

# Union-Endicott Central School District



*Study of Student Enrollments*

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## **Executive Summary**

### **Enrollment Study for the Union-Endicott Central School District**

This enrollment study for the Union-Endicott Central School District generates several observations and conclusions:

- In the six-year period from 2013-14 to 2018-19, the K-12 enrollment declined from 3,778 students to 3,631 students, a decrease of 147 students or 3.89%.
  - K-5 enrollment decreased from 1,700 to 1,683, a decrease of 17 students;
  - 6-8 enrollment decreased from 885 to 818, a loss of 67 students;
  - 9-12 enrollment decreased from 1,193 to 1,130, a loss of 63 students.
- No significant economic growth or decline for the Union-Endicott Central School District catchment area is expected for the foreseeable future.
- There is the potential for an increase in the school age population of 30-50 students for the Union-Endicott Central School District should the Endicott Square affordable housing development come to fruition.
- In the next seven years, K-12 enrollment is projected to decline from 3,631 students to 3,440 students, a decrease of 191 students or 5.26%.
- Home schooling, private school attendance, and the enrollment of non-resident students were all studied and none of these factors had a significant impact on the enrollment projections made for Union-Endicott.

## *Overview*

The Union-Endicott Central School District is located at 1100 East Main Street in Endicott, New York. The district is approximately fifteen minutes west of Binghamton, New York and consists primarily of the Towns of Union and Owego. The Town of Union contributes approximately 87% of the district's tax levy while the Town of Owego contributes approximately 13% of the levy. A largely suburban school district, Union-Endicott educates students in grades K-12 with a high school, a middle school, and four elementary schools.

The purpose of this study is to project enrollments for the Union-Endicott Central School District for the next six years in grades kindergarten through twelve. The enrollment projection is based upon data provided by the district and discussions with key district personnel to discern possible significant shifts in population that might impact enrollment.

## *Methodology*

The procedure for projecting student enrollments is referred to as the Cohort Survival Methodology. This methodology is highly reliable and is the most frequently used projective technique for making short-term school district enrollment projections. To calculate enrollment projections, the following data and procedures are used:

- Six-year history of district enrollment by grade level
- Calculation of survival ratios by grade level
- Kindergarten enrollment projections based on resident births

A survival ratio is obtained by dividing a given grade's enrollment into the enrollment of the following grade a year later. For example, the number of students in grade 3 in any year is divided by the number of students in grade 2 of the previous year. The ratios indicate the proportion of the cohort "surviving" to the following year. Cohort refers to the enrollment in a grade for a given year.

Using grade-to-grade survival ratios, an average of these ratios for each cohort progression is obtained. This average is referred to as an average projection survival ratio. This ratio is then multiplied by each current grade enrollment to obtain the

projected enrollment for the next successive year. The multiplicative process is continued for each successive year.

Survival ratios usually have values close to one, but may be less than or greater than one. Where the survival ratio is less than one, fewer students “survived” to the next grade. Where the survival ratio is greater than one, more students “survived” to the next grade. Grade-to-grade survival ratios reflect the net effects of deaths, dropouts, the number of students who are home schooled, promotion/retention policies, transfers to and from non-public schools, and migration patterns in and out of the school district.

Since estimating births introduces a possible source of error into the model, it is advisable to limit enrollment projections to a period for which existing data on district residential births can be used. This means that enrollment projections are possible for five years into the future for the elementary grades, which is usually sufficient for most planning purposes. Beyond that point, the number of births must be estimated and the projective reliability is greatly reduced. Enrollment projections for grades 7 and 8 and for grades 9-12 can be projected for ten years into the future but elementary projections are limited to approximately a five-year period. It is recommended that the district update these enrollment projections every year.

## *Data*

The methodology considered for this study was to extrapolate to kindergarten enrollment cohorts from birth data. Birth data is provided for school districts by the New York State Department of Health and is based upon the address of the mother at the time of the birth. Birth data for the Union-Endicott Central Schools from 2002 to 2016 is shown in the following table #1.

<b>Table 1 Number of Births</b>	
Calendar Year	Live Births
2002	337
2003	356
2004	318
2005	334
2006	348
2007	362
2008	351
2009	375
2010	366
2011	364
2012	358
2013	338
2014	345
2015	325
2016	313

Table 1 provides a 15-year history of the births in the Union-Endicott Central School District. It is clear from this table that the number of births in the district has been declining very slightly over the fifteen-year period examined. The average annual number of births for the first eight years (2002-2009) is 348 births while the average annual number of births for the last seven years (2010-2016) is 344 births. Over the 15-year period studied, the average annual number of births is 346.

Births are then used to project the kindergarten enrollment five years into the future...babies born in 2014 will be in kindergarten in 2019-20 and babies born in 2016 will be in kindergarten in 2021-22. An average ratio of births to kindergarten enrollment five years later is then calculated. This ratio is then used to project future kindergarten enrollments from actual and estimated births. These data enable the projection of future school enrollments as shown in table 2.

Table 2 that follows shows the district's enrollment history and projections.

Table 2 K-12 Enrollment History and Projections													
School Year	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26
Birth Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Births	351	375	366	364	358	338	345	325	313	348	348	348	348
K	277	296	278	284	282	269	270	255	245	273	273	273	273
1	292	287	303	271	272	288	270	271	255	246	274	273	273
2	299	281	276	311	262	288	287	268	270	254	245	272	272
3	262	298	277	287	292	261	286	284	266	267	252	243	270
4	258	280	282	272	277	301	261	285	284	266	267	252	242
5	312	251	281	282	260	276	297	257	281	280	262	263	248
6	285	301	249	287	271	265	274	294	255	279	277	260	261
7	316	296	297	246	277	258	261	270	290	251	275	274	256
8	284	307	290	298	247	295	259	263	271	292	252	276	275
9	292	288	303	303	300	247	298	262	265	274	295	255	279
10	305	284	275	293	307	294	241	291	256	259	268	288	249
11	283	301	272	270	282	295	285	234	283	248	252	260	279
12	313	280	302	277	263	294	297	287	235	284	250	253	261
Total K-12	3778	3750	3685	3681	3592	3631	3585	3521	3457	3474	3441	3441	3440
K-5 Total	1700	1693	1697	1707	1645	1683	1670	1620	1601	1586	1572	1576	1579
6-8 Total	885	904	836	831	795	818	794	827	816	821	804	809	792
9-12 Total	1193	1153	1152	1143	1152	1130	1121	1074	1040	1066	1064	1056	1069

As is apparent from table 2, the K-12 enrollment in Union-Endicott has declined slightly over the past six years (3,778 in 2013-14 to 3,631 in 2018-19) decreasing by 147 students or 3.89%. This K-12 enrollment is projected to continue to decline slowly through 2025-26 with 3,361 students in 2018-19 projected to become 3,440 students in 2025-26.

While the recent enrollment trends in Union-Endicott have declined slightly, the same trend has been seen in nearly every school district in upstate New York. As a matter of fact, half the area school districts have seen enrollment declines of greater proportion than those evidenced in Union-Endicott. Table 3 that follows shows the declining enrollment data for similar area school districts.

<b>Table 3</b>				
<b>Enrollment History for Area School Districts</b>				
District	2000-01	2010-11	2017-18	Change
Binghamton	6,176	5,671	5,154	1,022/16.5%
Chenango Forks	1,940	1,601	1,468	472/24.3%
Chenango Valley	1,986	1,734	1,619	367/18.5%
Johnson City	2,593	2,558	2,443	150/5.8%
Maine-Endwell	2,720	2,505	2,447	273/10.0%
Norwich	2,230	2,057	1,752	478/21.4%
Owego-Apalachin	2,508	2,138	1,954	554/22.1%
Union-Endicott	4,568	4,007	3,613	955/20.9%
Vestal	4,301	3,684	3,273	1,028/23.9%
Windsor	2,113	1,828	1,575	538/25.5%

Tables 4-7 that follow look at the enrollment history by grade level for each of the district's four elementary schools. In these tables, we see that the elementary enrollments have decreased slightly. This is consistent with the overall enrollment history for the district.

<b>Table 4</b>							
<b>Enrollment History for Ann G. McGuinness Elementary School</b>							
Grade Level	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	6 Year Change
K	56	73	63	63	54	49	-7/-12.5%
1	57	54	74	57	67	55	-2/-3.5%
2	64	64	58	72	62	67	+3/+4.7%
3	63	69	66	51	85	64	+1/+1.6%
4	57	71	71	63	47	83	+26/+45.6%
5	75	69	69	66	70	48	-27/-36.0%
Total	372	400	401	372	385	366	-6/-1.6%

<b>Table 5</b>							
<b>Enrollment History for Charles F. Johnson Elementary School</b>							
Grade Level	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	6 Year Change
K	76	72	85	63	71	68	-8/-10.5%
1	65	80	70	72	62	83	+18/+27.7%
2	80	65	69	82	65	67	-13/-16.3%
3	55	71	62	80	60	72	+17/+3.09%
4	72	60	71	65	68	73	+1/+1.4%
5	65	58	60	64	57	69	+4/+6.2%
Total	413	406	417	426	383	432	+19/+4.6%

<b>Table 6</b>							
<b>Enrollment History for George F. Johnson Elementary School</b>							
Grade Level	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	6 Year Change
K	98	104	94	89	93	91	-7/-7.1%
1	97	95	104	87	90	90	-7/-7.2%
2	95	94	102	95	89	95	0/0
3	99	100	89	104	91	84	-15/-15.2%
4	94	105	102	91	96	95	+1/+1.1%
5	116	86	108	95	90	97	-79/-16.4%
Total	599	584	599	561	549	552	-47/-7.8%

<b>Table 7</b>							
<b>Enrollment History for Thomas J. Watson Elementary School</b>							
Grade Level	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	6 Year Change
K	62	56	42	55	51	55	-7/-11.3%
1	68	54	49	44	59	59	-9/-13.2%
2	54	59	52	52	35	62	+8/+14.8%
3	52	55	59	51	45	33	-19/-36.5%
4	36	42	44	43	55	37	+1/+2.8%
5	45	38	52	50	46	52	+7/+15.6%
Total	317	304	298	295	291	298	-19/-6.0%

Table 8 that follows is the summary table for the elementary school enrollments by building. As can be seen from this table, the enrollment in one the school has increased slightly while other schools have decreased slightly. Overall, we again see a similar pattern to the individual school enrollments as well as the overall district enrollment as the total elementary school enrollment has decreased by 53 students (3.1%) over the past six years.

<b>Table 8</b>			
<b>Summary of Elementary Enrollments by School-2013-14 To 2018-19</b>			
School	2013-14 Enrollment	2018-19 Enrollment	Change
Ann G. McGuinness	372	366	-6//1.6%
Charles F. Johnson	413	432	+19/+4.6%
George F. Johnson	599	552	-47/-7.8%
Thomas J. Watson	317	298	-19/-6.0%
TOTAL	1,701	1,648	-53/-3.1%



The individual school tables as well as the summary table all point out that the slightly declining enrollment pattern in the district is affecting each of the elementary schools in a very similar manner. This means that there is not one geographic area of the district that is growing or declining at a very different rate than the rest of the district. Were this to be the case, an imbalance in the enrollments of the elementary schools would be occurring and an elementary school boundary study might be called for. However, such is not the case for Union-Endicott.

In studying school district enrollment histories and projections, it is important to see if there are outside factors that might be impacting the number of students attending the school district or any of its schools. The first factor that is examined is the number of students in Union-Endicott who are home schooled. Table 9 that follows presents these data.

<b>Table 9</b>					
<b>Number of Home Schooled Students By Grade Level</b>					
Grade	2014-15	2015-16	2016-17	2017-18	2018-19
K	1	1	1	5	4
1	5	7	5	7	6
2	13	4	4	6	9
3	7	11	6	7	7
4	9	6	9	7	6
5	5	8	12	10	6
6	6	10	15	12	10
7	7	11	8	15	9
8	12	6	12	10	13
9	4	11	6	11	7
10	8	3	14	6	10
11	8	4	2	10	5
12	0	5	6	3	10
Total	85	87	100	109	102
% of District Enrolment	2.27%	2.36%	2.72%	3.03%	2.81%

It is apparent from table 9 that home schooling does not significantly impact the enrollment at Union-Endicott. The number of students in the district who are home schooled has remained relatively constant over the past five years and represents, on average, 2.63% of the district's enrollment. This is very much in line with the average number of students who are home schooled across upstate New York school districts that usually represents 2-3% of the student population.

The next group of students to be studied is the group that attends private schools in the area. The Binghamton area private schools that educate Union-Endicott students include Seton Catholic Central Junior-Senior High School in Binghamton, Ross Corners Christian Academy, a Pre-K-12 school in Vestal, St. James School, a K-6 school in Johnson City, The Crescent Academy, a Pre-K-5 Islamic school in Johnson City, and All Saints School, a K-6 elementary school in Endicott. Table 10 that follows shows the number of Union-Endicott students who attend private schools.

<b>Table 10</b>	
<b>Union-Endicott Students Attending Private Schools</b>	
2014-15	145
2015-16	138
2016-17	136
2017-18	141
2018-19	213

As can be seen from table 10, private school enrollment ranged between 136 and 145 students from 2014-15 through 2017-18. In the 2018-19 school year, that number jumped to 213 students. The number of students in private schools can impact the future enrollment projections for a district. Should the private schools close, presumably these students would have to be absorbed into the Union-Endicott system. The increase in the number of students attending private schools in 2018-19 clearly is a change from the pattern of the previous four years and should be monitored for the future. Having said that, the average of 155 students attending private schools on average, represents only 4.3% of the 2018-19 enrollment for the district. Should 155 students return to the district, assuming an equal distribution of students across the grade levels, only 12 more students per grade level would have to be accommodated. This does not appear to be a major undertaking and would not alter the enrollment projections made earlier.

Student enrollment can also be impacted by policies that a school district has about non-resident students. District enrollment can be increased if there are a large number of non-resident students who attend a district and district enrollment can be decreased if a large number of resident students choose to attend school in another school district. Table 11 shows the number of non-resident students who have attended Union-Endicott over the past five years.

<b>Table 11</b>				
<b>Non Resident Students Attending Union-Endicott</b>				
2014-15	2015-16	2016-17	2017-18	2018-19
0	0	1	1	2

In looking at the data in table 11, it is obvious that the number of non-resident students who attend school in Union-Endicott does not have a significant impact on the district's enrollment.

It is also important to examine the opposite case of non-resident students attending Union-Endicott...how many students who reside in Union-Endicott attend school in other public school districts? Table 12 that follows examines those data.

<b>Table 12</b>				
<b>Union-Endicott Students Attending Other Public Schools</b>				
2014-15	2015-16	2016-17	2017-18	2018-19
0	0	0	1	1

Again, it is very obvious that the number of Union-Endicott students who have been attending school in other public school districts does not have a significant impact on the overall enrollment projections for Union-Endicott.

One other factor to be considered when projecting public school enrollment is whether or not there will be any dramatic change to the overall population of the district. Are large housing developments being planned for the district? Is a major employer developing a large business in the area that will create numerous new jobs? Are there any major employers who are planning to move out of the area? These questions were discussed with school district leaders. A new pharmacy school is being opened at Binghamton University but the impact on the Union-Endicott population does not appear to be of significant consequence.

There is one possible housing development that might occur within the district that will deserve the district's attention. Marchuska Brothers Construction has purchased a former Union-Endicott elementary school located at 23 Jackson Avenue in Endicott. This building has been sold to Housing Visions in Syracuse, pending the acquisition of low income housing tax credits by Housing Visions. It is the intention of Housing Visions to transform the school building into affordable housing and to name the development Endicott Square. Housing Visions is planning to create 61 apartments to

include 43 one-bedroom apartments and 18 two-bedroom apartments. Assuming that Housing Visions receives the tax credits fairly soon, it is planned that residents will start moving into the apartments by July 1, 2021 and that full occupancy would be achieved by December 31, 2021. Housing Visions is predicting that no children will live in the one-bedroom apartments and that an average of two children will live in the two-bedroom apartments. This would mean that there could be approximately 36 children living in Endicott Square by the end of 2021. For purposes of planning, the district should monitor this situation very closely and, assuming completion of this development, plan for 30-50 children to be entering Union-Endicott during the 2020-21 school year.

### *Other Area Municipalities*

The slight decline in the enrollment in the Union-Endicott schools mirrors the overall population of Broome County. The 2017 Broome County Profile prepared by Cornell University has found that the total population of Broome County was 165,749 in 1940, rose to a high of 222,065 in 1970, and was 200,600 in 2010. More recently, Broome County's population was 197,251 in 2014 and 191,659 in 2018. This represents a decrease of 5,592 people or 2.8% over the last four-year period.

Like most counties in upstate New York, Broome County is aging. In order to quantify this change, the period of the last fifty years was examined. The age range of 25-44 is generally considered to be the age when most people have children. In 1960, this age cohort of 25-64 in Broome County had 56,518 people; in 2010, there were 45,195 people in this group. This represents a decrease of 11,323 people or 20% of the 1960 population. Over the same period of time, the population of persons age 65 or older has increased from 20,959 in 1960 to 32,844 in 2010, an increase of 11,885 people or 56.7% of the 1960 population. The population of age 5-14 persons in Broome County was 26,957 in 2000 and 22,468, a decrease of 4,489 people or 16.7%. Broome County is indeed aging.

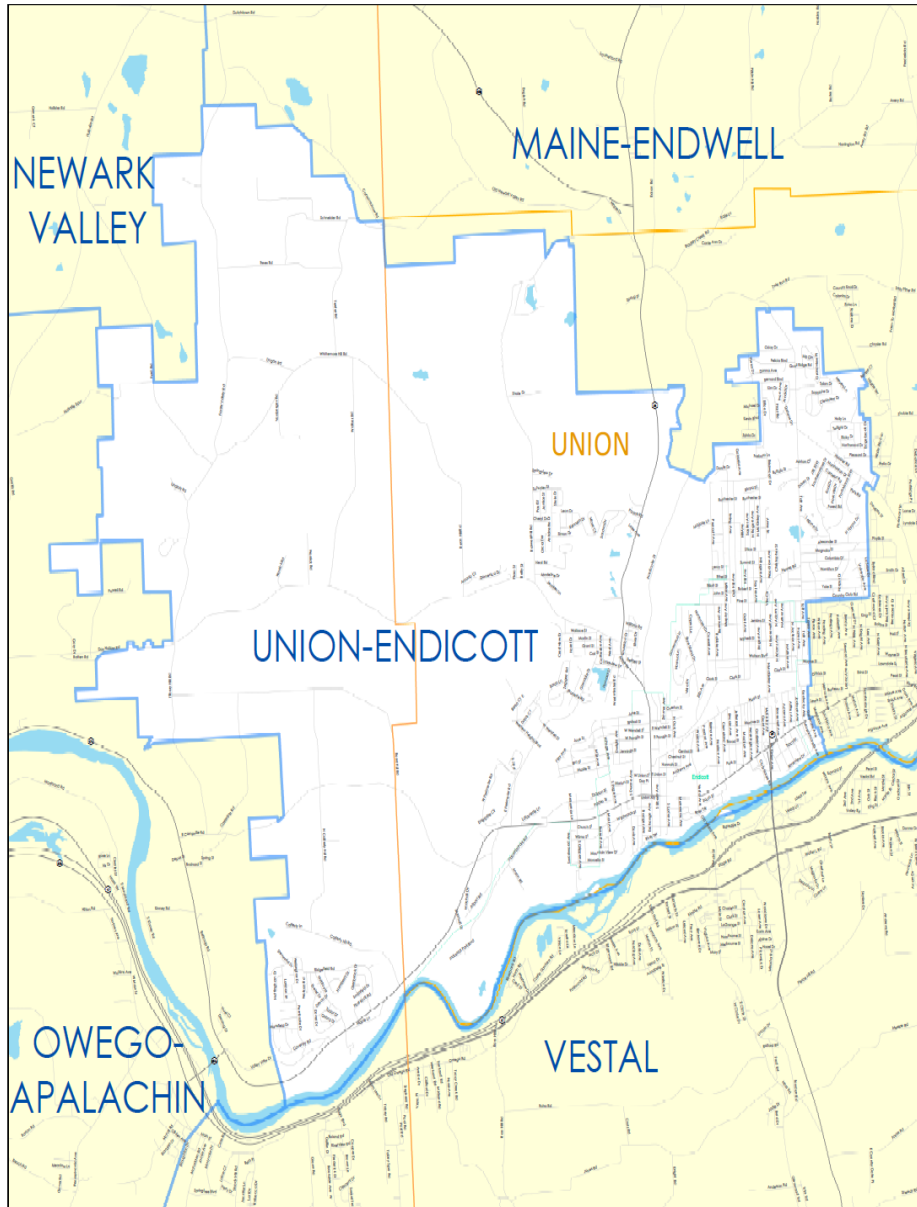
Union-Endicott has two towns within its borders, the Town of Union and the Town of Owego. The Town of Union represents 87.4% of the tax levy in the district so it is by far the larger town in the district. Like the county data, the 2010 census found that in 2010, the Town of Union had a population of 56,346 and in 2015 is projected to have a

population was 54,995, a decrease of 1,351 people or 2.4%. The Town of Owego had a population of 19,891 in 2010 and in 2015 is projected to have a population of 19,182, a decrease of 709 people or 3.6%. The consistent minor decline in population/student enrollment is evident across the county, the town, and the school district.

Other than the potential development of Endicott Square, there is nothing in this report to indicate that dramatic population growth or shifts will be occurring in the county, the district's towns, or the school district in the future. The population of Broome County is projected to continue to decline, the population of the two major towns in the school district will probably remain approximately the same or decline slightly, and the region will get older. It does not appear that any of these data will influence the student population in Union-Endicott in a dramatic way that would be inconsistent with what has been projected.

## *Summary*

The student enrollment in Union-Endicott has declined slightly since the 2013-2014 school year, as has the enrollment of nearly every other school district in upstate New York. Most of these other school districts have continued to experience enrollment decline up to the present time and, as a result, are projected to continue to see declining enrollments for the next 5-10 years. This school district projection is largely consistent with the demographic changes that are predicted for other area municipalities. The district should closely monitor the development of Endicott Square, an affordable housing development in the district, for the possible addition of 30-50 school age children.



### Map of Union-Endicott CSD 034601

- School Districts
- County
- City/Town
- Village
- Major Roads
- Local Roads

Miles  

 0 0.45 0.9 1.8

Map Produced by:  
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