



DISTRICT OF COLUMBIA

DC PUBLIC SCHOOLS MASTER FACILITIES PLAN

DEMOGRAPHICS



DEMOGRAPHICS AND DATA

Introduction

The demographic trends that drive changes in school enrollment at the citywide, neighborhood, and school levels are a critical component of a logical approach to facilities planning. Traditionally in the District of Columbia, a relatively limited set of questions were sufficient to develop reasonable projections of school enrollment for the purpose of school facility planning:

- What are the overall citywide population trends, reflecting migration and birth rates?
- What are the trends in the proportion of school-age children within the general population and by area of the city?
- What are the likely implications of new and planned housing, vis-à-vis number of school- age children in a particular community?
- What are the trends in public school versus private school enrollment?

While this projection exercise has never been an exact science, the current environment drastically complicates such an analysis.

The population and housing data presented below set the basic parameters for student enrollment projections. Perhaps more importantly, however, this section goes on to outline the existing complex context of tri-sector school reform that muddles enrollment projections. The bottom line conclusion that follows is simple, if not satisfying. The difficulty of accurately predicting enrollment at particular facilities necessitates a flexible and iterative facilities planning process. We will need to reassess school-level trends on a regular basis and adjust facilities plans accordingly, including entertaining new and creative ways of utilizing space.

Methodology for Demographic Projections

A modified cohort component (survival) method was used to develop the demographic projections. The cohort component method is one of the most common methods of projecting changes in population. The District population was divided into distinct five-year increment age groups or "cohorts": age 0 to 4, 5 to 9, 10 to 14, etc. Due to the small size of the final cohort, persons age 85 and over are considered as one cohort. Using a combination of the annual fertility and mortality rates for each cohort, the population was "aged" each year throughout the planning period. This was done for a period extending to 2018 for purposes of this plan. Longer periods can be used with the understanding that reliability decreases as the length of the planning period is increased. The fertility

and mortality rates were obtained from the U.S. Department of Health and Human Services through the National Center for Health Statistics (NCHS). These vital statistics are initially from the District of Columbia through the Department of Health and are published by the NCHS.

Population changes are also affected by migration into and out of the area. Traditionally, this is the most difficult factor to assess. A first step was the incorporation of local housing data into the population projection model. However, housing statistics alone do not tell the whole story. In established areas there is often a demographic shift exhibited as older "empty nesters" relocate to alternative housing. They tend to sell or move from larger homes or housing units where they raised their families. Families with young children, or "DINKS" (Dual Income No Kids) who are planning on starting a family, move in, thus beginning a "recycling" of the housing stock.

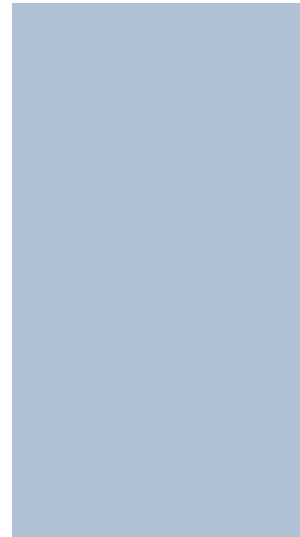
Another macro-level source of data is the Internal Revenue Service. The IRS codes the individual income tax returns by the social security number of the primary filer. The code establishes the location of the home from which the return was filed. The following year, the location code of the primary filer is compared to the previous year's location code. Tables of outflows and inflows by county for each state are developed. This represents macro-level data that is useful for spotting general migration trends.

The population projection developed as part of the 2008 Master Facilities Plan is one of many projections produced by a variety of sources. As the graph below illustrates, there is significant agreement among the various sources. At the same time, the differences underline the subjective element - and therefore imprecision - inherent in these kinds of projections. The following projections are compared in the graph below:

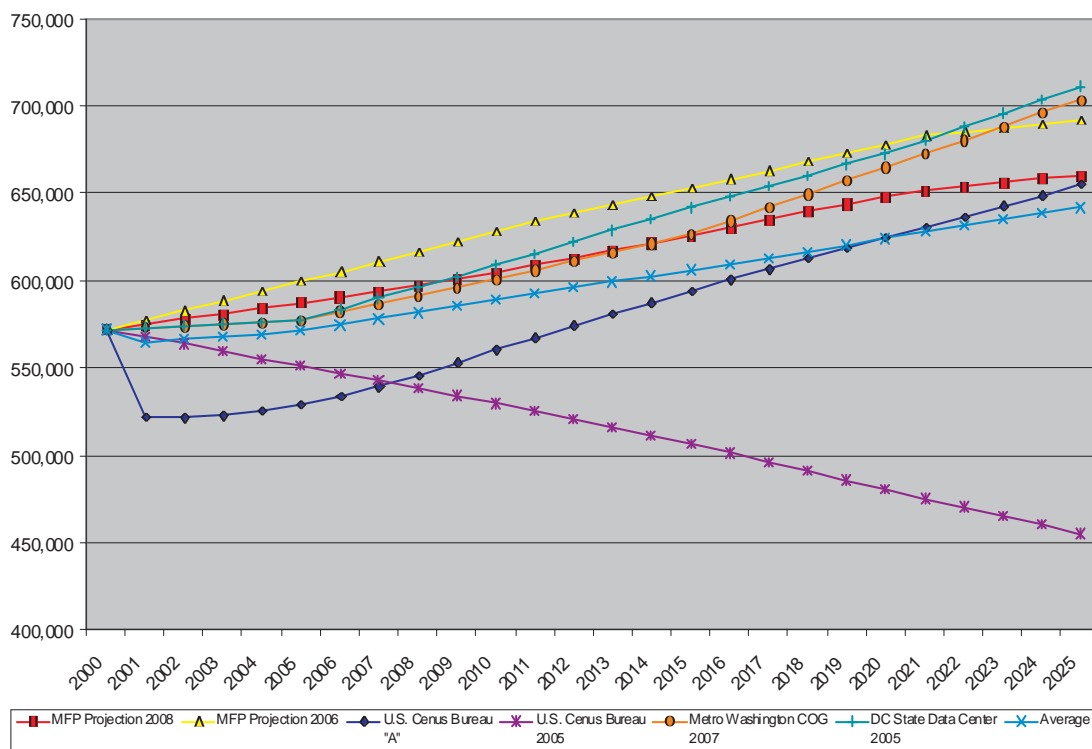
- Master Facility Plan 2008 - This is the projection used in this plan. It takes into account birth and migration rates as well as housing data, which considers new and planned housing by type.
- Master Facility Plan 2006 - The projection that was developed as part of the previous master plan.
- U.S. Census Bureau "A" - The most often referred to source is the U.S. Census Bureau. The Bureau publishes a "components of change" table for each state. This table estimates and projects the number of births, deaths, in-migration, and out-migration annually for each state. The most often referred to section is "A," which is a time-series projection. The projected population is derived by adding the births and in-migration and subtracting the deaths and out-migration.

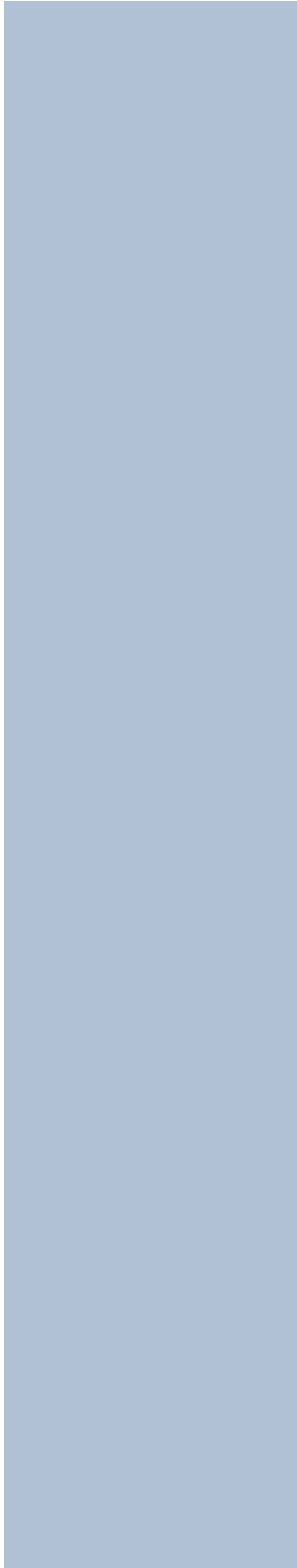


- U.S. Census Bureau 2005 - This is the interim population projection that was released in July 2005. It does not detail the components of change that the previous projection provides and is based on older data. The deviation between this projection and the other, new projections serves to illustrate the impact that the renewed housing boom is having on the District population.
- Metro Washington COG 2007 - This is a projection done last year by the Council of Governments.
- DC State Data Center 2005 - A projection done three years ago with the benefit of the latest housing information.



COMPARISON OF POPULATION PROJECTIONS





Year	Population	
2000	572,059	Actual
2001	574,977	MFP Estimate
2002	577,990	MFP Estimate
2003	581,070	MFP Estimate
2004	584,218	MFP Estimate
2005	587,434	MFP Estimate
2006	590,719	MFP Estimate
2007	594,072	MFP Estimate
2008	597,495	MFP Projection
2009	600,987	MFP Projection
2010	604,550	MFP Projection
2011	608,682	MFP Projection
2012	612,894	MFP Projection
2013	617,179	MFP Projection
2014	621,539	MFP Projection
2015	625,973	MFP Projection
2016	630,483	MFP Projection
2017	635,069	MFP Projection
2018	639,730	MFP Projection



POPULATION TRENDS

Year	Total Units	Units in Single-Family Structures	Units in All Multi-Family Structures	Units in 2-unit Multi-Family Structures	Units in 3- and 4-unit Multi-Family Structures	Units in 3- and 4-unit Multi-Family Structures
1985	590	152	438	24	31	383
1986	640	142	498	26	0	472
1987	1,198	286	912	10	16	886
1988	852	253	599	32	21	546
1989	410	91	319	20	0	299
1990	368	180	188	26	0	162
1991	333	83	250	14	0	236
1992	132	92	40	14	0	26
1993	305	99	206	0	43	163
1994	210	96	114	0	0	114
1995	35	35	0	0	0	0
1996	0	0	0	0	0	0
1997	15	11	4	0	4	0
1998	429	255	174	2	0	172
1999	683	319	364	6	3	355
2000	806	187	619	8	7	604
2001	896	131	765	18	9	738
2002	1,591	383	1,208	18	4	1,186
2003	1,427	152	1,275	4	0	1,271
2004	1,936	226	1,710	0	0	1,710
2005	2,860	125	2,735	76	35	2,624
2006	2,105	126	1,979	14	6	1,959
2007	1,910	576	1,334	14	23	1,297

Population Trends

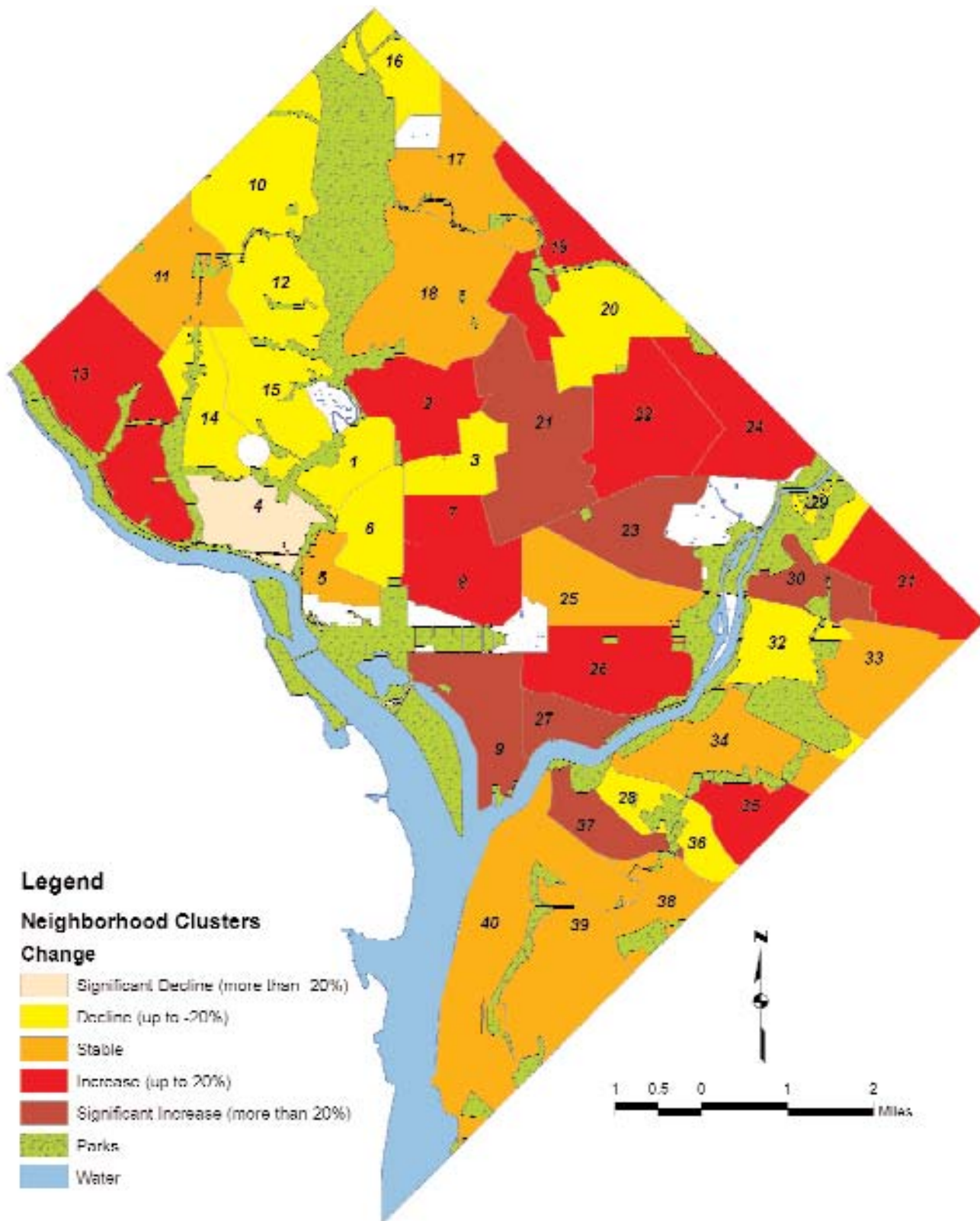
Between 2000 and 2007, the District of Columbia saw a total population increase of over 3%, as noted in the chart above, while the number of children 18 and under remained nearly flat. All of the demographic projections, however, point to an increasing number of school-age students in the future.

The differences between the projections in the 2006 Master Facilities Plan and the one in this plan reflect two major factors. First, there is the current economic slowdown which has affected the housing industry. Every indication is that as the national economy recovers the District housing boom will also rebound. Consider the following table which reflects the number of housing units and the type of units built in the District since 1985. This information is from the U.S. Census Bureau SOCDs Building Permits Database. The total number of units "peaked" in 2005 when permits were issued for 2,860 units. The past two years have seen a decline, but there are still a substantial number of units under construction.

Second, the 2008 projection has been adjusted by the fact that not as many persons per unit are moving into the District as expected. In 2006, the MFP presented three scenarios based on whether the new housing boom attracted significantly more families; some more families; or the same level of families as previously. With two years of actual experience to consider it appears that the last scenario is the most accurate.

The following map provides the future growth in population projections by neighborhood cluster. The neighborhood cluster analysis points to the likely areas where more children are projected to live in the future and with the most housing growth. Generally, those neighborhood clusters that have affordable housing - either constructed, under construction, or planned - will have the greatest growth.

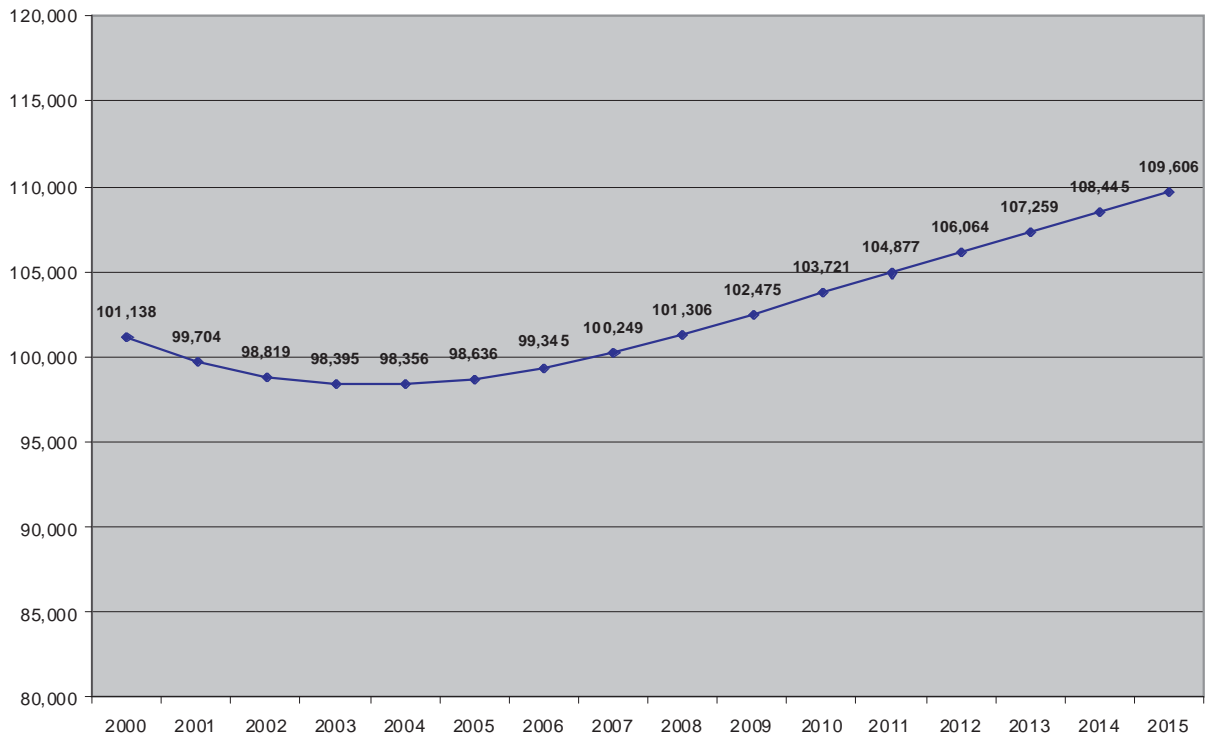
POTENTIAL CHANGE BY PERCENT IN TOTAL POPULATION BY NEIGHBORHOOD CLUSTERS 2008-2018



¹For planning purposes, the District of Columbia is divided into thirty-nine (39) neighborhood clusters. The area around Bolling Air Force Base is not an official cluster but has been designated as the fortieth (40th) cluster for the purposes of this analysis. See Appendix A to find which schools are in each cluster. See Appendix B for a list of neighborhoods by cluster.

Although the current housing mix of market-rate and affordable units attracts more single individuals and couples without children, a review of IRS migration reports confirms that households with children are moving into the District. Additionally, all indications are that the District birth rate will increase slightly in the future. These two factors indicate that there will be a greater number of school-age children in the future.

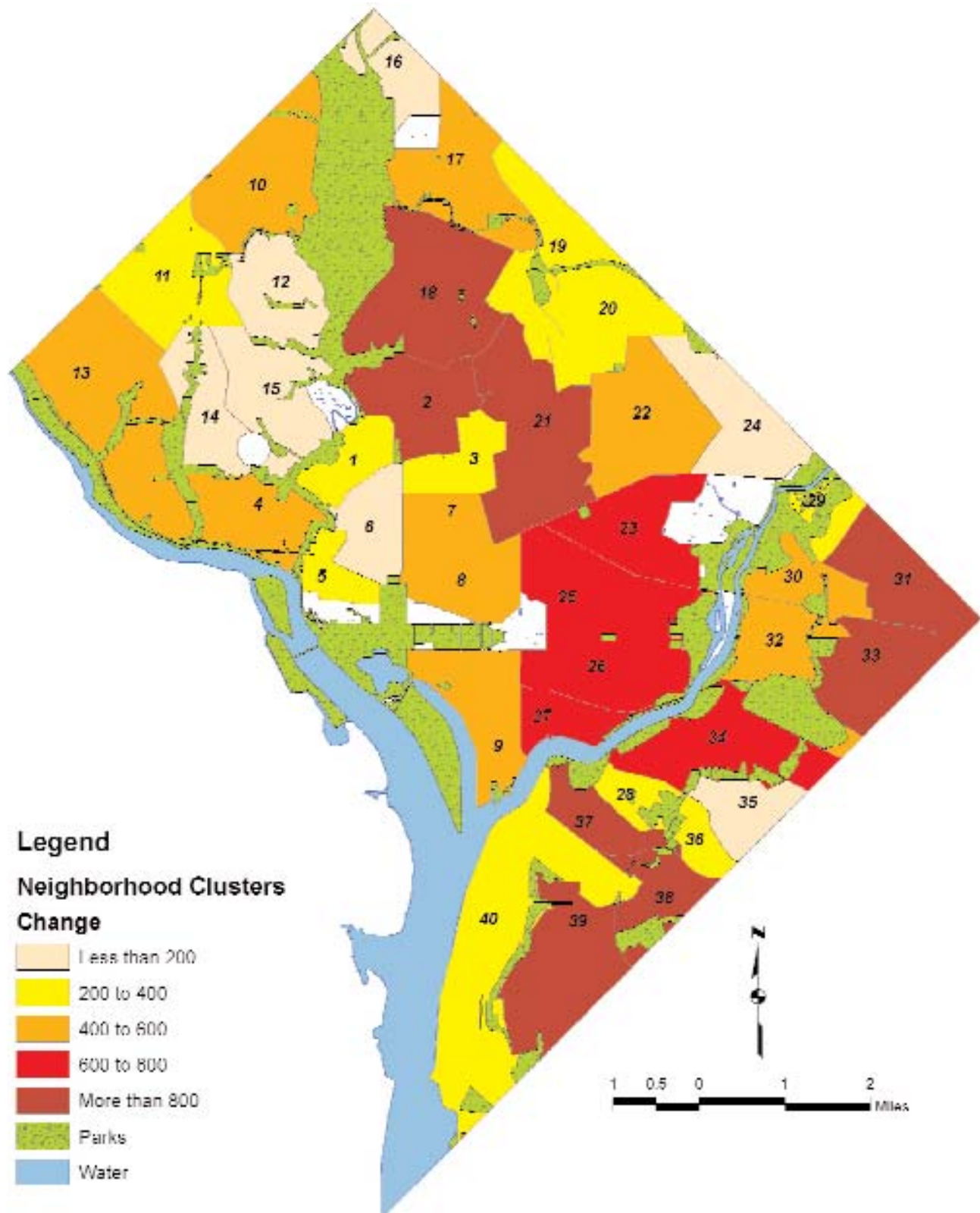
**TOTAL SCHOOL AGE CHILDREN (PS-12TH AGES 3-17)
2000 - 2005**

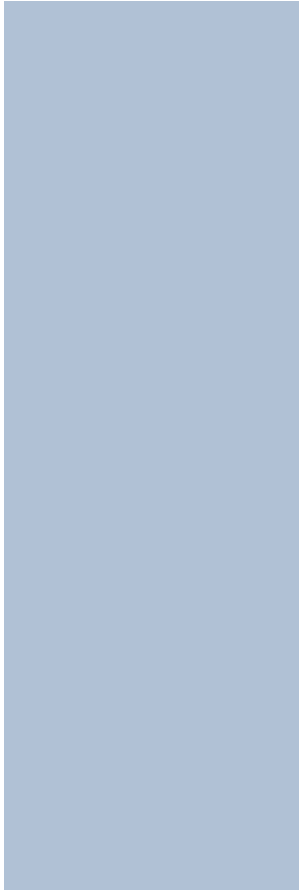


This overall trend looks different depending on the area of the city. The following page is a map that shows the relative increase in school-age children by neighborhood cluster.



POTENTIAL CHANGE BY IN THE NUMBER OF SCHOOL AGE CHILDREN (5-17) BY NEIGHBORHOOD CLUSTERS 2008-2018





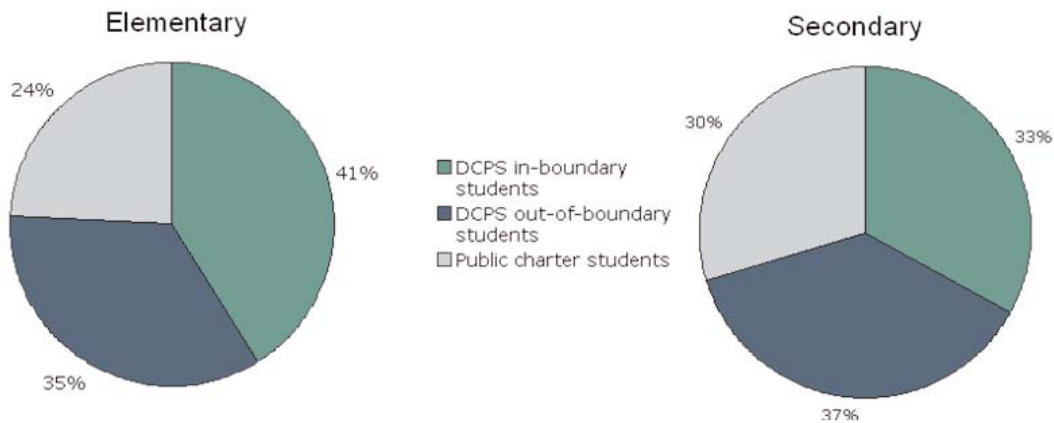
Changing Landscape of School Options

The landscape of school choice in the District of Columbia has become increasingly complex, with movement in every direction across the various sectors (traditional public, public charter, and non-public). Over the last 12 years, the rapid growth of the charter school sector has provided families with myriad public school options outside of DCPS - and for the most part, outside of DCPS buildings. In more recent years the advent of the voucher program has moved a significant portion of students from the public to the private sector. At the same time there has been a steady outflow of students with special needs from DCPS to non-public placements, further reducing the number of students in DCPS facilities (though not the number of students on DCPS rolls).

Charter Schools and DCPS Out-of-Boundary Option

As a public school option for District families since 1996, the charter school system has grown to serve over 21,000 students in 80 campuses during the 2007-2008 school year - capturing approximately 30% of the public school students in the District. At the same time, parents are exercising choice in high numbers without ever leaving DCPS. Through out-of-boundary enrollment, close to half of DCPS students are attending a school other than they one to which they were assigned. (See Appendix A for school-specific boundary information.)

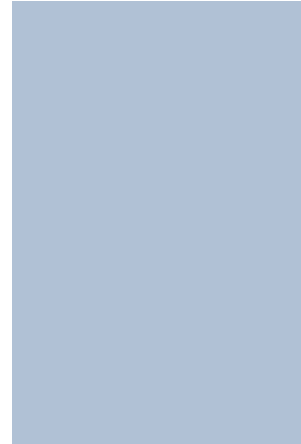
SHARE OF IN-BOUNDARY, OUT-OF-BOUNDARY AND PUBLIC CHARTER SCHOOL STUDENTS, 2006-2007



Source: Quality Schools, Healthy Neighborhoods and the Future of DC - Policy Report by the 21st Century School Fund, Brookings Institution and the Urban Institute, (Release forthcoming).



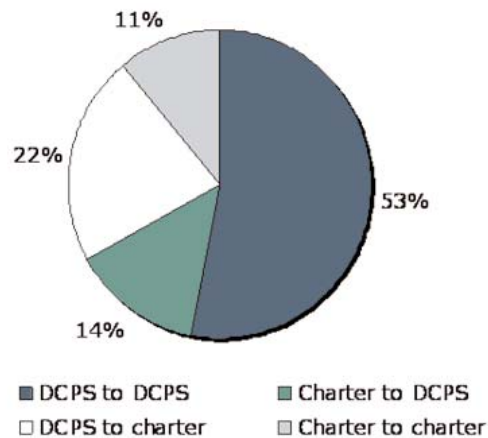
Since the 2003-2004 school year, charter schools have increased the number of students they serve by over 50% - an increase of over 8,000 students since 03-04 . Over the same five years, DCPS has lost over 11,000 students. Despite the overall increase in charter enrollment and decrease in DCPS, the movement from one sector to the other is by no means unidirectional. With limited systems in place to track exactly where students go when they move from school to school, it is difficult to find historical data on student mobility, but the chart below provides a one year snapshot of students who left their public school (DCPS or charter) before the terminal grade of that school and moved to another public school. Of the 8,100 students who fell in that category, a full two-thirds moved to or between DCPS schools.



8,100 students (14%)
exited early between
2005-06 and 2006-07.

67% of these “early exit”
students switched to or
between DCPS schools.

Where “early exit” students are going,
2005-06 to 2006-07



Source: Quality Schools, Healthy Neighborhoods and the Future of DC - Policy Report by the 21st Century School Fund, Brookings Institution and the Urban Institute, (Release forthcoming).

³OSSE Annual Public School Enrollment Audit Report, October 2002 and October 2007, [http://osse.dc.gov/seo/cwp/view,a,1222,q,552345,seoNav,31195\].asp](http://osse.dc.gov/seo/cwp/view,a,1222,q,552345,seoNav,31195].asp)

⁴The Office of the State Superintendent of Education (OSSE), in partnership with the Office of the Chief Technology Officer (OCTO) and key public education stakeholders in the District of Columbia, is developing a Statewide Longitudinal Education Data system, the SLED. SLED will incorporate information from educational data systems throughout the District. Beginning in spring of 2009, components of SLED will become available, with the full database launching in 2010.

This student mobility dynamic is exacerbated by the increase in the number of charter schools each year and there is no limit on expansion campuses. The DC Public Charter School Board can approve up to ten new charter schools a year. In the 2008-2009 school year, six schools on 12 campuses have opened, with a projected enrollment of over 650 students. As the latest example of the blurring of lines between what used to be distinct sectors - over 1,200 students who were in the non-public category last school year will now become public charter school students with the conversion of formerly Catholic schools to the seven campuses of the Center City Public Charter School.

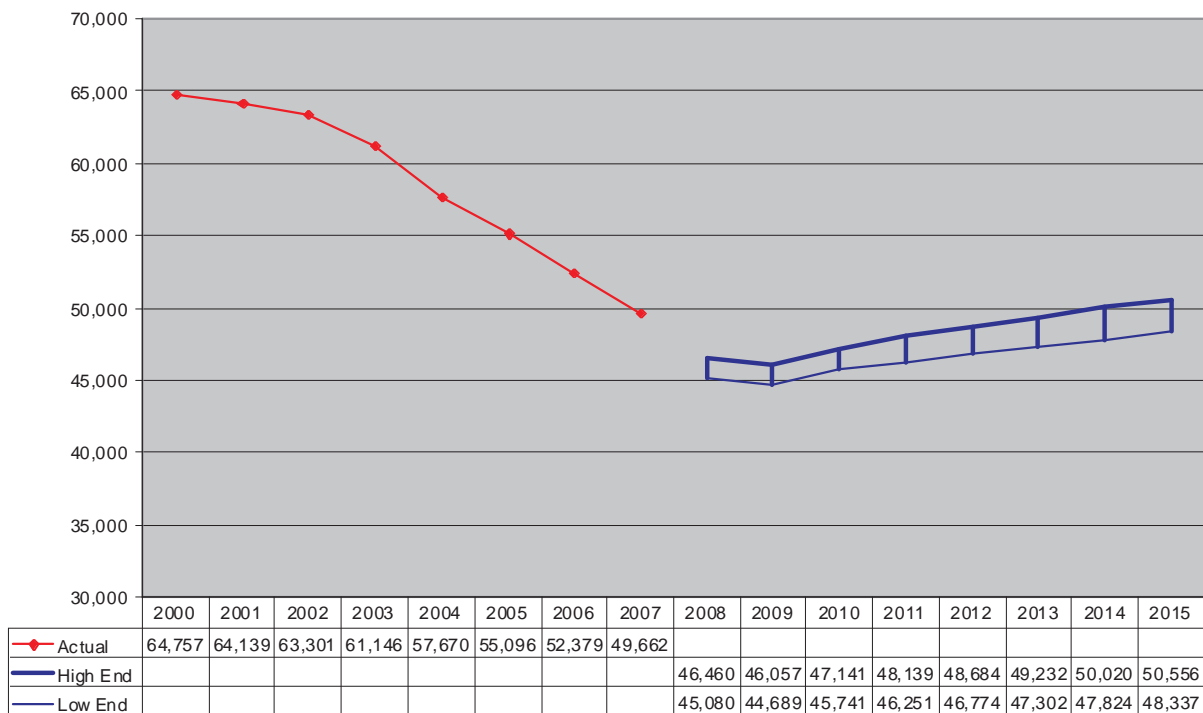
Finally, the relatively transient nature of charter schools themselves affects shifts in enrollment. Many charters lease their buildings on a short term basis and move into bigger space as they grow. As schools move, families may be more likely to pursue other options more convenient geographically.

Projecting Enrollment

With a projected increase in the number of school-age children, the process of projecting DCPS enrollment is a matter of predicting the market share that DCPS will capture, relative to the charter and non-public sectors. As noted above, such predictions are necessarily imprecise, given the complex landscape. Given the intense priority on improved programming that will retain and attract students to DCPS - not to mention the aggressive emphasis on improving the physical environment at our schools - below is mapped out a projected range of enrollment. This range reflects an expectation that the total "market" of school-age children will grow, as suggested by the demographic projections, and that the DCPS share of that market will bottom out in 2010 and then remain relatively steady.



DCPS ACTUAL ENROLLMENT 2000-2007 AND PROJECTED ENROLLMENT 2008-2015



Note:

The enrollment figures below include only students served in DCPS facilities. They do not, therefore, reflect those students placed in non-public schools.

RESPONDING TO THE CHANGING LANDSCAPE

School Closures and Consolidations

After years of declining enrollment in DCPS (see Appendix A for school specific enrollment data), without an accompanying adjustment of the facilities portfolio, Mayor Fenty and Chancellor Rhee made the bold decision to reduce the DCPS inventory through closing and consolidating 23 schools effective the 08-09 school year. On average each of the closing schools enrolled only 51% of its capacity. The closures eliminated two million square feet from the DCPS inventory, enabling DCPS to reallocate resources once spent on the maintenance and upkeep of these under-utilized buildings to where it matters most - the classroom.

The closures affected over 5,000 students and their families. With the new school year just beginning, however, it is too early to understand the impact of the closures on DCPS enrollment. With the official October enrollment count, DCPS will be able to analyze the impact on student movement caused by the closures, and in turn consider the short- and medium-term facilities implications.

Co-Location

As discussed in the Priorities section, co-location of DCPS programs with other compatible programs, including public charter schools and city government services, is a logical approach in this dynamic environment. We have taken steps in that direction, with the introduction of several new co-locations this fall, and expect to continue that trajectory.

New DCPS Program Offerings

While housing and population trends are clearly out of the control of DCPS, the school district is aggressively identifying areas within its control to attract and retain students. Through the development of schools that offer particular programmatic focus - including STEM (science, technology, engineering, math), fine arts, high tech, and gifted and talented - DCPS aims to attract both in-boundary and out-of-boundary students to schools around the city.



A new program at eight middle schools provides wrap-around support services for students, while supporting teachers with focused professional development on differentiating instruction. Another program at eight elementary schools will deliver an inclusion model that effectively addresses the needs of students with learning disabilities within the mainstream classroom. One of the targeted outcomes of each of these programs is to decrease the rate of new placements in non-public schools, providing strong service delivery to those students within our schools and thereby increasing the number of students DCPS serves in our own facilities.

With the citywide emphasis on increasing access to early childhood educational options, as well as increasing the number of young children who are served by the school system, we are seeking to increase the overall enrollment as families are introduced to DCPS early and choose to stay for the elementary grades and beyond.