This document presents WICHE's projections of high school graduates for the nation, regions, and states disaggregated by sex and race/ethnicity, and disaggregated by race/ethnicity for the 25 most populous metropolitan areas of the United States.

This supplement to the eighth edition of *Knocking at the College Door* (www.wiche.edu/knocking-8th) was prepared by Peace Bransberger, senior research analyst (303.541.0257 or pbransberger@wiche.edu), and Brian T. Prescott, director of policy research, Policy Analysis and Research (303.541.0255 or bprescott@wiche.edu).

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Summary
This brief summarizes a new extension to WICHE’s projections of high school graduates for the nation, regions, and states, now disaggregated by sex and race/ethnicity and by race/ethnicity for the 25 most populous metropolitan areas of the United States. These new series of projections build off of WICHE’s eighth edition of Knocking at the College Door: Projections of High School Graduates covering high school graduates for the nation, regions, and states for the classes of 1997 through 2028. These new data offer further detail about demographic trends facing policymakers and members of the higher education community, who can use them to compel change and target resources more effectively in order to broaden educational opportunity and improve educational attainment levels. The full range of previously published and new high school graduate projections discussed here are available from the Knocking website (www.wiche.edu/knocking-8th).

Methodology
These projections represent WICHE’s first attempt to use data collected below the state level to make projections. The full range of enrollment and graduates data that are needed for Knocking’s cohort survival ratio projection method have not previously been publicly available by sex and at the school district or county level. So, for this edition we obtained a license for the Common Core of Data restricted-use data files containing the seventh to 12th grade public enrollments and high school graduates by sex and race/ethnicity for local education areas (generally, local educational agencies are school districts).

We used these data to calculate the average proportions of all public high school graduates who were male or female between 2004-05 and 2008-09 and applied those proportions to projections of public high school graduates released in our 8th edition of Knocking over the projected years, 2009-10 to 2027-28. Similarly, for the metropolitan area estimates, we determined what percent each count in the covered metropolitan areas represented of the states’ public high school graduates, and applied those percentages to our projections of public high school graduates by state. One important note about the metropolitan area projections is that we used a fixed definition for which school districts, by county, are included in the metropolitan area. Therefore, this method does not represent in the projections any past or future changes in school district boundaries or changes to the roster of school districts included in the metropolitan area, that might differ from 2008-09, the point at which we set the metropolitan area definition.

Male and Female High School Graduates
Males generally outnumber females under the age of 19 but not among high school graduates. The sex ratio at birth in the United States has been around 105 males for every 100 females over time, and while the ratio of males to females generally declines as they age (due to greater mortality among males), historically there are slightly more males of school age than females. This is even truer in recent years (Figure 1).

Figure 1. Population Age 19 and Under by Sex: 2000 and 2010

Despite their greater numbers, numerous studies, including those of the National Center for Education Statistics (NCES), have documented educational attainment gaps by sex and race/ethnicity that have persisted for the last several decades, with females enrolling in and attaining postsecondary credentials at higher rates than their male counterparts. This pattern holds across all races/ethnicities, including White non-Hispanics.

We disaggregated our 8th edition state public high school graduate projections by race/ethnicity into projections by race/ethnicity for females and males. Our analysis confirms that males are 51 percent or more of the national public school enrollment in grades 9 through 12, but on average they are graduating in lower numbers than females. Males composed slightly less than 49 percent of public high school graduates between 2004-05 and 2008-09. This disparity is further evidenced among different races/ethnicities, as shown in Figure 2.

Proportionally fewer males than females are graduating across all races/ethnicities, with especially notable disparities for Black non-Hispanic and Hispanic males. These same patterns are seen by region, a circumstance that is particularly problematic for the high-growth South and West, which have the greatest numbers of Black and Hispanic male students. Recent Census estimates indicate that minority births exceeded White non-Hispanics for
If males, and particularly minority males, don’t begin graduating from high school and attaining higher education at greater rates, half of the working age population will fall further and further behind the education and skill levels increasingly needed for workforce and income success. Nationally prominent organizations have been shining a light on this fact, that some of the fastest-growing portions of the population are those minority groups who in recent decades have the lowest rates of postsecondary enrollment and attainment, males in particular. On top of their lower likelihood of graduating from high school, only about one-third of Hispanic and Black males between 15 and 24 years of age enroll in postsecondary education, and less than 40 percent of beginning postsecondary male Black and Hispanic students who do enroll go on to attain a credential within six years. Add to this that Black and Hispanic 18 to 24 year old males are disproportionately likely to be incarcerated relative to their representation in the general population. These dire facts combine to make it likely that the U.S. will see a decline in the educational attainment of the country as a whole, because of educational underachievement among males. These projections data may help support the planning to address their specific needs.

High School Graduates for the Top 25 Most Populous Metropolitan Areas

Educational data at the metropolitan area level – in this case, the number and proportions of public high school graduates by race/ethnicity – is important for a number of audiences. It can be useful for local elementary and secondary school districts and colleges and universities for planning capacity and to address educational underachievement by minority groups. These data can perhaps be most immediately useful for colleges that predominately serve a local market, especially community colleges, which tend to enroll a disproportionately large and growing share of metropolitan area racial and ethnic minority students. These students are an increasing portion of the high school graduating classes, as the projections here indicate.

Education data at the metropolitan level can also be useful for policymakers tackling concentrated poverty or planning economic and workforce development and resource distribution, as well as for the range of organizations working towards increasing the rate of educational attainment. Finally, they may prove especially helpful for the many community-based organizations that are focused on underrepresented populations in a local area. These data can be used by state, city, and community leaders to demonstrate the rapidly increasing diversity of high school graduates and the projected flood of more diverse and often less-advantaged youth coming up through the pipeline – students who may never graduate. The data can be used by these leaders to get out in front of the issue, providing the needed assistance to these students (and their families and communities) to help them stay in school and finish their education.

We disaggregated the state public high school graduate projections for the 25 most populous metropolitan statistical areas (MSAs). These 25 metropolitan areas accounted for about 127 million of the United States population (41 percent), a similar percent of youth 18 years or younger, and ultimately 1.25 million of its public high school graduates (41 percent) in 2009. They accounted for 65 percent of the nation’s Asian/Pacific Islander public high school graduates, 59 percent of Hispanic, 48 percent of Black non-Hispanic, 41 percent of American Indian/Alaska Native, and 33 percent of White non-Hispanic public high school graduates in 2009 (Figure 3).

Eight of these 25 most populous metropolitan areas for which we produced projections span multiple states (the Boston, Chicago, Minneapolis, New York City, Philadelphia, Portland, St. Louis, and Washington D.C. metro areas). Metropolitan areas that span borders are of
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These 25 metropolitan areas touch 23 states and the District of Columbia. And for 12 of these 23 states, the high school graduates from the included metropolitan areas make up 50 percent or more of their total public graduates (Figure 4). Concentration in urban areas is even more evident for high school graduates of certain racial/ethnic origins.

- The majority of the Black non-Hispanic public high school graduates in 18 of the covered 23 states are produced from these urban areas.
- The majority of Asian/Pacific Islander graduates come from these urban areas in 17 of the covered 23 states.
- The majority of Hispanic graduates in 13 of the 23 states come from these urban areas.

Figure 4. Public High School Graduates from 25 Most Populous MSAs (2008-09), Share of State Public High School Graduates

Our projections for the selected metropolitan areas reflect the nationwide diversification of youth and high school graduates (Figure 5). Projected declines among White non-Hispanic and Black non-Hispanic public high school graduates in the years between 2008-09 and 2019-20 are slightly more pronounced for these 25 metropolitan areas than for the nation.

- White non-Hispanic public high school graduates from these 25 metropolitan areas are projected to decline 17 percent, compared to 12 percent for the nation.
- Black non-Hispanic public high school graduates from these metropolitan areas are projected to decline 13 percent, compared to a 9 percent decline for the nation.

On the other hand, the projected rates of increase for Hispanic and Asian/Pacific Islander graduates from these metropolitan areas are slightly lower than what is projected for the nation.

- The number of Hispanic public high school graduates is projected to increase 41 percent for the nation by 2019-20, but slightly less for these 25 metropolitan areas, at 34 percent.
- The number of Asian/Pacific Islander public high school graduates is projected to increase 30 percent nationally by 2019-20 compared to 23 percent for these metropolitan areas.

Some of this difference may relate to the greater concentration of these racial/ethnic groups in certain metropolitan areas or to the specific metropolitan areas considered here, versus those which are not included. While we do not analyze or make claims about graduation rates with these projections (our method reflects the year-over-year progression of total grade enrollments through graduation, not a cohort of students...
through all years), it is very likely that some of the observed trend differences between the nation and these selected metropolitan areas may reflect differences in whether students in the most urbanized areas make it to graduation, compared to the nation as a whole.

Even though these selected metropolitan areas follow the national trends simply because they compose 41 percent of the national high school graduates, the rates of change vary among them. For example:

- 20 of these 25 metropolitan areas are projected to have greater rates of decline in the number of White non-Hispanic public high school graduates from 2008-09 to 2019-20 than the nation. The Atlanta, Phoenix, St. Louis, and Washington, D.C., metropolitan areas show declines that are less steep, and the Denver metropolitan area even projects growth.

- 13 of these 25 metropolitan areas are projected to experience higher rates of increase in the number of Hispanic high school graduates from 2008-09 to 2019-20 than the 41 percent increase projected for the nation.

- On the other hand, the projections indicate notably slower rates of growth in the number of Hispanic public high school graduates for the five metropolitan areas that are in California and the two metropolitan areas that are in Florida, than for the nation as a whole.

Of course, many other metropolitan areas are experiencing significant change. The combined population of the 25 metropolitan areas we consider here is about 127 million, or 41 percent of the entire U.S. population — a good but not necessarily perfect reflection of the U.S. as a whole. In fact, adding the 25 next most populous metropolitan areas would expand coverage to 54 percent of the U.S. population. However, we limited this first attempt at providing metro-level projections to the highest-population metropolitan areas, in order to avoid methodological issues with very small counts of students and because of complications involved with available school district data.

Readers should not assume that we are suggesting that what is not covered by the 25 highest-population metropolitan areas is rural. Nor do we mean to infer greater importance to the needs of urban schools or to exacerbate the rural-urban divide (i.e. the challenge of balancing resources between states’ rural and urban schools). Rural residents face serious barriers to access and success. Research suggests that the gaps between urban and rural graduation rates may be narrowing and that rural students may experience many of the same challenges to graduation as do urban students. Therefore, the racial/ethnic graduation gaps indicated by these metropolitan area projections could also be useful for policymakers whose states include substantial rural populations, since many rural students face the same barriers of poverty and lack of economic opportunity as urban students do and many minority students face similar challenges regardless of location.

In summary, we produced these estimates of future high school graduates for the 25 most populous metropolitan areas as a planning tool for institutional, community, philanthropic, business leaders, and others, who can use them as evidence of the number and characteristics of high school graduates in the coming 10 to 15 years. The projections mirror the national trend of a rising tide of minority, non-White high school graduates, alerting decision makers that the coming generations of students may have vastly different needs than the current one.

However, these data will not provide evidence on all of the issues that research shows exist for urban school districts. For example, we defined the metropolitan areas in terms that make sense to city and regional planners and businesses by including suburban areas with their core urban area. Therefore, the graduation disparities that research shows exist between the most racially segregated, high-poverty urban schools and schools in neighboring suburbs are masked when the trends are displayed for the wider metropolitan area – for example, the difference between the city of Baltimore’s four-year graduation rate of 66 percent, compared to Baltimore County’s at 84 percent.

**Conclusion**

Policymakers and institutional leaders can utilize these projections for planning purposes and to consider how to ensure that all students may have a reasonable shot at educational opportunity. That is critical, given that education increasingly determines how well individuals are able to contribute productively to a healthy society. Many current efforts are focused on the relative dearth of men in college or on delivering interventions to local communities, often within an urban corridor. Such local initiatives face idiosyncratic issues such as when a community spans state borders and efforts to increase educational attainment may face jurisdictional, financing, or other barriers or that inhibit individuals from making decisions that best serve their education pursuits.

Therefore, demographic projections are as important to a broad variety of organizations and policymakers focused on narrower groups of individuals or geographic areas, as they are to state policymakers, and these projections represent WICHE’s initial attempt to add nuance and wider utility to our data.
Endnotes

1 Brian Prescott and Peace Bransberger, \textit{Knocking at the College Door} (Boulder, CO: Western Interstate Commission for Higher Education: 2012), accessed 13 September 2013 from \url{<www.wiche.edu/knocking-8th>}

2 National Center for Education Statistics Common Core of Data (CCD) Restricted-Use Local Education Agency Dropout and Completion Data Files: School Years 2002-03 to 2008–09. Data obtained through special license; more information at \url{<http://nces.ed.gov/ccd/rudrp.asp>}

3 Data were not readily available to disaggregate the projections of nonpublic high school graduates for either sex or by metropolitan area.


6 In the projections tables in Appendix A we have not presented a disaggregation of the "Public Total" column from our 8th edition projections, because the data were not available to do so.

7 We are making no claims about graduation rates here. Rather, we observe that the number of male graduates compared to the number of males enrolled in high school results in a lower ratio than that for females.


12 We constructed metropolitan statistical areas (MSAs) using the counties identified by the U.S. Census as included in the MSA, as defined by the U.S. Office of Management and Budget as of November 2009 and aggregated using the Census CBSA code. We identified the 25 most populous metropolitan statistical areas using the U.S. Census Bureau’s Census 2000 and 2010 Census, “Table 20. Large Metropolitan Statistical Areas—Population,” accessed 23 August 2013 at \url{<http://www.census.gov/2010census/data/>}. School district data were associated with the MSA by county.


15 By definition, 100 percent of the public graduates in the District of Columbia are in the metropolitan area because the district is a single county.


17 Christopher B. Swanson, "Cities in Crisis 2009: Closing the Graduation Gap" (Bethesda, Maryland: Editorial Projects in Education Research Center, 2009), accessed 23 August 2013 from \url{<http://www.americaspromise.org/Our-Work/Dropout-Prevention/Cities-in-Crisis.aspx>}.