Capital Improvement Program
Fiscal Year 2015-2016
“We are building a world-class city for the future.”
- Mayor Sly James
“You are ultimately establishing the quality of life for future generations.”

- Troy Schulte, City Manager
Kansas City Water Services

1 Water Treatment Plant
18 Pump Stations
2,800 Miles of Water Main
35,000 Valves
23,000 Fire Hydrants

6 Wastewater Treatment Plants
46 Pump Stations
2,800 Miles of Sewer Main
67,000 Manholes

630 Miles of Storm Sewer
53,000 Storm Inlets
15 Stormwater Pump Stations
13.5 Miles of Levee
## Serving Our Customers

<table>
<thead>
<tr>
<th>FY14-FY15 Budget</th>
<th>$346 million</th>
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<tbody>
<tr>
<td>Water</td>
<td>$157 million</td>
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<tr>
<td>Wastewater</td>
<td>$171 million</td>
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<tr>
<td>Stormwater</td>
<td>$18 million</td>
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</table>

## Average Monthly Residential Bill

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>Water</td>
<td>$44.54</td>
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<tr>
<td>Wastewater</td>
<td>$46.60</td>
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<tr>
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<td>$2.50</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$93.64</strong></td>
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</table>
ANDY SHIVELY, P.E.
ENGINEERING OFFICER, KANSAS CITY WATER SERVICES

Capital Improvement Program
FY 2016-2020
Agenda

- Highlights: FY 2014-15 Capital Improvements
- Challenges & Opportunities
- Overview: Kansas City’s Capital Improvement Program
- CIP Focus Areas
- Getting to Work: Kansas City’s FY 2016-2020 Project Schedule
- Fiscal Year 2016
- Project Recognition
Highlights:
FY 2014-15 Capital Improvements
FY 2014-15 Citywide Programs

- Water Main Replacement Program
- Flood Protection Program
- Kansas City’s Overflow Control Program
- Sewer Rehabilitation Program
- Catch Basin Replacement Program
## Capital Project Delivery: FY 2015

$116 Million Investment, 85+ Projects

<table>
<thead>
<tr>
<th>MONTH</th>
<th># WATER PROJECTS</th>
<th># SEWER PROJECTS</th>
<th># STORMWATER PROJECTS</th>
<th>TOTAL CONTRACTS</th>
<th>TOTAL AMOUNT</th>
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<tr>
<td>MAY</td>
<td>8</td>
<td>3</td>
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<td>16</td>
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<tr>
<td>JUNE</td>
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<td>4</td>
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<td>1</td>
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<tr>
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<tr>
<td>JANUARY</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>$3,101,000</td>
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<tr>
<td>TOTAL Y-T-D</td>
<td>46</td>
<td>24</td>
<td>11</td>
<td>86</td>
<td>$116,730,000</td>
</tr>
</tbody>
</table>
Program Investment: 2010-2035

- **2010-2015**: Average $83 M/year
- **2016-2020**: Average $258 M/year
KANSAS CITY:

Challenges & Opportunities
The National Water Infrastructure Crisis

$1,000,000,000,000,000

$1 Trillion nationwide infrastructure investment need over the next 25 years.*

*2012 AWWA Report: Buried No Longer
National Data: Combined Sewer Overflows

850 Billion Gallons Of Discharge

772 Communities

40 Million People

$57 Billion Investment

2004 EPA Report to Congress: Impacts and Control of CSOs and SSOs
Kansas City’s Annual Combined Sewer Overflow Volume

- 6.4 Billion Gallons
- Planned Reduction
- Green infrastructure
- Sewer Separation
- In-Line Storage Gates
- Pipe Consolidation
- Relief Sewers
- Tunnels
- Wet Weather Treatment
- 1.4 Billion Gallons
Separate Sewer System
Inflow/Infiltration Reduction

![Graph showing planned and actual data points for Millions of Gallons per Day from 2012 to 2023.}]
OVERVIEW: KANSAS CITY’S

Capital Improvement Program
Water Services Capital Improvement Program

**Investing in the future of our team and our community so we may continue a legacy of providing quality services for generations to come.**

- **$1.2 billion** investment over 5 years
- Over **18,000** direct and indirect **jobs created**
- Projects designed to:
  - Improve water quality and protect public health
  - Improve customer utility services
  - Meet regulatory requirements
  - Promote economic development
  - Build and maintain utility infrastructure
Capital Improvement Program

Water

Wastewater

Stormwater

Performance Measures

Overflow Control Program

Water Main Replacement Program

Sewer Main Rehabilitation Program

Flood Protection Program

Catch Basin Replacement Program

Focus Areas
## Performance Goals

<table>
<thead>
<tr>
<th>Program</th>
<th>Goal</th>
</tr>
</thead>
</table>
| Overflow Control Program               | Consent Degree Requirements  
Overflow Reduction  
Envision Application |
| Water Main Replacement Program         | 28 miles of Water Main                                               |
| Sewer Main Rehabilitation Program      | 28 miles of Sewer Main                                                |
| Flood Protection Program               | $20 million in flood risk reduction  
Leverage City investments between 50-80%                              |
| Catch Basin Replacement Program         | 100 catch basins/year                                                 |
Water Main Replacement Program

- 100 Year Plan
- Strategic & Data Driven
- Improves System Reliability
- 28 Miles/Year
Sewer Main Rehabilitation Program

• 100 Year Plan
• Strategic & Data Driven
• Improves System Reliability
• 28 Miles/Year
Flood Protection Program

- Flood Risk Management
- Environmental Features
- Economic Development
- Recreational Corridors
Catch Basin Replacement Program

- $500,000 per year
- Replace about 100/year
- Goal is to replace 1% annually
- More than 44,000 catch basins city-wide
CIP Focus Areas
FY16 Focus Areas

INFLOW/INFILTRATION
  PUBLIC
  PRIVATE

TECHNOLOGY & EFFICIENCY
  ALTERNATE DELIVERY
  CONSTRUCTION MANAGEMENT

SUSTAINABILITY
  ENVISION

WORKFORCE
  SLBE CAPACITY
  INTERNAL EDUCATION
  OCP UNIVERSITY
  LOCAL PARTNERSHIPS
Inflow/Infiltration Program

Cost Allocation

Public
71%
$178 Million

Private
29%
$72 Million

Inflow/Infiltration Percent Reduction

Public
57%

Private
43%

$250 Million Investment
Technology & Efficiency:
Alternate Delivery & Construction Management
Workforce Development Programs

- OCP University
- Project Managers

- Construction Contractors
- Future Generation of Utility Staff
- Water Industry Education
Sustainability: Envision

CITY POLICY

SOLICITATION RFQ/P

PROJECT REQUIREMENTS

CERTIFICATION OF MEASURED RESULTS
FY 2016-2020
Capital Improvement Program
Water CIP: FY16-FY20

Number of Contracts by Project Type

- Distribution: 116 contracts
- Treatment: 30 contracts
- Pump Station: 20 contracts
- Transmission: 6 contracts

Total contracts: 172
## Water CIP: FY16-FY20

### Budget Amounts by Project Type

<table>
<thead>
<tr>
<th>Project Type</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>$10,500,000</td>
<td>$22,000,000</td>
<td>$23,500,000</td>
<td>$15,500,000</td>
<td>$27,000,000</td>
</tr>
<tr>
<td>Pump Station</td>
<td>$11,090,000</td>
<td>$25,915,000</td>
<td>$5,300,000</td>
<td>$17,000,000</td>
<td>$0</td>
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<tr>
<td>Transmission</td>
<td>$7,850,000</td>
<td>$0</td>
<td>$6,000,000</td>
<td>$1,820,000</td>
<td>$900,000</td>
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<tr>
<td>Distribution</td>
<td>$49,255,000</td>
<td>$56,940,000</td>
<td>$46,000,000</td>
<td>$46,000,000</td>
<td>$51,000,000</td>
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<tr>
<td>Total</td>
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<td>$104,855,000</td>
<td>$80,800,000</td>
<td>$80,320,000</td>
<td>$78,900,000</td>
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</tbody>
</table>

**Total Water 5-Year CIP**

$423,570,000
## Water FY16-FY20: Maintenance Program

<table>
<thead>
<tr>
<th>Project Type</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve Exercising</td>
<td>$1,100,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Supplemental Workforce</td>
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<td>$2,500,000</td>
<td>$2,650,000</td>
<td>$2,650,000</td>
<td>$2,650,000</td>
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<tr>
<td>Air Release Valves</td>
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<td>$150,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Curb Stops</td>
<td>$2,000,000</td>
<td>$500,000</td>
<td>$500,000</td>
<td>$500,000</td>
<td>$500,000</td>
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<tr>
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<td>$0</td>
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<td>$0</td>
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<tr>
<td>Hydrant Repair</td>
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<td>$1,000,000</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
<td>$1,000,000</td>
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<tr>
<td>Valve Exercising Maintenance</td>
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<td>$850,000</td>
<td>$850,000</td>
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<td>Valve Replacement</td>
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<td>$2,000,000</td>
<td>$2,000,000</td>
<td>$2,000,000</td>
<td>$2,000,000</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$9,000,000</strong></td>
<td><strong>$7,000,000</strong></td>
<td><strong>$7,000,000</strong></td>
<td><strong>$7,000,000</strong></td>
<td><strong>$7,000,000</strong></td>
</tr>
</tbody>
</table>
Wastewater CIP: FY16-FY20

Number of Contracts by Project Type

- Overflow Control Program: 132 contracts
- Collection System: 40 contracts
- Treatment: 33 contracts
- Pump Station: 3 contracts

Total contracts: 208
# Wastewater CIP: FY16-FY20

## Budget Amounts by Project Type

<table>
<thead>
<tr>
<th>Project Type</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wastewater Treatment</td>
<td>$13,550,000</td>
<td>$31,970,000</td>
<td>$39,170,000</td>
<td>$3,000,000</td>
<td>$36,000,000</td>
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<tr>
<td>Pump Stations</td>
<td>$10,000,000</td>
<td>$7,250,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Collection System</td>
<td>$27,760,000</td>
<td>$15,060,000</td>
<td>$15,060,000</td>
<td>$15,060,000</td>
<td>$15,060,000</td>
</tr>
<tr>
<td>Overflow Control Program</td>
<td>$137,420,000</td>
<td>$183,470,000</td>
<td>$88,190,000</td>
<td>$153,590,000</td>
<td>$30,560,000</td>
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<td><strong>Total</strong></td>
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<td><strong>$237,750,000</strong></td>
<td><strong>$142,420,000</strong></td>
<td><strong>$171,650,000</strong></td>
<td><strong>$81,620,000</strong></td>
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</table>

**Total Wastewater 5-Year CIP: $822,170,000**
## Wastewater FY16-FY20: Maintenance Program

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<tr>
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<th>FY16</th>
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<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
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<tr>
<td>Private Line Repair</td>
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<td>$3,000,000</td>
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<tr>
<td>Supplemental Workforce</td>
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<td>$3,000,000</td>
<td>$3,000,000</td>
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<tr>
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<td><strong>$8,060,000</strong></td>
<td><strong>$8,060,000</strong></td>
<td><strong>$8,060,000</strong></td>
<td><strong>$8,060,000</strong></td>
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</table>
Stormwater CIP: FY16-FY20

VOTE!
June 2015
## Stormwater & Waterways FY16-FY20: Maintenance Program

<table>
<thead>
<tr>
<th></th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
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<tr>
<td>Levee &amp; Channel Maintenance</td>
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<td>$790,000</td>
<td>$440,000</td>
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<td>$322,000</td>
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<td>$500,000</td>
<td>$500,000</td>
<td>$500,000</td>
<td>$500,000</td>
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<td><strong>Total</strong></td>
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<td><strong>$1,985,000</strong></td>
<td><strong>$1,622,000</strong></td>
<td><strong>$1,500,000</strong></td>
<td><strong>$1,566,000</strong></td>
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WATER SERVICES’

FY 2016 Capital Improvement Program
Water CIP: FY16

Number of Projects by Project Type

- Distribution: 49 projects
- Treatment: 9 projects
- Pump Station: 7 projects
- Transmission: 1 project

Total projects: 66

Design: $10.7 M
Construction: $49 M
## Water CIP: FY16

### Budget Amounts by Project Type

<table>
<thead>
<tr>
<th>Project Type</th>
<th>FY16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treatment</td>
<td>$10,500,000</td>
</tr>
<tr>
<td>Pump Station</td>
<td>$11,090,000</td>
</tr>
<tr>
<td>Transmission</td>
<td>$7,850,000</td>
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<tr>
<td>Distribution</td>
<td>$49,260,000</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$78,700,000</strong></td>
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## Wastewater CIP: FY16

### Budget Amounts by Project Type

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<th>Project Type</th>
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<tbody>
<tr>
<td>Wastewater Treatment</td>
<td>$13,550,000</td>
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<tr>
<td>Pump Stations</td>
<td>$10,000,000</td>
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<tr>
<td>Collection System</td>
<td>$27,760,000</td>
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<tr>
<td>Overflow Control Program</td>
<td>$137,420,000</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$188,730,000</strong></td>
</tr>
</tbody>
</table>
Stormwater & Waterways CIP: FY16

19 Projects

- Conveyance: 9
- Green Infrastructure: 2
- Channel: 2
- Trails: 2
- Drainage: 1
- Other: 1

Total Projects: 19
### Stormwater & Waterways CIP: FY16

#### Budget Amounts by Project Type

<table>
<thead>
<tr>
<th>Project Type</th>
<th>FY16</th>
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</thead>
<tbody>
<tr>
<td>Conveyance</td>
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<tr>
<td>Green Infrastructure</td>
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<tr>
<td>Drainage Improvements</td>
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<td>Other</td>
<td>$140,000</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>$6,840,500</strong></td>
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</table>
Building a Legacy & Serving our Citizens
Project Recognition
Downtown Streetcar
Sewer Tunnel Rehabilitation: 22nd & Paseo
First and Second Creek Interceptor: Pump Stations and Force Mains
Tell us how we did!
Survey coming your way....
Save the Date!
02/16/16
Water Services CIP Rollout FY 2017
Thank You