The Society of Military Engineers
July 22, 2015

QUALITY. VALUE. ECONOMIC GROWTH.

WWW.MIAMIDADE.GOV/WATER

Miami Dade Water & Sewer Department

MDWASD CIP Overview
Existing Water Infrastructure

- Three (3) large regional water treatment plants
- Five (5) small water treatment plants
- 100 water supply wells
- 7,940 miles of pipes
- 39,000 fire hydrants
- 127,000 valves
- 455,000 water meters
Existing Wastewater Infrastructure

- Three (3) wastewater treatment plants
- Two (2) ocean outfalls (N & C)
- Twenty-one (21) deep injection wells
- 6,277 miles of pipes
- 1,042 sewer pump stations
- Eleven (11) treated water storage tanks
Deteriorated Infrastructure

- 10% - older than 50 years old
- 42% - are 25 to 50 years old
- Approx. 26% are less than 25 years old
- 22% - are unknown age
Infrastructure Deficiencies

- Feb 2012 – BCC Reso-170-12 directed the Mayor to provide a report which addresses WASD’s most critical infrastructure renewal needs
We need to prevent something like this
Current Regulatory Challenges

• Compliance with the Federal Clean Water Act (EPA Consent Decree)
• Compliance with the State 2008 Ocean Outfall Legislation
• Continued compliance with the requirements of the Safe Drinking Water Act
• Renewing undersized water mains in order to meet fire flow and water quality requirements

  ❖ Failure to act will result in violations of law subject to fines and other enforcement actions
Other Needs

Rehabilitation & Replacement Related Needs

• Capital projects that address the rehabilitation and replacement of identified infrastructure

• Failure to perform these projects could result in pipe failures and equipment breakdowns

• Consequently, service interruptions, sewage spills, and other permit violations could occur, subject to enforcement actions and fines

Growth & Development Related Needs

• Capital projects that address capacity limitations and other deficiencies in the system that restrict and/or limit construction and development projects
WASD
On-going & Future Projects
# Consent Decree

<table>
<thead>
<tr>
<th>Project Phase</th>
<th>WWTP</th>
<th>WCTS</th>
<th>TOTAL</th>
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<tbody>
<tr>
<td><strong>Consent Decree Projects (Total of 81)</strong></td>
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<tr>
<td>Validation/Planning</td>
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<tr>
<td>Pre-Design</td>
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<td>6</td>
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<tr>
<td>Complete</td>
<td>3</td>
<td>3</td>
<td>6</td>
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<td><strong>TOTALS</strong>*</td>
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<table>
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<th>Child Projects (Total of 107)</th>
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<tr>
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<td>Complete</td>
<td>1 11 12</td>
</tr>
<tr>
<td><strong>TOTALS</strong>*</td>
<td>22 85 107</td>
</tr>
</tbody>
</table>

*SEP project is not included in totals.

** For CD projects with multiple child projects, the most advanced status (i.e. construction, etc.) is used to determine the CD Project status.
Ocean Outfall Legislation

- New Wastewater Treatment Plant
- Peak flow Management
- Storage Tunnels (under evaluation)
- Pipe Interconnections
- HLD Membranes (286 MGD) @ Central
- HLD Membranes (173 MGD) @ South
- Bolder Zone Deep Injection Wells
- Upgrades to all existing WWTPs.
Pump Station Improvement Program

• 5 design Engineering Firms
• 111 Pump Stations
• 27 Force Main under Construction
• 78 Infiltration & Inflow Repairs
• 138 Capital Projects
• Targeted to Small & Local Contractors
Water Use Permits

• New 20 MGD Water Treatment Plant - South Miami Heights
• New 50 MGD Water Treatment Plant - Northwest Well Fields
• Major upgrades and renovations at the Preston Water Treatment Plant
Project Delivery Methods

- Traditional DBB
- Design
- Construction
- Operations

- DB
- DBO
- DBFO
- DBFOM
- DBFOOM
HOW WILL PROJECTS BE CONTRACTED?
All modes of Procurement

- MCC 7040 Contracts
- 7360 Program
- Accelerate Ordinance
- EDP Program
- Traditional Design-Bid-Build
- Design-Build
- CM – At Risk
- P3 – Private Public Partnerships
Expression of Interest

• Thirty-two (32) respondents
• Areas of interest:
  ▪ WWTP
  ▪ WTP
  ▪ PS
  ▪ Bio-solids
  ▪ AMR/AMI
  ▪ Energy Optimization
Summary

- Significant investment is required over the next few years ($13.5B)
- Facilities and operations investment is needed
- Accommodating future growth and development is essential for the economic vitality of the County
- Meeting regulatory mandates is critical
- All project delivery alternatives are being fully explored and evaluated
- Rates remain competitive when compared to other utilities
How Do I prepare and get Involved?

- Stay Informed; seek and request information
- Partner with MDWASD to meet aggressive CIP schedules
- Bring new ideas for expediting project delivery
- Help MDWASD exceed small business initiative goals
- Be an advocate for MDWASD
- Network with your colleagues (designers and constructors)
- Training (MDWASD is going to implement some programs)
Questions ???

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