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 coagulating 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. The important process takes place 365 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 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

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

*Source: December 2015 Rating Agency Credit Presentation.*
# Residential Consumption (in CCFs)

<table>
<thead>
<tr>
<th></th>
<th>Residential Usage</th>
<th>Residential Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>May</td>
<td>1,013,530</td>
<td>928,226</td>
</tr>
<tr>
<td>Jun</td>
<td>946,617</td>
<td>1,017,210</td>
</tr>
<tr>
<td>Jul</td>
<td>1,288,284</td>
<td>1,175,619</td>
</tr>
<tr>
<td>Aug</td>
<td>1,202,673</td>
<td>1,195,054</td>
</tr>
<tr>
<td>Sep</td>
<td>1,521,408</td>
<td>1,405,440</td>
</tr>
<tr>
<td>Oct</td>
<td>1,146,235</td>
<td>1,141,411</td>
</tr>
<tr>
<td>Nov</td>
<td>1,159,858</td>
<td>1,051,868</td>
</tr>
<tr>
<td>Dec</td>
<td>899,081</td>
<td>993,490</td>
</tr>
<tr>
<td>Jan</td>
<td>1,102,161</td>
<td>1,055,314</td>
</tr>
<tr>
<td>Feb</td>
<td>846,723</td>
<td>901,164</td>
</tr>
<tr>
<td>Mar</td>
<td>1,035,418</td>
<td>924,483</td>
</tr>
<tr>
<td>Apr</td>
<td>771,154</td>
<td>815,942</td>
</tr>
<tr>
<td></td>
<td>12,933,141</td>
<td>12,605,221</td>
</tr>
</tbody>
</table>
Water Consumption (in CCFs)

FY 2015
FY 2014
10 YR Avg
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 Consumption (FY2011 - FY2015 in CCFs)](chart)
Water Usage by Month (all customers)

Water Usage (CCFs)
Monthly

Summer Impact

 FY 2014  FY 2015  FY 2016  Monthly % From Prior YR
Water Revenue by Customer Type

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

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

Source: December 2015 Rating Agency Credit Presentation.
Water Customers

FY2015 Water Revenue by Retail and Wholesale Customers

Retail Customers, 88%
$124,411,000

Wholesale Customers, 12%
$17,395,000

4/19/2016
# Top Water Customers, Including Wholesale (FY2015)

<table>
<thead>
<tr>
<th>Customer</th>
<th>Type of Business</th>
<th>Percent of Total Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Lee’s Summit</td>
<td>Wholesale water</td>
<td>3.6%</td>
</tr>
<tr>
<td>Jackson County PWSD #1 (Grandview)</td>
<td>Wholesale water</td>
<td>3.4%</td>
</tr>
<tr>
<td>City of Belton</td>
<td>Wholesale water</td>
<td>2.4%</td>
</tr>
<tr>
<td>City of Raymore</td>
<td>Wholesale water</td>
<td>2.2%</td>
</tr>
<tr>
<td>Raytown Water Company</td>
<td>Wholesale water</td>
<td>1.8%</td>
</tr>
<tr>
<td>City of Blue Springs</td>
<td>Wholesale water</td>
<td>1.7%</td>
</tr>
<tr>
<td>Veolia – Kansas City</td>
<td>Utility</td>
<td>1.5%</td>
</tr>
<tr>
<td>KCP&amp;L</td>
<td>Utility</td>
<td>1.4%</td>
</tr>
<tr>
<td>Dogwood Power Management</td>
<td>Utility</td>
<td>1.2%</td>
</tr>
<tr>
<td>Ford Motor Company</td>
<td>Commercial</td>
<td>1.2%</td>
</tr>
</tbody>
</table>
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)
FY2017 Water Utility Expense Budget

Water Utility Budget (FY2017)

- Capital Improvements: 10%
- Salaries: 23%
- Capital Outlays: 4%
- Commodities: 31%
- Debt Service: 10%
- Contractual Services: 22%
Water Planned CIP: FY2017

FY2017 Water Planned CIP ($101M)
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

<table>
<thead>
<tr>
<th>Water Bonds</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005 Authorization</td>
</tr>
<tr>
<td><strong>Issuances</strong></td>
</tr>
<tr>
<td>2008A</td>
</tr>
<tr>
<td>2009A</td>
</tr>
<tr>
<td>2012A</td>
</tr>
<tr>
<td>2013A</td>
</tr>
<tr>
<td>2014A</td>
</tr>
<tr>
<td><strong>Remaining Authorization</strong></td>
</tr>
<tr>
<td>April 2014 Authorization</td>
</tr>
<tr>
<td><strong>Issuances</strong></td>
</tr>
<tr>
<td>2015A</td>
</tr>
<tr>
<td><strong>Remaining Authorization</strong></td>
</tr>
</tbody>
</table>
## Projected Revenue for Debt Service and Coverage Ratio

### Projected Water Utility Financials

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

<table>
<thead>
<tr>
<th>Meter Size (Inches)</th>
<th>Inside City Billed</th>
<th>Outside City Billed</th>
<th>Commodity Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>5/8</td>
<td>$13.90</td>
<td>$15.15</td>
<td>$2.93 per 100 cubic feet</td>
</tr>
<tr>
<td>¾</td>
<td>$14.95</td>
<td>$16.25</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>$18.30</td>
<td>$19.90</td>
<td></td>
</tr>
<tr>
<td>1-1/2</td>
<td>$22.08</td>
<td>$24.70</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>$35.00</td>
<td>$38.00</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>$119.50</td>
<td>$120.00</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>$150.50</td>
<td>$152.50</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>$224.00</td>
<td>$226.00</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>$324.00</td>
<td>$324.00</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>$426.00</td>
<td>$435.00</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>$502.00</td>
<td>$511.00</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cubic Feet</th>
<th>Inside City Charge / 100</th>
<th>Outside City Charge / 100</th>
<th>Wholesale Charge / 100</th>
<th>Charge / 100</th>
</tr>
</thead>
<tbody>
<tr>
<td>First 600</td>
<td>$4.60</td>
<td>$5.00</td>
<td>$3.98</td>
<td>$2.26</td>
</tr>
<tr>
<td>Next 4,400</td>
<td>$4.29</td>
<td>$5.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Next 995,000</td>
<td>$3.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Over 1,000,000</td>
<td>$2.50</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Fire Protection Charge
- Connection Rate per Size (Inches) Annum
- 4 or less $116.00
- 6 $341.00
- 8 $726.00
- 10 $1,306.00
- 12 $2,110.00
- 16 $4,496.00
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).
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

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
</tr>
</thead>
</table>
| April 19, 2016 | • Roles/Member Orientation  
                  • Water Services Overview  
                  • Customer Profile  
                  • Current Rate Structures  
                  • History of Previous Task Force  
                  • Funding Challenges  
                  • Topics and Schedule |
| May 2016     | • Guiding Principles questionnaire  
                  • Water utility overview  
                  • Water utility – cost recovery options |
| June 2016    | • Stormwater utility overview  
                  • Discussion of stormwater funding sources and levels needed  
                  • Guiding Principles discussion |
| July 2016    | • Wastewater utility overview  
                  • Wastewater utility – cost recovery options  
                  • Draft Guiding Principles |
## Anticipated Schedule, continued

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
</tr>
</thead>
</table>
| **August 2016** | • Overview of Customer Assistance Program  
                 • Overview of System Development Charge options |
| **September 2016** | • Water rate structures                                               |
| **October 2016** | • Wastewater utility rate structures  
                     • Water utility and wastewater utility fixed charges  
                     • All utilities – infrastructure replacement funding |
| **November 2016** | • Water utility draft recommendations presentation  
                      • Public hearing                                                 |
| **December 2016** | • Stormwater utility draft recommendations and presentation  
                      • First Southwest Securities presentation (tentative)  
                      • Public hearing                                               |
| **January 2017** | • Wastewater utility draft recommendations presentation  
                     • Public hearing                                               |
| **February 2017** | • Consider public input and finalize recommendations                  |
| **March 2017**  | • Finalize recommendations                                            |
Public Comment
Meeting Adjourned