

Cost of Service Analysis: Alternative Water and Sewer Rate Structures and Impacts

Public Works & Utilities/Strategic
Services

November 24, 2015



Cost of Service Analysis

2

- A study to evaluate the current fiscal status of the water and sewer utilities.
 - *Compares revenues to revenue requirements.*
 - *Changes consumption projections based on local and industrial trends.*
 - *Establishes water and sewer cost of service by customer class.*
 - *Results previously presented at City Council Workshop on October 27, 2015*

Average Winter Consumption

- Average Winter Consumption (AWC) is the average gallons of water used during the months of December, January, February and March.
 - To arrive at this number, the meter readings send through water measured in 100 cubic feet (cf) which is then converted to gallons.
 - The minimum AWC for water accounts is 6,000 gallons.

Month	Usage (gallons)
December	8,000
January	6,000
February	5,000
March	5,000
AWC	6,000

Volumetric Water Charges

- Average Winter Consumption (AWC) = 6,000 gallons
- Tier 1 includes water usage up to 110% of AWC
 - Usage up to 6,600 gallons billed at \$1.91
- Tier 2 includes water usage up to 310% of AWC
 - Usage above 6,600 and up to 18,600 gallons billed at \$6.68
- Tier 3 includes water usage over 311% of AWC
 - Any usage above 18,600 billed at \$9.76

Other Water Charges

- Water base charge
 - Every account pays a base charge based on meter size
 - Accounts with larger meters pay a higher base charge
- Kansas Water Plan Charge
 - A pass-through fee from the State

Residential Consumption Projected Usage Trends

The residential class accounts for approximately **60.23%** of usage.

Existing Rate Structure					
	% of AWC	Usage (1,000g)	Usage (%)	Revenue (\$)	Revenue (%)
Tier 1	<110%	6,621,416	78%	\$13,266,112	48%
Tier 2	111%- 310%	1,339,172	16%	\$9,383,662	34%
Tier 3	>311%	499,123	6%	\$5,110,004	18%
Total		8,459,711	100%	\$27,759,778	100%

Commercial Consumption Projected Usage Trends

The commercial class accounts for approximately **39.77%** of usage

Existing Rate Structure					
	% of AWC	Usage (1,000g)	Usage (%)	Revenue (\$)	Revenue (%)
Tier 1	<110%	4,240,123	76%	\$8,495,154	44%
Tier 2	111%- 310%	852,754	15%	\$5,975,298	30%
Tier 3	>311%	492,847	9%	\$5,045,751	26%
Total		5,585,724	100%	\$19,516,203	100%

Revenue Impacts

Projected Revenue Increases										
	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Water	5.5%	4.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
Sewer	5.0%	5.0%	5.5%	5.0%	5.0%	4.5%	4.5%	4.5%	4.5%	3.0%

- Revenue increase estimates are the same as those presented to the City Council in 2014 due to reduction in interest rate assumptions.

Customer Impacts

Customer Combined Monthly Water and Sewer Bills				
	Current	Proposed	Difference	
			\$	%
<u>Residential</u>				
3,750 Gallons	\$39.04	\$41.04	\$2.00	5.1%
7,500 Gallons	\$62.38	\$65.54	\$3.16	5.1%
15,000 Gallons	\$136.26	\$143.06	\$6.80	5.0%
<u>Commercial</u>				
100,000 Gallons	\$545.30	\$574.48	\$29.18	5.4%
<u>Industrial</u>				
10 Million Gallons	\$50,994	\$53,532	\$2,538	5.0%

Rate Structure Options – Lifeline Rates

- Option to address affordability for those who meet income guidelines
- 100% of Federal Poverty Level
 - Approximately 17.6% of residential customers
 - Approximately 11,000 water accounts
- Discount on the base charge

Customer Impacts with Lifeline Rate

Customer Combined Monthly Water and Sewer Bills				
	Current	Proposed	Lifeline Rate	
			<u>25%</u>	<u>50%</u>
<u>Residential</u>				
3,750 Gallons	\$39.04	\$41.04	\$41.20	\$41.36
7,500 Gallons	\$62.38	\$65.54	\$65.90	\$66.26
15,000 Gallons	\$136.26	\$143.06	\$144.05	\$145.05
<u>Commercial</u>				
100,000 Gallons	\$545.30	\$574.48	\$578.75	\$583.01
<u>Industrial</u>				
10 Million Gallons	\$50,994	\$53,532	\$53,959	\$54,385

Rate Structure Comparison

Existing Rate Structure

- Base Charge
- Tiered, Volumetric Charge
 - Block 1: <110% of Average Winter Consumption
 - Block 2: 111%-310% of Average Winter Consumption
 - Block 3: >311% of Average Winter Consumption

Rate Structure Options

- Base Charge
- Tiered, Volumetric Charge
 - Scenario 1: Adjust Tier1 to start at 125%
 - Scenario 2: Break Tier 2 into two separate blocks
 - 126%-200%
 - 201%-310%

Customer Impacts of Rate Alternatives

Customer Combined Monthly Water and Sewer Bills				
	Current	Proposed	Alternatives	
			Scenario 1	Scenario 2
<u>Residential</u>				
3,750 Gallons	\$39.04	\$41.04	\$41.58	\$41.02
7,500 Gallons	\$62.38	\$65.54	\$62.11	\$65.48
15,000 Gallons	\$136.26	\$143.06	\$143.35	\$144.35
<u>Commercial</u>				
100,000 Gallons	\$545.30	\$574.48	\$588.69	\$573.79
<u>Industrial</u>				
10 Million Gallons	\$50,994	\$53,532	\$54,954	\$53,464

Customer Impacts of Rate Alternatives with Lifeline Rate

Customer Combined Monthly Water and Sewer Bills				
	Current	Proposed	Alternatives	
			Scenario 1	Scenario 2
<u>Residential</u>				
3,750 Gallons	\$39.04	\$41.36	\$41.90	\$41.34
7,500 Gallons	\$62.38	\$66.26	\$62.74	\$66.20
15,000 Gallons	\$136.26	\$145.05	\$145.26	\$146.37
<u>Commercial</u>				
100,000 Gallons	\$545.30	\$583.01	\$597.22	\$582.32
<u>Industrial</u>				
10 Million Gallons	\$50,994	\$54,385	\$55,806	\$54,316

Public Input

- Alternative rate structures were presented to each District Advisory Board
 - More positive feedback regarding Scenario 2 over Scenario 1
 - Mixed support for Lifeline Rate
 - Some support for higher rate increases for higher tiers

Cost of Service Analysis *and* Water and Sewer Rate Impact

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