

COUNTY WATER & SEWER DISTRICT – WASTEWATER COLLECTION AND TREATMENT SYSTEMS

CONTENTS

- **INTRODUCTION**
- **TABLES – WASTEWATER SYSTEM – LEVEL OF SERVICE STANDARD (LOSS) ASSESSMENTS FOR WATER RECLAMATION FACILITY SERVICE AREAS**
- **SUMMARIES – WASTEWATER SYSTEM LOSS ASSESSMENTS, INCLUDING CHANGES FROM 2011 AUIR**
- **CHARTS – WASTEWATER SYSTEM – LEVEL OF SERVICE STANDARD (LOSS) ASSESSMENTS FOR WATER RECLAMATION FACILITY SERVICE AREAS**
 - **NORTH COUNTY WATER RECLAMATION FACILITY (NCWRF) SERVICE AREA**
 - **SOUTH COUNTY WATER RECLAMATION FACILITY (SCWRF) SERVICE AREA**
 - **PROPOSED NORTHEAST WATER RECLAMATION FACILITY (NEWRF) SERVICE AREA**
- **EXISTING AND FUTURE WASTEWATER SERVICE AREA MAP**

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

COLLIER COUNTY WATER SEWER DISTRICT - WASTEWATER SYSTEM

Introduction:

The Public Utilities Division's 2012 AUIR submittals are based on the "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) Wastewater System AUIR:

1. The Orange Tree Water Reclamation Facility 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.
3. CCWSD draft Northeast service area business plan indicates that wastewater service and reliability connections 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 Wastewater System AUIR.

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

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

July 26, 2012

1	2	3	4	5	6	7	8	9
Fiscal Year	Peak Population	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	116,117	13.9		24.1		24.1	10.2	0.4 (Min) - 3.0 (Max)
2011	117,794	14.1	0.2	24.1		24.1	10.0	0.4 (Min) - 3.0 (Max)
2012	120,012	14.4	0.3	24.1		24.1	9.7	0.4 (Min) - 3.0 (Max)
2013	122,264	14.7	0.3	24.1		24.1	9.4	0.4 (Min) - 3.0 (Max)
2014	124,549	14.9	0.3	24.1		24.1	9.2	0.4 (Min) - 3.0 (Max)
2015	127,378	15.3	0.3	24.1		24.1	8.8	0.4 (Min) - 3.0 (Max)
2016	130,768	15.7	0.4	24.1		24.1	8.4	0.4 (Min) - 3.0 (Max)
2017	134,227	16.1	0.4	24.1		24.1	8.0	0.4 (Min) - 3.0 (Max)
2018	137,754	16.5	0.4	24.1		24.1	7.6	0.4 (Min) - 3.0 (Max)
2019	141,352	17.0	0.4	24.1		24.1	7.1	0.4 (Min) - 3.0 (Max)
2020	144,803	17.4	0.4	24.1		24.1	6.7	0.4 (Min) - 3.0 (Max)
2021	148,101	17.8	0.4	24.1		24.1	6.3	0.4 (Min) - 3.0 (Max)
2022	151,458	18.2	0.4	24.1		24.1	5.9	0.4 (Min) - 3.0 (Max)
2023	154,874	18.6	0.4	24.1		24.1	5.5	0.4 (Min) - 3.0 (Max)
2024	158,351	19.0	0.4	24.1		24.1	5.1	0.4 (Min) - 3.0 (Max)
2025	161,660	19.4	0.4	24.1		24.1	4.7	0.4 (Min) - 3.0 (Max)
2026	164,794	19.8	0.4	24.1		24.1	4.3	0.4 (Min) - 3.0 (Max)
2027	167,978	20.2	0.4	24.1		24.1	3.9	0.4 (Min) - 3.0 (Max)
2028	171,211	20.5	0.4	24.1		24.1	3.6	0.4 (Min) - 3.0 (Max)
2029	174,494	20.9	0.4	24.1		24.1	3.2	0.4 (Min) - 3.0 (Max)
2030	177,677	21.3	0.4	24.1		24.1	2.8	0.4 (Min) - 3.0 (Max)
2031	180,753	21.7	0.4	24.1		24.1	2.4	0.4 (Min) - 3.0 (Max)

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

July 26, 2012

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

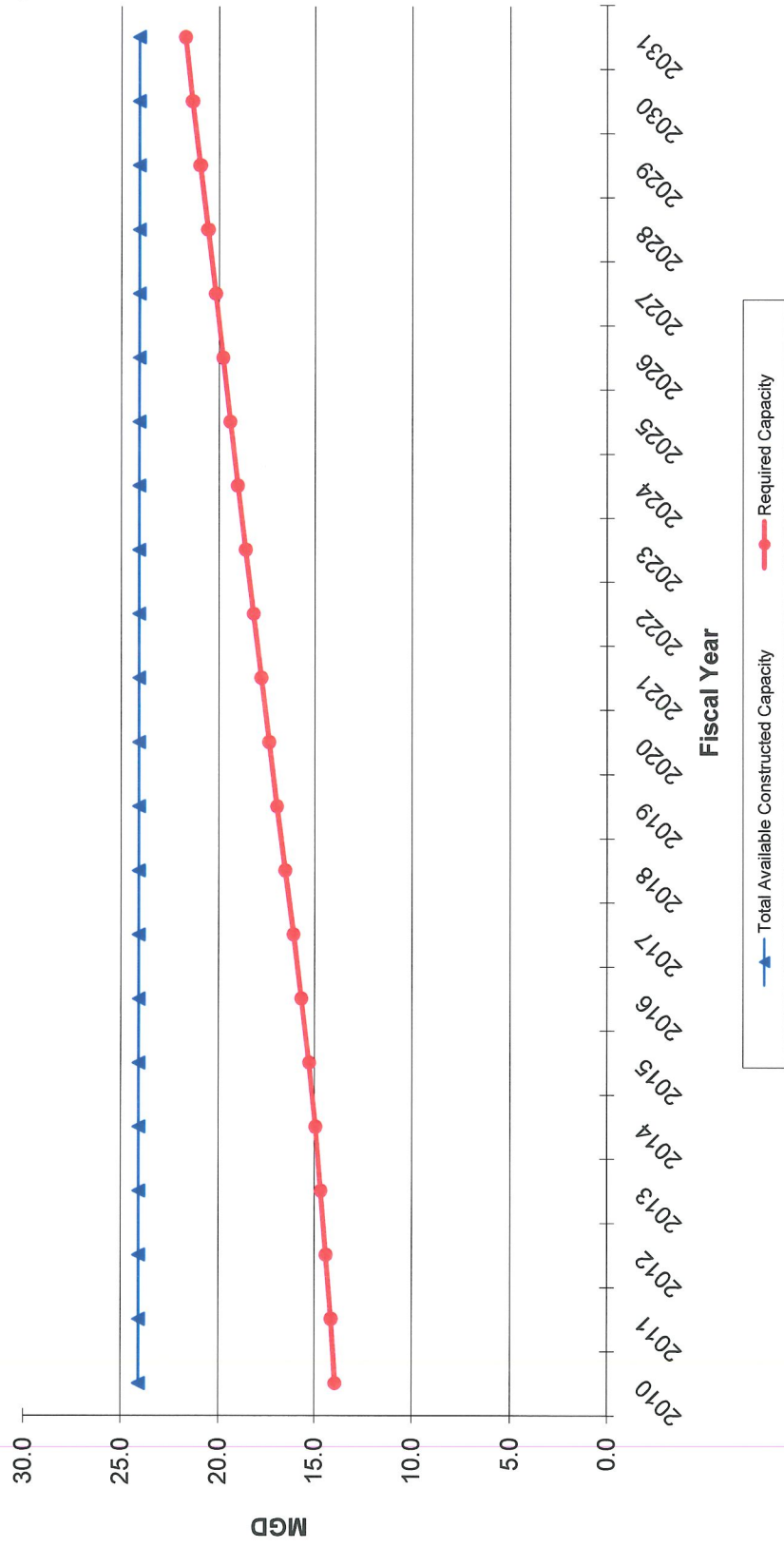
1. Fiscal Year starts October 1 and ends September 30.
2. Peak Population. Estimates and projections for the existing service area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 4, 2012, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2031.
Note: The non-Orange Tree Northeast Service Area population is currently, and is planned to continue, to be treated at the NCWRF.
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 2031. 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
 2012 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)
 Wastewater-North County Water Reclamation Facility (NCWRF)
 Level of Service Standard: 120 gpcd

July 26, 2012



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

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

July 26, 2012

1	2	3	4	5	6	7	8	9
Fiscal Year	Peak Population	Required Capacity at 100 gpcd	Required Capacity increase from previous year	Constructed Capacity On- line	New Plant Capacity	Total Available Constructed Capacity	Retained/ (Deficit) Constructed Capacity	Retained/ (Deficit) Constructed Capacity Target Value
		MGD	MGD	MGD	MGD	MGD	MGD	MGD
2010	101,578	10.2		16.0		16.0	5.8	0.5 (Min)
2011	102,972	10.3	0.1	16.0		16.0	5.7	0.5 (Min)
2012	104,769	10.5	0.2	16.0		16.0	5.5	0.5 (Min)
2013	106,593	10.7	0.2	16.0		16.0	5.3	0.5 (Min)
2014	108,444	10.8	0.2	16.0		16.0	5.2	0.5 (Min)
2015	110,737	11.1	0.2	16.0		16.0	4.9	0.5 (Min)
2016	113,484	11.3	0.3	16.0		16.0	4.7	0.5 (Min)
2017	116,286	11.6	0.3	16.0		16.0	4.4	0.5 (Min)
2018	119,144	11.9	0.3	16.0		16.0	4.1	0.5 (Min)
2019	122,058	12.2	0.3	16.0		16.0	3.8	0.5 (Min)
2020	124,855	12.5	0.3	16.0		16.0	3.5	0.5 (Min)
2021	127,527	12.8	0.3	16.0		16.0	3.2	0.5 (Min)
2022	130,246	13.0	0.3	16.0		16.0	3.0	0.5 (Min)
2023	133,014	13.3	0.3	16.0		16.0	2.7	0.5 (Min)
2024	135,831	13.6	0.3	16.0		16.0	2.4	0.5 (Min)
2025	138,512	13.9	0.3	16.0		16.0	2.1	0.5 (Min)
2026	141,052	14.1	0.3	16.0		16.0	1.9	0.5 (Min)
2027	143,631	14.4	0.3	16.0		16.0	1.6	0.5 (Min)
2028	146,251	14.6	0.3	16.0		16.0	1.4	0.5 (Min)
2029	148,911	14.9	0.3	16.0		16.0	1.1	0.5 (Min)
2030	151,489	15.1	0.3	16.0		16.0	0.9	0.5 (Min)
2031	153,982	15.4	0.2	16.0		16.0	0.6	0.5 (Min)

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

July 26, 2012

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

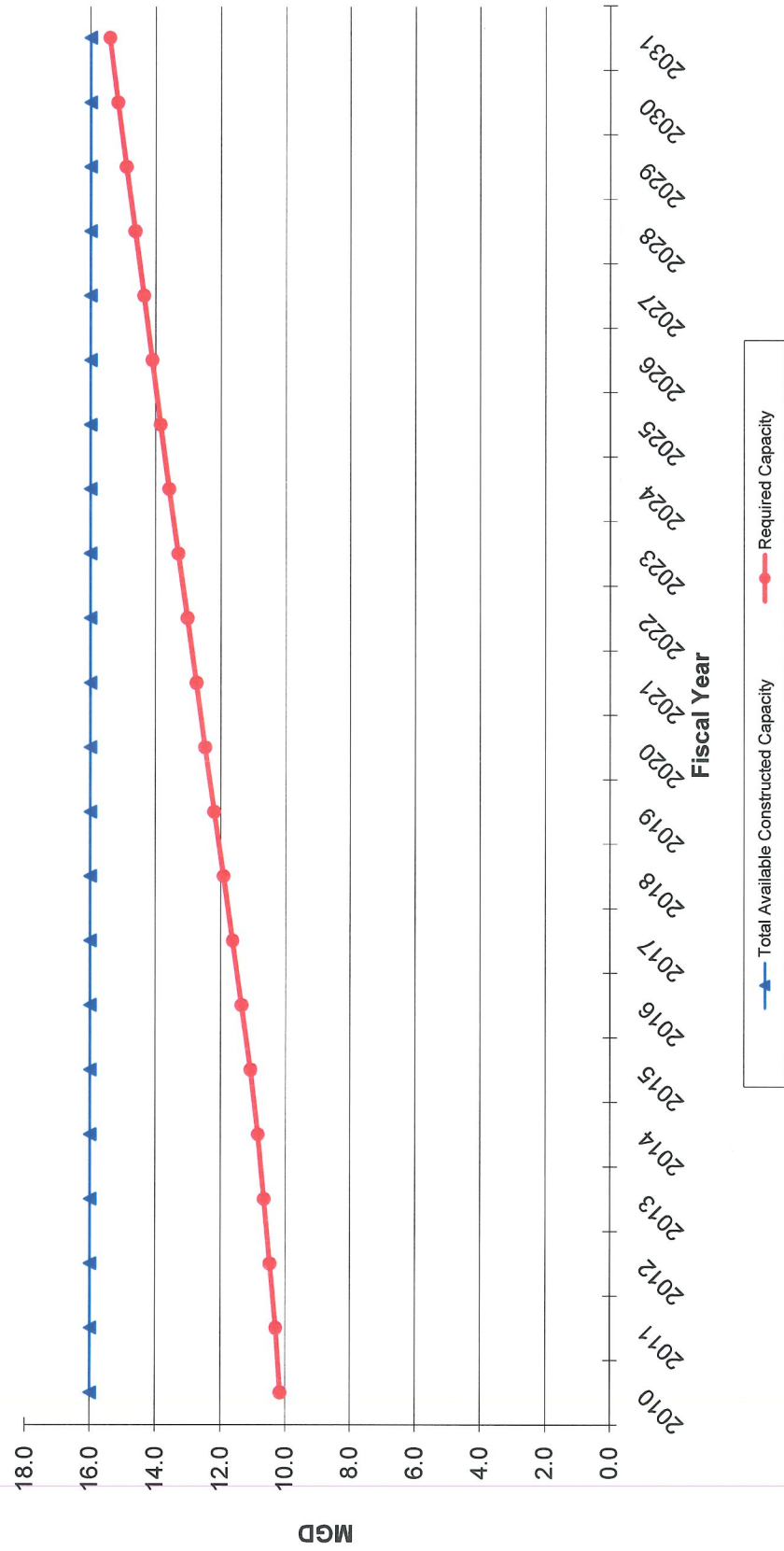
1. Fiscal Year starts October 1 and ends September 30.
2. Peak Population. Estimates and projections for the existing service area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 4, 2012, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2031.
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 2031. 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
2012 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)
Wastewater- South County Water Reclamation Facility (SCWRF)
 Level of Service Standard: 100 gpcd

July 26, 2012



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

**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR PROPOSED NORTHEAST WATER RECLAMATION FACILITY (NEWRF) SERVICE AREA**

July 26, 2012

1	2	3	4	5	6	7	8	9
Fiscal Year	Peak Population	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	6,192	0.62	0.62	0.00	0.60	0.60	-0.02	0.1 (Min) - 1.0 (Max)
2014	6,356	0.64	0.02	0.60		0.60	-0.04	0.1 (Min) - 1.0 (Max)
2015	6,560	0.66	0.02	0.60		0.60	-0.06	0.1 (Min) - 1.0 (Max)
2016	6,803	0.68	0.02	0.60		0.60	-0.08	0.1 (Min) - 1.0 (Max)
2017	7,052	0.71	0.02	0.60		0.60	-0.11	0.1 (Min) - 1.0 (Max)
2018	7,305	0.73	0.03	0.60		0.60	-0.13	0.1 (Min) - 1.0 (Max)
2019	7,564	0.76	0.03	0.60		0.60	-0.16	0.1 (Min) - 1.0 (Max)
2020	7,812	0.78	0.02	0.60		0.60	-0.18	0.1 (Min) - 1.0 (Max)
2021	8,049	0.80	0.02	0.60		0.60	-0.20	0.1 (Min) - 1.0 (Max)
2022	8,290	0.83	0.02	0.60		0.60	-0.23	0.1 (Min) - 1.0 (Max)
2023	8,536	0.85	0.02	0.60		0.60	-0.25	0.1 (Min) - 1.0 (Max)
2024	8,785	0.88	0.02	0.60		0.60	-0.28	0.1 (Min) - 1.0 (Max)
2025	9,023	0.90	0.02	0.60		0.60	-0.30	0.1 (Min) - 1.0 (Max)
2026	9,248	0.92	0.02	0.60		0.60	-0.32	0.1 (Min) - 1.0 (Max)
2027	9,477	0.95	0.02	0.60		0.60	-0.35	0.1 (Min) - 1.0 (Max)
2028	9,710	0.97	0.02	0.60		0.60	-0.37	0.1 (Min) - 1.0 (Max)
2029	9,945	0.99	0.07	0.60		0.60	-0.39	0.1 (Min) - 1.0 (Max)
2030	10,174	1.02	0.07	0.60		0.60	-0.42	0.1 (Min) - 1.0 (Max)
2031	10,395	1.04	0.07	0.60		0.60	-0.44	0.1 (Min) - 1.0 (Max)

**WASTEWATER SYSTEM - LEVEL OF SERVICE STANDARDS (LOSS) ASSESSMENT
FOR PROPOSED NORTHEAST WATER RECLAMATION FACILITY (NEWRF) SERVICE AREA**

July 26, 2012

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

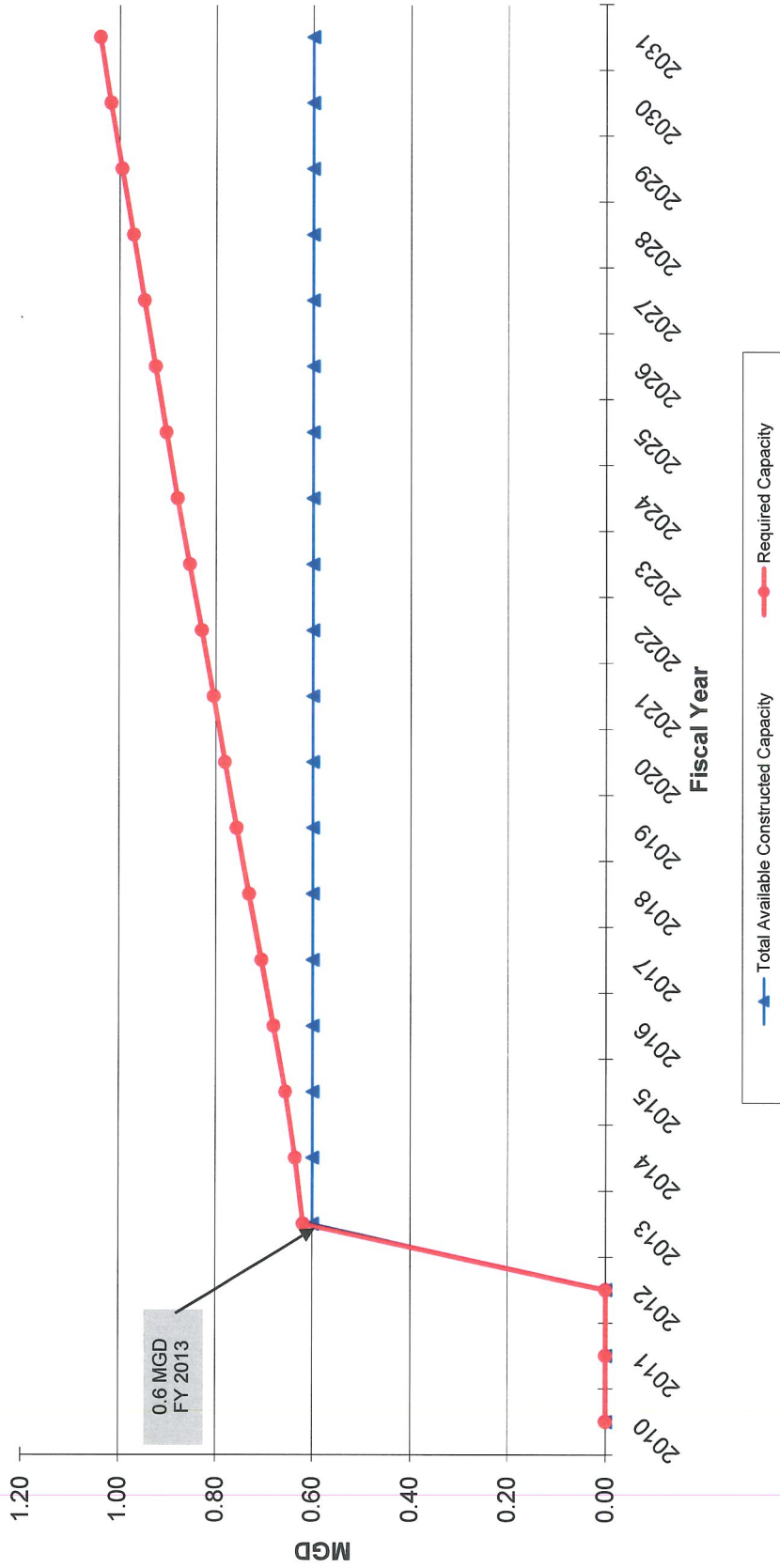
1. Fiscal Year starts October 1 and ends September 30.
2. Peak Population. Estimates and projections for the existing service area are based on the "Collier County Water & Sewer Districts Population Estimates and Projections" dated June 4, 2012, prepared by Collier County Comprehensive Planning Section. Populations are based on using Bureau of Economic and Business Research (BEBR) Medium Range growth rate through 2031.
NOTE: The populations shown reflect wastewater flow for the Orange Tree Service Area to be treated by the Orange Tree WRF. The non-Orange Tree Northeast Service Area population is currently, and is planned to continue, to be treated at the NCWRF.
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
2013	0.6 MGD	Existing 0.6 MGD Orange Tree WRF continues to serve Orange Tree Service Area.	Capacity based on County's Preliminary Regulatory Compliance Review of Orange Tree Utilities dated February 2012

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 2012 through FY 2031. 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
 2012 ANNUAL UPDATE AND INVENTORY REPORT (AUIR)
Wastewater- Proposed Northeast Water Reclamation Facility (NEWRF)
 Level of Service Standard: 100 gpcd

July 26, 2012



Existing and Future Wastewater Service Areas

2012 Wastewater AUIR

