



City of Needles, California Request for Council Action

CITY COUNCIL/NPUA Board of Public Utilities Regular Special

Meeting Date: August 11, 2020

Title: Accept Epic Engineering's Proposal for the Needles Well Siting Investigation Study in the amount not to exceed \$15,600

Background: The Integrated Regional Water Management (IRWM) Program in the Colorado River Ar2a announced a \$100,000 grant available to fund project planning activities that will lead to capital water projects that serve local disadvantaged communities (DAC).

Projects may include master/management plans, design drawings, engineering, and/or environmental compliance. Planning topics may address safe drinking water, sanitary sewer, flooding, reliable water supply, water quality, and/or aging infrastructure.

In April, the City submitted a grant request for \$94,098.82 for a two-part planning project Part one, the City needs to complete a technical review of well #11 which is high in iron and manganese to evaluate; full capacity and water quality, review of existing groundwater treatment system, determine new groundwater treatment systems and provide a cost estimate.

Part two will be completed simultaneously with part one which completes a review of the recently completed hydrology report to narrow the pool of potential new well sites to the most feasible and cost-effective option. The review will complete a detailed site evaluation and consider multiple factors such as proximity to other utilities such as existing water distribution system, powerlines, communications. Additional site work will also be completed such as the boundary survey and environmental assessment.

The Board of Public Utilities approved the recommended action on August 4, 2020.

Fiscal Impact: The City was notified of a 50% project award in the amount of \$48,947

Recommended Action: Accept Epic Engineering's Proposal for the Needles Well Siting Investigation Study not to exceed \$15,600

Submitted By: Rainie Torrance

City Management Review: Rick

Date: 8/5/20

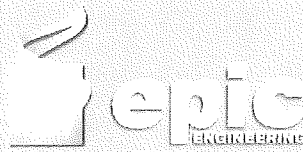
Approved:

Not Approved:

Tabled:

Other:

Agenda Item: 2



SUMMARY OF WELL SITING STUDY AND WELL DESIGN

March 24, 2020

Task 100 – Preliminary Design

The preliminary project design was initiated by the review of the recently completed hydrogeology report that was contracted by the City. The report gave several options for general locations within the city. The preliminary design included coordination with City staff on locating city owner property within those general areas and discussing the effects the locations would have on the water system. This task also included a review of the existing well data that City staff was aware of. Based on this preliminary information, the pool of sites was narrowed to the most feasible options.

Tasks 200 & 300 – Site Evaluations

The preliminary design phase of the study yielded two potential well sites. Tasks 200 & 300 will evaluate the pro and cons to each site and ultimately develop a cost estimate for both. The evaluation will consider things like the proximity to other utilities, such as waterlines, powerlines, communication lines, as well as access to the site. The evaluation will look into where and how to flush the well at start up, any land acquisition potential, proximity to residential homes, and hazard potential at each site. Based on the evaluation findings, a detailed summary and a preliminary cost for each of these items will be collected and used to present a recommendation to the City as to the best location for the new well.

Task 400 – Well vs. Treatment Plant Comparison Study

In conjunction with this study, the City has also solicited an evaluation of their unused water treatment plant and what it would take to rehabilitate it to treat the high manganese found in several of the City's other wells. This task will generate a cost per ac-ft to run the plant which will include the capital costs to fix the plant from the study, as well as an estimate of the yearly operation and maintenance cost. As similar cost per ac-ft for drilling the new well and its yearly operation and maintenance costs will be generated. These two costs will then be compared and presented to the City staff.

Well House Design

As this project will also include the design of the well house, an anticipated fee proposal for its design and construction management has been included. This will cover the cost of the site investigation work, including a topo survey, boundary survey, utility locating and coordination, and an environmental assessment. It also includes, hydraulic modeling of the new well in order to size the well and piping, stormwater design, civil site design, structural design of the well house, site and building electrical design, mechanical and instrumentation design, a review of the City's water rights land acquisition documents, project specifications, and coordination with the State Waterboard.

CITY OF NEEDLES, CALIFORNIA

Scope of Work and Budget Analysis
Well Siting Study

Prepared by Epic Engineering P.C.
3/16/2020

Total Estimated Cost: \$15,600.00

Task No.	Description	Hours	Cost	City Engineer	Plan Check Engineer	Plan Checker	GIS Specialist	Accounting	Clerical
100	Preliminary Design								
101	Kickoff Meeting & Coordination	6.00	\$970.00	4.00	1.00	1.00			
102	Contract Administration	8.50	\$775.00					5.00	2.00
103	Review Preliminary Hydrogeology Report	2.00	\$320.00	1.00	1.00				
104	Meet and Review Potential Sites with City Staff	1.00	\$180.00	1.00					
105	Research Existing Well Data	3.00	\$500.00	2.00	1.00				
106	Evaluate Potential Sites	1.50	\$250.00	1.00	0.50				
107	Narrow to 2 Potential Sites	4.00	\$680.00	3.00	1.00				
	SUB-TOTAL	36.00	\$3,875.00	12.00	5.00	2.00	5.00	\$85.00	\$70.00
	Indirect Costs		\$80.00						
	TOTAL for Task 100		\$3,955.00						
200	Well 15 Site Evaluation								
201	Generate GIS Exhibit	5.00	\$580.00		1.00		4.00		
202	Evaluate Access to Site & Needed Civil Improvements	3.50	\$510.00	0.50	3.00	1.00			
203	Evaluate Electrical Power Supply & Needed Improvements	3.00	\$470.00	2.00					
204	Evaluate Elevations & Flushing Line Alignments	4.00	\$565.00	0.50	3.00		0.50		
205	Evaluate Connection to Ex. System & Potential Alignments	5.50	\$695.00	3.00	2.00		0.50		
206	Land Acquisition Research	5.00	\$650.00	1.00	1.00	3.00			
207	Generate Cost Estimate	4.00	\$500.00	2.00	2.00				
208	Present Findings	2.00	\$250.00	1.00					1.00
	SUB-TOTAL	32.00	\$4,220.00	5.00	13.00	3.00	4.50	0.00	1.00
	Indirect Costs		\$70.00						
	TOTAL for Task 200		\$4,290.00						
300	Power Substation Site Evaluation								
301	Generate GIS Exhibit	5.00	\$580.00		1.00		4.00		
302	Evaluate Access to Site & Needed Civil Improvements	2.50	\$370.00	0.50	2.00				
303	Evaluate Electrical Power Supply & Needed Improvements	4.00	\$580.00	2.00		2.00			
304	Evaluate Elevations & Flushing Line Alignments	6.00	\$845.00	0.50	5.00		0.50		
305	Evaluate Connection to Ex. System & Potential Alignments	3.50	\$445.00	2.00	1.00		0.50		
306	Easement Acquisition Research	4.00	\$570.00	1.00	2.00	1.00			
307	Flooding Hazard Analysis	4.00	\$600.00	1.00	3.00				
308	Generate Cost Estimate	4.00	\$500.00	2.00	2.00				
309	Present Findings	3.00	\$430.00	2.00					1.00
	SUB-TOTAL	38.00	\$4,920.00	7.00	17.00	3.00	5.00	0.00	1.00
	Indirect Costs		\$50.00						
	TOTAL for Task 300		\$4,970.00						
400	Well 15 Treatment Plant Comparison Sites								
401	Generate well house preliminary cost estimate	5.50	\$700.00	0.50	2.00	3.00			
402	Generate side by side comparison summary	5.50	\$680.00	0.50	2.00	2.00			1.00
403	Discuss findings with City Staff	4.00	\$680.00	3.00	1.00				
404	Coordination and review of WTP rehabilitation report	3.00	\$500.00	2.00	1.00				
	SUB-TOTAL	18.00	\$2,560.00	6.50	7.00	5.00	0.00	0.00	0.00
	Indirect Costs		\$50.00						
	TOTAL for Task 400		\$2,610.00						
	MAN-HOUR / TASK COST TOTALS	112.00	\$15,600.00	30.00	42.00	20.00	10.00	5.00	3.00

