

COUNCIL AGENDA: NOVEMBER 18, 2014

SUBJECT: AMENDMENT OF DEE JASPAR AND ASSOCIATES WATER WELL DESIGN AND INSPECTION SERVICE AGREEMENT – WATER SYSTEM MODELING

SOURCE: Public Works Department - Engineering Division




COMMENT: Dee Jaspar & Associates is under contract with the City to design and provide inspection service for a maximum of five municipal water wells. On February 20, 2007, and November 3, 2009, City Council approved Service Agreement Amendments (Addendum No. 1 and Addendum No. 2) for the design of the Veteran's Park Booster Pump Project in two phases as part of the original well design services.

A portion of Addendum No. 1 scope of services required Dee Jaspar and Associates to update our hydraulic model and analyze our system to determine if the Veteran's Booster Pump facility would operate as designed. After performing several modeling runs that included the operation of the booster pumps during peak and non-peak conditions, it was proven that the project performed as designed. The full build-out of this facility was completed last year, proven to operate as the model predicted and has become an important feature to the entire water system.

Staff is now seeking a third addendum (Addendum No. 3) for Dee Jaspar & Associates to perform hydraulic modeling of the City's water system to evaluate its integrity at a cost of \$11,110 plus a 10% contingency to cover unforeseen costs. Staff feels that the modeling is necessary to determine the stress on the City's water system due to the recent drought and potential draw on the system by areas outside city limits. Dee Jaspar & Associates is the ideal consulting firm because of their experience as previously mentioned.

The water system status report is in tonight's City Council packet and states how the drought has impacted well production and is restated herein:

"Well yields have shown reductions in gallons per minute of about 25% compared to the 5-year average through October. Water production for the month of October 2014, continues an 11% decrease on the 5-year average and an 18% decrease from 2013. Staff will continue to monitor ground water levels and production, and will inform Council if conditions change, requiring Council action."

Dir.  Appropriated/Funded  CM 

Item No. 4

The economy is showing promising signs of improvement. Staff is currently reviewing a proposed 187 lot single-family residential subdivision project generally located between Beverly Street and Prospect Street, north of Date Avenue. The recent ruling that the Kings, Kern and Tulare Counties are no longer considered within the habitat range of Valley Elderberry Longhorn Beetle suggests that additional development on the west side of Porterville near the Tule River will occur. The constant demand for water service in East Porterville makes it necessary to review our water system to determine the feasibility of serving the anticipated growth within the city proper and outside city limits.

Dee Jaspar & Associates has provided a proposal to update our hydraulic model by adding new infrastructure and adjusting our water production capabilities to match our current water well production. The consultant will also be asked to include an assumed production increase by adding Well No. 32, Akin Water Company well (Well No. 33) and the Beverly-Grand Water Company well (Well No. 34). Wells 32, 33 and 34 are in various development stages. Once the hydraulic model is updated and system analysis complete, the consultant's report will provide a conclusion on the City's ability to maintain the current service requirements and the ability to meet future growth needs within the city and adjacent County areas, such as East Porterville. In East Porterville, the report will be limited to addressing the potential connection of approximately 150 acres (100 single-family residences within a potential island annexation area) and the ability to connect developed single-family residential parcels next to existing water mains.

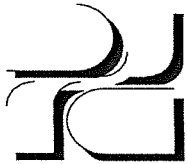
Attached for Council's review is an amendment proposal fee (Addendum No. 3) in the amount of \$11,110. Staff has reviewed the fee proposal with Dee Jaspar and Associates and finds it acceptable.

Water Replacement Fund is the funding source for this project and was approved in the 2014/2015 Annual Budget.

RECOMMENDATION: That City Council:

1. Authorize the Mayor to execute Addendum No. 3 to Dee Jaspar & Associates Service Agreement at an agreed upon fee of \$11,110 for the services described herein; and
2. Authorize progress payments up to 100% of the fee amount and authorize a 10% contingency to cover unforeseen costs.

ATTACHMENTS: Dee Jaspar & Associates, Inc. Proposal
Addendum No. 3 – Water System Hydraulic Modelling



DEE JASPAR & ASSOCIATES, INC.
CONSULTING CIVIL ENGINEERS
15 West Putnam Street, 2nd Floor W
PORTERVILLE, CA 93257
PHONE (559) 791-9286

October 30, 2014

Mike Reed, Deputy Public Works Dir./City Engineer
c/o City of Porterville Public Works Department
291 N. Main Street
Porterville, CA 93257

Re: System Hydraulic Modeling

Mr. Reed,

Attached is an itemized engineering proposal for the above referenced project. The project costs include time for four tasks:

- 1) Update the water system model. This would include the addition of any new infrastructure, updating the current status of the supply wells, and working with the Water Department to update the current production rates of the wells, groundwater levels, and system pressures.
- 2) Complete the calibration of the model as described in Item 1 above and analyze the current water system to assess the current production capabilities of the City and any problem areas.
- 3) Add the proposed single family residential subdivision to the hydraulic model and analyze the impacts to the water system. Provide recommendations for additional supply or piping improvements as necessary.
- 4) Prepare a written report/memorandum addressing the work performed in Items 1-3 above and discuss the City's limitations for growth based on the updated hydraulic model and the current water supply.

In addition to the above tasks, a supplemental task is proposed that will model the addition of the East Porterville annexation:

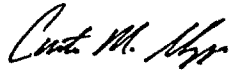
- 5) Model the addition of the East Porterville annexation (+/- 150 acres) and the subject properties that are adjacent to existing mains. An analysis of these additions will be performed to determine the impacts to the current water system and what improvements are required, if any, to adequately provide water service. If this task is implemented, the findings and recommendations will be included in the written report noted above in Task #4. The estimated cost for this supplemental item is \$3,060.00.

The total estimated budget is \$11,110.00. The work can begin immediately and is estimated to be completed within three weeks from receipt of all system information from City Staff. DJA would request that City Staff install 4 to 6 pressure chart recorders throughout the

City in critical areas that record 24 hrs per day for a period of seven days. This information combined with well production data over the same period will be used to calibrate the model.

If you have any questions, would like to discuss revisions, or need any additional information please give me a call.

Sincerely,

A handwritten signature in cursive script, appearing to read "Curtis M. Skaggs".

Curtis M. Skaggs
Dee Jasper & Associates, Inc.

City of Porterville System Hydraulic Modeling Project						
	Principal Engineer	Registered Engineer / Project Manager	Staff Engineer	Draftsperson	Secretary	
Construction Inspection	Estimated Time (hrs)	Estimated Time (hrs)	Estimated Time (hrs)	Estimated Time (hrs)	Estimated Time (hrs)	Total
Task 1. Hydraulic Modeling						
1) Update the water system model to reflect new infrastructure, change the status of current wells, and calibrate system flow rates.		2	20			\$2,780
2) Analyze the current water system and determine the current water production capabilities of the City, i.e. what is the current state of the water supply system.		2	12			\$1,780
3) Analyze the impacts to the water system with the addition of the proposed single family residential subdivision and make recommendations.		2	10			\$1,530
4) Analyze the addition of the East Porterville annexation (+/- 150 acres) and the properties adjacent to existing mains and provide recommendations as necessary to facilitate this effort. Provide a supplemental section to discuss this evaluation in the written report described below in Task 5.		4	20			\$3,060
5) Provide a written report addressing items 1-3 above and discuss the City's limitations for growth based on the updated hydraulic model and the current City water supply.	1	2	12			\$1,960
Total Hours Estimated:	1	12	74	0	0	
Total Engineering Estimate:	\$180	\$1,680	\$9,250	\$0	\$0	\$11,110

ADDENDUM NO. 3

CITY OF PORTERVILLE WATER SYSTEM HYDRAULIC MODELLING

**CITY OF PORTERVILLE
AND
DEE JASPAR & ASSOCIATES, INC.**

Addendum No. 3 to the existing Service Agreement for Water Well No. 28 and four future Wells is issued by the City and accepted by CONSULTANT pursuant to the mutual promises, covenants and conditions contained in said Service Agreement between the above named parties dated January 17, 2006, in connection with the performance outlined in Tasks 1 through 5 for City of Porterville Water System Hydraulic Modelling.

Please refer to M.O. #07-021704, M.O. #04-111505 and M.O. #____-111814.

A new Purchase Order for the City of Porterville Water System Hydraulic Modelling has been prepared and delivered to all parties. The project account number is 89-9770.

PURPOSE:

The purpose of this addendum is to amend the contract to provide services to the City to perform hydraulic water modelling per the attached scope of services letter. The CONSULTANT will provide the City with an updated water system model and provide a report on the City ability to maintain current service requirements and additional growth within the City and small areas in the unincorporated areas near and adjacent to the City.

PAYMENT:

CITY shall pay CONSULTANT the amount of \$11,110 for the completion of the specified professional services. Payment will be made monthly on presentation of documented invoices and shall include CONSULTANT'S direct labor costs, indirect labor costs (overhead), direct expenses and CONSULTANT'S fee.

IN WITNESS WHEREOF, duly authorized representatives of the CITY and the CONSULTANT have executed Addendum No. 3 for the City of Porterville Water System Hydraulic Modelling evidencing its issuance by CITY and accepted by CONSULTANT.

CONSULTANT'S NAME

CITY OF PORTERVILLE

By: Dee Jaspar

Milt Stowe, Mayor

Date

Date