

# Water & Wastewater Connection Charges - Overview

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# Objective

- “Growth Pays for Itself” policy
  - Longstanding City Commission policy
  - Common practice in Florida & elsewhere
  - Water & WW facilities are expensive
  - Rate payers not pay for costs associated with connecting new customers

# New Development W/WW Infrastructure Costs

- Water/WW Extension Cost
  - Developer installs & pays for pipes, pumping stations, etc. to connect development to GRU system
  - Certain types of work done by GRU & charged to developer
  - GRU plan review & inspection to ensure new facilities meet GRU standards & will be reliable

# New Development W/WW Infrastructure Costs

- Connection Fees
  - Charged at time customer connects
  - Pays for improvements utility does system-wide to increase system capacity to serve new customers
  - Sometimes referred to by other utilities as “capacity fees”, “impact fees”, “tap fees”, other

# Connection Charge Assistance

- **Connection Charge Installment Program**
  - Applies to existing homes & businesses currently served by wells, septic tanks or package plants
  - Connection charges financed over 10 year period – customer pays as part of monthly bill
- **ConnectFree Program**
  - Program to connect existing homes & non-profits to water and sewer

# How are Connection Charges Determined?

- Industry standard “cost of service” methods to allocate costs for various components
- Annual Inflationary Adjustment
- Periodic review of charges
  - Vetting with stakeholders
    - Meetings w/ BANCF
  - Independent review by consultant
    - Baker Tilly 2012 and 2015

# Connection Charge Components

- Water Meter
  - Cost of equipment & installation
- Water
  - Water Transmission & Distribution (T&D)
  - Water Plant
- Wastewater
  - WW Collection
  - WW Plant
    - Effluent Disposal Capacity

# GRU Water Distribution Facilities

NOTE: LOCATIONS AND DIRECTION ARE GIVEN FOR UTILITY OF STAFF USE ONLY. ENGINEER/CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION

0 3,000 6,000  
Feet



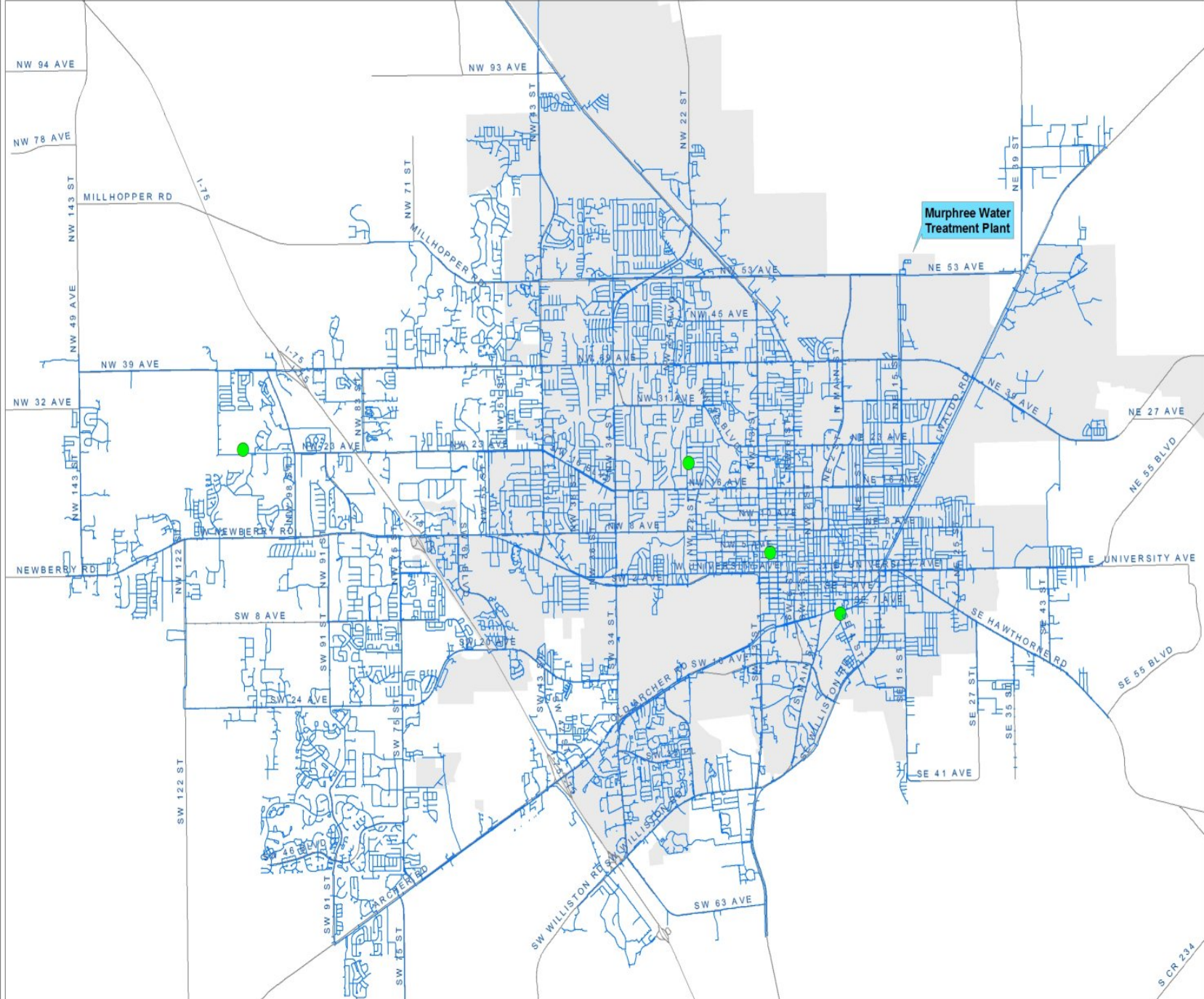
Murphree Water Treatment Plant

### Legend

- Water Main
- Storage Tanks
- City Limits

**GRU**  
More than Energy™

PLOTTED 05/06/2017 BY C.A.G.  
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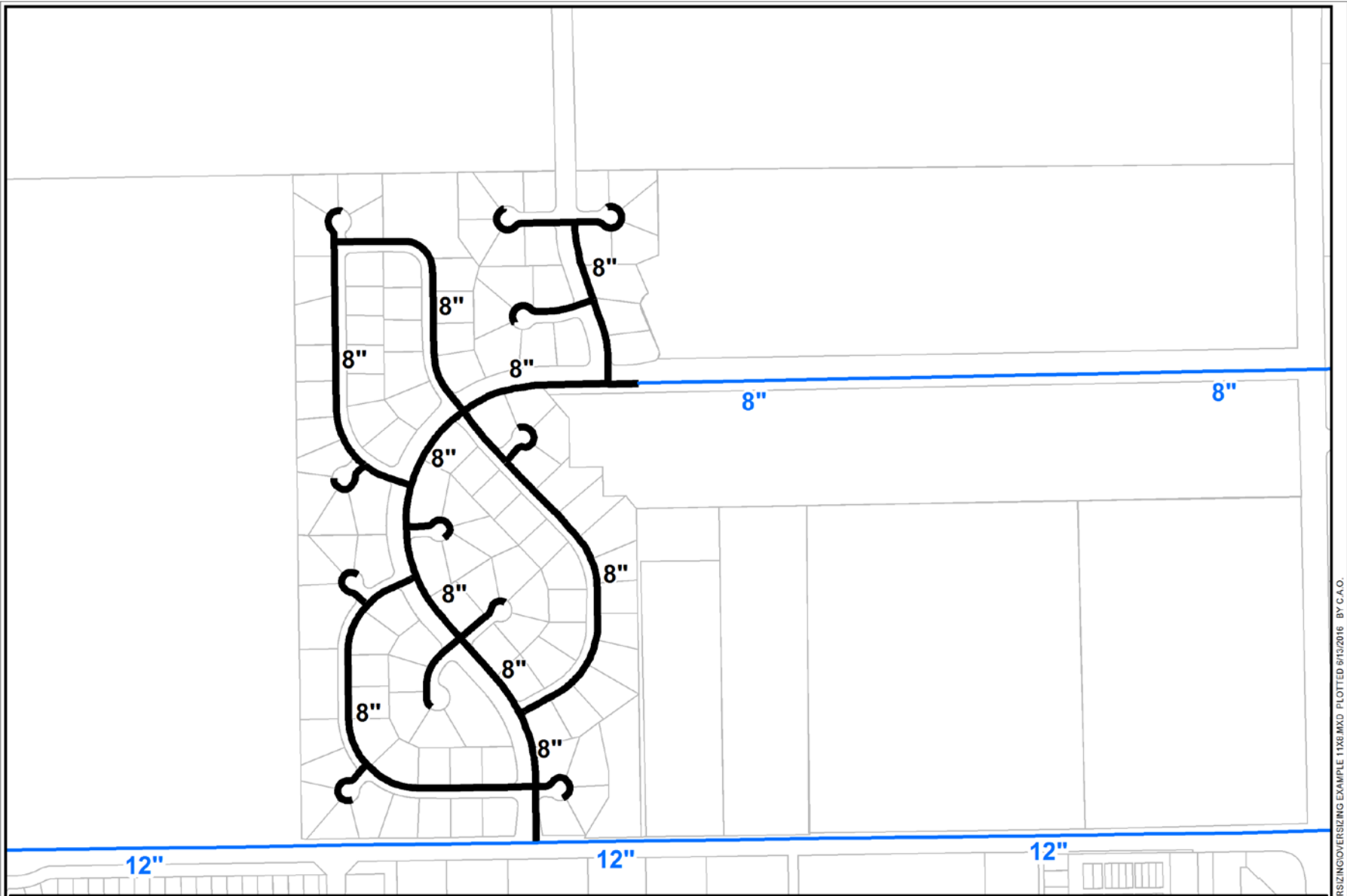
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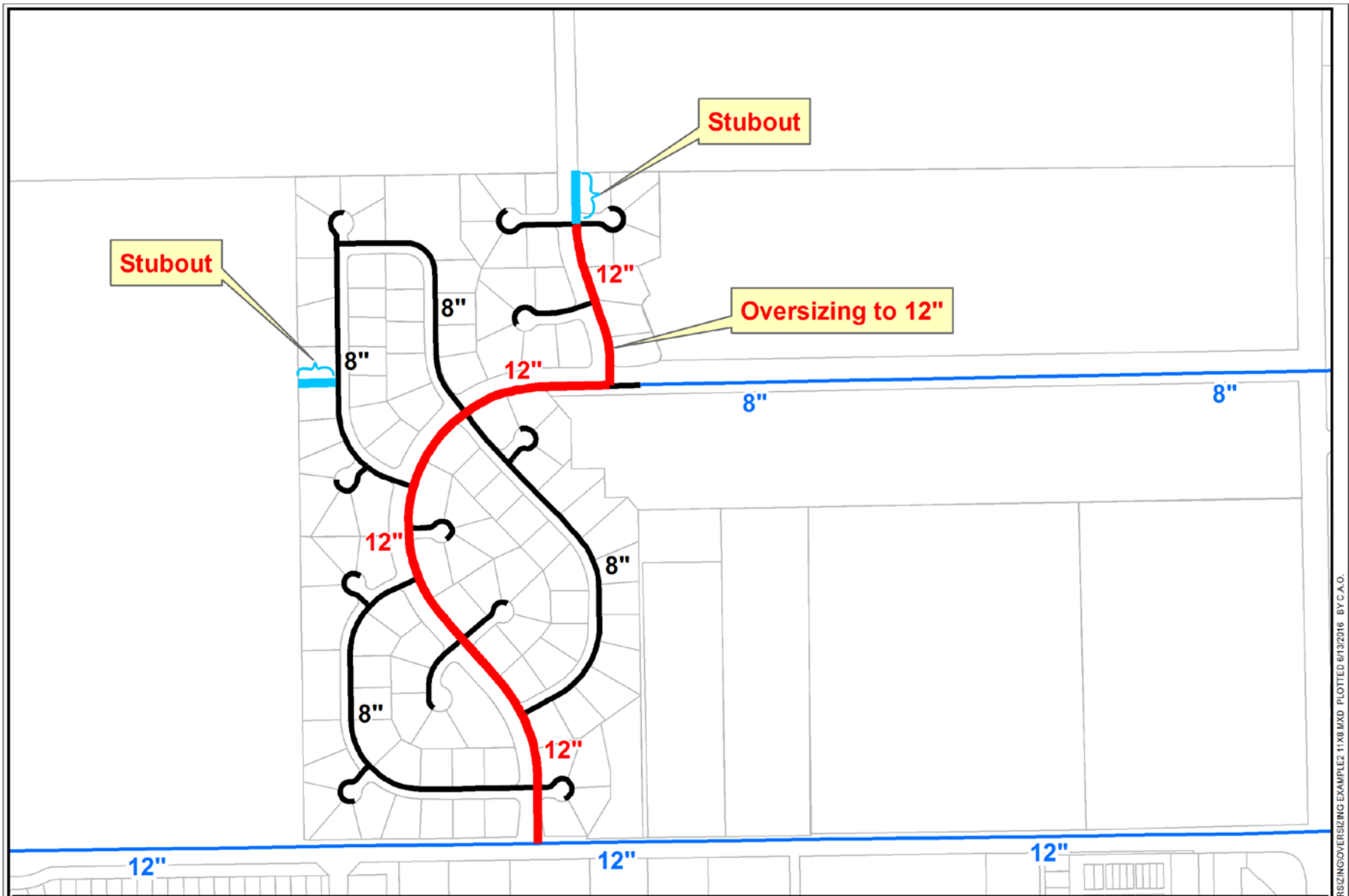
# Water Transmission & Distribution and WW Collection

- Recovers what GRU spends annually to make service available for new customers
  - Oversizing
  - Stub-outs
  - Regional piping & pumping capacity upgrades
- Does NOT pay for
  - O&M
  - Replacement/repair of existing facilities
  - Any other improvement not related to expanding system



## Developer's Design Requirements

-  Developer's Design
-  Existing Water Mains



## GRU Oversizing & Stubout

- ↗↘ GRU Oversizing
- ~ GRU Stubout
- ↗↘ Existing Water Mains
- ↗↘ Developer's Design

# Water Transmission & Distribution

- Basis for Rate

Avg Annual Expenditure	\$597,000/yr
New customer flow added per yr	452,000 gpd*
*(Equivalent to 1600 residential connections)	

$$\text{Cost/unit} = \frac{\$597,000}{452,000 \text{ gpd}} = \$1.32/\text{gpd}$$

$$\text{Cost/Unit with GFT} = \$1.55/\text{gpd}$$

- *Actual 5 Yr Averages During 2011-2015*

• Actual Expenditure	\$214,147/yr
• Actual Revenue	\$200,451/yr

# Wastewater Collection

- Basis for Rate

Avg Annual Expenditure	\$991,000/yr
New customer flow added per yr	452,000 gpd*
*(Equivalent to 1600 residential connections)	

$$\text{Cost/unit} = \frac{\$991,000}{452,000 \text{ gpd}} = \$2.19/\text{gpd}$$

$$\text{Cost/Unit with GFT} = \$2.57/\text{gpd}$$

- *Actual 5 Yr Averages During 2011-2015*

• Actual Expenditure	\$468,434 /yr
• Actual Revenue	\$273,402 /yr

# Water & Wastewater Plants

- Customer is buying proportional share of plant capacity
- Recovers cost GRU spent to build water & WW plants and increase their capacities
- Does NOT include:
  - Grant funded construction
  - O&M
  - Replacement/repair of equipment
  - Any other improvements not related to increasing capacity



# Water Plant

2015 Value of plant = \$57.5 Million

Avg Daily Flow (ADF) Capacity = 29.7 mgd

Cost/unit =  $\frac{\$57.5 \text{ Million}}{29.7 \text{ mgd}}$  = \$1.94/gpd

Cost/Unit with GFT = \$2.27/gpd



# Wastewater Plant

2015 Value of plant = \$95.7 Million

Avg Daily Flow (ADF) Capacity = 20 mgd

Cost/unit =  $\frac{\$95.7 \text{ Million}}{20 \text{ mgd}}$  = \$4.79/gpd WW flow

- On average 84% of water flow returns to WW plants
- Convert \$/gpd WW flow into an equivalent cost per unit water flow

Cost/unit water flow =  $\$4.79 \times 0.84 = \$4.02/\text{gpd}$

Cost/unit with GFT = \$4.71/gpd

# Wastewater Plant Effluent Disposal & Potable Offset Reclaimed Water

- Wastewater disposal capacity built incrementally through reclaimed water system as new customers added
- Reclaimed water (RCW) system expansion required to meet water Consumptive Use Permit Requirements in order to connect new water customers

# Wastewater Plant Effluent Disposal & Potable Offset Reclaimed Water

- RCW charge started in 2010
  - Phased in over 4 years
  - Stakeholder meetings w/ BANCf
  - Based on incremental cost to add RCW capacity with growth
  - 20 yr RCW master plan totaling \$45 million (Net Present Value)
    - RCW service area
    - Recharge Wetlands
    - Recharge Wells
  - Added into “Wastewater Plant” connection charge

# Connection Charge Components

## Effluent Disposal/Potable Offset portion of Connect Charges

Cost/unit = \$6.77 /gpd

Actual Totals 2010 – 2015 (6 years since RCW charge began)

Total Expenditure \$2.87 Million

Total Revenue \$3.56 Million

# Connection Charges Summary

- **Water**

T&D	\$1.55/gpd
<u>Plant</u>	<u>\$ 2.31/gpd</u>
<b>Total Water</b>	<b>\$ 3.86/gpd</b>

- **Wastewater**

Collection	\$ 2.57 /gpd
Plant	\$ 4.71 /gpd
<u>Disposal/offset</u>	<u>\$ 6.77 /gpd</u>
<b>Total WW</b>	<b>\$ 14.05 /gpd</b>
<b>Total Water + WW</b>	<b>\$17.91/gpd</b>

# How are Connection Charges Applied?

- Commercial & multi-family customers pay a “flow-based” connection charge which is calculated individually for each customer based on their expected flow (gpd)
- Residential & small commercial customers pay a “Minimum” connection charge

# 2016 Residential Connection Charge\*

Water meter (3/4" installed)	\$677	
Water Connection Charge	\$1,079	
<u>Wastewater Connection Charge</u>	<u>\$3,933</u>	
<b>Total Water + WW Connect Chge</b>	<b>\$5,689</b>	<b>(Inside City)</b>
<u>Surcharge Outside City Limits (25%)</u>	<u>\$1,422</u>	
<b>Total Outside City Limits</b>	<b>\$7,111</b>	<b>(Outside City)</b>

\*Applies to single family residential & to commercial customers using  $\leq 8.5$  kgal/mo (280 gpd)

# 2016 Flow Based Charges

- Flow allocation for multi-family based on 70 gpd/bedroom
- Flow allocation for new commercial customers calculated based on:
  - Flows for existing customers of same type
  - Flow data from other locations
  - Other data/information

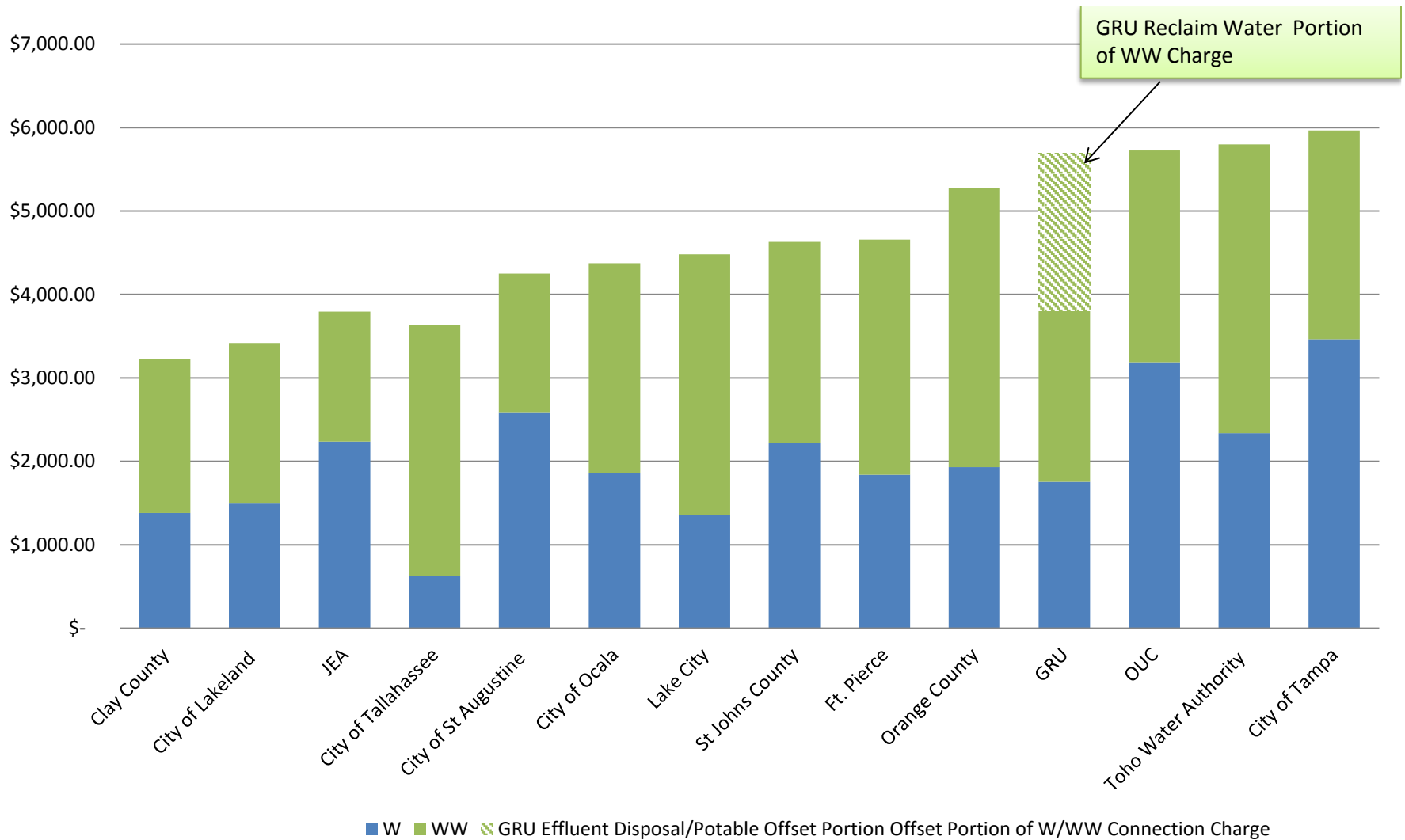


# Flow Based Connection Charge Example

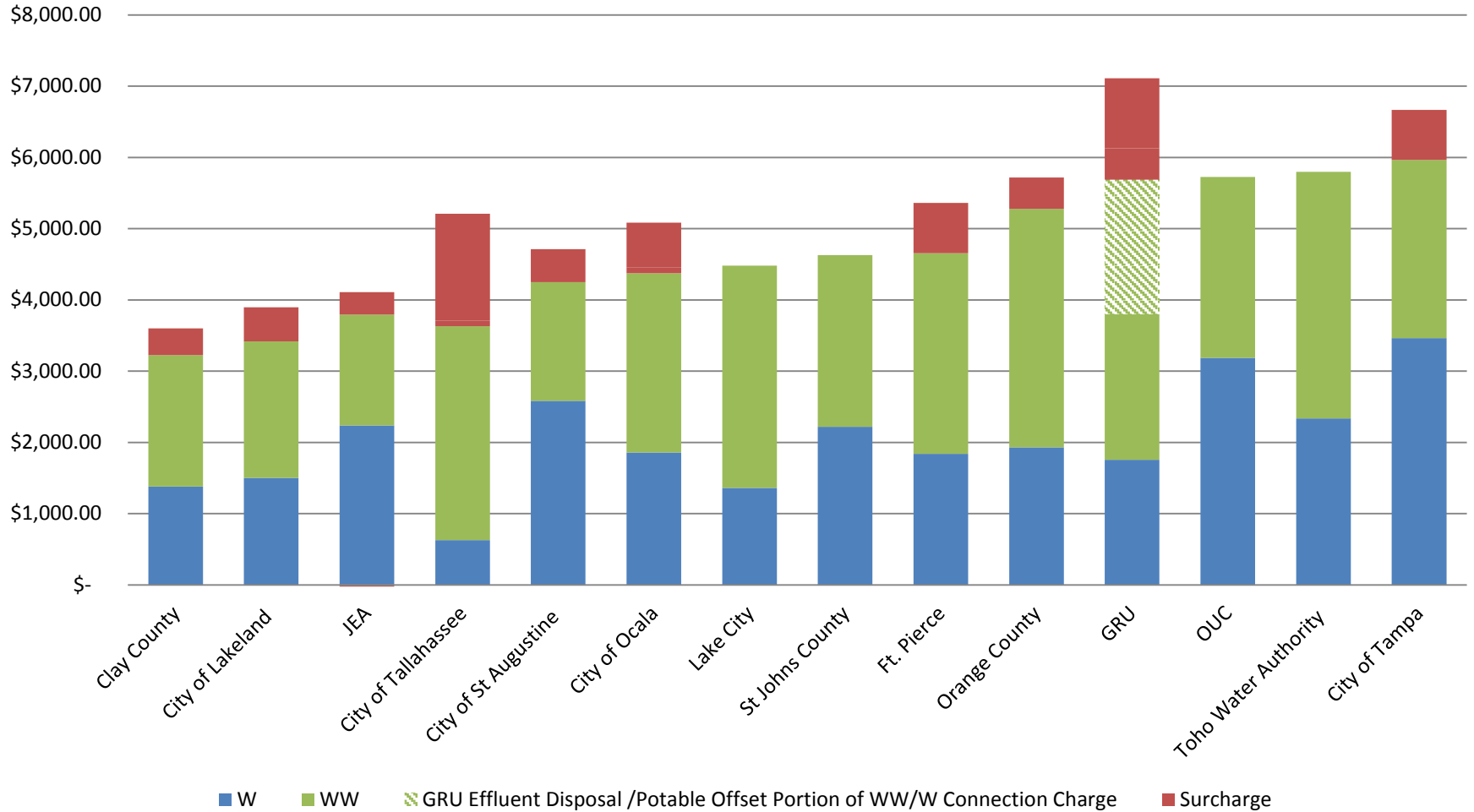
## Service Station – 703 gpd estimated Avg Flow

Water meter (3/4" installed)	\$677
Water Connection Charge = $\$3.85/\text{gpd} \times 703 \text{ gpd} =$	\$2,709
<u>WW Connection Charge = <math>\\$14.05/\text{gpd} \times 703 \text{ gpd} =</math></u>	<u>\$9,875</u>
<b>SubTotal</b>	<b>\$12,584</b>
Outside City Surcharge (25%)	\$3,146
<b>Total Connect Charge</b>	<b>\$15,730</b>

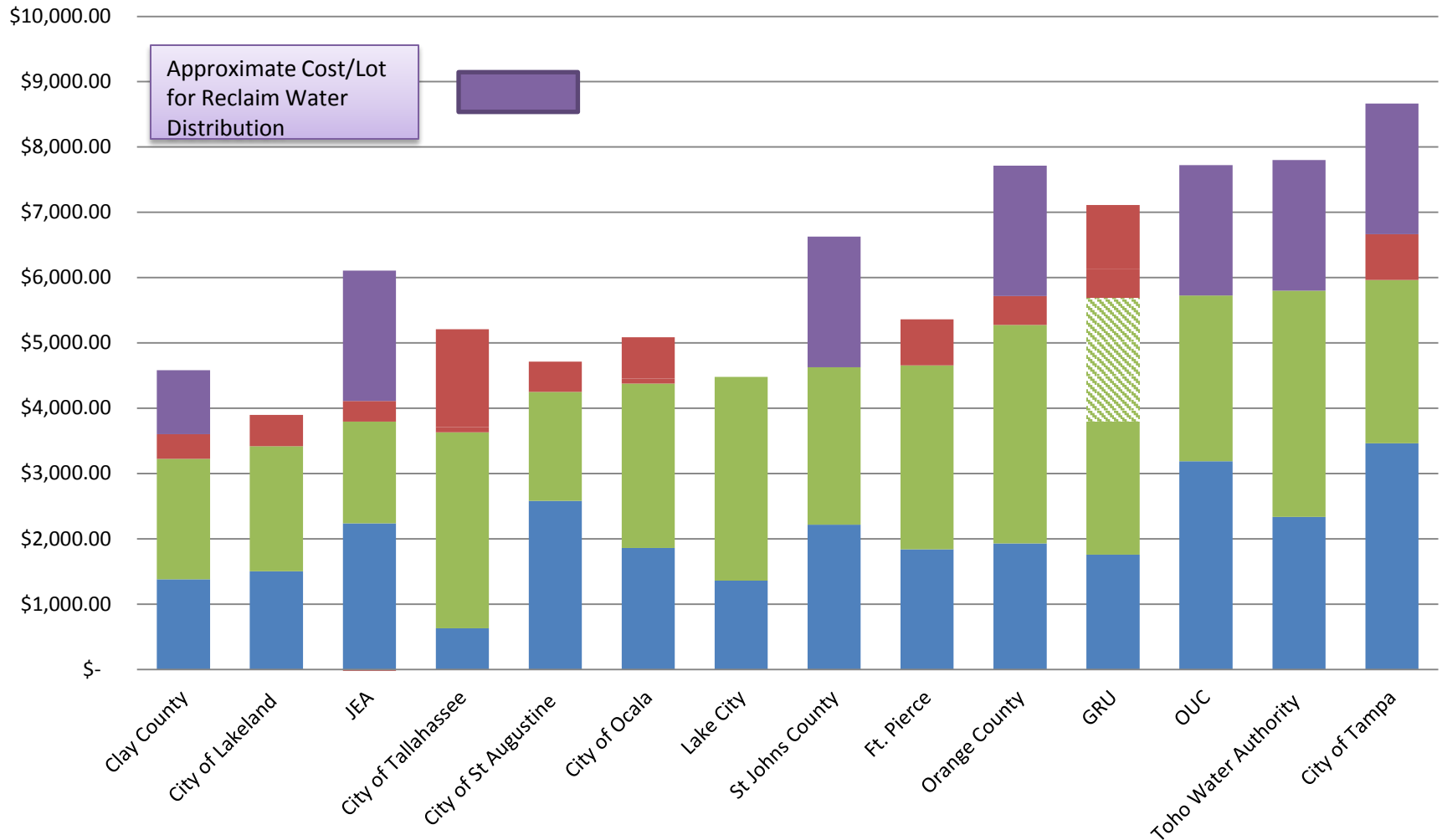
# 2016 Connection Charge Comparison Without Surcharges



# 2016 Connection Charge Comparison With Surcharges



# 2016 Connection Charge Comparison w/ Cost of Reclaimed Water Distribution



# Summary

- Water & WW Connection Charges recover capital investment utility makes to accommodate new development
- Adjusted annually for inflation and reviewed periodically
- Review planned in 2017
- Reclaimed water plan being reevaluated