FCPS ENROLLMENT PROJECTIONS

PROCESS and ACCURACY
THE PROJECTIONS PROCESS

- The Facilities Planning Office projects and coordinates projections of enrollment for most schools by grade and for a number of student categories. We directly participate in functions for which our projections are used and important, including: facilities planning/programming, the CIP, boundary studies, and instructional staffing. Along the way we attempt to understand a frequently-changing array of factors, both internal and external, affecting enrollment and the accuracy of our projections.

- We develop 6-year projections for each school once each year during March. Projections are primarily based on September and January historical enrollment data by grade for up to the prior 7 years.

- The Facilities Planning Office projects general education enrollment, which presently comprises about 147,000 students (or about 85% of total enrollment). The process is a bottom-up process – progressing from the elementary to middle to high school levels for 192 schools offering general education.
Process, continued

● The primary method used to develop the initial projections for general education is a cohort “survival” technique – which is a very commonly used demographic method for age- or grade-based projections. We usually consider the entry grade at each school separately and may make other adjustments based on known factors we believe are likely to affect enrollment significantly during the projection horizon.

● For non-general education projections (the remainder 27,000 students), we coordinate with liaisons or specialists in other departments who develop projections of special education level 2, also known as self-contained, the AAP programs formerly known as Gifted and Talented, alternative high school programs, alternative court programs, FECEP (head start), ESL transitional students, and preschool programs by program or school. We incorporate projections for those student groups into the projections database.

● Again, we consider up to 7 years of historical membership data by grade and school - the “current” school year plus 6 years of prior data to help determine “survival” or change rates we might expect going forward in time for grade-level cohort projections for general education students.
Process, continued

• The entry grade at each school is difficult to project because of the unknown about potential student entry or progression. We see the largest changes occurring into Kindergarten, between K and 1st grade and into 9th grade. Kindergarten is toughest due to a lack of a preceding grade on which to base it. Adjustments are made to projections for all entry grades, as needed.

• For Kindergarten projections we primarily rely on historical Kindergarten class sizes, but consider other broad sources of information such as birth/Kindergarten trends in FCPS effective 2008, we have been tracking births per household by zip code of the mother’s residence within Fairfax County and City.

• We consider elementary school feeder data to help estimate the projected sizes of the entering 7th grade (and in the case of 3 middle schools the entering size of 6th grade classes), at each middle school. Likewise, we consider middle school feeder data to high schools to help estimate the projected sizes of the entering 9th grade classes at each high school.

• After completing each level – elementary, middle, high, and then total, we examine the initial projections comparing them to aggregate grade-level projections, making adjustments, if or as needed.
# Projections Accuracy FCPS-wide

## 1-Year March Projections Compared with the Following September Membership

<table>
<thead>
<tr>
<th>School Year</th>
<th>Prior Projection</th>
<th>Enrollment</th>
<th>Projection Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>SY 2004-05</td>
<td>166,257</td>
<td>163,830</td>
<td>98.5% - Over</td>
</tr>
<tr>
<td>SY 2005-06</td>
<td>164,918</td>
<td>163,534</td>
<td>99.1% - Over</td>
</tr>
<tr>
<td>SY 2006-07</td>
<td>164,295</td>
<td>163,593</td>
<td>99.6% - Over</td>
</tr>
<tr>
<td>SY 2007-08</td>
<td>164,832</td>
<td>165,434</td>
<td>99.6% - Under</td>
</tr>
<tr>
<td>SY 2008-09</td>
<td>168,384</td>
<td>169,125</td>
<td>99.5% - Under</td>
</tr>
<tr>
<td>SY 2009-10</td>
<td>173,573</td>
<td>172,096</td>
<td>99.1% - Over</td>
</tr>
<tr>
<td>SY 2010-11</td>
<td>175,296</td>
<td>174,481</td>
<td>99.6% - Over</td>
</tr>
</tbody>
</table>

**Notes:** For projected populations. Some student populations are projected and compared to student populations differently than can be seen on the FCPS schools website (e.g. AAP students). Some student populations typically peak in membership later during the school year (e.g. some pre-school and alternative student populations) or are officially reported later in the school year than September (e.g. Special Education).
We have made changes to the projections processes and sources considered in recent years.

• Recent changes were implemented to:
  ▪ broaden the base of information from which we draw,
  ▪ understand emerging factors potentially affecting enrollment and projections, and
  ▪ improve consistency and comparability in our processes/outcomes.

• We have also begun measuring the relative accuracy of our school and student group projections as Operational Expectations data we provide to the Board and Dr. Dale each year. We know that enrollment projections will never be precise, but going forward we hope to continue to inform our projection decisions with consistent, reliable data available at the time of each projection process cycle. And, retrospectively, where our projections did not compare favorably with the later enrollment reality, we hope to better understand some of the reasons for those differences. In fact, we have begun to use the OE to identify and look more closely at projection issues at specific schools.
Process Changes, continued

Other specific changes we have made recently have included:

- Consolidated a fall 5-year projection process with a winter/spring 1-year process into a single winter/spring 6-year projection process (2010)

- Using September 30\textsuperscript{th} membership data for projections (2008) and January 31\textsuperscript{st} data together with the September 30\textsuperscript{th} (2010)

- Developed FCPS-wide grade-level General Education projections as an aggregate guide/checkpoint to the bottom-up school-based projections (2008)

- Requested and developed a consistent monthly count of enrollment comparable to the student groups for which we project enrollment (2008)

- Requested and began using a consistent classification of AAP students (center-eligible only) for enrollment and projections (2007 and 2008)

- We will begin revising our projections system requirements to redesign the software and database soon
Process Changes, continued

Data and sources that we are now considering/using include:

“Internal” FCPS data – net transfers, measures of mobility, race/ethnic student characteristics, program data

“External” data including:

▪ Fairfax County IPLS (Integrated Parcel Life Cycle System) containing forecast housing and residential development “pipeline” data,
▪ MRIS (MLS) housing sales, prices and days on the market,
▪ Population data from several U.S. Census Bureau programs,
▪ Virginia State Dept. of Health Statistics birth and population data,
▪ (BLS) Bureau of Labor Statistics regional employment,
▪ (BEA) Bureau of Economic Analysis Fairfax County area employment,
▪ Fairfax County Economic Indicator data and report,
▪ GMU Regional Economic Analyses reports and data,
▪ IRS County-County Migration,
▪ UVA Weldon Cooper Center school data,
▪ (NCES) National Center for Educational Statistics (private schools data)

● Periodically we have met with Fairfax County demographers, GMU faculty, and other local school systems’ staff to discuss issues related to the economy, enrollment, projections, capacity, and other issues.