



Ross Haber Associates, Inc.

Enrollment Projection Report

prepared for

The Tuckahoe Union Free School District

TUCKAHOE UNION FREE SCHOOL DISTRICT



Tuckahoe Enrollment Projection

Introduction

The Tuckahoe Union Free School District has engaged Ross Haber Associates, Inc. to provide a five-year enrollment projection. This projection is not only based upon a six-year history of the District which is the norm for a cohort survival projection, but is also designed to include the potential impact of enrollment from new residences from Glenmark at Tuckahoe Village. At this point the development has not received approval from the Village. Once that approval is obtained it was estimated by the developer that it will take eighteen (18) to twenty-four (24) months for the development to be open for rentals. Based upon this two sets of projections are provided. The first set of projections will be without the impact of Glenmark, and the second set will be with the potential impact of Glenmark. The projection with Glenmark will assume that the first impact will not be felt by the District until sometime late in the 2013-14 school year with the greater impact coming in the 2014-15 and 2015-16 school year.

During the process of creating the projections we found that there has been a substantial increase in the number of kindergarten students enrolling in the District. In 2008 there were 66 kindergarten students enrolled¹ in the District. This kindergarten enrollment replaced 57 grade 12 students who graduated in 2007. However, in 2009 90 kindergarten students enrolled and this replaced 68 students who graduated in 2008, which is a net gain of 22 students. In 2010 there were 98 kindergarten students enrolled and this replaced 68 grade 12 students who graduated in 2009, a net gain of 30 students.

As of this date (April, 2011) there are 105 kindergarten students already enrolled for September, 2011 with another 7 pending proof of residence. This would mean that as of April, 2011 there are approximately 112 kindergarten students replacing 64 students who are scheduled to graduate in June, 2011, which is a net gain of 48 students. The size of the kindergarten enrollment, because it has been increasing for the past three (3) years, cannot be treated as an anomaly, but as the norm for kindergarten.

The answer to this increase cannot be found in the birth rates attributed to the District, in fact, using birth rates to project kindergarten provided far lower kindergarten numbers than could be reasonably used in these projections. Therefore, to project kindergarten we used an averaging method. Also, because the kindergarten numbers increased so dramatically during the past two years (and for the coming 2011-12 school year) the projection tables will be based upon a three year history of the District. Projections were also made based upon a six-year and two year history. This produced a high-medium-and low projection.

¹ Enrollment is based upon the October B.E.D.S. report for each year.

Table 1 compares the three projections:

Table 1: Comparison of Projections²

Projection Year	6 Year History	3 Year History	2 Year History
2011-12	1,085	1,089	1,094
2012-13	1,112	1,131	1,146
2013-14	1,104	1,136	1,162
2014-15	1,118	1,160	1,190
2015-16	1,139	1,191	1,222

Table 1 shows the comparison of the projections based upon the three different enrollment histories. It is our opinion that the best guide for planning for the District will be the three-year projection.

Executive Summary

1. From the 2005-06 school year to the 2010-11 school year the District-wide enrollment increased from 995 students to 1,056. This is an increase of 61 students or approximately 6%.
2. It is projected that the total number of students (excluding pre-k) will increase from the current (as of October, 2010) 1,056 students to 1,191 during the 2015-16 school year, an increase of 135 students or approximately 12.7%. Add to this approximately 34 additional students who may be added during the last 3 years of the projection based upon Glenmark. This number also includes the adjustment for the 2011-12 kindergarten based upon the April, 2011 enrollment.
3. The K-6 enrollment grew from 565 students in 2005-06 to 579 students in 2010-11. This is an increase of 14 students, which is marginal.
4. The K-6 enrollment is projected to increase from the current 579 to 732 in 2015-16. This is an increase of 153 students or approximately 29.5%. This is driven by the increase in kindergarten enrollment during the past two years and the kindergarten students who have registered for 2011-12.
5. The 7-12 enrollment increased from 415 students in 2005-06 to 453 students in 2010-11. This is an increase of 38 students or approximately 9%.
6. The enrollment for grades 7-12 is expected to decline slightly from the current 453 students to 444 during the 2015-16 school year. This is a decrease of eight (8) students. But, this will

² Does not include PK and does not include Glenmark

change as the increased enrollment of the lower grades begins to approach grade 6 (in the 2016-17 school year).

The pre-k numbers have been at 21 for the past three years and the projection tables will use this number for the projections.

Methodology

This study uses the cohort survival method of projections. This method follows groups of students as they move through the District. For each year migration ratio is calculated to indicate whether enrollment have increased and/or declined for each group for each year of the history. For example, if there are 100 students in grade 1, and if this enrollment increased to 110 in grade two that would result in a 10% increase in enrollment for that grade which would be a migration ratio of 1.10. This is then calculated over a five year period to develop an average migration ratio per grade. This average is then applied to the current year's enrollment to project enrollment for the next five years (although projections can be made over longer periods of time these projections become increasingly less reliable as they move further out from five years).

In order to project kindergarten enrollment there are two methods. The most common is using birth to kindergarten ratios. This is accomplished by taking the births attributed to the community five years prior to these students enrolling in kindergarten. For example the 2010 kindergarten would be projected by the births in 2006. As with the grade levels this is calculated for a five year period to project future kindergarten enrollments. The problem with this method is that it assumes that the children born five years earlier are the same children who will be entering the system. Because of the nature of society and the number of persons who move into a district with pre-school children we have found this method becoming increasingly more unreliable.

We have replaced this method, in many of our projections, with using a moving average to determine kindergarten enrollment. We reliability tested this method against previous studies and have found it to be a better method of projecting kindergarten enrollments. In the case of Tuckahoe UFSD using birth rates dropped the kindergarten enrollment far below what would be expected based upon the current enrollment trends, therefore, we are using this method for kindergarten projections.

Another factor which influences enrollment projections are new housing developments. There are a number of methods used to project the impact of new housing on student enrollment. Making projections which consider new housing has a number of "built in" issues. These include such things as when the contraction of a project will begin and be completed, the number of units to be completed in any given year, the time to complete the project, the number of sales and/or rentals and when these rentals take place.

The method we use to calculate new housing divides the total number of residents by the total number of students attending the schools in the District to develop a student per household yield. This yield is then applied to the number of units to be built.

In Tuckahoe there are approximately 3,906 residential units of which 2,520 are private single family homes and 1,386 are apartments (coops/condos/rentals). Using the total student base of 1,077 students we determined that the average yield per household is .28 students. We then took the total number of units to be built by Glenmark which is 130, deducted from that the 10 studios (which would not yield any students), and that left 120 residences which could potentially produce students. We multiplied that number (120) by the projected yield ratio (.28) and determined that Glenmark would potentially add 33.6 (34) students to the District when fully occupied.

Housing

From 2005 to the 2010 only 18 permits were issued for new housing of which 9 were issued in 2007 and 9 in 2005. As of this date no permits for construction have been issue for The Glenmark. There are also currently eighty (80) homes for sale in Tuckahoe.

Sales of housing for existing stock are included in the cohort projection. The projections for the Glenmark will be included in Table 3.

Table 2: Five-Year Enrollment Projection-No Housing

Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	K-6	K-6 UG	7-12	7-12 UG	Sub	PK	Total
2005	155	74	76	87	73	80	96	79	61	79	79	62	64	70	565	8	415	7	995	0	995
2006	143	82	74	75	85	77	79	96	73	64	77	74	63	63	568	5	414	3	990	0	990
2007	152	86	88	72	72	79	76	77	99	72	65	74	66	57	550	1	433	11	995	0	995
2008	166	66	92	81	73	72	84	75	81	99	58	59	72	68	543	3	437	15	998	21	1019
2009	138	90	72	104	75	75	73	80	78	78	92	58	56	68	569	5	430	17	1021	21	1042
2010	142	98	92	68	103	67	79	72	82	77	80	93	57	64	579	7	453	17	1056	21	1077
Ratio		0.67	1.06	1.00	0.98	0.97	1.04	0.98	1.04	0.98	0.92	0.97	0.97	1.04							
Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	K-6	K-6 UG	7-12	7-12 UG	Sub	PK	Total
2011	148	112	104	92	66	100	70	77	75	81	71	78	90	58	621	8	452	7	1089	21	1110
2012	125	100	119	104	90	65	105	68	80	74	74	69	75	94	650	8	466	7	1131	21	1152
2013	144	103	106	119	101	87	67	102	71	79	68	72	67	78	686	8	434	7	1136	21	1157
2014	139	105	110	106	116	99	91	66	106	70	72	66	70	69	692	8	453	7	1160	21	1181
2015	140	103	112	109	103	113	103	89	68	104	64	70	64	73	732	8	444	7	1191	21	1212

Table 2 shows the five-year enrollment projection. It is based upon a three year history of enrollment and uses the kindergarten averaging method to project kindergarten.

Table 3: Five-Year Projection with Housing

Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	K-6	K-6 UG	7-12	7-12 UG	Sub	PK	Total
2005	155	74	76	87	73	80	96	79	61	79	79	62	64	70	565	8	415	7	995	0	995
2006	143	82	74	75	85	77	79	96	73	64	77	74	63	63	568	5	414	3	990	0	990
2007	152	86	88	72	72	79	76	77	99	72	65	74	66	57	550	1	433	11	995	0	995
2008	166	66	92	81	73	72	84	75	81	99	58	59	72	68	543	3	437	15	998	21	1019
2009	138	90	72	104	75	75	73	80	78	78	92	58	56	68	569	5	430	17	1021	21	1042
2010	142	98	92	68	103	67	79	72	82	77	80	93	57	64	579	7	453	17	1056	21	1077
Ratio		0.67	1.06	1.00	0.98	0.97	1.04	0.98	1.04	0.98	0.92	0.97	0.97	1.04							
Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	K-6	K-6 UG	7-12	7-12 UG	Sub	PK	Total
2011	148	112	104	92	66	100	70	77	75	81	71	78	90	58	621	8	452	7	1089	21	1110
2012	125	100	119	104	90	65	105	68	80	74	74	69	75	94	650	8	466	7	1131	21	1152
2013	144	104	107	119	101	87	67	102	71	79	68	72	67	78	688	8	434	7	1138	21	1159
2014	139	106	112	110	117	100	92	67	107	71	73	67	71	70	704	8	459	7	1178	21	1199
2015	140	105	114	113	109	115	105	91	70	106	65	71	65	74	751	8	452	7	1217	21	1238

Table projects the enrollment which includes the potential impact of the Glenmark. This projection assumes that the greatest impact will be during the 2014-15 and 2015-16 school year. This also assumes full occupancy by the 2015-16 school year.

Conclusion

During the past three years there has been a significant increase in kindergarten enrollment. Based upon this increase the Tuckahoe Union Free School District will experience growth during the next five years. Initially this will impact the lower grades but will begin to impact grades six through eight beginning with the 2016-17 school years.

This enrollment increase may be exacerbated by the addition of potentially 34 additional students generated by The Glenmark.