Safety Briefing

Welcome/Purpose: Brian Roche, VP/GM Water Wastewater Systems

CAPEX Overview: Raynetta Marshall, Director Project Engineering & Construction

Wastewater Treatment Projects: Bradley Collier, Manager Wastewater Plants

Water Treatment Projects: Hai Vu, Manager Water Plants

Delivery & Collection Projects: Beth DiMeo, Manager Delivery and Collection

Contract Requirements: Bryan Dewberry, Manager Project Controls

Closing Remarks/Questions: Raynetta Marshall
Welcome and Purpose

- Delivery of $1B W/WW Capital Program over the next 5 Years

- Enhance Communication
  - Engineering Consulting Firms
  - Construction Contractors
  - Jacksonville Small & Emerging Business

- Increase Number and Quality of Proposers/Bidders

- Alternative Project Delivery Methods for Select Projects

- Enterprise Asset Management (EAM)
**Water/Wastewater Engineering Standard Project Delivery Process**

Typical 5% - 30% Design Deliverables

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**Project Definition (PD)**
- Justification
- Process Flow Diagram
- Real Estate Identified
- Site Plan Review
- Project Schedule
- Cost Estimate: (+50%/-30%)

**Schematic Design Document (SDD)**
- Updated PD +
- Process Design
- Major Equipment Identified
- P&IDs
- Plan Views
- Cost/Benefit of Alternatives
- Cost Estimate: (+30% / -30%)

**Conceptual Design Document (CDD)**
- Updated SDD +
- Process Calculations Finalized
- Hydraulic Profile Finalized
- P&IDs Finalized and Locked
- Plan Views & Major Elevation Drawings, Electrical Schematics
- List of Specifications
- Itemized Cost Estimate with Equipment Quotes: (+30% / -15%)
- Project Schedule Finalized

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**Construct**
## Water/Wastewater 5-Year CAPEX

<table>
<thead>
<tr>
<th>Asset Category</th>
<th>Manager</th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
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<tbody>
<tr>
<td>Wastewater Treatment</td>
<td>Bradley Collier</td>
<td>$67,251</td>
<td>$54,275</td>
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<td>$32,558</td>
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<td>Interagency</td>
<td>Mickhail Sulayman</td>
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<td>$5,988</td>
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<td>O&amp;M Plants/Pump Stations</td>
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<td>O&amp;M Grid</td>
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<td>Large Diameter Program</td>
<td>Robert Cadle</td>
<td>$3,659</td>
<td>$7,123</td>
<td>$7,598</td>
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<td>O&amp;M System Control</td>
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<td>$412</td>
<td>$150</td>
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<td><strong>Subtotal</strong></td>
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<td>$178,480</td>
<td>$177,794</td>
<td>$199,049</td>
<td>$161,418</td>
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<td>Other (Fleet, Facilities, Meters, IT, etc.)</td>
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<td>$33,212</td>
<td>$35,871</td>
<td>$29,203</td>
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<td>$211,692</td>
<td>$213,664</td>
<td>$228,252</td>
<td>$190,095</td>
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**June 2017 Forecast:**

- $185,000
- $191,000
## Wastewater Treatment CAPEX Highlights

<table>
<thead>
<tr>
<th>($ in millions)</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
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<tr>
<td>Nassau Regional WRF</td>
<td>1</td>
<td>5</td>
<td>11</td>
<td>17</td>
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<tr>
<td>Buckman Biosolids Conversion</td>
<td>1</td>
<td>5</td>
<td>9</td>
<td>15</td>
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<tr>
<td>Bradley Rd PS</td>
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<td>7</td>
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<td>9</td>
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<tr>
<td>Pump Station Upgrades</td>
<td>12</td>
<td>22</td>
<td>7</td>
<td>41</td>
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<td>Pump Station Reliability</td>
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<td>7</td>
<td>7</td>
<td>21</td>
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<tr>
<td>Southwest WRF</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>9</td>
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<tr>
<td>Greenland WRF</td>
<td>1</td>
<td>3</td>
<td>15</td>
<td>19</td>
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<tr>
<td><strong>Subtotal</strong></td>
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<td><strong>$52</strong></td>
<td><strong>$54</strong></td>
<td><strong>$131</strong></td>
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<td><strong>FY Total</strong></td>
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<td><strong>$67</strong></td>
<td><strong>$62</strong></td>
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Blacks Ford WRF Expansion

![Map with project locations and costs]

- **Nassau**: $17M
- **Buckman**: $15M
- **Pump Stations**: $71M
- **Southwest**: $9M
- **Greenland**: $19M
### Water Treatment CAPEX Highlights

<table>
<thead>
<tr>
<th>($ in millions)</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>Total</th>
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<td>Otter Run WTP R&amp;R</td>
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<td>Lakeshore WTP Reservoir</td>
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<td>4</td>
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<td>Westlake WTP Expansion</td>
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<td>1</td>
<td>1</td>
<td>2</td>
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<tr>
<td>Cecil WTP HSPs/Tank</td>
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<td>2</td>
<td>1</td>
<td>4</td>
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<tr>
<td>Rivertown WTP</td>
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<td>6</td>
<td>6</td>
<td>13</td>
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<tr>
<td>Greenland WTP Expansion</td>
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<td>2</td>
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<td>5</td>
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<tr>
<td>Nocatee South RW Storage</td>
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<td>4</td>
<td>1</td>
<td>6</td>
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<tr>
<td>US 1 Booster Station</td>
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<td>5</td>
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<tr>
<td><strong>Subtotal</strong></td>
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<td>$22</td>
<td>$12</td>
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<tr>
<td><strong>FY Total</strong></td>
<td>$33</td>
<td>$45</td>
<td>$23</td>
<td>$101</td>
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- **NASSAU** $\$2M
- **NORTH GRID** $\$10M
- **SOUTH GRID** $\$31M

Greenland WTP Ozone Addition
## Delivery & Collection CAPEX Highlights

<table>
<thead>
<tr>
<th>Project Description</th>
<th>FY18</th>
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<tr>
<td>DII - Main St to Pulaski FM</td>
<td>3</td>
<td>1</td>
<td>--</td>
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<td>Walnut St Trunk Line</td>
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<td>4</td>
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<tr>
<td>Arlington East Sludge Line</td>
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<td>1</td>
<td>1</td>
<td>3</td>
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<tr>
<td>1st St to Franklin St WM</td>
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<td>5</td>
<td>1</td>
<td>7</td>
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<tr>
<td>South Shores Rehab</td>
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<td>1</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Huffman Blvd FM</td>
<td>2</td>
<td>--</td>
<td>--</td>
<td>2</td>
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<tr>
<td>West Grid FM and PS</td>
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<td>9</td>
<td>--</td>
<td>10</td>
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<tr>
<td>Glen Kernan to T-Line RW</td>
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<td>5</td>
<td>--</td>
<td>6</td>
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<tr>
<td><strong>Subtotal</strong></td>
<td>10</td>
<td>26</td>
<td>10</td>
<td>46</td>
</tr>
<tr>
<td><strong>FY Total</strong></td>
<td>36</td>
<td>40</td>
<td>27</td>
<td>103</td>
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</table>

- **Main St to Pulaski**: $4M
- **Walnut St Trunk Line**: $9M
- **Arlington East Sludge Line**: $3M
- **1st St to Franklin St WM**: $7M
- **South Shores Rehab**: $5M
- **West Grid**: $10M
- **Huffman Blvd**: $2M
- **Glen Kernan**: $6M

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South Shores Sub-Aqueous FM Crossing
Greenland 6 MGD WRF

Scope:  New 6 MGD WRF to support projected growth.
Status:  RFP for Engineering Pending
Budget:  $65,000,000
Schedule:  Design May 2018 – Jul 2019
          Construction Feb 2020 – Feb 2022
### Nassau Regional WRF Expansion

<table>
<thead>
<tr>
<th><strong>Scope</strong></th>
<th>4 MGD Expansion, Drainage Improvements, RIB Modification, Effluent Disposal and Wetlands</th>
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</thead>
<tbody>
<tr>
<td><strong>Status</strong></td>
<td>RFP for Engineering Pending</td>
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</tbody>
</table>

![Map of Nassau Regional WRF Expansion]
Bradley Road Pump Station Improvements

Scope: New Booster PS; 6 pumps, 2 jockey pumps, MCC's, pre-engineered building and generator.

Status: IFB for Construction Pending

Budget: $9,000,000

Schedule: Design Ongoing – Oct 2017
Construction May 2018 – Aug 2019
Southwest WRF Expansion

Scope: Expansion from 14 to 18 MGD to support projected growth.

Status: RFP for Engineering Pending

Budget: $32,000,000

Schedule: Design Apr 2018 – Jun 2019
Construction Jan 2020 – Jan 2022

Blanding Blvd

118th St

Morse Ave

SOUTHWEST WRF
### Buckman WRF Biosolids Conversion

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Status:</strong></td>
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<tr>
<td><strong>Budget:</strong></td>
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</table>
| **Schedule:** | Design Apr 2018 – Jun 2019  
Construction Jan 2020 – Feb 2022 |
Rivertown WTP

Scope: New 4.7 MGD MDD WTP with (1) 2 MG GST, (3) wells, (4) HSPs and potential H2S treatment

Status: RFP for Engineering Pending

Budget: $14,000,000

Schedule: Design Jan 2018 – Oct 2018
Construction Feb 2019 – Mar 2020
Greenland WTP Expansion

Scope: Expansion of Greenland WTP by adding (1) MG GST, (1) well, (1) HSP

Status: RFP for Engineering Pending

Budget: $5,000,000

Schedule: Design Jan 2018 – Sep 2018
Construction Aug 2018 – Oct 2019
Nocatee South RW Storage Tank & Booster PS

Scope: New booster PS and (1) 1 MG GST at Nocatee S. Increase pumping capacity to 10,000 GPM at Nocatee N.

Status: RFP for Engineering Pending

Budget: $5,100,000

Schedule: Design May 2018 – Feb 2019
Construction Jun 2019 – Mar 2020
**Buckman WRF Blower System Improvements**

<table>
<thead>
<tr>
<th>Scope:</th>
<th>Provide reliability and redundancy to existing turbo blower system</th>
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</thead>
<tbody>
<tr>
<td>Status:</td>
<td>Design Pending</td>
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<tr>
<td>Budget:</td>
<td>$4,000,000</td>
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</table>

![Map of Buckman WRF and JAXPORT locations]
West Grid - Lenox to Timuquana - FM Replacement and New Lenox PS

Scope:
- New JEA Standard Triplex PS
- Demolition of existing Pump Station
- 13,750 LF 30” PVC and 36” HDPE Open Cut and HDD
- 3,100 LF 20” PVC open cut and trenchless method

Status: In Design

Budget: $10,600,000

Schedule:
Design Apr 2017– Apr 2018
Construction Jul 2018 – Jul 2019
### DII - Main St to Pulaski Road FM

<table>
<thead>
<tr>
<th>Scope:</th>
<th>9,510 LF of 20” DR25 PVC Force Main</th>
</tr>
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<tbody>
<tr>
<td>Status:</td>
<td>90% Design</td>
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<tr>
<td>Budget:</td>
<td>$3,600,000</td>
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</table>
| Schedule: | Design  Jul 2016 - Jul 2017  
Construction  Nov 2017 – Jul 2018 |

**Approx. Location of Future Booster Pump Station**

**Proposed 9,510 LF 20” Force Main**
Walnut St Trunk Line Replacement

Scope:
• Replacement of 1540 LF of 60” RCP w/ 42” Pipe
• Rehabilitation of 1025 LF of 60” RCP w/ 42” Pipe

Status: RFP for Engineering Pending

Budget: $8,000,000

Schedule:
Design Jan 2018 – July 2018
Construction Nov 2018 – Nov 2019
Huffman Blvd FM Replacement

**Scope:** 6,600 LF of 30” DR25 PVC by open cut method

**Status:** Bid Package Pending

**Budget:** $2,500,000

**Schedule:**
Construction Oct 2017– May 2018

![Map of Huffman Blvd FM Replacement](image-url)
Arlington East WRF Parallel Sludge Transfer Line

Scope: 3,200 LF 10” DR9 HDPE by Horizontal Directional Drill; Upgrade pumping equipment at Arlington East WRF if necessary

Budget: $3,100,000

Schedule: Design Jan 2018 – Sept 2018
Construction Jan 2019 – Jun 2019

Status: RFP pending
Contract Requirements

- Invoicing
- Schedule Requirements
- Vendor Performance
- Jacksonville Small and Emerging Business
Closing Remarks