Emerald Coast Utilities Authority & Baskerville-Donovan, Inc

- Main Street Wastewater Treatment Plant Replacement Project Funding System
- December 7, 2016

Pensacola Escambia County, FL

- Serves 66,500 customer connections
- 3 Wastewater plants
  - CWRF; 22.5 mgd (MSWWTP Replacement)
  - Bayou Marcus; 8.2 mgd
  - Pensacola Beach; 2.4 mgd
- 334 Lift stations on mainland
- 45 Lift stations on the beaches
- 1,300 miles of sewer line
ECUA formed a committee which conducted a study to **Upgrade-in-Place** or **Replace** MSWWTP with new facility (SMRT Study)

- Study findings reported to ECUA Board 12/2002
  - Decision – move forward with **Replacement**

**Biggest Challenges**
- Funding
- Site Selection / Acquisition

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**Why Replace the Main Street WWTP?**

- Reduction of compliance problems
- Elimination of discharge into Pensacola Bay
- Elimination of odors from downtown
- Septic tank avoidance
- Opportunities for reclaimed water re-use
- Move away from flood plain
- Serious health concerns if plant is inoperable
- Current location has no room for “Upset Storage”
- New technology - efficient treatment processes
- Elimination of operation and maintenance problems and related expenses
Motivating Factor: Hurricane Ivan High Water Mark

Main Street WWTP lost both power feeds by 10pm
Main Street Plant hit by 12 ft. storm surge
Inundated plant resulting in severe corrosion of equipment & electrical components
All lift stations lost power
Hundreds of broken sewer mains from uprooted trees
Public confidence in the system reliability damaged

End Result of Ivan - Replacement of the Main Street WWTP shifted public opinion from a good idea to an urgent priority.

Wastewater Collection and Treatment System Damages
Alternate Proposed Wastewater Transmission and Treatment System

- 24 Miles of 18” to 54” Force Main
- 3 Regional Lift Stations
  - Government St. Lift Station
  - Pipeline Road Lift Station
  - Moreno St. Lift Station
- Regional Lift Station Key Features:
  - Hurricane-resistant construction
  - Elevated electrical components
  - Emergency power generator
  - Redundant pumps

Central Water Reclamation Facility (CWRF)

- 22.5 mgd AADF Treatment Capacity to 5/5/3/1 AWT quality
- 20 dtpd Biosolids dewatering and drying capacity to AA standard
- 100% Reuse of effluent reclaimed water
- 22.5 MG Reject storage capacity
- 60mg wet weather storage capacity
- Dual Power feeds
- Above Cat 5 storm surge elevation
- 18 miles inland
Replacement Project Costs

<table>
<thead>
<tr>
<th>Project Components</th>
<th>Cost in Millions</th>
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</thead>
<tbody>
<tr>
<td>Demolish Main St. WWTP (net)</td>
<td>$4.4</td>
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<tr>
<td>Replacement WRF</td>
<td>$123.4</td>
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<tr>
<td>Solids Drying</td>
<td>$20.5</td>
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<tr>
<td>Land Acquisition</td>
<td>$20.3</td>
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<tr>
<td>Effluent Transmission System</td>
<td>$21.8</td>
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<tr>
<td>Raw Wastewater Pumping and Transmission System</td>
<td>$100.0</td>
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<tr>
<td>Financing and Construction Contingency</td>
<td>$25.5</td>
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<tr>
<td><strong>Project Total (+/-)</strong></td>
<td><strong>$316.0</strong></td>
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</tbody>
</table>

Replacement Project Costs

- Maximize Local & State Funding
  - Local Grants
  - State Community Budget Issues Request “CBIRS” Grants
  - SRF Funding
  - Private Funding
- Seek FEMA Public Assistance (PA) Project Financing
  - Worked with Miles Anderson (State Hazard Mitigation Officer on Options)
  - Repair (direct repair of existing facility)
  - Improved Project (repair in place with unfunded enhancements)
  - Repair w/ “codes & standards” per FDEP
  - Alternate Project (redirect repair funds for alternate site)
  - Permanent Relocation (full replacement at alternate site)
Repairs w/ codes and standards funded at $151m project costs to provide “reasonable assurance” per FDEP

Permanent Replacement application denied based upon cost/benefit analysis given low anticipated recurrence frequency

Alternate Project request approved allowing redirection of FEMA’s award towards replacement at a more storm-resistant location

FEMA Funding

<table>
<thead>
<tr>
<th>Funding Sources</th>
<th>Amount in Millions</th>
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<tbody>
<tr>
<td>Escambia County</td>
<td>$7.0</td>
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<tr>
<td>City of Pensacola</td>
<td>Yearly funding from Community Redevelopment Agency (19.5M over 20 years)</td>
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<tr>
<td>State of Florida Grant Funds</td>
<td>$28.3 total</td>
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<tr>
<td>(2004, 2005, &amp; 2006 CBIRS plus legislative appropriation)</td>
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<tr>
<td>Northwest Florida Water Management District</td>
<td>$4.9</td>
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<tr>
<td>Florida Revolving Fund Loans</td>
<td>$24.0</td>
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<tr>
<td>Federal STAG</td>
<td>$0.8</td>
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<tr>
<td>ECUA Bank Loan</td>
<td>$129.7</td>
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<tr>
<td>FEMA 406 Funds</td>
<td>$134.4</td>
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Final Funding System