City of Rockdale
Water and Wastewater
CIP Overview

City Council
January 2018

Bob Lane, P.E.
Stuart Cowell, P.E.
KSA Engineers, Inc.
# Original 2017 Prioritized CIP Roster

## Water:

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cast Iron w/Lead Joints (10,000 LF)</td>
<td>$1,000,000</td>
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<tr>
<td>2</td>
<td>Cast Iron w/Rubber Joints (110,000 LF)</td>
<td>$11,000,000</td>
</tr>
<tr>
<td>3</td>
<td>Asbestos Cement Pipe Replacement (28,000 LF)</td>
<td>$3,640,000</td>
</tr>
<tr>
<td>4</td>
<td>Texas Street WTP Replacement</td>
<td>$9,000,000</td>
</tr>
<tr>
<td>5</td>
<td>Repaint &amp; Retro-fit Mill Street Water Tank</td>
<td>$400,000</td>
</tr>
<tr>
<td>6</td>
<td>New Development Water Lines</td>
<td>$1,500,000</td>
</tr>
<tr>
<td>7</td>
<td>Fire Hydrant Replacement - Frozen Valves (20)</td>
<td>$250,000</td>
</tr>
<tr>
<td>8</td>
<td>AMR - Direct Upload Meters</td>
<td>$350,000</td>
</tr>
<tr>
<td>9</td>
<td>Update Hydraulic Model &amp; Base Map</td>
<td>$30,000</td>
</tr>
<tr>
<td>10</td>
<td>Intergrated City Mapping</td>
<td>$35,000</td>
</tr>
<tr>
<td>11</td>
<td>New Treatment, GST, and HSPS w/Pressure Tank at Airport</td>
<td>$2,500,000</td>
</tr>
</tbody>
</table>

**Subtotal**: $29,705,000

## Wastewater:

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Vitrified Clay Pipe Replacement (I/I Reduction w/CCTV or Smoke Testing)</td>
<td>$3,000,000</td>
</tr>
<tr>
<td>2</td>
<td>East Cameron Lift Station</td>
<td>$250,000</td>
</tr>
<tr>
<td>3</td>
<td>WWTP Retro-fit: SBR Tank, Digester, Blowers</td>
<td>$6,000,000</td>
</tr>
<tr>
<td>4</td>
<td>Manhole Rehabilitation or Replacement</td>
<td>$350,000</td>
</tr>
<tr>
<td>5</td>
<td>New Development Trunk Lines*</td>
<td>$3,000,000</td>
</tr>
</tbody>
</table>

**Subtotal**: $12,600,000

## 2017 CIP ROSTER TOTAL WATER & SEWERAGE BUDGET (todays $)

$42,305,000

(+ 2% Inflationary Index (for Fiscal Years 2018 & 2019))

$44,014,122
## Original 20 Year Look Ahead

### Water:

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Cost</th>
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<tbody>
<tr>
<td>1</td>
<td>Elevated Water Storage Tank Northeast</td>
<td>$1,800,000</td>
</tr>
<tr>
<td>2</td>
<td>New Well for Industrial Park near Texas Street</td>
<td>$500,000</td>
</tr>
<tr>
<td>3</td>
<td>Mill Street WTP Replacement</td>
<td>$10,500,000</td>
</tr>
<tr>
<td>4</td>
<td>New Mill Street Elevated Water Storage Tank</td>
<td>$1,800,000</td>
</tr>
<tr>
<td>5</td>
<td>WWTP Expansion: SBR Tank, Auger Screen, EQ)</td>
<td>$5,000,000</td>
</tr>
<tr>
<td></td>
<td><strong>Subtotal</strong></td>
<td><strong>$19,600,000</strong></td>
</tr>
</tbody>
</table>

### Wastewater:

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<th>Cost</th>
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<tr>
<td>1</td>
<td>Vitrified Clay Pipe Replacement (I/I Reduction)</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>2</td>
<td>Manhole Rehabilitation or Replacement</td>
<td>$350,000</td>
</tr>
<tr>
<td>3</td>
<td>Cleanouts &amp; Existing Residents (1000)</td>
<td>$750,000</td>
</tr>
<tr>
<td></td>
<td><strong>Subtotal</strong></td>
<td><strong>$2,100,000</strong></td>
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</tbody>
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### 20 Year Look Ahead Roster Total Water & Sewerage Budget

$21,700,000

### Total Budget Major Infrastructure Improvements

$65,714,122
Primary Focus – Red Water
New Prioritized CIP Roster by Problem or Performance Type
## RED WATER & CORROSION ISSUES:

1. **Cast Iron Pipe Replacement (120,000 LF)**
   - Cost: 12,000,000

2. **Texas Street WTP Filtration Retro-fit:**
   - WTP Filtration Process
   - Chemical Feed, SCADA, Electrical, Operations
   - Cost: 4,500,000

## Option 1.a

3. **Mill Street WTP Replacement @ Airport**
   - Cost: 10,865,000
   - New 12" Supply Piping to Mill Street Elevated Water Storage Tank
   - Cost: 2,500,000
   - Subtotal: 29,865,000

## Option 1.b

4. **Mill Street WTP Replacement - Across the Street from Current Location**
   - Cost: 10,565,000

5. **New Treatment, GST, and HSPS w/Pressure Tank @ Airport**
   - Cost: 2,500,000
   - Subtotal: 29,565,000

## Option 1.c

6. **Mill Street WTP Filter Upgrades (Underdrains)**
   - Cost: 565,000

7. **New Treatment, GST, and HSPS w/Pressure Tank @ Airport**
   - Cost: 2,500,000
   - Subtotal: 19,565,000

## MAINTENANCE & RELIABILITY:

1. **Asbestos Cement Pipe Replacement (28,000 LF)**
   - Cost: 3,640,000

2. **Repaint & Retro-fit Mill Street Water Tank**
   - Cost: 400,000

3. **Replacement Water Lines (Capacity)**
   - Cost: 1,500,000

4. **Fire Hydrant Replacement - Frozen Valves (20)**
   - Cost: 250,000
   - Subtotal: 5,790,000

## CITY OPERATIONS AND EFFICIENCY:

1. **AMR - Direct Upload Meters**
   - Cost: 350,000

### Water Subtotal w/Option 1.a, above:

- **Cost: $36,005,000**
### Wastewater:

**WASTEWATER TREATMENT PLANT STRESS:**
- Vitrified Clay Pipe Replacement (I/I Reduction w/CCTV or Smoke Testing)
  - 1. 3,000,000
- Manhole Rehabilitation or Replacement
  - 2. 350,000
- WWTP Retro-fit: SBR Tank
  - 3. 4,000,000

**Subtotal:** 7,350,000

**MAINTENANCE & RELIABILITY:**
- East Cameron Lift Station
  - 1. 250,000
- Replacement Trunk Lines (Capacity)
  - 2. 3,000,000

**Subtotal:** 3,250,000

**Wastewater Subtotal:** 10,600,000

2017 CIP ROSTER TOTAL WATER & SEWERAGE BUDGET (today's $) 0

(+) 2% Inflationary Index (for Fiscal Years 2018 & 2019) $1,882,842

Total 2017 CIP ROSTER TOTAL WATER & SEWERAGE BUDGET $48,487,842
Projects Omitted from Option 1.c
(invented to save money)

• New Water Treatment Plants. Your existing plants will remain operational and both plants will be retro-fitted, as follows:
  – Mill Street WTP will receive a minor filtration media upgrade. The remainder of the plant is 61 years old and is at the end of its useful life.
  – Texas Street WTP will receive a substantial upgrade with a brand new filtration system.
Final Comments
(using Option 1.c)

- Over time (a period of several years) the Red Water Issue will eventually go away except for occasional system upsets and hydraulic surges.

-Sources:
  Tanks
  Unreplaced Lines or Breaks
  Fire Flow shifting the flow-line inside the pipe
Contact Information:

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