

# **COUNTY WATER & SEWER DISTRICT – POTABLE WATER SYSTEM**

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Collier County Government  
Public Utilities Division  
2012 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)

**COLLIER COUNTY WATER SEWER DISTRICT - POTABLE WATER SYSTEM**

Introduction:

The Public Utilities Division's 2012 AUIR submittals are based on "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 4, 2012, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2031. There are three notable changes from the 2011 Collier County Water-Sewer District (CCWSD) Potable Water System AUIR:

1. The Orange Tree Water Treatment Plant capacity was updated based on County's Preliminary Regulatory Compliance Review of Orange Tree Utilities dated February 2012.
2. The Orange Tree Service Area's level of service standard was updated to coincide with the Growth Management Plan's Capital Improvement Element until CCWSD completes a new master plan including northeast service area's level of service standard.
3. CCWSD draft Northeast service area business plan indicates that water service and reliability loops will be in place before deficiencies are reached in these areas.

Recommendation:

The Public Utilities Division's staff recommends that the Collier County Board of County Commissioners approve the 2012 CCWSD Potable Water System AUIR.

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2012 ANNUAL UPDATE AND INVENTORY REPORT (AUJR)

**POTABLE WATER SYSTEM - TREATMENT FACILITIES  
LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT FOR SERVICE AREA**

July 26, 2012

1 Fiscal Year	2 Peak Population	3 Required Treatment Capacity @ 170 gpcd		4 Required Treatment Capacity Increase from Previous Year	5 Total Constructed Plant Capacity On-line	6 New Plant Constructed Capacity	7 Total Constructed Plant Capacity	8 Total Treatment Reliable System Capacity	9 Retained/ (Deficit) Constructed System Capacity	10 Retained/ (Deficit) Reliable System Capacity	11 Retained/ (Deficit) Reliable Capacity Target Values
		MGD	MGD								
2010	201,377	34.2			52.0		52.0	46.8	17.8	12.6	0.9 (Min) - 9.5 (Max)
2011	204,578	34.8		0.5	52.0		52.0	46.8	17.2	12.0	0.9 (Min) - 9.5 (Max)
2012	208,744	35.5		0.7	52.0		52.0	46.8	16.5	11.3	0.9 (Min) - 9.5 (Max)
2013	212,972	36.2		0.7	52.0		52.0	46.8	15.8	10.6	0.9 (Min) - 9.5 (Max)
2014	217,262	36.9		0.7	52.0		52.0	46.8	15.1	9.9	0.9 (Min) - 9.5 (Max)
2015	222,575	37.8		0.9	52.0		52.0	46.8	14.2	9.0	0.9 (Min) - 9.5 (Max)
2016	228,942	38.9		1.1	52.0		52.0	46.8	13.1	7.9	0.9 (Min) - 9.5 (Max)
2017	235,436	40.0		1.1	52.0		52.0	46.8	12.0	6.8	0.9 (Min) - 9.5 (Max)
2018	242,061	41.2		1.1	52.0		52.0	46.8	10.8	5.6	0.9 (Min) - 9.5 (Max)
2019	248,817	42.3		1.1	52.0		52.0	46.8	9.7	4.5	0.9 (Min) - 9.5 (Max)
2020	255,297	43.4		1.1	52.0		52.0	46.8	8.6	3.4	0.9 (Min) - 9.5 (Max)
2021	261,490	44.5		1.1	52.0		52.0	46.8	7.5	2.3	0.9 (Min) - 9.5 (Max)
2022	267,794	45.5		1.1	52.0		52.0	46.8	6.5	1.3	0.9 (Min) - 9.5 (Max)
2023	282,744	48.1		2.5	52.0	10.0	62.0	55.8	13.9	7.7	0.9 (Min) - 9.5 (Max)
2024	289,523	49.2		1.2	62.0		62.0	55.8	12.8	6.6	0.9 (Min) - 9.5 (Max)
2025	295,974	50.3		1.1	62.0		62.0	55.8	11.7	5.5	0.9 (Min) - 9.5 (Max)
2026	302,087	51.4		1.0	62.0		62.0	55.8	10.6	4.4	0.9 (Min) - 9.5 (Max)
2027	308,294	52.4		1.1	62.0		62.0	55.8	9.6	3.4	0.9 (Min) - 9.5 (Max)
2028	314,597	53.5		1.1	62.0		62.0	55.8	8.5	2.3	0.9 (Min) - 9.5 (Max)
2029	320,999	54.6		1.1	62.0		62.0	55.8	7.4	1.2	0.9 (Min) - 9.5 (Max)
2030	327,203	55.6		1.1	62.0	2.0	64.0	57.6	8.4	2.0	0.9 (Min) - 9.5 (Max)
2031	333,201	56.6		1.0	64.0		64.0	57.6	7.4	1.0	0.9 (Min) - 9.5 (Max)

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**POTABLE WATER SYSTEM - TREATMENT FACILITIES  
LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT FOR SERVICE AREA**

July 26, 2012

**Notes: (References are to the column numbers on previous page)**

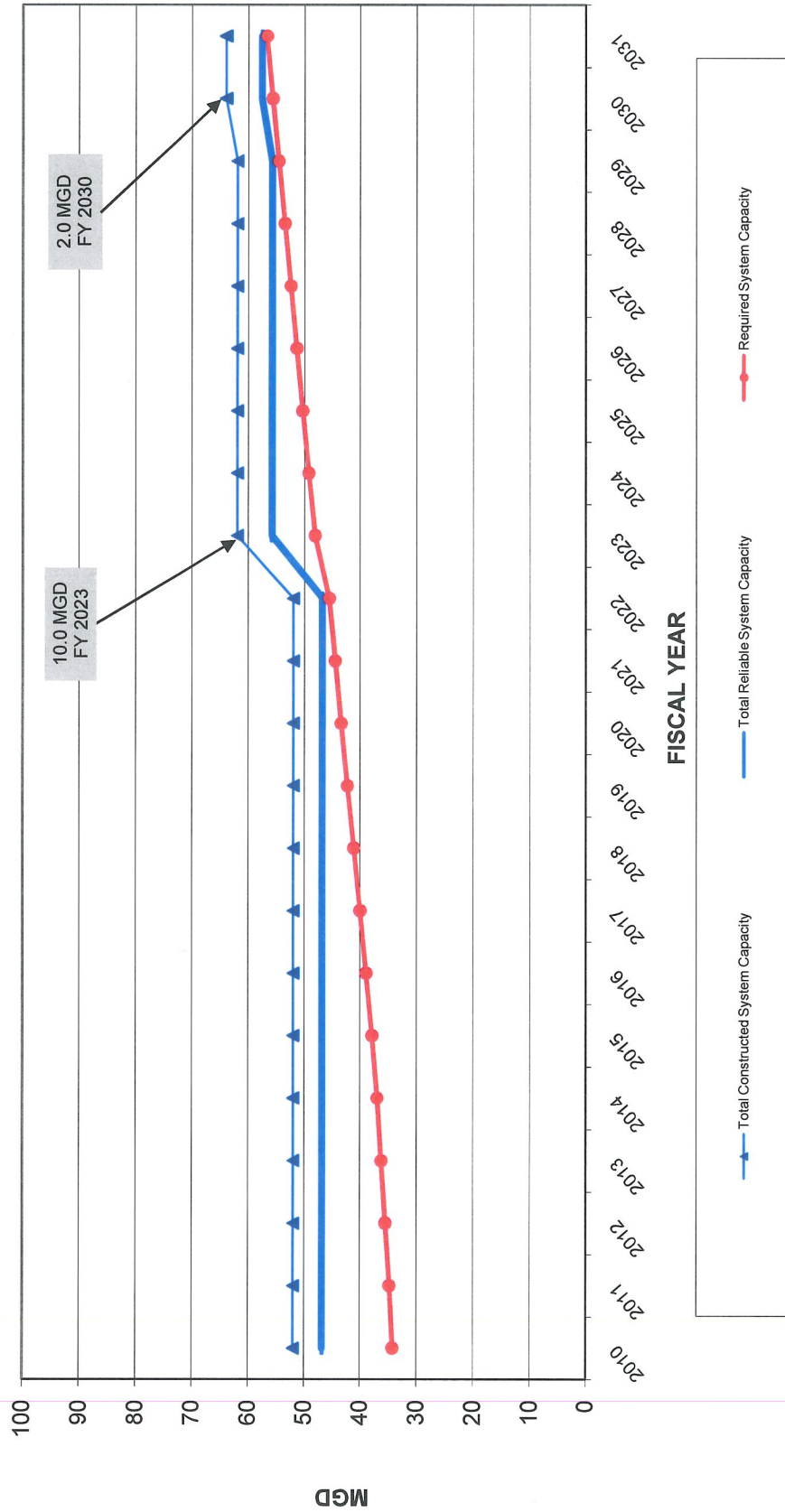
1. Fiscal Year starts October 1 and ends September 30.
2. Peak Population. Estimates and projections for the existing service area are based on "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 4, 2012, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2031. The peak population projections include the Orange Tree service area beginning in FY 2023.
3. Required Treatment Capacity @ 170 gpcd is obtained by multiplying the Peak Population (Column 2) times 170 gallons per capita per day (gpcd). 170 gpcd is the established Level of Service Standard (LOSS) as adopted in the 2008 Water Master Plan Update approved by the Board of County Commissioners on June 24, 2008. See graph on page W-4.
4. Required Treatment Capacity Increase from Previous Year is the increase of the Required Treatment Capacity @ 170 gpcd (Column 3) for the year listed from the previous year.
5. Total Constructed Plant Capacity On-line is the total finished water treatment capacity at the beginning of the Fiscal Year in Million Gallons per Day (MGD). All plant capacities are stated in Maximum Month Daily Demand (MMDD).
6. New Plant Constructed Capacity schedule is as follows:

Fiscal year	New Plant Constructed	Description	Source of Information
2023	10.0 MGD	New Northeast Regional Water Treatment Plant (NERWTP)	Recommended based on June 4, 2012 Comprehensive Planning Section population projections
2030	2.0 MGD	North RO wellfield restoration and preservation resulting in additional capacity at North County Regional Water Treatment Plant (NCRWTP)	Recommended based on June 4, 2012 Comprehensive Planning Section population projections

7. Total Constructed Plant Capacity is total of Total Constructed Plant Capacity On-line (Column 5) plus New Plant Constructed Capacity (Column 6). See graph on page W-4.
8. Total Treatment Reliable System Capacity is the total available system treatment capacity necessary to meet concurrency requirements, and is defined herein as 90-percent of the Total Constructed Plant Capacity (Column 7). See graph on page W-4.
9. Retained/(Deficit) Constructed System Capacity is the difference between Total Constructed Plant Capacity (Column 7) and Required Treatment Capacity (Column 3).
10. Retained/(Deficit) Reliable System Capacity is the difference between Total Treatment Reliable System Capacity (Column 8) and Required Treatment Capacity (Column 3).
11. Retained/(Deficit) Reliable System Capacity Target Values for planning purposes are 0.9 MGD minimum and 9.5 MGD maximum through FY 2031. The target minimum capacities represent the projected increase in the next year's demand and the target maximum capacities represent the projected increase in demand for the next eight years.

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**2012 ANNUAL UPDATE AND INVENTORY REPORT (AUJR)**  
**POTABLE WATER SYSTEM**  
 Level of Service Standard: 170 gpcd

July 26, 2012



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2012 ANNUAL UPDATE AND INVENTORY REPORT (AUJR)

**NORTHEAST POTABLE WATER SYSTEM - TREATMENT FACILITIES  
LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT FOR SERVICE AREA**

July 26, 2012

1	2	3	4	5	6	7	8	9	10	11
Fiscal Year	Peak Population	Required Treatment Capacity @ 100 gpcd	Required Treatment Capacity Increase from Previous Year	Total Constructed Capacity On-line	New Plant Constructed Capacity	Total Constructed Plant Capacity	Total Treatment Reliable System Capacity	Retained/ (Deficit) Constructed System Capacity	Retained/ (Deficit) Reliable System Capacity	Retained/ (Deficit) Reliable Capacity Target Values
		MGD	MGD	MGD	MGD	MGD	MGD	MGD	MGD	MGD
2010	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2011	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2012	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2013	6,192	0.62	0.62	0.00	0.75	0.75	0.68	0.13	0.06	.02 (Min) - 0.2 (Max)
2014	6,356	0.64	0.02	0.75		0.75	0.68	0.11	0.04	.02 (Min) - 0.2 (Max)
2015	6,560	0.66	0.02	0.75		0.75	0.68	0.09	0.02	.02 (Min) - 0.2 (Max)
2016	6,803	0.68	0.02	0.75		0.75	0.68	0.07	-0.01	.02 (Min) - 0.2 (Max)
2017	7,052	0.71	0.02	0.75		0.75	0.68	0.04	-0.03	.02 (Min) - 0.2 (Max)
2018	7,305	0.73	0.03	0.75		0.75	0.68	0.02	-0.06	.02 (Min) - 0.2 (Max)
2019	7,564	0.76	0.03	0.75		0.75	0.68	-0.01	-0.08	.02 (Min) - 0.2 (Max)
2020	7,812	0.78	0.02	0.75		0.75	0.68	-0.03	-0.11	.02 (Min) - 0.2 (Max)
2021	8,049	0.80	0.02	0.75		0.75	0.68	-0.05	-0.13	.02 (Min) - 0.2 (Max)
2022	8,290	0.83	0.02	0.75		0.75	0.68	-0.08	-0.15	.02 (Min) - 0.2 (Max)
2023	0	0.00	-0.83	0.75	-0.75	0.00	0.00	0.00	0.00	.02 (Min) - 0.2 (Max)
2024	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2025	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2026	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2027	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2028	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2029	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2030	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	
2031	0	0.00	0.00	0.00		0.00	0.00	0.00	0.00	

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July 26, 2012

**Notes: (References are to the column numbers on previous page)**

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2. Peak Population. Estimates and projections for the existing service area are based on "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 4, 2012, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2031. The peak populations are the Orange Tree service area. In 2023, the Orange Tree Water Treatment Plant will be decommissioned as the NERWTP begins operation and the Orange Tree Service Area becomes part of the total service area.
3. Required Treatment Capacity @ 100 gpcd is obtained by multiplying the Peak Population (Column 2) times 100 gallons per capita per day (gpcd). 100 gpcd is the Level of Service Standard (LOSS) in the Growth Management Plan's Capital Improvement Element. See graph on page W-7.
4. Required Treatment Capacity Increase from Previous Year is the increase of the Required Treatment Capacity @ 100 gpcd (Column 3) for the year listed from the previous year.
5. Total Constructed Plant Capacity On-line is the total finished water treatment capacity at the beginning of the Fiscal Year in Million Gallons per Day (MGD). All plant capacities are stated in Maximum Month Daily Demand (MMDD).
6. New Plant Constructed Capacity schedule is as follows:

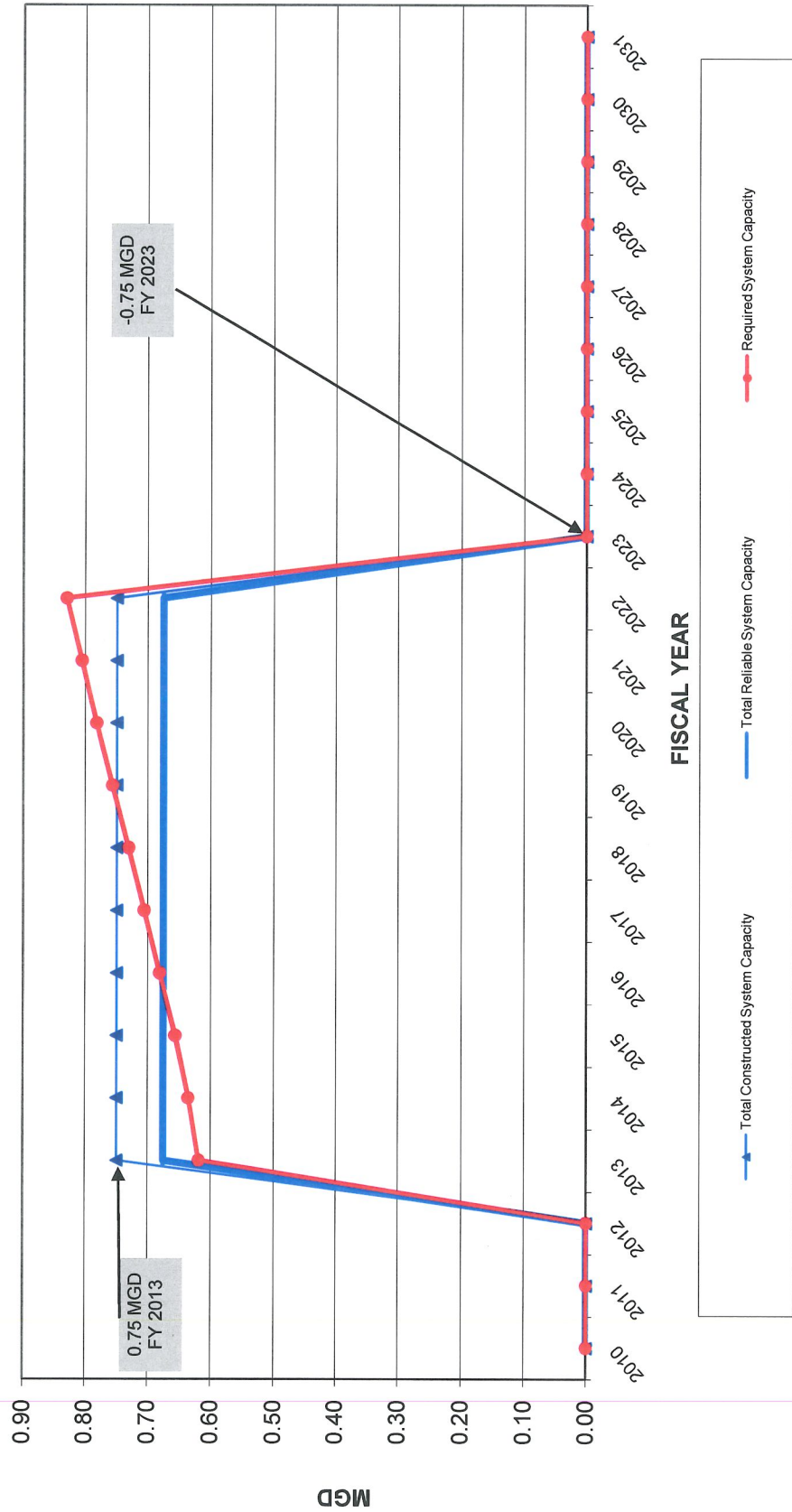
Fiscal year	New Plant Constructed	Description	Source of Information
2013	0.75 MGD	Existing 0.75 MGD Orange Tree WTP continues to serve Orange Tree Service Area.	Capacity based on County's Preliminary Regulatory Compliance Review of Orange Tree Utilities dated February 2012
2023	-0.75 MGD	Existing 0.75 MGD Orange Tree WTP decommissioned as NERWTP begins operation to serve Orange Tree Service Area.	Recommended based on June 4, 2012 Comprehensive Planning Section population projections.

7. Total Constructed Plant Capacity is total of Total Constructed Plant Capacity On-line (Column 5) plus New Plant Constructed Capacity (Column 6). See graph on page W-7.
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11. Retained/(Deficit) Reliable System Capacity Target Values for planning purposes are .02 MGD minimum and 0.2 MGD maximum through FY 2023. The target minimum capacities represent the projected increase in the next year's demand and the target maximum capacities represent the projected increase in demand for the next eight years.



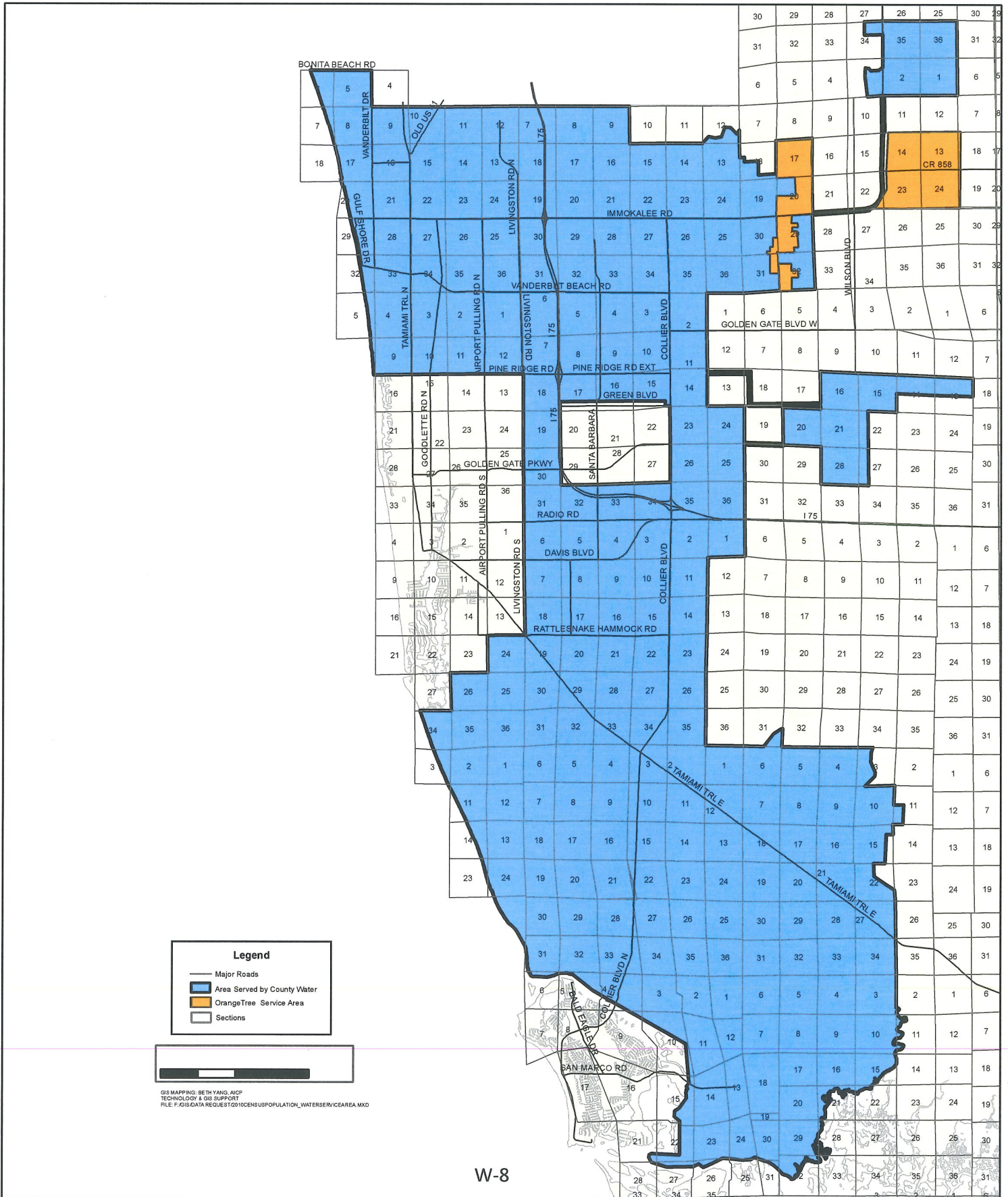
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**NORTHEAST POTABLE WATER SYSTEM**  
 Level of Service Standard: 100 gpcd

July 26, 2012



# Existing and Future Water Service Areas

## 2012 Water AUIR



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