

# **Water & Wastewater Expansion Program**



Fort Pierce Utilities Authority  
Water/Wastewater Engineering



# Agenda

- Current Expansion Programs
  - Where we are now
- Proposed Expansion Program
  - Where we are going
- Pilot Project
  - How We Are Going to Get There
- Wastewater Projects
  - Support Growth & Steps to MWRP



# CURRENT PROJECT TYPES

- Developer Supply Agreements/Amendments
- MSBUs- Municipal Services Benefit Units
  - System Expansion
- Oversizing of Developer Water Mains
- Water Main Looping



# Developer Supply Agreements/Amendments

- ✓ Portofino Landings: 72 new apartment units
- ✓ Bent Creek: 187 new single family homes \*
- ✓ Palm Breezes: 126 new single family homes\*
- ✓ Celebration Point: 318 new single family homes\*
- ✓ Carriage Point: 132 new single family homes
  
- ✓ Total Connections: 835

\* Current Phase

# MSBUs

## ✓ Noa MSBU: 2015

- 21 of 35 Homes Connected: 60%
- FPUA Contribution: \$51K

## ✓ Parkland: 2016

- 40 of 59 Homes Connected: 68%
- FPUA Contribution: \$92K

## ✓ Jenkins/Starcher: 2016

- 10 of 24 Homes Connected: 42%
- FPUA Contribution: \$35K

## ✓ Fra/Mar: 2017

- Potential: 4 Single Family, 50 Duplexes, 4 Commercial, 5 Vacant Lots
- FPUA Contribution: \$66K

## ✓ Iroquois: 2018

- Potential: 62 Single Family
- FPUA Contribution: \$68K



# Oversizing of Developer Water Mains

## ✓ Precast Specialties- East of Selvitz Road

- FPUA Contribution: \$13,000
- Oversizing of 8" water main to 12" water main
- Infrastructure added: 3900 lf of 12" pipe
- Providing needed water main loop in southwest service area and facilitate connection of Precast Specialties
- Completion: 2018



# Water Main Looping

## ✓ Buckeye Drive

- Cost: \$60,000
- Infrastructure added: 1300 lf of 6" WM
- Loop Between Citrus & Oleander
- 15 of 20 Homes Connected
- Completion: 2009



# Proposed Expansion - GOALS

- Turn FPUA into an Economic Engine That Will Better Support and Grow the City of Fort Pierce and Fund Otherwise Unobtainable Goals.
- Invest Capital Funds into System Expansion to Increase our Customer Base and Annexation into the City of Fort Pierce.
- Provide Utility Infrastructure to our Entire Service Territory



# Funding & Construction

- ✓ Initial Years Funding at \$1 Million and Increase in Out Years
- ✓ Efficient Engineering & Construction Practices
  - Bid Several Projects Together
    - Economies of Scale
    - More Efficient Use of Staff Time
  - Piggyback Contracts
  - Design-Build Contractors
  - Additional Unit Price Contractors



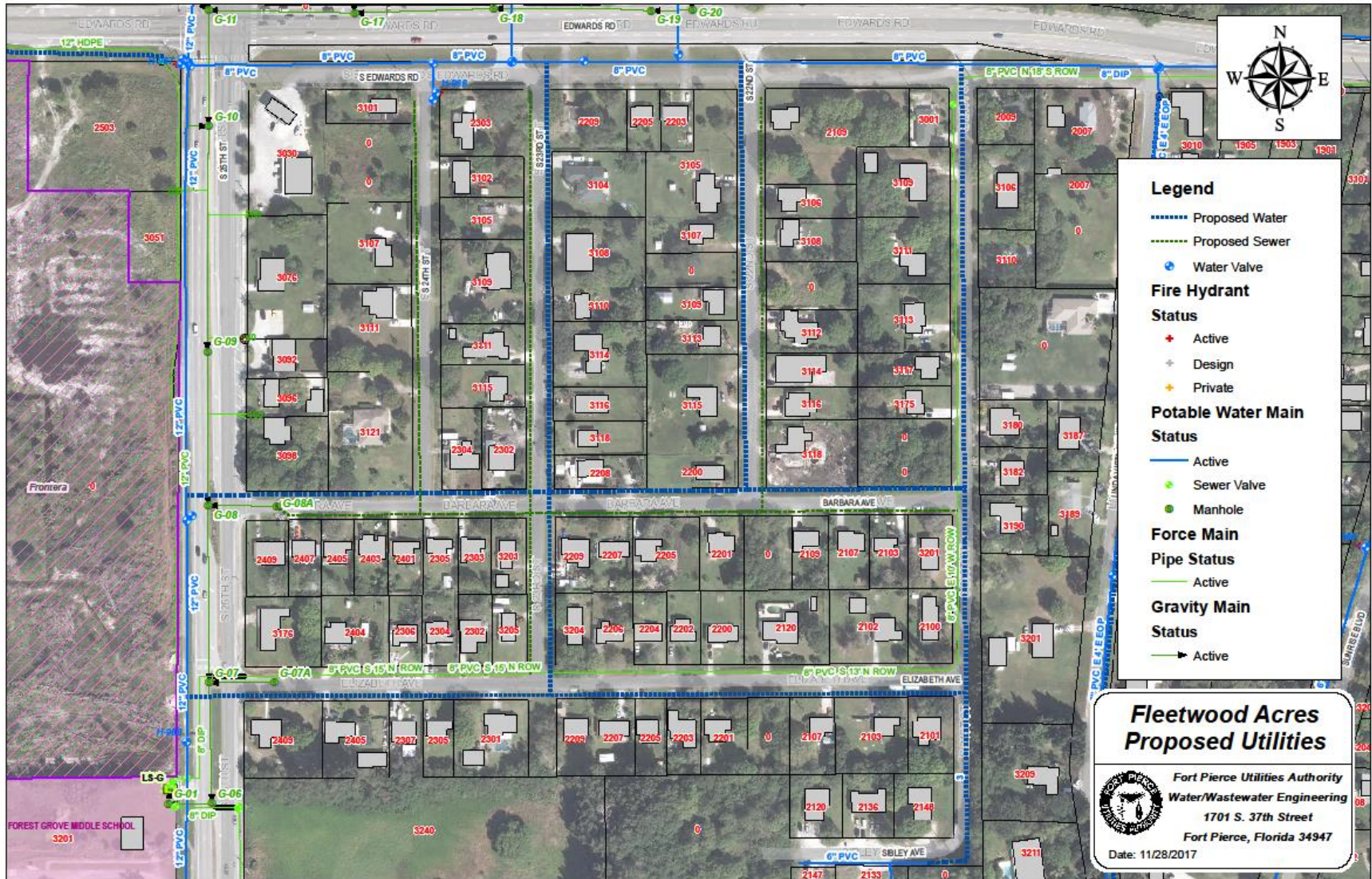
# Location Selection

✓ Select the Order of Neighborhoods Based on Established Criteria to Identify the Best Cost-Benefit Ratio.

- Cost of Infrastructure
  - Paved Streets
  - Conflicts w/ Drainage & Other Utilities (coms. power, etc.)
  - Proximity to Existing Utilities
- Contiguous
- Looping or Reliability Enhancements
- Future Expansions
- Property Values – Potential Tax Base
- Public Interest

# Pilot Project

Southeast Corner of Edwards Rd. & S. 25<sup>th</sup> St.





# Water Costs

Water System Cost: \$470K

Income from CICs: -\$166K

Net Cost: \$304K

- Modeled @ Conservative 10% Connection Rate
- 13 Year Payback - System Life of 100 YR+
- FPUA Income @ 100% Connection: \$35K/yr.

# Wastewater Costs

Wastewater System Cost: \$110K

Income from CICs:           -\$253K

Net Cost:                   -\$153K

- Modeled @ Conservative 5% Connection Rate
- 5 Year Payback – System Life of 100 YR+
- FPUA Income @ 100% Connection: \$48K yr.
- Lower than Typical Cost for Wastewater System

# City Income

## Tax Base – Annex @ yr 10

- Avg. Taxable Value is \$32K
- Avg. Tax Income is \$218/yr.
- Annual Tax Income \$20K/yr.

## Pre-Annexation City Income

- 6% Transfer                      \$5K

## Annexed City Income

- 10% City Water Tax              \$4K
- 6% Transfer                      \$7K
- Tax Income                      \$20K
- Total                              \$31K



# Customer Costs

## **Water** – Avg. Bill: \$35

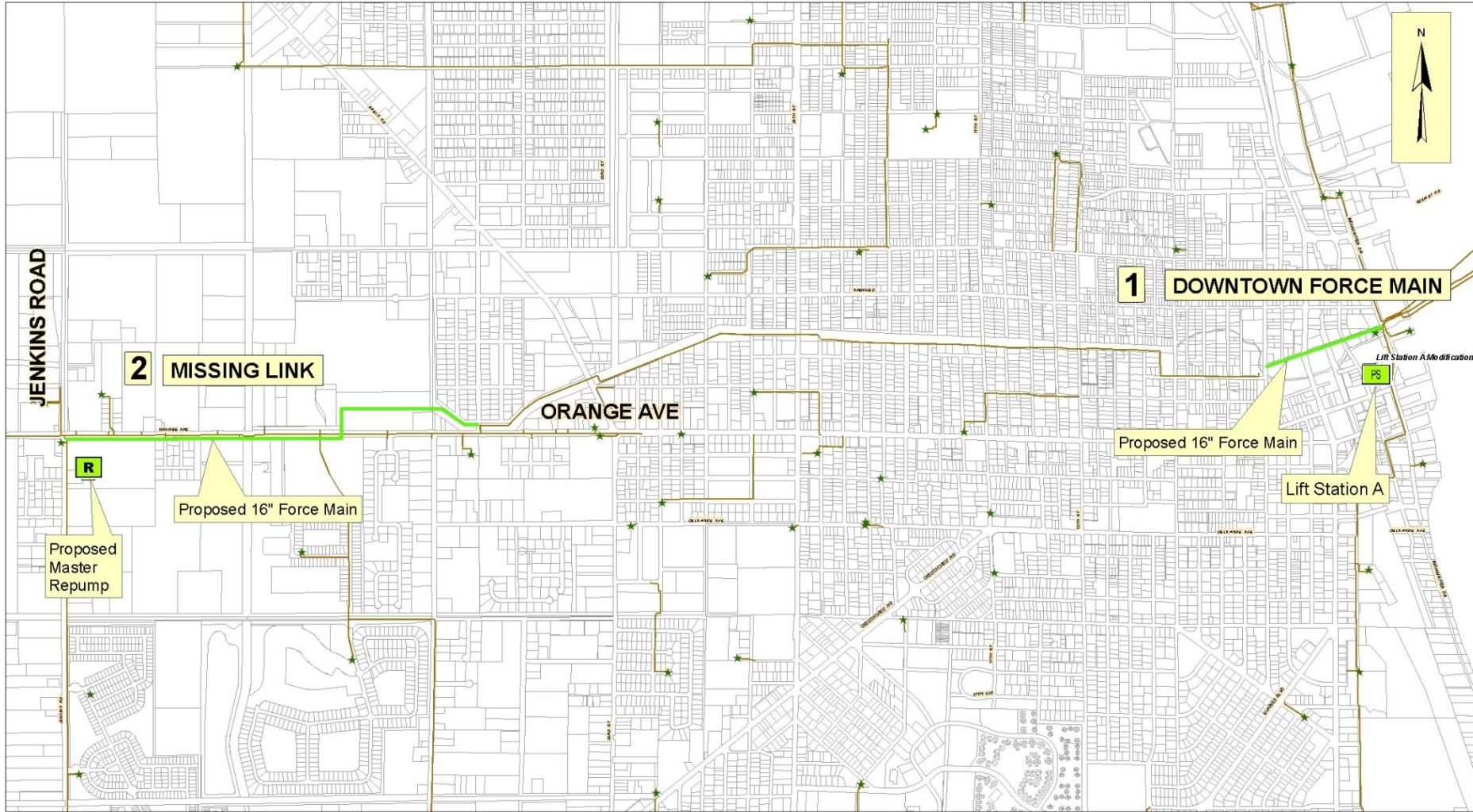
CIC:	\$1850 (Est. new CIC, current \$920)
Connection & Deposit	\$100
Legal Fee	\$60
Meter & Service	\$800 (Waived as Connection Incentive)
Plumbing	\$300
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Water Total	\$3110/\$2310

## **Wastewater** – Avg. Bill: \$48

CIC:	\$2815
Connection & Deposit	\$110
Lift Station & Plumbing	\$6500
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Wastewater Total	\$9425

# Wastewater Projects

Support MWRF





# Missing Link

- ✓ 16" FM along Orange Ave. from Jenkins to 39th
  - Est. Cost \$1.7M
  - Design In-House & Bid FY 18
  - Construct FY 19
- ✓ Currently Needed to Support Growth in our Western Territory
- ✓ Reroute Flows from Mid-Territory to Allow for Increased Southwestern Flows
- ✓ Needed in the Future as the Westerly Trunk Main to the 24" FM on Jenkins Road



# Downtown Force Main

- ✓ 16" FM along Ave. C from 10<sup>th</sup> to LS A
  - ✓ Est. Cost \$2.5M
  - ✓ Design by Consultant & Bid FY 19
  - ✓ Construct FY 20
- ✓ Relieve Additional Flows from the Ave. C Gravity Sewer When the Missing Link is Completed
- ✓ Needed in the Future as the Westerly Trunk Main to the 24" FM on Jenkins Road



# Steps Taken to MWRWF

✓ Purchased Property for Plant Site	\$ 1.1 M
✓ Purchased Property for Master Repump	\$ .5 M
✓ Constructed 2 Deep Injection Wells	\$12.5 M
✓ Plant Designed	\$ 2.2 M
✓ Constructed 24" FM Along Jenkins Road	\$ 1.8 M
✓ All Master Planned Wastewater System Components Are Designed to Go Both Ways	
✓ Missing Link (FY 19)	\$ 1.7 M*
✓ Downtown Force Main (FY 20)	<u>\$ 2.5 M*</u>
Total Investment	\$22.3 M

\*Proposed Projects



# Summary

- ✓ Biggest Political Challenge to FPUA is Moving the Wastewater Plant.
- ✓ Biggest Challenge to Moving the Wastewater Plant is Funding.
- ✓ Expansion Program Creates Funding.

“Change the Denominator” (Dan Delulio, 2017)

Questions?