

COUNTY WATER & SEWER DISTRICT – WASTEWATER COLLECTION AND TREATMENT SYSTEMS

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Collier County Government
Public Utilities Division
2013 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)

COLLIER COUNTY WATER SEWER DISTRICT - WASTEWATER SYSTEM

Introduction:

The Public Utilities Division's 2013 AUIR submittals are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 27, 2013, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2034. There are three notable changes from the 2012 Collier County Water Sewer District (CCWSD) Wastewater System AUIR:

1. The Orange Tree Service Area will be integrated into the Collier County Water-Sewer District in 2014 as the Northeast Service Area.
2. The Northeast Service Area demand, above the 6,000 population capacity that the current Orange Tree WRF serves, will be treated at the North County Water Reclamation Facility (NCWRF) until the new Northeast Water Reclamation Facility becomes operational. The South Service Area demand, above the 160,000 population capacity of the South County Water Reclamation Facility, will be treated at the NCWRF beginning in 2034.
3. The peak population used represents the actual served areas as represented on page WW-11.

The 2013 wastewater AUIR is presented as a snapshot of concurrency conditions. The CCWSD is in compliance with concurrency requirements for FY 2013 and FY 2014, as required by FS Section 163, the Collier County Comprehensive Plan and the Land Development Code.

Recommendation:

The Public Utilities Division's staff recommends that the Collier County Board of County Commissioners approve the 2013 CCWSD Wastewater System AUIR.

Collier County Government
Public Utilities Division
2013 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)

**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR SOUTH COUNTY WATER RECLAMATION FACILITY (SCWRF) SERVICE AREA**

August 05, 2013

1	2	3	4	5	6	7	8	9
Fiscal Year	Population Served	Required Capacity at 100 gpcd MGD	Required Capacity increase from previous year MGD	Constructed Capacity On-line MGD	New Plant Capacity MGD	Total Available Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity Target Value MGD
2010	98,210	9.8		16.0		16.0	6.2	0.5 (Min)
2011	100,015	10.0	0.2	16.0		16.0	6.0	0.5 (Min)
2012	102,460	10.2	0.2	16.0		16.0	5.8	0.5 (Min)
2013	104,752	10.5	0.2	16.0		16.0	5.5	0.5 (Min)
2014	107,087	10.7	0.2	16.0		16.0	5.3	0.5 (Min)
2015	109,760	11.0	0.3	16.0		16.0	5.0	0.5 (Min)
2016	112,782	11.3	0.3	16.0		16.0	4.7	0.5 (Min)
2017	115,869	11.6	0.3	16.0		16.0	4.4	0.5 (Min)
2018	119,021	11.9	0.3	16.0		16.0	4.1	0.5 (Min)
2019	122,240	12.2	0.3	16.0		16.0	3.8	0.5 (Min)
2020	125,262	12.5	0.3	16.0		16.0	3.5	0.5 (Min)
2021	128,079	12.8	0.3	16.0		16.0	3.2	0.5 (Min)
2022	130,946	13.1	0.3	16.0		16.0	2.9	0.5 (Min)
2023	133,866	13.4	0.3	16.0		16.0	2.6	0.5 (Min)
2024	136,838	13.7	0.3	16.0		16.0	2.3	0.5 (Min)
2025	139,555	14.0	0.3	16.0		16.0	2.0	0.5 (Min)
2026	142,008	14.2	0.2	16.0		16.0	1.8	0.5 (Min)
2027	144,497	14.4	0.2	16.0		16.0	1.6	0.5 (Min)
2028	147,023	14.7	0.3	16.0		16.0	1.3	0.5 (Min)
2029	149,585	15.0	0.3	16.0		16.0	1.0	0.5 (Min)
2030	151,963	15.2	0.2	16.0		16.0	0.8	0.5 (Min)
2031	154,151	15.4	0.2	16.0		16.0	0.6	0.5 (Min)
2032	156,364	15.6	0.2	16.0		16.0	0.4	0.5 (Min)
2033	158,601	15.9	0.2	16.0		16.0	0.1	0.5 (Min)
2034	160,000	16.0	0.1	16.0		16.0	0.0	0.5 (Min)

**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR SOUTH COUNTY WATER RECLAMATION FACILITY (SCWRF) SERVICE AREA**

August 05, 2013

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

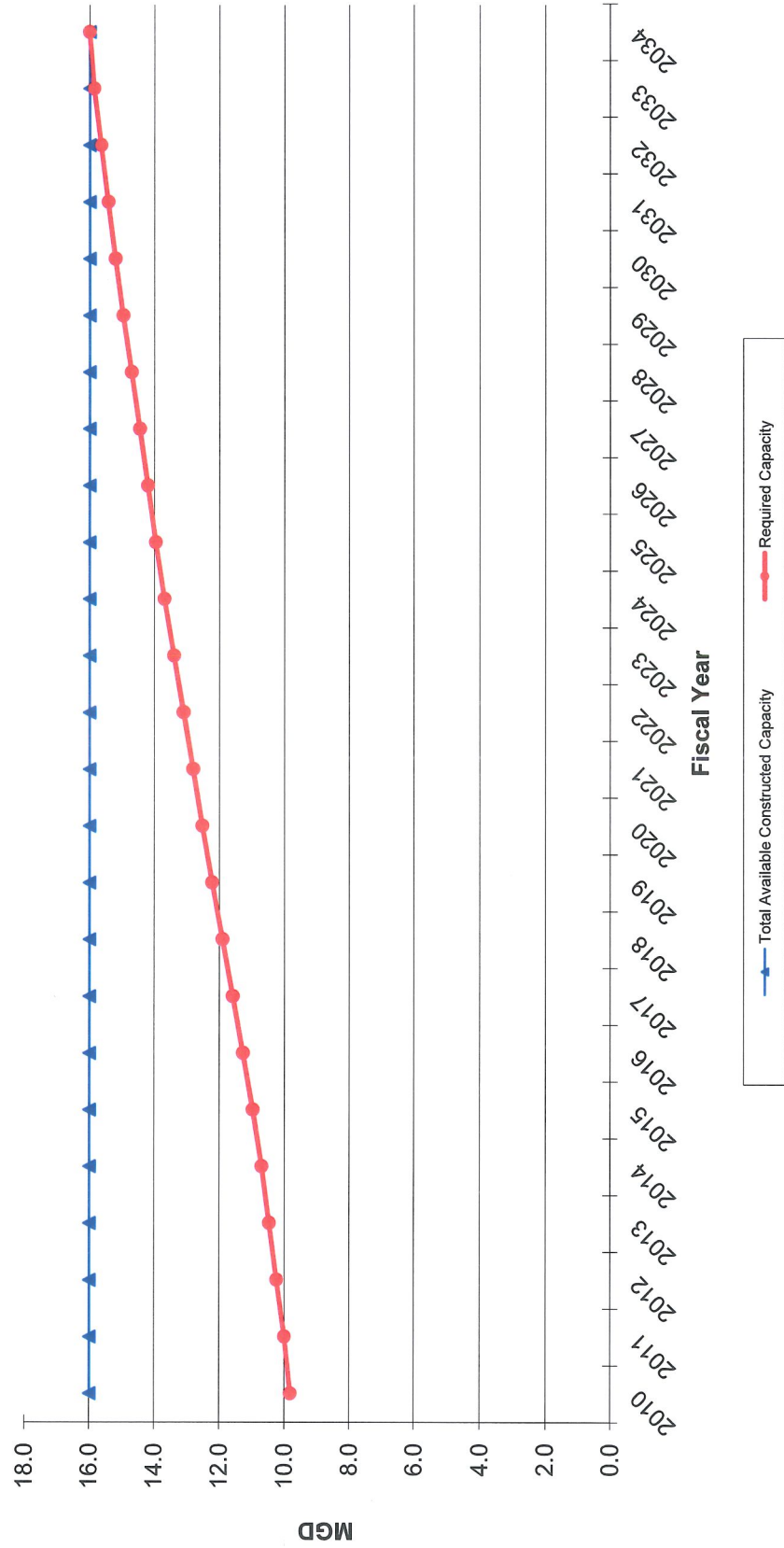
1. Fiscal Year starts October 1 and ends September 30.
2. Population Served. Estimates and projections for the served area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 27, 2013, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2034.
Note: The South Service Area demand, above the 160,000 population capacity of the SCWRF, will be treated at the NCWRF beginning in 2034.
3. Required Capacity at 100 gpcd is obtained by multiplying the Peak Population (Column 2) times 100 gallons per capita per day (gpcd). 100 gpcd is the established Level of Service Standard (LOSS) for the South Service Area as adopted in the 2008 Wastewater Master Plan Update approved by the Board of County Commissioners on June 24, 2008. See graph on page WW-7.
4. Required Capacity increase from previous year is the increase between the Required Capacity at 100 gpcd (Column 3) for the year listed and the previous year.
5. Constructed Capacity On-line is the plant capacity at the beginning of the fiscal year in Million Gallons per Day (MGD). All plant capacities are reliable plant capacities stated in Maximum Month Average Daily Flow (MMADF) per FDEP permit requirements.
6. New Plant Capacity schedule is as follows:

Fiscal Year	New Plant Capacity	Source of Information
		No new plant capacity is scheduled.

7. Total Available Constructed Capacity in MGD, also represented graphically on page WW-7 (Column 5 + Column 6).
8. Retained/(Deficit) Constructed Capacity is the difference between Total Available Constructed Capacity (Column 7) and Required Capacity (Column 3).
9. Retained/(Deficit) Constructed Capacity Target Value for planning purposes is 0.5 MGD minimum through 2034. The target minimum capacities represent the projected increase in the next year's wastewater flow (Column 4). The SCWRF does not have a target maximum capacity due to no space for expansion.

Collier County Government
 Public Utilities Division
 2013 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)
 Wastewater- South County Water Reclamation Facility (SCWRF)
 Level of Service Standard: 100 gpcd

August 05, 2013



Collier County Government
Public Utilities Division
2013 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)

**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR NORTH COUNTY WATER RECLAMATION FACILITY (NCWRF) SERVICE AREA**

August 05, 2013

1	2	3	4	5	6	7	8	9
Fiscal Year	Population Served	Required Capacity at 120 gpcd MGD	Required Capacity increase from previous year MGD	Constructed Capacity On-line MGD	New Plant Capacity MGD	Total Available Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity Target Values MGD
2010	110,655	13.3		24.1		24.1	10.8	0.4 (Min) - 3.0 (Max)
2011	113,004	13.6	0.3	24.1		24.1	10.5	0.4 (Min) - 3.0 (Max)
2012	116,107	13.9	0.4	24.1		24.1	10.2	0.4 (Min) - 3.0 (Max)
2013	118,880	14.3	0.3	24.1		24.1	9.8	0.4 (Min) - 3.0 (Max)
2014	122,032	14.6	0.4	24.1		24.1	9.5	0.4 (Min) - 3.0 (Max)
2015	125,404	15.0	0.4	24.1		24.1	9.1	0.4 (Min) - 3.0 (Max)
2016	129,216	15.5	0.5	24.1		24.1	8.6	0.4 (Min) - 3.0 (Max)
2017	133,033	16.0	0.5	24.1		24.1	8.1	0.4 (Min) - 3.0 (Max)
2018	136,314	16.4	0.4	24.1		24.1	7.7	0.4 (Min) - 3.0 (Max)
2019	139,125	16.7	0.3	24.1		24.1	7.4	0.4 (Min) - 3.0 (Max)
2020	141,764	17.0	0.3	24.1		24.1	7.1	0.4 (Min) - 3.0 (Max)
2021	144,223	17.3	0.3	24.1		24.1	6.8	0.4 (Min) - 3.0 (Max)
2022	146,727	17.6	0.3	24.1		24.1	6.5	0.4 (Min) - 3.0 (Max)
2023	149,276	17.9	0.3	24.1		24.1	6.2	0.4 (Min) - 3.0 (Max)
2024	151,871	18.2	0.3	24.1		24.1	5.9	0.4 (Min) - 3.0 (Max)
2025	154,244	18.5	0.3	24.1		24.1	5.6	0.4 (Min) - 3.0 (Max)
2026	156,386	18.8	0.3	24.1		24.1	5.3	0.4 (Min) - 3.0 (Max)
2027	158,559	19.0	0.3	24.1		24.1	5.1	0.4 (Min) - 3.0 (Max)
2028	160,764	19.3	0.3	24.1		24.1	4.8	0.4 (Min) - 3.0 (Max)
2029	163,001	19.6	0.3	24.1		24.1	4.5	0.4 (Min) - 3.0 (Max)
2030	165,078	19.8	0.2	24.1		24.1	4.3	0.4 (Min) - 3.0 (Max)
2031	166,989	20.0	0.2	24.1		24.1	4.1	0.4 (Min) - 3.0 (Max)
2032	168,921	20.3	0.2	24.1		24.1	3.8	0.4 (Min) - 3.0 (Max)
2033	170,874	20.5	0.2	24.1		24.1	3.6	0.4 (Min) - 3.0 (Max)
2034	173,723	20.8	0.3	24.1		24.1	3.3	0.4 (Min) - 3.0 (Max)

**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR NORTH COUNTY WATER RECLAMATION FACILITY (NCWRF) SERVICE AREA**

August 05, 2013

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

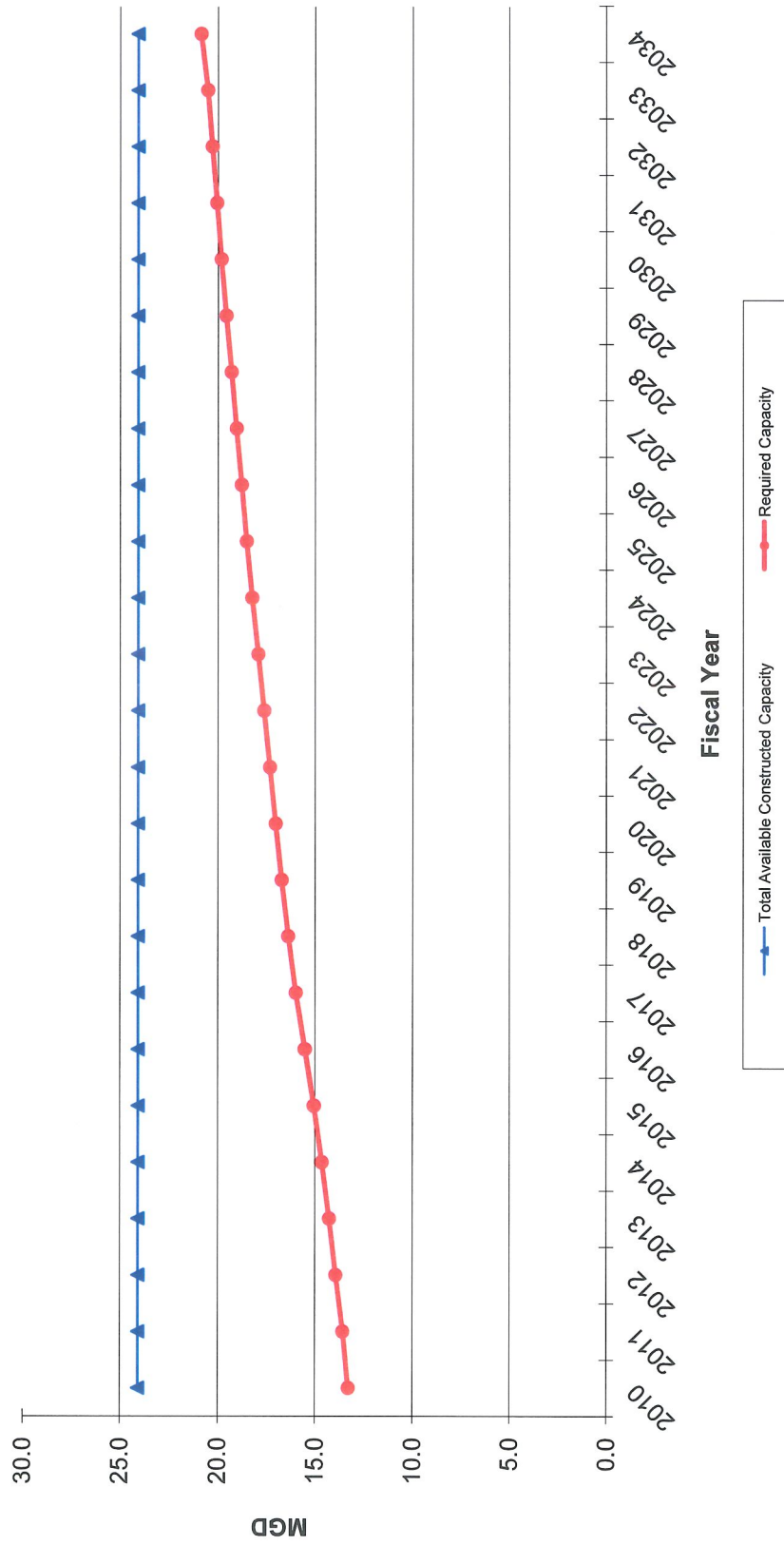
1. Fiscal Year starts October 1 and ends September 30.
2. Population Served. Estimates and projections for the served area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 27, 2013, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2034.
Note: The Northeast Service Area demand, above the 6,000 population capacity that the current Orange Tree WRF serves, will be treated at the NCWRF until the new NEWRF becomes operational. The South Service Area demand, above the 160,000 population capacity of the SCWRF, will be treated at the NCWRF beginning in 2034.
3. Required Capacity at 120 gpcd is obtained by multiplying the Peak Population (Column 2) times 120 gallons per capita per day (gpcd). 120 gpcd is the established Level of Service Standard (LOSS) for the North Service Area as adopted in the 2008 Wastewater Master Plan Update approved by the Board of County Commissioners on June 24, 2008. See graph on page WW-4.
4. Required Capacity increase from previous year is the increase between the Required Capacity at 120 gpcd (Column 3) for the year listed and the previous year.
5. Constructed Capacity On-line is the plant capacity at the beginning of the fiscal year in Million Gallons per Day (MGD). All plant capacities are reliable plant capacities stated in Maximum Month Average Daily Flow (MMADF) per FDEP permit requirements.
6. New Plant Capacity schedule is as follows:

Fiscal Year	New Plant Capacity	Source of Information
		No new plant capacity is scheduled.

7. Total Available Constructed Capacity in MGD, also represented graphically on WW-4 (Column 5 + Column 6).
8. Retained/(Deficit) Constructed Capacity is the difference between Total Available Constructed Capacity (Column 7) and Required Capacity (Column 3).
9. Retained/(Deficit) Constructed Capacity Target Values for planning purposes are 0.4 MGD minimum and 3.0 MGD maximum through FY 2034. The target minimum capacities represent the projected increase in the next year's wastewater flow (Column 4) and the target maximum capacities represent the projected increase in wastewater flow for the next eight years.

Collier County Government
 Public Utilities Division
 2013 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)
 Wastewater- North County Water Reclamation Facility (NCWRF)
 Level of Service Standard: 120 gpcd

August 05, 2013



Collier County Government
Public Utilities Division
2013 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)

**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR THE NORTHEAST SERVICE AREA**

August 05, 2013

1	2	3	4	5	6	7	8	9
Fiscal Year	Population Served	Required Capacity at 100 gpcd MGD	Required Capacity increase from previous year MDG	Constructed Capacity On-line MGD	New Plant Capacity MGD	Total Available Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity MGD	Retained/ (Deficit) Constructed Capacity Target Values MGD
2010	0	0.00		0.00		0.00	0.00	
2011	0	0.00	0.00	0.00		0.00	0.00	
2012	0	0.00	0.00	0.00		0.00	0.00	
2013	0	0.00	0.00	0.00		0.00	0.00	
2014	6,327	0.63	0.63	0.00	0.60 ¹	0.60	-0.03	0.1 (Min) - 1.0 (Max)
2015	6,000	0.60	-0.03	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2016	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2017	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2018	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2019	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2020	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2021	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2022	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2023	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2024	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2025	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2026	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2027	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2028	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2029	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2030	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2031	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2032	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2033	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)
2034	6,000	0.60	0.00	0.60		0.60	0.00	0.1 (Min) - 1.0 (Max)

1. The Orange Tree Utility Water Reclamation Facility may be decommissioned any time after transition.

**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR THE NORTHEAST SERVICE AREA**

August 05, 2013

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

1. Fiscal Year starts October 1 and ends September 30.
2. Population Served. Estimates and projections for the served area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 27, 2013, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2034.
NOTE: The Northeast Service Area demand, above the 6,000 population capacity that the current Orange Tree WRF serves, will be treated at the NCWRF until the new NEWRF becomes operational.
3. Required Capacity at 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) for the Orange Tree Service Area in Growth Management Plan's Capital Improvement Element. See graph on page WW-10.
4. Required Capacity increase from previous year is the increase between the Required Capacity at 100 gpcd (Column 3) for the year listed and the previous year.
5. Constructed Capacity On-line is the plant capacity at the beginning of the fiscal year in Million Gallons per Day (MGD). All plant capacities are reliable plant capacities stated in Maximum Month Average Daily Flow (MMADF) per FDEP permit requirements.
6. New Plant Capacity schedule is as follows:

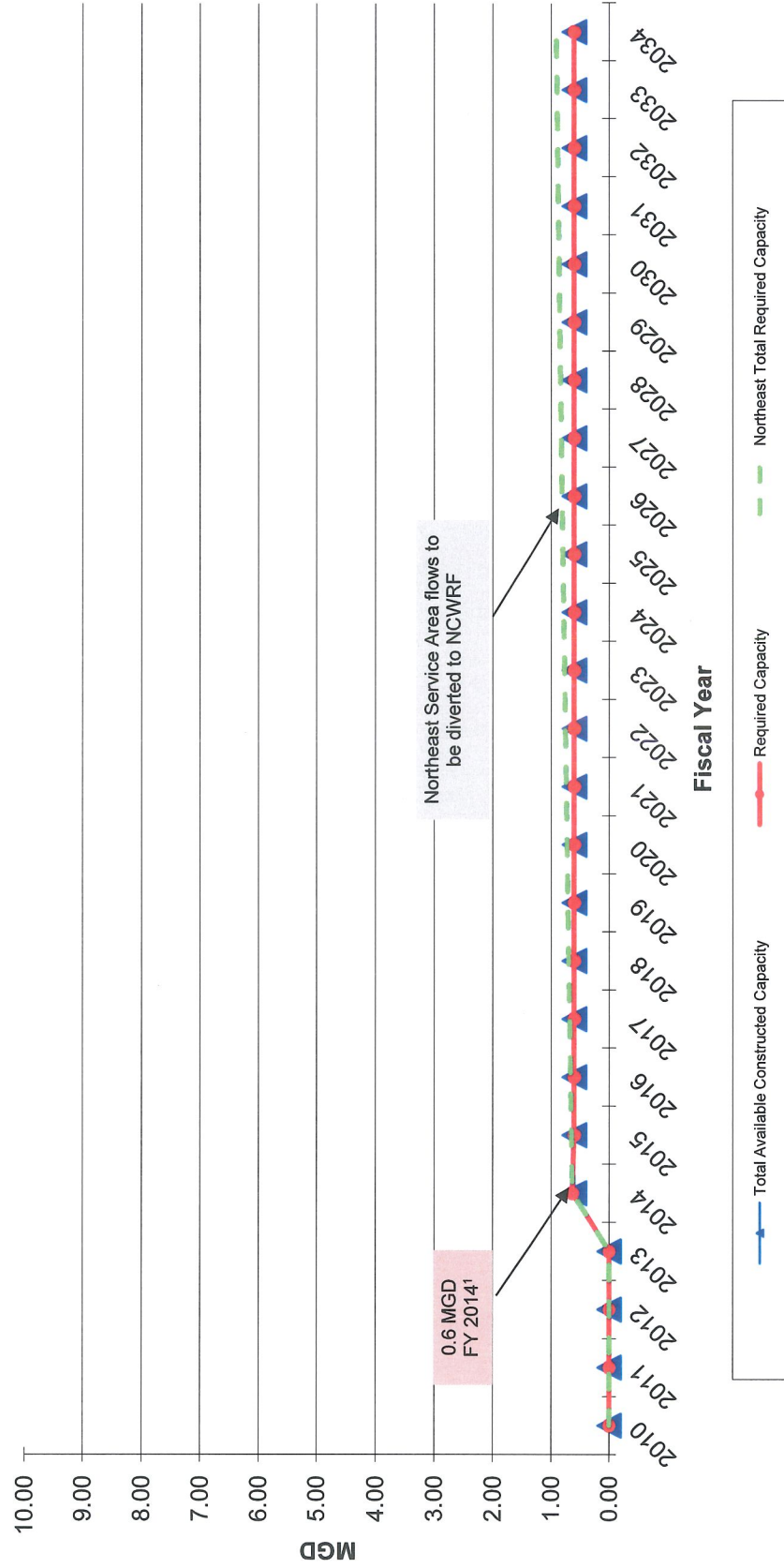
Fiscal Year	New Plant Capacity	Description	Source of Information
2014	0.6 MGD	Orange Tree Water Reclamation Facility continues to serve Orange Tree Service Area ¹ .	Capacity based on County's Preliminary Regulatory Compliance Review of Orange Tree Utilities dated February 2012

1. The Orange Tree Water Reclamation Facility may be decommissioned any time after transition.

7. Total Available Constructed Capacity in MGD, also represented graphically on page WW-10 (Column 5 + Column 6).
8. Retained/(Deficit) Constructed Capacity is the difference between Total Available Constructed Capacity (Column 7) and Required Capacity (Column 3).
9. Retained/(Deficit) Constructed Capacity Target Values for planning purposes are 0.1 MGD minimum and 1.0 MGD maximum from FY 2014 through FY 2034. The target minimum capacities represent the projected increase in the next year's wastewater flow (Column 4) and the target maximum capacities represent the projected increase in wastewater flow for the next eight years.

Collier County Government
 Public Utilities Division
 2013 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)
 Wastewater- Northeast Service Area
 Level of Service Standard: 100 gpcd

August 05, 2013



1. The Orange Tree Water Reclamation Facility may be decommissioned any time after transition.

Existing and Future Wastewater Service Areas

2013 Wastewater AUIR

