

City of Edgewater



Annual Concurrency Report 2008



November 2008

City of Edgewater
2008 Concurrency Report

The following report details information required for the City of Edgewater's Concurrency Management System as outlined in the Capital Improvements Element, effective June 2003. This report provides data and analysis on public facilities, capacities, and level-of-service (LOS) inventory for concurrency management purposes.

The following inventories shall be maintained by the City of Edgewater to be used for the concurrency assessment of new development.

TRANSPORTATION

1. *Design capacity of different roadway types.*

The design capacity for the different road types is found on the FDOT Generalized Peak Hour Directional Volumes for Florida's Urbanized Areas. For the Class I State Arterials in Edgewater, the peak hour directional volume for LOS D is 1,860. For the Non-State Roadways (County and City facilities) in Edgewater, the peak hour directional volume for LOS D is 760.

2. *The existing level-of-service measured by the peak hour directional trips.*

See the columns labeled 'Peak Hour 2008' and '2008 LOS' in Table 2 below.

3. *The status of service degradation of those roads classified as backlogged based on the methodology described in the Transportation Element of the Edgewater Comprehensive Plan.*

There are no roads classified as backlogged.

4. *The adopted level-of-service standards for all roadway types (Adopted LOS).*

See the column labeled 'Adopted LOS' in Table 2 below.

5. *The existing capacities or deficiencies of the roadway network.*

The existing capacities or deficiencies are calculated by taking the Peak Hour Directional Maximum for each roadway's LOS and subtracting the Current Peak Hour Directional for each roadway segment as well as the reserved capacity for each roadway segment based on projects that have been given final approval, but are not yet putting trips on the road.

There are no deficiencies when design capacity (Peak Hour Maximum for each roadway) is measured against current peak hour peak direction traffic and the reserved capacity. The Planning Department will require all future applicants to submit a traffic analysis to include trip generation and distribution for both AADT and peak hour, peak direction so that reserved capacity can continue to be monitored. This analysis should be submitted as part of the Final (Construction) Plan process.

6. *The improvements to be made to the roadway network in the current fiscal year by the City, Volusia County, the Florida Department of Transportation, or other public agencies and the impact of such improvements on the existing capacities or deficiencies.*

There are no planned projects for this current fiscal year that will add capacity to the roadway network.

7. *Reserved Trips*

**Table 1
Reserved Trips**

Road Segment	Pinehurst PUD PH Trips	River Colony PH Trips	Alison Estates PH Trips	Worthington Crk PH Trips	Julington Oaks PH Trips	Coral Trace PH Trips	Edgewater Lakes PH Trips	Total Reserved PH Trips
US 1								
N. of Park Ave. to N. City Limit			26 Trips					26 Trips
S. of Park Ave. to SR 442			26 Trips	122 Trips				148 Trips
S. of Volco Road to S. City Limit	21 Trips	15 Trips		188 Trips	67 Trips		187	478 Trips
SR 442								
I-95 to Old Mission Road						67		67
Old Mission Rd to Air Park Rd						23		23
Volco Road							124	124

NOTE: Information for the above table was provided to the City of Edgewater by engineers representing the developers of the named projects.

TABLE 2
Transportation Level of Service Report for 2008

Road	From	To	Facility Type	Daily Counts Oct. 2008	No. of Lanes	Peak Hour Directional 2008	Reserved Trips	Peak Hour Plus Reserved	PH/PD Max. For LOS	2008 LOS	Adopted LOS
I-95	North City Limit	S. City Limit	Federal	34,000*	4 LD					C	C
U.S. 1	N. of Park Ave.	N. City Limit	State	31,829	4 LD	1,535	26	1,561	1,860	C	D
	S. of Park Ave.	SR 442	State	30,338	4 LD	1,466	148	1,614	1,860	C	D
	S. of Volco Rd	S. City Limit	State	13,879	4 LD	683	478	1,161	1,860	B	D
S.R. 442	I-95	Old Mission	State	11,098	4 LD	815	67	882	1,860	B	D
	Old Mission Rd	Air Park Rd	State	13,923	4 LD	932	23	955	1,860	B	D
	India Palm Dr	U.S. 1	State	17,228	4 LD	858		858	1,860	B	D
Indian River Blvd	U.S. 1	Riverside Dr.	City	1,342	2 LD	91		91	760	C	D
Air Park Rd	West Park Ave	SR 442/Indian River Blvd	County	1,806	2 LU	165		165	760	C	D
Park Avenue	E. of Carol Ann Drive	U.S. 1	County	6,308	2 LU	294		294	760	C	D
	W. of Carol Ann Dr.	Air Park Rd	County	5,590	2 LU	275		275	760	C	D
East Park Avenue	U.S. 1	Riverside Dr.	City	1,996	2 LU	144		144	760	C	D
12 th Street	Mango Tree Dr.	Willow Oak Dr	City	2,218	2 LU	159		159	760	C	D
26 th Street	Silver Palm Dr.	Hibiscus Dr.	City	1,804	2 LU	112		112	760	C	D
30 th Street	Silver Palm Dr.	Hibiscus Dri.	City	7,341	2 LU	455		455	760	C	D
East Turgot Ave	U.S. 1	Riverside Dr.	City	329	2 LU	22		22	760	C	D
Guava Drive	Indian River Blvd	28 th Street	City	1,734	2 LU	95		95	760	C	D
Hibiscus Dr.	30 th Street	16 th Street	City	1,317	2 LU	71		71	760	C	D
Mango Tree Dr.	West Park Ave.	16 th Street	City	3,426	2 LU	259		259	760	C	D
Ocean Ave.	Flagler Avenue	U.S. 1	City	1,148	2 LU	77		77	760	C	D
Queen Palm Dr.	Indian River Blvd	35 th Street	City	708	2 LU	47		47	760	C	D
Riverside Dr.	N. City Limits	U.S. 1	City	2,095	2 LU	160		160	760	C	D
Roberts Rd.	Hibiscus Drive	U.S. 1	City	7,679	2 LU	499		499	760	D	D
Volco Road	West of U.S. 1	U.S. 1	City	1,518	2 LU	111	124	235	760	C	D
Willow Oak Dr.	12 th Street	35 th Street	City	2,725	2 LU	178		178	760	C	D

- I-95 Count from the Florida Department of Transportation 2005 Annual Average Daily Traffic Report.
- Many of the local roads (County and City facilities) operate well below the maximum for LOS C; however, the Generalized Tables for Non-State Roadways do not provide capacity measures for A and B LOS levels.

SANITARY SEWER

1. *The capacity of the wastewater treatment facilities.*

The wastewater treatment facility is permitted to treat up to 2.75 MGD. Edgewater has an interlocal agreement with Volusia County that allows Edgewater to send up to 140,000 GPD to the County's wastewater treatment plant. Edgewater currently sends 70,000 GPD to the County's wastewater treatment plant.

2. *The existing level-of-service standards measured by the average number of gallons per day per unit based on the average flow experienced at the treatment plant and the total number of equivalent residential units within the service area.*

The Average Daily Flow (ADF) at the wastewater plant using the most recent 12-month period is 1,162,250 Million Gallons per Day (MGD).

The average number of customers over that same time period is 9,788. Approximately ninety-six percent (96%) of the sanitary sewer customers are residential.

$1,162,250 \times .96 = 1,115,760 =$ total GPD being generated by residential customers

$1,115,760 \div 9,788$ residential customers in Edgewater = 114 GPD per household

2.46 persons per household based on the 2000 Census

$114 \text{ GPD} \div 2.46 \text{ persons per household} = 46.34$ gallons per capita per day

The existing LOS is 46.34 gallons per capita per day.

3. *The adopted level-of-service standards for average daily flow per equivalent residential unit.*

The adopted LOS for Sanitary Sewer is 204 gallons per day per equivalent residential unit (ERU). The 2000 Census shows 2.46 persons per household or ERU. At 46.34 GPD per person, the existing LOS is 114 GPD per ERU.

4. *The existing deficiencies of the system.*

There are no deficiencies in the wastewater system. The existing LOS is 114GPD/ERU. The adopted LOS is 204 GPD/ERU.

The wastewater treatment facility is permitted to treat up to 2.75 MGD. The ADF at the wastewater plant is 1,162,250 MGD. The reserved capacity is 176,225. There is approximately 1.41 MGD of additional treatment capacity remaining.

5. *The reserved capacities.*

**Table 3
Reserved Wastewater Treatment Capacity**

Year Reserved	Developments	Units	Population at 2.46 persons/household	Gallons Per Day (204 GPD/ERU)
2005-2006	Coral Trace (86) Edgewater Lakes, Ph 1A (79)	165	405	38,475
2006-2007	Julington Oaks	87	214	20,330
	Alison Estates	30	74	7,030
	Pinehurst PUD	21	52	4,940
	River Colony	15	37	3,515
	Worthington Creek	436	1,073	101,935
	TOTAL FOR 2006-2007	589	1,450	137,750
TOTAL GALLONS PER DAY RESERVED				176,225

The Planning Department will require all future applicants for development to provide an estimate of the amount of wastewater their projects will generate so that an accurate measure can be used for concurrency purposes. This information should be submitted as part of the Final Plan application package.

6. *The capacities or deficiencies of the system with current and reserved units:*

The wastewater treatment facility is permitted to treat up to 2.75 MGD. The ADF at the wastewater plant is 1.162 MGD. The reserved capacity is 176,225. There is approximately 1.41 MGD of additional treatment capacity remaining.

POTABLE WATER

1. *The design capacity of potable water treatment facilities.*

The theoretical capacity of all 10 operating wells is 5.76 MGD. The permitted treatment capacity is 5.0 MGD. The current CUP allows a total annual withdrawal of 873.75 MG and maximum daily withdrawal of 2.39 MGD. This CUP data is for the year 2008.

2. *The existing level-of-service measured by the average gallons per day per unit based on average flows experienced and the total number of equivalent residential units within the service area.*

The average daily flow for the period October 2007 through September 2008 was 1.937 MGD.

There were an average of 10,491 customers per month over that same time period. Approximately ninety-six percent (96%) of the potable water customers are residential (10,071).

$$1,937,000 \times .96 = 1,859,520 = \text{total GPD being generated by residential customers}$$

$$1,859,520 \div 10,071 \text{ residential customers} = 184.6 \text{ GPD per household}$$

2.46 persons per household based on the 2000 Census

$$184.6 \text{ GPD} \div 2.46 \text{ persons per household} = 75 \text{ gallons per capita per day}$$

Edgewater has an adopted LOS of 204 GPD/ERU. The current LOS of 184.6 GPD/ERU meets the adopted LOS of 204 GPD/ERU.

3. *The existing potable water storage capabilities of the water system.*

The City currently has 4 storage tanks with a combined storage capacity of 1.959 million gallons.

4. *The adopted level-of-service standards for the potable water facility components.*

The theoretical capacity of all 10 operating wells is 5.76 MGD. The permitted treatment capacity is 5.0 MGD. The current CUP allows a total annual withdrawal of 873.75 MG and maximum daily withdrawal of 2.39 MGD. This CUP data is for the year 2008.

5. *The reserved capacities.*

**Table 4
Reserved Potable Water Capacity**

Year Reserved	Developments	Units	Population at 2.46 persons/household	Gallons Per Day (204 GPD/ERU)
2005-2006	Coral Trace (86) Edgewater Lakes, Ph 1A (79)	165	405	40,500
2006-2007	Julington Oaks	87	214	21,400
	Alison Estates	30	74	7,400
	Pinehurst PUD	21	52	5,200
	River Colony	15	37	3,700
	Worthington Creek	436	1,073	107,300
	TOTAL FOR 2006-2007	589	1,450	145,000
TOTAL GALLONS PER DAY RESERVED				185,500

The Planning Department will require all future development to provide an estimate of the amount of water their projects will require so that an accurate measure can be used for concurrency purposes. This data should be submitted with the Final Plan application package.

6. *The existing capacities or deficiencies of the system.*

The current CUP allows a maximum daily withdrawal of 2.39 MGD. The average daily flow for the period October 2007 through September 2008 was 1.937 MGD. The reserved capacity is 185,500 GPD. The system has about .2675 million gallons per day that is currently available.

SOLID WASTE DISPOSAL

1. *The design capacity of solid waste disposal facilities.*

The Tomoka Landfill is designed to serve at current levels of service with sufficient capacity through 2025.

2. *The existing level-of-service.*

The following data is for garbage and yard waste for the period of October 2007 through September 2008:

October 2007	Garbage = 796.38 (tons)
	Yard Waste = 163.03
November 2007	Garbage = 785.39
	Yard Waste = 151.48
December 2007	Garbage = 727.69
	Yard Waste = 134.06
January 2008	Garbage = 877.07
	Yard Waste = 189.91
February 2008	Garbage = 750.01
	Yard Waste = 158.59
March 2008	Garbage = 745.11
	Yard Waste = 236.60
April 2008	Garbage = 765.65
	Yard Waste = 241.19
May 2008	Garbage = 724.32
	Yard Waste = 120.66
June 2008	Garbage = 690.34
	Yard Waste = 148.66
July 2008	Garbage = 775.45
	Yard Waste = 174.43
August 2008	Garbage = 727.52
	Yard Waste = 154.49
September 2008	Garbage = 666.93
	Yard Waste = 152.24

Total Tons of Garbage (9,031.86) and Yard Waste (2,025.34) = 11,057.20 tons

Of the 10,192 total garbage customers, approximately 3% are non-residential customers. For concurrency purposes, it was assumed that the non-residential customers (3%) produce about 10% of the solid waste.

$11,057.20 \times 2,000$ pounds = 22,114,400 Total pounds of garbage and yard waste

$22,114,400 \times .90$ (residential portion of the customers) = 19,902,960 lbs of garbage & yard waste
 $19,902,960 \div 9,886$ customers (97% are residential) = 2,013 lbs. per household per year

$2,013 \div 365 = 5.52$ pounds per household per day

$5.52 \div 2.46$ persons/household = 2.24 pounds/capita/day

The existing level of service is 2.24 pounds/capita/day. The adopted level of service is 2.75 pounds/capita/day. The current LOS of 2.24 pounds/capita/day meets the adopted LOS of 2.75 pounds/capita/day.

3. *The adopted level-of-service standard for solid waste.*

The adopted LOS for solid waste is 2.75 pounds per person per day.

4. *The reserved capacity.*

**Table 5
Solid Waste Reserved Capacity**

Year Reserved	Developments	Units	Population at 2.46 persons/household	Pound per day at 2.75 pounds per day per person
2005-2006	Coral Trace (86) Edgewater Lakes, Ph 1A (79)	165	405	1,113.75
2006-2007	Julington Oaks	87	214	588.50
	Alison Estates	30	74	203.50
	Pinehurst PUD	21	52	143
	River Colony	15	37	101.75
	Worthington Creek	436	1,073	2,950.75
	TOTAL FOR 2006-2007	589	1,450	3,987.50
TOTAL SOLID WASTE CAPACITY RESERVED				5,101.25

5. *The projected capacities or deficiencies.*

There are 5,101.25 pounds per day represented by the reserved capacity (using the 2.75 pounds per day per person).

There is excess capacity at the landfill so there are no deficiencies. The residential customers are currently generating 2.24 pounds per person per day and the adopted LOS is 2.75 pounds per person per day so there is excess capacity of .51 pounds per person per day.

STORMWATER DRAINAGE

1. *The existing level-of-service measured by storm event as determined by the City and its consulting engineers.*

The existing LOS standards have been established for the City’s stormwater management system.

- Level A No significant street flooding
- Level B No major residential yard flooding
- Level C No significant structure flooding
- Level D No limitation on flooding

The City requires that all new development provide evidence to show that LOS ratings in stormwater conveyances serving the new development will not be degraded to an LOS lower than currently exists as a result of the new development’s construction and stormwater runoff contribution.

2. *The adopted level-of-service standard for stormwater drainage quantity and quality.*

The City requires that all new development include adequate stormwater management facilities to limit post-development runoff to pre-development rates and quantities for the 25 year, 24 hour design storm, and that such facilities are available concurrent with the development.

RECREATION AND OPEN SPACE

1. *The existing acreage of parkland and the existing number of recreation facilities as outlined in the Recreation and Open Space Element of the Comprehensive Plan.*

See the column labeled “2008 LOS” in Table 7 below.

2. *The existing level-of-service measured by the number of acres of parkland available per 1,000 residents of the City based on an inventory of parklands in the City and the population of the City.*

There are 142.5 acres of parkland in Edgewater. There are an estimated 21,770 residents. Therefore, for the existing LOS for parkland, there are 6.55 acres of park land for every 1,000 residents.

3. *The existing level-of-service for recreation facilities measured by the adopted standard based on an inventory of the facilities in the City and the population of the City.*

See the column in Table 7 below labeled “2008 LOS” for the number of facilities available combined with the column labeled “Adopted LOS” which denotes the number required under the current Comp Plan standards, and finally the column titled “Land and Facilities Needed” for the current population.

4. *The adopted level-of-service standards for parkland acreage and individual recreation facilities as outlined in the Recreation and Open Space Element of the Comprehensive Plan.*

See the column below in Table 7 titled “Adopted LOS”.

5. *The reserved capacity for residential developments with Final Plan approval.*

**Table 6
Park Land Reserved Capacity**

Year Reserved	Developments	Units	Population (2.46 persons/household)	Park land needed at 5 acres per 1,000 persons
2005-2006	Coral Trace (86) Edgewater Lakes, 1A (79)	165	405	2.03 acres
2006-2007	Julington Oaks	87	214	1.07 acres
	Alison Estates	30	74	.37 acres
	Pinehurst PUD	21	52	.26 acres
	River Colony	15	37	.185 acres
	Worthington Creek	436	1,073	5.365 acres
	TOTAL FOR 2006-2007		589	1,450
TOTAL LAND RESERVED FOR PARKS				9.28 acres

6. *The projected capacities or deficiencies.*

See the column in Table 7 below titled “Surplus or Deficiencies” for a detailed review of park land as well as facilities.

**Table 7
Park Land and Recreational Facilities**

Land/Facility	Notes	2008 LOS	Adopted LOS	Land & Facilities needed based on BEBR Pop. (21,770)	Reserved Capacity 1,855 pop	Combined Current Need with Reserved Capacity	Surplus or Deficiencies	Construction within one year
Park Land		142.5 acres	5 acres per 1,000 persons	108.85 acres	9.28 Acres	118.13 Acres	Surplus of 24.37 acres	
Baseball/Softball Fields		7	1 field per 4,000 persons	5	.46	5	Surplus of 2 fields	
Basketball Courts		4	1 court per 5,000 persons	4	.37	4	Will soon need a 5 th Court	
Tennis Courts	Lost 1 court in the hurricanes	4	1 court per 3,500 persons	6	.53	6	Deficient by 2 courts	
Handball/Racquetball Courts	Lost 2 courts in the hurricanes	4	1 court per 4,000 persons	5	.46	5	Deficient by 1 court	
Community Centers		1	1 facility per 30,000 persons	-	-	-	Not yet required	
Multi-Purpose/Soccer Fields		3	1 field per 4,000 persons	5	.46	5	Deficient by 2 fields	
Shuffleboard Courts	Lost 16 courts in the hurricanes	0	1 court per 1,500 persons	14	1.24	15	Deficient by 15 courts	
Bocci Ball Courts	Lost 1 court in the hurricanes	0	1 court per 10,000 persons	2	.19	2	Deficient by 2 courts	
Volleyball Courts		1	1 court per 5,000 persons	4	.37	4	Deficient by 3 courts	
Boat Ramps		7	1 ramp per 4,700 persons	4	.39	4	Surplus of 3 ramps	
Bike/Pedestrian Trails		4.85 miles	1 mile per 4,000 persons	5.44 miles	.46 miles	5.9 miles	Deficient by 1.05 miles	
Fitness Trails		1	1 mile per 14,000 persons	1.56 miles	.133 miles	1.69 miles	Deficient by .69 miles	
Activity Centers		1	1 center per 15,000 persons	1	.12	1	Second Center not yet required	

Source: City of Edgewater Leisure Services Department

The City of Edgewater is planning to transmit a Comprehensive Plan Amendment to revise its levels of service for parks and park facilities. The amendment will provide guidelines for park facilities rather than levels of service. This is an acceptable methodology under the State regulations and it will provide more flexibility in addressing the facilities needs of an ever-changing population. This will be done as part of the City's EAR-based amendments.