

Issue Paper 5: Review of Multi-Family Billing Practices: Billing of Duplex Customers

Introduction

It is easy for most people to identify a duplex because it is a house which is divided into two living units, with a separate entrance for each living unit. However, for purposes of water utility billing, a duplex can pose some unique challenges, including identifying them in the billing system. The unique billing challenges posed by duplexes are addressed in different ways by different utilities. The purpose of this issue paper is to provide background information to the Tualatin Valley Water District (TVWD or the “District”) Rate Advisory Committee (RAC) to aid in its review and discussion of a policy recommendation related to the classification of duplex customers for billing purposes. This issue paper will provide background information, key issues, and a review of how other utilities classify duplex customers and address them within the billing process.

One of the key billing challenges posed by this particular group of customers is related to their metering configuration. Not all duplexes are metered in the same configuration. Ideally, each living unit is metered and billed separately. Essentially, each living unit in these types of duplexes would be treated as any other single-family residence. In contrast to this, in some instances, a single meter is used to measure the water consumption of both living units of the duplex. This situation raises the question of which customer class these types of duplexes belong in. TVWD uses an industry standard definition for classifying duplexes; two-family dwellings are treated as residential customers.¹

Our past experience, along with the research conducted to develop this issue paper, has led us to conclude that there are no specific industry standards for how duplex customers should be metered, or more importantly, how they should be classified for billing purposes (e.g., residential or multi-family). As will be seen, the bill impacts can vary depending upon which rate schedule these customers are classified and billed under.

At TVWD, all customer classes have a two-block increasing rate structure, and the rates for each block are the same for all customer classes. However, the basis for the establishment of the size of the first block of consumption varies between TVWD’s residential class and its multi-family class. In short, that is the crux of the issue in this particular case.

TVWD identified 434 duplex customers as part of the research into this issue. If those customers were to be re-classified as multi-family, it is estimated that the financial impact to the District and these duplex customers would be a reduction in bills and total revenue of approximately \$9,250 per year (i.e., an average reduction of approximately \$0.89/living

¹ American Water Works Association Manual M1: Principles of Water Rates, Fees, and Charges; Chapter 8 – Distributing Costs to Customer Classes.

unit/month). Provided below is a more detailed discussion of this issue and the research which has been conducted.

Overview of the Issue

TVWD currently bills its customers on a bimonthly basis and it bills duplex customers as residential customers. Provided below in Table 1 is a summary of the District's current water rates.²

Table 1 Summary of the District's Current Water Rates ^[1]	
Rate Component	Current Adopted Rate
Bi-Monthly Meter Charge	
5/8" Meter	\$24.58/bi-month
3/4" Meter	27.06/bi-month
1" Meter	33.36/bi-month
1-1/2" Meter	44.82/bi-month
2" Meter	66.12/bi-month
Consumption Charges (\$/CCF) ^[2]	
Block 1 Rates	\$4.06/CCF
Block 2 Rates ^[3]	\$5.79/CCF

[1] – Source: TVWD website – effective 11/1/16.

[2] – There are 748 gallons in one hundred cubic feet (CCF) of water

[3] – Block 2 rate applies to quantities used in excess of 28 CCF in a bi-monthly billing period for single-family residential customers or 140% of the past twelve-months average usage for multi-family, irrigation, commercial and production customers.

As can be seen in Table 1, the District's rates have fixed meter charges by meter size and consumption (volume) charges for two pricing blocks. As is footnoted in the table, the basis for establishing the volume of water included in the first block varies between residential and multi-family customers. For a residential customer, the first 28 CCF in the bi-monthly period is billed at the Block 1 rate (\$4.06/CCF). Any usage over 28 CCF in the bi-monthly period is billed at the Block 2 rate (\$5.79/CCF). For multi-family customers, the size of the first block of consumption is not a fixed volume. Rather, the size of the first block is based upon the past twelve months' average use and any volume up to 140% of that amount. Any usage during the bi-monthly period over and above the 140% (i.e., in excess of) is billed at the Block 2 rate. While the pricing is the same, the establishment of the size of the first block is slightly different.

This difference in billing approaches between residential and multi-family customers, while appearing to be minor, does in certain specific situations have a billing and financial impact to duplex customers.

² A summary rate schedule was previously provided as a part of the first paper developed for the RAC - Overview and Background of Tualatin Valley Water District.

Currently, where a duplex with a single meter has 28 CCF/bi-month of use within the first block, that amount is essentially split between two living units, effectively setting the first block size at 14 CCF/bi-month per living unit. Some duplex owners have questioned this inequity between duplex customers and other residential customers.

An obvious and possible solution to this inequity is to install a second meter on those duplexes which have only a single meter in place. While this sounds simple and beneficial, for a variety of reasons, this is likely not feasible, practical, or cost-effective. One feasible alternative is to move all duplex customers to the multi-family class (i.e., use the 12-month average approach). This is certainly feasible, but like any issue, there are arguments that can be made for and against changing the classification of duplex customers from residential to multi-family.

One duplex owner has approached the District and requested that this customer class issue be reviewed. Given that, it would appear to be appropriate to review whether there is an inequity, the extent of the inequity, and how best to address it, if at all.

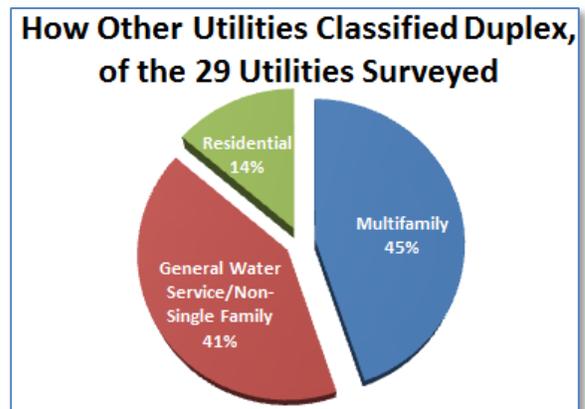
Tualatin Valley Water District Prior Analysis

The District conducted a cursory analysis of the duplex billing issue in early 2016. The analysis consisted of determining the impacts of moving duplex customers from the residential class of service to the multi-family class. A key administrative issue with this review is the ability to identify duplex customers as the District's current billing system information does not identify whether a customer is a duplex or is not. Even with this short-coming, the District compiled duplex billing data by cross referencing the District's billing data with Clean Water Service's billing data for joint customers, or those customers that are both District and Clean Water Services customers. Using this method and 4 years of data, 434 customers were identified as duplexes, with two living units served through a single meter.

Based on the analysis completed by District staff, approximately 67% of the bills analyzed would have seen no change if billed under the multi-family rate structure. Approximately 27% of the bills would have been decreased and approximately 6% would have increased.

Industry and Other Utility Practices

Based upon our experience and research conducted as a part of this study, there does not appear to be a standardized practice or approach related to the classification of duplex customers. The American Water Works Association (AWWA) M1 manual suggests the classification of a customer should consider service characteristics and demand patterns when developing classes of service.



For this paper, a review of the current billing practices of duplex customers by other water utilities was undertaken. Our review included several Oregon utilities, as well as a small sample of utilities outside of Oregon. From the

sample of utilities surveyed, the most common practice for duplex customers was to use a rate structure which included a fixed meter charge and a uniform consumption rate. The advantage of using a uniform rate structure is that it avoids the issue of block sizes and block rates. There were a few other utilities that treat duplex customers in a manner similar to TVWD. That is, they were classified as a residential customer and utilized a block rate structure. Provided in Table 2 is a summary of duplex customer classification and rate structure of Oregon utilities reviewed as part of this paper.

Table 2
Sample of Utilities and Their Rate Structures Inside Oregon

Utility	Duplex Classified As:	Type of Fixed Charge	Volume Charge
City of Albany	Multi-family	Meter Charge	Three Block Rate Structure Based on Meter Size
City of Corvallis	Multi-family	Meter Charge	Three Block Rate Structure Based on Meter Size
City of Tigard	Multi-family	Meter Charge	Three Block Rate Structure Based on Meter Size
Tualatin Valley Water District	Residential	Meter Charge	Two Block Rate Structure
Portland Water Bureau	Retail Rate Class	Meter Charge	Uniform
City of Beaverton	General Water Service	Meter Charge	Uniform
City of Bend	General Water Service	Meter Charge	Uniform
City of Redmond	General Water Service	Meter Charge	Uniform
Astoria Public Works Dept.	General Water Service	Meter Charge	Uniform
Eugene Water & Elec. Board	General Water Service	Meter Charge	Uniform
City of Tualatin	General Water Service	Water Service/Facility Charge	Uniform
Grant's Pass	Multi-family	Meter Charge	Uniform
City of Hillsboro	Multi-family	Meter Charge	Uniform
City of Lake Oswego	Multi-family	Unit Charge + charge per additional unit	Uniform
City of Medford	Multi-family	Meter Charge	Seasonal Uniform
Salem Public Works	Multi-family (Individual/Shared Meter)	Meter Charge	Uniform
City of Gresham	Duplex/Triplex Rate	Meter Charge	Uniform

In viewing Table 2 it can be seen that most utilities classify a duplex as either a multi-family or a general service customer. A few of the Oregon utilities reviewed have some variances in the way their rates were structured. For the utilities with block rate structures (Albany, Corvallis and Tigard) there are some differences in approach. In the case of Albany, while it is a block

rate similar to the residential rate, the multi-family blocks are larger than the single-family residential blocks and the rates for each of the three blocks are lower. In contrast, Corvallis and Tigard set the same block sizes for residential and multi-family, but single-family pays a higher volume rate per block than multi-family³.

Many of the utilities surveyed had a uniform rate for duplexes (multi-family). In the case of Hillsboro and Lake Oswego, they utilize a uniform rate for multi-family, but do have a block residential rate structure. One unique feature that Lake Oswego has is a meter charge and then a living unit charge.

All Gresham classes of service pay a meter charge. Single family has a three block consumption rate. Gresham has a specific duplex/triplex uniform rate which is the same rate as the single family’s first block rate. Finally, Salem uses a uniform seasonal rate structure. In many respects, this is a form of a block rate in that summer usage is priced at a higher level and presumably driven by outdoor water irrigation use.

In summary, there does not appear to be a consistent or singular approach to the rate schedule under which duplexes are charged or the rate structure used to bill them. Provided in Table 3 is a summary of other utilities outside of Oregon and their duplex billing practices.

Table 3 Sample of Duplex Billing for Utilities Outside Oregon			
Utility	Duplex Classified As:	Type of Fixed Charge	Volume Charge
Glendale (CA) Water & Power	Multi-family	Meter Charge	Two Block Rate Structure based on # of Units
Dist. of Columbia W&S Auth.	Residential (less than 4 Units)	Meter Charge	Two Block Rate Structure
City of Aurora (CO)	Multi-family (Less than 5 Units)	Meter Charge	Three Block Rate Structure
Alderwood W&S District (WA)	General Water Service	Meter Charge	Three Block Rate Structure based on Meter Size
City of Henderson (NV)	Multi-family	Meter Charge	Four Block Rate Structure (X # of Units)
Las Vegas Valley Water Dist.	Non-Single Family	Meter Charge	Four Block Rate Structure Based on Meter Size
City of Spokane (WA)	Residential	Fixed Charge per Unit	Four Block Rate Structure
Seattle Public Utilities	General Water Service	Meter Charge	Seasonal Two Block Rate Structure
Tacoma Public Utilities (WA)	Residential	Meter Charge per Unit (assumed 5/8")	Seasonal Three Block Rate Structure
Calif. Water Serv. Bakersfield	General Water Service	Meter Charge	Uniform
Granger-Hunter Impr. Dist (UT)	General Water Service	Meter Charge	Uniform
City of Vancouver (WA)	Multi-family	Meter Charge	Uniform

³ The price difference in the tiers is generally reflective of differences in peak capacity use on the system. A single-family residential customer tends to have larger peak demands in relation to their typical or average use. This is primarily driven by outdoor irrigation use. In contrast, multi-family customers tend to have lower peak demands and as a result, place lower capacity-related costs on the system.

Similar to Table 2, Table 3 illustrates the same array of approaches to billing this particular group of customers. After reviewing the duplex billing practices of the utilities in Tables 2 and 3, it was apparent that there was not a singular approach or method related to the billing practices for duplex customers. Given that, it would seem that the District has a broad array of choices as to how to bill duplex customers. However, an important policy consideration in that decision is to establish an approach which is reasonable, fair, and equitable to all duplex customers.

Potential Action/Solution

If the RAC concludes that there is an inequity of sufficient magnitude to warrant a change in the billing of duplex customers, the RAC may recommend that duplex customers with a shared meter be moved to the Multi-Family rate class. Advantages include the following:

- Addresses the current concern (perception)
- Only moves those customers with a shared meter
- Low cost solution; simple approach and administration
- Eliminates the fixed block size approach
- Utilizes multi-family block size approach

To take action on this issue will likely incur some additional short-term implementation costs. This includes determining which customers are duplexes served by a single meter. In addition, the District will need to determine how to effectively communicate how and why the change is being made.

There are, of course, other potential methods to address this issue. However, the option described above reflects the District's current rate structure goals and objectives.

Summary

The initial issue raised as a part of this review is whether a duplex with a single meter is being treated inequitably from a billing perspective when compared to other multi-family customers. As this paper has discussed, there is no uniform or generally accepted approach for billing of duplexes and their classification within a customer class of service (i.e., rate schedule).

There likely is no simple or singular solution to resolve the perceived inequity. As noted, the alternative of moving duplex customers to the multi-family rate class would appear to only benefit approximately one quarter of the bills affected, while the majority of the bills would not see any change based on the analysis completed by the District. Whatever the District chooses to do in this situation, it is advisable for the District to clarify how new duplex customers are connected to the system, if it is not already. Some utilities have language requiring duplexes, triplex and similar types of housing units to be individually metered, which would help resolve this issue with future connections.