Enrollment Forecasts/Demographics Subcommittee
of the Long-Range Educational Facilities Plan Work Group

Enrollment Research Topic

Births/Rates in Alexandria

Background

Children who were born to residents of Alexandria are potential students in the Alexandria City Public School (ACPS) system. In an effort to forecast the future population of ACPS kindergarteners (see also Kindergarten Capture Rates), this subcommittee examined birth rate trends to determine how they inform mid- and long-term student enrollment projections.

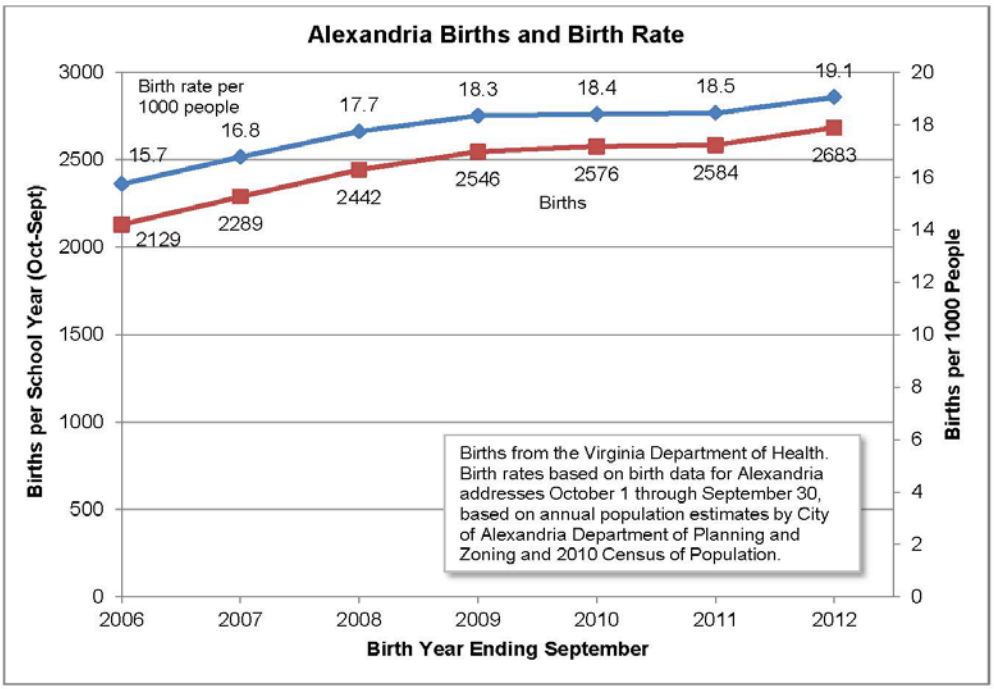
Methodology

Analysis included comparing birth rate trends within Alexandria, neighboring jurisdictions, as well as for the nation as a whole. Potential factors that could impact the number of births and the size of the school-aged population were considered including changes in the:

- crude birth rate (births per 1,000 population);
- total fertility rate (average number of births a woman has in her lifetime);
- age composition affecting the relative size of the female population (15 to 44 years of age); and
- racial/ethnic composition of child-bearing women in the city that affects the birth rate and thus enrollment.

Findings

- While the crude birth rate for the U.S. as a whole is declining and is expected to continue to do so for the next 30-40 years, Alexandria's birth rate is increasing. From 2006-2012, the City's births increased 26%, substantially faster than its population as a whole, which grew by an estimated 4.1% over the same period.



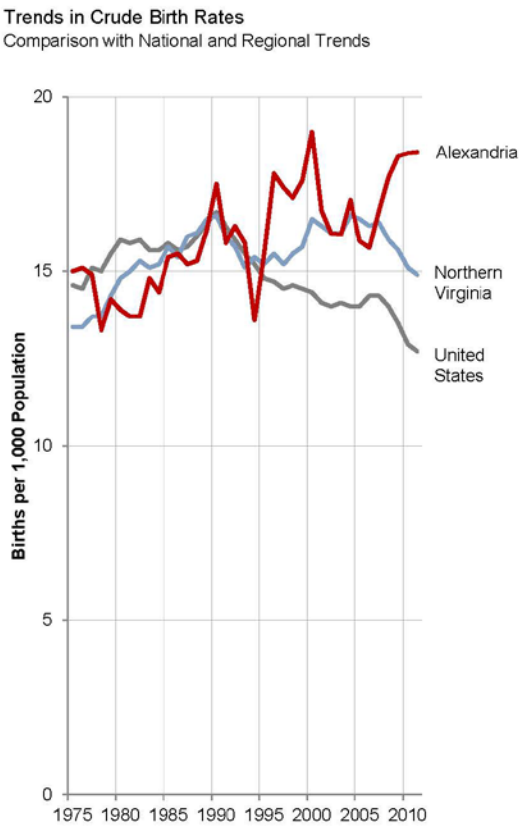
~ See Resource #1

Alexandria Births and Birth Rate

Calendar Year	Estimated Population	Births*	Births/ 1000 People
2000	128,283		
2001	129,451	2,167	16.7
2002	130,620	2,101	16.1
2003	131,788	2,115	16.0
2004	132,956	2,266	17.0
2005	134,125	2,128	15.9
2006	135,293	2,121	15.7
2007	136,461	2,284	16.7
2008	137,629	2,436	17.7
2009	138,798	2,541	18.3
2010	139,993	2,574	18.4
2011	140,044	2,580	18.4
2012	140,809	2,683	19.1
2013	142,000		

Population: Linear interpolation between Census 2000 and 2010 Census populations, city estimates of population since 2010 based on housing construction.
***Births**: Virginia Health Department data revised to ensure valid Alexandria addresses and adjust to months of kindergarten eligibility. October-September

- In fact, Alexandria's birth rates are higher than those of Northern Virginia and the nation as a whole.

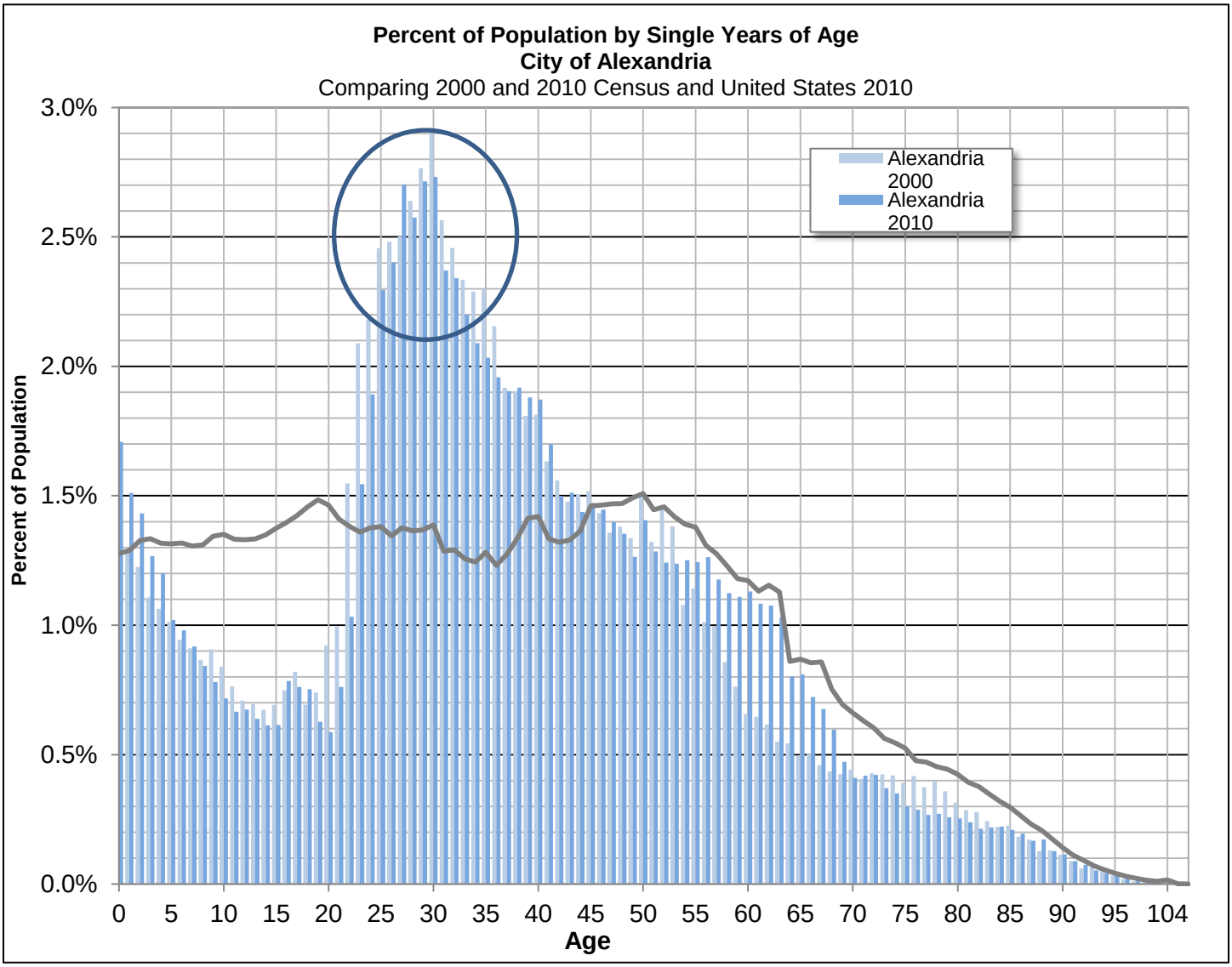


Births per 1000 Population

Year	Alexandria	Northern Virginia	United States
1975	15.0	13.4	14.6
1976	15.1	13.4	14.5
1977	14.9	13.7	15.1
1978	13.3	13.7	15.0
1979	14.2	14.3	15.5
1980	13.9	14.8	15.9
1981	13.7	15.0	15.8
1982	13.7	15.3	15.9
1983	14.8	15.1	15.6
1984	14.4	15.2	15.6
1985	15.4	15.7	15.8
1986	15.5	15.4	15.6
1987	15.2	16.0	15.7
1988	15.3	16.1	16.0
1989	16.2	16.5	16.4
1990	17.5	16.6	16.7
1991	15.8	16.0	16.3
1992	16.3	15.7	15.9
1993	15.8	15.1	15.5
1994	13.6	15.4	15.2
1995	15.5	15.2	14.8
1996	17.8	15.5	14.7
1997	17.4	15.2	14.5
1998	17.1	15.5	14.6
1999	17.6	15.7	14.5
2000	19.0	16.5	14.4
2001	16.7	16.3	14.1
2002	16.1	16.1	14.0
2003	16.0	16.1	14.1
2004	17.0	16.6	14.0
2005	15.9	16.5	14.0
2006	15.7	16.3	14.3
2007	16.7	16.4	14.3
2008	17.7	15.9	14.0
2009	18.3	15.6	13.5
2010	18.4	15.1	12.9
2011	18.4	14.9	12.7

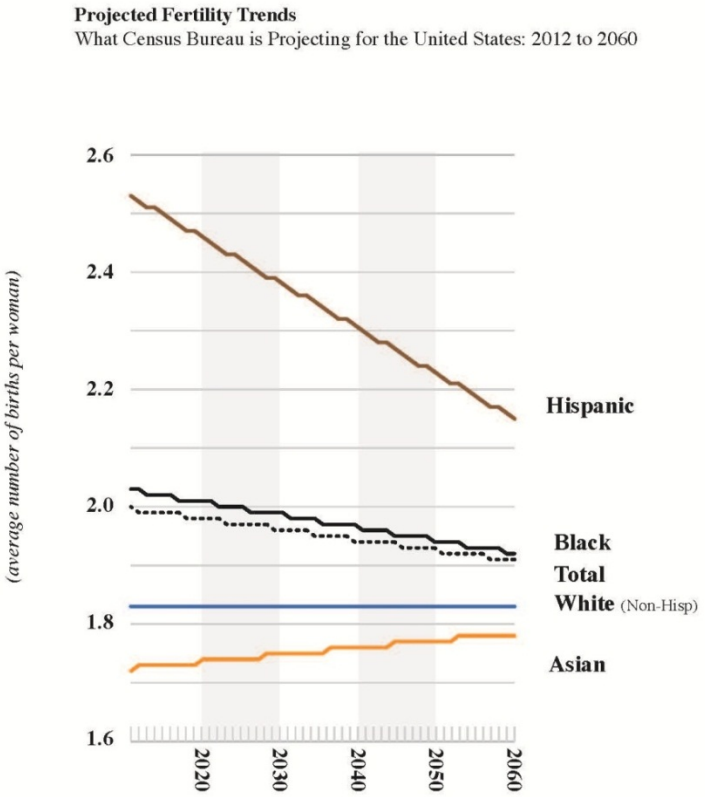
~ See resource #2

- On a national scale, the aging of the population will result in a reduction in the percentage of childbearing-aged women, consequently reducing the crude birth rate. Alexandria, however, has an unusually large proportion of residents aged 20-35 years (child-bearing years), and a somewhat smaller proportion of seniors – so the effect of the aging population in reducing the crude birth rate will be somewhat less in the city.



Resource #3

- Part of this analysis addressed any potential impact that race/ethnicity may have on births/trends in Alexandria as it relates to enrollment. Nationally, birth rates are decreasing, including those of some racial/ethnic groups with historically high birth rates. Currently, the City population is comprised of many racial/ethnic groups; however, in future years that composition may change – resulting in a change in student population – due to this decrease, as well as the potential impact the high cost of living may have on some groups' ability to live in the city (see also Student Generation).



— — Average Number of Births Per Woman — —

	Total	White	Black	Asian	Hispanic
2012	2.00	1.83	2.03	1.72	2.53
2013	1.99	1.83	2.03	1.73	2.52
2014	1.99	1.83	2.02	1.73	2.51
2015	1.99	1.83	2.02	1.73	2.51
2016	1.99	1.83	2.02	1.73	2.50
2017	1.99	1.83	2.02	1.73	2.49
2018	1.99	1.83	2.01	1.73	2.48
2019	1.98	1.83	2.01	1.73	2.47
2020	1.98	1.83	2.01	1.73	2.47
2021	1.98	1.83	2.01	1.74	2.46
2022	1.98	1.83	2.01	1.74	2.45
2023	1.98	1.83	2.00	1.74	2.44
2024	1.97	1.83	2.00	1.74	2.43
2025	1.97	1.83	2.00	1.74	2.43
2026	1.97	1.83	2.00	1.74	2.42
2027	1.97	1.83	1.99	1.74	2.41
2028	1.97	1.83	1.99	1.74	2.40
2029	1.97	1.83	1.99	1.75	2.39
2030	1.96	1.83	1.99	1.75	2.39
2031	1.96	1.83	1.99	1.75	2.38
2032	1.96	1.83	1.98	1.75	2.37
2033	1.96	1.83	1.98	1.75	2.36
2034	1.96	1.83	1.98	1.75	2.36
2035	1.95	1.83	1.98	1.75	2.35
2036	1.95	1.83	1.97	1.75	2.34
2037	1.95	1.83	1.97	1.76	2.33
2038	1.95	1.83	1.97	1.76	2.32
2039	1.95	1.83	1.97	1.76	2.32
2040	1.94	1.83	1.97	1.76	2.31
2041	1.94	1.83	1.96	1.76	2.30
2042	1.94	1.83	1.96	1.76	2.29
2043	1.94	1.83	1.96	1.76	2.28
2044	1.94	1.83	1.96	1.76	2.28
2045	1.94	1.83	1.95	1.77	2.27
2046	1.93	1.83	1.95	1.77	2.26
2047	1.93	1.83	1.95	1.77	2.25
2048	1.93	1.83	1.95	1.77	2.24
2049	1.93	1.83	1.95	1.77	2.24
2050	1.93	1.83	1.94	1.77	2.23
2051	1.92	1.83	1.94	1.77	2.22
2052	1.92	1.83	1.94	1.77	2.21
2053	1.92	1.83	1.94	1.78	2.21
2054	1.92	1.83	1.93	1.78	2.20
2055	1.92	1.83	1.93	1.78	2.19
2056	1.92	1.83	1.93	1.78	2.18
2057	1.91	1.83	1.93	1.78	2.17
2058	1.91	1.83	1.93	1.78	2.17
2059	1.91	1.83	1.92	1.78	2.16
2060	1.91	1.83	1.92	1.78	2.15

See Resource #4

Summary

Based on the findings, the long-term assumption is that declining national birth rate trends could be somewhat offset in Alexandria by its unique urban profile with a smaller share of seniors and an unusually large proportion of residents of childbearing-age (20 to 35 years).

Resources

1. Historic birth data on individual births by mother's address (since 2003) was obtained from the Virginia Health Department. (Data on individual births by address prior to 2003 was not available.)

2. Source: U.S. Census Bureau, "2012 National Population Projections, Summary Tables", released December 12, 2012; and 2001-2011 data on Alexandria population and births based on City population estimates and review of birth records to count only births for which the mother's address was in Alexandria.

3. City of Alexandria from 2000 and 2010 Census.

4. Source: U.S. Census Bureau, "*Methodology and Assumptions for the 2012 National Projections, Table 1. Total Fertility Rates by Race and Hispanic Origin: 2012-2060"*, page 17.