

# **Recommendations to Improve Accuracy of Fairfax County Public School's Enrollment Projections**

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**1. Incorporate Census variables by attendance area into projection process.**

The current enrollment projections process does not include the use of any base variables from the 2000 census. These variables, such as household composition, age of householder, housing tenure and presence of children would allow the projection results to account for the unique characteristics of each attendance area. Further, it would permit the projections calculations for each attendance area to be based on several demographic factors as opposed to relying primarily on the changes in the number of housing units in an area (see appendix for a sample listing of 2000 Census variables and results by attendance area).

**2. Continue development of school district/county government data sharing, particularly in regard to type, magnitude, and location of existing home sales. Incorporate local data trends into projection process.**

The district should continue it's on going effort to acquire, maintain and implement data from local government and private sources in the school district. The most important of these local data sets is annual sales of

existing homes by attendance area. For most of the last 30 years the most influential variable for predicting enrollment trends in the district has been new housing unit construction. Unfortunately, this variable's significance as a symptomatic indicator of enrollment change is waning. For the foreseeable future the magnitude and pace of existing home sales will be the major predictor of enrollment trends for the vast majority of attendance areas in the district. By establishing a strong working relationship with local data providers the district will be able to incorporate these trends (along with apartment occupancy rates and other variables) into the enrollment projections process.

**3. Combine the projection calculations processes for general education, special education, and the gifted and talented programs into one organization.**

Currently the calculation of enrollment projections for the general education, special education and the Gifted and Talented programs are calculated independent of each other with little coordination. This situation results in enrollment projections for the district (and the individual attendance areas) to have a high potential for systematic error. If the enrollment error for all three projection series are in the same direction, it tends to greatly magnify the total amount of projection error. Further, positive errors in one or two of the projection series may mask large negative errors in the third series (see appendix for average one year

projection errors by program for the period 2001-2005). If the calculations of all three enrollment projections series are completed within one organization, the amount of potential error can be reduced significantly by increased data sharing and incorporation of compatible projection methodologies.

**4. Develop a district-wide tracking system to monitor student movements between special education, and the gifted and talented programs.**

In conjunction with the previous recommendation, the district should enhance the system used for tracking student movements between the general education, special education and the Gifted and Talented programs. The current system can lead to situations where students can be double counted as they move from one program (counted in September) to another program (that may be counted in December or January). Further, if students do change programs they can be instantly transferred from one projection series to another allowing for immediate updating of the current projections series. This would allow the projections to become more useful when planning and allocating facility and space needs for special programs.

- 5. Develop a district-wide tracking system to monitor students that transfer between attendance areas within the district. Set a specific deadline (such as May 1) for transfer requests between schools.**

A current source of error in all projections series calculated in the district is the large number of students that transfer out of their home attendance areas to other schools in the district. The Pupil Placement Program makes it extremely difficult to calculate attendance area level enrollment projections due to the fact that these student movements are not related to any demographic or economic factors. Additionally, these students may move back to their home attendance areas at any time, creating an intra-district migration flow that can not be measured by any symptomatic indicator. The only way for the district to accurately ascertain the impact of these student movements on attendance area enrollment levels is to closely monitor and regulate student transfers. By setting a specific date (such as May 1) for students to register their intent to change schools, the projections procedures can be modified to accurately incorporate these intentions into the enrollment projections.

- 6. Continue to incorporate GIS technology into projection process.  
Continue developing GIS compatible data programs that will assist in identifying attendance area-specific changes in enrollment trends.**

The recent and rapid development of Geographic Information System (GIS) technology has created an opportunity for school districts to greatly improve and expand their planning capabilities. The district's GIS system will allow both the geographic illustration of student location and the distribution of variables that will affect short or long term trends in enrollment change. The key to realizing the full potential of a GIS program is the construction and maintenance of data "platforms" that can be used to track changes in household and population characteristics. With the ability to track localized changes in the trends of symptomatic variables that affect enrollment trends the GIS program is an extremely valuable tool in improving projections accuracy. Additionally, the maps produced from the GIS program are very beneficial in helping to explain not only enrollment projection results but also the impact of the symptomatic variables on the projections procedure.

**7. Incorporate measurement to ascertain the number of pre-school students residing in new housing units.**

One important variable that is lacking in the present projections procedure is the measurement of the number of pre-school age children that reside in newly constructed housing units. The currently used yield measurements only address the number of school age children moving into these units, thus underestimating the full impact these housing units will have on enrollment over time. While information from the 2000 Census can provide a solid starting point for establishing the number of pre-school children by household type, the best measurement is an ongoing survey of current students. This survey could track the number of 0 to 4 year old children that will be entering the school system in the next several years.

**8. Consider additional projections staff to accommodate the above recommendations.**

All of the aforementioned recommendations are labor intensive and require personnel that are highly trained and experienced in these tasks. Given the importance the School Board, the districts administration and the residence of the district place on the accuracy of the enrollment projections, the district needs to have a fully staffed and equipped planning division.