



Charlotte County Utilities

Past, Present, and Future

Board Workshop - April 16, 2013





Past





CHARLOTTE
COUNTY
UTILITIES
ESTABLISHED
1991





CCU Beginnings

- General Development Utilities (GDU)
 - A Florida Corporation
 - Provided Water, Wastewater and Liquefied Petroleum (LP) Gas Service to Developments Built by General Development Corporation(GDC) in Charlotte County
 - GDC Developed Port Charlotte, the Largest Unincorporated Community In the County





CCU Utility System Acquisition Timeline

- In June 1991, the County acquired the utilities system from GDU by means of a quick-take condemnation.
 - Financed through the issuance of the Charlotte County, Florida, Utility System Revenue Bonds.
- Charlotte County became the owner and operator of gas and wastewater facilities that served Charlotte County, and a water system that served Charlotte and De Soto counties.
- The Board of County Commissioners decided to sell the gas system in 1996 and the sale was completed on March 31, 1998.



Water Supply Authority Formation

- Inter-local Agreement Signed 1982
 - Charlotte, Desoto, Manatee, Hardee*, and Sarasota Counties formed the Water Supply Authority.

*Hardee County opts out.
- 1991 Charlotte County acquires GDU Peace River Water Treatment Plant Facilities as directed by SWFWMD and Water Supply Authority and transfers plant to the Authority forming the PRMRWSA (Peace River Manasota Regional Water Supply Authority).

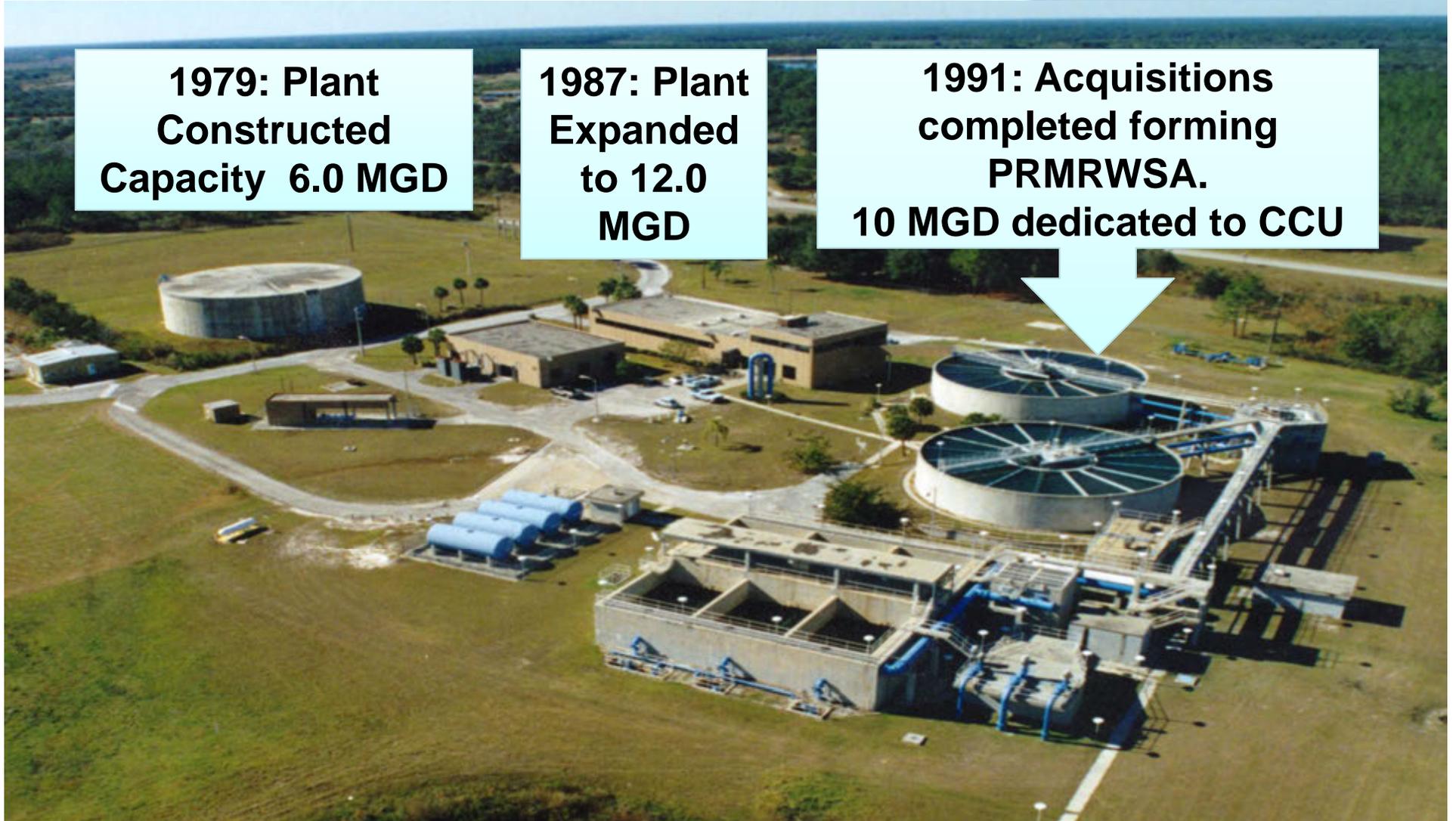


GDU Peace River Water Treatment Plant Facilities

**1979: Plant
Constructed
Capacity 6.0 MGD**

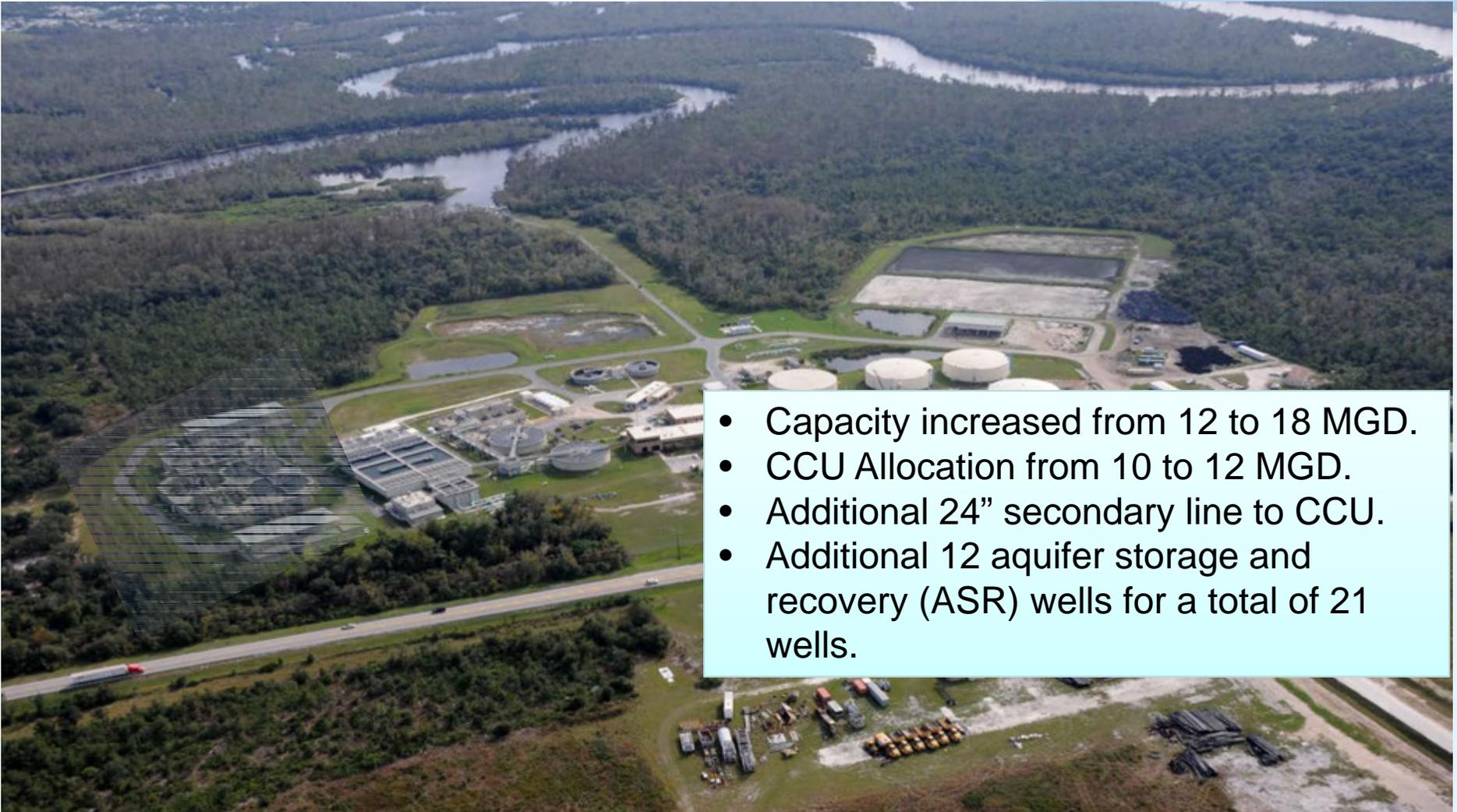
**1987: Plant
Expanded
to 12.0
MGD**

**1991: Acquisitions
completed forming
PRMRWSA.
10 MGD dedicated to CCU**





2001: PRMRWSA Capacity Upgrades “Peace River Option” (PRO)



- Capacity increased from 12 to 18 MGD.
- CCU Allocation from 10 to 12 MGD.
- Additional 24” secondary line to CCU.
- Additional 12 aquifer storage and recovery (ASR) wells for a total of 21 wells.



2009: PRMRWSA

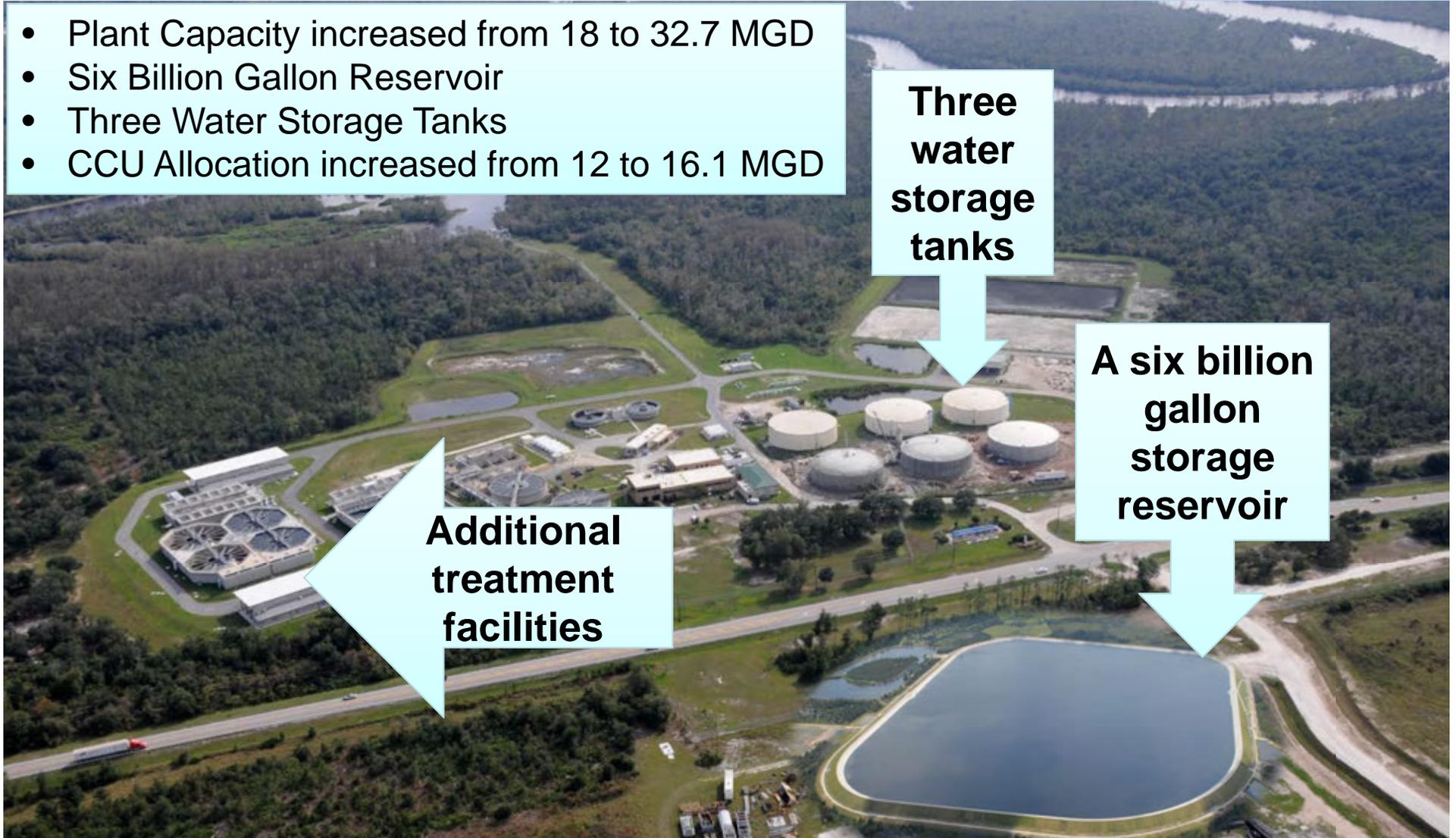
“Regional Expansion Program” (REP)

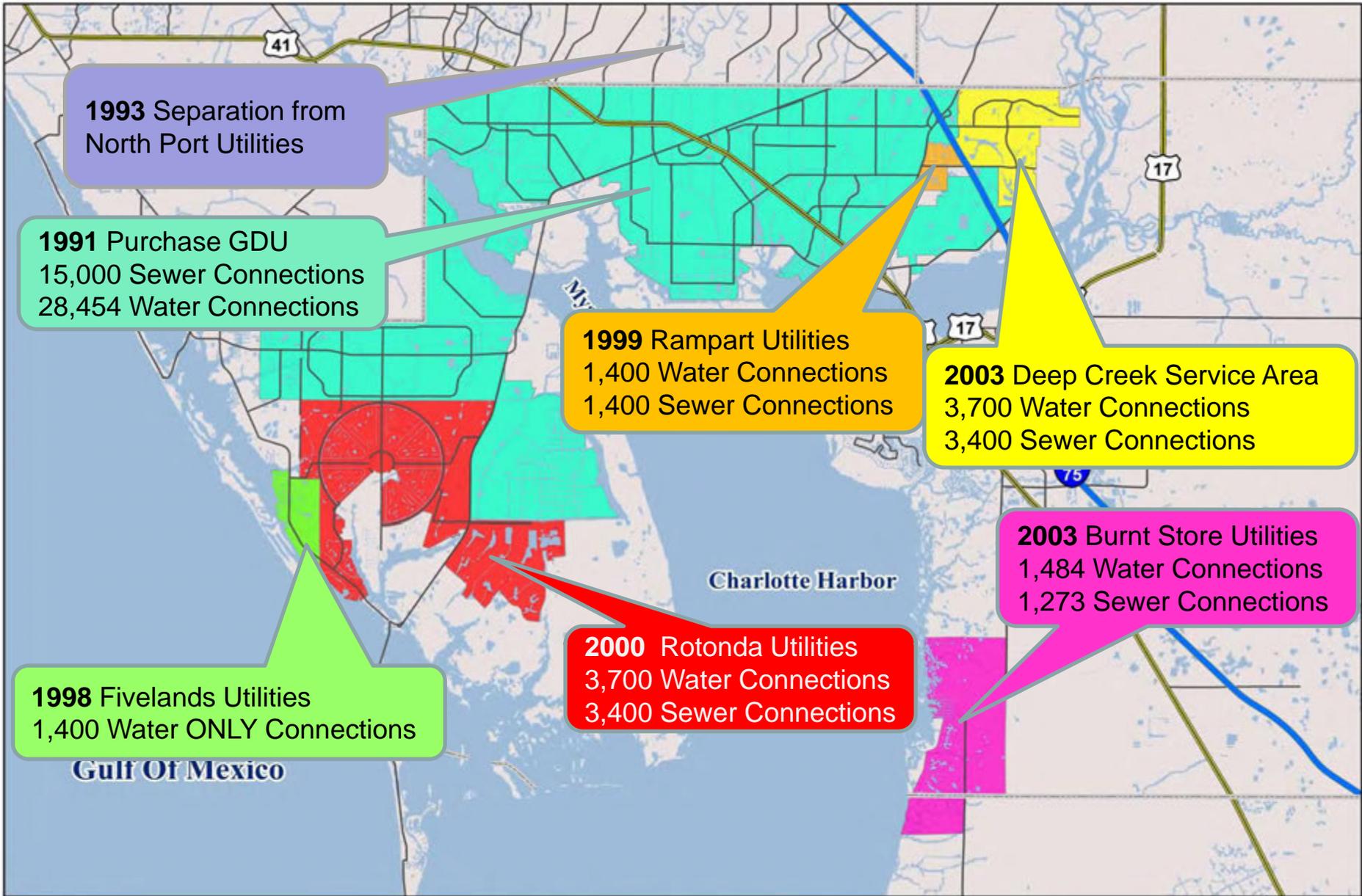
- Plant Capacity increased from 18 to 32.7 MGD
- Six Billion Gallon Reservoir
- Three Water Storage Tanks
- CCU Allocation increased from 12 to 16.1 MGD

Three
water
storage
tanks

A six billion
gallon
storage
reservoir

Additional
treatment
facilities





Purchased Utility Service Area





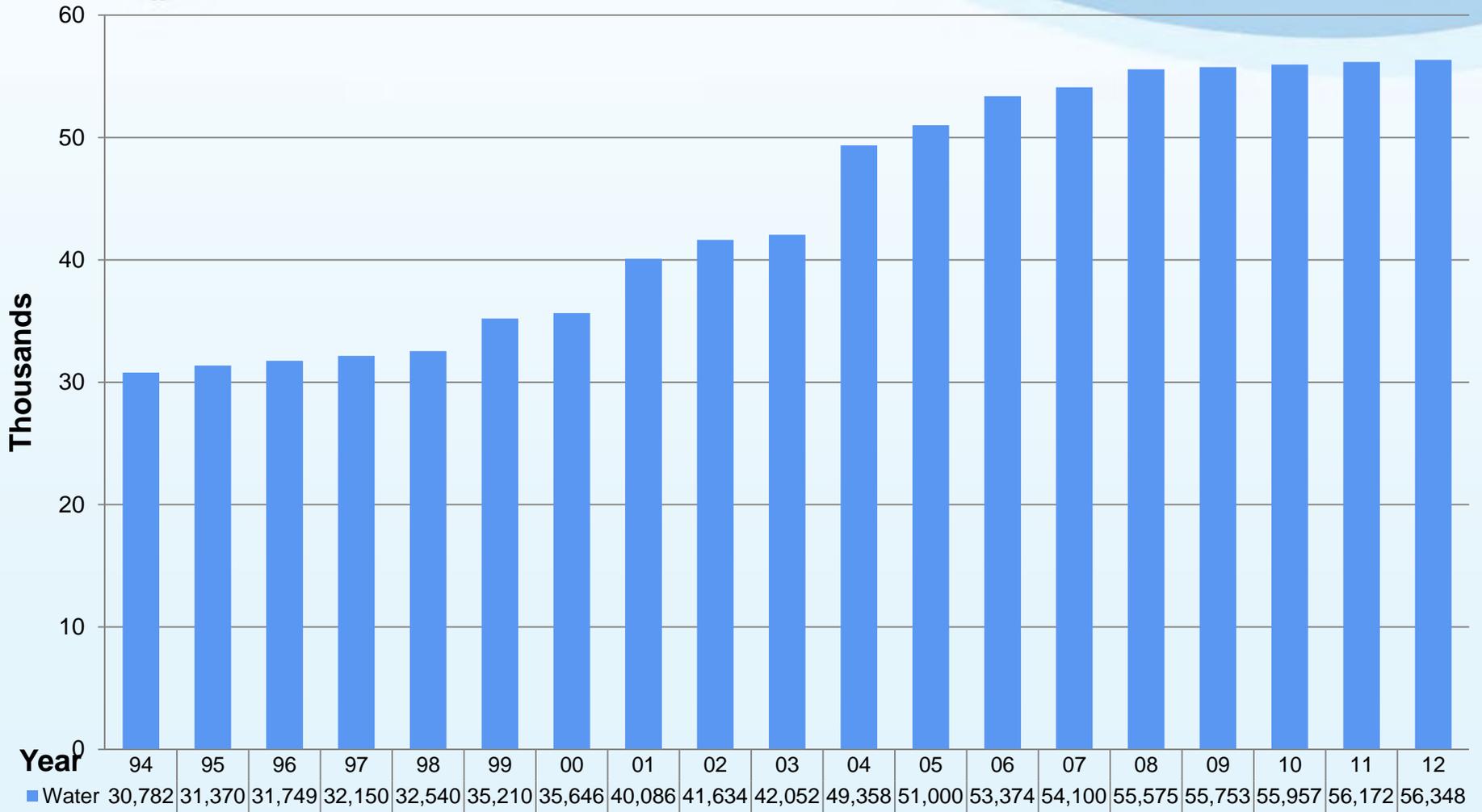
Potable Water

**CHARLOTTE
COUNTY**
"Open for Business"



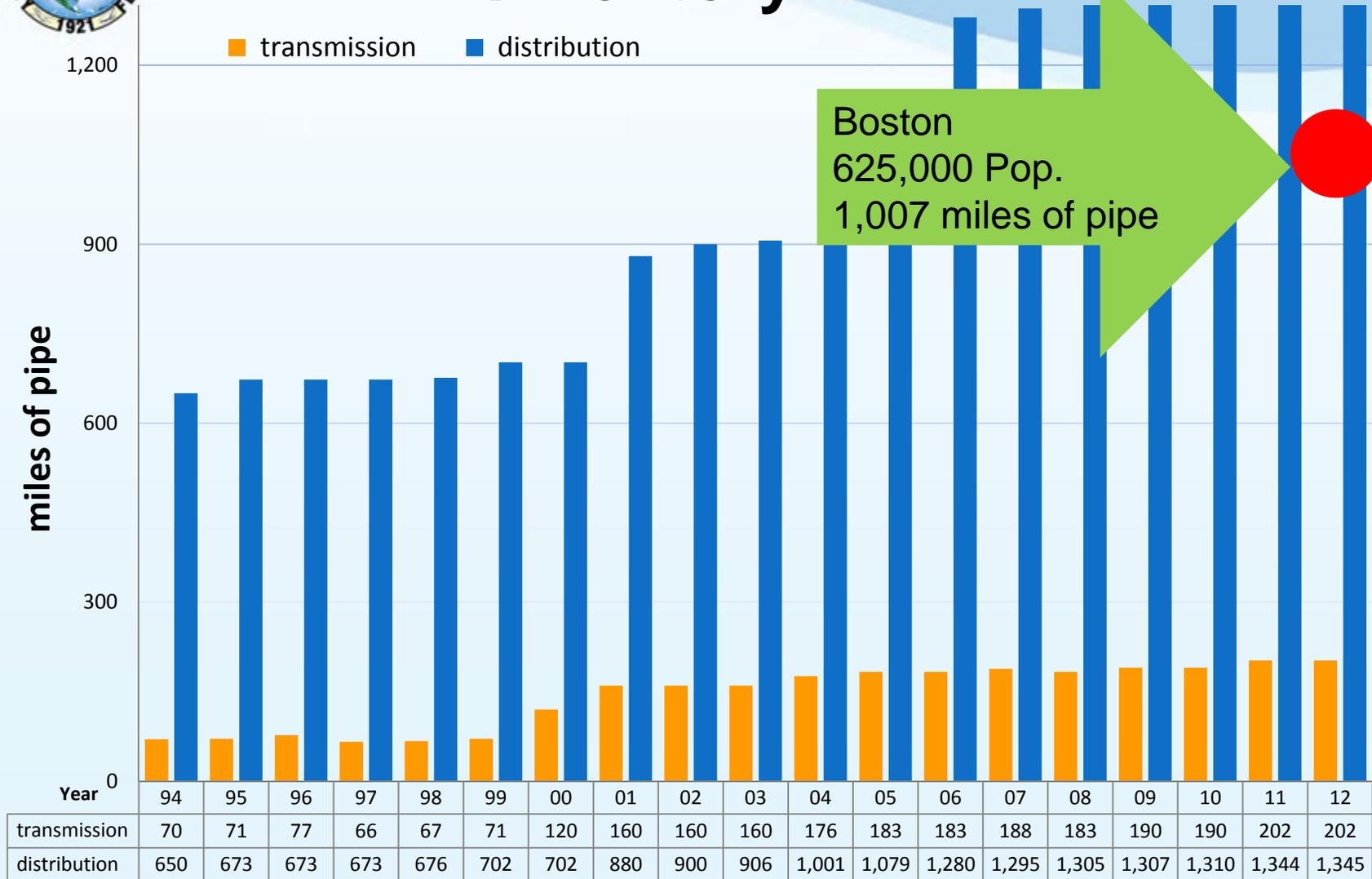


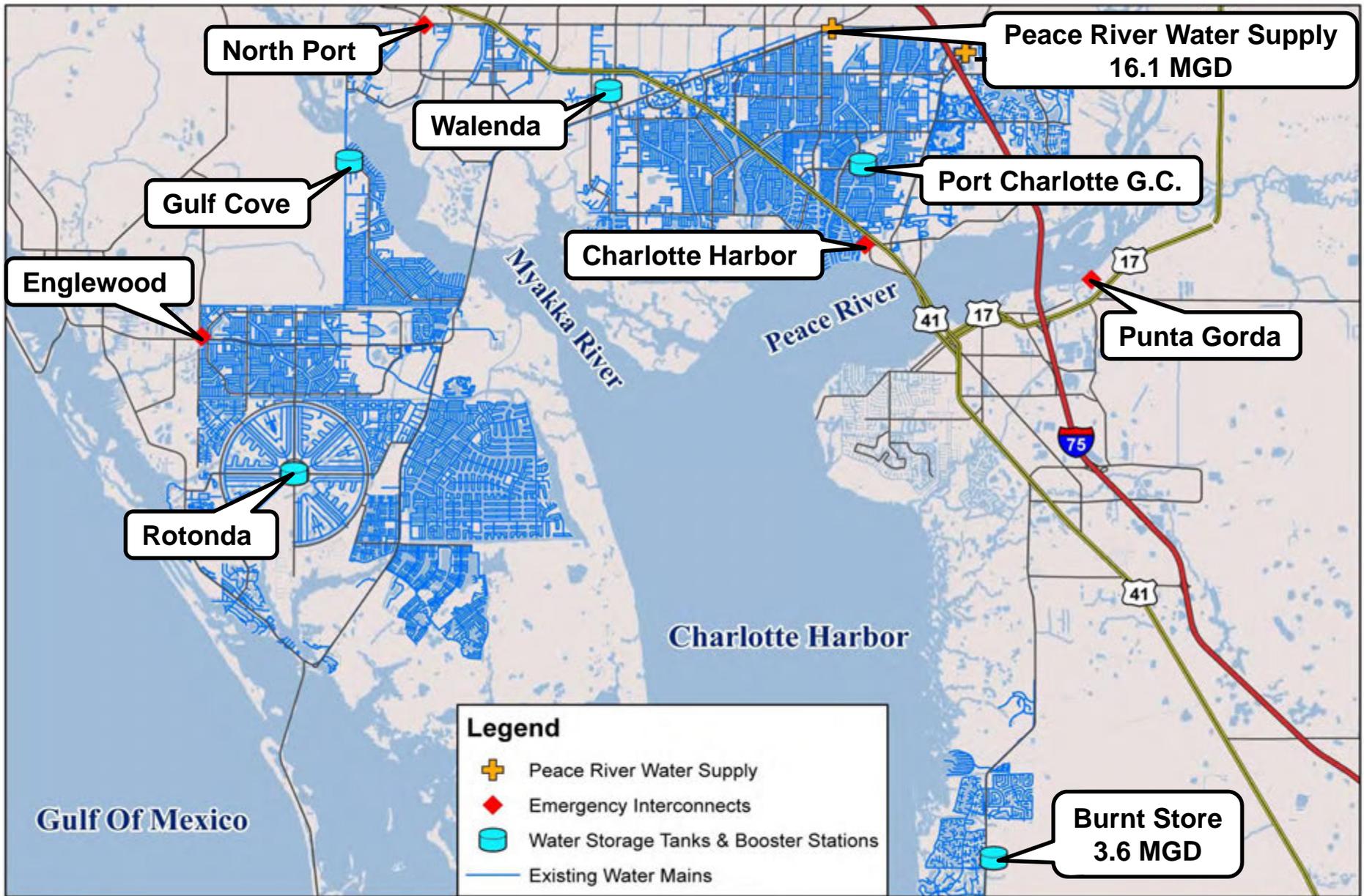
Water Connections





Potable Water Infrastructure Inventory

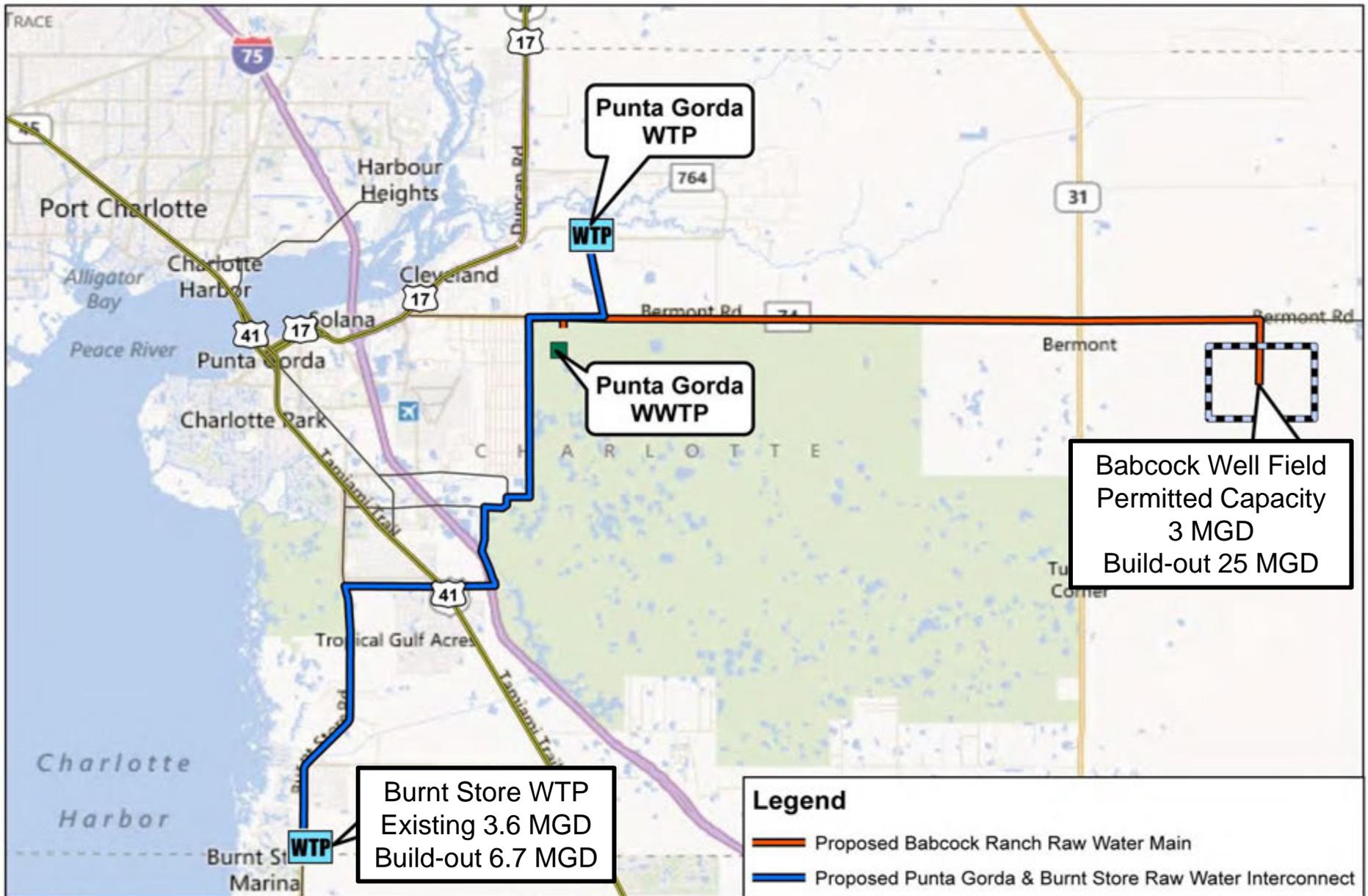




Charlotte County Utilities

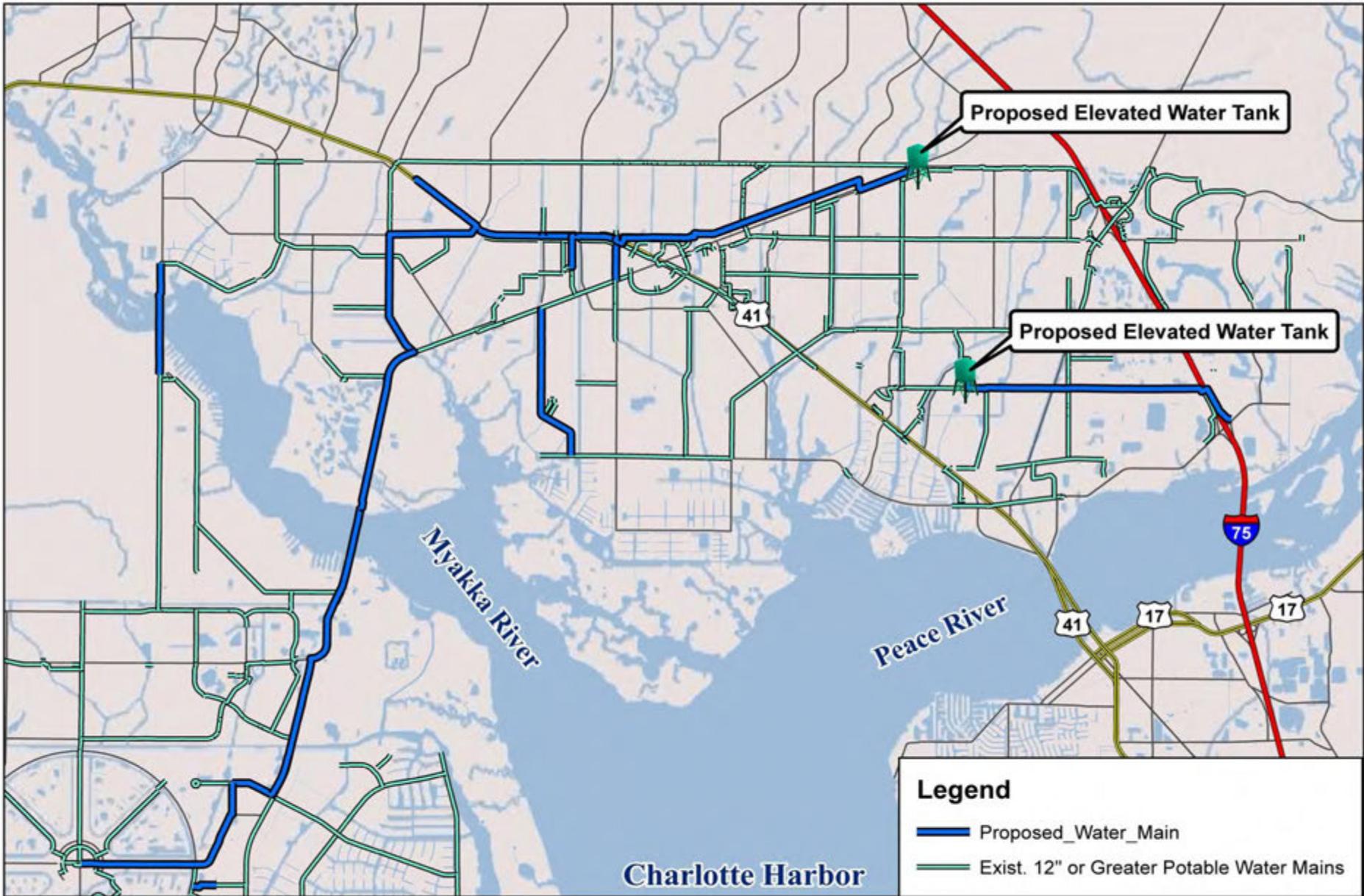
Existing Water Infrastructure and Interconnects





Charlotte County Utilities
- Proposed Punta Gorda WTP & Burnt Store WTP Interconnect
- Babcock Ranch Raw Water Pipeline Route Alternatives





Charlotte County Utilities Proposed Potable Water Infrastructure



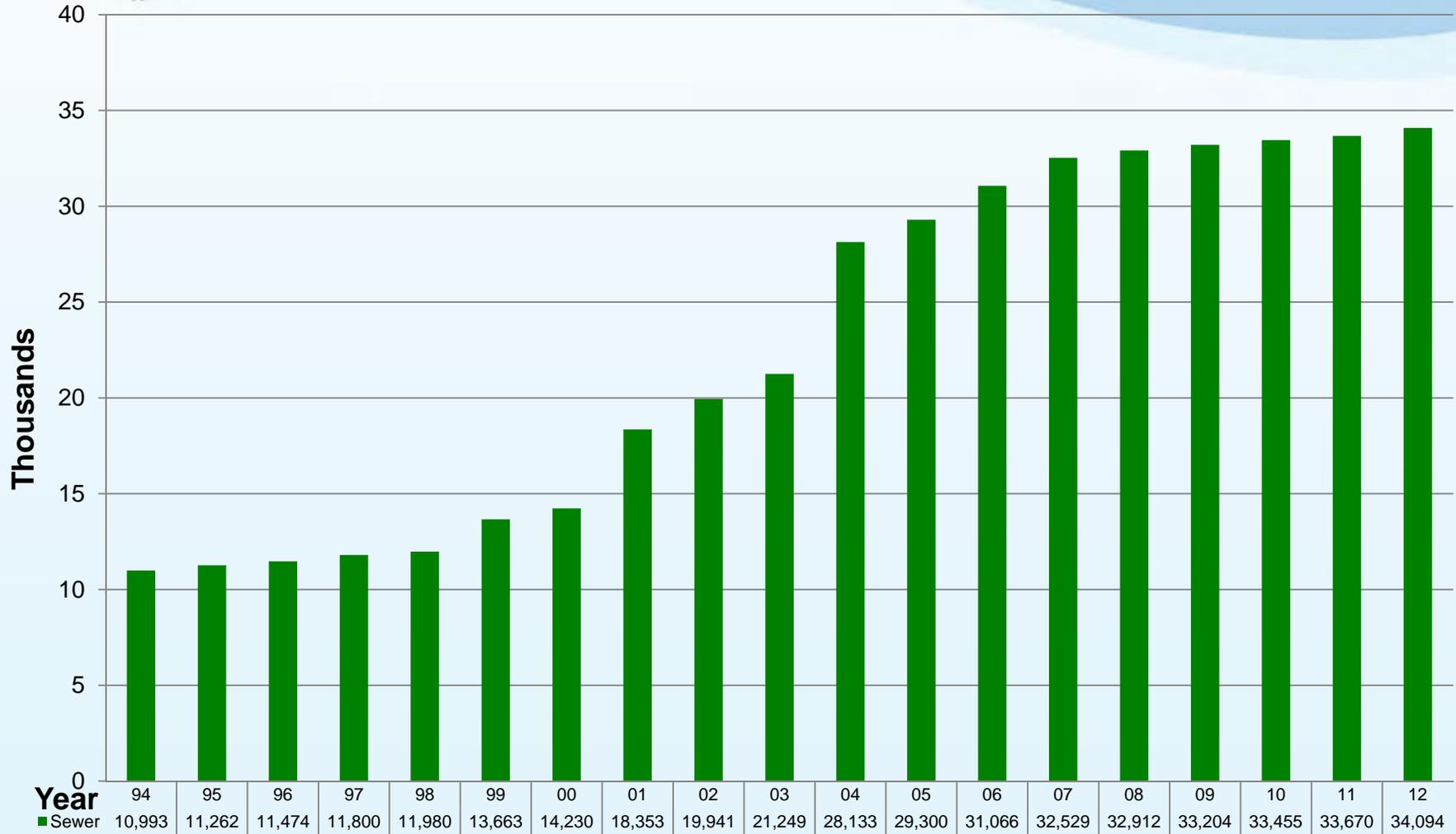


Wastewater



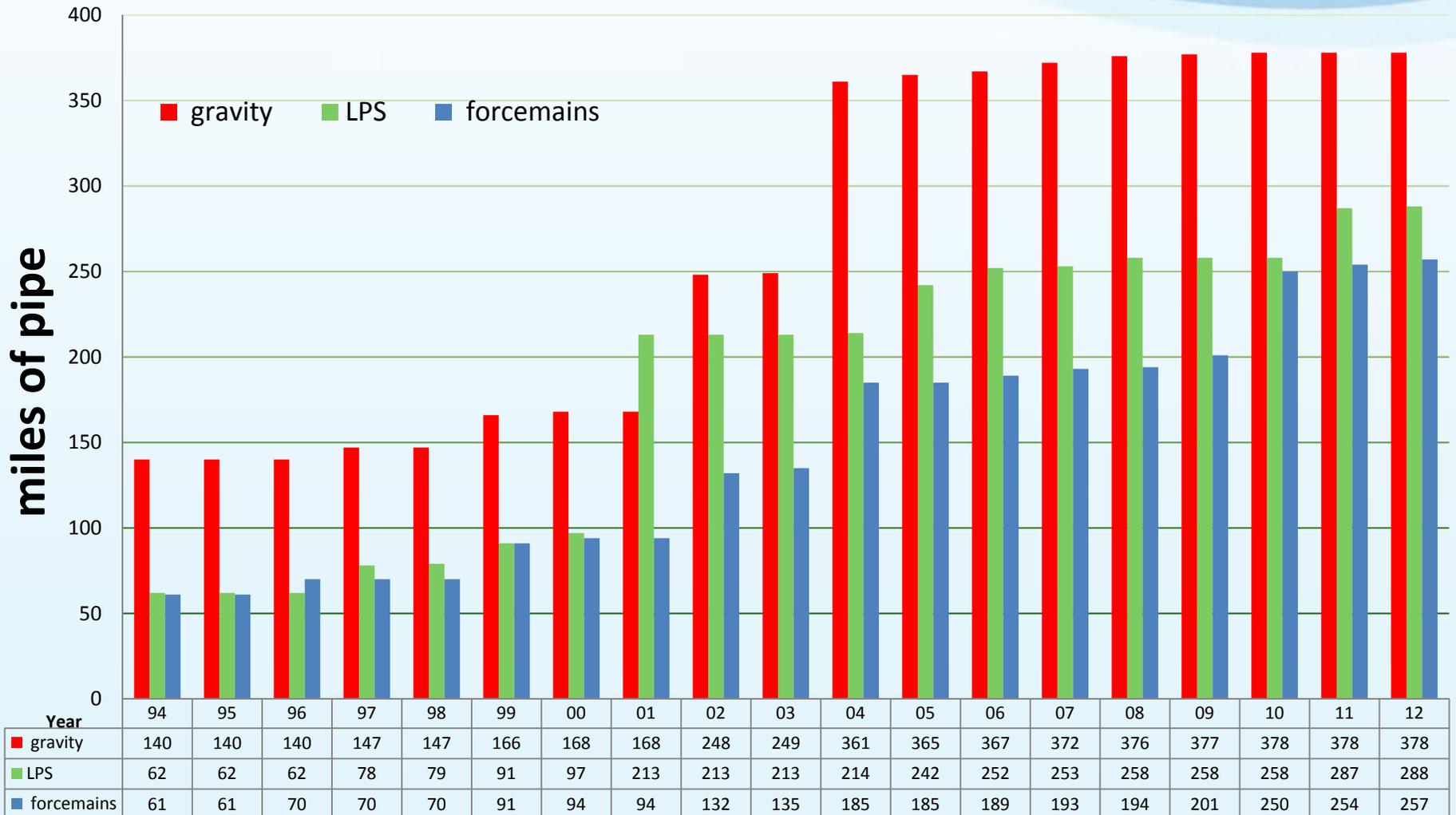


CCU Sewer Connections





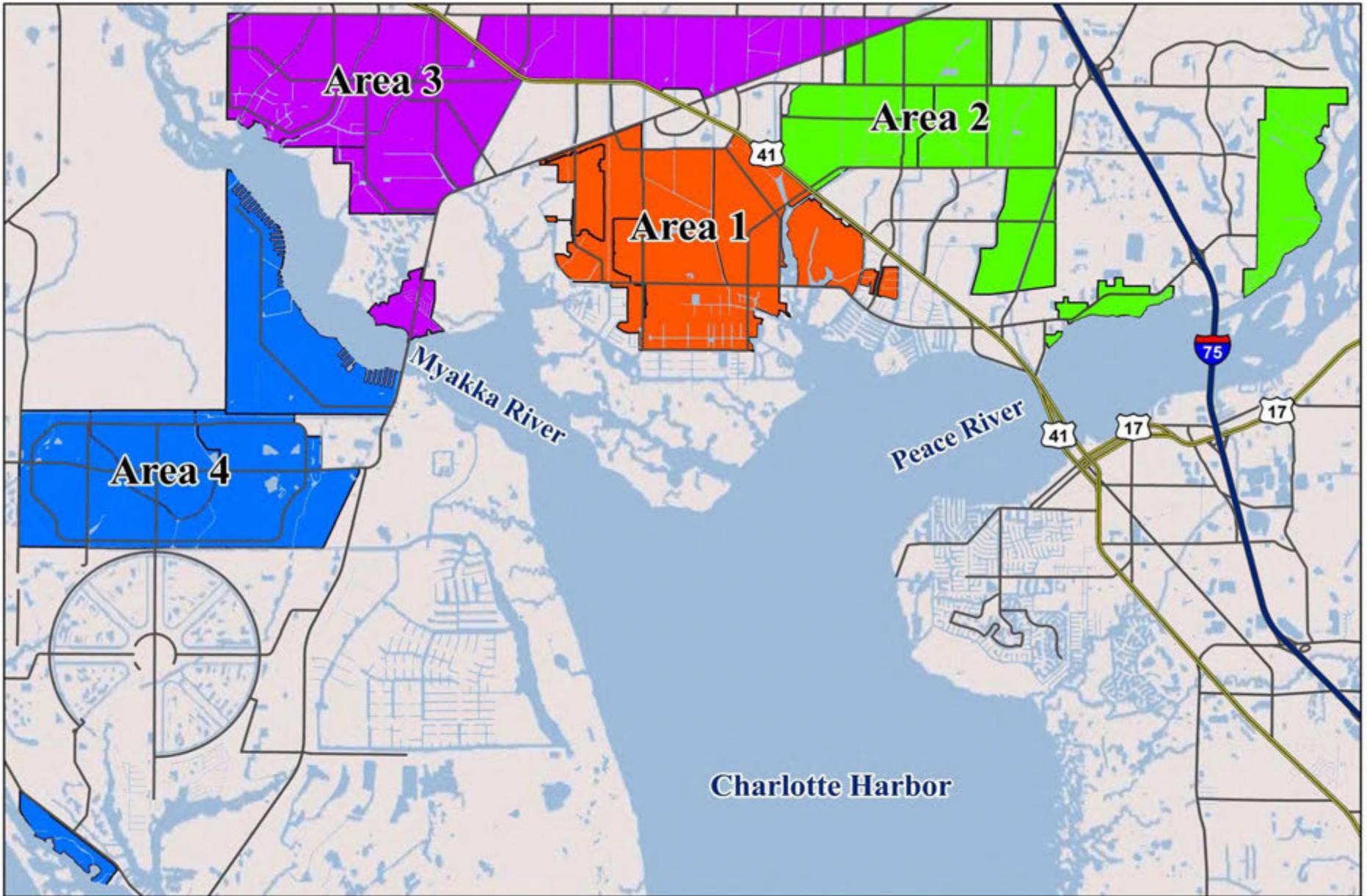
Wastewater Infrastructure Inventory





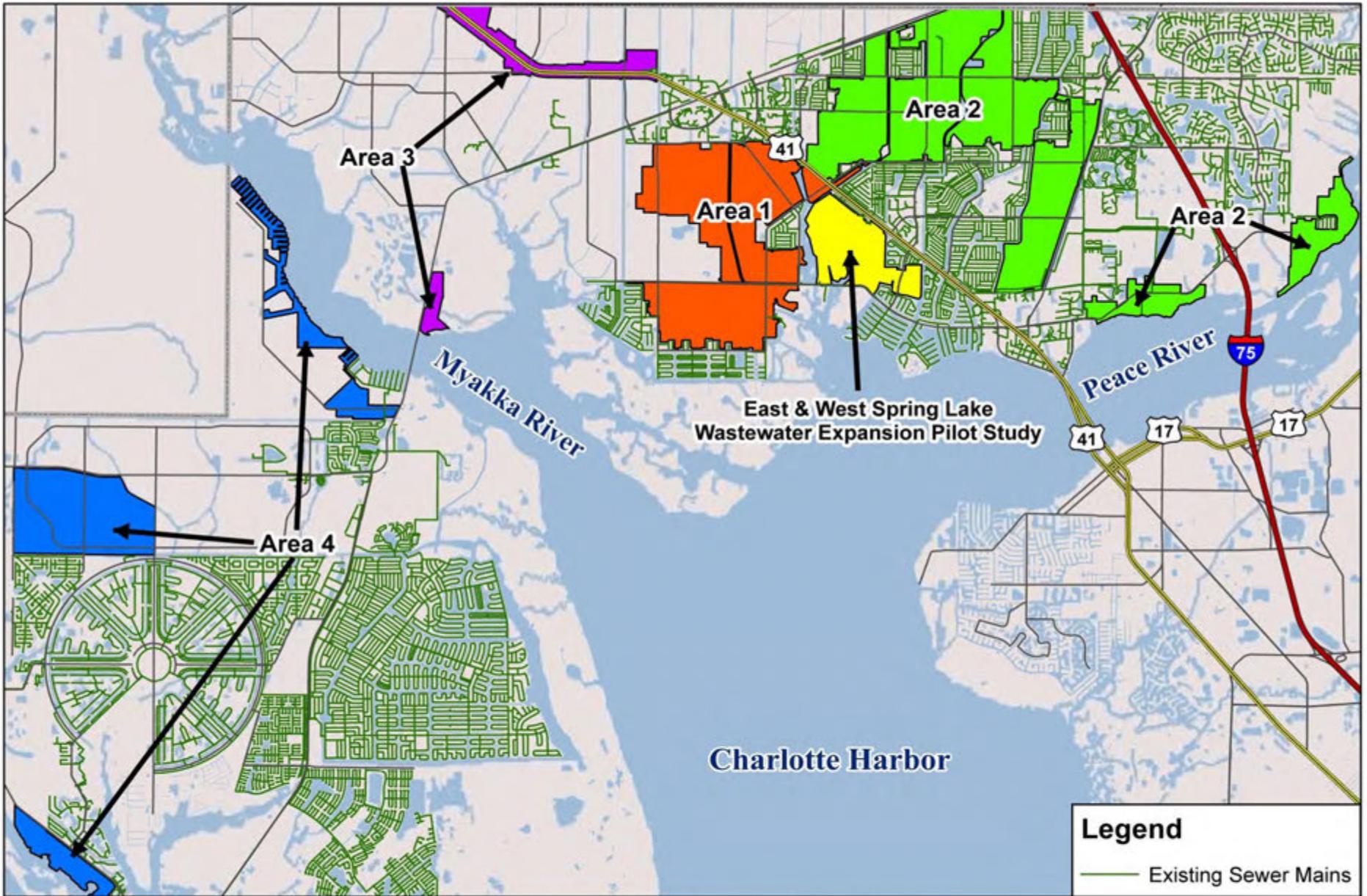
Charlotte County Utilities Existing Wastewater Infrastructure





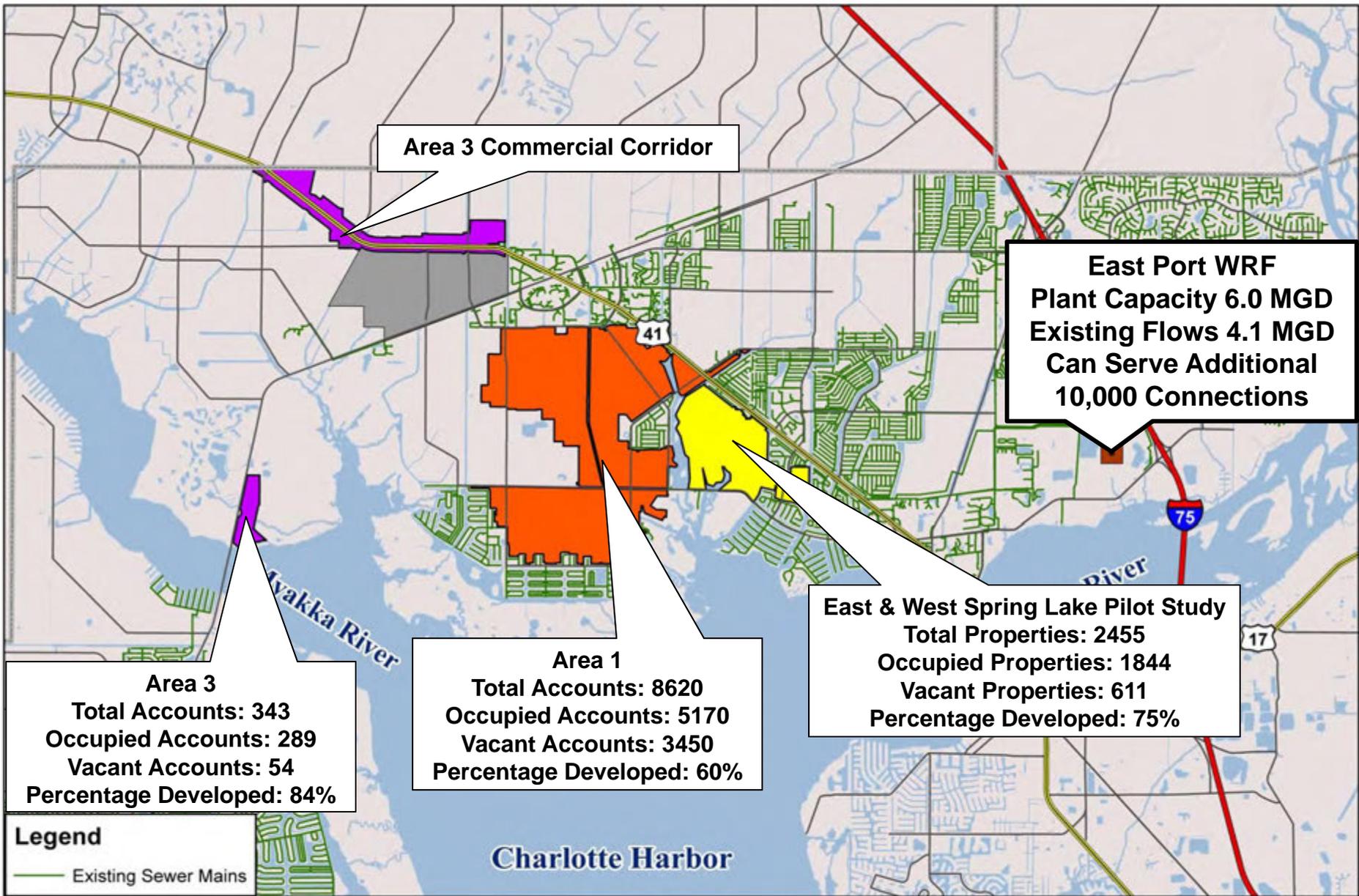
Charlotte County Utilities 2009 Proposed Wastewater Expansion Areas





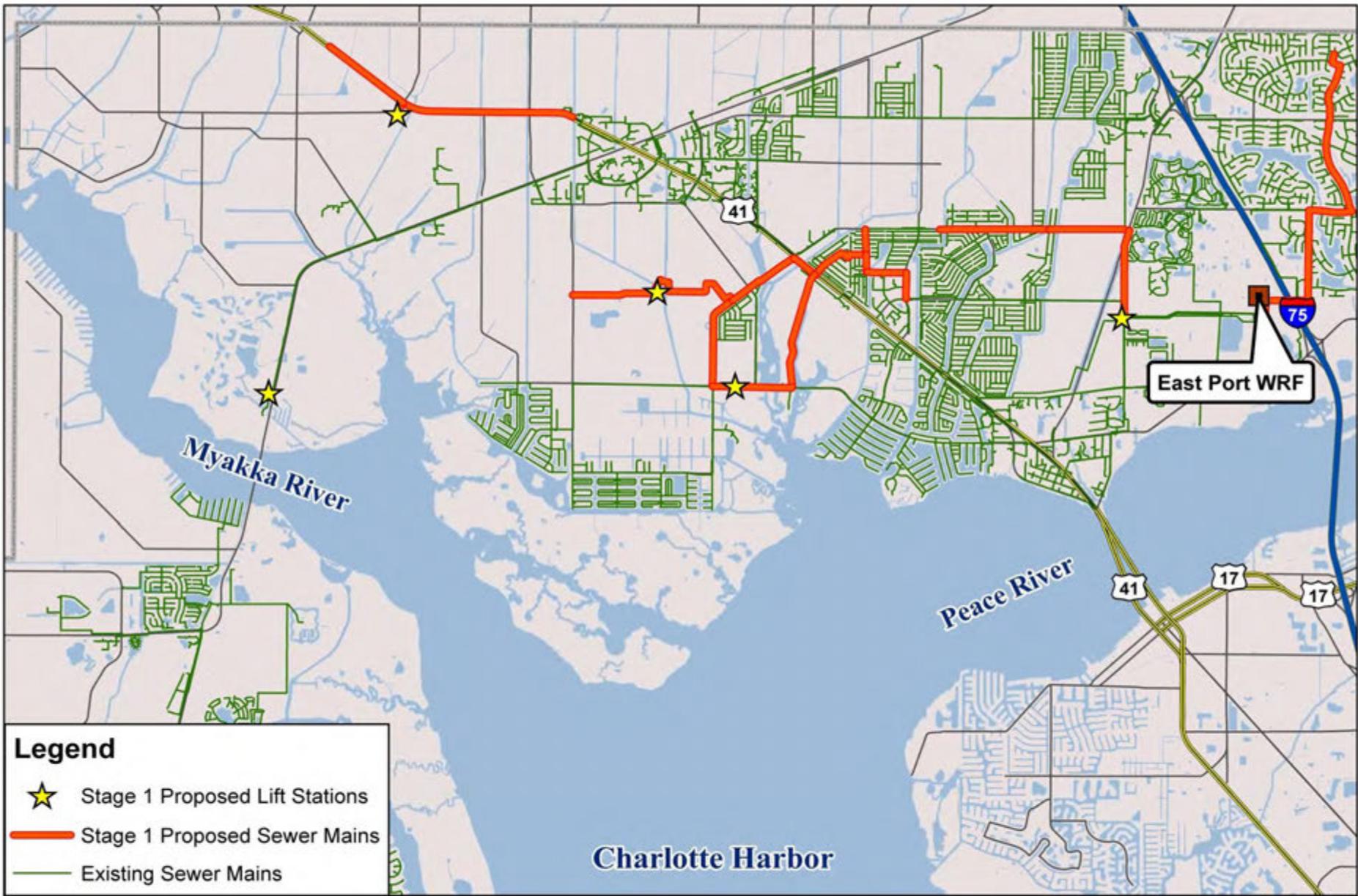
Charlotte County Utilities
2013 Proposed Wastewater Expansion Plan
Commercial Land Or 50% Greater Developed Residential Land





Charlotte County Utilities
Stage 1: Proposed Wastewater Expansion Plan
Existing East Port WRF





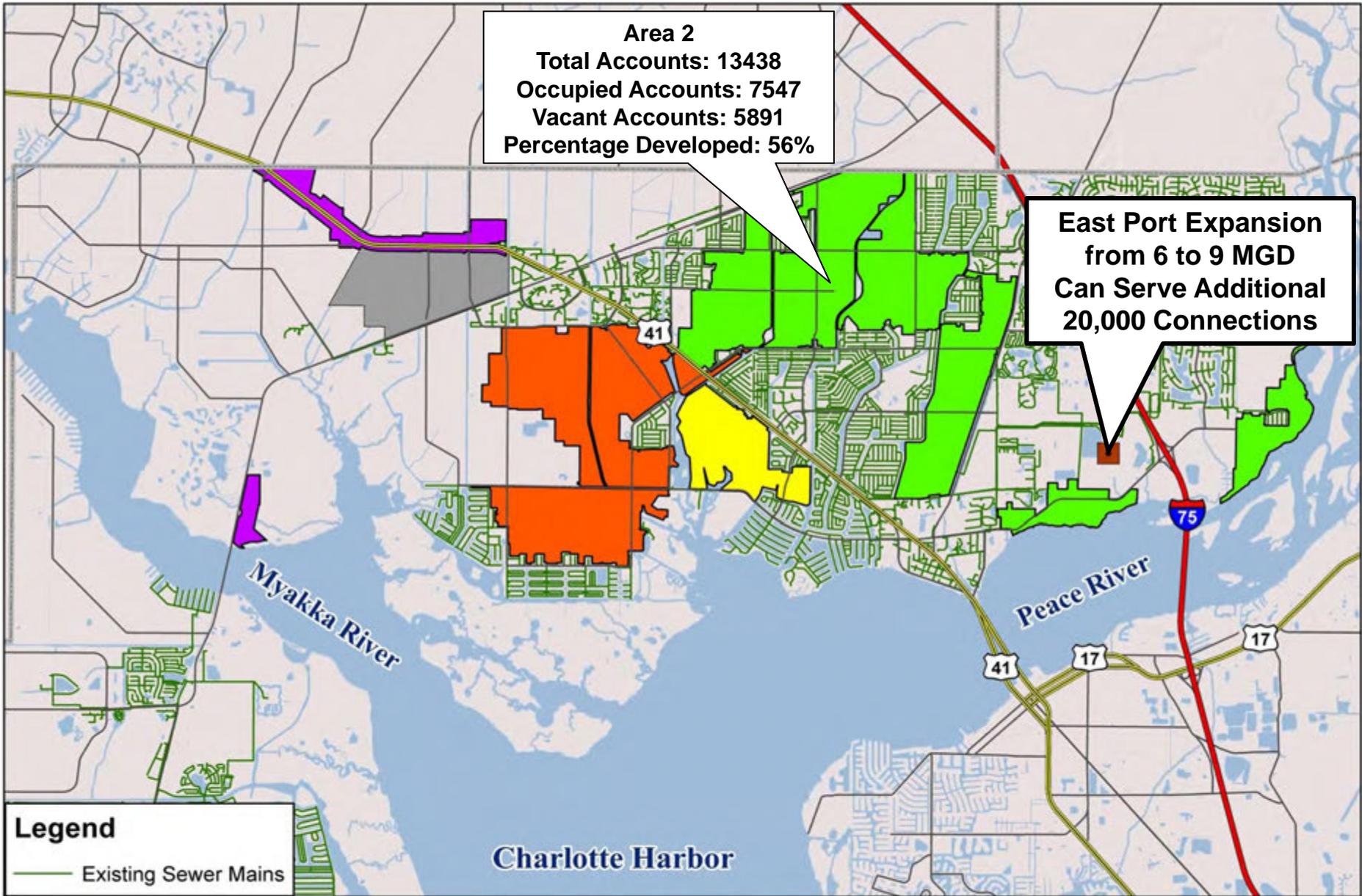
Legend

- ★ Stage 1 Proposed Lift Stations
- Stage 1 Proposed Sewer Mains
- Existing Sewer Mains



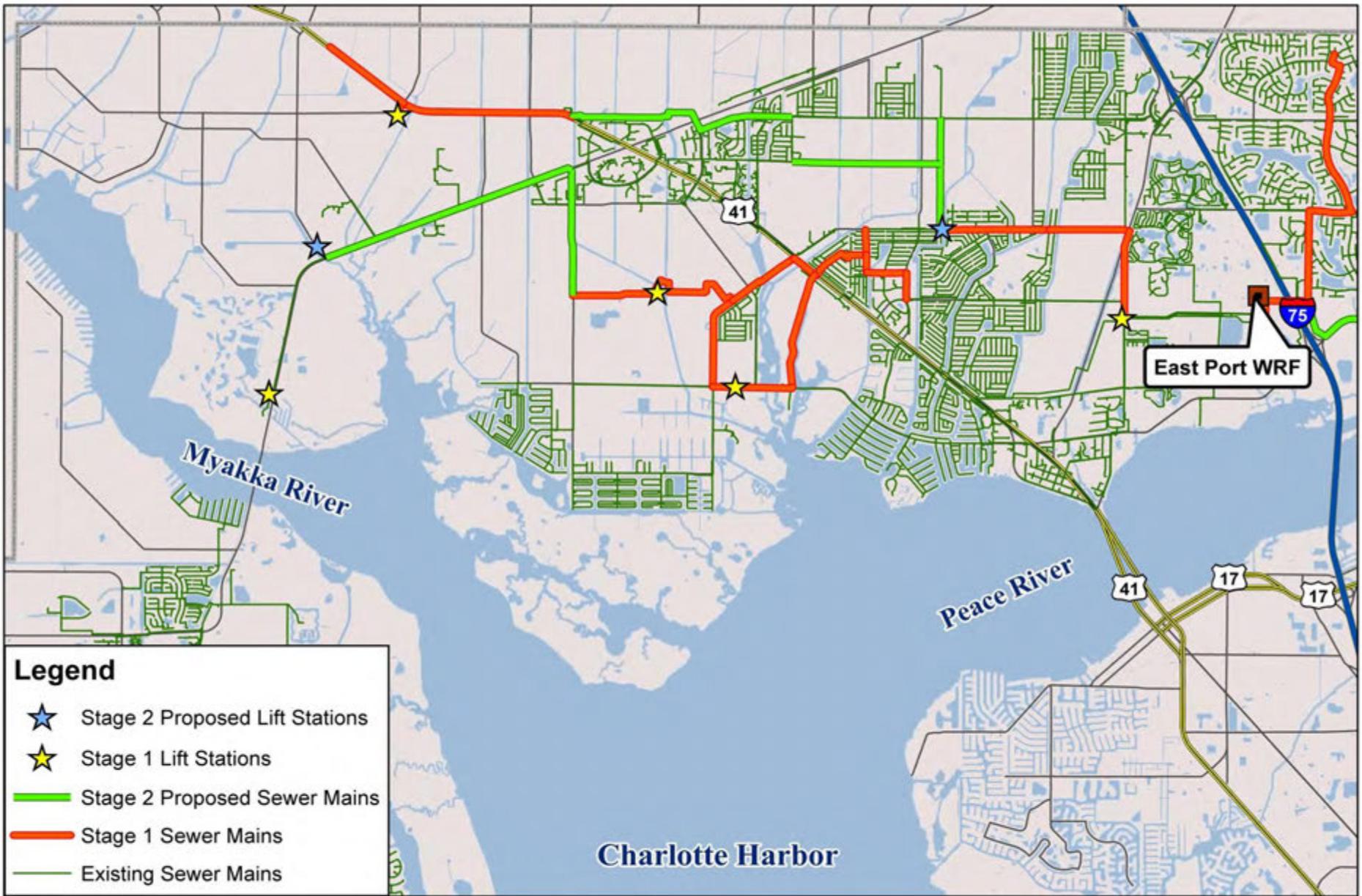
Charlotte County Utilities
Stage 1: Mid County Master Wastewater Plan





Charlotte County Utilities
Stage 2: Proposed Wastewater Expansion Plan
Permitted East Port WRF





Legend

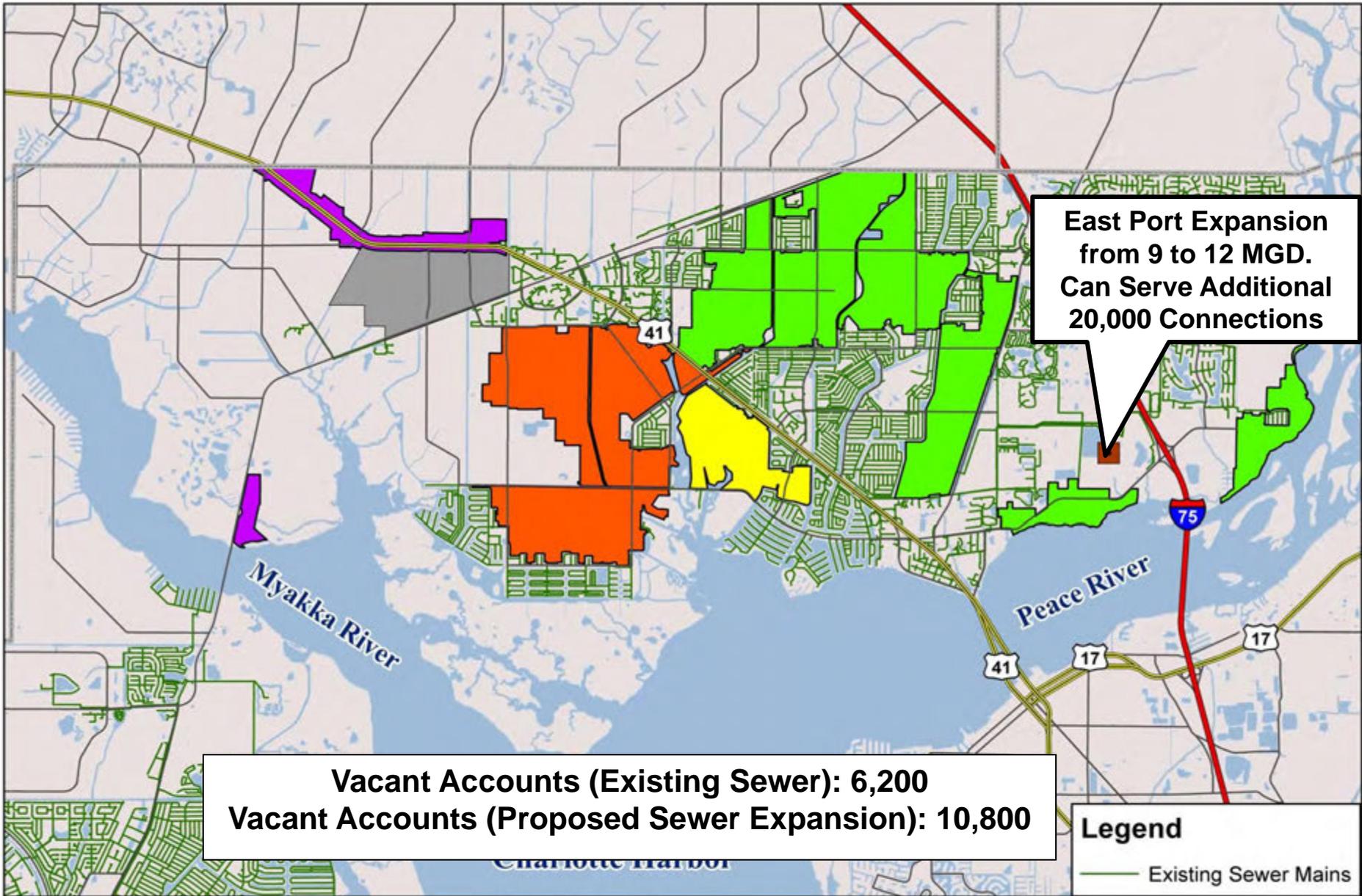
- ★ Stage 2 Proposed Lift Stations
- ★ Stage 1 Lift Stations
- Stage 2 Proposed Sewer Mains
- Stage 1 Sewer Mains
- Existing Sewer Mains



Charlotte County Utilities

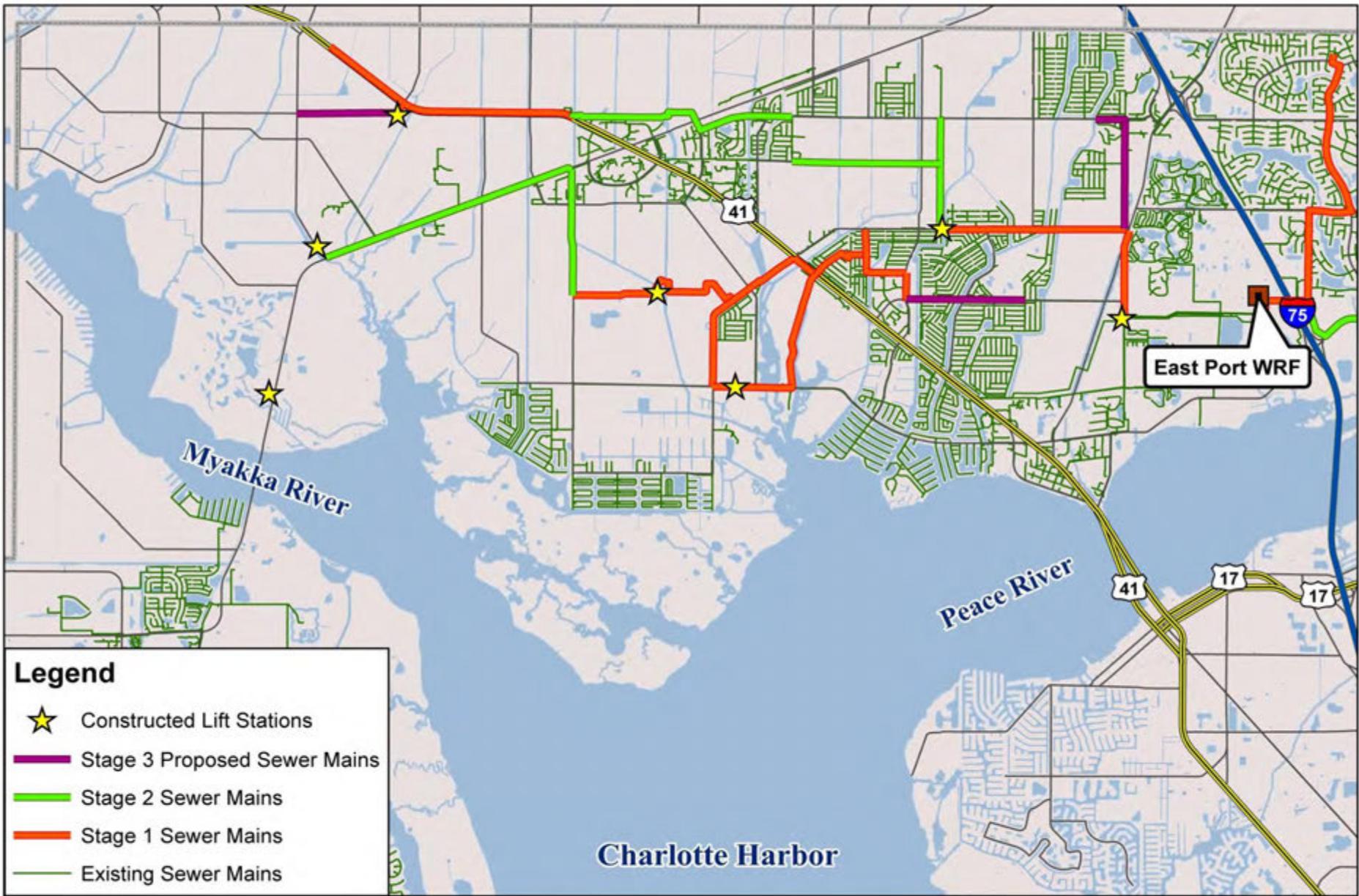
Stage 2: Mid County Master Wastewater Plan





Charlotte County Utilities
Stage 3: Mid County Wastewater Infill
Expansion of East Port WRF





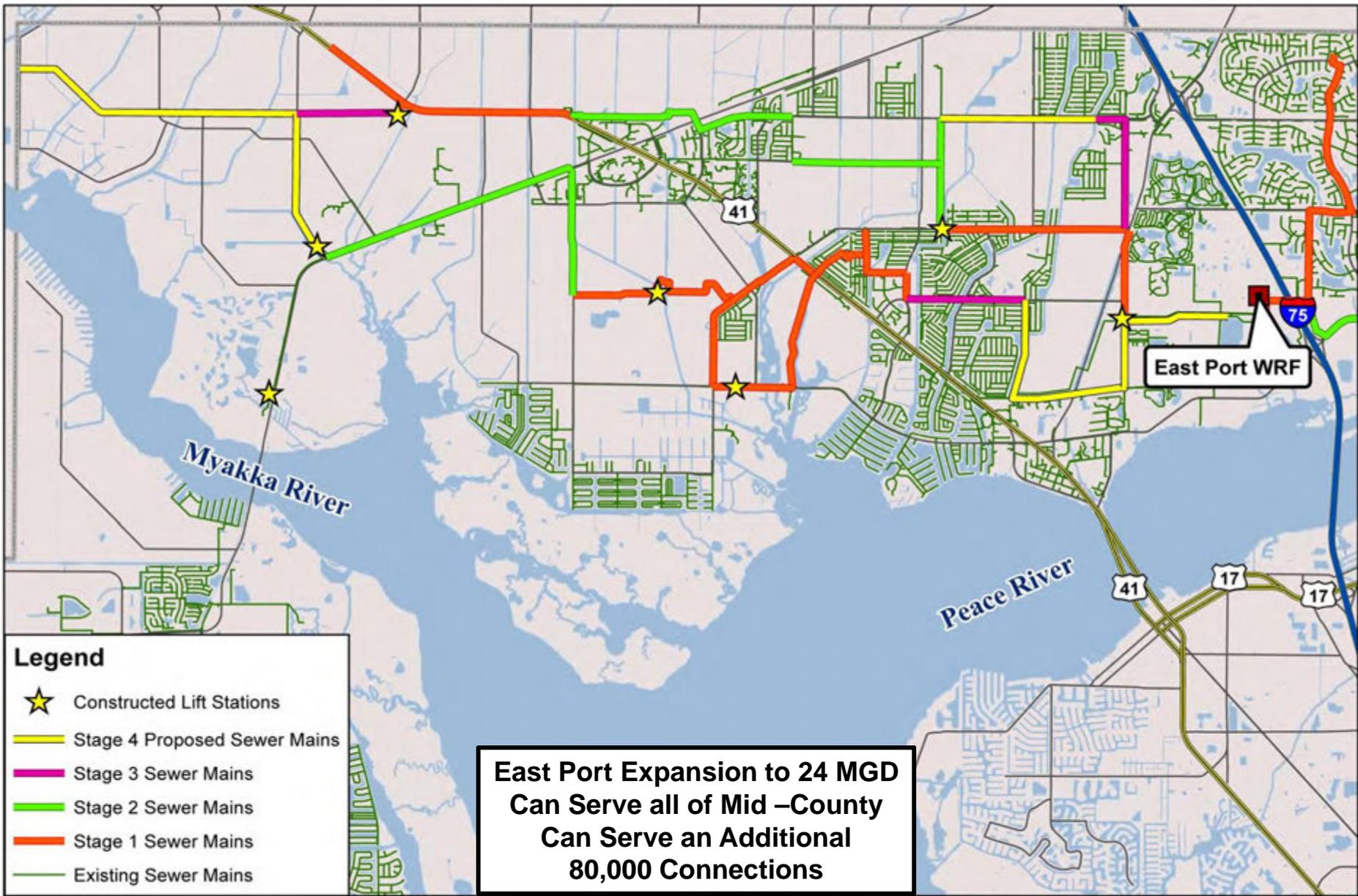
Legend

-  Constructed Lift Stations
-  Stage 3 Proposed Sewer Mains
-  Stage 2 Sewer Mains
-  Stage 1 Sewer Mains
-  Existing Sewer Mains



Charlotte County Utilities
Stage 3: Mid County Master Wastewater Plan





Legend

- ★ Constructed Lift Stations
- Stage 4 Proposed Sewer Mains
- Stage 3 Sewer Mains
- Stage 2 Sewer Mains
- Stage 1 Sewer Mains
- Existing Sewer Mains

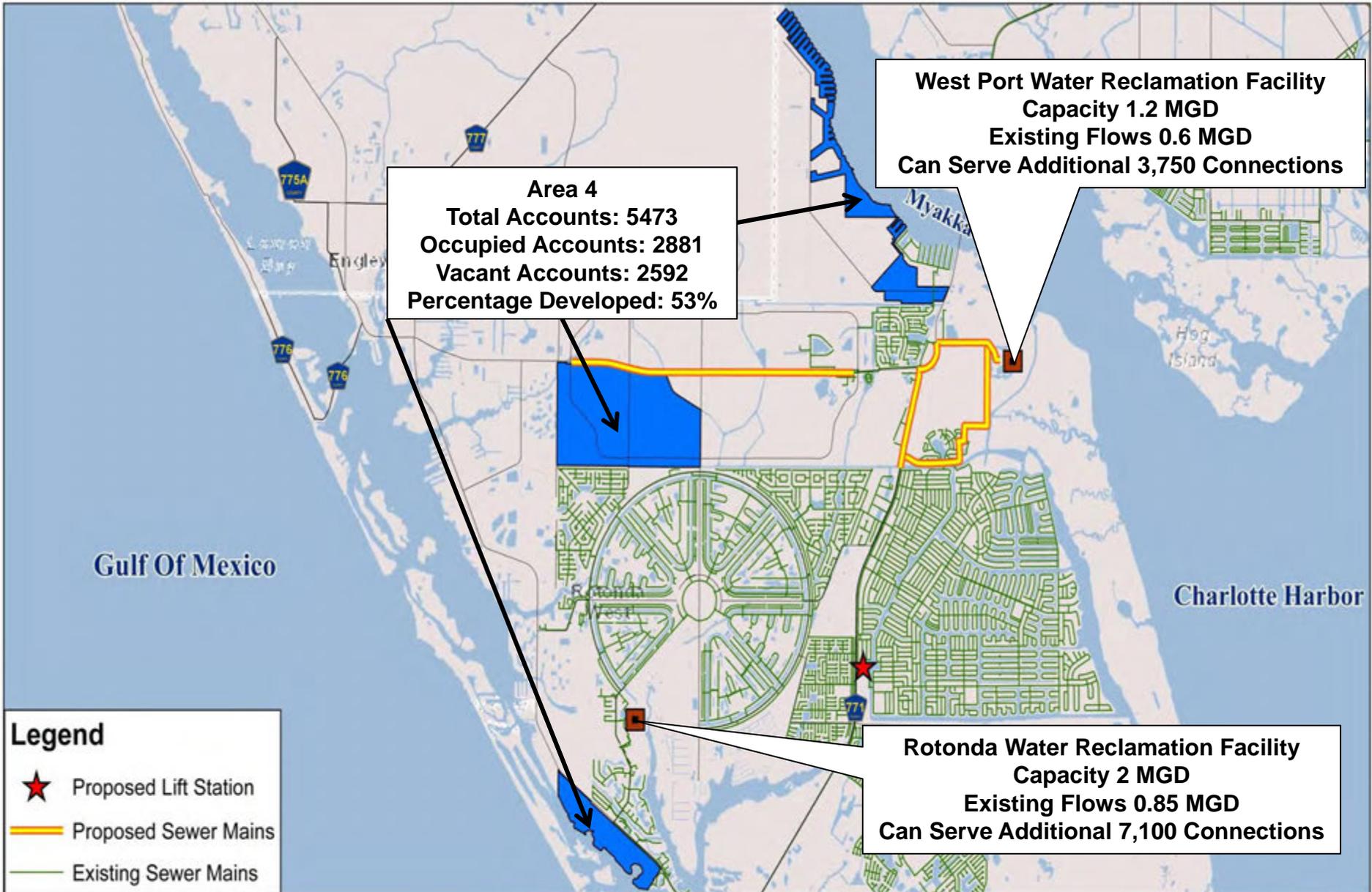
**East Port Expansion to 24 MGD
Can Serve all of Mid –County
Can Serve an Additional
80,000 Connections**



Charlotte County Utilities Mid County Full Build Out Wastewater Plan



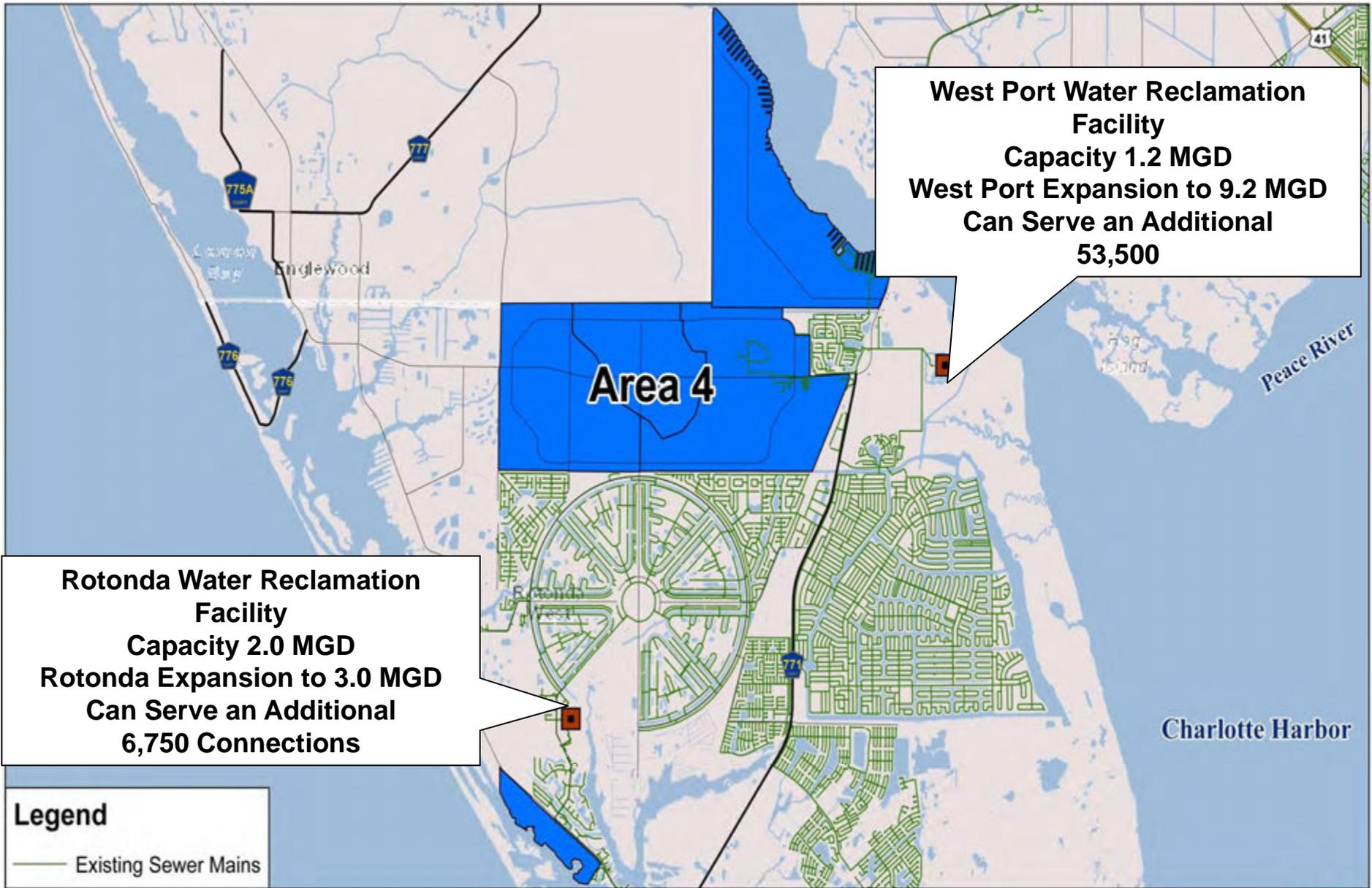
NOT TO SCALE



Charlotte County Utilities
2013 Proposed Wastewater Expansion Plan
50% Greater Developed Residential Land



NOT TO SCALE



Charlotte County Utilities
West County Proposed Wastewater Expansion Plan Full Build Out



NOT TO SCALE



Charlotte County Utilities

South County Full Build Out Master Wastewater Plan



NOT TO SCALE



Reclaimed Water





Why Use Reclaimed Water?

Environmental:

- Protects environment by helping to prevent salt water intrusion inland caused by excessive ground water withdrawals for irrigation
- Saves utility customers money by reducing the need to develop new potable water supplies

Regulation:

- Compliance with State's long term goal to conserve water by utilizing 75% of all wastewater flows for potable water offsets
- Compliance with existing permits allows future expansion of treatment and storage facilities to meet future growth

Financial Consequences:

- New Desalination Plant
\$10 to \$12 / 1,000gal
- New Reverse Osmosis Water Treatment Plant and Babcock Ranch Wellfield
\$4.00 to \$4.50 / 1,000gal



Cost of Reclaimed Water Distribution

Line No.	Description	Existing System Capital Costs	Existing System Equiv Annual Cost	Phase 1-3 Expansion Capital Costs	Phase 1-3 Equiv Annual Cost	Total System Capital Costs	Total System Equiv Annual Cost
Capital Investment:							
1	On-Site Facilities [1]	\$ 1,610,595.00	\$ 89,004.00	\$ 3,133,198.00	\$ 173,145.00	\$ 4,743,793.00	\$ 262,148.00
2	Transmission Mains [1]	10,124,463.00	559,491.00	9,952,540.00	549,991.00	20,077,003.00	1,109,482.00
3	Storage [1]	1,219,912.00	72,050.00	1,909,240.00	112,762.00	3,129,152.00	184,812.00
4	Pump Stations [1]	2,064,917.00	153,938.00	4,425,500.00	329,918.00	6,490,417.00	483,856.00
5	Total Capital Cost	\$ 15,019,887.00	\$ 874,483.00	\$ 19,420,478.00	\$ 1,165,816.00	\$ 34,440,365.00	\$ 2,040,299.00
6	Less Grants Received/Applied For	4,165,005.00	335,538.00	-	-	13,875,244.00	1,501,354.00
7	Total CCU Capital Investment	\$ 10,854,882.00	\$ 538,945.00	\$ 19,420,478.00	\$ 1,165,816.00	\$ 20,565,121.00	\$ 538,945.00
8	Amortized Capital Cost[2]		\$ 538,945.00				\$ 663,713.00
9	Renewal & Replacement[3]		42,839.00				78,000.00
10	Operating Expenses:						
11	Electric Pumping Cost[4]		106,000.00				162,000.00
12	Other Operating Cost[5]		-				67,000.00
13	Total Operating Expenses		\$ 106,000.00				\$ 597,000.00
14	Total Revenue Requirements		\$ 687,784.00				\$ 970,713.00
15	Daily Revenue Requirement		\$ 1,884.00				\$ 2,659.00
16							
17	Reclaimed Production @ Plants		5.9 MGD				8.5 MGD
18	Cost to produce 1000 gals if all production is sold		\$0.32				\$0.31 w/ 50% Grants
							\$0.76 w/o Grants
19	Reclaimed Sent to Customers @ present time		3.003 MGD				
20	Cost to produce 1000 gals with existing sales		\$0.63				

Notes:

CCU Life Estimate for Assets:

[1] Cost to Produce per 1000 gallons based on sales/demand

On-site facilities & Transmission Mains: 100 years

[2] Amortization based on the average service life of the facilities an an annual capital cost of 5.5%

Storage Facilities : 50 years

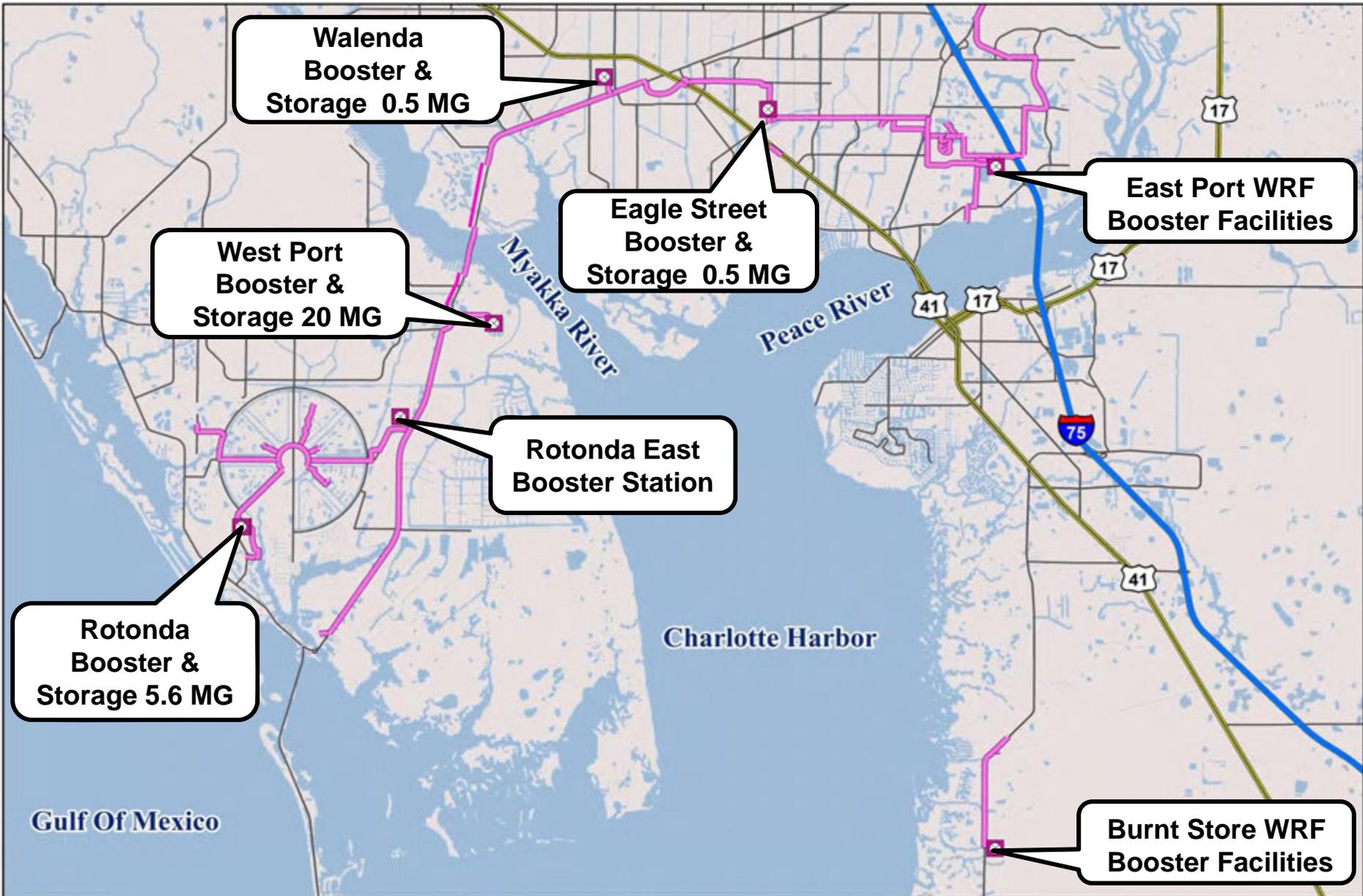
[3] Based on renewal and replacement funding level equal to 5.0% of revenue

Pumping Facilities: 25 years

[4] Per CCU staff based on actual operating expense.

[5] Based on one additional line technician.

Equivalent Annual Cost (EAC) = Net Present Value/Annuity Factor

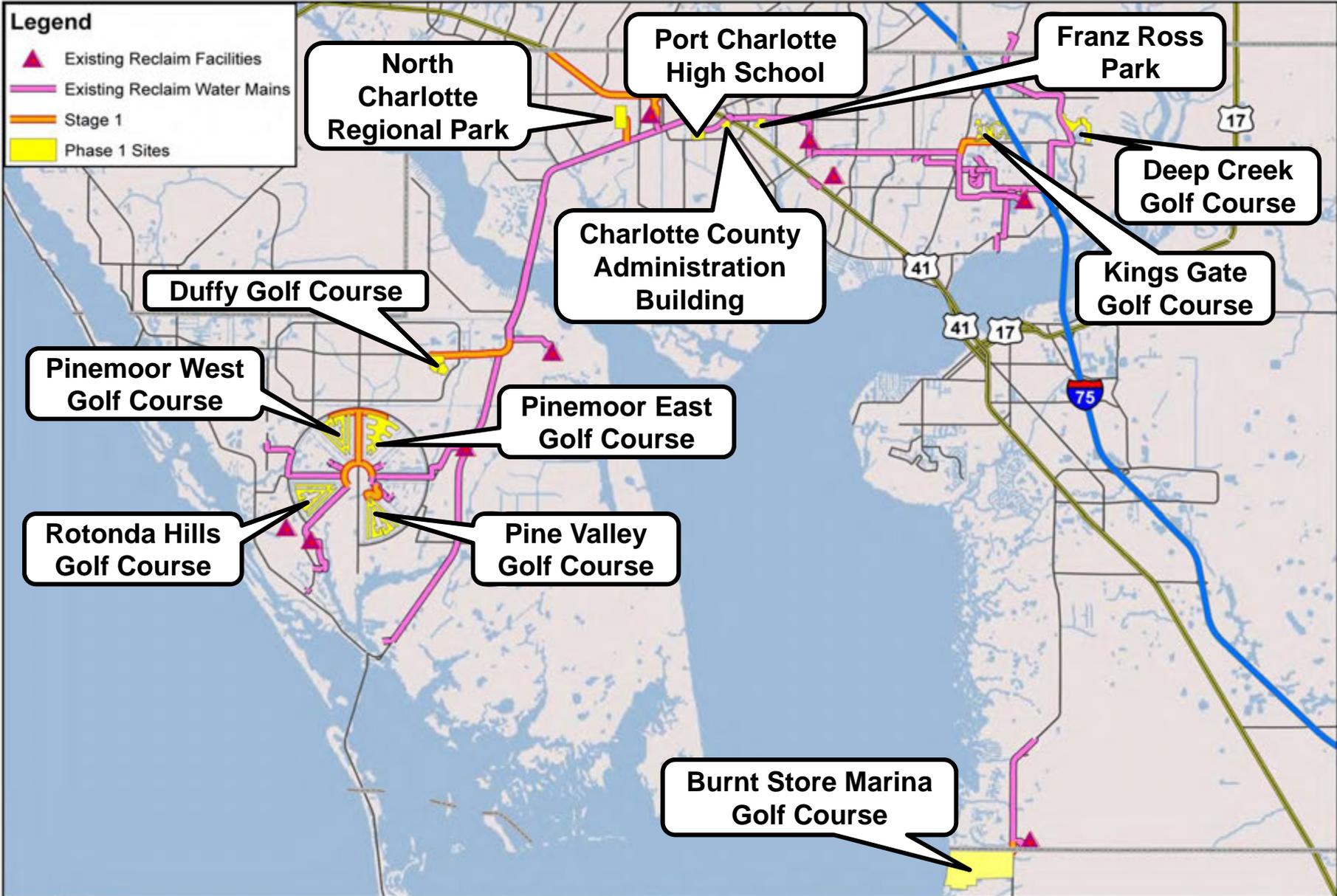


Charlotte County Utilities Existing Reclaimed Water Infrastructure



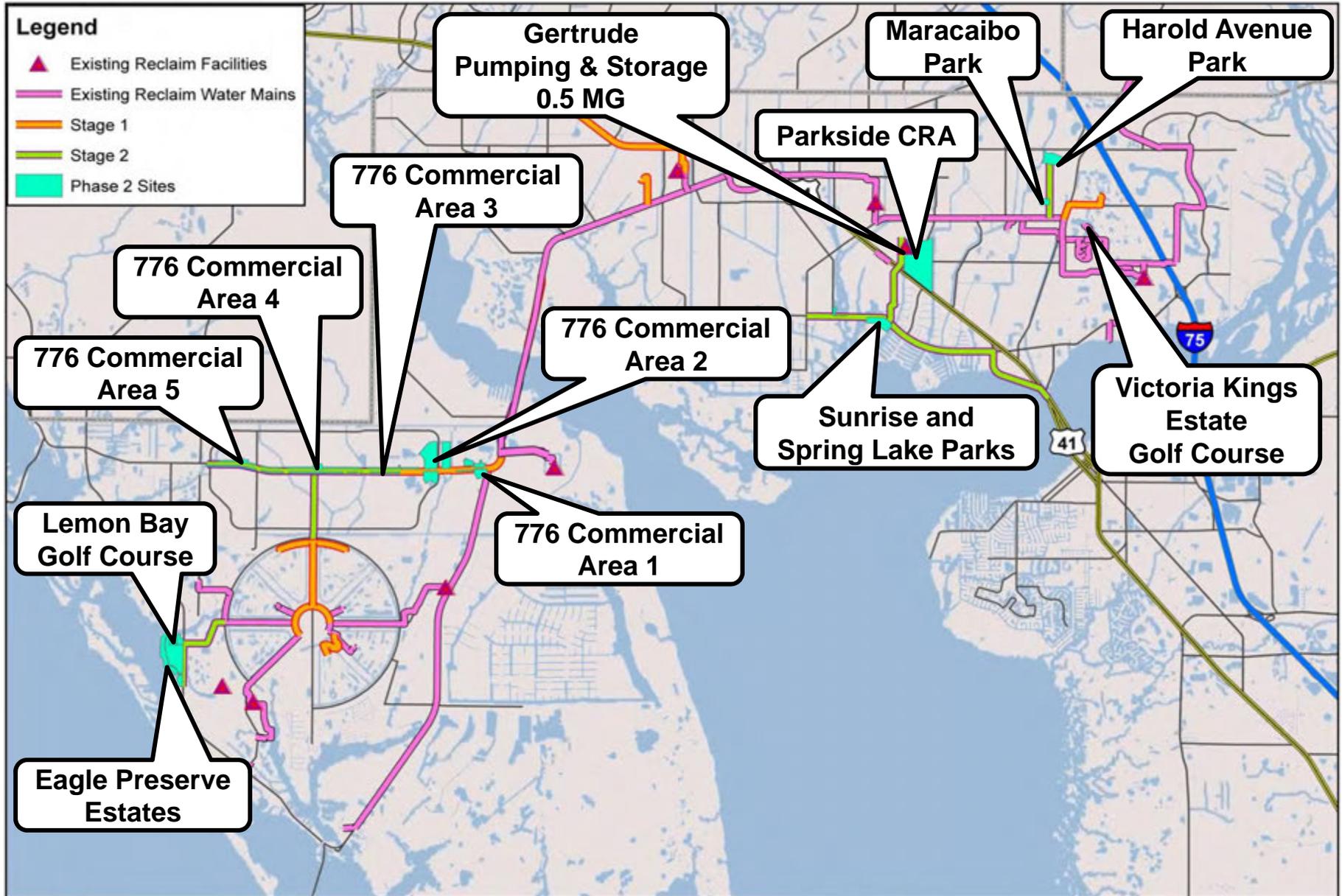
Legend

-  Existing Reclaim Facilities
-  Existing Reclaim Water Mains
-  Stage 1
-  Phase 1 Sites



Charlotte County Utilities
Phase 3 - Stage 1: Proposed Reclaimed Water Users

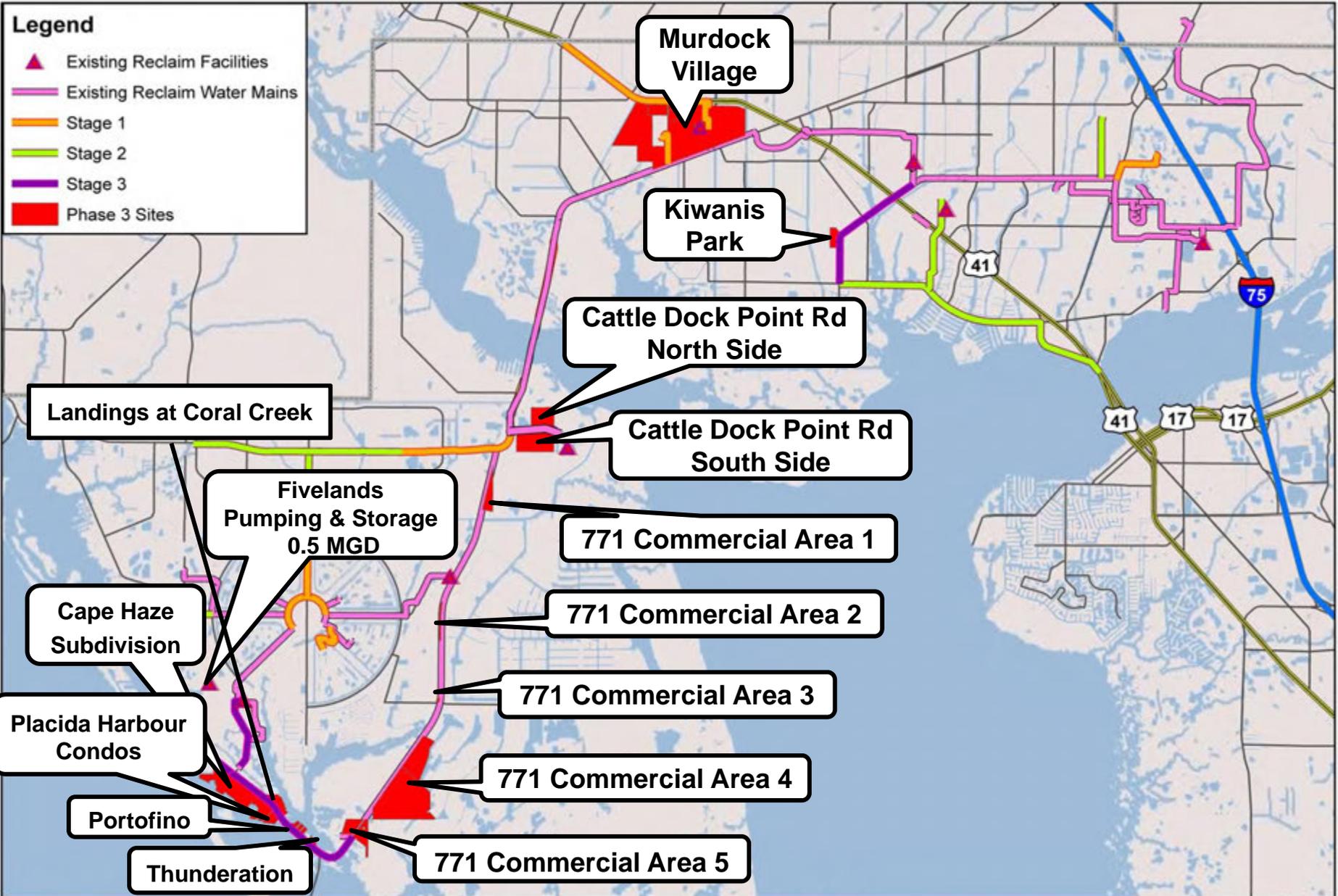




Charlotte County Utilities
Phase 3 - Stage 2: Proposed Reclaimed Water Users



NOT TO SCALE



Charlotte County Utilities
Phase 3 - Stage 3: Proposed Reclaimed Water Users





Reclaimed Water Dry Season Production and Usage

Plant	Production*	Sent to Users*	Total Available*
East Port WRF (current)	4.1	1.5	2.6
Rotonda WRF (current)	0.9	0.9	0.0
West Port WRF (current)	0.6	0.6	0.0
TOTAL (current)	5.6	3.0	2.6
WASTEWATER EXPANSION (Additional 17,000 Connections)	2.6		5.2
TOTAL DEMAND PHASE 3 STAGES 1-3		3.5	1.7
Burnt Store WRF (current)	0.3	0.003	0.297
Burnt Store (future demand)		0.297	0

* Flow in Million Gallons per Day (MGD)

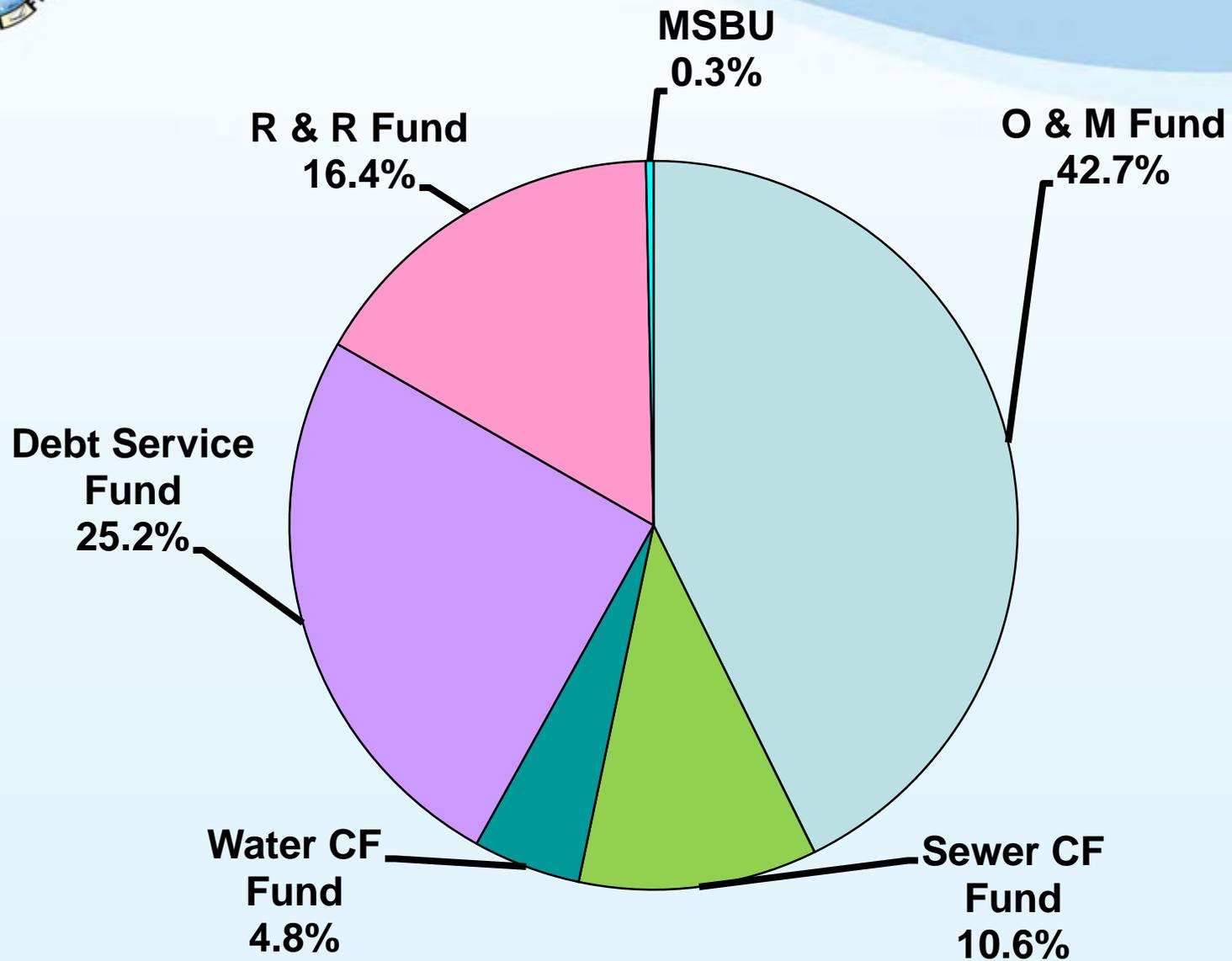


Finance



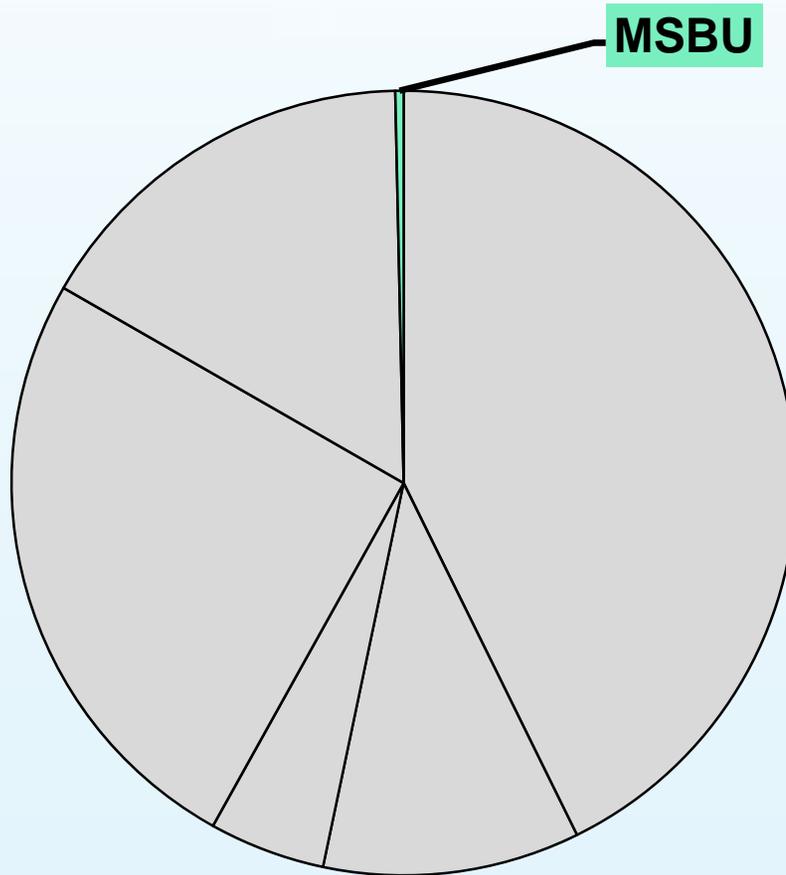


FY 12/13 Net Budget \$93,818,051





Municipal Service Benefit Unit (MSBU) Funds



Percent of Budget: 0.3%

Amount: \$319,093

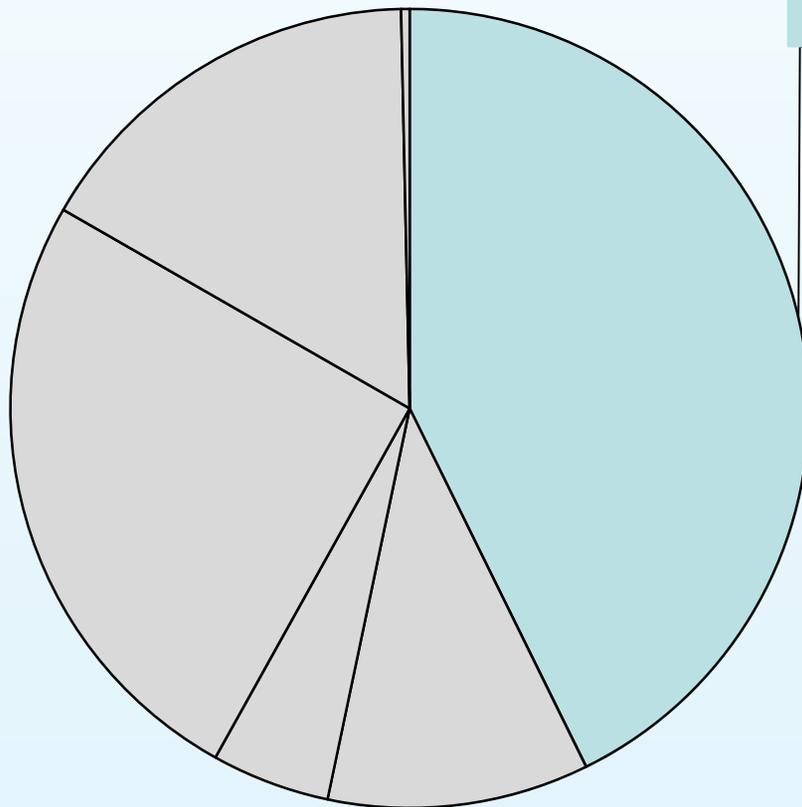
Definition: Pays for expansion projects through equitable assessments adopted by resolution.

Source: Assessments (Can be augmented with grants or other funding sources)

Note: Assessments are used as pledged revenues for borrowings



Operations & Maintenance (O&M) Fund



O & M
Fund

Percent of Budget: 42.7%

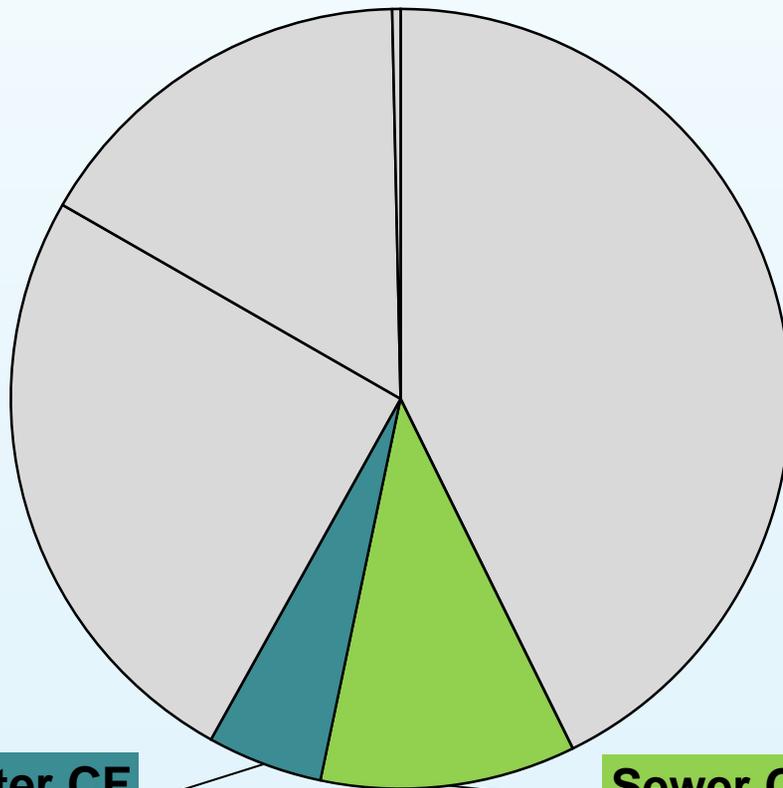
Amount: \$40,069,921

Definition: Cost of providing services and maintaining system and capacity.

Source: User fees including Base Facility Charge, Consumption or Usage Charge, a Customer Charge and payment of Accrued Guaranteed Revenue Fee by new users requesting service



Sewer Connection Fee and Water Connection Fee (CF) Funds



Water CF Fund

Sewer CF Fund

Percent of Budget:

Sewer 10.6%; Water 4.8%

Amount:

Sewer \$9,935,397

Water \$4,489,291

Definition: Used to pay for growth related capital costs. Also known as System Development Charges.

Source: New customers requesting utility services.



Connection Fee per ERC*

Water	
Plant Capacity	\$910
Transmission	\$380
Distribution	\$490
Total	\$1,780

Sewer	
Plant Capacity	\$1,100
Transmission	\$500
Collection	\$740
Total	\$2,350

* Equivalent Residential Connection (ERC) Based on rate resolution 4/1/2012



Debt Service Fund

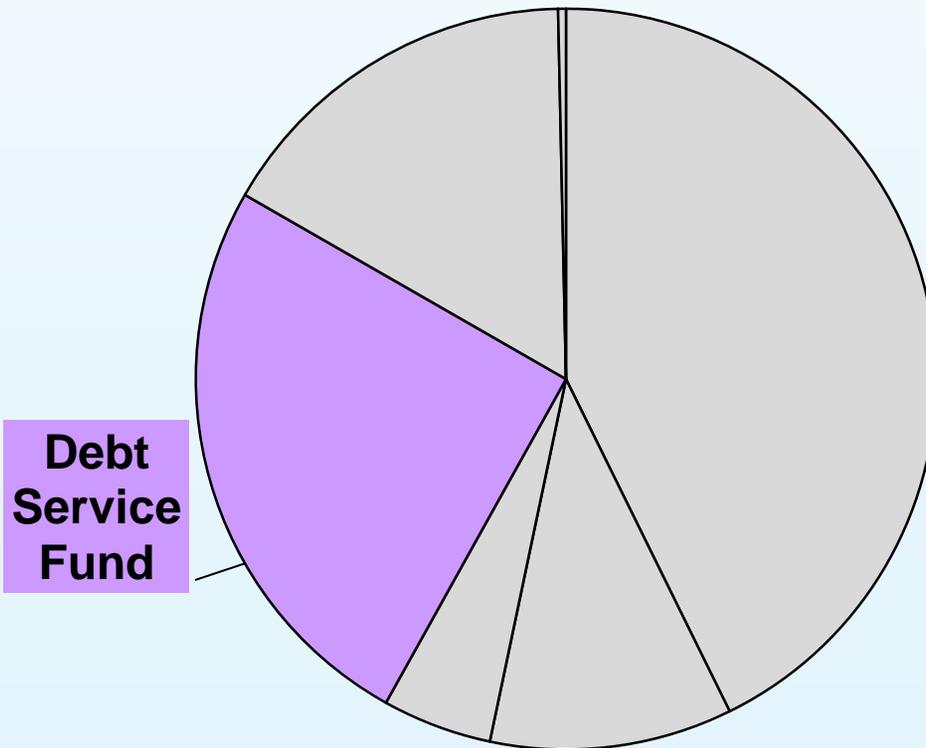
Percent of Budget: 25.2%

Amount: \$23,640,081

Definition: Fund pays all Utility bonds and debt.

Source: Transfer of Operations and Maintenance funds and MSBU Funds as needed to pay the annual debt and maintain debt reserves as required.

Final Bonds Maturity - 2024





Debt Retirement Fund

Principal Amount
remaining as
of 9/30/2012

Bond Total*

\$ 151,315,000

SRF Funding, Loans Total**

23,070,693

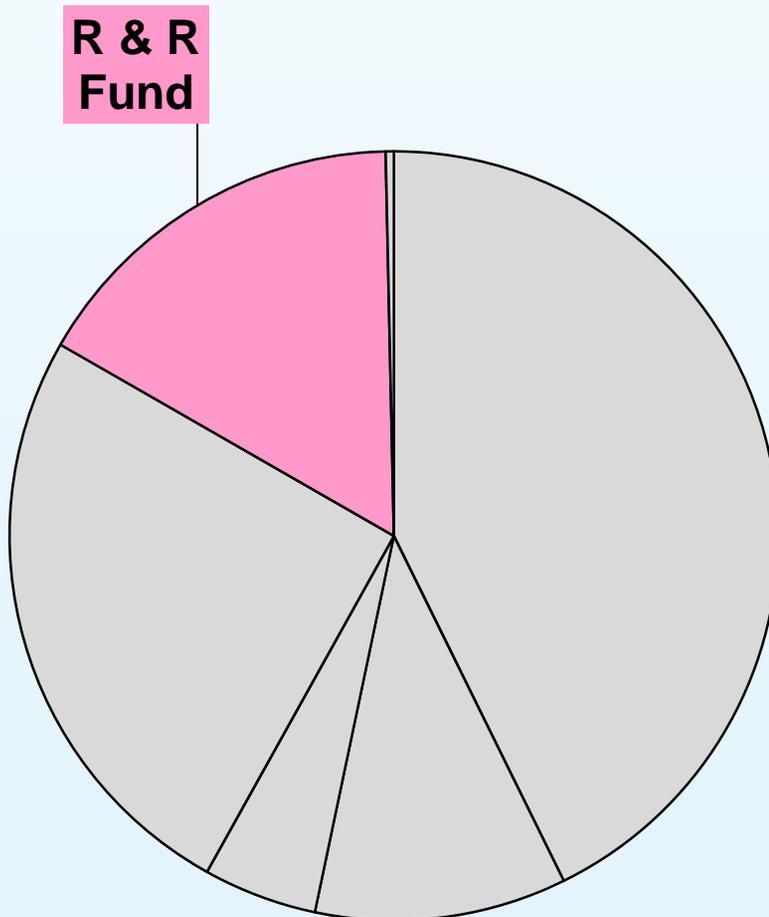
Total Debt \$ 174,385,693

* Purchase of GDU, Rotonda and Florida Water Service, Expansion of Burnt Store and 1995 Wastewater Expansion Engineering Design.

** MSBU water and sewer expansions, 1996 upgrade of East Port Facility, and Peace River REP internal loan payment.



Repair & Replacement (R&R) Fund



AKA - Refurbishment and Rehabilitation of Assets

Percent of Budget: 16.4%

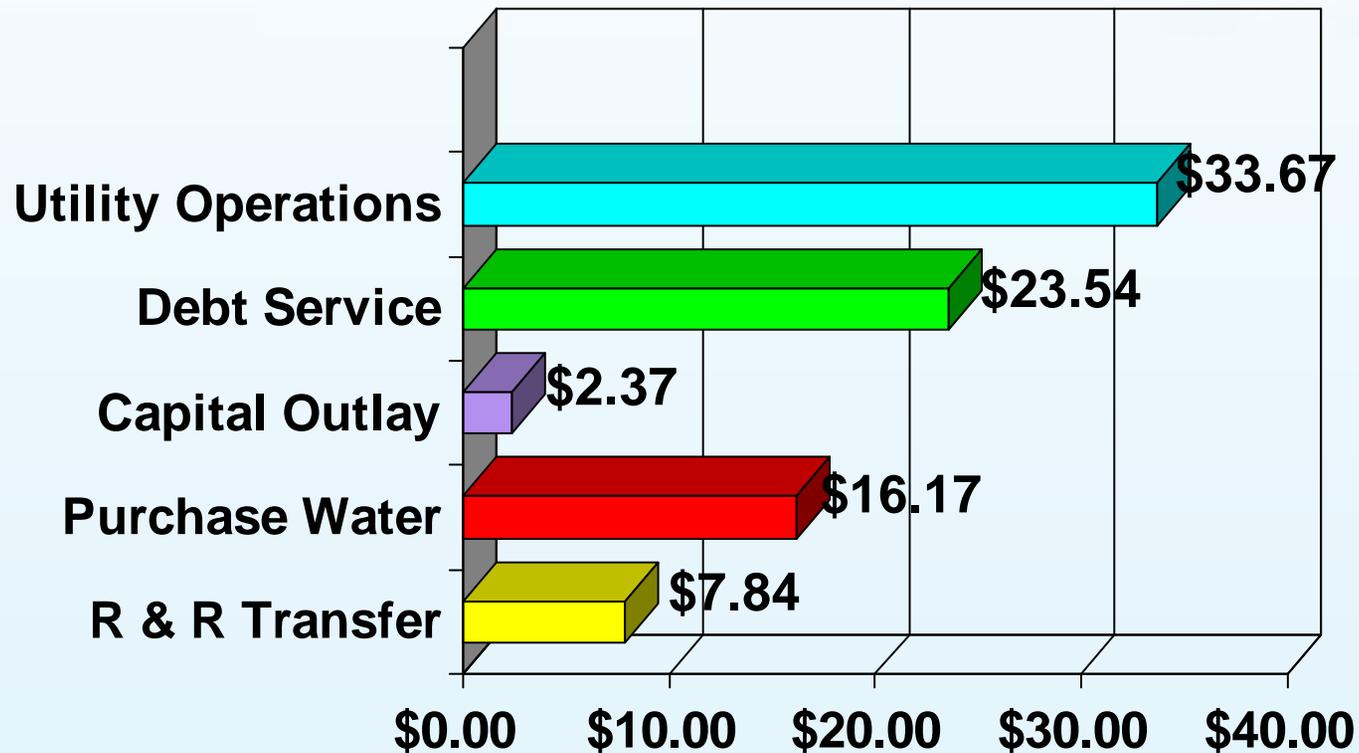
Amount: \$15,364,268

Definition: For renewal and replacement of infrastructure to maintain services and meet regulatory treatment standards

Source: Operations and Maintenance Funds



How an Average Payment of \$83.59 is used by the Utility



** Based on 4,000 gallons usage @ Rates Effective 10/1/2013
All utility bill payments are deposited initially into the O&M Fund.*

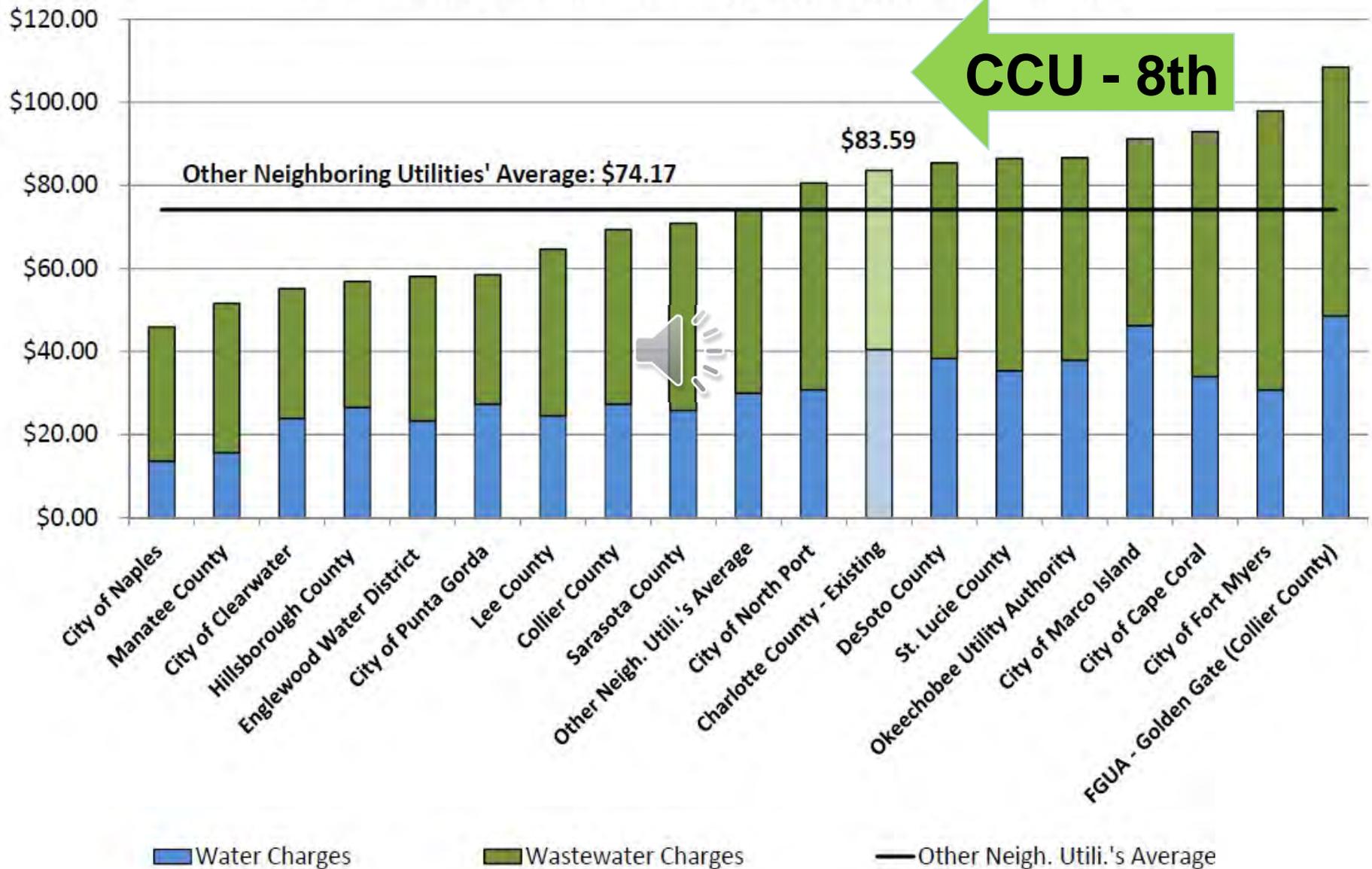


1997 – 2005 Rate Decrease For Water and Sewer Customers

- BOCC decreased water rates by 12% and sewer rates by 5%.
- No increases for inflation during this period.



Comparison of Monthly Charges for Combined Water and Wastewater Service For Single-Family Residential Customers Using 4,000 Monthly Gallons





Plans

- Rate study 2013
- Vacant Lot Program
- Adjust R&R Budget to bring in line with Asset Management Program





Awards and Accomplishments



Plant Operations Excellence Award CCU
Burnt Store Water Treatment Plant by
FDEP 2008 and 2012



FWEA Medium
Collection Size
Wastewater Collection
System Award 2013



FWPCOA Safety Award at
West Port WRF 2011



Water Distribution employees were
recognized with a proclamation by
Charlotte Board of County
Commissioners 2011



2nd - Top Ops
Competition 81st
Annual FWRC 2006



AWWA Water Distribution
Service Award 2010



Best Tasting Drinking Water
Taste Test, AWWA, Florida
Region X 2006 and 2009



Excellence in Marketing &
Communications MarCom
Award for 2007 Annual Report,
produced by CCU and PB
Americas 2008



Received QualServe
Self-Assessment and Peer Review
plaque in April by the Florida
Section of AWWA and WEF 2010



This is Only the Beginning....

