

NORTHWEST ALLEN COUNTY SCHOOLS

**POPULATION AND ENROLLMENT FORECASTS,
2023-24 THROUGH 2032-33**

NOVEMBER 2022

**McKIBBEN DEMOGRAPHIC RESEARCH, LLC
JEROME McKIBBEN, PH.D.
ROCK HILL, SC**

j.mckibben@mckibbendemographics.com

978-501-7069



CONTENTS

EXECUTIVE SUMMARY	3
INTRODUCTION	4
DATA	5
ASSUMPTIONS	6
METHODOLOGY	9
REFERENCES	11
Appendix A: Supplemental Tables	12
Appendix B: Population Forecasts	16
Appendix C: Population Pyramids.....	25
Appendix D: Enrollment Forecasts.....	26

EXECUTIVE SUMMARY

1. The resident total fertility rate for the Northwest Allen County Schools over the life of the forecasts is below replacement level. (1.82 vs. the replacement level of 2.1)
2. Most in-migration to the district continues to occur in the 0-to-9 and 25-to-44-year-old age groups.
3. The local 18-to-24-year-old population continues to leave the district, going to college or moving to other urbanized areas. This population group accounts for the largest segment of the district's out migration flow and will increase steadily over the next 10 years. The second largest migration outflow is in the 70+ age groups.
4. The primary factors causing the district's enrollment to increase over the next 10 years is the sustained rate of new home construction, the relatively high number of elderly housing units turning over coupled with a steady rate of in migration of young families.
5. Changes in year-to-year enrollment over the next ten years will primarily be due to large cohorts entering and moving through the school system in conjunction with larger cohorts leaving the system.
6. The elementary enrollment will continue to increase briskly over the next five school years.
7. The median age of the district's population will increase from 38.2 in 2020 to 41.5 in 2030.
8. Even if the district continues to have a significant amount of annual new housing unit construction over the next 10 years, the rate, magnitude and price of existing home sales will become the increasingly dominant factor later in the decade, affecting the amount of population and enrollment change.
9. Total district enrollment is forecasted to increase by 607 students, or 7.5%, between 2022-23 and 2027-28. Total enrollment will increase by 252 students, or 2.9%, from 2027-28 to 2032-33.

INTRODUCTION

By demographic principle, distinctions are made between projections and forecasts. A projection extrapolates the past (and present) into the future with little or no attempt to take into account any factors that may impact the extrapolation (e.g., changes in fertility rates, housing patterns or migration patterns) while a forecast results when a projection is modified by reasoning to take into account the aforementioned factors.

To maximize the use of this study as a planning tool, the ultimate goal is not simply to project the past into the future, but rather to assess various factors' impact on the future. The future population and enrollment change of each school district is influenced by a variety of factors. Not all factors will influence the entire school district or its attendance areas at the same level. Some may affect different areas at dissimilar magnitudes and rates causing changes at varying points of time within the same district. The forecaster's judgment, based on a thorough and intimate study of the district, has been used to modify the demographic trends and factors to predict likely changes more accurately. Therefore, strictly speaking, this study is a forecast, not a projection; and the amount of modification of the demographic trends varies between different areas of the district as well as within the timeframe of the forecast.

To calculate population forecasts of any type, particularly for smaller populations such as a school district or its attendance areas, realistic suppositions must be made as to what the future will bring in terms of age specific fertility,

mortality, and migration rates as well as the residents' demographic behavior at certain points of the life course. The demographic history of the school district and its interplay with the social and economic history of the area is the starting point and basis of most of these suppositions, particularly on key factors such as the age structure of the area. The unique nature of each district's and attendance area's demographic composition and rate of change over time must be assessed and understood to be factors throughout the life of the forecast series. Moreover, no two populations, particularly at the school district and attendance area level, have identical demographic characteristics or undergo demographics changes at exactly the same rate.

The manifest purpose of these forecasts is to ascertain the demographic factors that will ultimately influence the enrollment levels in the district's schools. There are of course, other non-demographic factors that affect enrollment levels over time. These factors include, but are not limited to transfer policies within the district; student transfers to and from neighboring districts; placement of "special programs" within school facilities that may serve students from outside the attendance area; state or federal mandates that dictate the movement of students from one facility to another (No Child Left Behind was an excellent example of this factor); the development of charter schools in the district; the prevalence of home schooling in the area; and the dynamics of local private schools.

Unless the district specifically requests the calculation of forecasts that reflect the effects of changes in these non-demographic factors, their influences are held constant for the life of the forecasts. Again, the main function of these forecasts is to determine what impact demographic changes will have on future enrollment. It is quite possible to calculate special “scenario” forecasts to measure the impact of school policy modifications, new state mandates as well as planned economic development and/or financial changes. However, in this case the results of these population and enrollment forecast are meant to represent the most likely scenario for changes over the next 10 years in the district and its attendance areas.

The first part of the report will examine the assumptions made in calculating the population forecasts for the Northwest Allen County Schools. Since the results of the population forecasts drive the subsequent enrollment forecasts, the assumptions listed in this section are paramount to understanding the area’s demographic dynamics. The remainder of the report is an explanation and analysis of the district's population forecasts and how they will shape the district's grade level enrollment forecasts.

DATA

The data used for the forecasts come from a variety of sources. The Northwest Allen County Schools provided enrollments by grade and attendance center for the school years 2017-18 to 2022-23. Birth and death data for the years 2010 through 2020 were obtained

from the Indiana Department of Health. The net migration values were calculated using Internal Revenue Service migration reports for the years 2010 through 2020. The data used for the calculation of migration models came from the United States Bureau of the Census, 2005 to 2020, and the models were designed using demographic and economic factors. The base age-sex population counts used are from the results of the 2010 Census, calibrated to the 2020 Census results

Recently the Census Bureau began releasing annual estimates of demographic variables at the block group and tract level from the American Community Survey (ACS). There has been wide scale reporting of these results in the national, state, and local media. However, due to the methodological problems the Census Bureau is experiencing with their estimates derived from ACS data, particularly in areas with a population of less than 60,000, the results of the ACS are not used in these forecasts. For example, given the sampling framework used by the Census Bureau, each year only 500 of the over 16,000 current households in the district would have been included. For comparison 2,100 households in the district were included in the sample for the long form questionnaire in the 2000 Census. As a result of this small sample size, the ACS survey result from the last 5 years must be aggregated to produce the tract and block group estimates.

To develop the population forecast models, past migration patterns, current age specific fertility patterns, the magnitude and dynamics of the gross and net migration, the current age specific

mortality trends, the distribution of the population by age and sex, the rate and type of existing housing unit sales, and future housing unit construction are considered primary variables. In addition, the change in household size relative to the age structure of the forecast area was addressed. While there was a slight drop in the average household size in the Northwest Allen County Schools (from 2.87 in 2010 to 2.78 in 2020) as well as most other areas of the country during the previous 20 years, the rate of this decline has been forecasted to slow over the next ten years.

ASSUMPTIONS

For these forecasts, the mortality probabilities are held constant at the levels calculated for the year 2018 (pre COVID-19 levels). While the number of deaths in an area are impacted by and will change given the proportion of the local population over age 65, in the absence of an extraordinary event such as a natural disaster or a breakthrough in the treatment of heart disease, death rates rarely move rapidly in any direction, particularly at the school district or attendance area level. Thus, significant changes are not foreseen in district's mortality rates between now and the year 2032. (At this point in time, there is insufficient data at the geographic and age levels needed for these forecasts of the impacts of COVID-19 on mortality rates. We assume that most areas will return to their traditional mortality rate levels by 2023.) Any increases forecasted in the number of deaths will be due primarily to the general aging of the

district's population and specifically to the increase in the number of residents aged 65 and older.

Similarly, fertility rates are assumed to stay fairly constant for the life of the forecasts. Like mortality rates, age specific fertility rates rarely change quickly or dramatically, particularly in small areas. Even with the recently reported drop in the fertility rates of the United States, overall fertility rates have stayed within a 10% range for most of the last 40 years. In fact, the vast majority of year-to-year change in an area's number of births is due to changes in the number of women in childbearing ages (particularly ages 20-29) rather than any fluctuation in an area's fertility rate. While there was a significant decline in the number of births in most regions of the United States in 2020 and 2021 due to the impact of COVID-19, we assume that after 2022 fertility rates will resume their pre COVID trends.

The **resident** total fertility rate (TFR), the average number of births a woman will have while living in the school district during her lifetime, is estimated to be 1.82 for the total district for the ten years of the population forecasts. A TFR of 2.1 births per woman is considered the theoretical "replacement level" of fertility necessary for a population to remain constant in the absence of in-migration. Therefore, in the absence of migration, fertility alone would be slightly below the level needed to maintain the current level of population and enrollment within the Northwest Allen County Schools over the course of the forecast period. At the current TFR and given the number of women in prime childbearing age in the district (ages 20–34-year-old), the district

will consistently see the number of total resident births be on average over 140 lower than the average enrollment in grade one.

A close examination of data for the Northwest Allen County Schools has shown the age specific pattern of net migration will be nearly constant throughout the life of the forecasts. While the number of in and out migrants has changed in past years for the Northwest Allen County Schools (and will change again over the next 10 years), the basic age pattern of the migrants has stayed nearly the same over the last 30 years. Based on the analysis of data it is safe to assume this age specific migration trend will remain unchanged into the future. This pattern of migration shows most of the local out-migration occurring in the 18-to-24-year-old age group as young adults leave the area to go to college or move to other urbanized areas. The second group of out-migrants is those householders aged 70 and older who are downsizing their residences. Most of the non-college in-migration occurs in the 0-to-9 and 25-44 age groups (the bulk of which come from areas within 100 miles of the Northwest Allen County Schools) primarily consisting of younger adults and their children.

As the Allen County area is not currently contemplating any major expansions or contractions, the forecasts also assume that the current economic, political, social, and environmental factors, as well as the transportation and public works infrastructure (with a few notable exceptions) of the Northwest Allen County Schools and its attendance areas will remain the same through the year 2032. Below is a list of assumptions and issues that are specific to the

Northwest Allen County Schools. These issues have been used to modify the population forecast models to predict the impact of these factors more accurately on each area's population change.

Specifically, the forecasts for the Northwest Allen County Schools assume that throughout the study period:

- a. The national, state, or regional economy does not go into deep recession at any time during the 10 years of the forecasts; (Deep recession is defined as four consecutive quarters where the GDP contracts greater than 1% per quarter)
- b. Interest rates have risen from their historic lows and will not fluctuate more than two percentage points in the short term; the interest rate for a 30-year fixed home mortgage stays between 5.0% and 7.0% for the 10 years of the forecasts;
- c. The rate of mortgage approval stays at 2022 levels and lenders do not return to "sub-prime" mortgage practices;
- d. There are no additional restrictions placed on home mortgage lenders or additional bankruptcies of major credit providers;
- e. The rate of housing foreclosures does not exceed 125% of the 2015-2020 average of Allen County for any year in the forecasts;

- f. All currently planned, platted, approved, and permitted housing developments are built out and completed by 2031. All new housing units constructed are occupied by 2032. Speculative new home construction plans are not included;
- g. The average annual unemployment rates for Allen County and the Greater Fort Wayne Metropolitan Area will remain below 7.5% for the 10 years of the forecasts;
- h. The intra-district student transfer policy remains unchanged over the next 10 years;
- i. The rate of students transferring out of the Northwest Allen County Schools will remain at the 2018-19 to 2022-23 average. The district will average -600 transfers per year;
- j. The inflation rate for gasoline will stay below 5% per year for the 10 years of the forecasts;
- k. The state of Indiana does not change the current policy on open enrollment (unrestricted inter district transfers) or school vouchers anytime in the next 10 years;
- l. There will be no building moratorium within the district;
- m. Businesses within the district and the Northwest Allen County Schools area will remain viable;
- n. There are no new charter schools opened in the district anytime or expansion of existing charter schools over the next 10 years;
- o. The number of existing home sales in the district that are a result of “distress sales” (homes worth less than the current mortgage value) will not exceed 20% of total homes sales in the district for any given year;
- p. Housing turnover rates (sale of existing homes in the district) will remain at their current levels. The majority of existing home sales are made by homeowners over the age of 60;
- q. The district will have at least an average of 500 existing home sales per year for the next 10 years;
- r. The district will have at least an average of 125 new single-family housing units constructed per year over the next 10 years;
- s. Private school and home school attendance rates will remain constant at 2022 levels;
- t. The rate of foreclosures for commercial property remains at the 2015-2020 average for Allen County;
- u. The number of students engaging in virtual learning (both within and outside of the district) remains at the 2022 level.

If a major employer in the district or in the Allen County or the Greater Fort Wayne Metropolitan Area (particularly in the northern parts of the metropolitan area) closes, reduces or expands its operations, the population forecasts would need to be adjusted to reflect the changes brought about by the change in economic and employment conditions. The same holds true for any type of natural disaster, major change in the local infrastructure (e.g., highway construction, water and sewer expansion, changes in zoning regulations etc.), a further economic downturn, any additional weakness in the housing market, another pandemic or any instance or situation that causes rapid and dramatic population changes that could not be foreseen at the time the forecasts were calculated.

The high proportion of high school graduates from the Northwest Allen County Schools that attend college or move to urban areas outside of the district for employment is a significant demographic factor. Their departure is a major reason for the extremely high out-migration in the 18 to 24 age group and was taken into account when calculating these forecasts. The out-migration of graduating high school seniors is expected to continue over the period of the forecasts and the rate of out-migration has been forecasted to remain the same over the life of the forecast series.

Finally, all demographic trends (i.e., births, deaths, and migration) are assumed to be linear in nature and annualized over the forecast period. For example, if 1,000 births are forecasted for a 5-year period, an equal number, or proportion of the births are assumed to occur every year, 200 per year. Actual

year-to-year variations do and will occur, but overall year-to-year trends are expected to be constant.

METHODOLOGY

The population forecasts presented in this report are the result of using the Cohort-Component Method of population forecasting (Siegel, and Swanson, 2004: 561-601) (Smith et. al. 2004). As stated in the **INTRODUCTION**, the difference between a projection and a forecast is in the use of explicit judgment based upon the unique features of the area under study. Strictly speaking, a cohort projection refers to the future population that would result if a mathematical extrapolation of historical trends. Conversely, a cohort-component forecast refers to the future population that is expected because of a studied and purposeful selection of the components of change (i.e., births, deaths, and migration) and forecast models are developed to measure the impact of these changes in each specific geographic area.

Five sets of data are required to generate population and enrollment forecasts. These five data sets are:

- a. a base-year population (here, the 2010 Census population for the Northwest Allen County Schools and its attendance areas);
- b. a set of age-specific fertility rates for the district to be used over the forecast period and its attendance areas;

- c. a set of age-specific survival (mortality) rates for the district and its attendance areas;
- d. a set of age-specific migration rates for the district and its attendance areas; and;
- e. the historical enrollment figures by grade.

The most significant and difficult aspect of producing enrollment forecasts is the generation of the population forecasts in which the school age population (and enrollment) is embedded. In turn, the most challenging aspect of generating the population forecasts is found in deriving the rates of change in fertility, mortality, and migration. From the standpoint of demographic analysis, the Northwest Allen County Schools is classified as a “small area” population (as compared to the population of the state of Indiana or to that of the United States). Small area population forecasts are more complicated to calculate because local variations in fertility, mortality, and migration may be more irregular than those at the regional, state, or national scale. Especially challenging is the forecast of the migration rates for local areas, because changes in the area's socioeconomic characteristics can quickly change from past and current patterns (Peters and Larkin, 2002.)

The population forecasts for Northwest Allen County Schools were calculated using a cohort-component method with the populations divided into male and female groups by five-year age cohorts that range from 0-to-4 years of age to 85 years of age and older (85+). Age- and sex-specific fertility, mortality,

and migration models were constructed to specifically reflect the unique demographic characteristics of each of the attendance areas in the Northwest Allen County Schools.

The enrollment forecasts were calculated using a modified average survivorship method. Average survivor rates (i.e., the proportion of students who progress from one grade level to the next given the average amount of net migration for that grade level) over the previous five years of year-to-year enrollment data were calculated for grades two through twelve. This procedure is used to identify specific grades where there are large numbers of students changing facilities for non-demographic factors, such as private school transfers or enrollment in special programs.

The survivorship rates were modified or adjusted to reflect the average rate of forecasted in and out migration of 5-to-9, 10-to-14 and 15-to-17-year-old cohorts to each of the attendance centers in Northwest Allen County Schools for the period 2010 to 2015. These survivorship rates then were adjusted to reflect the forecasted changes in age-specific migration the district should experience over the next five years. These modified survivorship rates were used to project the enrollment of grades 2 through 12 for the period 2015 to 2020. The survivorship rates were adjusted again for the period 2020 to 2025 to reflect the predicted changes in the amount of age-specific migration in the district for the period.

The forecasted enrollments for kindergarten and first grade are derived from the 5-to-9-year-old population of the

age-sex population forecast at the elementary attendance center district level. This procedure allows the changes in the incoming grade sizes to be factors of forecasted population change and not an extrapolation of previous class sizes. Given the potentially large amount of variation in kindergarten enrollment due to parental choice, changes in the state's minimum age requirement, and differing district policies on allowing children to start Kindergarten early, first grade enrollment is deemed to be a more accurate and reliable starting point for the forecasts. (McKibben, 1996) The level of accuracy for both the population and enrollment forecasts at the school district level is estimated to be no more than +/- 2.0% for the life of the forecasts.

REFERENCES

- McKibben, J.
The Impact of Policy Changes on Forecasting for School District. Population Research and Policy Review, Vol. 15, No. 5-6, December 1996
- McKibben, J., M. Gann, and K. Faust.
The Baby Boomlet's Role in Future College Enrollment. American Demographics, June 1999.
- Peters, G. and R. Larkin
Population Geography. 7th Edition. Dubuque, IA: Kendall Hunt Publishing. 2002.
- Siegel, J. and D. Swanson
The Methods and Materials of Demography: Second Edition, Academic Press: New York, New York. 2004.
- Smith, S., J. Tayman and D. Swanson
State and Local Population Projections, Academic Press, New York, New York. 2001.

Appendix A: Supplemental Tables

Table 1: Forecasted Elementary Area Population Change, 2020 to 2030

	2020	2025	2020-2025 Change	2030	2025-2030 Change	2020-2030 Change
Arcola	3,620	3,810	5.2%	3,940	3.4%	8.8%
Aspen Meadow	5,420	6,740	24.4%	7,880	16.9%	45.4%
Cedar Canyon	5,640	6,100	8.2%	6,540	7.2%	16.0%
Eel River	4,700	5,010	6.6%	5,310	6.0%	13.0%
Hickory Center	5,050	4,920	-2.6%	4,720	-4.1%	-6.5%
Huntertown	5,440	5,820	7.0%	6,190	6.4%	13.8%
Oak View	6,360	6,950	9.3%	7,340	5.6%	15.4%
Perry Hill	8,330	8,900	6.8%	9,120	2.5%	9.5%
District Total	44,560	48,250	8.3%	51,040	5.8%	14.5%

Table 2: Household Characteristics by Elementary Area, 2010 Census

	HH w/ Pop Under 18	% HH w/ Pop Under 18	Total Households	Household Population	Persons Per Household
Arcola	364	30.3%	1,202	1,885	2.57
Aspen Meadow	411	48.1%	856	1,598	2.86
Cedar Canyon	631	44.5%	1,420	2,890	3.03
Eel River	624	52.9%	1,179	2,555	2.95
Hickory Center	917	54.1%	1,695	3,578	3.10
Huntertown	647	38.1%	1,700	2,962	2.74
Oak View	727	41.7%	1,745	3,205	2.84
Perry Hill	900	38.5%	2,337	4,264	2.82
District Total	5,221	43.0%	12,134	22,937	2.87

Table 3: Householder Characteristics by Elementary Area, 2010 Census

	Percentage of Householders aged 35-54	Percentage of Householders aged 65+	Percentage of Householders who own homes
Arcola	41.3%	22.8%	88.3%
Aspen Meadow	44.6%	11.9%	93.1%
Cedar Canyon	49.7%	18.7%	96.4%
Eel River	49.9%	8.2%	91.5%
Hickory Center	53.1%	10.6%	95.8%
Huntertown	46.6%	17.4%	88.4%
Oak View	47.8%	21.7%	93.1%
Perry Hill	44.3%	23.4%	96.2%
District Total	47.3%	17.6%	93.2%

Table 4: Percentage of Households that are Single Person Households and Single Person Households that are over age 65 by Elementary Area, 2010 Census

	Percentage of Single Person Households	Percentage of Single Person Households and are 65+
Arcola	22.6%	8.0%
Aspen Meadow	16.9%	3.9%
Cedar Canyon	10.6%	4.2%
Eel River	15.2%	2.4%
Hickory Center	11.4%	2.9%
Huntertown	17.0%	5.8%
Oak View	15.5%	7.6%
Perry Hill	16.5%	7.8%
District Total	15.5%	5.6%

Table 5: Elementary Enrollment (K-5), 2022, 2027, 2032

	2022	2027	2022-2027 Change	2032	2027-2032 Change	2022-2032 Change
Arcola	215	242	12.6%	247	2.1%	14.9%
Aspen Meadow	555	619	11.5%	637	2.9%	14.8%
Cedar Canyon	511	528	3.3%	543	2.8%	6.3%
Eel River	413	401	-2.9%	416	3.7%	0.7%
Hickory Center	450	510	13.3%	471	-7.6%	4.7%
Huntertown	506	582	15.0%	589	1.2%	16.4%
Oak View	451	494	9.5%	501	1.4%	11.1%
Perry Hill	545	516	-5.3%	521	1.0%	-4.4%
District Total	3,646	3,892	6.7%	3,925	0.8%	7.7%

Table 6: Age Under One to Age Ten Population Counts, by Year of Age, by Elementary Area: 2010 Census

	Under 1 year	1 year	2 years	3 years	4 years	5 years	6 years	7 years	8 years	9 years	10 years
Arcola	30	35	34	34	36	41	37	39	31	36	41
Aspen Meadow	47	50	59	38	45	64	41	48	51	53	45
Cedar Canyon	48	61	66	84	70	84	75	80	72	80	86
Eel River	64	69	77	90	79	82	79	79	73	55	71
Hickory Center	71	103	110	80	103	91	104	97	122	101	112
Huntertown	42	41	43	72	54	67	63	72	84	78	73
Oak View	51	77	75	62	80	80	82	85	83	88	94
Perry Hill	65	76	72	75	107	106	81	106	103	108	130
District Total	418	513	536	535	574	614	562	605	619	600	653

Appendix B: Population Forecasts

Northwest Allen County Schools: Total Population

	2010	2015	2020	2025	2030
0-4	2,576	2,710	2,880	2,970	2,750
5-9	3,000	3,280	3,510	3,690	3,810
10-14	3,082	3,510	3,770	3,860	3,960
15-19	2,574	2,390	2,850	3,010	3,280
20-24	1,379	1,390	1,310	1,460	1,400
25-29	1,670	2,080	2,110	1,840	1,940
30-34	2,244	2,990	3,330	3,280	2,840
35-39	2,629	3,420	3,920	4,260	4,150
40-44	2,690	3,430	4,190	4,480	4,770
45-49	2,818	2,660	3,410	4,280	4,550
50-54	2,641	2,770	2,640	3,420	4,190
55-59	2,324	2,580	2,710	2,530	3,310
60-64	1,920	2,110	2,360	2,510	2,390
65-69	1,345	1,690	1,890	2,110	2,320
70-74	805	1,240	1,530	1,710	1,920
75-79	602	690	1,070	1,330	1,500
80-84	441	480	560	870	1,100
85+	331	430	520	640	860
Total	35,071	39,850	44,560	48,250	51,040
Median Age	36.9	37.3	38.2	39.7	41.5
Births	1,880	2,100	2,080	1,680	
Deaths	1,010	1,200	1,430	1,340	
Natural Increase	870	900	650	340	
Net Migration	3,910	3,850	3,030	2,150	
Change	4,780	4,750	3,680	2,490	

Differences between period Totals may not equal Change due to rounding.

Arcola Elementary: Total Population

	2010	2015	2020	2025	2030
0-4	169	180	190	180	160
5-9	184	210	220	240	240
10-14	214	180	210	220	240
15-19	210	170	140	170	180
20-24	167	170	130	110	150
25-29	140	210	210	170	130
30-34	159	180	250	250	190
35-39	177	240	270	320	310
40-44	226	270	320	330	380
45-49	267	220	270	320	330
50-54	284	270	220	250	320
55-59	258	280	250	210	250
60-64	213	250	260	250	210
65-69	134	200	240	240	210
70-74	94	120	190	220	210
75-79	85	80	110	160	190
80-84	60	60	70	90	140
85+	46	60	70	80	100
Total	3,087	3,350	3,620	3,810	3,940
Median Age	42.7	42.5	43.0	43.7	44.9
Births	170	190	180	160	
Deaths	120	140	160	190	
Natural Increase	50	50	20	-30	
Net Migration	220	210	180	150	
Change	270	260	200	120	

Differences between period Totals may not equal Change due to rounding.

Aspen Meadows Elementary: Total Population

	2010	2015	2020	2025	2030
0-4	240	340	420	510	510
5-9	257	360	500	530	570
10-14	203	380	500	610	630
15-19	159	160	330	390	520
20-24	111	110	100	100	100
25-29	217	240	240	200	200
30-34	190	570	590	690	580
35-39	185	440	830	800	970
40-44	194	440	700	1,050	1,020
45-49	167	190	430	700	1,040
50-54	141	160	190	420	690
55-59	118	130	160	190	420
60-64	99	110	130	160	180
65-69	69	100	110	130	150
70-74	40	70	80	100	110
75-79	27	30	50	80	80
80-84	15	20	30	50	60
85+	23	20	30	30	50
Total	2,454	3,870	5,420	6,740	7,880
Median Age	31.1	33.0	35.2	37.1	39.3
Births	220	290	290	320	
Deaths	50	70	90	130	
Natural Increase	170	220	200	190	
Net Migration	1,250	1,350	1,110	950	
Change	1,420	1,570	1,310	1,140	

Differences between period Totals may not equal Change due to rounding.

Cedar Canyons Elementary: Total Population

	2010	2015	2020	2025	2030
0-4	329	310	400	440	350
5-9	391	440	430	560	600
10-14	396	450	510	430	560
15-19	307	280	330	460	310
20-24	128	190	160	230	150
25-29	115	180	250	200	310
30-34	230	290	370	330	360
35-39	338	460	470	460	490
40-44	364	510	640	520	530
45-49	338	360	500	640	590
50-54	345	330	350	500	630
55-59	304	340	330	350	490
60-64	274	230	260	270	340
65-69	194	200	170	210	260
70-74	108	190	180	150	190
75-79	58	90	160	160	130
80-84	52	50	70	120	130
85+	38	50	60	70	120
Total	4,310	4,950	5,640	6,100	6,540
Median Age	38.8	38.6	38.9	39.3	41.3
Births	190	220	230	240	
Deaths	120	150	180	210	
Natural Increase	70	70	50	30	
Net Migration	580	620	430	390	
Change	650	690	480	420	

Differences between period Totals may not equal Change due to rounding.

Eel River Elementary: Total Population

	2010	2015	2020	2025	2030
0-4	379	320	320	290	280
5-9	367	430	410	390	380
10-14	305	370	430	410	390
15-19	207	250	300	360	380
20-24	141	150	180	220	240
25-29	319	200	210	210	260
30-34	347	440	320	290	270
35-39	384	460	530	400	350
40-44	294	380	460	570	430
45-49	222	290	380	460	560
50-54	207	220	290	370	450
55-59	180	200	220	280	370
60-64	144	170	200	200	280
65-69	95	140	170	180	200
70-74	59	90	130	160	180
75-79	36	50	80	110	140
80-84	22	30	40	60	90
85+	28	30	30	50	60
Total	3,734	4,220	4,700	5,010	5,310
Median Age	32.2	34.4	36.7	39.2	41.2
Births	260	260	260	250	
Deaths	80	90	120	150	
Natural Increase	180	170	140	100	
Net Migration	300	320	190	150	
Change	480	490	330	250	

Differences between period Totals may not equal Change due to rounding.

Hickory Center Elementary: Total Population

	2010	2015	2020	2025	2030
0-4	469	330	310	290	260
5-9	515	520	400	440	440
10-14	540	510	520	400	440
15-19	422	430	420	440	340
20-24	176	150	140	150	140
25-29	289	230	200	190	190
30-34	425	340	280	240	230
35-39	458	420	340	280	240
40-44	452	450	420	340	280
45-49	391	450	450	420	340
50-54	342	380	450	400	370
55-59	269	330	380	390	350
60-64	217	210	280	320	330
65-69	145	150	150	220	290
70-74	66	140	140	140	200
75-79	47	60	110	120	120
80-84	31	40	40	100	100
85+	19	20	20	40	60
Total	5,273	5,160	5,050	4,920	4,720
Median Age	32.7	35.8	38.8	40.4	41.4
Births	280	240	200	190	
Deaths	100	120	140	170	
Natural Increase	180	120	60	20	
Net Migration	-270	-240	-220	-210	
Change	-90	-120	-160	-190	

Differences between period Totals may not equal Change due to rounding.

Huntertown Elementary: Total Population

	2010	2015	2020	2025	2030
0-4	252	420	430	410	410
5-9	364	350	550	550	550
10-14	385	390	380	580	570
15-19	352	310	310	290	490
20-24	262	250	190	200	180
25-29	204	310	290	250	260
30-34	302	320	420	410	330
35-39	300	410	360	530	520
40-44	336	290	400	360	530
45-49	430	330	290	400	360
50-54	384	420	330	290	400
55-59	358	380	410	320	280
60-64	273	330	340	370	280
65-69	174	230	290	290	320
70-74	85	140	190	230	250
75-79	93	70	120	160	210
80-84	65	70	60	90	140
85+	43	60	80	90	110
Total	4,662	5,080	5,440	5,820	6,190
Median Age	38.5	37.3	37.1	37.1	37.9
Births	260	270	270	260	
Deaths	140	160	180	210	
Natural Increase	120	110	90	50	
Net Migration	270	270	280	290	
Change	390	380	370	340	

Differences between period Totals may not equal Change due to rounding.

Northwest Allen County Schools Demographic Study – November 2022

Total Population

	2010	2015	2020	2025	2030
0-4	344	370	390	430	390
5-9	417	480	490	510	560
10-14	437	550	590	590	600
15-19	394	370	490	490	500
20-24	147	120	130	140	150
25-29	157	280	240	240	220
30-34	263	360	450	420	410
35-39	369	400	480	660	580
40-44	396	500	510	570	740
45-49	435	390	500	500	570
50-54	393	430	390	500	500
55-59	334	380	420	380	480
60-64	279	320	370	410	370
65-69	220	270	300	350	390
70-74	148	200	250	280	320
75-79	88	130	180	220	250
80-84	76	70	100	150	170
85+	51	80	80	110	140
Total	4,950	5,700	6,360	6,950	7,340
Median Age	39.3	39.0	39.2	40.0	41.8
Births	240	280	280	260	
Deaths	160	190	230	280	
Natural Increase	80	90	50	-20	
Net Migration	680	580	510	430	
Change	760	670	560	410	

Differences between period Totals may not equal Change due to rounding.

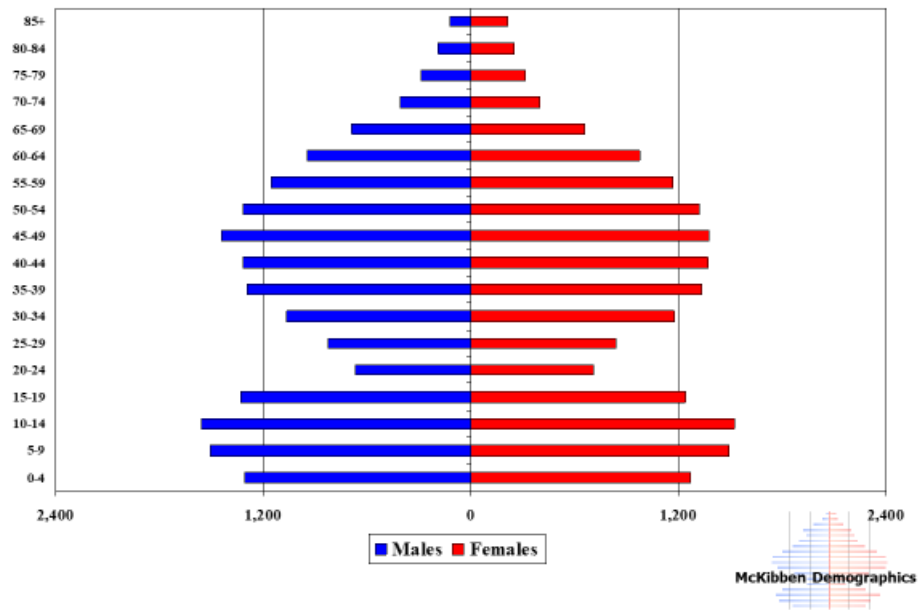
Perry Hill Elementary: Total Population

	2010	2015	2020	2025	2030
0-4	395	440	420	420	390
5-9	504	490	510	470	470
10-14	602	680	630	620	530
15-19	523	420	530	410	560
20-24	248	250	280	310	290
25-29	229	430	470	380	370
30-34	328	490	650	650	470
35-39	418	590	640	810	690
40-44	428	590	740	740	860
45-49	567	430	590	840	760
50-54	545	560	420	690	830
55-59	503	540	540	410	670
60-64	422	490	520	530	400
65-69	314	400	460	490	500
70-74	205	290	370	430	460
75-79	168	180	260	320	380
80-84	120	140	150	210	270
85+	82	110	150	170	220
Total	6,601	7,520	8,330	8,900	9,120
Median Age	40.6	39.7	40.2	42.6	44.6
Births	260	350	370	330	
Deaths	240	280	330	400	
Natural Increase	20	70	40	-70	
Net Migration	880	740	550	280	
Change	900	810	590	210	

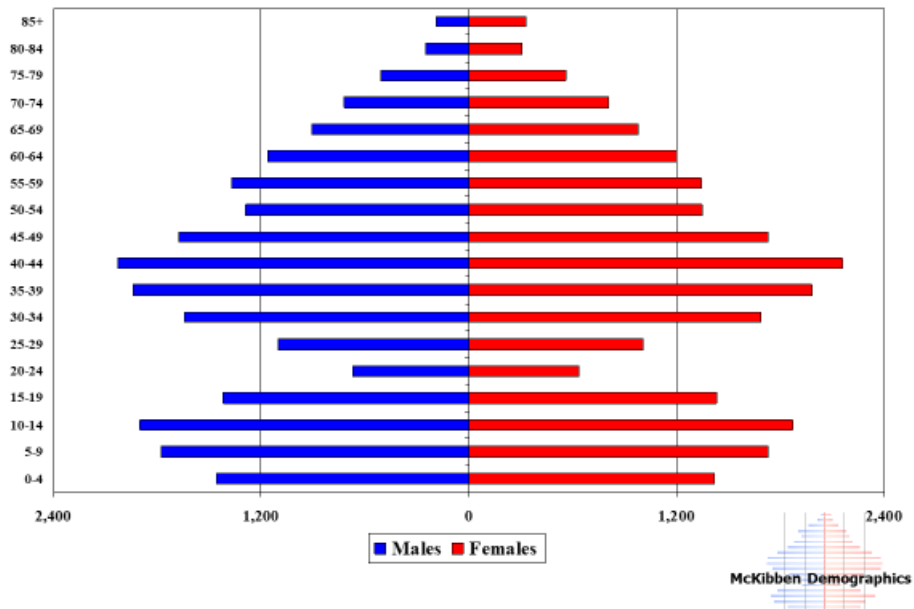
Differences between period Totals may not equal Change due to rounding.

Appendix C: Population Pyramids

Northwest Allen County Schools Total Population – 2010 Census



Northwest Allen County Schools Total Population – 2020 Estimate



Appendix D: Enrollment Forecasts

Northwest Allen County Schools: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
K	565	535	570	596	613	621	621	611	615	621	629	639	643	632
1	571	569	546	582	628	635	643	640	628	632	638	646	654	660
2	603	568	591	572	593	640	647	654	651	639	643	644	652	659
3	610	608	592	624	579	601	650	656	663	660	648	648	649	657
4	564	615	642	619	635	593	613	661	667	674	671	656	656	657
5	587	573	637	653	628	644	600	619	668	674	681	675	660	660
Total K-5	3500	3468	3578	3646	3676	3734	3774	3841	3892	3900	3910	3908	3914	3925
6	619	607	605	663	681	654	668	627	644	697	704	709	703	687
7	643	628	616	646	686	704	677	692	649	667	721	728	734	728
8	618	653	640	638	662	704	722	694	709	665	684	739	746	752
Total: 6-8	1880	1888	1861	1947	2029	2062	2067	2013	2002	2029	2109	2176	2183	2167
9	634	643	682	664	670	695	739	758	729	744	698	718	776	783
10	598	629	624	670	651	657	681	724	743	714	729	684	704	760
11	640	592	614	624	667	648	654	678	720	739	710	725	681	700
12	569	612	560	586	605	647	629	634	658	698	717	689	703	661
Total: 9-12	2441	2476	2480	2544	2593	2647	2703	2794	2850	2895	2854	2816	2864	2904
YSC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total K-12	7821	7832	7919	8137	8298	8443	8544	8648	8744	8824	8873	8900	8961	8996
Total K-12	7821	7832	7919	8137	8298	8443	8544	8648	8744	8824	8873	8900	8961	8996
Change		11	87	218	161	145	101	104	96	80	49	27	61	35
%-Change		0.1%	1.1%	2.8%	2.0%	1.7%	1.2%	1.2%	1.1%	0.9%	0.6%	0.3%	0.7%	0.4%
Total: K-5	3500	3468	3578	3646	3676	3734	3774	3841	3892	3900	3910	3908	3914	3925
Change		-32	110	68	30	58	40	67	51	8	10	-2	6	11
%-Change		-0.9%	3.2%	1.9%	0.8%	1.6%	1.1%	1.8%	1.3%	0.2%	0.3%	-0.1%	0.2%	0.3%
Total: 6-8	1880	1888	1861	1947	2029	2062	2067	2013	2002	2029	2109	2176	2183	2167
Change		8	-27	86	82	33	5	-54	-11	27	80	67	7	-16
%-Change		0.4%	-1.4%	4.6%	4.2%	1.6%	0.2%	-2.6%	-0.5%	1.3%	3.9%	3.2%	0.3%	-0.7%
Total: 9-12	2441	2476	2480	2544	2593	2647	2703	2794	2850	2895	2854	2816	2864	2904
Change		35	4	64	49	54	56	91	56	45	-41	-38	48	40
%-Change		1.4%	0.1%	2.6%	1.9%	2.1%	2.1%	3.4%	2.0%	1.6%	-1.4%	-1.3%	1.7%	1.4%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Arcola Elementary: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
K	29	41	35	38	40	41	41	40	39	40	41	42	42	41
1	38	30	42	29	38	39	40	40	39	38	39	40	41	41
2	27	36	32	42	30	39	40	41	41	40	39	40	41	42
3	27	30	37	34	42	30	39	40	41	41	40	39	40	41
4	35	32	33	38	35	44	31	41	42	43	43	42	41	42
5	25	32	36	34	37	34	43	30	40	41	42	42	41	40
Total K-5	181	201	215	215	222	227	234	232	242	243	244	245	246	247
Total K-5	181	201	215	215	222	227	234	232	242	243	244	245	246	247
Change		20	14	0	7	5	7	-2	10	1	1	1	1	1
%-Change		11.0%	7.0%	0.0%	3.3%	2.3%	3.1%	-0.9%	4.3%	0.4%	0.4%	0.4%	0.4%	0.4%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Aspen Meadows Elementary: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
K	0	0	94	94	96	97	97	95	96	97	99	100	101	100
1	0	0	86	102	103	104	105	105	103	104	105	107	108	110
2	0	0	83	87	103	104	105	106	106	104	105	106	108	109
3	0	0	95	81	85	101	102	103	104	104	102	103	104	106
4	0	0	101	98	83	88	104	105	106	107	107	105	106	107
5	0	0	84	93	97	82	87	103	104	105	106	106	104	105
Total K-5	0	0	543	555	567	576	600	617	619	621	624	627	631	637
Total K-5	0	0	543	555	567	576	600	617	619	621	624	627	631	637
Change				12	12	9	24	17	2	2	3	3	4	6
%-Change				2.2%	2.2%	1.6%	4.2%	2.8%	0.3%	0.3%	0.5%	0.5%	0.6%	1.0%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Cedar Canyon Elementary: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
K	112	85	71	81	82	84	83	82	83	84	85	87	88	87
1	87	117	75	72	83	84	86	85	83	84	85	86	88	89
2	99	94	95	74	73	85	86	88	87	85	86	87	88	90
3	95	107	84	104	76	75	88	89	91	90	88	89	90	91
4	88	94	88	90	106	78	77	90	91	93	92	90	91	92
5	98	93	81	90	93	109	80	79	93	94	96	95	93	94
Total K-5	579	590	494	511	513	515	500	513	528	530	532	534	538	543
Total K-5	579	590	494	511	513	515	500	513	528	530	532	534	538	543
Change		11	-96	17	2	2	-15	13	15	2	2	2	4	5
%-Change		1.9%	-16%	3.4%	0.4%	0.4%	-2.9%	2.6%	2.9%	0.4%	0.4%	0.4%	0.7%	0.9%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Eel River Elementary: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
K	93	92	75	64	68	70	69	67	68	69	70	72	73	71
1	118	89	60	68	65	67	69	68	66	67	68	69	71	72
2	90	108	75	64	67	64	66	68	67	65	66	67	68	70
3	99	96	73	80	65	68	65	67	69	68	66	67	68	69
4	80	98	63	73	78	64	67	64	66	68	67	65	66	67
5	82	79	80	64	74	79	65	68	65	67	69	68	66	67
Total K-5	562	562	426	413	417	412	401	402	401	404	406	408	412	416
Total K-5	562	562	426	413	417	412	401	402	401	404	406	408	412	416
Change		0	-136	-13	4	-5	-11	1	-1	3	2	2	4	4
%-Change		0.0%	-24%	-3.1%	1.0%	-1.2%	-2.7%	0.2%	-0.2%	0.7%	0.5%	0.5%	1.0%	1.0%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Hickory Center Elementary: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
K	60	48	65	88	84	80	80	80	80	79	79	78	78	76
1	50	56	67	71	91	87	83	83	82	82	81	81	80	80
2	65	51	63	69	72	92	88	84	84	83	83	80	80	78
3	69	56	71	71	70	73	93	89	85	85	84	82	79	79
4	80	68	72	74	72	71	74	92	88	84	84	83	81	78
5	74	85	75	77	75	73	72	73	91	87	83	83	82	80
Total K-5	398	364	413	450	464	476	490	501	510	500	494	487	480	471
Total K-5	398	364	413	450	464	476	490	501	510	500	494	487	480	471
Change		-34	49	37	14	12	14	11	9	-10	-6	-7	-7	-9
%-Change		-8.5%	13.5%	9.0%	3.1%	2.6%	2.9%	2.2%	1.8%	-2.0%	-1.2%	-1.4%	-1.4%	-1.9%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Huntertown Elementary: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
K	92	103	73	87	89	91	92	91	92	93	94	96	96	95
1	100	92	69	74	90	92	94	94	93	94	95	96	97	97
2	116	102	76	83	77	94	96	97	97	96	97	97	98	99
3	124	117	71	84	85	79	97	98	99	99	98	98	98	99
4	100	124	103	75	86	87	81	99	100	101	101	99	99	99
5	117	100	94	103	77	88	89	83	101	102	103	102	100	100
Total K-5	649	638	486	506	504	531	549	562	582	585	588	588	588	589
Total K-5	649	638	486	506	504	531	549	562	582	585	588	588	588	589
Change		-11	-152	20	-2	27	18	13	20	3	3	0	0	1
%-Change		-1.7%	-24%	4.1%	-0.4%	5.4%	3.4%	2.4%	3.6%	0.5%	0.5%	0.0%	0.0%	0.2%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Oak View Elementary: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
K	79	70	75	70	75	77	78	76	77	78	79	81	81	80
1	78	81	60	79	77	79	81	81	79	80	81	82	83	84
2	96	73	73	64	81	79	81	83	83	81	82	82	83	84
3	103	95	69	75	65	83	81	83	85	85	83	83	83	84
4	81	102	82	73	77	67	85	83	85	87	87	84	84	84
5	93	82	86	90	75	79	68	87	85	87	89	88	85	85
Total K-5	530	503	445	451	450	464	474	493	494	498	501	500	499	501
Total K-5	530	503	445	451	450	464	474	493	494	498	501	500	499	501
Change		-27	-58	6	-1	14	10	19	1	4	3	-1	-1	2
%-Change		-5.1%	-12%	1.3%	-0.2%	3.1%	2.2%	4.0%	0.2%	0.8%	0.6%	-0.2%	-0.2%	0.4%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Perry Hill Elementary: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
K	100	96	82	74	79	81	81	80	80	81	82	83	84	82
1	100	104	87	87	81	83	85	84	83	83	84	85	86	87
2	110	104	94	89	90	83	85	87	86	85	85	85	86	87
3	93	107	92	95	91	92	85	87	89	88	87	87	87	88
4	100	97	100	98	98	94	94	87	89	91	90	88	88	88
5	98	102	101	102	100	100	96	96	89	91	93	91	89	89
Total K-5	601	610	556	545	539	533	526	521	516	519	521	519	520	521
Total K-5	601	610	556	545	539	533	526	521	516	519	521	519	520	521
Change		9	-54	-11	-6	-6	-7	-5	-5	3	2	-2	1	1
%-Change		1.5%	-8.9%	-2.0%	-1.1%	-1.1%	-1.3%	-1.0%	-1.0%	0.6%	0.4%	-0.4%	0.2%	0.2%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Northwest Allen County Schools Demographic Study – November 2022

Carroll Middle School: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
6	333	313	309	340	344	324	323	327	318	368	368	364	363	356
7	321	333	304	330	350	354	334	333	337	328	379	379	375	374
8	317	326	333	321	340	361	365	344	343	347	338	390	390	386
Total 6-8	971	972	946	991	1034	1039	1022	1004	998	1043	1085	1133	1128	1116
Total 6-8	971	972	946	991	1034	1039	1022	1004	998	1043	1085	1133	1128	1116
Change		1	-26	45	43	5	-17	-18	-6	45	42	48	-5	-12
%-Change		0.1%	-2.7%	4.8%	4.3%	0.5%	-1.6%	-1.8%	-0.6%	4.5%	4.0%	4.4%	-0.4%	-1.1%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Maple Creek Middle School: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
6	286	294	296	323	337	330	345	300	326	329	336	345	340	331
7	322	295	312	316	336	350	343	359	312	339	342	349	359	354
8	301	327	307	317	322	343	357	350	366	318	346	349	356	366
Total 6-8	909	916	915	956	995	1023	1045	1009	1004	986	1024	1043	1055	1051
Total 6-8	909	916	915	956	995	1023	1045	1009	1004	986	1024	1043	1055	1051
Change		7	-1	41	39	28	22	-36	-5	-18	38	19	12	-4
%-Change		0.8%	-0.1%	4.5%	4.1%	2.8%	2.2%	-3.4%	-0.5%	-1.8%	3.9%	1.9%	1.2%	-0.4%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Carroll High School: Total Enrollment

	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	2030-31	2031-32	2032-33
9	634	643	682	664	670	695	739	758	729	744	698	718	776	783
10	598	629	624	670	651	657	681	724	743	714	729	684	704	760
11	640	592	614	624	667	648	654	678	720	739	710	725	681	700
12	569	612	560	586	605	647	629	634	658	698	717	689	703	661
Total 9-12	2441	2476	2480	2544	2593	2647	2703	2794	2850	2895	2854	2816	2864	2904
Total 9-12	2441	2476	2480	2544	2593	2647	2703	2794	2850	2895	2854	2816	2864	2904
Change		35	4	64	49	54	56	91	56	45	-41	-38	48	40
%-Change		1.4%	0.1%	2.6%	1.9%	2.1%	2.1%	3.4%	2.0%	1.6%	-1.4%	-1.3%	1.7%	1.4%

Blue cells are historical data; Red numbers are current enrollment; Orange cells are forecasted enrollment.

Appendix E: Live vs Attend Matrices

Where K-5th Students Live

		Where K-5th Students Live										
		Arcola ES	Aspen Meadow ES	Cedar Canyon ES	Eel River ES	Hickory Center ES	Huntertown ES	Oak View ES	Perry Hill ES	Out of District	Live Out, Attend In (K-5)	
Where K-5th Students Attend	Arcola Elementary	216	179	536	415	432	423	573	487	544	58	409
	Aspen Meadow Elementary	558	4	448	4	4	5	84	4	7	2	110
	Cedar Canyon Elementary	511	1	28	403	4	4	1	54	10	10	108
	Eel River Elementary	413	1	26	2	359	6	11	5	3		54
	Hickory Center Elementary	449	1	3	1	50	388	4	1	1		61
	Huntertown Elementary	506		21	1	5	6	467		2	4	39
	Oak View Elementary	453	1	4		7	17		416	3	5	37
	Perry Hill Elementary	545		6	4	3	1	2	7	518	4	27
	Live In, Attend Out (K-5)	318	4	88	12	73	35	106	71	26	54	

Where 6-8th Students Live

		Where 6-8th Students Live				
		Carroll MS	Maple Creek MS	Out of District	Live Out, Attend In (6-8)	
Where 6-8th Students Attend	Carroll Middle	992	955	30	7	37
	Maple Creek Middle	958	48	907	3	51
	Live In, Attend Out (6-8)	78	48	30		
	Total	1003	937	10	88	