

# Ratio Utility Billing System

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## Overview

El Dorado software supports an alternative billing method called Ratio Utility Billing System (RUBS). The RUBS method implements an allocation formula that divides a property's bill based on quantitative measures. This method might be used in apartment communities that have several units served by a single water meter. In this scenario, the water bill would be divided among the tenants based on factors such as number of occupants and the approximate square footage per unit. The RUBS method used is usually that which is most convenient to the building owner and can include variables such as number of square feet per unit, number of bathrooms or bedrooms per unit, or number of occupants per unit. The formula takes into account that a larger unit may be responsible for paying more than a smaller unit just as a unit with more occupants may be allocated a larger bill in effort to divide it fairly. El Dorado software lets you implement the RUBS variables you wish to work with.

**NOTE:** Laws for "sub-metering" or RUBS billing and pass-through of utility costs vary greatly by Local, City, State and Federal government jurisdiction. The acceptable parameters can also be affected by applicable taxation. Before implementing a RUBS billing system we advise you to check with your financial and legal council to ensure that the correct methods are used for your area.

## Getting Started

The most common RUBS parameters implemented are the approximate square footage and the number of occupants. This document will be based on these variables. If you wish to use different parameters then you may substitute them in the fields with your preferred values. The following simple example describes how the basic RUBS calculation is achieved and will be referred to throughout this document. In addition, the example refers to billing water in gallons; however you may apply the RUBS method for any type of billing (example= gas, electric, etc.) and unit (example: gallons, cubic-feet, acre-feet, etc.).

## Example of a Basic RUBS Calculation

### Parameters

Total Units in building: 4  
 Total Number of occupants: 10  
 Total Sq. Ft. in building: 1,000  
 Total "A" Charges (e.g., Water): \$100.00

The "A" charge is divided by:

- Charge allotment for # Occupants (50%): \$50.00
- Charge allotment for total Sq. Ft. (50%): \$50.00

Unit #1	Billing Criteria	Multiplier	Charges
# of Occupants	3	.30	\$15.00
Square Footage	250	.25	\$12.50
<b>Total "A" Charges</b>			<b>\$27.50</b>
Unit #2	Billing Criteria	Multiplier	Charges
# of Occupants	2	.20	\$10.00
Square Footage	250	.25	\$12.50
<b>Total "A" Charges</b>			<b>\$22.50</b>
Unit #3	Billing Criteria	Multiplier	Charges
# of Occupants	2	.20	\$10.00
Square Footage	100	.10	\$5.00
<b>Total "A" Charges</b>			<b>\$15.00</b>
Unit #4	Billing Criteria	Multiplier	Charges
# of Occupants	3	.30	\$15.00
Square Footage	400	.40	\$20.00
<b>Total "A" Charges</b>			<b>\$35.00</b>

Table 1 - Example of a basic RUBS calculation

## Setting Up for RUBS Billing

Activating the RUBS billing method within your El Dorado software requires some setup. It is a good idea to recreate the above example in El Dorado to ensure clarification. The following sections describe how to implement the RUBS billing method.

In order to activate the RUBS billing method the following items need to be addressed:

- I. Separate Database, if Required
- II. Entering Company Information
- III. Creating Rate Tables
- IV. Entering Ratios/Multiplier in Customer Accounts

## **I. Separate Database, if Required**

If you're currently employing or planning to use other types of billing methods than RUBS, then you will need to create a separate RUBS database. A rate schedule will need to be created for each set of units sharing a meter. For example, meter #100 is shared among units 1 - 4 and meter #200 is shared among units 5-8. Therefore, a rate schedule will need to be defined for each meter since the total charges to the residents may fluctuate each billing cycle depending on utility usage. For more information on creating a company database, see "Creating a Database" in the El Dorado Installation and User Guide.

## **II. Entering Company information**

The Company Information screen contains basic company information, defines the names of recurring charges (water, sewer, etc.) and identifies the multiplier rule to be implemented. The RUBS multiplier rule activates the multiplier on each customer account to be read as the number of days to be billed in a billing cycle.

To activate the Company Information multiplier attribute

- 1.** On the **El Dorado Main** screen, click the **Settings** menu, and then click **Company Information**.
- 2.** In the **Multiplier Rules** box, select rule "E = Customer multiplier".
- 3.** Click the **Save** button.
- 4.** Click the **Exit** button.

**Edit Basic Company Information**

Main Company: West Coast Property Management  
 Address: P.O. Box 1150  
 City/State/Zip: San Diego CA 92101  
 Default City/St: San Diego CA  
 (unused)  
 Phone Number: 619-123-4567

**Recurring Charges:**

Charge A Name: Water  
 Charge B Name: Sewer  
 Charge C Name: Trash Service  
 Charge D Name: -  
 Charge E Name: -

**User Defined Fields:**

Misc1 Name: M1  
 Misc2 Name: M2  
 Misc3 Name: M3  
 Misc4 Name: M4  
 Misc5 Name: M5

Unit of Measure: Gallon  
 Billing Cycle: Month  
 Datapath: C:\Program Files\El Dorado v7.x\RUBS db\RUBS\_Test.MDB

**Define Secondary Company Names**

01	West Coast Property Management
02	
03	
04	
05	
06	
07	
08	
09	
10	
11	
12	
13	
14	
15	
16	
17	
18	
19	
20	

Multiplier Rules: E E = Customer multiplier  
 Taxable Fields: -  
 Late Fee 2 Rules: A

Advanced

Select "Print Logo" and click on the image to add and edit your logo. After editing, click the button to update.

Print Logo



Figure 1 - Define the names of recurring charges used and set the multiplier rule

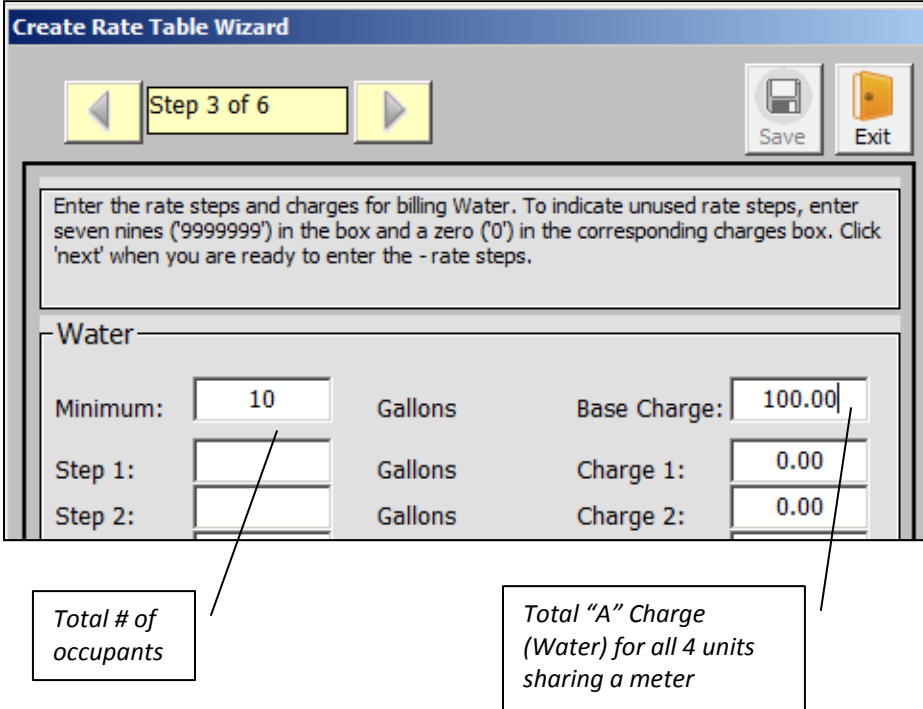
### III. Creating Rate Tables

Each set of units sharing the same meter must have its own rate table defined. Use the rate table to store the total occupant head count for the set of units and the total billed amount for the set of units.

If you're using a new company database, then the Edit Utility Rates screen defaults to a blank rate table. The rate attributes can be directly edited within the Metered Service Rate section. If your system already contains active rate tables, then use the wizard to create additional rate tables for each set of units. Note that in this example charge "A" refers to a water service; the names of the recurring charges are defined in the Company Information screen. The following describes how to create a rate table by using the Rate Table wizard and then shows how to directly edit the rate table.

### To create a rate table using RUBS parameters

1. On the **El Dorado Main** screen, click the **Settings** menu, and then click **Edit Rate Tables**.
2. Click the **Rate Table Wizard** button. 
3. Click the **Next** button. 
4. Enter a unique rate table name that clearly defines the set of units you are defining the rate table for.
5. Click **Next**.
6. In the **Charges A** section (it will display the name defined for Charge A, example: Water), enter the total number of occupants in the **Minimum** box.
7. In the **Charges A** section, enter the total utility billed amount for the set of units in the **Base Charge** box.



Create Rate Table Wizard			
Step 3 of 6		Save	Exit
Enter the rate steps and charges for billing Water. To indicate unused rate steps, enter seven nines ('9999999') in the box and a zero ('0') in the corresponding charges box. Click 'next' when you are ready to enter the - rate steps.			
Water			
Minimum:	10	Gallons	Base Charge: 100.00
Step 1:		Gallons	Charge 1: 0.00
Step 2:		Gallons	Charge 2: 0.00

Total # of occupants

Total "A" Charge (Water) for all 4 units sharing a meter

Figure 2 - Entering the total number of occupants and the total bill for Charge "A" (Water)

8. Click **Next**.
9. If "B" charges are applicable (example: sewer), enter the total number of occupants in the **Minimum** box and enter the total utility billed amount for the set of units in the **Base Charge** box.

Figure 3 - If applicable, enter the RUBS parameters for a "B" Charge

10. Click **Next**.
11. Enter the remaining charges in the provided input boxes.
12. Click **Next**.
13. Click the **Save** button and then the **Exit** button to return to the **Edit Utility Rates** screen.

#### To edit a rate table

1. Open the **Edit Rate Tables** screen.
2. To edit a field double-click on the entry you wish to change. Type the new value over the highlighted entry.
3. Click **Save**.

Water Rates			
Rate For First	10	Gallons =	100
Rate For Next	9999999	Gallons =	0
			Min. Charge Per Gallon

Figure 4- Editing the master bill amount on a rate table

#### IV. Entering Ratios into Customer Accounts

The final process includes updating the occupant's account to reflect the RUBS billing system. This is done by setting the RUBS charge indicator and entering the appropriate ratios for each unit account. In addition, a multiplier field needs to be set to the number of days in a billing cycle for each customer account. For instance, if the occupant moves out of the unit half way through a billing cycle, then the multiplier would be set to indicate 15 days as opposed to a monthly billing cycle of 30 days. The following describes how to add a customer account, set

the charges indicator to a RUBS billing, enter the appropriate RUBS parameters and set the multiplier to reflect the appropriate billing cycle for a customer.

## To setup the customer account to use RUBS

### Create an Account



1. From the Main screen click **Acct Manager**.
2. Create a customer account by clicking the **Add Account** button.
3. If you wish to use the current customer account as a template, then click **Yes**; otherwise click **No**.
4. Assign a unique customer account number then click **Verify and Continue**.
5. Fill in the information on the **Bill To: Name & Address** tab.
6. Click on the **Rate & Service Address** tab and fill in the information. Be sure to select the appropriate **Rate Number** from the list box.
7. Click on the **Meter & Readings** tab. Even though a meter reading is not required to implement RUBS at the customer account level, you will need to enter a **Start Read** and **Current Read** of "0" so you may save the record.
8. Click **Save** then **Exit**.

Account Number Entry Locked

Current Customer Account #: 0030

New Customer Account #: 0040

Assign current customer account number to the new customer  
 Auto-increment old (current) account number  
 Manually assign both customer account numbers

Verify and Continue

Bill To: Name & Address | Rate & Service Address | **Meter & Readings**

Meter Information:

Service Codes: [ ] Meter Type: [ ]  
Installation Date: [ ] Last Service Date: [ ]  
Meter Brand: ABB Meter Size: [ ]  
Number of Dials: [ ]  
Read Type: M Radio Frequency: [ ]

Readings and Usage:

Start Read: 0 Start Read Date: 03/30/2010  
Current Read: 0 Curr. Read Date: 4/12/2010  
Usage: 4 Days: 13  
Multiplier Unit: [ ] Multiplier: 001

\* Fields shown in red are required

Figure 5 - Creating a customer account for RUBS billing – Meter & Readings tab

### Set Charges for a RUBS Billing

1. The new customer account record defaults to the **Customer Profile** screen. Click on the **Charges Due** tab.
2. Go to the **Charges** section and for Charge “A” select “R” from the list box. The “R” attribute implies a RUBS billing. Repeat this process for other recurring charges.
3. Click **Save**.

Charges	
Water-Y/N/R/\$	R
Sewer-Y/N/R/\$	Yes No ###.## ###.##B R No
Trash Service-Y/N/R/\$	R
-Y/N/R/\$	
-Y/N/R/\$	

Other Charge/Credit 1

Other Charge/Credit 2

Figure 6 – Setting the recurring charges to reflect a RUBS billing

### Enter the RUBS Parameters

1. Click on the **Customer Profile** tab.
2. In the left pane enter the total number of people occupying the unit in the **RUB Headcount** box.
3. Enter the percentage (in decimal format) of the unit's total square footage in the **RUB Factor** box. The following figure depicts 3 persons occupying the unit and that the unit accounts for 250 square feet out of a total of 1,000 square feet (25% of the total SF).

### Enter the RUBS Multiplier

1. On the **Customer Profile** screen, go to the **Special Handling Codes** section and enter the number of days in the billing cycle in the **MULT** box. The value entered indicates the total number of days the tenant occupied the unit during the billing cycle.

**NOTE:** If a tenant moves out during a billing cycle then the multiplier field holds the total number of days the tenant occupied the unit. If a new tenant occupies the unit during a billing cycle then a new customer account needs to be created. The new account needs to be updated to reflect the RUBS billing and the multiplier field will contain the total number of days the new tenant occupied the unit through the remainder of the billing cycle.

- The rate table's total number of occupants may need to be updated if the new tenant contains more or less occupants than the last tenant.
- After calculating bills and issuing statements for a billing cycle, ensure that the moved out tenant's account record is set to "Inactive" by selecting the "I: Inactive- (same as D+L+S)" **Special Handling Code** on the **Customer Profile** screen.

The screenshot shows the 'Customer Profile' tab in the 'El Dorado Utility Software - Account Manager for West Coast Property Management'. The account number is 0010 and the customer name is Apt 1. The 'Bill To Address' is 100 N Main, Apt 1, Alexis, IL. The 'RUBS' parameters are set as follows: RUB Headcount is 3, RUB Factor is .25, and the multiplier (MULT) is 30. The 'Special Handling Codes' list includes options for reading units and dormant accounts. The 'eBilling Indicators' section shows that the account is not set for eBilling, ePayment, or Lock all Indicators.

Figure 7 - Entering the RUBS parameters and setting the multiplier to reflect the number of billing days in a cycle

## Calculating Bills

Calculating bills are done just as metered services would be done. Simply click the Calculate Bills button to open the Calculate Customer Bills screen. For more information on calculating bills, see "The Billing Cycle – 4: Calculate Bills" section in the El Dorado Installation and User Guide.

<b>West Coast Property Management</b>										
Billing Report printed at 13:12:09 on 04/16/2010										
Projected late-fees calculated as: Water = .10; Late-fee2 = 1.00 percent on current charges.										
Sewer bill calculated using the current Water usage.										
For billing date = 04/16/2010 and due date = 05/16/2010, bill all reading dates.										
Selection: From Account # 0010 to Account # 0040; for all codes.										
Account #	Water	Sewer	Trash	-	-	Other 1	Other 2	Tax	Prev. Bal.	Total
0010	27.50									27.50
0020	22.50									22.50
0030	15.00									15.00
0040	35.00									35.00

Figure 8 - Example of a Billing Report