



**CITY OF COLORADO SPRINGS
OFFICE OF THE CITY AUDITOR**

**09-14 - REVIEW OF
COLORADO SPRINGS UTILITIES'
RESIDENTIAL WASTEWATER
USAGE CALCULATION**

JULY 10, 2009

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City Auditor

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Office of the City Auditor

Date: July 10, 2009

To: Honorable Mayor and Members of City Council

Re: 09-14 - Review of Colorado Springs Utilities' Residential Wastewater Usage Calculation

A Colorado Springs Utilities' (Utilities) customer recently addressed the Utilities Board regarding the calculation of Wastewater charges. In response, we reviewed the Wastewater Tariff language, the current calculation method of customer billing for Winter and Summer Periods, and Utilities' newsletter communications defining Wastewater rate calculations. We also recalculated a sample of customer accounts for analysis.

We found the three-month average of the Winter Period billing units, as recalculated for use by Utilities in the Summer Period, is often different from the actual units billed during the Winter Period. The calculation is also difficult for customers to understand. This situation results from the Summer Period recalculation changing the weighted value of water consumption units by placing more emphasis on water consumption outside the Winter Period. In addition, the recalculation can result in water consumption data being used as many as three times in the calculation, further skewing the three-month average of the Winter Period. Our opinion is the three-month average used in the Summer Period calculation should correlate to the consumption actually billed to the customer during the Winter Period. We also conclude the change in the calculation method, which originally occurred with the 2008 Rate Case, was not communicated to the customers in a manner that adequately explained the change nor one where the customer could easily understand the change.

It should be noted that we stopped short of concluding the Summer Period calculation was not in compliance with the Tariff. From an auditor's viewpoint, we believe the Tariff implies the Summer Period calculation should be done in a manner similar to the Winter Period calculation. However, after consultation with the Deputy City Attorney – Utilities, we learned his opinion is the Tariff does not provide clear direction on the calculation nor does it prohibit the method Utilities is using, therefore, a conclusion of noncompliance could not be legally supported.

Based on our determination the Summer Period recalculation of billing units for the three-month average is often different from the actual units billed during the Winter Period and the difficulty of understanding the mechanics of the calculation, we recommend Utilities review the Wastewater usage calculations and develop a plan of action where the calculation can be changed before the next Summer Period begins (March 2010).

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Colorado Springs Utilities response, which can be found as Attachment 2 to our report, includes their recommendation of maintaining the current methodology until the 2011/2012 period.

The following pages detail our analysis of the manner in which Wastewater usage is calculated.

As always, feel free to contact me if you have any questions.

Sincerely,



Jeff Litchfield
City Auditor

cc: Jerry Forte, Chief Executive Officer
Gary Fischer, Colorado Springs Utilities Customer

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Abbreviations, Acronyms and Key Words used in this Report

NQC	Normal Quantity Charge
Summer Period	the months of March through November
Three-Month Period	Winter Period Billing Units
Winter Period	the months of December through February
Winter Period Billing Units	water consumed from December 1 through the last day of February. This period is also referred to as the Three-Month Period.

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AUTHORIZATION

We performed a review of the Residential Wastewater Usage Calculation used by Colorado Springs Utilities (Utilities). We conducted this review under the authority of Chapter 1, Article 2, Part 7 of the City Code, and more specifically parts 707 and 709(A), which state:

1.2.707: COOPERATE WITH CITY ADMINISTRATION AND CITY COUNCIL:

- A. The City Auditor shall confer and consult with the enterprises and City administration on matters relating to financial practices and the implementation of programs and operations.
- B. The City Auditor shall furnish information to Council whenever required upon any subject relating to the financial affairs of the City.

1.2.709: MAKE PERIODIC REPORTS TO COUNCIL:

The City Auditor shall make periodic reports to Council which shall include the following:

- A. Whether groups, departments, enterprises, administrative officials and employees, in making expenditures, have complied with the Charter and the will of the Council as expressed in this City Code and other formal actions of the Council;

ORGANIZATIONAL PLACEMENT

The Office of the City Auditor is structured in a manner to provide organizational independence from Utilities. This independence is accomplished by the City Auditor being appointed by and reporting directly to the City Council. Utilities is under the direction of their Chief Executive Officer, who is also appointed by City Council.

OBJECTIVE

The objective of this review was to determine if the existing methodology used by Utilities was in compliance with the Tariff, logical, and adequately communicated to customers.

THE TARIFF

The Tariff is the governing document for the way residential wastewater is billed. The language in the current Wastewater Tariff was approved by the City Council on December 11, 2007, with an effective date of January 1, 2008 (Resolution 269-07). The language was repeated within the Tariff approved by the Council in January 2009. The Tariff contains the following wording related to residential Wastewater billing units:

"Determination of Billing Units

Normal Quantity Charge (NQC)

The NQC billing units will be determined for a winter period and a summer period as defined below:

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The winter period is defined as the months of December through February. During the winter period, NQC billing units are equal to monthly metered water consumption. Customers not receiving water service from Utilities will be billed for thirty-three (33) cubic feet per day per residential unit.

The summer period is defined as the months of March through November. During the summer period, NQC billing units are equal to the three (3) month average of the winter period billing units or the monthly metered water usage, whichever is less. For Customers without water usage during any of the months of the winter period, thirty-three cubic feet per day will be used for that month in calculating the average for the winter period.”

In our review of the Tariff, we find several areas that are open for interpretation.

- Example 1, the second paragraph contains the sentence “During the winter period, Normal Quantity Charge billing units are equal to monthly metered water consumption.” Does this mean units billed on the December, January and February bills (like the Tariff prior to January 1, 2008), or does it refer to the number of units that were used for the period December 1 through the end of February?
- Example 2, the third paragraph contains the phrase, “During the summer period, Normal Quantity Charge billing units are equal to the three (3) month average of the winter period billing units.” Does this mean Utilities should determine an average for each of the three months and then calculate an average of that average, or does it mean to take the sum of the three months and divide by the number of days in the three months?

These areas that are open for interpretation hampered our ability to provide a clear and concise report.

OVERVIEW

At Utilities, wastewater collection and treatment services are billed to customers based on data provided from metered water consumption, i.e., a customer’s Wastewater bill is based on information from his/her water meter. Wastewater is not measured when it is collected. Utilities divides each year into two periods (Winter and Summer) to minimize the impact of water used for outdoor activities such as irrigation or washing a patio, which should not enter the wastewater system.

The billing methodology should equitably distribute the cost of service to those who utilize the service. The cost of service does not include any profit being distributed to stockholders because the customers/citizens own Utilities. The method used to distribute the cost of service and charge individual customers for the services provided are prescribed in tariffs. However, some terminology used in the Wastewater Tariff (Tariff) is open to interpretation.

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In an effort to help the reader understand the issue, we are providing a few definitions of key terms used throughout this report. They are:

Winter Period – the months of December through February.

Summer Period – the months of March through November.

Winter Period Billing Units – water consumed from December 1 through the last day of February. This period is also referred to as the **Three-Month Period**.

Most readers will need to understand the billing methodology used by Utilities in order to follow our comments in this report. Please see Appendix 1, where an example calculation can be found.

On April 22, 2009, Mr. Gary Fischer addressed the Utilities Board. He presented his concerns during the customer comment period and indicated he was reading from a prepared script. Mr. Fischer was concerned with the current method of calculating residential wastewater charges. At the conclusion of his comments, Chair Rivera asked Mr. Fischer if he could provide a copy of his comments to the Board. On April 23, 2009, Mr. Fischer e-mailed a copy of his comments to Chair Rivera, who subsequently forwarded them to the other members of the Utilities Board, Utilities Chief Executive Officer Jerry Forte and me, as City Auditor. A copy of Mr. Fischer's comments are included as an Attachment.

Mr. Fischer's comments indicate he believes the residential wastewater usage calculation is convoluted. The comments center on changes in the calculation method implemented in January 2008.

OUR REVIEW

After reviewing the Tariff and obtaining information from Utilities staff regarding the mechanics of the calculation, we conclude the Summer Period uses a calculation method for the Winter Period Billing Units that is difficult to understand and sometimes produces an average daily consumption unit substantially different from the Winter Period Billing Units billed during the Winter Period.

The following is a summary of the wastewater billing calculation methodologies used by Utilities.

1. For the Winter Period, Utilities uses a calculation methodology to bill its residential wastewater customers based on water consumption for the period December 1 through the last day of February (the Three-Month Period). This methodology includes using consumption outside the Three-Month Period, when that consumption is needed to calculate daily use within the period. The billed consumption is shown on the customer's bill in a manner that isolates billed consumption for the Three-Month Period. For example, a bill issued for the 30 days ending December 15 would show 15 days billed according to the Summer rates and 15 days billed according to Winter rates.
2. For the Summer Period, Utilities recalculates the average for the Three-Month Period. The recalculation uses the consumption data in a manner that arrives at a different average daily value of water consumption for the Three-Month Period. The Summer

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Period recalculation changes the weighted value of the water consumption units and allows more emphasis to be placed on water consumption outside the Three-Month Period. In addition, the recalculation can result in water consumption data from one month being used as many as three times in the calculation.

The customer has been billed in a manner showing their water consumption for the Three-Month Period and the recalculation reaches a conclusion that is often different from what was billed.

In Appendix 1, we provide an example account that shows a customer was billed a daily average of 17.92 CF for the Three-Month Period. However, when the Summer Period recalculation was performed, the result was a daily average of 20.63 CF for the Three-Month Period, which is an increase of over 15%.

We also reviewed Mr. Fischer's account and found the recalculation resulted in a 38% increase in the daily average for his Three-Month Period. Mr. Fischer's account information can be found in Appendix 2.

In addition to the example account and Mr. Fischer's account, we also reviewed a sample of 60 accounts selected on a random basis. We compared the average daily unit consumption billed to the customer for the Three-Month Period with the Summer Period recalculation. We found the Summer Period recalculation method resulted in an increase for 38 of the 60 sample accounts and a decrease for the remaining 22, with an average increase in the Average Daily Unit 0.51 CF. More specifics are:

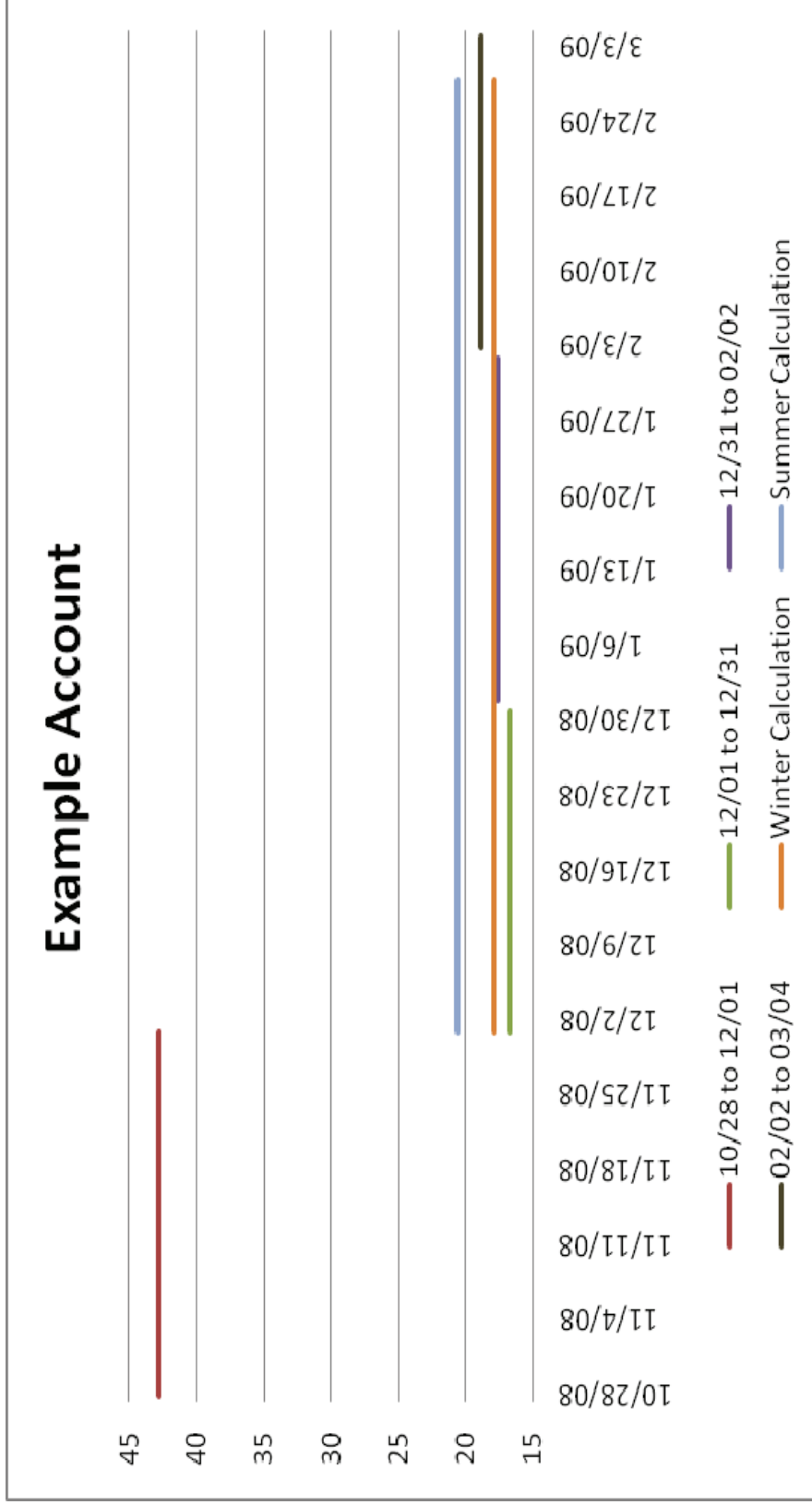
- the highest increase caused by the recalculation method would be a daily consumption difference of 7.96 CF that would calculate to a possible increase in their monthly wastewater quantity charge of \$5.80 a month, or \$52.20 for the 9 month Summer Period;
- the lowest increase caused by the recalculation method would be a daily consumption difference of -4.85 CF that would calculate to a possible decrease in their monthly wastewater quantity charge of \$3.53 a month, or -\$31.77 for the 9 month Summer Period;
- the average daily consumption difference of 0.51 CF would calculate to a possible increase in the monthly wastewater quantity charge of \$0.37 a month, or \$3.33 for the 9 month Summer Period.

The details for this review of 60 accounts can be found in Appendix 3.

The graphs on the following pages provide a graphical representation for the example and Mr. Fischer's accounts.

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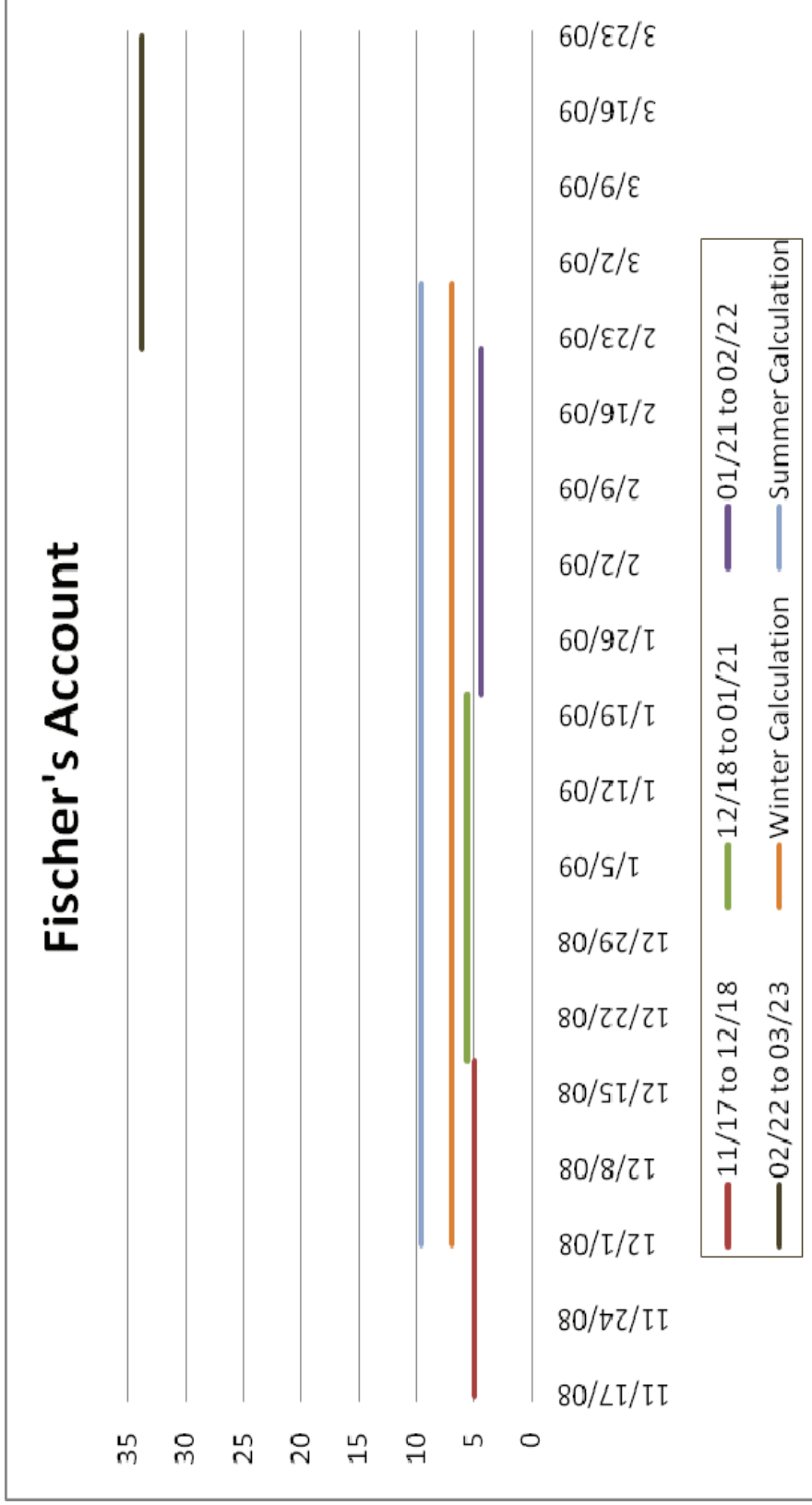
Average Daily Water Consumption Units for the Periods Indicated



This chart shows the impact on the Summer Period recalculation caused by increasing the weight of consumption units. The orange line is the average daily units, calculated on actual consumption data shown on the customer's bills for the Winter Period. The light blue line represents the average daily units as recalculated for the Summer Period. In the graph above, the Summer Period was influenced by the higher consumption in November.

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Average Daily Water Consumption Units for the Periods Indicated



This chart shows the impact on the Summer Period recalculation caused by increasing the weight of consumption units. The orange line is the average daily units, calculated on actual consumption data shown on the customer's bills for the Winter Period. The light blue line represents the average daily units as recalculated for the Summer Period. In the graph above, the Summer Period was influenced by the higher consumption in March.

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Before reaching our conclusion, we need to present information on how we believe Mr. Fischer interprets the three-month average.

MR. FISCHER'S INTERPRETATION OF THE THREE-MONTH WINTER AVERAGE

After reviewing Mr. Fischer's communication to the Utilities Board, we found he calculated his three-month average in a method that is more in line with the Tariff wording prior to January 1, 2008, which included the words "billed by Utilities." To expand, under the old method, any water used after his February billing would not be included in his winter average. His February billing period ended February 22. Therefore, under the old method, any water used after February 22 would not influence his winter average. Mr. Fischer calculated his winter daily average to be 5 CF. An in-depth analysis of Mr. Fischer's interpretation can be found in Appendix 4.

The Tariff that became effective January 1, 2008, did not include the words "billed by Utilities." They were replaced with the words "monthly metered water consumption." This change allows the current method of using averages to determine a consumption amount for the period December 1 to the last day of February.

Based on the actual winter consumption amounts shown on Mr. Fischer's bill, we found the actual winter daily average to be 6.92 CF. We also found the recalculation performed by Utilities resulted in a daily average of 9.56 CF. Our previous statement that Mr. Fischer's recalculation resulted in a 38% difference in the daily average was based on his actual winter daily average of 6.92. If you compare the Utilities recalculated consumption amount of 9.56 CF to Mr. Fischer's calculation of 5 CF, it results in a 91% difference.

COMMUNICATIONS WITH CUSTOMERS

While preparing Appendix 4, we gathered enough information to determine the adequacy of communications with customers. We found the communication in *Connections*, a Utilities publication for its customers, was not sufficient to explain the change in the calculation method. The publication contained wording that allowed customers, such as Mr. Fischer, to reach a conclusion Utilities was using a calculation method much different than the one actually used.

CONCLUSION AND RECOMMENDATION

Our opinion is the three-month average used in the Summer Period calculation should correlate to the consumption actually billed to the customer during the Winter Period.

This difference is caused by the Summer Period recalculation changing the weighted value of water consumption units by placing more emphasis on water consumption outside the three-month period. In addition, the recalculation can result in water consumption data being used as many as three times in the calculation, further skewing the three-month average.

We stopped short of concluding the Summer Period calculation did not comply with the Tariff. From an auditor's viewpoint, we believe the Tariff implies the Summer Period calculation should be done in a manner that is similar to the Winter Period calculation. However, after consultation with the Deputy City Attorney – Utilities, we learned his opinion is the Tariff does not provide clear direction on the calculation methodology nor does it prohibit the method Utilities is using, therefore a conclusion of noncompliance could not be legally supported.

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We also conclude the change in the calculation method, which originally occurred with the 2008 Rate Case, was not communicated to the customers in a manner that adequately explained the change nor one where the customer could easily understand the change.

We recommend Utilities review the wastewater calculations and develop a plan of action where the calculation can be changed before the next Summer Period begins (March 2010). This implies the method be developed prior to November 2009, so the customer can be educated concerning the calculation prior to the Winter Period.

We are not recommending Utilities take immediate actions to change the calculation, for several reasons, some of which are shown below.

1. While we conclude the Summer Period recalculation arrives at an average daily unit that is often different from what was previously billed to the customer, we find the Tariff is too open to interpretation to find the calculation method to be noncompliant with the Tariff.
2. The change should be well thought out and include discussions on whether the existing method of billing for the Winter Period is one Utilities wants to continue, or whether they want to revert to one that is easier understood and controlled by the customer.
3. While the cost to modify the software should be a factor in determining any new billing method, Utilities should also consider the administrative costs associated with the change. For example, if the method is not easily understood by customers, how much time will be spent by customer service representatives explaining the methodology, will there be an extra amount of time spent on complex re-billings, etc.

Once the new billing method is determined, we recommend Utilities include examples in their explanations of the new method so the risk of misunderstanding is minimized.

UTILITIES' RESPONSE

Utilities response to our report is attached as Attachment 2.

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APPENDIX 1 - HOW THE TARIFF IS APPLIED TO RESIDENTIAL CUSTOMER ACCOUNTS

In order to know the true water consumption for the December through February period, the water meter would need to be read at midnight on the last day of November and again at midnight on the last day of February. Utilities does not have a mechanism in place to obtain midnight reads. Therefore, they have developed a method of calculation that meets the intent of the Tariff. The method they have chosen includes the use of meter consumption data outside the December through February period. The use of this information is necessary to calculate an estimate for read periods that have consumption within and without the December through February period. The months outside the December through February period are called shoulder months.

The calculation of wastewater charges based on water consumption is best understood using information for an actual account. We will use an account that Utilities provided, to walk you through the nuance of the calculations. The actual water consumption for our example account is as follows:

		Date	Read (CF)
Period 1	Beginning	10/28/08	147800
	Ending	12/01/08	149255
	Difference (days, consumption)	34	1455
	Average daily consumption (CF)		42.79
Period 2	Beginning	12/01/08	149255
	Ending	12/31/08	149755
	Difference (days, consumption)	30	500
	Average daily consumption (CF)		16.67
Period 3	Beginning	12/31/08	149755
	Ending	02/02/09	150335
	Difference (days, consumption)	33	580
	Average daily consumption (CF)		17.58
Period 4	Beginning	02/02/09	150355
	Ending	03/04/09	150900
	Difference (days, consumption)	30	565
	Average daily consumption (CF)		18.83

The next two sections will analyze the Normal Quantity Charge (NQC) for the Winter and Summer periods, as set forth in the Tariff and as applied by Utilities.

Winter Period

The Tariff for the Winter Period states:

“The winter period is defined as the months of December through February. During the winter period, NQC billing units are equal to monthly metered water consumption.”

Appendixes

As previously discussed, Utilities does not have a mechanism to read meters in a manner to give them an accurate consumption amount for the period December through February. Therefore, they have developed a method of calculation that meets the intent of the Tariff. The calculation methodology adopted by Utilities for the Winter Period can be paraphrased as follows:

Water consumption for any billing periods that contain any day in the months of December, January or February, divided by the number of days in the respective billing period, and then multiplied by the number of days that fell in December, January or February.

We have reproduced a portion of the actual bill for two billing periods, along with our comments.

Water Residential Service (W-R)			
Meter Number:		Service Chg: 34 days x \$0.19	\$6.46
Reading 12/01/08	149255	Comdty Chg Blk 1: 999 CF x \$0.0161	\$16.08
Reading 10/28/08	147800	Comdty Chg Blk 2: 456 CF x \$0.0278	\$12.68
	1455 (CF)	To convert CF to gallons, multiply by 7.48	
Your average daily usage was 42.79 CF		Total charge this service	\$35.22
<p>Average Daily Usage Trend</p> <p>12 Previous Bills plus Current Month</p>			
Wastewater Residential Service (S-R)			
Meter Number:		Service Chg: 34 days x \$0.3997	\$13.59
Reading 12/01/08	149255	Comdty Chg: 43 CF x \$0.021	\$0.90
Reading 10/28/08	147800	Comdty Chg: 586 CF x \$0.021	\$12.31
	1455 (CF)	December through February bill cycles, wastewater charges a based on water usage. March through November bill cycles, wastewater charges are based on either actual water usage f the current month or the 3 month winter average, whichever less.	
Your average daily winter usage 17.74 CF		Total charge this service	\$26.80

For the billing period, the water consumption period was 10/28/08 through 12/1/08. Since one day was in December, the system carved out one day of consumption as follows: 1,455 CF for the billing cycle divided by 34 days in the billing cycle to arrive at an average daily water consumption of 42.79 CF.

The system then charged out the one day for December using a rounded consumption of 43 CF. The arrow points to this number. The remainder of the consumption, which represented October 28 to November 30, was charged at the lower of actual consumption or the previous year's winter average, which, in this case, was the previous year's winter average, or a calculation of 33 days times 17.74 CF for a total of 586 CF.

It is important to note the consumption for the first day of December was based on an average of water used that included part of October, all of November and one day in December. In this calculation, October and November are considered shoulder months. We are not questioning

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the use of the shoulder month data, because it is necessary to use it in order to estimate the monthly-metered water consumption for December.

Water Residential Service (W-R)				
Meter Number:			Service Chg: 30 days x \$0.282	\$8.46
Reading 03/04/09	150900		Cmnty Chg Btk 1: 565 CF x \$0.0221	\$12.49
Reading 02/02/09	150335		To convert CF to gallons, multiply by 7.48	
Your average daily usage was	565 (CF)		Total charge this service	\$20.95
	18.83 CF			
Average Daily Usage Trend				
<p style="text-align: center;">12 Previous Bills plus Current Month</p>				
Wastewater Residential Service (S-R)				
Meter Number:			Service Chg: 30 days x \$0.4588	\$13.76
Reading 03/04/09	150900		Cmnty Chg: 490 CF x \$0.0239	\$11.71
Reading 02/02/09	150335		Cmnty Chg: 75 CF x \$0.0239	\$1.79
Your average daily winter usage	565 (CF)		December through February bill cycles, wastewater charges are based on water usage. March through November bill cycles, wastewater charges are based on either actual water usage for the current month or the 3 month winter average, whichever is less.	
	20.09 CF		Total charge this service	\$27.26

For this billing period, the water consumption period was 02/02/09 through 03/04/09. Since 26 days were in February, the system carved out 26 days of consumption as follows: 565 CF for the billing cycle divided by 30 days in the billing cycle to arrive at an average daily water consumption of 18.83 CF.

The system then charged out 26 days for February using the 18.83 CF per day consumption, or 490 CF. The arrow points to this number. The remainder of the consumption, which represented the period March 1 to March 4, was charged at the lower of actual consumption or the previous year's winter average, which, in this case, was the lower of actual consumption or a calculation of 4 days times 18.83 CF for a total of 75 CF.

It is important to note the consumption for the 26 days in February were based on an average of water used that included part of March. In this calculation, March is considered a shoulder month. We are not questioning the use of the shoulder month data, because it is necessary to do so in order to estimate the monthly-metered water consumption for February.

So far, we have provided you the details for the billing period October 28 to December 1 and February 2 through March 4. There were two billing periods that occurred between December 1 and February 2. We did not present the actual bill for these two periods since all of their consumption was within the December through February constraints as given in the Tariff.

Appendixes

In order to determine the actual Winter Period Billing Units billed to the customer, you have to take data from all four billing periods.

The cumulative effect of the four billing Periods are as follows:

	Days	Cons in CF
Period 1 – Consumption for 1 day in December	1	43
Period 2 – Consumption for 30 days in December	30	500
Period 3 – Consumption for 31 days in January and 2 days February	33	580
Period 4 – Consumption for 26 days in February	<u>26</u>	<u>490</u>
Total	90	1613
Average Daily Consumption for the period		17.92

Therefore, based on the information presented to the Customer on their actual bills, we are able to conclude, that in this example, the customer was billed for 1,613 CF for the 90-day period December 1, 2008 to February 30, 2009, and the average daily consumption during the period was 17.92 CF (1613/90).

As a reminder, the Tariff reads:

“The winter period is defined as the months of December through February. During the winter period, NQC billing units are equal to monthly metered water consumption.”

Since it is not possible to read meters to exactly coincide with the December through February period, as referenced in the Tariff, we must make a determination on the validity of the method Utilities used to calculate the December through February metered water consumption.

Based on our review of the above calculations, we conclude the method of billing for the Winter Period, including the use of metered information outside of the Winter Period, i.e. shoulder months, is an acceptable, cost effective method, which meets the intent of the Tariff.

Summer Period

The tariff for the Summer Period states:

“The summer period is defined as the months of March through November. During the summer period, NQC billing units are equal to the three (3) month average of the winter period billing units or the monthly metered water usage, whichever is less.”

In reading the above paragraph, we reach the conclusion the “winter period billing units” are a direct reference to the “winter period ... billing units” in the Winter Period paragraph. Therefore, for the example account, the NQC billing units should be based on the data shown at the top of this page, where we told the customer they used 1613 CF of water for the Three-Month Period.

In our discussion with Utilities, we found they do a separate calculation of the Winter Period Billing Units for their Summer Period rate calculation. The calculation usually arrives at different winter consumption than that billed to the customer.

Appendixes

The calculation methodology adopted by Utilities for calculating the Winter Period Billing Units for use in the Summer Periods can be paraphrased as follows:

- The sum of water consumption for any billing period that contains any day in the month of December, divided by the number of days in the respective billing periods.
- The sum of water consumption for any billing period that contains any day in the month of January, divided by the number of days in the respective billing periods.
- The sum of water consumption for any billing period that contains any day in the month of February, divided by the number of days in the respective billing periods.
- The sum of the three averages calculated above, divided by three.

Using this methodology with the example account data, Utilities calculates the Three-Month Average as follows:

Step 1 - The sum of water consumption for any billing period that contains any day in the month of December, divided by the number of days in the respective billing periods.

	Dates	Days	Cons (CF)	
Period 1	10/28/08 to 12/01/08	34	1455	
Period 2	12/01/08 to 12/31/08	30	500	
Period 3	12/31/08 to 02/02/09	<u>33</u>	<u>580</u>	
	Totals for December	97	2535	
	Average daily CF for December			26.13

Step 2 - The sum of water consumption for any billing period that contains any day in the month of January, divided by the number of days in the respective billing periods.

Period 3	12/31/08 to 02/02/09	33	580	
	Average daily CF for January			17.58

Step 3 - The sum of water consumption for any billing period that contains any day in the month of February, divided by the number of days in the respective billing periods.

Period 3	12/31/08 to 02/02/09	33	580	
Period 4	02/02/09 to 03/04/09	<u>30</u>	<u>565</u>	
	Totals for February	63	1145	
	Average for February			18.17

Step 4 - The sum of the three averages calculated above, divided by three.

	Average for December	26.13		
	Average for January	17.58		
	Average for February	<u>18.17</u>		
	Total	61.88		
	Average (divided by 3)			20.63

Appendixes

In the example account, when the customer was billed during the Winter Period, they were billed for an average of 17.92 CF per day. However, during the Summer Period, they are billed based on an average of 20.63 CF per day. For this example, the increase is 2.71 CF per day, or 15%.

Some of the reasons for the different results between the two methods are:

1. For the Winter Period calculation, the consumption billed for December, as taken from page 6, was 43 CF for one day and 500 CF for 30 days, arriving at a total of 543 CF for 31 days, or an average of 17.51 CF per day. For the Summer Period calculation, the average consumption for December calculates to 26.13 per day, or an increase of 49.23%.
2. If you look closely at the calculation used for the Summer Period, you will see that Period 3 is included in the December calculation, the January calculation and the February calculation. Including the information in the calculation three times results in that period having extra weight in the overall calculation.
3. The total period covered by the calculation includes consumption from October 28th to March 4th, or a total of 127 days. This means those 37 days (or 41%) of the consumption data used in the Three-Month Period average was outside the 90 day December through February range, as referenced in the Tariff.
4. When you include the impact of including Period 3 three times, the actual number of days used to calculate the Three-Month Period average grows to 193 days.

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APPENDIX 2 – HOW THE TARIFF IS APPLIED TO MR. FISCHER’S ACCOUNT

In reviewing Mr. Fischer’s account, we found the following amounts were billed by Utilities for water meter consumption for the December 1, 2008 through February 28, 2009 Three-Month Period. Calculating the daily average in accordance with the Tariff, we arrive at an average daily consumption of 6.92, calculated as follows:

	Days	Cons (CF)	
December 1 to December 18	18	90	
December 19 to January 21	34	190	
January 22 to February 22	32	140	
February 23 to February 28	<u>6</u>	<u>203</u>	
Total for the 90 days	90	623	
Average			6.92

Using Mr. Fischer’s account data, Utilities calculates the Three-Month Period average for use in the Summer Period as follows:

Step 1 - The sum of water consumption for any billing period that contains any day in the month of December, divided by the number of days in the respective billing periods.

Dates	Days	Cons (CF)	
11/17/08 to 12/18/08	31	155	
12/18/08 to 01/21/09	<u>34</u>	<u>190</u>	
Totals/Average Daily for December	65	245	5.31

Step 2 - The sum of water consumption for any billing period that contains any day in the month of January, divided by the number of days in the respective billing periods.

12/18/08 to 01/21/09	34	190	
01/21/09 to 02/22/09	<u>32</u>	<u>140</u>	
Totals/Average Daily for January	66	330	5.00

Step 3 - The sum of water consumption for any billing period that contains any day in the month of February, divided by the number of days in the respective billing periods.

01/21/09 to 02/22/09	32	140	
02/22/09 to 03/23/09	<u>29</u>	<u>980</u>	
Totals/Average Daily for February	61	1120	18.36

Step 4 - The sum of the three averages calculated above, divided by three.

Average for December	5.31		
Average for January	5.00		
Average for February	<u>18.36</u>		
Total/Average Daily	28.67		9.56

In comparing the average daily winter use of 6.92 CF with the summer recalculation of 9.56 CF, you find the difference is 2.64 CF, or 38%.

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APPENDIX 3 - REVIEW OF OTHER ACCOUNTS

In addition to the example account and Mr. Fischer's account, we reviewed 60 accounts selected on a random basis. Listed below is the information for the 60 accounts, and the result of our review.

Average Daily Billing Units, in CF, for the December through February period

	Actual, as Billed for the Winter Period	Recalculated for use in the Summer Period	Consumption Difference	Percent Difference
Sample 1	43.55	43.32	-0.23	-0.53%
Sample 2	29.56	30.25	0.69	2.35%
Sample 3	21.52	23.63	2.11	9.79%
Sample 4	29.78	30.43	0.65	2.17%
Sample 5	19.91	19.00	-0.91	-4.55%
Sample 6	16.52	18.28	1.76	10.66%
Sample 7	19.87	19.69	-0.18	-0.92%
Sample 8	31.98	37.24	5.26	16.43%
Sample 9	34.06	33.98	-0.08	-0.23%
Sample 10	15.37	16.17	0.80	5.18%
Sample 11	22.74	21.63	-1.11	-4.88%
Sample 12	21.63	23.00	1.37	6.33%
Sample 13	8.69	8.76	0.07	0.86%
Sample 14	49.89	51.75	1.86	3.74%
Sample 15	19.53	20.00	0.47	2.42%
Sample 16	14.72	15.63	0.91	6.21%
Sample 17	20.00	20.48	0.48	2.42%
Sample 18	14.64	14.61	-0.03	-0.18%
Sample 19	17.00	20.13	3.13	18.45%
Sample 20	20.50	20.68	0.18	0.87%
Sample 21	40.49	40.62	0.13	0.33%
Sample 22	21.41	21.06	-0.35	-1.62%
Sample 23	18.26	18.34	0.08	0.42%
Sample 24	3.44	3.45	0.01	0.16%
Sample 25	16.68	17.52	0.84	5.05%
Sample 26	2.04	2.13	0.09	4.33%
Sample 27	18.70	18.48	-0.22	-1.17%
Sample 28	26.49	30.79	4.30	16.24%
Sample 29	28.51	28.48	-0.03	-0.11%
Sample 30	15.84	16.00	0.16	1.04%
Sample 31	8.84	8.60	-0.24	-2.69%
Sample 32	23.55	23.29	-0.26	-1.10%
Sample 33	11.84	12.22	0.38	3.19%
Sample 34	21.71	24.59	2.88	13.27%
Sample 35	7.49	6.59	-0.90	-11.98%

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	Actual, as Billed for the Winter Period	Recalculated for use in the Summer Period	Consumption Difference	Percent Difference
Sample 36	41.14	36.29	-4.85	-11.79%
Sample 37	26.85	25.36	-1.49	-5.56%
Sample 38	8.90	8.74	-0.16	-1.85%
Sample 39	21.75	21.64	-0.11	-0.51%
Sample 40	9.75	9.91	0.16	1.61%
Sample 41	11.57	11.90	0.33	2.82%
Sample 42	21.10	20.09	-1.01	-4.81%
Sample 43	9.49	9.64	0.15	1.55%
Sample 44	8.97	9.01	0.04	0.45%
Sample 45	7.11	7.03	-0.08	-1.16%
Sample 46	16.35	16.30	-0.05	-0.29%
Sample 47	9.61	9.94	0.33	3.41%
Sample 48	13.61	15.13	1.52	11.2%
Sample 49	14.59	15.92	1.33	9.13%
Sample 50	11.90	12.25	0.35	2.97%
Sample 51	21.83	22.59	0.76	3.47%
Sample 52	14.36	14.10	-0.26	-1.81%
Sample 53	7.06	7.13	0.07	1.03%
Sample 54	25.45	25.46	0.01	0.03%
Sample 55	42.02	49.98	7.96	18.93%
Sample 56	17.74	18.03	0.29	1.62%
Sample 57	19.77	20.51	0.74	3.72%
Sample 58	25.24	26.54	1.30	5.17%
Sample 59	22.49	22.33	-0.16	-0.69%
Sample 60	19.38	18.73	-0.65	-3.35%
Total of the Consumption Differences (CF)			30.59	
Average of the Consumption Differences (CF)			0.51	

Based on the 60 accounts we reviewed, and on an average month of 30.5 days:

- the highest increase caused by the recalculation method would be for Sample 55, where their daily consumption difference of 7.96 CF would calculate to a possible increase in their monthly wastewater quantity charge of \$5.80 a month, or \$52.20 for the 9 month Summer Period;
- the lowest increase caused by the recalculation method would be for Sample 36, where their daily consumption difference of -4.85 CF would calculate to a possible decrease in their monthly wastewater quantity charge of \$3.53 a month, or -\$31.77 for the 9 month Summer Period;
- the average daily consumption difference of 0.51 CF would calculate to a possible increase in the monthly wastewater quantity charge of \$0.37 a month, or \$3.33 for the 9 month Summer Period.

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As a side note, the reason each of the above calculations has been qualified with the use of the word possible is that the impact of the difference could be minimized or negated, if the actual monthly consumption is less than the calculated average. In addition, the purpose of reviewing the sampled accounts were to assist us in understanding the calculations, and they cannot be used to make a statistical statement on the overall values in the population of 122,000 plus residential accounts.

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APPENDIX 4 - MR. FISCHER'S INTERPRETATION OF THE THREE-MONTH WINTER AVERAGE

Per Mr. Fischer's comments to the Utilities Board, we believe he interprets the three-month average to be the sum of the three billings periods ending with his February billing cycle, divided by the number of days in the billing cycles. To expand, it would be the sum of the billing cycles ending in December, January and February, divided by the sum of the days in the three cycles.

Mr. Fischer references several items of information that was provided to Utilities customers. Two of the items he references are:

1. The January 2008 edition of *Connections*, a Utilities publication for its customers, included an article on calculating wastewater. The article stated:

"Three winter months (December, January, and February) of water use will be averaged to determine the number of billing units for the remaining nine months."

2. The April 2008 edition of *Connections*, also had an article on calculating wastewater. It included the following sentences:

"For the December, January and February billing periods, wastewater charges are based on actual water usage for each billing period." and

"For the March through November billing periods, wastewater charges are based on either 1) actual water usage for the current billing period or 2) the three-month winter average, whichever is less."

It appears Mr. Fischer has interpreted the three-month average to be based on the information published in the April 2008 edition of *Connections*, which states water usage is based on actual water for each billing period. Therefore, he took his bills for December, January and February, added up the consumption and divided by the number of days billed to arrive at his three-month average. The result of this calculation is an average daily water use of 5 CF. Because he knew his February billing period ended on February 22, he began using outside water after that date.

If you just read the April 2008 *Connection* article, one could reach the same conclusion as Mr. Fischer.

While the information in the *Connections* publication is information provided to customers by Utilities, the ultimate authority over how the usage should be calculated is what is included in the Tariff.

To recap Mr. Fischer's bill:

- We believe Mr. Fischer thought his three-month average would be based on the three billing periods of December through February. This is evidenced by his comments that he knew when the February period ended and waited until then to begin watering his yard. In addition, it is important to interject here that the Tariff, prior to December 11, 2007, did reference Billing Periods, so under the previous method, Mr. Fischer would be correct in his calculation. Mr. Fischer believes his average daily consumption is 5 CF. It

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is also important to note that, in Mr. Fischer's calculation, it includes 14 days in November, which were included in the December billing period.

- In reviewing Mr. Fischer's activity, we find the calculation for the three months, December through February, as billed in December, January, February and March, arrives at an average daily consumption of 6.92 CF, which is 1.92 CF or 38% higher than Mr. Fischer's calculation.
- In reviewing how Utilities recalculates the three-month average for use in the Summer Period, it calculates to an average daily consumption of 9.56 CF, which is 4.56 CF or 91% higher than Mr. Fischer's calculation.

In Mr. Fischer, we have a customer who thought he understood the rules, followed them and then found out the rules were not what he thought they were. We believe this was caused by a lack of clear communication by Utilities.

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ATTACHMENT 1 - MR. FISCHER'S COMMENTS TO THE UTILITY BOARD ON APRIL 22, 2009

I am Gary Fischer, a Springs Utilities customer since the 1970's. During my 35 year career in the field of measurement science I analyzed a lot of data but never saw anything as convoluted as the calculations for our wastewater charges.

The Gazette often publishes letters from utility customers expressing concerns about the various inadequacies of wastewater billing.^{1,2,3} I am going to speak about a curious development in the residential wastewater calculation methodology that was adopted after the 2008 rate hearings were finalized. At that time the Board directed Utilities to scale back the proposed 5 month winter average of water consumption to a 3 month average for purposes of estimating wastewater charges. Utilities tells us in the Jan. 2008 issue of their "Connection" newsletter that "Three winter months (Dec/Jan/&Feb) of water use will be averaged to determine the number of billing units for the remaining nine months".⁴ The same 3 months-D/J/F-are described in subsequent newsletter clarifications,⁵ as well as in several places on the csu.org website, and also in the governing wastewater tariff.

One recent letter to the Gazette broached the details of the curious development just mentioned. I contacted the writer² to find out what he knew that I didn't. He told me that the actual winter period used by Utilities is not 3 months, but instead is 4 months. He then described the calculation method, as explained to him by a Utilities representative. To his surprise, his average daily winter usage for the upcoming 9 months exactly matches a 4 month calculation method, not the promised-and much advertised-3 month method. He continued to say that he did landscape watering during an unusually dry period in early March, which is outside the 3 month window of D/J/F but because of the 4 month window that is being used, his March watering will cost him approximately \$12/month in additional and unwarranted wastewater charges. That is an unnecessary penalty for the customer and pure profit for Utilities.

Nowhere on the csu.org website is there a description of the exact calculation method. I called Utilities and found a person who described the method, exactly as the letter writer had described it to me.⁶ That method is needlessly tedious, and worse yet, creates an inaccurate estimate of wastewater use for customers who water their landscape in the winter. The method used is not as simple as adding 3 numbers and dividing by 3 to get an estimate, though it should be just that simple. Here is how Utilities massages the numbers: data from the 4 month period of D/J/F/M is averaged in 3 different ways, then those 3 averages are averaged once more, thus cleverly compressing 4 months of data into what we would be led to believe is a 3 month window. The averaging of averages method is discredited in the world of statistics; statisticians call that method the junk science of their field. Yet, Utilities would have us believe their method is-and I quote - "more accurate and fair".⁷

Are we talking about small potatoes here? Let's look at my own account data to better bring it into focus. I too watered my landscaping during the late winter dry spell, smugly doing so beginning on the day after my February billing cycle ended, certain that I knew and understood the 3 month winter period rules, oblivious that those rules were never implemented. My additional and unwarranted wastewater charge will be \$3.47 per month, as long as I use more water in the summer months than I did in the winter months, which is a near certainty.

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If my winter water usage for landscape watering is typical-and I can tell you that in my neighborhood some families watered a whole lot more than I while others watered not at all this past winter-that \$3.47 per month multiplied by the 122,000 residential wastewater customers becomes \$423,000 per month of pure profit for Utilities. Keep in mind, the homeowner is putting the water on his lawn, trees, and shrubs, and not down the sewer. In addition, Utilities is not treating the water at its treatment plant.

The \$66 Million 2009 Wastewater budget equates to approximately \$5.5 Million of revenue per month. The \$423,000 of pure profit represents 7.7% of the monthly revenue.

My recommendation to the board for corrective action is as follows:

**Wastewater charges for all residential customers are to be re-calculated using a legitimate 3 month winter period as originally mandated by the board for each month since the 2008 rate change first became effective, and all overpayments are to be refunded to the customer within one billing cycle after the re-calculation.

**Utilities-with Board approval of the wording-is to notify customers of the real reason for the incorrect method they chose for estimating wastewater charges and to clearly state the corrected method that will be used in the future.

Does the Board have questions for me?

- 1) http://www.gazette.com/opinion/vote_41062_article.html/letters_personhood.html "Springs Utilities' Policies Wasteful, Foolish"
 - 2) http://www.gazette.com/opinion/colorado_50452_article.html/noreen_benefits.html "Utilities Pads Wastewater Rate"
 - 3) http://www.gazette.com/opinion/school_50741_article.html/html_gazette.html "Wastewater Fees Unbalanced"
 - 4) <http://www.csu.org/about/newsletter/2008connection/14523.pdf> Connection Newsletter, January 2008, page 1
 - 5) <http://www.csu.org/about/newsletter/2008connection/17376.pdf> Connection Newsletter, April 2008, page 2
 - 6) Telephone conversation with CSU, April 7, 2009
 - 7) http://www.csu.org/customer/rates/rate_residential/page14591.html CSU document, October 9,2007, page 1 headline
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Unspoken, but worth mentioning: The February 2009 "Connection", page 2, "Winter Watering", encourages winter watering of trees, shrubs, and lawns but fails to advise that by doing so the customer will incur a substantial penalty in the form of higher wastewater fees. This type of advice, without full disclosure, destroys precious integrity that is so hard for large organizations to establish. Come on, you guys can do better than this, can't you?

Finally, it is my expectation that if Utilities needs additional funding that it do so by making well reasoned proposals, present them in clear, objective, and unbiased language to all stakeholders, and if accepted, use the funding wisely. My observations are that your customer base is unhappy with the wastewater rate increases, even if they have little or no understanding of the mechanics of the rates. I suspect if they knew of the apparent impropriety of the 4 month winter average scheme they would be all that more dissatisfied.

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ATTACHMENT 2- UTILITIES RESPONSE

Auditor's note – The attached response was provided by Colorado Springs Utilities in response to our report. We have not performed any audit steps on the data presented in their report. It is being reproduced verbatim.

UTILITIES RESPONSE:

As requested by Utilities Board, Colorado Springs Utilities (Utilities) has assessed its current wastewater billing methodology and has cooperated with the City Auditor's comprehensive and thorough independent review of this matter as well.

Summary:

Utilities has closely reviewed its tariffs, billing system and a random sample of customer bills, as well as customer communications, concerning its current wastewater calculations. Based on this review, Utilities has confirmed its wastewater calculations and billings are accurate and in alignment with the tariff.

Utilities acknowledges the City Auditor's opinion that it would be preferred to use one methodology for both the winter billing period commodity charge, and the summer period's winter period average calculation. It's important to note that in the Fall and Winter of 2007, when this new methodology was being reviewed and put into place, Utilities was in the midst of replacing its decade-old customer information and billing system. The old system had mainframe supportability issues and dramatically rising costs. At that time, it was felt that significant customization of this sort could delay the project further and increase the risk of creating major unintended billing consequences. We consciously chose to keep implementation as simple as possible by using base functionality, and to minimize customization costs throughout implementation, where possible. As such, Utilities current calculation for the winter period average was deployed, recognizing it aligned with the tariff, leveraged base functionality, and enabled the timely implementation of the new billing system and the January 1 effective date of the rate case.

Concerns have been raised that Utilities' current methodology is over-charging customers. As part of this review, Utilities conducted a random sample of 125 customer accounts representing all billing cycles to compare variations in different methodology approaches. In this assessment, it was determined that on average, there was minimal variation between Utilities' current methodology and two other methodologies discussed with the Auditor's office. Of the 125 accounts reviewed, the additional methodologies resulted in a higher winter period average ADU as compared to CC&B's current methodology 42% and 45% of the time. On average, variations between the methodologies were approximately +/- 2% or less when compared to the current CC&B approach. The Auditor's Office completed a similar sample of an additional 60 random accounts and found similar results, as noted in the above report. Additionally, Utilities has verified that in 2008, it's first full year of the new methodology, it billed customers for approximately 87% of the total wastewater treated through treatment plants.

Utilities also concurs with the City Auditor that there were opportunities to provide more detailed communication with examples on the wastewater billing methodology. As such, Utilities recognizes that a very limited number of customers may have irrigated significantly during shoulder month days yielding an increase in their winter period ADU, as in the case of Mr. Fischer. When special circumstances occur, Utilities' policy allows appropriate adjustments to the winter period ADU. We will offer that consideration to Mr. Fischer and other customers that

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request a review based on similar circumstances. Lastly, communications on the wastewater methodology, with examples, have been developed and are now available on Utilities' website.

Historical Background

In June of 2007, Utilities presented to the Board a new approach to calculating wastewater for customers as a result of a public process. Utilities assessed various industry standards in charging for wastewater services, including flat bills for all customers regardless of use, charges correlated with water use year round, or a calculation that attempts to determine a winter average to use for wastewater billing during summer or irrigating months/billing periods.

During the various communications, which included Board and City Council presentations and memos, Utilities shared sensitivity analysis based on 150 randomly selected residential customer accounts. The sensitivity analysis demonstrated that 35% of customers could expect a decrease of 5% or more; 36% of customers would remain within 5% (+/-) of the previous methodology, and 29% of customers could experience a 5% plus increase. In November of 2007, communications was provided to the Board noting that

“each customer’s average winter consumption amount will be based on actual billing cycle periods during the winter months of December, January and February. Based on the current billing methodology, three month averages may include water consumption from November for some customers and March for others. This methodology is currently used in the existing billing process of averaging the two lowest winter months of December, January and February.”

Additionally, Utilities provided historical system-wide monthly water consumption data demonstrating that November through March are significantly lower water use months.

City Council approved the new methodology on December 11, 2007 as part of the 2008 Wastewater Rate Filing, which was implemented in January of 2008.

It is important to note that wastewater billing is and has historically been a challenge to the industry, because it is a non-metered service. Wastewater utilities must either charge a flat fee for all customers regardless of use, or attempt to determine an allocation or calculation to assign use and charges to customers.

System Calculation

Utilities has reviewed the configuration within CC&B and has confirmed the system is calculating the winter period average and wastewater billing accurately. While on the surface it appears that creating a winter average of water use should be simple, due to various complexities including billing periods which do not align with calendar months, unique customer situations and system functionality parameters, calculating customer consumption for a non-metered service is complicated.

Specifically, in Springs Utilities calculation, the configuration to calculate the winter average was based on tariff language and system functionality. As such, in order to calculate three monthly ADUs to result in the “3 month average” as stated in the tariff, multiple billing periods are used to capture all days of the winter months. Total consumption from these billing periods is divided by the number of total days to calculate the relevant month’s ADU. Once the three winter month ADUs are calculated, those three ADUs are averaged to determine the winter period average. As such, Utilities’ design of calculating individual monthly ADUs based on relevant

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billing periods, and averaging the three winter period month ADUs, does align with the tariff which states

“three month average of the winter period billing units.”

Random Sampling

In order to compare ADU calculations among three methods, 125 utility accounts encompassing 21 billing cycles were reviewed. The three methodologies compared were the current “CC&B” approach; the “Total Period” ADU approach which sums all three winter months’ normalized consumption quantities and divides by the total number of days in the winter period to determine an ADU; and the “By Month” ADU approach which is a hybrid of the two above by creating monthly ADUs through proration, and then determining the final ADU for the winter period by averaging the three winter ADUs.

The purpose of the sampling was to see whether the current CC&B approach charges customers significantly more than other approaches, and to determine if there are any trends amongst bill cycles or methodologies. The sampling showed that the different methodologies resulted in small average variances summarized as follows:

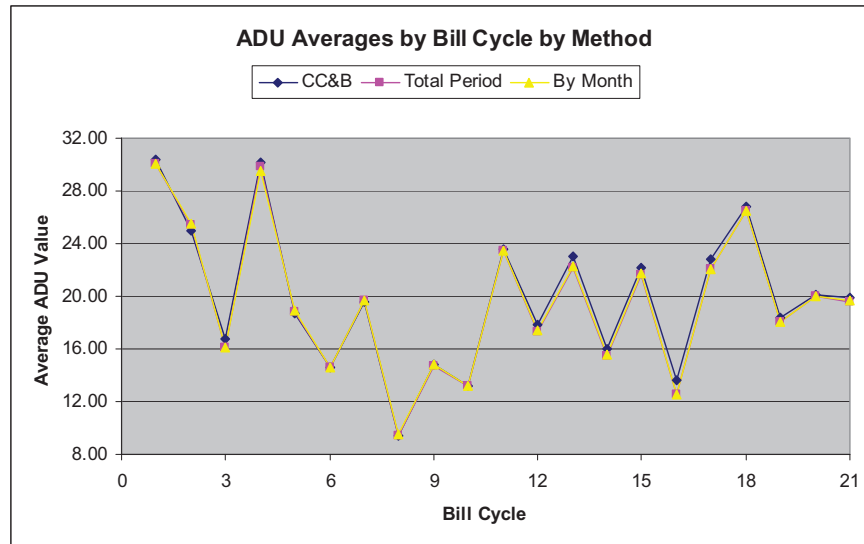
Comparison of CC&B to the “Total Period” Method

- 53 (42%) had a higher ADU when using the Total Period method compared to CC&B
- The Total Period method’s ADU average was 19.54 compared to CC&B’s average of 19.86 when utilizing all individual account data points
- The margin of difference where the Total Period ADU calculated *more* than CC&B averaged 0.54 units across all bill cycles
- The margin of difference where the Total Period ADU was *less* than CC&B averaged 1.50 units across all bill cycles
- The percentage of increase in the CC&B ADU calculation over the Total Period method using all 125 data points averaged 1.58%

Comparison of CC&B to the “By Month” Method

- 56 (45%) had a higher ADU when using the By Month method compared to CC&B
- The By Month method’s ADU average was 19.56 compared to CC&B’s average of 19.86 when utilizing all individual account data points
- The margin of difference where the By Month ADU calculated *more* than CC&B averaged 0.51 units across all bill cycles
- The margin of difference where the By Month ADU was *less* than CC&B averaged 1.51 units across all bill cycles
- The percentage of increase in the CC&B ADU calculation over the By Month method using all 125 data points averaged 1.49%

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The chart demonstrates minimal variance between the different methodologies.

Additionally, Utilities conducted a review of the total wastewater units billed compared to the total units of wastewater treated to ensure its methodology was not overstating customer consumption. In 2008, customers were billed 86.56% of total treated units.

Customer Communications

It is a goal of Colorado Springs Utilities to provide our customers with clear, timely and concise information about their utility services. Meeting their diverse information needs is a continual process, requiring a number of communication methods. Questions and feedback from customers like Mr. Fischer help us to shape and improve our communications.

According to the auditor's review, an article in the April 2008 issue of our Connection newsletter was not sufficient to explain the change in the wastewater calculation method. Colorado Springs Utilities agrees. On its own, an article in the monthly customer newsletter cannot fully explain the complexities of the wastewater calculation method to everyone's satisfaction. The intent of the newsletter is to provide brief, high-level information.

Connection keeps customers informed on a variety of critical utility topics, such as energy and water efficiency, public safety, financial assistance programs, capital projects and rates for all four services. General information is sufficient for the vast majority of our customers. Those who want more detailed information are encouraged to visit our Web site or call our customer service center.

In addition to Connection and the Web site, information about rates is provided on the bill, at Utilities Board meetings, and reported through the local news media. Customers are also given the opportunity to speak directly with subject matter experts.

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We make every effort to align our rates communications with the tariffs. At the same time, we recognize the need to provide additional clarification and detail for customers planning to irrigate near the winter period.

Utilities Recommended Action Plan

Customer Communications – Going forward, our communications plan will include:

- Revising the printed message in the wastewater section of the bill to read, “The winter average is based on water usage for Dec through Feb billing periods, which can include usage from late Oct through early Apr.”
- Adding further detail to our Web site’s wastewater calculation fact sheet on the methodology and winter billing period, including examples.
- In September, providing a short message in our Connection newsletter about the upcoming winter billing period.
- In October, including a brief wastewater calculation article emphasizing that shoulder-month consumption may be included in the winter average.
- In all communications, customers will be asked to go online or call our customer service center for more details and examples.

System Calculation – Due to the minimal variance amongst calculation approaches and tariff compliance, as well as the time and resource commitment required to modify the methodology and the costs associated with customizing the winter period calculation (~\$125,000), Utilities recommends maintaining the current methodology with more detailed communications regarding shoulder month water consumption. A change for the 2009/2010 winter period calculation is not feasible given the complexity of the customization and the short time frame (3 – 4 months). Furthermore, as presented in 2007 with the methodology change, next year Utilities plans the implementation of a Smart Grid Meter Data Management system. The Smart Grid Meter Data Management system, coupled with the completion of the Automated Meter Reading (AMR) program in 2010, will enable the use of daily reads in the wastewater billing methodology. Assuming budgets and resources are available for the completion of both of these systems, a new methodology leveraging Smart Grid is possible for the 2011/2012 winter period calculation.

Customer Exceptions

Utilities recognize that there were a very limited number of customers doing significant irrigation during shoulder month days. In a relatively small number of cases, this coupled with some billing cycles having a higher number of shoulder month days could increase the winter period ADU calculation, as is the case for Mr. Fischer. It is Springs Utilities’ policy to manage residential wastewater calculations consistently by following established guidelines. When special circumstances occur, Utilities’ policy allows appropriate adjustments to the winter period ADU. We will offer that consideration to Mr. Fischer and other customers that request a review based on similar circumstances.