

JLA Geosciences, Inc.

HYDROGEOLOGIC CONSULTANTS

1931 Commerce Lane, Suite 3
Jupiter, Florida 33458
(561) 746-0228
fax (561) 746-0119

October 28, 2019

via Electronic Mail

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

RE: *Proposal for Phase III Wellfield Rehabilitation – Hydrogeologic Consulting Services*

Dear Shannon:

JLA Geosciences, Inc. (JLA) has been providing hydrogeologic consulting services to the Village of Wellington (Village) for wells being rehabilitated by Florida Design Drilling (FDD) under the Wellfield Rehabilitation and Maintenance Contract (Bid 017-15/DZ). Our scope of work has included development of a rehabilitation plan, coordination of rehabilitation work, field supervision during rehabilitation work, water quality and well performance testing, and documentation of rehabilitation results.

To date, six wells have been rehabilitated and returned to service: Well R2, Well R4, Well R8, Well R9, Well R10, and Well 18. Rehabilitation efforts have been successful—increasing the specific capacity of the above-mentioned wells between 23% and 81% over the pre-rehabilitation specific capacity. The rehabilitation of Well 24 and the replacement of Well R3 (with new well R3R) are currently on-going.

To keep the Village's wells producing the optimal water quality and quantity, an on-going effective maintenance and rehabilitation program is required. JLA and the Village have identified additional wells to be rehabilitated as part of the next phase, Phase III, of well rehabilitation work. The proposed Phase III scope of work includes replacement of the existing well screens in production wells R1 and 23, acidization and redevelopment of wells R6 and R7, and drilling and testing of one exploratory well. Similar to previous efforts, JLA's proposed scope of work will include coordination of rehabilitation work; development of rehabilitation plans; field supervision, water quality and well performance testing during rehabilitation work; and documentation of rehabilitation results.

The following tasks identify our proposed scope of work with the associated costs for your consideration.

- 1.0 Project Management, Coordination, and Design of Individual Well Rehabilitation Plan** – JLA will assist in the design of a rehabilitation program for each surficial aquifer production well. This task

will include coordination with the Village's current well rehabilitation contractor (Florida Design Drilling), coordination with the Village of Wellington and Wellington Water Treatment Plant staff, a pre-rehabilitation walkthrough meeting, weekly project updates (via email), monthly project progress meetings, review of Contractor submittals, and review and approval of Contractor pay applications.

Per well unit cost	\$4,075.00
Professional and support services for 4 Wells and 1 Exploratory Well	\$ 16,300.00

- 2.0 Surficial Aquifer Well Rehabilitation Services for Three (4) Wells**—Well rehabilitation oversight to include pre-rehabilitation specific capacity testing, supervision of well video logging, supervision during screen pull and screen and gravel installation (if applicable), acidization plan review and field oversight (if applicable), and performance of development testing and specific capacity testing. Daily site logs (Utility inspection Forms) will be prepared whenever JLA is onsite.

Per well cost unit cost	\$13,100.00
Professional and support services for 4 Wells	\$52,400.00

- 3.0 Profile Well Drilling and Testing** -JLA will provide hydrogeologic observation services, hydrogeologic direction and well design expertise during the installation of one temporary surficial aquifer test well. JLA will be present during the critical phases of construction, including: pilot hole drilling, geophysical logging, temporary screen and casing installation, and interval testing, JLA will evaluate drill cuttings, water quality and well performance data and will provide recommendations for the selection of screen and gravel and constructed depths of boreholes and casing for a new public water supply well. Lithologic logs and geologic interpretations will be included in a technical memorandum summarizing the results of profile well drilling and providing recommendations for the construction of a public water supply well at that location.

Unit cost	\$15,200.00
-----------	-------------

- 4.0 Technical Memorandum** - provide a brief technical memorandum for each well documenting the rehabilitation program and summarizing the rehabilitation results.

Per well task cost	\$3,150.00
Professional and support services for 4 Wells	\$12, 600.00

TOTAL COST ESTIMATE	\$96,500.00
----------------------------	--------------------

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.

Proposal to Shannon LaRocque, P.E.

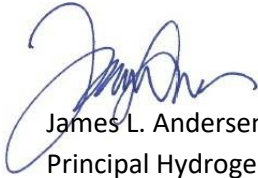
October 28, 2019

Page 3 of 3

We appreciate the opportunity to continue working with you on this important project. If you have any questions please don't hesitate to call me.

Sincerely,

JLA Geosciences, Inc.

A handwritten signature in blue ink, appearing to read 'James L. Andersen', is positioned above the printed name.

James L. Andersen, P.G

Principal Hydrogeologist

Encls.: JLA Hydrogeo Svs Est

Hydrogeologic Consulting Services for the Village of Wellington - Wellfield Rehabilitation Phase 3	SHEET 1 OF 1
CLIENT: Village of Wellington	FILE NO.
ESTIMATOR: Shelley Day, P.G., JLA Geosciences	DATE: 10/23/19

DESCRIPTION:		MAN HOURS/EXPENSES											
Coordinate with FDD and VOW, aid in development of a rehabilitation plan for rehabilitation of 4 wells and one new profile well; attend weekly progress meetings and provide look ahead; review contractor submittals; review and approve contractor pay applications; provide contractor coordination, perform pre-and post-rehabilitation specific capacity testing, supervise individual well video logging, review video log, provide onsite hydrogeologic observation during well video logging, screen pull, screen and gravel or liner installation, perform development testing and specific capacity testing; summarize results in brief technical memorandum.		Pres/ Andersen	Prof. Geol	Snr. Hydro II	Snr. Hydro I	Geol./ Hydro II	Geol./ Hydro I	Geol Tech	Admin	Mileage (\$0.545/mi)	Equipment ODC	PER WELL TOTAL	TASK TOTAL
No.	TASK												
1.0	Project Management, Coordination and Design of Individual Rehabilitation Plan												
	Coordinate with FDD, WTP staff to design rehabilitation plan; Pre-rehabilitation walk-through; Monthly progress meetings with FDD and WTP staff; Weekly progress reports; Review contractor submittals; Review and approve contractor's application for payment												
	Subtotal Task 1.0 (Per Well)	5	16			8						\$4,075	
	Subtotal Task 1.0 (Four Wells)	20	64			32							\$16,300
2.0	Well Rehabilitation Oversight												
	Perform pre-rehabilitation capacity testing, supervise individual well video logging, review video log; provide onsite hydrogeologic observation during screen and gravel installation or liner installation, well video logging, perform step-drawdown testing, perform development testing.												
	Subtotal Task 2.0 (Per Well)	4	16			100						\$13,100	
	Subtotal Task 2.0 (Four Wells)	16	64			400							\$52,400
3.0	Exploratory Well Drilling/Profile Well Testing												
	Coordinate with FDD and WTP staff; site visit/coordination meeting; weekly progress reports; daily site reports while on-site ; provide onsite supervision during pilot hole drilling, geophysical logging, temporary screen and casing installation, and interval testing, JLA will evaluate drill cuttings, water quality and well performance data and will provide recommendations for the selection of screen and gravel and constructed depths of boreholes and casing for a new public water supply well. Lithologic logs and geologic interpretations will be included in a technical memorandum summarizing the results of profile well drilling and providing recommendations for the construction of a public water supply well at that location.												
	Subtotal Task 3.0 (Per Well)	8	32			90						\$15,200	\$15,200
4.0	Technical Memorandum												
	Technical memorandum summarizing rehabilitation procedures and results												
	Subtotal Task 4.0 (Per Well)	2	8			16						\$3,150	
	Subtotal Task 4.0 (Four Wells)	8	32			64							\$12,600
	TOTAL HOURS	52	192			586				\$ -	\$ -		
	LABOR (\$/HOUR)	175	150	140	124	100	93	77	62				
	TOTALS	9100	28800			58600							96,500.00