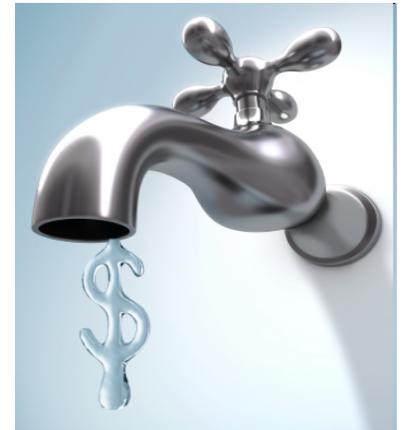


Water Conservation Rates

Broward County Water Resources Task Force

May 7, 2010

Technical Team Presentation





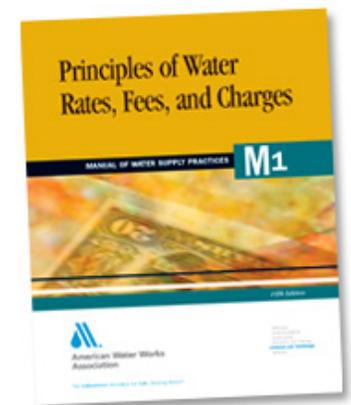
What is a water conservation rate...

- A rate structure that is used to encourage customers to conserve water using a cost incentive.
- Structure is generally comprised of different **blocks** or **tiers** that define a consumption range with a corresponding unit cost.
- Most common and effective type is referred to as an “**inclining block rate**” structure – cost per unit of water increases with consumption.

Inclining Block Rate Structure

Base Charge

- Fixed cost element of the bill.
- Non-discretionary cost component of the bill.
- Generally it is established based on meter size – A recommended approach is the use the AWWA Meter Equivalency Factor.
- The costs to replace and maintain meters and service lines increase with the size of the meter and service line.



Base Charge – AWWA Meter Factors

$$\text{Base Charge} = \text{Base rate} \times \text{meter eq. factor}$$

<u>Meter Size</u>	<u>Meter Equivalency</u>	<u>Base Charge</u>
5/8 Inch	1	\$ 1.00
1 Inch	2.5	\$ 2.50
1 1/2 inch	5	\$ 5.00
2 Inch	8	\$ 8.00
3 Inch	15	\$ 15.00
4 Inch	25	\$ 25.00
6 Inch	50	\$ 50.00
8 Inch	80	\$ 80.00

Inclining Block Rate Structure

Consumption Charge

- Variable cost element of the bill.
- Discretionary cost component of the bill.
- Generally, structure unit cost for 3 to 4 consumption tiers.
- Typically, first tier provides for minimal water usage (essential) at the minimum reasonable price. Subsequent tiers are priced higher.



Tiered Structure - Example

Single Family Residential

From (ccf)	To (ccf)	Rate (\$/ccf)
0	4	1.00
5	9	2.00
10	14	3.00
15	19	4.00
20 and over		5.00

Multi-Family Residential

From (ccf)	To (ccf)	Rate (\$/ccf)
0	3	1.00
4	6	2.00
7	10	3.00
11	13	4.00
14 and over		5.00

Non-Residential

From (ccf)	To (ccf)	Rate (\$/ccf)
0	10	1.00
11 and over		2.00

THE CITY OF SAN DIEGO
WATER & WASTEWATER SERVICES
 SAN DIEGO, CA 92187-0001 (619) 313-3500

Mailed on Sep 10 2007

U25-11111-11-1
 ACCOUNT NUMBER

1111 TEST PL
 SERVICE ADDRESS

Sep 24 2007
 PAYMENT DUE DATE

UWA-901 (6-05)-11

██
 CITIZEN
 1111 TEST PL
 SAN DIEGO CA 92102-3742

RETURN THIS PORTION

MAKE CHECK PAYABLE TO CITY TREASURER

2511111111 0000116749

\$116.74
 TOTAL AMOUNT DUE

ACCOUNT NO. U25-11111-11-1 CITIZEN
 SERVICE ADDRESS 1111 TEST PL

Sep **Meter Size** 116.74
 PAYMENT DUE DATE TOTAL AMOUNT DUE

TYPE OF SERVICE	METER	SERVICE PERIOD FROM	TO	DAYS	METER READING PREVIOUS	CURRENT	USAGE HCF*	AMOUNT	CODE
Water Base Fee		08-03	09-04	32			Meter Size = 3/4 Inch	15.18	
Water Used		08-03	09-04	32	2823	2845	22	55.26	E
					7 HCF @ \$2.2620 =		\$15.83		
					7 HCF @ \$2.4610 =		\$17.23		
					8 HCF @ \$2.7750 =		\$22.20		
Sewer Base Fee		08-03	09-04	32				12.31	
Sewer Srvc Chrg		08-03	09-04	32				34.11	
Storm Drain Fee								0.95	
CURRENT CHARGES								117.81	
PREV. BALANCE								1.07CR	
TOTAL AMOUNT DUE								\$116.74	

Water Usage



Conclusion

- Many utilities have adopted or are in the process of adopting tiered rate structures as a means to encourage water conservation.
- Currently there are 23 utilities in Broward County that have adopted water conservation rates.
- Given the complexity of tiered rate structures, we recommend using a rate consultant to conduct the necessary rate sensitivity analysis for different scenarios.

Questions

