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August 22, 2016

Mr. Graham Moore, P.E.  
Executive Director  
Hays Caldwell Public Utility Agency  
630 E. Hopkins  
San Marcos, Texas 78666

**Re: Hays Caldwell Public Utility Agency  
Wastewater Treatment Plant Feasibility Study  
Work Order No. RFQ2016001-02 Exhibit A – Scope of Services**

Dear Mr. Moore:

AECOM Technical Services, Inc., (AECOM) is pleased to submit this proposal for professional engineering services to perform a Wastewater Treatment Plant Feasibility Study to evaluate the feasibility of locating a wastewater treatment plant between the City of San Marcos and the City of Kyle to serve the currently unserved developing area between these two cities' existing wastewater collection systems. If acceptable, this proposal will form the basis for a Work Order under the Master Agreement between the Hays Caldwell Public Utility Agency (HCPUA) and AECOM executed on May 25, 2016.

## **PROJECT BACKGROUND**

The Hays Caldwell Public Utility Agency, consisting of the Cities of San Marcos, Kyle, and Buda, and the Canyon Regional Water Authority, was formed to jointly develop new water supplies from the Carrizo-Wilcox aquifers. The HCPUA has leased groundwater rights in Caldwell and Gonzales Counties, and has initiated permitting and planning studies for a proposed water supply system to provide up to 35,000 acre-feet per year of new water supplies from these groundwater sources.

In addition to these groundwater sources, HCPUA is investigating the feasibility of direct potable reuse (DPR) as a potential alternative source of new potable water supplies. This source is potentially from reuse of the wastewater effluent from the cities of San Marcos, Kyle and Buda. Evaluation of this issue identified an area between San Marcos and Kyle that is currently unserved by a wastewater collection and treatment system. HCPUA has requested AECOM to review this area to perform a preliminary siting for a wastewater treatment plant to serve the area. The siting study will evaluate the feasibility, identify a potential location and determine the capacity and recommended phasing for the plant.

## **PROJECT DESCRIPTION**

During our meeting on July 28, 2016, initial discussion of the concept of siting a wastewater treatment plant resulted in the definition of the following points:

- The study will evaluate the feasibility of a wastewater treatment plant serving the Blanco River basin, west of IH-35, between the current service areas of the City of San Marcos and

the City of Kyle (the Cities). Additionally, the study will evaluate an area to the east of IH-35 to quantify the service area that can be reasonably served by a central plant.

- The study will utilize future growth projections for the defined area, from data compiled by the cities of San Marcos and Kyle and information available from the HCPUA.
- The study will use flow projections applied to the growth projections to estimate wastewater flow and plant capacity requirements over a planning period consistent with the population projections.
- The study will evaluate potential sites for the proposed wastewater treatment plant and the advantages/disadvantages of co-locating the proposed WWTP with HCPUA's proposed Direct Potable Reuse facilities.
- The study will evaluate potential wastewater treatment plant effluent discharge locations, including conceptual evaluation of potential permitting issues.
- The study will recommend the minimum site area(s) required for the proposed WWTP facilities.
- The study will include conceptual planning level cost estimates. These costs will consist of estimated capital costs and estimated annual operation and maintenance (O&M) costs.
- The study will provide recommendations for additional steps to be taken if HCPUA elects to move forward with development of facilities.
- Deliverables will include a draft feasibility study report and a final feasibility study report incorporating HCPUA's comments. Presentations will be made to the HCPUA Executive Committee and Board and the Cities to report on the study progress and findings.

## **SCOPE OF SERVICES**

The following scope of services is proposed to address the points identified above.

1. Project management and coordination, including interfacing with HCPUA to confirm project requirements, obtain data, and report on progress and deliverables. This task anticipates attendance at HCPUA monthly Board meetings and up to four presentations to HCPUA's board or executive committee, and/or to the Cities.
2. Conduct a kickoff and scoping meeting with HCPUA and the Cities to confirm the project planning horizon and time increments, overall project boundary and sewersheds.
3. Review information on the Cities existing and proposed collection systems and meet with the City of Kyle and the City of San Marcos to define existing and planned wastewater service areas for each city. Confirm the intermediate areas to be served by the proposed HCPUA facility and confirm the western boundary of this potential service area.
4. Coordinate with HCPUA and other utilities or large planned developments to define the potential eastern limit of the service area evaluation for the possible HCPUA facility.
5. Obtain and review existing growth projections provided by HCPUA and the Cities. Prepare an estimate of future growth in the defined service area for the proposed facility. This will be a concept level estimate based on best available data (e.g., Texas State Data Center population projections or planned developments' projected land use and density).

6. Obtain and review wastewater flow projections furnished by the Cities and identify data gaps; develop supplemental flow projections based on available data. The future wastewater flow will be estimated based on recent average gallon per capita/day values provided by the Cities.
7. Define estimated capacity and phasing required for a potential Blanco River basin WWTP based on the population and flow projections. Review the estimated capacity and phasing requirements with HCPUA and the Cities.
8. Conceptually define the site area required for WWTP facilities based on the capacity requirements defined above.
9. Identify up to three potential wastewater treatment plant effluent discharge locations. Perform limited coordination with TCEQ for conceptual evaluation of potential permitting issues associated with the discharge locations.
10. Identify conceptual WWTP facility site location, and coordinate with HCPUA and the Cities to confirm the conceptual proposed WWTP site for evaluation.
11. Evaluate the feasibility of developing a proposed wastewater treatment plant at the conceptual proposed site location. Evaluation will include consideration of:
  - Proximity to outfall and effluent discharge system conceptual capital costs
  - Major collection system improvements conceptual capital costs
  - Proximity to potential HCPUA DPR WTP and conceptual water transmission costs
  - TPDES permit requirements and potential wastewater treatment facilities capital costs
  - Electric power availability and power transmission capital costs
  - Ability to capture additional DPR source water
12. Evaluate advantages or disadvantages of co-locating the proposed WWTP with proposed HCPUA DPR WTP facilities.
13. Compare cost and benefits of a proposed Blanco River basin WWTP to expansions of the Cities existing WWTPs at the conceptual level. Conceptual costs for expansions of existing facilities will be based on information provided by the Cities and HCPUA. Evaluation will include:
  - Collection system conceptual differential costs (pumping vs. gravity)
  - Effluent pipeline/pumping costs to a proposed HCPUA DPR WTP
  - Duplication of general facilities – operations building, plant roads/parking, sludge dewatering, power, etc.
  - Operational requirements
  - Potential for increased DPR source water availability
14. Meet with HCPUA and the Cities to discuss the preliminary study findings, conclusions and recommendations.
15. Prepare and submit the Draft Study Report; incorporate HCPUA and Cities' review comments; and submit the Feasibility Study Final Report.

## **SPECIAL SERVICES**

The above Scope of Services and the budget presented herein does not include the following services. If and when it is determined that these services may be required, AECOM will obtain authorization from the HCPUA before performing any of these additional services.

1. Significant revisions requested by the HCPUA after receiving initial direction by the HCPUA.
2. Travel and subsistence required of AECOM and authorized by the HCPUA to points other than the project site, existing WWTP sites defined above, or HCPUA offices.
3. Public involvement meetings.
4. Environmental/cultural resources investigations or permitting
5. Surveying, geotechnical engineering, or other field investigations.
6. Preliminary Engineering or Final Design of WWTP facilities or collection system improvements.

Should the HCPUA and AECOM agree that any of the above Special Services or any other additional services are required, AECOM will prepare a scope and fee proposal for such services and obtain authorization from the HCPUA prior to performing any special services.

## SCHEDULE

It is anticipated the above described scope of services will be performed within six (6) months of receipt of notice to proceed from the HCPUA. The intent of this schedule is to provide the draft Report to HCPUA no later than March/April of 2017.

## DELIVERABLES

Deliverables to be submitted to the HCPUA consist of the following items:

1. Five (5) copies of the draft Report.
2. Five (5) copies of the final Report.

## COMPENSATION

The total compensation requested in this proposal is \$41,880.00 and is summarized in Exhibit B. All compensation will be on a lump sum basis. If acceptable, this proposal will form the basis of a Work Order under the Master Agreement executed on May 25, 2016. We would appreciate receiving one signed original for our files.

Very truly yours,



Shelby G. Eckols, PE  
Senior Vice President  
AECOM

Attachments

Accepted: \_\_\_\_\_

Date: \_\_\_\_\_

Graham Moore  
Executive Director, HCPUA

HAYS CALDWELL PUBLIC UTILITY AGENCY  
BLANCO RIVER BASIN WWTP FEASIBILITY STUDY  
FEASIBILITY / CONCEPTUAL PLANNING PHASE ENGINEERING SERVICES

EXHIBIT B  
WORK ORDER NO. RFQ2016001-02

	PRINCIPAL/ TECH. DIR.	PROJ. MGR.	PROJ. ENGR.	GRAD. ENGR.	TECH.	CLER.	FRINGE and G&A MULT.
Direct Labor Rates and Multipliers	90	65	50	35	30	25	2.00
LABOR ESTIMATE							
TASK LISTING	PRINCIPAL	P. MGR.	P. ENGR.	ENGR.	TECH.	CLER.	TOTAL
<i>Feasibility and Conceptual Planning Phase</i>							
1. Project Management, Coordination, and Presentations	3	36				6	45
2. Kickoff Meeting/Confirm Project Approach		2					2
3. Review Collection Systems/Confirm Svc Area West Boundary							-
<i>a. San Marcos Collection System</i>		1	2	1	2		6
<i>b. Kyle Collection System</i>		1	2	1	2		6
4. Confirm Service Area Potential East Boundary	1	2	4		4		11
5. Review Population Projections and Develop for Service Area	1	4	8	2			15
6. Review Flow Projections and Develop for Service Area	1	4	8				13
7. Develop Capacity and Phasing and Review w/ HCPUA	1	2	2				5
8. Define WWTP Site Area Requirements	1	1	2				4
9. Limited TCEQ Coordination/Evaluate Discharge Locations	1	3	3		4		11
10. Define WWTP Conceptual Proposed Site Location	2	3	3		4		12
11. Feasibility Evaluation of WWTP at Proposed location	1	4	8	4			17
12. Evaluate Co-Location of WWTP with DPR WTP Facilities	1	3			2		6
13. Compare New WWTP vs. Expansions of Existing WWTPs							-
<i>a. San Marcos WWTP</i>	1	6	8				15
<i>b. Kyle WWTP</i>	1	6	8				15
14. Review Preliminary Findings with HCPUA and Cities	1	4	3				8
15. Prepare and Submit Draft Report and Final Report	4	6	32		12	4	58
TOTAL HOURS	20	88	93	8	30	10	249
DIRECT LABOR TOTALS	\$1,800	\$5,720	\$4,650	\$280	\$900	\$250	\$13,600
FRINGE & GENERAL/ADMIN. COSTS	\$3,600	\$11,440	\$9,300	\$560	\$1,800	\$500	\$27,200
TOTAL LABOR COSTS	\$5,400	\$17,160	\$13,950	\$840	\$2,700	\$750	\$40,800

\$ 8,280.00  
\$ 390.00  
\$ -  
\$ 780.00  
\$ 780.00  
\$ 1,620.00  
\$ 2,460.00  
\$ 2,250.00  
\$ 960.00  
\$ 765.00  
\$ 1,665.00  
\$ 1,935.00  
\$ 2,670.00  
\$ 1,035.00  
\$ -  
\$ 2,640.00  
\$ 2,640.00  
\$ 1,500.00  
\$ 8,430.00

NON-LABOR ESTIMATE

ITEM		QTY.	RATE		TOTAL
Internal Printing (8.5 x 11 photocopies)	LS	1	\$30		\$30
CADD	Hrs.	30	\$15		\$450
Mileage	LS	1	\$600		\$600
TOTAL NON-LABOR COSTS					\$1,080

TOTAL FEE ESTIMATE:		\$41,880
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Proposed Project Staff Labor Rate Categories

PROJECT PRINCIPAL/TECHNICAL DIRECTOR  
PROJECT MANAGER  
PROJECT ENGINEER  
GRADUATE ENGINEER  
TECHNICIAN  
CLERICAL

Shelby G. Eckols, P.E.; Abu S. Alam, ScD, P.E., BCEE  
Martin Rumbaugh, P.E., BCEE; John Buser, P.E.; Ioan Chilarescu, PhD, P.E.  
Xiaohong He, PhD, P.E.; Behnoush Yeganeh, P.E.; Jake Balcom, P.E.  
Johnathen Chen, EIT; Kyle Ward, EIT; Chloe Wooldridge, EIT; Alex Caya , EIT  
Joe Nungaray; Talsi Gadhia; Kristi Teykl, GSP  
Seneida Barrerra; Toni Holland