Water and Wastewater Capital Improvement Plan Options and Revenue Requirements

November 15, 2012

City of Lawrence
UTILITIES

Contents

Introduction

For City Commission consideration this report presents seven Capital Improvement Plans (CIPs) based on recently completed Master Plans for Lawrence's Water and Wastewater Utilities. Previously, staff presented two scenarios. Staff updated these with the latest information and formulated an additional five scenarios based on City Commission comments and questions. The scenarios help compare benefits relative to costs of the various CIP plans, determine rate impacts to customers, and compare those to what is happening nationally and within our region.

Lawrence has an opportunity to expand wastewater capacity to support economic development, initiate programs that will address deferred infrastructure maintenance and upcoming maintenance needs, comply with expected new regulatory requirements, and improve the quality of water and services for the customer with rate increases below those of our peers. This can be accomplished for less than a total $15.56 increase spread out over five years to a typical monthly bill. The table on page 3 summarizes the scenarios' costs and relative levels of services provided.

Lawrence is seeing the benefits of adoption and implementation of several previous five-year CIP's that initiated programs and addressed utility needs. In addition, operational efficiency efforts and use of technology have allowed the department to increase services provided while reducing budgeted FTE's by five over the last 3 years. Current water treatment capacity is sufficient to meet community growth for the next two decades. Improvements in the mechanical reliability of the wastewater plant and lift stations, plus sewer line maintenance and rehabilitation programs, have resulted in significant reductions in sanitary sewer overflows. As with other communities, Lawrence still has infrastructure needs to address. For Lawrence this includes water lines, old equipment, and structures at the Kaw water plant, and rapid wastewater inflow and infiltration. Several of the scenarios presented address these issues and expand capacities of the systems to provide for community growth and at rate increases that are less than surrounding communities.

Staff recommends adoption of the 5-Year CIP and Rate Plan outlined in Scenario 1 and the Master Plans to meet the needs of the Utility. While implementation will require adjustments to both the CIP and rates annually, having plan adoption for a five-year period allows customers and developers to have predictability with future costs. It also helps with implementation of projects and programs since many span years or even decades.

Scenario	WWTP Capacity Sufficient to	Total Increase in Typical Monthly Bill From 2012 to 2017	Total Additional Cost Over the 5 Year Period	Growth Supported Outside Existing City Limits	Addresses Water & Wastewater Infrastructure Needs	Regulatory Compliance**
1 - Recommended	2030	$13.66	$453.60	Yes	Yes	Yes
2 - Reduced Water	2030	$11.01	$384.12	Yes	No	Yes
3 - Deferred Maintenance/Reliability	2030	$12.10	$404.52	Yes	Yes	Yes
4 - Deferred Maintenance/Reliability & Wakarusa WWTP	2018	$8.54	$291.48	No*	No	No
5 - Taste, Odor, & Toxins	2030	$15.56	$519.96	Yes	Yes	Yes
6 - Delay Wakarusa WWTP & Accelerate Rapid I/I	2018	$11.70	$368.76	No*	No	No
7 - Roadway Relocations Only - No Wakarusa WWTP	2018	$1.38	$72.48	No*	No	No

* Annexation is not supported west of K-10, south of west 6th, and Southeast Lawrence.
** As it applies to wet weather overloading in the collection system and at the existing WWTP.

Community Growth and Population Projections

The Master Plans evaluated the latest population projections as summarized in the table below. The recommended Scenario 1 is based on Lawrence having a population of 119,529 in the year 2030. This follows a rate of growth between Horizon 2020's low and medium growth projections. The Planning Staff indicates the current growth rate is above the low growth rate estimates from Horizon 2020.

Population Projections	2010	2020	2030
Low (Horizon 2020)	88,961	100,076	111,191
Medium (Horizon 2020)	95,178	110,406	125,635
High (Horizon 2020)	99,013	122,394	151,296
Master Plan Service Area Populations	92,727	106,667	119,529

Based on actual wastewater loading in 2010 the Master Plan determined the existing wastewater treatment plant has the ability to serve an additional population of about 13,000 people in addition to the population at the time[1]. The Master plan projects remaining existing capacity (excluding wet weather treatment that currently exceeds treatment capacity) will be fully utilized around 2018.

CIP Scenarios

Based on City Commission comments received during the budget study session staff has developed five new CIP scenarios and updated the two originally presented to help evaluate options and rate impacts. A summary description of each scenario follows:

- Scenario 1 – Recommended
  This CIP scenario represents the most recent and updated staff and master plan recommendations. For the purposes of project timing, it reflects project timing based on the Planning Department's population projections between the Low and Medium Population Projections from Horizon 2020. This CIP includes major projects and programs that address water and wastewater system needs related to reliability, regulatory requirements, and growth.

  These include:
  - Construction of the Wakarusa WWTP with completion in 2018
  - Programs and projects (Rapid I&I and Wakarusa WWTP) to address current wet weather overloading at the Kaw WWTP
  - Sanitary Sewer Rehabilitation Program
  - Water Line Replacement Program
  - Construction and renovation of Kaw water plant intake(s)
  - Construction of the Kaw Transmission Main Phase I which is a second transmission main to North Lawrence that is also sized to eventually provide additional transmission capacity to South East Lawrence including Farmland

[1] The remaining capacity estimated is based on load and translated to population equivalents. There is not more or less capacity if actual 2010 population is different from the value used.

- Renovation and or replacement of the 1931 and 1954 Oread water tanks
- Other projects as outlined in the detailed project listing

- Scenario 2 – Reduced Water
  This CIP scenario extends and or reduces projects for the water utility. The wastewater CIP is the same as in Scenario 1. The Reduced Water CIP addresses wastewater system needs but does not address water system needs related to reliability, regulatory requirements, and growth. It shows the rate impacts of projects primarily related to the water utility.

  This CIP includes water projects related to roadway relocations and funds the 33-year, $72 million dollar water main rehabilitation program at $0.5 million annually. This is one-half of the historical level of funding and less than 25% of what is needed. It does not deal with Kaw Water Plant intake issues, the aging Oread Water Tanks, the need for a second water transmission main for North Lawrence, nor expansion of transmission capacity to serve the South East Lawrence (Kaw Transmission Main Phase I).

- Scenario 3 – Deferred Maintenance/Reliability
  This CIP scenario modifies Scenario 1 by extending the Rapid I/I Reduction Program by 5 years to 2025 and deferring to 2015 the co-generation and backup power project at the WWTP. On the water side the Kaw Transmission Main Phase I (second transmission source for North Lawrence and transmission capacity for the South East Lawrence) is delayed by 4 years until 2017 and the water main replacement program is spread out over an additional 5 years extending the program to 2050.

- Scenario 4 – Deferred Maintenance/Reliability & Wakarusa WWTP (Low Growth)
  This CIP scenario modifies Scenario 3 and adjusts the Wakarusa WWTP for completion in 2022 based on the population estimates for the Low Growth Population Projections from Horizon 2020. The Wakarusa WWTP expansion in conjunction with the Rapid I&I Removal Program provides for relief of current wet weather overloading of the existing treatment plant and of Lift Station 5A/5B on the Haskell campus. This scenario may result in reduction in the ability to serve additional growth through the Wakarusa Valley and areas to the West. The model also indicates bypassing will occur under design conditions, which does not comply with state and federal regulations.

- Scenario 5 – Taste, Odor & Microtoxins
  This CIP scenario modifies Scenario 1 with the acceleration of projects to begin in 2013 that would enhance treatment capability to further control Taste, Odor, and Microtoxins. The Master Plan schedules this project for 2025. Staff has received responses to RFPs for evaluating enhanced treatment options. Staff will interview firms this month.

  Over the last year, treatment staff has improved effectiveness of the existing powder activated carbon (PAC) technology. They achieved 90% removal of the taste and odor causing compounds consistently. In most cases, this is sufficient to reduce taste and odor causing compounds to levels below those detectable by sensitive individuals. However, there could be periods when the severity of the outbreak is beyond the ability of the existing system to manage completely and some portions of the taste and odor causing compounds pass through to the finished water.

- Scenario 6 – Delay Wakarusa WWTP & Accelerate Rapid I/I
  This CIP scenario modifies Scenario 1 by deferring the start of the Wakarusa WWTP by 3 years to 2016 and accelerates the Rapid I/I Program by 3 years for completion in 2017 instead of 2020.

  Achieving the goals of the Rapid I/I Program 3 years sooner would help to mitigate current wet weather overloading at the WWTP. However, since the Wakarusa WWTP is integral to alleviating the wet weather overloading at Lift Station 5A/5B, this station and the area it serves would continue to be overloaded for an additional 3 years. Just as with Scenario 4, deferral of the Wakarusa WWTP may limit the ability to serve additional growth through the Wakarusa Valley and areas to the West due to collection system limitations, not just treatment capacity limitations. The model indicates bypassing will occur under design conditions unless and until projects are initiated and completed to either expand 5A/5B and its downstream sewers, or divert flows to the Wakarusa WWTP.

- Scenario 7 – Roadway Relocations Only – No Wakarusa WWTP
  This CIP Scenario only addresses utility relocations in advance of roadway projects. It does no major projects including the Wakarusa WWTP, Rapid I/I Removal Program, Kaw Intake, Oread Storage Tanks, water main rehabilitation, and treatment plant maintenance. This scenario provides a baseline for comparing other scenarios.

Rate Model Adjustments and Fiscal Requirements

Lawrence's rate model calculates the revenue needed to support the Operations & Maintenance (O & M) and Capital Budgets of the Department. The model follows American Water Works Association's practices for establishing reasonable costs of service for the various classes of water and wastewater customers for a five-year period. For the seven scenarios evaluated, the model calculates revenue needs and the corresponding water and wastewater rates. For each scenario, the model uses the same values for operations and maintenance costs, water use characteristics, and growth. The model adjusts utilization of cash, debt financing, and debt service to ensure there is adequate bond coverage and reserve funds.

As of December 31, 2011, the Water and Wastewater Fund had $32,634,608 in cash and investments. Of this amount, $13,089,415[2] was from bond proceeds for current capital projects and $5,990,033 allocated to cash finance current and future capital improvement projects. The remaining $13,555,160 was available for operating expenses. Purchase orders encumbered a total of $1,380,262. In addition, bond covenants require the City to maintain a three-month operating reserve, which is equal to just over $5,000,000. As a result, as of December 31, 2011, approximately $7.1 million was available for future operating expenses. These were the inputs to the model to begin the 2013 rate model runs.

All of the scenarios use the same beginning cash balances. A common goal of the scenarios is to maintain at least $1.0 million in cash available for both water and wastewater operating expenses and the same for capital projects. This provides a total of $4.0 million in cash available for unplanned events. All of the scenarios approximate this goal with the exception of

[2] As of October 31, 2012 the balance of bond proceeds is $2,721,796

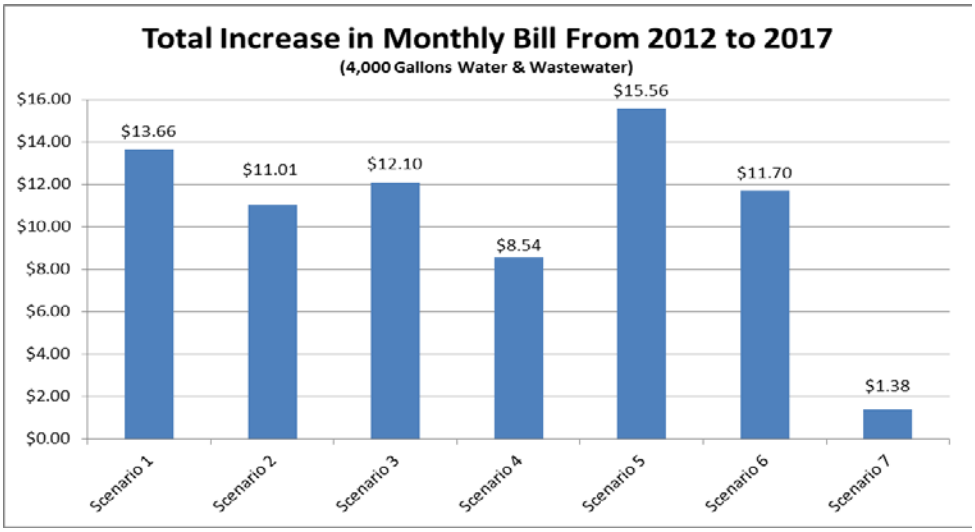
scenario 7. This scenario projects available cash in 2018 of $10.2 million for wastewater operations and $3.0 million for wastewater capital projects despite no increase in rates.

The City must maintain a debt coverage ratio of 1.25 to stay in compliance with our bond covenants. The calculation for debt coverage ratio is revenues minus expenses divided by debt expense. All of the scenarios meet this requirement when combining water and wastewater. However, the water utility alone only meets the coverage requirements under Scenarios 2 and 3. Under the other scenarios, the debt coverage ratio when looking at just the water operations is less than 1.25 and reduces the amount of cash available for water operations.

Scenario Rate Results

The table and graph below show a summary of the increase in a typical[3] residential bill from 2012 to 2017 for each scenario. In 2012, a typical bill is $47.64 per month. The recommended scenario 1 will cost a customer paying a typical bill an additional $453.60 over the five years.

Scenario	*Total Increase in Monthly Bill From 2012 to 2017*	*Average Yearly Increase in Monthly Bill*	*Total Additional Cost Over the 5 Year Period*
1 - Recommended	*$13.66*	*$2.73*	*$453.60*
2 - Reduced Water	*$11.01*	*$2.20*	*$384.12*
3 - Deferred Maintenance/Reliability	*$12.10*	*$2.42*	*$404.52*
4 - Deferred Maintenance/Reliability & Wakarusa WWTP	*$8.54*	*$1.71*	*$291.48*
5 - Taste, Odor, & Toxins	*$15.56*	*$3.11*	*$519.96*
6 - Delay Wakarusa WWTP & Accelerate Rapid I/I	*$11.70*	*$2.34*	*$368.76*
7 - Roadway Relocations Only - No Wakarusa WWTP	*$1.38*	*$0.28*	*$72.48*



[3] The median water usage for all billings over the year defines "Typical" for this comparison. Over the course of a year, generally half of monthly bills use less than the 4,000-gallon quantity and half of bills use more than 4,000 gallons. Residential bills will vary based on actual metered water usage (water) and winter average water usage (wastewater).

Many combinations of customer class, meter size, and usage affect the increase a particular customer may realize in their bill. Appendix II contains tables detailing rate changes over the 5-year rate plan for all customer classes.

The table below shows the yearly percentage revenue increase for 2013 through 2018 required for the seven scenarios.

Full Year Revenue Increase

	Scenario 1		Scenario 2		Scenario 3		Scenario 4		Scenario 5		Scenario 6		Scenario 7	
	Water	Wastewater	Water	Wastewater	Water	Wastewater	Water	Wastewater	Water	Wastewater	Water	Wastewater	Water	Wastewater
2013	3.0%	4.0%	3.0%	4.0%	3.0%	4.0%	3.0%	4.0%	5.0%	3.0%	3.0%	0.0%	0.0%	0.0%
2014	5.0%	1.0%	3.0%	1.0%	3.0%	1.0%	3.0%	0.0%	6.0%	3.0%	5.0%	3.0%	0.0%	0.0%
2015	6.0%	6.0%	3.0%	6.0%	4.0%	6.0%	4.0%	0.0%	8.0%	4.0%	6.0%	3.0%	0.0%	0.0%
2016	6.0%	5.0%	3.0%	5.0%	5.0%	4.0%	5.0%	0.0%	8.0%	6.0%	6.0%	4.0%	0.0%	0.0%
2017	7.0%	6.0%	3.0%	6.0%	7.0%	6.0%	7.0%	6.0%	6.0%	7.0%	7.0%	6.0%	0.0%	0.0%
2018	3.0%	7.0%	1.0%	7.0%	6.0%	6.0%	6.0%	5.0%	3.0%	6.0%	3.0%	6.0%	2.0%	0.0%

System Development Charges

System Development Charges (SDCs) are fees paid by new development to recover the cost of the existing (but unused) and new capacity utilized or required by growth that help fund new and existing water and wastewater infrastructure. The City Commission established system development charges for customers in 1996. A 3-year phased-in approach for SDCs began in January 1997. Annual increases of SDC's from adopted 5-year Rate Plans in 2000 and 2004 also used a phased-in approach. Later, the City Commission adjusted the SDC charges outlined in the 2004 Rate Plan for the years 2008 and 2009. There have been no changes to SDCs since 2009 and the 2009 SDCs remain in effect today. The SDCs for the recommended Scenario 1's five-year period are in the table located on page 9. The SDCs for all of the scenarios are in Appendix III. The SDCs for all scenarios begin with a phase-in approach but the fifth year is at the calculated and recommended SDC funding level.

Utilities staff met and continues to communicate with the Lawrence Home Builders Association and the Lawrence Board of Realtors about SDC's. Through last November and December Utilities staff provided detailed information to the Lawrence Home Builders Association and the Lawrence Board of Realtors about how SDC's are calculated and the rationalization for why SDC's are collected. Utilities staff shared the seven scenarios presented in this document and discussed with both organization's executives. They presented and discussed the scenarios with their governing boards and developed written position statements (see Appendix III) that accept adoption of a phased-in 5-year SDC rate adjustment. Their acceptance is predicated on adoption of a Capital Improvement Plan that meets the Master Plan recommendations that address growth, infrastructure maintenance needs, and future regulatory requirements. This includes construction of the Wakarusa Wastewater Treatment Plant.

Scenario 1 - Recommended System Development Charges

	Existing	2013	2014	2015	2016	2017
	$	$	$	$	$	$
Water Utility						
Residential						
5/8"	1,560	1,590	1,580	1,570	1,560	1,550
1"	3,900	3,980	3,960	3,930	3,910	3,880
1-1/2"	7,800	7,950	7,900	7,850	7,800	7,750
2"	12,480	12,720	12,640	12,560	12,480	12,400
All Other						
5/8"	1,560	1,590	1,580	1,570	1,560	1,550
1"	3,900	3,980	3,960	3,930	3,910	3,880
1-1/2"	7,800	7,950	7,900	7,850	7,800	7,750
2"	12,480	12,720	12,640	12,560	12,480	12,400
3"	23,400	23,850	23,700	23,550	23,400	23,250
4"	39,000	39,750	39,500	39,250	39,000	38,750
6"	78,000	79,500	79,000	78,500	78,000	77,500
8"	156,000	159,000	158,000	157,000	156,000	155,000
10"	234,000	238,500	237,000	235,500	234,000	232,500
12"	343,200	349,800	347,600	345,400	343,200	341,000
16"	858,000	874,500	869,000	863,500	858,000	852,500
Wastewater Utility						
Residential						
All Meters	1,470	1,680	1,860	2,050	2,230	2,410
All Other						
5/8"	2,970	3,510	3,890	4,280	4,660	5,040
1"	7,430	8,780	9,740	10,690	11,650	12,600
1-1/2"	14,850	17,550	19,460	21,380	23,290	25,200
2"	23,760	28,080	31,140	34,200	37,260	40,320
3"	44,550	52,650	58,390	64,130	69,860	75,600
4"	74,250	87,750	97,310	106,880	116,440	126,000
6"	148,500	175,500	194,630	213,750	232,880	252,000
8"	297,000	351,000	389,250	427,500	465,750	504,000
10"	445,500	526,500	583,880	641,250	698,630	756,000
12"	653,400	772,200	856,350	940,500	1,024,650	1,108,800
16"	1,633,500	1,930,500	2,140,880	2,351,250	2,561,630	2,772,000
Combined Utilities						
Residential						
5/8"	3,030	3,270	3,440	3,620	3,790	3,960
1"	5,370	5,660	5,820	5,980	6,140	6,290
1-1/2"	9,270	9,630	9,760	9,900	10,030	10,160
2"	13,950	14,400	14,500	14,610	14,710	14,810
All Other						
5/8"	4,530	5,100	5,470	5,850	6,220	6,590
1"	11,330	12,760	13,700	14,620	15,560	16,480
1-1/2"	22,650	25,500	27,360	29,230	31,090	32,950
2"	36,240	40,800	43,780	46,760	49,740	52,720
3"	(a)	76,500	82,090	87,680	93,260	98,850
4"	(a)	127,500	136,810	146,130	155,440	164,750
6"	(a)	255,000	273,630	292,250	310,880	329,500
8"	(a)	510,000	547,250	584,500	621,750	659,000
10"	(a)	765,000	820,880	876,750	932,630	988,500
12"	(a)	1,122,000	1,203,950	1,285,900	1,367,850	1,449,800
16"	(a)	2,805,000	3,009,880	3,214,750	3,419,630	3,624,500

(a) Determined based on analysis of new customer's anticipated use of the system.

Area and National Rate Trends

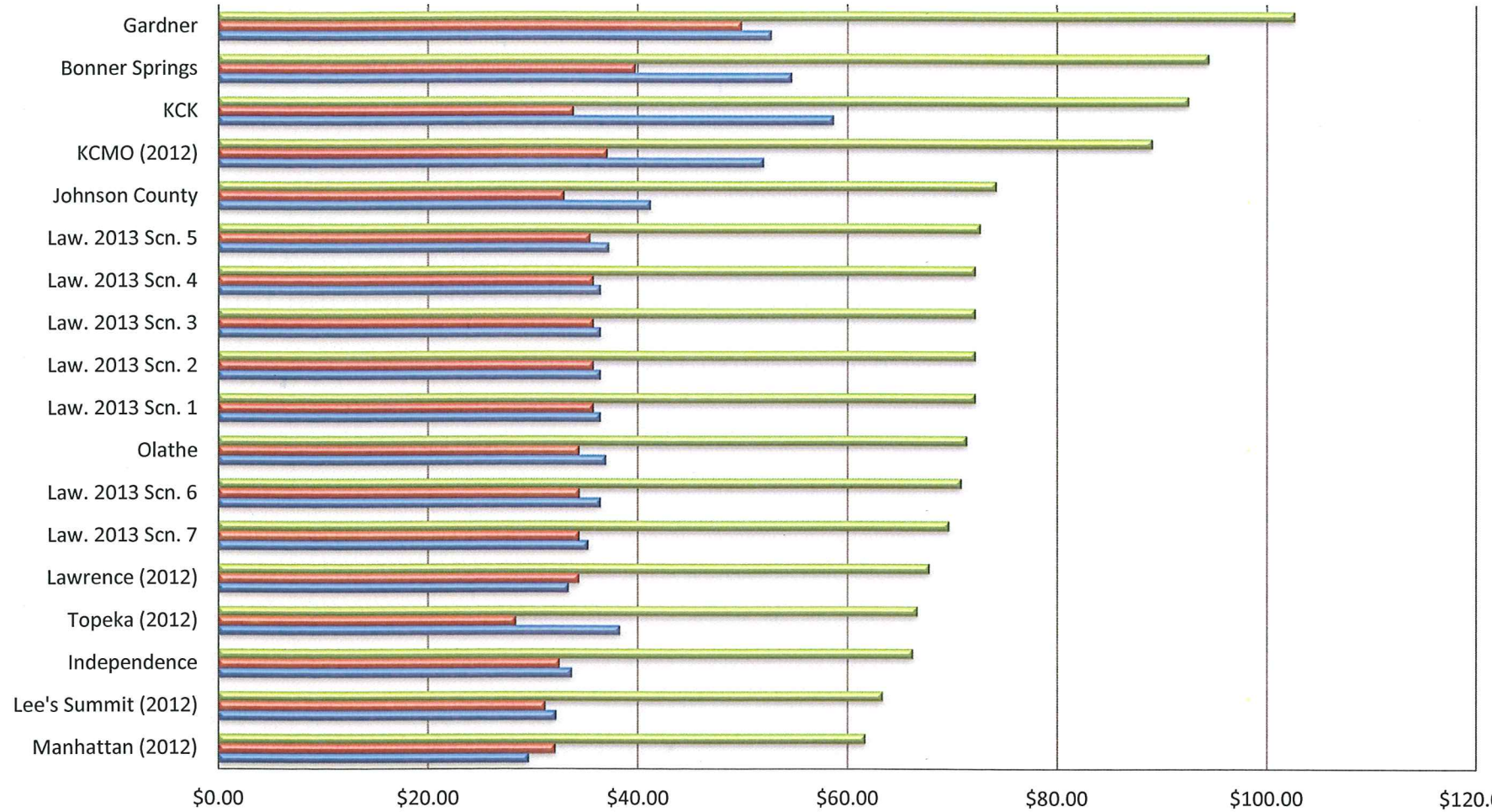
Addressing aging water and wastewater infrastructure is an issue that requires a continuous investment to maintain the quality of service expected by customers and required by regulations. Many of the water and wastewater providers surveyed in this region increased rates for 2013 and anticipate annual increases in the coming years to pay for infrastructure replacement and maintenance, comply with regulatory requirements, and meet operational needs. Regional trends are consistent with the findings of a survey completed by USA Today on water and wastewater rates across the country.

Many of the area utilities have completed the budget process for 2013 including water and wastewater rate changes. A summary of utility rate changes follows.

- Johnson County Wastewater approved a 7.3% revenue increase to pay for regulatory requirements, CIP, salaries, maintenance, and rate increases for wastewater treated by KCMO. Property tax assessments generate most of their revenue for capital projects.
- Johnson County WaterOne approved a 3.2% increase in revenue.
- Lee's Summit increased their water and sewer rates 6% in April 2012. Discussion of a 6% revenue increase will begin in early 2013.
- Olathe approved increases of 6.9% for both water and wastewater for 2013. They anticipate future annual increases of up to 7% for sewer and 4-6% for water to fund their 5-year capital plan.
- Manhattan increased wastewater rates by 15% and third tier and higher water rates by 7% in 2012 to fund expansion of both water and wastewater facilities. For 2013, Manhattan is requesting revenue increases of 7% for water and 3% for wastewater.
- Topeka has proposed revenue increases of 3% for water and 4% for wastewater. Prior to approval Topeka is planning to perform a detailed rate study in response to numerous recent water line leaks and infrastructure needs.
- Independence, MO increased the minimum charge for water by 9% for 2012 and expect the same 2013 and 2014. Wastewater revenues will increase by 4.5% annually until 2015. In addition to these increases there is a special charge funding work mandated by an EPA wet weather consent order. This charge increased by 50% to $6.00 per month in July 2012. The charge will increase by another 50% to $9.00 per month in 2014.
- KCMO increased water rates by 12% and wastewater rates by 17% or a combined increase of 14% effective May 1, 2012. More wastewater increases are planned for the near future for infrastructure improvements required to comply with a $2.4 billion wet weather EPA consent order. Discussion on 2013 adjustments will begin in early 2013.
- Both the Unified Government, which provides wastewater services to Kansas City, Kansas, and the Kansas City Board of Public Utilities, which provides water treatment, have approved 5% rate increases effective 1/1/13.

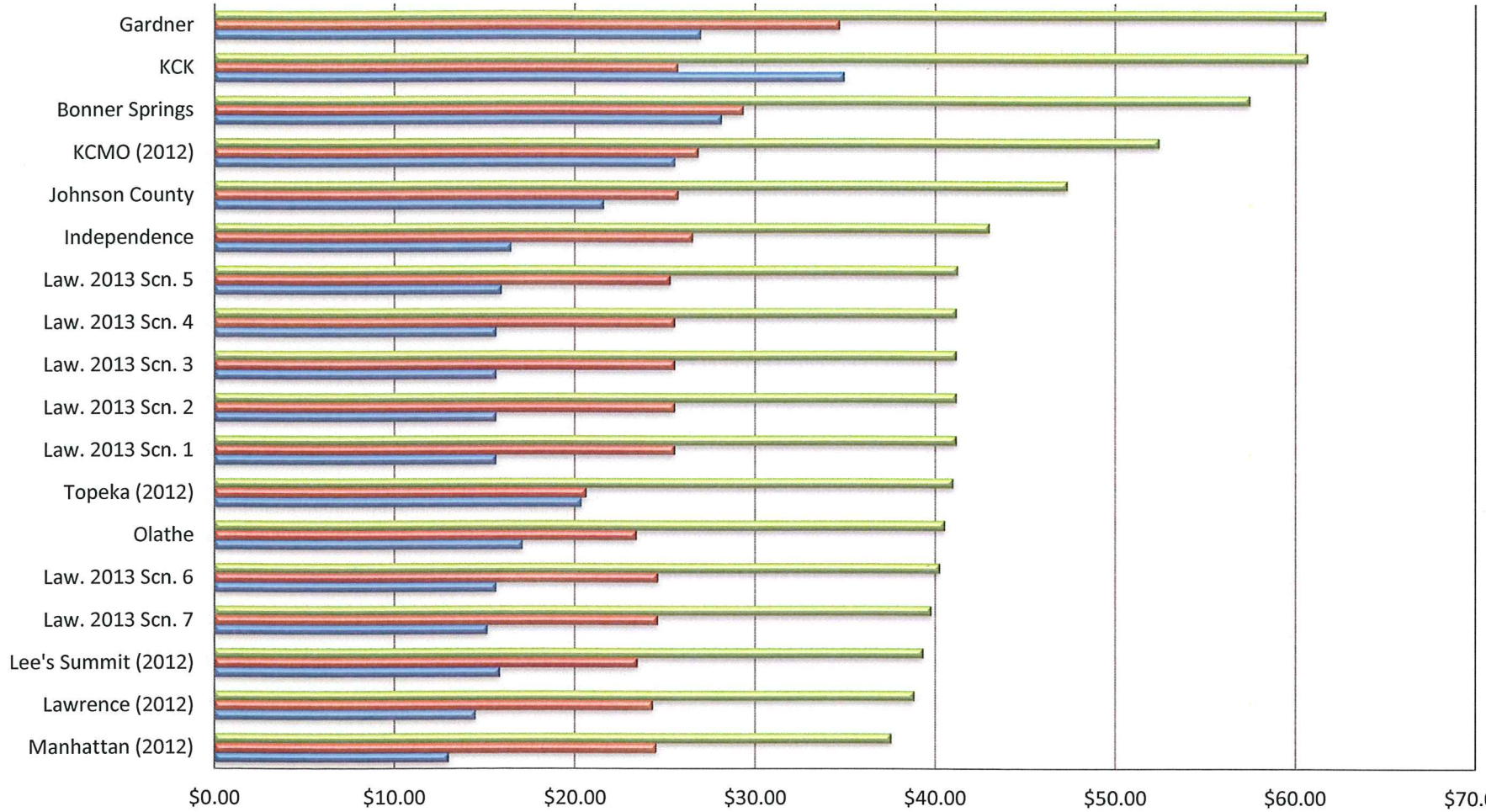
The graphs on pages 11 and 12 compare the area's residential utility bills for 8,000 gallon and 3,000-gallon usage. The 2013 proposed rates for the seven CIP scenarios are included.

2013 Summer Use Residential Monthly Utility Bill Comparison



	Manhattan (2012)	Lee's Summit (2012)	Independence	Topeka (2012)	Lawrence (2012)	Law. 2013 Scn. 7	Law. 2013 Scn. 6	Olathe	Law. 2013 Scn. 1	Law. 2013 Scn. 2	Law. 2013 Scn. 3	Law. 2013 Scn. 4	Law. 2013 Scn. 5	Johnson County	KCMO (2012)	KCK	Bonner Springs	Gardner
2013 Monthly Bill	$61.69	$63.33	$66.22	$66.63	$67.78	$69.68	$70.86	$71.37	$72.20	$72.20	$72.20	$72.20	$72.67	$74.19	$89.07	$92.56	$94.44	$102.65
2013 Monthly Bill Sewer (5,000 gal.)	$32.11	$31.15	$32.52	$28.36	$34.39	$34.42	$34.43	$34.41	$35.77	$35.77	$35.77	$35.77	$35.44	$32.95	$37.07	$33.87	$39.78	$49.90
2013 Monthly Bill Water (8,000 gal.)	$29.58	$32.18	$33.70	$38.27	$33.39	$35.26	$36.43	$36.95	$36.43	$36.43	$36.43	$36.43	$37.23	$41.24	$52.01	$58.68	$54.65	$52.75

2013 Low Use Residential Monthly Utility Bill Comparison



	Manhattan (2012)	Lawrence (2012)	Lee's Summit (2012)	Law. 2013 Scn. 7	Law. 2013 Scn. 6	Olathe	Topeka (2012)	Law. 2013 Scn. 1	Law. 2013 Scn. 2	Law. 2013 Scn. 3	Law. 2013 Scn. 4	Law. 2013 Scn. 5	Independence	Johnson County	KCMO (2012)	Bonner Springs	KCK	Gardner
2013 Monthly Bill	$37.56	$38.84	$39.33	$39.78	$40.26	$40.54	$41.01	$41.18	$41.18	$41.18	$41.18	$41.25	$43.02	$47.36	$52.43	$57.49	$60.68	$61.70
2013 Monthly Bill Sewer (3,000 gal.)	$24.54	$24.35	$23.49	$24.62	$24.63	$23.44	$20.64	$25.55	$25.55	$25.55	$25.55	$25.32	$26.55	$25.74	$26.87	$29.35	$25.73	$34.70
2013 Monthly Bill Water (3,000 gal.)	$13.01	$14.49	$15.84	$15.16	$15.63	$17.10	$20.37	$15.63	$15.63	$15.63	$15.63	$15.93	$16.47	$21.61	$25.57	$28.14	$34.95	$27.00

Supporting Staff Reports

Wastewater Treatment Capacity and Project Drivers for Wakarusa WWTP
Staff Report – City of Lawrence Department of Utilities
November 14, 2012

Current Loading and Treatment Capacity

The 2012 wastewater loading for wet weather, suspended solids, and nitrogen exceeds the existing Wastewater Treatment Plant (WWTP) design capacity and the current organic loading is at or near rated design capacity. Only average day hydraulic loading and population are below current design values. Plant performance indicates that most treatment units, (excluding wet weather units) can treat pollutant loads beyond their rated design. Based on performance and current loads, the master plan indicates sufficient capacity at the existing WWTP for an additional 13,000 people, excluding wet weather treatment. This assumes that the distribution and characteristics of waste sources between residential, commercial, and industrial remains consistent with historical experience. The master plan indicates peak wet weather loading of the existing WWTP is at or near 81 MGD and exceeds the design capacity of 65 MGD.

Wet Weather Solutions

The Wastewater Master Plan recommends two actions to reduce peak wet weather flows to a level within the capacity of the existing facilities and to meet future wet weather treatment and conveyance needs. These are:

1) Construct the Wakarusa WWTP, influent pump station, and wet weather storage.
2) Reduce inflow and infiltration both from public and private system sources into the collection system by 35%. This program would focus on the area that drains to the existing WWTP by gravity. The First step would be to perform a detailed Sanitary Sewer Evaluation (SSES) to identify the public and private sources of I/I in the collection system, refine the program scope, and prioritize site-specific work to correct deficiencies.

The objective of these improvements is to:

1) Reduce the current 81 million gallons per day (MGD) peak flow to the existing WWTP to 59 MGD.
2) Alleviate surcharging in the collection system near 31st St. and Louisiana and downstream of Pump Station 5A/5B by diverting flows to the Wakarusa WWTP.
3) Avoid having to add interceptor capacity between Pump Station 5A/5B and the WWTP.
4) Justify to EPA the continued use of Actiflo to manage wet weather flows[4]

[4] Since 2008, EPA has objected to the reissuance of the City's NPDES permit based on their interpretation that treated wet weather discharges from Actiflo are illegal sanitary sewer overflows (SSOs). . EPA contends the Clean Water Act requires reducing wet weather flows so that Actiflo is not needed (unless no feasible alternative exists). The City has taken the position these are not SSOs and our programs to manage inflow and infiltration, combined with wet weather treatment are best management practices. Due to EPA's objections, the City is operating on an administrative extension of the expired permit. The current Master Plan assumes that the EPA will allow the City to use Actiflo to manage 40 MGD of wet weather flows. At this time, there are no clear answers or direction as to how the EPA is planning to resolve wet weather permit objections.

Without the diversion of wet weather flows provided by the Wakarusa WWTP in the area of 31st and Louisiana, additional projects, such as expansion of pump station 5A/5B, the interceptors along Burroughs Creek Trail, and additional wet weather treatment at the existing WWTP would be required to manage current wet weather flows and serve growth within the Wakarusa watershed. KDHE does review all design plans for sewer extensions ensuring minimum design standards are met. This includes making sure there is sufficient downstream capacity to collect and transport the sewage. If there is insufficient collection system capacity, KDHE may withhold approval until sufficient capacity is available by adding relief sewers or achieving better control of peak flows.

Effectiveness of Water Conservation on Wastewater Load

Water conservation and reductions of wet weather flows will not significantly reduce overall organic, nutrient, and solids loadings. Therefore, those measures do not help defer the timing of additional treatment capacity. In addition, since the collection system is designed to handle volumes of flow under wet weather conditions, the reduced volumes resulting from water conservation do not appreciably reduce the scope or timing of collection system projects.

Planning for Economic Development

The latest master plan assumes a proportional growth in industrial loads based on existing community demographics. It does not plan for a large industry that would generate large amounts of organic or nutrient loads[5]. Currently industries use about 11% of the available organic wastewater treatment capacity. Assessing the impact of additional industrial expansion requires knowing the detailed characterizations of the wastewater discharges. Even within like industries, owner specific choices of processes and pretreatment options can change the wastewater load and treatment requirements. Servicing a large wastewater generating industry would require a wastewater treatment process specifically designed to handle that industry's wastewater.

Wakarusa Project Status and Prior Project Development

The Wakarusa siting is based on the lowest costs and preferred option presented in the 2004 Master plan and confirmed in the subsequent siting study. The site has been acquired and significant assessment work has been done to ensure the site is suitable. It is annexed and zoned appropriately for the use. The National Pollution Discharge Elimination Permit (NPDES) has been issued by KDHE and approved by the EPA and is current (unlike the existing WWTP's)[4].

This site was selected based on cost and non-cost factors using detailed evaluations and public input. It has significant long-term advantages in having the ability to be expanded and can serve a very large area via gravity that encompasses a significant portion of Douglas County.

[5] The City of Lawrence industrial organic load (Biochemical Oxygen Demand (BOD)) averages 1,675 lbs/day and industries contribute about 18 million gallons of wastewater per year or less than 0.4% of the hydraulic capacity. As a comparison, the City of St Joseph, MO, has an average industrial organic load of 41,700 lbs BOD/day and treats approximately 1.2 billion gallons per year from industries that include corn processing (ethanol), meat processing, and meatpacking. With the construction of the Wakarusa WWTP, as called for in the master plan, the combined organic treatment capacity of the existing Kansas WWTP and the Wakarusa WWTP would be 18,800 lbs BOD/day. Accommodating loads similar to those of St Joseph's, or even a single large industrial user would require significant expansion of wastewater treatment processes beyond those considered in the master plan.

Evaluation of expanding the existing WWTP showed it had a higher cost based on a present worth analysis. Further expansion of the existing WWTP is problematic due to wastewater conveyance limitations through the Burroughs Creek, Haskell Indian Nations University, and Baker Wetlands. Also with any increase in capacity, a revised permit would require enhanced treatment to remove additional nutrients. While we expect KDHE to impose this regulatory requirement in several permit cycles, expansion would trigger this requirement sooner and for a larger overall flow initially. Installation of Biological Nutrient Removal at the existing plant will require significant re-pumping and thus energy costs as compared to a new facility designed with these processes in mind.

Project Timing

Based on the current capacity utilization, projected growth, and the objectives of the community to support economic development, the recommendation is to proceed with design and construction of the Wakarusa WWTP for a targeted completion by 2017. Staff recommends completion of the Wakarusa WWTP by 2018 or earlier because:

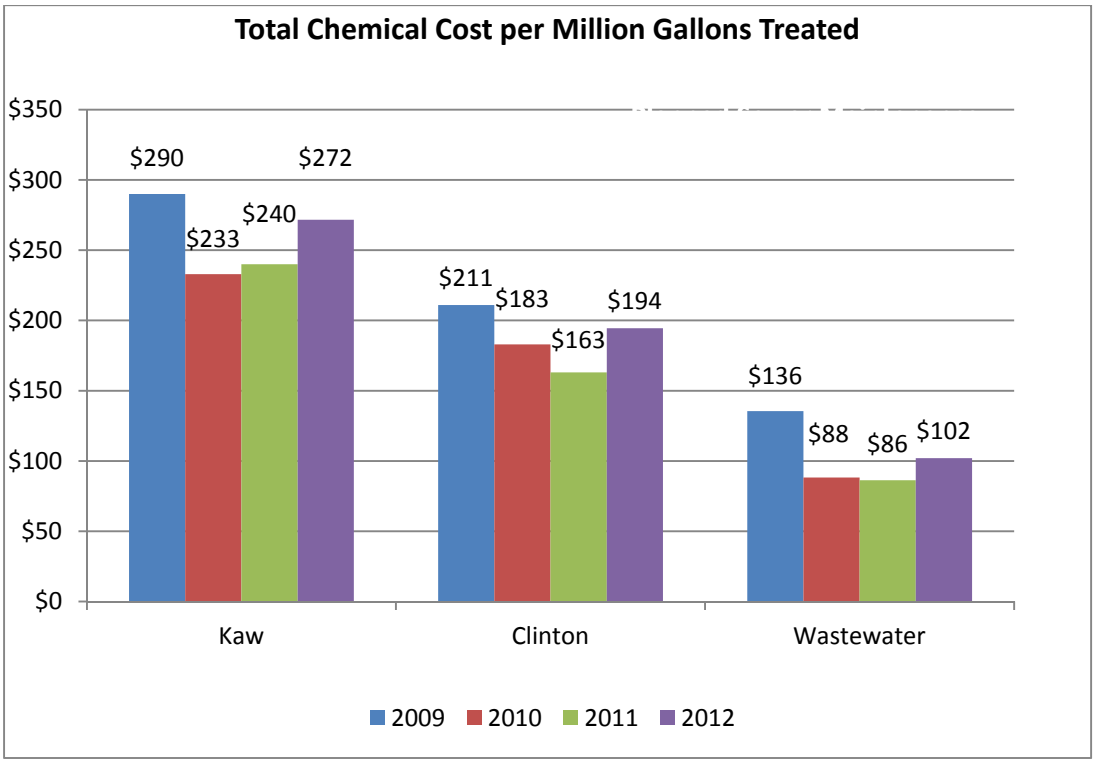
- By their nature, there is uncertainty in growth and population projections.
- It takes at least 5 years to design and construct additional treatment capacity using conventional Design-Bid-Build processes.
- The existing WWTP facility is overloaded under wet weather conditions.
- The existing pump station 5A/5B on the Haskell campus is overloaded under wet weather conditions.
- Additional treatment capacity is needed in order to attract economic development opportunities.
- Additional treatment capacity is needed to serve community growth.
- Continued growth combined without capacity expansion may result in permit violations and potential regulatory interventions to address permit violations, sanitary sewer overflows, and inflow and infiltration control or a moratorium on sewer extensions by KDHE.

Efficiency and Operational Cost Controls
Staff Report – City of Lawrence Department of Utilities
November 14, 2012

The Utilities Department strives continually to increase efficiency and reliability. The Department uses savings to repair and replace critical and aging infrastructure and absorb increases for services and resources used in the production of water and treatment of wastewater. As a result, the Department is able to curtail requested budget increases for the last several years despite increases for personnel costs, general fund transfers, energy, and commodities. Utilities staff continue to look for efficiencies in the day-to-day operations and maintenance of the facilities and activities. Some of these efficiencies include:

Chemical Usage

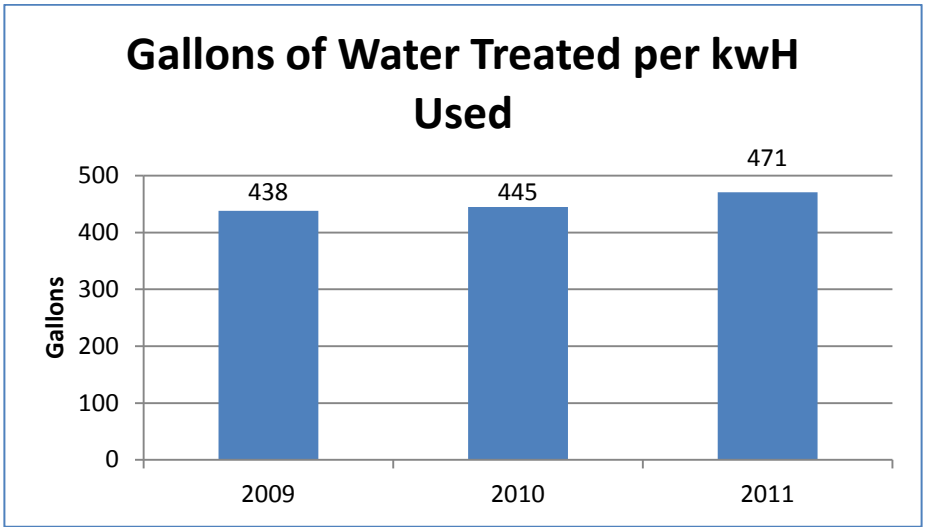
The chemical cost per unit of water treated continues to be less than three years ago in both water and wastewater treatment. The overall decrease has been the result of optimizing the chemical dosing through the use of plant automation and laboratory testing, use of the GCMS analyzer results for faster chemical adjustment, and increasing the staff's knowledge of processes through advanced training. The cost increase in 2012 for water treatment is due to treatment of taste and odor. The increase in wastewater treatment is due to the decreased flows due to the drought conditions. Both conditions resulted in an increase in chemical usage. The graph below shows a reduction in chemical costs per million gallons at all three treatment facilities from 2009.



Energy Usage

All of the department water and wastewater facilities have a base energy demand plus a demand that is influenced by the volume and rate of production. Energy demand increases as both the volume and rate of treatment increase. In general, the energy used on a per volume basis will decrease as volume treated increases.

The graph below indicates the water plants are treating an additional 33 gallons of water for every kWh used in 2011 compared with two year ago. This represents a 7.5% increase in energy utilization. Annual electrical bills for both water treatment facilities are around $700,000 annually. A 7.5% savings represents a savings of about $52,000 annually. Some of that savings results from increases in production and some due to energy efficiency efforts.



Energy Efficiency Measures

Some of the steps taken to improve energy efficiency and control related environmental impacts include:

- Expanding the use of low distortion variable frequency drives to regulate pump speeds. The ability to adjust the pump's speed to less than 100 percent saves energy when lower water and wastewater flows occur. This also provides a unity power factor that reduces energy costs and reduces wear and tear on internal electrical distribution equipment.

- Continued specification of high efficiency electric motors.

- Replacement of the current T-12 interior lighting fixtures as they fail with T-5 fixtures and replacement of exterior door and basin lights with LED fixtures for improved and more energy efficient lighting[6].

- Addition of biogas storage with the recent anaerobic digester expansion. The biogas is used in place of natural gas to operate the sludge heaters that were replaced with larger units as part of the expansion and to provide building heat.

- Digester complex modification to provide space for a future micro turbine to generate electricity on-site using biogas.

- Modification of field crews hours to four 10-hour days per week decreasing fuel usage by approximately 20%.

- Use of an electric car, gator, and industrial tricycle at the wastewater treatment plant in place of full size vehicles to save on fuel usage.

Internal Water Conservation

The Utilities Department uses water for operational needs on a routine base. By decreasing the use of potable water within the department, it decreases the need to treat more water and decreases expenses. Examples of ways that the department has decreased the use of water internally include:

- Circulation water to cool pumps at the wastewater treatment plant uses treated plant effluent (TPE) instead of potable water.

- Irrigation of the front lawn and landscaping at the wastewater treatment plant uses TPE instead of potable water.

- An increase in filter run time at the Clinton Water Treatment Plant may result in a savings of 177 million gallons of potable water or $350,000 per year.

- The wastewater treatment plant is working with the Parks & Recreation Department to provide TPE for watering of trees, medians, and landscaping on park and city owned areas that receive minimal public exposure.

- The department needs to flush hydrants periodically, especially on lines that receive low flows. Parks & Recreation has been given a schedule for hydrant flushing so they can use the water typically wasted to fill their trucks for irrigation, watering of trees, and landscaping.

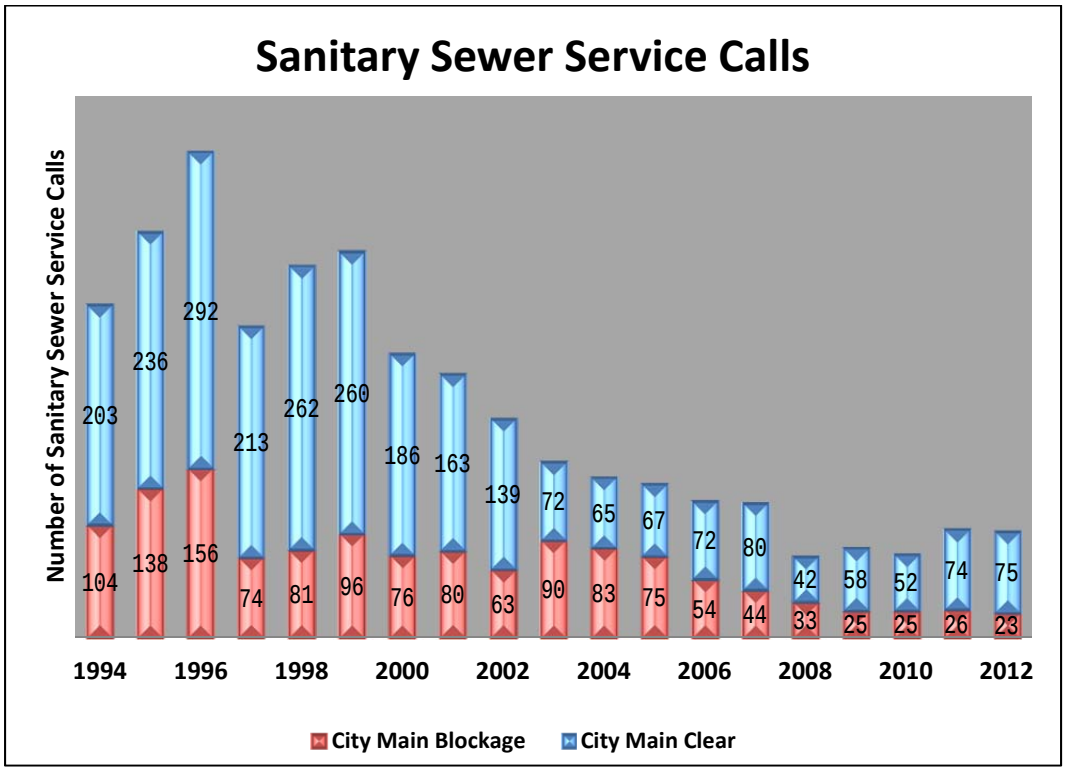
[6] The utility department's facilities have over 1,500 light fixtures with in excess of 3,500 bulbs. New basin LED lighting puts out 3 times the light at a fraction of the energy usage. A significant benefit is these bulbs have an estimated 50 year life that reduces the resources need to change out bulbs and helps ensure they remain lit. Increased and more light output in industrial settings creates a safer work environment reducing risk of injury.

Personnel and Staff Time

The Utilities Department has decreased staffing by five FTE's in the last three years and continues to look for ways to use staff time more efficiently. Despite the decrease in staff, the department was able to take on additional workload, such as hydrant flow testing, answering customer service calls after hours, additional internal data analysis and usage, education of food service providers on FOG, and additional laboratory analysis.

Expansion and rehabilitation of department infrastructure also increased the responsibility and work for utilities employees. This includes the expansions of the Clinton Water Treatment Plant, anaerobic digester facility at the wastewater treatment plant, two lift stations, the Stoneridge Water Tank, and extension of water and sewer lines. Some of the changes implemented by the department, which have resulted in improved use of time include:

- Collections system preventive maintenance programs, including the 4-year section cleaning, chemical root control, TV inspection of the sewer lines, and monthly/3-month/6-month cleaning of specific trouble areas. These programs have decreased the number of service calls, specifically related to city main blockage, which not only decrease the likelihood of a compliance issue due to a sanitary sewer overflow, but also decrease the staff time necessary to attend to these service calls. Staff can then be re-directed to other tasks and projects. The graph below shows there has been a significant reduction in the number of sanitary sewer service calls over the past 18 years.



- Replacement of the TV truck has resulted in faster and more comprehensive review and analysis of sewer lines for more accurate and effective identification of sewer line failures.

- Altering field crew shifts to four 10-hour days per week has decreased the site set up and tear down time by allowing the crews to stay on the job for the additional 2 hours each workday.

- Implementation and use of automation and control systems to redirect employee time away from manual operation and monitoring of the various facilities and structures, including plant, lift stations, and water towers to tasks that are more technical in nature.

- Overall, preventive, and predictive maintenance of equipment has resulted in increased reliability of the system, as well as decreased time and money spent on unplanned repairs.

- Overall, improved cause analysis of equipment and infrastructure failures has resulted in a decrease in repeat failures.

- Cross training between water and wastewater operations staff, water and wastewater maintenance staff, and collections and distributions staff has increased the flexibility of the work units to provide adequate resources to the areas needed.

- Enhanced staff training and certification incentive programs has advanced the overall knowledge of the department to work smarter and faster using fewer resources to get the job done.

- More effective use of operational data has resulted in better operational decisions.

- Implementing comprehensive inventory best management practices department wide as well as delivery of supplies to the job site has decreased the amount of time spent in gathering supplies and equipment for job completion as well as improved the accounting for inventory parts and costs.

The outlined modifications to Utilities Department activities have resulted in significant progress in making the water and wastewater treatment processes more efficient. The Department continues to look for additional ways to become more effective and efficient at providing a great quality product and service to our customers.

Appendix I – Detailed Capital Improvement Plans

2013 CIP Scenario 1 - Recommended
10/19/2012

Water CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
1	Kaw WTP Supply Improvements (a) (c)		4,770,500					4,770,500	
2	Oread Storage & BPS Replacement (c)		1,248,000	2,704,600				3,952,600	
3	19th & Kasold Pump Station (b) (c)			411,000				411,000	
4	Harper Booster Pump Station (b) (c)		624,000					624,000	
5	Tower Protective Coatings (c)		1,040,000			1,684,600	876,000	3,600,600	
6	Kaw 36" WM to North Lawrence (One 30" river crossings) - Phase 1	(a) (c)	7,836,400				0	7,836,400	0
7	Concrete Main Assessment (c)			648,960			0	648,960	0
8	Pipeline Replacement Program (c)	0	2,338,600	2,432,100	2,529,400	2,630,600	2,735,800	12,666,500	2,845,200
9	Water Main Relocation for Road Projects (a)		1,985,000	500,000	520,000	540,800	562,400	4,108,200	584,900
10	Small Water Main Replacement Program (c)	0	968,500	1,007,200	1,047,500	1,089,400	1,133,000	5,245,600	1,178,300
11	Kaw Structural, Electrical, Process (b) (c)		723,800	811,200		166,700		1,701,700	
12	Clinton Intake (a) (c)	0	0	1,297,900	517,400			1,815,300	
13	Clinton Process (b) (c)			108,200		187,200		295,400	
14	Clinton Basin Coatings (c)						1,374,800	1,374,800	
15	Plant Maintenance (c)		150,000	156,000	600,000	624,000	649,000	2,179,000	675,000
16	31st St. - extend 12" to O'Connell (a)		685,400					685,400	
17	31st St. & O'Connell - Extend 16" to WWTP (includes River crossing)	(a)	1,852,700					1,852,700	
								0	
18	Bowersock Dam Improvements (c)		425,000					425,000	
19	Clinton Backup Generator (15MGD) (a) (c)				849,300			849,300	
21	Total	0	24,647,900	10,077,160	6,063,600	6,923,300	7,331,000	55,042,960	5,283,400

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

Wastewater CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
	Collection System								
1	PS 32 Expansion & Force Main (a)		832,000					832,000	
2	21" Gravity Sewer to Eliminate PS 8 (c)						425,800	425,800	4,002,800
3	KR-5B 12" Relief Sewer (c)		0				973,300	973,300	
	KR-6B 21" Relief Sewer (c)	**0**	0					0	885,700
4	PS 23 Expansion (a) (c)	**0**	208,000	0				208,000	
5	Rapid I/I Reduction Program (b) (c)		1,872,000	2,720,200	2,829,000	2,942,200	3,059,900	13,423,300	3,182,300
6	Sewer Rehabilitation, Replacement, CIPP & MHs		416,000	432,600	449,900	467,900	486,700	2,253,100	1,265,300
8	Subtotal	0	3,328,000	3,152,800	3,278,900	3,410,100	4,945,700	18,115,500	9,336,100
	Treatment System								
	Kansas River WWTP								
9	Co-generation & Backup Power		600,000	481,600				1,081,600	
	Wakarusa River WWTP	**0**							
10	Wakarusa River WWTP Treatment Plant (a) (b)		3,784,000	6,489,600	10,686,200	11,698,600	2,920,000	35,578,400	
11	Wakarusa Peak Flow Storage (a) (b)		499,200		2,249,700	3,509,600	632,700	6,891,200	
12	Roads & Utilities (a) (b)		499,200	2,995,200	3,125,000			6,619,400	
13	Wakarusa PS 5C, 2 - 16" Force Mains (a) (b)		924,600	5,408,000	5,624,300	2,118,600		14,075,500	
15	Subtotal	0	6,307,000	15,374,400	21,685,200	17,326,800	3,552,700	64,246,100	0
	Other								
								0	
16	General Pumping Station Improvements (c)		100,000	104,000	108,200	112,500	117,000	541,700	121,700
17	General WWTP Improvements (c)		300,000	312,000	324,500	337,500	351,000	1,625,000	365,000
18	Sanitary Sewer Relocations (a)		1,000,000	312,000	500,000	337,500	351,000	2,500,500	365,000
20	Subtotal	0	1,400,000	728,000	932,700	787,500	819,000	4,667,200	851,700
22	Total	0	11,035,000	19,255,200	25,896,800	21,524,400	9,317,400	87,028,800	10,187,800

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

2013 CIP Scenario 2 - Reduced Water
10/22/2012

Water CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
1	Kaw WTP Supply Improvements (a) (c)							0	
	Oread Storage & BPS Replacement (c)							0	
	19th & Kasold Pump Station (b) (c)							0	
	Harper Booster Pump Station (b) (c)		0					0	
	Tower Protective Coatings (c)							0	1,822,063
	Kaw 36" WM to North Lawrence (One 30" river crossings) - Phase 1 (a) (c)							0	0
	Concrete Main Assessment (c)						0	0	0
2	Pipeline Replacement Program (c)	0	2,338,600	520,000	540,800	562,432	584,929	4,546,761	608,326
3	Water Main Relocation for Road Projects (a)		1,985,000	500,000	520,000	540,800	562,400	4,108,200	584,900
	Small Water Main Replacement Program (c)	0						0	
	Kaw Structural, Electrical, Process (b) (c)							0	
	Clinton Intake (a) (c)	0	0					0	
	Clinton Process (b) (c)							0	
	Clinton Basin Coatings (c)							0	
4	Plant Maintenance (c)		400,000	156,000	600,000	624,000	649,000	2,429,000	675,000
5	31st St. - extend 12" to O'Connell (a)		685,400					685,400	
6	31st St. & O'Connell - Extend 16" to WWTP (includes River crossing) (a)		1,852,700					1,852,700	
								0	
7	Bowersock Dam Improvements (c)		425,000					425,000	
	Clinton Backup Generator (15MGD) (a) (c)							0	
9	Total	0	7,686,700	1,176,000	1,660,800	1,727,232	1,796,329	14,047,061	3,690,289

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

Wastewater CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
	Collection System								
1	PS 32 Expansion & Force Main (a)		832,000					832,000	
2	21" Gravity Sewer to Eliminate PS 8 (c)						425,800	425,800	4,002,800
3	KR-5B 12" Relief Sewer (c)		0				973,300	973,300	
	KR-6B 21" Relief Sewer (c)	0	0					0	885,700
4	PS 23 Expansion (a) (c)	0	208,000	0				208,000	
5	Rapid I/I Reduction Program (b) (c)		1,872,000	2,720,200	2,829,000	2,942,200	3,059,900	13,423,300	3,182,300
6	Sewer Rehabilitation, Replacement, CIPP & MHs		416,000	432,600	449,900	467,900	486,700	2,253,100	1,265,300
8	Subtotal	0	3,328,000	3,152,800	3,278,900	3,410,100	4,945,700	18,115,500	9,336,100
	Treatment System								
	Kansas River WWTP								
9	Co-generation & Backup Power		600,000	481,600				1,081,600	
	Wakarusa River WWTP	0							
10	Wakarusa River WWTP Treatment Plant (a) (b)		3,784,000	6,489,600	10,686,200	11,698,600	2,920,000	35,578,400	
11	Wakarusa Peak Flow Storage (a) (b)		499,200		2,249,700	3,509,600	632,700	6,891,200	
12	Roads & Utilities (a) (b)		499,200	2,995,200	3,125,000			6,619,400	
13	Wakarusa PS 5C, 2 - 16" Force Mains (a) (b)		924,600	5,408,000	5,624,300	2,118,600		14,075,500	
14									
15	Subtotal	0	6,307,000	15,374,400	21,685,200	17,326,800	3,552,700	64,246,100	0
	Other							0	
16	General Pumping Station Improvements (c)		100,000	104,000	108,200	112,500	117,000	541,700	121,700
17	General WWTP Improvements (c)		300,000	312,000	324,500	337,500	351,000	1,625,000	365,000
18	Sanitary Sewer Relocations (a)		1,000,000	312,000	500,000	337,500	351,000	2,500,500	365,000
20	Subtotal	0	1,400,000	728,000	932,700	787,500	819,000	4,667,200	851,700
	Total	0	11,035,000	19,255,200	25,896,800	21,524,400	9,317,400	87,028,800	10,187,800

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

2013 CIP Scenario 3 - Deferred Maintenance/Reliability
10/22/2012

Water CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
1	Kaw WTP Supply Improvements (a) (c)		4,770,500					4,770,500	
2	Oread Storage & BPS Replacement (c)		1,248,000	2,704,600				3,952,600	
3	19th & Kasold Pump Station (b) (c)			411,000				411,000	
4	Harper Booster Pump Station (b) (c)		0		674,918			674,918	
5	Tower Protective Coatings (c)				1,124,864			1,124,864	1,822,063
6	Kaw 36" WM to North Lawrence (One 30" river crossings) - Phase 1 (a) (c)						9,167,500	9,167,500	0
7	Concrete Main Assessment (c)			648,960			0	648,960	0
8	Pipeline Replacement Program (c)	0	1,830,200	1,903,400	1,979,500	2,058,700	2,141,100	9,912,900	2,226,700
9	Water Main Relocation for Road Projects (a)		1,985,000	500,000	520,000	540,800	562,400	4,108,200	584,900
10	Small Water Main Replacement Program (c)	0	596,000	619,800	644,600	670,400	725,100	3,255,900	754,100
11	Kaw Structural, Electrical, Process (b) (c)		723,800	811,200		166,700		1,701,700	
12	Clinton Intake (a) (c)	0	0	1,297,900	517,400			1,815,300	
13	Clinton Process (b) (c)			108,200		187,200		295,400	
14	Clinton Basin Coatings (c)						1,374,800	1,374,800	
15	Plant Maintenance (c)		400,000	156,000	600,000	624,000	649,000	2,429,000	675,000
16	31st St. - extend 12" to O'Connell (a)		685,400					685,400	
17	31st St. & O'Connell - Extend 16" to WWTP (includes River crossing) (a)		1,852,700					1,852,700	
								0	
18	Bowersock Dam Improvements (c)		425,000					425,000	
19	Clinton Backup Generator (15MGD) (a) (c)						918,603	918,603	
21	Total	0	14,516,600	9,161,060	6,061,282	4,247,800	15,538,503	49,525,245	6,062,763

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

Wastewater CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
	Collection System								
1	PS 32 Expansion & Force Main (a)		832,000					832,000	
2	21" Gravity Sewer to Eliminate PS 8 (c)						425,800	425,800	4,002,800
3	KR-5B 12" Relief Sewer (c)		0				973,300	973,300	
	KR-6B 21" Relief Sewer (c)	0	0					0	885,700
4	PS 23 Expansion (a) (c)	0	208,000	0				208,000	
5	Rapid I/I Reduction Program (b) (c)		1,872,000	1,590,000	1,653,600	1,719,700	1,788,500	8,623,800	1,860,000
6	Sewer Rehabilitation, Replacement, CIPP & MHs		416,000	432,600	449,900	467,900	486,700	2,253,100	1,265,300
8	Subtotal	0	3,328,000	2,022,600	2,103,500	2,187,600	3,674,300	13,316,000	8,013,800
	Treatment System								
	Kansas River WWTP								
9	Co-generation & Backup Power				648,960	520,899		1,169,859	
	Wakarusa River WWTP	0							
10	Wakarusa River WWTP Treatment Plant (a) (b)		3,784,000	6,489,600	10,686,200	11,698,600	2,920,000	35,578,400	
11	Wakarusa Peak Flow Storage (a) (b)		499,200		2,249,700	3,509,600	632,700	6,891,200	
12	Roads & Utilities (a) (b)		499,200	2,995,200	3,125,000			6,619,400	
13	Wakarusa PS 5C, 2 - 16" Force Mains (a) (b)		924,600	5,408,000	5,624,300	2,118,600		14,075,500	
15	Subtotal	0	5,707,000	14,892,800	22,334,160	17,847,699	3,552,700	64,334,359	0
	Other								
								0	
16	General Pumping Station Improvements (c)		100,000	104,000	108,200	112,500	117,000	541,700	121,700
17	General WWTP Improvements (c)		300,000	312,000	324,500	337,500	351,000	1,625,000	365,000
18	Sanitary Sewer Relocations (a)		1,000,000	312,000	500,000	337,500	351,000	2,500,500	365,000
20	Subtotal	0	1,400,000	728,000	932,700	787,500	819,000	4,667,200	851,700
22	Total	0	10,435,000	17,643,400	25,370,360	20,822,799	8,046,000	82,317,559	8,865,500

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

2013 CIP Scenario 4 - Deferred Maintenance/Reliability & Wakarusa WWTP (Low Growth)
10/22/2012

Water CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
1	Kaw WTP Supply Improvements (a) (c)		4,770,500					4,770,500	
2	Oread Storage & BPS Replacement (c)		1,248,000	2,704,600				3,952,600	
3	19th & Kasold Pump Station (b) (c)			411,000				411,000	
4	Harper Booster Pump Station (b) (c)		0		674,918			674,918	
5	Tower Protective Coatings (c)				1,124,864			1,124,864	1,822,063
6	Kaw 36" WM to North Lawrence (One 30" river crossings) - Phase 1 (a) (c)						9,167,500	9,167,500	0
7	Concrete Main Assessment (c)			648,960			0	648,960	0
8	Pipeline Replacement Program (c)	0	1,830,200	1,903,400	1,979,500	2,058,700	2,141,100	9,912,900	2,226,700
9	Water Main Relocation for Road Projects (a)		1,985,000	500,000	520,000	540,800	562,400	4,108,200	584,900
10	Small Water Main Replacement Program (c)	0	596,000	619,800	644,600	670,400	725,100	3,255,900	754,100
11	Kaw Structural, Electrical, Process (b) (c)		723,800	811,200		166,700		1,701,700	
12	Clinton Intake (a) (c)	0	0	1,297,900	517,400			1,815,300	
13	Clinton Process (b) (c)			108,200		187,200		295,400	
14	Clinton Basin Coatings (c)						1,374,800	1,374,800	
15	Plant Maintenance (c)		400,000	156,000	600,000	624,000	649,000	2,429,000	675,000
16	31st St. - extend 12" to O'Connell (a)		685,400					685,400	
17	31st St. & O'Connell - Extend 16" to WWTP (includes River crossing) (a)		1,852,700					1,852,700	
								0	
18	Bowersock Dam Improvements (c)		425,000					425,000	
19	Clinton Backup Generator (15MGD) (a) (c)						918,603	918,603	
21	Total	0	14,516,600	9,161,060	6,061,282	4,247,800	15,538,503	49,525,245	6,062,763

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

Wastewater CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
	Collection System								
1	PS 32 Expansion & Force Main (a)		832,000					832,000	
2	21" Gravity Sewer to Eliminate PS 8 (c)						425,800	425,800	4,002,800
3	KR-5B 12" Relief Sewer (c)		0				973,300	973,300	
	KR-6B 21" Relief Sewer (c)	0	0					0	885,700
4	PS 23 Expansion (a) (c)	0	208,000	0				208,000	
5	Rapid I/I Reduction Program (b) (c)		1,872,000	1,590,000	1,653,600	1,719,700	1,788,500	8,623,800	1,860,000
6	Sewer Rehabilitaiton, Replacement, CIPP & MHs		416,000	432,600	449,900	467,900	486,700	2,253,100	1,265,300
8	Subtotal	0	3,328,000	2,022,600	2,103,500	2,187,600	3,674,300	13,316,000	8,013,800
	Treatment System								
	Kansas River WWTP								
9	Co-generation & Backup Power				648,960	520,899		1,169,859	
	Wakarusa River WWTP	0							
10	Wakarusa River WWTP Treatment Plant (a) (b)						4,155,000	4,155,000	7,591,900
11	Wakarusa Peak Flow Storage (a) (b)						584,000	584,000	
12	Roads & Utilities (a) (b)						584,000	584,000	3,796,000
13	Wakarusa PS 5C, 2 - 16" Force Mains (a) (b)						1,081,600	1,081,600	6,326,600
15	Subtotal	0	0	0	648,960	520,899	6,404,600	7,574,459	17,714,500
	Other								
								0	
16	General Pumping Station Improvements (c)		100,000	104,000	108,200	112,500	117,000	541,700	121,700
17	General WWTP Improvements (c)		300,000	312,000	324,500	337,500	351,000	1,625,000	365,000
18	Sanitary Sewer Relocations (a)		1,000,000	312,000	500,000	337,500	351,000	2,500,500	365,000
20	Subtotal	0	1,400,000	728,000	932,700	787,500	819,000	4,667,200	851,700
22	Total	0	4,728,000	2,750,600	3,685,160	3,495,999	10,897,900	25,557,659	26,580,000

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

2013 CIP Scenario 5 - Taste, Odor, & Microtoxins
10/22/2012

Water CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
1	Kaw WTP Supply Improvements (a) (c)		4,770,500					4,770,500	
2	Oread Storage & BPS Replacement (c)		1,248,000	2,704,600				3,952,600	
3	19th & Kasold Pump Station (b) (c)			411,000				411,000	
4	Harper Booster Pump Station (b) (c)		624,000					624,000	
5	Tower Protective Coatings (c)		1,040,000			1,684,600	876,000	3,600,600	
6	Kaw 36" WM to North Lawrence (One 30" river crossings) - Phase 1 (a) (c)		7,836,400				0	7,836,400	0
7	Concrete Main Assessment (c)			648,960			0	648,960	0
8	Pipeline Replacement Program (c)	0	2,338,600	2,432,100	2,529,400	2,630,600	2,735,800	12,666,500	2,845,200
9	Water Main Relocation for Road Projects (a)		1,985,000	500,000	520,000	540,800	562,400	4,108,200	584,900
10	Small Water Main Replacement Program (c)	0	968,500	1,007,200	1,047,500	1,089,400	1,133,000	5,245,600	1,178,300
11	Kaw Structural, Electrical, Process (b) (c)		723,800	811,200		166,700		1,701,700	
12	Clinton Intake (a) (c)	0	0	1,297,900	517,400			1,815,300	
13	Clinton Process (b) (c)			108,200		187,200		295,400	
14	Clinton Basin Coatings (c)						1,374,800	1,374,800	
15	Plant Maintenance (c)		150,000	156,000	600,000	624,000	649,000	2,179,000	675,000
16	31st St. - extend 12" to O'Connell (a)		685,400					685,400	
17	31st St. & O'Connell - Extend 16" to WWTP (includes River crossing) (a)		1,852,700					1,852,700	
18	Taste & Odor and Microtoxins at Clinton & Kaw WTPs		1,440,000	17,900,000				19,340,000	
19	Bowersock Dam Improvements (c)		425,000					425,000	
20	Clinton Backup Generator (15MGD) (a) (c)				849,300			849,300	
22	Total	0	26,087,900	27,977,160	6,063,600	6,923,300	7,331,000	74,382,960	5,283,400

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

Wastewater CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
	Collection System								
1	PS 32 Expansion & Force Main (a)		832,000					832,000	
2	21" Gravity Sewer to Eliminate PS 8 (c)						425,800	425,800	4,002,800
3	KR-5B 12" Relief Sewer (c)		0				973,300	973,300	
	KR-6B 21" Relief Sewer (c)	**0**	0					0	885,700
4	PS 23 Expansion (a) (c)	**0**	208,000	0				208,000	
5	Rapid I/I Reduction Program (b) (c)		1,872,000	2,720,200	2,829,000	2,942,200	3,059,900	13,423,300	3,182,300
6	Sewer Rehabilitation, Replacement, CIPP & MHs		416,000	432,600	449,900	467,900	486,700	2,253,100	1,265,300
8	Subtotal	0	3,328,000	3,152,800	3,278,900	3,410,100	4,945,700	18,115,500	9,336,100
	Treatment System								
	Kansas River WWTP								
9	Co-generation & Backup Power		600,000	481,600				1,081,600	
	Wakarusa River WWTP	**0**							
10	Wakarusa River WWTP Treatment Plant (a) (b)		3,784,000	6,489,600	10,686,200	11,698,600	2,920,000	35,578,400	
11	Wakarusa Peak Flow Storage (a) (b)		499,200		2,249,700	3,509,600	632,700	6,891,200	
12	Roads & Utilities (a) (b)		499,200	2,995,200	3,125,000			6,619,400	
13	Wakarusa PS 5C, 2 - 16" Force Mains (a) (b)		924,600	5,408,000	5,624,300	2,118,600		14,075,500	
15	Subtotal	0	6,307,000	15,374,400	21,685,200	17,326,800	3,552,700	64,246,100	0
	Other							0	
16	General Pumping Station Improvements (c)		100,000	104,000	108,200	112,500	117,000	541,700	121,700
17	General WWTP Improvements (c)		300,000	312,000	324,500	337,500	351,000	1,625,000	365,000
18	Sanitary Sewer Relocations (a)		1,000,000	312,000	500,000	337,500	351,000	2,500,500	365,000
20	Subtotal	0	1,400,000	728,000	932,700	787,500	819,000	4,667,200	851,700
22	Total	0	11,035,000	19,255,200	25,896,800	21,524,400	9,317,400	87,028,800	10,187,800

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

2013 CIP Scenario 6 - Delay Wakarusa WWTP & Accelerate Rapid I/I
10/23/2012

Water CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
1	Kaw WTP Supply Improvements (a) (c)		4,770,500					4,770,500	
2	Oread Storage & BPS Replacement (c)		1,248,000	2,704,600				3,952,600	
3	19th & Kasold Pump Station (b) (c)			411,000				411,000	
4	Harper Booster Pump Station (b) (c)		624,000					624,000	
5	Tower Protective Coatings (c)		1,040,000			1,684,600	876,000	3,600,600	
6	Kaw 36" WM to North Lawrence (One 30" river crossings) - Phase 1 (a) (c)		7,836,400				0	7,836,400	0
7	Concrete Main Assessment (c)			648,960			0	648,960	0
8	Pipeline Replacement Program (c)	0	2,338,600	2,432,100	2,529,400	2,630,600	2,735,800	12,666,500	2,845,200
9	Water Main Relocation for Road Projects (a)		1,985,000	500,000	520,000	540,800	562,400	4,108,200	584,900
10	Small Water Main Replacement Program (c)	0	968,500	1,007,200	1,047,500	1,089,400	1,133,000	5,245,600	1,178,300
11	Kaw Structural, Electrical, Process (b) (c)		723,800	811,200		166,700		1,701,700	
12	Clinton Intake (a) (c)	0	0	1,297,900	517,400			1,815,300	
13	Clinton Process (b) (c)			108,200		187,200		295,400	
14	Clinton Basin Coatings (c)						1,374,800	1,374,800	
15	Plant Maintenance (c)		150,000	156,000	600,000	624,000	649,000	2,179,000	675,000
16	31st St. - extend 12" to O'Connell (a)		685,400					685,400	
17	31st St. & O'Connell - Extend 16" to WWTP (includes River crossing) (a)		1,852,700					1,852,700	
								0	
18	Bowersock Dam Improvements (c)		425,000					425,000	
19	Clinton Backup Generator (15MGD) (a) (c)				849,300			849,300	
21	Total	0	24,647,900	10,077,160	6,063,600	6,923,300	7,331,000	55,042,960	5,283,400

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

Wastewater CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
	Collection System								
1	PS 32 Expansion & Force Main (a)		832,000					832,000	
2	21" Gravity Sewer to Eliminate PS 8 (c)						425,800	425,800	4,002,800
3	KR-5B 12" Relief Sewer (c)		0				973,300	973,300	
	KR-6B 21" Relief Sewer (c)	0	0					0	885,700
4	PS 23 Expansion (a) (c)	0	208,000	0				208,000	
5	Rapid I/I Reduction Program (b) (c)		1,872,000	4,759,000	4,949,400	5,147,400	5,353,300	22,081,100	
6	Sewer Rehabilitation, Replacement, CIPP & MHs		416,000	432,600	449,900	467,900	486,700	2,253,100	1,265,300
8	Subtotal	0	3,328,000	5,191,600	5,399,300	5,615,300	7,239,100	26,773,300	6,153,800
	Treatment System								
	Kansas River WWTP								
9	Co-generation & Backup Power		600,000	481,600				1,081,600	
	Wakarusa River WWTP	0							
10	Wakarusa River WWTP Treatment Plant (a) (b)					4,056,700	7,299,900	11,356,600	12,020,500
11	Wakarusa Peak Flow Storage (a) (b)					561,500		561,500	2,530,600
12	Roads & Utilities (a) (b)					561,500	3,650,000	4,211,500	3,796,000
13	Wakarusa PS 5C, 2 - 16" Force Mains (a) (b)					1,040,000	6,083,300	7,123,300	6,326,600
15	Subtotal	0	600,000	481,600	0	6,219,700	17,033,200	24,334,500	24,673,700
	Other								
								0	
16	General Pumping Station Improvements (c)		100,000	104,000	108,200	112,500	117,000	541,700	121,700
17	General WWTP Improvements (c)		300,000	312,000	324,500	337,500	351,000	1,625,000	365,000
18	Sanitary Sewer Relocations (a)		1,000,000	312,000	500,000	337,500	351,000	2,500,500	365,000
19									
20	Subtotal	0	1,400,000	728,000	932,700	787,500	819,000	4,667,200	851,700
22	Total	0	5,328,000	6,401,200	6,332,000	12,622,500	25,091,300	55,775,000	31,679,200

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

2013 CIP Scenario 7 - Roadway Relocations Only - No Wakarusa WWTP
10/22/2012

Water CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
1	Kaw WTP Supply Improvements (a) (c)							0	
	Oread Storage & BPS Replacement (c)							0	
	19th & Kasold Pump Station (b) (c)							0	
	Harper Booster Pump Station (b) (c)		0					0	
	Tower Protective Coatings (c)							0	
	Kaw 36" WM to North Lawrence (One 30" river crossings) - Phase 1 (a) (c)							0	0
	Concrete Main Assessment (c)						0	0	0
	Pipeline Replacement Program (c)	0						0	
2	Water Main Relocation for Road Projects (a)		1,985,000	500,000	520,000	540,800	562,400	4,108,200	584,900
	Small Water Main Replacement Program (c)	0						0	
	Kaw Structural, Electrical, Process (b) (c)							0	
	Clinton Intake (a) (c)	0	0					0	
	Clinton Process (b) (c)							0	
	Clinton Basin Coatings (c)							0	
	Plant Maintenance (c)							0	
	31st St. - extend 12" to O'Connell (a)							0	
	31st St. & O'Connell - Extend 16" to WWTP (includes River crossing) (a)							0	
								0	
3	Bowersock Dam Improvements (c)		425,000					425,000	
	Clinton Backup Generator (15MGD) (a) (c)							0	
5	Total	0	2,410,000	500,000	520,000	540,800	562,400	4,533,200	584,900

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

Wastewater CIP

Line No.	Description	2012	2013	2014	2015	2016	2017	Total	2018
		$	$	$	$	$	$	$	$
	Collection System								
1	PS 32 Expansion & Force Main (a)							0	
	21" Gravity Sewer to Eliminate PS 8 (c)							0	
	KR-5B 12" Relief Sewer (c)		0					0	
	KR-6B 21" Relief Sewer (c)	**0**	0					0	
	PS 23 Expansion (a) (c)	**0**		0				0	
	Rapid I/I Reduction Program (b) (c)							0	
	Sewer Rehabilitation, Replacement, CIPP & MHs							0	
	Subtotal	0	0	0	0	0	0	0	0
	Treatment System								
	Kansas River WWTP								
	Co-generation & Backup Power							0	
	Wakarusa River WWTP	**0**							
	Wakarusa River WWTP Treatment Plant (a) (b)							0	
	Wakarusa Peak Flow Storage (a) (b)							0	
	Roads & Utilities (a) (b)							0	
	Wakarusa PS 5C, 2 - 16" Force Mains (a) (b)							0	
3									
	Subtotal	0	0	0	0	0	0	0	0
	Other								
								0	
	General Pumping Station Improvements (c)							0	
	General WWTP Improvements (c)							0	
4	Sanitary Sewer Relocations (a)		1,000,000	312,000	500,000	337,500	351,000	2,500,500	365,000
6	Subtotal	0	1,000,000	312,000	500,000	337,500	351,000	2,500,500	365,000
	Total	0	1,000,000	312,000	500,000	337,500	351,000	2,500,500	365,000

(a) Project required to meet anticipated growth related requirements.
(b) Project required by EPA and KDHE regulations.
(c) Project required to improve system reliability or transmission capacity.

Appendix II – Rate Tables for CIP Scenarios

Scenario 1 – Recommended

Comparison of Typical Monthly Bills
Under Existing and Proposed 2013 Rates - Scenario 1

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	9.29	12.44	3.15	10.22	13.37	0.93	7.5%
5/8	1	6.93	14.31	21.24	7.31	15.33	22.64	1.40	6.6%
5/8	2	10.71	19.33	30.04	11.47	20.44	31.91	1.87	6.2%
5/8	4	18.27	29.37	47.64	19.79	30.66	50.45	2.81	5.9%
5/8	6	25.83	39.41	65.24	28.11	40.88	68.99	3.75	5.7%
5/8	10	40.95	59.49	100.44	44.75	61.32	106.07	5.63	5.6%
5/8	15	59.85	84.59	144.44	65.55	86.87	152.42	7.98	5.5%
5/8	20	78.75	109.69	188.44	86.35	112.42	198.77	10.33	5.5%
Multifamily									
5/8	0	3.15	9.29	12.44	3.15	10.22	13.37	0.93	7.5%
5/8	1	6.44	14.31	20.75	6.41	15.33	21.74	0.99	4.8%
5/8	2	9.73	19.33	29.06	9.67	20.44	30.11	1.05	3.6%
5/8	4	16.31	29.37	45.68	16.19	30.66	46.85	1.17	2.6%
5/8	6	22.89	39.41	62.30	22.71	40.88	63.59	1.29	2.1%
5/8	10	36.05	59.49	95.54	35.75	61.32	97.07	1.53	1.6%
5/8	15	52.50	84.59	137.09	52.05	86.87	138.92	1.83	1.3%
5/8	20	68.95	109.69	178.64	68.35	112.42	180.77	2.13	1.2%
Commercial									
2	50	153.80	260.29	414.09	170.00	265.72	435.72	21.63	5.2%
2	100	301.80	511.29	813.09	334.50	521.22	855.72	42.63	5.2%
3	200	609.00	1,013.29	1,622.29	673.50	1,032.22	1,705.72	83.43	5.1%
3	300	905.00	1,515.29	2,420.29	1,002.50	1,543.22	2,545.72	125.43	5.2%
4	500	1,501.00	2,519.29	4,020.29	1,664.50	2,565.22	4,229.72	209.43	5.2%
4	1000	2,981.00	5,029.29	8,010.29	3,309.50	5,120.22	8,429.72	419.43	5.2%
Industrial									
3	200	591.00	1,013.29	1,604.29	589.50	1,032.22	1,621.72	17.43	1.1%
3	300	878.00	1,515.29	2,393.29	876.50	1,543.22	2,419.72	26.43	1.1%
4	2500	7,196.00	12,559.29	19,755.29	7,194.50	12,785.22	19,979.72	224.43	1.1%
6	5000	14,381.00	25,109.29	39,490.29	14,378.00	25,560.22	39,938.22	447.93	1.1%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2013 and Proposed 2014 Rates - Scenario 1

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water $	Wastewater $	Combined $	Water $	Wastewater $	Combined $	$	
Residential									
5/8	0	3.15	10.22	13.37	3.15	10.35	13.50	0.13	1.0%
5/8	1	7.31	15.33	22.64	7.56	15.51	23.07	0.43	1.9%
5/8	2	11.47	20.44	31.91	11.97	20.67	32.64	0.73	2.3%
5/8	4	19.79	30.66	50.45	20.79	30.99	51.78	1.33	2.6%
5/8	6	28.11	40.88	68.99	29.61	41.31	70.92	1.93	2.8%
5/8	10	44.75	61.32	106.07	47.25	61.95	109.20	3.13	3.0%
5/8	15	65.55	86.87	152.42	69.30	87.75	157.05	4.63	3.0%
5/8	20	86.35	112.42	198.77	91.35	113.55	204.90	6.13	3.1%
Multifamily									
5/8	0	3.15	10.22	13.37	3.15	10.35	13.50	0.13	1.0%
5/8	1	6.41	15.33	21.74	6.49	15.51	22.00	0.26	1.2%
5/8	2	9.67	20.44	30.11	9.83	20.67	30.50	0.39	1.3%
5/8	4	16.19	30.66	46.85	16.51	30.99	47.50	0.65	1.4%
5/8	6	22.71	40.88	63.59	23.19	41.31	64.50	0.91	1.4%
5/8	10	35.75	61.32	97.07	36.55	61.95	98.50	1.43	1.5%
5/8	15	52.05	86.87	138.92	53.25	87.75	141.00	2.08	1.5%
5/8	20	68.35	112.42	180.77	69.95	113.55	183.50	2.73	1.5%
Commercial									
2	50	170.00	265.72	435.72	181.60	268.35	449.95	14.23	3.3%
2	100	334.50	521.22	855.72	357.60	526.35	883.95	28.23	3.3%
3	200	673.50	1,032.22	1,705.72	720.00	1,042.35	1,762.35	56.63	3.3%
3	300	1,002.50	1,543.22	2,545.72	1,072.00	1,558.35	2,630.35	84.63	3.3%
4	500	1,664.50	2,565.22	4,229.72	1,780.00	2,590.35	4,370.35	140.63	3.3%
4	1000	3,309.50	5,120.22	8,429.72	3,540.00	5,170.35	8,710.35	280.63	3.3%
Industrial									
3	200	589.50	1,032.22	1,621.72	610.00	1,042.35	1,652.35	30.63	1.9%
3	300	876.50	1,543.22	2,419.72	907.00	1,558.35	2,465.35	45.63	1.9%
4	2500	7,194.50	12,785.22	19,979.72	7,445.00	12,910.35	20,355.35	375.63	1.9%
6	5000	14,378.00	25,560.22	39,938.22	14,879.00	25,810.35	40,689.35	751.13	1.9%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2014 and Proposed 2015 Rates - Scenario 1

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.35	13.50	3.30	10.88	14.18	0.68	5.0%
5/8	1	7.56	15.51	23.07	7.97	16.37	24.34	1.27	5.5%
5/8	2	11.97	20.67	32.64	12.64	21.86	34.50	1.86	5.7%
5/8	4	20.79	30.99	51.78	21.98	32.84	54.82	3.04	5.9%
5/8	6	29.61	41.31	70.92	31.32	43.82	75.14	4.22	6.0%
5/8	10	47.25	61.95	109.20	50.00	65.78	115.78	6.58	6.0%
5/8	15	69.30	87.75	157.05	73.35	93.23	166.58	9.53	6.1%
5/8	20	91.35	113.55	204.90	96.70	120.68	217.38	12.48	6.1%
Multifamily									
5/8	0	3.15	10.35	13.50	3.30	10.88	14.18	0.68	5.0%
5/8	1	6.49	15.51	22.00	6.79	16.37	23.16	1.16	5.3%
5/8	2	9.83	20.67	30.50	10.28	21.86	32.14	1.64	5.4%
5/8	4	16.51	30.99	47.50	17.26	32.84	50.10	2.60	5.5%
5/8	6	23.19	41.31	64.50	24.24	43.82	68.06	3.56	5.5%
5/8	10	36.55	61.95	98.50	38.20	65.78	103.98	5.48	5.6%
5/8	15	53.25	87.75	141.00	55.65	93.23	148.88	7.88	5.6%
5/8	20	69.95	113.55	183.50	73.10	120.68	193.78	10.28	5.6%
Commercial									
2	50	181.60	268.35	449.95	192.80	285.38	478.18	28.23	6.3%
2	100	357.60	526.35	883.95	379.80	559.88	939.68	55.73	6.3%
3	200	720.00	1,042.35	1,762.35	765.00	1,108.88	1,873.88	111.53	6.3%
3	300	1,072.00	1,558.35	2,630.35	1,139.00	1,657.88	2,796.88	166.53	6.3%
4	500	1,780.00	2,590.35	4,370.35	1,891.00	2,755.88	4,646.88	276.53	6.3%
4	1000	3,540.00	5,170.35	8,710.35	3,761.00	5,500.88	9,261.88	551.53	6.3%
Industrial									
3	200	610.00	1,042.35	1,652.35	649.00	1,108.88	1,757.88	105.53	6.4%
3	300	907.00	1,558.35	2,465.35	965.00	1,657.88	2,622.88	157.53	6.4%
4	2500	7,445.00	12,910.35	20,355.35	7,921.00	13,735.88	21,656.88	1,301.53	6.4%
6	5000	14,879.00	25,810.35	40,689.35	15,830.00	27,460.88	43,290.88	2,601.53	6.4%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2015 and Proposed 2016 Rates - Scenario 1

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.30	10.88	14.18	3.40	11.29	14.69	0.51	3.6%
5/8	1	7.97	16.37	24.34	8.35	17.08	25.43	1.09	4.5%
5/8	2	12.64	21.86	34.50	13.30	22.87	36.17	1.67	4.8%
5/8	4	21.98	32.84	54.82	23.20	34.45	57.65	2.83	5.2%
5/8	6	31.32	43.82	75.14	33.10	46.03	79.13	3.99	5.3%
5/8	10	50.00	65.78	115.78	52.90	69.19	122.09	6.31	5.4%
5/8	15	73.35	93.23	166.58	77.65	98.14	175.79	9.21	5.5%
5/8	20	96.70	120.68	217.38	102.40	127.09	229.49	12.11	5.6%
Multifamily									
5/8	0	3.30	10.88	14.18	3.40	11.29	14.69	0.51	3.6%
5/8	1	6.79	16.37	23.16	7.12	17.08	24.20	1.04	4.5%
5/8	2	10.28	21.86	32.14	10.84	22.87	33.71	1.57	4.9%
5/8	4	17.26	32.84	50.10	18.28	34.45	52.73	2.63	5.2%
5/8	6	24.24	43.82	68.06	25.72	46.03	71.75	3.69	5.4%
5/8	10	38.20	65.78	103.98	40.60	69.19	109.79	5.81	5.6%
5/8	15	55.65	93.23	148.88	59.20	98.14	157.34	8.46	5.7%
5/8	20	73.10	120.68	193.78	77.80	127.09	204.89	11.11	5.7%
Commercial									
2	50	192.80	285.38	478.18	204.50	300.79	505.29	27.11	5.7%
2	100	379.80	559.88	939.68	403.00	590.29	993.29	53.61	5.7%
3	200	765.00	1,108.88	1,873.88	811.50	1,169.29	1,980.79	106.91	5.7%
3	300	1,139.00	1,657.88	2,796.88	1,208.50	1,748.29	2,956.79	159.91	5.7%
4	500	1,891.00	2,755.88	4,646.88	2,006.50	2,906.29	4,912.79	265.91	5.7%
4	1000	3,761.00	5,500.88	9,261.88	3,991.50	5,801.29	9,792.79	530.91	5.7%
Industrial									
3	200	649.00	1,108.88	1,757.88	691.50	1,169.29	1,860.79	102.91	5.9%
3	300	965.00	1,657.88	2,622.88	1,028.50	1,748.29	2,776.79	153.91	5.9%
4	2500	7,921.00	13,735.88	21,656.88	8,446.50	14,486.29	22,932.79	1,275.91	5.9%
6	5000	15,830.00	27,460.88	43,290.88	16,881.00	28,961.29	45,842.29	2,551.41	5.9%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2016 and Proposed 2017 Rates - Scenario 1

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.40	11.29	14.69	3.50	11.88	15.38	0.69	4.7%
5/8	1	8.35	17.08	25.43	8.83	18.03	26.86	1.43	5.6%
5/8	2	13.30	22.87	36.17	14.16	24.18	38.34	2.17	6.0%
5/8	4	23.20	34.45	57.65	24.82	36.48	61.30	3.65	6.3%
5/8	6	33.10	46.03	79.13	35.48	48.78	84.26	5.13	6.5%
5/8	10	52.90	69.19	122.09	56.80	73.38	130.18	8.09	6.6%
5/8	15	77.65	98.14	175.79	83.45	104.13	187.58	11.79	6.7%
5/8	20	102.40	127.09	229.49	110.10	134.88	244.98	15.49	6.7%
Multifamily									
5/8	0	3.40	11.29	14.69	3.50	11.88	15.38	0.69	4.7%
5/8	1	7.12	17.08	24.20	7.50	18.03	25.53	1.33	5.5%
5/8	2	10.84	22.87	33.71	11.50	24.18	35.68	1.97	5.8%
5/8	4	18.28	34.45	52.73	19.50	36.48	55.98	3.25	6.2%
5/8	6	25.72	46.03	71.75	27.50	48.78	76.28	4.53	6.3%
5/8	10	40.60	69.19	109.79	43.50	73.38	116.88	7.09	6.5%
5/8	15	59.20	98.14	157.34	63.50	104.13	167.63	10.29	6.5%
5/8	20	77.80	127.09	204.89	83.50	134.88	218.38	13.49	6.6%
Commercial									
2	50	204.50	300.79	505.29	220.70	319.38	540.08	34.79	6.9%
2	100	403.00	590.29	993.29	435.20	626.88	1,062.08	68.79	6.9%
3	200	811.50	1,169.29	1,980.79	876.00	1,241.88	2,117.88	137.09	6.9%
3	300	1,208.50	1,748.29	2,956.79	1,305.00	1,856.88	3,161.88	205.09	6.9%
4	500	2,006.50	2,906.29	4,912.79	2,167.50	3,086.88	5,254.38	341.59	7.0%
4	1000	3,991.50	5,801.29	9,792.79	4,312.50	6,161.88	10,474.38	681.59	7.0%
Industrial									
3	200	691.50	1,169.29	1,860.79	744.00	1,241.88	1,985.88	125.09	6.7%
3	300	1,028.50	1,748.29	2,776.79	1,107.00	1,856.88	2,963.88	187.09	6.7%
4	2500	8,446.50	14,486.29	22,932.79	9,097.50	15,386.88	24,484.38	1,551.59	6.8%
6	5000	16,881.00	28,961.29	45,842.29	18,182.00	30,761.88	48,943.88	3,101.59	6.8%

The charges shown are for customers inside the City Limits.

Scenario 2 – Reduced Water

Comparison of Typical Monthly Bills
Under Existing and Proposed 2013 Rates - Scenario 2

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	9.29	12.44	3.15	10.22	13.37	0.93	7.5%
5/8	1	6.93	14.31	21.24	7.31	15.33	22.64	1.40	6.6%
5/8	2	10.71	19.33	30.04	11.47	20.44	31.91	1.87	6.2%
5/8	4	18.27	29.37	47.64	19.79	30.66	50.45	2.81	5.9%
5/8	6	25.83	39.41	65.24	28.11	40.88	68.99	3.75	5.7%
5/8	10	40.95	59.49	100.44	44.75	61.32	106.07	5.63	5.6%
5/8	15	59.85	84.59	144.44	65.55	86.87	152.42	7.98	5.5%
5/8	20	78.75	109.69	188.44	86.35	112.42	198.77	10.33	5.5%
Multifamily									
5/8	0	3.15	9.29	12.44	3.15	10.22	13.37	0.93	7.5%
5/8	1	6.44	14.31	20.75	6.41	15.33	21.74	0.99	4.8%
5/8	2	9.73	19.33	29.06	9.67	20.44	30.11	1.05	3.6%
5/8	4	16.31	29.37	45.68	16.19	30.66	46.85	1.17	2.6%
5/8	6	22.89	39.41	62.30	22.71	40.88	63.59	1.29	2.1%
5/8	10	36.05	59.49	95.54	35.75	61.32	97.07	1.53	1.6%
5/8	15	52.50	84.59	137.09	52.05	86.87	138.92	1.83	1.3%
5/8	20	68.95	109.69	178.64	68.35	112.42	180.77	2.13	1.2%
Commercial									
2	50	153.80	260.29	414.09	170.00	265.72	435.72	21.63	5.2%
2	100	301.80	511.29	813.09	334.50	521.22	855.72	42.63	5.2%
3	200	609.00	1,013.29	1,622.29	673.50	1,032.22	1,705.72	83.43	5.1%
3	300	905.00	1,515.29	2,420.29	1,002.50	1,543.22	2,545.72	125.43	5.2%
4	500	1,501.00	2,519.29	4,020.29	1,664.50	2,565.22	4,229.72	209.43	5.2%
4	1000	2,981.00	5,029.29	8,010.29	3,309.50	5,120.22	8,429.72	419.43	5.2%
Industrial									
3	200	591.00	1,013.29	1,604.29	589.50	1,032.22	1,621.72	17.43	1.1%
3	300	878.00	1,515.29	2,393.29	876.50	1,543.22	2,419.72	26.43	1.1%
4	2500	7,196.00	12,559.29	19,755.29	7,194.50	12,785.22	19,979.72	224.43	1.1%
6	5000	14,381.00	25,109.29	39,490.29	14,378.00	25,560.22	39,938.22	447.93	1.1%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2013 and Proposed 2014 Rates - Scenario 2

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.22	13.37	3.15	10.35	13.50	0.13	1.0%
5/8	1	7.31	15.33	22.64	7.45	15.51	22.96	0.32	1.4%
5/8	2	11.47	20.44	31.91	11.75	20.67	32.42	0.51	1.6%
5/8	4	19.79	30.66	50.45	20.35	30.99	51.34	0.89	1.8%
5/8	6	28.11	40.88	68.99	28.95	41.31	70.26	1.27	1.8%
5/8	10	44.75	61.32	106.07	46.15	61.95	108.10	2.03	1.9%
5/8	15	65.55	86.87	152.42	67.65	87.75	155.40	2.98	2.0%
5/8	20	86.35	112.42	198.77	89.15	113.55	202.70	3.93	2.0%
Multifamily									
5/8	0	3.15	10.22	13.37	3.15	10.35	13.50	0.13	1.0%
5/8	1	6.41	15.33	21.74	6.43	15.51	21.94	0.20	0.9%
5/8	2	9.67	20.44	30.11	9.71	20.67	30.38	0.27	0.9%
5/8	4	16.19	30.66	46.85	16.27	30.99	47.26	0.41	0.9%
5/8	6	22.71	40.88	63.59	22.83	41.31	64.14	0.55	0.9%
5/8	10	35.75	61.32	97.07	35.95	61.95	97.90	0.83	0.9%
5/8	15	52.05	86.87	138.92	52.35	87.75	140.10	1.18	0.8%
5/8	20	68.35	112.42	180.77	68.75	113.55	182.30	1.53	0.8%
Commercial									
2	50	170.00	265.72	435.72	177.60	268.35	445.95	10.23	2.3%
2	100	334.50	521.22	855.72	349.60	526.35	875.95	20.23	2.4%
3	200	673.50	1,032.22	1,705.72	704.00	1,042.35	1,746.35	40.63	2.4%
3	300	1,002.50	1,543.22	2,545.72	1,048.00	1,558.35	2,606.35	60.63	2.4%
4	500	1,664.50	2,565.22	4,229.72	1,740.00	2,590.35	4,330.35	100.63	2.4%
4	1000	3,309.50	5,120.22	8,429.72	3,460.00	5,170.35	8,630.35	200.63	2.4%
Industrial									
3	200	589.50	1,032.22	1,621.72	596.00	1,042.35	1,638.35	16.63	1.0%
3	300	876.50	1,543.22	2,419.72	886.00	1,558.35	2,444.35	24.63	1.0%
4	2500	7,194.50	12,785.22	19,979.72	7,270.00	12,910.35	20,180.35	200.63	1.0%
6	5000	14,378.00	25,560.22	39,938.22	14,529.00	25,810.35	40,339.35	401.13	1.0%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2014 and Proposed 2015 Rates - Scenario 2

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.35	13.50	3.25	10.88	14.13	0.63	4.7%
5/8	1	7.45	15.51	22.96	7.67	16.37	24.04	1.08	4.7%
5/8	2	11.75	20.67	32.42	12.09	21.86	33.95	1.53	4.7%
5/8	4	20.35	30.99	51.34	20.93	32.84	53.77	2.43	4.7%
5/8	6	28.95	41.31	70.26	29.77	43.82	73.59	3.33	4.7%
5/8	10	46.15	61.95	108.10	47.45	65.78	113.23	5.13	4.7%
5/8	15	67.65	87.75	155.40	69.55	93.23	162.78	7.38	4.7%
5/8	20	89.15	113.55	202.70	91.65	120.68	212.33	9.63	4.8%
Multifamily									
5/8	0	3.15	10.35	13.50	3.25	10.88	14.13	0.63	4.7%
5/8	1	6.43	15.51	21.94	6.59	16.37	22.96	1.02	4.6%
5/8	2	9.71	20.67	30.38	9.93	21.86	31.79	1.41	4.6%
5/8	4	16.27	30.99	47.26	16.61	32.84	49.45	2.19	4.6%
5/8	6	22.83	41.31	64.14	23.29	43.82	67.11	2.97	4.6%
5/8	10	35.95	61.95	97.90	36.65	65.78	102.43	4.53	4.6%
5/8	15	52.35	87.75	140.10	53.35	93.23	146.58	6.48	4.6%
5/8	20	68.75	113.55	182.30	70.05	120.68	190.73	8.43	4.6%
Commercial									
2	50	177.60	268.35	445.95	182.80	285.38	468.18	22.23	5.0%
2	100	349.60	526.35	875.95	359.80	559.88	919.68	43.73	5.0%
3	200	704.00	1,042.35	1,746.35	724.50	1,108.88	1,833.38	87.03	5.0%
3	300	1,048.00	1,558.35	2,606.35	1,078.50	1,657.88	2,736.38	130.03	5.0%
4	500	1,740.00	2,590.35	4,330.35	1,790.50	2,755.88	4,546.38	216.03	5.0%
4	1000	3,460.00	5,170.35	8,630.35	3,560.50	5,500.88	9,061.38	431.03	5.0%
Industrial									
3	200	596.00	1,042.35	1,638.35	612.50	1,108.88	1,721.38	83.03	5.1%
3	300	886.00	1,558.35	2,444.35	910.50	1,657.88	2,568.38	124.03	5.1%
4	2500	7,270.00	12,910.35	20,180.35	7,470.50	13,735.88	21,206.38	1,026.03	5.1%
6	5000	14,529.00	25,810.35	40,339.35	14,930.00	27,460.88	42,390.88	2,051.53	5.1%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2015 and Proposed 2016 Rates - Scenario 2

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.25	10.88	14.13	3.35	11.29	14.64	0.51	3.6%
5/8	1	7.67	16.37	24.04	7.90	17.08	24.98	0.94	3.9%
5/8	2	12.09	21.86	33.95	12.45	22.87	35.32	1.37	4.0%
5/8	4	20.93	32.84	53.77	21.55	34.45	56.00	2.23	4.1%
5/8	6	29.77	43.82	73.59	30.65	46.03	76.68	3.09	4.2%
5/8	10	47.45	65.78	113.23	48.85	69.19	118.04	4.81	4.2%
5/8	15	69.55	93.23	162.78	71.60	98.14	169.74	6.96	4.3%
5/8	20	91.65	120.68	212.33	94.35	127.09	221.44	9.11	4.3%
Multifamily									
5/8	0	3.25	10.88	14.13	3.35	11.29	14.64	0.51	3.6%
5/8	1	6.59	16.37	22.96	6.77	17.08	23.85	0.89	3.9%
5/8	2	9.93	21.86	31.79	10.19	22.87	33.06	1.27	4.0%
5/8	4	16.61	32.84	49.45	17.03	34.45	51.48	2.03	4.1%
5/8	6	23.29	43.82	67.11	23.87	46.03	69.90	2.79	4.2%
5/8	10	36.65	65.78	102.43	37.55	69.19	106.74	4.31	4.2%
5/8	15	53.35	93.23	146.58	54.65	98.14	152.79	6.21	4.2%
5/8	20	70.05	120.68	190.73	71.75	127.09	198.84	8.11	4.3%
Commercial									
2	50	182.80	285.38	468.18	188.40	300.79	489.19	21.01	4.5%
2	100	359.80	559.88	919.68	370.90	590.29	961.19	41.51	4.5%
3	200	724.50	1,108.88	1,833.38	747.00	1,169.29	1,916.29	82.91	4.5%
3	300	1,078.50	1,657.88	2,736.38	1,112.00	1,748.29	2,860.29	123.91	4.5%
4	500	1,790.50	2,755.88	4,546.38	1,846.00	2,906.29	4,752.29	205.91	4.5%
4	1000	3,560.50	5,500.88	9,061.38	3,671.00	5,801.29	9,472.29	410.91	4.5%
Industrial									
3	200	612.50	1,108.88	1,721.38	633.00	1,169.29	1,802.29	80.91	4.7%
3	300	910.50	1,657.88	2,568.38	941.00	1,748.29	2,689.29	120.91	4.7%
4	2500	7,470.50	13,735.88	21,206.38	7,721.00	14,486.29	22,207.29	1,000.91	4.7%
6	5000	14,930.00	27,460.88	42,390.88	15,431.00	28,961.29	44,392.29	2,001.41	4.7%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2016 and Proposed 2017 Rates - Scenario 2

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.35	11.29	14.64	3.45	11.88	15.33	0.69	4.7%
5/8	1	7.90	17.08	24.98	8.13	18.03	26.16	1.18	4.7%
5/8	2	12.45	22.87	35.32	12.81	24.18	36.99	1.67	4.7%
5/8	4	21.55	34.45	56.00	22.17	36.48	58.65	2.65	4.7%
5/8	6	30.65	46.03	76.68	31.53	48.78	80.31	3.63	4.7%
5/8	10	48.85	69.19	118.04	50.25	73.38	123.63	5.59	4.7%
5/8	15	71.60	98.14	169.74	73.65	104.13	177.78	8.04	4.7%
5/8	20	94.35	127.09	221.44	97.05	134.88	231.93	10.49	4.7%
Multifamily									
5/8	0	3.35	11.29	14.64	3.45	11.88	15.33	0.69	4.7%
5/8	1	6.77	17.08	23.85	6.97	18.03	25.00	1.15	4.8%
5/8	2	10.19	22.87	33.06	10.49	24.18	34.67	1.61	4.9%
5/8	4	17.03	34.45	51.48	17.53	36.48	54.01	2.53	4.9%
5/8	6	23.87	46.03	69.90	24.57	48.78	73.35	3.45	4.9%
5/8	10	37.55	69.19	106.74	38.65	73.38	112.03	5.29	5.0%
5/8	15	54.65	98.14	152.79	56.25	104.13	160.38	7.59	5.0%
5/8	20	71.75	127.09	198.84	73.85	134.88	208.73	9.89	5.0%
Commercial									
2	50	188.40	300.79	489.19	194.10	319.38	513.48	24.29	5.0%
2	100	370.90	590.29	961.19	382.10	626.88	1,008.98	47.79	5.0%
3	200	747.00	1,169.29	1,916.29	769.50	1,241.88	2,011.38	95.09	5.0%
3	300	1,112.00	1,748.29	2,860.29	1,145.50	1,856.88	3,002.38	142.09	5.0%
4	500	1,846.00	2,906.29	4,752.29	1,901.50	3,086.88	4,988.38	236.09	5.0%
4	1000	3,671.00	5,801.29	9,472.29	3,781.50	6,161.88	9,943.38	471.09	5.0%
Industrial									
3	200	633.00	1,169.29	1,802.29	653.50	1,241.88	1,895.38	93.09	5.2%
3	300	941.00	1,748.29	2,689.29	971.50	1,856.88	2,828.38	139.09	5.2%
4	2500	7,721.00	14,486.29	22,207.29	7,971.50	15,386.88	23,358.38	1,151.09	5.2%
6	5000	15,431.00	28,961.29	44,392.29	15,931.00	30,761.88	46,692.88	2,300.59	5.2%

The charges shown are for customers inside the City Limits.

Scenario 3 – Deferred Maintenance/Reliability

Comparison of Typical Monthly Bills
Under Existing and Proposed 2013 Rates - Scenario 3

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	9.29	12.44	3.15	10.22	13.37	0.93	7.5%
5/8	1	6.93	14.31	21.24	7.31	15.33	22.64	1.40	6.6%
5/8	2	10.71	19.33	30.04	11.47	20.44	31.91	1.87	6.2%
5/8	4	18.27	29.37	47.64	19.79	30.66	50.45	2.81	5.9%
5/8	6	25.83	39.41	65.24	28.11	40.88	68.99	3.75	5.7%
5/8	10	40.95	59.49	100.44	44.75	61.32	106.07	5.63	5.6%
5/8	15	59.85	84.59	144.44	65.55	86.87	152.42	7.98	5.5%
5/8	20	78.75	109.69	188.44	86.35	112.42	198.77	10.33	5.5%
Multifamily									
5/8	0	3.15	9.29	12.44	3.15	10.22	13.37	0.93	7.5%
5/8	1	6.44	14.31	20.75	6.41	15.33	21.74	0.99	4.8%
5/8	2	9.73	19.33	29.06	9.67	20.44	30.11	1.05	3.6%
5/8	4	16.31	29.37	45.68	16.19	30.66	46.85	1.17	2.6%
5/8	6	22.89	39.41	62.30	22.71	40.88	63.59	1.29	2.1%
5/8	10	36.05	59.49	95.54	35.75	61.32	97.07	1.53	1.6%
5/8	15	52.50	84.59	137.09	52.05	86.87	138.92	1.83	1.3%
5/8	20	68.95	109.69	178.64	68.35	112.42	180.77	2.13	1.2%
Commercial									
2	50	153.80	260.29	414.09	170.00	265.72	435.72	21.63	5.2%
2	100	301.80	511.29	813.09	334.50	521.22	855.72	42.63	5.2%
3	200	609.00	1,013.29	1,622.29	673.50	1,032.22	1,705.72	83.43	5.1%
3	300	905.00	1,515.29	2,420.29	1,002.50	1,543.22	2,545.72	125.43	5.2%
4	500	1,501.00	2,519.29	4,020.29	1,664.50	2,565.22	4,229.72	209.43	5.2%
4	1000	2,981.00	5,029.29	8,010.29	3,309.50	5,120.22	8,429.72	419.43	5.2%
Industrial									
3	200	591.00	1,013.29	1,604.29	589.50	1,032.22	1,621.72	17.43	1.1%
3	300	878.00	1,515.29	2,393.29	876.50	1,543.22	2,419.72	26.43	1.1%
4	2500	7,196.00	12,559.29	19,755.29	7,194.50	12,785.22	19,979.72	224.43	1.1%
6	5000	14,381.00	25,109.29	39,490.29	14,378.00	25,560.22	39,938.22	447.93	1.1%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2013 and Proposed 2014 Rates - Scenario 3

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.22	13.37	3.15	10.35	13.50	0.13	1.0%
5/8	1	7.31	15.33	22.64	7.45	15.51	22.96	0.32	1.4%
5/8	2	11.47	20.44	31.91	11.75	20.67	32.42	0.51	1.6%
5/8	4	19.79	30.66	50.45	20.35	30.99	51.34	0.89	1.8%
5/8	6	28.11	40.88	68.99	28.95	41.31	70.26	1.27	1.8%
5/8	10	44.75	61.32	106.07	46.15	61.95	108.10	2.03	1.9%
5/8	15	65.55	86.87	152.42	67.65	87.75	155.40	2.98	2.0%
5/8	20	86.35	112.42	198.77	89.15	113.55	202.70	3.93	2.0%
Multifamily									
5/8	0	3.15	10.22	13.37	3.15	10.35	13.50	0.13	1.0%
5/8	1	6.41	15.33	21.74	6.45	15.51	21.96	0.22	1.0%
5/8	2	9.67	20.44	30.11	9.75	20.67	30.42	0.31	1.0%
5/8	4	16.19	30.66	46.85	16.35	30.99	47.34	0.49	1.0%
5/8	6	22.71	40.88	63.59	22.95	41.31	64.26	0.67	1.1%
5/8	10	35.75	61.32	97.07	36.15	61.95	98.10	1.03	1.1%
5/8	15	52.05	86.87	138.92	52.65	87.75	140.40	1.48	1.1%
5/8	20	68.35	112.42	180.77	69.15	113.55	182.70	1.93	1.1%
Commercial									
2	50	170.00	265.72	435.72	177.60	268.35	445.95	10.23	2.3%
2	100	334.50	521.22	855.72	349.60	526.35	875.95	20.23	2.4%
3	200	673.50	1,032.22	1,705.72	704.00	1,042.35	1,746.35	40.63	2.4%
3	300	1,002.50	1,543.22	2,545.72	1,048.00	1,558.35	2,606.35	60.63	2.4%
4	500	1,664.50	2,565.22	4,229.72	1,740.00	2,590.35	4,330.35	100.63	2.4%
4	1000	3,309.50	5,120.22	8,429.72	3,460.00	5,170.35	8,630.35	200.63	2.4%
Industrial									
3	200	589.50	1,032.22	1,621.72	596.00	1,042.35	1,638.35	16.63	1.0%
3	300	876.50	1,543.22	2,419.72	886.00	1,558.35	2,444.35	24.63	1.0%
4	2500	7,194.50	12,785.22	19,979.72	7,270.00	12,910.35	20,180.35	200.63	1.0%
6	5000	14,378.00	25,560.22	39,938.22	14,529.00	25,810.35	40,339.35	401.13	1.0%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2014 and Proposed 2015 Rates - Scenario 3

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.35	13.50	3.25	10.89	14.14	0.64	4.7%
5/8	1	7.45	15.51	22.96	7.75	16.38	24.13	1.17	5.1%
5/8	2	11.75	20.67	32.42	12.25	21.87	34.12	1.70	5.2%
5/8	4	20.35	30.99	51.34	21.25	32.85	54.10	2.76	5.4%
5/8	6	28.95	41.31	70.26	30.25	43.83	74.08	3.82	5.4%
5/8	10	46.15	61.95	108.10	48.25	65.79	114.04	5.94	5.5%
5/8	15	67.65	87.75	155.40	70.75	93.24	163.99	8.59	5.5%
5/8	20	89.15	113.55	202.70	93.25	120.69	213.94	11.24	5.5%
Multifamily									
5/8	0	3.15	10.35	13.50	3.25	10.89	14.14	0.64	4.7%
5/8	1	6.45	15.51	21.96	6.62	16.38	23.00	1.04	4.7%
5/8	2	9.75	20.67	30.42	9.99	21.87	31.86	1.44	4.7%
5/8	4	16.35	30.99	47.34	16.73	32.85	49.58	2.24	4.7%
5/8	6	22.95	41.31	64.26	23.47	43.83	67.30	3.04	4.7%
5/8	10	36.15	61.95	98.10	36.95	65.79	102.74	4.64	4.7%
5/8	15	52.65	87.75	140.40	53.80	93.24	147.04	6.64	4.7%
5/8	20	69.15	113.55	182.70	70.65	120.69	191.34	8.64	4.7%
Commercial									
2	50	177.60	268.35	445.95	184.80	285.39	470.19	24.24	5.4%
2	100	349.60	526.35	875.95	363.80	559.89	923.69	47.74	5.5%
3	200	704.00	1,042.35	1,746.35	732.50	1,108.89	1,841.39	95.04	5.4%
3	300	1,048.00	1,558.35	2,606.35	1,090.50	1,657.89	2,748.39	142.04	5.4%
4	500	1,740.00	2,590.35	4,330.35	1,810.50	2,755.89	4,566.39	236.04	5.5%
4	1000	3,460.00	5,170.35	8,630.35	3,600.50	5,500.89	9,101.39	471.04	5.5%
Industrial									
3	200	596.00	1,042.35	1,638.35	622.50	1,108.89	1,731.39	93.04	5.7%
3	300	886.00	1,558.35	2,444.35	925.50	1,657.89	2,583.39	139.04	5.7%
4	2500	7,270.00	12,910.35	20,180.35	7,595.50	13,735.89	21,331.39	1,151.04	5.7%
6	5000	14,529.00	25,810.35	40,339.35	15,180.00	27,460.89	42,640.89	2,301.54	5.7%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2015 and Proposed 2016 Rates - Scenario 3

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.25	10.89	14.14	3.35	11.21	14.56	0.42	3.0%
5/8	1	7.75	16.38	24.13	8.05	16.94	24.99	0.86	3.6%
5/8	2	12.25	21.87	34.12	12.75	22.67	35.42	1.30	3.8%
5/8	4	21.25	32.85	54.10	22.15	34.13	56.28	2.18	4.0%
5/8	6	30.25	43.83	74.08	31.55	45.59	77.14	3.06	4.1%
5/8	10	48.25	65.79	114.04	50.35	68.51	118.86	4.82	4.2%
5/8	15	70.75	93.24	163.99	73.85	97.16	171.01	7.02	4.3%
5/8	20	93.25	120.69	213.94	97.35	125.81	223.16	9.22	4.3%
Multifamily									
5/8	0	3.25	10.89	14.14	3.35	11.21	14.56	0.42	3.0%
5/8	1	6.62	16.38	23.00	6.88	16.94	23.82	0.82	3.6%
5/8	2	9.99	21.87	31.86	10.41	22.67	33.08	1.22	3.8%
5/8	4	16.73	32.85	49.58	17.47	34.13	51.60	2.02	4.1%
5/8	6	23.47	43.83	67.30	24.53	45.59	70.12	2.82	4.2%
5/8	10	36.95	65.79	102.74	38.65	68.51	107.16	4.42	4.3%
5/8	15	53.80	93.24	147.04	56.30	97.16	153.46	6.42	4.4%
5/8	20	70.65	120.69	191.34	73.95	125.81	199.76	8.42	4.4%
Commercial									
2	50	184.80	285.39	470.19	194.40	297.71	492.11	21.92	4.7%
2	100	363.80	559.89	923.69	382.90	584.21	967.11	43.42	4.7%
3	200	732.50	1,108.89	1,841.39	771.00	1,157.21	1,928.21	86.82	4.7%
3	300	1,090.50	1,657.89	2,748.39	1,148.00	1,730.21	2,878.21	129.82	4.7%
4	500	1,810.50	2,755.89	4,566.39	1,906.00	2,876.21	4,782.21	215.82	4.7%
4	1000	3,600.50	5,500.89	9,101.39	3,791.00	5,741.21	9,532.21	430.82	4.7%
Industrial									
3	200	622.50	1,108.89	1,731.39	657.00	1,157.21	1,814.21	82.82	4.8%
3	300	925.50	1,657.89	2,583.39	977.00	1,730.21	2,707.21	123.82	4.8%
4	2500	7,595.50	13,735.89	21,331.39	8,021.00	14,336.21	22,357.21	1,025.82	4.8%
6	5000	15,180.00	27,460.89	42,640.89	16,031.00	28,661.21	44,692.21	2,051.32	4.8%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2016 and Proposed 2017 Rates - Scenario 3

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.35	11.21	14.56	3.45	11.77	15.22	0.66	4.5%
5/8	1	8.05	16.94	24.99	8.49	17.86	26.35	1.36	5.4%
5/8	2	12.75	22.67	35.42	13.53	23.95	37.48	2.06	5.8%
5/8	4	22.15	34.13	56.28	23.61	36.13	59.74	3.46	6.1%
5/8	6	31.55	45.59	77.14	33.69	48.31	82.00	4.86	6.3%
5/8	10	50.35	68.51	118.86	53.85	72.67	126.52	7.66	6.4%
5/8	15	73.85	97.16	171.01	79.05	103.12	182.17	11.16	6.5%
5/8	20	97.35	125.81	223.16	104.25	133.57	237.82	14.66	6.6%
Multifamily									
5/8	0	3.35	11.21	14.56	3.45	11.77	15.22	0.66	4.5%
5/8	1	6.88	16.94	23.82	7.26	17.86	25.12	1.30	5.5%
5/8	2	10.41	22.67	33.08	11.07	23.95	35.02	1.94	5.9%
5/8	4	17.47	34.13	51.60	18.69	36.13	54.82	3.22	6.2%
5/8	6	24.53	45.59	70.12	26.31	48.31	74.62	4.50	6.4%
5/8	10	38.65	68.51	107.16	41.55	72.67	114.22	7.06	6.6%
5/8	15	56.30	97.16	153.46	60.60	103.12	163.72	10.26	6.7%
5/8	20	73.95	125.81	199.76	79.65	133.57	213.22	13.46	6.7%
Commercial									
2	50	194.40	297.71	492.11	209.10	316.27	525.37	33.26	6.8%
2	100	382.90	584.21	967.11	412.10	620.77	1,032.87	65.76	6.8%
3	200	771.00	1,157.21	1,928.21	829.50	1,229.77	2,059.27	131.06	6.8%
3	300	1,148.00	1,730.21	2,878.21	1,235.50	1,838.77	3,074.27	196.06	6.8%
4	500	1,906.00	2,876.21	4,782.21	2,052.00	3,056.77	5,108.77	326.56	6.8%
4	1000	3,791.00	5,741.21	9,532.21	4,082.00	6,101.77	10,183.77	651.56	6.8%
Industrial									
3	200	657.00	1,157.21	1,814.21	707.50	1,229.77	1,937.27	123.06	6.8%
3	300	977.00	1,730.21	2,707.21	1,052.50	1,838.77	2,891.27	184.06	6.8%
4	2500	8,021.00	14,336.21	22,357.21	8,647.00	15,236.77	23,883.77	1,526.56	6.8%
6	5000	16,031.00	28,661.21	44,692.21	17,282.00	30,461.77	47,743.77	3,051.56	6.8%

The charges shown are for customers inside the City Limits.

Scenario 4 – Deferred Maintenance/Reliability & Wakarusa WWTP (Low Growth)

Comparison of Typical Monthly Bills
Under Existing and Proposed 2013 Rates - Scenario 4

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	9.29	12.44	3.15	10.22	13.37	0.93	7.5%
5/8	1	6.93	14.31	21.24	7.31	15.33	22.64	1.40	6.6%
5/8	2	10.71	19.33	30.04	11.47	20.44	31.91	1.87	6.2%
5/8	4	18.27	29.37	47.64	19.79	30.66	50.45	2.81	5.9%
5/8	6	25.83	39.41	65.24	28.11	40.88	68.99	3.75	5.7%
5/8	10	40.95	59.49	100.44	44.75	61.32	106.07	5.63	5.6%
5/8	15	59.85	84.59	144.44	65.55	86.87	152.42	7.98	5.5%
5/8	20	78.75	109.69	188.44	86.35	112.42	198.77	10.33	5.5%
Multifamily									
5/8	0	3.15	9.29	12.44	3.15	10.22	13.37	0.93	7.5%
5/8	1	6.44	14.31	20.75	6.41	15.33	21.74	0.99	4.8%
5/8	2	9.73	19.33	29.06	9.67	20.44	30.11	1.05	3.6%
5/8	4	16.31	29.37	45.68	16.19	30.66	46.85	1.17	2.6%
5/8	6	22.89	39.41	62.30	22.71	40.88	63.59	1.29	2.1%
5/8	10	36.05	59.49	95.54	35.75	61.32	97.07	1.53	1.6%
5/8	15	52.50	84.59	137.09	52.05	86.87	138.92	1.83	1.3%
5/8	20	68.95	109.69	178.64	68.35	112.42	180.77	2.13	1.2%
Commercial									
2	50	153.80	260.29	414.09	170.00	265.72	435.72	21.63	5.2%
2	100	301.80	511.29	813.09	334.50	521.22	855.72	42.63	5.2%
3	200	609.00	1,013.29	1,622.29	673.50	1,032.22	1,705.72	83.43	5.1%
3	300	905.00	1,515.29	2,420.29	1,002.50	1,543.22	2,545.72	125.43	5.2%
4	500	1,501.00	2,519.29	4,020.29	1,664.50	2,565.22	4,229.72	209.43	5.2%
4	1000	2,981.00	5,029.29	8,010.29	3,309.50	5,120.22	8,429.72	419.43	5.2%
Industrial									
3	200	591.00	1,013.29	1,604.29	589.50	1,032.22	1,621.72	17.43	1.1%
3	300	878.00	1,515.29	2,393.29	876.50	1,543.22	2,419.72	26.43	1.1%
4	2500	7,196.00	12,559.29	19,755.29	7,194.50	12,785.22	19,979.72	224.43	1.1%
6	5000	14,381.00	25,109.29	39,490.29	14,378.00	25,560.22	39,938.22	447.93	1.1%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2013 and Proposed 2014 Rates - Scenario 4

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.22	13.37	3.15	10.25	13.40	0.03	0.2%
5/8	1	7.31	15.33	22.64	7.45	15.36	22.81	0.17	0.8%
5/8	2	11.47	20.44	31.91	11.75	20.47	32.22	0.31	1.0%
5/8	4	19.79	30.66	50.45	20.35	30.69	51.04	0.59	1.2%
5/8	6	28.11	40.88	68.99	28.95	40.91	69.86	0.87	1.3%
5/8	10	44.75	61.32	106.07	46.15	61.35	107.50	1.43	1.3%
5/8	15	65.55	86.87	152.42	67.65	86.90	154.55	2.13	1.4%
5/8	20	86.35	112.42	198.77	89.15	112.45	201.60	2.83	1.4%
Multifamily									
5/8	0	3.15	10.22	13.37	3.15	10.25	13.40	0.03	0.2%
5/8	1	6.41	15.33	21.74	6.45	15.36	21.81	0.07	0.3%
5/8	2	9.67	20.44	30.11	9.75	20.47	30.22	0.11	0.4%
5/8	4	16.19	30.66	46.85	16.35	30.69	47.04	0.19	0.4%
5/8	6	22.71	40.88	63.59	22.95	40.91	63.86	0.27	0.4%
5/8	10	35.75	61.32	97.07	36.15	61.35	97.50	0.43	0.4%
5/8	15	52.05	86.87	138.92	52.65	86.90	139.55	0.63	0.5%
5/8	20	68.35	112.42	180.77	69.15	112.45	181.60	0.83	0.5%
Commercial									
2	50	170.00	265.72	435.72	177.60	265.75	443.35	7.63	1.8%
2	100	334.50	521.22	855.72	349.60	521.25	870.85	15.13	1.8%
3	200	673.50	1,032.22	1,705.72	704.00	1,032.25	1,736.25	30.53	1.8%
3	300	1,002.50	1,543.22	2,545.72	1,048.00	1,543.25	2,591.25	45.53	1.8%
4	500	1,664.50	2,565.22	4,229.72	1,740.00	2,565.25	4,305.25	75.53	1.8%
4	1000	3,309.50	5,120.22	8,429.72	3,460.00	5,120.25	8,580.25	150.53	1.8%
Industrial									
3	200	589.50	1,032.22	1,621.72	596.00	1,032.25	1,628.25	6.53	0.4%
3	300	876.50	1,543.22	2,419.72	886.00	1,543.25	2,429.25	9.53	0.4%
4	2500	7,194.50	12,785.22	19,979.72	7,270.00	12,785.25	20,055.25	75.53	0.4%
6	5000	14,378.00	25,560.22	39,938.22	14,529.00	25,560.25	40,089.25	151.03	0.4%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2014 and Proposed 2015 Rates - Scenario 4

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.25	13.40	3.25	10.27	13.52	0.12	0.9%
5/8	1	7.45	15.36	22.81	7.75	15.38	23.13	0.32	1.4%
5/8	2	11.75	20.47	32.22	12.25	20.49	32.74	0.52	1.6%
5/8	4	20.35	30.69	51.04	21.25	30.71	51.96	0.92	1.8%
5/8	6	28.95	40.91	69.86	30.25	40.93	71.18	1.32	1.9%
5/8	10	46.15	61.35	107.50	48.25	61.37	109.62	2.12	2.0%
5/8	15	67.65	86.90	154.55	70.75	86.92	157.67	3.12	2.0%
5/8	20	89.15	112.45	201.60	93.25	112.47	205.72	4.12	2.0%
Multifamily									
5/8	0	3.15	10.25	13.40	3.25	10.27	13.52	0.12	0.9%
5/8	1	6.45	15.36	21.81	6.62	15.38	22.00	0.19	0.9%
5/8	2	9.75	20.47	30.22	9.99	20.49	30.48	0.26	0.9%
5/8	4	16.35	30.69	47.04	16.73	30.71	47.44	0.40	0.9%
5/8	6	22.95	40.91	63.86	23.47	40.93	64.40	0.54	0.8%
5/8	10	36.15	61.35	97.50	36.95	61.37	98.32	0.82	0.8%
5/8	15	52.65	86.90	139.55	53.80	86.92	140.72	1.17	0.8%
5/8	20	69.15	112.45	181.60	70.65	112.47	183.12	1.52	0.8%
Commercial									
2	50	177.60	265.75	443.35	184.80	265.77	450.57	7.22	1.6%
2	100	349.60	521.25	870.85	363.80	521.27	885.07	14.22	1.6%
3	200	704.00	1,032.25	1,736.25	732.50	1,032.27	1,764.77	28.52	1.6%
3	300	1,048.00	1,543.25	2,591.25	1,090.50	1,543.27	2,633.77	42.52	1.6%
4	500	1,740.00	2,565.25	4,305.25	1,810.50	2,565.27	4,375.77	70.52	1.6%
4	1000	3,460.00	5,120.25	8,580.25	3,600.50	5,120.27	8,720.77	140.52	1.6%
Industrial									
3	200	596.00	1,032.25	1,628.25	622.50	1,032.27	1,654.77	26.52	1.6%
3	300	886.00	1,543.25	2,429.25	925.50	1,543.27	2,468.77	39.52	1.6%
4	2500	7,270.00	12,785.25	20,055.25	7,595.50	12,785.27	20,380.77	325.52	1.6%
6	5000	14,529.00	25,560.25	40,089.25	15,180.00	25,560.27	40,740.27	651.02	1.6%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2015 and Proposed 2016 Rates - Scenario 4

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.25	10.27	13.52	3.35	10.27	13.62	0.10	0.7%
5/8	1	7.75	15.38	23.13	8.05	15.38	23.43	0.30	1.3%
5/8	2	12.25	20.49	32.74	12.75	20.49	33.24	0.50	1.5%
5/8	4	21.25	30.71	51.96	22.15	30.71	52.86	0.90	1.7%
5/8	6	30.25	40.93	71.18	31.55	40.93	72.48	1.30	1.8%
5/8	10	48.25	61.37	109.62	50.35	61.37	111.72	2.10	1.9%
5/8	15	70.75	86.92	157.67	73.85	86.92	160.77	3.10	2.0%
5/8	20	93.25	112.47	205.72	97.35	112.47	209.82	4.10	2.0%
Multifamily									
5/8	0	3.25	10.27	13.52	3.35	10.27	13.62	0.10	0.7%
5/8	1	6.62	15.38	22.00	6.88	15.38	22.26	0.26	1.2%
5/8	2	9.99	20.49	30.48	10.41	20.49	30.90	0.42	1.4%
5/8	4	16.73	30.71	47.44	17.47	30.71	48.18	0.74	1.6%
5/8	6	23.47	40.93	64.40	24.53	40.93	65.46	1.06	1.6%
5/8	10	36.95	61.37	98.32	38.65	61.37	100.02	1.70	1.7%
5/8	15	53.80	86.92	140.72	56.30	86.92	143.22	2.50	1.8%
5/8	20	70.65	112.47	183.12	73.95	112.47	186.42	3.30	1.8%
Commercial									
2	50	184.80	265.77	450.57	194.40	265.77	460.17	9.60	2.1%
2	100	363.80	521.27	885.07	382.90	521.27	904.17	19.10	2.2%
3	200	732.50	1,032.27	1,764.77	771.00	1,032.27	1,803.27	38.50	2.2%
3	300	1,090.50	1,543.27	2,633.77	1,148.00	1,543.27	2,691.27	57.50	2.2%
4	500	1,810.50	2,565.27	4,375.77	1,906.00	2,565.27	4,471.27	95.50	2.2%
4	1000	3,600.50	5,120.27	8,720.77	3,791.00	5,120.27	8,911.27	190.50	2.2%
Industrial									
3	200	622.50	1,032.27	1,654.77	657.00	1,032.27	1,689.27	34.50	2.1%
3	300	925.50	1,543.27	2,468.77	977.00	1,543.27	2,520.27	51.50	2.1%
4	2500	7,595.50	12,785.27	20,380.77	8,021.00	12,785.27	20,806.27	425.50	2.1%
6	5000	15,180.00	25,560.27	40,740.27	16,031.00	25,560.27	41,591.27	851.00	2.1%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2016 and Proposed 2017 Rates - Scenario 4

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.35	10.27	13.62	3.45	11.05	14.50	0.88	6.5%
5/8	1	8.05	15.38	23.43	8.49	16.43	24.92	1.49	6.4%
5/8	2	12.75	20.49	33.24	13.53	21.81	35.34	2.10	6.3%
5/8	4	22.15	30.71	52.86	23.61	32.57	56.18	3.32	6.3%
5/8	6	31.55	40.93	72.48	33.69	43.33	77.02	4.54	6.3%
5/8	10	50.35	61.37	111.72	53.85	64.85	118.70	6.98	6.2%
5/8	15	73.85	86.92	160.77	79.05	91.75	170.80	10.03	6.2%
5/8	20	97.35	112.47	209.82	104.25	118.65	222.90	13.08	6.2%
Multifamily									
5/8	0	3.35	10.27	13.62	3.45	11.05	14.50	0.88	6.5%
5/8	1	6.88	15.38	22.26	7.26	16.43	23.69	1.43	6.4%
5/8	2	10.41	20.49	30.90	11.07	21.81	32.88	1.98	6.4%
5/8	4	17.47	30.71	48.18	18.69	32.57	51.26	3.08	6.4%
5/8	6	24.53	40.93	65.46	26.31	43.33	69.64	4.18	6.4%
5/8	10	38.65	61.37	100.02	41.55	64.85	106.40	6.38	6.4%
5/8	15	56.30	86.92	143.22	60.60	91.75	152.35	9.13	6.4%
5/8	20	73.95	112.47	186.42	79.65	118.65	198.30	11.88	6.4%
Commercial									
2	50	194.40	265.77	460.17	209.10	280.05	489.15	28.98	6.3%
2	100	382.90	521.27	904.17	412.10	549.05	961.15	56.98	6.3%
3	200	771.00	1,032.27	1,803.27	829.50	1,087.05	1,916.55	113.28	6.3%
3	300	1,148.00	1,543.27	2,691.27	1,235.50	1,625.05	2,860.55	169.28	6.3%
4	500	1,906.00	2,565.27	4,471.27	2,052.00	2,701.05	4,753.05	281.78	6.3%
4	1000	3,791.00	5,120.27	8,911.27	4,082.00	5,391.05	9,473.05	561.78	6.3%
Industrial									
3	200	657.00	1,032.27	1,689.27	707.50	1,087.05	1,794.55	105.28	6.2%
3	300	977.00	1,543.27	2,520.27	1,052.50	1,625.05	2,677.55	157.28	6.2%
4	2500	8,021.00	12,785.27	20,806.27	8,647.00	13,461.05	22,108.05	1,301.78	6.3%
6	5000	16,031.00	25,560.27	41,591.27	17,282.00	26,911.05	44,193.05	2,601.78	6.3%

The charges shown are for customers inside the City Limits.

Scenario 5 – Taste, Odor & Microtoxins

Comparison of Typical Monthly Bills
Under Existing and Proposed 2013 Rates - Scenario 5

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	9.29	12.44	3.15	10.14	13.29	0.85	6.8%
5/8	1	6.93	14.31	21.24	7.41	15.20	22.61	1.37	6.5%
5/8	2	10.71	19.33	30.04	11.67	20.26	31.93	1.89	6.3%
5/8	4	18.27	29.37	47.64	20.19	30.38	50.57	2.93	6.2%
5/8	6	25.83	39.41	65.24	28.71	40.50	69.21	3.97	6.1%
5/8	10	40.95	59.49	100.44	45.75	60.74	106.49	6.05	6.0%
5/8	15	59.85	84.59	144.44	67.05	86.04	153.09	8.65	6.0%
5/8	20	78.75	109.69	188.44	88.35	111.34	199.69	11.25	6.0%
Multifamily									
5/8	0	3.15	9.29	12.44	3.15	10.14	13.29	0.85	6.8%
5/8	1	6.44	14.31	20.75	6.41	15.20	21.61	0.86	4.1%
5/8	2	9.73	19.33	29.06	9.67	20.26	29.93	0.87	3.0%
5/8	4	16.31	29.37	45.68	16.19	30.38	46.57	0.89	1.9%
5/8	6	22.89	39.41	62.30	22.71	40.50	63.21	0.91	1.5%
5/8	10	36.05	59.49	95.54	35.75	60.74	96.49	0.95	1.0%
5/8	15	52.50	84.59	137.09	52.05	86.04	138.09	1.00	0.7%
5/8	20	68.95	109.69	178.64	68.35	111.34	179.69	1.05	0.6%
Commercial									
2	50	153.80	260.29	414.09	176.00	263.14	439.14	25.05	6.0%
2	100	301.80	511.29	813.09	346.50	516.14	862.64	49.55	6.1%
3	200	609.00	1,013.29	1,622.29	698.00	1,022.14	1,720.14	97.85	6.0%
3	300	905.00	1,515.29	2,420.29	1,039.00	1,528.14	2,567.14	146.85	6.1%
4	500	1,501.00	2,519.29	4,020.29	1,724.50	2,540.14	4,264.64	244.35	6.1%
4	1000	2,981.00	5,029.29	8,010.29	3,429.50	5,070.14	8,499.64	489.35	6.1%
Industrial									
3	200	591.00	1,013.29	1,604.29	590.00	1,022.14	1,612.14	7.85	0.5%
3	300	878.00	1,515.29	2,393.29	877.00	1,528.14	2,405.14	11.85	0.5%
4	2500	7,196.00	12,559.29	19,755.29	7,194.50	12,660.14	19,854.64	99.35	0.5%
6	5000	14,381.00	25,109.29	39,490.29	14,378.00	25,310.14	39,688.14	197.85	0.5%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2013 and Proposed 2014 Rates - Scenario 5

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.14	13.29	3.15	10.43	13.58	0.29	2.2%
5/8	1	7.41	15.20	22.61	7.72	15.65	23.37	0.76	3.4%
5/8	2	11.67	20.26	31.93	12.29	20.87	33.16	1.23	3.9%
5/8	4	20.19	30.38	50.57	21.43	31.31	52.74	2.17	4.3%
5/8	6	28.71	40.50	69.21	30.57	41.75	72.32	3.11	4.5%
5/8	10	45.75	60.74	106.49	48.85	62.63	111.48	4.99	4.7%
5/8	15	67.05	86.04	153.09	71.70	88.73	160.43	7.34	4.8%
5/8	20	88.35	111.34	199.69	94.55	114.83	209.38	9.69	4.9%
Multifamily									
5/8	0	3.15	10.14	13.29	3.15	10.43	13.58	0.29	2.2%
5/8	1	6.41	15.20	21.61	6.57	15.65	22.22	0.61	2.8%
5/8	2	9.67	20.26	29.93	9.99	20.87	30.86	0.93	3.1%
5/8	4	16.19	30.38	46.57	16.83	31.31	48.14	1.57	3.4%
5/8	6	22.71	40.50	63.21	23.67	41.75	65.42	2.21	3.5%
5/8	10	35.75	60.74	96.49	37.35	62.63	99.98	3.49	3.6%
5/8	15	52.05	86.04	138.09	54.45	88.73	143.18	5.09	3.7%
5/8	20	68.35	111.34	179.69	71.55	114.83	186.38	6.69	3.7%
Commercial									
2	50	176.00	263.14	439.14	188.20	271.43	459.63	20.49	4.7%
2	100	346.50	516.14	862.64	370.70	532.43	903.13	40.49	4.7%
3	200	698.00	1,022.14	1,720.14	746.50	1,054.43	1,800.93	80.79	4.7%
3	300	1,039.00	1,528.14	2,567.14	1,111.50	1,576.43	2,687.93	120.79	4.7%
4	500	1,724.50	2,540.14	4,264.64	1,845.00	2,620.43	4,465.43	200.79	4.7%
4	1000	3,429.50	5,070.14	8,499.64	3,670.00	5,230.43	8,900.43	400.79	4.7%
Industrial									
3	200	590.00	1,022.14	1,612.14	632.50	1,054.43	1,686.93	74.79	4.6%
3	300	877.00	1,528.14	2,405.14	940.50	1,576.43	2,516.93	111.79	4.6%
4	2500	7,194.50	12,660.14	19,854.64	7,720.00	13,060.43	20,780.43	925.79	4.7%
6	5000	14,378.00	25,310.14	39,688.14	15,429.00	26,110.43	41,539.43	1,851.29	4.7%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2014 and Proposed 2015 Rates - Scenario 5

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.43	13.58	3.30	10.82	14.12	0.54	4.0%
5/8	1	7.72	15.65	23.37	8.24	16.25	24.49	1.12	4.8%
5/8	2	12.29	20.87	33.16	13.18	21.68	34.86	1.70	5.1%
5/8	4	21.43	31.31	52.74	23.06	32.54	55.60	2.86	5.4%
5/8	6	30.57	41.75	72.32	32.94	43.40	76.34	4.02	5.6%
5/8	10	48.85	62.63	111.48	52.70	65.12	117.82	6.34	5.7%
5/8	15	71.70	88.73	160.43	77.40	92.27	169.67	9.24	5.8%
5/8	20	94.55	114.83	209.38	102.10	119.42	221.52	12.14	5.8%
Multifamily									
5/8	0	3.15	10.43	13.58	3.30	10.82	14.12	0.54	4.0%
5/8	1	6.57	15.65	22.22	7.00	16.25	23.25	1.03	4.6%
5/8	2	9.99	20.87	30.86	10.70	21.68	32.38	1.52	4.9%
5/8	4	16.83	31.31	48.14	18.10	32.54	50.64	2.50	5.2%
5/8	6	23.67	41.75	65.42	25.50	43.40	68.90	3.48	5.3%
5/8	10	37.35	62.63	99.98	40.30	65.12	105.42	5.44	5.4%
5/8	15	54.45	88.73	143.18	58.80	92.27	151.07	7.89	5.5%
5/8	20	71.55	114.83	186.38	77.30	119.42	196.72	10.34	5.5%
Commercial									
2	50	188.20	271.43	459.63	203.40	282.32	485.72	26.09	5.7%
2	100	370.70	532.43	903.13	400.90	553.82	954.72	51.59	5.7%
3	200	746.50	1,054.43	1,800.93	807.00	1,096.82	1,903.82	102.89	5.7%
3	300	1,111.50	1,576.43	2,687.93	1,202.00	1,639.82	2,841.82	153.89	5.7%
4	500	1,845.00	2,620.43	4,465.43	1,996.00	2,725.82	4,721.82	256.39	5.7%
4	1000	3,670.00	5,230.43	8,900.43	3,971.00	5,440.82	9,411.82	511.39	5.7%
Industrial									
3	200	632.50	1,054.43	1,686.93	687.00	1,096.82	1,783.82	96.89	5.7%
3	300	940.50	1,576.43	2,516.93	1,022.00	1,639.82	2,661.82	144.89	5.8%
4	2500	7,720.00	13,060.43	20,780.43	8,396.00	13,585.82	21,981.82	1,201.39	5.8%
6	5000	15,429.00	26,110.43	41,539.43	16,781.00	27,160.82	43,941.82	2,402.39	5.8%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2015 and Proposed 2016 Rates - Scenario 5

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.30	10.82	14.12	3.45	11.29	14.74	0.62	4.4%
5/8	1	8.24	16.25	24.49	8.82	17.09	25.91	1.42	5.8%
5/8	2	13.18	21.68	34.86	14.19	22.89	37.08	2.22	6.4%
5/8	4	23.06	32.54	55.60	24.93	34.49	59.42	3.82	6.9%
5/8	6	32.94	43.40	76.34	35.67	46.09	81.76	5.42	7.1%
5/8	10	52.70	65.12	117.82	57.15	69.29	126.44	8.62	7.3%
5/8	15	77.40	92.27	169.67	84.00	98.29	182.29	12.62	7.4%
5/8	20	102.10	119.42	221.52	110.85	127.29	238.14	16.62	7.5%
Multifamily									
5/8	0	3.30	10.82	14.12	3.45	11.29	14.74	0.62	4.4%
5/8	1	7.00	16.25	23.25	7.45	17.09	24.54	1.29	5.5%
5/8	2	10.70	21.68	32.38	11.45	22.89	34.34	1.96	6.1%
5/8	4	18.10	32.54	50.64	19.45	34.49	53.94	3.30	6.5%
5/8	6	25.50	43.40	68.90	27.45	46.09	73.54	4.64	6.7%
5/8	10	40.30	65.12	105.42	43.45	69.29	112.74	7.32	6.9%
5/8	15	58.80	92.27	151.07	63.45	98.29	161.74	10.67	7.1%
5/8	20	77.30	119.42	196.72	83.45	127.29	210.74	14.02	7.1%
Commercial									
2	50	203.40	282.32	485.72	220.20	301.29	521.49	35.77	7.4%
2	100	400.90	553.82	954.72	434.20	591.29	1,025.49	70.77	7.4%
3	200	807.00	1,096.82	1,903.82	874.00	1,171.29	2,045.29	141.47	7.4%
3	300	1,202.00	1,639.82	2,841.82	1,302.00	1,751.29	3,053.29	211.47	7.4%
4	500	1,996.00	2,725.82	4,721.82	2,162.50	2,911.29	5,073.79	351.97	7.5%
4	1000	3,971.00	5,440.82	9,411.82	4,302.50	5,811.29	10,113.79	701.97	7.5%
Industrial									
3	200	687.00	1,096.82	1,783.82	740.00	1,171.29	1,911.29	127.47	7.1%
3	300	1,022.00	1,639.82	2,661.82	1,101.00	1,751.29	2,852.29	190.47	7.2%
4	2500	8,396.00	13,585.82	21,981.82	9,047.50	14,511.29	23,558.79	1,576.97	7.2%
6	5000	16,781.00	27,160.82	43,941.82	18,083.00	29,011.29	47,094.29	3,152.47	7.2%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2016 and Proposed 2017 Rates - Scenario 5

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.45	11.29	14.74	3.55	11.97	15.52	0.78	5.3%
5/8	1	8.82	17.09	25.91	9.25	18.19	27.44	1.53	5.9%
5/8	2	14.19	22.89	37.08	14.95	24.41	39.36	2.28	6.1%
5/8	4	24.93	34.49	59.42	26.35	36.85	63.20	3.78	6.4%
5/8	6	35.67	46.09	81.76	37.75	49.29	87.04	5.28	6.5%
5/8	10	57.15	69.29	126.44	60.55	74.17	134.72	8.28	6.5%
5/8	15	84.00	98.29	182.29	89.05	105.27	194.32	12.03	6.6%
5/8	20	110.85	127.29	238.14	117.55	136.37	253.92	15.78	6.6%
Multifamily									
5/8	0	3.45	11.29	14.74	3.55	11.97	15.52	0.78	5.3%
5/8	1	7.45	17.09	24.54	7.81	18.19	26.00	1.46	5.9%
5/8	2	11.45	22.89	34.34	12.07	24.41	36.48	2.14	6.2%
5/8	4	19.45	34.49	53.94	20.59	36.85	57.44	3.50	6.5%
5/8	6	27.45	46.09	73.54	29.11	49.29	78.40	4.86	6.6%
5/8	10	43.45	69.29	112.74	46.15	74.17	120.32	7.58	6.7%
5/8	15	63.45	98.29	161.74	67.45	105.27	172.72	10.98	6.8%
5/8	20	83.45	127.29	210.74	88.75	136.37	225.12	14.38	6.8%
Commercial									
2	50	220.20	301.29	521.49	234.00	322.97	556.97	35.48	6.8%
2	100	434.20	591.29	1,025.49	461.50	633.97	1,095.47	69.98	6.8%
3	200	874.00	1,171.29	2,045.29	929.00	1,255.97	2,184.97	139.68	6.8%
3	300	1,302.00	1,751.29	3,053.29	1,384.00	1,877.97	3,261.97	208.68	6.8%
4	500	2,162.50	2,911.29	5,073.79	2,298.50	3,121.97	5,420.47	346.68	6.8%
4	1000	4,302.50	5,811.29	10,113.79	4,573.50	6,231.97	10,805.47	691.68	6.8%
Industrial									
3	200	740.00	1,171.29	1,911.29	789.00	1,255.97	2,044.97	133.68	7.0%
3	300	1,101.00	1,751.29	2,852.29	1,174.00	1,877.97	3,051.97	199.68	7.0%
4	2500	9,047.50	14,511.29	23,558.79	9,648.50	15,561.97	25,210.47	1,651.68	7.0%
6	5000	18,083.00	29,011.29	47,094.29	19,284.00	31,111.97	50,395.97	3,301.68	7.0%

The charges shown are for customers inside the City Limits.

Scenario 6 – Delay Wakarusa WWTP & Accelerate Rapid I/I

Comparison of Typical Monthly Bills
Under Existing and Proposed 2013 Rates - Scenario 6

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	9.29	12.44	3.15	9.93	13.08	0.64	5.1%
5/8	1	6.93	14.31	21.24	7.31	14.83	22.14	0.90	4.2%
5/8	2	10.71	19.33	30.04	11.47	19.73	31.20	1.16	3.9%
5/8	4	18.27	29.37	47.64	19.79	29.53	49.32	1.68	3.5%
5/8	6	25.83	39.41	65.24	28.11	39.33	67.44	2.20	3.4%
5/8	10	40.95	59.49	100.44	44.75	58.93	103.68	3.24	3.2%
5/8	15	59.85	84.59	144.44	65.55	83.43	148.98	4.54	3.1%
5/8	20	78.75	109.69	188.44	86.35	107.93	194.28	5.84	3.1%
Multifamily									
5/8	0	3.15	9.29	12.44	3.15	9.93	13.08	0.64	5.1%
5/8	1	6.44	14.31	20.75	6.41	14.83	21.24	0.49	2.4%
5/8	2	9.73	19.33	29.06	9.67	19.73	29.40	0.34	1.2%
5/8	4	16.31	29.37	45.68	16.19	29.53	45.72	0.04	0.1%
5/8	6	22.89	39.41	62.30	22.71	39.33	62.04	(0.26)	-0.4%
5/8	10	36.05	59.49	95.54	35.75	58.93	94.68	(0.86)	-0.9%
5/8	15	52.50	84.59	137.09	52.05	83.43	135.48	(1.61)	-1.2%
5/8	20	68.95	109.69	178.64	68.35	107.93	176.28	(2.36)	-1.3%
Commercial									
2	50	153.80	260.29	414.09	170.00	254.93	424.93	10.84	2.6%
2	100	301.80	511.29	813.09	334.50	499.93	834.43	21.34	2.6%
3	200	609.00	1,013.29	1,622.29	673.50	989.93	1,663.43	41.14	2.5%
3	300	905.00	1,515.29	2,420.29	1,002.50	1,479.93	2,482.43	62.14	2.6%
4	500	1,501.00	2,519.29	4,020.29	1,664.50	2,459.93	4,124.43	104.14	2.6%
4	1000	2,981.00	5,029.29	8,010.29	3,309.50	4,909.93	8,219.43	209.14	2.6%
Industrial									
3	200	591.00	1,013.29	1,604.29	589.50	989.93	1,579.43	(24.86)	-1.5%
3	300	878.00	1,515.29	2,393.29	876.50	1,479.93	2,356.43	(36.86)	-1.5%
4	2500	7,196.00	12,559.29	19,755.29	7,194.50	12,259.93	19,454.43	(300.86)	-1.5%
6	5000	14,381.00	25,109.29	39,490.29	14,378.00	24,509.93	38,887.93	(602.36)	-1.5%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2013 and Proposed 2014 Rates - Scenario 6

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	9.93	13.08	3.15	10.20	13.35	0.27	2.1%
5/8	1	7.31	14.83	22.14	7.56	15.25	22.81	0.67	3.0%
5/8	2	11.47	19.73	31.20	11.97	20.30	32.27	1.07	3.4%
5/8	4	19.79	29.53	49.32	20.79	30.40	51.19	1.87	3.8%
5/8	6	28.11	39.33	67.44	29.61	40.50	70.11	2.67	4.0%
5/8	10	44.75	58.93	103.68	47.25	60.70	107.95	4.27	4.1%
5/8	15	65.55	83.43	148.98	69.30	85.95	155.25	6.27	4.2%
5/8	20	86.35	107.93	194.28	91.35	111.20	202.55	8.27	4.3%
Multifamily									
5/8	0	3.15	9.93	13.08	3.15	10.20	13.35	0.27	2.1%
5/8	1	6.41	14.83	21.24	6.49	15.25	21.74	0.50	2.4%
5/8	2	9.67	19.73	29.40	9.83	20.30	30.13	0.73	2.5%
5/8	4	16.19	29.53	45.72	16.51	30.40	46.91	1.19	2.6%
5/8	6	22.71	39.33	62.04	23.19	40.50	63.69	1.65	2.7%
5/8	10	35.75	58.93	94.68	36.55	60.70	97.25	2.57	2.7%
5/8	15	52.05	83.43	135.48	53.25	85.95	139.20	3.72	2.7%
5/8	20	68.35	107.93	176.28	69.95	111.20	181.15	4.87	2.8%
Commercial									
2	50	170.00	254.93	424.93	181.60	262.70	444.30	19.37	4.6%
2	100	334.50	499.93	834.43	357.60	515.20	872.80	38.37	4.6%
3	200	673.50	989.93	1,663.43	720.00	1,020.20	1,740.20	76.77	4.6%
3	300	1,002.50	1,479.93	2,482.43	1,072.00	1,525.20	2,597.20	114.77	4.6%
4	500	1,664.50	2,459.93	4,124.43	1,780.00	2,535.20	4,315.20	190.77	4.6%
4	1000	3,309.50	4,909.93	8,219.43	3,540.00	5,060.20	8,600.20	380.77	4.6%
Industrial									
3	200	589.50	989.93	1,579.43	610.00	1,020.20	1,630.20	50.77	3.2%
3	300	876.50	1,479.93	2,356.43	907.00	1,525.20	2,432.20	75.77	3.2%
4	2500	7,194.50	12,259.93	19,454.43	7,445.00	12,635.20	20,080.20	625.77	3.2%
6	5000	14,378.00	24,509.93	38,887.93	14,879.00	25,260.20	40,139.20	1,251.27	3.2%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2014 and Proposed 2015 Rates - Scenario 6

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	10.20	13.35	3.30	10.53	13.83	0.48	3.6%
5/8	1	7.56	15.25	22.81	7.97	15.73	23.70	0.89	3.9%
5/8	2	11.97	20.30	32.27	12.64	20.93	33.57	1.30	4.0%
5/8	4	20.79	30.40	51.19	21.98	31.33	53.31	2.12	4.1%
5/8	6	29.61	40.50	70.11	31.32	41.73	73.05	2.94	4.2%
5/8	10	47.25	60.70	107.95	50.00	62.53	112.53	4.58	4.2%
5/8	15	69.30	85.95	155.25	73.35	88.53	161.88	6.63	4.3%
5/8	20	91.35	111.20	202.55	96.70	114.53	211.23	8.68	4.3%
Multifamily									
5/8	0	3.15	10.20	13.35	3.30	10.53	13.83	0.48	3.6%
5/8	1	6.49	15.25	21.74	6.79	15.73	22.52	0.78	3.6%
5/8	2	9.83	20.30	30.13	10.28	20.93	31.21	1.08	3.6%
5/8	4	16.51	30.40	46.91	17.26	31.33	48.59	1.68	3.6%
5/8	6	23.19	40.50	63.69	24.24	41.73	65.97	2.28	3.6%
5/8	10	36.55	60.70	97.25	38.20	62.53	100.73	3.48	3.6%
5/8	15	53.25	85.95	139.20	55.65	88.53	144.18	4.98	3.6%
5/8	20	69.95	111.20	181.15	73.10	114.53	187.63	6.48	3.6%
Commercial									
2	50	181.60	262.70	444.30	192.80	270.53	463.33	19.03	4.3%
2	100	357.60	515.20	872.80	379.80	530.53	910.33	37.53	4.3%
3	200	720.00	1,020.20	1,740.20	765.00	1,050.53	1,815.53	75.33	4.3%
3	300	1,072.00	1,525.20	2,597.20	1,139.00	1,570.53	2,709.53	112.33	4.3%
4	500	1,780.00	2,535.20	4,315.20	1,891.00	2,610.53	4,501.53	186.33	4.3%
4	1000	3,540.00	5,060.20	8,600.20	3,761.00	5,210.53	8,971.53	371.33	4.3%
Industrial									
3	200	610.00	1,020.20	1,630.20	649.00	1,050.53	1,699.53	69.33	4.3%
3	300	907.00	1,525.20	2,432.20	965.00	1,570.53	2,535.53	103.33	4.2%
4	2500	7,445.00	12,635.20	20,080.20	7,921.00	13,010.53	20,931.53	851.33	4.2%
6	5000	14,879.00	25,260.20	40,139.20	15,830.00	26,010.53	41,840.53	1,701.33	4.2%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2015 and Proposed 2016 Rates - Scenario 6

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.30	10.53	13.83	3.40	10.93	14.33	0.50	3.6%
5/8	1	7.97	15.73	23.70	8.35	16.34	24.69	0.99	4.2%
5/8	2	12.64	20.93	33.57	13.30	21.75	35.05	1.48	4.4%
5/8	4	21.98	31.33	53.31	23.20	32.57	55.77	2.46	4.6%
5/8	6	31.32	41.73	73.05	33.10	43.39	76.49	3.44	4.7%
5/8	10	50.00	62.53	112.53	52.90	65.03	117.93	5.40	4.8%
5/8	15	73.35	88.53	161.88	77.65	92.08	169.73	7.85	4.8%
5/8	20	96.70	114.53	211.23	102.40	119.13	221.53	10.30	4.9%
Multifamily									
5/8	0	3.30	10.53	13.83	3.40	10.93	14.33	0.50	3.6%
5/8	1	6.79	15.73	22.52	7.12	16.34	23.46	0.94	4.2%
5/8	2	10.28	20.93	31.21	10.84	21.75	32.59	1.38	4.4%
5/8	4	17.26	31.33	48.59	18.28	32.57	50.85	2.26	4.7%
5/8	6	24.24	41.73	65.97	25.72	43.39	69.11	3.14	4.8%
5/8	10	38.20	62.53	100.73	40.60	65.03	105.63	4.90	4.9%
5/8	15	55.65	88.53	144.18	59.20	92.08	151.28	7.10	4.9%
5/8	20	73.10	114.53	187.63	77.80	119.13	196.93	9.30	5.0%
Commercial									
2	50	192.80	270.53	463.33	205.00	281.43	486.43	23.10	5.0%
2	100	379.80	530.53	910.33	404.00	551.93	955.93	45.60	5.0%
3	200	765.00	1,050.53	1,815.53	813.50	1,092.93	1,906.43	90.90	5.0%
3	300	1,139.00	1,570.53	2,709.53	1,211.50	1,633.93	2,845.43	135.90	5.0%
4	500	1,891.00	2,610.53	4,501.53	2,011.50	2,715.93	4,727.43	225.90	5.0%
4	1000	3,761.00	5,210.53	8,971.53	4,001.50	5,420.93	9,422.43	450.90	5.0%
Industrial									
3	200	649.00	1,050.53	1,699.53	689.50	1,092.93	1,782.43	82.90	4.9%
3	300	965.00	1,570.53	2,535.53	1,025.50	1,633.93	2,659.43	123.90	4.9%
4	2500	7,921.00	13,010.53	20,931.53	8,421.50	13,535.93	21,957.43	1,025.90	4.9%
6	5000	15,830.00	26,010.53	41,840.53	16,831.00	27,060.93	43,891.93	2,051.40	4.9%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2016 and Proposed 2017 Rates - Scenario 6

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.40	10.93	14.33	3.50	11.60	15.10	0.77	5.4%
5/8	1	8.35	16.34	24.69	8.83	17.33	26.16	1.47	6.0%
5/8	2	13.30	21.75	35.05	14.16	23.06	37.22	2.17	6.2%
5/8	4	23.20	32.57	55.77	24.82	34.52	59.34	3.57	6.4%
5/8	6	33.10	43.39	76.49	35.48	45.98	81.46	4.97	6.5%
5/8	10	52.90	65.03	117.93	56.80	68.90	125.70	7.77	6.6%
5/8	15	77.65	92.08	169.73	83.45	97.55	181.00	11.27	6.6%
5/8	20	102.40	119.13	221.53	110.10	126.20	236.30	14.77	6.7%
Multifamily									
5/8	0	3.40	10.93	14.33	3.50	11.60	15.10	0.77	5.4%
5/8	1	7.12	16.34	23.46	7.50	17.33	24.83	1.37	5.8%
5/8	2	10.84	21.75	32.59	11.50	23.06	34.56	1.97	6.0%
5/8	4	18.28	32.57	50.85	19.50	34.52	54.02	3.17	6.2%
5/8	6	25.72	43.39	69.11	27.50	45.98	73.48	4.37	6.3%
5/8	10	40.60	65.03	105.63	43.50	68.90	112.40	6.77	6.4%
5/8	15	59.20	92.08	151.28	63.50	97.55	161.05	9.77	6.5%
5/8	20	77.80	119.13	196.93	83.50	126.20	209.70	12.77	6.5%
Commercial									
2	50	205.00	281.43	486.43	220.70	298.10	518.80	32.37	6.7%
2	100	404.00	551.93	955.93	435.20	584.60	1,019.80	63.87	6.7%
3	200	813.50	1,092.93	1,906.43	876.00	1,157.60	2,033.60	127.17	6.7%
3	300	1,211.50	1,633.93	2,845.43	1,305.00	1,730.60	3,035.60	190.17	6.7%
4	500	2,011.50	2,715.93	4,727.43	2,167.50	2,876.60	5,044.10	316.67	6.7%
4	1000	4,001.50	5,420.93	9,422.43	4,312.50	5,741.60	10,054.10	631.67	6.7%
Industrial									
3	200	689.50	1,092.93	1,782.43	744.00	1,157.60	1,901.60	119.17	6.7%
3	300	1,025.50	1,633.93	2,659.43	1,107.00	1,730.60	2,837.60	178.17	6.7%
4	2500	8,421.50	13,535.93	21,957.43	9,097.50	14,336.60	23,434.10	1,476.67	6.7%
6	5000	16,831.00	27,060.93	43,891.93	18,182.00	28,661.60	46,843.60	2,951.67	6.7%

The charges shown are for customers inside the City Limits.

Scenario 7 – Roadway Relocations Only – No Wakarusa WWTP

Comparison of Typical Monthly Bills
Under Existing and Proposed 2013 Rates - Scenario 7

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.15	9.29	12.44	3.10	9.92	13.02	0.58	4.7%
5/8	1	6.93	14.31	21.24	7.12	14.82	21.94	0.70	3.3%
5/8	2	10.71	19.33	30.04	11.14	19.72	30.86	0.82	2.7%
5/8	4	18.27	29.37	47.64	19.18	29.52	48.70	1.06	2.2%
5/8	6	25.83	39.41	65.24	27.22	39.32	66.54	1.30	2.0%
5/8	10	40.95	59.49	100.44	43.30	58.92	102.22	1.78	1.8%
5/8	15	59.85	84.59	144.44	63.40	83.42	146.82	2.38	1.6%
5/8	20	78.75	109.69	188.44	83.50	107.92	191.42	2.98	1.6%
Multifamily									
5/8	0	3.15	9.29	12.44	3.10	9.92	13.02	0.58	4.7%
5/8	1	6.44	14.31	20.75	6.11	14.82	20.93	0.18	0.9%
5/8	2	9.73	19.33	29.06	9.12	19.72	28.84	(0.22)	-0.8%
5/8	4	16.31	29.37	45.68	15.14	29.52	44.66	(1.02)	-2.2%
5/8	6	22.89	39.41	62.30	21.16	39.32	60.48	(1.82)	-2.9%
5/8	10	36.05	59.49	95.54	33.20	58.92	92.12	(3.42)	-3.6%
5/8	15	52.50	84.59	137.09	48.25	83.42	131.67	(5.42)	-4.0%
5/8	20	68.95	109.69	178.64	63.30	107.92	171.22	(7.42)	-4.2%
Commercial									
2	50	153.80	260.29	414.09	166.00	254.92	420.92	6.83	1.6%
2	100	301.80	511.29	813.09	326.50	499.92	826.42	13.33	1.6%
3	200	609.00	1,013.29	1,622.29	657.50	989.92	1,647.42	25.13	1.5%
3	300	905.00	1,515.29	2,420.29	978.50	1,479.92	2,458.42	38.13	1.6%
4	500	1,501.00	2,519.29	4,020.29	1,624.50	2,459.92	4,084.42	64.13	1.6%
4	1000	2,981.00	5,029.29	8,010.29	3,229.50	4,909.92	8,139.42	129.13	1.6%
Industrial									
3	200	591.00	1,013.29	1,604.29	557.50	989.92	1,547.42	(56.87)	-3.5%
3	300	878.00	1,515.29	2,393.29	828.50	1,479.92	2,308.42	(84.87)	-3.5%
4	2500	7,196.00	12,559.29	19,755.29	6,794.50	12,259.92	19,054.42	(700.87)	-3.5%
6	5000	14,381.00	25,109.29	39,490.29	13,578.00	24,509.92	38,087.92	(1,402.37)	-3.6%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2013 and Proposed 2014 Rates - Scenario 7

Meter Size	Monthly Usage	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
Inches	1,000 gal.	$	$	$	$	$	$	$	
Residential									
5/8	0	3.10	9.92	13.02	3.16	9.97	13.13	0.11	0.8%
5/8	1	7.12	14.82	21.94	7.18	14.86	22.04	0.10	0.5%
5/8	2	11.14	19.72	30.86	11.20	19.75	30.95	0.09	0.3%
5/8	4	19.18	29.52	48.70	19.24	29.53	48.77	0.07	0.1%
5/8	6	27.22	39.32	66.54	27.28	39.31	66.59	0.05	0.1%
5/8	10	43.30	58.92	102.22	43.36	58.87	102.23	0.01	0.0%
5/8	15	63.40	83.42	146.82	63.46	83.32	146.78	(0.04)	0.0%
5/8	20	83.50	107.92	191.42	83.56	107.77	191.33	(0.09)	0.0%
Multifamily									
5/8	0	3.10	9.92	13.02	3.16	9.97	13.13	0.11	0.8%
5/8	1	6.11	14.82	20.93	6.16	14.86	21.02	0.09	0.4%
5/8	2	9.12	19.72	28.84	9.16	19.75	28.91	0.07	0.2%
5/8	4	15.14	29.52	44.66	15.16	29.53	44.69	0.03	0.1%
5/8	6	21.16	39.32	60.48	21.16	39.31	60.47	(0.01)	0.0%
5/8	10	33.20	58.92	92.12	33.16	58.87	92.03	(0.09)	-0.1%
5/8	15	48.25	83.42	131.67	48.16	83.32	131.48	(0.19)	-0.1%
5/8	20	63.30	107.92	171.22	63.16	107.77	170.93	(0.29)	-0.2%
Commercial									
2	50	166.00	254.92	420.92	165.50	254.47	419.97	(0.95)	-0.2%
2	100	326.50	499.92	826.42	325.50	498.97	824.47	(1.95)	-0.2%
3	200	657.50	989.92	1,647.42	656.00	987.97	1,643.97	(3.45)	-0.2%
3	300	978.50	1,479.92	2,458.42	976.00	1,476.97	2,452.97	(5.45)	-0.2%
4	500	1,624.50	2,459.92	4,084.42	1,619.50	2,454.97	4,074.47	(9.95)	-0.2%
4	1000	3,229.50	4,909.92	8,139.42	3,219.50	4,899.97	8,119.47	(19.95)	-0.2%
Industrial									
3	200	557.50	989.92	1,547.42	556.00	987.97	1,543.97	(3.45)	-0.2%
3	300	828.50	1,479.92	2,308.42	826.00	1,476.97	2,302.97	(5.45)	-0.2%
4	2500	6,794.50	12,259.92	19,054.42	6,769.50	12,234.97	19,004.47	(49.95)	-0.3%
6	5000	13,578.00	24,509.92	38,087.92	13,528.00	24,459.97	37,987.97	(99.95)	-0.3%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2014 and Proposed 2015 Rates - Scenario 7

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.16	9.97	13.13	3.22	10.04	13.26	0.13	1.0%
5/8	1	7.18	14.86	22.04	7.24	14.91	22.15	0.11	0.5%
5/8	2	11.20	19.75	30.95	11.26	19.78	31.04	0.09	0.3%
5/8	4	19.24	29.53	48.77	19.30	29.52	48.82	0.05	0.1%
5/8	6	27.28	39.31	66.59	27.34	39.26	66.60	0.01	0.0%
5/8	10	43.36	58.87	102.23	43.42	58.74	102.16	(0.07)	-0.1%
5/8	15	63.46	83.32	146.78	63.52	83.09	146.61	(0.17)	-0.1%
5/8	20	83.56	107.77	191.33	83.62	107.44	191.06	(0.27)	-0.1%
Multifamily									
5/8	0	3.16	9.97	13.13	3.22	10.04	13.26	0.13	1.0%
5/8	1	6.16	14.86	21.02	6.21	14.91	21.12	0.10	0.5%
5/8	2	9.16	19.75	28.91	9.20	19.78	28.98	0.07	0.2%
5/8	4	15.16	29.53	44.69	15.18	29.52	44.70	0.01	0.0%
5/8	6	21.16	39.31	60.47	21.16	39.26	60.42	(0.05)	-0.1%
5/8	10	33.16	58.87	92.03	33.12	58.74	91.86	(0.17)	-0.2%
5/8	15	48.16	83.32	131.48	48.07	83.09	131.16	(0.32)	-0.2%
5/8	20	63.16	107.77	170.93	63.02	107.44	170.46	(0.47)	-0.3%
Commercial									
2	50	165.50	254.47	419.97	164.60	253.54	418.14	(1.83)	-0.4%
2	100	325.50	498.97	824.47	323.60	497.04	820.64	(3.83)	-0.5%
3	200	656.00	987.97	1,643.97	652.00	984.04	1,636.04	(7.93)	-0.5%
3	300	976.00	1,476.97	2,452.97	970.00	1,471.04	2,441.04	(11.93)	-0.5%
4	500	1,619.50	2,454.97	4,074.47	1,610.00	2,445.04	4,055.04	(19.43)	-0.5%
4	1000	3,219.50	4,899.97	8,119.47	3,200.00	4,880.04	8,080.04	(39.43)	-0.5%
Industrial									
3	200	556.00	987.97	1,543.97	554.00	984.04	1,538.04	(5.93)	-0.4%
3	300	826.00	1,476.97	2,302.97	823.00	1,471.04	2,294.04	(8.93)	-0.4%
4	2500	6,769.50	12,234.97	19,004.47	6,745.00	12,185.04	18,930.04	(74.43)	-0.4%
6	5000	13,528.00	24,459.97	37,987.97	13,479.00	24,360.04	37,839.04	(148.93)	-0.4%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2015 and Proposed 2016 Rates - Scenario 7

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.22	10.04	13.26	3.28	10.09	13.37	0.11	0.8%
5/8	1	7.24	14.91	22.15	7.30	14.96	22.26	0.11	0.5%
5/8	2	11.26	19.78	31.04	11.32	19.83	31.15	0.11	0.4%
5/8	4	19.30	29.52	48.82	19.36	29.57	48.93	0.11	0.2%
5/8	6	27.34	39.26	66.60	27.40	39.31	66.71	0.11	0.2%
5/8	10	43.42	58.74	102.16	43.48	58.79	102.27	0.11	0.1%
5/8	15	63.52	83.09	146.61	63.58	83.14	146.72	0.11	0.1%
5/8	20	83.62	107.44	191.06	83.68	107.49	191.17	0.11	0.1%
Multifamily									
5/8	0	3.22	10.04	13.26	3.28	10.09	13.37	0.11	0.8%
5/8	1	6.21	14.91	21.12	6.25	14.96	21.21	0.09	0.4%
5/8	2	9.20	19.78	28.98	9.22	19.83	29.05	0.07	0.2%
5/8	4	15.18	29.52	44.70	15.16	29.57	44.73	0.03	0.1%
5/8	6	21.16	39.26	60.42	21.10	39.31	60.41	(0.01)	0.0%
5/8	10	33.12	58.74	91.86	32.98	58.79	91.77	(0.09)	-0.1%
5/8	15	48.07	83.09	131.16	47.83	83.14	130.97	(0.19)	-0.1%
5/8	20	63.02	107.44	170.46	62.68	107.49	170.17	(0.29)	-0.2%
Commercial									
2	50	164.60	253.54	418.14	163.80	253.59	417.39	(0.75)	-0.2%
2	100	323.60	497.04	820.64	321.80	497.09	818.89	(1.75)	-0.2%
3	200	652.00	984.04	1,636.04	648.00	984.09	1,632.09	(3.95)	-0.2%
3	300	970.00	1,471.04	2,441.04	964.00	1,471.09	2,435.09	(5.95)	-0.2%
4	500	1,610.00	2,445.04	4,055.04	1,600.00	2,445.09	4,045.09	(9.95)	-0.2%
4	1000	3,200.00	4,880.04	8,080.04	3,180.00	4,880.09	8,060.09	(19.95)	-0.2%
Industrial									
3	200	554.00	984.04	1,538.04	554.00	984.09	1,538.09	0.05	0.0%
3	300	823.00	1,471.04	2,294.04	823.00	1,471.09	2,294.09	0.05	0.0%
4	2500	6,745.00	12,185.04	18,930.04	6,745.00	12,185.09	18,930.09	0.05	0.0%
6	5000	13,479.00	24,360.04	37,839.04	13,479.00	24,360.09	37,839.09	0.05	0.0%

The charges shown are for customers inside the City Limits.

Comparison of Typical Monthly Bills
Under Proposed 2016 and Proposed 2017 Rates - Scenario 7

Meter Size Inches	Monthly Usage 1,000 gal.	Existing			Proposed			Total Increase	Percent Increase
		Water	Wastewater	Combined	Water	Wastewater	Combined		
		$	$	$	$	$	$	$	
Residential									
5/8	0	3.28	10.09	13.37	3.35	10.23	13.58	0.21	1.6%
5/8	1	7.30	14.96	22.26	7.37	15.07	22.44	0.18	0.8%
5/8	2	11.32	19.83	31.15	11.39	19.91	31.30	0.15	0.5%
5/8	4	19.36	29.57	48.93	19.43	29.59	49.02	0.09	0.2%
5/8	6	27.40	39.31	66.71	27.47	39.27	66.74	0.03	0.0%
5/8	10	43.48	58.79	102.27	43.55	58.63	102.18	(0.09)	-0.1%
5/8	15	63.58	83.14	146.72	63.65	82.83	146.48	(0.24)	-0.2%
5/8	20	83.68	107.49	191.17	83.75	107.03	190.78	(0.39)	-0.2%
Multifamily									
5/8	0	3.28	10.09	13.37	3.35	10.23	13.58	0.21	1.6%
5/8	1	6.25	14.96	21.21	6.32	15.07	21.39	0.18	0.8%
5/8	2	9.22	19.83	29.05	9.29	19.91	29.20	0.15	0.5%
5/8	4	15.16	29.57	44.73	15.23	29.59	44.82	0.09	0.2%
5/8	6	21.10	39.31	60.41	21.17	39.27	60.44	0.03	0.0%
5/8	10	32.98	58.79	91.77	33.05	58.63	91.68	(0.09)	-0.1%
5/8	15	47.83	83.14	130.97	47.90	82.83	130.73	(0.24)	-0.2%
5/8	20	62.68	107.49	170.17	62.75	107.03	169.78	(0.39)	-0.2%
Commercial									
2	50	163.80	253.59	417.39	163.40	252.23	415.63	(1.76)	-0.4%
2	100	321.80	497.09	818.89	320.90	494.23	815.13	(3.76)	-0.5%
3	200	648.00	984.09	1,632.09	646.50	978.23	1,624.73	(7.36)	-0.5%
3	300	964.00	1,471.09	2,435.09	961.50	1,462.23	2,423.73	(11.36)	-0.5%
4	500	1,600.00	2,445.09	4,045.09	1,595.50	2,430.23	4,025.73	(19.36)	-0.5%
4	1000	3,180.00	4,880.09	8,060.09	3,170.50	4,850.23	8,020.73	(39.36)	-0.5%
Industrial									
3	200	554.00	984.09	1,538.09	552.50	978.23	1,530.73	(7.36)	-0.5%
3	300	823.00	1,471.09	2,294.09	820.50	1,462.23	2,282.73	(11.36)	-0.5%
4	2500	6,745.00	12,185.09	18,930.09	6,720.50	12,110.23	18,830.73	(99.36)	-0.5%
6	5000	13,479.00	24,360.09	37,839.09	13,430.00	24,210.23	37,640.23	(198.86)	-0.5%

The charges shown are for customers inside the City Limits.

Appendix III – System Development Charge Tables & Position Statements

Scenario 1 - Recommended
System Development Charges

	Existing	2013	2014	2015	2016	2017
	$	$	$	$	$	$
Water Utility						
Residential						
5/8"	1,560	1,590	1,580	1,570	1,560	1,550
1"	3,900	3,980	3,960	3,930	3,910	3,880
1-1/2"	7,800	7,950	7,900	7,850	7,800	7,750
2"	12,480	12,720	12,640	12,560	12,480	12,400
All Other						
5/8"	1,560	1,590	1,580	1,570	1,560	1,550
1"	3,900	3,980	3,960	3,930	3,910	3,880
1-1/2"	7,800	7,950	7,900	7,850	7,800	7,750
2"	12,480	12,720	12,640	12,560	12,480	12,400
3"	23,400	23,850	23,700	23,550	23,400	23,250
4"	39,000	39,750	39,500	39,250	39,000	38,750
6"	78,000	79,500	79,000	78,500	78,000	77,500
8"	156,000	159,000	158,000	157,000	156,000	155,000
10"	234,000	238,500	237,000	235,500	234,000	232,500
12"	343,200	349,800	347,600	345,400	343,200	341,000
16"	858,000	874,500	869,000	863,500	858,000	852,500
Wastewater Utility						
Residential						
All Meters	1,470	1,680	1,860	2,050	2,230	2,410
All Other						
5/8"	2,970	3,510	3,890	4,280	4,660	5,040
1"	7,430	8,780	9,740	10,690	11,650	12,600
1-1/2"	14,850	17,550	19,460	21,380	23,290	25,200
2"	23,760	28,080	31,140	34,200	37,260	40,320
3"	44,550	52,650	58,390	64,130	69,860	75,600
4"	74,250	87,750	97,310	106,880	116,440	126,000
6"	148,500	175,500	194,630	213,750	232,880	252,000
8"	297,000	351,000	389,250	427,500	465,750	504,000
10"	445,500	526,500	583,880	641,250	698,630	756,000
12"	653,400	772,200	856,350	940,500	1,024,650	1,108,800
16"	1,633,500	1,930,500	2,140,880	2,351,250	2,561,630	2,772,000
Combined Utilities						
Residential						
5/8"	3,030	3,270	3,440	3,620	3,790	3,960
1"	5,370	5,660	5,820	5,980	6,140	6,290
1-1/2"	9,270	9,630	9,760	9,900	10,030	10,160
2"	13,950	14,400	14,500	14,610	14,710	14,810
All Other						
5/8"	4,530	5,100	5,470	5,850	6,220	6,590
1"	11,330	12,760	13,700	14,620	15,560	16,480
1-1/2"	22,650	25,500	27,360	29,230	31,090	32,950
2"	36,240	40,800	43,780	46,760	49,740	52,720
3"	(a)	76,500	82,090	87,680	93,260	98,850
4"	(a)	127,500	136,810	146,130	155,440	164,750
6"	(a)	255,000	273,630	292,250	310,880	329,500
8"	(a)	510,000	547,250	584,500	621,750	659,000
10"	(a)	765,000	820,880	876,750	932,630	988,500
12"	(a)	1,122,000	1,203,950	1,285,900	1,367,850	1,449,800
16"	(a)	2,805,000	3,009,880	3,214,750	3,419,630	3,624,500

(a) Determined based on analysis of new customer's anticipated use of the system.

Scenario 2 - Reduced Water

System Development Charges

	Existing	2013	2014	2015	2016	2017
	$	$	$	$	$	$
Water Utility						
Residential						
5/8"	1,560	1,590	1,630	1,670	1,700	1,740
1"	3,900	3,980	4,070	4,170	4,260	4,350
1-1/2"	7,800	7,950	8,140	8,330	8,510	8,700
2"	12,480	12,720	13,020	13,320	13,620	13,920
All Other						
5/8"	1,560	1,590	1,630	1,670	1,700	1,740
1"	3,900	3,980	4,070	4,170	4,260	4,350
1-1/2"	7,800	7,950	8,140	8,330	8,510	8,700
2"	12,480	12,720	13,020	13,320	13,620	13,920
3"	23,400	23,850	24,410	24,980	25,540	26,100
4"	39,000	39,750	40,690	41,630	42,560	43,500
6"	78,000	79,500	81,380	83,250	85,130	87,000
8"	156,000	159,000	162,750	166,500	170,250	174,000
10"	234,000	238,500	244,130	249,750	255,380	261,000
12"	343,200	349,800	358,050	366,300	374,550	382,800
16"	858,000	874,500	895,130	915,750	936,380	957,000
Wastewater Utility						
Residential						
All Meters	1,470	1,680	1,830	1,980	2,130	2,280
All Other						
5/8"	2,970	3,510	3,830	4,150	4,460	4,780
1"	7,430	8,780	9,570	10,370	11,160	11,950
1-1/2"	14,850	17,550	19,140	20,730	22,310	23,900
2"	23,760	28,080	30,620	33,160	35,700	38,240
3"	44,550	52,650	57,410	62,180	66,940	71,700
4"	74,250	87,750	95,690	103,630	111,560	119,500
6"	148,500	175,500	191,380	207,250	223,130	239,000
8"	297,000	351,000	382,750	414,500	446,250	478,000
10"	445,500	526,500	574,130	621,750	669,380	717,000
12"	653,400	772,200	842,050	911,900	981,750	1,051,600
16"	1,633,500	1,930,500	2,105,130	2,279,750	2,454,380	2,629,000
Combined Utilities						
Residential						
5/8"	3,030	3,270	3,460	3,650	3,830	4,020
1"	5,370	5,660	5,900	6,150	6,390	6,630
1-1/2"	9,270	9,630	9,970	10,310	10,640	10,980
2"	13,950	14,400	14,850	15,300	15,750	16,200
All Other						
5/8"	4,530	5,100	5,460	5,820	6,160	6,520
1"	11,330	12,760	13,640	14,540	15,420	16,300
1-1/2"	22,650	25,500	27,280	29,060	30,820	32,600
2"	36,240	40,800	43,640	46,480	49,320	52,160
3"	(a)	76,500	81,820	87,160	92,480	97,800
4"	(a)	127,500	136,380	145,260	154,120	163,000
6"	(a)	255,000	272,760	290,500	308,260	326,000
8"	(a)	510,000	545,500	581,000	616,500	652,000
10"	(a)	765,000	818,260	871,500	924,760	978,000
12"	(a)	1,122,000	1,200,100	1,278,200	1,356,300	1,434,400
16"	(a)	2,805,000	3,000,260	3,195,500	3,390,760	3,586,000

(a) Determined based on analysis of new customer's anticipated use of the system.

Scenario 3 - Deferred Maintenance/Reliability

System Development Charges

	Existing	2013	2014	2015	2016	2017
	$	$	$	$	$	$
Water Utility						
Residential						
5/8"	1,560	1,590	1,580	1,560	1,550	1,530
1"	3,900	3,980	3,940	3,910	3,870	3,830
1-1/2"	7,800	7,950	7,880	7,800	7,730	7,650
2"	12,480	12,720	12,600	12,480	12,360	12,240
All Other						
5/8"	1,560	1,590	1,580	1,560	1,550	1,530
1"	3,900	3,980	3,940	3,910	3,870	3,830
1-1/2"	7,800	7,950	7,880	7,800	7,730	7,650
2"	12,480	12,720	12,600	12,480	12,360	12,240
3"	23,400	23,850	23,630	23,400	23,180	22,950
4"	39,000	39,750	39,380	39,000	38,630	38,250
6"	78,000	79,500	78,750	78,000	77,250	76,500
8"	156,000	159,000	157,500	156,000	154,500	153,000
10"	234,000	238,500	236,250	234,000	231,750	229,500
12"	343,200	349,800	346,500	343,200	339,900	336,600
16"	858,000	874,500	866,250	858,000	849,750	841,500
Wastewater Utility						
Residential						
All Meters	1,470	1,680	1,860	2,050	2,230	2,410
All Other						
5/8"	2,970	3,510	3,900	4,280	4,670	5,050
1"	7,430	8,780	9,740	10,710	11,670	12,630
1-1/2"	14,850	17,550	19,480	21,400	23,330	25,250
2"	23,760	28,080	31,160	34,240	37,320	40,400
3"	44,550	52,650	58,430	64,200	69,980	75,750
4"	74,250	87,750	97,380	107,000	116,630	126,250
6"	148,500	175,500	194,750	214,000	233,250	252,500
8"	297,000	351,000	389,500	428,000	466,500	505,000
10"	445,500	526,500	584,250	642,000	699,750	757,500
12"	653,400	772,200	856,900	941,600	1,026,300	1,111,000
16"	1,633,500	1,930,500	2,142,250	2,354,000	2,565,750	2,777,500
Combined Utilities						
Residential						
5/8"	3,030	3,270	3,440	3,610	3,780	3,940
1"	5,370	5,660	5,800	5,960	6,100	6,240
1-1/2"	9,270	9,630	9,740	9,850	9,960	10,060
2"	13,950	14,400	14,460	14,530	14,590	14,650
All Other						
5/8"	4,530	5,100	5,480	5,840	6,220	6,580
1"	11,330	12,760	13,680	14,620	15,540	16,460
1-1/2"	22,650	25,500	27,360	29,200	31,060	32,900
2"	36,240	40,800	43,760	46,720	49,680	52,640
3"	(a)	76,500	82,060	87,600	93,160	98,700
4"	(a)	127,500	136,760	146,000	155,260	164,500
6"	(a)	255,000	273,500	292,000	310,500	329,000
8"	(a)	510,000	547,000	584,000	621,000	658,000
10"	(a)	765,000	820,500	876,000	931,500	987,000
12"	(a)	1,122,000	1,203,400	1,284,800	1,366,200	1,447,600
16"	(a)	2,805,000	3,008,500	3,212,000	3,415,500	3,619,000

(a) Determined based on analysis of new customer's anticipated use of the system.

Scenario 4 - Deferred Maintenance/Reliability & Wakarusa WWTP

System Development Charges

	Existing	2013	2014	2015	2016	2017
	$	$	$	$	$	$
Water Utility						
Residential						
5/8"	1,560	1,590	1,580	1,560	1,550	1,530
1"	3,900	3,980	3,940	3,910	3,870	3,830
1-1/2"	7,800	7,950	7,880	7,800	7,730	7,650
2"	12,480	12,720	12,600	12,480	12,360	12,240
All Other						
5/8"	1,560	1,590	1,580	1,560	1,550	1,530
1"	3,900	3,980	3,940	3,910	3,870	3,830
1-1/2"	7,800	7,950	7,880	7,800	7,730	7,650
2"	12,480	12,720	12,600	12,480	12,360	12,240
3"	23,400	23,850	23,630	23,400	23,180	22,950
4"	39,000	39,750	39,380	39,000	38,630	38,250
6"	78,000	79,500	78,750	78,000	77,250	76,500
8"	156,000	159,000	157,500	156,000	154,500	153,000
10"	234,000	238,500	236,250	234,000	231,750	229,500
12"	343,200	349,800	346,500	343,200	339,900	336,600
16"	858,000	874,500	866,250	858,000	849,750	841,500
Wastewater Utility						
Residential						
All Meters	1,470	1,680	1,900	2,120	2,330	2,550
All Other						
5/8"	2,970	3,510	3,970	4,420	4,880	5,330
1"	7,430	8,780	9,920	11,060	12,190	13,330
1-1/2"	14,850	17,550	19,830	22,100	24,380	26,650
2"	23,760	28,080	31,720	35,360	39,000	42,640
3"	44,550	52,650	59,480	66,300	73,130	79,950
4"	74,250	87,750	99,130	110,500	121,880	133,250
6"	148,500	175,500	198,250	221,000	243,750	266,500
8"	297,000	351,000	396,500	442,000	487,500	533,000
10"	445,500	526,500	594,750	663,000	731,250	799,500
12"	653,400	772,200	872,300	972,400	1,072,500	1,172,600
16"	1,633,500	1,930,500	2,180,750	2,431,000	2,681,250	2,931,500
Combined Utilities						
Residential						
5/8"	3,030	3,270	3,480	3,680	3,880	4,080
1"	5,370	5,660	5,840	6,030	6,200	6,380
1-1/2"	9,270	9,630	9,780	9,920	10,060	10,200
2"	13,950	14,400	14,500	14,600	14,690	14,790
All Other						
5/8"	4,530	5,100	5,550	5,980	6,430	6,860
1"	11,330	12,760	13,860	14,970	16,060	17,160
1-1/2"	22,650	25,500	27,710	29,900	32,110	34,300
2"	36,240	40,800	44,320	47,840	51,360	54,880
3"	(a)	76,500	83,110	89,700	96,310	102,900
4"	(a)	127,500	138,510	149,500	160,510	171,500
6"	(a)	255,000	277,000	299,000	321,000	343,000
8"	(a)	510,000	554,000	598,000	642,000	686,000
10"	(a)	765,000	831,000	897,000	963,000	1,029,000
12"	(a)	1,122,000	1,218,800	1,315,600	1,412,400	1,509,200
16"	(a)	2,805,000	3,047,000	3,289,000	3,531,000	3,773,000

(a) Determined based on analysis of new customer's anticipated use of the system.

Scenario 5 - Taste, Odor, & Toxins

System Development Charges

	Existing	2013	2014	2015	2016	2017
	$	$	$	$	$	$
Water Utility						
Residential						
5/8"	1,560	1,590	1,580	1,580	1,570	1,560
1"	3,900	3,980	3,960	3,940	3,920	3,900
1-1/2"	7,800	7,950	7,910	7,880	7,840	7,800
2"	12,480	12,720	12,660	12,600	12,540	12,480
All Other						
5/8"	1,560	1,590	1,580	1,580	1,570	1,560
1"	3,900	3,980	3,960	3,940	3,920	3,900
1-1/2"	7,800	7,950	7,910	7,880	7,840	7,800
2"	12,480	12,720	12,660	12,600	12,540	12,480
3"	23,400	23,850	23,740	23,630	23,510	23,400
4"	39,000	39,750	39,560	39,380	39,190	39,000
6"	78,000	79,500	79,130	78,750	78,380	78,000
8"	156,000	159,000	158,250	157,500	156,750	156,000
10"	234,000	238,500	237,380	236,250	235,130	234,000
12"	343,200	349,800	348,150	346,500	344,850	343,200
16"	858,000	874,500	870,380	866,250	862,130	858,000
Wastewater Utility						
Residential						
All Meters	1,470	1,680	1,860	2,050	2,230	2,410
All Other						
5/8"	2,970	3,510	3,890	4,280	4,660	5,040
1"	7,430	8,780	9,740	10,690	11,650	12,600
1-1/2"	14,850	17,550	19,460	21,380	23,290	25,200
2"	23,760	28,080	31,140	34,200	37,260	40,320
3"	44,550	52,650	58,390	64,130	69,860	75,600
4"	74,250	87,750	97,310	106,880	116,440	126,000
6"	148,500	175,500	194,630	213,750	232,880	252,000
8"	297,000	351,000	389,250	427,500	465,750	504,000
10"	445,500	526,500	583,880	641,250	698,630	756,000
12"	653,400	772,200	856,350	940,500	1,024,650	1,108,800
16"	1,633,500	1,930,500	2,140,880	2,351,250	2,561,630	2,772,000
Combined Utilities						
Residential						
5/8"	3,030	3,270	3,440	3,630	3,800	3,970
1"	5,370	5,660	5,820	5,990	6,150	6,310
1-1/2"	9,270	9,630	9,770	9,930	10,070	10,210
2"	13,950	14,400	14,520	14,650	14,770	14,890
All Other						
5/8"	4,530	5,100	5,470	5,860	6,230	6,600
1"	11,330	12,760	13,700	14,630	15,570	16,500
1-1/2"	22,650	25,500	27,370	29,260	31,130	33,000
2"	36,240	40,800	43,800	46,800	49,800	52,800
3"	(a)	76,500	82,130	87,760	93,370	99,000
4"	(a)	127,500	136,870	146,260	155,630	165,000
6"	(a)	255,000	273,760	292,500	311,260	330,000
8"	(a)	510,000	547,500	585,000	622,500	660,000
10"	(a)	765,000	821,260	877,500	933,760	990,000
12"	(a)	1,122,000	1,204,500	1,287,000	1,369,500	1,452,000
16"	(a)	2,805,000	3,011,260	3,217,500	3,423,760	3,630,000

(a) Determined based on analysis of new customer's anticipated use of the system.

Scenario 6 - Delay Wakarusa WWTP & Accelerate Rapid I/I

System Development Charges

	Existing	2013	2014	2015	2016	2017
	$	$	$	$	$	$
Water Utility						
Residential						
5/8"	1,560	1,590	1,580	1,570	1,560	1,550
1"	3,900	3,980	3,960	3,930	3,910	3,880
1-1/2"	7,800	7,950	7,900	7,850	7,800	7,750
2"	12,480	12,720	12,640	12,560	12,480	12,400
All Other						
5/8"	1,560	1,590	1,580	1,570	1,560	1,550
1"	3,900	3,980	3,960	3,930	3,910	3,880
1-1/2"	7,800	7,950	7,900	7,850	7,800	7,750
2"	12,480	12,720	12,640	12,560	12,480	12,400
3"	23,400	23,850	23,700	23,550	23,400	23,250
4"	39,000	39,750	39,500	39,250	39,000	38,750
6"	78,000	79,500	79,000	78,500	78,000	77,500
8"	156,000	159,000	158,000	157,000	156,000	155,000
10"	234,000	238,500	237,000	235,500	234,000	232,500
12"	343,200	349,800	347,600	345,400	343,200	341,000
16"	858,000	874,500	869,000	863,500	858,000	852,500
Wastewater Utility						
Residential						
All Meters	1,470	1,680	1,880	2,080	2,270	2,470
All Other						
5/8"	2,970	3,510	3,930	4,340	4,760	5,170
1"	7,430	8,780	9,820	10,860	11,890	12,930
1-1/2"	14,850	17,550	19,630	21,700	23,780	25,850
2"	23,760	28,080	31,400	34,720	38,040	41,360
3"	44,550	52,650	58,880	65,100	71,330	77,550
4"	74,250	87,750	98,130	108,500	118,880	129,250
6"	148,500	175,500	196,250	217,000	237,750	258,500
8"	297,000	351,000	392,500	434,000	475,500	517,000
10"	445,500	526,500	588,750	651,000	713,250	775,500
12"	653,400	772,200	863,500	954,800	1,046,100	1,137,400
16"	1,633,500	1,930,500	2,158,750	2,387,000	2,615,250	2,843,500
Combined Utilities						
Residential						
5/8"	3,030	3,270	3,460	3,650	3,830	4,020
1"	5,370	5,660	5,840	6,010	6,180	6,350
1-1/2"	9,270	9,630	9,780	9,930	10,070	10,220
2"	13,950	14,400	14,520	14,640	14,750	14,870
All Other						
5/8"	4,530	5,100	5,510	5,910	6,320	6,720
1"	11,330	12,760	13,780	14,790	15,800	16,810
1-1/2"	22,650	25,500	27,530	29,550	31,580	33,600
2"	36,240	40,800	44,040	47,280	50,520	53,760
3"	(a)	76,500	82,580	88,650	94,730	100,800
4"	(a)	127,500	137,630	147,750	157,880	168,000
6"	(a)	255,000	275,250	295,500	315,750	336,000
8"	(a)	510,000	550,500	591,000	631,500	672,000
10"	(a)	765,000	825,750	886,500	947,250	1,008,000
12"	(a)	1,122,000	1,211,100	1,300,200	1,389,300	1,478,400
16"	(a)	2,805,000	3,027,750	3,250,500	3,473,250	3,696,000

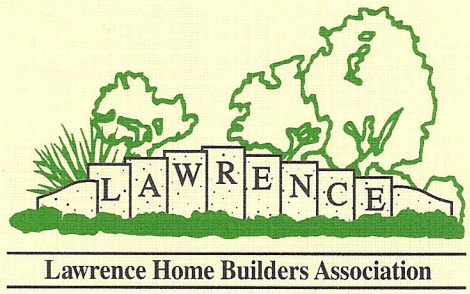
(a) Determined based on analysis of new customer's anticipated use of the system.

Scenario 7 - Roadway Relocations Only - No Wakarusa WWTP

System Development Charges

	Existing	2013	2014	2015	2016	2017
	$	$	$	$	$	$
Water Utility						
Residential						
5/8"	1,560	1,590	1,620	1,650	1,670	1,700
1"	3,900	3,980	4,050	4,120	4,180	4,250
1-1/2"	7,800	7,950	8,090	8,230	8,360	8,500
2"	12,480	12,720	12,940	13,160	13,380	13,600
All Other						
5/8"	1,560	1,590	1,620	1,650	1,670	1,700
1"	3,900	3,980	4,050	4,120	4,180	4,250
1-1/2"	7,800	7,950	8,090	8,230	8,360	8,500
2"	12,480	12,720	12,940	13,160	13,380	13,600
3"	23,400	23,850	24,260	24,680	25,090	25,500
4"	39,000	39,750	40,440	41,130	41,810	42,500
6"	78,000	79,500	80,880	82,250	83,630	85,000
8"	156,000	159,000	161,750	164,500	167,250	170,000
10"	234,000	238,500	242,630	246,750	250,880	255,000
12"	343,200	349,800	355,850	361,900	367,950	374,000
16"	858,000	874,500	889,630	904,750	919,880	935,000
Wastewater Utility						
Residential						
All Meters	1,470	1,680	1,860	2,050	2,230	2,410
All Other						
5/8"	2,970	3,510	3,900	4,280	4,670	5,050
1"	7,430	8,780	9,740	10,710	11,670	12,630
1-1/2"	14,850	17,550	19,480	21,400	23,330	25,250
2"	23,760	28,080	31,160	34,240	37,320	40,400
3"	44,550	52,650	58,430	64,200	69,980	75,750
4"	74,250	87,750	97,380	107,000	116,630	126,250
6"	148,500	175,500	194,750	214,000	233,250	252,500
8"	297,000	351,000	389,500	428,000	466,500	505,000
10"	445,500	526,500	584,250	642,000	699,750	757,500
12"	653,400	772,200	856,900	941,600	1,026,300	1,111,000
16"	1,633,500	1,930,500	2,142,250	2,354,000	2,565,750	2,777,500
Combined Utilities						
Residential						
5/8"	3,030	3,270	3,480	3,700	3,900	4,110
1"	5,370	5,660	5,910	6,170	6,410	6,660
1-1/2"	9,270	9,630	9,950	10,280	10,590	10,910
2"	13,950	14,400	14,800	15,210	15,610	16,010
All Other						
5/8"	4,530	5,100	5,520	5,930	6,340	6,750
1"	11,330	12,760	13,790	14,830	15,850	16,880
1-1/2"	22,650	25,500	27,570	29,630	31,690	33,750
2"	36,240	40,800	44,100	47,400	50,700	54,000
3"	(a)	76,500	82,690	88,880	95,070	101,250
4"	(a)	127,500	137,820	148,130	158,440	168,750
6"	(a)	255,000	275,630	296,250	316,880	337,500
8"	(a)	510,000	551,250	592,500	633,750	675,000
10"	(a)	765,000	826,880	888,750	950,630	1,012,500
12"	(a)	1,122,000	1,212,750	1,303,500	1,394,250	1,485,000
16"	(a)	2,805,000	3,031,880	3,258,750	3,485,630	3,712,500

(a) Determined based on analysis of new customer's anticipated use of the system.



December 17, 2012

Dave Wagner
City of Lawrence Utilities Department
1400 E. 8th Street
Lawrence, KS 66044

Dear Dave,

Thank you and your staff for educating the Lawrence Home Builders Association on the methodology the utility department uses to determine proposed System Development Charges. We appreciated your effort to open the dialogue with us and the Lawrence Board of Realtors on this topic. The result has been a better understanding and acknowledgement of each other's perspective.

As you know, the LHBA fundamentally disagrees with SDC's. New home owners have 'paid their way' through building fees, property and sales taxes, and user fees. On the other hand, it is recognized that no charges exist for the reimbursement of significant costs incurred by the community-at-large for aging infrastructure improvements for existing homes. However, given that SDC's are established in our community, the LHBA has reviewed the seven scenarios presented and will not oppose a fee increase for any of the scenarios that include building the Wastewater Treatment Plant now. If the City determines that population and capacity projections do not necessitate moving forward with the WWTP at this time, then the LHBA supports no change to the current SDC's.

If the 2012 International Building Codes are adopted by the City, there will be cost increases for new homes. The scenarios presented for SDC's will add to that an additional $910 - $1,080 for a 5/8" meter. These combined increases make it more difficult for those trying to buy an affordable new home. As the city adopts new building codes and considers how to best provide water and wastewater services to the community, they should keep in mind how these combined costs will impact housing.

The recently adopted Transfer Policy did not result in the transparency of revenue transferred from the utility fund to the general fund. When the City begins to move forward with the largest utility project in our history, it will be critical for the elected leadership to assure fee payers that the fees paid for water and wastewater services are actually spent for the purposes in which they were collected.

Thank you for facilitating several meetings with us to discuss SDC's.

Sincerely,

Bobbie Flory
Executive Director

P.O. Box 3490 • Lawrence, Kansas 66046 • (785) 748-0612 • fax (785) 748-0622 • www.lhba.net

LAWRENCE BOARD OF REALTORS®
3838 W. SIXTH STREET / LAWRENCE, KANSAS 66049

January 4, 2013

Lawrence City Commission
P.O. Box 708
Lawrence, KS 66044

Subject: Comments on System Development Charges and Water/Wastewater Master Plan

Dear Mayor Schumm and Members of the City Commission,

On November 15, 2012, the Utilities Department submitted a detailed memorandum to the City Commission outlining seven different scenarios for capital improvement projects that are necessary to fully implement the recommendations contained in the city's recently-drafted water and wastewater master plans. First and foremost, the Lawrence Board of REALTORS® (hereinafter "LBOR") would like to commend the leadership and staff of the Utilities Department for the very open and transparent process used to develop these recommendations and their willingness to provide information to industry stakeholders.

As you are well aware, LBOR fundamentally disagrees with the notion that the developers (and ultimately the owners and tenants) of newly-constructed commercial and residential properties should be forced to pay system development charges (or "impact fees") for the right to build in our community. In our opinion, the overall economic and financial benefits the community derives from the construction of commercial and residential properties contribute an overwhelming amount of resources to the local economy and these benefits vastly outweigh any related costs to the community associated with growth.

When a commercial or residential building is constructed in this community, a large number of our citizens are employed and receive decent wages, sales tax revenues increase due to the purchase of building materials, building permit fees are paid to the city to support development services, property tax revenues increase as the value of new structures are added to the city's property tax rolls and the owners and occupants of new structures pay user fees to support the publicly-owned utilities. In our opinion, no truly objective observer could attempt to argue that a newly-constructed commercial or residential building does not make a substantial contribution to economic development and job growth in our community.

Having said that, LBOR recognizes that system development charges are firmly established in our community and that now is the time for the City of Lawrence to take action to ensure that we have adequate water and wastewater capacity to service future real estate development and growth in our community, which will be vital to leading our community's economy out of this recession in future years. LBOR is very concerned that the City Commission may not take the necessary steps to adopt the full recommendations of the Utilities Department and immediately address our community's water and wastewater infrastructure needs.

If the system development charges are going to be increased as recommend by the Utilities Department, then LBOR strongly believes that the City Commission must follow the full recommendations of the department and our water and wastewater master plan consultants by adopting Scenario #1 and immediately taking those recommended steps to increase the capacity and fully fund the maintenance of our water and wastewater systems. If these steps are not taken in full, including the immediate commencement of the construction of the Wakarusa Wastewater Treatment Plant (WWTP), then LBOR sees little justification for increasing the system development charges and opposes any increase at this time.

If the City Commission fails to follow the professional recommendations of the Utilities Department and the water and wastewater master plan consultants, then our community will not be adequately prepared to service new growth that will generate economic development and job growth in our community in future years. LBOR strongly believes that now is not the time for the City Commission to foolishly "kick the can" down the road by adopting one of the reduced and less effective capital improvement scenarios.

The argument behind the implementation of system development charges was that additional revenue was needed from the developers (and ultimately the owners and tenants) of newly-constructed commercial and residential properties in order to pay for the related infrastructure costs associated with growth. However, this argument will be severely undermined if the city decides to increase the system development charges while at the same time failing to undertake capital improvement projects that will actually provide adequate infrastructure for growth and new real estate development opportunities in our community.

Finally, LBOR continues to be extremely concerned that the city has not instituted a plan for funding the infrastructure needed to accommodate growth with transparency, so that all funds actually collected by the Utilities Department are exclusively devoted to the actual cost of constructing and maintaining infrastructure to service new and existing development. Until the city properly accounts for the cost of providing services to the utilities department and ensures that all utilities funds are not being improperly transferred to cover other city costs that should be covered by other city funds, we cannot in good faith conclude that the city is being transparent with funds swept from the water and wastewater enterprise funds.

In conclusion, LBOR strongly opposes any increase in the system development charges at this time unless the City Commission agrees to follow the full recommendations of the Utilities Department and our water and wastewater master plan consultants by adopting Scenario #1 and immediately taking those recommended steps to increase the capacity and fully fund the maintenance of our water and wastewater systems. If these steps are not taken in full, including the immediate commencement of the construction of the Wakarusa Wastewater Treatment Plant (WWTP), then LBOR sees little justification for increasing the system development charges and opposes any increase of the system development charges at this time.

Thank you for the opportunity to provide public comments on this issue. We look forward to continuing this discussion with you as the City Commission discusses the recommendations of the Utilities Department.

Sincerely,

Luke Bell
Governmental Affairs Director
Lawrence Board of REALTORS®
3838 W. 6th St.
Lawrence, KS 66049
lbell@kansasrealtor.com