

BUILDING A WORLD OF DIFFERENCE

12 January, 2015

SAN ANTONIO WATER SYSTEM (SAWS) RATE ADVISORY COMMITTEE: MEETING 10

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RATE SETTING PROCESS

PURPOSE

WASTEWATER RATE STRUCTURE

WHOLESALE RATES

RECYCLED WATER RATES

MULTI-FAMILY CUSTOMER CLASS

QUESTIONS



PURPOSE

- **Review and Consideration of Recommendations concerning:**
 - Conceptual Wastewater System Rate Structure
 - Water and Wastewater Wholesale Rates;
 - Recycled Water Rates; and
 - Multi-Family Customer Class Designation

WASTEWATER RATE STRUCTURE



KEY STEPS TO DEVELOPING THE CONCEPTUAL WASTEWATER RATE DESIGN

- STEP 1 – Determine the Total Wastewater System Cost;
- STEP 2 – Determine the cost to serve each Customer Class; and
- STEP 3 – Design rates based on the Rate Setting Objectives established.

TOTAL WASTEWATER SYSTEM COST

STEP 1 – Determine the Total Wastewater System Cost

Line No.	Description	Total Cost	
		RAC Meeting 8	RAC Meeting 10
		\$	\$
	Statement of Revenue Requirements:		
1	O&M Expenses	105,623,107	105,623,107
2	Debt Service	77,146,358	77,146,358
3	Other Expenditure & Transfers	31,644,207	30,972,682
4	Subtotal	214,413,672	213,742,147
	Less Revenue Requirements from Other Sources:		
5	Other Revenues	13,608,656	5,090,997
6	Net Cost of Service	200,805,016	208,651,150

TOTAL WASTEWATER SYSTEM COST

STEP 1 – Determine the Total Wastewater System Cost (By Function)

Line	Description ¹	Total	Volume	BOD	TSS	Customer Bills	Equivalent Meters
Net Cost of Service (RAC Meeting 8):							
1	Amount	\$200.8	\$168.3	\$15.1	\$13.3	\$3.4	\$0.8
2	Percent	100.0%	83.7%	7.5%	6.6%	1.7%	0.4%
Net Cost of Service (RAC Meeting 10):							
3	Amount	\$208.7	\$146.1	\$15.9	\$14.2	\$31.7	\$0.8
4	Percent	100.0%	70.0%	7.6%	6.8%	15.2%	0.4%

1. The Net Cost of Service amounts outlined in Lines 1 and 3 are presented in million of dollars.

CUSTOMER CLASS COST OF SERVICE

STEP 2 – Determine the cost to serve each Customer Class

Net Cost of Service (RAC Meeting 8):

Line	Description	Allocated		Existing		Revenue Recovery	
		Cost of Service		Revenues		Amount	Percent
		\$		\$		\$	%
SAWS							
1	Residential	\$	113,999,246	\$	125,948,668	\$ 11,949,422	110.5%
2	Multi-Family		32,025,059		26,921,782	(5,103,277)	84.1%
3	General		49,877,393		42,639,190	(7,238,203)	85.5%
4	Surcharge		4,903,318		5,295,376	392,058	108.0%
5	Total	\$	200,805,016	\$	200,805,016	\$ -	100.0%

Net Cost of Service (RAC Meeting 10):

Line	Description	Allocated		Existing		Revenue Recovery	
		Cost of Service		Revenues		Amount	Percent
		\$		\$		\$	%
SAWS							
1	Residential	\$	124,164,909	\$	125,948,666	\$ 1,783,757	101.4%
2	Multi-Family		27,463,799		26,921,782	(542,017)	98.0%
3	General		44,026,079		42,639,190	(1,386,890)	96.8%
4	Wholesale		7,860,894		7,846,134	(14,760)	99.8%
5	Surcharge Customers		5,135,468		5,295,376	159,908	103.1%
6	Total	\$	208,651,149	\$	208,651,147	\$ (1)	100.0%

WASTEWATER RATE DESIGN

STEP 3 – Design Wastewater Rates based on the Rate Setting Objectives established

	2009 Rate Study Priorities
Essential	<ol style="list-style-type: none"> 1 Conservation/Demand Management 2 Financial Sufficiency 3 Rate Stability
Very Important	<ol style="list-style-type: none"> 4 Revenue Stability 5 Equitable Contributions from New Customers 5 Affordability to Disadvantaged Customers
Important	<ol style="list-style-type: none"> 7 Cost of Service Based Allocations 8 Minimization of Customer Impacts 9 Simple to Understand and Update
Least Important	<ol style="list-style-type: none"> 10 Legality 11 Ease of Implementation 12 Economic Development

	2014 Rate Study Priorities
Essential	<ol style="list-style-type: none"> 1 Financial Sufficiency 2 Cost of Service Based Allocations 3 Revenue/Rate Stability
Very Important	<ol style="list-style-type: none"> 4 Conservation 5 Drought Management 6 Economic Development
Important	<ol style="list-style-type: none"> 7 Affordability to Disadvantaged Customers 8 Simple to Understand/Update
Least Important	<ol style="list-style-type: none"> 9 Minimize Customer Impact 10 Ease of Implementation

Prioritization of rate setting objectives

DESIGN WASTEWATER RATES

Comparison of Meter Charge for Texas Cities

Wastewater Fixed Charges						
Line	Meter Sizes	Austin	Dallas	Fort Worth	Houston (A)	San Antonio (B)
1	5/8 Inch	\$10.30	\$4.45	\$5.50	\$8.75	\$11.93
2	3/4 Inch	\$10.30	\$6.00	\$5.50	\$8.75	\$11.93
3	1.0 Inch	\$10.30	\$8.75	\$6.60	\$9.19	\$11.93
4	1.5 Inch	\$10.30	\$16.60	\$10.30	\$10.66	\$11.93
5	2.0 Inch	\$10.30	\$26.15	\$14.75	\$11.10	\$11.93
6	3.0 Inch	\$10.30	\$63.79	\$35.05	\$19.88	\$11.93
7	4.0 Inch	\$10.30	\$103.90	\$58.35	\$22.52	\$11.93
8	6.0 Inch	\$10.30	\$206.50	\$121.20	\$32.19	\$11.93
9	8.0 Inch	\$10.30	\$340.15	\$210.00	\$78.17	\$11.93
10	10.0 Inch	\$10.30	\$525.50	\$313.45	\$95.02	\$11.93
11	12.0 Inch	\$10.30	\$525.50	\$392.76	\$95.02	\$11.93

A. Figures shown are rates for commercial, industrial, and multi-family. Charges for the residential class is slightly higher

B. Currently includes the first 1,496 of sewer usage

WASTEWATER RATE DESIGN

Comparison of Volumetric Rates for Texas Cities

Wastewater Volumetric						
Line	Description	Austin (A)	Dallas	Fort Worth	Houston (B)	San Antonio (C)
		\$ Per 1,000 Gallons				
1	Lifeline Residential	\$4.51	N/A	N/A	\$0.26	N/A
2	Residential	\$9.13	\$4.95	\$3.13	\$7.44	\$3.16
3	Multi-Family	\$8.79	\$3.70	\$3.13	\$5.56	N/A
4	Commercial	\$8.82	\$3.70	N/A	\$5.56	\$3.16
5	Industrial	\$7.32 - \$8.82	\$3.38	\$2.71 - \$3.97	\$6.09	N/A

A. The “Lifeline” residential rate is applied to volumes up to 2,000 gallons.

B. Houston has an effective “Lifeline” residential amount equivalent to 3,000 gallons. At 4,000 gallons, the rate increases from \$10.94 to \$25.10.

C. San Antonio (SAWS) currently has a minimum flow allowance which includes the first 2,244 gallons.

- **No Texas cities have a minimum allowance (though Houston is close).**
- **Most multi-family rates are very close to commercial rates.**

WASTEWATER RATE DESIGN

Rate Design Considerations

1. Tiered Meter Charge
 - General/Multi-Family
 - Residential
2. Removal of Minimum Allowance
3. Multi-Family Class Designation

Conceptual Rate Design

1. Apply a Water Meter Equivalency Factor developed by SAWS
2. Remove the Existing Minimum Allowance
3. Develop a Multi-Family Class Designation

WASTEWATER RATE DESIGN

Conceptual Rate Design – Cost of Service Comparison:

Line	Description	Allocated		Proposed		Revenue Recovery	
		Cost of Service		Revenues		Amount	Percent
		\$		\$		\$	%
SAWS							
1	Residential	\$	124,164,909	\$	124,032,268	\$ (132,641)	99.9%
2	Multi-Family		27,463,799		27,538,624	74,826	100.3%
3	General		44,026,079		43,920,113	(105,966)	99.8%
4	Wholesale		7,860,894		7,864,766	3,872	100.0%
5	Surcharge Customers		5,135,468		5,295,376	159,908	103.1%
6	Total	\$	208,651,149	\$	208,651,147	\$ (1)	100.0%

WASTEWATER RATE DESIGN

Proposed Rate Design Scenarios:

Scenario 1:

- **Develop Meter Based Wastewater Charges**
 - **Meter Based revenues equal 22.0% of total system revenues (32.0% under existing rates)**
- **Develop separate rates for the Multi-Family Class**

Scenario 2:

- **Develop Meter Based Wastewater Charges**
 - **Meter Based revenues equal 27.0% of total system revenues (32.0% under existing rates)**
- **Develop a two-block residential volumetric rate**
- **Develop separate rates for the Multi-Family Class**

WASTEWATER RATE DESIGN

Conceptual Rate Design – Comparison of Existing and Proposed Rates (Scenario 1):

Line	Description	Existing Rates	Proposed Rates		
		(All Customers)	Residential	Multi-Family	General
	Availability Charge (1):				
1	5/8 Inch	\$11.93	\$7.20	\$7.20	\$7.20
2	3/4 Inch	\$11.93	\$9.00	\$9.00	\$9.00
3	1.0 Inch	\$11.93	\$10.80	\$10.80	\$10.80
4	1.5 Inch	\$11.93	\$14.40	\$14.40	\$14.40
5	2.0 Inch	\$11.93	\$21.60	\$21.60	\$21.60
6	3.0 Inch	\$11.93	\$43.21	\$43.21	\$43.21
7	4.0 Inch	\$11.93	\$86.42	\$86.42	\$86.42
8	6.0 Inch	\$11.93	\$172.83	\$172.83	\$172.83
9	8.0 Inch	\$11.93	\$345.66	\$345.66	\$345.66
10	10.0 Inch	\$11.93	\$518.49	\$518.49	\$518.49
11	12.0 Inch	\$11.93	\$691.33	\$691.33	\$691.33
12	Volumetric Rate (2)	\$0.3163	\$0.3110	\$0.3010	\$0.3164

Note:

1. The existing availability charge includes a minimum allowance of 1,496 gallons.
2. The volumetric rates outlined above are assessed for wastewater flow per 100 gallons.



WASTEWATER RATE DESIGN

Conceptual Rate Design – Comparison of Existing and Proposed Rates (Scenario 2):

Line	Description	Existing Rates	Proposed Rates		
		(All Customers)	Residential	Multi-Family	General
	Availability Charge (1):				
1	5/8 Inch	\$11.93	\$9.36	\$9.36	\$9.36
2	3/4 Inch	\$11.93	\$11.23	\$11.23	\$11.23
3	1.0 Inch	\$11.93	\$14.04	\$14.04	\$14.04
4	1.5 Inch	\$11.93	\$18.72	\$18.72	\$18.72
5	2.0 Inch	\$11.93	\$23.40	\$23.40	\$23.40
6	3.0 Inch	\$11.93	\$46.79	\$46.79	\$46.79
7	4.0 Inch	\$11.93	\$93.59	\$93.59	\$93.59
8	6.0 Inch	\$11.93	\$187.17	\$187.17	\$187.17
9	8.0 Inch	\$11.93	\$280.76	\$280.76	\$280.76
10	10.0 Inch	\$11.93	\$374.34	\$374.34	\$374.34
11	12.0 Inch	\$11.93	\$467.93	\$467.93	\$467.93
	Volumetric Rate (2):				
12	Block 1 (3)	\$0.3163	\$0.1785	\$0.2996	\$0.3132
13	Block 2		\$0.3569		

Note:

1. The existing availability charge includes a minimum allowance of 1,496 gallons.
2. The volumetric rates outlined above are assessed for wastewater flow per 100 gallons.
3. The proposed residential volumetric rates consist of two Blocks with Block 1 ending at 2,992 gallons.



RATE DESIGN ANALYSIS

Residential Bill Impact Comparison (Scenario 1):

Residential (ICL) - Assumes 5/8" Meter and includes TCEQ Fees										
Usage			Existing Bill			Proposed Bill			Difference	
Gallons	CCF	% Billed	Fixed	Volume	Total	Fixed	Volume	Total	Amount	Percent
-	0	0.0%	\$ 11.99	\$ -	\$ 11.99	\$ 7.26	\$ -	\$ 7.26	\$ (4.73)	-39.4%
748	1	10.2%	\$ 11.99	\$ -	\$ 11.99	\$ 7.26	\$ 2.33	\$ 9.59	\$ (2.40)	-20.0%
1,496	2	20.0%	\$ 11.99	\$ -	\$ 11.99	\$ 7.26	\$ 4.65	\$ 11.91	\$ (0.08)	-0.6%
2,244	3	29.3%	\$ 11.99	\$ 2.37	\$ 14.36	\$ 7.26	\$ 6.98	\$ 14.24	\$ (0.12)	-0.8%
2,992	4	37.9%	\$ 11.99	\$ 4.73	\$ 16.72	\$ 7.26	\$ 9.30	\$ 16.57	\$ (0.16)	-0.9%
3,740	5	45.7%	\$ 11.99	\$ 7.10	\$ 19.09	\$ 7.26	\$ 11.63	\$ 18.89	\$ (0.20)	-1.0%
4,488	6	52.5%	\$ 11.99	\$ 9.46	\$ 21.45	\$ 7.26	\$ 13.96	\$ 21.22	\$ (0.24)	-1.1%
5,236	7	58.5%	\$ 11.99	\$ 11.83	\$ 23.82	\$ 7.26	\$ 16.28	\$ 23.54	\$ (0.28)	-1.2%
5,984	8	63.6%	\$ 11.99	\$ 14.20	\$ 26.19	\$ 7.26	\$ 18.61	\$ 25.87	\$ (0.32)	-1.2%
6,732	9	68.0%	\$ 11.99	\$ 16.56	\$ 28.55	\$ 7.26	\$ 20.94	\$ 28.20	\$ (0.35)	-1.2%
7,480	10	71.7%	\$ 11.99	\$ 18.93	\$ 30.92	\$ 7.26	\$ 23.26	\$ 30.52	\$ (0.39)	-1.3%
8,228	11	74.9%	\$ 11.99	\$ 21.29	\$ 33.28	\$ 7.26	\$ 25.59	\$ 32.85	\$ (0.43)	-1.3%
8,976	12	77.6%	\$ 11.99	\$ 23.66	\$ 35.65	\$ 7.26	\$ 27.91	\$ 35.17	\$ (0.47)	-1.3%
9,724	13	79.9%	\$ 11.99	\$ 26.03	\$ 38.02	\$ 7.26	\$ 30.24	\$ 37.50	\$ (0.51)	-1.4%
10,472	14	81.9%	\$ 11.99	\$ 28.39	\$ 40.38	\$ 7.26	\$ 32.57	\$ 39.83	\$ (0.55)	-1.4%
11,220	15	83.6%	\$ 11.99	\$ 30.76	\$ 42.75	\$ 7.26	\$ 34.89	\$ 42.15	\$ (0.59)	-1.4%
11,968	16	85.1%	\$ 11.99	\$ 33.12	\$ 45.11	\$ 7.26	\$ 37.22	\$ 44.48	\$ (0.63)	-1.4%
12,716	17	86.4%	\$ 11.99	\$ 35.49	\$ 47.48	\$ 7.26	\$ 39.54	\$ 46.81	\$ (0.67)	-1.4%
13,464	18	87.5%	\$ 11.99	\$ 37.85	\$ 49.84	\$ 7.26	\$ 41.87	\$ 49.13	\$ (0.71)	-1.4%
14,212	19	88.5%	\$ 11.99	\$ 40.22	\$ 52.21	\$ 7.26	\$ 44.20	\$ 51.46	\$ (0.75)	-1.4%
14,960	20	89.4%	\$ 11.99	\$ 42.59	\$ 54.58	\$ 7.26	\$ 46.52	\$ 53.78	\$ (0.79)	-1.5%
15,708	21	90.2%	\$ 11.99	\$ 44.95	\$ 56.94	\$ 7.26	\$ 48.85	\$ 56.11	\$ (0.83)	-1.5%
16,456	22	90.9%	\$ 11.99	\$ 47.32	\$ 59.31	\$ 7.26	\$ 51.18	\$ 58.44	\$ (0.87)	-1.5%
17,204	23	91.5%	\$ 11.99	\$ 49.68	\$ 61.67	\$ 7.26	\$ 53.50	\$ 60.76	\$ (0.91)	-1.5%
17,952	24	92.1%	\$ 11.99	\$ 52.05	\$ 64.04	\$ 7.26	\$ 55.83	\$ 63.09	\$ (0.95)	-1.5%
18,700	25	92.6%	\$ 11.99	\$ 54.42	\$ 66.41	\$ 7.26	\$ 58.15	\$ 65.41	\$ (0.99)	-1.5%
19,448	26	93.0%	\$ 11.99	\$ 56.78	\$ 68.77	\$ 7.26	\$ 60.48	\$ 67.74	\$ (1.03)	-1.5%
20,196	27	93.5%	\$ 11.99	\$ 59.15	\$ 71.14	\$ 7.26	\$ 62.81	\$ 70.07	\$ (1.07)	-1.5%



RATE DESIGN ANALYSIS

Residential Bill Impact Comparison (Scenario 2):

Residential (ICL) - Assumes 5/8" Meter and includes TCEQ Fees										
Usage			Existing Bill			Proposed Bill			Difference	
Gallons	CCF	% Billed	Fixed	Volume	Total	Fixed	Volume	Total	Amount	Percent
-	0	0.0%	\$ 11.99	\$ -	\$ 11.99	\$ 9.42	\$ -	\$ 9.42	\$ (2.57)	-21.4%
748	1	10.2%	\$ 11.99	\$ -	\$ 11.99	\$ 9.42	\$ 1.33	\$ 10.75	\$ (1.24)	-10.3%
1,496	2	20.0%	\$ 11.99	\$ -	\$ 11.99	\$ 9.42	\$ 2.67	\$ 12.09	\$ 0.10	0.8%
2,244	3	29.3%	\$ 11.99	\$ 2.37	\$ 14.36	\$ 9.42	\$ 4.00	\$ 13.42	\$ (0.93)	-6.5%
2,992	4	37.9%	\$ 11.99	\$ 4.73	\$ 16.72	\$ 9.42	\$ 5.34	\$ 14.76	\$ (1.96)	-11.7%
3,740	5	45.7%	\$ 11.99	\$ 7.10	\$ 19.09	\$ 9.42	\$ 8.01	\$ 17.43	\$ (1.66)	-8.7%
4,488	6	52.5%	\$ 11.99	\$ 9.46	\$ 21.45	\$ 9.42	\$ 10.68	\$ 20.10	\$ (1.36)	-6.3%
5,236	7	58.5%	\$ 11.99	\$ 11.83	\$ 23.82	\$ 9.42	\$ 13.35	\$ 22.77	\$ (1.05)	-4.4%
5,984	8	63.6%	\$ 11.99	\$ 14.20	\$ 26.19	\$ 9.42	\$ 16.02	\$ 25.44	\$ (0.75)	-2.9%
6,732	9	68.0%	\$ 11.99	\$ 16.56	\$ 28.55	\$ 9.42	\$ 18.69	\$ 28.11	\$ (0.44)	-1.6%
7,480	10	71.7%	\$ 11.99	\$ 18.93	\$ 30.92	\$ 9.42	\$ 21.36	\$ 30.78	\$ (0.14)	-0.5%
8,228	11	74.9%	\$ 11.99	\$ 21.29	\$ 33.28	\$ 9.42	\$ 24.03	\$ 33.45	\$ 0.16	0.5%
8,976	12	77.6%	\$ 11.99	\$ 23.66	\$ 35.65	\$ 9.42	\$ 26.70	\$ 36.12	\$ 0.47	1.3%
9,724	13	79.9%	\$ 11.99	\$ 26.03	\$ 38.02	\$ 9.42	\$ 29.37	\$ 38.79	\$ 0.77	2.0%
10,472	14	81.9%	\$ 11.99	\$ 28.39	\$ 40.38	\$ 9.42	\$ 32.04	\$ 41.46	\$ 1.07	2.7%
11,220	15	83.6%	\$ 11.99	\$ 30.76	\$ 42.75	\$ 9.42	\$ 34.71	\$ 44.12	\$ 1.38	3.2%
11,968	16	85.1%	\$ 11.99	\$ 33.12	\$ 45.11	\$ 9.42	\$ 37.38	\$ 46.79	\$ 1.68	3.7%
12,716	17	86.4%	\$ 11.99	\$ 35.49	\$ 47.48	\$ 9.42	\$ 40.05	\$ 49.46	\$ 1.99	4.2%
13,464	18	87.5%	\$ 11.99	\$ 37.85	\$ 49.84	\$ 9.42	\$ 42.72	\$ 52.13	\$ 2.29	4.6%
14,212	19	88.5%	\$ 11.99	\$ 40.22	\$ 52.21	\$ 9.42	\$ 45.38	\$ 54.80	\$ 2.59	5.0%
14,960	20	89.4%	\$ 11.99	\$ 42.59	\$ 54.58	\$ 9.42	\$ 48.05	\$ 57.47	\$ 2.90	5.3%
15,708	21	90.2%	\$ 11.99	\$ 44.95	\$ 56.94	\$ 9.42	\$ 50.72	\$ 60.14	\$ 3.20	5.6%
16,456	22	90.9%	\$ 11.99	\$ 47.32	\$ 59.31	\$ 9.42	\$ 53.39	\$ 62.81	\$ 3.50	5.9%
17,204	23	91.5%	\$ 11.99	\$ 49.68	\$ 61.67	\$ 9.42	\$ 56.06	\$ 65.48	\$ 3.81	6.2%
17,952	24	92.1%	\$ 11.99	\$ 52.05	\$ 64.04	\$ 9.42	\$ 58.73	\$ 68.15	\$ 4.11	6.4%
18,700	25	92.6%	\$ 11.99	\$ 54.42	\$ 66.41	\$ 9.42	\$ 61.40	\$ 70.82	\$ 4.42	6.6%
19,448	26	93.0%	\$ 11.99	\$ 56.78	\$ 68.77	\$ 9.42	\$ 64.07	\$ 73.49	\$ 4.72	6.9%
20,196	27	93.5%	\$ 11.99	\$ 59.15	\$ 71.14	\$ 9.42	\$ 66.74	\$ 76.16	\$ 5.02	7.1%



RATE DESIGN ANALYSIS

Multi-Family Bill Impact Comparison (Scenario 1):

Usage		Meter	Existing Bill			Proposed Bill			Difference	
Gallons	CCF	Size	Fixed	Volume	Total	Fixed	Volume	Total	Amount	Percent
-	0	5/8"	\$ 11.99	\$ -	\$ 11.99	\$ 7.26	\$ -	\$ 7.26	\$ (4.73)	-39.4%
10,000	13	5/8"	\$ 11.99	\$ 26.90	\$ 38.89	\$ 7.26	\$ 30.10	\$ 37.36	\$ (1.53)	-3.9%
26,180	35	1.0"	\$ 11.99	\$ 78.08	\$ 90.07	\$ 10.86	\$ 78.80	\$ 89.66	\$ (0.41)	-0.5%
50,000	67	2.0"	\$ 11.99	\$ 153.42	\$ 165.41	\$ 21.66	\$ 150.49	\$ 172.16	\$ 6.75	4.1%
250,000	334	4.0"	\$ 11.99	\$ 786.02	\$ 798.01	\$ 86.48	\$ 752.46	\$ 838.93	\$ 40.93	5.1%
500,000	668	6.0"	\$ 11.99	\$ 1,576.77	\$ 1,588.76	\$ 172.89	\$ 1,504.92	\$ 1,677.81	\$ 89.05	5.6%
750,000	1,003	6.0"	\$ 11.99	\$ 2,367.52	\$ 2,379.51	\$ 172.89	\$ 2,257.38	\$ 2,430.27	\$ 50.76	2.1%
1,000,000	1,337	6.0"	\$ 11.99	\$ 3,158.27	\$ 3,170.26	\$ 172.89	\$ 3,009.83	\$ 3,182.73	\$ 12.47	0.4%

Multi-Family Bill Impact Comparison (Scenario 2):

Usage		Meter	Existing Bill			Proposed Bill			Difference	
Gallons	CCF	Size	Fixed	Volume	Total	Fixed	Volume	Total	Amount	Percent
-	0	5/8"	\$ 11.99	\$ -	\$ 11.99	\$ 9.42	\$ -	\$ 9.42	\$ (2.57)	-21.4%
10,000	13	5/8"	\$ 11.99	\$ 26.90	\$ 38.89	\$ 9.42	\$ 29.96	\$ 39.38	\$ 0.49	1.3%
26,180	35	1.0"	\$ 11.99	\$ 78.08	\$ 90.07	\$ 14.10	\$ 78.45	\$ 92.54	\$ 2.48	2.8%
50,000	67	2.0"	\$ 11.99	\$ 153.42	\$ 165.41	\$ 23.46	\$ 149.82	\$ 173.28	\$ 7.87	4.8%
250,000	334	4.0"	\$ 11.99	\$ 786.02	\$ 798.01	\$ 93.65	\$ 749.11	\$ 842.76	\$ 44.75	5.6%
500,000	668	6.0"	\$ 11.99	\$ 1,576.77	\$ 1,588.76	\$ 187.23	\$ 1,498.22	\$ 1,685.46	\$ 96.70	6.1%
750,000	1,003	6.0"	\$ 11.99	\$ 2,367.52	\$ 2,379.51	\$ 187.23	\$ 2,247.34	\$ 2,434.57	\$ 55.06	2.3%
1,000,000	1,337	6.0"	\$ 11.99	\$ 3,158.27	\$ 3,170.26	\$ 187.23	\$ 2,996.45	\$ 3,183.68	\$ 13.42	0.4%



RATE DESIGN ANALYSIS

General Bill Impact Comparison (Scenario 1):

Usage		Meter	Existing Bill			Proposed Bill			Difference	
Gallons	CCF	Size	Fixed	Volume	Total	Fixed	Volume	Total	Amount	Percent
-	0	5/8"	\$ 11.99	\$ -	\$ 11.99	\$ 7.26	\$ -	\$ 7.26	\$ (4.73)	-39.4%
10,000	13	5/8"	\$ 11.99	\$ 26.90	\$ 38.89	\$ 7.26	\$ 31.64	\$ 38.91	\$ 0.02	0.0%
18,700	25	5/8"	\$ 11.99	\$ 54.42	\$ 66.41	\$ 7.26	\$ 59.17	\$ 66.44	\$ 0.03	0.0%
50,000	67	2.0"	\$ 11.99	\$ 153.42	\$ 165.41	\$ 21.66	\$ 158.22	\$ 179.88	\$ 14.48	8.8%
250,000	334	4.0"	\$ 11.99	\$ 786.02	\$ 798.01	\$ 86.48	\$ 791.10	\$ 877.58	\$ 79.57	10.0%
500,000	668	6.0"	\$ 11.99	\$1,576.77	\$1,588.76	\$ 172.89	\$1,582.21	\$1,755.10	\$ 166.34	10.5%
750,000	1,003	6.0"	\$ 11.99	\$2,367.52	\$2,379.51	\$ 172.89	\$2,373.31	\$2,546.20	\$ 166.70	7.0%
1,000,000	1,337	6.0"	\$ 11.99	\$3,158.27	\$3,170.26	\$ 172.89	\$3,164.42	\$3,337.31	\$ 167.05	5.3%

General Bill Impact Comparison (Scenario 2):

Usage		Meter	Existing Bill			Proposed Bill			Difference	
Gallons	CCF	Size	Fixed	Volume	Total	Fixed	Volume	Total	Amount	Percent
-	0	5/8"	\$ 11.99	\$ -	\$ 11.99	\$ 9.42	\$ -	\$ 9.42	\$ (2.57)	-21.4%
10,000	13	5/8"	\$ 11.99	\$ 26.90	\$ 38.89	\$ 9.42	\$ 31.32	\$ 40.74	\$ 1.85	4.8%
18,700	25	5/8"	\$ 11.99	\$ 54.42	\$ 66.41	\$ 9.42	\$ 58.57	\$ 67.99	\$ 1.59	2.4%
50,000	67	2.0"	\$ 11.99	\$ 153.42	\$ 165.41	\$ 23.46	\$ 156.61	\$ 180.07	\$ 14.66	8.9%
250,000	334	4.0"	\$ 11.99	\$ 786.02	\$ 798.01	\$ 93.65	\$ 783.06	\$ 876.70	\$ 78.70	9.9%
500,000	668	6.0"	\$ 11.99	\$1,576.77	\$1,588.76	\$ 187.23	\$1,566.11	\$1,753.35	\$ 164.59	10.4%
750,000	1,003	6.0"	\$ 11.99	\$2,367.52	\$2,379.51	\$ 187.23	\$2,349.17	\$2,536.40	\$ 156.90	6.6%
1,000,000	1,337	6.0"	\$ 11.99	\$3,158.27	\$3,170.26	\$ 187.23	\$3,132.23	\$3,319.46	\$ 149.20	4.7%



DISCUSSION



REVIEW OF WHOLESALE RATES



KEY STEPS TO ASSESSING THE EXISTING WHOLESALE WATER AND WASTEWATER RATES

- STEP 1 – Verify the existing Wholesale Water and Wastewater revenue;
- STEP 2 – Determine the cost to serve existing Wholesale Customers; and
- STEP 3 – Design rates based on the Rate Setting Objectives established.

SUMMARY OF WHOLESALE BILLING DETERMINANTS

STEP 1 – Verify existing Water and Wastewater Wholesale Revenues

Wholesale Customers				
Line	System	Number of Customers	Annual Volume (000s Gals.)	Annual Revenue
1	Water	8	130,016	\$455,160
2	Wastewater	12	2,302,363	\$7,846,134

COST OF SERVICE RESULTS

STEP 2 – Determine the cost to serve Existing Wholesale Customers

Cost of Service Comparison					
Line	Description	Allocated Cost	Existing Revenues	Revenue Recovery (Amount)	Revenue Recovery (Percent)
1	Water System	\$476,692	\$455,160	\$(21,532)	95.5%
2	Wastewater System	\$7,860,894	\$7,846,134	\$(14,760)	99.8%
3	Total	\$8,337,586	\$8,301,294	\$(36,292)	99.6%

RATE DESIGN ANALYSIS

STEP 3 – Design Wholesale Rates based on the Rate Setting Objectives established

Rate Design Targets:

- i. Wholesale Water
 - i. Maintain the existing SAWS Water Meter Equivalency Factors on Water
 - ii. Recover 100% of Cost of Service through base rate
 - iii. Eliminate ICL and OCL rate differential
- ii. Wholesale Sewer
 - i. Recover 100% of the Cost of Service
 - ii. Eliminate ICL and OCL rate differential

RATE DESIGN ANALYSIS

STEP 3 – Wholesale Cost of Service Comparison under Existing Rates

Cost of Service Comparison					
Line	Description	Allocated Cost	Proposed Revenues	Revenue Recovery (Amount)	Revenue Recovery (Percent)
1	Water System	\$476,692	\$476,455	\$(238)	100.0%
2	Wastewater System	\$7,860,894	\$7,864,766	\$3,872	100.0%
3	Total	\$8,337,586	\$8,341,221	\$3,635	100.0%

RATE DESIGN ANALYSIS

Summary of Wholesale Meter/Service Availability Charges

Meter/Service Availability Charges					
Line	Meter Sizes	Water		Wastewater	
		Existing	Proposed	Existing	Proposed
1	5/8 Inch	\$7.31	\$8.27	\$140.06	\$140.06
2	3/4 Inch	\$10.26	\$11.61	\$140.06	\$140.06
3	1.0 Inch	\$16.14	\$18.26	\$140.06	\$140.06
4	1.5 Inch	\$30.83	\$34.88	\$140.06	\$140.06
5	2.0 Inch	\$48.44	\$54.80	\$140.06	\$140.06
6	3.0 Inch	\$89.58	\$101.35	\$140.06	\$140.06
7	4.0 Inch	\$148.33	\$167.81	\$140.06	\$140.06
8	6.0 Inch	\$295.23	\$334.01	\$140.06	\$140.06
9	8.0 Inch	\$471.50	\$533.43	\$140.06	\$140.06
10	10.0 Inch	\$677.14	\$766.08	\$140.06	\$140.06
11	12.0 Inch	\$1,264.71	\$1,430.82	\$140.06	\$140.06

RATE DESIGN ANALYSIS

Summary of Volumetric Rates

Volumetric Rates per 100 gallons			
Line	Description	Existing	Proposed
	Wholesale Water:		
1	Block 1: (Base)	\$0.2696	\$0.2543
2	Block 2: (1.0 – 1.25 of Base) (1)	\$0.3105	See Footnote (1)
3	Block 3: (1.25 – 1.75 of Base)	\$0.3649	See Footnote (1)
4	Block 4: (Over 1.75 of Base)	\$0.4382	See Footnote (1)
5	Wholesale Wastewater	\$0.3422	\$.3397

Note:

1. The highest unit block rate assessed by SAWS over all the water services classes will be applied for all water usage over the Base in the proposed scenario.

QUESTIONS



REVIEW OF RECYCLED WATER RATES



KEY STEPS TO ASSESSING THE EXISTING RECYCLED WATER RATES

- STEP 1 – Verify the existing Recycled Water Revenues;
- STEP 2 – Determine the cost to serve existing Recycled Water Customers; and
- STEP 3 – Design rates based on the Rate Setting Objectives established.

SUMMARY OF RECYCLED WATER REVENUES

STEP 1 – Verify existing Recycled Water Revenues

Recycled Water Customers				
Line	Description	Number of Customers	Annual Volume (000s Gals.)	Annual Revenue
1	Edwards Exchange (1)	5	382,883	\$86,695
2	Non-Exchange	91	1,668,172	\$1,868,967
3	Total	96	2,051,055	\$1,955,662

1. Edwards Exchange rate equal to 25% of Non-Exchange Rate

COST OF SERVICE RESULTS

STEP 2 – Determine the cost to serve Existing Recycled Water Customers

Cost of Service Comparison					
Line	Description	Allocated Cost	Existing Revenues	Revenue Recovery (Amount)	Revenue Recovery (Percent)
1	Total System	\$11,056,198	\$1,955,662	\$(9,100,536)	17.7%

COMPARISON OF EXISTING UTILITY BILLS

STEP 2 – Determine the cost to serve Existing Recycled Customers

Comparison to Potable Water Rates					
Line	Description	Recycled Rates	Residential Rates	General Class Rates	Irrigation Class Rates
1	Total Bill (1)	\$134.28	\$785.03	\$409.91	\$854.22
2	Average Rate (00s Gals.)	\$0.1343	\$0.7850	\$0.4099	\$0.8542
3	Recycle % of Potable		17%	33%	16%

1. Based on 100,000 gallons of water, 2" meter, standard 2014 rates.

RATE DESIGN ANALYSIS

STEP 3 – Design Recycled Water Rates based on the Rate Setting Objectives established

Rate Design Targets:

- i. Adjust the existing Recycled Water Rates
 - i. Increase Recycled Water Rates by 10.0% annually
 - i. Initiate the process of moving to Cost of Service; and/or
 - ii. Achieve 75% of the General Class potable water rates
 - ii. Unrecovered Recycled Water Cost of Service to be subsidized proportionately by all potable water customers.

SUMMARY OF RECYCLED WATER REVENUES

STEP 3 – Design Recycled Water Rates

Cost of Service Comparison					
Line	Description	Allocated Cost	Proposed Revenues	Revenue Recovery (Amount)	Revenue Recovery (Percent)
1	Total System	\$11,056,198	\$2,151,228	\$(8.904,970)	19.5%

RATE DESIGN ANALYSIS

Summary of Recycled Water Rates

Recycled Water Rates			
Line	Description	Edwards Exchange	Non-Exchange
	Service Availability:		
1	5/8 Inch	\$10.19	\$10.19
2	3/4 Inch	\$13.26	\$13.26
3	1.0 Inch	\$17.27	\$17.27
4	1.5 Inch	\$27.45	\$27.45
5	2.0 Inch	\$40.14	\$40.14
6	3.0 Inch	\$106.77	\$106.77
7	4.0 Inch	\$158.70	\$158.70
8	6.0 Inch	\$302.74	\$302.74
9	8.0 Inch	\$456.33	\$456.33
10	10.0 Inch	\$625.72	\$625.72
11	12.0 Inch	\$772.04	\$772.04
	Volumetric Rates:	Rate per 100 Gals.	Rate per 100 Gals.
12	Block 1	\$0.0277	\$0.1108
13	Block 2	\$0.1130	\$0.1130



MULTI-FAMILY CUSTOMER CLASS



MULTI-FAMILY CUSTOMER CLASS DESIGNATION

How should SAWS staff proceed with developing a Multi-Family Customer Class?

Considerations:

- i. Multi-Family customers are currently assessed General Class rates.
- ii. Existing Multi-Family customers are billed based on a master meter
 - i. Master meter vs. billing unit
- iii. The water demand characteristics of this class are not typically identical to the General Class.
- iv. Multi-Family customers will see an increase in rates in order to meet the water and wastewater system class cost of service.

MULTI-FAMILY CUSTOMER CLASS DESIGNATION

General and Multi-Family Class Cost of Service Comparison

Provided below is a summary of the Existing Cost of Service results:

Line	Description	Allocated		Existing		Revenue Recovery		
		Cost of Service		Revenues		Amount	Percent	
		\$		\$		\$	%	
Cost of Service (Water):								
1	General	\$	46,462,035	\$	51,321,239	\$	4,859,205	110.5%
2	Multi-Family		30,627,633		28,474,494		(2,153,139)	93.0%
3	Total	\$	77,089,668	\$	79,795,733	\$	2,706,065	103.5%
Cost of Service (Wastewater):								
4	General	\$	44,026,079	\$	42,639,190	\$	(1,386,890)	96.8%
5	Multi-Family		27,463,799		26,921,782		(542,017)	98.0%
6	Total	\$	71,489,878	\$	69,560,971	\$	(1,928,907)	97.3%
Combined Water & Wastewater:								
7	General	\$	90,488,114	\$	93,960,429	\$	3,472,315	103.8%
8	Multi-Family		58,091,432		55,396,276		(2,695,156)	95.4%
9	Total	\$	148,579,546	\$	149,356,705	\$	777,158	100.5%

QUESTIONS



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