



**Memorandum**

TO: Cathy Moore, Superintendent  
David Ellis, County Manager

FROM: Marcella S. Rorie, Senior Director for WCPSS Long-Range Planning  
Michelle Venditto, Wake County Director, Budget and Management Services

DATE: February 9th, 2022

SUBJECT: Student Membership Forecast for WCPSS Operating and Capital Planning

The staff of WCPSS, Wake County Budget and Management Services and Wake County Planning completed an update of the WCPSS student membership forecast. The student membership forecasts are used in the development of the WCPSS operating budget, subsequent school allotments for the 2022-23 school year, and the update of the seven-year capital program. COVID-19 continues to have an impact on student membership across the country, and Wake County has not been an exception to this trend.

Report on Prior Year Forecast

The 2021-22 DPI reported PMR-2 (Principal Monthly Report-Month 2) membership of 158,760 represents a net gain of 1,087 students compared to last year and varies from the forecast by -1,831. WCPSS has once again seen high attendance violations in 2021-22. To account for these violations, PMR-2 is adjusted to 159,066 based on historical attendance violation information, similar to the adjustment applied last year. After accounting for these violations, there was a net gain of 183 students compared to last year and membership varies from the forecast by -1,525. Pre-pandemic forecasts do not include adjustments for attendance violations.

**PMR-2 Comparison with 2021-22 K-12 Forecast (Violation-adjusted)  
Membership by Grade Group**

	2020-21 (violation-adjusted actual)	2021-22 (forecast)	2021-22 (violation-adjusted actual)	Net Gain (2021-22 - 2020-21 violation- adjusted actual)	Percentage Change
<b>K-5</b>	69,188	70,800	69,000	-188	-0.3%
<b>6-8</b>	37,969	37,524	37,295	-674	-1.8%
<b>9-12+</b>	51,726	52,267	52,771	1,045	2.0%
<b>Total</b>	<b>158,883</b>	<b>160,591</b>	<b>159,066</b>	<b>183</b>	<b>0.1%</b>

## Overview

The student membership forecast developed by the work team reflects a one-year estimate to assist with planning and developing the WCPSS operating budget for the 2022-23 school year. Student membership forecasts for capital purposes have a multi-year impact. A long-term forecast takes into consideration varying rates of growth over time. North Carolina public school membership decreased by nearly 63,000 students in PMR-2 of 2020-21, a -4.4% decrease compared to 2019-20. Public school memberships rebounded slightly in PMR-2 of 2021-22, increasing by 12,571 students or 0.9%.

The global pandemic caused by COVID-19 is an unprecedented event with no equivalent historical point of reference. We saw significant disruptions to trends at the start of the 2020-21 school year and these disruptions have continued through 2021-22. Our understanding of the results of these disruptions for the near-term and longer-term remains limited.

The goal of the forecast team was to evaluate current impacts and determine how these impacts would affect the District moving forward. WCPSS also experienced an elevated number of students who were in attendance violation, which affected the PMR-2 data. After evaluating the attendance violation data, the forecast includes a recommended means of addressing this impact.

## Considerations

The work team evaluated input data and assumptions to assess the impacts on 2022-23 membership numbers. The forecast model is based on Grade Progression Ratios (GPRs) and makes the following assumptions:

- Individuals who enroll in alternative schooling options (home school, charters, and private schools) will remain within these options,
- Incremental increases in live births in Wake County,
- Grade Progression Ratios (GPRs) that are based on historical trends from 2015-19 and 2021-22 and exclude the impacts of COVID-19 in 2020-21, and
- Three new charter schools will open in 2022-23.

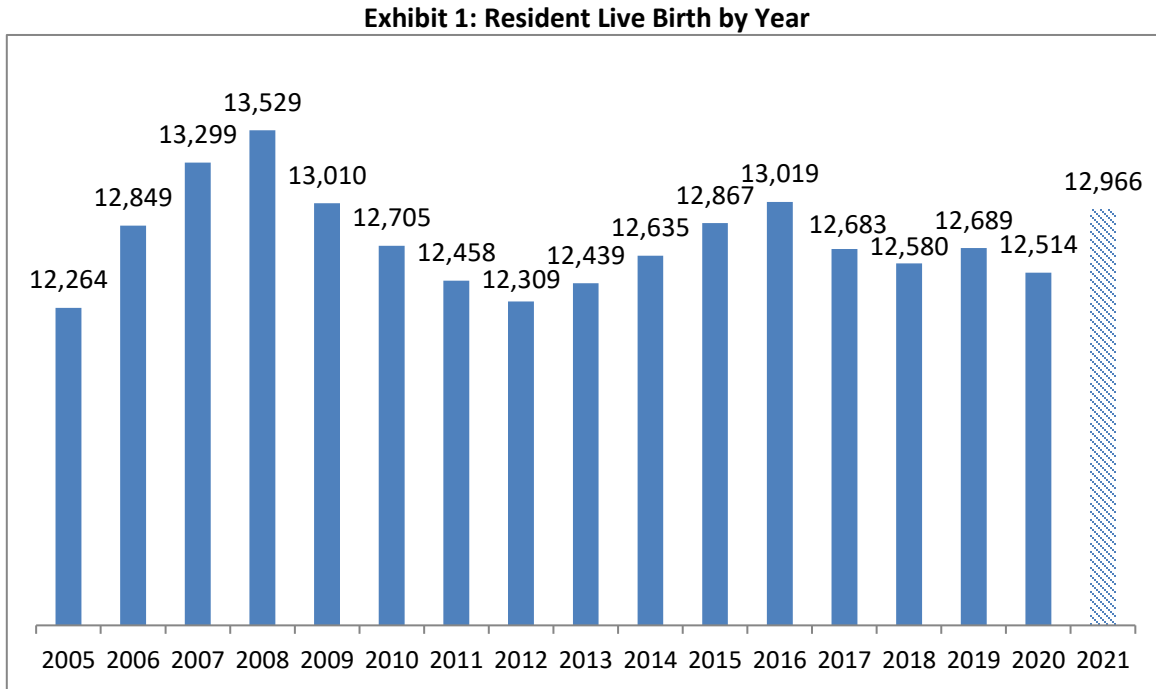
This model projects lower membership in the early years of the forecast. Membership increases in later years of the forecast are due to an increasing projection of resident live births.

## Methodology

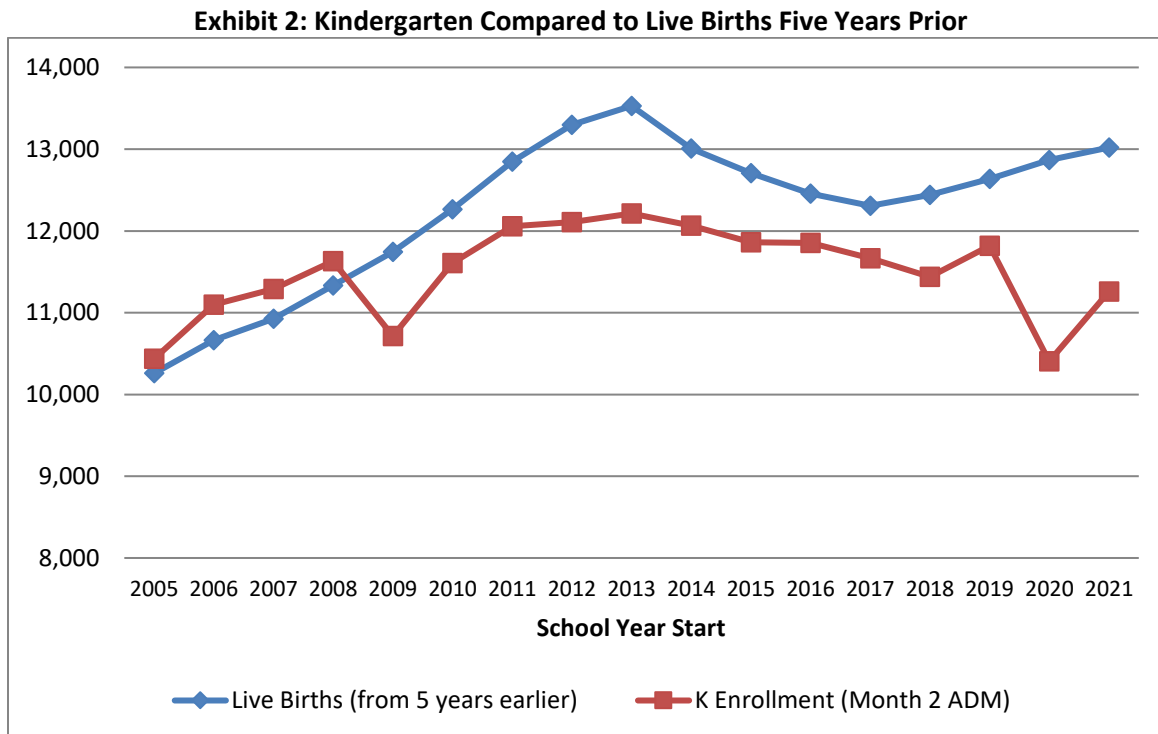
Staff and the consultants from Carolina Demography reviewed demographic, membership and economic trends to refine membership forecasts. For the current membership forecast update, staff reviewed past and future resident live birth rates; discussed the impact of shifting population demographics; and considered trends in market shares associated with school choice and the COVID-19 pandemic. As a result of these and other factors, staff adjusted the student membership forecast accordingly.

Population Changes

Factored into the student membership model are resident live births. Exhibit 1 shows declines from 2009 - 2012, and an upward trend from 2012 - 2017. Low live birth totals continued until 2021, when live births are currently projected to be the highest since 2016.

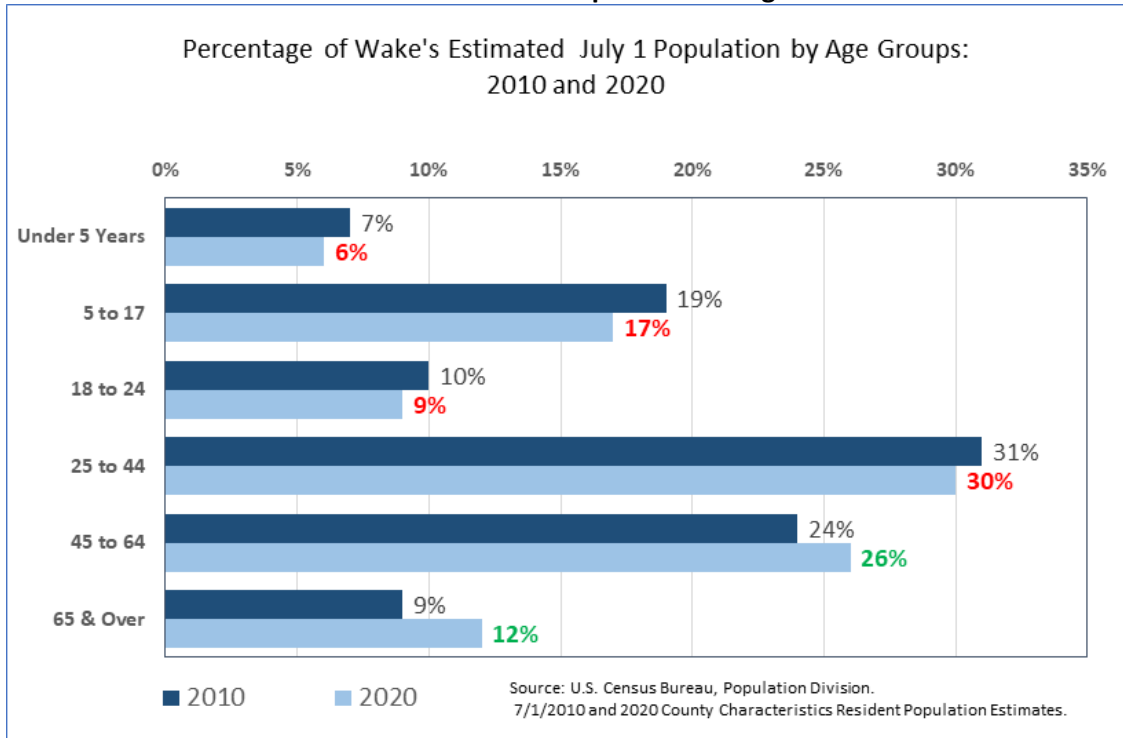


(Exhibit 2) The decreased number of births from 2009 to 2012, and the lower averages from 2017 to 2020, continue to impact kindergarten memberships and corresponding Grade Progressions Ratios (GPRs) used to predict future grade level membership.



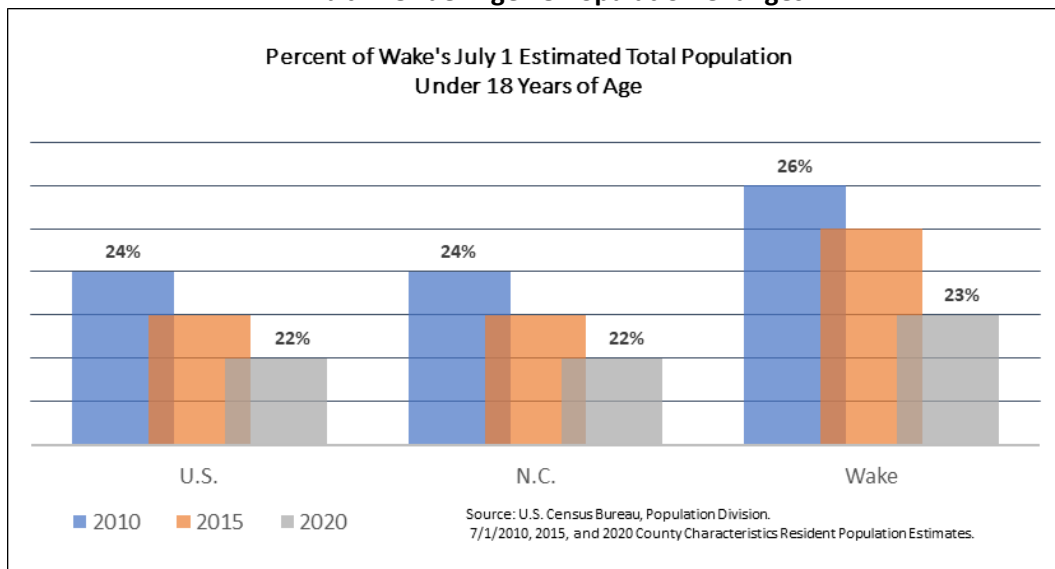
U.S. Census Bureau estimates indicate that Wake County's population is aging. Examining the change in distribution of select age cohorts reflects an increase in the share of total population for older adults (ages 65 years and over) between 2010 and 2020. As shown below in Exhibit 3, the population ages 65 and over accounted for 9% of the population on July 1, 2010; by July 1, 2020, this age group accounted for 12% of the County's total population.

**Exhibit 3: General Population Changes**



By comparison, the share of population under age 18 years decreased from 26% in 2010 to 23% in 2020. This trend is found across the state of North Carolina and across the country. Youth under 18 years of age (Exhibit 4) declined by 3 percentage points in Wake County and by 2 percentage points in North Carolina and nationally from July 1, 2010 to July 1, 2020, according to Census Bureau estimates.

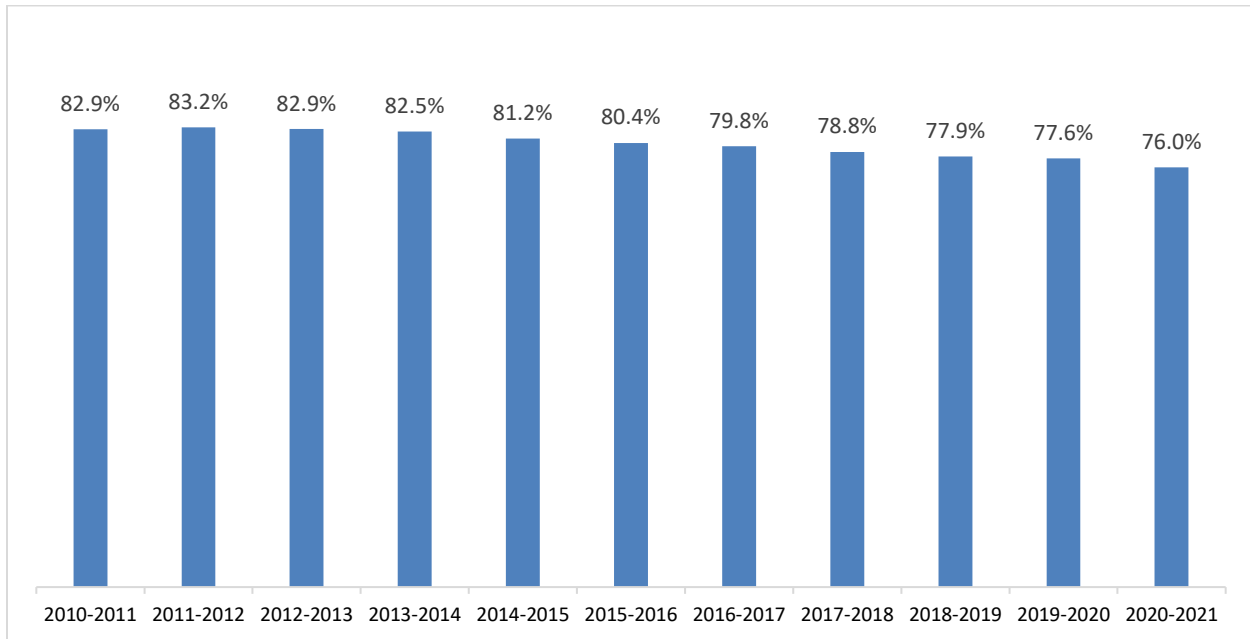
**Exhibit 4: Under Age 18 Population Changes**



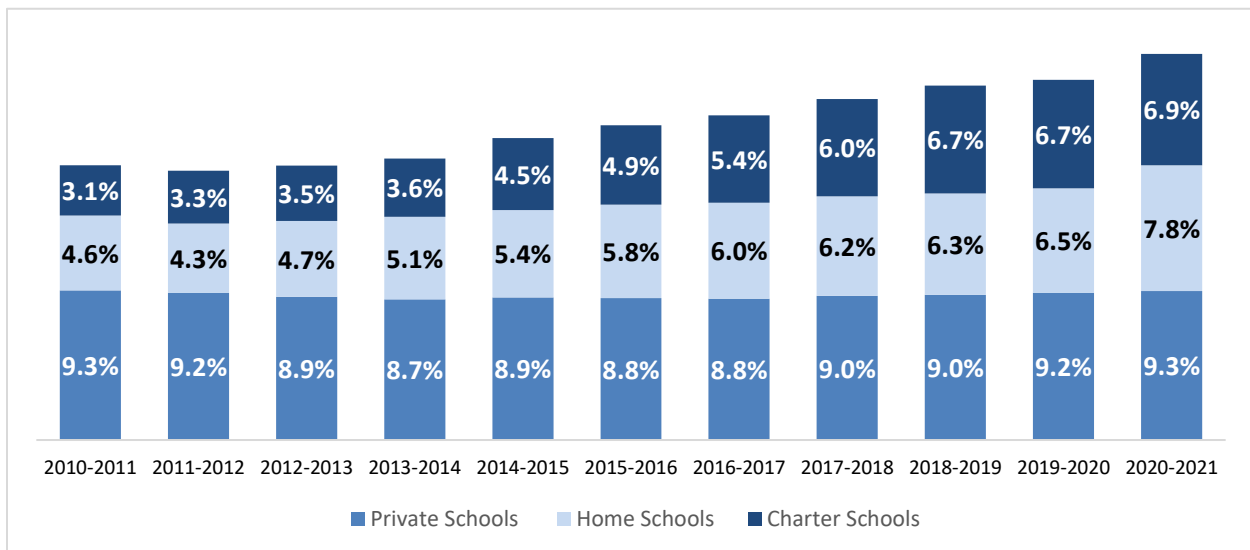
## Market Share

Prior year membership data for charter, private and home schools, as reported by the State, is analyzed as part of the membership forecast. A review of the market share indicates that these membership options grew as WCPSS' market share decreased (Exhibits 5 & 6). These changes in market share percentages reflect a 14,328-student increase in charter, private and homeschooling as compared to WCPSS's increase of 3,699 between 2014-15 and 2020-21. Prior to 2012, the WCPSS market share had held at approximately 83 percent since 2003.

**Exhibit 5: WCPSS Market Share**



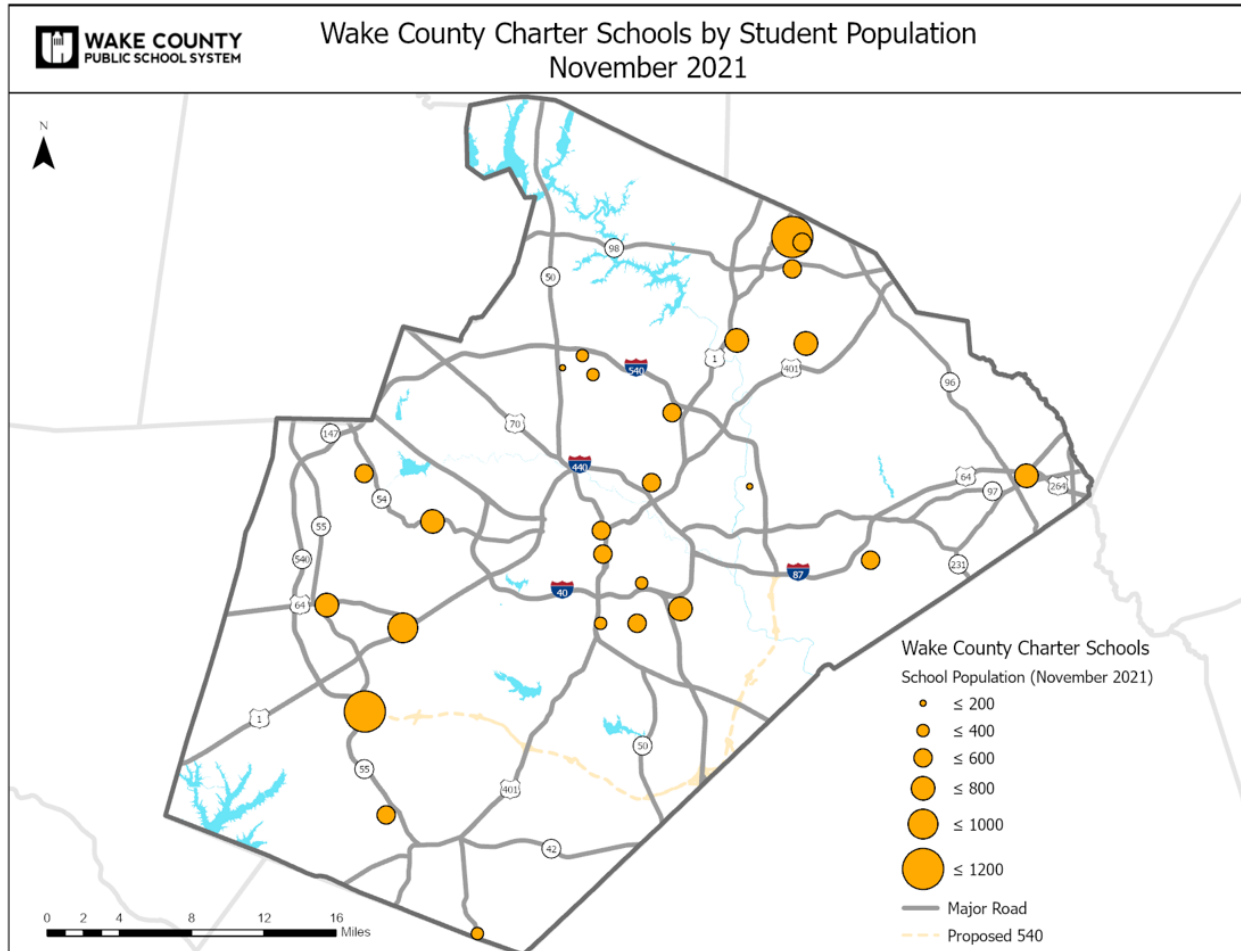
**Exhibit 6: Other Market Shares**



Note: 2013-14 - 2018-19 data is based on WCPSS Month-2 ADM; years prior are 20<sup>th</sup> day membership. Private and Home school data compiled from the North Carolina Division of Non-Public Education website. Data released Spring of current year. Charter school data from WCPSS Fall billing of charter school students.

For the school year 2011-12, the NC General Assembly lifted the cap for charter schools, allowing for additional charter school openings. Charter school membership was 14,490 in the 2020-21 school year and 15,780 in the 2021-22 school year based on WCPSS October 2021 billing reports. One charter school opened in 2021-22; there are a total of 26 charter schools in Wake County (Exhibit 7).

### Exhibit 7: Charter School Locations & Membership Size



Two charter schools were planned to open in fall of 2021: Doral Academy (K – 7, expanding to K – 8), and CE Academy (K-8). Both charters were included in the 2021-2022 forecast; however, as of early 2022, only Doral Academy has opened for students.

Three charters are expected to open in fall 2022: Revitalize Charter (K – 2, expanding to K – 8), Triangle Math & Science Academy Apex (K – 5, expanding to K – 8), and Wake Preparatory Academy (K – 10, expanding to K – 12). These three charter schools are expected to serve 1,646 students in fall 2022 and 2,884 students when the schools reach full capacity in fall 2028.

Two additional charter schools expected to open in the fall of 2022 in the 2021-22 forecast are no longer anticipated to open and are not included in this year’s model. Heritage Collegiate Leadership Academy’s charter application was not approved by the State, and North Raleigh Charter relinquished its charter and will not be opening.

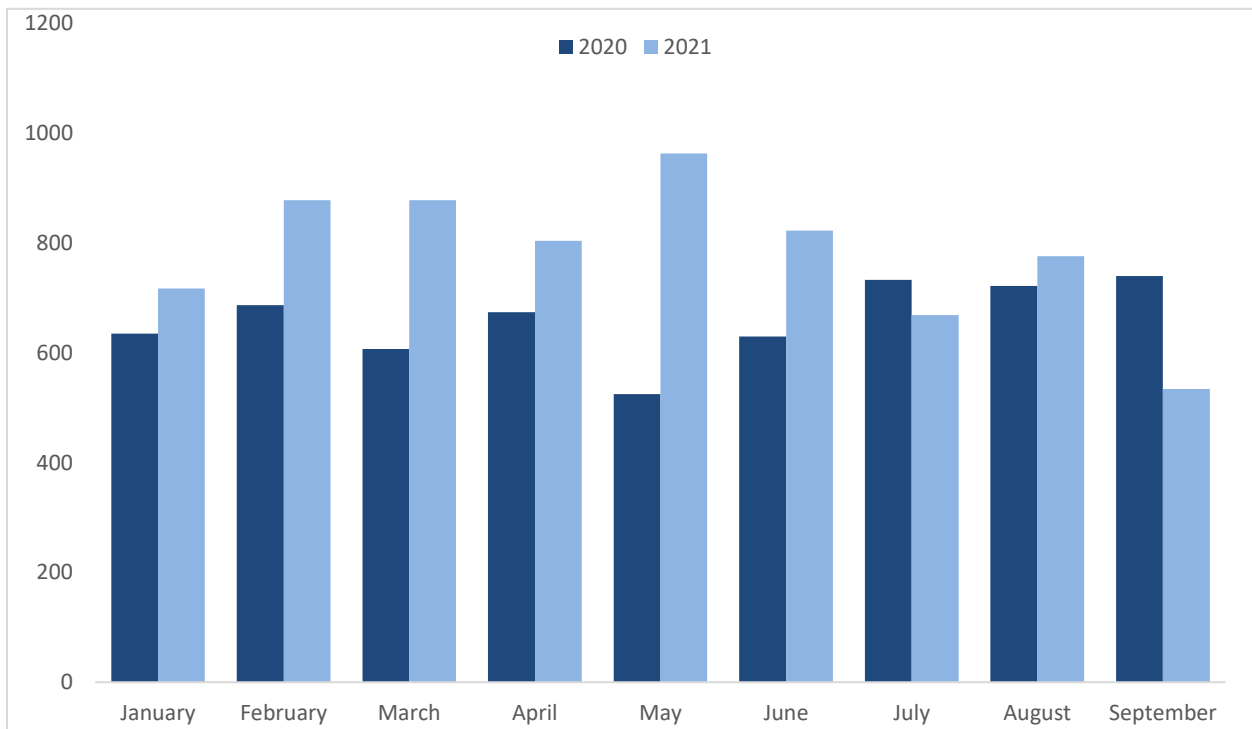
The model does not include Nalanda Academy, a new applicant that is pending approval in January 2022. If Nalanda Academy is approved, the school will open in the fall of 2023.

For this forecast, the charter school impact on WCPSS membership for 2022-23 is anticipated to be 17,426 students, an increase of 1,646 students over the October 2021 charter billing number. The charter applications provide projected membership numbers, but final numbers are not confirmed until closer to the start of the school year. Charter schools may not open unless 75% of their projected Year One ADM is enrolled. It is difficult to predict how many of these charters will actually open based on recent history. Between the application process and the school’s opening, schools are permitted to amend their projected membership numbers or request delayed openings.

Economic Climate

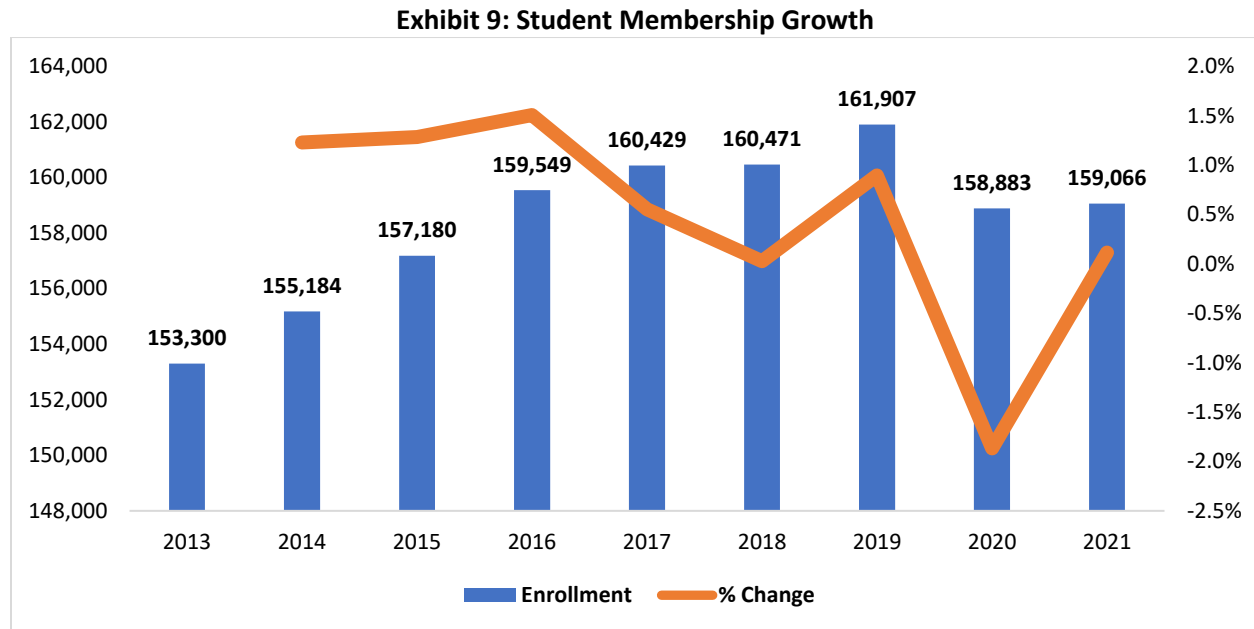
The economy in Wake is healthy as indicated by low unemployment rates and the number of residential building permits issued. As of November 2021, the Wake County unemployment rate is 2.7%, almost half of last year’s 5.2% and lower than the North Carolina and US rates of 3.4% and 3.9%, respectively. New residential building permit data (Exhibit 8) in Wake County from January-September 2021 reflects an 18.4% increase compared to same period in 2020. The value of the new residential permits in the period from January-September 2021 was 25.7% higher than 2020.

**Exhibit 8: New Residential Building Permits**



Forecast

Recent years reflect a smaller percentage growth in annual student membership (Exhibit 9). Month 2 ADM for the 2021-22 year increased slightly to 159,066, largely due to slight recovery from the pandemic.



Note: In 2013, reported student membership changed from 20<sup>th</sup> day to month 2 ADM (40<sup>th</sup> day), aligning with the base number that the State uses for LEA allotments. Month 2 ADM for 2020 and 2021 are adjusted for attendance violations.

The forecast team annually reviews new data, conducts error analysis, analyzes trends, and adjusts the forecast accordingly. These adjustments are based on data collected and received and made in response to existing and new trends.

Lower resident live births from 2016 to 2020 and actual K – 2 memberships continue to have a major impact on projected student membership, especially in the early years of the forecast. The 2020-21 school year saw a decrease in kindergarten membership of -1,387. Last year’s forecast projected that these missing kindergarteners would return to school in K – 1 in 2021-22; based on actual data, the current forecast removes the assumption that these kindergarteners will return. While 2021-22 kindergarten membership increased by 795 students compared to the prior year, that was not enough to fully offset the decrease seen in 2020-21 and was lower than 2019-20.

The forecast reflects a slight but steady increase in resident live births based on the higher live births seen in 2021 (Exhibit 10). The forecast does not anticipate a return to 2019 kindergarten membership levels until 2026-27; however, the steady growth in live births beginning in 2021 corresponds to steadily increasing kindergarten membership five years later.

**Exhibit 10: Wake County Resident Live Births**  
(2020 provisional; 2021 estimated, 2022-2026 projected)

2020	2021	2022	2023	2024	2025	2026
12,514	12,966	13,185	13,252	13,319	13,385	13,452

Membership growth continues to be moderate for 2022-23, with similar moderate increases in 2023-24 and 2024-25. There is a sharp decrease in 2025-26 because of impact of a smaller birth cohort in 2020 (the 2025 kindergarten cohort) and the aging out of the current ninth grade cohort. 2026-27 through 2031-32 forecast increasing membership growth driven by increasing projected live births. **The membership forecast for next year is 159,542, which is a growth of 476 students (0.30%) over the violation adjusted 2021-22 membership (Exhibit 11), but still less than actual membership for the 2019-2020 school year.**

### Exhibit 11: Student Membership Forecast

School Year Starting	-1%	Mid-Point	1%	# Of Additional Students	% Growth
2013	151,767	<b>153,300</b>	154,833	3,570	2.38%
2014	153,632	<b>155,184</b>	156,736	1,884	1.23%
2015	155,608	<b>157,180</b>	158,752	1,996	1.29%
2016	157,954	<b>159,549</b>	161,144	2,369	1.51%
2017	158,825	<b>160,429</b>	162,033	880	0.55%
2018	158,866	<b>160,471</b>	162,076	42	0.03%
2019	160,288	<b>161,907</b>	163,526	1,436	0.89%
2020	157,294	<b>158,883</b>	160,472	-3024	-1.87%
2021	157,475	<b>159,066</b>	160,657	183	0.12%
2022	157,947	<b>159,542</b>	161,137	476	0.30%
2023	158,090	<b>159,687</b>	161,284	145	0.09%
2024	158,274	<b>159,873</b>	161,472	186	0.12%
2025	157,130	<b>158,717</b>	160,304	-1156	-0.72%
2026	157,336	<b>158,925</b>	160,514	208	0.13%
2027	157,747	<b>159,340</b>	160,933	415	0.26%
2028	158,711	<b>160,314</b>	161,917	974	0.61%
2029	159,942	<b>161,558</b>	163,174	1244	0.78%
2030	161,706	<b>163,339</b>	164,972	1781	1.10%
2031	163,691	<b>165,344</b>	166,997	2005	1.23%

*Membership since 2013 is based on Month 2 membership*

Neighboring LEAs experienced varying degrees of growth and loss over the past two school years, based on NC DPI Month-2 membership (Exhibit 12).

### Exhibit 12: Comparisons of Surrounding LEAs

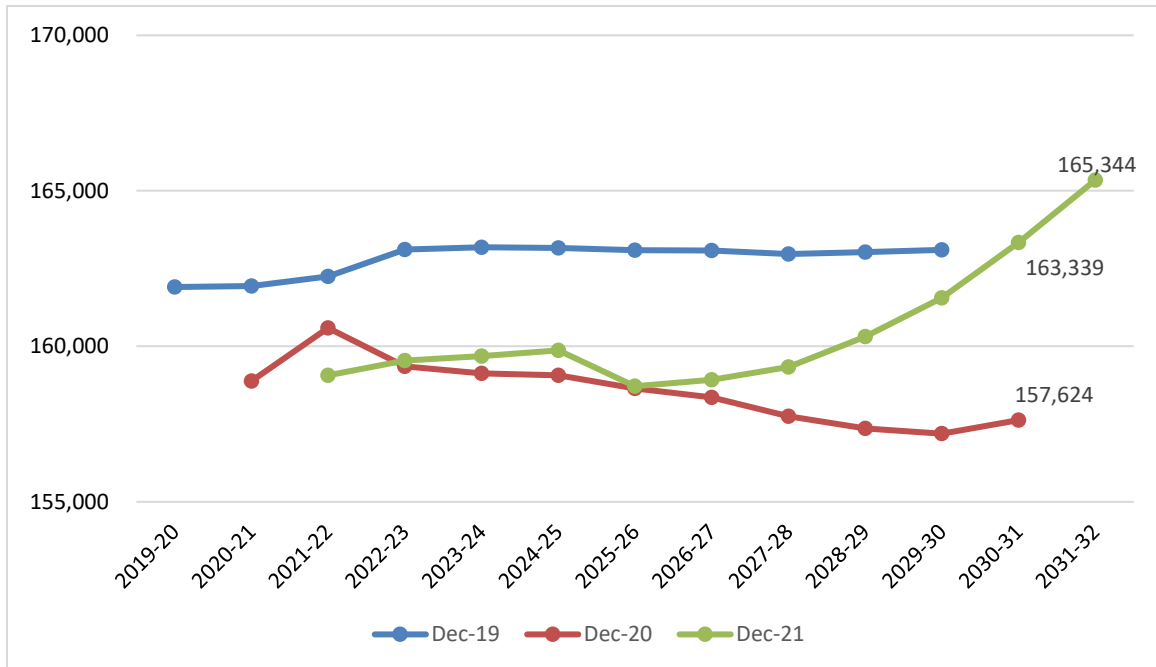
LEA	Month-2 2020-21	Month-2 2021-22	Change	% Gains/Loss
Johnston County Schools	35,906	37,270	1,364	3.80%
Winston Salem/Forsyth County Schools	50,407	51,974	1,567	3.10%
Franklin County Schools	7,724	7,921	197	2.60%
Chatham County Schools	8,612	8,805	193	2.20%
Nash-Rocky Mount Schools	13,896	14,179	283	2.00%
Charlotte-Mecklenburg Schools	138,884	140,471	1,587	1.10%
Orange County Schools	7,031	7,094	63	0.90%
<b>Wake County Public Schools*</b>	<b>157,673</b>	<b>158,760</b>	<b>1,087</b>	<b>0.70%</b>
Durham Public Schools	31,171	31,189	18	0.10%
Harnett County Schools	19,256	19,186	-70	-0.40%
Cumberland County Schools	48,185	47,949	-236	-0.50%
Guilford County Schools	68,264	67,632	-632	-0.90%
Granville County Schools	6,816	6,650	-166	-2.40%
Chapel Hill-Carrboro City Schools	11,764	11,411	-353	-3.00%

*\*Unadjusted ADM shown for accurate comparisons. Membership forecast is based on ADM adjusted for attendance violations*

### Comparison of Forecasts

The updated membership forecast is moderately higher than the prior year forecast, but still lower than the forecasts developed prior to the COVID-19 pandemic. The forecasts have been updated to account for changes in demographic trends to include population shifts, the impact of increasing school choices, and the pandemic. Exhibit 13 reflects the revisions made to the forecast trajectory in recent years.

**Exhibit 13: Comparison of Forecasts**



### Conclusion

Student membership forecasts for the 2022-23 school year reflect a slight increase over the 2021-22 school year. Subsequent years in the forecast continue this slight growth trend, until a drop in membership in 2025-26 caused by a large cohort aging out of school and a smaller cohort of kindergartners aging into school. The forecast then projects consistent increasing growth in 2026-27 through 2031-32, driven by increasing numbers of live births in 2021 and subsequent years. Despite the increase in kindergarten membership this year, K – 5 membership is anticipated to remain below 2019 numbers from 2022-23 through 2025-26.

The current forecast predicts a 2022-23 Month-2 K-12 Average Daily Membership of 159,492, an increase of 476 (.3%) over violation adjusted 2021-22. The forecasted ten-year annual growth will result in a total K-12 membership of 165,344 in 2030-31.

Highlights of assumptions used in generating the membership forecast:

- 12,966 Resident Live Births (RLB) in Wake County for 2021
- RLBs are expected to show incremental growth in the future. The RLB forecast is based on a linear regression; the average annual RLB projected growth rate for the 2021 to 2027 period is 0.7%.
- Three new charter schools in 2022-23.

Concerns and questions that will be discussed with future forecasts:

- Will 2022 be a true return to “normal?”
- Will families continue to make other school choices during and after the pandemic?
- How well will charter applications capture true build out?

If you have any questions or would like additional information on the forecast, we welcome an opportunity to review the attached materials in greater detail.

Attachments:

K-12 Forecast Report

Consultant Student Membership Forecast Report