

MAY 10, 2016

KC Water Cost of Service Task Force

Meeting #2



Agenda

- Welcome and Introductions
- The Charge of the Task Force
- Overview of KC's Water Utility
- KC's Water Utility Financial Overview
- Water Utility Governance
- Water Rate Structures
- Guiding Principles
- Discussion
- Public Comment



Welcome and Introductions



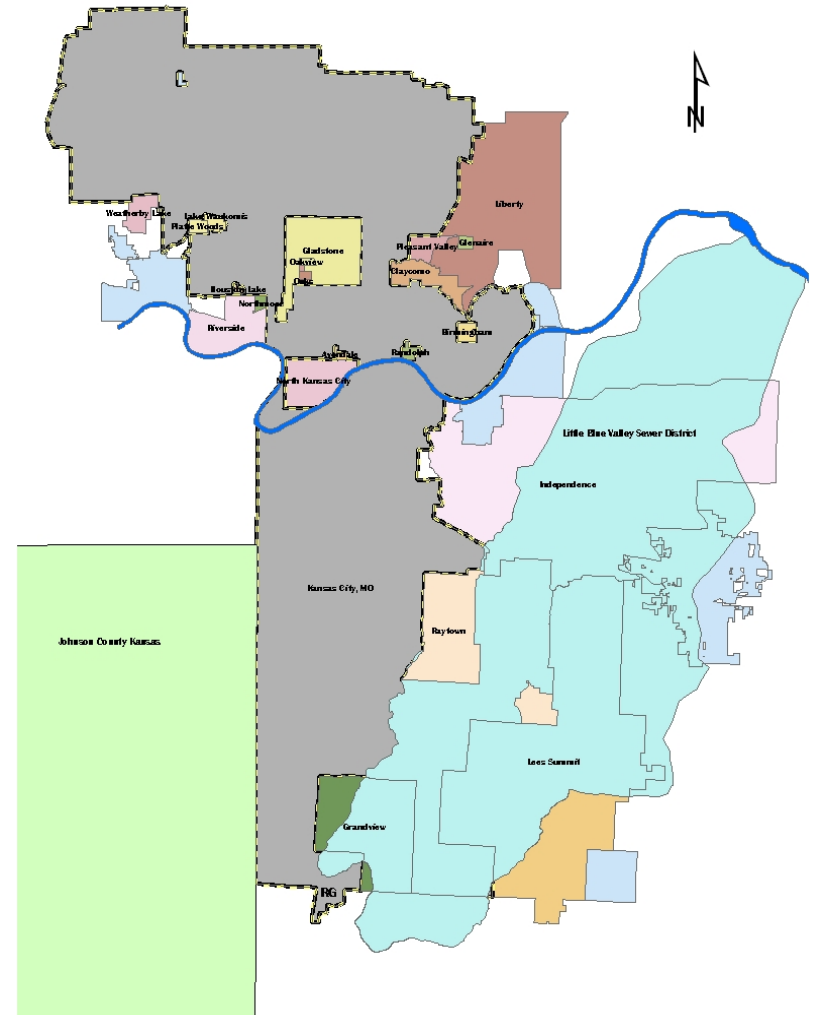
Task Force Charge



KC Water – Water Utility Overview

Water Utility Overview

- Serves a 318 square mile area
- 1 Water Treatment Plant
- 14 Groundwater Wells
- 18 Pump Stations
- 2,800 Miles of Water Main
- 35,000 Valves
- 23,000 Fire Hydrants



The Source for your Water



KC Water Intake Station along River



Kansas City Water Treatment Plant

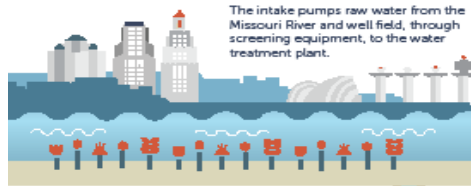


Kansas City's Water Treatment Process



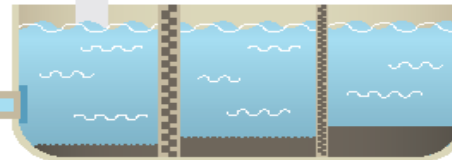
1. SOURCE

The intake pumps raw water from the Missouri River and well field, through screening equipment, to the water treatment plant.



2. SEDIMENTATION

Raw water enters into the basin where debris and other impurities are allowed to settle. Chemicals, which act like magnets to attract fine debris and impurities, are added during certain times of the year to improve the settling process and minimize cloudiness in the water.



3. SOFTENING & DISINFECTION

Raw water travels down channels where lime is added for softening and for improving taste and odor, and where chlorine is added for disinfection. This is where raw water begins its transformation into high-quality drinking water.



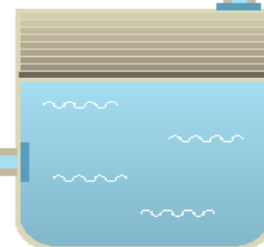
4. STABILIZATION

The water is stabilized to prevent corrosive properties from emerging, and any lime that is still present is allowed to settle. Depending on the seasonal conditions of the Missouri River, carbon can be added at this step of the process to improve taste and odor. The water is then stabilized to the proper pH.



5. FILTRATION

Finally, the water is filtered to remove calcium carbonate and any other impurities that may still exist. The water is filtered through 27" of fine sand, which catches and removes any remaining impurities. The drinking water is now finished and is ready for delivery to customers. The entire process takes about 18 hours to go from raw river water to high-quality drinking water. This important process takes place 24 hours a day, 365 days a year.



6. TRANSMISSION & DISTRIBUTION

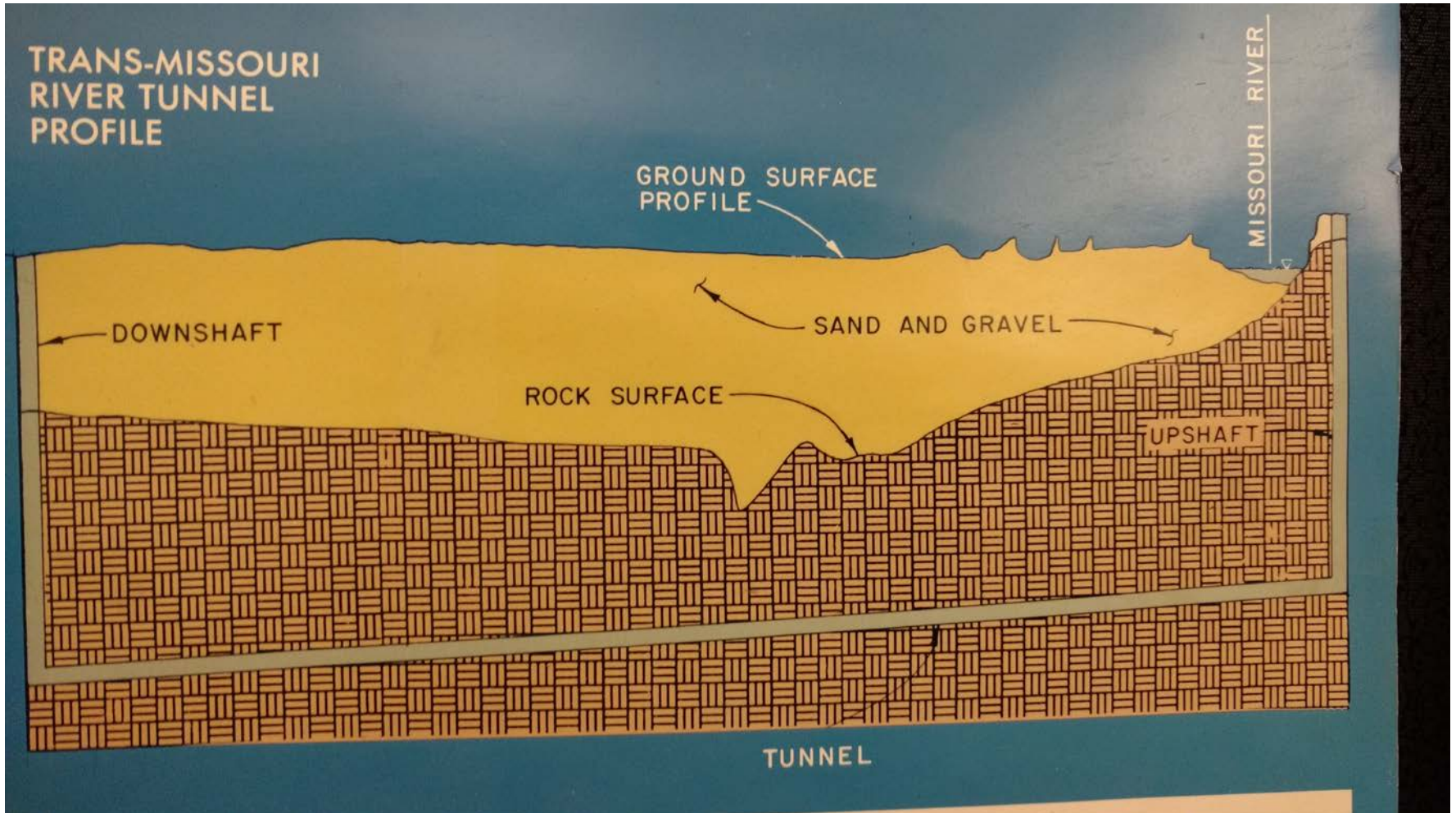
Using large and powerful pumps, high-quality and great-tasting drinking water is sent through 2,800 miles of water pipes to elevated storage tanks, reservoirs, and ultimately to the taps of customers throughout KC.



Pumping Station



Tunnel



Tunnel under the River

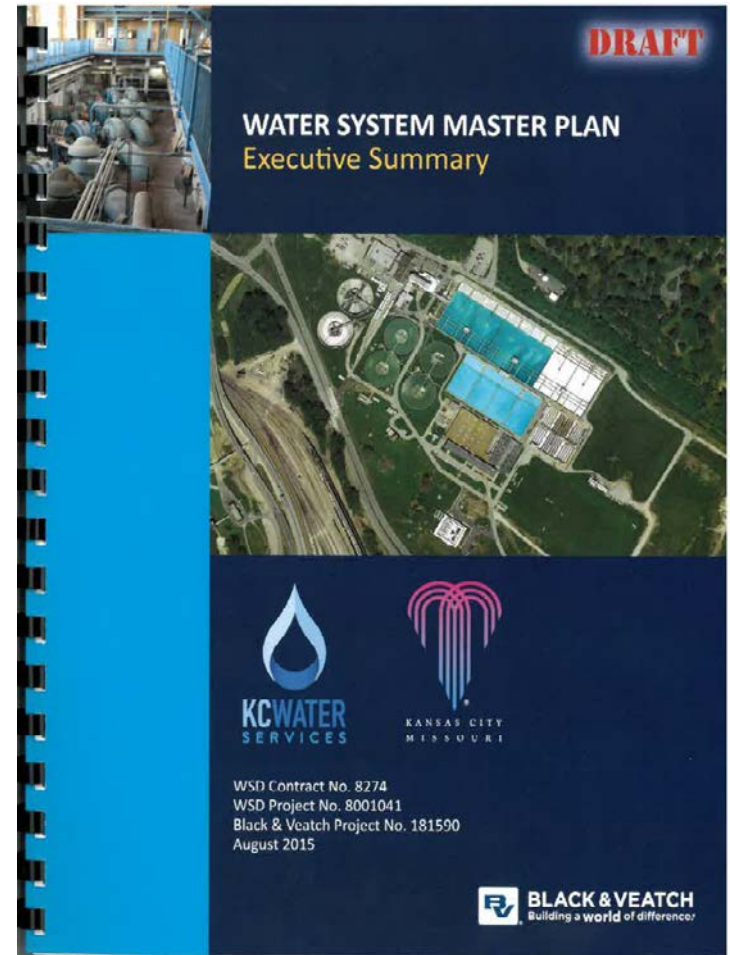


Regulatory

- Federal Safe Drinking Water Act
- Missouri Department of Natural Resources (“MDNR”)
- Missouri Safe Drinking Water Act
- Water Quality Report
- Public Health Security (aka Bio-Terrorism) Act
- Vulnerability Assessment

KC Water Master Plan

- Master plan in 1997
- Updated in 2012
- Master Plan drives Capital Improvements (CIP)
- Analyzes:
 - Performance
 - Condition
 - Hydraulic capacities
 - Improvements
 - Treatment
 - Transmission
 - Distribution
 - Pumping
 - Storage





KC Water – Water Utility Financial Overview

Water Utility Customer Base

- Residential, Commercial and Industrial users are considered “Retail” customers.
- Commercial/Industrial users include water service accounts other than one- and two-family dwellings.
- Wholesale customers are other municipalities or water districts that purchase water for resale.

Water Customers by Type

Water Customers by Type

<u>Customer Type</u>	<u>FY2011</u>	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>
Residential	144,000	147,448	150,790	150,958	151,073
Commercial / Industrial	15,000	16,160	16,818	16,954	17,865
Wholesale	34	33	33	32	32
Total	159,034	163,641	167,641	167,944	168,970

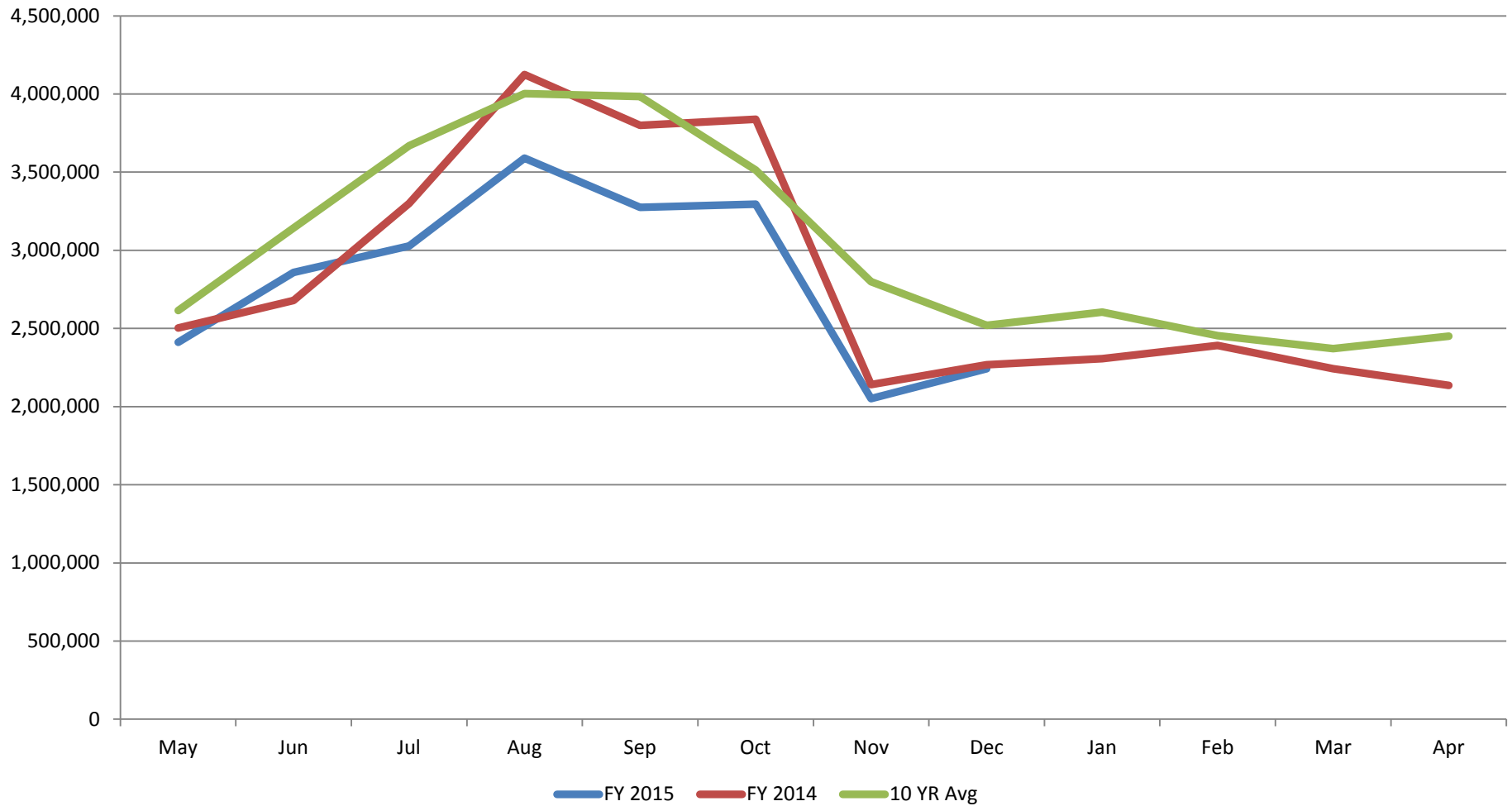
Source: December 2015 Rating Agency Credit Presentation.

Residential Consumption (in CCFs)

Residential Usage			
	<u>2000-04 Avg</u>	<u>2005-09 Avg</u>	<u>2010-14 Avg</u>
May	1,013,530	928,226	816,755
Jun	946,617	1,017,210	1,099,469
Jul	1,288,284	1,175,619	1,187,055
Aug	1,202,673	1,195,054	1,238,734
Sep	1,521,408	1,405,440	1,154,966
Oct	1,146,235	1,141,411	1,056,387
Nov	1,159,858	1,051,868	867,809
Dec	899,081	993,490	828,734
Jan	1,102,161	1,055,314	841,511
Feb	846,723	901,164	831,679
Mar	1,035,418	924,483	761,331
Apr	<u>771,154</u>	<u>815,942</u>	<u>791,681</u>
	12,933,141	12,605,221	11,476,110

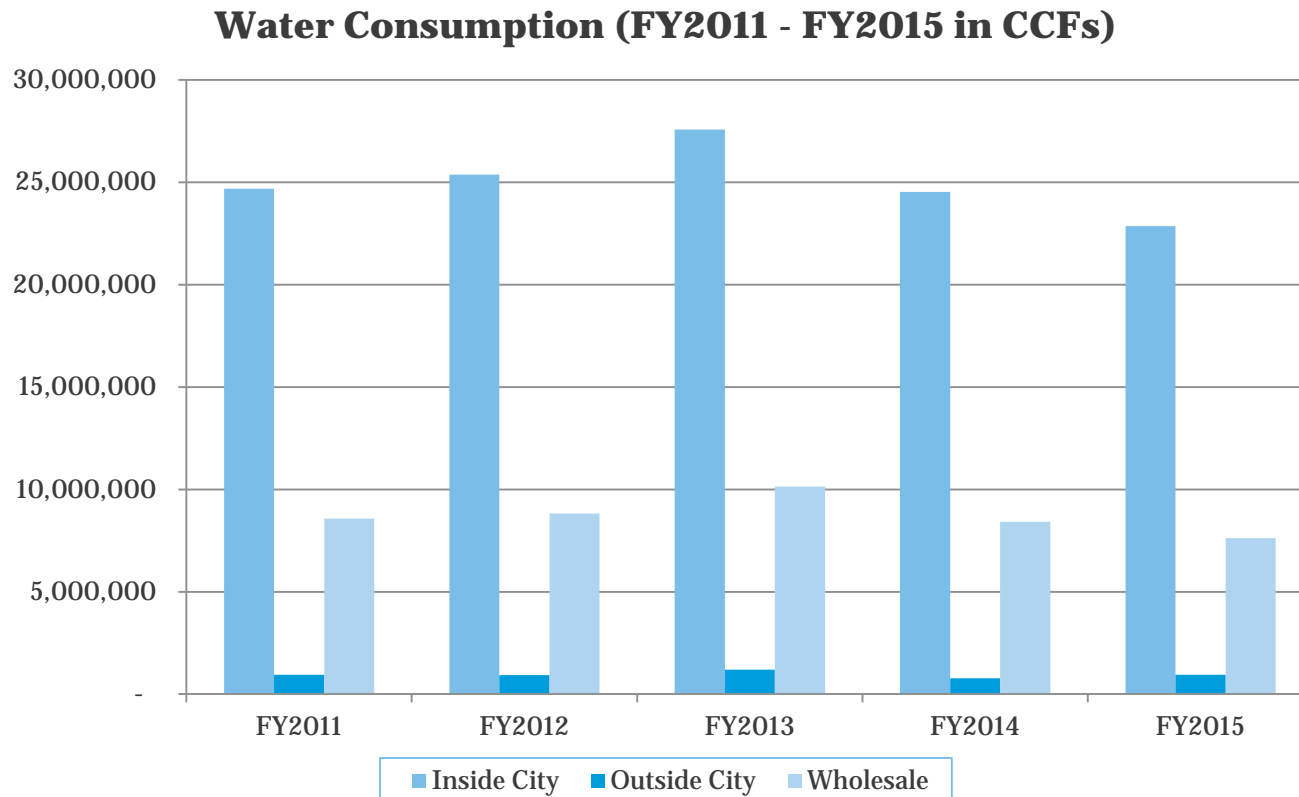
Residential Units			
	<u>2000-04 Avg</u>	<u>2005-09 Avg</u>	<u>2010-14 Avg</u>
May	7	6	6
Jun	7	7	7
Jul	8	9	8
Aug	10	9	8
Sep	9	10	8
Oct	9	8	7
Nov	8	8	6
Dec	8	7	6
Jan	7	7	6
Feb	7	7	6
Mar	6	6	5
Apr	<u>6</u>	<u>6</u>	<u>5</u>
Avg	8	7	6

Water Consumption (in CCFs)

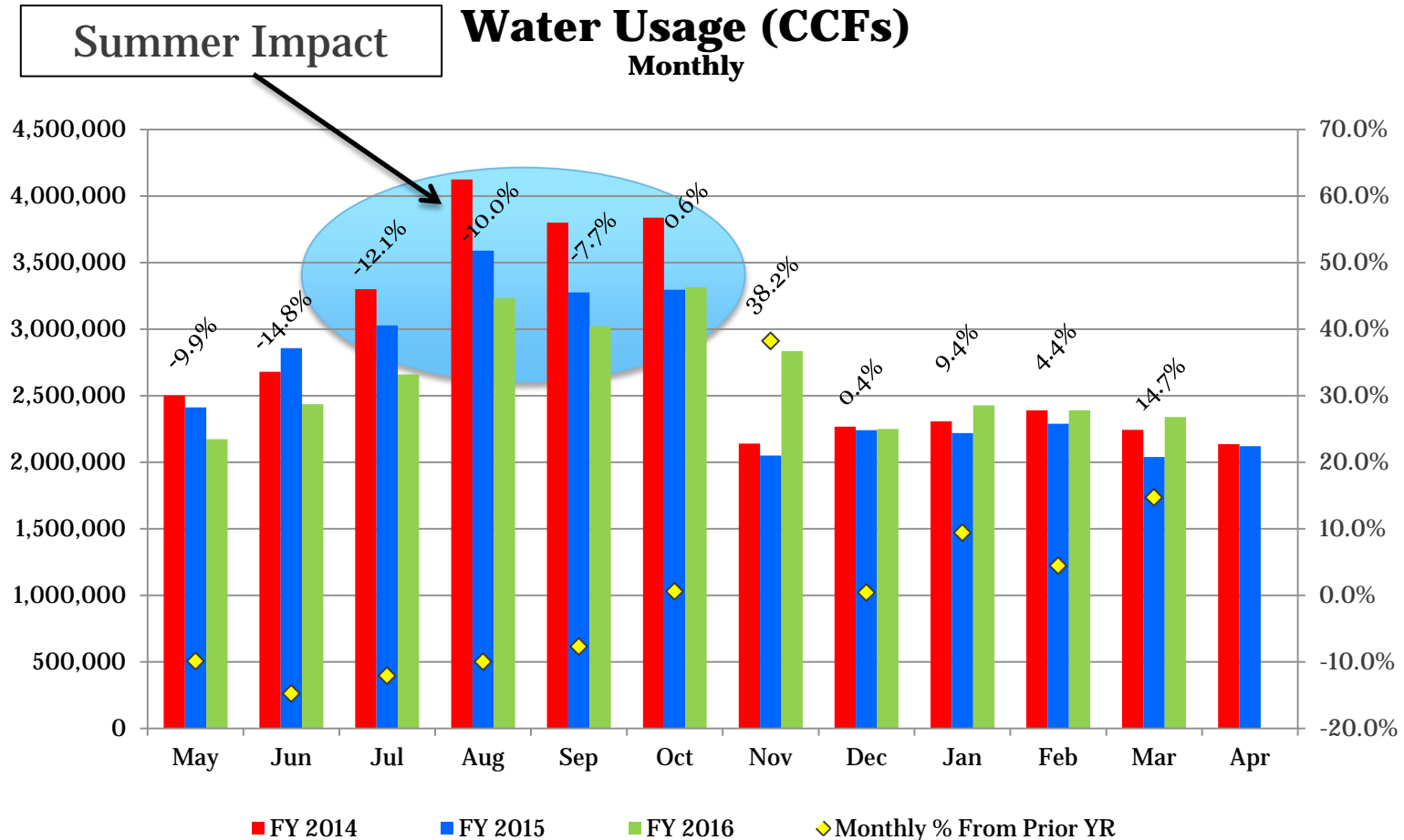


Water Consumption YTD (all customers)

- For the last 3 fiscal years (FY13 to FY15) the Water utility has seen a decline in consumption across customer classes.



Water Usage by Month (all customers)



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Water Revenue by Customer Type

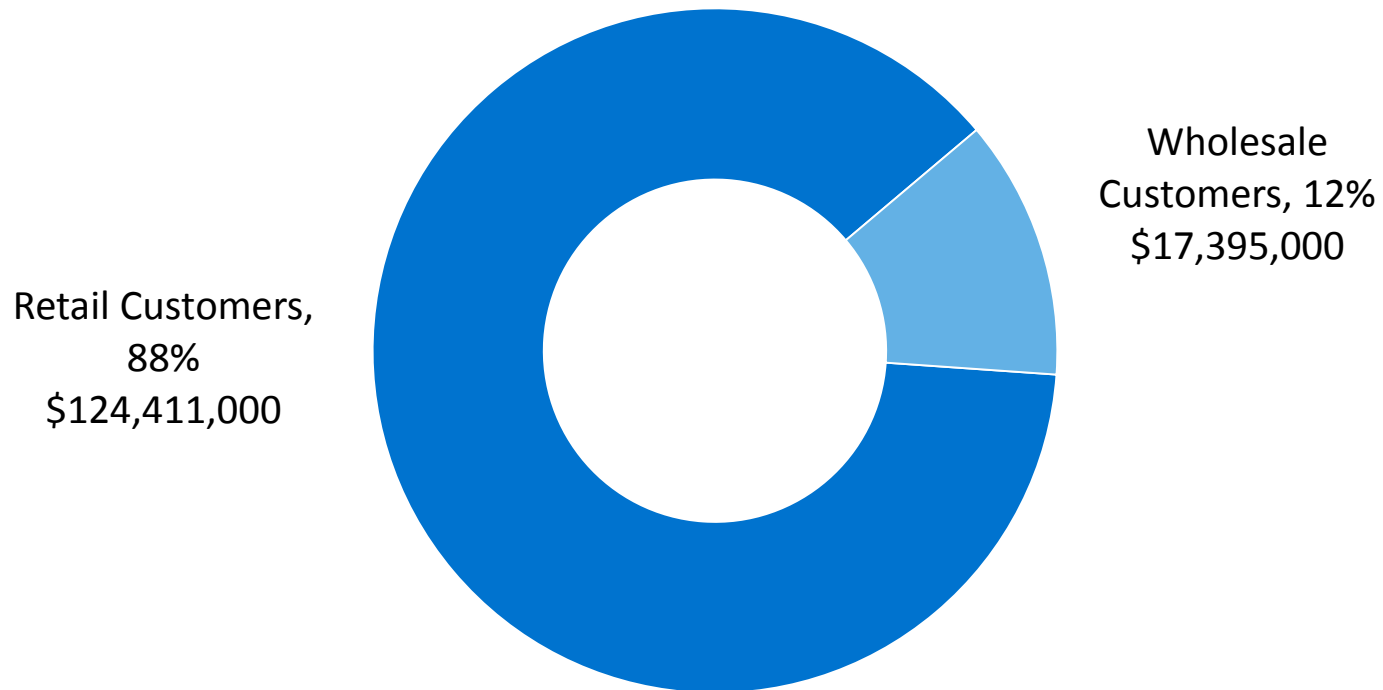
Water Revenue by Retail and Wholesale Customers (in \$000)

<u>Customer Type</u>	<u>FY2011</u>	<u>FY2012</u>	<u>FY2013</u>	<u>FY2014</u>	<u>FY2015</u>
Retail Customers	\$ 91,072	\$ 97,503	\$ 118,403	\$ 118,428	\$ 124,411
Wholesale Customers	\$ 13,737	\$ 16,292	\$ 20,641	\$ 18,217	\$ 17,395
Total	\$ 104,809	\$ 113,795	\$ 139,044	\$ 136,645	\$ 141,806

Source: December 2015 Rating Agency Credit Presentation.

Water Customers

FY2015 Water Revenue by Retail and Wholesale Customers



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Top Water Customers, Including Wholesale (FY2015)

Customer	Type of Business	Percent of Total Consumption
City of Lee's Summit	Wholesale water	3.6%
Jackson County PWSD #1 (Grandview)	Wholesale water	3.4%
City of Belton	Wholesale water	2.4%
City of Raymore	Wholesale water	2.2%
Raytown Water Company	Wholesale water	1.8%
City of Blue Springs	Wholesale water	1.7%
Veolia – Kansas City	Utility	1.5%
KCP&L	Utility	1.4%
Dogwood Power Management	Utility	1.2%
Ford Motor Company	Commercial	1.2%

Residential Water Charges (FY2017)

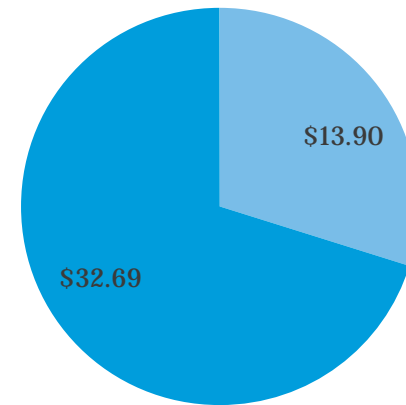
Service Charge (Fixed):

- Charge per meter
- Pro-rated per day during the billing period
- Fixed charge applied to all connections in the system
- Based on the size of meter
- Covers readiness to serve (capacity), meter maintenance, billing, collections, accounting services, etc.

Commodity Charge (Variable):

- Total volume of water purchased by the customer
- Rates vary depending on whether the customer is inside the city, outside the city or wholesale

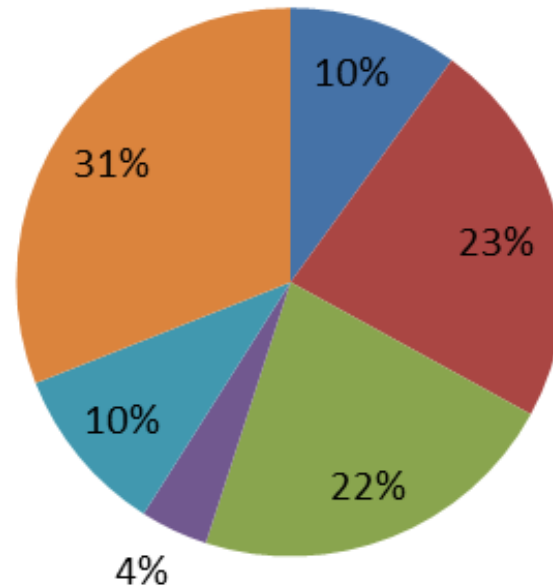
Average KC Residential Water Bill (FY2017)



■ Service Charge (Fixed) ■ Commodity Charge (Variable)

FY2017 Water Utility Expense Budget

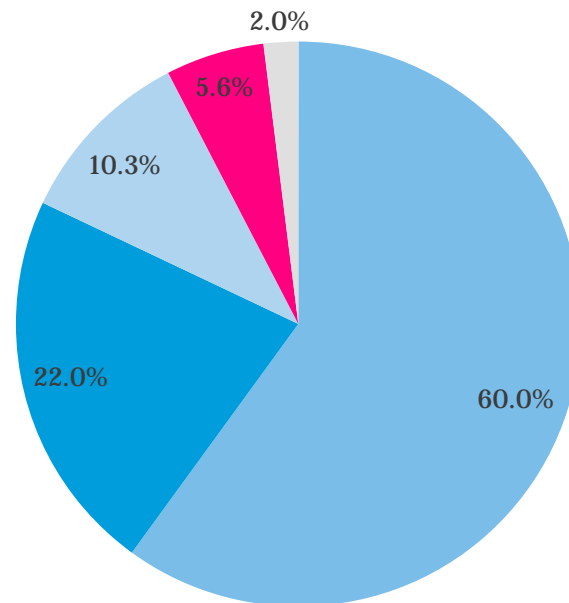
Water Utility Budget (FY2017)



■ Capital Improvements	■ Salaries	■ Debt Service
■ Capital Outlays	■ Commodities	■ Contractual Services

Water Planned CIP: FY2017

FY2017 Water Planned CIP (\$101M)



■ Distribution ■ Treatment ■ Transmission ■ Pump Station ■ Storage

Debt Financing

- 79% majority vote in April 2014 to authorize the issuance of \$500 million in water revenue bonds
- Plans for 2016 Water Bond Sale ~\$90 Million

Water Bonds		
2005 Authorization	\$	250,000,000
<u>Issuances</u>		
2008A	\$	(24,910,000)
2009A	\$	(69,000,000)
2012A	\$	(47,725,000)
2013A	\$	(54,000,000)
2014A	\$	(54,365,000)
Remaining Authorization	\$	-
April 2014 Authorization	\$	500,000,000
<u>Issuances</u>		
2015A	\$	(59,790,000)
Remaining Authorization	\$	440,210,000

Projected Revenue for Debt Service and Coverage Ratio

Projected Water Utility Financials

	<u>FY2016</u>	<u>FY2017</u>	<u>FY2018</u>	<u>FY2019</u>
Net Revenue for Debt Service	\$ 71,753,979	\$ 72,346,227	\$ 72,929,513	\$ 73,503,469
Aggregate Debt Service	\$ 29,439,534	\$ 31,362,126	\$ 31,359,985	\$ 31,357,224
Debt Service Coverage Ratio	2.44	2.31	2.33	2.34



Governance Structures

KC Water

- Three utilities with two separate funds:
 - Water
 - Wastewater (Sewer) / Stormwater
- \$360 million budget funded by ratepayers
 - KCMO Businesses and Residents
 - Wholesale and Inter-jurisdictional Customers
 - Stormwater System Expansion - PIAC

KC Water's Governance

- KC Water proposes a budget to the City Manager
- City Manager / Mayor submit the budget to the City Council every year.
- The 13 member City Council acts as KC water's current governance board
- Ultimately, the City Council has the final say in approving or not approving the KC Water's budget and associated rate structure each fiscal year.

Governance Issues

- **Rate Setting** - The process of allocating revenue requirements to customers via the price of the service (i.e. water, wastewater, & stormwater fees).
- **Management / Operational Rules** - The local governing rules regarding contracting, hiring, benefits, union vs. non-union, purchasing, etc.
- **System Growth and Design** - Where, when and how capital is spent. Dictates how the system and inevitably the service area grows.
- **Cost of Capital** - Utilities are extremely capital intensive. The cost of capital directly impacts the rates and what is needed for revenue requirements.



Water Rate Structure and Options

Kansas City's Water Rate Structure

- Kansas City has fixed service charge and declining block structure by customer class

		<u>Service Charge</u>		<u>Seasonal Off-Peak Commodity Charge</u> \$2.93 per 100 cubic feet	
<u>Meter Size (Inches)</u>	<u>Inside City</u>	<u>Outside City</u>		<u>Fire Protection Charge</u>	
	<u>Billed Monthly</u>	<u>Billed Monthly</u>		<u>Connection Size (Inches)</u>	<u>Rate per Annum</u>
5/8	\$13.90	\$15.15		4 or less	\$116.00
3/4	\$14.95	\$16.25		6	\$341.00
1	\$18.30	\$19.90		8	\$726.00
1-1/2	\$22.08	\$24.70		10	\$1,306.00
2	\$35.00	\$38.00		12	\$2,110.00
3	\$119.50	\$120.00		16	\$4,496.00
4	\$150.50	\$152.50			
6	\$224.00	\$226.00			
8	\$324.00	\$324.00			
10	\$426.00	\$435.00			
12	\$502.00	\$511.00			

		<u>Commodity Charge</u>		<u>Wholesale</u>	
<u>Cubic Feet</u>	<u>Inside City</u>	<u>Outside City</u>		<u>Charge / 100 Cubic Feet</u>	
	<u>Charge / 100 Cubic Feet</u>	<u>Cubic Feet</u>	<u>Charge / 100 Cubic Feet</u>	<u>Unrestricted</u>	
First 600	\$4.60	First 5,000	\$5.00	Restricted	\$2.18
Next 4,400	\$5.09	Over 5,000	\$3.98		
Next 995,000	\$4.29			1 st Repump	\$0.20
Over 1,000,000	\$3.03			2 nd Repump	\$0.27

Calculating a KCMO Bill

- Water Service Charge
 - Based on size of meter
- Water Usage Charge
 - Based on volume used

[Bill Evaluation.xlsx](#)

Different Rate Structures and Purpose

- Flat Fee
 - All customers are charged the same.
- Uniform Rate
 - Constant per unit price for all metered units of water consumed.
- Increasing Block
 - Unit price of each succeeding block of usage charged at a higher unit rate than the previous block(s).
- Declining Block
 - Unit price of each succeeding block of usage is charged at a lower unit rate than the previous block(s).

Ref: EPA WaterSense
4/19/2016 38

Different Rate Structures and Purpose

- Seasonal
 - Rates for a specific time period, encourages conservation.
- Drought
 - Adjust rates based on the local area's drought level, encourages conservation.
- Water Budget
 - Household given a "water budget" based on the anticipated needs of that household either by the number of people living in the house and/or property size.

Considerations when Determining Rate Structure

- Recovers Costs of the Utility
 - Capital Costs and Operating Costs
- Availability and Quality of Data
- Administrative Costs of Structure
- Customer Segmentation
- Seasonality of Revenue and Costs



Guiding Principles Questionnaire



Task Force Discussion



Schedule and Next Steps

Anticipated Schedule

Date	Topics
April 19, 2016	<ul style="list-style-type: none">• Roles/Member Orientation• Water Services Overview• Customer Profile• Current Rate Structures• History of Previous Task Force• Funding Challenges• Topics and Schedule
May 2016	<ul style="list-style-type: none">• Guiding Principles questionnaire• Water utility overview• Water utility – cost recovery options
June 2016	<ul style="list-style-type: none">• Stormwater utility overview• Discussion of stormwater funding sources and levels needed• Guiding Principles discussion
July 2016	<ul style="list-style-type: none">• Wastewater utility overview• Wastewater utility – cost recovery options• Draft Guiding Principles

Anticipated Schedule, continued

Date	Topics
August 2016	<ul style="list-style-type: none"> • Overview of Customer Assistance Program • Overview of System Development Charge options
September 2016	<ul style="list-style-type: none"> • Water rate structures
October 2016	<ul style="list-style-type: none"> • Wastewater utility rate structures • Water utility and wastewater utility fixed charges • All utilities – infrastructure replacement funding
November 2016	<ul style="list-style-type: none"> • Water utility draft recommendations presentation • Public hearing
December 2016	<ul style="list-style-type: none"> • Stormwater utility draft recommendations and presentation • First Southwest Securities presentation (tentative) • Public hearing
January 2017	<ul style="list-style-type: none"> • Wastewater utility draft recommendations presentation • Public hearing
February 2017	<ul style="list-style-type: none"> • Consider public input and finalize recommendations
March 2017	<ul style="list-style-type: none"> • Finalize recommendations



Public Comment



Meeting Adjourned