SAWS Capital Improvements Program

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Manager – Engineering

January 31, 2018
SAWS Infrastructure by the Numbers

One of Nation’s Largest Municipally Owned Utilities

- Projected 5 year Capital Program: $2 Billion
- ≈ 12,500 miles of pipelines
- 4 major plants
- 73 pump stations
- 191 wells
- 117 storage tanks
### SAWWS CIP 2018-2022

<table>
<thead>
<tr>
<th></th>
<th>2018</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
<th>2022</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td>$391.4</td>
<td>$417.5</td>
<td>$379.5</td>
<td>$447.9</td>
<td>$373.5</td>
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<tr>
<td><strong>Wastewater</strong></td>
<td>187.6</td>
<td>211.9</td>
<td>217.6</td>
<td>302.0</td>
<td>209.9</td>
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<tr>
<td><strong>Water Delivery</strong></td>
<td>159.2</td>
<td>141.7</td>
<td>130.9</td>
<td>134.5</td>
<td>153.5</td>
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<tr>
<td><strong>Water Supply</strong></td>
<td>44.6</td>
<td>63.9</td>
<td>31.0</td>
<td>11.5</td>
<td>10.2</td>
</tr>
</tbody>
</table>

$ Millions
SAWS 2018 CIP

By Core Business

- Water Delivery: $159,169,902
- Wastewater: $187,634,903
- Water Resources: $44,590,528

TOTAL: $391M

$369M Construction
$20M Design
76% Replacement
24% Growth
Key Projects
2018 – 2019 CIP
Small and Large Diameter Rehab Program


- Program will fund the rehabilitation of approximately 45 miles of small and large diameter sewer mains.
- This project is part of the EPA Consent Decree.
2018 CIP Construction Projects

• Martinez Creek: $14.1M
• E-19 Seguin Road to Nacogdoches Road Phase 2: $28.1M
E-20 Wurzbach Parkway Segment 1


- Replace about 3 miles of 36” and 42” sewer pipelines with gravity sewer lines up to 54”
- Along Salado Creek
- Currently 90% Design Phase
- Project part of the EPA Consent Decree
Rilling Road Storage Facility

$4,418,935 (2019) Design

- Design a 15 million gallon storage facility at the former Rilling Road wastewater treatment plant (WWTP)
- The facility will provide for peak wet weather operational control at the Dos Rios WRC
- Design will include piping, pump station, instrumentation & control and other ancillary equipment related to the storage facility
- Construction is planned for late 2021
W-2 Huebner Creek: Eckhert Rd to Bandera Rd

$11,360,639 (2019) Construction

- Replace about 2 miles of 21” and 24” sewer pipelines with 42” gravity sewer lines
- Along Huebner Creek
- Project part of the EPA Consent Decree
Mission del Lago Sewer Main

$4,218,912 (2018) Construction

- Approximately 3.25 miles of 27-inch oversized sewer main (15-inch required) to accommodate growth on the South side
- SAWWS will participate in developer project
- Total cost is $5.7 million, SAWWS share is $3.6 million
Helotes Creek Gravity Main and LS#246 Elimination

$8,240,379 (2019) Construction

- Install about 1.5 miles of 15” gravity sewer pipeline to eliminate Lift Station #246 and bypass Lift Station #233
- Along Helotes Creek
- Project not part of EPA CD

![Map of Helotes Creek Gravity Main and LS#246 Elimination]
Dos Rios Water Recycling Center

$11.1 million (2018); $33.1 million (2019) Design & Construction

• 2018 projects
  – Dos Rios Chlorine Upgrades, $4.7 million
  – Dos Rios WRC Sludge Thickening Facility Expansion, $4.7 million

• 2019 projects
  – Dos Rios Headworks Enhancements, $2.7 million
  – Dos Rios WRC Electrical System Improvements - Phase 2, $21.7 million
  – Dos Rios WRC Sand Drying Beds Improvements, $3.9 million
Central Water SCADA and Control Coordination


- Integration of 45 MGD of water requires automation of facilities in up to 14 pressure zones
- Automate distribution equipment such as distribution pumps, flow control valves, wells, pressure reducing valves, elevated and ground storage tanks
Water Resource Integration Pipeline and Pump Stations Phase II

$37,070,914 (2018); $58,207,663 (2019) Const.

- Complete the pipeline from Old Pearsall Road to Anderson Pump Station
- Pump Stations at Twin Oaks and Old Pearsall Road
Water Pipeline Assessment Tools Today

• New technology allows us to see problems in advance
  – Air in pipes
  – Corrosion
  – Leaks
Water Main Condition Inspection and Replacement


- Inspect and assess water mains through structural and statistical analysis to determine causes of main breaks
- Design and replacement of water mains by SAWS crews or contractors as appropriate
Boerne Stage Water Main Replacement


• Three miles of 24-inch main was installed in 2007

• Repeated main breaks require inspection and analysis to determine the limits of replacement
Pleasanton Road Water Main Replacement

$8,369,976 (2018) Construction

- Replacement of approximately 5.7 miles of existing 3-inch, 6-inch, 8-inch, and 12-inch potable water pipeline with 12-inch PVC water pipeline
- Repeated main breaks requiring boil notices, undersized pipeline, and inadequate pipe material
Vance Jackson Water Main Replacement


- Replace 1.9 miles of 8-inch, 12-inch DI and 6-inch AC pipe with 8-, 12-, and 16-inch C-900 PVC pipe
- Repeated main breaks since 2009 leading to customer complaints require main replacement
Turtle Creek No. 3 Well Field, GST, Well Pumps, Main

$3,335,860 (2018); $33,357,387 (2019)

Design & Construction

• Design and construct a 1.5 mile transmission main and 5 million gallon ground storage tank, well pumps, and high services pumps

• Provides additional water source and redundancy to highly critical area of Medical Center
Water Production Facility Projects

$82 million (2018); $25.8 million (2019) Design & Construction

• Hunt Lane Elevated Storage Tank, $7.6 million
• Zarzamora Pump Station Upgrade, $4.0 million
• Wurzbach Pump Station Rehab, $21.8 million
• Artesia Pump Station Disinfection System Upgrades, $5.7 million
• La Rosa Pump Station Upgrade, $6.7 million
• Basin Pump Station Upgrade, $20.9 million
Governmental 2018 and 2019 Projects

Total - $46,218,880 (2018); $57,588,388 (2019)

- Governmental Engineering provides the necessary tools for the relocation and adjustments of SAWS water, recycled water and wastewater infrastructure to accommodate any Outside Agency improvements.
  
  - Water Delivery
    $22,077,328 (2018); $32,048,032 (2019)
  
  - Wastewater
    $24,141,552 (2018); $25,540,356 (2019)
Future Contract Opportunities

• 2018 Design Work Order Contracts
  – Multi-Contract RFQ
  – Estimated Total Amount: $4M
  – Anticipated Solicitation: 2nd Quarter
  – Work to include:
    • Small & Large Diameter Condition
    • Small & Large Diameter Capacity
    • Governmental
The Next Five Years

SAWS CIP 2018-2022

5 Year Total

$2 Billion

$1.4 Billion
Aging Infrastructure

$253 Million
Growth

$155 Million
Water Resources
SAWS Website Improvements

Finding contract opportunities and project information

• Business Center
  – Contract opportunities (Active & Future)
  – [https://www.saws.org/business_center/](https://www.saws.org/business_center/)

• SAWS Projects
  – Water projects coming soon
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