

Regional School District 13
Durham & Middlefield

**School Enrollment
Dynamics & Projections
2012-2021**

Prepared for the

Regional School District #13
Board of Education



H. C. Planning Consultants, Inc.

397 Fairlea Rd., Orange, Connecticut

May 17, 2012

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Hyung C. Chung, Ph.D.
President

Ms. Susan Viccaro
Superintendent
Regional School District 13
135A Pickett Lane
Durham, CT 06422

May 17, 2012

Dear Ms. Viccaro,

We are pleased to submit our report, entitled *Regional School District 13, Durham/Middlefield School Enrollment Dynamics & Projections, 2012-2021*, dated May 17, 2012. Please note that the summary report is prepared as a stand-alone report. Both the summary and the main reports are lengthy because we wanted to explain the rationale for the projections. I look forward to presenting the report to the RSD 13 Board of Education on May 23rd.

Sincerely Yours,

Hyung C. Chung
President, HCPC, Inc.

HC/jc
Encl.

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-SUMMARY REPORT-

**REGIONAL SCHOOL DISTRICT 13 PUBLIC SCHOOLS
10-YEAR ENROLLMENT PROJECTIONS
2012-2021**

1. Introduction

In this report, we present the 10-year K-12 enrollment projections by grade for Regional School District #13 (RSD 13), which serves both Durham and Middlefield. There are three elementary schools, two middle schools and one high school in RSD 13. They are: Brewster Elementary School (P3, PK and K-2), Korn Elementary School (Grades 3-4), Lyman Elementary School (K-4), Memorial Middle School (grades 5 and 6), Strong Middle School (grades 7 and 8) and Cuginchaug Regional High School (grades 9-12). All enrollments are as of October 1 of the school year. The report presents enrollment projections for both Durham and Middlefield separately in addition to total RSD 13 enrollment projections.

2. School Enrollment as of October 1, 2011

There were 1,961 K through 12 students in RSD 13 as of October 1, 2011, consisting of 696 grades K-4 students, 325 grades 5-6 students, 358 grades 7-8 students, and 582 grades 9-12 students. In addition, there were 17 P3, 14 PK students and 10 out-placed students. Of the total K-12 students in RSD 13, 66% were Durham residents and the remaining 34% were Middlefield residents.

TABLE 1
DURHAM, MIDDLEFIELD AND REGION 13 SCHOOL ENROLLMENTS AS OF OCTOBER 1, 2011
(Not Including P3 and PK)

	Durham Resident Students					Middlefield Resident Students					RSD 13 Public Schools*				
	K-4	5-6	7-8	9-12	K-12	K-4	5-6	7-8	9-12	K-12	K-4	5-6	7-8	9-12	K-12
Brewster (K-2)	149					55					204				204
Korn ES (3-4)	142					50					192				192
Lyman ES (K-4)	162					138					300				300
Memorial MS (5-6)		224					101					325			325
Strong MS (7-8))			233					125					358		358
CR HS (9-12)				387					195					582	582
TOTAL PK-12	453	224	233	387	1297	243	101	125	195	664	696	325	358	582	1961
% Distribution	65%	69%	65%	66%	66%	35%	31%	35%	34%	34%	100%	100%	100%	100%	100%

* In 2010, there were 279 PK-12 RSD 13 resident students who were attending schools other than RSD 13 public schools, consisting of 14 students in public schools in other towns and charter schools, 44 students in Vocational-Technical schools, and 221 students in private/parochial schools. (2011 nonpublic school enrollment data are not yet available from CSDE.)

3. Factors Influencing Public School Enrollments and Assumptions

Table 2 presents the 10-year trends (2002-2011) for five major factors that influence Regional School District 13 public school enrollments. They include annual births, housing net gains, home sales, % of resident students in nonpublic schools, and unemployment rate. These factors are considered leading indicators because their ups and downs precede school enrollment changes. For example, the number of births five years earlier roughly determines the size of kindergarten enrollment in the current year. Similarly, the ups and downs of new housing net gains (new homes built minus withdrawals) and home sales (or housing turnover) determine the extent of net migrations of school-age children. Table 2 shows that the leading indicators declined in magnitude from 2002 to 2011 while the

unemployment rates for Connecticut and RSD 13 had risen. In short, the leading indicators are negatively impacted by the unemployment rates. Fig. 1 clearly exhibits the negative impact of RSD 13's unemployment rates on the leading indicators.

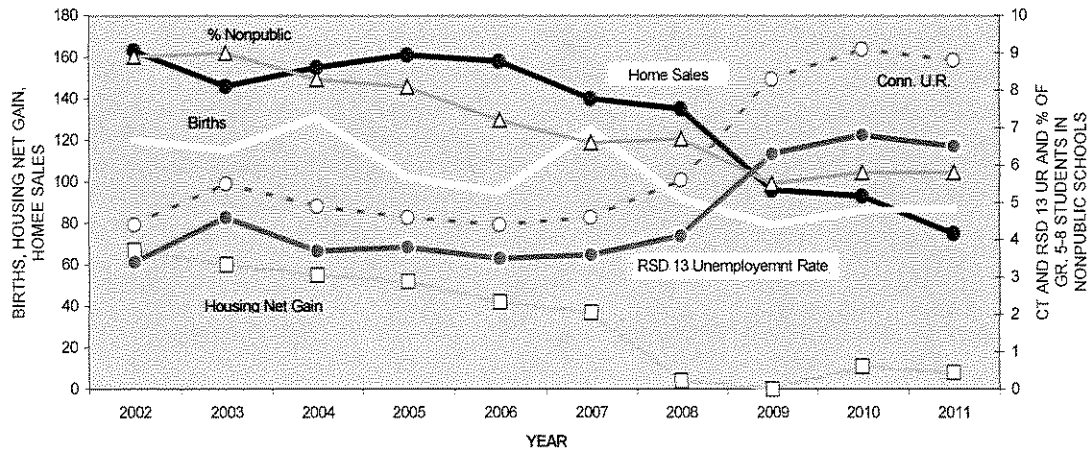
TABLE 2
ASSUMPTIONS ON THE FACTORS INFLUENCING
REGIONAL SCHOOL DISTRICT 13 PUBLIC SCHOOL ENROLLMENTS, 1999-2011

Year	Growth Scenario	Regional School District #13 Unemployment Rate	Conn. Unemployment Rate	Births (State Data)	Housing Net Gain	Home Sales (Single Family)	% Of Gr. 5-8 Students in Nonpublic schools
		(1)	(2)	(3)	(4)	(5)	(6)
2002		3.4	4.4	120	67	163	8.9
2003		4.6	5.5	115	60	146	9
2004		3.7	4.9	131	55	155	8.3
2005		3.8	4.6	102	52	161	8.1
2006		3.5	4.4	95	42	158	7.2
2007		3.6	4.6	125	37	140	6.6
2008		4.1	5.6	92	4	135	6.7
2009		6.3	8.3	79	0	96	5.5
2010		6.8	9.1	86	11	93	5.8
2011		6.5	8.8	87	8	75	5.8
10-Yr. Change		+ 3.1	4.4	- 33	- 59	- 88	- 3.1
% Change		+ 91%	+100%	- 28%	- 88%	- 54%	- 35%
ASSUMPTIONS: 2002-2011 AVERAGES							
3-Yr. Avg.	Slow	6.5	8.7	84	6	88	6.0
5-Yr. Avg.	Moderate	5.5	7.3	94	12	108	6.4
10-Yr. Avg.	Faster	4.6	6.0	103	34	132	7.3

Sources: Col. (1) and (2) - Connecticut Department of Labor [;] Column (3) - Connecticut Department of Public Health; Col. (4) - Connecticut Department of Economic and Community Development; Col. (5) - Warren Information Service; Col. (6) - Connecticut State Department of Education.

The size of the declines for the leading indicators has been unprecedented: births declined from 120 births in 2002 to 87 births in 2011(-28%); home sales dropped from 163 units in 2002 to 75 units in 2011 (-54%); and the annual housing net gain plummeted from 67 units in 2002 to 8 units in 2011 (-88%). In the meantime, the RDS 13 unemployment rates nearly doubled from 3.4% in 2002 to 6.5% in 2011. Fig. 1 clearly demonstrates that when the unemployment rates went up, the enrollment leading indicators went down.

FIG. 1
IMPACT OF UNEMPLOYMENT RATES ON OTHER LEADING INDICATORS
REGIONAL SCHOOL DISTRICT 13, 2002-2011



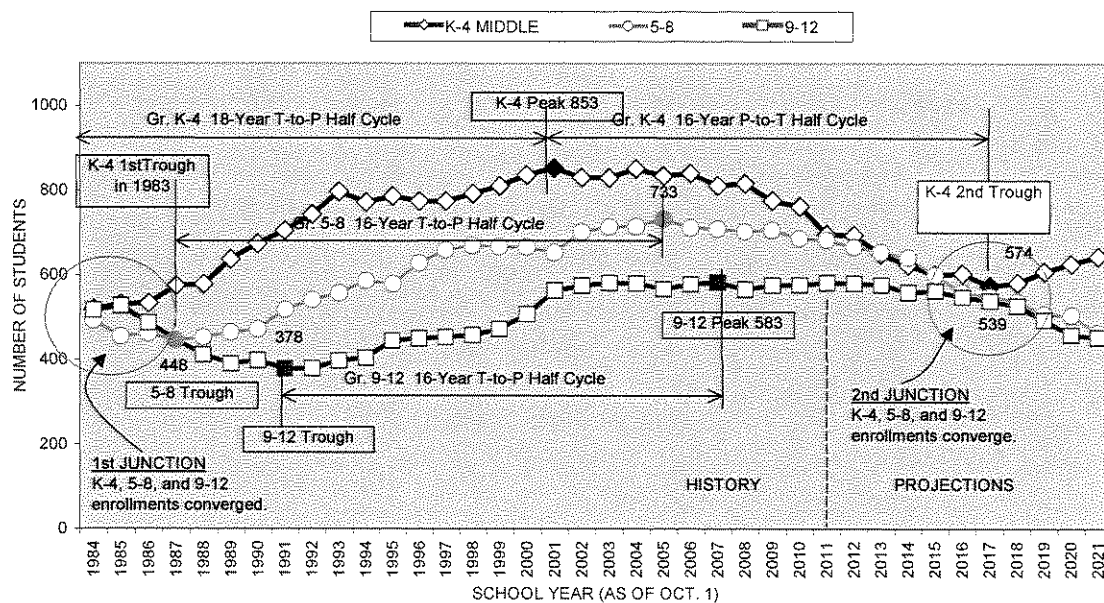
Projection Assumptions: Table 2 calculated the 3-, 5-, and 10-year averages for the leading indicators of the past ten years (between 2002 and 2011). Observe that the past 3 years was the period of high unemployment rates together with low levels of births, new home construction, and home sales. In contrast, the past 10 years included a period of low unemployment rates combined with relatively high level of births, new home construction, and home sales. Thus, by projecting the 3-year and 10-year trends for the future, we produced low and high school enrollment projections, respectively. Also, by averaging the low and high projections we produced middle projections, which were found to be similar to the 5-year trend projections. It is therefore clear that future school enrollments depend on our assumptions of future economic conditions: the 3-year trend represents our most pessimistic assumption, a slow economic recovery, while the 10-year trend represents an optimistic view of the future. Assumptions are very important because when assumptions change, so do the projections. Given these three projections, which do we choose? We preferred the middle projections on the grounds that they are most likely to produce the smallest projection errors even if the high or low projections turn out to be the future reality. Accordingly, we are presenting in this summary report only the ‘middle projections’. The low and high projections can be seen in the main report. The grade-by-grade projections for RSD 13, Durham and Middlefield are shown in Summary Appendix Tables A, B, and C of this summary.

4. Enrollment Projections by Grade Level (See Table 3 for grades K-4, 5-8 and 9-12 enrollment projections)

Our first step in the projection process was to prepare enrollment projections by grade for Durham and Middlefield, and then we added the two projections together to derive the district-wide projections. Fig. 2 below charts the projected district-wide enrollments for grades K-4, 5-8 and 9-12. Observe the following from this chart:

(a) In 1984, hitherto declining grades K-4 enrollment reached its trough and at the same time, grades K-4, 5-8 and 9-12 enrollments converged to form an enrollment junction around 1984. K-4 enrollments then began to increase again but grades 5-8 enrollments continued to decline and four years later reached their lowest point (448 students) in 1987. Meanwhile, grades 9-12 enrollments continued to decline until they too reached their lowest point (378 students) in 1991, four years after the middle school enrollments hit a bottom.

FIG. 2
GRADES K-4, 5-8 AND 9-12 ENROLLMENT TRENDS AND CYCLES
REGIONAL SCHOOL DISTRICT 13, 1984-2021



(b) After K-4, 5-8 and 9-12 enrollments reached their respective troughs, enrollments began to expand again. K-4 enrollments grew very rapidly so that they attained their peak level (853 students) 17 years later in 2001; similarly, grades 5-8 enrollments arrived at their peak level (733 students) in 2005, four years after K-4's peak; finally, grades 9-12 enrollment reached their peak (583 students) in 2007 with a two-year time lag.

(c) Once enrollments reached their peaks, they began to decline: K-4 enrollment shrank to 683 students in 2011, a decline partly accelerated by the Great Recession of 2008. In contrast, grades 5-8 and 9-12 enrollments lost very few students by 2011, although they too were in the midst of an enrollment decline.

(d) According to our projections, K-4 enrollments will reach their second trough in 2017, 16 years after they peaked in 2001, thus completing a full enrollment cycle of 33 years. At this point, K-4 enrollments are projected to converge with grades 5-8 and 9-12 enrollments once again. From this second enrollment junction, K-4 enrollments will begin a new cycle of enrollment growth while the other two grade level groups are still on their way towards their respective enrollment troughs, which will be reached later than the years covered by our 10-year enrollment projections.

5. Enrollment Projections by School

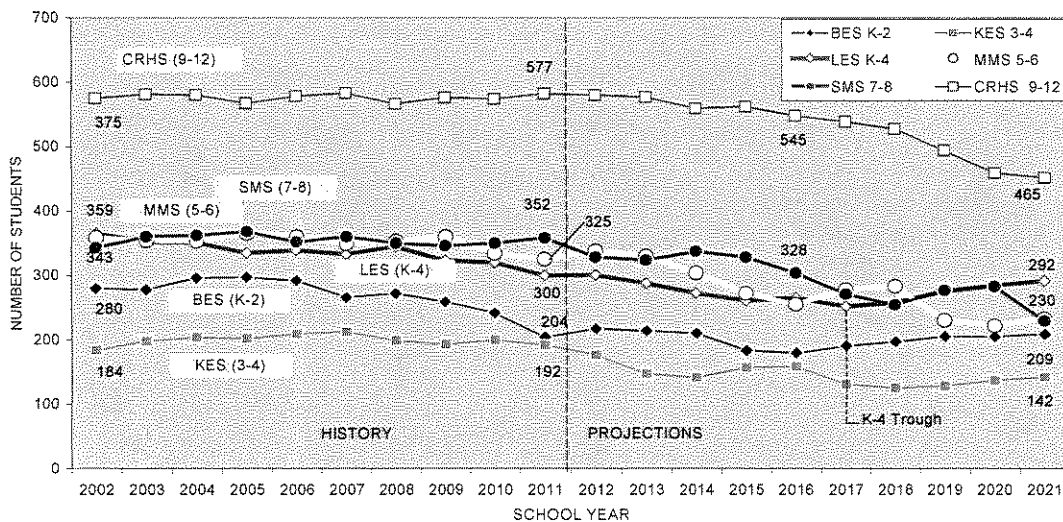
Table 3 presents the results of ten-year enrollment projections for each elementary school in Regional School District 13 along with middle and high schools enrollment data.

TABLE 3
10-YEAR ENROLLMENT PROJECTIONS FOR INDIVIDUAL SCHOOLS
REGIONAL SCHOOL DISTRICT 13, CONNECTICUT, 2012-2021

	BES K-2	KES 3-4	LES K-4	Total K-4	MMS 5-6	SMS 7-8	Total 5-8	CRHS 9-12	TOTAL K-12
2002	280	184	365	829	359	343	702	575	2120
2003	278	198	352	828	354	360	714	581	2153
2004	296	204	351	851	353	362	715	580	2181
2005	297	202	335	834	365	368	733	567	2170
2006	292	209	339	840	360	352	712	578	2164
2007	266	213	333	812	349	360	709	583	2139
2008	272	199	345	816	353	350	703	566	2123
2009	259	193	323	775	360	346	706	576	2082
2010	242	200	320	762	334	350	684	574	2046
2011	204	192	300	696	325	358	683	582	1983
2012	217	176	301	694	338	328	666	580	1940
2013	214	147	288	649	330	324	653	577	1879
2014	210	141	273	624	304	337	641	559	1825
2015	183	157	261	601	272	328	601	562	1764
2016	180	158	265	603	255	304	559	548	1710
2017	191	131	252	574	278	271	549	539	1662
2018	197	125	258	581	283	255	538	527	1646
2019	205	128	275	608	230	277	507	494	1609
2020	205	137	284	626	222	283	505	459	1590
2021	209	142	292	643	233	230	462	452	1556
<u>2006-2011</u>	(Last Five Years)								
Number	-88	-17	-39	-144	-35	6	-29	4	-181
Percent	-30%	-8%	-12%	-17%	-10%	2%	-4%	1%	-8%
<u>2011-2016</u>	(First 5-Year Projection Period)								
Number	-24	-34	-35	-93	-70	-54	-124	-34	-273
Percent	-12%	-17%	-12%	-13%	-21%	-15%	-18%	-6%	-14%
<u>2016-2021</u>	(Second 5-Year Projection Period)								
Number	29	-16	26	39	-23	-74	-97	-96	-154
Percent	16%	-10%	10%	7%	-9%	-24%	-17%	-18%	-9%
<u>2011-2021</u>	(10-Year Projection Period)								
Number	5	-50	-8	-53	-92	-128	-221	-130	-427
Percent	2%	-26%	-3%	-8%	-28%	-36%	-32%	-22%	-22%

(a) Projected Enrollment of K-4 Elementary Schools: During the past five years (between 2006 and 2011), K-4 enrollments in RSD 13 declined by 144 students or by 17% (see the bottom rows of Table 3). Note that BES experienced the largest decline of 30% among the schools (-88 students) followed by LES losing 12% (39 students) and KES declining by 8% (17 students). It is projected that the pattern of K-4 enrollment decline will continue over the first 5-year projection period but will decline somewhat more slowly from 696 students in 2011 to 603 students in 2016, a reduction of 93 students or -13%. Therefore, it is projected that the enrollments for all three elementary schools will decline over the next five years, but the extent of the decline will vary among the three schools: Table 3 shows a decline of 24 students (-12%) in BES, a similar decline of 35 students (-12%) in LES, and a reduction of 34 students (-17%) in KES. These projections for years 2012 through 2016 are prepared based on five years of actual birth numbers.

FIG. 3
SCHOOL ENROLLMENT PROJECTIONS BY SCHOOL
REGIONAL SCHOOL DISTRICT 13, 2002-2021



The second five-year enrollment forecasts are subject to the possibility of greater inaccuracy because the enrollments were based on assumed or projected future births. It is forecast that K-4 school enrollments will decline at a slower rate during the second five years of the projection period. According to Table 3, KES will lose 16 students (-10%) between 2016 and 2021, but the two other schools are projected to gain enrollments: that is, BES will gain 29 students or 16% while LES will also gain by 26 students (+10%) over the second five-year projection period. However, the Low projections show K-4 enrollments will continue to decline during the second five-year period.

(b) Projected Enrollments of Middle Schools: During the past five years (between 2006 and 2011), MMS lost 10% (35 students) and SMS gained 2% (6 students). In short, when the K-4 schools experienced a sizable enrollment decline during the last five years, the middle schools were left nearly unscathed by the impact of declining births and reduced net migration of students due to the worsening economy. However, in accordance with the time lag effect of enrollment cycles, middle school enrollments are projected to decline rapidly following the footsteps of K-4 schools. It is projected that MMS's enrollments will decline more rapidly over the next five years than the SMS decreased, but the situation will be reversed over the subsequent five years. That is, MMS is projected to decline by 21% while SMS

will decline by 15% over the first five years. Afterwards, the situation will be reversed over the second five-year period: SMS is projected to decline by 24% (74 students) vis-à-vis MMS by 9% (23 students).

(c) High School Enrollment Projections: RSD 13's high school avoided severe enrollment reductions during the last five years, but it is beginning to receive fewer students due to the diminishing enrollments of SMS. Accordingly, it is projected that high school enrollments will be reduced by 18% (124 students) over the next five years and will lose another 17% (97 students) over the subsequent five years.

6. Beyond the 10-Year Enrollment Projections

Within the 10-year projection period, our enrollment projections do not show when grades 5-8 and 9-12 enrollments will reach their second troughs. However, we can surmise that the enrollment troughs for grades 5-8 and 9-12 may take place in 2021 and 2024 (or 2025), respectively, assuming that the full enrollment cycle is 33 or 34 years as shown in Table 4 below.

TABLE 4
HISTORICAL AND PROJECTED BIRTH AND ENROLLMENT CYCLES
RSD 13 PUBLIC SCHOOLS, 1975 - 2030

	Actual Births and Enrollments				Tentative Projections		
	Year of the First Trough	First Trough Enrollments Or Births	Peak Year	Peak Enrollment Or Births	Year of the 2 nd Trough	2 nd Trough Enrollment Or Births	Length of T-to-T Full Cycle
Births	1978	84	1992	137	2009	79	31 Years
K-4	1984	519	2001	853	2017	574	33 Years
5-8	1987	446	2005	733	2021?	?	34 Years?
9-12	1991	378	2006	583	2024?	?	33 Years?

7. Conclusions

This report foretells that public schools in Regional School District 13 are in the midst of a long period of declining school enrollments although K-4 enrollments are likely to be at the tail end of a second trough in 2017, a pattern that the middle and high schools will follow with a lag. These enrollment forecasts were based on the assumptions stipulated in this report. Accordingly, as the future unfolds, if it is revealed that the emerging reality differs significantly from the assumptions, an updating of enrollment projections is warranted.

8. Caveat

Annual enrollment changes are due to trend, cyclical, and random factors. Our projections are primarily based on trend factors since we are unable to factor in cyclical and random events. These projections are thus limited and should not be considered as predictions. Projections of small numbers are susceptible to large percentage variances due to cyclical and random factors, which cannot be forecasted. Accordingly, the updating of the enrollment projections is highly desirable when the revision of projection assumptions becomes necessary.

We have primarily applied the Cohort-Survival Method, which we supplemented with two other methods, the Share-Ratio Method (SRM) and the Multiple Regression Method (MRM). The SRM projects RSD 13's enrollments as a % share of Connecticut's enrollments by grade, and the MRM is capable of showing probability statistics for the accuracy of the projections.

This report is prepared by Hyung C. Chung, Ph.D., President of H. C. Planning Consultants, Inc, and Professor Emeritus in Economics at the University of Bridgeport.

SUMMARY APPENDIX TABLE A

REGIONAL SCHOOL DISTRICT #13 TEN-YEAR ENROLLMENT PROJECTIONS BY GRADE, 2012 - 2021
Modified Cohort Survival Method, Middle Projections

(Enrollment as Of October 1 of Each School Year)

A. RSD 13 Enrollment History and Middle Projections

Birth Year	Births	School Year	GRADE											GRADE LEVEL						
			K	1	2	3	4	5	6	7	8	9	10	11	12	K-4	5-6	7-8	9-12	K-12
HISTORY:																				
1996	121	2001	148	177	166	170	192	171	177	153	151	155	159	126	123	853	348	304	563	2068
1997	114	2002	148	164	183	163	172	193	166	188	155	147	146	153	129	830	359	343	575	2107
1998	116	2003	146	168	162	183	170	169	185	170	190	143	140	145	153	829	354	360	581	2124
1999	126	2004	160	156	179	164	192	177	176	189	173	162	134	135	149	851	353	362	580	2146
2000	126	2005	141	183	162	178	170	192	173	177	191	145	162	127	133	834	365	368	567	2134
2001	125	2006	151	152	187	169	181	173	187	176	176	164	133	160	121	840	360	352	578	2130
2002	120	2007	131	168	152	186	174	183	166	182	178	145	158	133	147	811	349	360	583	2103
2003	115	2008	149	153	173	154	187	174	179	166	184	143	144	157	122	816	353	350	566	2085
2004	131	2009	118	168	158	178	153	187	173	180	166	150	138	141	147	775	360	346	576	2057
2005	102	2010	125	131	162	161	183	149	185	172	178	141	154	143	136	762	334	350	574	2020
2006	95	2011	101	134	130	171	160	182	143	184	174	150	136	155	141	696	325	358	582	1961
PROJECTIONS:																				
<i>Projections are shown in italics</i>																				
2007	125	2012	<i>140</i>	<i>113</i>	<i>135</i>	<i>133</i>	<i>173</i>	<i>159</i>	<i>179</i>	<i>144</i>	<i>185</i>	<i>147</i>	<i>147</i>	<i>135</i>	<i>151</i>	<i>694</i>	<i>338</i>	<i>328</i>	<i>580</i>	<i>1940</i>
2008	92	2013	<i>106</i>	<i>156</i>	<i>113</i>	<i>138</i>	<i>135</i>	<i>173</i>	<i>157</i>	<i>180</i>	<i>144</i>	<i>156</i>	<i>144</i>	<i>146</i>	<i>131</i>	<i>649</i>	<i>330</i>	<i>324</i>	<i>577</i>	<i>1879</i>
2009	79	2014	<i>93</i>	<i>118</i>	<i>157</i>	<i>116</i>	<i>140</i>	<i>134</i>	<i>170</i>	<i>157</i>	<i>180</i>	<i>122</i>	<i>153</i>	<i>143</i>	<i>141</i>	<i>624</i>	<i>304</i>	<i>337</i>	<i>559</i>	<i>1825</i>
2010	86	2015	<i>100</i>	<i>104</i>	<i>119</i>	<i>161</i>	<i>118</i>	<i>140</i>	<i>132</i>	<i>171</i>	<i>158</i>	<i>152</i>	<i>119</i>	<i>152</i>	<i>139</i>	<i>601</i>	<i>272</i>	<i>328</i>	<i>562</i>	<i>1764</i>
2011	87	2016	<i>103</i>	<i>111</i>	<i>105</i>	<i>122</i>	<i>163</i>	<i>118</i>	<i>137</i>	<i>133</i>	<i>171</i>	<i>133</i>	<i>149</i>	<i>119</i>	<i>147</i>	<i>603</i>	<i>255</i>	<i>304</i>	<i>548</i>	<i>1710</i>
2012	102	2017	<i>117</i>	<i>114</i>	<i>112</i>	<i>107</i>	<i>124</i>	<i>162</i>	<i>115</i>	<i>138</i>	<i>133</i>	<i>145</i>	<i>130</i>	<i>148</i>	<i>115</i>	<i>574</i>	<i>278</i>	<i>271</i>	<i>539</i>	<i>1662</i>
2013	96	2018	<i>113</i>	<i>130</i>	<i>115</i>	<i>114</i>	<i>109</i>	<i>124</i>	<i>160</i>	<i>116</i>	<i>139</i>	<i>112</i>	<i>141</i>	<i>130</i>	<i>144</i>	<i>581</i>	<i>283</i>	<i>255</i>	<i>527</i>	<i>1646</i>
2014	103	2019	<i>119</i>	<i>125</i>	<i>131</i>	<i>118</i>	<i>116</i>	<i>109</i>	<i>121</i>	<i>160</i>	<i>116</i>	<i>117</i>	<i>110</i>	<i>141</i>	<i>126</i>	<i>608</i>	<i>230</i>	<i>277</i>	<i>494</i>	<i>1609</i>
2015	99	2020	<i>115</i>	<i>132</i>	<i>126</i>	<i>134</i>	<i>119</i>	<i>115</i>	<i>106</i>	<i>122</i>	<i>161</i>	<i>98</i>	<i>114</i>	<i>109</i>	<i>137</i>	<i>626</i>	<i>222</i>	<i>283</i>	<i>459</i>	<i>1590</i>
2016	101	2021	<i>117</i>	<i>128</i>	<i>133</i>	<i>129</i>	<i>136</i>	<i>119</i>	<i>113</i>	<i>107</i>	<i>123</i>	<i>136</i>	<i>96</i>	<i>114</i>	<i>106</i>	<i>643</i>	<i>233</i>	<i>230</i>	<i>452</i>	<i>1556</i>

Source: Table 5.5 on page 5-9, RSD 13 middle projections.

B. Annual Cohort Survival Ratios or Coefficients and Multi-Year Trend Averages

School Year	Grade												
	K	1	2	3	4	5	6	7	8	9	10	11	12
2002	1.293	1.108	1.034	0.982	1.012	1.005	0.971	1.062	1.013	0.974	0.942	0.962	1.024
2003	1.247	1.135	0.988	1.000	1.043	0.983	0.959	1.024	1.011	0.923	0.952	0.993	1.000
2004	1.273	1.068	1.065	1.012	1.049	1.041	1.041	1.022	1.018	0.853	0.937	0.964	1.028
2005	1.176	1.038	1.071	0.989	1.073	0.958	1.051	1.000	0.931	0.954	0.944	0.955	1.030
2006	1.213	1.027	1.127	1.012	1.023	0.983	1.016	0.946	1.000	0.932	0.927	1.046	0.945
2007	1.095	1.113	1.000	0.995	1.030	1.011	0.960	0.973	1.011	0.824	0.963	0.869	0.919
2008	1.274	1.168	1.030	1.013	1.005	1.000	0.978	1.000	1.011	0.803	0.993	0.994	0.917
2009	0.927	1.128	1.033	1.029	0.994	1.000	0.994	1.006	1.000	0.815	0.965	0.979	0.936
2010	1.224	1.110	0.964	1.019	1.028	0.974	0.995	1.000	0.994	0.849	1.033	1.036	0.979
2011	1.015	1.064	0.977	1.056	0.957	0.995	0.960	0.984	0.994	0.838	0.965	0.994	0.979
3-Year Average	1.059	1.103	0.996	1.034	1.005	0.989	0.981	0.998	1.000	0.836	0.985	1.007	0.962
5-Year Average	1.109	1.118	1.004	1.022	1.010	0.996	0.976	0.994	1.005	0.827	0.983	1.003	0.945
10-Year Average	1.169	1.112	1.017	1.014	1.021	1.003	0.981	1.010	1.007	0.858	0.967	0.986	0.973
Weighted 3-Year Avg.	1.075	1.094	0.990	1.039	1.005	0.989	0.975	0.996	1.002	0.840	0.985	1.012	0.971
Weighted 5-Year Avg.	1.097	1.109	0.998	1.031	1.007	0.992	0.977	0.996	1.003	0.832	0.985	1.007	0.957

* Coefficients under the full-day K (FDK) program. ** 2-year average K/B ratio is applied for all enrollment projections.

Instead of a 2-year average of 1.083, we used 1.071 first grade survival ratios for projections.

Regional School District 13 School Enrollment Projections Summary

C. Durham Enrollment History and Middle Projections

Birth Year	Births	School Year	GRADE												GRADE LEVEL					
			K	1	2	3	4	5	6	7	8	9	10	11	12	K-4	5-6	7-8	9-12	K-12
HISTORY:																				
1996	85	2001	94	112	113	98	123	121	110	94	102	101	108	84	82	540	231	196	375	1342
1997	76	2002	104	104	116	111	99	124	117	117	95	99	95	104	86	534	241	212	384	1371
1998	75	2003	95	117	104	119	116	102	122	120	119	86	90	95	105	551	224	239	376	1390
1999	86	2004	106	107	124	108	128	121	107	123	121	103	84	87	99	573	228	244	373	1418
2000	80	2005	94	117	112	121	112	128	117	110	124	106	103	80	89	556	245	234	378	1413
2001	80	2006	92	106	121	117	122	112	124	119	110	116	96	98	76	558	236	229	386	1409
2002	68	2007	82	102	104	121	119	119	106	123	119	86	111	94	90	528	225	242	381	1376
2003	74	2008	104	99	109	104	117	123	117	105	127	95	87	109	85	533	240	232	376	1381
2004	85	2009	64	116	103	113	101	118	118	117	107	106	92	86	103	497	236	224	387	1344
2005	61	2010	79	75	114	105	123	106	114	118	114	89	108	98	86	496	220	232	381	1329
2006	54	2011	69	89	75	118	102	123	101	114	119	95	83	110	99	453	224	233	387	1297
PROJECTIONS:																				
<i>Projections are shown in italics</i>																				
2007	80	2012	94	112	113	98	123	121	110	94	102	101	108	84	82	454	223	216	385	1277
2008	61	2013	104	104	116	111	99	124	117	117	95	99	95	104	86	421	222	222	369	1235
2009	60	2014	95	117	104	119	116	102	122	120	119	86	90	95	105	426	197	221	370	1214
2010	52	2015	106	107	124	108	128	121	107	123	121	103	84	87	99	407	172	220	377	1176
2011	56	2016	94	117	112	121	112	128	117	110	124	106	103	80	89	402	176	196	362	1136
2012	59	2017	92	106	121	117	122	112	124	119	110	116	96	98	76	376	189	170	366	1102
2013	56	2018	82	102	104	121	119	119	106	123	119	86	111	94	90	369	191	175	345	1080
2014	62	2019	104	99	109	104	117	123	117	105	127	95	87	109	85	371	166	187	323	1048
2015	58	2020	64	116	103	113	101	118	118	117	107	106	92	86	103	379	154	190	307	1030
2016	59	2021	79	75	114	105	123	106	114	118	114	89	108	98	86	383	150	165	297	995

Source: Prepared by H. C. Planning Consultants, Inc. 5/12/2012.

D. Middlefield Enrollment History and Middle Projections

Birth Year	Births	School Year	GRADE												GRADE LEVEL					
			K	1	2	3	4	5	6	7	8	9	10	11	12	K-4	5-6	7-8	9-12	K-12
HISTORY:																				
1996	36	2001	54	65	53	72	69	50	67	59	49	54	51	42	41	313	117	109	188.0	727
1997	38	2002	44	60	67	52	73	69	49	71	60	48	51	49	43	296	118	131	191	736
1998	41	2003	51	51	58	64	54	67	63	50	71	57	50	50	48	278	130	121	205	734
1999	40	2004	54	49	55	56	64	56	69	66	52	59	50	48	50	278	125	118	207	728
2000	46	2005	47	66	50	57	58	64	56	67	67	39	59	47	44	278	120	134	189	721
2001	45	2006	59	46	66	52	59	61	63	57	66	48	37	62	45	282	124	123	192	721
2002	52	2007	49	66	48	65	55	64	60	59	59	59	47	39	57	283	124	118	202	727
2003	41	2008	45	54	64	50	70	51	62	61	57	48	57	48	37	283	113	118	190	704
2004	46	2009	54	52	55	65	52	69	55	63	59	44	46	55	44	278	124	122	189	713
2005	41	2010	46	56	48	56	60	43	71	54	64	52	46	45	50	266	114	118	193	691
2006	41	2011	32	45	55	53	58	59	42	70	55	55	53	45	42	243	101	125	195	664
PROJECTIONS:																				
<i>Projections are shown in italics</i>																				
2007	45	2012	51	34	45	57	54	56	60	42	70	46	55	52	42	240	115	112	195	663
2008	31	2013	36	55	34	46	57	51	56	60	42	59	46	54	49	228	108	102	207	644
2009	19	2014	25	38	54	35	46	55	52	56	60	35	59	45	51	198	107	116	189	611
2010	34	2015	39	26	38	56	35	44	56	52	56	50	35	57	42	194	100	109	185	588
2011	31	2016	38	42	26	39	57	34	45	56	52	47	50	34	54	202	79	108	186	574
2012	43	2017	50	41	42	27	39	54	34	45	56	44	47	49	32	198	89	101	172	560
2013	40	2018	47	53	40	43	27	38	55	34	45	47	44	46	46	211	93	79	183	566
2014	41	2019	48	51	53	41	43	26	38	55	34	38	47	43	43	237	64	89	171	561
2015	41	2020	48	52	50	54	42	42	26	38	55	29	38	46	40	247	68	93	152	561
2016	42	2021	49	52	51	52	55	40	42	26	38	46	29	37	43	259	82	65	155	561

Source: Prepared by H. C. Planning Consultants, Inc. 5/12/2012.

SUMMARY APPENDIX TABLE B

ELEMENTARY SCHOOL ENROLLMENT PROJECTIONS BY SCHOOL & BY GRADE
MIDDLE PROJECTIONS

Panel A: Durham Residents Attending Brewster, Korn And Lyman Elementary Schools, 2012-2021

SCH YR	BREWSTER-D				KORN-D		LYMAN-D					SCH YR	DURHAM K-4 TOTAL						BES K-2	KES 3-4	LES K-4	Total K-4
	PK	K	1	2	3	4	K	1	2	3	4		PK	K	1	2	3	4				
2002	7	65	68	70	63	60	39	36	46	48	39	2002	7	104	104	116	111	99	203	123	208	534
2003	17	59	73	69	70	63	36	44	35	49	53	2003	17	95	117	104	119	116	201	133	217	551
2004	27	74	68	77	69	78	32	39	47	39	50	2004	27	106	107	124	108	128	219	147	207	573
2005	24	66	81	72	77	74	28	36	40	44	38	2005	24	94	117	112	121	112	219	151	186	556
2006	26	55	74	83	76	79	37	32	38	41	43	2006	26	92	106	121	117	122	212	155	191	558
2007	27	56	63	73	82	75	26	40	31	39	43	2007	27	82	103	104	121	118	192	157	179	528
2008	23	68	63	68	70	76	36	36	41	34	41	2008	23	104	99	109	104	117	199	146	188	533
2009	12	39	78	68	70	70	25	38	35	43	31	2009	12	64	116	103	113	101	185	140	172	497
2010	18	52	47	78	68	83	27	28	36	37	40	2010	18	79	75	114	105	123	177	151	168	496
2011	9	46	55	48	77	65	23	34	27	41	37	2011	9	69	89	74	118	102	149	142	162	453
2012	19	57	51	57	48	80	32	27	33	29	40	2012	19	89	78	90	77	120	166	128	161	454
2013	19	46	64	53	57	49	25	37	26	36	29	2013	19	71	101	80	93	78	163	106	153	421
2014	19	44	51	67	53	58	24	29	36	28	36	2014	19	68	80	102	81	94	162	111	153	426
2015	19	39	49	53	66	55	22	29	29	39	28	2015	19	61	77	82	105	83	141	120	146	407
2016	19	42	43	51	52	68	23	26	28	31	38	2016	19	65	69	79	83	106	136	121	145	402
2017	19	43	47	46	50	54	24	27	24	30	30	2017	19	67	73	70	80	85	136	105	135	376
2018	19	42	49	48	45	52	23	28	26	26	29	2018	19	65	76	75	72	82	139	97	133	369
2019	19	45	47	50	48	47	25	27	27	28	26	2019	19	71	74	78	76	73	143	95	134	371
2020	19	43	51	49	50	50	24	29	26	30	28	2020	19	67	80	75	80	77	144	100	136	379
2021	19	44	48	53	49	52	24	28	29	29	29	2021	19	68	76	81	77	81	145	100	138	383

Panel B: Middlefield Residents Attending Brewster, Korn And Lyman Elementary Schools, 2012-2021

SCH YR	BREWSTER-M				KORN-M		LYMAN-M					SCH YR	MIDDLEFIELD K-4 TOTAL						BES K-2	KES 3-4	LES K-4	Total K-4
	PK	K	1	2	3	4	K	1	K-4	3	4		PK	K	1	2	3	4				
2002	6	21	24	32	29	32	23	35	35	23	41	2002	6	44	59	67	52	73	77	61	157	295
2003	12	28	25	24	33	32	23	26	34	30	22	2003	12	51	51	58	63	54	77	65	135	277
2004	8	27	26	24	23	34	27	23	31	33	30	2004	8	54	49	55	56	64	77	57	144	278
2005	12	20	32	26	27	24	27	34	24	30	34	2005	12	47	66	50	57	58	78	51	149	278
2006	8	28	20	32	25	29	31	26	34	27	30	2006	8	59	46	66	52	59	80	54	148	282
2007	9	21	31	22	30	26	28	36	26	35	29	2007	9	49	67	48	65	55	74	56	154	284
2008	15	21	24	28	22	31	24	30	36	28	39	2008	15	45	54	64	50	70	73	53	157	283
2009	13	23	25	26	30	23	31	27	29	35	29	2009	13	54	52	55	65	52	74	53	151	278
2010	8	17	25	23	24	25	29	31	25	32	35	2010	8	46	56	48	56	60	65	49	152	266
2011	5	13	17	25	25	25	19	28	30	28	33	2011	5	32	45	55	53	58	55	50	138	243
2012	10	21	14	17	25	24	30	20	28	32	30	2012	10	51	34	45	57	54	52	49	140	240
2013	10	14	23	14	17	25	21	32	19	29	33	2013	10	36	55	34	46	57	51	41	135	228
2014	10	10	16	23	14	16	15	22	32	21	30	2014	10	25	38	54	35	46	48	30	119	198
2015	10	16	11	16	23	14	23	15	22	33	22	2015	10	39	26	38	56	35	42	36	115	194
2016	10	15	17	11	16	22	23	25	15	23	35	2016	10	38	42	26	39	57	43	38	120	202
2017	10	20	17	18	11	16	30	24	24	16	24	2017	10	50	41	42	27	39	55	27	117	198
2018	10	19	22	17	17	11	28	31	23	26	16	2018	10	47	53	40	43	27	58	28	125	211
2019	10	19	21	22	17	17	29	30	31	25	26	2019	10	48	51	53	41	43	62	34	141	237
2020	10	19	21	21	22	16	29	30	29	33	26	2020	10	48	52	50	54	42	62	38	148	247
2021	10	20	22	22	21	21	29	30	30	31	34	2021	10	49	52	51	52	55	64	42	154	259

Regional School District 13 School Enrollment Projections Summary

APPENDIX SUMMARY TABLE 6-B (CONTINUED)

ELEMENTARY SCHOOL ENROLLMENT PROJECTIONS BY SCHOOL & BY GRADE
MIDDLE PROJECTIONS

Panel C: RSD 13 Residents Attending Brewster, Korn And Lyman Elementary Schools, 2012-2021

(PK enrollments are not projected. They are 10- year averages.)

SCH YR	BREWSTER-RSD13				KORN-		LYMAN-RSD 13					SCH YR	DURHAM K-4 TOTAL						BES	KES	LES	Total
	PK	K	1	2	3	4	K	1	2	3	4		PK	K	1	2	3	4				
2002	13	86	92	102	92	92	62	71	81	71	80	2002	13	148	163	183	163	172	280	184	365	829
2003	29	87	98	93	103	95	59	70	69	79	75	2003	29	146	168	162	182	170	278	198	352	828
2004	35	101	94	101	92	112	59	62	78	72	80	2004	35	160	156	179	164	192	296	204	351	851
2005	36	86	113	98	104	98	55	70	64	74	72	2005	36	141	183	162	178	170	297	202	335	834
2006	34	83	94	115	101	108	68	58	72	68	73	2006	34	151	152	187	169	181	292	209	339	840
2007	36	77	94	95	112	101	54	76	57	74	72	2007	36	131	170	152	186	173	266	213	333	812
2008	38	89	87	96	92	107	60	66	77	62	80	2008	38	149	153	173	154	187	272	199	345	816
2009	25	62	103	94	100	93	56	65	64	78	60	2009	25	118	168	158	178	153	259	193	323	775
2010	26	69	72	101	92	108	56	59	61	69	75	2010	26	125	131	162	161	183	242	200	320	762
2011	14	59	72	73	102	90	42	62	57	69	70	2011	14	101	134	130	171	160	204	192	300	696
2012	29	78	65	74	73	104	62	47	61	61	70	2012	29	140	113	135	133	173	217	176	301	694
2013	29	60	86	68	74	74	46	69	46	65	62	2013	29	106	156	113	138	135	214	147	288	649
2014	29	54	67	89	67	75	39	51	67	49	66	2014	29	93	118	157	116	140	210	141	273	624
2015	29	55	60	69	88	68	45	44	51	72	49	2015	29	100	104	119	161	118	183	157	261	601
2016	29	58	60	62	68	90	45	50	43	54	73	2016	29	103	111	105	122	163	180	158	265	603
2017	29	64	64	63	61	70	54	51	48	46	54	2017	29	117	114	112	107	124	191	131	252	574
2018	29	61	71	65	62	63	52	59	50	52	46	2018	29	113	130	115	114	109	197	125	258	581
2019	29	65	68	73	65	64	54	57	58	53	52	2019	29	119	125	131	118	116	205	128	275	608
2020	29	63	73	70	71	66	53	59	56	63	54	2020	29	115	132	126	134	119	205	137	284	626
2021	29	64	70	74	69	73	53	58	58	60	63	2021	29	117	128	133	129	136	209	142	292	643

Source: Prepared by H. C. Planning Consultants, Inc. 5/12/2012.