

**CAMDEN PRESERVE  
PLANNED DEVELOPMENT DISTRICT**

**EXHIBIT F**

**WATER AND SEWER DEMANDS  
FOR  
CAMDEN PRESERVE**

# **EXHIBIT F** **WATER and SEWER DEMANDS** **FOR** **CAMDEN PRESERVE**

## Camden County Standards

<u>Water</u>	<u>Wastewater</u>
110 GPD/Per Capita	100 GPD/Per Capita
385 GPD/Connection	280 GPD/Per Connection
Commercial 135 GPD/1,000 SF	1,500 GPD/Ac. – Multi-Family
Fire Flow = 500 GPM Residential	Commercial 100 GPD/1,000 SF
1,000 GPM Commercial	Peak Flow Factors:
or as required by Fire Marshall	<3,000 population 4.0
Peak Day = $1.8 \times \text{no. of connections} \times 0.3 = (\text{GPM})$	3,000 – 4,000 population 3.8
Peak Hour = $3.25 \times \text{no. of connections} \times 0.3 = (\text{GPM})$	4,000 – 6,000 population 3.6
Design Period: 25 yrs. min. water main	6,000 – 8,000 3.4
20 yrs. Booster Station	8,000 – 10,000 3.2
50 yrs. Elevation Tank	10,000 – 15,000 3.0
50 yrs. Treatment Facility	
	<u>Design Period</u>
	Gravity Sewer 25 yr. min. – 50 yr.
	All other facilities 20 yrs.

## **DETERMINE BUILD-OUT REQUIREMENTS** Camden Preserve – 5,600 DU, 750,000 SF Commercial

Assume 2.5 persons per household, therefore for water use 275 GPD/DU and sewer use 250 GPD/DU for residential

### Water

5,600 Residential Connections x 275 GPD	=	1,540,000 GPD
750,000 SF Commercial x 135 GPD/1,000 SF	=	<u>101,250 GPD</u>
Total		1, 641,250 GPD

Fire Flow = 1,000 GPM

Peak Day  $1.8 \times 5,600 \times 0.3 = 3,024 \text{ GPM}$

Peak Hour  $3.25 \times 5,600 \times 0.3 = 5,460 \text{ GPM}$

Recommend Flow =  $(1,641,250 \div 1,440) + 1,000 = 2.140 \text{ GPM}$

Wastewater

5,600 connections x 250 GPD/DU = 1,400,000 GPD

750,000 SF Commercial x 100 GPD/1,000 SF = 75,000 GPD

Total 1,475,000 GPD

Water & Sewer Demand Projections						
Year	# of Dwelling Units	# of Commercial SF	Yearly Water Demands GPD	Cumulative Water Demands GPD	Yearly Sewer Demand GPD	Cumulative Sewer Demand GPD
2007	200	-	55,000	55,000	50,000	50,000
2008	400	20,000	112,700	167,700	102,000	152,000
2009	500	30,000	141,550	309,250	128,000	280,000
2010	500	50,000	144,250	453,500	130,000	410,000
2011	500	50,000	144,250	597,750	130,000	540,000
2012	500	50,000	144,250	742,000	130,000	670,000
2013	500	50,000	144,250	886,250	130,000	800,000
2014	500	100,000	151,000	1,037,250	135,000	935,000
2015	500	100,000	151,000	1,188,250	135,000	1,070,000
2016	500	100,000	151,000	1,339,250	135,000	1,205,000
2017	500	100,000	151,000	1,490,250	135,000	1,340,000
2018	500	100,000	151,000	1,641,250	135,000	1,475,000
<b>Total</b>	5,600	750,000	1,641,250		1,475,000	