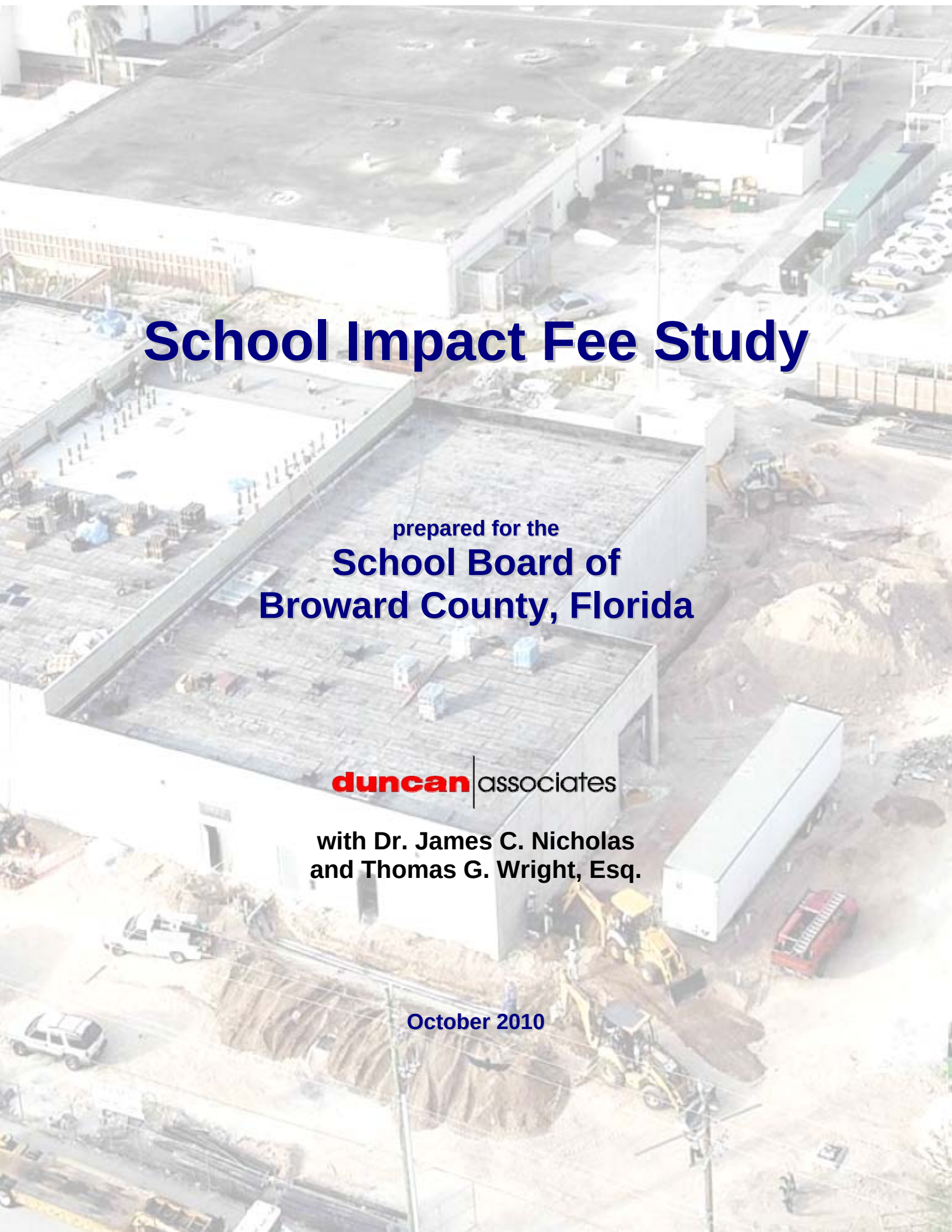

School Impact Fee Study

prepared for the

School Board of Broward County, Florida

duncan associates

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and Thomas G. Wright, Esq.

October 2010

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EXECUTIVE SUMMARY

The consultant team has been retained by the School Board of Broward County (SBBC) to update student generation rates and school impact fees.

This project involves updating the Broward County school impact fee study prepared by Walter H. Keller, Inc. in December 2007. That study was initiated in 2004. The ordinance updating the impact fee schedule was approved by the County Commissioners and became effective in June 2008. The inter-local agreement between the School Board, the County and a certain number of municipalities requires that the study be updated every three years, counting from the effective date of the previous study. Consequently, this update needs to be completed in 2011 to comply with the School Board/County inter-local agreement.

Not addressed in the previous study is the issue of declining public school enrollment and resulting excess capacity. Over the past six school years, the SBBC has lost 25,532 regular (non-charter) public school students. The decline in regular enrollment has slowed over the last two years, and SBBC's projections show enrollment increasing over the next five years. However, enrollment by the end of SBBC's five-year capital plan will still be less than it was at its peak in the 2004/2005 school year.

Excluding K-12 students attending centers with adults, there are currently 17,674 more student stations in permanent classrooms than there are regular public school students. In light of these facts, it is necessary to demonstrate that (1) recent enrollment declines are the result of short-term demographic and economic factors rather than long-term aging trends, and (2) there are growth-related costs that new development should help pay for through school impact fees.

Enrollment Declines

The previous study derived student generation rates by matching addresses of Broward County public school students with the addresses of newly-constructed units. However, the critical issue that must be addressed in this update is whether the recent declines in overall public school enrollment are due primarily to temporary conditions or to more long-term trends, such as the aging of the population and resultant declines in student generation rates. To address this issue, a different kind of analysis is required. It is necessary to look at student generation rates for older units as well as new units, at recent trends and projections for school-age children, and at recent trends and projections for private school and charter school enrollment. This analysis is done using U.S. Census data, including the 5% Public Use Micro-Sample (PUMS) data from 1990 and 2000 census, the 1% annual American Community Survey (ACS) microdata from 2001-2008, a 3% ACS sample for the 2006-2008 period, historical summary data from the decennial census, projections from the Broward County age-cohort model and SBBC enrollment projections. These data are analyzed to determine whether new students generated by new units may be wholly or partially offset by declining numbers of students residing in older existing units.

Analysis of available data indicates that the enrollment declines experienced in the last couple of years are the result of temporary demographic and economic cycles. The decline in regular public school enrollment has closely tracked the decline in school-age children. The County's age-cohort model reveals that the number of school-age children (6-18 year olds) declined by 20,147 from 2004 to 2010 (even as total population increased by 48,721), but will begin growing again next year and

continue growing through 2030. The decline in regular public school enrollment has slowed significantly over the last two years, and total public school enrollment (including charter schools), increased this year for the first time in six years. The demographic data thus reveal that the primary cause of the decline in public school enrollment has been the passage of an abnormally small school age cohort, possibly exacerbated by an exodus of construction workers and their young families.

The housing vacancy rate climbed from 11.7% in 2000 to 17.7% in 2007, but it is projected to decline to a long-term average rate of about 11.4% by 2030. To see past the abnormally high vacancy rate, student generation rates for occupied housing were examined over time. These rates have been remarkably stable. Further analysis of student generation rates by the decade in which the housing was built reveals that while units built over the past 20 years tend to have significantly higher student generation, the rates for older units has remained relatively stable over time. These data indicate that recent declines in public school enrollment have been due to temporary phenomena, not longer-term trends such as aging of the population or the decline of student generation rates in older housing.

Use of Fee Revenue

Another challenge of this project is to justify the continued assessment of school impact fees, despite the fact that SBBC does not have any new capacity-expanding improvements in the official 5-year work plan approved by the School Board in August 2010. Impact fees are designed to cover the capital costs attributable to new development, and must be spent within a reasonable period of time to provide a benefit to new development. There may not be a need to construct additional student stations for some time, due to the surplus capacity in existing schools. A portion of that excess capacity will be needed to serve existing development when growth resumes and many of the vacant housing units become occupied. However, a portion of the excess capacity was built in anticipation of growth that has not yet occurred. Since most of the recent school construction was funded with debt, this excess capacity has not yet been paid for. The impact fees could be used to pay the debt service for the portion of existing excess capacity that has been built in anticipation of growth. As documented in this report, capacity-expanding projects completed in 2009 and funded wholly or partially with debt obligations (certificates of participation) total $92.1 million, and there is sufficient eligible debt in each of the four benefit zones to absorb anticipated impact fee revenues for almost ten years at current rates (see Table 33). The benefit that new development will receive from this use of impact fee funds is the available capacity that was created with the debt financing. The Florida courts have ruled that retirement of debt incurred to create capacity that will serve future growth is a legitimate expenditure of impact fee revenues.

Updated Student Generation Rates

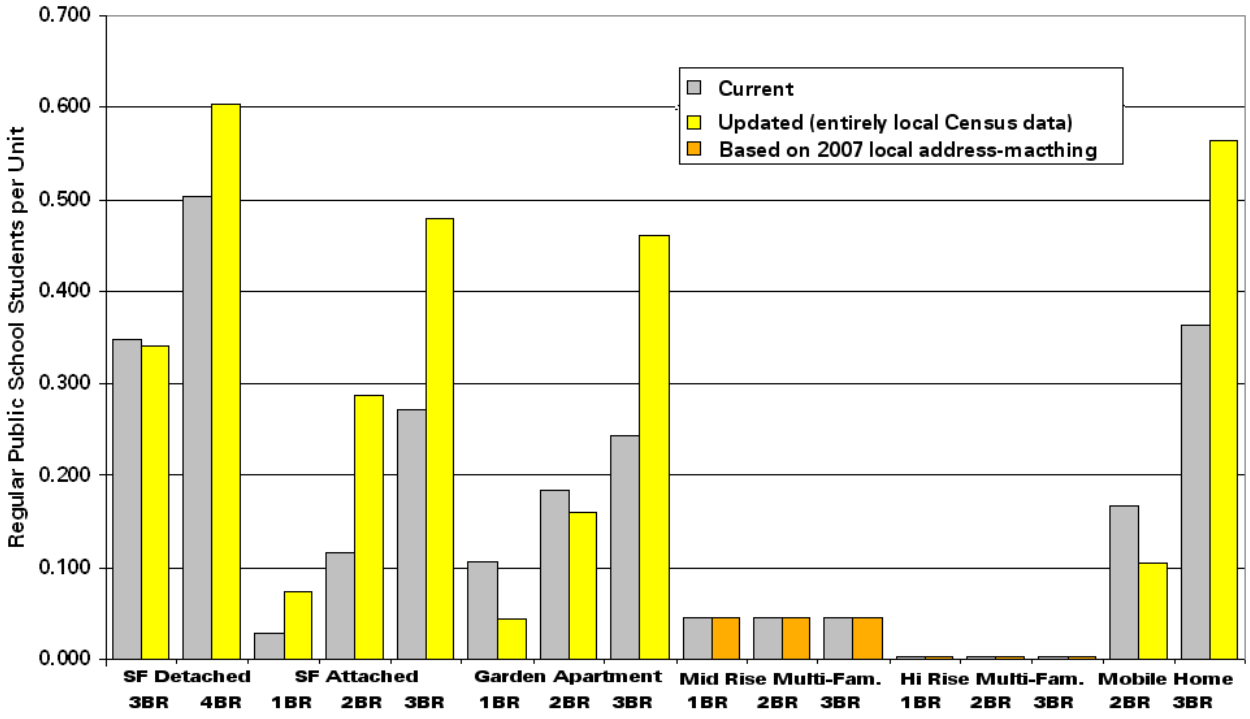
Review of the student generation rates derived in the last study based on the 2007 address-matching effort reveals some limitations. These include the inability to determine the bedroom size of multi-family residences, small sample size in the one-bedroom townhome category, and no data on mobile homes. The student generation rates on which the current impact fees are based under-predict actual total regular public school enrollment in Broward County. This is surprising, since the 2007 study was based on units built during 2000-2005, and Census data clearly show that such housing has much high student generation rates per occupied unit than does older housing. The likely explanation is that many of these newly-built units were unoccupied, resulting in student generation rates that were too low to reflect true, long-tem impacts.

Revised student generation rates were developed based on the most recent (2006-2008) U.S. Census sample data for Broward County. A limitation of the census data is that it is not possible to distinguish between different types of multi-family buildings (i.e., garden apartments, mid-rise and high-rise). Two sets of updated student generation rates are presented in this report, one that uses national data to estimate rates for the multi-family housing types, and one that relies entirely on local data. The "local data" alternative relies on the most recent (2006-2008) local Census data for all of the housing categories except mid-rise and high-rise; the student generation rates for mid-rise and high-rise are based on the address-matching analysis from the 2007 study.

Both sets of rates are reasonable and should be legally defensible, but both have limitations. The one based partially on national data can be objected to on the grounds that it is not as consistent with the State law requirement that impact fees be based on "the most recent and localized data." On the other hand, the one based entirely on local data is unable to distinguish between mid-rise and high-rise units of various bedroom sizes, and is likely to under-predict student generation from such units. On balance, the student generation rates based entirely on local data are recommended, since they are more conservative.

Current and recommended rates are compared in Figure 1 (based on data from Table 13). As can be seen, the recommended student generation rates tend to reveal a greater range between smaller and larger units, particularly in the single-family attached (duplex/townhouse/villa) and garden apartment categories. This reflects the fact that the Census data can more accurately determine the bedroom size of the multi-family unit in which the student resides, while address-matching requires students to be allocated proportionately to different unit sizes within a multi-family building.

Figure 1. Current and Recommended Student Generation Rates

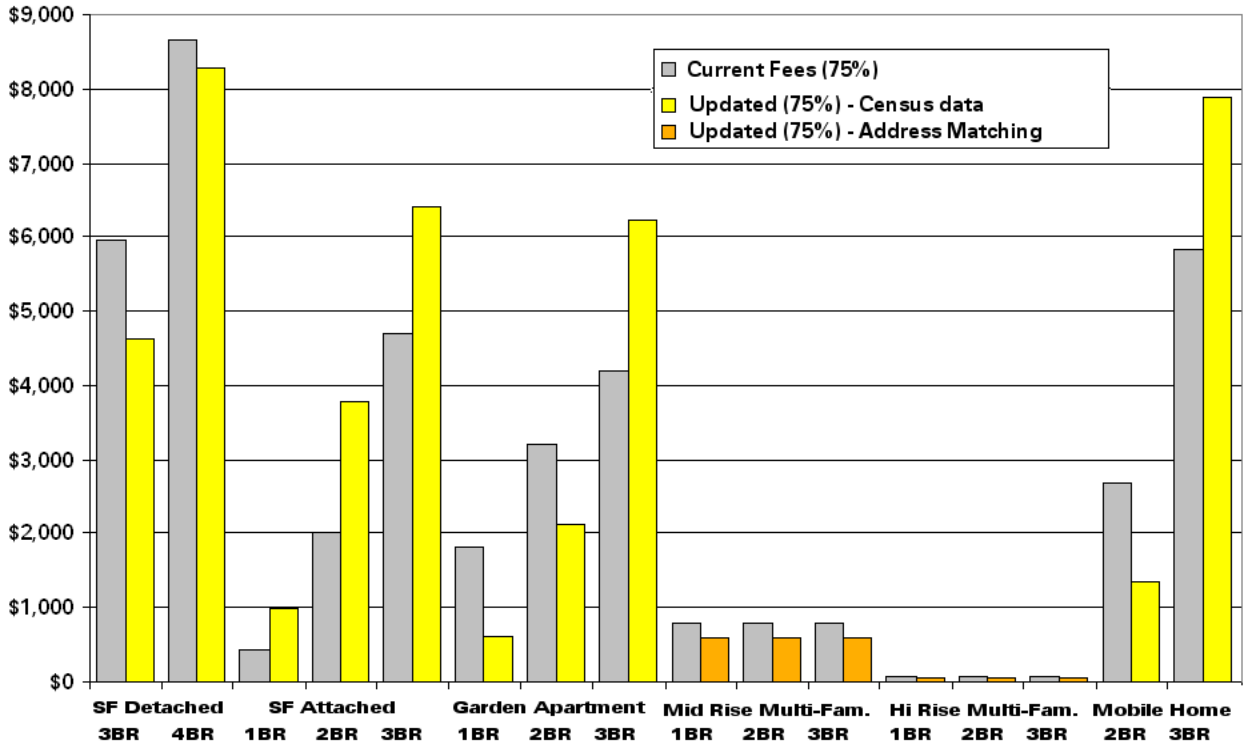


Updated School Impact Fees

Two alternative maximum fee schedules have been prepared, based on the two alternative sets of student generation rates. The recommended maximum fees are based on the student generation rates that rely entirely on local data.

The current school impact fees have been implemented at 75% of the maximum rates calculated in the previous study. While the School Board can recommend and the County can adopt impact fees at any percentage up to 100% of the maximum amounts, the most appropriate comparison is between the current fees and the updated fees adopted at the same percentage. In Figure 2, current impact fees are compared to the recommended fees, assuming a 75% implementation (based on data from Table 31). Assuming the same implementation rate as the current fees, school impact fees would go down for single-family detached units, 1- and 2-bedroom garden apartments, mid-rise, high-rise and small mobile home units. Fees would increase for single-family attached (duplex, townhouse and villa) and large (3 or more bedroom) garden apartments and mobile homes.

Figure 2. Current and Recommended School Impact Fees



LEGAL FRAMEWORK

School impact fees have been litigated and upheld in Florida. In *St. Johns County v. Northeast Florida Builders Association*, the Florida Supreme Court ruled in 1991 that school impact fee ordinances do not conflict with the State constitutional requirement of a uniform system of public schools, and that neither the State constitution nor State law preempts county school impact fees. The Court further ruled that the failure of municipalities within the county to participate in the school impact fee could invalidate the ordinance, since some of the funding would be used to construct schools that would benefit development not subject to the fee. For this reason, the Court held that no impact fee could be collected under the ordinance until "substantially all of the population of St. Johns County is subject to the ordinance."

In 2000, the Florida Supreme Court heard another school impact fee case, *Volusia County v. Aberdeen at Ormond Beach, L.P.* The case was brought by the company that owned Aberdeen at Ormond Beach Manufactured Housing Community, an age-restricted mobile home park. The mobile home park had restrictive covenants that imposed limits on the age of residents, including a prohibition against permanent residence by persons younger than 18 years old. The Court held that the school impact fee ordinance should not apply to age-restricted communities, because they will not generate a need for additional school facilities.

Since impact fees were pioneered in states like Florida that lacked specific enabling legislation, such fees have been defended as a legal exercise of local government's broad "police power" to regulate land development in order to protect the health, safety and welfare of the community. The courts have developed guidelines for constitutionally valid impact fees, based on "rational nexus" standards. The standards set by court cases generally require that an impact fee meet a two-part test:

1) The fees must be proportional to the need for new facilities created by new development, and

2) The expenditure of impact fee revenues must provide benefit to the fee-paying development.

A Florida district court of appeals described the dual rational nexus test in 1983 as follows, and this language was quoted and followed by the Florida Supreme Court in its 1991 St. Johns County decision:

> In order to satisfy these requirements, the local government must demonstrate a reasonable connection, or rational nexus, between the need for additional capital facilities and the growth in population generated by the subdivision. In addition, the government must show a reasonable connection, or rational nexus, between the expenditures of the funds collected and the benefits accruing to the subdivision. In order to satisfy this latter requirement, the ordinance must specifically earmark the funds collected for use in acquiring capital facilities to benefit the new residents.[1]

The 2006 Florida Legislature passed Senate Bill 1194, which establishes certain requirements for impact fees in Florida. The bill, which became effective on June 14, 2006, created a new Section

[1] *Hollywood, Inc. v. Broward County*, 431 So. 2d 606, 611-12 (Fla. 4th DCA), review denied, 440 So. 2d 352 (Fla. 1983), quoted and followed in *St. Johns County v. Northeast Florida Builders Ass'n*, 583 So. 2d 635, 637 (Fla. 1991).

163.31801, Florida Statutes. After two amendments that became effective in 2009, it now reads as follows:

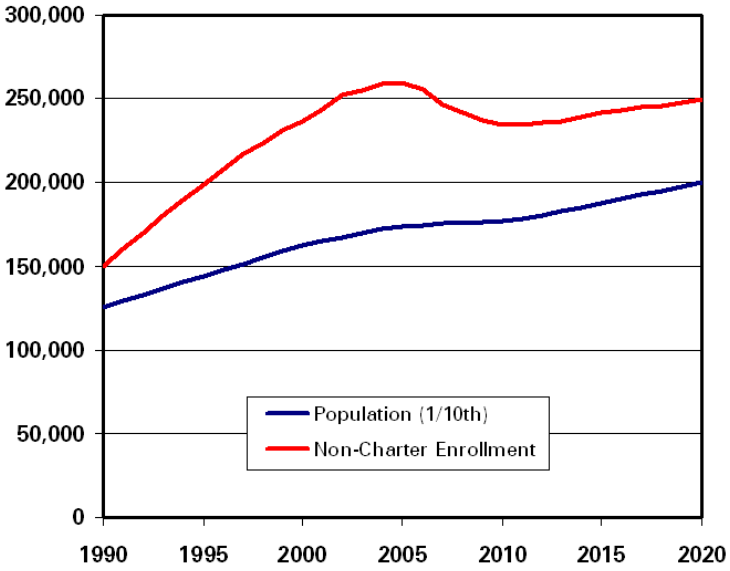
> *163.31801 Impact fees; short title; intent; definitions; ordinances levying impact fees.--*
>
> *(1) This section may be cited as the "Florida Impact Fee Act."*
>
> *(2) The Legislature finds that impact fees are an important source of revenue for a local government to use in funding the infrastructure necessitated by new growth. The Legislature further finds that impact fees are an outgrowth of the home rule power of a local government to provide certain services within its jurisdiction. Due to the growth of impact fee collections and local governments' reliance on impact fees, it is the intent of the Legislature to ensure that, when a county or municipality adopts an impact fee by ordinance or a special district adopts an impact fee by resolution, the governing authority complies with this section.*
>
> *(3) An impact fee adopted by ordinance of a county or municipality or by resolution of a special district must, at minimum:*
>
> > *(a) Require that the calculation of the impact fee be based on the most recent and localized data.*
> >
> > *(b) Provide for accounting and reporting of impact fee collections and expenditures. If a local governmental entity imposes an impact fee to address its infrastructure needs, the entity shall account for the revenues and expenditures of such impact fee in a separate accounting fund.*
> >
> > *(c) Limit administrative charges for the collection of impact fees to actual costs.*
> >
> > *(d) Require that notice be provided no less than 90 days before the effective date of an ordinance or resolution imposing a new or amended impact fee.*
>
> *(4) Audits of financial statements of local governmental entities and district school boards which are performed by a certified public accountant pursuant to s. 218.39 and submitted to the Auditor General must include an affidavit signed by the chief financial officer of the local governmental entity or district school board stating that the local governmental entity or district school board has complied with this section.*
>
> *(5) In any action challenging an impact fee, the government has the burden of proving by a preponderance of the evidence that the imposition or amount of the fee meets the requirements of state legal precedent or this section. The court may not use a deferential standard.*

Other provisions relating to impact fees are scattered about in the Florida Statutes. For example, public schools are exempted from the payment of impact fees in Section 1013.371(1)(a).

The Need Test

To meet the first prong of the dual rational nexus test, it is necessary to demonstrate that new development creates the need for additional educational facilities. The county's growing population creates demands for new school facilities in order to maintain acceptable levels of service. Over the last two decades, regular (non-charter) public school enrollment has increased faster than population, although the trend was reversed over the last five years due to demographic cycles, likely exacerbated by the housing market downturn and the exodus of construction workers and their families. However, as a larger cohort enters the school-age years and the housing market recovers, public school enrollments will begin rising again. In addition, new units will be constructed and occupied and generate additional students. Population and enrollment forecasts for the next ten years indicate that enrollment will increase at about the rate of population growth, as illustrated in Figure 3.

Figure 3. Population and Enrollment, 1990-2020



Because of the recent drop-off in enrollment, the District has a temporary capacity surplus. This surplus is due not only to enrollment declines, but also to improvements that were initiated prior to the enrollment declines. These improvements were funded with debt. Since these improvements provide capacity in advance of the need, the school impact fees can be used to help retire this debt.

Not only does growth in housing units create a need for new student stations, the school impact fees are proportional to the need. The County's school impact fees are proportional to the number of students expected to enroll in public school in Broward County for each type of dwelling unit constructed. Student generation rates derived from U.S. Census data for Broward County have been calibrated against actual public school enrollment in Broward County to ensure that the school impact fees assessed are proportional to the impacts of the development. In addition, the impact fees are reduced to take into account future local school taxes and State funding that will be generated by new residential development and used for capacity-expanding capital improvements.

The Benefit Test

To meet the second prong of the dual rational nexus test, it is necessary to demonstrate that new development subject to the fee will benefit from the expenditure of the impact fee funds. One requirement is that the fees actually be used to fill the need that serves as the justification for the fees under the first part of the test. Section 5-184(b)(2) of the County's land development code requires that impact fee revenues be spent only on growth-related capital improvements:

> The amount of money required to be deposited with the County in lieu of dedication requirements and improvements shall be determined pursuant to the specific standards set

> forth in this division. The use of such funds will be restricted to the acquisition, expansion, and development of service facilities for new users, in a manner consistent with the principles set forth in Contractors & Builders Association v. City of Dunedin, 329 So.2d 314 (Fla. 1976), and otherwise consistent with all requirements of the Constitutions of the United States and the state of Florida and all applicable laws.

These provisions ensure that school impact fee revenues are spent on improvements that expand the capacity of the public educational system to accommodate new students, rather than on the maintenance or rehabilitation of existing school facilities or other purposes.

Due to the current temporary capacity surplus, there are no capacity-expanding improvements needed for the near-term. However, much of the current excess capacity was built in anticipation of growth using long-term obligations (certificates of participation). In a subsequent Dunedin decision to the one referenced in the County's ordinance, the Florida District Court of Appeals in 1978 ruled that the City of Dunedin could use water and sewer impact fees "for the purposes of further expansion or retiring bonds issued for the earlier (post-1974) expansion of the system."[2] When impact fees are used to retire debt that has created surplus capacity to accommodate future growth, the benefit received by feepaying developments is the available capacity that was created with the debt financing. The Florida courts have thus clearly said that impact fees can be used to retire bonds issued to create capacity in anticipation of growth, which is exactly the situation in which the School Board of Broward County finds itself.

Another way to ensure that the expenditure of fees benefits the feepaying development is to divide the jurisdiction into benefit districts, so that the fees are spent in reasonable proximity to the fee-paying development. As discussed in the next section, most Florida counties have a single, county-wide school impact fee benefit district. However, Broward County is divided into four benefit districts for school impact fee purposes, as set forth in Sec. 5-182(m)(7) of the County Code.

In sum, ordinance provisions requiring the earmarking of funds and the segregation of funds into benefit districts ensure that the fees are spent to benefit the fee-paying development.

[2] *The City of Dunedin, Florida v. Contractors and Builders Association of Pinellas County*, 358 So. 2d 846 (Fla. 1978)

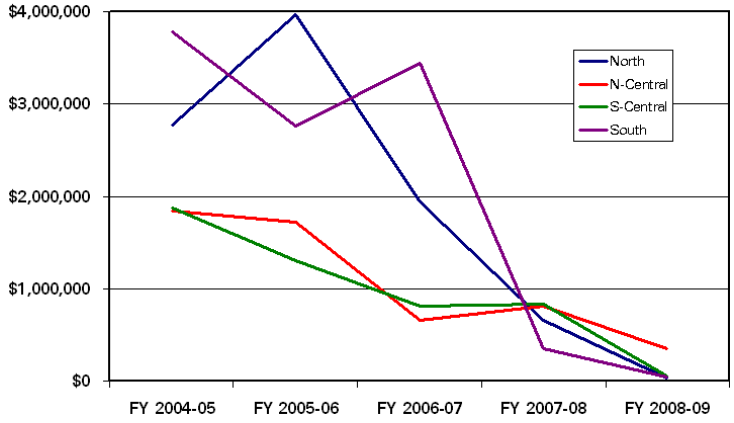
BENEFIT DISTRICTS

There are two kinds of geographic areas in impact fee systems: service areas and benefit districts. A service area, also sometimes called an assessment district, is an area that is served by a defined group of capital facilities and is subject to a uniform impact fee schedule. A benefit district is an area within which fees collected are earmarked to be spent.

The county-wide school impact fee ordinance requires all new residential development within Broward County to pay applicable impact fees. The County collects the fees and transmits them to the School Board. The use of a county-wide service area is consistent with the *St. John's County* decision by the Florida Supreme Court, discussed above.

The county is divided into four benefit districts (see Figure 5) in order to ensure reasonable benefit to the development paying the school impact fee. Impact fee revenues received from each district over the last five years are summarized in Table 1 and illustrated in Figure 4. Prior to the dramatic decline in construction experienced over the last few years, each district was generating a substantial amount of revenue.

Figure 4. Impact Fee Revenue, FY 2005-2009



The majority of Florida school impact fees have a single, county-wide benefit district. This can be justified because the construction of a school anywhere in the county will increase capacity to serve new development, regardless of location. As new schools are constructed, attendance zones are modified to ensure that the capacity is efficiently utilized. A new residential development subject to a school impact fee is not guaranteed that the students residing there will attend a new school paid for with those impact fees, just as a new development paying road impact fees is not guaranteed the ability to drive exclusively on new roads funded with those road impact fees. Instead, the benefit to an impact-fee-paying development is that the impact fees are spent to expand the overall capacity of the public school system, so that the students living in new developments have student stations available for them, regardless of whether those stations are in new or existing schools.

Table 1. School Impact Fee Revenue by Benefit District, FY 2005-2009

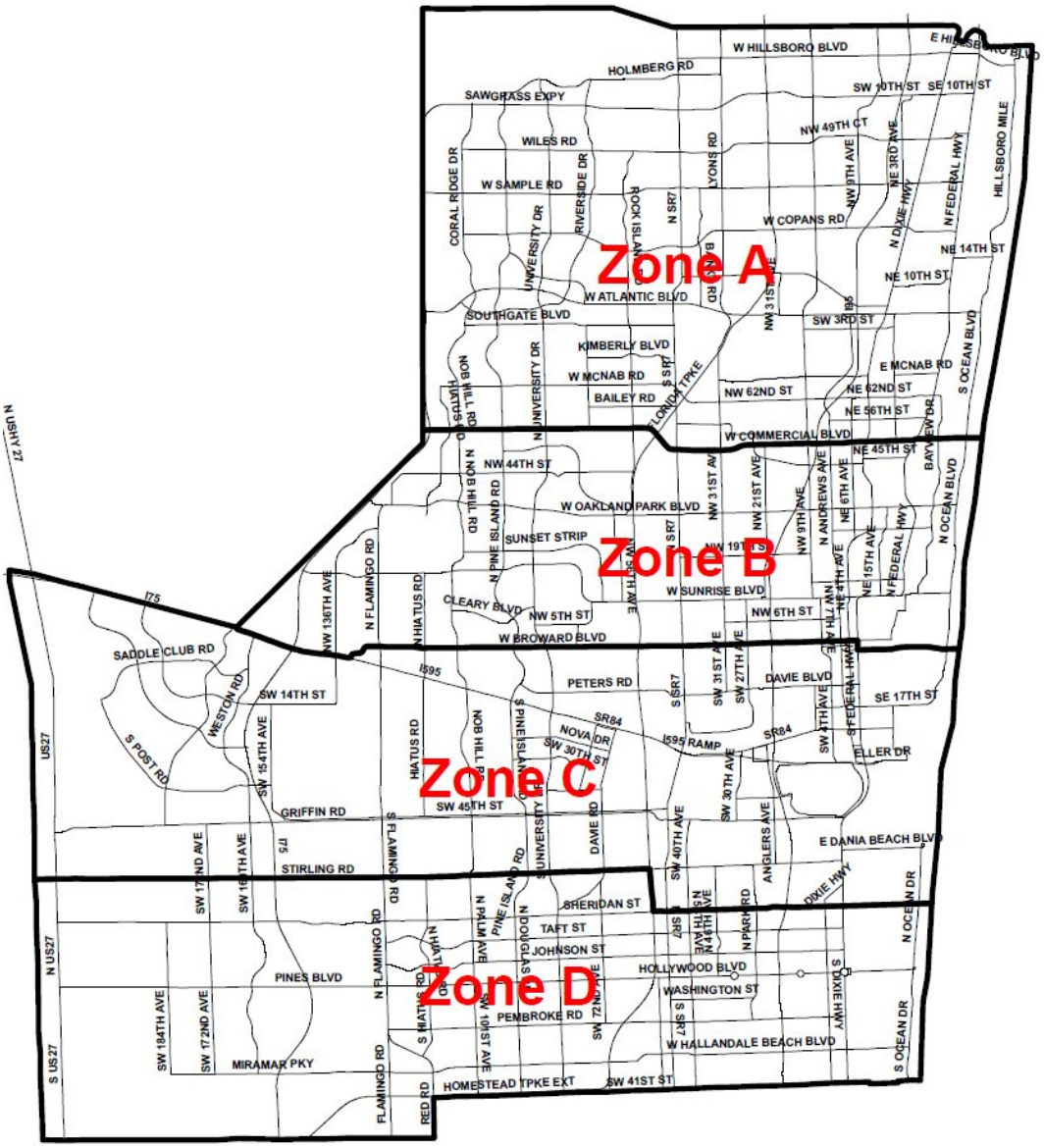
Benefit District	FY 2004-05	FY 2005-06	FY 2006-07	FY 2007-08	FY 2008-09
A - North	$2,769,977	$3,961,467	$1,940,445	$667,966	$41,542
B - North Central	$1,850,641	$1,723,913	$665,118	$816,783	$355,771
C - South Central	$1,865,777	$1,303,502	$815,885	$840,746	$59,573
D - South	$3,782,078	$2,753,164	$3,433,599	$362,431	$46,666
Total	**$10,268,473**	**$9,742,046**	**$6,855,047**	**$2,687,926**	**$503,553**

Source: SBBC Capital Budget Department, August 21, 2009 (does not include earned interest).

Only the three most populous counties in Florida (Miami-Dade, Broward and Palm Beach) have multiple benefit districts for school impact fees. If Broward County were to change to a single

county-wide benefit zone, it would have the most population per school impact fee benefit zone of any Florida County (about 1.8 million, compared to the next largest, Hillsborough County, at 1.2 million). No change to the four existing benefit zones is recommended.

Figure 5. School Impact Fee Benefit Zones



This update includes ancillary facility costs (administrative offices, buses, storage and maintenance facilities, etc.). Since ancillary facilities tend to serve the entire county, the inclusion of ancillary facility costs will require designating the portion of a fees that would be eligible to be spent outside benefit district boundaries on such facilities.

LEVEL OF SERVICE

A fundamental principle of impact fees is that new development should not be held to a higher standard than existing development. If the impact fees are based on a higher standard than currently exists, new development must not be required to both pay the impact fee and pay taxes that are used to remedy the existing deficiency, unless credit against the fees is given for such tax payments.

In the arena of school impact fees, the level of service can best be measured in terms of the overall ratio of students to school capacity. School capacity is determined in accordance with standards developed by the State, as described below.

School Capacity

The Florida Department of Education (DOE) maintains an inventory of student capacity in schools. This inventory is referred to as the Florida Inventory of School Houses (FISH). There are two official measures of school capacity: "FISH Satisfactory Student Stations" and "Actual FISH Capacity." FISH Satisfactory Student Stations are computed by multiplying the core-curriculum classrooms by the post-amendment maximum students per class by grade level (different capacities are specified for specialized classrooms). In the November 2002 election, Florida voters approved the Classroom Size Reduction Amendment (Amendment 9) to the Florida Constitution. Section 1 of Article IX of the State Constitution establishes, by the beginning of the 2010/2011 school year, the following maximum number of students in core curricula courses assigned to a teacher: pre-kindergarten through grade 3: 18 students; grades 4 through 8: 22 students; and grades 9 through 12: 25 students. Following the passage of the classroom size amendment, DOE adjusted (lowered) FISH classroom capacities to reflect the mandated targets.

Actual FISH Capacity takes into account DOE adopted utilization rates. The official utilization rates are: 100 percent of Satisfactory Student Stations for elementary schools, 90 percent for middle schools and 95 percent for high schools. Utilization rates give school boards some flexibility at middle and high school levels to accommodate reasonable inefficiencies created with multiple class changes, electives and other activities. Schools that have a combination of grade levels (e.g., K-8 and 6-12) take on the utilization rate of middle schools (90 percent). For the purposes of this report, Actual FISH Capacity is used. For convenience, the term "student stations" will be used when describing school capacity, but that capacity is measured in terms of Actual FISH Capacity, not FISH Satisfactory Student Stations.

Existing School Inventory

To determine the current level of service for educational facilities in Broward County, an inventory was prepared of existing schools for the current (2010/2011) school year. Table 42 in the Appendix shows the existing school inventory, including the name of each school, grade level, site area in acres, student capacity (in permanent buildings) and enrollment. Excluding centers, which serve both K-12 and adult students, these facilities have the capacity to accommodate 245,368 students in permanent classrooms.

Level of Service Summary

As mentioned above, the most appropriate level of service for the purpose of impact fees is the county-wide ratio of regular public student enrollment to permanent FISH capacity. Since the costs per student are calculated for permanent buildings, the FISH capacity reflects only the capacity in permanent buildings. Students attending centers, which serve adults as well, are excluded. As shown in Table 2, the School Board currently provides more than one unit of permanent FISH capacity per enrolled student, and has a surplus of 17,674 permanent student stations, which amounts to 7.2% of total existing permanent capacity.

Table 2. Existing Level of Service

Actual FISH Capacity in Permanent Buildings	245,368
– Current Enrollment, 2010-2011	-227,694
Current Permanent FISH Capacity Surplus	17,674
Percent of Total Permanent Capacity	7.2%

Source: Capacity and enrollment, excluding centers and charter schools, from Table 42.

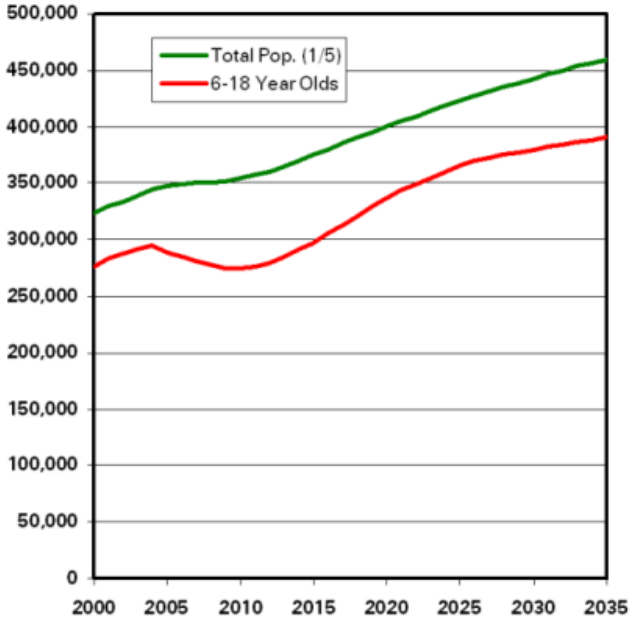
ENROLLMENT AND DEMOGRAPHIC TRENDS

This section of the report provides evidence that recent enrollment declines are the result of short-term demographic and economic factors rather than long-term demographic trends.

Population and Enrollment Trends

Broward County has been hit hard by the housing crisis and economic recession. The number of housing units for which permits were issued in the county dropped from an estimated 12,020 in 2002 to 1,049 in 2009.[3] Population estimates prepared by the Broward County Planning and Redevelopment Division indicate that the population growth of the county has slowed to a crawl. While the county was adding 20,000 new residents every year from 2000-2004, it only grew by an estimated 2,815 from 2007 to 2008. The number of new residents is expected to resume growing in 2009, returning to adding more than 20,000 residents per year by 2013.[4]

Figure 6. School-Age Population, Broward County, 2000-2035



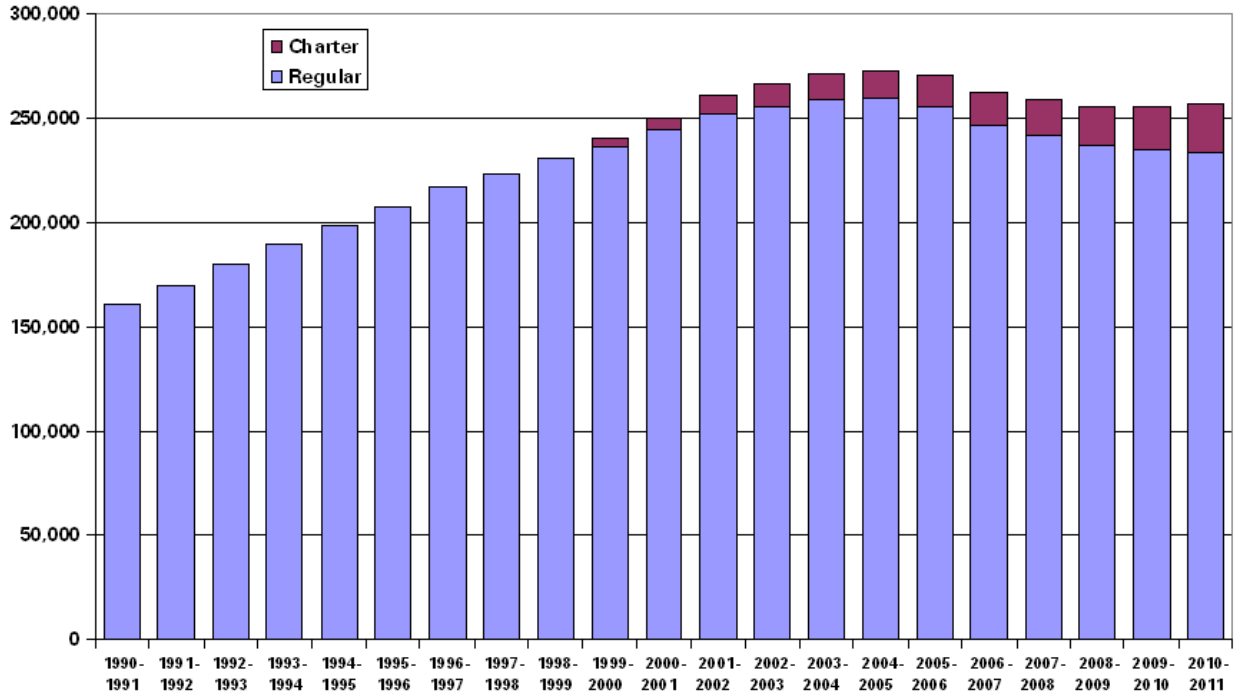
While the growth of the total population has stalled, the school-age population (6-to-18 year olds) has plummeted since 2004. This has largely been due to age-cohort cycles, but may also have been exacerbated by the economic downturn (e.g., the out-migration of construction workers and their young families). According to the County's age-cohort projections, the school-age population is projected to begin growing again in 2011, and is expected to get back to 2004 levels by 2015, as shown in Figure 6.

[3] U.S. Bureau of the Census, http://censtats.census.gov/bldg/bldgprmt.shtml, April 30, 2010.

[4] See Table 34 in the Appendix. County planning staff notes that their estimates differ from those of the Census Bureau, which indicate a 2007 decline in total population. They attribute this to the Bureau's heavy reliance on Internal Revenue Service county-to-county migration flow tables, which are not as reliable for Broward County as they are for other areas of the country. Staff also points out that their population estimate for 2007 is actually lower than the Census Bureau's, without any annual population declines. Staff believes that the Bureau over-estimated Broward population growth in the early part of the decade.

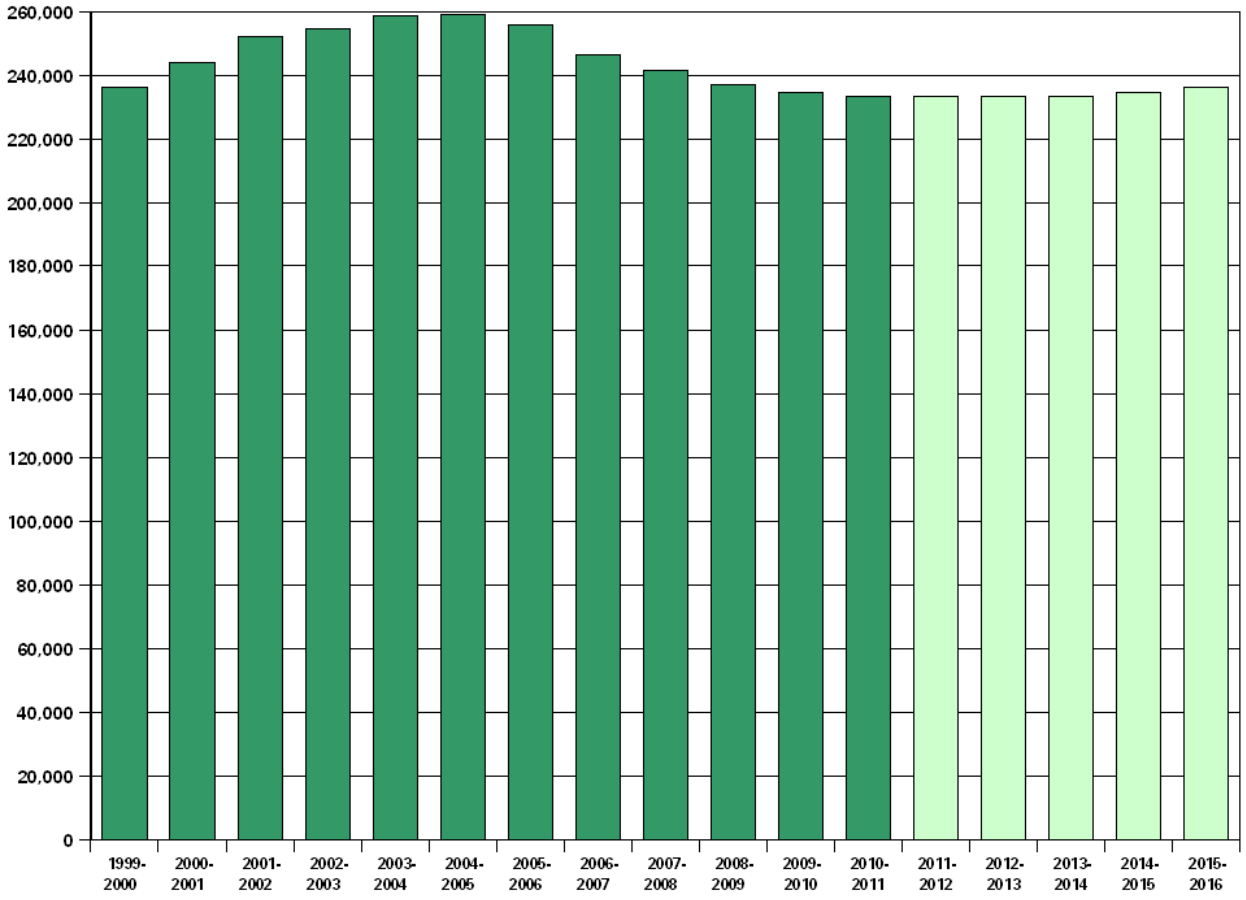
The number of public school students who must be housed by SBBC in regular school buildings is affected not only by the decline in school-age children, but also by changes in charter school enrollment, changes in private school enrollment and dropout rates. The history of Broward County's public school enrollment since 1990 is illustrated in Figure 7 (based on data that can be found in Table 36 in the Appendix). Public school enrollment (both regular and total) began to decline in the 2005/2006 school year. While charter school enrollment has been increasing ever since the first charter schools were formed in the 1999/2000 school year, regular school enrollment has been declining since the 2004/2005 school year. Total enrollment increased this year for the first time in six years, due both to continued growth in charter school enrollment and the gradual stabilization of regular school enrollment.

Figure 7. Enrollment History, 1990/1991-2010/2011



The School Board's current enrollment projections anticipate that regular school enrollment will stabilize next year, and will increase slowly over the next five years (see Figure 8 and Table 36 in the Appendix). By way of contrast, the County's demographic projections indicate that the number of school-aged children will return to peak 2004 levels by 2015.

Figure 8. Regular School Enrollment, 5-Year Projection

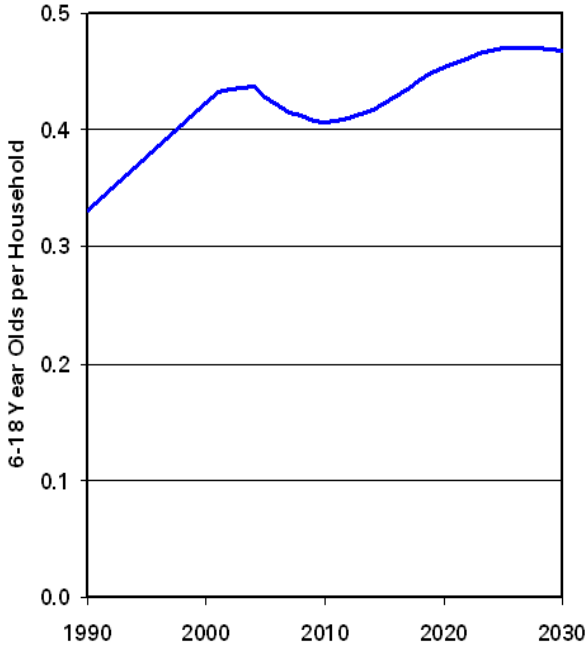


The County's age-cohort model indicates that recent enrollment declines are primarily due to a short-term demographic cycle (the passage of an abnormally small school age cohort), rather than to long-term aging trends. The School Board's projections, while more conservative than the County's demographic projections, also indicate that the decline in enrollment is a temporary phenomena.

Students-per-Household Trends

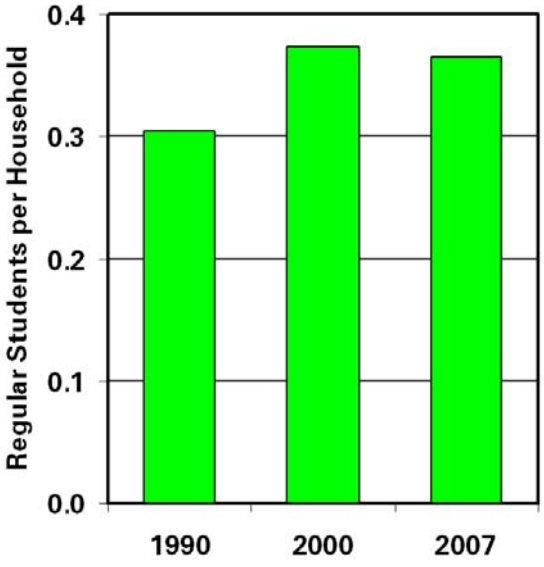
If current enrollment declines are partially attributable to long-term demographic shifts, such as the aging of the population, there should be some evidence of this trend in recent historical data. Data to construct such an analysis are available from the 1990 and 2000 U.S. Census for Broward County, as well as from a 3% sample of Broward County households, which is a composite of annual 1% samples taken in 2006, 2007 and 2008, from the American Community Survey conducted by the Census Bureau (for convenience these will be referred to as 2007 data).

Figure 9. School-Age Children per Household, Broward County, 1990-2030



The analysis in this section will focus on households, rather than housing units. This approach removes the volatile factor of vacancy rates, which were abnormally high in the 1990s, during Florida's last major recession, and are again abnormally high during the current housing and economic downturn. The data show that there has been a recent decline in the number of school-age (6-18 year old) children per household in Broward County (see Figure 9 and supporting data in Table 35 in the Appendix). However, the number of school-age children per household is still higher than it was in the 1990s, and it is projected to increase in the future.

Figure 10. Regular Public Students per Household, Broward County, 1990-2007



The number of regular (non-charter) public school students per household increased during the 1990s, then took a slight dip in 2007, as shown in Figure 10 (for data see Table 38 in the Appendix). The primary factor responsible for this decline is the current, temporary decline in school-age children discussed above.

A factor affecting public school enrollment is the percent of school-age children that attend private school. This percentage appears to have remained relatively constant, at about 18%, since 2000, and is down from about 20% in 1990 (see Table 38 in the Appendix). Consequently, the number of public school students per household has not been declining due to increasing private school enrollment.

A major change during this period has been the rise of charter schools. Charter schools are technically public schools, but SBBC is not responsible for providing capital facilities for these students. There were

no charter schools in 1990, but charter schools accounted for 2.3% of enrollment in the 2000/2001 school year, and for 9.1% in the 2010/2011 school year (see Table 36 in the Appendix). Charter school enrollment has continued to grow over the last six years, during which regular public school enrollment was declining. (Total enrollment increased this year for the first time in six years, driven by the continued growth of charter school enrollment but also made possible by the stabilization of regular school enrollment.) However, there is no guarantee that individual charter schools will not close and return the responsibility of providing capital facilities for their students to the regular public school system. The recent rapid growth in charter school enrollment, combined with the uncertain long-term viability of charter schools, makes future charter enrollment projections problematic. The School Board, in making projections of its capital needs, acknowledges current charter school enrollment but does not assume that the historic growth rate for charter students will be sustained in the future. This seems to be a prudent course for public facility planning under these conditions of uncertainty, and the same approach will be taken in the impact fee analysis.

Another way to look at the stability of student generation rates (SGR) over time is to control for the decade in which the housing was built (housing vintage), and to observe how the number of public school students per household has changed over time. The three time periods for which data are available are the 1990 census, the 2000 census, and the 2006-2008 American Community Survey. These data confirm that student generation rates are not declining over time (see Figure 11 and Table 39 through Table 41 in the Appendix). Student generation rates have increased since 1990 for all vintages of housing. While there have been modest declines in students per household since 2000 for housing built in the 1980s and 1960s and earlier, these are more than compensated for by the significantly higher rates for housing built since 1980.

Figure 11. Students per Household by Vintage, Broward County, 1990-2007

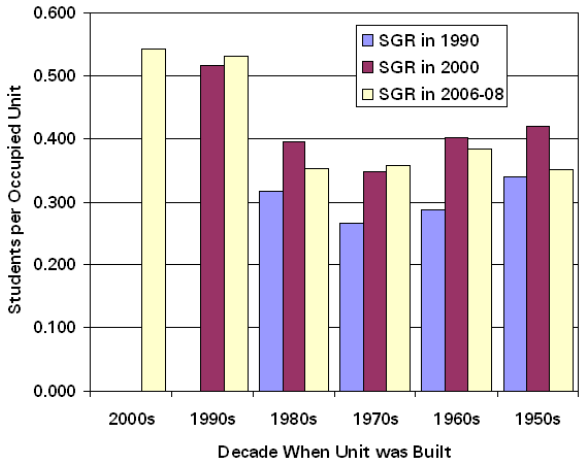
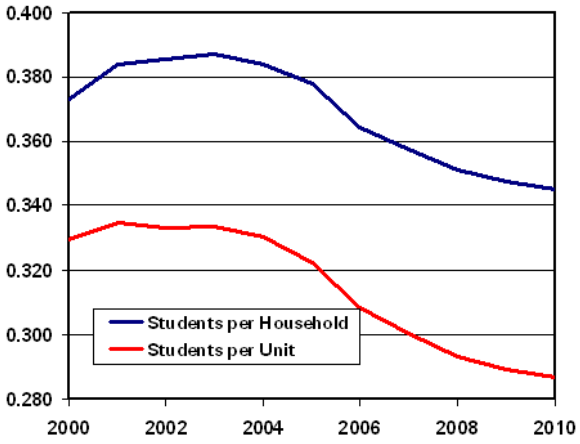


Figure 12. Students per Unit and per Household, Broward County, 2000-2010



From 2000 to 2010, the number of regular public school students per household declined by 7%, while the number of students per dwelling unit declined by 13% (see Figure 11 and Table 37 in the Appendix). This difference can be attributed entirely to the increase in vacancy rates, which is a temporary phenomenon. When vacancy rates return to normal, enrollment will increase, even without the construction of new housing units. The issue of vacancy rates is addressed in the next section.

Vacancy Rates

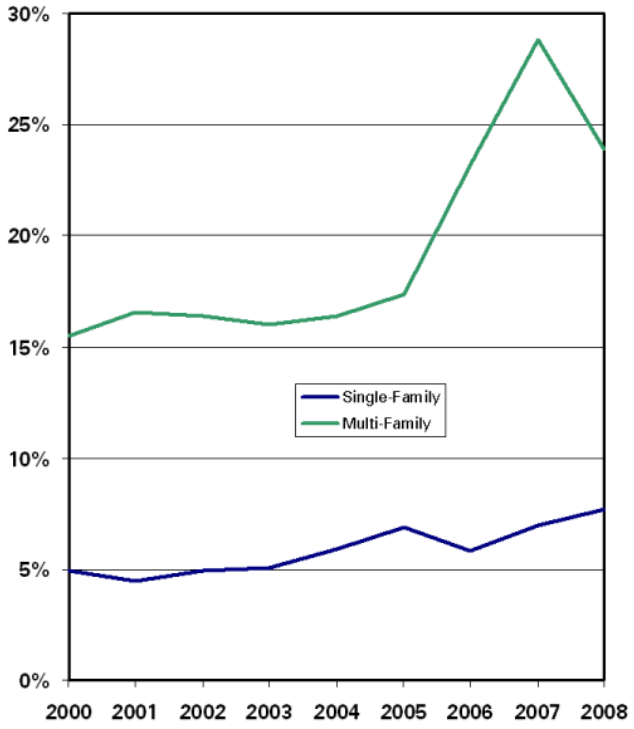
Vacancy rates are a crucial factor in determining the impact of the construction of new units on the generation of public school students. Current vacancy rates are at an historical high (see Figure 13 and Table 3). Keep in mind that Florida's last recession was in 1990-1991. Excluding 1990, the average vacancy rates from 1970, 1980 and 2000 were 4.9% for single-family detached homes and 17.4% for multi-family units, compared to 2008 rates of 7.7% and 23.9%, respectively.

Table 3. Vacancy Rates, Broward, 1970-2008

Year	Single-Family	Multi-Family	Total
1970	4.4%	18.8%	9.5%
1980	5.5%	17.8%	12.6%
1990	6.5%	21.2%	15.9%
2000	4.9%	15.5%	11.7%
2001	4.5%	16.6%	12.3%
2002	4.9%	16.4%	11.9%
2003	5.0%	16.0%	11.5%
2004	6.0%	16.4%	12.2%
2005	6.9%	17.4%	13.0%
2006	5.8%	23.2%	14.5%
2007	7.0%	28.8%	17.7%
2008	7.7%	23.9%	17.2%

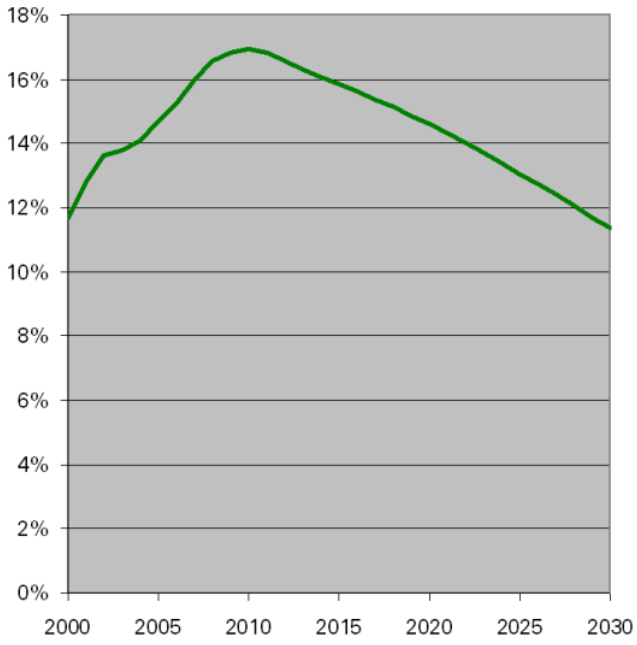
Source: U.S. Census Bureau, full-count data for 1970, 1980 and 1990, 1-in-6 sample data for 2000, and 1% sample data from the American Community Survey for 2001-2008.

Figure 13. Historical Vacancy Rates by Housing Type, Broward County, 2000-2008



The Broward County Planning and Redevelopment Division's housing model projects that the overall vacancy rate will begin to decline after 2010 and will continue to decline until it reaches a long-term average rate of about 11.4% in 2030. These projections are illustrated in Figure 14, based on data that can be found in Table 35 in the Appendix.

Figure 14. Projected Vacancy Rates, Broward County, 2000-2030



Summary

In summary, none of the data reviewed provide any evidence of a long-term trend of declining student generation rates. The recent decline in enrollment has been due primarily to a temporary age-cohort cycle, coupled with an exodus of families with children in response to the housing and economic downturn. It is clearly not due to any long-term decline in student generation rates, either from new housing or older housing. The number of students per housing unit has fallen more than students per household, due to the fact that vacancy rates have climbed to historic highs. As a larger cohort enters school age and vacancy rates return to normal, enrollment will increase, even in the absence of new construction.

STUDENT GENERATION RATES

The foregoing analysis provides the context for the determining appropriate student generation rates to be used in the calculation of the school impact fee schedule. This section reviews the current student generation rates on which the County's school impact fees are based, and develops updated rates based on the most recent U.S. Census data.

Current Student Generation Rates

The starting point is the student generation rates developed as part of the previous school impact fee update. That study, *Student Generation Rate/School Impact Fee Study, Phase II, Final Report*, was prepared by Walter H. Keller, Inc. in December 2007. That analysis involved matching addresses of current students from SBBC enrollment records (20th day of 2006/07 school year) with addresses of newly-constructed residential units for which the County had issued certificates of occupancy during the period from January 1, 2001 to December 31, 2005 as reported in the County's Permit Monitoring System (PMS). Much of the address matching had to be done manually because of differences in naming conventions between the two data sets (e.g., inconsistent abbreviations) and address ranges instead of specific addresses. Because the PMS data lacks information on the number of floors, which are critical to the definitions of the multi-family land use categories, many field checks were required to develop this information. Other problems with the address-matching procedure for multi-family units are that (1) the number of bedrooms was not available for individual multi-family dwelling units in the PMS data base (although the number of units by bedroom category was available for the building), and (2) the student addresses did not always include an apartment number. These problems were addressed by assigning students known to reside in a multi-family building to the bedroom categories in proportion to the distribution of the building units by bedroom category (for example, if 10% of the units in a building were 1-bedroom, 10% of the students living in the building would be assumed to reside in 1-bedroom units). Unfortunately, this procedure has the effect of minimizing the differences between student generation rates of small and large units.[5]

The results of the address-matching analysis from the 2007 study are summarized in Table 4. Several of the housing types presented in Table 4 require some explanation. It is particularly important to understand how these categories differ from those used by the U.S. Census Bureau, since much of the analysis in this report relies on Census data. The "townhouse-duplex-villa" category is virtually the same as the combination of the duplex and single-family attached housing types as defined by the U.S. Census. The impact fee category consists of the following defined housing types: "townhouse" is defined as three or more attached dwelling units with each unit having two or more residential stories, exclusive of parking floors; "duplex" is defined as two dwelling units, attached by a common party or firewall, in one building; "villa" is defined as three or

[5] To test the extent of this effect, the consultant assumed there were ten 100-unit apartment buildings, each with a different mix of bedroom sizes (3 buildings with only one unit size, 3 with 80% of one size and 10% of the other two sizes, 3 building with 50% of one unit size, 40% of another and 10% of the other, and one with 50% 2-bedroom and 50% 3+-bedroom units). It was further assumed that each unit generated the following students per unit: 0.055 per 1-bedroom, 0.180 per 2-bedroom and 0.522 per 3-bedroom. If the students were assumed to be generated in proportion to the number of units, the following student generation rates were derived: 0.123 per 1-bedroom, 0.220 per 2-bedroom and 0.410 per 3-bedroom. With the assumed "real" student generation rates, the ratio of the rate from the 3-bedroom to the 1-bedroom was 8.7 to one. Allocating students according to the number of units resulted in a ratio of only 3.3 to one.

more attached dwelling units in a building not exceeding one residential story. The Census definition of a duplex is simply a structure containing only two dwelling units. The Census definition of single-family attached is a one-unit structure that has one or more walls extending from ground to roof separating it from adjoining structures.

In the school impact fee categories, multi-family projects that are not included in the "townhouse-duplex-villa" category are further classified according to the number of stories (exclusive of parking levels), with "garden apartments" having three floors or less, "mid-rise" having four to eight floors and "high-rise" having nine or more floors. The U.S. Census makes no comparable distinction, since it groups other multi-family buildings by the number of units in the structure, not by the number of floors. Nevertheless, the "multi-family" Census category, consisting of units in buildings with three or more units (other than single-family attached), is comparable to the combination of garden apartment, mid-rise and high-rise categories used in the impact fee classification. In addition, the Census multi-family category should be reasonably representative of the impact fee garden apartment category, which comprised about two-thirds all of the multi-family units built in Broward County from 2001 to 2005, and likely makes up a far larger proportion of all multi-family units in Broward County.

Table 4. Student Generation Rates, 2007 Study

Housing Type	Bedrooms	Students	Housing Units	Student Generation Rate
Single-Family Detached	3 or fewer	1,686	4,847	0.348
	4 or more	7,699	15,265	0.504
Townhouse, Duplex, Villa	1 or none	2	72	0.028
	2	274	2,333	0.117
	3 or more	1,656	6,116	0.271
Garden Apartment	1 or none	268	2,524	0.106
	2	1,048	5,653	0.185
	3 or more	827	3,392	0.244
Mid-Rise	1 or none	30	791	0.038
	2	54	1,459	0.037
	3 or more	29	187	0.155
High-Rise	1 or none	3	451	0.007
	2	7	1,841	0.004
	3 or more	2	787	0.003
Total	All	13,585	45,718	0.297
All Multi-Family (excluding Townhouse Duplex, Villa)	1 or none	301	3,766	0.080
	2	1,109	8,953	0.124
	3 or more	858	4,366	0.197
Multi-Family Total	All	2,268	17,085	0.133
Average Mid-Rise	All	113	2,437	0.046
Average High-Rise	All	12	3,079	0.004

Source: Walter H. Keller, Inc., *Student Generation Rate/School Impact Fee Study*, December 2007.

As noted above, the major alternative data sources for information about student generation rates are the U.S. Census Bureau microdata samples, on which the preceding analysis of demographic and enrollment trends has relied (microdata are data sets that have records for individual housing units). One way to gauge the reliability of these various samples is to look at the sample sizes. While the

2006 address-matching procedure did not employ sampling techniques, its 100%-count of units built in Broward County in 2001 through 2005 still represents only about 6% of all units in the county in 2006. This is relatively similar to the samples sizes of the available microdata samples for Broward County from 2000 (5%) and 2007 (3%, based on annual 1% samples from 2006-2008). However, only about one-tenth of the units in the Census microdata samples could be considered "new" units.

The sample sizes are summarized in Table 5. Note that in order to make this comparison, the impact fee categories for garden apartments, mid-rises and high-rises had to be combined to be comparable to the Census multi-family category. Overall, the 2006 address-matching sample is the largest, containing information on almost twice as many units as the 2006-2008 American Community Survey, and about 30% more units than the 2000 Census microdata. And of course it has 10 to 20 times as many newly-constructed units as the Census data, since the entire sample is of units built over a recent five-year period. On the other hand, it does not include mobile home units at all, and its sample of 1-bedroom single-family attached/duplex units is quite small.

Table 5. Survey Sample Sizes (Housing Units)

	No. of	2006	2000 Census (5%)		2006-2008 ACS (3%)	
Housing Type	Bedrooms	Address-Match	All Units	Last 10 yrs	All Units	Last 8 yrs
Single-Family	3 or fewer	4,847	10,586	969	6,973	299
Detached	4 or more	15,265	4,115	1,093	3,576	657
Single-Family	1 or none	72	614	60	188	9
Attached,	2	2,333	1,687	193	1,177	121
Duplex	3 or more	6,116	1,237	231	1,148	282
	1 or none	3,766	6,233	341	3,188	228
Multi-Family	2	8,953	8,292	562	5,205	385
	3 or more	4,366	940	156	762	167
Mobile Home	2 or fewer	0	1,058	42	506	41
	3 or more	0	253	25	182	35
Total	All Types	45,718	35,015	3,672	22,905	2,224

Note: Sample sizes represent all housing units, both occupied and vacant
Source: Walter H. Keller, Inc., *Student Generation Rate/School Impact Fee Study*, December 2007; 2000 U.S. Census 5% Public-Use Microdata Sample for Broward County; U.S. Census, American Community Survey, 3% data set comprised of 1% annual samples from 2006, 2007 and 2008.

A rather important issue to be addressed is whether impact fees should be based on student generation rates for new units or on average rates for all existing units. It is generally believed that newer units have higher student generation rates than older units, all else equal, and that as dwelling units age the number of students declines. If true, this would be a strong argument for basing the impact fees on average student generation rates for all existing units, since the long-term impact of new units will tend to approach the average. However, the data presented earlier demonstrates that, while units built since 1990 do tend to have higher student generation rates, student generation rates for older units in Broward County have been quite stable over the last 16 years. Insufficient data is available to answer this question definitively. What can be agreed upon is that basing the fees on average student generation rates for all housing vintages would be a conservative approach that would certainly not over-estimate the long-term impact of new dwelling units.

Updated Student Generation Rates

On balance, census data are judged to provide the better basis for the updated student generation rates, as opposed to an attempt to replicate the 2006 address-matching effort. The focus on new units appears to have resulted in a significant underestimate of long-term impacts (see rate comparison in Table 12), probably because of abnormally high vacancy rates among the newly-built units surveyed. While the address-matching effort was able to distinguish mid-rise and high-rise units from garden apartments, it turned out to be very difficult to assign students to specific units within those buildings. The Census sample data for Broward County have very large sample sizes, and allow a direct match between public school students and the characteristics of the individual multi-family units in which they reside. In addition, because the census samples include all vintages of housing, the resulting rates are arguably more appropriate for determining long-term impacts. Data on students per household by grade level and housing type from the most recent 2006-2008 Census microdata are shown in Table 6.

Table 6. Students per Household by Grade Level

	No. of	Public School Students			House-	Students per Household			
Housing Type	Bedrooms	Elem.	Middle	High	Holds	Elem.	Middle	High	Total
Single-Family	3 or fewer	39,819	21,652	28,450	204,344	**0.195**	**0.106**	**0.139**	**0.440**
Detached	4 or more	32,840	19,611	26,300	104,571	**0.314**	**0.188**	**0.252**	**0.753**
Single-Family	1 or none	310	108	189	5,764	**0.054**	**0.019**	**0.033**	**0.105**
Attached,	2	6,793	2,982	3,628	35,975	**0.189**	**0.083**	**0.101**	**0.373**
Duplex	3 or more	9,655	4,873	6,185	33,120	**0.292**	**0.147**	**0.187**	**0.625**
	1 or none	3,162	1,069	2,410	92,878	**0.034**	**0.012**	**0.026**	**0.072**
Multi-Family	2	19,943	8,687	10,553	151,305	**0.132**	**0.057**	**0.070**	**0.259**
	3 or more	7,559	3,911	5,256	24,720	**0.306**	**0.158**	**0.213**	**0.677**
Mobile Home	2 or fewer	1,307	331	581	12,450	**0.105**	**0.027**	**0.047**	**0.178**
	3 or more	1,622	1,148	1,610	5,549	**0.292**	**0.207**	**0.290**	**0.789**

Source: U.S. Census Bureau, American Community Survey, 2006-2008 3% microdata for Broward County (elementary defined as attending preschool through 8th grade, and not having completed 5th grade; middle school defined as attending grades 5-8, and having completed 5th grade; high school defined as attending grades 9-12).

Several adjustments will be made to the public school student generation rates per household shown above. First, they will be adjusted downward to account for charter school enrollment, converting them from students per household to regular students per household. Second, they will be adjusted downward to account for the most recent occupancy rates, converting them from students per household to students per unit. The results of these first two adjustments is made to convert total students per household to total regular students per unit, as shown in Table 7.

Table 7. Total Regular Students per Unit

Housing Type	No. of Bedrooms	Students/ Household	% Non-Charter	Regular Students/HH	Occupancy Rate	Regular Students/Unit
Single-Family Detached	3 or fewer	0.440	90.94%	0.400	92.23%	**0.369**
	4 or more	0.753	90.94%	0.685	95.05%	**0.651**
Single-Family Attached, Duplex	1 or none	0.105	90.94%	0.095	83.09%	**0.079**
	2	0.373	90.94%	0.339	91.20%	**0.309**
	3 or more	0.625	90.94%	0.568	90.61%	**0.515**
Multi-Family	1 or none	0.072	90.94%	0.065	73.43%	**0.048**
	2	0.259	90.94%	0.236	73.65%	**0.174**
	3 or more	0.677	90.94%	0.616	80.91%	**0.498**
Mobile Home	2 or fewer	0.178	90.94%	0.162	69.31%	**0.112**
	3 or more	0.789	90.94%	0.718	84.83%	**0.609**

Source: Students per household from 2006-2008 3% American Community Survey data in Table 6; percentage charter students in 2010/2011 school year from Table 36; occupancy rates from 2006-2008 3% ACS data.

Multiplying these student generation rates per unit by the estimated number of existing housing units by type yields an "expected" number of students, which can be compared with the actual number of regular students enrolled in Broward County public schools. This comparison indicates that the student generation rates need to be reduced by 7.2% in order not to over-predict current enrollment.

Table 8. Comparison of Actual and Expected Students, 2010/2011

Housing Type	No. of Bedrooms	Housing Units 2007 ACS	Housing Units 2010	Students/ Unit	Expected Students
Single-Family Detached	3 or fewer	221,560	224,929	0.369	82,999
	4 or more	110,022	111,695	0.651	72,713
Single-Family Attached, Duplex	1 or none	6,937	7,042	0.079	556
	2	39,448	40,048	0.309	12,375
	3 or more	36,551	37,107	0.515	19,110
Multi-Family	1 or none	126,480	128,403	0.048	6,163
	2	205,446	208,569	0.174	36,291
	3 or more	30,553	31,017	0.498	15,446
Mobile Home	2 or fewer	17,963	18,236	0.112	2,042
	3 or more	6,541	6,640	0.609	4,044
Total	All Types	801,501	813,686		251,739
Actual Regular SBBC Students, 2010/2011					233,598
Ratio of Actual to Expected Students					**0.9279**

Source: 2007 ACS housing units from 2006-2008 3% American Community Survey data; 2010 housing is 2007 ACS units adjusted upward to match total 2010 housing estimate from Broward County in Table 35 in the Appendix; students per unit from Table 7; actual regular public school students from SBBC, 20th day enrollment report, September 2010.

In the following table, the three adjustments noted above have been applied to develop regular public school students per unit by grade level. The rates per household have been adjusted by the current percent of non-charter students, the latest occupancy rate data, and the adjustment factor needed to calibrate expected students to actual current regular public school enrollment. The results of these three adjustments are displayed in Table 9.

Table 9. Students per Unit by Grade Level, 2010

Housing Type	No. of Bedrooms	Students/Household			2010 % Non-Charter	Occup. Rate	2010 Adjust. Factor	2010 Regular Students per Unit		
		Elem.	Middle	High				Elem.	Middle	High
Single-Family Detached	3 or fewer	0.195	0.106	0.139	90.94%	92.23%	92.79%	**0.152**	**0.082**	**0.108**
	4 or more	0.314	0.188	0.252	90.94%	95.05%	92.79%	**0.252**	**0.151**	**0.202**
Single-Family Attached, Duplex	1 or none	0.054	0.019	0.033	90.94%	83.09%	92.79%	**0.038**	**0.013**	**0.023**
	2	0.189	0.083	0.101	90.94%	91.20%	92.79%	**0.145**	**0.064**	**0.078**
	3 or more	0.292	0.147	0.187	90.94%	90.61%	92.79%	**0.223**	**0.112**	**0.143**
Multi-Family	1 or none	0.034	0.012	0.026	90.94%	73.43%	92.79%	**0.021**	**0.007**	**0.016**
	2	0.132	0.057	0.070	90.94%	73.65%	92.79%	**0.082**	**0.035**	**0.044**
	3 or more	0.306	0.158	0.213	90.94%	80.91%	92.79%	**0.209**	**0.108**	**0.145**
Mobile Home	2 or fewer	0.105	0.027	0.047	90.94%	69.31%	92.79%	**0.061**	**0.016**	**0.027**
	3 or more	0.292	0.207	0.290	90.94%	84.83%	92.79%	**0.209**	**0.148**	**0.208**

Source: Students per household from Table 6; percent non-charter and occupancy rates from Table 7; 2010 adjustment factor from Table 8.

The non-charter student generation rates calculated above are the basis for the updated rates, but there is one problem: the multi-family rates are not differentiated between garden apartment, mid-rise and high-rise. This is because the Census does not provide information on the number of floors in a multi-family building. However, national data from the 2007 American Housing Survey, shown in Table 10, can be used to develop appropriate adjustment factors.

Table 10. Multi-Family Adjustment Factors

Bedrooms	% of Households with Public School Students				Ratio to Multi-Family Average		
	Garden Apt (1-3 floors)	Mid-Rise (4-8 floors)	High-Rise (9+ floors)	Multi-Family Total	Garden Apt (1-3 floors)	Mid-Rise (4-8 floors)	High-Rise (9+ floors)
1 or none	4.6%	4.2%	1.3%	4.3%	**1.083**	**0.995**	**0.303**
2	18.6%	14.4%	11.9%	17.9%	**1.040**	**0.804**	**0.667**
3 or more	37.6%	26.7%	22.1%	36.0%	**1.045**	**0.742**	**0.614**
Total	16.3%	10.3%	7.7%	14.9%	1.091	0.692	0.517

Source: Percent of households with one or more public school students from U.S. Department of Housing and Urban Development, *American Housing Survey*, 2007 (because of small sample size for 3+bedroom high-rise, 22.1% is the product of percent for 3-bedroom mid-rise and ratio of high-rise to mid-rise 2-bedroom percentages).

Applying the adjustment factors calculated above for garden apartments, mid-rise and high-rise buildings yields the following student generation rates.

Table 11. Disaggregated Multi-Family Student Generation Rates

Bedrooms	Garden Apartments			Mid-Rise Buildings			High-Rise Buildings		
	Elem.	Middle	High	Elem.	Middle	High	Elem.	Middle	High
Average Multi-Family Students per Unit:									
1 or none	0.021	0.007	0.016	0.021	0.007	0.016	0.021	0.007	0.016
2	0.082	0.035	0.044	0.082	0.035	0.044	0.082	0.035	0.044
3 or more	0.209	0.108	0.145	0.209	0.108	0.145	0.209	0.108	0.145
National Ratios to Multi-Family Averages:									
1 or none	1.083	1.083	1.083	0.995	0.995	0.995	0.303	0.303	0.303
2	1.040	1.040	1.040	0.804	0.804	0.804	0.667	0.667	0.667
3 or more	1.045	1.045	1.045	0.742	0.742	0.742	0.614	0.614	0.614
Estimated Local Student Generation Rates:									
1 or none	**0.023**	**0.008**	**0.017**	**0.021**	**0.007**	**0.016**	**0.006**	**0.002**	**0.005**
2	**0.085**	**0.036**	**0.046**	**0.066**	**0.028**	**0.035**	**0.055**	**0.023**	**0.029**
3 or more	**0.218**	**0.113**	**0.152**	**0.155**	**0.080**	**0.108**	**0.128**	**0.066**	**0.089**

Source: Average multi-family student generation rates from Table 9; national ratios to multi-family averages from Table 10; estimated local rates are product of average multi-family rates and national ratios.

The updated student generation rates are summarized for all land use categories in Table 12 (the housing categories highlighted in yellow are based entirely on local Census data, while the categories highlighted in green have been adjusted using national data). The total rates for all grade levels are also compared to the rates used in Broward County's current school impact fee ordinance. In general, the updated student generation rates are higher than the current rates, which is to be expected given the fact that the current rates significantly understate overall public school enrollment. The exceptions are smaller single-family detached, garden apartment, mid-rise and mobile home units, which are either unchanged or decreased.

Table 12. Updated Student Generation Rates (Some National Data)

Housing Type	No. of Bedrooms	Updated Student Generation Rates				Current Total	Percent Change
		Elem.	Middle	High	Total		
Single-Family Det.	3 or fewer	0.152	0.082	0.108	0.342	0.348	-2%
	4 or more	0.252	0.151	0.202	0.605	0.504	20%
Townhouse/ Duplex/Villa	1 or none	0.038	0.013	0.023	0.074	0.028	164%
	2	0.145	0.064	0.078	0.287	0.117	145%
	3 or more	0.223	0.112	0.143	0.478	0.271	76%
Garden Apartment	1 or none	0.023	0.008	0.017	0.048	0.106	-55%
	2	0.085	0.036	0.046	0.167	0.185	-10%
	3 or more	0.218	0.113	0.152	0.483	0.244	98%
Mid-Rise	1 or none	0.021	0.007	0.016	0.044	0.046	-4%
	2	0.066	0.028	0.035	0.129	0.046	180%
	3 or more	0.155	0.080	0.108	0.343	0.046	646%
High-Rise	1 or none	0.006	0.002	0.005	0.013	0.004	225%
	2	0.055	0.023	0.029	0.107	0.004	2575%
	3 or more	0.128	0.066	0.089	0.283	0.004	6975%
Mobile Home	2 or fewer	0.061	0.016	0.027	0.104	0.167	-38%
	3 or more	0.209	0.148	0.208	0.565	0.364	55%

Source: Updated student generation rates from Table 9 and Table 11 (categories highlighted in yellow are based entirely on local Census data; categories highlighted in green have been adjusted using national data); current student generation rates (total of all grade levels) from Broward County Code of Ordinances, Sec. 5-182(m)(6).

While the above student generation rates are not unreasonable, they have been criticized because the estimates for garden apartments, mid-rise and high-rise buildings are partially based on national data. The concern has been expressed that mid-rise and high-rise residential buildings in Broward County may have fewer students than many other urban areas, due to a larger retiree population and more recreational resort orientation. In response to these concerns, an alternative set of student generation rates has been prepared that relies entirely on local data. This set retains the student generation rates developed in this report based on local Census data for single-family detached, single-family attached (townhome, duplex and villa) and mobile homes, and uses the unadjusted rates derived from local Census data for the average of all multi-family units for garden apartments (the local rates for garden apartments are lower than those presented in the table above, since they have not been adjusted upward using national ratios).

However, for mid-rise and high-rise buildings, the local student generation rates developed in the 2007 study based on address-matching have been retained. It is likely that these mid-rise and high-rise student generation rates are too low, since they were based on a sample of buildings built during the housing boom, many of which were apparently unoccupied. Nevertheless, they are based on local data, and are certainly not going to over-estimate student generation for mid-rise and high-rise units. The updated student generation rates based entirely on local data are presented in Table 13 (the housing categories highlighted in yellow are based on local Census data, while the categories highlighted in orange are based on local address-matching performed in 2007).

Table 13. Updated Student Generation Rates (All Local Data)

Housing Type	No. of Bedrooms	Updated Student Generation Rates				Current Total	Percent Change
		Elem.	Middle	High	Total		
Single-Family Det.	3 or fewer	0.152	0.082	0.108	0.342	0.348	-2%
	4 or more	0.252	0.151	0.202	0.605	0.504	20%
Townhouse/ Duplex/Villa	1 or none	0.038	0.013	0.023	0.074	0.028	164%
	2	0.145	0.064	0.078	0.287	0.117	145%
	3 or more	0.223	0.112	0.143	0.478	0.271	76%
Garden Apartment	1 or none	0.021	0.007	0.016	0.044	0.106	-58%
	2	0.082	0.035	0.044	0.161	0.185	-13%
	3 or more	0.209	0.108	0.145	0.462	0.244	89%
Mid-Rise	1 or none	0.027	0.011	0.008	0.046	0.046	0%
	2	0.027	0.011	0.008	0.046	0.046	0%
	3 or more	0.027	0.011	0.008	0.046	0.046	0%
High-Rise	1 or none	0.002	0.001	0.001	0.004	0.004	0%
	2	0.002	0.001	0.001	0.004	0.004	0%
	3 or more	0.002	0.001	0.001	0.004	0.004	0%
Mobile Home	2 or fewer	0.061	0.016	0.027	0.104	0.167	-38%
	3 or more	0.209	0.148	0.208	0.565	0.364	55%

Source: Updated student generation rates from Table 9 for categories highlighted in yellow (single-family detached, single-family attached, townhouse/duplex/villa and garden apartment -- based on all multi-family -- and mobile home); updated rates for categories highlighted in orange (mid-rise and high-rise) are from Walter H. Keller, Inc., *Student Generation Rate/School Impact Fee Study, Phase II, Final Report*, December 2007, Table 5; current student generation rates (total of all grade levels) from Broward County Code of Ordinances, Sec. 5-182(m)(6).

Both sets of student generation are reasonable and defensible. However, our recommendation is that the updated school impact fees should be based on entirely local data, in order to be as consistent as possible with the State law requirement that impact fees be based on "the most recent and localized data."

It is recommended that when the student generation rates are re-visited in three years, the updated rates for mid-rise and high-rise be based on address-matching, which is the only approach that can provide these rates based on local data. If address-matching is confined to mid-rise and high-rise buildings, it should be possible to enumerate a 100% sample of all such buildings in the county and more accurately determine student generation rates for these housing types. For other housing types, Census data provides the most accurate local data available.

CAPITAL COSTS

In determining the cost of providing public school facilities in Broward County, the first step is to calculate the capital cost per student station. The cost components include the school construction cost, land acquisition cost and ancillary cost per student station.

Construction Cost

To determine the school construction cost per student station, new school and classroom addition projects completed in the last few years were reviewed. Construction costs include design and engineering costs, site improvement costs incidental to construction, building contract price and furniture, fixtures and equipment (FF&E) costs. Classroom addition projects that included remodeling costs unrelated to the capacity expansion were excluded. The construction costs per student station for recent elementary, middle and high school capacity improvements are summarized in Table 14.

Table 14. Recent School Construction Costs

School Name	Project Description	Completion Date	Construction Cost	FISH Capacity	Cost/ Station
Discovery Elementary	New School	Jul-09	$30,583,727	942	$32,467
Embassy Creek Elementary	18 Classroom Add.	Apr-09	$6,562,518	360	$18,229
Heron Heights Elementary	New School	Jul-09	$31,361,530	942	$33,292
Lauderdale Manors Elementary	15 Classroom Add.	Dec-09	$8,622,229	312	$27,635
Parkside Elementary	8 Classroom Add.	Jun-09	$3,152,304	160	$19,702
Pines Lakes Elementary	12 Classroom Add.	Aug-09	$5,453,732	240	$22,724
Quiet Waters Elementary	24 Classroom Add.	May-09	$10,265,807	480	$21,387
Sunset Lakes Elementary	24 Classroom Add.	Jan-09	$7,044,997	480	$14,677
Tradewinds Elementary	24 Classroom Add.	Apr-09	$8,674,774	480	$18,072
Elementary School Total			$111,721,619	4,396	**$25,414**
Glades Middle	New School	Jun-07	$52,863,382	1,842	$28,699
Nova Middle	17 Classroom Add.	Aug-09	$6,484,512	374	$17,338
Middle School Total			$59,347,894	2,216	**$26,782**
West Broward High	New School	Jun-08	$93,413,765	2,755	$33,907
Western High	36 Class/Mini Gym	Aug-09	$31,132,607	900	$34,592
Stoneman Douglas High	36 Classroom Add.	Apr-09	$15,186,592	900	$16,874
High School Total			$139,732,964	4,555	**$30,677**

Source: Construction costs from School Board of Broward County, Capital Budget Department, April 29, 2010; FISH capacities from Facility Planning and Information Management Department, May 4, 2010.

In the table below, the average construction costs per student station calculated above are compared with the State-recommended maximum construction costs per student station for the current year. The State cap is based on FISH Satisfactory Student Stations, while the local cost is based on Actual FISH Capacity. In order to compare the State caps to the local costs used in this study, the State caps are adjusted by multiplying the State cap figure by an inflation factor to determine the applicable cap for 2010, and further adjusted for middle and high schools to reflect the official utilization rates. These adjustments determine the State construction spending cap per student station for Actual FISH Capacity. As shown in Table 15, the District's recent school construction costs per student station are close to the State caps for middle and high schools, but are significantly

higher for elementary schools. To be conservative, the updated fees will be based on the current State caps.

Table 15. Comparison to State Construction Cost Guidelines

Grade Level	State Cap (Jan 2006)	CPI Factor	Adj. Cap/ Stud. Station	Adj. Cap/ FISH Capacity	Local Cost/ Student	% of State Cap
Elementary	$17,952	1.093	$19,622	$19,622	$25,414	130%
Middle	$19,386	1.093	$21,189	$23,543	$26,782	114%
High	$25,181	1.093	$27,523	$28,972	$30,677	106%

Source: State cap is maximum construction cost per student station from Sec. 1013.64, Florida Statutes for January 2006; CPI factor is ratio of Consumer Price Index, U.S. City Average, All Urban Consumers, All Items, 1982-84 = 100 for Jan. 2010 to Jan. 2006; adjusted cap per FISH capacity provides adjustment to FISH Satisfactory Student Station used in State caps by dividing adjusted cap for middle schools by utilization rate of 90 percent and high school by utilization rate of 95 percent; local cost from Table 14.

This update excludes the interest carrying cost related to new school construction. Interest costs are often an unavoidable expense of making growth-related capital improvements where (1) rapid growth necessitates improvement costs that cannot be funded out of current revenues or (2) capacity must be added in very large increments. Despite broad agreement that interest costs may legitimately be included in impact fee calculations, relatively few communities, at least in Florida, have done so to-date. This study excludes interest costs from the cost side of the equation, and, to be consistent, the credit calculation excludes the interest portion of the debt service payments.

Land Cost

The land cost per student station is determined by using recent land acquisition costs. The table below summarizes land acquisitions by SBBC over the last 15 years. Four very expensive school site acquisitions completed during the peak of the housing bubble were excluded as outliers. As shown in Table 16, the average land acquisition cost, adjusted to current dollars, is $126,465 per acre for school sites and $277,668 per acre for administrative sites.

Table 16. Land Acquisition Cost per Acre

Location	Year	CPI	Orig. Cost	Current $	Acres	Cost/Acre
Discovery Elementary	2007	1.049	$8,290,435	$8,696,666	14.34	$606,462
Challenger Elementary	2000	1.264	$1,695,132	$2,142,647	8.00	$267,831
Coconut Palms Elementary	1998	1.335	$1,306,127	$1,743,680	12.00	$145,307
Coral Cove Elementary	1999	1.306	$558,000	$728,748	12.00	$60,729
Dolphin Bay Elementary	2000	1.264	$1,300,000	$1,643,200	12.00	$136,933
Elementary D-1	1997	1.356	$2,001,723	$2,714,336	12.00	$226,195
Elementary School A-1 (Trails End)	2006	1.079	$5,875,833	$6,340,024	10.14	$625,249
Gator Run Elementary	1997	1.356	$600,000	$813,600	12.00	$67,800
Heron Heights Elementary	2006	1.079	$6,922,800	$7,469,701	12.00	$622,475
Lakeside Elementary	1997	1.356	$1,710,000	$2,318,760	12.00	$193,230
Liberty Elementary	2001	1.229	$2,321,025	$2,852,540	11.81	$241,536
Manatee Bay Elementary	2001	1.229	$770,000	$946,330	7.00	$135,190
Panther Run Elementary	1996	1.387	$1,782,431	$2,472,232	12.00	$206,019
Park Lakes Elementary	2000	1.264	$2,850,000	$3,602,400	14.80	$243,405
Park Trails Elementary	1999	1.306	$1,610,000	$2,102,660	12.00	$175,222
Plantation Elementary	1999	1.306	$292,500	$382,005	12.01	$31,807
Quiet Waters Elementary	2008	1.011	$1,309,373	$1,323,776	5.00	$264,755
Rock Island Elementary	2000	1.264	$1,357,895	$1,716,379	12.00	$143,032
Silver Shores Elementary	2001	1.229	$1,347,525	$1,656,108	12.00	$138,009
Sunset Lakes Elementary	2001	1.229	$1,306,068	$1,605,158	12.00	$133,763
Total, Elementary Sites			$45,206,867	$53,270,950	227.10	$234,570
Dave Thomas Education Ctr - West	2002	1.203	$971,266	$1,168,433	10.00	$116,843
Cypress Bay High	2000	1.264	$2,250,000	$2,844,000	45.00	$63,200
Everglades High	2000	1.264	$1,568,655	$1,982,780	45.00	$44,062
West Broward High	2006	1.079	$25,049,625	$27,028,545	42.96	$629,156
Arthur Robert Ashe Jr Middle	2000	1.264	$2,263,161	$2,860,636	20.00	$143,032
Arthur Ashe Vacant Parcel	2000	1.264	$678,947	$858,189	7.29	$117,721
Falcon Cove Middle	1999	1.306	$1,050,000	$1,371,300	21.43	$63,990
Glades Middle	2000	1.264	$697,180	$881,236	20.00	$44,062
Millennium Middle	2002	1.203	$3,115,593	$3,748,058	12.59	$297,701
New Renaissance Middle	2001	1.229	$2,025,000	$2,488,725	20.00	$124,436
Westglades Middle	1996	1.387	$1,944,621	$2,697,189	24.00	$112,383
Southwest Ranches School Site	2006	1.079	$4,433,500	$4,783,747	30.43	$157,205
Total, Middle/High School Sites			$46,047,548	$52,712,838	298.70	$176,474
Total, School Sites			$91,254,415	$105,983,788	525.80	$201,567
Total School Sites, Excluding Outliers*			$45,115,722	$56,448,852	446.36	**$126,465**
North Area Maintenance	1997	1.356	$620,000	$840,720	3.79	$221,826
North Central Area Superintendent	2000	1.264	$847,236	$1,070,906	4.70	$227,852
South Area Maintenance	2000	1.264	$884,000	$1,117,376	4.50	$248,306
South Area Portable Annex	2004	1.152	$1,188,505	$1,369,158	5.00	$273,832
South West Bus Parking Facility	2001	1.229	$8,945,944	$10,994,565	35.00	$314,130
Technology & Support Svcs Facility	1995	1.428	$450,000	$642,600	4.73	$135,856
Twin Lakes Administrative Center	2001	1.229	$499,308	$613,650	2.24	$273,951
Total, Administrative Sites			$13,434,993	$16,648,975	59.96	**$277,668**

* outliers are four 2006-2007 acquisitions costing more than $600,000 per acre

Source: Acquisitions since 1995 (location, year, original cost and acres) from SBBC, Real Estate and Environmental Planning, June 15, 2009; CPI is inflation factor based on Consumer Price Index, All Urban Areas (March 2010 = 217.6).

The land cost per student station is based on the existing system-wide ratio of District-owned school land to the existing capacity of District schools. Note that centers, which include adult students, are excluded from the analysis. As shown in Table 17, the land cost of school sites is $1,720 per student station.

Table 17. Land Cost per Student Station

Total Acres, Existing School Sites (excl. Centers)	3,333.70
÷ Permanent FISH Capacity at Existing Schools (excl. Centers)	245,368
Acres per Student Station	0.0136
x Average School Land Cost per Acre	$126,465
School Land Cost per Student	**$1,720**

Source: Total school acres and capacity from Table 42; average site cost per acre from Table 17.

Ancillary Facility Cost

In addition to schools themselves, the Board provides ancillary facilities that must also be expanded as enrollment grows. These ancillary facilities, which include administration buildings, support and fleet maintenance facilities, have a total current replacement value of $264 million, as summarized in Table 18. The land costs are based on District-owned acres and the average administrative land cost per acre calculated in the preceding section. The ancillary facility improvement costs are based on the District's current insured values.

Table 18. Ancillary Facility Costs

	Land (Acres)		Building	Replacement Value		
Location	Total	Owned	Sq. Ft.	Land	Improvements	Total
BECON ITV Station	7.12	7.12	31,218	$1,976,996	$6,339,820	$8,316,816
ITV Relay Station (leased)	2.21	0.00	0	$0	$19,000	$19,000
Lockhart Stadium (leased)	23.65	0.00	22,950	$0	$4,333,220	$4,333,220
Multilingual Evaluation/Training Ctr	1.25	1.25	12,202	$347,085	$2,750,180	$3,097,265
New River Circle Portable Site	10.38	10.38	14,062	$2,882,194	$2,028,580	$4,910,774
North Area Maintenance	3.79	3.79	59,688	$1,052,362	$12,016,920	$13,069,282
North Bus Parking Satellite	5.00	5.00	17,705	$1,388,340	$3,930,150	$5,318,490
North Bus Parking Lot	10.69	10.69	7,549	$2,968,271	$1,829,310	$4,797,581
North Central Area Superintendent	4.70	4.70	48,661	$1,305,040	$9,641,790	$10,946,830
Rock Island Annex	9.08	9.08	52,826	$2,521,225	$11,206,260	$13,727,485
South Area Maintenance	4.50	4.50	11,296	$1,249,506	$2,326,680	$3,576,186
South Area Portable Annex	5.00	5.00	89,394	$1,388,340	$8,415,000	$9,803,340
South Bus Parking (leased)	12.63	0.00	13,576	$0	$2,165,040	$2,165,040
South Central Area Superintendent	3.49	3.49	21,578	$969,061	$4,327,220	$5,296,281
South West Bus Parking Facility	35.00	35.00	59,627	$9,718,380	$11,081,370	$20,799,750
Technology & Support Svcs Facility	4.73	4.73	118,142	$1,313,370	$24,024,780	$25,338,150
Twin Lakes Administrative Center	2.24	2.24	40,416	$621,976	$8,074,040	$8,696,016
Twin Lakes Annex	1.15	1.15	28,232	$319,318	$5,759,080	$6,078,398
Twin Lakes Maintenance & Bus Lot	35.75	35.75	269,559	$9,926,631	$51,076,290	$61,002,921
West Central Bus Parking/Maint.	20.36	20.36	36,361	$5,653,320	$7,307,090	$12,960,410
Wright, Kathleen Admin Center	2.77	2.77	166,532	$769,140	$38,747,440	$39,516,580
Total	205.49	167.00	1,121,574	$46,370,555	$217,399,260	**$263,769,815**

Source: Acres, building square feet and insured improvement value from SBBC, "School Board Sites – Property Values as of 6/30/2009" and "2009-2010 Schedule of Values;" land cost based on administrative facility cost per acre from Table 16.

Currently, the School Board has 1,510 buses in active service. These include buses on daily routes and spare buses. The spare buses are used for field trips and substitute buses when the route buses are in for service. The current unit costs of new school buses are multiplied by the number of buses to determine the total cost of the current bus fleet, as shown in Table 19.

Table 19. Existing Bus Fleet Cost

Bus Capacity	Lift Equipped	Number	Unit Cost	Total Cost
19 - 29	Y	30	$105,978	$3,179,340
19 - 29	N	75	$101,125	$7,584,375
47	Y	88	$113,920	$10,024,960
47	N	57	$109,468	$6,239,676
65	Y	155	$116,952	$18,127,560
65	N	666	$112,486	$74,915,676
72 - 84	Y	63	$134,077	$8,446,851
72 - 84	N	376	$130,347	$49,010,472
Total		1,510		**$177,528,910**

Source: Bus inventory and replacement cost from School Board of Broward County, April 23, 2010.

The total ancillary cost is the sum of facility, land acquisition and bus costs, as shown in Table 20. The total cost is divided by the current number of student stations to determine the ancillary capital cost per student station.

Table 20. Total Ancillary Cost per Student Station

Building Cost	$217,399,260
Land Cost	$46,370,555
Bus Fleet Cost	$177,528,910
Total Ancillary Cost	$441,298,725
÷ Permanent FISH Capacity at Existing Schools (excl. Centers)	245,368
Ancillary Capital Cost per Student	**$1,799**

Source: Building and land cost from Table 18; bus fleet cost from Table 19; regular public school enrollment from Table 36.

Capital Cost Summary

Table 21 provides a summary of the cost per student station, including the construction cost, land cost and ancillary facility cost. The total capital cost ranges from $23,141 per elementary school student to $32,491 per high school student.

Table 21. Total Capital Cost per Student Station

	Elem.	Middle	High
Construction Cost per Student	$19,622	$23,543	$28,972
School Land Cost per Student	$1,720	$1,720	$1,720
Ancillary Facility Cost per Student	$1,799	$1,799	$1,799
Total Capital Cost per Student	**$23,141**	**$27,062**	**$32,491**

Source: Construction cost per student station is adjusted State cap from Table 15; land cost from Table 17; ancillary cost from Table 20.

REVENUE CREDITS

In addition to paying school impact fees, new development will also pay for school facilities through its future contributions to other capital funding sources that will be used to pay for expanding school capacity. The impact fees will be reduced by the present value of those future contributions expected to be made over the next 25 years in order to ensure that new development is not charged twice for the same facilities.

Credit for future revenues, however, only needs to be given for funds that will be available for capacity-expanding improvements. As part of this update, the Board's official 5-year *District Education Facilities Plan* was examined to estimate the percent of future capital funding likely to be received by the School Board over the next 25 years that will be available to pay for capacity-expanding improvements.

Planned School Capital Expenditures

The capital expenditures and revenues anticipated by the School Board over the next five years, as set forth in the Board's five-year work program, are summarized in Table 22. No new capacity-expanding projects are planned. Non-earmarked recurring revenues, which consist primarily of the School Board's 1.50-mill Capital Improvements Tax, will be spent primarily on non-capacity improvements. However, 46.9% of non-earmarked recurring revenues will be spent on what has been labeled "capacity" improvements. Basically, this "capacity" expenditure consists of payment of outstanding debt on existing facilities. This is treated as a capacity expense because new development will receive a credit against the impact fees for the portion of the Capital Improvements Tax that is used for capacity. New development should get a credit for future payments to retire debt on existing facilities that are serving existing development, as discussed in the "Legal Framework" section of this report. As discussed earlier in this report, the interest portion of the debt service is not considered capacity, since it is not included in the cost calculations. Giving new development credit for the entire outstanding debt principal is somewhat generous, since some of the debt is attributable to existing excess capacity that is available to accommodate new students.

Table 22. Planned School Capital Expenditures and Revenues, FY 2011-2015

	Total	Capacity	Non-Capacity
Remodeling & Renovations	$8,817,000	$0	$8,817,000
Debt Service	$747,718,000	$469,417,360	$278,300,640
Indoor Air Quality	$18,095,000	$0	$18,095,000
Technology and Equipment	$5,406,000	$0	$5,406,000
Safety	$27,893,000	$0	$27,893,000
Capital Improvements	$85,305,000	$0	$85,305,000
ADA Compliance	$5,950,000	$0	$5,950,000
Vehicles	$5,107,000	$0	$5,107,000
Facility Leases	$14,591,000	$0	$14,591,000
Facilities/Capital Salaries (Formerly Capitalized Cost)	$80,367,000	$0	$80,367,000
Legal & Contingency	$14,637,000	$0	$14,637,000
Lease Payments (Tech/Vehicles)	$30,342,000	$19,048,708	$11,293,292
Maintenance Transfer	$227,300,000	$0	$227,300,000
PECO Charter Schools Transfer	$50,000,000	$0	$50,000,000
Property & Casualty Insurance	$22,400,000	$0	$22,400,000
Total Expenditures	$1,343,928,000	$488,466,068	$855,461,932
– Impact/Mitigation Fees and Interest	-$9,200,000	-$9,200,000	$0
– Miscellaneous Local	-$775,000	$0	-$775,000
– PECO - Construction	-$16,444,000	$0	-$16,444,000
– PECO - SSMA	-$81,694,000	$0	-$81,694,000
– PECO Charter Schools Capital Outlay	-$50,000,000	$0	-$50,000,000
– CO & DS Interest	-$6,053,000	$0	-$6,053,000
– COBI	-$2,000,000	$0	-$2,000,000
– FEMA	-$4,000,000	$0	-$4,000,000
– Sale of Land	-$10,000,000	$0	-$10,000,000
– Designated Reserve	-$141,858,000	$0	-$141,858,000
Paid with Non-Earmarked, Recurring Revenue	$1,021,904,000	$479,266,068	$542,637,932
Distribution of Non-Earmarked, Recurring Revenue	100.0%	**46.9%**	53.1%

Source: School Board of Broward County, *Adopted District Education Facilities Plan, FY 2010-2011 to 2014-2015*, August 2010; 37.22% of debt service and lease payments is attributable to interest (treated as non-capacity) based on debt service schedules.

State Funding Credit

The State of Florida provides limited funding for capital improvements. The two sources of regular annual State capital funding, Public Education Capital Outlay (PECO) and Capital Outlay and Debt Service (CO&DS), have diminished in recent years and are no longer significant sources of capital funding. PECO new construction revenues to school boards are actually the proceeds of bonds that are retired with revenue from a State surtax on telephone lines. Due to a decrease in phone lines caused by increased usage of cell phones and alternatives to dial-up internet access, among other trends, PECO funding is in decline. Since the total State funding is expected to decline in future years compared to recent years, the average State capital funding per student is based on the five years in the capital plan. Anticipated annual funding over the next five years is approximately $19 per student, as summarized in Table 23.

Table 23. Planned State Capital Funding, FY 2011-2015

	FY 2010/11	FY 2011/12	FY 2012/13	FY 2013/14	FY 2014/15	5-Year Avg.
Peco New Construction	$0	$698,000	$2,783,000	$7,664,000	$5,299,000	$3,288,800
CO&DS Interest	$1,211,000	$1,210,000	$1,211,000	$1,210,000	$1,211,000	$1,210,600
Total State Funding	$1,211,000	$1,908,000	$3,994,000	$8,874,000	$6,510,000	$4,499,400
÷ Enrollment	233,598	235,369	236,654	238,733	241,606	237,192
State Funding per Student	$5.18	$8.11	$16.88	$37.17	$26.94	**$18.97**

Source: Annual funding from School Board of Broward County, *Adopted District Education Facilities Plan, FY 2010-2011 to 2014-2015*, August 2010; FY 2010/2011 non-charter enrollment from SBBC, "Twentieth Day Enrollment Report – September 21, 2010;" enrollment projections from Table 36.

The State funding credit is based on the present value of the PECO and CO&DS funding per student. The total State capital funding over the next 25 years is the equivalent to a current payment of $289 per student, as shown in Table 24.

Table 24. State Funding Credit

Average Annual State Capital Funding per Student, FY 2010/11-2014/15	$18.97
x Present Value Factor (25 Years @ 4.24%)	15.23
State Funding Credit per Student	**$289**

Source: Average annual State capital funding per student from Table 23; net present value factor based on discount rate of 4.24%, which is average interest rate on state and local bonds for the last three months (June through August 2010) from the Federal Reserve at http://www.federalreserve.gov/releases/h15/data.htm.

Property Tax Credit

School boards in Florida are authorized to impose a maximum 1.50-mill property tax for capital improvements known as the Capital Improvement Tax (CIT). The maximum CIT property tax rate was reduced from 2.00 to 1.75 mills effective on July 1, 2008 as a result of a change in Florida State law. It was reduced again in 2009, from 1.75 to 1.50 mills. New residential developments that will send children to public schools will also pay the CIT. Therefore, it is necessary to calculate a credit to equitably reflect what new developments will pay toward their school capital needs through their CIT payments.

As noted earlier, credit needs to be provided only for CIT revenue that will be used for capacity-expanding improvements. Dividing the current year's revenue by current regular school enrollment yields an estimate of the annual revenue likely to be received per new student. Applying the percentage of capital funding available for capacity expansion yields the annual CIT capacity payment per student that can be expected from new development, as shown in Table 25.

Table 25. Annual Capital Improvement Tax per Student

2010/2011 CIT Millage and Interest	$200,440,000
÷ 2010/2011 Regular School Enrollment	233,598
Annual Capital Improvement Tax Revenue per Student	$858
x Percent of Capital Funding Available for Capacity Expansion	46.9%
Annual CIT Payments for Capacity per Student	**$402**

Source: 2010/2011 CIT millage and interest revenue from School Board of Broward County, *Adopted District Education Facilities Plan, FY 2010-2011 to 2014-2015*, August 2010; 2010/2011 non-charter enrollment from SBBC, "Twentieth Day Enrollment Report – September 21, 2010;" percent of capital funding available for capacity from Table 22.

State law caps increases in taxable value on homesteads at the Consumer Price Index (CPI) or 3 percent, whichever is lower. In recent years the CPI has been increasing at about 3 percent annually (although it actually declined from 2008 to 2009). To take into account that residential development will pay more in CIT capacity payments in future years due to appreciation of property value, despite recent property value declines, the annual contribution per student will be inflated at 3 percent annually, reflecting normal property value trends that generally mirror long-term appreciation rates. The anticipated stream of future tax revenues over the next 25 years is discounted to determine the net present value. As shown in Table 26, a credit of $8,379 per student is appropriate to account for future property tax payments.

Table 26. Capital Improvement Tax Credit

Year	CIT/Student
Year 1	$402
Year 2	$414
Year 3	$426
Year 4	$439
Year 5	$452
Year 6	$466
Year 7	$480
Year 8	$494
Year 9	$509
Year 10	$524
Year 11	$540
Year 12	$556
Year 13	$573
Year 14	$590
Year 15	$608
Year 16	$626
Year 17	$645
Year 18	$664
Year 19	$684
Year 20	$705
Year 21	$726
Year 22	$748
Year 23	$770
Year 24	$793
Year 25	$817
Total CIT Payments	$14,651
Net Present Value	**$8,379**

Source: Year 1 CIT capacity payment from Table 25; succeeding years inflated by 3% annually, which is the State cap on the annual increase in taxable value for homesteads; net present value based on discount rate of 4.24% (see notes to Table 24).

The final credit is for past payments of property taxes for vacant land. Prior to development, vacant land paid school property taxes that were used to construct existing capital improvements. One way to approximate the value of this contribution is to determine vacant land's share of total county-wide property value. This is multiplied by the percent of capacity expansion expenditures paid for with non-earmarked, recurring revenue sources, which is essentially the Capital Improvement Tax. This results in the percentage of the capital cost of schools that was paid for with property taxes from vacant land, as shown in Table 27.

Table 27. Past Property Tax Credit

Vacant/Agricultural Land as % of Total Taxable Value	2.55%
x Percent of Capital Funding Available for Capacity Expansion	46.9%
Past Payment Credit as % of Cost per Student	**1.20%**

Source: Vacant land as % of taxable value from Broward County Property Appraiser; percent of capital funding for capacity from Table 22.

Reducing the capital cost per student by the amount of the credit for anticipated State funding, the present value of future property taxes that will be paid by new residential development and available to fund capital improvements, and the credit for past property tax payments used for capital improvements results in a net cost ranging from $14,195 per elementary school student to $23,433 per high school student, as shown in Table 28.

Table 28. School Net Cost per Student

	Elem.	Middle	High
Capital Cost per Student	$23,141	$27,062	$32,491
– State Funding Credit per Student	-$289	-$289	-$289
– Future Property Tax Credit (CIT) per Student	-$8,379	-$8,379	-$8,379
– Past Payment Credit per Student (1.20%)	-$278	-$325	-$390
Net Capital Cost per Student	**$14,195**	**$18,069**	**$23,433**

Source: Capital cost per student from Table 21; State funding credit from Table 24; future property tax credit from Table 26; past payment credit based on percentage from Table 27 times capital cost per student.

UPDATED FEE SCHEDULE

The net cost per dwelling unit is the product of the number of public school students that, on average, can be expected to be generated from the type of unit and the net cost per student. The resulting net costs per dwelling unit represent the maximum school impact fees that can be justified based on the analysis contained in this study.

Two alternative maximum fee schedules are presented in this report. The potential fee schedule shown in Table 29 below is based on student generation rates that rely partially on national data for garden apartments, mid-rise and high-rise buildings. The housing categories highlighted in yellow are based on student generation rates entirely based on local Census data, while the categories highlighted in green have been adjusted using national ratios.

Table 29. Potential School Impact Fee Schedule (Some National Data)

	No. of	Student Generation Rates			Net Cost per Student			Net Cost/
Housing Type	Bedrooms	Elem.	Middle	High	Elem.	Middle	High	Unit
Single-Family	3 or fewer	0.152	0.082	0.108	$14,195	$18,069	$23,433	$6,170
Detached	4 or more	0.252	0.151	0.202	$14,195	$18,069	$23,433	$11,039
Townhouse/	1 or none	0.038	0.013	0.023	$14,195	$18,069	$23,433	$1,313
Duplex/Villa	2	0.145	0.064	0.078	$14,195	$18,069	$23,433	$5,042
	3 or more	0.223	0.112	0.143	$14,195	$18,069	$23,433	$8,540
Garden	1 or none	0.023	0.008	0.017	$14,195	$18,069	$23,433	$869
Apartment	2	0.085	0.036	0.046	$14,195	$18,069	$23,433	$2,935
	3 or more	0.218	0.113	0.152	$14,195	$18,069	$23,433	$8,698
Mid-Rise	1 or none	0.021	0.007	0.016	$14,195	$18,069	$23,433	$800
	2	0.066	0.028	0.035	$14,195	$18,069	$23,433	$2,263
	3 or more	0.155	0.080	0.108	$14,195	$18,069	$23,433	$6,177
High-Rise	1 or none	0.006	0.002	0.005	$14,195	$18,069	$23,433	$238
	2	0.055	0.023	0.029	$14,195	$18,069	$23,433	$1,876
	3 or more	0.128	0.066	0.089	$14,195	$18,069	$23,433	$5,095
Mobile Home	2 or fewer	0.061	0.016	0.027	$14,195	$18,069	$23,433	$1,788
	3 or more	0.209	0.148	0.208	$14,195	$18,069	$23,433	$10,515

Source: Students per unit from Table 12; net cost per student from Table 28.

The recommended fee schedule, which is based on student generation rates derived entirely from local data, is shown in Table 30. The housing categories highlighted in yellow rely on student generation rates based entirely on local Census data, while the categories highlighted in orange are based on local student generation rates derived from address-matching in the 2007 study. While both potential fee schedules are reasonable and may be legally defensible, the one below is most consistent with the State law requirement that impact fees be based on "the most recent and localized data."

Table 30. Potential School Impact Fee Schedule (All Local Data)

Housing Type	No. of Bedrooms	Student Generation Rates			Net Cost per Student			Net Cost/ Unit
		Elem.	Middle	High	Elem.	Middle	High	
Single-Family Detached	3 or fewer	0.152	0.082	0.108	$14,195	$18,069	$23,433	$6,170
	4 or more	0.252	0.151	0.202	$14,195	$18,069	$23,433	$11,039
Townhouse/ Duplex/Villa	1 or none	0.038	0.013	0.023	$14,195	$18,069	$23,433	$1,313
	2	0.145	0.064	0.078	$14,195	$18,069	$23,433	$5,042
	3 or more	0.223	0.112	0.143	$14,195	$18,069	$23,433	$8,540
Garden Apartment	1 or none	0.021	0.007	0.016	$14,195	$18,069	$23,433	$800
	2	0.082	0.035	0.044	$14,195	$18,069	$23,433	$2,827
	3 or more	0.209	0.108	0.145	$14,195	$18,069	$23,433	$8,316
Mid-Rise	1 or none	0.027	0.011	0.008	$14,195	$18,069	$23,433	$769
	2	0.027	0.011	0.008	$14,195	$18,069	$23,433	$769
	3 or more	0.027	0.011	0.008	$14,195	$18,069	$23,433	$769
High-Rise	1 or none	0.002	0.001	0.001	$14,195	$18,069	$23,433	$70
	2	0.002	0.001	0.001	$14,195	$18,069	$23,433	$70
	3 or more	0.002	0.001	0.001	$14,195	$18,069	$23,433	$70
Mobile Home	2 or fewer	0.061	0.016	0.027	$14,195	$18,069	$23,433	$1,788
	3 or more	0.209	0.148	0.208	$14,195	$18,069	$23,433	$10,515

Source: Students per unit from Table 13; net cost per student from Table 28.

The potential school impact fee schedule based entirely on local data is compared with the current fees in Table 31 (see also Figure 2). Since the current fees were only adopted at 75% of the maximum fees calculated in the previous 2007 study, the most appropriate comparison is with the updated fees at a similar 75% implementation. If the fees are adopted at 75%, they would go down for single-family detached, 1- and 2-bedroom garden apartments, mid-rise and high-rise units and small mobile homes. The fees would increase for single-family attached (townhouse/duplex/villa), 3-bedroom garden apartments and large mobile homes.

Table 31. Comparative School Impact Fees

Housing Type	No. of Bedrooms	Current Fee (75%)	Updated Fee (100%)	Change at 100%	Updated Fee (75%)	Change at 75%
Single-Family Detached	3 or fewer	$5,966	$6,170	$204	$4,628	-$1,339
	4 or more	$8,666	$11,039	$2,373	$8,279	-$387
Townhouse/ Duplex/Villa	1 or none	$433	$1,313	$880	$985	$552
	2	$2,020	$5,042	$3,022	$3,782	$1,762
	3 or more	$4,694	$8,540	$3,846	$6,405	$1,711
Garden Apartment	1 or none	$1,811	$800	-$1,011	$600	-$1,211
	2	$3,187	$2,827	-$360	$2,120	-$1,067
	3 or more	$4,197	$8,316	$4,119	$6,237	$2,040
Mid-Rise	1 or none	$771	$769	-$2	$577	-$194
	2	$771	$769	-$2	$577	-$194
	3 or more	$771	$769	-$2	$577	-$194
High-Rise	1 or none	$68	$70	$2	$53	-$16
	2	$68	$70	$2	$53	-$16
	3 or more	$68	$70	$2	$53	-$16
Mobile Home	2 or fewer	$2,675	$1,788	-$887	$1,341	-$1,334
	3 or more	$5,830	$10,515	$4,685	$7,886	$2,056

Source: Current fees effective June 2, 2010 from Broward County Code; updated fees from Table 30.

ELIGIBLE EXPENDITURES

Another challenge of this project is to justify the continued assessment of school impact fees, despite the fact that SBBC does not have any new capacity-expanding improvements (in terms of added student stations) in the current five-year work plan that was approved by the School Board in August 2010.

A comparison of enrollment and capacity trends since enrollment was at its peak in the 2004/2005 school year reveals that regular school enrollment and permanent capacity reached parity system-wide after the 2006/2007 school year, when the SBBC's schools had sufficient capacity to provide an overall ratio of one seat in a permanent facility per non-charter-school student (although some individual schools may have had excess permanent capacity or insufficient permanent capacity). As enrollment has continued to decline and as more capacity has been added since that time, SBBC now has a system-wide surplus of capacity in permanent buildings, as shown in Table 32.

Table 32. FISH Capacity and Enrollment, 2005-2010

School Year	Permanent FISH Capacity	Regular Students	Perm. Seats/ Student	Surplus
2004/05	263,791	254,776	na	na
2005/06	224,197	251,863	0.890	-27,666
2006/07	236,422	241,800	0.978	-5,378
2007/08	239,986	236,540	1.015	3,446
2008/09	246,283	232,448	1.060	13,835
2009/10	245,734	229,925	1.069	15,809
2010/11	245,368	227,694	1.078	17,674

* 2004/2005 capacities are not comparable to later years, since they were based on pre-Classroom Size Amendment standards
Note: Capacities and enrollment exclude centers, which serve adults as well as K-12 students
Source: SBBC, 20th-Day Enrollment Reports, September 21, 2010.

In the previous section, student generation rates were calibrated to current (2010) conditions. This is likely to be conservative in terms of calculating impact fees to reflect the long-term impact of new development, as today's high vacancy rates are likely to decline to more normal, long-term levels, resulting in an increase in student generation rates in the future. Nevertheless, to the extent that the impact fees will be based on current student generation rates, there is excess capacity to accommodate future growth in enrollment due to new development.

All of the current excess capacity, which amounts to 17,674 permanent student stations, is technically available to accommodate future growth. However, since student generation rates and vacancy rates will begin to return to normal as a larger cohort reaches school age and the economy and housing market improve, some of the current excess will be filled by students from existing housing. However, about 30% of the current excess capacity, amounting to 5,382 student stations, has been built since the 2007/2008 school year, when permanent capacity exceeded enrollment, and has, in effect, never been occupied. It would be reasonable to consider that the capacity added since 2007/2008 has been built in anticipation of growth.

Most of SBBC's major capital projects are funded with some form of long-term obligation, primarily Certificates of Participation (COPs). These obligations are retired using a combination of proceeds

from the Capital Improvements Tax, a dedicated property tax for capital improvements, and impact fees. Since most of the recent school construction was funded with debt, the current excess capacity is still mostly unpaid for. Consequently the impact fees could be used to pay the debt service for the portion of existing excess capacity that has been built in anticipation of growth.

Capacity-expanding projects completed in 2009 can reasonably be said to have been built for future growth. The 2009 projects that were funded in whole or in part with certificates of participation (COPs) added 4,778 new student stations, as summarized in Table 33. Current outstanding debt on these growth-serving projects totals $92.1 million. Even in Benefit Zone D, which has the least amount of impact fee-eligible debt, it would take almost 10 years of impact fee revenue at current rates to retire the outstanding principal. Clearly, there is plenty of eligible debt that could be retired with impact fees in all four benefit districts.

Table 33. Impact Fee Eligible Debt

School Name	Compl. Date	New Capacity	COPs Issue	Purpose	Original Debt Issue	Outstanding Debt
Heron Heights Elem	Jul-09	942	2005-B	Construction	$16,455,623	$16,455,623
Heron Heights Elem	Jul-09	n/a	2008-A	Construction	$11,757,692	$11,757,692
Heron Heights Elem	Jul-09	n/a	2005-B	Land	$5,025,833	$5,025,833
Tradewinds Elem	Apr-09	480	2007-A	Construction	$6,117,952	$5,605,851
Stoneman Douglas High	Apr-09	900	2007-A	Construction	$13,990,048	$12,819,015
Subtotal, Zone A		2,322			$53,347,148	$51,664,014
Discovery Elem	Jul-09	942	2005-B	Construction	$8,448,496	$8,448,496
Discovery Elem	Jul-09	n/a	2008-A	Construction	$21,003,289	$21,003,289
Subtotal, Zone B		942			$8,448,496	$8,448,496
Nova Middle	Aug-09	374	2005-A	Construction	$5,832,317	$4,962,753
Western High	Aug-09	900	2008-A	Construction	$26,615,392	$26,615,392
Subtotal, Zone C		1,274			$32,447,709	$31,578,145
Pines Lakes Elem	Aug-09	240	2009-A	Construction	$452,479	$452,479
Subtotal, Zone D		240			$452,479	$452,479
Total		4,778			$94,695,832	$92,143,134

Source: SBBC, Capital Budget Department, September 24, 2010.

The lack of near-term capacity needs may lead some to question the need for school impact fees. However, as the District's five-year capital plan makes clear, there is a great need for capital improvement funding. The Legislature cut the school capital improvement property tax rate from 2.00 to 1.50 mills just as property values began to plummet, resulting in the deferral of $1.8 billion in needed capital projects. While these projects are related to non-capacity needs, the ability to use impact fee money to help retire some of the debt service attributable to growth will free up other capital revenue for non-growth-related needs.

RECOMMENDATIONS

The following recommendations are offered relative to the findings of this study and the preparation of subsequent studies.

- Base the updated student generation rates on the most recent and most accurate local data available. This means basing the rates for single-family detached, townhouse/duplex/villa, garden apartment and mobile home housing types on 2006-2008 U.S. Census microdata, and basing the rates for mid-rise and high-rise housing types on the 2007 address-matching study. The recommended student generation rates can be found in Table 13. Amend the Broward County Land Development Code to reflect the updated student generation rates.

- As part of the next update, develop more accurate local student generation rates for mid-rise and high-rise housing using the address-matching technique with a 100% sample of all mid-rise and high-rise buildings in the county, if possible. The student generation rates for other housing types should be based on U.S. Census microdata, as was done in this update.

- Include the cost of ancillary facilities in the cost calculations, as has been done in this report. Amend the Broward County Land Development Code to specifically allow the percentage of the fee associated with ancillary facilities (6.7%) to be spent outside the benefit district on such facilities.

- Base the updated school impact fees on the recommended local student generation rates and the cost and credit analysis contained in this report. This means that the fees should be based on a percentage, up to 100%, of the updated maximum fees shown in Table 30. Amend the Broward County Land Development Code to reflect the updated fees.

APPENDIX

Table 34. Total and School-Age Population, Broward County, 2000-2035

	Total Population		Population Change	
Year	Total	6-18 yrs.	Total	6-18 yrs.
2000	1,623,018	276,890		
2001	1,649,688	284,067	26,670	7,177
2002	1,668,970	287,739	19,282	3,672
2003	1,698,741	292,285	29,771	4,546
2004	1,723,339	295,030	24,598	2,745
2005	1,739,487	289,765	16,148	-5,265
2006	1,748,153	285,195	8,666	-4,570
2007	1,753,272	280,531	5,119	-4,664
2008	1,756,087	278,387	2,815	-2,144
2009	1,762,285	274,929	6,198	-3,458
2010	1,772,060	274,883	9,775	-46
2011	1,785,667	276,576	13,607	1,693
2012	1,803,223	279,982	17,556	3,406
2013	1,824,846	284,899	21,623	4,917
2014	1,850,613	291,236	25,767	6,337
2015	1,876,261	298,142	25,648	6,906
2016	1,901,796	305,536	25,535	7,394
2017	1,927,112	313,430	25,316	7,894
2018	1,952,092	321,679	24,980	8,249
2019	1,976,697	329,650	24,605	7,971
2020	2,000,888	336,861	24,191	7,211
2021	2,024,613	343,319	23,725	6,458
2022	2,047,859	349,428	23,246	6,109
2023	2,070,660	355,327	22,801	5,899
2024	2,092,905	360,798	22,245	5,471
2025	2,114,586	365,580	21,681	4,782
2026	2,135,708	369,525	21,122	3,945
2027	2,156,255	372,684	20,547	3,159
2028	2,176,221	375,317	19,966	2,633
2029	2,195,601	377,717	19,380	2,400
2030	2,214,420	379,983	18,819	2,266
2031	2,232,475	382,178	18,055	2,195
2032	2,249,867	384,343	17,392	2,165
2033	2,266,586	386,484	16,719	2,141
2034	2,282,617	388,583	16,031	2,099
2035	2,298,006	390,619	15,389	2,036

Source: Broward County Planning and Redevelopment Division, *Broward County Population, 2000 through 2035*, December 2008.

Table 35. Housing and Demographic Trends, Broward County, 2000-2030

Year	Total Households	Vacant Units	Total Units	Annual Growth	Vacancy Rate	6-18 Year Olds Number	6-18 Year Olds per HH
2000	654,445	86,598	741,043		11.7%	276,890	0.423
2001	657,069	96,589	753,658	12,615	12.8%	284,067	0.432
2002	661,154	104,110	765,264	11,606	13.6%	287,739	0.435
2003	669,088	107,177	776,265	11,001	13.8%	292,285	0.437
2004	674,308	110,299	784,607	8,342	14.1%	295,030	0.438
2005	677,038	116,600	793,638	9,031	14.7%	289,765	0.428
2006	677,023	122,110	799,133	5,495	15.3%	285,195	0.421
2007	675,978	128,735	804,713	5,580	16.0%	280,531	0.415
2008	674,597	134,089	808,686	3,973	16.6%	278,387	0.413
2009	674,672	136,514	811,186	2,500	16.8%	274,929	0.408
2010	676,125	137,561	813,686	2,500	16.9%	274,883	0.407
2011	678,872	137,314	816,186	2,500	16.8%	276,576	0.407
2012	683,205	135,666	818,871	2,685	16.6%	279,982	0.410
2013	689,205	134,347	823,552	4,681	16.3%	284,899	0.413
2014	696,722	133,358	830,080	6,528	16.1%	291,236	0.418
2015	704,490	132,656	837,146	7,066	15.8%	298,142	0.423
2016	712,275	131,828	844,103	6,957	15.6%	305,536	0.429
2017	719,992	130,832	850,824	6,721	15.4%	313,430	0.435
2018	727,628	129,657	857,285	6,461	15.1%	321,679	0.442
2019	735,163	128,307	863,470	6,185	14.9%	329,650	0.448
2020	742,674	126,784	869,458	5,988	14.6%	336,861	0.454
2021	749,986	125,108	875,094	5,636	14.3%	343,319	0.458
2022	757,143	123,257	880,400	5,306	14.0%	349,428	0.462
2023	764,273	121,248	885,521	5,121	13.7%	355,327	0.465
2024	771,311	119,110	890,421	4,900	13.4%	360,798	0.468
2025	778,377	116,841	895,218	4,797	13.1%	365,580	0.470
2026	785,368	114,468	899,836	4,618	12.7%	369,525	0.471
2027	792,311	111,985	904,296	4,460	12.4%	372,684	0.470
2028	799,170	109,405	908,575	4,279	12.0%	375,317	0.470
2029	806,631	106,733	913,364	4,789	11.7%	377,717	0.468
2030	812,711	104,067	916,778	3,414	11.4%	379,983	0.468

Source: Broward County Planning and Redevelopment Division, *Broward County Population, 2000 through 2035*, December 2008.

Table 36. Public School Enrollment, 1990-2016

School Year	Regular	Charter	Total
1989/1990	149,096	0	149,096
1990/1991	160,757	0	160,757
1991/1992	169,878	0	169,878
1992/1993	179,975	0	179,975
1993/1994	189,600	0	189,600
1994/1995	198,690	0	198,690
1995/1996	207,345	0	207,345
1996/1997	217,218	0	217,218
1997/1998	223,633	0	223,633
1998/1999	230,552	0	230,552
1999/2000	236,087	3,873	239,960
2000/2001	244,147	5,776	249,923
2001/2002	252,212	8,680	260,892
2002/2003	254,888	11,384	266,272
2003/2004	258,884	12,455	271,339
2004/2005	259,130	13,561	272,691
2005/2006	255,799	15,136	270,935
2006/2007	246,516	16,100	262,616
2007/2008	241,783	17,122	258,905
2008/2009	237,040	18,698	255,738
2009/2010	234,601	20,602	255,203
2010/2011	233,598	23,274	256,872
2011/2012	233,377	23,274	256,651
2012/2013	233,593	23,274	256,867
2013/2014	233,801	23,274	257,075
2014/2015	234,840	23,274	258,114
2015/2016	236,091	23,274	259,365

Source: School Board of Broward County, historical enrollment from http://www.broward.k12.fl.us/schoolboundaries/EnrollmentCounts.shtml; projections from *2011-12 Through 2015-16 Enrollment Projections Report*, October 2010.

Table 37. Student Generation Rate Trends, Broward County, 2000-2009

Year	School Year	Enrollment	Housing Units	Households	Students/ Unit	Students/ Household
2000	2000/2001	244,147	741,043	654,445	0.329	0.373
2001	2001/2002	252,212	753,658	657,069	0.335	0.384
2002	2002/2003	254,888	765,264	661,154	0.333	0.386
2003	2003/2004	258,884	776,265	669,088	0.333	0.387
2004	2004/2005	259,130	784,607	674,308	0.330	0.384
2005	2005/2006	255,799	793,638	677,038	0.322	0.378
2006	2006/2007	246,516	799,133	677,023	0.308	0.364
2007	2007/2008	241,783	804,713	675,978	0.300	0.358
2008	2008/2009	237,040	808,686	674,597	0.293	0.351
2009	2009/2010	234,601	811,186	674,672	0.289	0.348
2010	2010/2011	233,598	813,686	676,125	0.287	0.345

Source: SBBC 20th day (September) regular public school enrollment from Table 36; Broward County housing units and households from Table 35.

Table 38. Enrollment Trends, Broward County, 1990-2007

	1990	2000	2007
Pre-K to 12 Students (Census)	263,576	324,646	334,302
Public School Students (Census)	209,914	267,863	273,436
Private School Students (Census)	53,662	56,783	60,866
Percent in Private School	20.4%	17.5%	18.2%
Regular Public School Enrollment (SBBC)	160,757	244,147	241,783
Occupied Housing Units (Households)	528,442	654,445	675,978
Regular Public School Students per Household	0.304	0.373	0.365

Source: Census enrollment data for Broward County from U.S. Census Bureau PUMS 5% samples for 1990 and 2000; "2007" data is 3% sample data from the American Community Survey for 2006-2008; SBBC enrollment data from Table 36; Broward County households from Table 35.

Table 39. Students per Household by Housing Vintage, Broward County, 1990 Census

Housing Type	No. of Bedrooms	All Units	Vintage of Housing Unit					
			2000s	1990s	1980s	1970s	1960s	1950s
Single-Family	3 or fewer	0.401			0.440	0.426	0.399	0.359
Detached	4 or more	0.804			0.882	0.910	0.471	0.638
Single-Family	1 or none	0.307						
Attached,	2	0.224			0.163	0.248	0.338	
Duplex	3 or more	0.583			0.589	0.546		
	1 or none	0.090			0.108	0.074	0.073	0.175
Multi-Family	2	0.147			0.154	0.119	0.194	
	3 or more	0.447			0.522	0.361		
Mobile Home	2 or fewer	0.062			0.114	0.057	0.038	
	3 or more	0.390				0.443		
All Types	All BRs	0.294			0.317	0.265	0.288	0.340

Source: U.S. Census, 1990 5% Public Use Microdata Sample for Broward County, students defined as persons enrolled in public school and without a high school diploma, no data shown for samples smaller than 100 households.

Table 40. Students per Household by Housing Vintage, Broward County, 2000 Census

Housing Type	No. of Bedrooms	All Units	Vintage of Housing Unit					
			2000s	1990s	1980s	1970s	1960s	1950s
Single-Family	3 or fewer	0.489		0.513	0.536	0.521	0.507	0.414
Detached	4 or more	0.790		0.813	0.830	0.765	0.722	0.766
Single-Family	1 or none	0.428			0.527	0.450	0.351	
Attached,	2	0.363		0.313	0.284	0.370	0.567	0.460
Duplex	3 or more	0.635		0.565	0.581	0.722		
	1 or none	0.138		0.146	0.157	0.128	0.118	0.164
Multi-Family	2	0.234		0.266	0.210	0.202	0.250	0.485
	3 or more	0.717		0.819	0.810	0.488		
Mobile Home	2 or fewer	0.179		0.228	0.122	0.202		
	3 or more	0.540						
All Types	All BRs	0.408		0.516	0.396	0.348	0.401	0.420

Source: U.S. Census, 2000 5% Public Use Microdata Sample for Broward County, students defined as persons enrolled in public school grades pre-K through 12; no data shown for samples smaller than 100 households.

Table 41. Students per Household by Housing Vintage, Broward County, 2006-08 ACS

Housing Type	No. of Bedrooms	All Units	Vintage of Housing Unit					
			2000s	1990s	1980s	1970s	1960s	1950s
Single-Family	3 or fewer	0.440	0.463	0.520	0.476	0.440	0.451	0.360
Detached	4 or more	0.753	0.848	0.818	0.632	0.729	0.673	0.557
Single-Family	1 or none	0.105						
Attached,	2	0.373	0.313	0.271	0.238	0.449	0.646	
Duplex	3 or more	0.625	0.541	0.616	0.595	0.690		
	1 or none	0.072	0.093	0.045	0.064	0.075	0.060	0.101
Multi-Family	2	0.259	0.307	0.291	0.218	0.257	0.282	0.298
	3 or more	0.677	0.756	0.648	0.577	0.726		
Mobile Home	2 or fewer	0.178				0.193		
	3 or more	0.789						
All Types	All BRs	0.406	0.543	0.532	0.353	0.358	0.385	0.352

Source: U.S. Census, 2006-2008 3% American Community Survey microdata for Broward County, students defined as persons enrolled in public school grades pre-K through 12, no data shown for samples smaller than 100 households.

Table 42. Existing School Inventory

Facility Name	Grade Level	Land (Acres)	Permanent Capacity	Regular Enrollment
Atlantic West	Elementary	8.00	759	747
Banyan	Elementary	10.00	747	743
Bayview	Elementary	1.84	500	551
Bennett	Elementary	8.20	542	396
Bethune, Mary M.	Elementary	18.02	1,085	689
Boulevard Heights	Elementary	10.00	812	827
Broadview	Elementary	10.00	926	970
Broward Estates	Elementary	10.00	691	623
Broward Virtual Educ. Elem.	Elementary	n/a	n/a	70
Castle Hill	Elementary	9.20	515	595
Central Park	Elementary	13.06	939	1,146
Challenger	Elementary	8.00	1,000	851
Chapel Trail	Elementary	10.00	1,054	927
Coconut Creek	Elementary	10.40	737	845
Coconut Palm	Elementary	12.00	820	1,047
Colbert	Elementary	10.00	812	590
Collins	Elementary	10.31	371	349
Cooper City	Elementary	10.00	701	711
Coral Cove	Elementary	12.00	830	837
Coral Park	Elementary	11.04	705	598
Coral Springs	Elementary	11.36	907	677
Country Hills	Elementary	14.96	831	857
Country Isles	Elementary	9.20	980	938
Cresthaven	Elementary	9.60	705	546
Croissant Park	Elementary	12.00	802	712
Cypress	Elementary	12.62	873	788
Dania	Elementary	7.28	569	443
Davie	Elementary	14.18	741	692
Deerfield Beach	Elementary	13.50	743	757
Deerfield Park	Elementary	10.60	805	618
Dillard	Elementary	9.62	759	674
Discovery (A)	Elementary	14.34	942	849
Dolphin Bay	Elementary	12.00	830	851
Drew	Elementary	15.10	579	622
Driftwood	Elementary	10.00	558	644
Eagle Point	Elementary	12.00	1,228	1,176
Eagle Ridge	Elementary	12.00	872	773
Embassy Creek	Elementary	13.87	1,087	955
Endeavour Primary Learning Ctr	Elementary	13.18	468	406
Everglades	Elementary	10.10	1,060	1,033
Fairway	Elementary	11.40	970	914
Flamingo	Elementary	14.50	613	743
Floranada	Elementary	10.70	814	700
Forest Hills	Elementary	8.50	795	590
Foster, Stephen	Elementary	9.00	743	624
Fox Trail	Elementary	26.00	1,178	1,240
Gator Run	Elementary	12.00	1,140	1,270
Griffin	Elementary	10.00	615	540
Hallandale	Elementary	14.00	974	1,106

Table 42 Continued.

Facility Name	Grade Level	Land (Acres)	Permanent Capacity	Regular Enrollment
Harbordale	Elementary	4.50	480	399
Hawkes Bluff	Elementary	14.97	852	873
Heron Heights (Z)	Elementary	12.00	942	818
Hollywood Central	Elementary	7.00	687	600
Hollywood Hills	Elementary	12.00	768	738
Hollywood Park	Elementary	12.00	593	440
Horizon	Elementary	8.00	663	555
Hunt, James	Elementary	12.70	841	881
Indian Trace	Elementary	10.00	669	708
King, Martin Luther	Elementary	11.49	809	410
Lake Forest	Elementary	13.00	714	877
Lakeside	Elementary	12.00	744	858
Larkdale	Elementary	10.00	623	385
Lauderdale Manors	Elementary	13.00	1,048	555
Lauderhill, Paul Turner	Elementary	11.00	872	560
Liberty	Elementary	11.81	1,260	1,042
Lloyd Estates	Elementary	8.15	593	476
Manatee Bay	Elementary	12.03	1,140	1,235
Maplewood	Elementary	9.71	813	754
Margate	Elementary	10.69	1,305	1,086
Markham, Robert C	Elementary	9.10	637	561
Marshall, Thurgood	Elementary	8.20	745	356
McNab	Elementary	10.00	677	797
Meadowbrook	Elementary	14.78	706	590
Miramar	Elementary	10.50	929	945
Mirror Lake	Elementary	13.30	625	574
Morrow	Elementary	9.65	831	553
Nob Hill	Elementary	10.30	723	686
Norcrest	Elementary	8.00	921	809
North Andrews Gardens	Elementary	10.00	813	840
North Fork	Elementary	9.68	713	406
North Lauderdale	Elementary	13.00	948	625
North Side	Elementary	3.98	608	447
Nova, Blanche Forman	Elementary	10.00	774	767
Nova D Eisenhower	Elementary	10.00	777	777
Oakland Park	Elementary	7.55	828	573
Oakridge	Elementary	8.30	605	718
Orange Brook	Elementary	8.57	830	848
Oriole	Elementary	10.00	722	694
Palm Cove	Elementary	0.00	871	926
Palmview	Elementary	9.90	665	604
Panther Run	Elementary	12.00	778	686
Park Lakes	Elementary	14.80	1,214	1,200
Park Ridge	Elementary	10.00	546	400
Park Springs	Elementary	12.00	1,201	981
Park Trails	Elementary	12.00	1,276	871
Parkside	Elementary	0.00	980	817
Pasadena Lakes	Elementary	10.00	742	763
Pembroke Lakes	Elementary	7.50	653	690

Table 42 Continued.

Facility Name	Grade Level	Land (Acres)	Permanent Capacity	Regular Enrollment
Pembroke Pines	Elementary	9.60	599	613
Perry, Annabel C	Elementary	10.20	899	725
Peters	Elementary	11.30	629	645
Pines Lakes	Elementary	10.00	927	795
Pinewood	Elementary	9.99	836	765
Plantation	Elementary	12.01	814	621
Plantation Park	Elementary	10.00	579	514
Pompano Beach	Elementary	19.95	571	589
Quiet Waters	Elementary	22.72	1,366	1,414
Ramblewood	Elementary	10.00	985	908
Riverglades	Elementary	10.00	669	618
Riverland	Elementary	9.47	633	598
Riverside	Elementary	10.17	731	761
Rock Island	Elementary	12.00	580	672
Royal Palm	Elementary	14.68	874	754
Sanders Park	Elementary	12.00	661	506
Sandpiper	Elementary	14.11	909	774
Sawgrass	Elementary	12.60	1,184	952
Sea Castle	Elementary	12.00	1,091	923
Sheridan Hills	Elementary	7.00	607	584
Sheridan Park	Elementary	12.90	810	644
Silver Lakes	Elementary	12.00	778	743
Silver Palms	Elementary	14.00	806	816
Silver Ridge	Elementary	13.32	882	976
Silver Shores	Elementary	12.00	820	674
Stirling	Elementary	9.44	701	677
Sunland Park	Elementary	4.20	517	308
Sunset Lakes	Elementary	12.00	1,300	1,026
Sunshine	Elementary	8.98	803	805
Tamarac	Elementary	8.28	1,290	1,173
Tedder	Elementary	11.79	1,240	770
Tradewinds	Elementary	4.88	1,214	1,074
Tropical	Elementary	10.30	943	930
Village	Elementary	11.33	870	759
Walker	Elementary	9.50	1,017	599
Watkins	Elementary	10.00	814	763
Welleby	Elementary	12.50	791	811
West Hollywood	Elementary	11.10	597	612
Westchester	Elementary	10.00	1,038	1,156
Westwood Heights	Elementary	9.00	783	594
Wilton Manors	Elementary	7.58	615	596
Winston Park	Elementary	12.40	1,191	1,215
Young, Virginia Shuman	Elementary	8.39	687	724
Total - Elementary		**1,510.53**	**115,132**	**104,780**

Table 42 Continued.

Facility Name	Grade Level	Land (Acres)	Permanent Capacity	Regular Enrollment
Apollo	Middle	14.92	1,241	938
Ashe, Jr Arthur Robert	Middle	20.00	1,052	652
Attucks	Middle	28.22	1,227	895
Bair	Middle	10.00	1,198	978
Broward Virtual Educ. Middle	Middle	n/a	n/a	121
Coral Springs	Middle	22.84	1,899	1,746
Crystal Lake	Middle	14.50	1,343	1,427
Dandy, William	Middle	19.00	1,133	991
Deerfield Beach	Middle	32.50	1,443	1,188
Driftwood	Middle	22.00	1,670	1,552
Falcon Cove	Middle	21.43	1,319	2,463
Forest Glen	Middle	20.00	1,625	1,515
Glades	Middle	20.00	1,842	1,821
Gulfstream Middle	Middle	7.00	634	334
Indian Ridge	Middle	26.35	1,718	2,123
Lauderdale Lakes	Middle	14.40	941	901
Lauderhill	Middle	22.00	1,024	586
Lyons Creek	Middle	14.40	1,858	2,056
Margate	Middle	22.93	1,334	1,047
McNicol	Middle	12.73	1,323	707
Millennium	Middle	12.59	1,618	1,725
New Renaissance	Middle	20.00	1,547	1,372
New River	Middle	17.50	1,374	1,322
Nova	Middle	14.00	1,245	1,281
Olsen	Middle	20.00	1,698	1,122
Parkway	Middle	15.00	1,670	1,160
Perry, Henry D	Middle	20.00	1,148	815
Pines	Middle	20.76	1,769	1,754
Pioneer	Middle	24.85	1,175	1,412
Plantation	Middle	22.00	1,385	949
Pompano Beach	Middle	13.82	1,037	1,109
Ramblewood	Middle	17.00	1,346	1,563
Rickards, James	Middle	13.30	1,069	880
Sawgrass Springs	Middle	20.42	1,216	1,305
Seminole	Middle	20.70	1,238	1,286
Silver Lakes	Middle	19.99	1,097	451
Silver Trail	Middle	22.45	1,445	1,666
Sunrise	Middle	18.63	1,245	1,124
Tequesta Trace	Middle	23.00	1,364	1,547
Westglades	Middle	24.00	1,449	1,524
Westpine	Middle	18.40	1,312	1,389
Young Walter C	Middle	0.00	1,436	1,488
Total - Middle		**763.63**	**55,707**	**52,285**

Table 42 Continued.

Facility Name	Grade Level	Land (Acres)	Permanent Capacity	Regular Enrollment
Anderson, Boyd	High	31.60	2,805	2,093
Atlantic Tech. (bldg 24, bldg 18)*	High	n/a	566	595
Broward Virtual Educ. High	High	n/a	n/a	214
Coconut Creek	High	40.00	2,100	2,028
College Academy at BCC	High	n/a	n/a	349
Cooper City	High	35.15	2,543	2,259
Coral Glades	High	0.00	2,637	2,290
Coral Springs	High	37.05	2,897	2,319
Cypress Bay	High	45.00	3,312	4,099
Deerfield Beach	High	40.34	2,349	2,402
Dillard	High	51.68	2,738	1,498
Ely, Blanche	High	38.73	3,473	1,947
Everglades	High	45.00	2,457	2,802
Flanagan, Charles W	High	45.00	2,298	3,241
Fort Lauderdale	High	27.78	2,633	1,811
Hallandale	High	31.10	1,639	1,507
Hollywood Hills	High	30.00	2,216	1,855
McArthur	High	40.00	2,216	2,117
McFatter, William Tech. (bldg 3,4)*	High	n/a	566	591
Miramar	High	37.80	2,570	2,760
Monarch	High	45.00	2,122	2,123
Northeast	High	51.60	2,318	2,196
Nova	High	50.74	1,548	2,233
Piper	High	30.00	2,576	2,667
Plantation	High	35.00	2,647	2,166
Pompano Beach Inst of Int'l Studies	High	17.99	1,139	1,271
South Broward	High	24.72	2,289	2,085
South Plantation	High	31.60	2,327	2,371
Stoneman Douglas	High	45.00	3,082	3,176
Stranahan	High	38.00	2,375	1,730
Taravella, J P	High	30.70	3,381	3,009
West Broward	High	42.96	2,755	2,695
Western	High	40.00	3,208	3,008
Total - Sr High		**1,059.54**	**73,782**	**69,507**
Beachside Montessori Village (K-8)			747	650
Harbordale Agency Schools			n/a	472
District Totals (excl. centers/charters)		**3,333.70**	**245,368**	**227,694**

* K-12 student in centers that also include adults

Source: Acres of land (excludes leased sites) from SBBC, Facility Management, Planning & Site Acquisition, "School Board Sites - Property Values as of 6/30/2009;" permanent FISH capacity and regular enrollment (excluding centers) from SBBC, "Twentieth Day Enrollment – September 21, 2010."