

**Cartwright Creek, L.L.C.**  
**PO Box 147**  
**1551 Thompson's Station Road West**  
**Thompson's Station, TN 37179**  
**615-261-8600**

June 30, 2010

filed electronically in docket office on 07/01/10

Ms. Darlene Standley, Chief  
Utilities Division  
Tennessee Regulatory Authority  
460 James Robertson Parkway  
Nashville, TN 37243-0505

Docket No. 09-00056  
Petition of Cartwright Creek, LLC to Change and Increase Rates and Charges  
Volumetric Billing Feasibility Report

Dear, Ms. Standley,

Attached for filing is Cartwright Creek's Volumetric Billing Feasibility Report as requested by the Authority during the regularly scheduled conference of December 14, 2009.

Please contact me if you have any questions.

Sincerely,

Br / My

Bruce E. Meyer  
Vice President – Operations  
Cartwright Creek, LLC

Copies: Sharla Dillon, TRA – (Electronic version  
Hard copy original and five copies )

**Volumetric Billing Feasibility Report**  
**Cartwright Creek, LLC**

**1. Introduction**

This report has been prepared as a result of the determinations made by the Authority in Docket No. 09-00056 during the regularly scheduled Conference of December 14, 2009. The Authority requested that Cartwright Creek study the feasibility of changing to volumetric billing rather than billing based upon the number of bedrooms.

The Authority's statements during the proceedings in the aforementioned docket as well as dockets for similar wastewater utilities indicate to Cartwright Creek that the Authority strongly desires billing to be based on volumetric water use. Therefore, this report addresses the issues that must be addressed for Cartwright Creek to consider volumetric billing including the resources required and additional costs to Cartwright Creek and its customers.

**2. Current Billing Basis**

Cartwright Creek has approximately 495 residential customers and 35 non-residential customers. Cartwright Creek provides only wastewater treatment services. Approximately 70 Cartwright Creek customers receive potable water from the Harpeth Valley Utility District (HVUD). The remainder receive potable water from the City of Franklin.

Cartwright Creek bills residential customers based upon the number of bedrooms in the residence. This method has been used since Cartwright Creek's formation in the early 1970's.

Historically, non-residential customers have been billed based upon volumetric water flow, actual or estimated. At the present time, non-residential customers receive monthly bills that are based upon an average of monthly usage calculated from actual water use data (City of Franklin and Harpeth Valley Utility District) from January 2007 through June 2009. This monthly average will be updated annually based upon the actual water use from the prior 12 months.

**3. Volumetric Billing Issues**

There are number of interrelated issues that were considered by Cartwright Creek in its evaluation and selection of the desired method of volumetric billing:

**- The method of obtaining and handling the water flow data**

Existing Cartwright Creek customers in the Grasslands area are provided water by Harpeth Valley Utility District (HVUD) and the City of Franklin. For the Waterbridge development,

water data will be provided by Nolensville-College Grove Water District and for the Stillwater development by Milcrofton Utility District. There needs to be discussion and ongoing relationship with each water utility to define the requirements and provide this data in a format workable with Cartwright Creek. There may also be a one-time setup and ongoing costs from each water utility to provide the data.

- **Billing rates**

Billing rates (\$/1000 gallons) need to be kept fair and comparable to other neighboring utilities and municipalities. Rates need to yield revenues consistent with those accepted by TRA in Docket Number 09-00056.

- **Resources and cost requirements**

There will be additional personnel and possibly physical resources required to initially setup and maintain the volumetric billing system and associated costs to Cartwright Creek's customers. The current bills for residential customers (90% of Cartwright Creek's customers), are unchanged from month to month. Therefore, obtaining and managing the volumetric data from up to 4 water utilities, calculating and adjusting each individual bill (both hard copy and automatic withdrawal), and checking and resolution of missing or erroneous flow information will require significantly more administrative and management time.

No resources or costs for any volumetric billing system were included in Docket No. 09-00056. These will need to be included in a rate case that will be submitted to and approved by TRA prior to implementing any type of volumetric billing.

- **Irrigation water use**

If wastewater bills are based solely on water use, without adjustment for summer irrigation, customers pay higher wastewater bills for water never entering the collection and treatment system.

Additionally, the Company's current method of billing results in steady and predictable monthly revenue, which corresponds well with Cartwright Creek's relatively consistent monthly costs. A volumetric system that results in irregular wide swings in monthly revenue, or worse yet, unexpected, unrecoverable shortfalls in approved revenue if irrigation decreases due to wet weather or installation of irrigation meters, will have severe impact on Cartwright Creek.

#### **4. Communications with Water Providers**

Cartwright Creek contacted the two water companies serving the Grasslands facility, the City of Franklin and the Harpeth Valley Utility District (HVUD) to determine the feasibility of obtaining customer water data.

The City of Franklin, which has been very helpful during previous requests for information, has indicated it can provide volumetric data to Cartwright Creek annually or monthly. In order to determine the City's time and fee for initial setup and regular updates, the City has requested additional information, a portion of which will result from the TRA's response to this report.

HVUD has preliminarily indicated that there will be no monthly charge to provide volumetric data from its approximately 70 Cartwright Creek customers. There will be an initial setup charge of just under \$600.

Since Cartwright Creek has no customers in Waterbridge or Stillwater at the present time, the Company did not contact Milcrofton or Nolensville-College Grove.

#### **5. Potential Volumetric Billing System**

After consideration of the above described issues, Cartwright Creek believes that transitioning to an annually adjusted volumetric billing system is the only potential method that will be acceptable to our current operations. The concept of the system is described as follows.

Residential and non-residential customers will be billed monthly with the volume based upon the monthly average volumetric water use for the months of December, January, and February. The billing volume will be adjusted annually, beginning with the April bill each year, using the average monthly volumetric flow in the preceding December through February.

Cartwright Creek will establish an agreement with HVUD and the City of Franklin to provide, initially and once each year, flow data on in an Excel or other equivalent format. The data will be quality control checked to exclude bills from separate irrigation meters and the volume contributed by confirmable leaks. Then the billing volume will be calculated for each customer, the monthly bill calculated using TRA approved volumetric rates (to be determined), and that information entered into the Cartwright Creek accounting system.

For new residential customers, until an actual winter volumetric use can be established as described above, the monthly bill will be based upon the volumetric use for December-February of the previous occupant or, if not applicable, the volumetric use of equivalent nearby residences.

For new non-residential customers, until an actual winter volumetric use can be established as described above, the monthly billing volume will be estimated either based upon the previous volumetric use (if equivalent business) or estimated using EPA or TDEC guidance.

We believe the above described proposed method positively addresses a number of issues:

- It is a method similar to other middle Tennessee municipalities and utilities that bill wastewater customers based upon some variation of average winter water use. Please see Attachment A for a sampling of nearby towns.
- It does not bill for irrigation water use.
- It keeps revenue relatively consistent from month to month.
- Volumetric data is managed and bills are adjusted once annually it requires fewer additional resources and costs than would a volumetric billing system based upon a monthly flow and bill adjustment.

The following items are still a concern, however:

- Additional resources and costs for initial setup and annual maintenance are not in Cartwright Creek's budget and must be part of a future rate case before the conversion can be made.
- The true cost benefit to individual Cartwright Creek customers cannot be evaluated until the rates are identified and rate case is processed and approved.

#### **6. Initial Setup and Establishment of Volumetric Rates**

To be able to arrive at a \$/1000 gallon rate for Cartwright Creek customers, HVUD and Franklin will need to supply volumetric data for November 2008 through March 2009 and November 2009 through March 2010.

Based upon Cartwright Creek's experience reviewing similar data from 35 commercial customers, there will be significant time office and field time required to review and convert this data from 500 customers so that it is usable in the proposed volumetric billing method. The reasons for this time include: the water utilities have their own systems of naming and tracking accounts that do not necessarily match with Cartwright Creek's system; they do not know which of their water customers are Cartwright Creek; water meter readings are often not on the first of the month; and there will be a number of differences in customer names or locations that will need to be contacted directly for verification.

Once the winter volumetric use is confirmed, total volume can be calculated and used to arrive at residential and non-residential billing rates per 1000 gallons that will provide the revenue

equivalent to that approved by TRA in Docket No. 09-00056, plus the cost to setup and maintain the volumetric billing system. This will be presented for TRA approval in a rate case.

We anticipate 120 hours of fully loaded management time (\$12,000) to establish agreements with the two water utilities, refine the data as described above, and arrive at volumetric rates. There will be an estimated \$2,000 paid to the water utilities for initial setup. In addition, we anticipate an additional \$10,000 in management and legal costs to prepare and process a rate case through TRA. Cartwright Creek does not have sufficient cash resources to fund these upfront costs and would need to seek a reduction in the required financial security amount to free up cash reserves to complete the work.

### **7. Ongoing Resources and Costs**

Volumetric data will be received, checked, and new bills calculated for each customer annually. There will be written notices explaining the changes prepared and mailed to each customer. The banks of the customers on automatic withdrawal will each have to be notified in writing. As with any change in billing and procedures, customer questions and billing issues will need to be addressed, requiring additional administrative and management time. The Company estimates that an additional 100 hours of fully loaded administrative and management time will be required annually at a cost of \$10,000 plus the cost of additional mailings at \$500.

### **8. Conclusions**

It is feasible for Cartwright Creek to transition to volumetric billing using the billing method described above, which is based upon an annual bill adjustment corresponding to winter water use. If the TRA desires another billing method, the feasibility, and related resources and costs, would need to be reevaluated.

None of the costs for conversion and maintenance of this volumetric system, nor the cost of the rate case required to convert to this system, nor the costs for the time required to research and prepare this report are in Cartwright Creek's budget or included in Docket No. 09-00056. These costs will need to be approved in a future rate case.

It is not clear whether or not the increased cost passed to each customer will offset the benefits of converting to a volumetric billing system. Its cost advantages or disadvantages to specific customers can only be evaluated once the work for the rate case is completed, however, in aggregate Cartwright Creek will have to increase its rates to cover additional costs outlined above.

**Attachment A**  
**Examples of Billing by Neighboring Utilities**

Obtained from the respective websites or TRA dockets:

City of Brentwood: “Winter Water Average - The monthly sewer rate charge by the city is based on each customers average winter water consumption ass billed in the months of December through March using the previous rate schedule. For sewer customer who are not water customer of the city, the computation of average winter water consumption is based upon the four-month period that most closely corresponds to that used for other customers. The established rate per 1000 gallons above the minimum bill is prorated for each 100 gallons consumed.”

Harpeth Valley Utility District: “All and only wastewater service bills for 5/8” x 3/4” water meters for the nine (9) months beginning in March (which would be the bills with due dates from May through January) each year will automatically have the wastewater service charge computed on the wintertime (December, January, and February) water usage plus thirty (30%) or actual water usage, whichever is less.”

City of Columbia: “Why is my sewer bill the same every month? Volume fees for residential customers are calculated using the 6-month average gallons of water used. The usage during the months of November through April will be used to calculate the average. .... During the month of May, a new average will be available and will automatically be used to calculate the volume fee for the account. (Customers with new service will be billed on actual monthly water usage until an entire averaging period has been complete at the service address.)”

City of Murfreesboro: “Summer Sewer Credits: ..... With this in mind, when your bill is printed each month April through October, if your usage exceeds the amount calculated from your winter month’s average plus 20 percent, you are automatically credited with a Summer Sewer Adjustment reduction to the sewer billing.”

City of Franklin: “Sewer is billed based on water delivered. The City of Franklin does not adjust water of sewer bills for lawn sprinkling.”

City of Spring Hill: Sewer charges are based upon water use with no seasonal adjustment.

Lynwood Utility: Sewer charges are based upon water use with no seasonal adjustment (City of Franklin does billing.)