



# Lower West Water Supply Plan Update

## Population and Demand Projections

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# **Population Projections – Lower West Coast Planning Area**

**Legislative Mandate: F.S. 373.0361(2)(a)1:**

- **Best available data, including local plans**
- **Shall “consider” BEBR medium projections**

**Objective: Accurately represent population-based water demand in the 2010 LWC Plan Update while recognizing recent local government water supply planning efforts**

**BEBR=Bureau of Economic & Business Research**



# **Population Projections – Lower West Coast Planning Area**

## **Methodology:**

- **Establish County-level control populations for 2030**
- **Distribute populations to PWS service areas**



# **Population Projections – Lower West Coast Planning Area**

## **Resources:**

- **LWC Water Supply Plan: 2005-2006 Update**
- **Annual BEBR projections by County**
- **Adopted local Water Supply Facilities Work Plans (WSFWP)**
- **Consumptive Use Permits (CUP)**
- **Traffic Analysis Zone (TAZ) data – Florida Department of Transportation (FDOT)**



# **Population Projections – Lower West Coast Planning Area**

- **STEP 1: Establish 2030 County-Level Control Populations**



# Establish 2030 County-Level Control Populations

## BEBR Medium-Range Projections For 2030 By Year

County	Date of BEBR Projection (population)				
	2005	2006	2007	2008	2009
Charlotte	238,700	232,600	235,900	219,300	217,000
Collier	607,200	619,100	598,500	548,900	472,000
Glades	14,200	13,700	13,400	13,400	13,500
Hendry	57,800	56,000	52,900	52,000	56,100
Lee	905,400	979,000	1,053,900	1,033,500	957,100





# **Establish 2030 County-Level Control Populations**

- **Recommended 2030 Countywide Control Populations**
  - **Charlotte County = 217,000 (BEBR Medium)**
  - **Collier County = 506,569 (unadjusted TAZ total)**
  - **Glades County = 13,500 (BEBR Medium)**
  - **Hendry County = 56,100 (BEBR Medium)**
  - **Lee County = 957,100 (BEBR Medium)**



# 2010-11 Population Recommendations Comparison with 2005-06 Plan

LWC County	2005-06 LWC Update	2010/2011 LWC Update	Percent Change
	For 2025	For 2030	2025-2030
Charlotte	8,673	39,950	360.62
Collier	608,002	506,569	-16.68
Glades	7,889	9,312	18.04
Hendry	51,821	54,748	5.65
Lee	906,199	957,101	5.62
LWC Region	1,582,584	1,567,680	-0.94

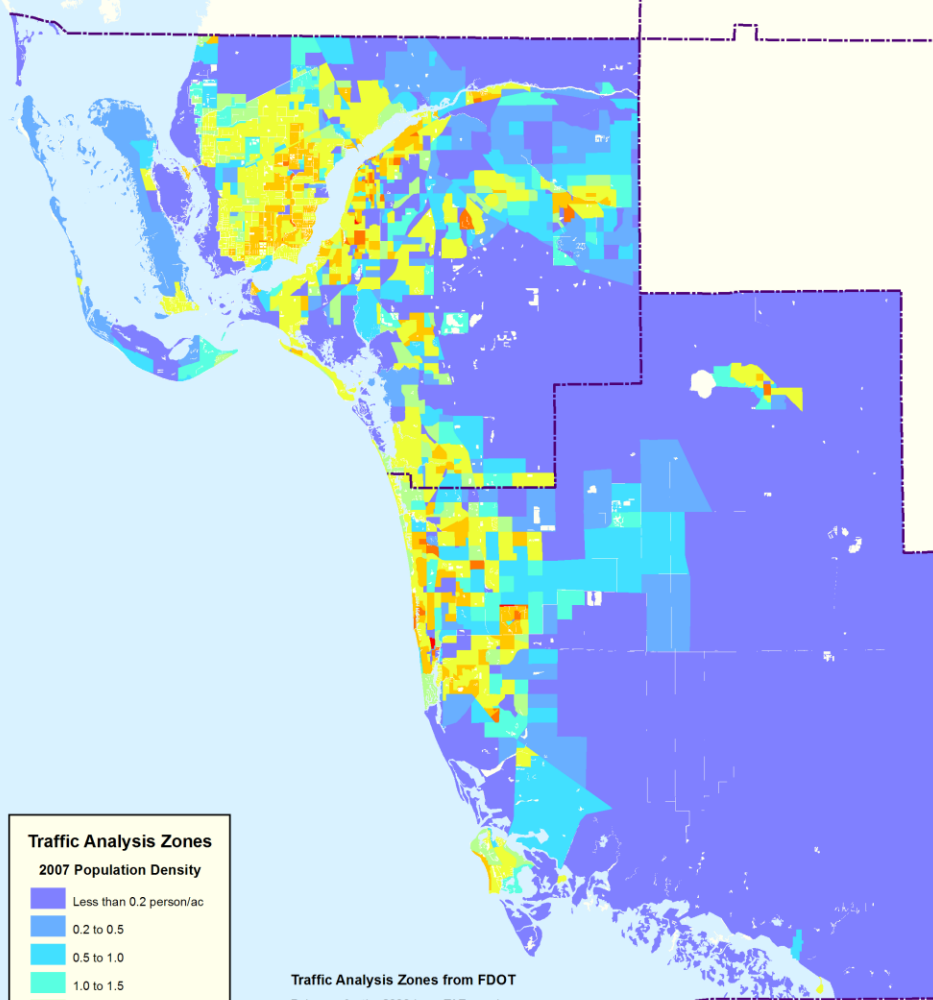
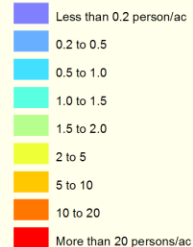




## **2010-11 Population Recommendations PWS Service Areas**

- **Next Step: Distribute 2030 “County-Control” Populations To PWS Service Areas**

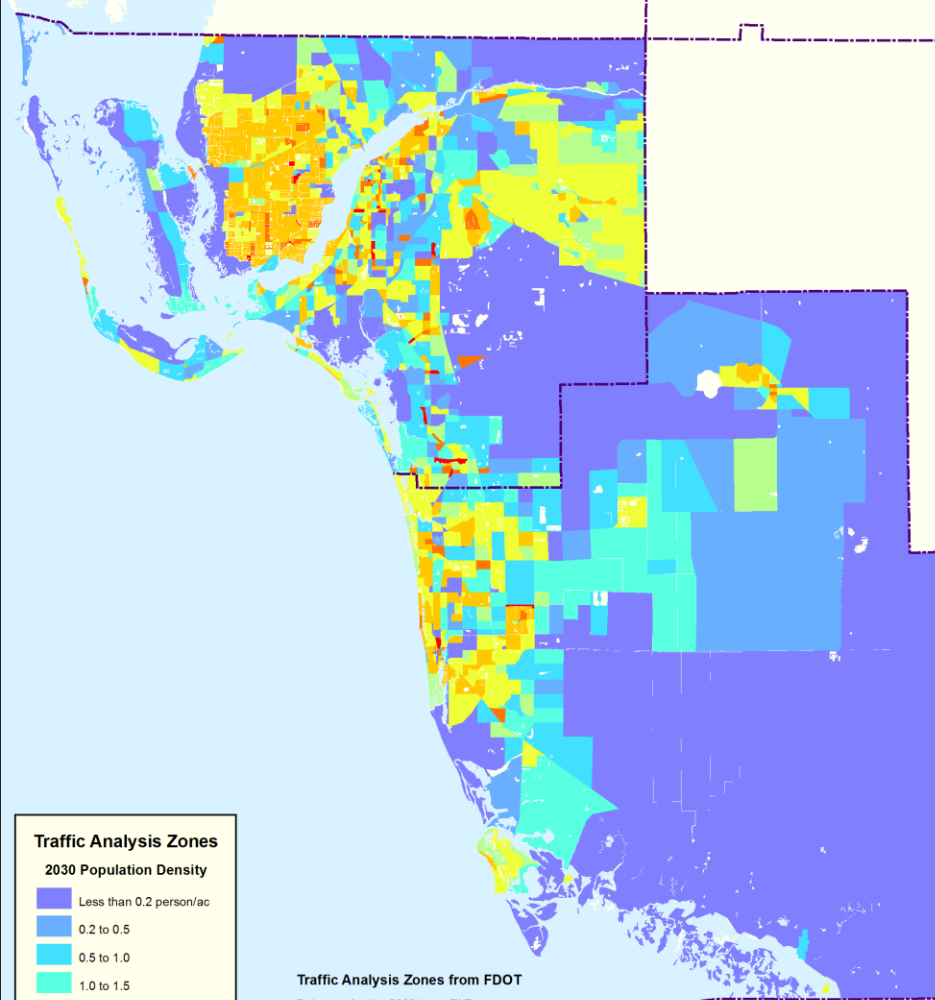
## 2007 POPULATION DENSITY


**Traffic Analysis Zones**  
**2007 Population Density**
**Traffic Analysis Zones from FDOT**

Polygons for the 2000-base TAZ are shown. 2000 population is from the 2000-base TAZ and is adjusted to match the 2000 census totals. 2007 population is from the 2007-base TAZ and is adjusted to match the 2007 census totals. 2030 population is interpolated from the 2035 value from the 2007-base TAZ, and is adjusted to match the BEBR Medium estimate for 2030. The 2007-base TAZ is currently in development by FDOT. Final numbers will differ slightly from the preliminary data shown here.

LeeCollier\_TazMrg-1b, 7/30/09

## 2030 POPULATION DENSITY


**Traffic Analysis Zones**  
**2030 Population Density**
**Traffic Analysis Zones from FDOT**

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# Prepare PWS Five-Year Incremental Projections

## Final Step: Incremental Projections

- Determine Compound Annual Growth Rate 2005-2030
  - Slow growth initially
  - More rapid growth at end of projection period
- Apply Growth Rates to Calculate interim Projections
  - 2010, 2015, 2020, and 2025



# Water Demand Projections Methodology

- **Per Capita Projection Method**
  - **Raw Water Demand**
  - **Finished Water Demand**
- **Projected Population x PCUR (per capita use rate)**
- **Assumption: Historical PCURs remain constant over time**
  - **Base year – 2005**
  - **Data Sources: Raw water – USGS; and Finished water – FDEP**



# 2010-11 Water Demand Recommendations (MGD)

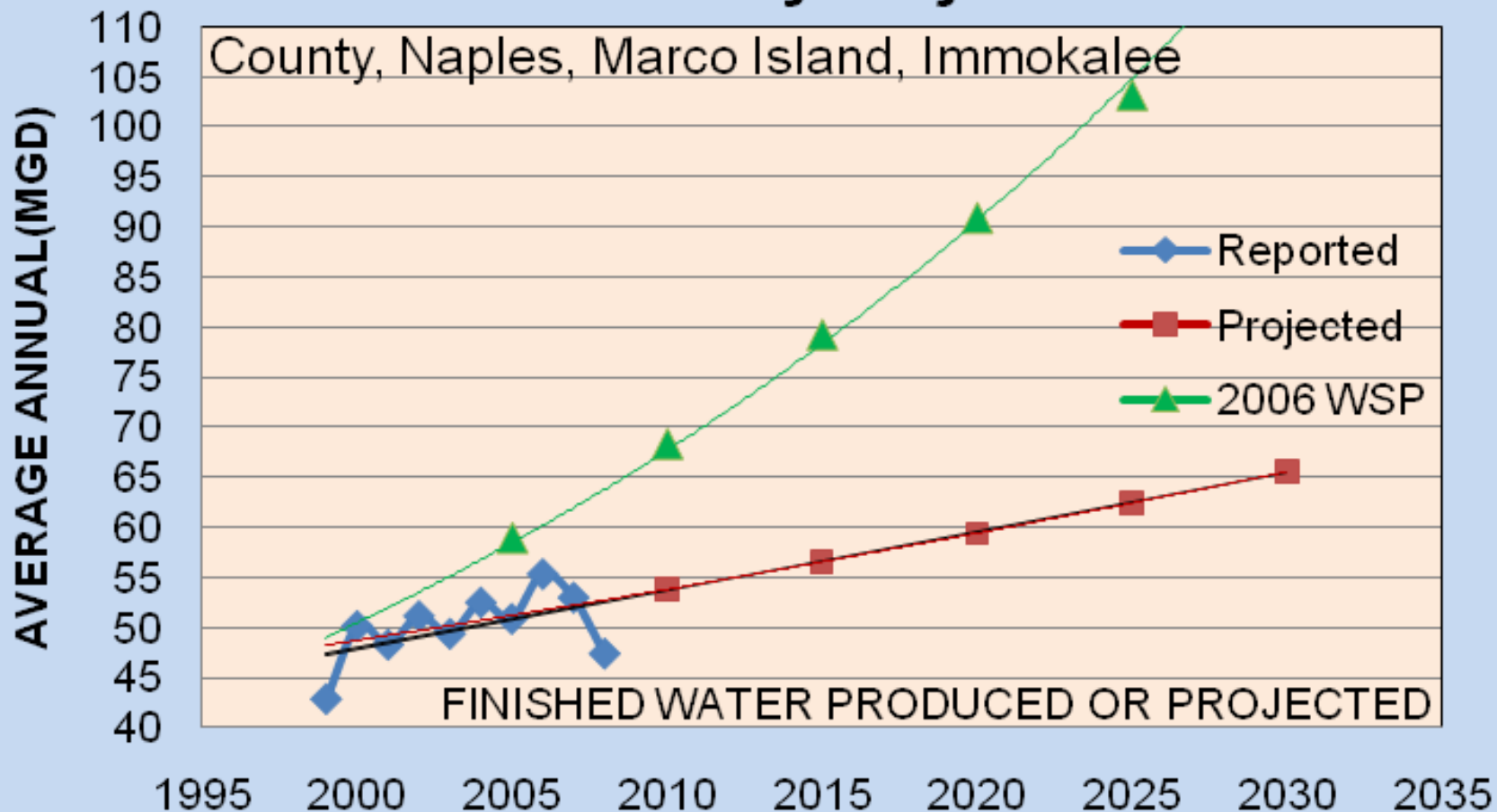
## Comparison with 2005-06 Plan

LWC County	2005-06 LWC Update	2010/2011 LWC Update	Percent Change
	For 2025	For 2030	2025-2030
Charlotte	1.13	5.67	401.77
Collier	126.84	96.22	-24.14
Glades	1.07	1.13	5.61
Hendry	6.34	6.33	-0.17
Lee	121.20	123.20	1.65
LWC Region	256.58	232.55	-9.37



# Collier County Proposed Demand Projections

## Collier County Major Utilities

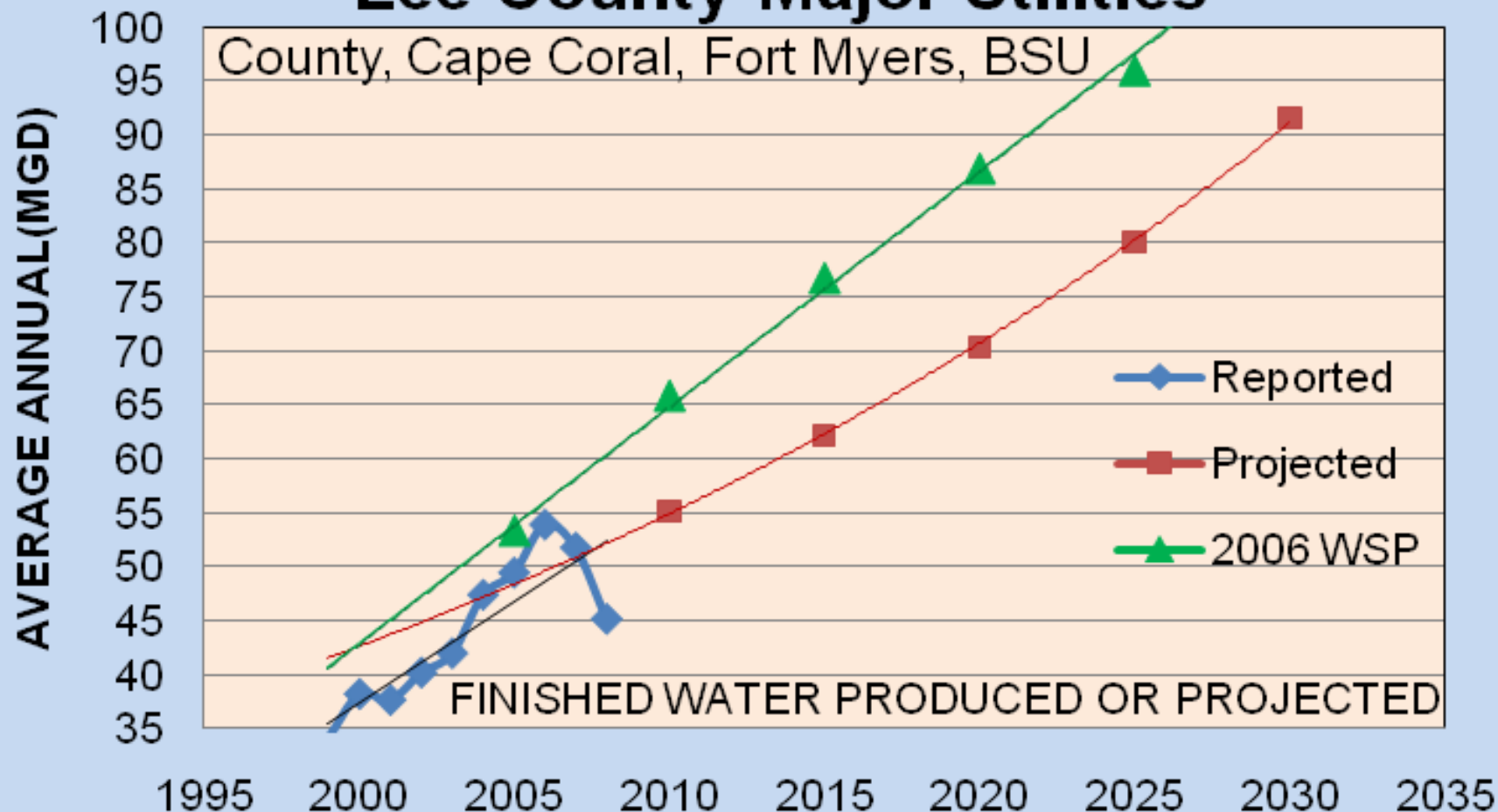






# Lee County Proposed Demand Projections

## Lee County Major Utilities





# LWC Plan Update

## Goals and Objectives

- *To ensure sustainable water supplies that protect natural systems and meet all reasonable-beneficial uses*
- Objectives in the 2006 plan update
  - Water Supply Reliability
  - Natural Systems
  - Conservation and alternative water sources
  - Local government linkage
  - Compatibility with other planning efforts



# Questions?

