REQUEST FOR QUALIFICATIONS

Brackish Groundwater Model Review

Solicitation No.: Q-18-006-FF

Addendum 1 | June 7, 2018

To Respondent of Record:
This addendum, applicable to project referenced above, is an amendment to the RFQ and as such will be a part of and included in the Contract Documents. Acknowledge receipt of this addendum by entering the Addendum number and issue date on the space provided in submitted copies of the Respondent Questionnaire.

QUESTIONS AND ANSWERS

1. **Which groundwater availability model is the subject of the review?**

   The model is a modification of an existing Southern Queen City/Sparta (QCSP) Groundwater Availability Model (GAM). The modified model consists of eight layers with the lowest layer (layer 8) representing the Lower Wilcox Formation. The Lower Wilcox Formation is the source water for the SAWS' Brackish Groundwater Desalination operation.

2. **What is the name of the aquifer unit?**

   Lower Wilcox Formation

3. **What computer programs/software were used for this model?**

   The original code is MODFLOW 96. Groundwater Vistas was the Graphical User Interface used.

4. **Describe the model, number of layers, number of cells, size of cells, etc...?**

The model is eight layers and is composed of 112 Rows and 217 columns. The cell size is 1 mile. Stress periods were simulated on a monthly basis. The model consists of a total of 194,432 cells. Each layer in the model contains 24,304 cells.

5. **How many wells will need to be reviewed?**

   There are a total of 12 production wells and 3 monitor wells. Water level data from the 12 production wells was recorded by the SCADA system on a 1 hour basis. The total volume of water from each production well is available on a monthly basis from approximately September 2016 through December 2017.

6. **How many calibration points, and types?**

   There are a total of 15 calibration points (12 production wells/ 3 monitor wells).

7. **Was an uncertainty analysis done?**

   A detailed uncertainty analysis (such as a Monte Carlo simulation) was not completed. Transmissivity and storativity values were manually lowered and evaluated to improve the correspondence between the measured artesian head changes and the simulated head changes. A cross plot of the model's simulated static water levels versus measured static water levels was completed for the original model (prior to any modifications) and for the recalibrated model (after modifications). In addition, drawdown calibration statistical results were provided to SAWS.

8. **Who did the modeling?**

   The firm that completed the model will be identified and provided to the selected consultant.

9. **What is the groundwater code (e.g., MODFLOW-NWT) that forms the basis for the numerical model?**

   MODFLOW 96

10. **Is the model constructed in a graphical user interface (e.g., Groundwater Vistas) or is it ASCII files?**

    The model was constructed using Groundwater Vistas as the graphical user interface.

11. **What processes are simulated by the model? Flow? Transport? Density-dependent flow?**

    Only flow was simulated. Neither particle transport nor density-dependent flow was simulated.

12. **Is surface water-groundwater interaction considered in the model?**

    No surface water – groundwater interaction was considered in the recalibrated model.

13. **Will all data that is needed for the review be provided by SAWS, or will the contractor need to access additional public or privately-available sources of information in order to complete the review?**

    SAWS or the firm that completed the model will supply all of the data required to the selected consultant.

END OF QUESTIONS AND ANSWERS

No other items, dates, or deadlines for this RFQ are changed.

END ADDENDUM 1

This Addendum is three (3) pages in its entirety.
Attachments:

None