

ONTEORA CENTRAL SCHOOL DISTRICT

ENROLLMENT PROJECTION 2013-2022

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- Live Births vs Kindergarten Enrollment - Live Births Base Projection
- Enrollment Projection Breakdown - Live Births (K-4, 5-8, 9-12)
- Grand Total Enrollment Projection - Live Births

INTRODUCTION

The following enrollment projection has been prepared by FACTS at the request of the Onteora Central School District.

Data and information from the following sources were utilized in compiling this report:

- School District
- United States Census Bureau
- New York State Department of Health
- Local Building Inspector(s)

FACTS has utilized diligent research and generally accepted formulas and procedures in preparing these projections. It must be recognized, however, that given the many variables comprising such projections, that caution must be exercised in the interpretation and application of these projections. A thorough review for accuracy of the data contained in this report should be conducted by the school district and prompt notification of any discrepancies provided to FACTS for correction.

PROJECTION METHODOLOGY

The Cohort Survival Method has been used in preparing these projections. This formula has proven to be highly reliable and is used extensively for enrollment projections for school districts in New York State.

The calculation of enrollment projections is based on the following data and procedures:

- Six years of actual district enrollment by grade
- Calculation of the survival ratios by grade level
- Projection of kindergarten enrollment based on resident live births

The survival ratio expresses a quantitative relationship between the numerical size of a grade in a given year in comparison to the size of the next lower grade in the previous year. The number of students in a grade in a given year is divided by the number of students in the next lower grade in the previous year (i.e.; Grade 5 in 2008 divided by Grade 4 in 2007). If the quotient is greater than 1.0, the number of students has increased; conversely, if the quotient is less than 1.0, the number of students has decreased. Five years of actual survival ratios are calculated for each grade 1-12 and the five-year average is determined. This average is then applied by grade to determine the ten-year projected enrollment for each grade 1-12.

The calculation of projected kindergarten enrollment is based on the analysis of resident live birth data. A ten-year history of live birth data is collected. Each of the first five years of live birth data is compared to the actual kindergarten enrollment five years hence and the survival ratio is calculated (i.e.; 2003 live births to 2008 kindergarten enrollment, etc.). The five annual survival ratios are averaged and that average is applied to the next five years of live birth data to obtain the first five years of annual projected kindergarten enrollment (i.e.; 2008-2012 live births to project 2013-2017 kindergarten enrollments). For purposes of providing a ten-year enrollment projection, the kindergarten enrollment is projected for the last five years of the projection at the same number appearing in the fifth year.

In addition, the following factors which could potentially impact these projections are also researched and analyzed:

- Significant changes in residential construction
- Major changes in the local employment base
- Shifts in the non-public school population

The reliability of any enrollment projection must clearly be understood. Projections based on current and historical actual enrollments are the most reliable. Those based on historical live birth data are somewhat less reliable. In addition, the time frame and subset of the projections also play an important part in the reliability. Projections for the immediate future will be more reliable than those in later years, for example. Projections for the total K-12 district enrollment will also be more reliable than those for any particular grade in any given year. Therefore, these projections should be updated annually to reflect the latest live birth and actual enrollment data.

For the purposes of this study, data for the Towns of Hurley, Olive, Shandaken and Woodstock have been researched.

Annual Updates: Annual updates of original projections prepared by FACTS are limited to the collection and research of the following information:

- Live births
- District enrollment
- District non-public school enrollment

The collection of information regarding future residential construction programs are not included in the annual update pricing fee.

DEMOGRAPHIC DATA

POPULATION TRENDS:

Table I reflects the population data from the 1990, 2000 and 2010 census as provided by the U.S. Census Bureau. The Towns of Hurley and Woodstock experienced a minimal decline in population between 1990 and 2000 and continued to lose population between 2000 and 2010. The Towns of Olive and Shandaken experienced moderate increases in population between 1990 and 2000 and both lost population between 2000 and 2010. Ulster County experienced moderate growth between 1990 and 2000 and a minimal gain between 2000 and 2010. Since these trends are already reflected in the District's historical enrollments, no adjustments to the projection formulas are necessary.

TABLE I POPULATION TRENDS						
Town/Village	1990	2000	1990-00 % Change	2010	2000-10 % Change	1990-10 % Change
Hurley	6,741	6,564	-2.63	6,314	-3.81	-6.34
Olive	4,086	4,579	12.07	4,419	-3.50	8.15
Shandaken	3,013	3,235	7.37	3,085	-4.64	2.39
Woodstock	6,290	6,241	-0.78	5,884	-5.72	-6.46
Ulster County	165,304	177,749	7.53	182,493	2.67	10.40
Source: U.S. Census Bureau						

RESIDENT LIVE BIRTHS:

Table II shows the actual number of resident live births for the nine-year period 2003-11. For 2012 the total of 85 is estimated at the average for 2009 through 2011.

TABLE II RESIDENT LIVE BIRTHS										
	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012*
District	130	101	90	98	113	96	94	84	78	85
* Estimated										
Source: New York State Department of Health										

RESIDENTIAL HOUSING UNITS:

Table III reflects the number of building permits issued for new single family home residential construction by town for the past five years. The level of new home construction since 2006 has declined every year through 2010.

The results of discussions with the building inspectors will be provided separately.

Town of Hurly -

Town of Olive -

Town of Shandaken -

Town of Woodstock -

TABLE III RESIDENTIAL HOUSING UNITS						
Town/ Village	2007	2008	2009	2010	2011	Average
Hurly	10	15	2	0	0	5
Olive	9	7	3	8	0	5
Shandaken	7	7	5	N/R	0	5*
Woodstock	14	3	13	8	22	12
TOTAL	40	32	23	16	22	27

* Four year average

NON-PUBLIC SCHOOL ENROLLMENT:

Table IV reflects this District's non-public school enrollment for a five-year period and has averaged 161 students per year. Any major change in this pattern may require a recalculation of the projection.

TABLE IV NONPUBLIC SCHOOL ENROLLMENT					
2008	2009	2010	2011	2012	5 Year Average
150	159	158	170	170	161

ENROLLMENT PROJECTIONS

HISTORICAL ENROLLMENT:

Table V depicts the district's actual enrollment by grade level for a six-year period. The grade by grade survival ratios shown in Table VI were calculated from this information.

TABLE V HISTORICAL ENROLLMENT						
Grade	2007	2008	2009	2010	2011	2012
Pre-Kindergarten	0	28	29	26	36	22
Kindergarten	101	113	108	77	86	116
First	105	108	120	114	86	81
Second	113	106	103	108	112	85
Third	109	111	105	94	115	106
Fourth	104	111	106	107	91	121
Total Pre K-4	532	577	571	526	526	531
% Change	-5.34	8.46	-1.04	-7.88	0.00	0.95
Fifth	125	108	118	98	109	86
Sixth	152	124	112	111	101	102
Seventh	151	156	118	114	105	105
Eighth	161	152	155	123	110	106
Total 5-8	589	540	503	446	425	399
% Change	-6.36	-8.32	-5.45	-11.33	-4.71	-6.12
Ninth	182	144	150	154	125	114
Tenth	172	172	148	139	138	114
Eleventh	201	154	158	147	136	132
Twelfth	172	179	143	145	141	129
Total 9-12	727	649	599	585	540	489
% Change	-2.55	-10.73	-11.52	-2.34	-7.69	-9.44
Total Pre K-12	1,848	1,766	1,673	1,557	1,491	1,419
% Change	-4.59	-5.00	-5.27	-6.94	-4.24	-4.83
Ungraded Elem	0	0	2	0	0	0
Ungraded Sec	11	0	5	2	0	0
Grand Total	1,859	1,766	1,680	1,559	1,491	1,419
% Change	-4.32	-4.44	-5.94	-7.20	-4.36	-4.83

SURVIVAL RATIOS:

The district's historical loss or gain of students from one grade level to the next grade level is reflected in Table VI. These ratios reflect the number of students in a particular grade in one year as compared to the number of students in the next higher grade in the following year. A ratio higher than 1.0 indicates a gain in students and conversely a ratio of less than 1.0 reflects a loss of students. These ratios, by grade level, were calculated individually for a five-year period and the five-year average for each grade level determined. The five-year average was then used to project future enrollments for each grade level.

TABLE VI SURVIVAL RATIOS						
Grade	2008	2009	2010	2011	2012	5-Year Average
K-1	1.0693	1.0619	1.0556	1.1169	0.9419	1.0491
1-2	1.0095	0.9537	0.9000	0.9825	0.9884	0.9668
2-3	0.9823	0.9906	0.9126	1.0648	0.9464	0.9793
3-4	1.0183	0.9550	1.0190	0.9681	1.0522	1.0025
4-5	1.0385	1.0631	0.9245	1.0187	0.9451	0.9980
5-6	0.9920	1.0370	0.9407	1.0306	0.9358	0.9872
6-7	1.0263	0.9516	1.0179	0.9459	1.0396	0.9963
7-8	1.0066	0.9936	1.0424	0.9649	1.0095	1.0034
8-9	0.8944	1.0417	0.9935	1.0163	1.0364	0.9855
9-10	0.9451	0.8605	0.9267	0.8961	0.9120	0.9415
10-11	0.8953	1.0260	0.9932	0.9784	0.9565	0.9484
11-12	0.8905	0.7989	0.9177	0.9592	0.9485	0.9289

PROJECTED KINDERGARTEN ENROLLMENT:

The annual ratios were calculated for a five-year period reflecting the ratio between the actual kindergarten enrollment in each year and the number of live births in each of the preceding five years (i.e.; 2008 actual kindergarten enrollment to 2003 live births, etc.). The five-year average was calculated and applied to the most recent five years of live births to project the subsequent five years of kindergarten enrollment for each projection. Years six through ten of kindergarten enrollment were projected at the same number as the fifth projected year.

TABLE VII PROJECTED KINDERGARTEN ENROLLMENT - LIVE BIRTHS								
Year	Live Births	Year	K-Enroll	Birth/K Ratio	Year	Projected K-En		
2003	130	2008	113	0.8692				
2004	101	2009	108	1.0693				
2005	90	2010	77	0.8556				
2006	98	2011	86	0.8776				
2007	113	2012	116	1.0265				
FIVE-YEAR AVERAGE SURVIVAL				0.9396				
2008	96						2013	90
2009	94						2014	88
2010	84						2015	79
2011	78						2016	73
2012	85*				2017	80		
* Estimated					2018	80		
					2019	80		
					2020	80		
					2021	80		
					2022	80		

TEN-YEAR ENROLLMENT PROJECTION:

Table VIII provides a summary by grade groupings of the projections shown in Table IX comparing the projected fifth and tenth years to the base year of 2012.

Since there is no methodology for projecting pre-kindergarten and attendance is not mandatory and is often dictated by staff, space and /or financial resources, we have projected a constant at the 2010-2012 average of students of twenty-eight. Pre-kindergarten are included in the pre-k - 4, pre-k - 12 and the Grand Total.

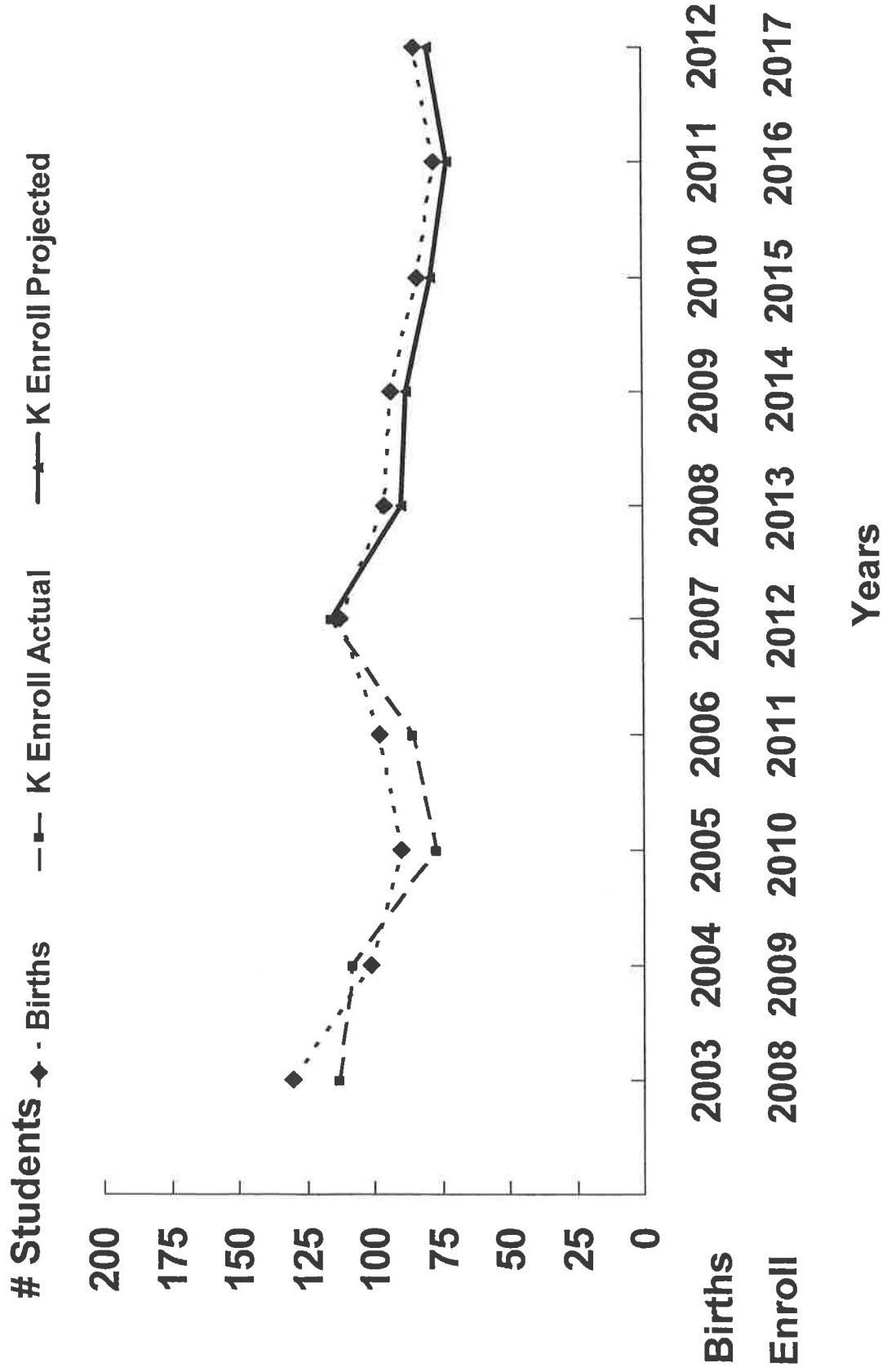
TABLE VIII ENROLLMENT PROJECTION SUMMARY					
	2012	2017	% Change	2022	% Change
Pre-K-4					
Live Birth	531	441	-16.95	431	-18.84
5-8					
Live Birth	399	378	-5.27	313	-21.56
9-12					
Live Birth	489	371	-24.13	326	-33.34
Pre-K-12					
Live Birth	1,419	1,190	-16.14	1,070	-24.60

TABLE IX
TEN-YEAR ENROLLMENT PROJECTION - LIVE BIRTHS

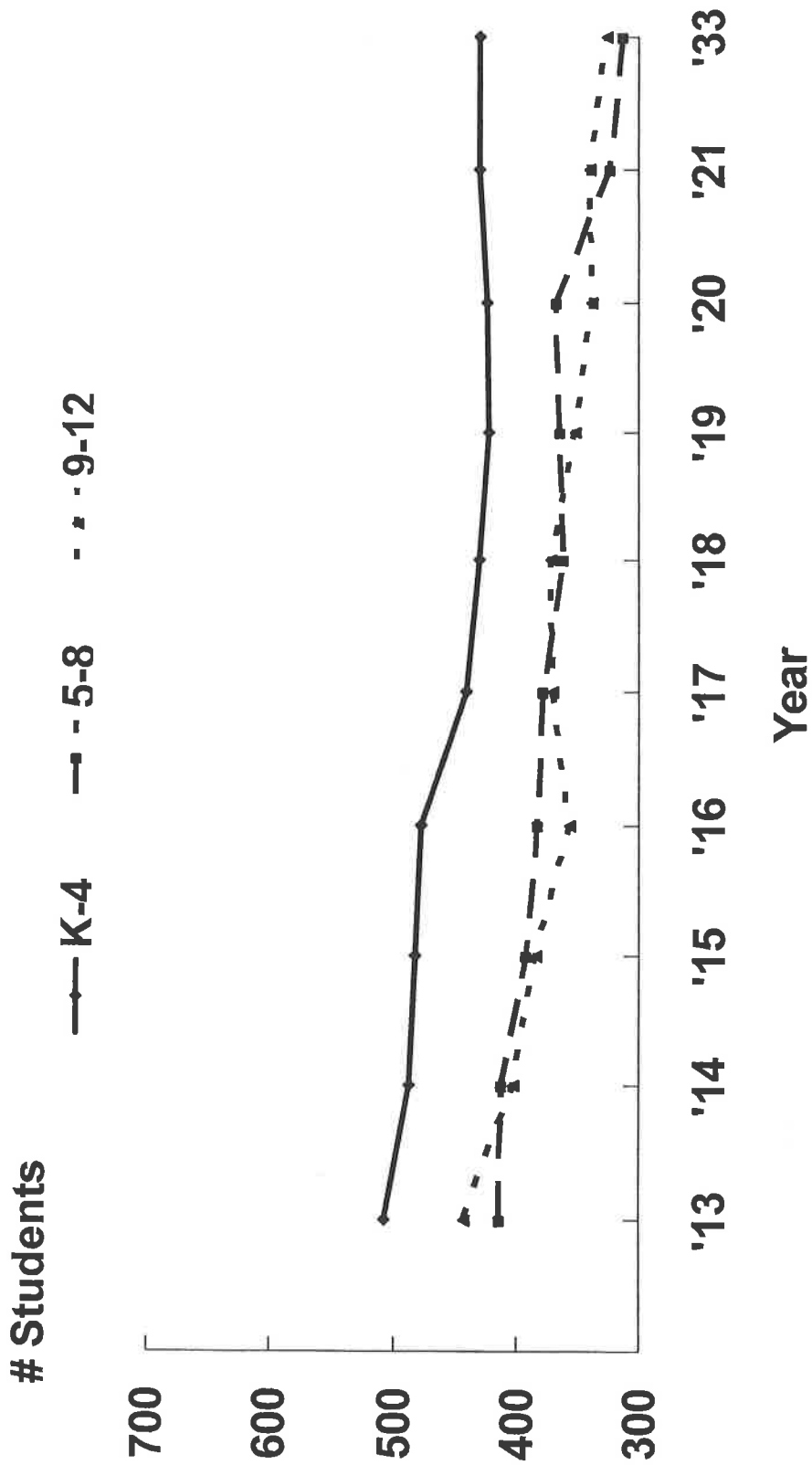
Grade	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Pre- Kindergarten	28	28	28	28	28	28	28	28	28	28
Kindergarten	90	88	79	73	80	80	80	80	80	80
First	122	94	92	83	77	84	84	84	84	84
Second	78	118	91	89	80	74	81	81	81	81
Third	83	76	116	89	87	78	72	79	79	79
Fourth	106	83	76	116	89	87	78	72	79	79
Total Pre-K-4	507	487	482	478	441	431	423	424	431	431
% Change	-4.52	-3.94	-1.03	-0.83	-7.74	-2.27	-1.86	0.24	1.65	0.00
Fifth	121	106	83	76	116	89	87	78	72	79
Sixth	85	119	105	82	75	115	88	86	77	71
Seventh	102	85	119	105	82	75	115	88	86	77
Eighth	105	102	85	119	105	82	75	115	88	86
Total 5-8	413	412	392	382	378	361	365	367	323	313
% Change	3.51	-0.24	-4.85	-2.55	-1.05	-4.50	1.11	0.55	-11.99	-3.10
Ninth	104	103	101	84	117	103	81	74	113	87
Tenth	107	98	97	95	79	110	97	76	70	106
Eleventh	108	101	93	92	90	75	104	92	72	66
Twelfth	123	100	94	86	85	84	70	97	85	67
Total 9-12	442	402	385	357	371	372	352	339	340	326
% Change	-9.61	-9.05	-4.32	-7.27	3.92	0.27	-5.38	-3.69	0.29	-4.12
Total Pre-K-12	1,362	1,301	1,259	1,217	1,190	1,164	1,140	1,130	1,094	1,070
% Change	-4.02	-4.48	-3.23	-3.34	-2.22	-2.18	-2.06	-0.88	-3.19	-2.19

Live Births vs Kindergarten Enrollment Comparison

Baseline Projection



Enrollment Projection Breakdown Based on Live Births



K-12 Enrollment Projection Based on Live Births

