

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

EVALUATION AND APPRAISAL REPORT REQUIREMENTS

This section of the report presents the analyses of the Comprehensive Plan as required by Florida Statute 163.3191(2). Since the City of Fellsmere does not lie within or near the coastal high-hazard area or a military institution and also does not have a designated concurrency management area, concurrency exception area, or multimodal transportation district, an analysis of these features has not been conducted.

Population Estimates [F.S. 163.3191(2)(a)]

The City currently uses a 20-year planning horizon. As part of the Stipulated Settlement Agreement (SSA) for DCA#09-01 related to the City’s adoption of the Villages of Fellsmere (VOF) future land use category and assignment of the VOF to 18,388 acres, the City and the Department of Community Affairs (DCA) entered into an SSA that authorized the City to extend its planning timeframe to a 25-year horizon and accepted certain base assumption of the population and housing unit needs analysis. The required amendments to implement the SSA are currently being processed by the City and are expected to be adopted and found in compliance prior to the commencement of any EAR-based amendments. As such, the population estimates to be used for this EAR shall be based upon the 25-year horizon using the methodology and assumptions set forth in the SSA supporting data and analysis.

The City of Fellsmere will utilize a 25-year planning horizon and rely upon the 2035 medium range population forecast from the Bureau of Economic and Business Research for Indian River County. To determine the City’s capture of the countywide total population, the City considered the capacity to capture such growth by other municipalities and unincorporated areas within the county and the goals of the City for growth. A summary of these considerations are provided below.

Based upon the methodology summarized herein, in 2035, the City of Fellsmere is expected to contain 26,139 permanent residents.

Other Municipalities

Indian River County has four incorporated municipalities of noticeable size: Vero Beach, Sebastian, Indian River Shores and Fellsmere. Table 2.1 provides a snapshot of the current population distribution in the County. A quantitative analysis of whether these municipalities have adequate vacant lands with appropriate land use designations to accommodate continued levels of future growth is beyond the means of the City to accomplish; however, a review of various data sources and associated trends is presented below.

Table 2.1. Population Estimates for Indian River County

	2008 Population	Percent of County
Indian River County	141,667	100%
Unincorporated County	91,152	64.5%
Vero Beach	17,889	12.7%
Orchid Island	305	-
Sebastian	22,924	16.3%
Indian River Shores	3,829	2.8%
Fellsmere	5,108	3.7%

Source: BEBR 2008 Estimates of Population

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

During the 20 year period between 1970 and 1990, the City of Indian River Shores grew at an average annual rate of 19% per year. Indian River Shores, like Fellsmere, was a small town, indicating that substantial growth in historically small cities is not uncommon. However, at this time, opportunities for further growth or annexation are quite limited due to limited opportunities for annexation and limited capacity within their future land use maps (FLUM). For this reason, additional growth in the capture of future county residents is limited and its share of countywide population is likely to decline as the county continues to grow.

From 1970 to 2000, the City of Sebastian grew at an average annual rate of 10% per year. Future large scale annexations are limited due to the presence of developed unincorporated areas surrounding the City and the presence of the St. Sebastian River Preserve along its western boundary. Sebastian does contain an annexation reserve area and may be able to annex certain lands over time. However, as far as the ability to continue to grow at the rates from 1970 to 2000, opportunities are limited. According to Table 1-8 of the Future Land Use Element of the Sebastian Comprehensive Plan, the holding capacity of the FLUM is 5,002 dwelling units. For this reason, the capture of future county residents will increase, but not likely at the City's historical pace.

Vero Beach is an established city with limited opportunities for expansion. Developed areas of unincorporated Indian River County surround the city. Potential for future annexations of vacant lands are limited. The capacity of the FLUM is also limited. Redevelopment opportunities will likely become the City's focus to spur continued growth and revitalization. For this reason, the capture of future county residents will likely continue to decline as its redevelopment efforts seek to maintain growth opportunities as countywide growth continues.

Unincorporated Area

The unincorporated area of Indian River County has considerable capacity to accommodate future growth. In fact, within the urban service area of unincorporated Indian River County, there are currently 50,445 residential units. This and all other data presented in this section was obtained from the County's EAR. The County estimates that vacant land inside the urban service area can accommodate an additional 45,584 residential units. The resulting build-out potential of the urban service area portion of the unincorporated county would then be 96,029 residential units. However, data also reflects that typical development programs yield about 57% of the maximum allowable density within Indian River County. From a more realistic development scenario, the County then has a potential build-out of 76,427 units.

The current inventory of units in unincorporated county represents roughly 65% of the total County inventory. If growth in the unincorporated portions of the County were to grow at the same pace as the County as a whole, then in 2035, the unincorporated county will experience demand for a total of 73,510 housing units or approximately 65% of the total demand for housing units countywide. From this simplistic analysis, a surplus of 22,519 units may exist based upon maximum density assumptions. However, a surplus of only 2,917 units may exist based on the more realistic historical development trends presented above. The County's Evaluation and Appraisal Report also states that potable water constraints currently exist to service all of its vacant lands.

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

In summary, the County has current limitations on the ability to service the anticipated population and based on historical development trends does not have substantial reserves of residential capacity. This data reflects that the share of countywide population residing in the unincorporated county may decrease during the planning timeframe. Vero Beach and Indian River Shores will also experience decreasing shares of County population since annexations and capacity of vacant lands are limited. Finally, Sebastian reports a capacity of 5,002 residential units and has identified an annexation reserve area. Sebastian's growth as a percent of total countywide population may continue to increase for a number of years until the remaining capacity is absorbed. Over the planning timeframe, the percentage share of countywide population is expected to level off.

City of Fellsmere

Based upon the above data and analysis, the City determines that future capture of countywide population may decrease in other municipalities and unincorporated areas (Sebastian excepted). Assuming this growth remains in Indian River County, the City determines that their share of the future countywide population will increase unrelated to historical trends. To determine just how much additional growth can be captured by the City through an aggressive annexation and development climate, the City reviewed the historic nature of population growth of municipalities within Indian River County.

From 1930 to 1950, the City of Vero Beach accounted for almost 50% of all growth within Indian River County. By 1950, Vero Beach accounted for 40% of the total Indian River County Population. In contrast, the Cities of Sebastian and Fellsmere accounted for 3% and 5% of the population, respectively, in 1950. Beyond 1950, Vero Beach's share of countywide population decreased considerably each year. By 1980 the percentage share of total countywide population for Vero Beach had decreased to 27% and decreased further to 13% by 2008. From 1980 to 2008, the City of Vero Beach accounted for only 2% of countywide growth. These figures strongly suggest that Vero Beach has reached build-out and that a future increase in percentage share is unlikely.

As the City of Vero Beach began to lose population share in the years beyond 1950, the City of Sebastian experienced significantly increased levels of growth. In 1950, Sebastian accounted for 3% of the total countywide population. By 1980, Sebastian's percentage of the countywide population had only increased to 5%. However, between 1980 and 1990, Sebastian more than doubled its percentage share from 5% to 11%. In 2008, Sebastian accounted for 16% of total countywide population. These figures indicate that the City of Sebastian absorbed the growth that previously had been accommodated by the City of Vero Beach. From 1980 to 2008, the City of Sebastian accounted for 25% of the countywide population growth. The remaining municipalities, including the City of Vero Beach, combined, accounted for only 10% of growth during that time period. Similar to the growth patterns in Vero Beach, growth patterns in the City of Sebastian since 1995 suggest that the City of Sebastian is also approaching build-out. From 1975 to 1995, the City of Sebastian increased its percentage share of total population by over 300%, going from 3% to 13%. In contrast, during the most recent 20-year period (1988 to 2008), Sebastian's percentage share increased by only 40%. So while the percentage share for the City of Sebastian continues to increase, the rate at which the share is increasing has decreased substantially.

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Based upon the above data and analysis, the City of Fellsmere determines that its population capture of the countywide total population in 2035 will be 12.5%. This assumption is based on data that clearly shows inadequate capacity of other municipalities to accommodate their continued share of countywide population and infrastructure service constraints and diminishing capacity within the unincorporated area. The data further shows that municipalities clearly grow on a nonlinear basis with growth “spurts” coinciding with annexation and growth policies of the municipality. The City of Fellsmere has clearly sought aggressive growth through recent annexations and growth policy initiatives. The table below presents the City’s population estimates through the 2035 planning horizon.

Table 2.2: City of Fellsmere Population Projections

	2010	2015	2020	2025	2030	2035
Indian River County BEER Medium	142,300	155,000	169,300	183,400	196,900	209,110
% City of Fellsmere	4.1%	5.4%	7.1%	9.4%	12.5%	12.5%
City of Fellsmere Population	5,834	8,370	12,020	17,240	24,613	26,139

Source: Florida Population Studies, Volume 42, Bulletin 153; March 2009

As part of the SSA for DCA#09-01, the City acknowledges that their growth assumptions are based upon a goal to achieve greater economic diversity and housing choices and has committed to monitoring growth in relation to these projections. The growth assumptions are not based upon the City’s own historical trends but rather a goal for reasonable growth supported by data and analysis that indicates such growth is not uncommon for municipalities in Indian River County.

Changes in Land Area (Annexations) [F.S. 163.3191(2)(a)]

As indicated above, the City has annexed considerable lands. Table 2.3 on the following page presents the annexations that have occurred during the evaluation period since 2003. Figure 2.1 reflects these areas graphically and depicts the current City limits as of December 31, 2009, the end of the evaluation period for this EAR. In total, the land area of the City increased from approximately 4,502 acres to approximately 26,664 acres as a result of the annexations that have occurred during the evaluation period.

All of the annexations were voluntary and most included annexation agreements. Many of the annexation agreements anticipated an appropriate City of Fellsmere future land use designation, specific site development constraints, and specific contributions for public facilities. For example, the Fellsmere 392 annexation anticipated a combination of two future land uses across the property: the Regional Employment Activity Center and the Low Density Mixed Use Neighborhood. The required land use amendments have been processed for Fellsmere 392 and are now effective on the property. As part of the Fellsmere 392 annexation agreement though, a limitation was placed on the total allowable units that was subsequently applied to the property through a site specific objective within the Comprehensive Plan limiting the property to only 650 residential units. Also, the annexation agreement required the dedication of a one acre parcel for future City use and the improvement of the rail trail connecting the adjacent County park and extending to I-95.

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

The future land use on most the annexed properties has already been amended from the old County designation to the appropriate City designation. A few still maintain their old County designation, most notably the most recent Ro-Ed Ansin annexation and the Fellsmere Joint Venture annexation. These three properties total approximately 21,400 acres. Of this, the Fellsmere Joint venture property, approximately 18,545 acres, is slated to be designated as Villages of Fellsmere (VOF) over 18,388 acres and Medium Density Residential over 157 acres as part of the SSA for DCA #09-01 currently being processed. For this evaluation, the land use will continue to be shown as a County designation of Agriculture. The most recent Ro-Ed Ansin properties, approximately 2,800 acres, was also part of the original Plan amendment that was found in noncompliance by DCA (now forming the basis of the SSA for DCA #09-01). During the settlement discussions leading toward the SSA, the property owner withdrew their application for Low Density Mixed Use Neighborhood. Therefore, the property maintains the County designation of Agriculture on 2,500 acres and County Low Density Residential on 300 acres.

The provision of public facilities to the large tracts of vacant lands, particularly the Ro-Ed Ansin parcels may be more efficiently provided by Indian River County. Water and sewer facilities are already present in this areas serving existing development. In addition, CR 512, which provides primary access to these properties, is County owned and maintained. To lay the foundation for the intergovernmental framework to address these interjurisdictional services, the City will continue to coordinate with Indian River County and seen interlocal service agreements as required to implement these cross-jurisdictional service needs. During the development of these agreements, other joint planning needs will be identified and appropriate resolution will be negotiated.

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Table 2.3: Voluntary Annexations into the City of Fellsmere Since 2003

MAP #	Applicant	Acreage +/-	Units per Acre	Total Units Allowed	Land Use Assigned (Existing/Proposed)	Zoning (Proposed)
1	Ansin ¹	300	3	900	L-1/LDR	(TBD-PDD)
2	Ansin ²	2592	0.2	518.4	AG/LDMXN	(TBD-PDD)
3	Ayres	8.95	1.5	14	LDR	R-1A
4	Banack	91.32	3.5	315	LDR	(TBD-PDD)
5	Banack	41.35	-	-	AG/Industrial	TBD-IND
6	Banack	1	-	-	Old Town	Old Town
7	Fellsmere 392	392	1.8	650	LDMXN & REAC	(TBD-PDD)
8	FJV ³	18,545	-	1,691	AG/Villages of Fellsmere & MDR	(TBD-PDD)
9	Garafolo	78	4.5	315	LDMXN & GC	(TBD-PDD)
10	Habitat for Humanity	19	3.6	70	LDR	R-1B
11	Jet Oil, Inc.	4.37	-	-	General Commercial	C-2
12	Racetrac	2.19	-	-	General Commercial	C-2
13	FCT-Preserve	86	-	-	AG/PIN	Public
14	Chapin	0.58	-	-	NC	C-1
	Sub-total:	22,161.76		4,473		

1. Comp Plan Designation in County is L-1 (3 units per acre)
2. Comp Plan Designation is County Agricultural (A-1)
3. Comp Plan under County is A-1, A-2, and Conservation/Comp Plan amendment related to SSA DCA#09-01

LDR – Low Density Residential
MDR – Medium Density Residential
LDMXN – Low Density Mixed Use Neighborhood
GC – General Commercial
REAC – Regional Employment Activity Center
AG – Agriculture (County)
PPD – Planned Development District
TBD – To Be Determined

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Inset Figure 2.1 showing and labeling all annexations and current city boundary

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

The distribution of future land uses within the City as of December 31, 2009, is shown below in Table 2.4.

Table 2.4: Summary of Existing Land Uses

FLUM Code	Total Acres (approx.)	Developed Acres	Vacant Acres
LDR	650	196	454
LDMH	144	127	17
MDR	180	16	164
HDR	87	21	66
LDMXN	9	4	5
Ayres	9	0	9
Banack	91	0	91
Fellsmere 392	351	0	351
Garafolo	78	0	78
Habitat for Humanity	19	19	0
Pine Grove	3,426	7	3,419
Residential Subtotal	5,044	390	4,654
Ansin (AG-1 County)	2,592	0	2,592
AG-1 County (Other)	201	39	162
FJV (AG-2 County)	16,388	58	16,330
FJV (C-1 County)	2,000	16	1,984
Agriculture Subtotal	21,181	113	21,068
GC	75	38	37
NC	44	23	21
OLD Town	52	18	34
REAC (Fellsmere 392)	41	0	41
IND	89	55	34
Commercial/Industrial Subtotal	301	134	167
Public Inst	119	119	0
Recreation	19	18	1
Total	26,664	774	25,890

Source: Fishkind and Associates, Inc. & City of Fellsmere FLUM

Although each of the recent comprehensive plan amendments contain an underlying FLUM designation, the amount of development allowed on the parcels is either based upon a site specific policy that limits it to less than the land use would allow or maintains the historical County land use since the City has yet to amend the underlying land use to a City designation. Those that maintain the County land use designation may still have an annexation agreement limiting the allowable units once the City land use designation is approved. In this regard, any housing unit estimates from the vacant land should specifically consider the unique circumstance of each of the unique annexation parcels. For this reason, the acreage contained within each of the recent amendments has been removed from the total acreage count for the underlying land use. For example, the Banack Family Partnership amendment converted 91

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

acres from A-1 to LDR; however, as part of the amendment language the overall density of the parcel can not exceed 3.5 dwelling units per acre, which is less than the 5 units per acre allowed by the LDR land use category. In the preceding table and Table 2.5 to follow, the 91 acres included in the Banack Family Partnership amendment has been removed from the LDR land use category and has been included in a unique Banack Family Partnership category.

Vacant Land for Future Development [F.S. 163.3191(2)(b)]

According to the adopted Future Land Use Map (FLUM), the City of Fellsmere contains 25,890 acres of vacant land. Table 2.5 has broken down the acreage according to the FLUM categories indicated in the Fellsmere Comprehensive Plan and recent comp plan amendments that each contain specific development entitlements.

Table 2.5: Vacant Land Capacity

FLUM Code	Vacant Acres	Allowable Density (upa)	Allowable Units
LDR	454	5	2,270
LDMH	17	5	85
MDR	164	7	1,148
HDR	66	8	21
LDMXN	5	9	528
Ayres	9	-	14
Banack	91	-	315
Fellsmere 392	351	-	650
Garafolo	78	-	315
Habitat for Humanity	0	-	70
Pine Grove	3,419	-	5600
Residential Subtotal	4,654	-	11,016
Ansin (AG-1 County)	2,592	0.2	518
AG-1 County (Other)	162	0.2	32
FJV (AG-2 County)	16,330	0.1	58
FJV (C-1 County)	1,984	0	1,633
Agriculture Subtotal	21,068	-	2,241
GC	37	0.35 FAR	38
NC	21	0.50 FAR	23
OLD Town	34	1.0 FAR	18
REAC (Fellsmere 392)	41	0.50 FAR	0
IND	34	0.50 FAR	55
Commercial/Industrial Subtotal	167	301	134
Public Inst	0	-	-
Recreation	1	-	-
Total	25,890	-	13,391

Source: Fishkind and Associates, Inc. & City of Fellsmere FLUM

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Demands of Growth on Infrastructure [F.S. 163.3191(2)(c)]

To analyze the demand of growth on infrastructure, the population projections presented earlier must be allocated to the vacant lands within the City of Fellsmere. In addition, a component of nonresidential development must also be determined so that its impact on infrastructure can also be considered.

Residential Demand

Table 2.6 below utilizes the methodology developed by DCA as part of the SSA for DCA#09-01 to determine the estimated housing units through the planning horizon of 2035. Similar to the forecast of population, the assumptions employed in developing the housing unit forecast are goal-based. In other words, the reduction of person per household over time that is reflected in the methodology (see table below) assumes that as the City grows, the persons per household will trend toward the County average. This assumption is based on the fact that with a diversified economy, less reliance on agriculture will result in a lower percentage migrant workers that tend to live with higher household occupancies. In addition, as a wider variety of housing is provided in the city, particularly upper income housing, the persons per household are also generally lower.

Table 2.6: City of Fellsmere Housing Unit Forecast

	2010	2015	2020	2025	2030	2035
Population	5,893	8,424	12,043	17,217	24,613	26,139
Less 2007 base year population	5,108	5,108	5,108	5,108	5,108	5,108
Planning Year Population Growth	785	3,316	6,863	12,109	19,505	21,031
PPH	3.50	3.25	3.00	2.75	2.50	2.32
Households	224	1,020	2,288	4,403	7,802	9,065
Vacancy Rate	83%	82%	82%	81%	81%	80%
Housing Units	270	1,244	2,790	5,436	9,632	11,331

Based upon the table above, 9,065 additional households within 11,331 additional housing units are anticipated within the City in the year 2035. Presently, Fellsmere has 1,567 developed units. Infrastructure provisions in 2035 must then accommodate the needs of 12,890 households since infrastructure commitments must be in place for vacant units. Since vacant units will be included in the unit estimate, the effects of seasonal population are therefore addressed in any infrastructure analysis.

Comparing the results provided in Table 2.6 with the capacity of vacant lands reported in Table 2.5 indicates that the City has not allocated sufficient lands within its urban areas to accommodate the anticipated population and housing units through the planning horizon. A total of 11,331 additional housing units are estimated to be needed in 2035; whereas, the vacant land within the urban land uses of the City can accommodate only 11,016 units based upon maximum development intensity. This simplistic analysis does not include the contribution to residential units that may be provided through the mixed use land use categories of the City; however, at the same time, it does not take into account the fact that vacant land rarely develops at its maximum intensity.

The infrastructure analysis required to accommodate growth is based on the demand for 11,331

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

additional units and a total unit count of 12,890 units to accommodate the population projections for the 2035 planning timeframe.

Non-Residential Demand

Table 2.7 below analyzes the allowable non-residential development that can be provided on the vacant non-residential lands reported in Table 2.5 assuming maximum development intensity. Based upon this data, 3,904,716sf of additional building space can be developed within the City for commercial and industrial purposes. Presently, Fellsmere has 117,335sf of developed commercial and industrial building space on 59 acres of land.

Table 2.7: City of Fellsmere Non-Residential Development Allowances

FLUM Code	Vacant Acres	Allowable Intensity	Square Feet of Building Space (sf)
Commercial	92		1,762,002
GC	37	0.25-0.35 FAR	564,102
NC	21	0.50 FAR	457,380
OLD Town	34	1.0 FAR	*740,520
Industrial	75		1,633,500
IND	34	0.25-0.50 FAR	740,520
REAC	41	0.50 FAR	892,980
Other	19		509,214
LDMXN	13	-	138,954
Pine Grove	17	0.50 FAR	370,260
Total	185		3,904,716

*0.50 FAR to account for stormwater, utility, and parking constraints within the Old Town district.

Similar to the forecast of population and housing units, the assumptions employed in developing the future non-residential needs are also goal-based. In other words, with the City's desire to diversify its employment base and to achieve greater economic development, the amount of future non-residential development will not be based solely on historical development trends. Clearly, the City of Fellsmere does not contain a sustainable mix of housing and employment. The unemployment rate in the City is historically above the regional average and many basic life needs cannot be found within the City limits.

A review of comparable counties was conducted to determine the average ratio of commercial square footage to population. The results of this survey are shown in Table 2.8. Indian River County shows a commercial square feet per capita ratio of 96:1. This places Indian River County at the higher end of the range of comparable counties. St. Lucie County, which has traditionally served as a bedroom community, has the lowest ratio at 59 square feet of commercial space per person while Seminole and Lee County possess the highest at 105 and 100, respectively. The conversion to commercial square footage per unit was derived based upon the average persons per household for each respective county.

Table 2.8: Comparable Commercial Ratios

	Commercial	Commercial
--	-------------------	-------------------

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Comparable County	SF per Resident	SF per Unit
Indian River County	96	217
St. Lucie County	59	150
Seminole County	105	278
Lee County	100	235

Source: PIRS by Metro Market Trends. 2000 U.S. Census.

The City also reviewed comparable jurisdictions recently adopting major economic development initiatives in the form of large scale land use amendments. The large scale amendments each incorporated mixed use village development forms similar to that envisioned by the City as part of the Village of Fellsmere land use category. A summary of the findings is provided in Table 2.9.

Table 2.9: Comparable Amendments to the Villages of Fellsmere

Project	Acres	Residential Units	Nonresidential Uses	Commercial & Industrial Ratio
Restoration	5,187	8,500	3,300,000	388sf/unit
Sarasota 2050		4,000		-
Clear Springs DSAP	7,606	9,998	6,406,000 commercial 15,350,000 industrial	640sf/unit 1,535sf/unit
Babcock Ranch	13,521	17,870	6,000,000	335sf/unit

Based on the ratios provided in Tables 2.8 and 2.9, the City elects to plan for an appropriate ratio of 360sf per unit in determining future commercial space demand. This rate is based on the comparable amendments in lieu of the historic rate within Indian River County as Fellsmere strives to become a unique city more in keeping with the comparable amendments than the typical suburban development form found in most of Indian River County. By comparison, the Indian River County commercial ratio is approximately 217sf per household.

If each residential unit generates demand for 360 square feet of commercial space, then the total demand for commercial space arising within the City of Fellsmere will be 4.64 million square feet by 2035. Table 2.10 highlights the commercial space demand calculations.

Table 2.10: Commercial Demand Calculations

Planning-Level Residential Units	12,890
Commercial Sq. Ft. / Person	360
Commercial Demand Generated	4,640,400

Comparing the results provided in Table 2.10 with the capacity of vacant lands reported in Table 2.7 indicates that the City has not allocated sufficient lands within its urban areas to accommodate the anticipated non-residential demand. A total of 4.64 million square feet of non-residential space are estimated to be needed in 2035; whereas, the vacant land within the urban land uses of the City can accommodate only 3.90 million square feet based upon maximum development intensity. This simplistic analysis does not take into account the fact

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

that vacant land rarely develops at its maximum intensity.

Infrastructure provisions in 2035 must then accommodate the needs of 12,890 households demanding 4.64 million square feet of non-residential development. In this analysis, the 117,335sf of existing non-residential development is discounted as redevelopment over time will likely generate new demands at higher levels. Since infrastructure commitments will be based upon total units, including vacant units, the effects of seasonal population will be addressed in any infrastructure analysis.

Infrastructure Analysis

Financial feasibility of implementing the comprehensive plan and providing needed infrastructure to achieve and maintain adopted level-of-service standards and sustain concurrency management systems through the capital improvements element, as well as the ability to address infrastructure backlogs and meet the demands of growth on public services and facilities can now be addressed based upon the data and analysis presented earlier.

Water

The level of service standard for potable water is 250 gallons per day (gpd) per equivalent residential unit and 0.15gpd per square foot (building area). Both the City of Fellsmere and Indian River County provide potable water within the city limits.

According to the County's Comprehensive Plan, the total 2030 potable water demand in the county will be 18.90 million gallons per day (mgpd). At that time, the projected capacity of the county's water treatment plants, based on the county's potable water master plan, will be 24.65mgpd. Using the County's 2025-2030 five-year estimate of demand growth extrapolates the 2035 potable demand to 20.9mgpd. The excess capacity in the County system in 2035 is estimated to be 3.75mgpd.

Presently, the County Utilities Department has a Consumptive Use Permit from the SJRWMD that allows a maximum Floridan Aquifer withdrawal of 13.79 mgpd by the year 2021. This permitted amount of water withdrawal is significantly less than the projected demand for that same time period. To remedy this situation, the County Utilities Department recently applied to SJRWMD for 3 additional wells at the north county water plant and is applying for a revised Consumptive Use Permit to allow more Floridan Aquifer water withdrawals to meet projected demand.

The City of Fellsmere water treatment plant has a capacity of 0.65mgpd. The City is completing a plant expansion as reflected in the 5-Year Schedule of Capital Improvements to increase the plants capacity to 1.6mgpd. No other projects are reflected in the CIP related to City participation in funding water supply-related projects, reuse facilities, development of any alternative water supply projects, or any privately funded projects that the City intends to rely on to achieve and maintain adopted level-of-service standards when approving new development over the next five years.

The Consumptive Use Permit (No. 2377) from the SJRWMD allows a maximum withdrawal of 1.0mgpd through the year 2021 from the lower surficial aquifer. The permit conditions allow a staged withdrawal capacity. In 2010, the permitted withdrawal capacity is 0.50mgpd. In 2011, the permitted capacity is 0.6mgpd, and in 2012 the permitted capacity is 0.80mgpd. From 2013

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

through the permitting timeframe of 2021, the permitted withdrawal capacity is 1.0mgpd. The current average demand is 0.242mgpd and the maximum daily demand during the evaluation period was 0.448mgpd.

The 11,331 additional units through 2035 will demand 2.83mgpd. The 4.64 million square feet of nonresidential development through 2035 will demand 0.70mgpd. The total new demand for potable water services that must be accommodated in 2035 is 3.53mgpd. This demand is less than the excess capacity in the combined City and County system, which equates to 4.508mgpd.

Nonpotable and agricultural water demands are not anticipated to be drawn from the same water supply as potable water. Agricultural water needs will continue to be provided through private permitting agreements between agricultural operators and the SJRWMD. As agricultural operations are converted to urban mixed use villages and supportive countryside uses, requests for CUP modifications will be filed concurrent with applications for water treatment plant construction permits and environmental resource construction permits related to the urban development proposals. The primary source of water for urban irrigation will be stormwater and surface water. The projected non-potable demand is 4,610 MGY based on an average per acre irrigation demand. The City has an aggressive water conservation program related to irrigation demands being the only jurisdiction in the region to have adopted the SJRWMD’s guidelines on irrigation timing. The City also maintains a strong native landscape component to its landscape code and has very few irrigated areas within the existing developed portion of the City.

JEFF – I NEED THIS SECTION RESOLVED. THANKS.

Agricultural water needs are reserved by individual agricultural operations. The City has obtained existing water use permit allowances for the two major operations which are reflected in Table 2.11

Agricultural Permits for Water Withdrawal

Permit Holder	Permit Number	Water Source	Permitted Withdrawal	Existing Withdrawal	Estimated Withdrawal in 2035
FJV	2-061-2186-9	Ground	5,848.8 (MGY)	1,763.4 (MGY)	
FJV	2-061-2186-9	Surface	14,221.2 (MGY)		
Egan/Fellsmere Estates	2-061-9612-8	Ground	1,133.6 (MGY)	640.6 (MGY)	
Egan/Fellsmere Estates	2-061-9612-8	Surface	460.0 (MGY)		

JEFF MURRAY Permit No. 2186 and 9612 22,385.8 mgy

THIS IS FROM THE ORC REPOSE

As a result of information provided by Fellsmere Joint Venture, for the Year 2007 the total withdrawals from all sources have been estimated to be in excess of 18,000 million gallons per year (MGY) including withdrawals from

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

surface waters and irrigation wells associated with District-issued agricultural CUP's in the amount of 3,010 million gallons (MG) as summarized in the table below

Exhibit 7A: Summary of 2007 Water Usage for Fellsmere Joint Venture
and Berry East & West

Well Usage ¹	
Fellsmere Joint Venture	1,617,430,298
Berry East and West	1,392,930,793
Total	3,010,361,091
Surface Water Usage ¹	
Fellsmere Joint Venture	5,808,504,298
Berry East and West	9,789,134,213
Total	18,607,999,602

An alternative water supply project for the region is currently being constructed by the SJRWMD and lies directly adjacent to the westerly city limits. Below is a summary of the program as provided by the SJRWMD.

ACTIVITY: Surface Water Projects

Project Title: Indian River Lagoon Basin – Fellsmere Farms Restoration Area FFRA)

Type: Reservoir Construction

Physical Location: This project is located immediately east of the St. Johns Water Management Area (SJWMA) and south of the Fellsmere Grade within the Fellsmere Water Control District in Indian River County.

Square Footage/Physical Description: The proposed size of this reservoir will be approximately 10,000 acres.

Expected Completion Date: August 2015

Historical Background/Need for Project: In an effort to improve water quality downstream in the St. Johns River, the District originally proposed to construct a new 4,000-acre reservoir to treat agricultural discharges prior to entering the SJWMA and provide water supply potential. It is expected that with the completion of this reservoir, the discharges from SJWMA into Three Forks Marsh Conservation Area will meet projected nutrient targets. The District has already acquired 10,000 acres of land for this project. The project will provide water quality treatment of agricultural discharges along with habitat improvement and water supply benefits.

Plan Linkages: FY 2007-2008 Work Plan and Budget (pg. 307)

Area(s) of Responsibility: Water Quality, Flood Control, and Natural Systems

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Sewer

The level of service standard for sanitary sewer is 250gpd per equivalent residential unit and 0.15gpd per square foot (building area). The City of Fellsmere does not provide central sewer treatment services but does own and maintain distribution lines within the City. Currently, sewer treatment service is provided by Indian River County and through private systems and septic tanks. According to the County's Comprehensive Plan, the total 2030 sanitary sewer demand in the county will be 12.62mgpd. At that time, the projected capacity of the county's sewer treatment plants, based on the county's sanitary sewer master plan, will be 19.0mgpd. Extrapolating the 2025-2030 five year growth in demand, the 2035 sanitary sewer demand in the County will be 14.62mgpd. The excess capacity in 2035 is estimated to be 4.38mgpd.

Currently, at the county's central plant, the county treats the City of Fellsmere's sewage for a bulk rate. Currently, the city's average daily sewer flow is about 71,000 gallons per day, with a maximum flow of 100,000 gallons per day.

Private providers in the City are limited to two operations that provide specific services for their use and are not expected to generate demand on the public system. However, the eventual conversion of the existing residential units on septic tanks in the historic city center to central sewer is a goal of the City they hope to accomplish during the planning period. As such, the existing 1,567 units must be added to the ultimate demand from new growth to properly account for their sewer needs.

The 12,890 additional units (including existing units on septic systems) through 2035 will demand 3.22mgpd. The 4.64 million square feet of total nonresidential development through 2035 will demand 0.70mgpd. The total new demand for sanitary sewer services that must be accommodated in 2035 is 3.92mgpd. This demand is less than the excess capacity in the County system which is reported to be 4.38mgpd.

The provision of sewer lines within the City to serve new development is the responsibility of the developer pursuant to policies of the Comprehensive Plan. For the existing single-family residences currently on septic systems, the cost of connecting to a central sewer system may be allocated in a number of ways. For example, grants may be sought by the City to cover main line construction costs while the connections are allocated to the homeowner. Alternatively, the City could assess each property owner for the entire cost of providing central sewer on a prorated basis. These and other options are certainly available. Based upon the recent cost of

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

extending sewer down Broadway to serve existing commercial establishments (grant funded), the unit cost of providing main service lines is approximately \$100 per lineal foot. The City has approximately 70,000 linear feet of existing residential roads resulting in a total cost of approximately \$7Million to provide central sewer to the existing single-family residences in the City. Given the City's desire to consider the extension of central sewer to existing residences, a more detailed analysis of system design, costs, and funding options should be developed.

Solid Waste

The level of service for solid waste in the City of Fellsmere is 6.5 pounds per capita per day. This standard averages out the solid waste contributions from seasonal residents and nonresidential uses. Service is currently provided through a franchise agreement by Waste Management, Inc. Waste Management utilizes the County landfill repository. One of the County's principal responsibilities is to ensure that sufficient landfill capacity is available for disposal of processed or raw waste. According to the Solid Waste Master Plan, the County must maintain a disposal capacity of at least three years to allow for sufficient time to permit and construct a new active landfill segment, when necessary.

Currently, the County utilizes two approaches to ensure that there is adequate landfill capacity. These are: (1) developing new landfill capacity, and (2) implementing programs to reduce the demand for landfill disposal. To increase the disposal capacity for Class I waste and C&D debris, the County has optimized the design of the Class I landfill between Segments I and II. Also, the County recently obtained permits for additional C&D disposal on the side slopes of Segment I to increase the C&D disposal capacity. To increase the disposal capacity of the landfill footprint area, the County obtained permits for a vertical expansion of the Class I landfill to elevation 185 feet National Geodetic Vertical Datum (NGVD). Construction of the vertical expansion began in May 2009 and was completed in October 2009. Besides those initiatives, a 70-acre Segment III Class I cell is being designed and permitted for future construction. This cell will accommodate another 8.4 million cubic yards of Class I waste and C&D debris. The County has also obtained permits for a 33-acre component of the Segment III landfill that can be constructed prior to re-permitting of the entire 70-acre footprint. Along with Segment III, the existing Class I landfill with the scheduled vertical expansion and the two additional infills are designed to provide a disposal capacity of 13.5 million cubic yards. This will provide sufficient capacity to meet the County's disposal needs through the year 2030 and provide a surplus of more than 2.11 million cubic yards of disposal capacity.

From 2010 through 2035, the population growth within the City is expected to be 21,031 residents. The solid waste to be generated by these residents based upon the City's level of service would then be 136,701 pound per day. Over the course of one year, this equates to 49.9 million pounds or about 52,522 cubic yards (CY); whereas, the existing population of the City in 2008 of 5,108 residents generates only 12,757CY per year. Over the course of the next 25 years, the total demand for solid waste would be approximately 1.01MCY, which is less than the excess capacity (2.11MCY) of the landfill in 2035 as reported by Indian River County in their Comprehensive Plan.

Stormwater

The regional public stormwater system within the City of Fellsmere is provided by both the City and the Fellsmere Water Control District (FWCD), which also provides flood control services within a larger area of approximately 40,000 acres surrounding the City. The FWCD maintains

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

the main ditch laterals within the City while the City maintains the lot swales and City-owned drainage facilities. The City's drainage facilities outfall into the FWCD facilities. The capacity of the FWCD facilities were analyzed during the evaluation period and were determined to be sized accordingly; nevertheless, as roads within the City are paved, major pipes are replaced due to age. Currently there are no persistent flooding concerns within the City of Fellsmere. The Fellsmere Water Control District also sees no problems in continued management of their flood control system.

Stormwater requirements for new growth are provided by the developer for each project. As part of their projects, downstream constraints within the public system are the responsibility of the developer as well. As such, the City does not anticipate any capacity constraints that may be their own responsibility. However, as the State continues to heighten water quality rules, the City as well as the Fellsmere Water Control District, may find a need to improve water quality of their discharges. All future development will have to meet the SJRWMD stormwater requirements in place at time of their development.

As the State implements ever heightened water quality standards, the City and the FWCD may find a need to retrofit existing systems to comply with such regulations. System retrofits will have a pronounced affect on the City for a number of reasons. First, current city finances cannot absorb financial mandates. Second, water quality retrofits will often entail the storage of stormwater for nutrient settlement. This would require the acquisition of large holdings since the City nor FWCD have such lands available under public ownership today. Finally, retrofits would also result in great disruption to the utility and roadway system through the City as all drainage systems cross a multitude of streets.

The City of Fellsmere falls within two major basins: the St. John's River Basin and the Indian River Lagoon Basin. The City and FWCD are active partners with the State in implementing the Surface Water Improvement and Management (SWIM) Plan for the St. John's basin including the creation of the Fellsmere Water Management Area and various data monitoring stations. FWCD lands are not located within the Indian River Lagoon basin; however, some lands within the City near the eastern limits are located within this basin. A majority of these lands are currently vacant. Their development will require adherence to pertinent district rules and will be measured against the Indian River Lagoon SWIM Plan. In all development within the City, regulations require management of stormwater discharge to avoid unwarranted discharges.

Natural Groundwater Aquifer Recharge

Maps of groundwater recharge areas are useful planning tools for groundwater resource management. Groundwater recharge to the Floridan aquifer, as mapped by SJRWMD, is the addition of water to the Floridan aquifer from the overlying surficial aquifer, or the more direct infiltration of rainfall in areas where the surficial sediments are thin or absent and where the limestones of the Floridan aquifer are at or near land surface. The surficial aquifer system extends from the land surface downward to the top of the intermediate confining unit separating the surficial and Floridan aquifer systems. The water table of the surficial aquifer is the upper surface of the zone of saturation. The intermediate confining unit, where present, retards the movement of water between the surficial and Floridan aquifers and confines the Floridan aquifer under artesian conditions.

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

The amount of water available as recharge to the Floridan aquifer is that part of rainfall, after losses to runoff and evapotranspiration, which infiltrates through the soil zone to the water table and continues to move downward to underlying aquifer systems. Soils having high infiltration potential with little or no runoff due to poorly developed surface drainage features are most conducive to recharging groundwater systems. Recharge to the Floridan aquifer occurs in areas where the water table elevation is higher than the Upper Floridan potentiometric elevation, creating downward hydraulic pressure to move water through the confining unit. In areas where the Upper Floridan potentiometric surface is at a higher elevation than the water table, leakage is upward from the Floridan to the surficial aquifer. The areas of upward leakage define the discharge areas of the Floridan aquifer. Where Floridan potentiometric elevations are above the land surface, springs and free-flowing artesian wells occur.

The City of Fellsmere is located in a discharge area of the groundwater aquifer. Figure 2.2 presents an overview of the recharge potential within the St. John's River Water Management District. Figure 2.3 presents significant groundwater recharge areas within Indian River County. Except for some isolated locations along the eastern ridge and along the western extent of the County, there are no prime recharge areas within Indian River County. The 2005 Floridan aquifer recharge map updates the map published in Technical Publication SJ93-5, "Recharge Areas of the Floridan Aquifer in the St. Johns River Water Management District." The recharge map provides a regional assessment of recharge to the Floridan aquifer. The map is intended to be used as a regional planning aid for groundwater resource management. The map is not intended for site-specific assessments.

According to the SJRWMD, the City of Fellsmere is not located in an area identified as a priority water resource caution area (PWRCA) by SJRWMD's District Water Supply Plan (DWSP) 2005. The 2008 draft assessment (revised 1/23/09) identified the City in an area designated as a potential PWRCA and included the City in the Southern Water Supply Planning Area; however, current groundwater modeling results do not indicate that there will be unacceptable wetland impacts associated with projected water demands through the planning horizon. Therefore, designating the Southern Water Supply Planning Area as a PWRCA does not appear warranted. The SJRWMD plans to identify alternative water supply projects for the area in the DWSP 2010, which could be eligible for cooperative funding. The City will participate in the development of these alternative water supplies where feasible.

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Inset Figure 2.2 showing an overview of the recharge potential within the St. John's River Water Management District

EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO

Inset Figure 2.3 showing significant groundwater recharge areas within Indian River County

EVALUATION AND APPRAISAL REPORT OF THE CITY OF FELLSMERE COMPREHENSIVE PLAN CHAPTER TWO

Transportation

The City of Fellsmere relies upon the Indian River County Metropolitan Planning Organization (MPO) for its long range transportation planning. The data and analysis underpinning the analysis of the MPO's long range plan is derived by the MPO Technical Advisory Committee (TAC) with the assistance of the 2035 Long Range Transportation Plan (LRTP) Consultant and input from the public, Citizen's Advisory Committee (CAC) and the MPO Board. The City of Fellsmere has representation on the TAC, CAC, and MPO Board.

The assumptions employed in the current 2035 Long Range Transportation Plan under development are consistent with the City of Fellsmere's population projections and resulting housing and employment projections. The road network and zonal structure are also consistent with the City of Fellsmere's existing and future conditions. The 2035 LRTP allocates 16,967 households to zones within and around Fellsmere. Approximately 5,000 units are allocated to the existing Vero Lakes Estates east of Fellsmere within unincorporated Indian River County. The net units allocated to Fellsmere is then consistent with the 12,890 units estimated for 2035.

The 2035 LRTP has estimated that 7,590 jobs will exist within and around the City of Fellsmere. Since the area outside of the City within the zonal structures has limited nonresidential land uses, of this employment estimate, approximately 6,000 jobs are estimated for the City of Fellsmere. Using a square footage per employee conversion of 450, the 6,000 jobs equates to approximately 2.7 Million square feet of nonresidential development. Although less than the estimate summarized earlier in Table 2-10, it does provide a comparable ratio to that of Indian River County's unincorporated areas. Recall, the estimate provided in Table 2-10 was a goal-based estimate whereas the MPO uses more of a trend based approach.

Appendix E provides the current Needs Plan from the 2035 LRTP update. The transportation map series required by Rule 9J-5 were previously developed based upon the results of the 2030 LRTP created about five years ago. Inconsistencies between the new 2035 LRTP and the transportation map series will be corrected as part of the 2035 Plan update being developed at this time in response to the SSA for DCA #09-01 related to the Villages of Fellsmere amendment.

Existing transit services with the City are provided on a daily basis during the weekdays. No weekend or evening service currently exists. The system is comprised of fixed routes throughout the City connecting to the urban areas in the eastern portion of the unincorporated areas of the County. Transit operations are provided by the Senior Resource Association as the contract provider of transit in Indian River County. A detailed description of the existing transit system within both the City and the County is provided in Appendix F, the Transit Development Plan, prepared by the Indian River County MPO.

The Transit Development Plan also provides a cost feasible five-year plan for proposed transit services. Within the City, extended weekday service is planned providing evening service for extended work hours and after-work trips. No weekend service is programmed at this time.

At this time, there are no existing intermodal deficiencies and needs such as terminals, connections, high occupancy vehicle lanes, park-and-ride lots and other facilities. Through the planning horizon, transportation systems required to serve development within the City at the

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

adopted levels of service do not reflect any need for high occupancy vehicle lanes. However, the City anticipates a number of park-n-ride lots to support an integrated public transit system linking village centers to the historic center of town as well as the City to urban centers within Indian River County. The proposed transportation map series being developed as part of the 2035 Plan in response to the SSA for DCA #09-01 related to the Villages of Fellsmere amendment will present a long term vision for transit and related support facilities such as park and ride lots.

The pedestrian and bicycle network in the City is limited at this time due to funding constraints. As new development occurs within the City, they are required to provide sidewalks or make payments in lieu of. Bike lanes are provided at time of major roadway enhancements and new road construction. The Pedestrian and Bicycle Map within the Plan will be updated as part of the 2035 Plan in response to the SSA for DCA #09-01 related to the Villages of Fellsmere amendment to reflect the long term vision for pedestrian and bicycle facilities within the City.

Complete streets within the developed portion of the City, a major issue of the community, are limited at this time. Undeveloped areas of the City are required through various plan policies and the Land Development Code to provide complete streets as part of their development program. Streets within the developed area of the City are lacking many components of a complete street. Most roads remain unpaved and few have sidewalks or street lights. The City has utilized grant funding and local match to pave numerous streets and construct strategic sidewalk segments. Access to the Fellsmere Elementary School was prioritized as was major business streets in town including Broadway and North Willow Street. These streets represent the most complete streets within the City often containing paved roads, sidewalks (programmed for North Willow), and limited street lights. Public transit stops are also being programmed for North Willow to serve a major workforce housing development. Due to limited funding, the City should prioritize the provision of complete streets addressing safety concerns and access to schools among others.

Location of Existing Growth [F.S. 163.3191(2)(d)]

A summary of development activity between 2003 and 2009, the timeframe of analysis for this evaluation, is provided in the table below. All of the development approved or completed during the evaluation period has been consistent with the future land use map and Comprehensive Plan in general. No new nonconforming uses have been created.

Table 2.11: Development Activity during the Evaluation Period

Year	Residential Building Permits (units)	Non-Residential (sf)
2003	25 (partial)	NA
2004	31	NA
2005	39	NA
2006	25	NA
2007	85	9,000
2008	16	0
2009	6	0
TOTAL	227	9,000

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Permit data was first computerized in 2003. Data was not readily available for full year 2003 for residential permits. For all non-residential permits, data was not entered into the system as to size of development or redevelopment until 2007. Between 2003 and 2006, there were five commercial development or redevelopment projects. There has been no new non-residential building constructed within the City during 2008 or 2009.

Analysis of Major Issues [F.S. 163.3191(2)(e)]

See Chapter 3 titled "Success & Shortcomings of the Plan."

Changes to the State and Regional Requirements [F.S. 163.3191(2)(f)]

Relevant changes to the state comprehensive plan, the requirements of this part, the minimum criteria contained in chapter 9J-5, Florida Administrative Code, and the appropriate strategic regional policy plan for the evaluation period are provided in Appendix C.

Evaluation of Plan Objectives [F.S. 163.3191(2)(g)]

See Chapter 3 titled "Success & Shortcomings of the Plan."

Assessment of Plan Elements [F.S. 163.3191(2)(h)]

See Chapter 3 titled "Success & Shortcomings of the Plan" and the Matrices for Evaluating Plan Objectives in Appendix D.

Identification of Corrective Measures [F.S. 163.3191(2)(i)]

See Chapter 4, Conclusions and Recommendations.

Analysis of Public Input [F.S. 163.3191(2)(j)]

Summary of the public participation program and activities undertaken by the local government in preparing the report are presented in Chapter 1.

School Capacity and Location Coordination [F.S. 163.3191(2)(k)]

Indian River County and the incorporated municipalities therein have adopted an Interlocal Agreement (ILA) addressing school capacity and location coordination. The City has also adopted a Public School Facilities Element (PSFE) consistent with this ILA. Both the ILA and the PSFE have both been found consistent with recent State mandates related to school coordination.

Coordination of the comprehensive plan with existing public schools and those identified in the applicable Educational Facilities Plan (EFP) is assured through the annual update of the CIE/CIP that is required to include the educational facilities plan. Preparation of the EFP includes input from the City through its participation in the Technical Coordinating Committee (TCC).

The most recent annual report of the coordinating process indicates the systems is currently working as envisioned (See Appendix G). School capacity is being maintained across the County with the only exception being Fellsmere Elementary School. This deficiency is being addressed by the TCC, and a capacity program will be included in the next annual update. The City shares all building permit and site plan data with the School District to ensure population projections are based upon best available data. In addition, the City does not approve any non-

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

vested development unless adequate school capacity exists. With the current capacity deficiency, the City is limited at this time to approving only vested development.

An analysis of the long term school facility needs based upon the population forecasts presented herein is provided in Table 2.12. The student generation rates were obtained from the School District as were the planned school capacities. The student generation rates assumed 80% of the total housing stock will be comprised of 80% single-family residences, 15% multifamily residences, and 5% mobile homes. The rates for each housing type were taken directly from the Indian River County Concurrency Procedures Manual. The capacity of elementary schools is 750 students; 1,400 for middle and 2,500 for high schools.

Based upon the analysis, additional educational facilities will be needed to serve the City during the planning period. The specific location of such facilities will be determined at a later date as part of the continuing planning process and consistent with the process outline in the PSFE and ILA. The generalized location of such facility needs will be reflected on the land use map series as part of the 2035 Plan as part of the SSA for DCA #09-01.

Table 2.12: School Facility Needs through Planning Horizon

	BEBR Fellsmere Population	Total Housing Units	Projected Elementary Students	Projected Middle School Students	Projected High School Students	Elementary Schools	Middle Schools	High Schools
						750	1400	2500
2035	26,139	12,898	2,051	1,040	1,307	2.73	0.74	0.52
2034	25,834	12,386	1,969	999	1,255	2.63	0.71	0.50
2033	25,528	11,901	1,892	960	1,206	2.52	0.69	0.48
2032	25,223	11,442	1,819	923	1,159	2.43	0.66	0.46
2031	24,918	11,007	1,750	888	1,115	2.33	0.63	0.45
2030	24,613	10,595	1,685	854	1,073	2.25	0.61	0.43
2029	23,071	9,647	1,534	778	977	2.05	0.56	0.39
2028	21,563	8,764	1,393	707	888	1.86	0.50	0.36
2027	20,088	7,941	1,263	640	804	1.68	0.46	0.32
2026	18,647	7,174	1,141	579	727	1.52	0.41	0.29
2025	17,240	6,460	1,027	521	654	1.37	0.37	0.26
2024	16,144	5,903	939	476	598	1.25	0.34	0.24
2023	15,074	5,384	856	434	545	1.14	0.31	0.22
2022	14,030	4,899	779	395	496	1.04	0.28	0.20
2021	13,012	4,446	707	359	450	0.94	0.26	0.18
2020	12,020	4,024	640	325	408	0.85	0.23	0.16
2019	11,251	3,699	588	298	375	0.78	0.21	0.15
2018	10,502	3,395	540	274	344	0.72	0.20	0.14
2017	9,772	3,111	495	251	315	0.66	0.18	0.13
2016	9,061	2,846	453	230	288	0.60	0.16	0.12
2015	8,370	2,599	413	210	263	0.55	0.15	0.11
2014	7,836	2,411	383	194	244	0.51	0.14	0.10
2013	7,316	2,235	355	180	226	0.47	0.13	0.09
2012	6,809	2,071	329	167	210	0.44	0.12	0.08
2011	6,315	1,917	305	155	194	0.41	0.11	0.08
2010	5,834	1,773	282	143	180	0.38	0.10	0.07

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Coordination of Water Supply Plan [F.S. 163.3191(2)(I)]

The City of Fellsmere provides potable water to a portion of the City from the lower surficial aquifer. The permit is valid through the year 2021. Indian River County is the only other public potable water provider and serves the eastern limits of the City, generally the area south of CR 512 including the Pine grove property and land east of I-95. The County system utilizes the Floridan Aquifer and has been allotted a withdrawal of up to 13.79mgdp through 2021. According to the SJRWMD, neither the City of Fellsmere nor Indian River County is in priority water resource conservation areas. Development of alternative water supply sources is not mandatory. Nevertheless, the County has begun to investigate the alternative water supply sources.

In 2003, the SJRWMD concluded that the UFA (Upper Floridan Aquifer) groundwater resources in Indian River County can sustain continued development through 2025. Beyond 2025, however, there may not be sufficient capacity in the UFA to sustain continued development. In 2010, the SJRWMD will complete a new water supply assessment. If that assessment indicates that the UFA cannot sustain proposed withdrawals through 2030, then the County will be identified as a priority water resource caution area and will become a focus of the next District (SJRWMD) Water Supply Plan.

To address the potential capacity issues with the UFA, Indian River County prepared a local Alternative Water Supply Master Plan in 2007. According to that plan, surface water may serve as an alternative to, or as a supplement to, the Floridan Aquifer as the county's future potable water supply source. For surface water to be a practical alternative supply source, there needs to be a viable surface water storage system. Any such surface water storage system, however, would need to be created in coordination with the SJRWMD. Among its responsibilities, the district has been legislatively authorized to provide funding for alternative water supply projects. Besides planning for alternative water supply sources, the County Utilities Department is also analyzing water conservation and reuse programs.

The City of Fellsmere anticipates, as does Indian River County, that surface water may serve as an alternative potable water supply source. Within the City, the SSA for DCA#09-01 anticipates the development of mixed-use villages in the western 18,388 acres annexed into the City in 2007. Adjacent to these lands lies the proposed Fellsmere Water Management Area currently being developed. This water resource area will contain 10,000 acres of surface waters and would be a viable source for alternative water supplies.

The City has been successful in implementing the work plan for building public water supply facilities. The expansion of the City's lower surficial aquifer water plant is nearing completion. At this time, the City has not developed or analyzed the development of an alternative water supply source. The City is, however, the only municipality in the entire SJRWMD to have implemented the districts mandatory landscape irrigation restrictions and has one of the lowest per capita water consumption rates in the State according to the SJRWMD.

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

**Analysis of Transportation Analysis Methodologies with Indian River County
[F.S. 163.3191(2)(p)]**

An assessment of the consistency of the methodology for measuring impacts on transportation facilities with Indian River County reveals that both jurisdictions use the same methodology. For planning purposes, the level of service for a roadway link is determined by comparing the link's traffic volume to its roadway capacity. Generally, level of service calculations are determined using guidelines established in the latest edition of FDOT's *Level of Service Handbook*. Alternatively, level of service can be determined using other methodologies, including ART-Plan analyses, speed-delay studies or the Highway Capacity Manual method.

In both Indian River County and City of Fellsmere, level of service "D" is the minimum accepted standard during peak hour, peak season, peak direction conditions for non-local roads not on the State Intermodal System (SIS). Facilities on the SIS utilize the level of service assigned by the FDOT.

Affordable Housing

A projection of the anticipated number of households by income range derived from the population projections is provided in Tables 2-13. The table was derived from the base population projection reflecting 26,139 residents in Fellsmere in 2035 presented earlier. This represents a growth over the existing 5,108 residents of 21,031 residents. As the success of the City's economic development plans come to fruition over the planning timeframe, the City anticipates that its demographics will trend toward Indian River County. Using 2.32 persons per household and an 80% occupancy to convert the growth in population yields 9,065 new households living within 11,331 new housing units.

The distribution of household income is anticipated to trend toward that of the county as a whole as the City is more successful at broadening the socioeconomic fabric of the community. For the anticipated growth in households from that reported by the 2000 US Census to the year 2035, the anticipated distribution of households by income is shown in Table 2-13.

Table 2-13: Projection of Anticipated Household Growth by Income Range for 2035

	FELLSMERE	Fellsmere 2035 Percent	Indian River County 2000 PERCENT
Households	9,065	100.0	100.0
Less than \$10,000	716	7.9	7.9
\$10,000 to \$14,999	589	6.5	6.5
\$15,000 to \$24,999	1,405	15.5	15.5
\$25,000 to \$34,999	1,296	14.3	14.3
\$35,000 to \$49,999	1,577	17.4	17.4
\$50,000 to \$74,999	1,650	18.2	18.2
\$75,000 to \$99,999	707	7.8	7.8
\$100,000 to \$149,999	562	6.2	6.2
\$150,000 to \$199,999	172	1.9	1.9
\$200,000 or more	391	4.3	4.3

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

The housing needs of current residents are expected to be addressed through the greater flexibility in housing choice that will be available as additional residential development comes to fruition. Currently, the residents of Fellsmere and potential newcomers experience limited choice in housing due to the tight vacancy rate (approximately 5%) and the limited range of housing values. As the City is more successful at providing economic development opportunities for middle and upper income households, the market will provide these housing choices. As the supply of housing catches up to a reasonable market vacancy rate (20%), greater choices will then exist for current as well as future residents.

Affordable Housing Needs Assessment

The City of Fellsmere utilizes the affordable housing needs assessment prepared by the Shimberg Center for Affordable Housing, University of Florida. Since the planning timeframe of the City extends beyond that of the Shimberg Center and since the City uses a differing population projection, a direct use of the Shimberg data is not appropriate. The Shimberg Center projects affordable housing need through 2030. To adjust for the differing population forecasts, the City assumed the relative percentage of renter versus owner occupied units would remain as reported by Shimberg but applied to the larger number of total households forecast by the City. Likewise, the City assumed the breakdown of household income remained the same as well. To adjust for the extended timeframe, the City used simple linear projection.

According to Table 2-14, in 2035 a total of 755 owner occupied units and 783 renter occupied units will be occupied by families making less than 120% of the average monthly income. Therefore, affordable housing for a minimum of 1,538 families must be provided. As of the last census, a total of 556 homes were valued at a level attainable for families with less than 120% of the average monthly income. In addition, according to Table 2-11, 227 new homes were constructed in the City since the last census. For this analysis, 75% of these homes were assumed to be affordable. A resulting deficit of affordable housing of 814 homes.

To address the affordable housing deficit, as part of the SSA for DCA 09-01, the City will be including affordable housing requirements for future large scale developments as part of the Villages of Fellsmere within the Comprehensive Plan. The requirement will result in a minimum of 5% of the housing stock being set aside for affordable housing. These 408 additional units along with the 724 existing housing units that are affordable in nature will result in 1,132 affordable units by 2035 which is still shy of the affordable housing need by 406 units. The City has other large vacant land holdings that are anticipated to develop during the planning timeframe, primarily the Pine Grove and RoEd Ansin properties adjacent to I-95. Affordable housing should be a component of any development on these properties to help achieve the affordable housing needs of the City both in quantity and location. With these requirements, the City of Fellsmere expects the long term provision of affordable housing will be entirely addressed by the private sector. In fact, the City anticipates that the entire portion of the housing need will be met by the private sector within current market conditions. In the short term however, continued subsidies may be required through current established affordable housing programs especially in light of current economic conditions.

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

Table 2-14: City of Fellsmere Affordable Housing Needs Assessment

Owner Occupied Households by Income

Household Income	2010	2015	2020	2025	2030	2035
0-30% AM	50	56	65	73	82	91
30.1-50% AMI	56	61	72	81	89	97
50.1-80% AMI	142	160	185	207	231	255
80.01-120% AMI	172	196	225	254	283	312
120+% AMI	396	451	527	593	658	723
Shimburg Total Owner Occupied Households	816	924	1074	1208	1343	1478
Shimburg Total Households	1186	1343	1558	1748	1947	2146
City of Fellsmere Total Households	1713	2509	3777	5892	9291	10554
Factor	1.44	1.87	2.42	3.37	4.77	4.92

Renter Occupied Households by Income

Household Income	2010	2015	2020	2025	2030	2035
0-30% AM	61	69	80	89	100	111
30.1-50% AMI	61	65	77	86	96	106
50.1-80% AMI	94	107	122	136	153	170
80.01-120% AMI	77	89	103	114	255	396
120+% AMI	77	89	102	115	0	-115
Shimburg Total Renter Occupied Households	370	419	484	540	604	668
Shimburg Total Households	1186	1343	1558	1748	1947	2146
City of Fellsmere Total Households	1713	2509	3777	5892	9291	10554
Factor	1.44	1.87	2.42	3.37	4.77	4.92

According to Table 2-14, in 2035 a total of 424 owner occupied units and 364 renter occupied units will be occupied by families making less than 80% of the average monthly income. Therefore, affordable housing for a minimum of 790 families must be provided. As of the last census, there were 305 dwelling units valued below \$100,000 and 128 rental units that rent for less than \$500. A deficit of affordable housing units would exist in 2035 of approximately 236 rental units and 119 owner-occupied units. To this end, the City has included affordable housing requirements for future large scale developments as part of the Villages of Fellsmere within the Comprehensive Plan. This requirement is being processed at this time as part of the 2035 Plan update in response to the SSA for DCA 09-01. The requirement will result in a minimum of 5% of the housing stock being set aside for affordable housing. These 408 additional units along with the 433 existing housing units that are affordable in nature will result in 841 affordable units by 2035 which exceeds the affordable housing need of 790 units. With these requirements, the City of Fellsmere expects the long term provision of affordable housing will be entirely addressed by the private sector. In fact, the City anticipates that the entire portion of the

**EVALUATION AND APPRAISAL REPORT
OF THE
CITY OF FELLSMERE COMPREHENSIVE PLAN
CHAPTER TWO**

housing need will be met by the private sector within current market conditions. In the short term however, continued subsidies may be required through current established affordable housing programs especially in light of current economic conditions.

Rural and Farmworker Households

Two major agricultural operations are ongoing in the City: Fellsmere Farms and B&W Growers. Fellsmere Farms maintains a migrant farmworker housing complex in the City comprised of a 100 space mobile home park. Occupancy fluctuates in line with the demand for workers from a low of 130 occupants to a high of 300. The citrus harvesting season usually runs October thru June. Migrant farmworkers leave during the summer. As the area of citrus decreases due to pestilence, foreign competition, or other business reasons, the number of migrant farmworkers may vary, or it may continue at the same level for a shorter time period. Operational considerations would allow for either option depending on what makes sense at the time.

Fellsmere Farms encompasses the 18,388 acres annexed into the City and planned for the Villages of Fellsmere future land use designation. As part of the conversion of agricultural lands to the compact mixed-use urban villages envisioned by the Villages of Fellsmere future land use, the potential exists for a tree farm and nursery to support the landscape needs of the development program. These types of operations are more labor intensive than citrus operations on a year round basis. The citrus groves have about one employee per 90 acres, whereas a nursery/tree farm has around one employee per 10 acres. For this reason, as agriculture decreases due to conversion, the need for farmworker housing may remain or even increase.

B&W Growers own approximately 25 houses in Fellsmere for their employees to occupy. During the growing season, about 200 migrant farmworkers are employed. B&W Growers leases land from Fellsmere Farms; consequently, their future demands will for migrant housing will depend upon the development timeline of the Villages of Fellsmere. As an income producer for Fellsmere Farms and considering the area leased by B&W Growers is outside of the Phase 1 limits of the Villages of Fellsmere, the operation of B&W Growers is expected to continue through the planning horizon. As such, demand for migrant housing is anticipated to remain at current levels.