

# JLA Geosciences, Inc.

HYDROGEOLOGIC CONSULTANTS

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October 29, 2024,

**Via Electronic Mail**

Gustavo Vergara, CPRE  
Parks, Recreation & Conservation  
Operations and Programs Assistant Director  
1590 9<sup>th</sup> St SW  
Vero Beach, FL 32962

***RE: Proposal for Indian River County, Parks, Recreation & Conservation Department,  
North County Pool Heat Exchange System UFA Supply Well Sand Investigation,  
Exploratory Video, Testing, & Recommendations***

Dear Mr. Vergara:

JLA Geosciences, Inc. (JLA) is pleased for the opportunity to assist Indian River County Parks, Recreation and Conservation Department (IRC) with hydrogeologic consulting services. The IRC North County Aquatic Complex (NCAC) operates a closed loop heat exchange system to regulate water temperature utilizing water from the Upper Floridan Aquifer (UFA). Recently the UFA supply well started producing substantial quantities of sand and has made the heat exchange system inoperable. The scope of this proposal includes work necessary to investigate the cause of UFA supply well sand production which includes modification of the existing wellhead to facilitate testing, downhole investigatory well video, field water quality and performance testing, and reconnection of the UFA supply well to the heat exchange system. Following the investigation, JLA will generate a summary of work completed on the well, observations from the downhole well video, results of water quality and performance testing, and recommendations for resolving the current sand production issue. Since the cause of the sand production is still unknown the recommendations may include changes to well operations and/or well replacement, additional repairs/modifications, or rehabilitation based on results of the investigation.

Outlined below are the specific tasks included in our proposed scope of work, along with the associated costs for your thorough review and consideration. Our dedicated team is committed to delivering outstanding results, ensuring the project maintains the highest standards of quality.

- 1.0 **Static and Dynamic Exploratory Videos & Water Quality Testing** – Centerline Drilling (CLD) will salt kill the well, remove the existing wellhead configuration from the well to the pump, modify the wellhead to facilitate testing, conduct dynamic downhole video log of the well using a temporary pump, and reconnect the well updated wellhead to the existing pump

and discharge line. A JLA hydrogeologist will coordinate with CLD on the wellhead modification work and will be present on-site during the exploratory video and testing work. The primary objective of the investigatory well video is to identify the source of sand production, assess the condition of the existing well casing and borehole, collect current well performance and water quality data at the design rate of the heat exchange system (300 gallons per minute) and identify potential solutions.

- 2.0 **Summary & Recommendation Report**– JLA will furnish IRC with a summary of work completed on the well, observations from the downhole well video, results of water quality and performance testing, and recommendations for resolving the current sand production issue. This information will be provided in a detailed report and submitted electronically.

TASK	COST
<b>1.0- STATIC AND DYNAMIC EXPLORATORY VIDEOS &amp; WATER QUALITY TESTING</b>	
<b>1.1- DRILLING SUBCONTRACTOR SERVICES</b>	<b>\$16,775.00</b>
<b>1.2- PROFESSIONAL AND SUPPORT SERVICES</b>	<b>\$5,247.00</b>
<b>2.0- SUMMARY &amp; RECOMMENDATION REPORT</b>	<b>\$1,124.00</b>
<b>PROJECT TOTAL</b>	<b>\$23,146.00</b>

This proposal has been carefully prepared using the information provided and our understanding of the project. If there are any additional details or specific requirements that we may have inadvertently overlooked, we would be more than happy to review any additional information provided. Our aim is to ensure that the scope of work and associated costs align with your expectations and project goals.

Thank you once again for considering our services. We look forward to the possibility of collaborating with you on this project.

Sincerely,  
JLA Geosciences, Inc.



Jon Friedrichs, P.G.  
Principal Hydrogeologist

ATTACHMENT A  
BUDGET SUMMARY

Client: Indian River County Parks, Recreation & Conservation  
Consultant: JLA Geosciences, Inc.  
Project Title: North County Aquatic Complex Floridan Well Exploratory Video, Water Quality Testing, & Recommendations

		Labor Classification and Hourly Rate														
Task No.	Task Description	President	Prin./Hydro Corp. Officer	Prj. Manager Sr Hydro III	Senior Hydro II	Senior Hydro I	Hydro III	Hydro II	Hydro I	Hydro Tech	Admin / Tech	Total Labor	Mileage (\$0.67/mi)	ODC	Sub Consultant Services	TASK TOTAL
1.0	Static and Dynamic Exploratory Videos & Water Quality Testing															
	Work Performed by Centerline - Artesian Well - fabricate new wellhead, kill well, video survey, and restart well.														\$ 16,775.00	\$ 16,775.00
	JLA oversight of all video logging to verify: 1.) the existing conditions of the well, 2.) examine for any fill, 3.) ensure that the well is not visibly producing solid matter, and 4.) perform water quality and specific capacity testing during the well videos.		4.0			8.0			20.0				\$ 439.00			\$ 5,247.00
	Subtotal Task 1.0	0.0	4.0	0.0	0.0	8.0	0.0	0.0	20.0	0.0	0.0	32.0	\$ 439.00	\$ -	\$ 16,775.00	\$ 22,022.00
2.0	Summary & Recommendation Report															
	JLA will provide Osceola with a summary of current well details and recommendations derived from the observations made during the video analysis.		2.0			4.0										\$ 1,124.00
	Subtotal Task 2.0	0.0	2.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0	6.0	\$ -	\$ -	\$ -	\$ 1,124.00
	Labor Subtotal Hours	0.00	6.00	0.00	0.00	12.00	0.00	0.00	20.00	0.00	0.00					
	Labor Hourly Billing Rates	\$ 249.00	\$ 238.00	\$ 214.00	\$ 197.00	\$ 162.00	\$ 151.00	\$ 139.00	\$ 128.00	\$ 112.00	\$ 92.00					
	Labor Subtotal	\$ -	\$ 1,428.00	\$ -	\$ -	\$ 1,944.00	\$ -	\$ -	\$ 2,560.00	\$ -	\$ -					
	Labor Total															\$5,932.00
	Mileage/ODC															\$439.00
	Subconsultant Total															\$16,775.00
	Project Total															\$23,146.00

Please be advised that the rates outlined in this proposal are valid for a duration of 90 days from the date of this proposal's issuance. After this period, adjustments to the rates may occur to accommodate annual rate increases