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January 17, 2014

VIA FEDEX

COMMISSION CLERK

Carlotta S. Stauffer, Commission Clerk Office of Commission Clerk Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399

Docket No. 130212-WS; Application for an Increase in Water and Wastewater Rates RE: in Polk County by Cypress Lakes Utilities, Inc. Our File No.: 30057.212

Dear Ms. Stauffer:

The following are Cypress Lakes Utilities, Inc.'s ("Utility" or "Cypress Lakes") responses to the Staff's Third Data Request dated December 31, 2013:

1. In reference to MFR Schedule F-1, Column (4) Other Uses, please provide documentation to substantiate the other uses in the test year 2012. As part of the response, please provide the purpose, quantity, and frequency of such uses.

Response. In response to a Polk County Health Department ("PCHD") routine sanitary survey of the Cypress Lakes water system in February 2010, Cypress Lakes Utilities identified that a program of quarterly flushing of dead end lines would be followed in order to establish an adequate and consistent chlorine residual throughout the distribution system (see attached file titled "Sanitary Survey Response 050410.pdf"). The Utility had previously executed a less structured flushing effort that was focused on flushing some dead end lines but primarily driven by customer complaints. These 2010 flushing program modifications were intended to reduce detention time of the water in the piping network and to remove any buildup of minerals and sediment from the mains that may have contributed to an increase in chlorine demand and thus make it difficult to maintain an adequate chlorine residual. This would also improve water quality at the tap for the benefit of the customers. As a result of executing this program, the annual volume of water used for flushing increased substantially to more than three million gallons per year, about 10 times as much as was used in the previous year.

Subsequent monitoring of the distribution system identified a lack of success in meeting this objective. Discussions with PCHD resulted in the submittal of an application to convert the disinfection system to chloramine disinfection,



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which was accomplished in July 2011 (see attached file titled "Chlorine Conversion Approval 072711.pdf"). In order to maintain a combined chlorine residual of at least 0.6 mg/L at the farthest point in the distribution system, a more extensive flushing program was required and implemented. The Utility installed a number of automatic flushing valves at select locations throughout the system, some of which were 2" size and some that were <sup>3</sup>/<sub>4</sub>" (see attached file titled "SDR 3.1 List of Flushing Points.xlsx"). Automatic flushing valves (AFVs) were purchased and installed with flushing activity controlled by the use of a preset timer at each AFV (see attached file titled "Hydro-Guard AFV brochure.pdf").

The flushing volume at each location was estimated based on the duration and frequency of flushing multiplied by the estimated flow using a flow calculator provided by the AFV manufacturer. In order to better quantify the amount of flushing volume actually being used, the Utility began installing meters at the flushing points beginning in 2010 at three locations with 2" valves, then the eleven <sup>3</sup>/<sub>4</sub>" flushing points in 2012 and 2013. Two-inch meters are to be installed on the three remaining 2" flushing points in 2014.

2. Are the other uses identified above likely to be recurring in future years? If so, please explain.

Response. Yes, Cypress Lakes Utilities expects to continue utilizing a combination of chlorine and ammonia, commonly referred to as chloramination, in order to meet the disinfection requirements specified in Chapter 62-550 and 62-555, F.A.C., and to conform with the regulatory requirements contained in the Total Coliform Rule and the Disinfection Byproducts Rule. The presence of naturally occurring organics in the groundwater at the two Cypress Lakes supply wells act as precursors to the formation of Total Trihalomethanes (TTHMs) and Haloacetic Acids (HAAs) in concentrations that exceed the Maximum Contaminant Level (MCL) for those constituents. The MCL for TTHM is 80 micrograms per liter and the MCL for HAA5 is 60 micrograms per liter. Elevated levels of TTHM and HAA5 in 2011, based on a running annual average of quarterly monitoring data, indicated a change to the disinfection method was necessary in order to adequately disinfect the groundwater without triggering the formation of TTHM and HAA5 in concentrations greater than the applicable MCL (see the attached file titled "TTHM RAA Exceedance Ltr 040811.pdf").

As a consequence, Cypress Lakes Utilities requested authorization from the Polk County Health Department to use chloramination as the disinfectant Carlotta S. Stauffer, Commission Clerk Office of Commission Clerk Florida Public Service Commission January 17, 2014 Page 3

> method in order to remain compliant with current regulations while adequately disinfecting the water supply in a reliable and cost effective manner. The combined use of chlorine and ammonia produces a weak disinfecting agent that is less effective as an oxidizing agent than free chlorine and thus it is more difficult to maintain an adequate residual chlorine in the distribution system. Consequently, the Utility must execute an extensive flushing program in order to reduce the detention time of the water in the piping system, especially at the more distant locations. Therefore, the Utility will continue to report a significant amount of water used for flushing of water mains each month and year at Cypress Lakes.

3. Please provide the total gallons pumped and gallons for other uses for years 2005, 2009, 2010, and 2011. As part of the response, please explain whether the other uses are for similar purposes identified in 1.

**Response.** The attached file titled "SDR 3.3, Water pumped & flushed per year 2005-12.xlsx" includes data from 2005 through 2012. The vast majority of "Other Uses" volume is associated with flushing. Examples of additional uses include potable water use at the utility's field office, water losses from repairs to water mains and services; wash down water used at Utility facilities, and leaks in the piping system.

4. Based on MFR Schedule F-1 and Schedule F-6, the number of gallons of water sold is less than the number of gallons of wastewater treated. Please explain and provide documentation to support the explanation.

**<u>Response.</u>** As shown on MFR Schedules F-1, total water sold in 2012 was 46.211 million gallons. As shown on MFR Schedule F-2 and F-6, total wastewater treated in 2012 was 50.796 million gallons, a difference of 4.585 million gallons or 12,560 gallons per day on average. This is less than the amount allowed under PSC rule as calculated on Schedule F-6. This daily volume reflects the impact of inflow and infiltration (I&I) on the total volume of wastewater treated at the Cypress Lakes WWTP. It is often the case that wastewater flow exceeds water sold for the same customer base after taking into account the effect of I&I.

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If you or the Staff have any questions, please feel free to contact me.

Very truly yours,

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MARTIN S. FRIEDMAN For the Firm

MSF/der

cc: Jason Barrett (via e-mail) Patrick Flynn (via e-mail) Frank Seidman (via e-mail) Daniel Lee (via e-mail)