Reclaimed Water Master Plan

RUC ITEM #080421

by

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GRU More than Energy

August 27, 2009 RUC RCW Discussion Summary

- **RCW Master Plan**
  - **Increased RCW Expansion**
  - **Efficient Expansion**
  - **Regulatory & water supply needs**
  - **WW Disposal capacity**
- **RCW Extension Policy Changes**
- **Funding**

Follow-up Issues

- **Potential to serve Ironwood & surrounding future development**
- **Phasing in of W/WW Connection Charge Increases**
- **Impact of changes to RCW usage charges**
- **Comparison of GRU RCW usage charge to other utilities**

RCW Expansion Goals

	Current RCW		Additional* Capacity (mgd)
	Flow (mgd)	Capacity (mgd)	
KWRF (14.9 MGD Plant Capacity)			
Recharge Wells	8	10	-
Irrigation	2	2	**5**
Water Features	1.2	1.2	**1-2**
Total KWRF RCW	11.2	13.2	6-7
MSWRF (7.5 MGD Plant Capacity)			
Sweetwater Branch/Paynes Prairie	5.5	7.5	-
Indus/Irrig Reuse	0.1	0.1	0.1-0.6
Total MSWRF RCW	5.6	7.6	0.1-0.6

*Additional capacity over 20-30 yr horizon.

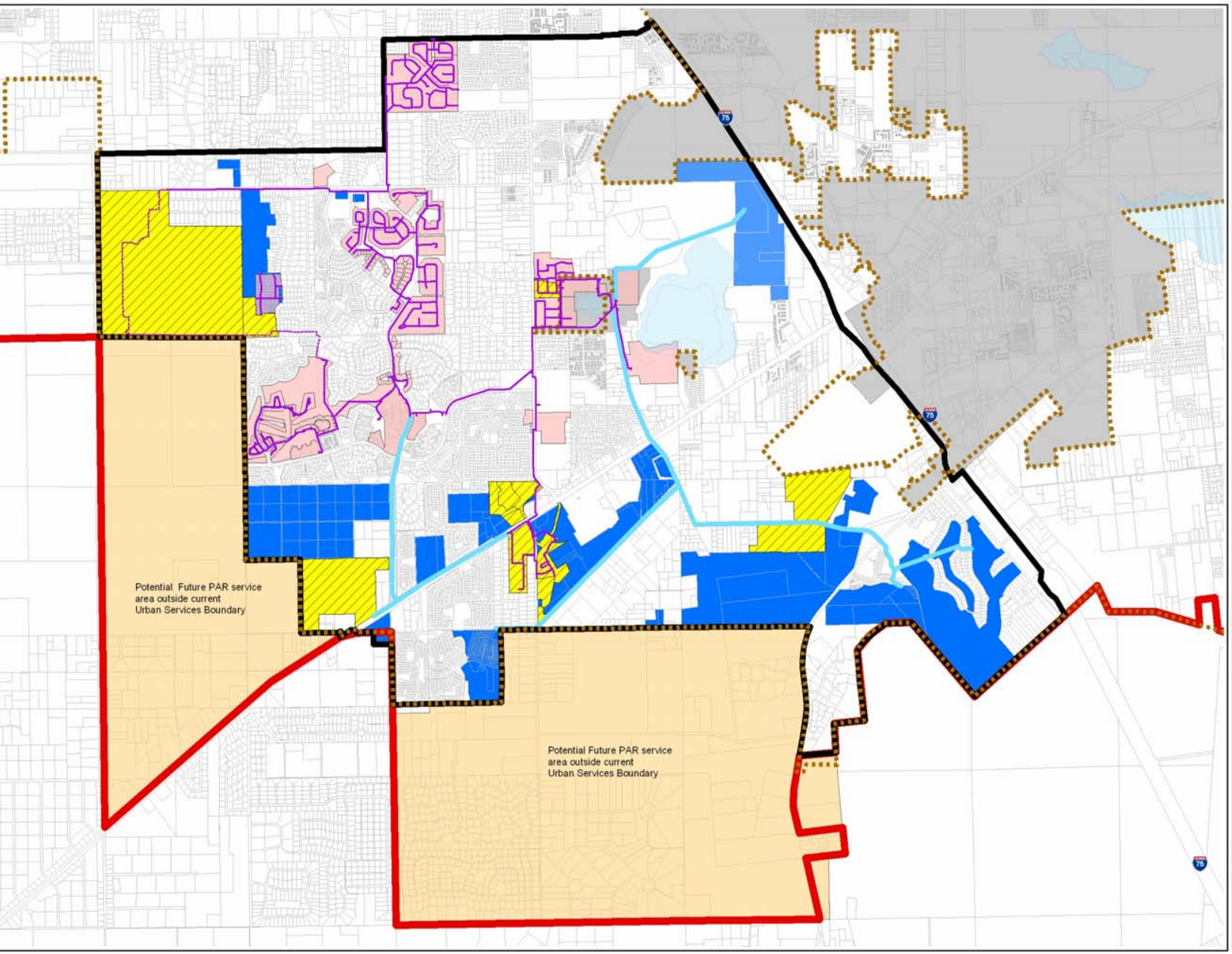
RCW Master Plan

- Kanapaha WRF
  - Aggressive expansion in SW area
    - High irrigation demands
    - Potable Offset
  - Need more WW disposal capacity
- Main Street WRF
  - Paynes Prairie Sheetflow Restoration
    - Beneficial use of all flow
  - Do Not need more WW disposal capacity
  - Industrial & Irrigation reuse where cost effective & beneficial

Proposed RCW Policy

- Designated RCW service Area
- GRU responsible for RCW transmission lines
- Developers in area required to install RCW distribution piping
  - **Requires Alachua County & City LDRs**
  - Temporary connection to potable system where RCW transmission not immediately available

Proposed Reclaimed Water Service Area Boundary



N
W E
S

0 1,600 3,200
Feet

Legend

- City Limits
- Existing Reclaimed Water Mains
- Other Future RCW Mains
- Conceptual Future RCW Main
- Urban Cluster
- Gainesville Urban Reserve
- RCW Areas Currently Served
- Identified Potential PAR Sites
- Future Potential PAR Sites within current Urban Svcs. Bdy
- Future PAR service area outside current Urban Cluster

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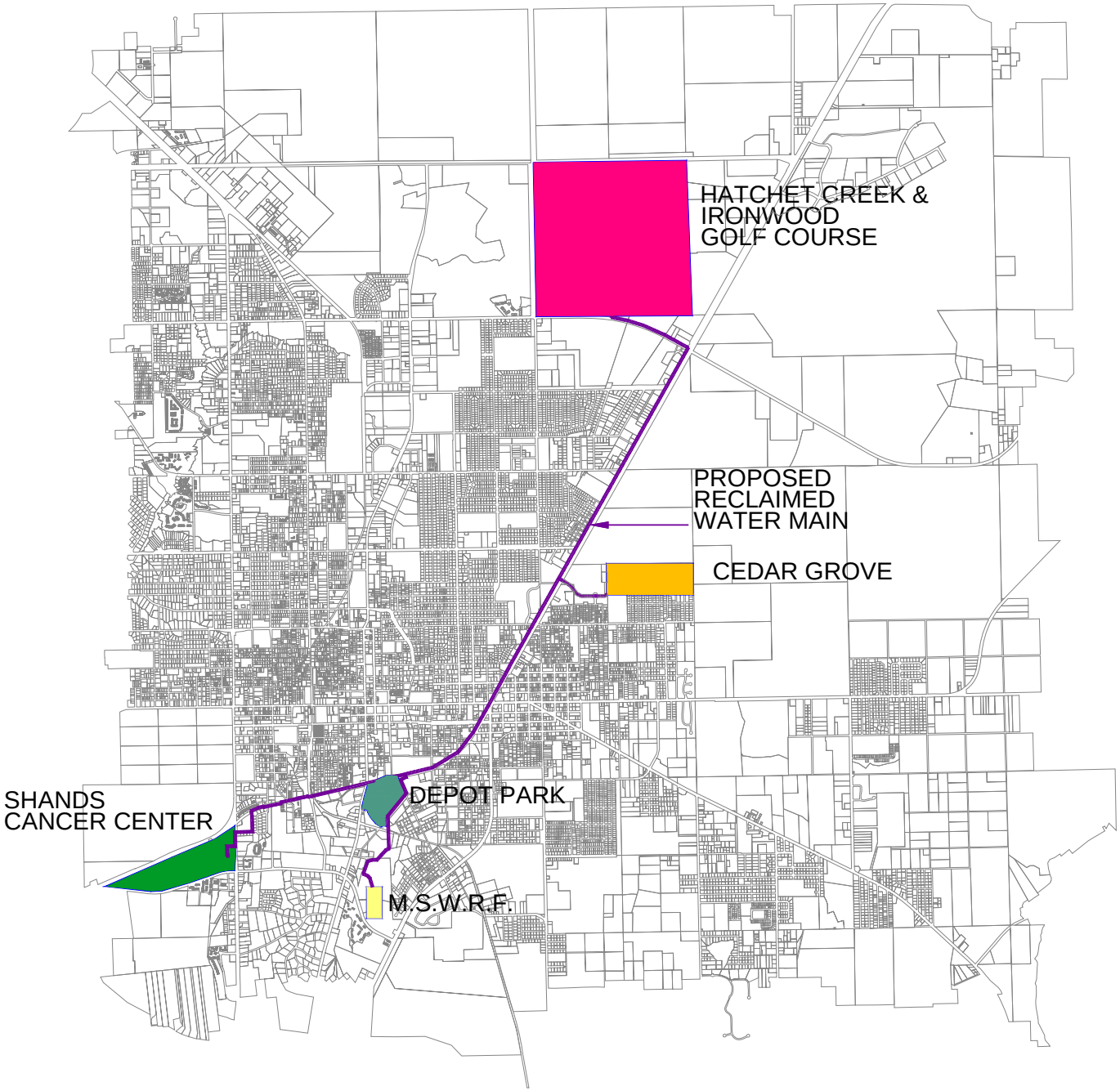

HATCHET CREEK &
IRONWOOD
GOLF COURSE
PROPOSED
RECLAIMED
WATER MAIN
CEDAR GROVE
DEPOT PARK
SHANDS
CANCER CENTER
M.S.W.R.F.

RCW Service to Ironwood & Hatchet Creek

- Estimated Irrigation Demands
  - Ironwood 0.15 MGD
  - Hatchet Creek 0.3 – 0.68 MGD
  - Total 0.45 – 0.83 MGD
- Est Total Cost $7.1 million
- Cost/unit Capacity
  - Ironwood/Hatchet Crk $8.60 - $15.00 /gpd
  - SEC/Shands Cancer Center $6.56 /gpd
  - KWRF Area Reuse Extensions $6.00 - $7.00 /gpd

RCW Service to an Existing Neighborhood (Cedar Grove)

- Max Potential Irrigation Demand* 0.065 MGD
- Est Total Cost** $683,000
- Cost/Unit Capacity $10.43 /gpd

- Total Cost per lot after GRU RCW Reimbursement $4,000

*Assumes all lots & common areas have in-ground irrigation systems

**Assumes RCW main already constructed on Waldo Rd

Conclusion

- Ironwood/Hatchet Creek Extension
  - Not cost effective
  - RCW capacity not needed from MSWRF
- Factors Affecting RCW Extension Feasibility
  - High irrigation demands
    - In-ground irrigation
    - Landscaping type
    - Soil type
  - New Development
    - Retrofit to existing development typically 2-3x more expensive
  - Proximity to existing RCW infrastructure

Funding for RCW

20 Year Total RCW Capital Costs

RCW Pumping/Transmission	**$34M**
RCW Distribution	**$11.4M**
Total Cost	**$45.4M**
NPV of Customer Usage Rates	**-$7.6M (income)**
Total Cost to Recover	**$37.7M**

Proposed Funding Mechanism

- **RCW Usage Rates**
  - $0.60/kgal rate recovers ~17% of capital
  - Also covers pumping electricity costs
- **W/WW Connection Charges**
  - Increase to pay for Future RCW pumping & piping
  - Continue to reimburse developers in RCW area for RCW distribution piping
- **Base WW Rates**
  - Have paid for most of existing RCW system

Projected W+WW Connection Charges

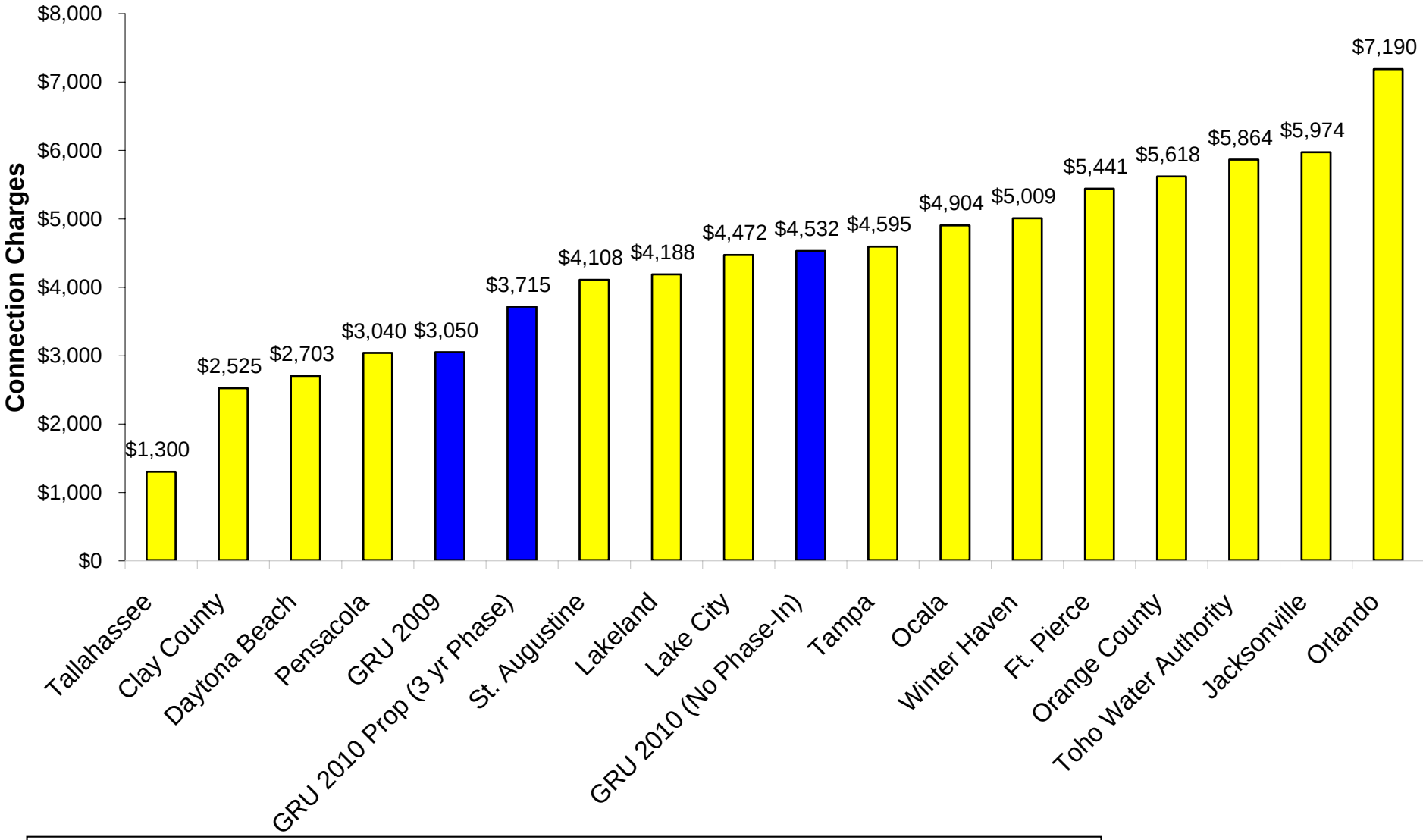
City (no Surcharge)

Year	No Phasing		3-Yr Phased		5-Yr Phased	
	Charge	% Increase	Charge	% Increase	Charge	% Increase
2009	$3,050		$3,050		$3,050	
2010	$4,532	49%	$3,714	22%	$3,564	17%
2011	$4,668	3%	$4,329	17%	$4,029	13%
2012	$4,808	3%	$4,946	14%	$4,495	12%
2013	$4,952	3%	$5,094	3%	$4,965	10%
2014	$5,101	3%	$5,247	3%	$5,438	10%
2015	$5,254	3%	$5,405	3%	$5,601	3%

County (25% Surcharge)

Year	No Phasing		3-Yr Phased		5-Yr Phased	
	Charge	% Increase	Charge	% Increase	Charge	% Increase
2009	$3,813		$3,813		$3,813	
2010	$5,665	49%	$4,643	22%	$4,456	17%
2011	$5,835	3%	$5,411	17%	$5,036	13%
2012	$6,010	3%	$6,182	14%	$5,619	12%
2013	$6,190	3%	$6,368	3%	$6,207	10%
2014	$6,376	3%	$6,559	3%	$6,798	10%
2015	$6,567	3%	$6,756	3%	$7,002	3%

Combined Water and Wastewater Connection Charge (5/8" Meter)

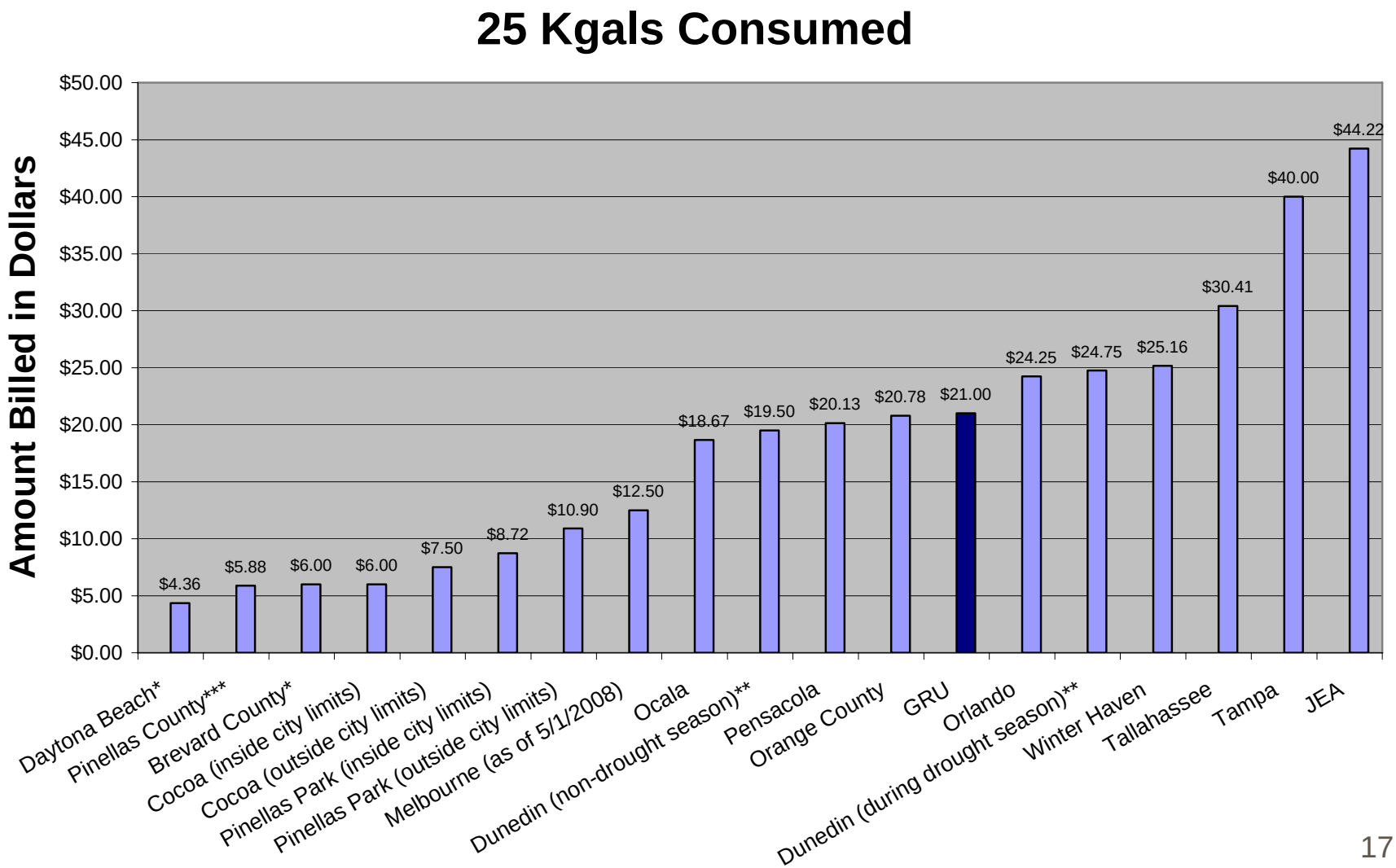


NOTE: All figures represent connection charges exclusive of any taxes or additional surcharges

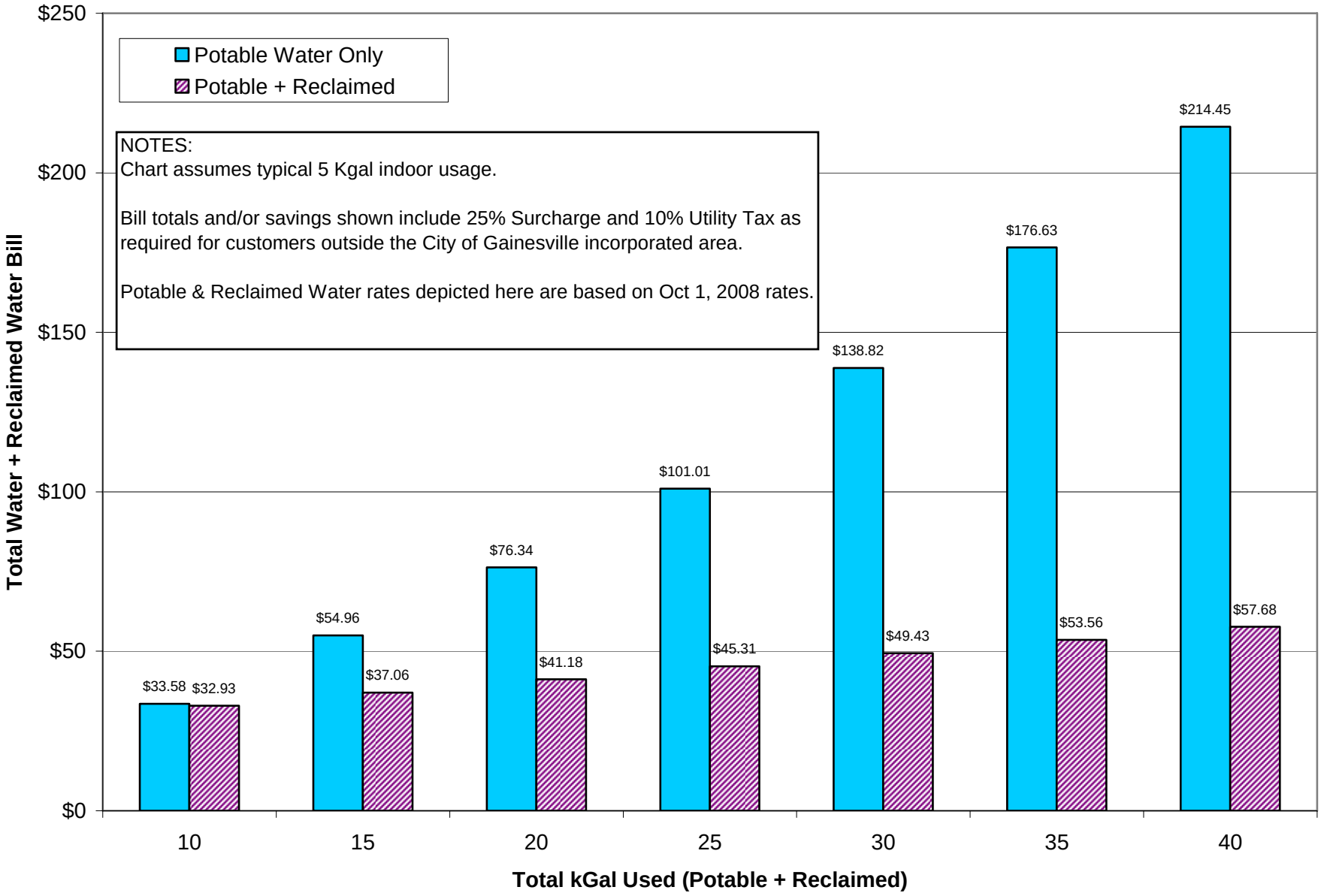
Effect of RCW Rate on Projected Connection Charges

RCW Rate	Est 2010 Revenue	W/WW Connect Chge Increase Phased - 3 Year		
		Yr 1	Yr 2	Yr 3
$0.60	$216,000	$664	$614	$617
$0.80	$240,000	$633	$552	$524
$1.00	$260,000	$607	$500	$446
$1.20	$285,000	$579	$444	$361

Reclaimed Water Rate Compares (25 kgal/mo)



Monthly Water Bill Comparison: Potable Only vs. Using Reclaimed Water



Recommendations

- RUC recommend City Commission approve:
  - RCW Extension Policy
  - 3-Year Phased Increase in Wastewater Connection Charges
  - Keep RCW charge at Customer Charge (currently $6) + $0.60/kgal for FY2010