

# JLA Geosciences, Inc.

HYDROGEOLOGIC CONSULTANTS

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April 10, 2018

via Electronic Mail

Shannon R. LaRocque, P.E.  
Utility Director, Village of Wellington  
12300 Forest Hill Blvd.  
Wellington, FL 33414

**RE:     *Proposal for Hydrogeologic Services for Groundwater Modeling and Application for  
Modification of Village of Wellington SFWMD Consumptive Use Permit***

Dear Shannon:

JLA Geosciences, Inc. (JLA) is submitting this cost proposal to provide hydrogeologic services to support application for modification of the Village of Wellington's (Village's) existing South Florida Water Management District (SFWMD) consumptive use permit (CUP). The proposed scope of services includes: i) applying the recently updated MODFLOW Model to evaluate future water supply options for the Village; ii) preparing the CUP modification application; and iii) responding to anticipated SFWMD requests for additional information (RAI) letters.

The scope of work is further detailed in the following tasks.

## **1.0     Groundwater Model Simulations and Impact Evaluation**

Under a previous scope, JLA developed a calibrated MODFLOW groundwater model to simulate the Surficial Aquifer System (SAS) in Wellington and the surrounding area. The Modflow model was used to evaluate impacts on surface water (conveyance canals) and groundwater (the SAS) resulting from a proposed increase in the Village's allocation from the SAS. The model was run simulating an average day allocation of 10.93 million gallons per day (MGD), which equates to a maximum day allocation of 17.6 MGD when using the ratio of 1.61 (for max day to average day) which was listed in the 2007 SFWMD CUP Staff Report. The modeling showed that the cone of depression (defined as the 0.1-foot drawdown contour within the surficial aquifer) resulting from the withdrawal of 10.93 MGD from the SAS did not reach the C-51 canal or induce excessive canal seepage that would contradict the Regional Water Availability Rule.

JLA will perform groundwater model simulations as needed to evaluate potential wellfield layouts and operating scenarios for the Surficial Aquifer System. Up to five model simulations will be performed with a variety of wellfield layouts and operating scenarios. The intent for the various model layouts and operating scenarios is to keep the cone of depression within the Village of Wellington boundaries. Per SFWMD water use permitting criteria, all existing legal users within the

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cone of depression must be modeled along with the proposed use in a cumulative modeling scenario. For the model simulation runs, JLA will maximize pumpage from existing and proposed wells and will coordinate with the Village on potential future well sites, as necessary. Model simulations will be consistent with SFWMD criteria for impact evaluations needed for CUP applications, as described in Section 3.1.2 of the "Applicant's Handbook for Water Use Permit Applications within the South Florida Water Management District, September 2015 (AH)." Results of the model simulations will be evaluated with respect to applicable SFWMD CUP criteria. Water use demand projections are to be provided by the Village.

## **2.0 Consumptive Use Permit Modification Application Preparation**

JLA will prepare an application package to modify the Village's CUP No. 50-00464-W. JLA will coordinate with the Village and the Village's engineering consultants, as required for application information related to historic and project demands, population, per capita use rates, reuse, and water conservation. JLA's effort under this task will include preparation of a report detailing and summarizing results of the modeling related to the proposed groundwater supply sources, the results of the groundwater impact evaluation, as well as any other groundwater supply related evaluation required in accordance with the AH. JLA will also prepare and assemble the additional permit application supporting information and documents.

## **3.0 Meetings and Communications**

JLA will facilitate communication of the Village's permit goals and objectives to the SFWMD throughout the process of preparation of the CUP application, including preparation for and attendance of meetings and communications via email and telephone with Village representatives and SFWMD staff, as necessary. It is anticipated that multiple meetings with SFWMD staff may be required to discuss water availability from the Regional System and model simulations required for the impact evaluations. Eight meetings with the Village, the Village's consultants, and/or the SFWMD are included. The following meetings are anticipated 1) Presentation of preliminary model results to the Village after simulation of Mock Roos current demand projections of 380.2 MGM and 445.0 MGM, for average and maximum month use, respectively; 2) Strategy meeting for presentation of modification application and model to the District; 3,4,5) A few preapplication meetings with the SFWMD to discuss projections and modeling performed; 6,7) Meetings with the Village to discuss modeling and draft CUP application; and 8) Post-application RAI meeting.

## **4.0 Prepare Technical Responses to SFWMD RAI Letters**

JLA will evaluate and prepare responses to SFWMD RAI letters following submittal of the permit modification application. Services to respond to the SFWMD will be performed as needed on a time and expense basis up to the budgeted amount of this task. The amount of effort required for this task is not reasonably predictable at this time, and therefore estimated efforts to respond to two (2) RAI requests by Paul Stout, Jim Andersen, and/or Shelley Day at their respective hourly rates are budgeted.

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#### SCHEDULE

TASK	COMPLETION DATE FROM NOTICE TO PROCEED (NTP)
Task 1: Groundwater Model Simulations and Impact Evaluation	60-90 days <sup>1</sup>
Task 2: Consumptive Use Permit Modification Application Preparation	150-180 days <sup>2</sup>
Task 3: Meetings and Communication	Concurrent with Task 1,2, and 4
Task 4: Prepare Technical Responses to SFWMD RAI Letters	240 days from completion of Task 2 <sup>3</sup>

<sup>1</sup>Contingent upon identifying additional future well sites, as required to meet projected demand.

<sup>2</sup>Contingent upon scheduling of meeting(s) with SFWMD.

<sup>3</sup>Permitting schedule is estimated; however, it is subject to regulatory review and turnaround times. Two RAIs are included in estimate.

#### COST ESTIMATE

JLA proposes to provide services for Tasks 1,2, and 3 on a lump sum basis for \$72,240.00. Although every effort will be taken to limit RAIs, permitting is a regulatory function and the effort required to respond to RAIs is uncertain; therefore, Task 4 is proposed on a time and materials basis, with an estimated budgeted of \$9,000.00. The total proposed cost estimate for groundwater modeling and preparation of the consumptive use permit modification application is \$81,240.00. The attached service estimate contains a breakdown of the per task level of effort anticipated for each task outlined above and the corresponding fees.

Please note that this proposal is to provide hydrogeologic support to perform groundwater modeling and prepare the application for modification of the Village's SFWMD CUP 50-00464-W. This proposal does not include the permit application fee of \$11,500 for a 20-year permit duration or guarantee that SFWMD will issue the permit based on the proposed effort by JLA.

This proposal was prepared based on the information provided to date and our understanding of the project. If you feel that we have omitted anything or have not clearly defined the anticipated scope of work, we will gladly review additional information, and modify the scope and associated costs accordingly.

We look forward to working with you as always on this project; if you have any questions please don't hesitate to call me.

Sincerely,

JLA Geosciences, Inc.



James L. Andersen, P.G.  
Principal Hydrogeologist

PROJECT: Village of Wellington CUP Modification	SHEET 1 OF 1
CLIENT: Village of Wellington	FILE NO.
ESTIMATOR: Jim Andersen, P.G., JLA Geosciences	DATE:4/10/18

DESCRIPTION:		MAN HOURS/EXPENSES									
Village of Wellington CUP modification including applying MODFLOW Model to conduct impact evaluation and provide other required elements for preparation and submittal of application for modification.		President	Principal Hydro	Prof Hydro	Sr Hydro II	Sr Hydro I	Hydro II	ODC / Subcontr.	Dir Exp 5% (vehicle mileage and non itemized expenses)	LINE TOTAL	TASK TOTAL
NO.	TASK										
1.0	Groundwater Model Simulations and Impact Evaluation										\$26,500.00
	Conduct up to five model simulations of various wellfield layouts and operating scenarios	16	120	26						\$26,500	
	Hours subtotal	16	120	26							
2.0	Consumptive Use Permit Modification Application Preparation										\$25,100.00
	Prepare CUP Mod application including a report detailing and summarizing results of the updated modeling, results of the impact evaluation, as well as any other required elements in accordance with the Applicant's Handbook.	20	40	100						\$25,100	
	Hours subtotal	20	40	100							
3.0	Meetings and Communication of Village Permit Goals and Objectives										\$20,640.00
	Meetings with the Village and SFWMD (8 meetings), meeting presentation material preparation.	20	40	24						\$13,700	
	Email correspondence and telephone communication with SFWMD and Village, provide channel of communication between Village and SFWMD	16	16	10						\$6,940	
	Hours subtotal	36	56	34							
4.0	Respond to SFWMD RAIs										\$9,000.00
	On a time and materials basis, evaluate and respond to SFWMD requests for additional information (RAI), providing additional information and performing additional tasks as required by SFWMD. Response to two (2) RFIs is included for budgeting purposes	12	20	24						\$9,000	
	Hours subtotal	12	20	24							
	TOTAL HOURS	84	236	184							
	LABOR (\$/HOUR)	175	165	150	135	120	100				
	TOTALS	14700	38940	27600						29,640	\$81,240.00