BACKGROUND/DISCUSSION: In 1998, the Airport Water Reclamation Facility (AWRF), located at 905 E. Queen Creek Road, was put into service. The AWRF treats domestic wastewater to the highest standard mandated by the State of Arizona so it can be used for irrigation and to recharge local groundwater aquifers.

The project scope of work consists of: process review and optimization, wastewater characterizations, a treatability study, assessment of the AWRF infrastructure, and permitting assistance as well as a review of current pretreatment permits to determine renewal changes.

8. EVALUATION: This project is being performed under the Annual Water and Wastewater Services Contract No. EN1517.101, to Wilson Engineers, LLC. The costs proposed for this project have been evaluated by staff and are determined to be reasonable. The contract completion time is 365 calendar days following Notice to Proceed.

9. FINANCIAL IMPLICATIONS:

Cost: \$348,260
Savings: N/A
Long Term Costs: N/A

Fund Source:

<u>Account No.:</u>	<u>Fund Name:</u>	<u>Program Name:</u>	<u>CIP Funded:</u>	<u>Amount:</u>
611.3910.6817.6VW621	Wastewater Bond	Water Reclamation Facility Improvements	Yes	\$348,260

10. PROPOSED MOTION: Move City Council award a Project Agreement to Wilson Engineers, LLC, for the Wastewater Treatability Evaluation, pursuant to Annual Water and Wastewater Services Contract No. EN1517.101, Project No. WW1703.101, in an amount not to exceed \$348,260.

ATTACHMENTS: Location Map, Agreement

APPROVALS

11. Requesting Department



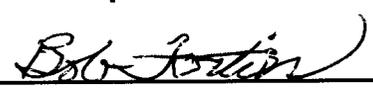
Kim Neill, Utility Operations Manager

13. Department Head

 For

John Krudson, Municipal Utilities Director

12. Transportation & Development



Bob Fortier, Capital Projects Manager

14. City Manager



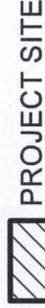
Marsha Reed



WASTEWATER TREATABILITY EVALUATION PROJECT NO. WW1703.101



MEMO NO. CP17-080



**PROJECT AGREEMENT
PURSUANT TO ANNUAL CONTRACT NO. EN1517.101**

PROJECT AGREEMENT NO: WW1703.101

This PROJECT AGREEMENT is made this ____ day of _____, 2016, by and between the City of Chandler, a municipal corporation (hereinafter referred to as "CITY") and Wilson Engineers, LLC, registered in the state of Arizona (hereinafter referred to as "Annual Consultant") and is a project agreement entered into pursuant to Annual Contract No. EN1517.101.

CITY and Wilson Engineers, LLC, in consideration of the mutual covenants herein set forth, agree as follows:

ARTICLE 1 - DESCRIPTION OF WORK:

This project is **Wastewater Treatability Evaluation**, Project Number **WW1703.101**. The scope of work consists of performing this study project, which will assist the City with tasks targeted to confirm the characteristics of incoming wastewater by influent type, conduct a treatability study based on current influent conditions, complete an evaluation of the current treatment performance and provide interim and final recommendations to maintain and optimize the AWRF production of Class A+ reclaimed water. The Annual Consultant shall also assist the City with renewal of current pre-treatment permits, 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 Three Hundred Forty Eight Thousand Two Hundred Sixty Dollars (\$348,260) determined and payable as set forth in Annual Contract EN1517.101 and Exhibit B attached hereto and made a part hereof by reference.

ARTICLE 3 - CONTRACT TIME:

The contract time is Three Hundred Sixty Five calendar days and Annual Consultant agrees to complete all work within Three Hundred Sixty Five (365) 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. EN1517.101 and the terms and conditions contained therein are incorporated herein by reference as if set forth in full.

IN WITNESS WHEREOF, the parties hereto have executed this Project Agreement on the day and year first written above.

This Project Agreement will be effective on this _____ day of _____, 2016.

CITY OF CHANDLER

FOR THE ANNUAL:

MAYOR DATE:

By: Steve Todd
Title: Principal

ADDRESS FOR NOTICE
City of Chandler
P.O. Box 4008, Mail Stop 407
Chandler, AZ 85244-4008
480-782-3307

ADDRESS FOR NOTICE
Mr. Steve Todd
Wilson Engineers, LLC
9633 S. 48th St., Ste. 290
Phoenix, AZ 85044-5658

APPROVED AS TO FORM:

Phone: 480-893-8860

City Attorney By: [Signature]

ATTEST:

City Clerk

EXHIBIT A SCOPE OF WORK

ANNUAL CONSULTANT shall perform the following project tasks:

TASK 1.0 PROJECT MEETINGS

As part of the project, the ANNUAL CONSULTANT shall meet with the City to discuss project progress, brief the City on project related tasks and obtain the City's input, and update the City on the project schedule. A total of eight (8) meetings are anticipated for this purpose. The ANNUAL CONSULTANT shall prepare the meeting agenda and appropriate hand outs and shall also prepare meeting minutes.

TASK 2.0 PROCESS REVIEW AND OPTIMIZATION

Subtask 2.1 Site Visits and Meetings with Plant Staff

The ANNUAL CONSULTANT shall conduct site visits and meet with plant staff to collect data, conduct an interactive optimization workshop, and perform a site walk to define present conditions. The ANNUAL CONSULTANT shall also meet with the staff to review current testing data, discuss testing methods and sampling protocols that are currently being used internally and by third party laboratories. These parameters include, but are not limited to; Biochemical Oxygen Demand (BOD), Chemical Oxygen Demand (COD), Total Nitrogen (TN), and Total Kjeldahl Nitrogen (TKN)/total concentration of organic nitrogen and ammonia. The ANNUAL CONSULTANT shall make recommendations related to sampling, sampling frequencies, and test methods as necessary.

Subtask 2.2 Review Process and Provide Recommendations for Process Optimization

After completion of the review of the existing sampling data, methodology, protocols, and review of the process data and process at AWRP, the ANNUAL CONSULTANT may recommend additional testing and will create a sampling and testing plan for this purpose. The ANNUAL CONSULTANT will complete an evaluation and in conjunction with the City's operating staff, provide recommendations for implementation of process adjustments as deemed necessary.

TASK 3.0 WASTEWATER CHARACTERIZATIONS

Subtask 3.1 As-Designed Wastewater Characterizations

The ANNUAL CONSULTANT shall identify typical Publicly Owned Treatments Works (POTW) characteristics from reference sources used for the design of POTW facilities. The ANNUAL CONSULTANT shall also outline the characteristics of influent wastewater that served as the basis for the design of the current facility.

The ANNUAL CONSULTANT shall conduct the characterization of the current influent wastewater and shall compare and contrast the current influent characteristics to reference values.

Subtask 3.2 Additional Wastewater Characterizations

In addition to the characterization above, the ANNUAL CONSULTANT shall consider additional parameters associated with the non-standard parameters for typical POTW, but which may be relevant parameters for industrial wastewater. In order to conduct a characterization study, the consultant shall complete a literature review, prepare a characterization plan, conduct an analysis of chemical constituents, and conduct assays.

After the completion of the chemical constituent analysis and wastewater characterization, the consultant shall review the data collected and develop a comprehensive influent characterization.

TASK 4.0 TREATABILITY EVALUATION

Subtask 4.1 Phase 1

The ANNUAL CONSULTANT shall summarize the performance and evaluation testing that was conducted at the facility since its initial operation (previous Capacity Evaluation Studies) to identify prior treatment performance and proportional capacities. The ANNUAL CONSULTANT shall prepare a testing plan and assist the City in conducting a treatability comparative evaluation. The ANNUAL CONSULTANT shall compare and contrast the performance of current systems to previous performance conditions. Based on this comparison, the ANNUAL CONSULTANT will identify potential opportunities for process optimization and adjustments and modifications necessary to implement optimization recommendations. Modifications may include operational modifications or new treatment process considerations.

Miscellaneous Treatability Tasks:

1. Contact other POTWs that may be treating similar influent wastewater and compile information related to performance as available.

2. Compare AWRF performance with the performance of other facilities.
3. Identify treatability expectations at other City of Chandler Water Reclamation Facilities (WRF), i.e. Ocotillo WRF existing, Ocotillo WRF new, and Lone Butte WRF.

Subtask 4.2 Phase 2

If the project team concludes that the information collected does not provide sufficient information to determine and identify the conditions necessary for the optimized operation of AWRF, a second phase of the treatability study shall commence to obtain additional information by conducting lab and/or a pilot level treatability work. An allowance for this item is included and will be utilized either after completion of previous tasks and/or at any time as determined necessary by the City. This task shall not commence without prior authorization by the City.

TASK 5.0 ASSESSMENT OF AWRF INFRASTRUCTURE

The ANNUAL CONSULTANT shall assist the City in determining the current status of the existing infrastructure at the AWRF that is related to the conveyance and treatment of wastewater from industrial sources. The ANNUAL CONSULTANT shall inspect the existing infrastructure. Facilities and equipment may need to be taken offline from service for inspection purposes. The ANNUAL CONSULTANT shall catalogue any observed damage to AWRF infrastructure for the purposes of further evaluation. After completion of field investigation, the ANNUAL CONSULTANT shall conduct a literature search and consult with component manufacturers as needed to determine if there are any compatibility issues. Based on the information collected during the field investigation, the ANNUAL CONSULTANT shall provide recommendations for repair and/or rehabilitation of equipment or infrastructure. The recommendations may include identifying new protective coatings, installation of new material, and/or replacement of some equipment with new equipment as necessary. The ANNUAL CONSULTANT shall identify and provide a new maximum potential life of any of the assets as appropriate.

TASK 6.0 PERMIT ASSISTANCE

The City issues discharge permits for large users and renews these permits on a yearly basis. The ANNUAL CONSULTANT shall assist City in reviewing and adding provisions to future renews, as may be required, to safeguard the City's current collection, conveyance, and treatment facilities. The ANNUAL CONSULTANT shall identify conditions and characteristics that will protect the existing infrastructure and maintain the ability to effectively produce Class A+ effluent suitable for reuse. The effort shall include the review of the existing permit, identification of parameters which may require control and develop limits based on the existing facility limitations and impacts on existing infrastructure. The ANNUAL CONSULTANT shall assist the City in identifying additional parameters and limitations that can be introduced in new permits to large users. This may include identifying mass and concentration limits for parameters that are currently not listed, but may also include identifying mass, concentration, minimum, and maximum limits for existing parameters listed currently in the permit. The ANNUAL CONSULTANT shall assist by attending meetings between the City and large users and coordinating with City staff to prepare draft concentration and mass limits for parameters identified.

CLARIFICATIONS, ASSUMPTIONS, AND EXCLUSIONS

- The Airport Water Reclamation Facility is located at 905 East Queen Creek Road, Chandler, AZ 85286
- KC Environmental shall provide sub-consultant services on all tasks.
- Expenses for items such as printing, delivery, and mileage, shall be compensated at cost utilizing the Direct Expense Allowance.
- Owner's Allowance shall only be utilized for additional services with prior written approval from the City.

**EXHIBIT B
FEE SCHEDULE**

Task	Task Description	Subtotal
Task 1.0 - Project Meetings		
1.0	Project Meetings	\$15,860
		Subtotal - Project Meetings
		\$15,860
Task 2.0 - Process Review and Optimization		
2.1	Site Visits and Meetings with Plant Staff	\$6,260
2.2	Review Process and Provide Recommendations	\$11,260
		Subtotal - Process Review and Optimization
		\$17,520
Task 3.0 - Wastewater Characterizations		
3.1	As-Designed Wastewater Characterizations	\$9,120
3.2	Additional Wastewater Characterizations	\$18,360
		Subtotal - Wastewater Characterization
		\$27,480
Task 4.0 - Treatability Evaluation		
4.1	Phase 1	\$27,200
4.2	Phase 2	\$5,920
		Subtotal - Treatability Evaluation
		\$33,120
Task 5.0 - Assessment of AWRF Infrastructure		
5.0	Assessment of AWRF Infrastructure	\$19,220
		Subtotal - Assessment of AWRF Infrastructure
		\$19,220
Task 6.0 - Permit Assistance		
6.0	Permit Assistance	\$18,560
		Subtotal - Permit Assistance
		\$18,560
		Subtotal - Wilson Labor Summary
		\$131,760
Other Direct Costs		
2.0	Sampling and Testing (Allowance)	\$25,000
5.0	Corrosion Engineering Assistance (Allowance)	\$10,000
1 thru 6	KC Environmental	\$95,000
4.2	Phase II Testing (Allowance)	\$35,000
1 thru 6	Printing and Mileage	\$1,500
1 thru 6	Owner Allowance	\$50,000
		Subtotal - Other Direct Costs
		\$216,500
		TOTAL FEE
		\$348,260