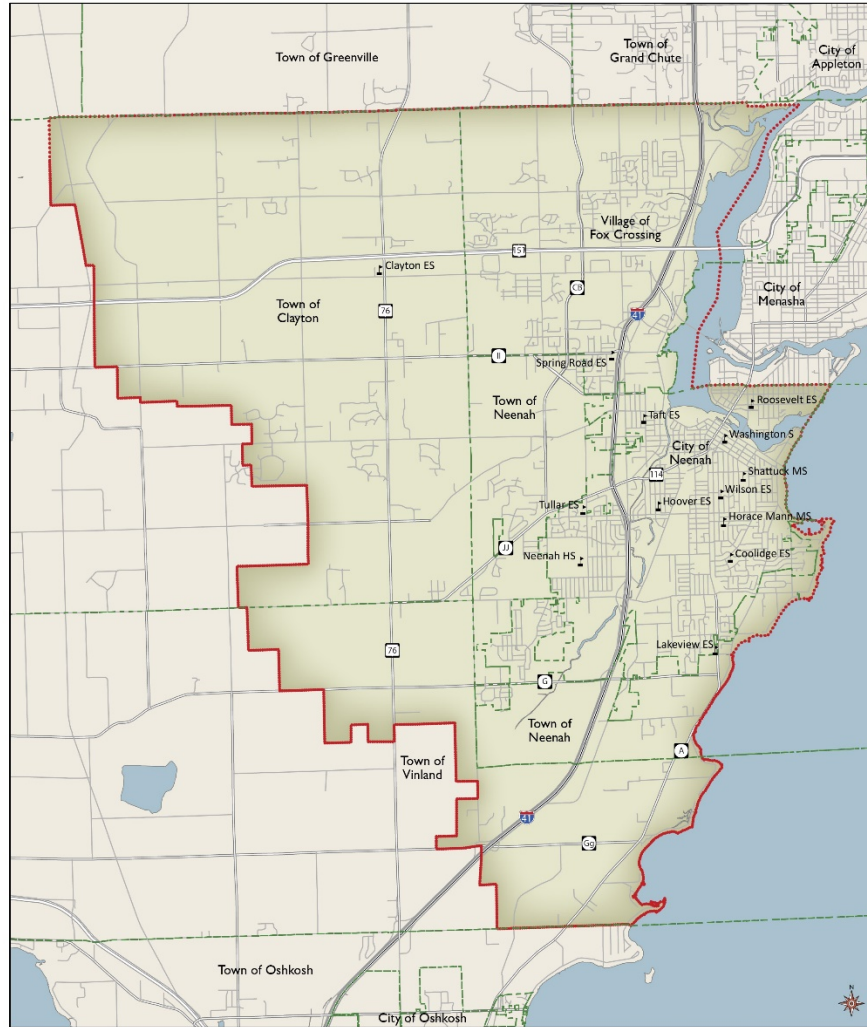# Planning for the Schools of Tomorrow

Neenah Joint School District

- Schools
- Municipalities
- School District
- Water

0   0.5   1 Mile

Prepared by the Applied Population Laboratory
University of Wisconsin-Madison
Department of Community & Environmental Sociology

School Enrollment Projections Series
Neenah Joint School District

May 2018

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Table of Contents

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Introduction

This report offers a summary of the Enrollment Projections Analysis completed for the Neenah Joint School District by the Applied Population Laboratory, University of Wisconsin-Madison. Projections from 2018/19 to 2027/28 are provided for the district as a whole, and individually for each grade and grade grouping. The projections process uses a combination of historical enrollment data, birth trends and projections, housing starts data, and population trends to create reasonable assumptions about future growth scenarios and the likely impact on the school district.

District Enrollment History

Figure 1-A and Tables 1 and 2 display the last ten years of enrollment history for the Neenah Joint School District. District enrollment has increased over the last ten years. Grades 4K-12 enrollment has increased since 2008/09 by 475 students, a 7.7% increase (0.9% annually). K-12 enrollment has increased since 2008/09 by 129 students, a 2.1% increase (0.2% annually).

Figure 1-A

Neenah Joint School District

Student Enrollment
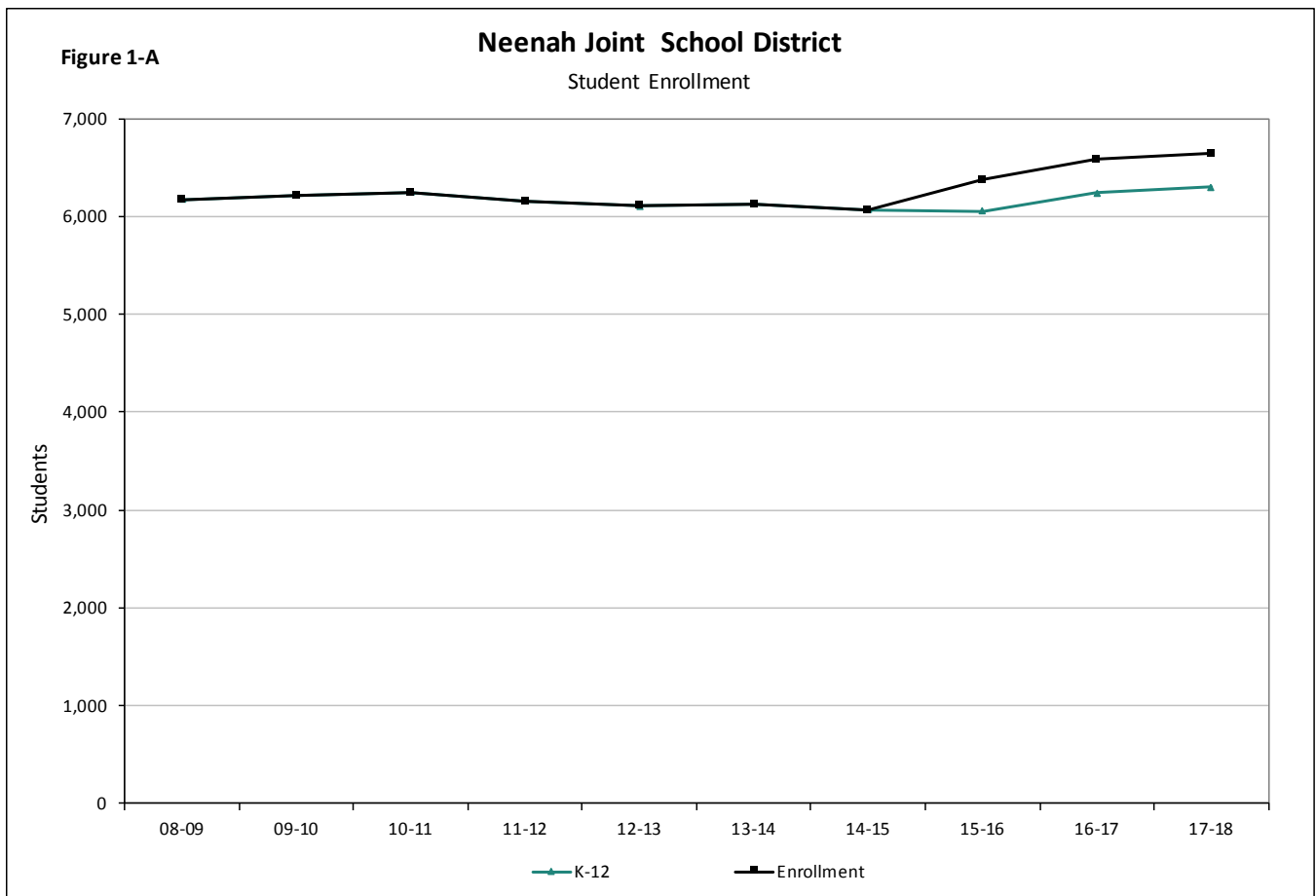
TABLE 1
Student Enrollment
Neenah Joint School District

	SCHOOL YEAR									
	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16	16-17	17-18
4K								322	341	346
K	428	471	459	416	457	464	454	454	484	464
1	441	439	469	457	423	468	469	466	483	491
2	477	454	455	463	451	435	458	448	460	490
3	439	481	466	446	470	450	437	436	464	444
4	437	432	475	469	443	470	450	455	468	472
5	436	433	426	498	464	447	468	470	439	478
6	466	453	450	446	502	492	449	446	472	474
7	475	470	465	446	449	506	498	497	500	496
8	481	478	473	478	441	457	508	511	475	476
9	517	527	500	501	479	473	471	471	514	501
10	538	517	531	495	495	462	458	457	536	499
11	512	540	517	528	494	495	450	447	467	536
12	525	522	559	513	534	507	498	492	474	480
TOTAL	**6,172**	**6,217**	**6,245**	**6,156**	**6,102**	**6,126**	**6,068**	**6,372**	**6,577**	**6,647**
K-12	6,172	6,217	6,245	6,156	6,102	6,126	6,068	6,050	6,236	6,301
K-5	2,658	2,710	2,750	2,749	2,708	2,734	2,736	2,729	2,798	2,839
6-8	1,422	1,401	1,388	1,370	1,392	1,455	1,455	1,454	1,447	1,446
9-12	2,092	2,106	2,107	2,037	2,002	1,937	1,877	1,867	1,991	2,016

TABLE 2
Student Enrollment Changes
Neenah Joint School District

	ABSOLUTE CHANGE			PERCENT CHANGE			AVERAGE ANNUAL PERCENT CHANGE		
GRADE	'08 to '17	'08 to '12	'13 to '17	'08 to '17	'08 to '12	'13 to '17	'08 to '17	'08 to '12	'13 to '17
4K	346	0	346	-	-	-	-	-	-
K	36	29	0	8.4	6.8	0.0	0.9	1.7	0.0
1	50	-18	23	11.3	-4.1	4.9	1.3	-1.0	1.2
2	13	-26	55	2.7	-5.5	12.6	0.3	-1.4	3.2
3	5	31	-6	1.1	7.1	-1.3	0.1	1.8	-0.3
4	35	6	2	8.0	1.4	0.4	0.9	0.3	0.1
5	42	28	31	9.6	6.4	6.9	1.1	1.6	1.7
6	8	36	-18	1.7	7.7	-3.7	0.2	1.9	-0.9
7	21	-26	-10	4.4	-5.5	-2.0	0.5	-1.4	-0.5
8	-5	-40	19	-1.0	-8.3	4.2	-0.1	-2.1	1.0
9	-16	-38	28	-3.1	-7.4	5.9	-0.3	-1.8	1.5
10	-39	-43	37	-7.2	-8.0	8.0	-0.8	-2.0	2.0
11	24	-18	41	4.7	-3.5	8.3	0.5	-0.9	2.1
12	-45	9	-27	-8.6	1.7	-5.3	-1.0	0.4	-1.3
TOTAL	**475**	**-70**	**521**	**7.7**	**-1.1**	**8.5**	**0.9**	**-0.3**	**2.1**
K-12	129	-70	175	2.1	-1.1	2.9	0.2	-0.3	0.7
K-5	181	50	105	6.8	1.9	3.8	0.8	0.5	1.0
6-8	24	-30	-9	1.7	-2.1	-0.6	0.2	-0.5	-0.2
9-12	-76	-90	79	-3.6	-4.3	4.1	-0.4	-1.1	1.0

Figure 1-B shows enrollment history broken down by grade groupings (4K, K-5, 6-8, and 9-12). Elementary school enrollment has increased over the last ten years by 6.8%. Middle school enrollment has increased by 1.7%, while high school enrollment has decreased by 3.6% during this time period.

Figure 1-B

Neenah Joint School District
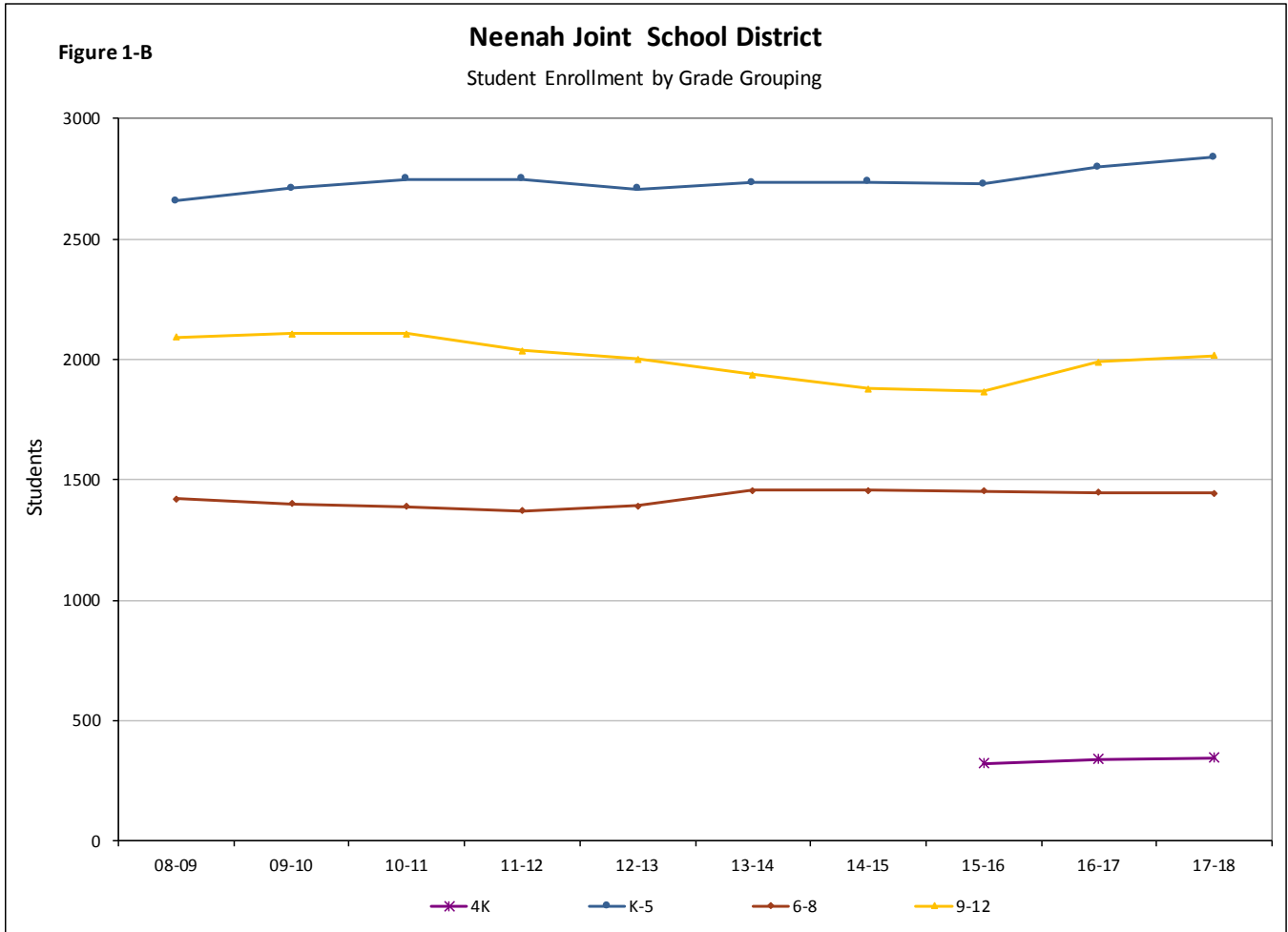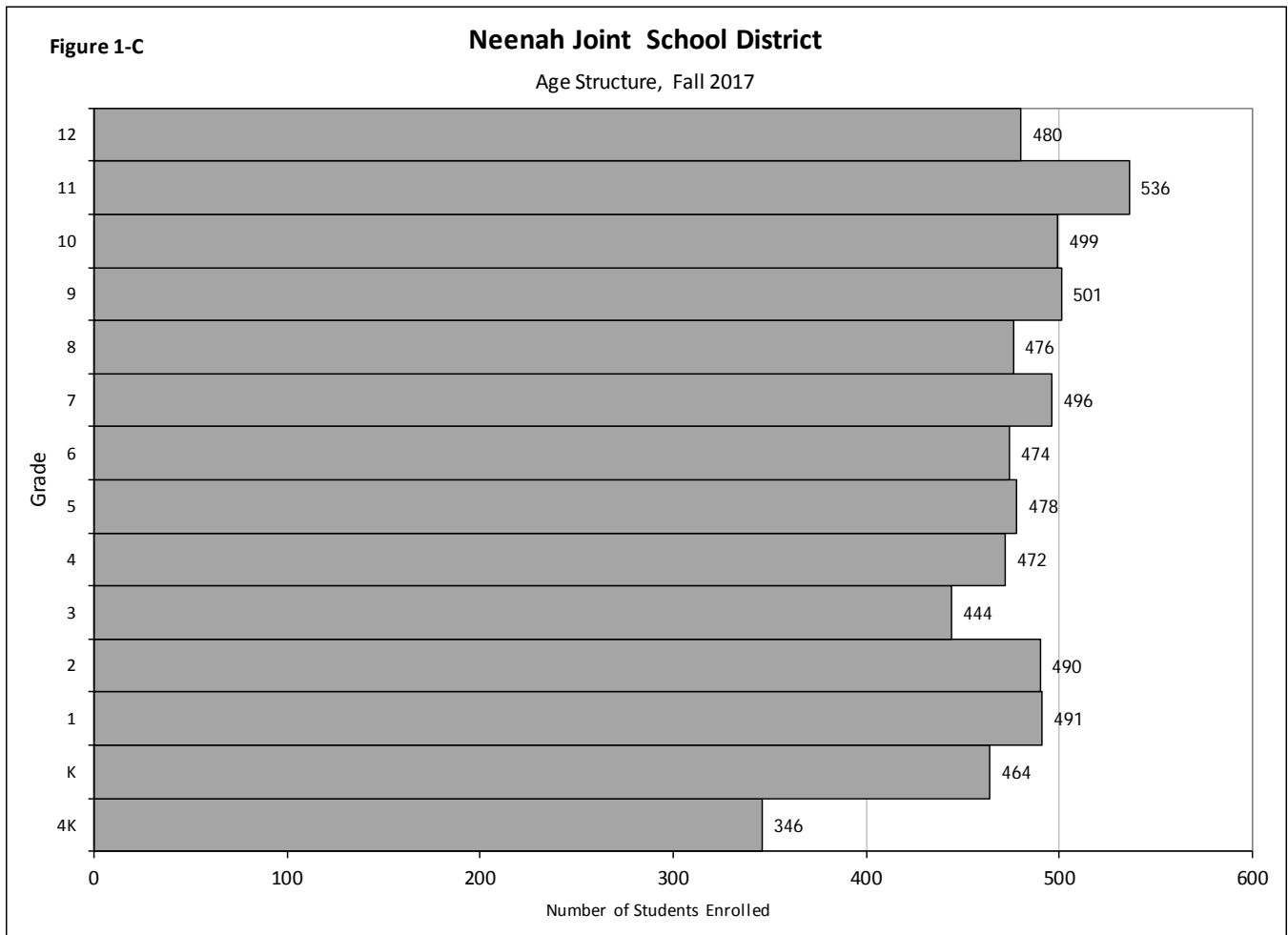
Student Enrollment by Grade Grouping

Figure 1-C shows the age structure in Fall 2017 of the student population with the number of four year old kindergarteners at the bottom and the number of 12th graders at top. The 1st and 2nd grade class is the largest in the elementary school. The 7th grade class is the largest in the middle school, while the 11th grade class is the largest in the high school.

Figure 1-C

Neenah Joint School District

Age Structure, Fall 2017

| Grade	Number of Students Enrolled
12	480
11	536
10	499
9	501
8	476
7	496
6	474
5	478
4	472
3	444
2	490
1	491
K	464
4K	346

Kindergarten Enrollment Trends

Examining trends in kindergarten enrollment is particularly informative for gaining perspective on future district enrollment, as today's kindergarteners will gradually make up tomorrow's students at the higher grade levels as they age and move through the school system. When kindergarten enrollment is increasing, elementary and middle school enrollment might be expected to increase in the near future, while high school enrollment may increase farther in the future. Figure 2-A shows kindergarten enrollment history in black, and trend lines depicting kindergarten enrollment in red and blue. The "Long-Term Trend" line (shown in red) averages kindergarten enrollment changes between 2008/09 and 2017/18. The "Recent Trend" line emphasizes kindergarten enrollment changes over the last five years. In the Neenah Joint School District, the long-term and recent kindergarten enrollment trend indicates increasing enrollment. The recent trend will be used to project kindergartners in the Kindergarten Trend model found later in the report.


Figure 2-A

Neenah Joint School District

Kindergarten Enrollment Trends
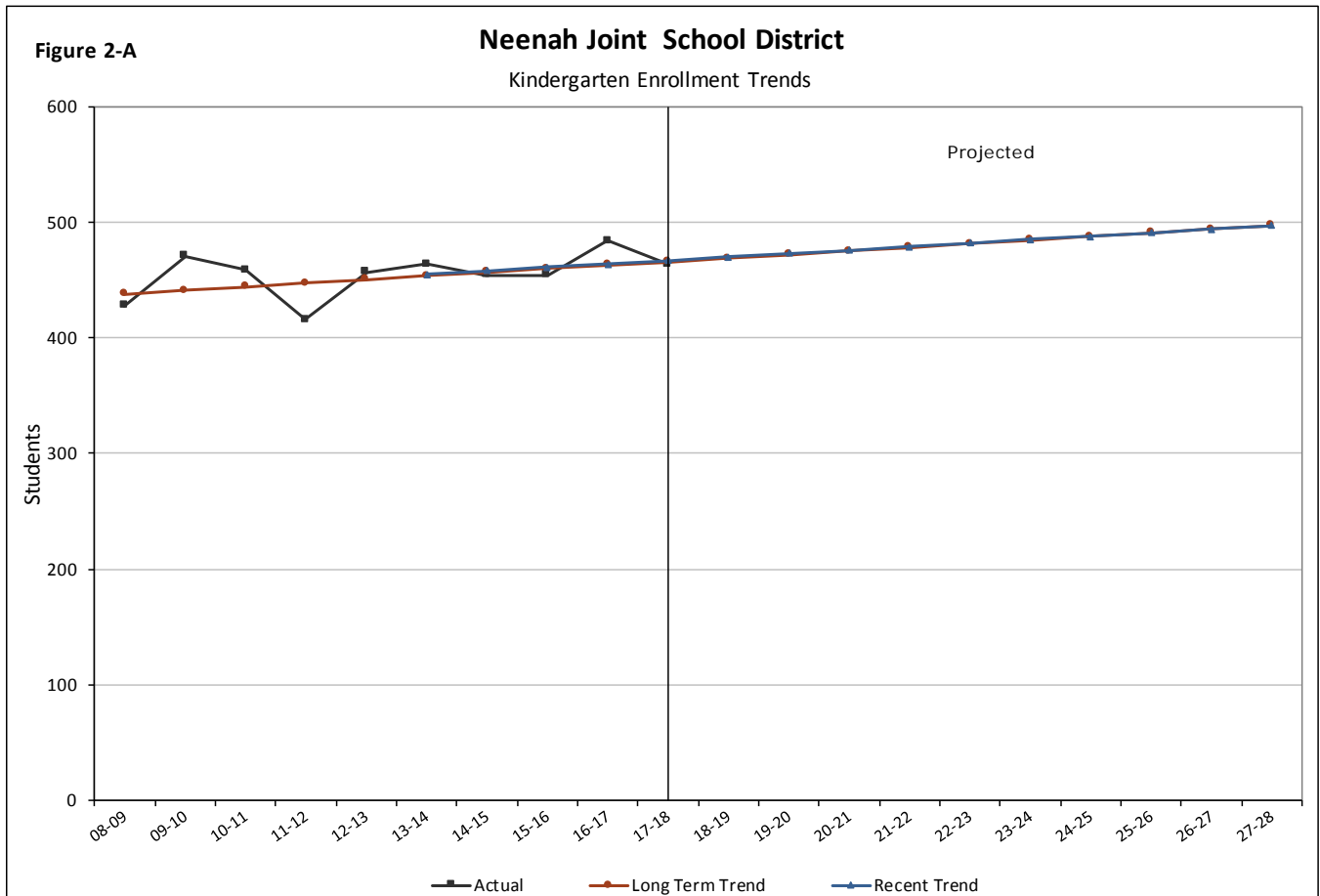
In addition to examining kindergarten enrollment on its own, comparing kindergarten enrollment to outgoing 12th graders offers a snapshot of how the age structure of district enrollment is shifting either from older to younger, or younger to older. Districts tend to experience overall growth when kindergarten enrollment outpaces outgoing students, and they tend to experience decline when kindergarteners do not fully replace the number of graduates. Over the past decade, the Neenah Joint School District kindergartners have not replaced outgoing seniors (Figure 2-B). Private schools may influence the number of kindergartners as some students will attend a private school through 8th grade but move to public school for high school.

Figure 2-B

Neenah Joint School District
Kindergarten Replacement

Students (y-axis)

Legend: Previous Year's 12th Grade Enrollment | Kindergarten Enrollment
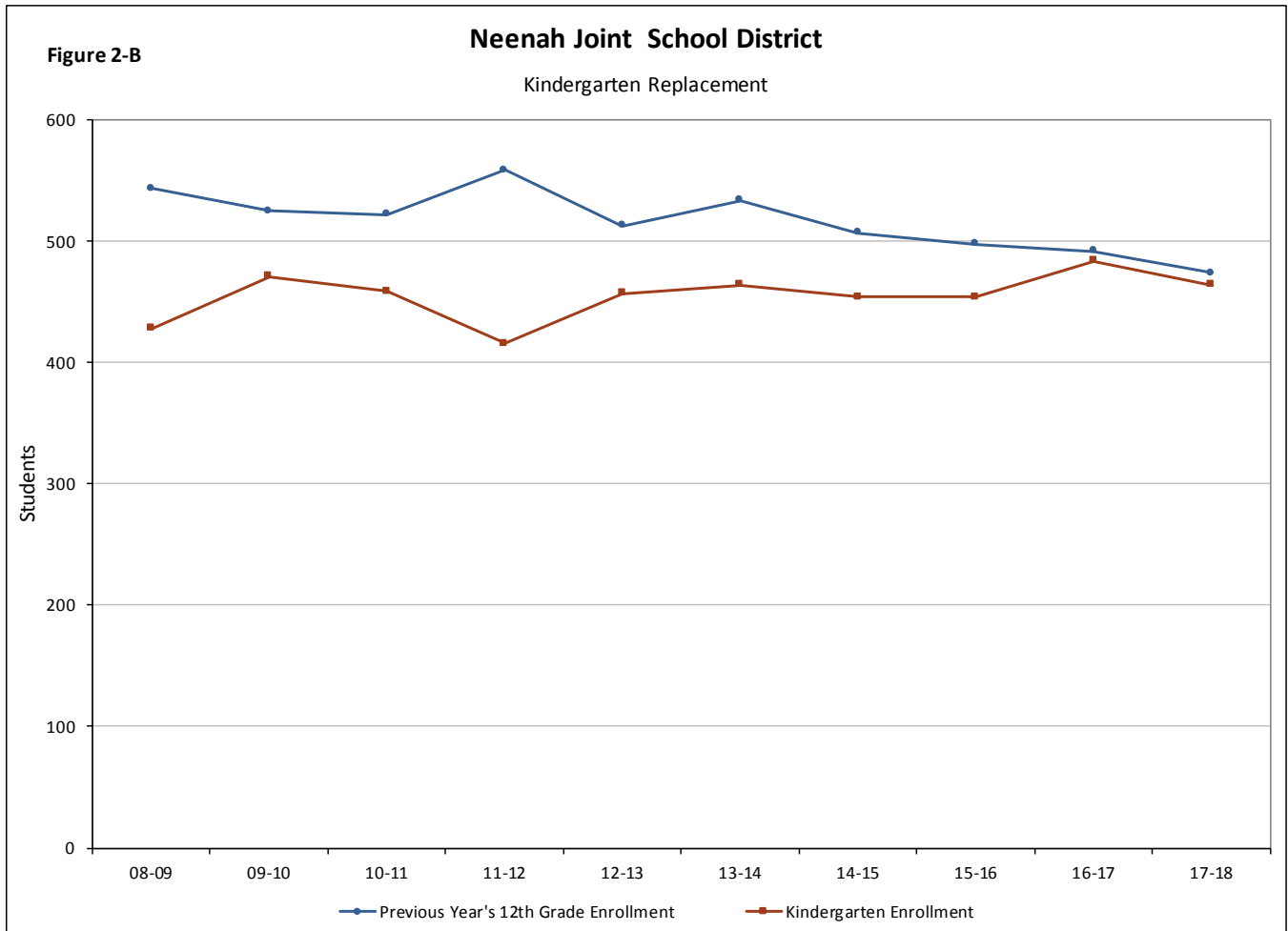
Birth Trends and Projections

We use historical and projected birth data to forecast the number of kindergarten students who will enroll in the Neenah Joint School District in future years. Figure 3 shows (in black) the number of births to mothers living in the City of Neenah, Village of Fox Crossing, and the towns of Clayton, Neenah, and Vinland, by year, from 1999 to 2016, as collected from the Wisconsin Department of Health Services. We extrapolate these birth trends into the future to correspond with the projection models. The red line in Figure 3 represents birth trends over the longer term, while the blue line examines birth patterns over the last seven years. The long-term and recent birth trends project increasing births. The long-term trend is used in the Baseline model, while the recent trend is used to project kindergartners for the five- and two- year trend model.

Figure 3

Neenah Joint School District

Area Births
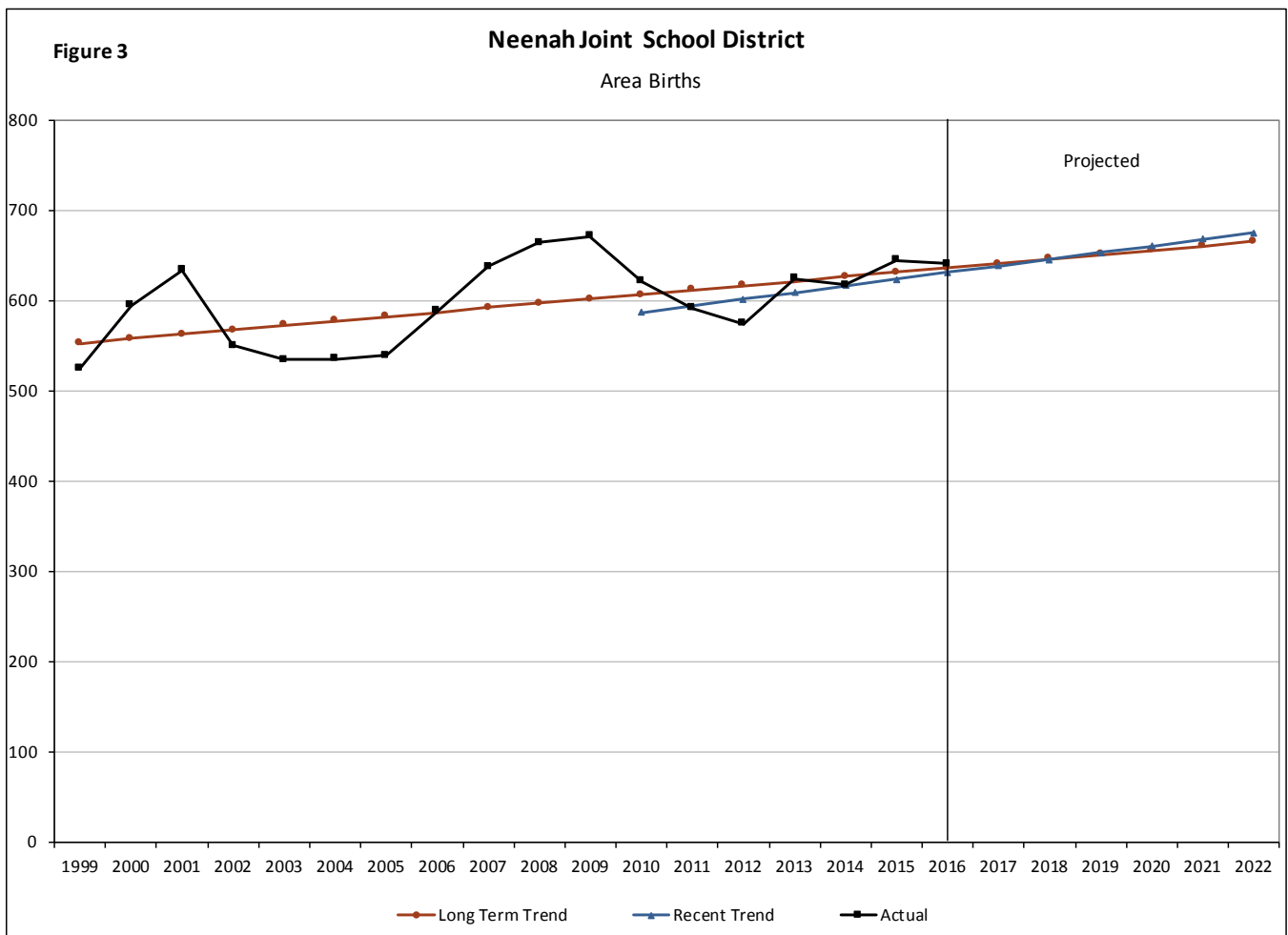
Year	1999	2000	2001	2002	2003	2004	2005	2006	2007
# of Births	525	594	633	550	534	535	539	588	637
Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
# of Births	664	671	621	591	574	624	617	644	640

Source: WI Department of Health Services

Population Trends

This section examines population trends of the recent past for municipalities that fall within the Neenah Joint School District. Changes in the total population of the district area, particularly when examined by age, provide clues into how the school age population may be changing. Table 3 and Figure 4-A provides 2010 U. S. Census population counts and Wisconsin Department of Administration (DOA) estimates for district area municipalities from 2011 to 2017. These municipal estimates can be compared with estimates for Winnebago County and the State of Wisconsin. The district area shows faster growth than the county and state population estimates.

TABLE 3
Total Population by Municipality: 2010-2017
Neenah Joint School District

| | POPULATION | | | | | | | |
| | Census | est. | est. | est. | est. | est. | est. | est. |
Municipality	2010	2011	2012	2013	2014	2015	2016	2017
C. Neenah	25,501	25,612	25,723	25,750	25,833	25,871	26,050	25,976
V. Fox Crossing	18,498	18,533	18,545	18,582	18,624	18,665	18,741	18,892
T. Clayton	3,951	3,964	3,974	3,996	4,016	4,053	4,061	4,062
T. Neenah	3,237	3,273	3,306	3,371	3,435	3,492	3,539	3,537
T. Vinland	1,765	1,759	1,757	1,748	1,750	1,749	1,742	1,744
District Area	52,952	53,141	53,305	53,447	53,658	53,830	54,133	54,211
Winnebago County	166,994	167,245	167,702	167,862	168,216	168,526	169,032	169,053
State of Wisconsin	5,686,986	5,694,236	5,703,525	5,717,110	5,732,981	5,753,324	5,775,120	5,788,500

| | PERCENT CHANGE | | | | | | | |
| | 2010 to | 2011 to | 2012 to | 2013 to | 2014 to | 2015 to | 2016 to | 2010 to |
Municipality	2011	2012	2013	2014	2015	2016	2017	2017
C. Neenah	0.4%	0.4%	0.1%	0.3%	0.1%	0.7%	-0.3%	1.9%
V. Fox Crossing	0.2%	0.1%	0.2%	0.2%	0.2%	0.4%	0.8%	2.1%
T. Clayton	0.3%	0.3%	0.6%	0.5%	0.9%	0.2%	0.0%	2.8%
T. Neenah	1.1%	1.0%	2.0%	1.9%	1.7%	1.3%	-0.1%	9.3%
T. Vinland	-0.3%	-0.1%	-0.5%	0.1%	-0.1%	-0.4%	0.1%	-1.2%
District Area	0.4%	0.3%	0.3%	0.4%	0.3%	0.6%	0.1%	2.4%
Winnebago County	0.2%	0.3%	0.1%	0.2%	0.2%	0.3%	0.0%	1.2%
State of Wisconsin	0.1%	0.2%	0.2%	0.3%	0.4%	0.4%	0.2%	1.8%

Source: U. S. Census Bureau & Demographic Services Center, WIDOA

Figure 4-A

Neenah Joint School District

Population for Area Municipalities

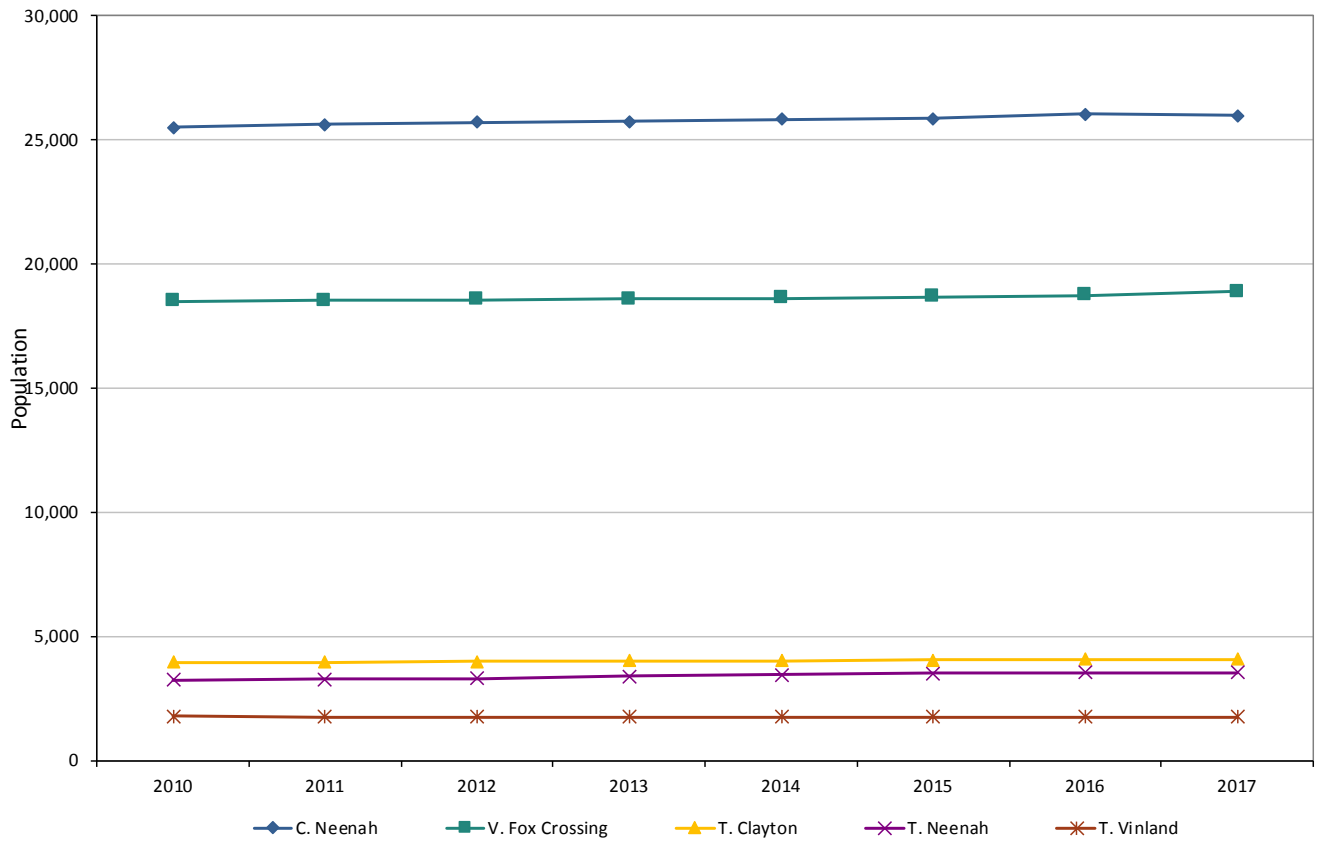Legend: C. Neenah · V. Fox Crossing · T. Clayton · T. Neenah · T. Vinland

Table 4 and Figure 4-B illustrate the population for the Neenah Joint School District showing the age structure for 2016 from the American Community Survey (ACS). The ACS shows population collected over a five-year period from 2012 to 2016. The illustration on the next page provides a population breakdown in five-year increments providing a visual representation of this data. The largest population group is ages 45 to 54.

TABLE 4
Population by Age and Gender, 2016
Neenah Joint School District

Age	Males	Females	Total
Under 5	1,439	1,219	2,658
5 to 9	1,581	1,701	3,282
10 to 14	1,520	1,523	3,043
15 to 19	1,263	1,306	2,569
20 to 24	1,250	1,098	2,348
25 to 29	1,286	1,189	2,475
30 to 34	1,502	1,578	3,080
35 to 39	1,407	1,710	3,117
40 to 44	1,295	1,255	2,550
45 to 49	1,844	1,457	3,301
50 to 54	1,850	2,053	3,903
55 to 59	1,655	1,636	3,291
60 to 64	1,269	1,338	2,607
65 to 69	1,061	1,037	2,098
70 to 74	591	935	1,526
75 to 79	392	614	1,006
80 to 84	455	454	909
85plus	183	368	551
Total	21,843	22,471	44,314

Source: U. S. Census Bureau

Figure 4-B

Neenah Joint School District

Age Structure

Males   Females

Age	
85plus	
80 to 84	
75 to 79	
70 to 74	
65 to 69	
60 to 64	
55 to 59	
50 to 54	
45 to 49	
40 to 44	
35 to 39	
30 to 34	
25 to 29	
20 to 24	
15 to 19	
10 to 14	
5 to 9	
Under 5	

2,500   2,000   1,500   1,000   500   0   500   1,000   1,500   2,000   2,500

Number of People

■ 2016 ACS
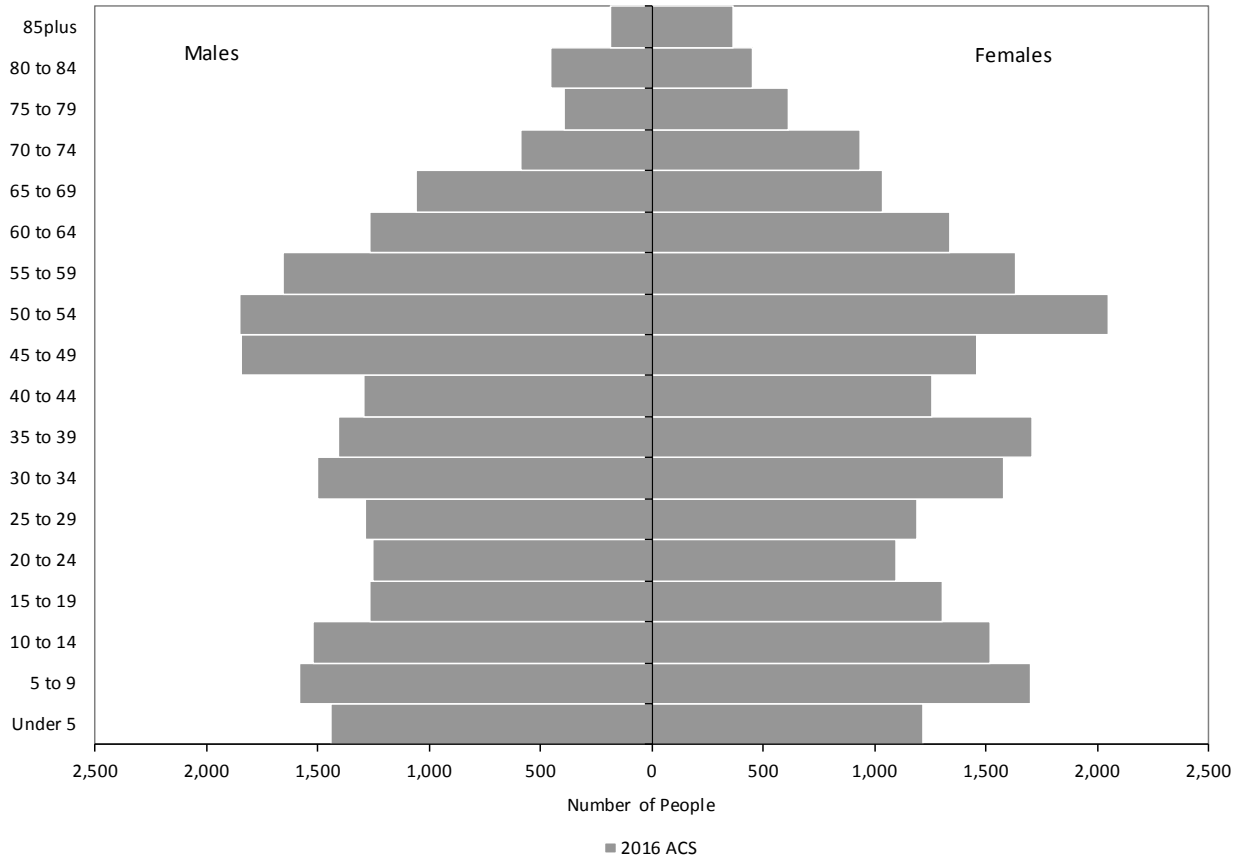
Past Housing Development

Table 5 shows the number of housing starts in the municipalities that fall within Neenah Joint School District from 2007 to 2016. The district area experienced a decline in single-family home construction from 2008 to 2011 but has increased since that time. The district has also seen significant two-family and multi-family home construction over the last ten years. The city and village has experienced more housing development than the towns. Households in single-family homes, on average, contain more school-aged children than multi-family units.

TABLE 5
School District Area Housing Starts
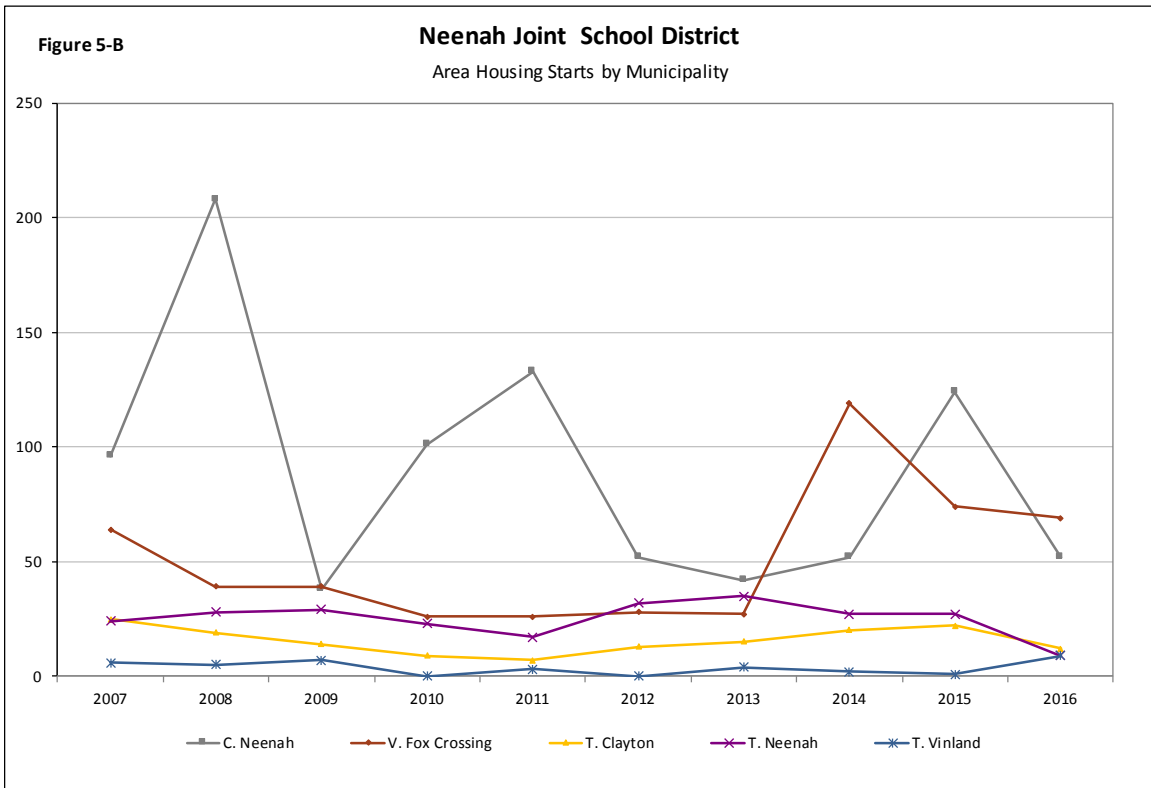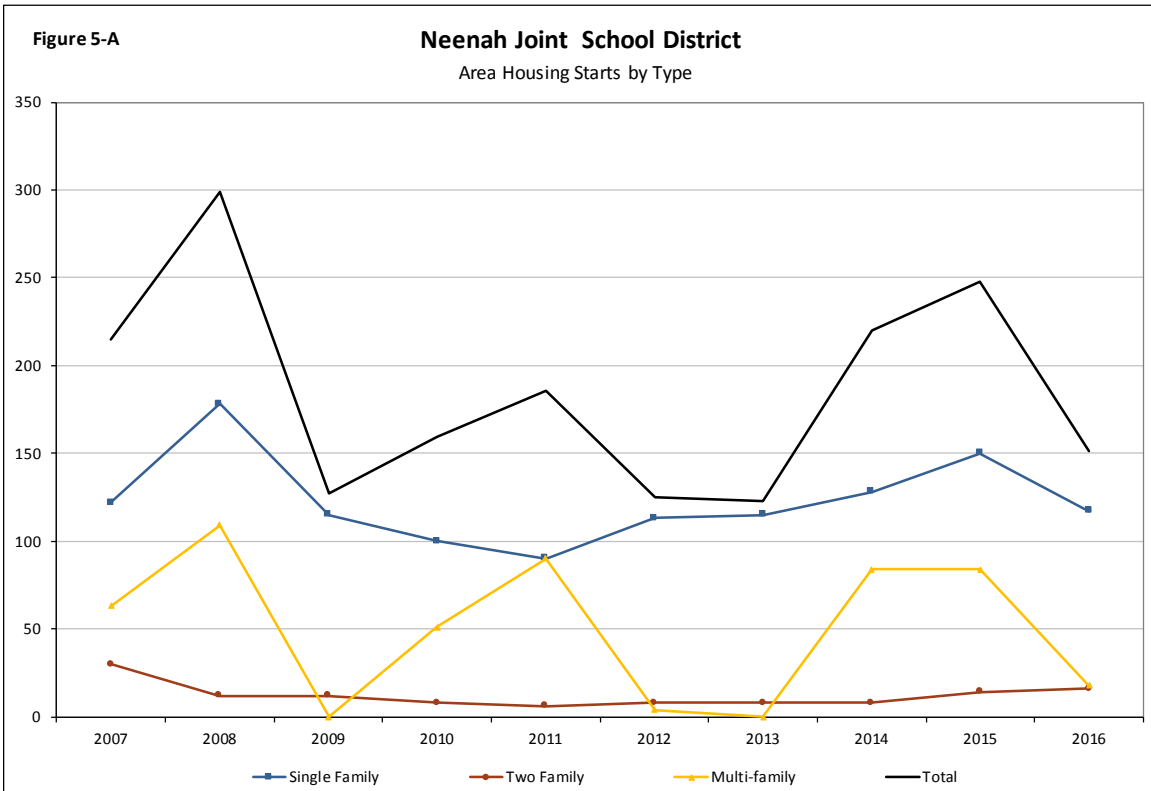**Neenah Joint School District**

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
District Area										
TOTAL	**215**	**299**	**127**	**159**	**186**	**125**	**123**	**220**	**248**	**151**
Single Family	**122**	**178**	**115**	**100**	**90**	**113**	**115**	**128**	**150**	**117**
Two Family	**30**	**12**	**12**	**8**	**6**	**8**	**8**	**8**	**14**	**16**
Multi-family	**63**	**109**	**0**	**51**	**90**	**4**	**0**	**84**	**84**	**18**
C. Neenah										
TOTAL	**96**	**208**	**38**	**101**	**133**	**52**	**42**	**52**	**124**	**52**
Single Family	31	99	34	42	47	46	36	50	59	46
Two Family	14	8	4	8	0	6	6	2	8	6
Multi-family	51	101	0	51	86	0	0	0	57	0
V. Fox Crossing										
TOTAL	**64**	**39**	**39**	**26**	**26**	**28**	**27**	**119**	**74**	**69**
Single Family	36	27	31	26	16	22	25	29	41	41
Two Family	16	4	8	0	6	2	2	6	6	10
Multi-family	12	8	0	0	4	4	0	84	27	18
T. Clayton										
TOTAL	**25**	**19**	**14**	**9**	**7**	**13**	**15**	**20**	**22**	**12**
Single Family	25	19	14	9	7	13	15	20	22	12
Two Family	0	0	0	0	0	0	0	0	0	0
Multi-family	0	0	0	0	0	0	0	0	0	0
T. Neenah										
TOTAL	**24**	**28**	**29**	**23**	**17**	**32**	**35**	**27**	**27**	**9**
Single Family	24	28	29	23	17	32	35	27	27	9
Two Family	0	0	0	0	0	0	0	0	0	0
Multi-family	0	0	0	0	0	0	0	0	0	0
T. Vinland										
TOTAL	**6**	**5**	**7**	**0**	**3**	**0**	**4**	**2**	**1**	**9**
Single Family	6	5	7	0	3	0	4	2	1	9
Two Family	0	0	0	0	0	0	0	0	0	0
Multi-family	0	0	0	0	0	0	0	0	0	0

Source: Demographic Services Center, WIDOA

Figure 5-A shows housing starts in the area by type of housing unit—single-family, two-family, and multi-family housing unit. Figures 5-B shows the total number of residential building permits issued by municipalities over the last ten years.

Figure 5-A

Neenah Joint School District

Area Housing Starts by Type

Legend: Single Family — Two Family — Multi-family — Total

Figure 5-B

Neenah Joint School District

Area Housing Starts by Municipality

Legend: C. Neenah — V. Fox Crossing — T. Clayton — T. Neenah — T. Vinland

Method

In order to generate school enrollment projections, we rely on a commonly used demographic technique called the "cohort survival" method or the "grade progression ratio" method. This method advances current students through the school system over time and applies rates of transfer (or "survival") as the students who are now in school age from year-to-year and grade-to-grade. It is through these rates of transfer that we make assumptions about how migration in and out of the district and transfers to and from different schools will impact future enrollment.

Grade Progression Ratios

Grade progression ratios are used to measure district enrollment changes, year-to-year and grade-to-grade, that have occurred within the school district in the recent past. By examining these, we can better understand recent changes in enrollment. We use these ratios as the rates of transfer to inform future student projections.

Table 6 shows the grade progression ratios for the Neenah Joint School District. The ratios measure the effects of in- and out-migration and the transfer of students between private and public schools. The ratios are calculated for pairs of years and then averages of these based on different time frames are calculated for each grade.

TABLE 6
Grade Progression Ratios
Neenah Joint School District

YEAR CHANGES	B:K	K:1	1:2	2:3	3:4	4:5	5:6	6:7	7:8	8:9	9:10	10:11	11:12
08-09/09-10	0.873	1.026	1.029	1.008	0.984	0.991	1.039	1.009	1.006	1.096	1.000	1.004	1.020
09-10/10-11	0.858	0.996	1.036	1.026	0.988	0.986	1.039	1.026	1.006	1.046	1.008	1.000	1.035
10-11/11-12	0.774	0.996	0.987	0.980	1.006	1.048	1.047	0.991	1.028	1.059	0.990	0.994	0.992
11-12/12-13	0.800	1.017	0.987	1.015	0.993	0.989	1.008	1.007	0.989	1.002	0.988	0.998	1.011
12-13/13-14	0.748	1.024	1.028	0.998	1.000	1.009	1.060	1.008	1.018	1.073	0.965	1.000	1.026
13-14/14-15	0.693	1.011	0.979	1.005	1.000	0.996	1.004	1.012	1.004	1.031	0.968	0.974	1.006
14-15/15-16	0.679	1.026	0.955	0.952	1.041	1.044	0.953	1.107	1.026	0.927	0.970	0.976	1.093
15-16/16-17	0.759	1.064	0.987	1.036	1.073	0.965	1.004	1.121	0.956	1.006	1.138	1.022	1.060
16-17/17-18	0.772	1.014	1.014	0.965	1.017	1.021	1.080	1.051	0.952	1.055	0.971	1.000	1.028
Baseline	0.770	1.020	0.991	1.001	0.998	0.999	1.029	1.015	1.008	1.039	0.982	0.999	1.027
5 Year Trend	0.730	1.028	0.993	0.991	1.026	1.007	1.020	1.060	0.991	1.018	1.002	0.994	1.043
2 Year "Trend"	0.765	1.039	1.001	1.000	1.045	0.993	1.042	1.086	0.954	1.030	1.054	1.011	1.044

*Shaded progression ratios are excluded from the Baseline Average

The grade progression ratios can be interpreted in the following manner. The Baseline ratio for K:1 is 1.020. This means that in the Neenah Joint School District, the first grade class is on average 2% larger than the kindergarten class from the previous year. The B:K (birth to kindergarten) Baseline ratio of .770 indicates that on average, 77% of the district area births will attend kindergarten five years later.

In order to predict future enrollment under different growth assumptions, three sets of grade progression ratios are calculated:

- Baseline averages the past ten years of progression ratios, with outlying ratios (those outside of one standard deviation of the mean) excluded;
- Five-Year Trend averages the past five years of progression ratios with no exclusions;
- Two-Year "Trend" averages the past two years of progression ratios with no exclusions.

These short-, medium- and long-range bases produce varying projections that indicate a range of likely enrollment outcomes in the future. Figure 6 shows the differences between these three sets of grade progression ratios. A ratio above one indicates in-migration, while a ratio below one indicates out-migration from one grade to the next.

Figure 6

Neenah Joint School District

Grade Progression Ratios, by Model

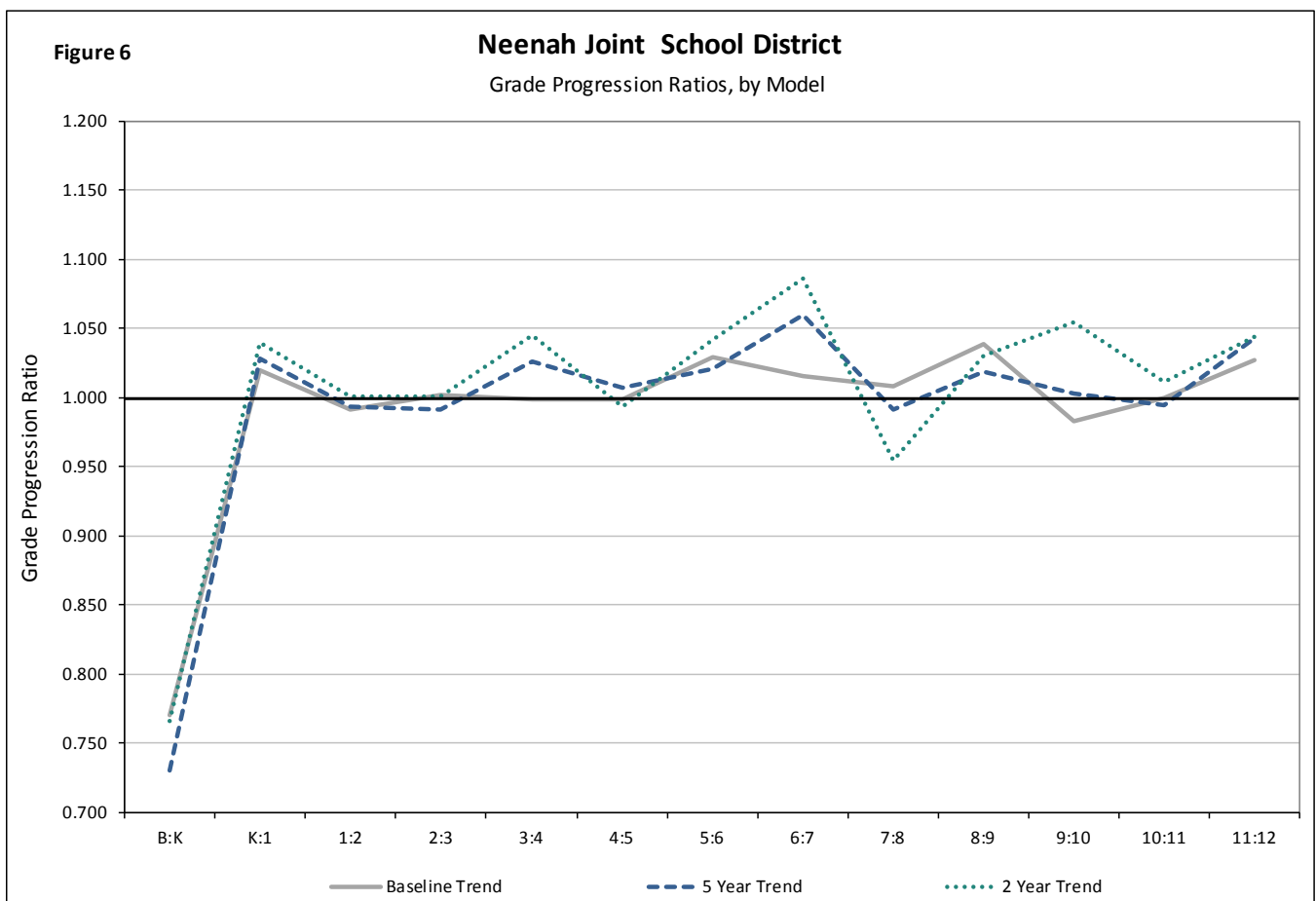Baseline Trend — — 5 Year Trend ⋯⋯ 2 Year Trend

Table 7 shows the observed transfer ratios between birth and 4K from the last three years and the projected ratios for the next ten years. To generate 4K enrollment projections, we hold the grade progression ratio steady at this year's current ratio (59.7%). This means that, on average, we assume that almost 60% of resident births will attend 4K. The table also provides the 4K enrollment projections which will be used in the four projection models provided on the following pages.

TABLE 7
Grade 4K Projections
Neenah Joint School District

Year	B:4K	4K
16-17	0.505	322
16-17	0.567	341
17-18	0.597	346
18-19	0.597	370
19-20	0.597	379
20-21	0.597	383
21-22	0.597	381
22-23	0.597	384
23-24	0.597	388
24-25	0.597	392
25-26	0.597	397
26-27	0.597	401
27-28	0.597	406

School Enrollment Projections

When considering all of the projections provided in this report for decision-making, it is important to recognize that population projections of all types, including school enrollment projections, are more accurate in the immediate future than they are farther into the future. Overall, our projections are more reliable over the next five years (up to the 2022/23 school year) than they are in the second half of the next decade.

Baseline Projections

The Baseline model (Table 8) projects enrollments using the assumption that ten-year average trends from year-to-year, grade-to-grade, will continue into the future. This model assumes that long-term trends in enrollment and births will be representative of future trends. This model projects that 4K-12 enrollment will increase from 6,647 students in 2017/18 to 6,822 students in 2022/23, an increase of 175 students.

TABLE 8
Baseline Projection Model
Neenah Joint School District

	SCHOOL YEAR									
	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
4K	370	379	383	381	384	388	392	397	401	406
K	468	477	489	494	493	496	500	504	507	511
1	473	477	487	499	504	503	506	510	513	517
2	487	469	473	482	494	499	498	501	505	509
3	491	487	469	473	483	495	500	499	502	506
4	443	490	486	469	472	482	494	499	498	501
5	471	443	489	486	468	472	481	493	498	498
6	492	485	456	503	500	482	486	495	508	513
7	481	499	492	462	511	507	489	493	503	515
8	500	485	503	496	466	515	511	493	497	507
9	494	519	504	523	516	484	535	531	512	516
10	492	486	510	495	514	506	476	526	522	503
11	499	492	485	510	495	513	506	475	525	521
12	550	512	505	498	524	508	527	520	488	539
TOTAL	**6,711**	**6,700**	**6,732**	**6,772**	**6,822**	**6,850**	**6,901**	**6,935**	**6,979**	**7,061**
K-12	6,341	6,321	6,349	6,390	6,438	6,462	6,508	6,538	6,578	6,656
K-5	2,833	2,843	2,893	2,903	2,915	2,947	2,979	3,006	3,024	3,041
6-8	1,473	1,469	1,451	1,462	1,477	1,504	1,486	1,481	1,507	1,535
9-12	2,036	2,009	2,005	2,026	2,047	2,012	2,044	2,052	2,047	2,080

The Five-Year Trend model (Table 9) uses the grade progression ratios from the last five years and the recent birth trends in the school district area to project what future enrollments would look like if more recent patterns were representative of future trends.

With recent migration rates and birth trends weighted more heavily, 4K-12 enrollment in the Neenah Joint School District is projected to increase from 6,647 students in 2017/18 to 6,818 students in 2022/23, an increase of 171 students.

TABLE 9
5 Year Trend Projection Model
Neenah Joint School District

GRADE	SCHOOL YEAR									
	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
4K	370	379	383	381	384	388	392	397	401	406
K	443	452	464	468	466	469	475	480	485	491
1	477	456	465	477	481	479	482	488	494	499
2	487	474	452	461	473	478	476	479	484	490
3	486	483	469	448	457	469	474	472	475	480
4	456	498	496	482	460	469	481	486	484	487
5	475	459	502	499	485	464	473	485	490	487
6	488	485	468	512	510	495	473	482	495	499
7	502	517	514	496	543	540	525	501	511	524
8	492	498	512	509	492	538	535	520	497	507
9	485	501	507	522	519	501	548	545	529	506
10	502	486	502	508	523	520	502	549	546	531
11	496	499	483	499	505	520	517	499	546	543
12	559	517	521	504	520	527	542	539	521	569
TOTAL	**6,718**	**6,704**	**6,738**	**6,767**	**6,818**	**6,857**	**6,895**	**6,922**	**6,957**	**7,019**
K-12	6,348	6,325	6,355	6,386	6,435	6,469	6,502	6,525	6,556	6,614
K-5	2,824	2,822	2,848	2,836	2,823	2,828	2,861	2,889	2,912	2,935
6-8	1,482	1,500	1,495	1,518	1,544	1,573	1,533	1,503	1,502	1,530
9-12	2,042	2,003	2,012	2,032	2,067	2,068	2,109	2,132	2,142	2,149

The Two-Year "Trend" model (Table 10) uses the grade progression ratios from the last two years and recent birth trends to project what future enrollments would look like if even more recent patterns were representative of future trends. For the Two-Year "Trend", 4K-12 enrollment is projected to increase from 6,647 students in 2017/18 to 7,157 students in 2022/23, an increase of 510 students.

TABLE 10
2 Year "Trend" Projection Model
Neenah Joint School District

GRADE	SCHOOL YEAR									
	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
4K	370	379	383	381	384	388	392	397	401	406
K	465	474	486	491	489	492	498	503	509	515
1	482	483	493	505	510	508	511	517	523	529
2	491	483	483	493	505	511	508	512	518	523
3	490	492	483	484	493	506	511	509	512	518
4	464	512	514	505	506	516	529	534	532	535
5	469	461	509	510	501	502	512	525	530	528
6	498	488	480	530	532	522	523	534	547	553
7	515	541	530	522	576	578	567	568	579	594
8	473	491	516	506	497	549	551	541	542	553
9	490	487	506	532	521	513	566	568	557	558
10	528	517	514	533	560	550	540	597	598	588
11	504	534	523	520	539	567	556	546	603	605
12	560	527	558	546	543	563	592	580	570	630
TOTAL	**6,800**	**6,869**	**6,977**	**7,057**	**7,157**	**7,263**	**7,356**	**7,430**	**7,523**	**7,634**
K-12	6,430	6,490	6,595	6,676	6,773	6,875	6,964	7,033	7,122	7,228
K-5	2,862	2,905	2,968	2,988	3,005	3,034	3,069	3,100	3,124	3,148
6-8	1,486	1,520	1,527	1,558	1,605	1,649	1,641	1,643	1,668	1,699
9-12	2,083	2,065	2,100	2,130	2,164	2,192	2,254	2,291	2,330	2,381

For this method, a kindergarten trend analysis is performed to project the number of future kindergarten students, rather than relying upon the traditional birth to kindergarten (B:K) grade progression ratios. Then, the Five-Year Trend progression ratios are used for projecting the other grades (1-12) in the district. In other words, this model assumes that the number of new kindergarteners each year over the next decade will continue to follow a trend similar to the recent kindergarten trend, regardless of the number of observed births in the school district area.

According to this hybrid projection method (Table 11), the Kindergarten Trend model projects enrollment will increase from 6,647 students in 2017/18 to 6,906 students in 2022/23, an increase of 259 students.

TABLE 11
Kindergarten Trend Projection Model
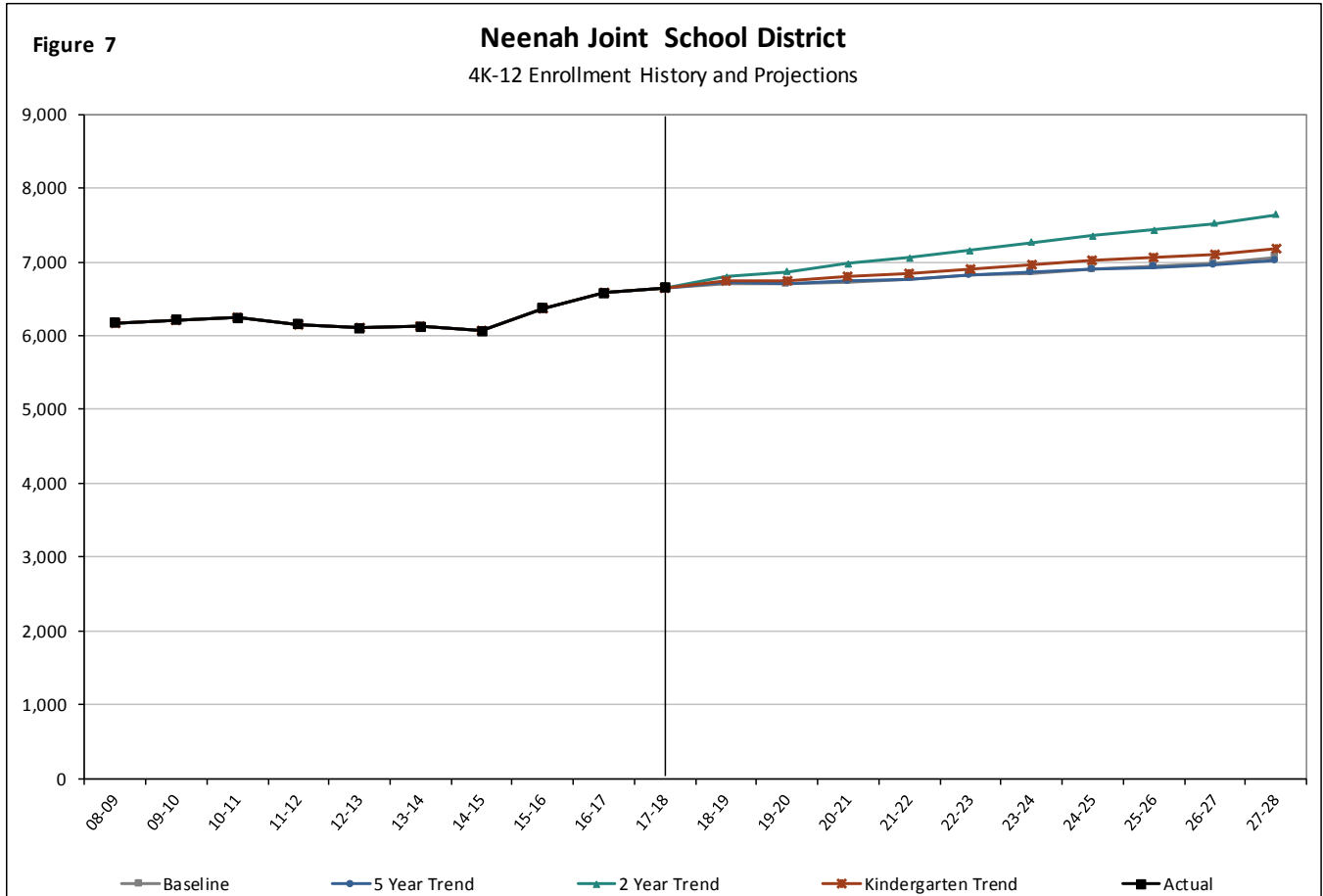**Neenah Joint School District**

GRADE	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
4K	370	379	383	381	384	388	392	397	401	406
K	470	473	476	479	482	485	488	491	494	497
1	477	483	486	489	492	495	499	502	505	508
2	487	474	480	483	486	489	492	495	498	501
3	486	483	469	475	478	481	484	487	491	494
4	456	498	496	482	488	491	494	497	500	503
5	475	459	502	499	485	491	494	498	501	504
6	488	485	468	512	510	495	501	505	508	511
7	502	517	514	496	543	540	525	531	535	538
8	492	498	512	509	492	538	535	520	527	530
9	485	501	507	522	519	501	548	545	529	536
10	502	486	502	508	523	520	502	549	546	531
11	496	499	483	499	505	520	517	499	546	543
12	559	517	521	504	520	527	542	539	521	569
TOTAL	**6,744**	**6,752**	**6,799**	**6,839**	**6,906**	**6,962**	**7,014**	**7,055**	**7,101**	**7,171**
K-12	6,375	6,373	6,416	6,458	6,523	6,574	6,621	6,658	6,699	6,765
K-5	2,851	2,870	2,909	2,907	2,911	2,933	2,951	2,970	2,988	3,007
6-8	1,482	1,500	1,495	1,518	1,544	1,573	1,561	1,556	1,569	1,579
9-12	2,042	2,003	2,012	2,032	2,067	2,068	2,109	2,132	2,142	2,179

Comparison of Projection Models

Figures 7-11 and Tables 12-16 compare the four enrollment projection models broken down by total 4K-12 and K-12 enrollment and by grade groupings (K-5, 6-8, and 9-12)
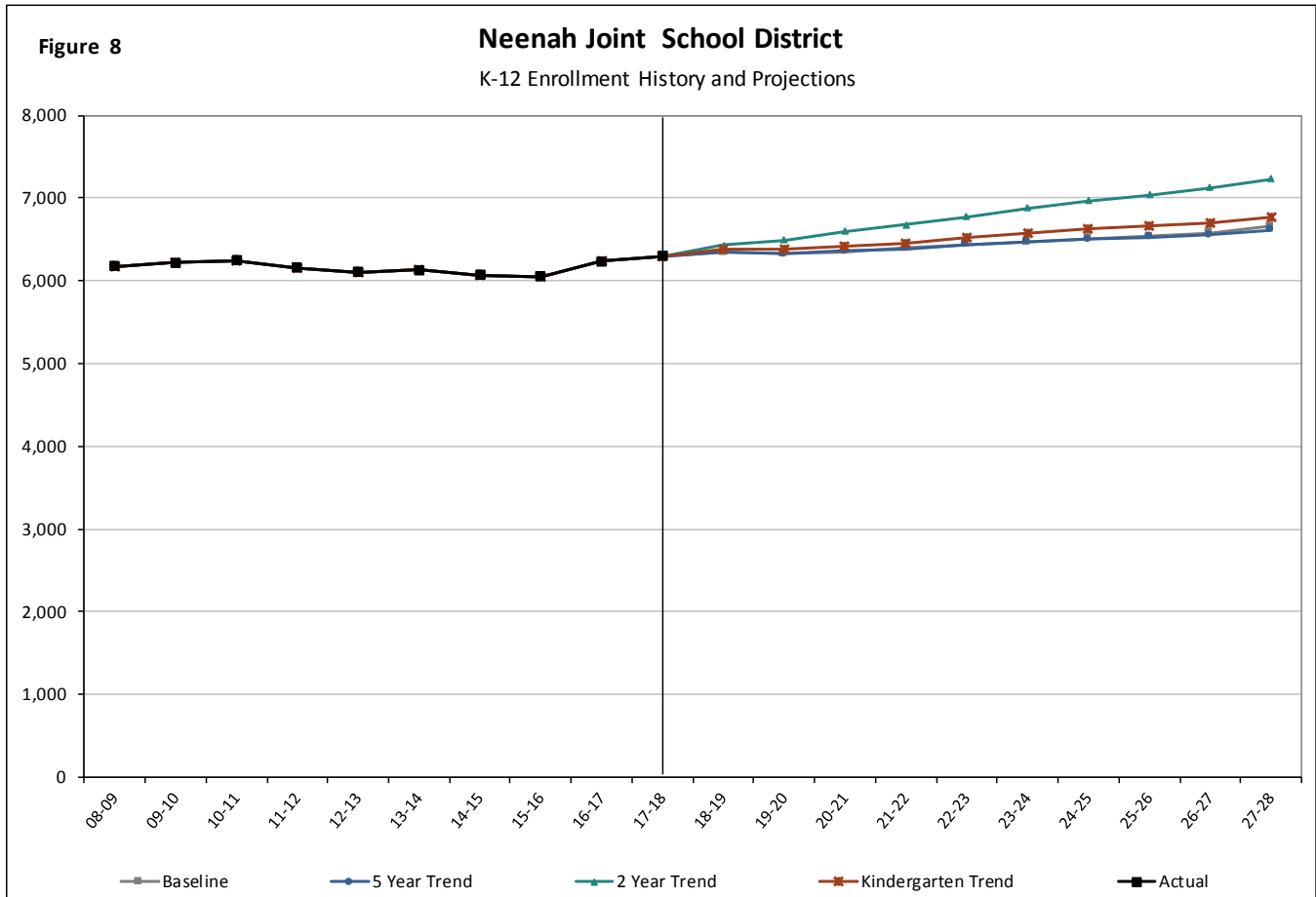

Figure 7

Neenah Joint School District

4K-12 Enrollment History and Projections

TABLE 12
Summary of 4K-12 Enrollment Projections
Neenah Joint School District

	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
Baseline	6,711	6,700	6,732	6,772	6,822	6,850	6,901	6,935	6,979	7,061
5 Year Trend	6,718	6,704	6,738	6,767	6,818	6,857	6,895	6,922	6,957	7,019
2 Year "Trend"	6,800	6,869	6,977	7,057	7,157	7,263	7,356	7,430	7,523	7,634
Kindergarten Trend	6,744	6,752	6,799	6,839	6,906	6,962	7,014	7,055	7,101	7,171

4K-12 enrollment is 6,647 in the 2017/18 school year. All models project district-wide enrollment increasing over time with the Two-Year "Trend" model indicating the greatest increase. 4K-12 enrollment projections five years from now (2022/23) forecast a range of enrollment from 6,818 to 7,157 students.
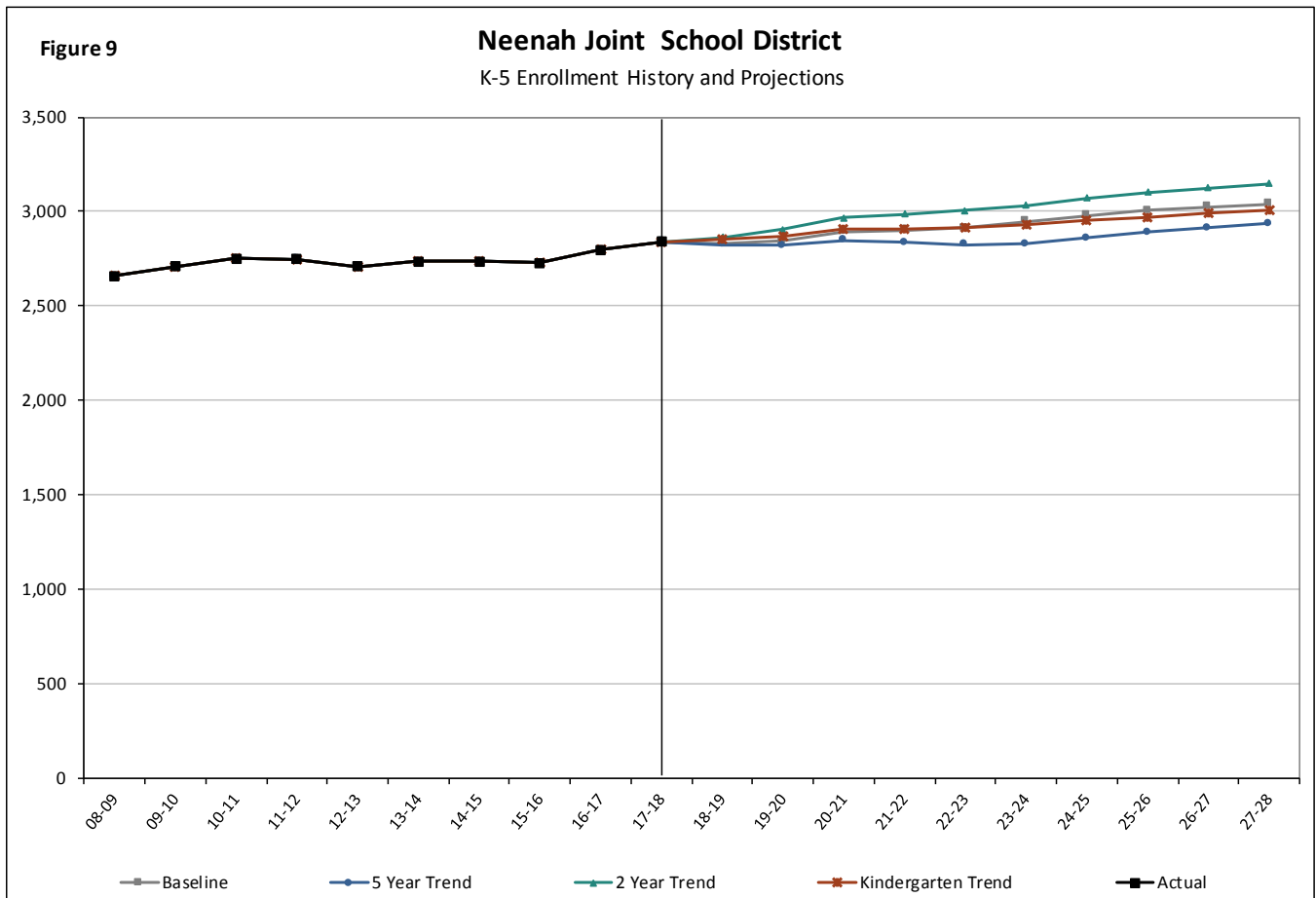
Figure 8

Neenah Joint School District

K-12 Enrollment History and Projections

TABLE 13
Summary of K-12 Enrollment Projections
Neenah Joint School District

	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
Baseline	6,341	6,321	6,349	6,390	6,438	6,462	6,508	6,538	6,578	6,656
5 Year Trend	6,348	6,325	6,355	6,386	6,435	6,469	6,502	6,525	6,556	6,614
2 Year "Trend"	6,430	6,490	6,595	6,676	6,773	6,875	6,964	7,033	7,122	7,228
Kindergarten Trend	6,375	6,373	6,416	6,458	6,523	6,574	6,621	6,658	6,699	6,765

K-12 enrollment is 6,301 in the 2017/18 school year. All models project K-12 enrollment increasing with the Two-Year "Trend" model indicating the greatest increase. In 2022/23, K-12 enrollment projections forecast a range of enrollment from 6,435 to 6,773 students.

Figure 9

Neenah Joint School District
K-5 Enrollment History and Projections

Legend: Baseline · 5 Year Trend · 2 Year Trend · Kindergarten Trend · Actual

TABLE 14
Summary of K-5 Enrollment Projections
Neenah Joint School District

	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
Baseline	2,833	2,843	2,893	2,903	2,915	2,947	2,979	3,006	3,024	3,041
5 Year Trend	2,824	2,822	2,848	2,836	2,823	2,828	2,861	2,889	2,912	2,935
2 Year "Trend"	2,862	2,905	2,968	2,988	3,005	3,034	3,069	3,100	3,124	3,148
Kindergarten Trend	2,851	2,870	2,909	2,907	2,911	2,933	2,951	2,970	2,988	3,007

Elementary school enrollment in the current school year is 2,839. The Baseline, Two-Year, and Kindergarten models show increasing enrollment, while the Five-Year Trend model projects steady enrollment in the near term. Grades K-5 enrollment projections five years from now (2022/23) forecast a range of enrollment from 2,823 to 3,005.
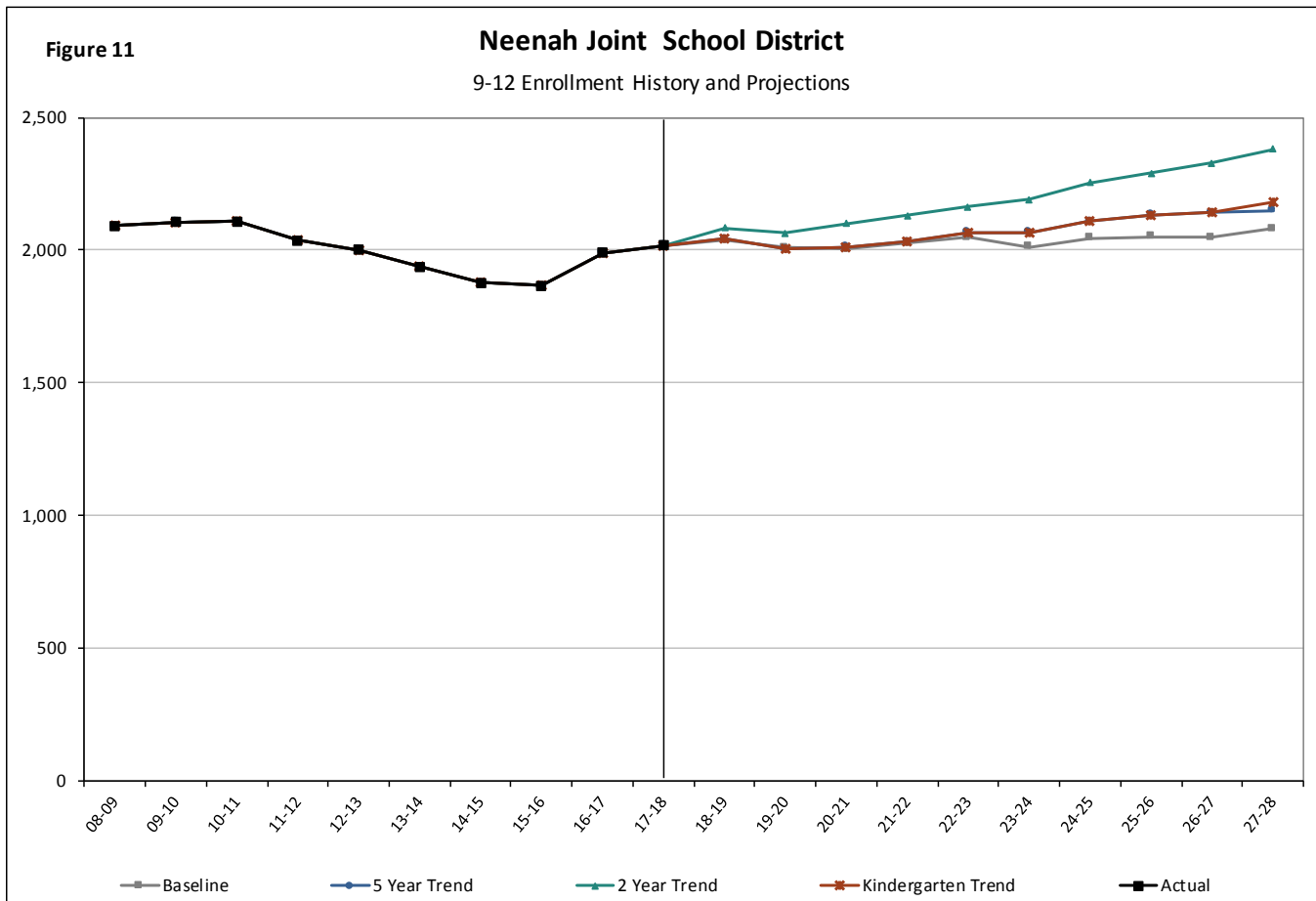
Figure 10

Neenah Joint School District

6-8 Enrollment History and Projections
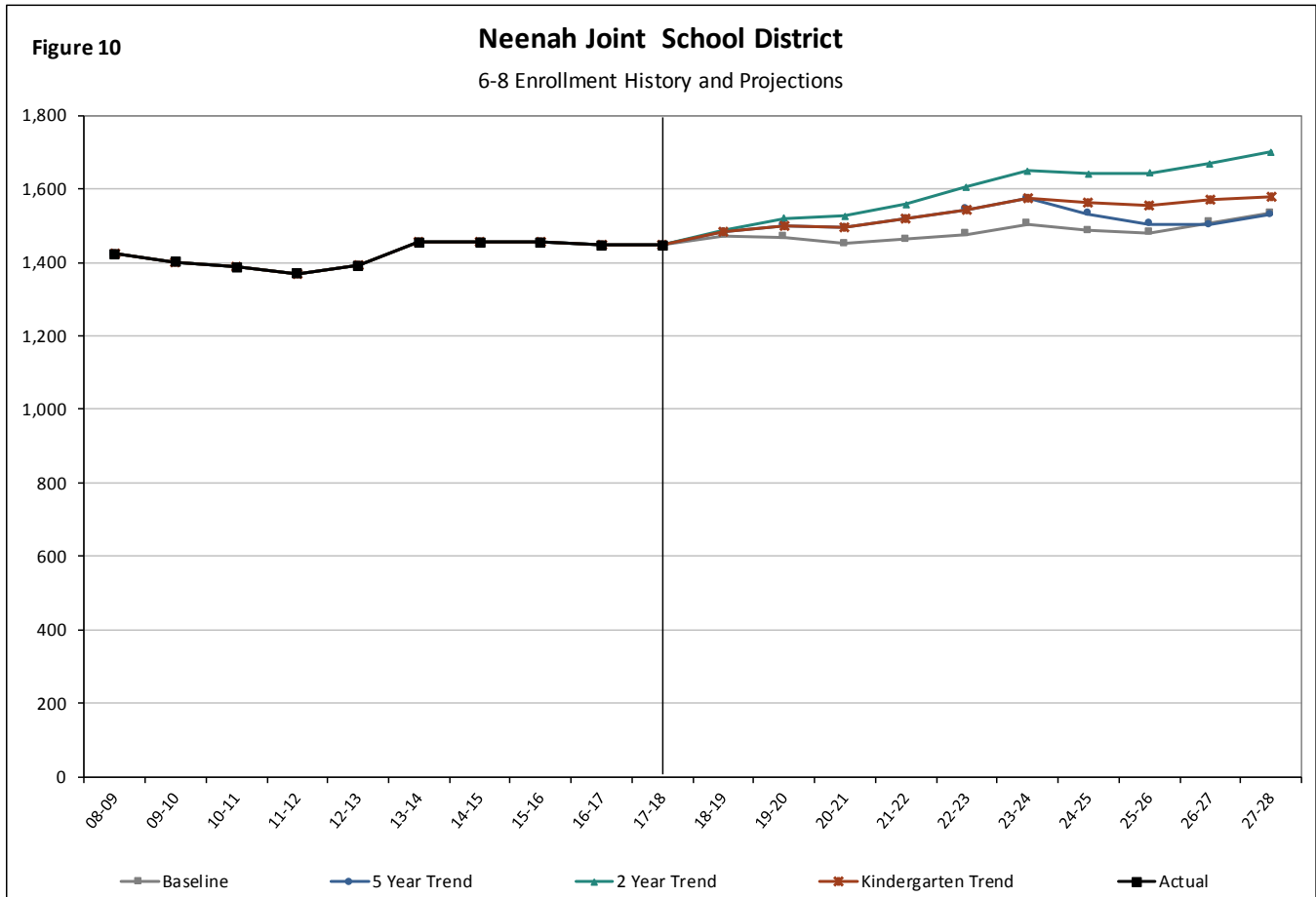
TABLE 15
Summary of 6-8 Enrollment Projections
Neenah Joint School District

	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
Baseline	1,473	1,469	1,451	1,462	1,477	1,504	1,486	1,481	1,507	1,535
5 Year Trend	1,482	1,500	1,495	1,518	1,544	1,573	1,533	1,503	1,502	1,530
2 Year "Trend"	1,486	1,520	1,527	1,558	1,605	1,649	1,641	1,643	1,668	1,699
Kindergarten Trend	1,482	1,500	1,495	1,518	1,544	1,573	1,561	1,556	1,569	1,579

Middle school enrollment in the current school year is 1,446. All models project increasing enrollment over the next five to six years followed by steady enrollment. Grades 6-8 enrollment projections five years from now (2022/23) predict a range of enrollment from 1,477 to 1,605.

Figure 11

Neenah Joint School District

9-12 Enrollment History and Projections

TABLE 16
Summary of 9-12 Enrollment Projections
Neenah Joint School District

	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28
Baseline	2,036	2,009	2,005	2,026	2,047	2,012	2,044	2,052	2,047	2,080
5 Year Trend	2,042	2,003	2,012	2,032	2,067	2,068	2,109	2,132	2,142	2,149
2 Year "Trend"	2,083	2,065	2,100	2,130	2,164	2,192	2,254	2,291	2,330	2,381
Kindergarten Trend	2,042	2,003	2,012	2,032	2,067	2,068	2,109	2,132	2,142	2,179

High school enrollment this current school year is 2,016. All projection models, except the Two-Year "Trend" model, project steady high school enrollment over the next five years followed by increasing enrollment. Grades 9-12 enrollment projections five years from now (2022/23) project a range of enrollment from 2,047 to 2,164.

Conclusions

These district-level enrollment projections are based on models that incorporate recent past and current demographic information as well as the district's own enrollment. Because most of the students in the district's schools over the next few years have already been born or are already in school, and because their grade progression from one year to another is highly predictable, the total district-level projections should be viewed as having high accuracy over the next few years.

After several years, and increasingly for the lower elementary grades, actual enrollment figures will likely deviate from these projections by ever increasing amounts. The reason for this is that birth trends, in-migration of pre-school age children, and transfers into the district are more difficult to predict and makes meaningful incorporation into enrollment projections a challenge. As with nearly all types of forecasts, accuracy in these enrollment projections decreases over time.

The information provided in this school enrollment projections report suggests increasing 4K-12 enrollment in the Neenah Joint School District. Enrollment in the elementary grades will likely increase according to the Baseline, Two-Year, and Kindergarten Trend models, while the Five-Year Trend model shows steady enrollment. In the middle school, the enrollment will likely increase the next five years followed by steady enrollment. While the high school enrollment will remain steady over the next five years followed by increasing enrollment.

In sum, these enrollment projections point to the Neenah School District experiencing enrollment growth. In particular:

- Long-term and recent birth trends, as well as trends in kindergarten enrollment, all indicate increasing enrollment in the elementary grades.

- The relatively large increases in students in the past two school years leads to the Two-Year "Trend" producing the highest projected future enrollments, across elementary, middle and high school levels.

- The growing elementary school classes now will lead to an increase at the middle school level. Ninth through twelfth grades saw a sizable jump in enrollment over the last two years and are projected to gain from 30 to 150 students over the next five years.

If growth in the coming years is closer to the district's experience of the last two years, then the higher projections predicted by the Two-Year "Trend" may be more applicable of the four models. Otherwise, growth may be relatively modest in future years. Monitoring enrollment over the next few years will be critical for the district. Enrollment changes should be closely monitored and compared with these projections to determine the trajectory of future growth. This type of monitoring program might help the district to determine which of the models seems to be the most realistic to use for planning purposes.