



May 19, 2023

Mr. Gregory C. Alfsen, P.E.  
Project Manager  
State Revolving Fund Program  
Division of Water Restoration Assistance  
3900 Commonwealth Blvd, MS 3505  
Tallahassee, FL 32399-3000

Re: FGUA's Lehigh Acres Drinking Water Project DW36072  
Request for Additional Information No. 2

Dear Mr. Alfsen:

On behalf of the Florida Governmental Utility Authority (FGUA) the following information is provided in response to the Request for Additional Information (RAI) No. 2 received on May 3<sup>rd</sup>, 2023, via email regarding the above referenced project. Your comments have been restated in **bold** followed by our response.

**Comments:**

- 1. Provide a discussion of the water treatment technologies, reject water disposal methods, and drinking water supply sources (rehab existing wells?) that were evaluated for this project; and state the reasons NF and RO were selected as the method of treatment, DIW as the method of reject disposal, and new UFA wells as the source of drinking water. Lime softening treatment and NF reject to WWTP were discussed in the system expansion plan document. Please note that the purpose of the alternatives evaluation process is to identify viable solutions that will meet project objectives; and in this case, the objective is to meet the increasing water demand of Lehigh Acres. It's my understanding that Lehigh Acres is presently at 100% capacity for providing drinking water; therefore, alternative #1/option #1 and alternative #2/option #2 do not meet the objectives of the project, and do not consider the available technologies and methods for each step of the project, and are not considered viable solutions. The 'no action' option should only be used in SRF's request for three alternatives if only one or two viable alternatives are found. At this point of the review, in lieu of a thorough alternatives evaluation, SRF may be able to accept a discussion of the different technologies and methods evaluated, since NF, RO, and DIW are proven methods to address brackish waters.**

Response: WIPI: As discussed during our telecon on 5/8/2023, many technologies were looked at including Reverse Osmosis (RO) and Nanofiltration (NF) as treatment alternatives. Since the Total dissolved Solids (TDS) is low at this facility and softening the



water is the objective, NF was selected and discussed in detail in section 6.2 of the “Water Supply System Plan and Wastewater System Expansion Plan” submitted in October 2022. In summary, below are the main factors for improvements:

- Plant age.
- Lime disposal.
- Adopt more reliable technology.

Comparison and O&M cost analysis was also produced in table 6-4 of the “Water Supply System Plan and Wastewater System Expansion Plan” as well as Appendix 4.

Reject water (concentrate) will be pumped and disposed at FGUA’s Wastewater Treatment Plant (WWTP) via an existing force main.

WTP2: Reverse osmosis (RO) is the technology selected to treat raw water with high TDS (over 3,500 ppm). This was discussed in section 6.4 “Water Supply System Plan and Wastewater System Expansion Plan”.

The RO concentrate will be disposed to Deep injection well (DIW) with Dual Zone Monitoring Well (DZMW)

Options: the short-term projected water demand is 3.56 MGD and options were updated to meet or exceed such demand. In all options there is potential for expansion and meet long-term demand by increasing WTP2 capacity.

2. **The title ‘Attachment 1 – Response to RAI Questions’ should be revised to reflect the document’s connection to the Water Supply System Plan and Wastewater System Expansion Plan. The system expansion plan document is a necessary part of SRF’s review and acceptance of the facilities plan.**

Response: The report is updated and labeled as “Drinking Water Facility Plan Supplemental Report” to be linked to the original submittal of “Water Supply System Plan and Wastewater System Expansion Plan”.

3. **Figures 1 & 2 and cost table 2-2 for WTP #1, and figures 4 & 5 and cost table 2-2 for WTP #2 need to be revised to address conflicting and missing information, unlabeled equipment, and inconsistent nomenclature. There should be consistency between figures and cost tables. Figures should clearly label existing, new, and rehabbed equipment, and equipment locations and should match the equipment listed in cost table 2-2. For example, figure 1 does not show the location of the new raw water tank listed in table 2-2, and figure 2 does not indicate that the old water tank will be replaced. Figure 1 does not show the location of the NF reject PS Modifications and does not indicate where the NF reject will be sent. Figure 2 indicates RO membranes instead of nanofiltration. Figure 4 does not show the location of well UFA-1 and that it will be rehabbed. There are several others examples of conflicting and missing information and inconsistent nomenclature.**

Response: All figures and tables were updated to reflect the changes. Items that were not included are identified at the bottom of each table. An updated cost estimate will be provided with the next submittal as the design progresses.



- 4. A discussion of where the NF reject water will be discharged. It's understood from the system expansion plan document that the WWTP is not an option for discharge. It appears the DIW does not have the capacity to receive the NF reject water. A discharge method for WTP #1 must be established and must be constructed in conjunction with the rehabilitation of WTP #1.**

Response: Since this is a softening plant, WWTP will be able to receive the concentrate and process it when the hydraulic capacity permits. Improvements to WTP#1 should be coordinated with WWTP improvements/expansions.

- 5. Cost table 2-2 should breakout new building costs for WTP #1 treatment equipment, and new or rehabbed building costs for WTP #2.**

Response: See response to comment#3.

- 6. Section 2.1.3 of Attachment 1 should list equipment to be installed as given in table 2-2 and shown in the process flow diagrams, and list details of the major equipment that is part of the NF package treatment units and the RO Skid.**

Response: Corrected in a new table.

- 7. Page 12 of the system expansion plan document shows that the Lee Blvd. booster pump station will need to be rehabbed and that the water main extensions will need to be constructed during the short-term plan (2020-2025). Provide a discussion of the relationship of these projects with the improvements of WTP #1 and #2, and if they are dependent, especially the rehab of Lee Blvd. P.S.**

Response: The improvement of Lee Blvd. booster pump is independent of improvements at WTP1 and WTP2. It is R&R project.

- 8. A discussion of the unused equipment (e.g., forced draft aeration) at WTP #2, its current condition, and the cost to rehab and return the equipment to service. This rehabilitation cost should be part of cost table 2-2.**

Response: The rehabilitation of several existing equipment is currently undertaken by different projects. Rehabilitated equipment will be ready before this project is completed. That will include (1) Degasifier (forced draft aeration), (2) Clearwell transfer pumps and (3) High service pumps.

- 9. A copy of the most recent sanitary survey for WTP #1 and #2.**

Response: Included as attachment 1 to this letter. Please note that the attached survey is the last complete survey by the Department of Health (DOH) of the Lehigh Acres Water Utility system. The FDEP is now in charge of drinking water systems and the FGUA is in the middle of the sanitary survey process with the FDEP.



- 10. A copy of the public meeting advertisement and proof of publication, meeting minutes, and adopted resolution to implement the planning document.**

Response: Public Meeting is scheduled for May 25, 2023. Related documentation and meeting minutes will be provided at that time and included as part of the Facilities Plan.

- 11. Provide an explanation for the discrepancy between the sum of Annual Residential Water Sales in Line 5 and Annual Commercial Water Sales in Line 14 of Table 1, and the water rates listed in Line 1 of Table 2. It appears these numbers should be somewhat the same.**

Response: Total sale includes Wastewater revenues.

- 12. A discussion of how the elimination of lime softening will impact the operation and maintenance expenses listed in Table 2 of the SRF Business Plan. It appears there is no impact.**

Response: See section 6.2.2 of the “Water Supply System Plan and Wastewater System Expansion Plan” as well as table 6-4 and Appendix 4.

- 13. Provide an explanation of what Outside Services include as listed in Line 24 of Table 2 of the SRF Business Plan.**

Response: Service paid to US Water to operate the system.

- 14. Debt-Repayment - Principal and Interest listed in Line 37 of Table 2 of the SRF Business Plan should include projected debt for this project.**

Response: Corrected in new schedule.

- 15. Define ‘Other’ listed in Line 44 of Table 2 of the SRF Business Plan.**

Response: SRF loan we are applying for in this application (Principal and Interest)

- 16. Table 3 of the SRF Business Plan must include projected debt for this project.**

Response: Corrected in new schedule.

- 17. Debt Service listed in the table on page 11 of the SRF Business Plan must include projected debt for this project.**

Response: Corrected in new schedule.

The cost breakdowns shown in this “Attachment 1 – Response to RAI questions” represent costs from the “FGUA Lehigh Acres Utility System Water Supply System Plan and Wastewater System Expansion Plan,” submitted under separate cover in October 2022. The costs in this plan were determined in 2021. Updated construction costs for the WTP 2 portion of the work will be



provided with the readiness to proceed documents in June 2023 ahead of August FDEP SRF Priority meeting.

We trust the foregoing adequately addresses the Department's requests. If you have any questions or need additional information, please feel free to contact us.

Sincerely,

**ARDURRA GROUP, INC.**

Loc P. Truong, P.E.  
Florida Water Practice Director

Enclosures

cc: Robert Dickson, P.E. - FGUA,  
John Carlson, P.E. - FGUA  
Dwayne Kreidler, PE - Wharton-Smith  
David Weber, PE - Ardurra, Moustafa Wardeh, P.E. - Ardurra

Attachment 1: Sanitary Survey 2021 Lehigh Acres

**Mission:**

To protect, promote & improve the health of all people in Florida through integrated state, county & community efforts.



**Ron DeSantis**  
Governor

**Scott A. Rivkees, MD**  
State Surgeon General

**Vision:** To be the Healthiest State in the Nation

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September 15, 2021

Mr. Sam Cain, P.E.  
Florida Governmental Utility Authority  
280 Wekiva Springs, Suite 2070  
Longwood, FL 32779

Reference: Compliance Inspection Report  
Florida Governmental Utility Authority  
PWS I.D. No.: 5360172-1

Dear Mr. Cain:

Attached is a copy of the recently completed compliance inspection report for the referenced water system. Deficiencies found with the system, if any, are listed on this report. Listed deficiencies are a violation of Florida Administrative Code Chapter 62-555 and must be corrected in order to avoid formal enforcement action.

Five (5) deficiencies were identified:

1. Leaking Transfer pump 1 after filters (PICTURE 1)
2. Leaking Transfer pump 2 after filters (PICTURE 2)
3. Clarifiers with bio-growth (PICTURE 3)
4. Aerator with bio-growth (PICTURE 4)
5. Pressure gauge at raw water entry in disrepair (PICTURE 5)

Please have the deficiencies corrected within thirty (30) days from the day of the letter. If it cannot be corrected within 30 days, please provide this office with a written schedule for correction within this time frame.

If you have any questions about this report, please contact Rosa Esparza at [Rosa.Esparza@FLHealth.gov](mailto:Rosa.Esparza@FLHealth.gov) or by phone at 239-274-2217.

Sincerely,

Ileana N. Bracete, M.E., E.I  
Environmental Manager

INB/re  
cc: Joshua Fruauff, Lead Operator

BASIC INSPECTION AND SYSTEM INFORMATION

Water system: FLORIDA GOVERNMENTAL UTILITY AUTHORITY WTP 1 System PWS #: 5360172-1 Date of inspection: 09/08/2021

System address: 305 COOLIDGE AVE City: LEHIGH ACRES State: FL Zip: 33936

System phone: 239-368-1766 Cell: 239-222-8389

Fax number: 239-368-7313 Email: jfruauff@uswatercorp.net

Owner name: FGUA (Sam Cain, P.E.) Title: OPERATIONS MANAGER

Owner address: 280 WEKIVA SPRINGS SUITE 2070 City: LONGWOOD State: FL Zip: 32779

Owner phone: 407-629-6900 Cell: \_\_\_\_\_

Fax number: 407-629-6963 Email: SCain@govmserv.com

Operator required?  Yes  No (If "No", Operator sections not applicable) Operator name: JOSHUA FRUAUFF

Operator Email: jfruauff@uswatercorp.net Phone: 239-222-8389 Fax: 239-368-7313

S=Satisfactory U=Unsatisfactory ~ =Not Applicable \* =See comment below

SOURCE - WELL INFORMATION

Well Number	13
Well head sealed? (Pad/conduit/openings)	S
Well casing 12" above grade?	S
Casing vent compliant? (2003)	S
Check valve compliant?	S
Tap Compliant? (Smooth/12" high/pre-check)	S
Flow measurable?	S
Security measures compliant?	S
O & M manual compliant?	S
Cl storage complaint (no organics/acid/sun)	S
Spare chlorinator compliant?	S
Loss of chlorine alarm compliant?	S
Treated sample tap provided?	S
Security measures compliant?	S

TREATMENT

HYPO	Cl solution NSF approved?	S
	Solution vat compliant?(covered/etc)	S
	Safety: (Gloves/Apron/Eyewash/etc)	S
GAS	Cl room compliant?(separate/ventilation)	~
	Scales compliant?	~
	Auto switchover provided?	~
OTHER	Safety:(SCBA/Gloves/Ammonia/Panic HW)	~
	Aeration	S
	pH adjustment	S
Orthophosphate	~	
Other:	~	

STORAGE

Tank Number	1C	2G	3G	4G*	5E				
Inspections compliant? (annual/5yr)	S	S	S	S	S				
Overflow/Vents compliant? (elevated)	S	S	S	S	S				
Pressure relief valve provided? (hydro)	S	S	S	S	S				
Security measures compliant?	S	S	S	S	S				

DISTRIBUTION	Water system map compliant?	Yes
	Flushing of dead ends compliant?	Yes
	Valve maintenance compliant?	Yes
	Chlorine residual > 0.6 mg/L	Yes
PUMPS	Number of high service pumps?	8
	High service pumps functional?	Yes
MANAGEMENT	CCC devices tested annually?	Yes
	Flow meter accuracy checked?	Yes
	ERP, PbCu, DBP, and CCC Plans?	Yes
OPERATOR	In use permits have clearance?	Yes
	Operator visits compliant?	Yes
	Plant checked 5 times per week?	Yes
MORs submittal compliant?	Yes	

**FOLLOW-UP TO LAST INSPECTION OR SURVEY**

Last inspection fully compliant?  Yes  No (see below)

Number of deficiencies last cited? 3

Were any of the deficiencies "repeat"? No

Response from system submitted? Yes

Have deficiencies been addressed? Yes

**MONITORING SCHEDULE**

CHEMICAL	ANALYSIS DATE	NEXT DUE
Nitrate/Nitrite	09/20	12/21
Inorganics	09/20	12/23
Lead & Copper	09/20	09/23
TIHM/HAA5 (Stage 2)	09/20	09/21
VOCs	05/20	12/23
SOCs	09/20	12/23
Rads	09/20	12/26
Secondaries	09/20	12/23
Asbestos		

FIELD SAMPLING RESULTS	Plant Cl <sub>2</sub> (mg/L)	S	3.6	Remote Cl <sub>2</sub> (mg/L)	S	1.0
	Plant pH	S	8.5	Remote pH	S	7.4

COMMENTS

Remote sample taken at Race Track on Lee Blvd.



**Deficiencies**

- **DEFICIENCY: Transfer pumps 1 with leakage. (Picture 1)**  
Regulation: F.A.C 62-555.350(2). Suppliers of water shall keep all necessary public water system components in operation and shall maintain such components in good operating condition so the components function as intended.
- **DEFICIENCY: Transfer pumps 2 with leakage. (Picture 2)**  
Regulation: F.A.C 62-555.350(2). Suppliers of water shall keep all necessary public water system components in operation and shall maintain such components in good operating condition so the components function as intended.
- **DEFICIENCY: Bio-Growth on Clarifier. (Picture 3)**  
Regulation: F.A.C 62-555.350(2). Suppliers of water shall keep all necessary public water system components in operation and shall maintain such components in good operating condition so the components function as intended.
- **DEFICIENCY: Bio-Growth on Aerator. (Picture 4)**  
Regulation: F.A.C 62-555.350(2). Suppliers of water shall keep all necessary public water system components in operation and shall maintain such components in good operating condition so the components function as intended.
- **DEFICIENCY: Pressure Gauge inoperable at raw entry line to plant. (Picture 5)**  
Regulation: ; F.A.C 62-555.350(2). Suppliers of water shall keep all necessary public water system components in operation and shall maintain such components in good operating condition so the components function as intended.

**Picture**



Picture 1: Leaking Transfer Pump



Picture 2: Leaking Transfer Pump

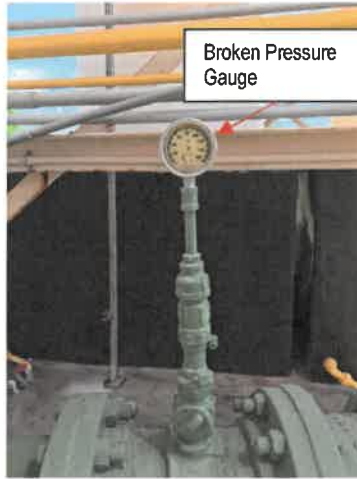


Picture 3: Bio-growth on Clarifiers



Picture 4: Bio-growth on Aerator





Picture 5: Pressure Gauge in disrepair

INSPECTOR'S SIGNATURE Rosa Esparza  
Rosa Esparza

TITLE: ENGINEERING SPECIALIST III

DATE: 9/15/21

REVIEWED BY Ileana N. Bracete  
Ileana N. Bracete, M.E., E.I.

TITLE: ENVIRONMENTAL MANAGER

DATE: 9/15/21



## FGUA Operations Office

Government Services Group, Inc.  
280 Wekiva Springs Rd., Ste 2070  
Longwood, FL 32779-6026

(877) 552-3482 Toll Free  
(407) 629-6900 Tel  
(407) 629-6963 Fax

October 14, 2021

Ileana N. Bracete  
Environmental Manager  
Lee County Department of health  
60 South Danley Drive, Unit 1  
Fort Myers, FL 33907

Subject: Response to Lehigh Acres (PWS 5360172) Compliance Inspection Report

Dear Ileana,

This information is in response to the Florida Department of Health's Compliance Inspection Report dated September 15, 2021. The Department's letter requests that five items found during an inspection on September 8, 2021, be resolved. Please see below for details how on these matters have been addressed:

1. **Deficiency:** *Leaking Transfer pump 1 after filters*

**Response:** Pump 1 is currently in the shop for repairs.

2. **Deficiency:** *Leaking Transfer pump 2 after filters*

**Response:** Pump 2 will be sent in after Pump 1 is repaired since they are on the same clear well.

3. **Deficiency:** *Clarifiers with bio-growth*

**Response:** Bio-growth on the clarifier has been cleaned, plants are on a routine cleaning schedule every 2 weeks.

## FGUA Board of Directors

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4. **Deficiency:** *Aerator with bio-growth*

**Response:** Aerator beam was pressure washed and the upper metal panel was replaced.



5. **Deficiency:** *Pressure gauge at raw water entry in disrepair*

**Response:** The pressure gauge has been replaced.



If there are any questions or concerns regarding any of the responses, please don't hesitate to contact me via e-mail at [scain@govmserv.com](mailto:scain@govmserv.com) or via cell at 407-488-8843.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sam Cain".

Sam Cain, P.E.  
Utility Engineer

Copy to:  
Michael Currier, South Region Manager  
Lina Maria Quintero, P.E., Regional Manager (U.S. Water Services Corp.)