



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
 - CWRP; 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





Replacement of Main St. WWTP Project Considerations

- 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



Why Replace the Main Street WWTP?

- | | |
|---|--|
| ■ Reduction of compliance problems | ■ Move away from flood plain |
| ■ Elimination of discharge into Pensacola Bay | ■ Serious health concerns if plant is inoperable |
| ■ Elimination of odors from downtown | ■ Current location has no room for "Upset Storage" |
| ■ Septic tank avoidance | ■ New technology - efficient treatment processes |
| ■ Opportunities for reclaimed water re-use | ■ Elimination of operation and maintenance problems and related expenses |

Motivating Factor: Hurricane Ivan High Water Mark



Wastewater Collection and Treatment System Damages



- 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 a urgent priority.

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

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



Funding System Alternatives

- 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)



FEMA Funding

- 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



Final Funding System

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