

**Step by Step Process Utilized for Student Generation Rate Analysis
As Part of Educational Impact Fee Updated for the Board
For the 2018-2019 Study Effort
(February 8, 2019)**

Step 1: The LCS project number to be utilized for this updated student generation rate effort will be 0150. The primary analysis will be accomplished within the following ArcMap document: Educational Impact Fee Assessment -- 20181204.mxd and later updated during the process to Educational Impact Fee Assessment -- 20190128.mxd. Utilized the latest (October 8th, 2018) geocoded Skyward student demographic GIS point layer file of the full student demographic dataset that was pulled from the Data Warehouse (SQL Server //lcs-issql/arcgis //, database: students). This particular dataset was utilized because it was consistent with our standard 40th-day student count window as established by the Growth Planning Department. The original raw student database that was extracted from the Data Warehouse contained 48,534 student records and was stored as Raw Skyward Dataset 48534 in the following project File Geodatabase Impact Fee Analysis -- 20181204.gdb within the project directory. The first step in the geocoding process is to match the students with a developed summary table from the same dataset that contains a list of cost centers that are tied to the centers coded by student accounting interest. This summary table extracted from the raw data file (FINAL Summary Table of CostCenters for Student Accounting) generated a total of 62 unique records (a portion of the table is shown in the graphic below).

Cur_S_Code	Count	First_Cur_School	Standardized School Name	Student Accounting Inter	Student Generation Rate
0231	800	UMATILLA HIGH SCHOOL	Umatilla High	Yes	Yes
0241	898	TREADWAY ELEMENTARY SCHOOL	Treadway Elementary	Yes	Yes
0251	527	OAK PARK MIDDLE SCHOOL	Oak Park Middle	Yes	Yes
0261	1307	MINNEOLA CHARTER ELEMENTARY	Minneola Charter Elementary	Yes	Yes
0271	656	ASTATULA ELEMENTARY	Astatula Elementary	Yes	Yes
0281	1027	LOST LAKE ELEMENTARY	Lost Lake Elementary	Yes	Yes
0291	787	LEESBURG ELEMENTARY	Leesburg Elementary	Yes	Yes
0351	829	CARVER MIDDLE SCHOOL	Carver Middle	Yes	Yes
0382	732	GROVELAND ELEMENTARY SCHOOL	Groveland Elementary	Yes	Yes
0401	584	CLERMONT MIDDLE SCHOOL	Clermont Middle	Yes	Yes
0411	854	MT DORA MIDDLE SCHOOL	Mount Dora Middle	Yes	Yes
0421	282	RIMES EARLY LEARN/LIT CENTER	Rimes Early Learning Center	Yes	Yes
0481	1388	WINDY HILL MIDDLE SCHOOL	Windy Hill Middle	Yes	Yes
0521	762	TRIANGLE ELEMENTARY SCHOOL	Triangle Elementary	Yes	Yes
0531	551	LAKE TECHNICAL CHARTER CENTER	Lake Technical College	No	No
0533	212	LAKE HILLS SCHOOL	Lake Hills Schools	Yes	Yes
0535	96	PUBLIC SAFETY COMPLEX	Institute of Public Safety Campus	No	No
0536	61	LAKE ACADEMY - EUSTIS	Lake Academy -- Eustis	Yes	No
0541	779	MASCOTTE CHARTER ELEMENTARY	Mascotte Charter Elementary	Yes	Yes
0551	1002	TAVARES ELEMENTARY SCHOOL	Tavares Elementary	Yes	Yes
0561	633	UMATILLA ELEMENTARY SCHOOL	Umatilla Elementary	Yes	Yes
0571	600	UMATILLA MIDDLE SCHOOL	Umatilla Middle	Yes	Yes
0591	804	PINE RIDGE ELEMENTARY SCHOOL	Pine Ridge Elementary	Yes	Yes
0597	578	CYPRESS RIDGE ELEMENTARY	Cypress Ridge Elementary	Yes	Yes
0631	609	SPRING CREEK CHARTER SCHOOL	Spring Creek Charter	Yes	Yes

The table graphic on the following page depicts the final school (cost center) selections associated with the 6th column above that correspond to the schools that offer student stations that will be applied during the impact fee analysis. These designated schools of interest are generating 41,542 students of the 48,534 Skyward student totals and represent 45 of the 62 school centers that will be under consideration as part of this study effort. These 41,542 students were extracted from FINAL Geocoded Results from Skyward with SAZs and Enhancements 47695 utilizing the 45 schools in interest and placed into a few point feature layer titled Geocoded Students ImpactFeeInterest 20181008 41542.

Cost Center Code	Student Count	Skyward School Name	Standardized School Name
0031	741	BEVERLY SHORES ELEMENTARY	Beverly Shores Elementary
0041	474	CLERMONT ELEMENTARY	Clermont Elementary
0061	454	EUSTIS ELEMENTARY	Eustis Elementary
0067	1,341	SAWGRASS BAY ELEMENTARY	Sawgrass Bay Elementary
0068	1,070	GRASSY LAKE ELEMENTARY	Grassy Lake Elementary
0069	876	SORRENTO ELEMENTARY	Sorrento Elementary
0071	750	EUSTIS HEIGHTS ELEMENTARY	Eustis Heights Elementary
0080	1,145	EAST RIDGE MIDDLE SCHOOL	East Ridge Middle
0081	1,370	EUSTIS HIGH SCHOOL	Eustis High - 9th Grade Curtrig
0101	741	FRUITLAND PARK ELEMENTARY	Fruitland Park Elementary
0113	985	CECIL E. GRAY MIDDLE SCHOOL	Cecil E. Gray Middle
0119	889	THE VILLAGES ELEM OF LADY LAKE	The Villages Elementary
0141	534	SEMINOLE SPRINGS ELEMENTARY	Seminole Springs Elementary
0149	1,078	ROUND LAKE CHARTER ELEMENTARY	Round Lake Elementary
0161	1,515	LEESBURG HIGH SCHOOL	Leesburg High
0181	1,125	MOUNT DORA HIGH SCHOOL	Mount Dora High
0211	1,429	TAVARES HIGH SCHOOL	Tavares High
0213	1,103	TAVARES MIDDLE SCHOOL	Tavares Middle
0231	800	UMATILLA HIGH SCHOOL	Umatilla High
0241	898	TREADWAY ELEMENTARY SCHOOL	Treadway Elementary
0251	527	OAK PARK MIDDLE SCHOOL	Oak Park Middle
0261	1,307	MINNEOLA CHARTER ELEMENTARY	Minneola Charter Elementary
0271	656	ASTATULA ELEMENTARY	Astatula Elementary
0281	1,027	LOST LAKE ELEMENTARY	Lost Lake Elementary
0291	787	LEESBURG ELEMENTARY	Leesburg Elementary
0351	829	CARVER MIDDLE SCHOOL	Carver Middle
0382	732	GROVELAND ELEMENTARY SCHOOL	Groveland Elementary
0401	584	CLERMONT MIDDLE SCHOOL	Clermont Middle
0411	854	MT DORA MIDDLE SCHOOL	Mount Dora Middle
0421	282	RIMES EARLY LEARN/LIT CENTER	Rimes Early Learning Center
0481	1,388	WINDY HILL MIDDLE SCHOOL	Windy Hill Middle
0521	762	TRIANGLE ELEMENTARY SCHOOL	Triangle Elementary
0533	212	LAKE HILLS SCHOOL	Lake Hills Schools
0541	779	MASCOTTE CHARTER ELEMENTARY	Mascotte Charter Elementary
0551	1,002	TAVARES ELEMENTARY SCHOOL	Tavares Elementary
0561	633	UMATILLA ELEMENTARY SCHOOL	Umatilla Elementary
0571	600	UMATILLA MIDDLE SCHOOL	Umatilla Middle
0591	804	PINE RIDGE ELEMENTARY SCHOOL	Pine Ridge Elementary
0597	578	CYPRESS RIDGE ELEMENTARY	Cypress Ridge Elementary
0631	609	SPRING CREEK CHARTER SCHOOL	Spring Creek Charter
0697	963	EUSTIS MIDDLE SCHOOL	Eustis Middle
0701	2,063	SOUTH LAKE HIGH SCHOOL	South Lake High
0801	2,507	EAST RIDGE HIGH SCHOOL	East Ridge High
0901	1,730	LAKE MINNEOLA HIGH SCHOOL	Lake Minneola High
9022	9	ALTERNATIVE DISCIPLINE PROGRAM	Alternative Discipline Program
	41,542		

Step 2:

Based on past experience, two new fields were added to the geocoded point attribute table representing “out-of-county” (field = “*OutofCty*”) and city designated students based on the corporate limits layer (field = “*CityAssignmt*”) from Lake County GIS. Utilizing the “Select by Attributes” on the “*County*” field, the “*OutofCty*” field was populated with a “Yes” or “No” depending upon the appropriate assignment. The results indicated that 460 students of the total population of 41,542 (or 1.1%) specified that their home address resided outside of the corporate boundaries of Lake County or their address was unable to be adequately geocoded with the point address geocoder from Lake County GIS. These uncoded student address made up 52 of the 460 students that were assigned as out-of-county. Ms. Randall of Growth Planning indicated that we should not include out of county students in our final Student Generation Rate (SGR) analysis and therefore these particular 460 students were removed from consideration and a new point feature class representing the resultant 41,082 students of interest dataset was created: *FINAL_Students_ImpactFeeInterest_20181008_41082*. See the two associated table below:

Attending Schools	Student Count	Percent of Total
Astatula Elementary	1	0.22%
Beverly Shores Elementary	6	1.30%
Carver Middle	7	1.52%
Cecil E. Gray Middle	6	1.30%
Clermont Elementary	2	0.43%
Clermont Middle	3	0.65%
Cypress Ridge Elementary	3	0.65%
East Ridge High	9	1.96%
East Ridge Middle	4	0.87%
Eustis Elementary	2	0.43%
Eustis Heights Elementary	5	1.09%
Eustis High - 9th Grade Curtrig	8	1.74%
Eustis Middle	5	1.09%
Fruitland Park Elementary	20	4.35%
Grassy Lake Elementary	6	1.30%
Groveland Elementary	2	0.43%
Lake Minneola High	7	1.52%
Leesburg Elementary	6	1.30%
Leesburg High	20	4.35%
Lost Lake Elementary	4	0.87%
Mascotte Charter Elementary	6	1.30%
Minneola Charter Elementary	11	2.39%
Mount Dora High	25	5.43%
Mount Dora Middle	21	4.57%
Oak Park Middle	2	0.43%
Pine Ridge Elementary	1	0.22%
Rimes Early Learning Center	10	2.17%
Round Lake Elementary	86	18.70%
Sawgrass Bay Elementary	5	1.09%
Seminole Springs Elementary	3	0.65%
Sorrento Elementary	3	0.65%
South Lake High	6	1.30%
Spring Creek Charter	30	6.52%
Tavares Elementary	6	1.30%
Tavares High	3	0.65%
Tavares Middle	5	1.09%
The Villages Elementary	20	4.35%
Treadway Elementary	3	0.65%
Triangle Elementary	6	1.30%
Umatilla Elementary	10	2.17%
Umatilla High	39	8.48%
Umatilla Middle	32	6.96%
Windy Hill Middle	1	0.22%
Grand Total	460	

Attending Schools	Student Count
Beverly Shores Elementary	5
Cecil E. Gray Middle	1
Clermont Elementary	1
Clermont Middle	1
East Ridge High	1
East Ridge Middle	1
Eustis Elementary	2
Eustis Heights Elementary	4
Eustis Middle	1
Fruitland Park Elementary	6
Grassy Lake Elementary	3
Groveland Elementary	1
Lake Minneola High	1
Leesburg Elementary	2
Mount Dora High	2
Mount Dora Middle	2
Oak Park Middle	2
Rimes Early Learning Center	1
Seminole Springs Elementary	1
South Lake High	6
Tavares Elementary	1
Tavares Middle	1
Treadway Elementary	1
Triangle Elementary	3
Umatilla High	2
Grand Total	52

Step 3: The October 24th corporate limit layer acquired from Lake County GIS was spatially joined with the previous student point layer, and the “*CityAssignmt*” was calculated in the attribute table utilizing the joined layer corporate limit assignments to create the resultant student dataset that will be joined with the final land use data:
FINAL Students ImpactFeeInterest City 20181008 41082. As anticipated, the “NULL” values were assumed to be “Unincorporated” Lake County assignments. The results of the good geocoded students in Skyward are associated with the following cities and the unincorporated portion of the county as depicted below:

Corporate Assignments	Student Count	Percent of Total
Astatula	326	0.79%
Clermont	4,613	11.23%
Eustis	2,781	6.77%
Fruitland Park	635	1.55%
Groveland	2,130	5.18%
Howey-in-the-Hills	136	0.33%
Lady Lake	921	2.24%
Leesburg	3,242	7.89%
Mascotte	1,268	3.09%
Minneola	2,263	5.51%
Montverde	177	0.43%
Mount Dora	1,526	3.71%
Tavares	2,085	5.08%
Umatilla	564	1.37%
Unincorporated	18,415	44.82%
Grand Total	41,082	

Step 4: From my routine downloads of the Tax Parcel GIS Geodatabase layer (*TaxParcels.mdb*) from Lake County’s publicly accessible FTP site, as supplied by the Lake County Property Appraiser’s (LCPA) office, I’ve opted to utilize the particular feature layer from October 24th to closely coincide with the October 8th, 40th day student count information. This polygon layer was imported into the study File Geodatabase (*Impact Fee Analysis -- 20181204.gdb*) under the feature name of (*TaxParcels_ImpactFeeStudy*). The layer contained 182,394 individual tax parcel records with thirty-six (36) primary fields as noted in the graphic below.

<input checked="" type="checkbox"/>	<input type="checkbox"/>	AltKey	AltKey	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						7
<input checked="" type="checkbox"/>	<input type="checkbox"/>	ParcelType	ParcelType	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						1073741822
<input checked="" type="checkbox"/>	<input type="checkbox"/>	ParcelStatus	ParcelStatus	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						10
<input checked="" type="checkbox"/>	<input type="checkbox"/>	ParcelNumber	ParcelNumber	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						18
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Section	Section	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Township	Township	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Range	Range	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Subdivision	Subdivision	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						4
<input checked="" type="checkbox"/>	<input type="checkbox"/>	OwnerName	OwnerName	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						100
<input checked="" type="checkbox"/>	<input type="checkbox"/>	OwnerAddress	OwnerAddress	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						100
<input checked="" type="checkbox"/>	<input type="checkbox"/>	OwnerCity	OwnerCity	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						30
<input checked="" type="checkbox"/>	<input type="checkbox"/>	OwnerState	OwnerState	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	OwnerZip	OwnerZip	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						10
<input checked="" type="checkbox"/>	<input type="checkbox"/>	OwnerProvince	OwnerProvince	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						30
<input checked="" type="checkbox"/>	<input type="checkbox"/>	OwnerCountry	OwnerCountry	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						40
<input checked="" type="checkbox"/>	<input type="checkbox"/>	PropertyAddress	PropertyAddress	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						100
<input checked="" type="checkbox"/>	<input type="checkbox"/>	GISSubNumber	GISSubNumber	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						4
<input checked="" type="checkbox"/>	<input type="checkbox"/>	SubdivisionName	SubdivisionName	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						100
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Vacant	Vacant	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						3
<input checked="" type="checkbox"/>	<input type="checkbox"/>	YearBuilt	YearBuilt	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						4
<input checked="" type="checkbox"/>	<input type="checkbox"/>	ComResStatus	ComResStatus	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						1
<input checked="" type="checkbox"/>	<input type="checkbox"/>	LandValue	LandValue	Long	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	BuildingValue	BuildingValue	Long	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	MiscValue	MiscValue	Long	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	TotalJustValue	TotalJustValue	Long	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	LastSalePrice	LastSalePrice	Long	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	LastSaleDate	LastSaleDate	Date	<input checked="" type="checkbox"/>	<input type="checkbox"/>						
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Exemptions	Exemptions	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						10
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Millage	Millage	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						4
<input checked="" type="checkbox"/>	<input type="checkbox"/>	LastTaxAmount	LastTaxAmount	Long	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric					
<input checked="" type="checkbox"/>	<input type="checkbox"/>	LandUseCode	LandUseCode	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						4
<input checked="" type="checkbox"/>	<input type="checkbox"/>	LandUseDescription	LandUseDescription	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						50
<input checked="" type="checkbox"/>	<input type="checkbox"/>	PropertyClassCode	PropertyClassCode	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						2
<input checked="" type="checkbox"/>	<input type="checkbox"/>	PropertyClassDescription	PropertyClassDescription	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						50
<input checked="" type="checkbox"/>	<input type="checkbox"/>	PropertyName	PropertyName	Text	<input checked="" type="checkbox"/>	<input type="checkbox"/>						50
<input checked="" type="checkbox"/>	<input type="checkbox"/>	Acres	Acres	Double	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Numeric					

Step 5: Downloaded and imported into a Microsoft Excel spreadsheet the latest available Land Use Codes as found on the Lake County Property Appraiser's web site under Tax, Millage & Map Data on the front page of their web site (see graphic below highlighted with a red box) (https://www.lakecopropappr.com/pdfs/2018_Land_Use_Codes.pdf). Also downloaded the latest available Florida Department of Revenue Production Guide for Data Record Layout for 2018 under the following URL: <http://floridarevenue.com/property/Documents/2018prodguide.pdf> which contains the Florida Department of Revenue (FDOR) Land Use Code descriptions for Field 5 of the database starting on page 7 and ending on page 10 of the PDF manual.



LAND USE CODES DESCRIPTIONS					
0000	VACANT RESIDENTIAL	2000	BANK	7000	VACANT INSTITUTIONAL
0001	VACANT RESIDENTIAL CANAL	2001	BANK MULTISTORY	7001	VACANT INSTITUTIONAL UNBULBUILDABLE
0002	VACANT RESIDENTIAL CREEKFRONT	2002	INSURANCE COMPANY	7100	CHURCH
0003	VACANT ACCESS LOT	2003	SERVICE SHOP	7101	PARISHOUSE
0004	VACANT RESIDENTIAL UNBULBUILDABLE	2004	SERVICE STATION	7200	PRIVATE SCHOOL
0005	VACANT RESIDENTIAL UNBULBUILDABLE WITH USE	2005	CAR WASH	7210	RECREATION CENTER
0006	VACANT RESIDENTIAL GOLF	2006	AUTO SALES/STORAGE	7300	PRIVATE HOSPITAL
0007	SINGLE FAMILY	2100	RESTAURANT/SHOP	7400	HOME SITE USE LIMITS
0008	SINGLE FAMILY 1/2 CANAL	2101	FARM/AG LAND/LOT	7500	CONDOMINIUM, NON PROFIT SERVICE
0009	SINGLE FAMILY 1/4 CANAL	2102	FARM/AG UNIMPROVED HOME PARK	7600	RECREATION CENTER, ORNAMENTARY
0010	SINGLE FAMILY 3/4 DWELLING	2103	RENTAL RV PARK	7700	CLUB/LODGE/UNION HALL
0011	SINGLE FAMILY 1/2 DWELLING	2104	INDUSTRIAL	7710	BOAT DOCKS
0012	MANUFACTURED HOME SUB CANAL	2200	RETAIL MEDICAL NURSERY/GREENHOUSE	7720	BOAT CLUB
0013	MANUFACTURED HOME SUB CANAL	2201	THEATER DRIVE-IN	7730	COUNTRY CLUB
0014	MANUFACTURED HOME SUB CREEKFRONT	2202	THEATER BUILDING	7800	CONVULSION HOME
0015	MANUFACTURED HOME SUB ALT DWELLING	2203	INDUSTRIAL/BLN	7900	CULTURAL ORGANIZATION
0016	MANUFACTURED HOME	2204	SHOW/AG BLDG/BANK	8000	VACANT GOVT COUNTY
0017	MANUFACTURED HOME 1/2 CANAL	2205	EXHIBIT/ATTRACTION	8001	VACANT GOVT FEDERAL
0018	MANUFACTURED HOME 1/4 CREEKFRONT	2206	CAMP	8002	VACANT GOVT STATE
0019	MANUFACTURED HOME GOLF	2207	RACE TRACK	8003	VACANT GOVT MUNICIPAL
0020	MULTI FAMILY 4+ UNITS MARKET RENT	2300	SOFT COURSE	8004	VACANT GOVT MUNICIPAL
0021	MULTI FAMILY 4+ UNITS GOVT PROGRAMS	2301	HOTEL/MOTEL	8005	SOFT BIJECT OF BAY
0022	CONDOMINIUM	2302	VACANT INDUSTRIAL	8006	SOFT ENGINEERED LAND
0023	CONDO WATERFRONT	2303	VACANT INDUSTRIAL UNBULBUILDABLE	8007	SOFT WETLAND
0024	CONDO PARCEL ALT DWELLING	2304	LIGHT MANUFACTURING	8008	FOREST PARK
0025	CONDO TRAILHEAD	2305	HEAVY MANUFACTURING	8009	PUBLIC SCHOOL
0026	CO-OP PARCEL	2306	UNIMPROVED YARD	8010	COLLEGE
0027	CONDO PARCEL ALT DWELLING	2307	PROCESSED WOOD	8011	HOSPITAL
0028	RETIREMENT HOME RESIDENT LIVING	2308	BOILER	8012	IMPROVED GOVT COUNTY
0029	RETIREMENT HOME ASSISTED LIVING	2309	FOOD PROCESSING	8013	IMPROVED GOVT STATE
0030	RETIREMENT HOME FULL CARE	2310	MINERAL PROCESSING	8014	IMPROVED GOVT FEDERAL
0031	INDIC RESIDENTIAL (MIXED)	2400	MANUFACTURING	8015	IMPROVED GOVT MUNICIPAL
0032	MULTI FAMILY 4+ UNITS	2401	BMW HARDWARE	8016	LEASING/IN INTEREST
0033	MULTI FAMILY 4+ UNITS UNIMPROVED	2402	HARDWARE COMBO	8017	UTILITY
0034	RESIDENTIAL COMMON ELEMENTS AREA	2403	OPEN STORAGE	8018	RR/RP
0035	RESIDENTIAL COMMON ELEMENTS AREA	2404	PALACE YARD	8019	SOFT SURFACE RIGHTS
0036	COMMERCIAL COMMON ELEMENTS AREA	2405	AGRICULTURAL HOME SITE	8020	RIGHT OF BAY
0037	CELL TOWER SITE	2406	AGRICULTURAL HOME SITE WATERFRONT LOT	8021	UNIMPROVED LAND
0038	MILL/SHED SITE	2407	AGRICULTURAL HOME SITE ALT DWELLING	8022	WETLAND
0039	STORE, STORE FUEL ST/SHED	2500	CROCK/AGL, NURSERY, GREENERY	8023	CLASSIFIED RECREATION
0040	CONVENIENCE STORE WITHOUT FUEL	2501	MUCK SOIL, NON CROPLAND	8024	CONTROL, ASSIGNED
0041	CONVENIENCE STORE WITH FUEL	2502	MUCK SOIL, NON CROPLAND	8025	NON AGRICULTURAL INCREASE
0042	CONGREGATED STORE	2503	TOUR CROPLAND	8026	NON AGRICULTURAL INCREASE 2+
0043	STORE NON PROFIT STORE	2504	TRUCKER 31 1/2	8027	NON AGRICULTURAL INCREASE 3+
0044	STORE MERCHANDISE COMBO	2505	TRUCKER 31 1/2	8028	CONSERVATION CLASSIFICATION
0045	DEPARTMENT STORE	2506	TRUCKER 31 1/2	8029	CONSERVATION/CLASSIFICATION BARRI
0046	WAREHOUSE STORE	2507	TRUCKER 31 1/2		
0047	DISCOUNT STORE	2508	PASTURE UNIMPROVED HAY AVERAGE		
0048	SUPERMARKET	2509	OPEN PINE		
0049	SHOPPING CENTER FULL	2510	PASTURE UNIMPROVED HAY AVERAGE		
0050	SHOPPING CENTER COMMUNITY ANCHORED	2511	OPEN PINE		
0051	TRIP CENTER	2512	PASTURE UNIMPROVED		
0052	OFFICE BLDG	2600	NATIVE PASTURE 1		
0053	OFFICE CONDO	2601	CONCRETE DRIVE		
0054	OFFICE BLDG 1/2 STORY CONDO	2602	UNIMPROVED DRIVE		
0055	OFFICE BLDG 1/2 STORY CONDO	2603	TOP 1 ACRE UNIMPROVED		
0056	MEDICAL BLDG	2604	SPECIAL FRUIT		
0057	MEDICAL BLDG 1/2 STORY	2605	PEACH		
0058	MEDICAL OFFICE CONDO	2606	SPECIAL TREE CROPP		RESIDENTIAL
0059	MEDICAL OFFICE CONDO	2607	SOIL COVER		COMMERCIAL
0060	MEDICAL OFFICE CONDO 1/2 STORY	2608	AGRICULTURE		AGRICULTURAL
0061	RESTAURANT	2609	ORNAMENTAL NURSERY		INSTITUTIONAL
0062	RESTAURANT	2610	RESTAURANT		GOVERNMENT
0063	DRIVE-IN RESTAURANT	2611	OTHER		OTHER

Step 6: From the Tax Parcel GIS Geodatabase layer (*TaxParcels_ImpactFeeStudy*) captured in Step 4, a summary feature table was generated and stored in the study File Geodatabase (*Summary Table LCPA LandUseCodes with PropertyClassInfo*) on the attribute (Field = *LandUseCode, LandUseDescription, PropertyClassCode & PropertyClassDescription*). The resultant table generated 159 unique land use code categories. I cross-referenced this summary table with the PDF extracted from the LCPA's web site noted in the previous step and observed some gaps in the descriptions in the summary table. I also noticed that some of the descriptions were slightly different as well. I decided to export the PDF to an Excel spreadsheet and in order to create a useable table representing the 2018 values from their website. I created a new field (*LandUseDesc2018*) in the tax parcel table and joined the two tables together. I noticed that 160 records did not match after the join. Further inspection of the actual tax parcels layer indicated that these records had "Null" land use values. Most appeared to be slivers of parcels that had not yet been cleaned, gaps in faulty legal descriptions, or drainage features from the recorded plat. These conditions reflect the difference between the 160 parcels and the 142 that show up in the next Step 7 table. It would appear that 18 of these parcels are overlaps/gaps tied up within the polygon data structure. The remaining 17 parcels did contain other parcel information within the data set but looked to be commercial in nature based on the owner's names. I will make the LCPA's office aware of the discrepancies in hopes they will be corrected in the next available download.

Step 7:

A new attribute (Field = *ImpFeeInterest* & Field = *ImpFeeLUDescr*) was added to the summary table (*Summary Table LCPA LandUseCodes with PropertyClassInfo*) for calculating the applicable land use assignments related with the three types of residential units to be analyzed as part of the student generation rate calculations. These residential classifications were assigned accordingly on the basis of single-family, manufactured (or mobile) home or multi-family designation and coded with the primary land use categories based on the Property Appraiser’s land use codes as outlined below. Retirement home and facilities along with Co-op parcels as residential areas within developments were not included in these designations due to the fact that no students “should be” generated from these lots. All other codes not residential in nature were given a designation of “N/A.” Based on the code and their respective descriptions the following table depicts the property appraiser land use codes, the number of associated tax parcels, and their associated area distribution. It would appear that the residential impact represents almost 88% of the number of parcels, but only representing only 21% of the total land area of the county.

LCPA Primary Land Use Categories	Number of Tax Parcels	Total Acreage	Percent of All Tax Parcels	Percent of Total Acreage
Agricultural	6,082	199,069	3.33%	26.99%
Commercial	7,764	26,645	4.26%	3.61%
Governmental	4,593	286,137	2.52%	38.80%
Institutional	1,321	6,297	0.72%	0.85%
Other	2,853	64,637	1.56%	8.76%
Unknown	142	229	0.08%	0.03%
Residential	159,639	154,547	87.52%	20.95%
Grand Total	182,394	737,561	100.00%	100.00%

Pulling from the same land use summary table that was consolidated with the proposed impact fee categories (*Summary Table LCPA LandUseCodes with PropertyClassInfo*) the table on the sequent page was created depicting the relative percentage of Property Appraiser land use categories against their respective residential impact fee categories. It is no surprise that 20 percent of the single-family residential lots are coded as vacant. This represents 17.4% of the 152,905 residential parcels to be considered as part of this study effort.

Impact Fee Categories with LCPA Land Use Categories	Number of Tax Parcels	Percent of All Tax Parcels
Manufactured Units	16,377	10.71%
0200 -- MANUFACTURED HOME SUB	5,130	31.32%
0202 -- MANUFACTURED HOME SUB CANAL	646	3.94%
0203 -- MANUFACTURED HOME SUB LAKEFRONT	208	1.27%
0230 -- MANUFACTURED HOME	9,061	55.33%
0232 -- MANUFACTURED HOME CANAL	500	3.05%
0233 -- MANUFACTURED HOME LAKEFRONT	292	1.78%
0238 -- MANUFACTURED HOME GOLF	540	3.30%
Multi-Family Units	4,914	3.21%
0300 -- MULTI FAMILY >9 UNITS MARKET RENT	98	1.99%
0310 -- MULTI FAMILY >9 UNITS GOVT PROGRAMS	58	1.18%
0400 -- CONDOMINIUM	3,421	69.62%
0403 -- CONDO WATERFRONT	14	0.28%
0421 -- CONDO TIMESHARE	13	0.26%
0800 -- MULTI FAMILY <5 UNITS	1,208	24.58%
0810 -- MULTI FAMILY >4 AND <10 UNITS	102	2.08%
Single-Family Units	131,614	86.08%
0000 -- VACANT RESIDENTIAL	21,396	16.26%
0002 -- VACANT RESIDENTIAL CANAL	536	0.41%
0003 -- VACANT RESIDENTIAL LAKEFRONT	2,046	1.55%
0004 -- VACANT ACCESS LOT	234	0.18%
0005 -- VACANT RESIDENTIAL UNBUILDABLE	299	0.23%
0006 -- VACANT RESIDENTIAL UNBUILDABLE W/VALUE	1,320	1.00%
0038 -- VACANT RESIDENTIAL GOLF	704	0.53%
0100 -- SINGLE FAMILY	89,822	68.25%
0102 -- SINGLE FAMILY CANAL	2,650	2.01%
0103 -- SINGLE FAMILY LAKEFRONT	7,064	5.37%
0138 -- SINGLE FAMILY GOLF	5,543	4.21%
Grand Total	152,905	100.00%

Step 8: The purpose of this step will be to perform a spatial join of the enhanced tax parcel information representing the 182,394 individual tax parcels (*TaxParcels_ImpactFeeStudy*) created in STEP 4 with the final 41,082 students of interest dataset that was created in STEP 2 (*FINAL_Students_ImpactFeeInterest_City_20181008_41082*) all stored in the File Geodatabase *Impact Fee Analysis – 20181204.gdb* with the feature class name of: *Student_Demographics_20181008_with_ImpactFee_Categories*.

Step 9: A review of the Board of County Commissioner age-restricted developments was performed to ensure that their lots are not included in the final student generation rate. The rationale is because their recorded (in public record) covenants do not permit students from residing within those communities for extended periods of time, and therefore they “should not” offer any impacts associated with student generation rate. Helen LaValley emailed me the latest (July 19, 2017) “Lake County Approved Age Restricted Developments – 2018” in the form of a PDF. I copied the latest age-restricted analysis ArcMap document (MXD) that was previously utilized in January of 2017 under Project No: 0172 and saved the ArcMap document (*Update Age-Restricted Developments -- 20181211.mxd*) in the current impact fee assessment 0150 project file folder location. The polygon feature class (*Age_Restricted_Communities*) has been included in the File Geodatabase (*MiscDataofInterest.gdb*) located under the following location for public school layers: *F:\School_Board\Public_School_Data\Public_Geodatabase_Layers*. A comparison of the 2018 age-restricted list against the last 2016 updates revealed that three developments had been added since that time. One condominium (Orchard at Cagan Crossings) and historic two manufactured home parks (Bonfire & Griffwood). I spoke with Helen LaValley and Mary Harris regarding the status of the age-restricted list that I received. Ms. Harris indicated that several developments had been approved by the Board since the last list was created and that she also had two developments that were also working their way through the process. I received her updated list on Friday, December 14th with some additional detailed information later that day. The single-family development of the Palms at Serenoa at Four Corners and the multi-family Oaks on Lake at Summer Bay (Buildings 1 through 6) were new. The single-family development Cascades of Groveland – Phase 6 was added to the existing phases 1 through 5. This final list from Mary Harris of Lake County Growth Management is included in its entirety on the following page. These latest changes in the developments and their boundaries were updated in the age-restricted polygon feature class *Age_Restricted_Communities* to incorporate the latest changes. These three age-restricted development types made up of 46 different developments are comprised of 26,270 units spread over 12,030 acres throughout Lake County (**NOTE: See updates to this information in STEP 17.**)

AGE-RESTRICTED ADULT COMMUNITIES (SCHOOL IMPACT FEE EXEMPTION)

SUBDIVISION	JURISDICTION	COUNTY ATTORNEY APPROVAL	TOTAL LOTS APPROVED	TOTAL DWELLING UNITS
Single-Family Dwelling Units				
Arlington Ridge	Leesburg	6/2/2005	720	720
Arlington Ridge (1A, 1B, 1C & 2)	Leesburg	2/25/2014		
Baytree	Tavares	4/15/1992	226	226
Cascades of Groveland Phases I-VI	Groveland	4/20/2005	1,147	1,147
Countryside Villas on Lake Pearl	Umatilla	12/3/2004	40	40
Heritage - The Cottages of Sanders Grove	Leesburg	10/3/2008	182	182
Heritage Hills Royale, Phase I	Clemont	12/21/2007	153	153
Heritage Hills Royale, Phase II	Clemont	4/28/2008	162	162
Heritage Hills - PH 5A	Clemont	7/8/2016	89	89
Heritage Hills - PH 5B	Clemont	7/8/2016	56	56
Heritage Hills - PH 5C	Clemont	7/8/2016	73	73
Highland Lakes	County	unknown	1,048	1,048
Highland Ranch Esplanade Ph I	Clemont	3/23/2015	70	70
Highland Ranch Esplanade Ph 2	Clemont	1/23/2018		102
Imperial Village	Tavares	9/28/1999	48	48
Kings Ridge of Clemont	Clemont	4/26/1999	2,094	2,094
Lake Frances Estates	Tavares	5/4/2001	479	479
Lakes of Mount Dora	Mbunt Dora	5/24/2006	497	497
Legacy of Leesburg (Unit 1 - 4)	Leesburg	5/21/2002	993	993
Legacy of Leesburg (Unit 5-7)	Leesburg	2/21/2014	0	0
Palms at Serenoa	Clemont	7/18/2018	577	577
Pennbrooke Fairways	County	unknown	1,154	1,154
Plantation at Leesburg	County	5/11/2005	2,817	2,817
Royal Harbor	Tavares	6/9/1999	751	751
Royal Highlands	County	unknown	1,491	1,491
Spring Lake Cove, Phase II	Fruitland Pk	2/25/2008	0	48
Sullivan Ranch- 1 (lots 101-212)	County	5/29/2007	111	111
Summit Greens	Clemont	9/26/2000	690	690
Twin Lakes	Umatilla	8/3/2006	64	64
Villages of Lake-Sumter/OB/Garden	Lady Lake	10/15/2014		5,083
Single-Family Dwelling TOTAL				20,965
Multi-Family (condos & Apartments)				
Lakeview Terrace (Adult/ALF)	Umatilla	5/28/2014	0	0
Shantiniketan Developers, David Walker	Tavares	9/13/2013	54	54
Africa Inland Mission	Minneola	7/30/2007	0	40
Spring Lake Cove Apt.	Fruitland Pk	2/25/2008		48
Cauthen Properties	Leesburg	6/19/2008	0	29
Oaks on Lakes @ Summer Bay (Bldg 1-6)	County	10/26/2018		267
Orchard at Cagan Crossings	County	1/24/2018		136
Oakridge Condominium	Leesburg	8/3/2006	84	84
Southern Rolling Acres, Phase II	Lady Lake	12/21/2007	0	35
Multi-Family TOTAL				693
MOBILE HOMES				
Bonfire Mobile Home Park	County	6/13/2017	247	247
Britany Estates	County	11/23/2005	924	924
Dora Pines Unit III	County	4/12/2004	201	201
Fox Run Mobile Home Sub	Tavares	4/15/1992	348	348
Griffwood Mobile Home Park	County	6/13/2017	117	117
Lake Yale Estates Condo	Leesburg	12/24/2015	140	140
Olde Mill Stream	Umatilla	9/2/2008	425	425
Sago Palm @ Hawthorne	County	9/9/2005	21	21
Spanish Village	County	10/6/2003	0	250
Still Waters Village	Umatilla	11/16/2006	0	152
Sunlake Estates Mobile Home Park	County	3/3/2004	430	430
Sunshine Mobile Home Park	Lady Lake	10/3/2003	74	74
Water Oaks Country Club Estates	Lady Lake	7/8/2002	952	952
Woodlands at Church Lake MHP	County	3/16/2004	304	304
Mobile Home Units Total				4,585

Source Documents Notes:

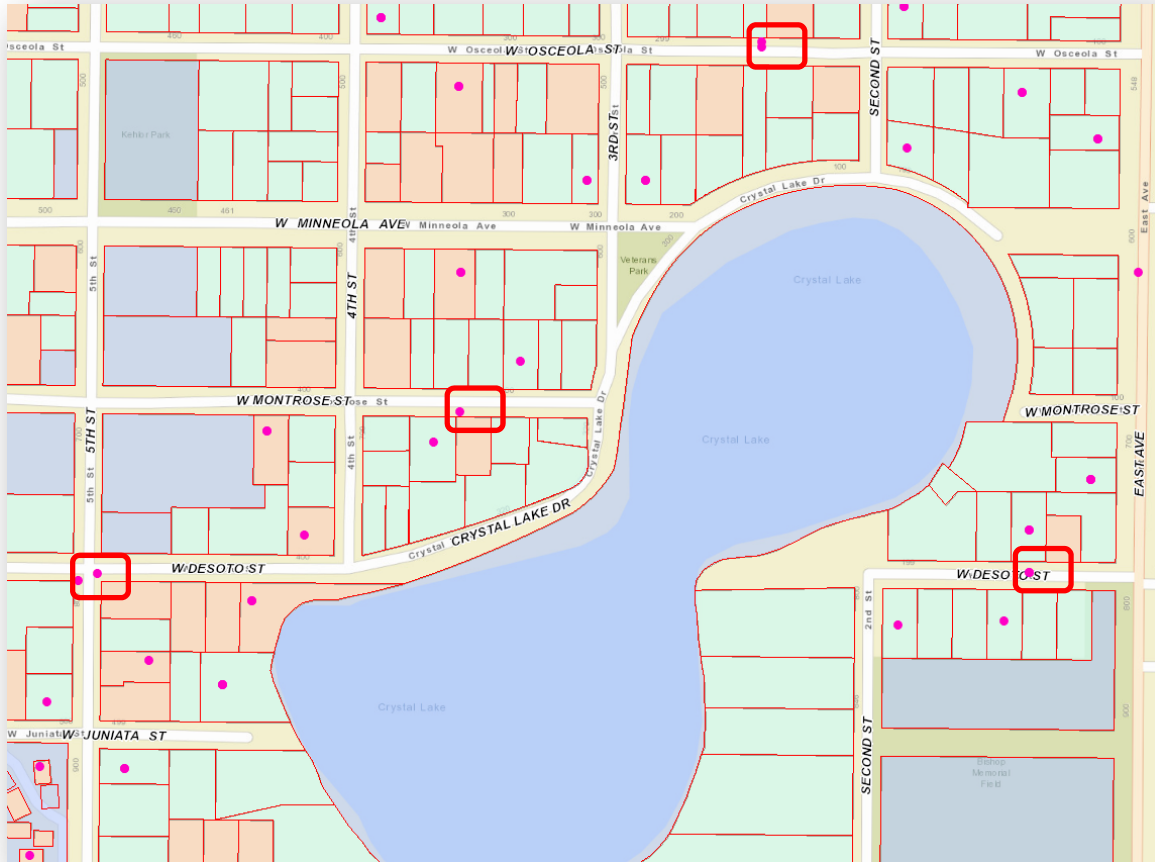
Data Current as of 12/14/2018

Step 10: The tax parcel GIS Geodatabase layer (*TaxParcels_ImpactFeeStudy*) captured from Step 4 will be utilized for joining the updated *Age_Restricted_Communities* layer that was updated in the previous step. Because of the time difference in the creation of the two layers that need to be joined, there is a concern that if the boundaries of the two layers are not perfect, there will be unintended parcels that might be coded as age-restricted. To prevent this from occurring, the tax parcels were converted into points utilizing the “Feature to Point” data management tool in ArcToolBox to create the following layer: *TaxParcels_ImpactFeeStudy_Points*. During this process, a series of errors with the geometry of the tax parcel layer was encountered. The “*Repair Geometry*” geoprocessing tool was run but continued to have some errors generated from the layer file. There were various slivers (less than 20 square feet in size) that were encountered, and 38 of the 182,394 parcel records were removed in hopes of correcting the problem. This left 182,356 records that will now become the operative tax parcel base to be utilized in the following spatial join process. The removal of these slivers utilizing the “Feature to Point” data management tool in ArcToolBox did resolve the error issues associated with forcing the points to occur inside the polygon. This newly created *TaxParcels_ImpactFeeStudy_Points* feature class was then spatially joined with the updated *Age_Restricted_Communities* layer to merge the two respective feature classes. A new point feature layer was generated: *TaxParcel_Points_with_AgeRestrComm*. The following fields were added to the *TaxParcels_ImpactFeeStudy* attribute table to be transferred from the just created point file eventually: *AgeRestr* (Age Restricted); *DevelopID* (ARC Development ID); *ResidClass* (Impact Fee Residential Type). Utilizing the “Joins & Relates” command the *TaxParcel_Points_with_AgeRestrComm* was joined to the *TaxParcels_ImpactFeeStudy* on the “*AltKey*” field. All the previously created fields were updated by transferring the same attributes from the joined table. The “*Age Restricted*” field was coded with a “*Yes*” or “*No*.” All “*Null*” records were coded with an “*N/A*” with the exception of the *ARC Development ID* which was coded with a “*0*” (zero). There were 26,646 tax parcel records (of the 182,356) that were coded as age-restricted.

Step 11: Now that the age-restricted community information has been appended with the tax parcel information, this next step will be to perform a spatial join of the newly enhanced tax parcel information (*TaxParcels_ImpactFeeStudy*) created in STEP 4 and enhanced in STEP 8 with the representing the 182,356 individual tax parcels. These additional details will be transferred to the original student layer (*FINAL_Students_ImpactFeeInterest_City_20181008_41082*) representing the 41,082 students of interest dataset that was created in STEP 2 (*FINAL_Students_ImpactFeeInterest_City_20181008_41082*) all stored in the File Geodatabase *Impact Fee Analysis – 20181204.gdb* with the feature class name of: *Student_Demographics_20181008_with_ImpactFee_Categories_Rev2*. The resultant students joined together into a point feature layer attribute table and were exported into a Database table (.dbf) (*Students_with_ImpactFee_Categories_Rev2_41082.dbf*). This database was imported into an Excel Spreadsheet (*Students with Required Impact Fee Categories -- 41082.xlsx*), so the eventual student generation rate analysis could be performed with the use of various pivot tables.

Step 12: The latest tax parcel polygon feature class (*TaxParcels_ImpactFeeStudy*) was exported to a Database table (.dbf) (*TaxParcels_ImpactFeeStudy_with_LU_AgeRestr.dbf*) and subsequently imported into an Excel spreadsheet (*TaxParcels with Land Use and Age-Restricted Status -- 182356.xlsx*) to run a series of pivot tables.

Step 13: While evaluating the results of students that resided within an age-restricted community it appeared that several students did not include a land use designation as should have been assigned by the property appraiser's land use category. Further inspection noted that 906 student records contained "Null" values. It appears that as part of the tier effects of the geocoding process were matched to a residential address that was within the appropriate numeric range for a given street segment. This typically occurs when the students that could not be matched to a specific numeric point address, but their house numeric can be found within the road centerline street segment, the geocoder places the physical location of the student just either side of the road centerline in an area that was appropriate for the address based on a percentage of the distance between the segments and the appropriate side of the street base on odd or even numbers. This geocoding process has become more of the norm than the exception for coding the location of addresses. However, our internal methodology utilizes this technique as the last automated step in the typical four-step coding process for student addresses. Because of this centerline coding method, and the fact that the Property Appraiser's office tax parcels less out all public right-of-way, creates a situation that caused these students to not be attached to a tax parcel, and therefore did not allow their residential land use category to be determined for the impact fee analysis (see graphic on the following page with examples of suspect students noted with a red box that were not assigned to a tax parcel). A new field ("LU_Add" [Manual Land Use Updated]) was created in the student file (*Student_Demographics_20181008_with_ImpactFee_Categories_Rev2*), and these 906 "NULL" records were coded with a "Yes" to build an edit structure into the process and to maintain a record of those students that were manually coded for future reference.



Step 14: An automated process of matching these unjoined students as discussed in the previous step was evaluated, but the assurance of a satisfactory coding accuracy was not considered acceptable. Even though it was a laborious process that took almost 16 hours to complete (averaging slightly more than one minute per student); each student was visually inspected against the appropriate backdrop of the Property Appraiser’s adjacent land use designation (shown in the graphic above by the color-coded tax parcels). Seven of the applicable “NULL” fields for each student were hand-coded (see below) according to the adjacent land use category and impact fee residential category information. A new field (“LU_Add” (Manual Land Use Updated)) was created in the student file (*Student_Demographics_20181008_with_ImpactFee_Categories_Rev2*) and the 906 records were coded with a “Yes” to make the process more structure with the updates and to note the students that were manually created for future reference.

Updated Land Use Descriptions	Impact Fee Interest	Primary Land Use Category	Impact Fee LU Description	Age Restricted	ARC Development ID	Impact Fee Residential Type	Manual Land Use Updated
SINGLE FAMILY	Yes	RESIDENTIAL	Single-Family	No	0	N/A	No
SINGLE FAMILY	Yes	RESIDENTIAL	Single-Family	No	0	N/A	Yes
SINGLE FAMILY	Yes	RESIDENTIAL	Single-Family	No	0	N/A	No
SINGLE FAMILY	Yes	RESIDENTIAL	Single-Family	No	0	N/A	Yes
SINGLE FAMILY	Yes	RESIDENTIAL	Single-Family	No	0	N/A	No
SINGLE FAMILY	Yes	RESIDENTIAL	Single-Family	No	0	N/A	No
MULTI FAMILY <5 UNITS	Yes	RESIDENTIAL	Multi-Family	No	0	N/A	No
MULTI FAMILY <5 UNITS	Yes	RESIDENTIAL	Multi-Family	No	0	N/A	No
MULTI FAMILY >9 UNITS GOVT PROGRAMS	Yes	COMMERCIAL	Multi-Family	No	0	N/A	No
MULTI FAMILY >9 UNITS MARKET RENT	Yes	COMMERCIAL	Multi-Family	No	0	N/A	No

- Step 15:** With the resultant impact fee residential land use designations added to the 906 student records, the resulting student file was exported into a database table (.dbf) (*Students with ImpactFee Categories Rev3 41086.dbf*) for importing into an Excel Spreadsheet (*Students with Impact Fee Categories – Ver3 -- 41086.xlsx*) so the following sets of evaluations could be performed with various pivot tables.
- Step 16:** With the subsequent impact fee residential land use designations added to the 906 student records, the resulting student file was exported into a Database table (.dbf) (*Students with ImpactFee Categories Rev3 41086.dbf*) for importing into an Excel Spreadsheet (*Students with Impact Fee Categories – Ver3 -- 41082.xlsx*) so the following set of evaluations could be performed with various pivot tables.
- Step 17:** After cleaning up the spreadsheet and evaluating the data in a series of pivot tables it was noticed that the number of students that resided within an age-restricted community was more than three times higher than the last student generation rate assessment by Tindall Oliver a few years ago. Two of the developments that stuck out were the Spring Lake Cove Apartment/Cottages in Fruitland Park and the Highland Ranch Esplanade subdivision in Clermont. A visual inspection of the students within these two developments highlighted the obvious problems associated with the created boundaries. I coordinated with Mary Harris, the Program Specialist with the Lake County Growth Management office to obtain the approved and recorded documents that were originally approved. I ran out the two legal descriptions and noted that the boundaries within the GIS and the legal description boundaries did not match. The appropriate corrections were made in the *Age Restricted Communities* polygon feature class, and a reassessment of the students was performed. The final distribution of the students by development was exported into a spreadsheet (*Students Residing within an Age Restricted Community -- 33.xlsx*). The results of the final 33 students who reside within an age-restricted community are displayed in a graphic on the following page.

Age Restricted Development	Student Count
<u>Heritage Hills</u>	<u>3</u>
Elementary	3
<u>Highland Lakes</u>	<u>1</u>
Elementary	1
<u>Highland Ranch Esplanade</u>	<u>1</u>
Middle	1
<u>Kings Ridge</u>	<u>4</u>
Elementary	2
High	1
Middle	1
<u>Lakes of Mount Dora</u>	<u>1</u>
Middle	1
<u>Pennbrooke Fairways</u>	<u>1</u>
Middle	1
<u>Royal Highlands</u>	<u>1</u>
High	1
<u>Spanish Village</u>	<u>6</u>
Elementary	3
High	2
Middle	1
<u>Sunlake Estates Mobile Home Park (Holiday Lakes Sub)</u>	<u>1</u>
High	1
<u>The Plantation at Leesburg</u>	<u>2</u>
High	2
<u>Villages of Lake-Sumter</u>	<u>9</u>
Elementary	6
High	2
Middle	1
<u>Water Oaks Country Club Estates</u>	<u>2</u>
Elementary	1
High	1
<u>Woodlands at Church Lake Mobile Home Park</u>	<u>1</u>
Middle	1
Grand Total	33

Step 18: It was determined that rather than performing the GIS intersection of the updated age-restricted communities with the student land use point feature class again, that the process would be much easier to modify in the latest student spreadsheet (*Students with Impact Fee Categories – Ver3 -- 41082.xlsx*). A filter was created on the spreadsheet for age-restricted equals “Yes”, and those 93 students were changed to a “No”. Utilizing the search feature in Excel, each of the 33 students was searching on their student ID and then updated to “Yes” in the age-restricted field.

Step 19: Another issue was noticed during the creation of the first pivot table while utilizing the (*Students with Impact Fee Categories – Ver3 -- 41086.xlsx*) spreadsheet. This oversight caused the leaving out of two LCPA Land Use Codes that are considered “Commercial” by the Property Appraiser and thus could (and do) generate students that could be of interest to the impact fee considerations. These LCPA codes are the “RENTAL MANUFACTURED HOME PARK” representing 104 parcels and “STORE/RESIDENCE COMBO” making up 232 parcel categories, respectively. Both of these categories in the spreadsheet noted above will be updated as part of this step for their “Impact Fee Interest” and “Updated Land Use Descriptions” to make sure they are included in the overall lot count and that the student will be counted for the student generation rate. The “RENTAL MANUFACTURED HOME PARK” will be coded with an “Impact Fee LU Description” of “Manufactured Home,” while the “STORE/RESIDENCE COMBO” will be coded with an “Impact Fee LU Description” of “Multi-Family.” These necessary updates were made to the enhanced tax parcel information (*TaxParcels ImpactFeeStudy*) created in **STEP 4**, enhanced in **STEP 8** with the representing the 182,356 individual tax parcels that were intersected in **STEP 11**. This intersection process included the additional details to the original student layer (*FINAL_Students_ImpactFeeInterest_City_20181008_41082*) representing the 41,082 students of interest dataset that was created in **STEP 2** (*FINAL_Students_ImpactFeeInterest_City_20181008_41082*). All of these features were stored in the File Geodatabase *Impact Fee Analysis – 20181204.gdb* with the feature class name of *Student_Demographics_20181008_with_ImpactFee_Categories_Rev2*. This file was manually cleaned by updating the residential land use designations added to the 906 student records. The ensuing student file was created within the final Excel Spreadsheet (*Students with Impact Fee Categories – Ver3 -- 41082.xlsx*). This spreadsheet will also be updated manually to make these corrections in the final student records.

Step 20: Once these two sets of edits were incorporated in the student spreadsheet and land use parcel polygon feature class in the previous step, the attribute table was exported from the (*TaxParcels_ImpactFeeStudy*) parcel feature class and was exported directly into an Excel spreadsheet titled “*Updated Tax Parcels Impact Fee Study.xlsx*” that was generated purely for backup purposes. From this same parcel feature class table a summary table “*Updated7 Summary Table Land Use Codes with LCPA Property Class Info.xlsx*”, another spreadsheet was created utilizing the “Updated Land Use Descriptions” (Field Name: *LandUseDesc2018*) field to highlight all the primary land use categories and provide a relationship table between the Property Appraiser’s original land use information, the assigned updated land use descriptions, and the assigned impact fee analysis land use information. The table on the following page is a revision of the same table created in **Step 7** but includes the cleaned up Tax Parcel polygon feature class with all the corrections.

LCPA Primary Land Use Categories	Total Tax Parcel Count	Total GIS Area (Acres)	Percent of Total Parcels (%)	Percent of Total Acreage (%)
AGRICULTURAL	6,082	199,070	3.34%	26.99%
COMMERCIAL	11,121	27,008	6.10%	3.66%
GOVERNMENTAL	4,590	286,139	2.52%	38.79%
INSTITUTIONAL	1,320	6,297	0.72%	0.85%
OTHER	2,853	64,637	1.56%	8.76%
RESIDENTIAL	156,265	154,190	85.69%	20.91%
UNCLASSIFIED	125	229	0.07%	0.03%
Grand Total	182,356	737,570	100.00%	100.00%

Step 21: Based on the updated Property Appraiser tax parcel layer from the previous step, the following two tables represent the preliminary breakdown of LCPA updated property class descriptions based on the proposed tax parcels of interest. **NOTE:** These two tables do not represent the final tax parcels of interest because they include 26,521 parcels (10,888.60 acres) that reside within the 46 age-restricted communities that are described in Step 9 and were subsequently updated in Step 17. These numbers are slightly different than those before the edits that reflected 26,270 units spread over 12,030 acres. Step 22 on the following page will represent the final tax parcel counts that will be utilized for determining the student generation rates in the final steps of this process.

Residential Impact Fee Assignment Descriptions	Total Tax Parcel Count	Total GIS Area (Acres)	Percent of Total Parcels (%)	Percent of Total Acreage (%)
Single-Family	131,604	116,918.81	85.89%	80.04%
Manufactured Home	16,480	26,683.86	10.76%	18.27%
Multi-Family	5,144	2,474.90	3.36%	1.69%
Grand Total	153,228	146,077.57	100.00%	100.00%

Residential Impact Fee Land Use Assignments with Associated Property Class Descriptions	Total Tax Parcel Count	Total GIS Area (Acres)	Percent of Total Parcels (%)	Percent of Total Acreage (%)
Manufactured Home	16,480	26,683.86	10.76%	18.27%
MANUFACTURED HOME	9,060	21,520.77	54.98%	80.65%
MANUFACTURED HOME CANAL	500	197.85	3.03%	0.74%
MANUFACTURED HOME GOLF	540	76.04	3.28%	0.28%
MANUFACTURED HOME LAKEFRONT	292	811.01	1.77%	3.04%
MANUFACTURED HOME SUB	5,130	856.81	31.13%	3.21%
MANUFACTURED HOME SUB CANAL	646	125.41	3.92%	0.47%
MANUFACTURED HOME SUB LAKEFRONT	208	49.59	1.26%	0.19%
RENTAL MANUFACTURED HOME PARK	104	3,046.38	0.63%	11.42%
Multi-Family	5,144	2,474.90	3.36%	1.69%
CONDO TIMESHARE	13	21.79	0.25%	0.88%
CONDO WATERFRONT	14	2.95	0.27%	0.12%
CONDOMINIUM	3,419	295.37	66.47%	11.93%
MULTI FAMILY <5 UNITS	1,208	422.83	23.48%	17.08%
MULTI FAMILY >4 AND <10 UNITS	102	137.63	1.98%	5.56%
MULTI FAMILY >9 UNITS GOVT PROGRAMS	58	426.49	1.13%	17.23%
MULTI FAMILY >9 UNITS MARKET RENT	98	679.14	1.91%	27.44%
STORE/RESIDENCE COMBO	232	488.71	4.51%	19.75%
Single-Family	131,604	116,918.81	85.89%	80.04%
SINGLE FAMILY	89,820	62,261.42	68.25%	53.25%
SINGLE FAMILY CANAL	2,650	1,545.81	2.01%	1.32%
SINGLE FAMILY GOLF	5,543	1,292.18	4.21%	1.11%
SINGLE FAMILY LAKEFRONT	7,064	11,305.87	5.37%	9.67%
VACANT ACCESS LOT	234	80.48	0.18%	0.07%
VACANT RESIDENTIAL	21,388	30,094.69	16.25%	25.74%
VACANT RESIDENTIAL CANAL	536	443.17	0.41%	0.38%
VACANT RESIDENTIAL GOLF	704	191.93	0.53%	0.16%
VACANT RESIDENTIAL LAKEFRONT	2,046	5,138.04	1.55%	4.39%
VACANT RESIDENTIAL UNBUILDABLE	299	67.77	0.23%	0.06%
VACANT RESIDENTIAL UNBUILDABLE W/VALUE	1,320	4,497.45	1.00%	3.85%
Grand Total	153,228	146,077.57	100.00%	100.00%

Step 22: Taking the next step in the process will be to remove those tax parcels that reside within age-restricted communities that will not be of interest in producing those residential lots that should qualify in the single-family parcel side for creating the student generation rates. The following table below depicts the property class designations associated with 24,972 parcels as identified by Lake County Growth Management Department as approved age-restricted communities that should not be generating any students to be considered for the exemption of educational impact fees. With the modification made in Step 17 from additional information from Lake County, this reduced the total number of tax parcels by 1,549 from 26,521 (nearly 6%) originally noted in Step 9 that do meet the residential criteria for consideration for determining student generation rates. Here is the breakdown of the remaining LCPA property classes by the three primary residential impact fee categories that are in the age-restricted category.

Residential Impact Fee Land Use Assignments with Associated Property Class Descriptions	Total Tax Parcel Count	Percent of Total Parcels (%)
Manufactured Home	4,522	18.11%
MANUFACTURED HOME	209	4.62%
MANUFACTURED HOME GOLF	540	11.94%
MANUFACTURED HOME SUB	3,570	78.95%
MANUFACTURED HOME SUB CANAL	37	0.82%
MANUFACTURED HOME SUB LAKEFRONT	160	3.54%
RENTAL MANUFACTURED HOME PARK	6	0.13%
Multi-Family	418	1.67%
CONDO WATERFRONT	9	2.15%
CONDOMINIUM	407	97.37%
MULTI FAMILY >9 UNITS GOVT PROGRAMS	1	0.24%
MULTI FAMILY >9 UNITS MARKET RENT	1	0.24%
Single-Family	20,032	80.22%
SINGLE FAMILY	14,593	72.85%
SINGLE FAMILY CANAL	295	1.47%
SINGLE FAMILY GOLF	3,145	15.70%
SINGLE FAMILY LAKEFRONT	492	2.46%
VACANT RESIDENTIAL	1,348	6.73%
VACANT RESIDENTIAL CANAL	21	0.10%
VACANT RESIDENTIAL GOLF	87	0.43%
VACANT RESIDENTIAL LAKEFRONT	42	0.21%
VACANT RESIDENTIAL UNBUILDABLE	9	0.04%
Grand Total	24,972	100.00%

Step 23: Manufactured homes offer some additional complexities when assigning students to individual residents for calculating student generation rates. The methodology of utilizing tax parcels has some limitations when using the LCPA property class “RENTAL MANUFACTURED HOME PARK,” which is classified as a “Manufactured Home” under the residential impact fee designation. This limitation involves the fact that these “Rental Manufactured Home Parks” are classified by the Property Appraiser as single owner and are comprised of one or more tax parcels reflecting numerous residential units. A good example of this would be the Riverest Mobile Home Community off State Road 19 in Tavares (<https://riverestwaterfrontresort.com/>). See graphic representation below. It has one single tax parcel under the ownership of Riverest MHC LLC and has 126 residential address. The community is currently generating eight (8) students (3 in elementary, 2 in middle & 3 in high school). Even though residential addresses are not a perfect method, it represents the only viable option when determining the student generation rate. **Step 25** will be to determine the number of valid residential addresses for each residential impact fee assignment category utilizing a hybrid method of address and tax parcels.



Step 24: As with rental manufactured home parks from the previous step, the same hold true for apartments, duplexes, triplexes, and quadruplexes also provide for some additional obstacles when assigning students to individual residents. This methodology of utilizing tax parcels also has limitations when also using the LCPA property classes like: “MULTI FAMILY <5 UNITS”, ”MULTI FAMILY >4 AND <10 UNITS”, “MULTI FAMILY >9 UNITS GOVT PROGRAMS”, and “MULTI FAMILY >9 UNITS MARKET RENT” which are classified as “Multi-Family” housing under the residential impact fee designation. This limitation involves the fact that these “Multi-Family” land use categories are typically classified by the Property Appraiser’s office as single owner and are comprised of one or more tax parcels reflecting numerous residential units within a single building or complex of buildings. A good example of this would be the Atwater Apartments off Ann Rou Road in Tavares behind the AdventHealth Waterman Hospital (<https://www.atwatertavares.com/>). See graphic representation below. The orange shaded boundary represents the multi-family category single ownership, the red dots represent the individual unit addresses, and the turquoise dots represents the students residing within the apartment complex. It has one single tax parcel under the ownership of Atwater Apartments LLC and has 262 residential addresses. The community is currently generating twenty-nine (29) students (20 in elementary, 3 in middle & 6 in high school). Even though residential addresses are not a perfect method, it represents the only practical option when determining the student generation rate for these particular land use categories. The succeeding step (**Step 25**) will be to determine the number of valid residential addresses for each residential impact fee assignment category.



Step 25: In cooperation with Lake County GIS, we were provided a complete residential address E911 point feature class (*FullAddress* point feature class contained within the *LCSchools.gdb* File Geodatabase) on December 16th, 2018. This file contains a total of 200,108 address broken into six (6) structure use type categories and into two address types (public & confidential). Utilizing a query, the structure use types for “911”, “Construction,” “Government,” & “Utility” will not be utilized, and only “Commercial” & “Residential” were selected for further consideration. The resultant query (*StructureUseType = 'R' OR StructureUseType = 'C'*) selected out 196,922 address (or 98.4%) with the resultant point feature class (*ONLY_Residential_Commercial_Addresses_20181216*) which was stored in the following File Geodatabase: *Impact Fee Analysis – 20181204.gdb*. This resultant point feature class was spatially joined with the (*TaxParcels_ImpactFeeStudy*) parcel feature class which contained all the appropriate land use and age-restricted community information. The resulting file name of that intersection: *ONLY_Res_Com_Addresses_with_Parcel_LU_Info_196922* was stored in the *Impact Fee Analysis – 20181204.gdb* File Geodatabase. The subsequent attribute table was exported to an Excel spreadsheet with the same name (*ONLY Res Com Addresses with Parcel LU Info -- 196922.xlsx*) and stored in the project directory under *\0150\Data_Files\2018-2019 Analysis*.

The table symbolized below is an illustration of a county-wide comparison of all tax parcels vs. structure addresses that resulted from this spatial join. This information is not filtered by age-restricted and therefore depicts a difference of 14,566 between the address count of 196,922 and the parcel count of 182,356. The greatest difference is between the commercial land use categories with almost four times the number of addresses for the same number of parcels. This 32,873 difference is expected when you consider the commercial strip centers and multi-family housing has many units in a strip center or apartment complex owned by a single individual or corporation. The residential unit count difference is 9,679 less for addresses than for tax parcels. Even though most platted subdivisions have been pre-addressed at the time of plat, a large number of condominiums, manufactured homes, and retirement homes greatly offset this dissimilarity.

LCPA Primary Land Use Categories	Total Structure Address Count	Total Tax Parcel Count	Total GIS Area (Acres)	Percent of Total Parcels (%)	Percent of Total Acreage (%)
AGRICULTURAL	3,032	6,082	199,070	3.34%	26.99%
COMMERCIAL	43,994	11,121	27,008	6.10%	3.66%
GOVERNMENTAL	817	4,590	286,139	2.52%	38.79%
INSTITUTIONAL	1,511	1,320	6,297	0.72%	0.85%
OTHER	910	2,853	64,637	1.56%	8.76%
RESIDENTIAL	146,586	156,265	154,190	85.69%	20.91%
UNCLASSIFIED	10	125	229	0.07%	0.03%
BLANK	62	0	0	0.00%	0.00%
Grand Total	196,922	182,356	737,570	100.00%	100.00%

The next two sets of tables portrayed were generated within the Excel spreadsheet (*ONLY Res Com Addresses with Parcel LU Info -- 196922.xlsx*) depict the process of removing of the age-restricted communities from the overall tally of residential addresses and tax parcels. Both of these tables illustrate the same general comparison with the exception that it has been filtered only to depict those structures which fell into those of interest based on the LCPA land use designations identified in Step 7. The first table represents a summary by residential land use, while the second table offers a more detailed breakdown of the three impact fee residential categories of interest compared against the accompanying tax parcel table from Step 21. The residential address count of 167,441, as compared to the tax parcel count (not including age-restricted units) of 153,228 reflect a difference of 14,213 additional addresses over tax parcels. Most of the count differences in residential uses are tied up in vacant lots not included within recorded subdivision plats. Because the county and cities have for some time performed pre-addressing on newly platted subdivisions, there is an excess of addresses in vacant lots in these areas. You would expect the number to be much higher than expected considering the number of empty subdivision lots, but these lots are overshadowed by the sheer numbers associated with vacant residential lots not included within these recorded plats. An excess of 27,291 addresses over parcels in the Manufactured Homes and Multi-Family land uses are understood to primarily represent residential units within rental manufactured home parks, multi-family duplexes, and apartments owned by the same individual or corporation. About half of this excess is compensated for with an excess of 14,021 parcels than addresses tied up in what the LCPA has identified as vacant lands. About 715 additional pre-addressed subdivision lots also offer part of the difference in the Single-Family designation. A more detailed explanation will be provided when emphasizing the specific differences in the following step.

Residential Impact Fee Assignment Descriptions	Total Residential Address Count Including Age-Restriction	Total Tax Parcel Count Including Age-Restriction	Total Age-Restricted Tax Parcel / Addresses Count	Total Tax Parcel/ Addresses Not Including Age-Restriction	Total GIS Area Not Including Age-Restriction from Parcels (Acres)	Percent of Total Parcels/ Addresses Not Including Age-Restriction (%)	Percent of Total Acreage Not Including Age-Restriction (%)
Manufactured Home	29,547	16,480	6,871	22,261	26,683.86	14.78%	18.27%
Multi-Family	19,869	5,144	593	19,190	2,474.90	12.51%	1.69%
Single-Family	118,025	131,604	20,032	111,572	116,918.81	72.71%	80.04%
Grand Total	167,441	153,228	27,496	153,023	146,077.57	100.00%	100.00%

Residential Impact Fee Land Use Assignments with Associated Property Class Descriptions	Total Residential Address Count Including Age-Restriction	Total Tax Parcel Count Including Age-Restriction	Total Age-Restricted Tax Parcel / Addresses Count	Total Tax Parcel/ Addresses Count Not Including Age-Restriction	Total GIS Area Not Including Age-Restriction from Parcels (Acres)	Percent of Total Parcels/ Addresses Not Including Age-Restriction (%)	Percent of Total Acreage Not Including Age-Restriction (%)
Manufactured Home	29,547	16,480	6,871	22,261	26,683.86	14.55%	18.27%
MANUFACTURED HOME	9,427	9,060	209	8,851	21,520.77	39.76%	80.65%
MANUFACTURED HOME CANAL	506	500	0	500	197.85	2.25%	0.74%
MANUFACTURED HOME GOLF	539	540	540	0	76.04	0.00%	0.28%
MANUFACTURED HOME LAKEFRONT	307	292	0	292	811.01	1.31%	3.04%
MANUFACTURED HOME SUB	5,155	5,130	3,570	1,560	856.81	7.01%	3.21%
MANUFACTURED HOME SUB CANAL	649	646	37	609	125.41	2.74%	0.47%
MANUFACTURED HOME SUB LAKEFRONT	208	208	160	48	49.59	0.22%	0.19%
RENTAL MANUFACTURED HOME PARK	12,756	104	2,355	10,401	3,046.38	46.72%	11.42%
Multi-Family	19,869	5,144	593	19,190	2,474.90	12.54%	1.69%
CONDO TIMESHARE	331	13	0	13	21.79	0.07%	0.88%
CONDO WATERFRONT	15	14	9	5	2.95	0.03%	0.12%
CONDOMINIUM	2,911	3,419	407	3,012	295.37	15.70%	11.93%
MULTI FAMILY <5 UNITS	2,475	1,208	0	2,475	422.83	12.90%	17.08%
MULTI FAMILY >4 AND <10 UNITS	560	102	0	560	137.63	2.92%	5.56%
MULTI FAMILY >9 UNITS GOVT PROGRAMS	4,393	58	148	4,245	426.49	22.12%	17.23%
MULTI FAMILY >9 UNITS MARKET RENT	8,677	98	29	8,648	679.14	45.07%	27.44%
STORE/RESIDENCE COMBO	507	232	0	232	488.71	1.21%	19.75%
Single-Family	118,025	131,604	20,032	111,572	116,918.81	72.91%	80.04%
SINGLE FAMILY	90,535	89,820	14,593	75,227	62,261.42	67.42%	53.25%
SINGLE FAMILY CANAL	2,665	2,650	295	2,355	1,545.81	2.11%	1.32%
SINGLE FAMILY GOLF	5,544	5,543	3,145	2,398	1,292.18	2.15%	1.11%
SINGLE FAMILY LAKEFRONT	6,775	7,064	492	6,572	11,305.87	5.89%	9.67%
VACANT ACCESS LOT	2	234	0	234	80.48	0.21%	0.07%
VACANT RESIDENTIAL	10,649	21,388	1,348	20,040	30,094.69	17.96%	25.74%
VACANT RESIDENTIAL CANAL	214	536	21	515	443.17	0.46%	0.38%
VACANT RESIDENTIAL GOLF	701	704	87	617	191.93	0.55%	0.16%
VACANT RESIDENTIAL LAKEFRONT	908	2,046	42	2,004	5,138.04	1.80%	4.39%
VACANT RESIDENTIAL UNBUILDABLE	28	299	9	290	67.77	0.26%	0.06%
VACANT RESIDENTIAL UNBUILDABLE W/VALUE	4	1,320	0	1,320	4,497.45	1.18%	3.85%
Grand Total	167,441	153,228	27,496	153,023	146,077.57	100.00%	100.00%

One last adjustment must be made to compensate for the removal of vacant residential lots from consideration when calculating the student generation rates. The following two tables depict the removal of the seven (7) LCPA land use categories from the Single-Family residential group as highlighted by the blue text in the last table on the previous page. These particular tax parcels reduce the number of single-family units (not including age-restricted communities) to 86,552 for a reduction of 25,020 residential units. This brings the total residential unit count for analysis purposes to 128,033.

Residential Impact Fee Assignment Descriptions	Total Residential Address Count Including Age-Restriction	Total Tax Parcel Count Including Age-Restriction	Total Age-Restricted Tax Parcel / Addresses Count	Total Tax Parcel/ Addresses Count Not Including Age-Restriction	Total GIS Area Not Including Age-Restriction from Parcels (Acres)	Percent of Total Parcels/ Addresses Not Including Age-Restriction (%)	Percent of Total Acreage Not Including Age-Restriction (%)
Manufactured Home	29,547	16,480	6,871	22,261	26,683.86	17.66%	25.28%
Multi-Family	19,869	5,144	593	19,190	2,474.90	14.94%	2.34%
Single-Family	105,519	105,007	18,525	86,552	76,405.27	67.40%	72.38%
Grand Total	154,935	126,631	25,989	128,003	105,564.03	100.00%	100.00%

Residential Impact Fee Land Use Assignments with Associated Property Class Descriptions	Total Residential Address Count Including Age-Restriction	Total Tax Parcel Count Including Age-Restriction	Total Age-Restricted Tax Parcel / Addresses Count	Total Tax Parcel/ Addresses Count Not Including Age-Restriction	Total GIS Area Not Including Age-Restriction from Parcels (Acres)	Percent of Total Parcels/ Addresses Not Including Age-Restriction (%)	Percent of Total Acreage Not Including Age-Restriction (%)
Manufactured Home	29,547	16,480	6,871	22,261	26,683.86	17.39%	25.28%
MANUFACTURED HOME	9,427	9,060	209	8,851	21,520.77	39.76%	80.65%
MANUFACTURED HOME CANAL	506	500	0	500	197.85	2.25%	0.74%
MANUFACTURED HOME GOLF	539	540	540	0	76.04	0.00%	0.28%
MANUFACTURED HOME LAKEFRONT	307	292	0	292	811.01	1.31%	3.04%
MANUFACTURED HOME SUB	5,155	5,130	3,570	1,560	856.81	7.01%	3.21%
MANUFACTURED HOME SUB CANAL	649	646	37	609	125.41	2.74%	0.47%
MANUFACTURED HOME SUB LAKEFRONT	208	208	160	48	49.59	0.22%	0.19%
RENTAL MANUFACTURED HOME PARK	12,756	104	2,355	10,401	3,046.38	46.72%	11.42%
Multi-Family	19,869	5,144	593	19,190	2,474.90	14.99%	2.34%
CONDO TIMESHARE	331	13	0	13	21.79	0.07%	0.88%
CONDO WATERFRONT	15	14	9	5	2.95	0.03%	0.12%
CONDOMINIUM	2,911	3,419	407	3,012	295.37	15.70%	11.93%
MULTI FAMILY <5 UNITS	2,475	1,208	0	2,475	422.83	12.90%	17.08%
MULTI FAMILY >4 AND <10 UNITS	560	102	0	560	137.63	2.92%	5.66%
MULTI FAMILY >9 UNITS GOVT PROGRAMS	4,393	58	148	4,245	426.49	22.12%	17.23%
MULTI FAMILY >9 UNITS MARKET RENT	8,677	98	29	8,648	679.14	45.07%	27.44%
STORE/RESIDENCE COMBO	507	232	0	232	488.71	1.21%	19.75%
Single-Family	105,519	105,077	18,525	86,552	76,405.27	67.62%	72.38%
SINGLE FAMILY	90,535	89,820	14,593	75,227	62,261.42	86.92%	81.49%
SINGLE FAMILY CANAL	2,665	2,650	295	2,355	1,545.81	2.72%	2.02%
SINGLE FAMILY GOLF	5,544	5,543	3,145	2,398	1,292.18	2.77%	1.69%
SINGLE FAMILY LAKEFRONT	6,775	7,064	492	6,572	11,305.87	7.59%	14.80%
Grand Total	154,935	126,701	25,989	128,003	105,564.03	100.00%	100.00%

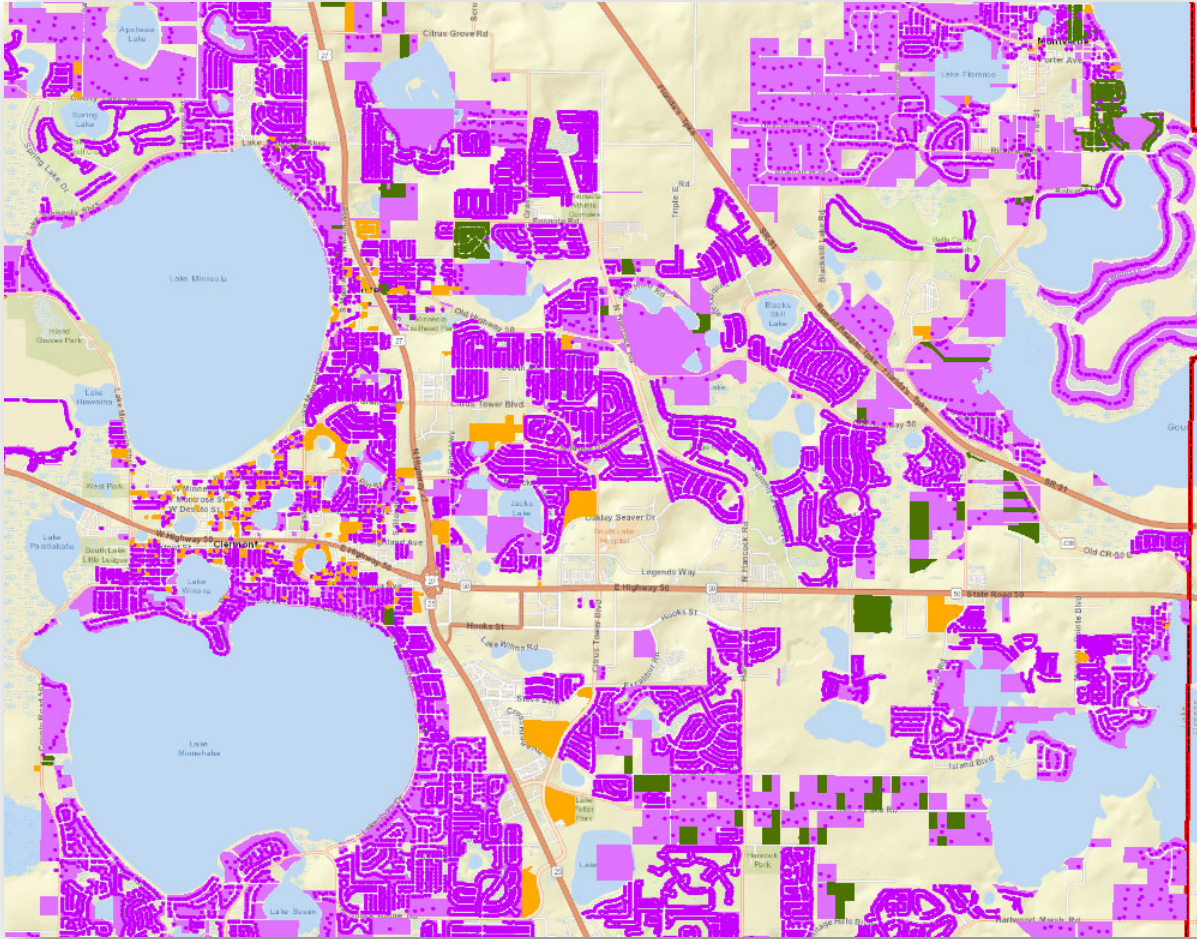
Step 26: A thoughtful selection of the best available residential unit representations from a combination of structure addresses and tax parcels was compiled to find the most relevant means of calculating the respective student generation rates for each of the three residential land use categories. A detailed illustration of these final residential units is provided in the table on the following page. This table illustrates a relative comparison of residential units expressed in point addressed (noted with red text) as developed by the Office of Public Safety Support with the Lake County Board of County Commissioners and the polygon tax parcels maintained by the Lake County Property Appraiser's Office. This combination or a hybrid model of the two counts was considered the only suitable alternative to obtaining a more accurate picture of the residential units that could house students contributing to our educational system.

While walking through this methodology and performing the core analysis for this effort, several observations were made. Considering the fact that this process involved 200,108 structure addresses and 182,392 tax parcels, the quality of the data is very good. However, as with most data of this magnitude that has been created over a long period of time, there are some limitations that need to be addressed. Structure addresses are maintained in a county-wide GIS layer by the County and actually represents behind the scenes a cooperative venture with incorporated cities. Some cities are more responsive in creating and maintaining their addresses than others, and this sometimes causes a delay particularly during the "certificate of occupancy" stage of adding an address. I've been told that this process can lag by as much as six months during the busier times of the year. For some time, when pre-addressing, the County staff were adding two address for corner lots not knowing which direction the driveway cut would occur during the construction process. This process has caused duplicate addresses to occur on vacant lots. The LPCA tax parcels also have some issues themselves. There are overlapping polygons or what is termed "polygon stacking" issues that were noted in the multi-story apartment, condominium buildings, Also noted were single-family residential lots are part of an overall homeowner association common areas and sub-surface mineral rights were also stacked in many cases. In both of these instances, when calculating the number of parcels and performing the intersection of addressed structures a duplication also occurs. Can't forget the just "bad address" supplied by the parent or input by the school clerk in our student database. An effort will be made for most of the instances that will be identified and manually cleaned up during the pivot table process when they can be isolated at the student level.

I spoke with Larry Martin, Database 9-1-1 Specialist for the Office of Public Safety Support at Lake County who handles addressing and with Joe Ward, GIS Cadastral Mapping, Manager for the Lake County Property Appraiser's Office who is responsible for the tax parcels. Both individuals were extremely helpful in assisting me with understanding some of these limitations mentioned in the previous paragraph.

The resultant table immediately below was created from all the previous steps in an effort to show the contribution of the residential unit count as 86,552 (67.62%) for single-family, 22,261 (17.39%) for manufactured homes and 19,190 (14.99%) for multi-family. This brings the total residential unit count to be considered as part of this student generation rate analysis to 128,003. The second graphic (on the following page) portrays a graphic representation of the Clermont, Minneola & Montverde area of South Lake County showing an example of the distribution and extent of residential tax parcels and their accompanying structure addresses color-coded by the three residential land use categories of single-family in purple, multi-family in orange and manufactured homes in green.

Residential Impact Fee Land Use Assignments with Associated Property Class Descriptions	Addresses Utilized for Residential Address Count Including Age-Restriction	Total Tax Parcel/ Addresses Contributed By Age-Restriction Communities	Overall Residential Unit Counts for Analysis (SGR)	Overall Residential Unit Counts for Analysis (SGR)
Manufactured Home	12,756	6,871	22,261	17.39%
MANUFACTURED HOME	-	209	8,851	39.76%
MANUFACTURED HOME CANAL	-	0	500	2.25%
MANUFACTURED HOME GOLF	-	540	0	0.00%
MANUFACTURED HOME LAKEFRONT	-	0	292	1.31%
MANUFACTURED HOME SUB	-	3,570	1,560	7.01%
MANUFACTURED HOME SUB CANAL	-	37	609	2.74%
MANUFACTURED HOME SUB LAKEFRONT	-	160	48	0.22%
RENTAL MANUFACTURED HOME PARK	12,756	2,355	10,401	46.72%
Multi-Family	16,105	593	19,190	14.99%
CONDO TIMESHARE	-	0	13	0.07%
CONDO WATERFRONT	-	9	5	0.03%
CONDOMINIUM	-	407	3,012	15.70%
MULTI FAMILY <5 UNITS	2,475	0	2,475	12.90%
MULTI FAMILY >4 AND <10 UNITS	560	0	560	2.92%
MULTI FAMILY >9 UNITS GOVT PROGRAMS	4,393	148	4,245	22.12%
MULTI FAMILY >9 UNITS MARKET RENT	8,677	29	8,648	45.07%
STORE/RESIDENCE COMBO	-	0	232	1.21%
Single-Family	--	18,525	86,552	67.62%
SINGLE FAMILY	-	14,593	75,227	86.92%
SINGLE FAMILY CANAL	-	295	2,355	2.72%
SINGLE FAMILY GOLF	-	3,145	2,398	2.77%
SINGLE FAMILY LAKEFRONT	-	492	6,572	7.59%
Grand Total	28,861	25,989	128,003	100.00%



Step 27: Utilizing the (*Students with Impact Fee Categories – Ver3 -- 41082.xlsx*) spreadsheet that was created in Step 3, that went through the refinement process starting in Step 11 and was finalized with the manual cleaned up of residential land use designations of the 906 student records that did not have a land use code in Step 19. A systematic review of the 41,082 student dataset reveals the following information. Three students that were found to reside at 9400 US 192 in Clermont, actually reside within Osceola County in a hotel just south of the county line leaving 41,079. By removing the thirty-three (33) students that were updated from within age-restricted communities as identified in Step 17, it brings the total student count of preliminary interest to 41,046.

These 41,046 students within the (*Students with Impact Fee Categories – Ver3 -- 41082.xlsx*) spreadsheet are divided into two categories. Those of impact fee interest and those who are not. A total of 991 students are coded as “No” that is not of impact fee interest (spreadsheet column: Land Use of Impact Fee Interest within the spreadsheet tab [Cleaned Abrev. Impact Fee Table]). These pupils who have been assigned a “No”, based on their residential geocoded address, have a land use assignment that would not be considered a residential use based on the criteria originally derived as part of this impact fee study effort. These 991 students represent 2.4% of the subset of students (41,046) to be considered of preliminary interest. The contributing primary land use categories associated with these students are noted in the table immediately below.

Primary Land Use Categories with Associated Detailed Land Use Descriptions	Total Student Count	Percent of Total (%)
AGRICULTURAL	449	45.31%
COMMERCIAL	315	31.79%
GOVERNMENTAL	168	16.95%
INSTITUTIONAL	59	5.95%
Grand Total	991	100.00%

A more detailed table, broken down by specific land use categories for these 991 particular students is depicted on the following page. Other than a few selected land use categories in the commercial and governmental primary assignments, most of the categories are reasonable to expect students to be located in. As an example, a single family residence that would house a student on a large acreage farm with a predominant land use of “orange grove” or “pasture improved good” is very realistic and occurs in the more rural areas of the county. The same would hold true for a commercial use where students would live within “hotels & motels”, a “camp”, or a “rental rv park”; or within governmental uses like a “forest/ park”, “improved govt state” or a “public school”; or with institutional uses like a “church”, “orphanage...” or parsonage. Many of these commercial land uses have provisions for a residential caretaker’s residence. A good example I found was the Lake Correctional Institution under the operational responsibility of the Florida Department of Corrections on US Hwy 27 north of Minneola has a mini-subdivision that the facility uses to house corrections staff.

Primary Land Use Categories with Associated Detailed Land Use Descriptions	Total Student Count	Percent of Total (%)
AGRICULTURAL	449	45.31%
CROPLAND, NURSERY, FERNERY	4	0.89%
MUCK SOIL ROW CROPLAND	5	1.11%
ORANGE GROVE	36	8.02%
ORNAMENTAL NURSERY	35	7.80%
PASTURE IMPROVED GOOD	114	25.39%
PASTURE IMPROVED HAY AVERAGE	178	39.64%
PECANS	1	0.22%
POULTRY/BEEES	8	1.78%
ROW CROPLAND	25	5.57%
TIMBER SI 70	43	9.58%
COMMERCIAL	315	31.79%
AUTO REPAIR SHOP	1	0.32%
AUTO SALES/STORAGE	2	0.63%
BANK MULTI STORY	3	0.95%
CAMP	18	5.71%
COMMERCIAL COMMON ELEMENTS/AREA	2	0.63%
DEPARTMENT STORE	3	0.95%
HOTEL/MOTEL	89	28.25%
HOTELS & MOTELS	2	0.63%
LIGHT MANUFACTURING	4	1.27%
MARINA	2	0.63%
MEDICAL BLDG	5	1.59%
MINI-WAREHOUSE	11	3.49%
OFFICE 1 STORY	27	8.57%
OFFICE MULTI STORY	1	0.32%
RENTAL RV PARK	102	32.38%
RESTAURANT	2	0.63%
SALVAGE YARD	1	0.32%
SHOPPING CENTER COMMUNITY ANCHORED	7	2.22%
SHOPPING CENTER REG.	1	0.32%
STORE 1 STORY FREE STANDING	19	6.03%
STORES 1 STORY	1	0.32%
STRIP CENTER	5	1.59%
VACANT COMMERCIAL	3	0.95%
WAREHOUSING	4	1.27%
GOVERNMENTAL	168	16.95%
FOREST/PARK	1	0.60%
IMPROVED GOVT COUNTY	4	2.38%
IMPROVED GOVT FEDERAL	3	1.79%
IMPROVED GOVT MUNICIPAL	149	88.69%
IMPROVED GOVT STATE	4	2.38%
PUBLIC SCHOOL	3	1.79%
VACANT GOVT FEDERAL	1	0.60%
VACANT GOVT MUNICIPAL	3	1.79%
INSTITUTIONAL	59	5.95%
CHURCH	34	57.63%
DAYCARE CENTER	3	5.08%
ORPHANAGE, NON PROFIT SERVICE	11	18.64%
PARSONAGE	7	11.86%
PRIVATE SCHOOL	4	6.78%
Grand Total	991	100.00%

Step 28: Utilizing the same spreadsheet (*Students with Impact Fee Categories – Ver3 -- 41082.xlsx*) in the previous step, the total number of valid students that are coded as “Yes” (spreadsheet column: Land Use of Impact Fee Interest within the spreadsheet tab [Cleaned Abrev. Impact Fee Table]) represents 40,055. These students will become the basis for which to evaluate the overall student generation rates. The table below highlights the distribution of those students based on their assignments with the three residential impact fee zones as assigned by the LCPA primary and land use classification. A random check of the last three land use categories of “VACANT RESIDENTIAL,” “VACANT RESIDENTIAL CANAL,” AND “VACANT RESIDENTIAL LAKEFRONT” were mostly associated with residential lots within recently platted subdivisions that had houses that were recently constructed. This was easily recognizable while looking at the 2017 aerial photography that typically showed no housing units on those lots. See an example at the top of the next page for these students residing on lots coded a “vacant” at The Reserves at Minneola behind Grassy Lake Elementary.

Residential Land Uses of Interest with Primary Land Use Categories and Detailed Land Use Descriptions	Total Student Count	Percent of Total (%)
Manufactured Home	4,128	10.31%
COMMERCIAL	722	17.49%
RENTAL MANUFACTURED HOME PARK	719	99.58%
MULTI FAMILY <10 UNITS	3	0.42%
RESIDENTIAL	3,406	82.51%
CO-OP PARCEL	1	0.03%
MANUFACTURED HOME	2,957	86.82%
MANUFACTURED HOME CANAL	38	1.12%
MANUFACTURED HOME LAKEFRONT	70	2.06%
MANUFACTURED HOME SUB	312	9.16%
MANUFACTURED HOME SUB CANAL	21	0.62%
MANUFACTURED HOME SUB LAKEFRONT	4	0.12%
MH ACRE / LT NOT IN PARK	3	0.09%
Multi-Family	5,409	13.50%
COMMERCIAL	5,094	94.18%
MULTI FAMILY <5 UNITS	1	0.02%
MULTI FAMILY >4 AND <10 UNITS	158	3.10%
MULTI FAMILY >9 UNITS GOVT PROGRAMS	2,074	40.71%
MULTI FAMILY >9 UNITS MARKET RENT	1,876	36.83%
STORE/RESIDENCE COMBO	54	1.06%
MULTI FAMILY >10 UNITS	10	0.20%
MULTI FAMILY <10 UNITS	921	18.08%
RESIDENTIAL	315	5.82%
CONDO WATERFRONT	2	0.63%
CONDOMINIUM	313	99.37%
Single-Family	30,518	76.19%
GOVERNMENTAL	9	0.03%
SINGLE FAMILY	9	100.00%
RESIDENTIAL	30,509	99.97%
SINGLE FAMILY	28,320	92.83%
SINGLE FAMILY CANAL	314	1.03%
SINGLE FAMILY GOLF	398	1.30%
SINGLE FAMILY LAKEFRONT	964	3.16%
VACANT RESIDENTIAL	494	1.62%
VACANT RESIDENTIAL CANAL	2	0.01%
VACANT RESIDENTIAL LAKEFRONT	17	0.06%
Grand Total	40,055	100.00%



Step 29: Continuing with the same Excel spreadsheet (*Students with Impact Fee Categories – Ver3 -- 41082.xlsx*) as utilized in the two previous steps, we start the process of breaking down the students by their respective grade levels of elementary, middle and high and associating them with their corresponding contribution to the three residential land uses of interest. The first summary table immediately below depicts the illustration of students associated with each grade level, while the second table on the following page demonstrates the student distribution by land use depicted in greater detail.

Grade Level	Student Count	Percent by Grade Level
Elementary	18,735	46.77%
High	12,227	30.53%
Middle	9,093	22.70%
Grand Total	40,055	100.00%

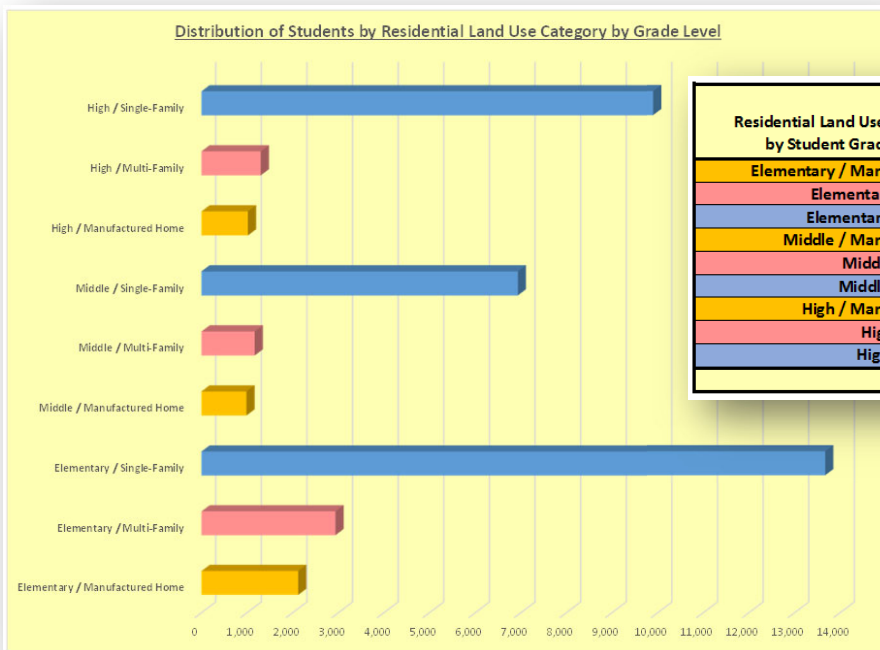
Residential Land Uses of Interest	Total Student Count	Percent of Total (%)
Manufactured Home	4,128	10.31%
Multi-Family	5,409	13.50%
Single-Family	30,518	76.19%
Grand Total	40,055	100.00%

The following three tables on the sequent three pages portray the distribution of students with respect to the impact fee residential land use categories accompanying each of the three grade levels of elementary, middle and high. These tables are broken down by the more detailed LCPA land uses categories to provide a better understanding of how these particular land uses to compare against their relative parcel distribution as highlighted in the previous step. A summary table and chart located at the bottom of page 36 illustrates a compilation of these results.

Elementary		
Residential Land Use Categories of Interest	Total Student Count	Percent of Total
Manufactured Home	2,121	11.32%
MANUFACTURED HOME	1,525	71.90%
MANUFACTURED HOME CANAL	18	0.85%
MANUFACTURED HOME LAKEFRONT	28	1.32%
MANUFACTURED HOME SUB	159	7.50%
MANUFACTURED HOME SUB CANAL	9	0.42%
MANUFACTURED HOME SUB LAKEFRONT	1	0.05%
MH ACRE / LT NOT IN PARK	3	0.14%
MULTI FAMILY <10 UNITS	2	0.09%
RENTAL MANUFACTURED HOME PARK	376	17.73%
Multi-Family	2,939	15.69%
CONDO WATERFRONT	1	0.03%
CONDOMINIUM	170	5.78%
MULTI FAMILY <10 UNITS	531	18.07%
MULTI FAMILY <5 UNITS	1	0.03%
MULTI FAMILY >10 UNITS	6	0.20%
MULTI FAMILY >4 AND <10 UNITS	94	3.20%
MULTI FAMILY >9 UNITS GOVT PROGRAMS	1,154	39.27%
MULTI FAMILY >9 UNITS MARKET RENT	951	32.36%
STORE/RESIDENCE COMBO	31	1.05%
Single-Family	13,675	72.99%
SINGLE FAMILY	12,722	93.03%
SINGLE FAMILY CANAL	157	1.15%
SINGLE FAMILY GOLF	152	1.11%
SINGLE FAMILY LAKEFRONT	391	2.86%
VACANT RESIDENTIAL	246	1.80%
VACANT RESIDENTIAL CANAL	1	0.01%
VACANT RESIDENTIAL LAKEFRONT	6	0.04%
Grand Total	18,735	100.00%

Middle		
Residential Land Use Categories of Interest	Total Student Count	Percent of Total
Manufactured Home	988	10.87%
CO-OP PARCEL	1	0.10%
MANUFACTURED HOME	685	69.33%
MANUFACTURED HOME CANAL	9	0.91%
MANUFACTURED HOME LAKEFRONT	24	2.43%
MANUFACTURED HOME SUB	73	7.39%
MANUFACTURED HOME SUB CANAL	6	0.61%
MANUFACTURED HOME SUB LAKEFRONT	1	0.10%
RENTAL MANUFACTURED HOME PARK	189	19.13%
Multi-Family	1,168	12.85%
CONDOMINIUM	70	5.99%
MULTI FAMILY <10 UNITS	194	16.61%
MULTI FAMILY >10 UNITS	3	0.26%
MULTI FAMILY >4 AND <10 UNITS	33	2.83%
MULTI FAMILY >9 UNITS GOVT PROGRAMS	459	39.30%
MULTI FAMILY >9 UNITS MARKET RENT	400	34.25%
STORE/RESIDENCE COMBO	9	0.77%
Single-Family	6,937	76.29%
SINGLE FAMILY	6,450	92.98%
SINGLE FAMILY CANAL	62	0.89%
SINGLE FAMILY GOLF	101	1.46%
SINGLE FAMILY LAKEFRONT	200	2.88%
VACANT RESIDENTIAL	122	1.76%
VACANT RESIDENTIAL LAKEFRONT	2	0.03%
Grand Total	9,093	100.00%

High		
Residential Land Use Categories of Interest	Total Student Count	Percent of Total
Manufactured Home	1,019	8.33%
MANUFACTURED HOME	747	73.31%
MANUFACTURED HOME CANAL	11	1.08%
MANUFACTURED HOME LAKEFRONT	18	1.77%
MANUFACTURED HOME SUB	80	7.85%
MANUFACTURED HOME SUB CANAL	6	0.59%
MANUFACTURED HOME SUB LAKEFRONT	2	0.20%
MULTI FAMILY <10 UNITS	1	0.10%
RENTAL MANUFACTURED HOME PARK	154	15.11%
Multi-Family	1,302	10.65%
CONDO WATERFRONT	1	0.08%
CONDOMINIUM	73	5.61%
MULTI FAMILY <10 UNITS	196	15.05%
MULTI FAMILY >10 UNITS	1	0.08%
MULTI FAMILY >4 AND <10 UNITS	31	2.38%
MULTI FAMILY >9 UNITS GOVT PROGRAMS	461	35.41%
MULTI FAMILY >9 UNITS MARKET RENT	525	40.32%
STORE/RESIDENCE COMBO	14	1.08%
Single-Family	9,906	81.02%
SINGLE FAMILY	9,157	92.44%
SINGLE FAMILY CANAL	95	0.96%
SINGLE FAMILY GOLF	145	1.46%
SINGLE FAMILY LAKEFRONT	373	3.77%
VACANT RESIDENTIAL	126	1.27%
VACANT RESIDENTIAL CANAL	1	0.01%
VACANT RESIDENTIAL LAKEFRONT	9	0.09%
Grand Total	12,227	100.00%



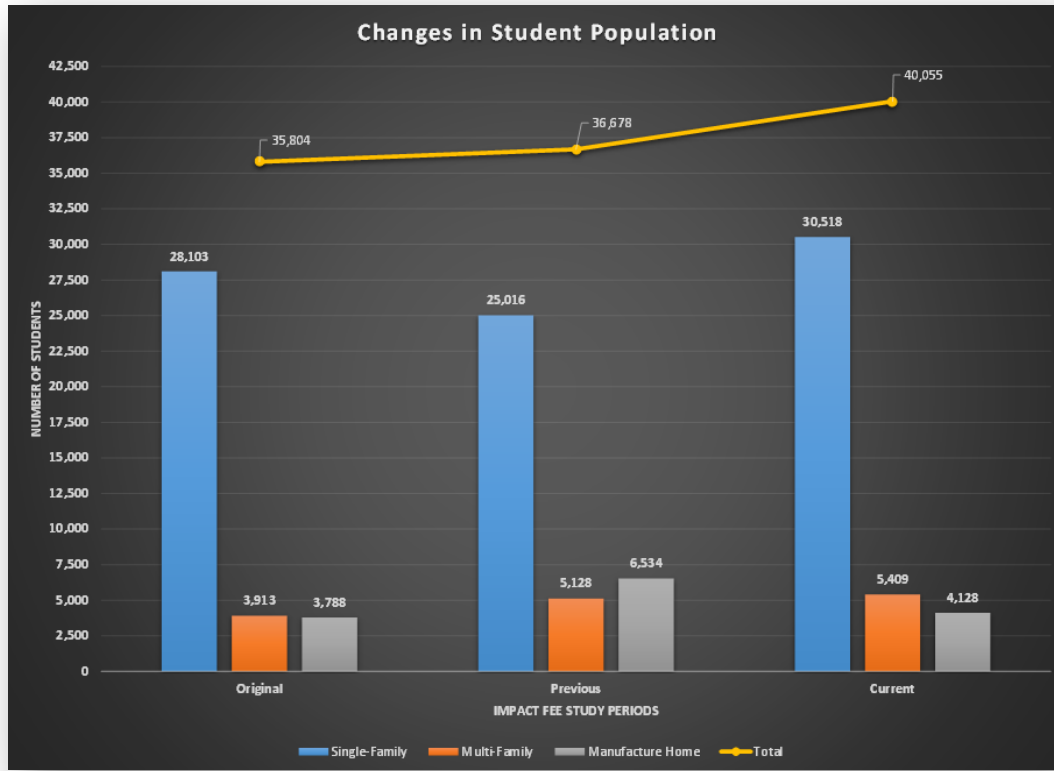
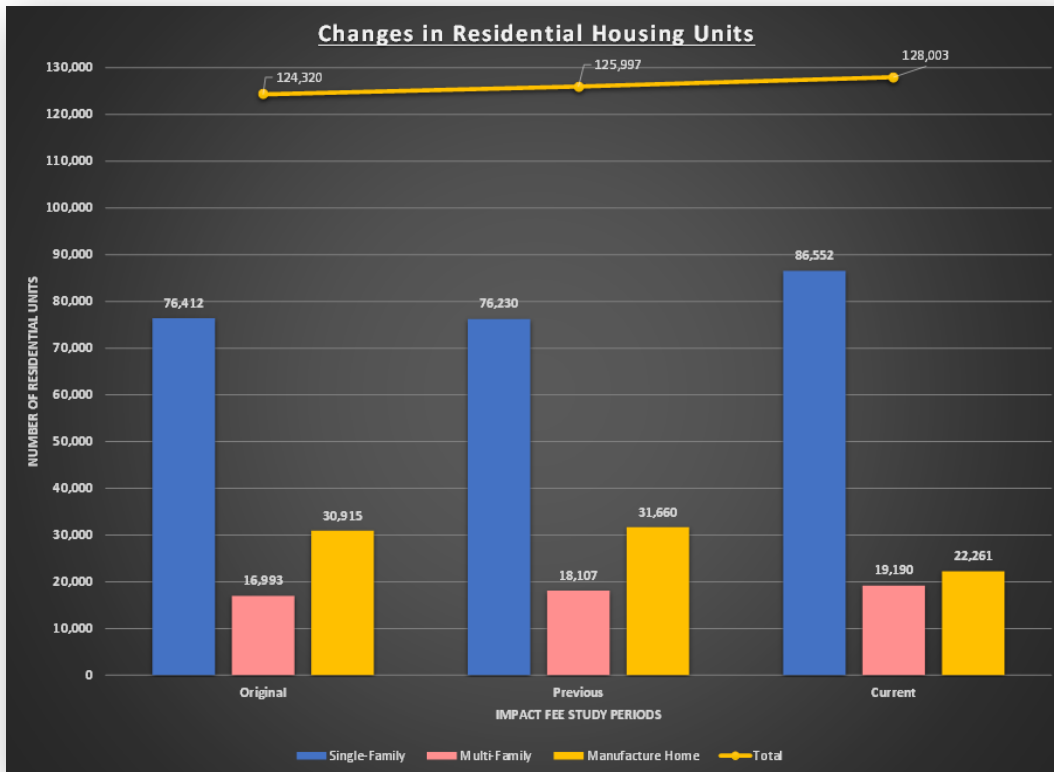
Residential Land Use Categories by Student Grade Level	Total Student Count	Percent of Total
Elementary / Manufactured Home	2,121	5.30%
Elementary / Multi-Family	2,939	7.34%
Elementary / Single-Family	13,675	34.14%
Middle / Manufactured Home	988	2.47%
Middle / Multi-Family	1,168	2.92%
Middle / Single-Family	6,937	17.32%
High / Manufactured Home	1,019	2.54%
High / Multi-Family	1,302	3.25%
High / Single-Family	9,906	24.73%
Grand Total	40,055	100.00%

Step 30: The first table below represents a summary of the district-wide analysis of residential land use categories associated with students of interest with their respective grade levels. The following two table highlight the differences between housing units and student numbers for all three impact fee study efforts. The two charts on the following page reflect the respective changes over time during the same period. It would appear that the current calculated ratios for manufactured and multi-family housing have dropped, while the single-family housing numbers have increased. Single-family high school ratio had the greatest gains at 12.21%, and the manufactured high school ratio had the greatest decrease at 26.17%.

Residential Land Use Categories by Student Grade Level	Total Student Count	Percent of Total	Number of Units	Calculated 2018-2019 Student Ratio	Currently Adopted Student Ratio	Change In Student Ratio	Percent Change In Ratio
Elementary / Manufactured Home	2,121	5.30%	22,261	0.095	0.097	-0.002	-1.77%
Elementary / Multi-Family	2,939	7.34%	19,190	0.153	0.143	0.010	7.10%
Elementary / Single-Family	13,675	34.14%	86,552	0.158	0.152	0.006	3.95%
Middle / Manufactured Home	988	2.47%	22,261	0.044	0.047	-0.003	-5.57%
Middle / Multi-Family	1,168	2.92%	19,190	0.061	0.063	-0.002	-3.39%
Middle / Single-Family	6,937	17.32%	86,552	0.080	0.074	0.006	8.31%
High / Manufactured Home	1,019	2.54%	22,261	0.046	0.062	-0.016	-26.17%
High / Multi-Family	1,302	3.25%	19,190	0.068	0.077	-0.009	-11.89%
High / Single-Family	9,906	24.73%	86,552	0.114	0.102	0.012	12.21%
Grand Total	40,055	100.00%	128,003	0.313			

Residential Land Use of Impact Fee Interest	Current Housing Units	Previous (2015) Housing Units	Original (2011) Housing Units	Current Students	Previous (2015) Students	Original (2011) Students	Difference Current vs. 2015 in Housing Units	Difference Current vs. 2015 in Students	Percent Change Current vs. 2015 in Housing Units	Percent Change Current vs. 2015 in Students
Single-Family	86,552	76,230	76,412	30,518	25,016	28,103	10,322	5,502	13.54%	21.99%
Multi-Family	19,190	18,107	16,993	5,409	5,128	3,913	1,083	281	5.98%	5.48%
Manufacture Home	22,261	31,660	30,915	4,128	6,534	3,788	-9,399	-2,406	-29.69%	-36.82%
- Owned Lots	10,401	16,896	--	3,409	4,102	--	-6,495	-693	-38.44%	-16.89%
- Rental Lots	11,860	14,764	--	719	2,432	--	-2,904	-1,713	-19.67%	-70.44%
Total / Average	128,003	125,997	124,320	40,055	36,678	35,804	2,006	3,377	1.59%	9.21%

Residential Land Use Categories	Calculated 2018-2019 Student Ratio	Currently Adopted (2015) Ratio	Difference Calculated vs. Adopted	Difference In Percent
Manufactured Home	0.185	0.206	-0.021	-9.98%
Multi-Family	0.282	0.283	-0.001	-0.40%
Single-Family	0.353	0.328	0.025	7.50%
Average	0.273	0.272		



NOTE: I'm currently working with Mark O'Keefe, Manager with the Lake County Tax Collector's Office who is currently researching information regarding annual license tax program, or also known as a mobile home decal. State law (http://floridarevenue.com/Forms_library/current/gt800047.pdf) requires every owner of a mobile home who does not own the lot or land on which the mobile home is affixed must pay an annual license tax by purchasing an MH (mobile home) decal. It is hoped that this additional information can help resolve some of the differences between these counts noted from the different studies.