

# COUNTRY WALK UTILITIES, INC.

August 9, 2018

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FPSC - COMMISSION CLERK

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Public Service Commission  
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Tallahassee, FL 32399

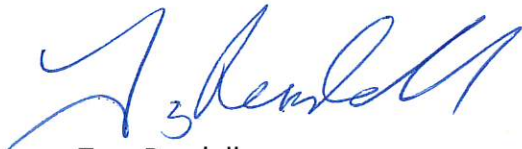
***Re: Docket No. 20180021-WU - Application of Country Walk Utilities, Inc. for Staff Assisted Rate Case in Highlands County – Response to FPSC Request 1284605W***

Dear Commission Clerk,

Please include the attached correspondence in the above referenced docket.

If you have any questions, please do not hesitate to contact me at (727) 848-8292, ext. 245.

Respectfully Submitted,

A handwritten signature in blue ink, appearing to read "Trendell", with a stylized flourish at the end.

Troy Rendell  
Vice President  
Investor Owned Utilities  
*// for Country Walk Utilities, Inc.*

# COUNTRY WALK UTILITIES, INC.

August 9, 2018

Arthur Ballard  
35 Quail Roost Rd.  
Lake Placid, FL 33852

RE: FPSC Request No 1284605W

Dear Mr. Ballard,

I have received your concern filed with the Florida Public Service Commission (FPSC) – Request No. 1284605W. I've previously explained the new water treatment system recently placed into service. However, for the record and for the reply to the FPSC, I'll reiterate my previous e-mailed correspondence to you.

Regarding the new treatment system - This is a forced draft aeration treatment system which is prescribed by Florida Department of Environmental Protection (FDEP) Rule 25-555.315(5)(a), Florida Administrative Code. The levels of sulfides in the source ground water rise to the level which requires forced draft aeration with pH adjustment. We worked closely with both the Homeowners Association and the FDEP on this project, which was placed into service last year. Country Walk Utilities spent approximately \$134,343.64 on the project. The actual costs were higher than that amount, but U.S. Water Services did not charge all of the costs to the utility in order to keep the rate impact at a minimum. We have had some components failures and have either replaced them or are in the process of replacing these components through the warranty. Prior to the filing of the recent staff assisted rate case (SARC), the utility has received very little water quality complaints, and have been told that it is the best water the customers have tasted. The water quality issues that were previously raised were addressed with the homeowners, primarily through flushing.

There is no need or requirement for an additional filter at the water treatment plant. Filters would require backwash with no means to dispose of the backwash water – as there is no wastewater plant. In addition, this would require an Industrial Wastewater Discharge Permit with the FDEP which is costly. Cartridge filters would be costly and would have no added benefits. Individual homeowners may chose to install additional home filters if they would like additional filtration. Cartridges will remove any supplemental components that may remain in the water. However, the forced draft aeration is working properly and is removing the sulfides in the water as designed. Country Walk Utilities is currently meeting all primary and secondary water quality standards. In fact with the addition of the new treatment system, the utility was able to lower the chlorine usage previously utilized. As a result, the utility is now below the disinfection byproduct limits as set by the FDEP.

Country Walk has also recently implemented an additional service line project. The utility began digging up service lines and decalcifying the service lines. This has been caused by the level of disinfection previously required to address the sulfides prior to the new treatment system. This has greatly improved the water pressure for the homes where we've completed this. This project is nearing completion with approximately 4 – 5 home services to go.

I've attached a test result taken on 09/06/17 which shows that the sulfide levels post treatment were "not detectable" which indicates that the new treatment system is removing the naturally occurring sulfides in the water as designed. Forced draft aeration with pH adjustments have proven to remove up to 90% of total sulfides. However, as previously explained at the HOA meetings, the sulfide issue has existed for numerous years, prior to the acquisition of the utility by Country Walk. It was previously explained that the previous owner also had issues with FDEP. Prior to the recent installation of the aeration treatment, the sulfides were previously oxidized utilizing higher levels of free chlorine. However, this caused exceedances in the disinfection byproducts (DBP) in the system. In order to address the water quality concerns and maintain the minimum chlorine residual in the distribution system, Country Walk utilized flushing of the distribution systems to maintain water quality. Due to the naturally occurring high sulfide content in the wells, the water had to be circulated in the distribution system to maintain the proper chlorine residual as required by FDEP. If the water is allowed to sit stagnant for any length of time, the residual hydrogen sulfide starts reforming and it exhibits a chlorine demand causing the residual to be reduced and ending with "rotten egg" smelly water and chlorine residuals lower than state requirements placing the utility in violation of Rule 62-555, Florida Administrative Code (F.A.C.). Again, this was prior to the installation of the new aeration treatment system.

Flushing is recognized as a normal maintenance practice of utilities to address water quality concerns throughout distribution systems in the United States. This is also recognized by the Florida Department of Protection (FDEP) as a common utility practice to address distribution system maintenance. Flushing is the most common and cost effective method of mitigation for this phenomenon. It is accomplished by flushing of the distribution system through blow-offs at dead ends or from flushing hydrants. In addition to regular flushing, upon complaints from specific areas, Country Walk institutes some emergency flushing that can provide immediate relief. Although flushing is the most immediate response to these issues, it only scours the build-up of naturally occurring minerals in the distribution system and did not provide a solution to the source of supply.

The residual hydrogen sulfides in the water distribution lines caused bacteria to begin feeding on the residuals. This interaction of the bacteria with the residual hydrogen sulfides also increased the chlorine demand in the water. In order to address both the rotten egg smell and the reduction in chlorine in the lines, the utility was forced to increase its flushing. This situation is exacerbated by the seasonality of the customer base. During the summer months, the Country Walk experiences a low customer population and low usage throughout the distribution system.

Thus, as previously explained, although the sulfides are now being removed at the source (treatment plant), there may still be residuals throughout the distribution system, as well as inside customers' homes and hot water heaters. This has accumulated over the period of years – ***again prior to the installation of the new treatment process***. It is going to take additional time for the residuals to be

removed throughout the distribution system, as well as inside the customers' homes. Flushing of the customers' hot water heaters will also assist in this removal process. This will not be instantaneous.

There are several automatic flushers located throughout the Country Walk distribution system. The utility recently installed another automatic flusher to address customer concerns. Again, the utility is meeting all primary and secondary standards are is also below the DBP requirements set by FDEP.

Below is the table from FDEP Chapter 62-555.315(5)(a), Florida Administrative Code:

(a) Provide aeration or other appropriate treatment of the water from the new or altered well to remove total sulfide as necessary. Recommended types of aeration treatment for different water quality ranges are listed in the table below, which is incorporated herein as guidance and not as a requirement. Direct chlorination shall not be used to remove (i.e., oxidize) 0.3 mg/L or more of total sulfide unless the elemental sulfur formed during chlorination is removed.

POTENTIAL FOR IMPACTS WITHOUT TOTAL SULFIDE REMOVAL	WATER QUALITY RANGES	POTENTIAL WATER TREATMENT
Low	Total Sulfide < 0.3 mg/L Dissolved Iron < 0.1 mg/L1	Direct Chlorination2
Moderate	0.3 mg/L Total Sulfide 0.6 mg/L @ pH $\leq$ 7.2  <b>or</b> 0.3 mg/L Total Sulfide 0.6 mg/L @ pH > 7.2	Conventional Aeration3 (maximum removal efficiency 40-50%)  <b>or</b> Conventional Aeration with pH Adjustment4,5 (maximum removal efficiency 40-50%)
Significant	0.6 mg/L < Total Sulfide 3.0 mg/L @ pH 7.2  <b>or</b> 0.6 mg/L < Total Sulfide 3.0 mg/L @ pH > 7.2	Forced Draft Aeration3 (maximum removal efficiency 90%)  <b>or</b> Forced Draft Aeration with pH Adjustment4,5 (maximum removal efficiency 90%)
Very Significant	Total Sulfide > 3.0 mg/L	Packed Tower Aeration with pH Adjustment4,5 (maximum removal efficiency > 90%)

1. High iron content raises concern if chlorination alone is used and significant dissolved oxygen exists in the source water. Filtration may be required to remove particulate iron prior to water distribution.
2. Direct chlorination of sulfide in water in the pH range normally found in potable sources produces elemental sulfur and increased turbidity. Finished-water turbidity should not be more than two nephelometric turbidity units greater than raw-water turbidity.
3. Increased dissolved oxygen entrained during aeration may increase corrosivity.
4. Reduction of alkalinity during pH adjustment and high dissolved oxygen entrained during aeration may increase corrosivity. Corrosion control treatment such as pH adjustment, alkalinity recovery, or use of inhibitors may be required.
5. High alkalinity will make pH adjustment more costly, and use of other treatment may be in order. Treatment that preserves the natural alkalinity of the source water may enhance the stability of finished water.

Concerning the water pressure, the minimum pressure required by FDEP is 20 psi. Country Walk's pressure is between 40 psi and 60 psi. Pursuant to FDEP Rule 62-555.350(7), Florida Administrative Code.

(7) Except when a water main breaks or treatment or pumping equipment fails and except under circumstances that the supplier of water documents to be highly unusual and nonrecurring, suppliers of water shall maintain a minimum gauge pressure of 20 pounds per square inch throughout their drinking water distribution system up to each customer's point of connection to the water supplier's distribution system.

Concerning the chlorine levels, this too is prescribed by FDEP. Pursuant to Rule 62-555.350(6), FAC:

(6) Suppliers of water shall maintain a minimum free chlorine residual of 0.2 milligram per liter, or a minimum combined chlorine residual of 0.6 milligram per liter or an equivalent chlorine dioxide residual, throughout their drinking water distribution system at all times. If at any time the residual disinfectant concentration in any portion of a distribution system falls below the required minimum level, the supplier of water shall increase the disinfectant dose as necessary and flush said portion of the distribution system until the residual disinfectant concentration is restored to the required minimum level.

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Mr. Ballard  
August 9, 2018

If you have any questions or concerns please contact me at (727) 848-8292 ext. 245. Thank you

Sincerely,

A handwritten signature in blue ink, appearing to read "Troy Rendell". The signature is fluid and cursive, with a large initial "T" and "R".

Troy Rendell  
Vice President  
Investor Owned Utilities  
*/// For Country Walk Utilities, Inc.*