

# MADISON PUBLIC SCHOOLS

## ENROLLMENT PROJECTIONS

PREPARED BY

DR. ARTHUR R. WAGMAN

EDUCATIONAL RESOURCES MANAGEMENT

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# **MADISON PUBLIC SCHOOLS ENROLLMENT PROJECTIONS**

## **INTRODUCTION**

Enrollment forecasting and demographic analysis are two basic components utilized in school planning and prior to construction. Forecasting is the projection of specified future events within a certain time frame based upon available, if often incomplete information. Demographic analysis is the process used to examine the environmental context of the school district that may affect student enrollment. As in most cases birth data, in-out migration, rate of building, available building lots, the local real estate market and future development are all instrumental in establishing the demographics of a community.

The cohort survival method is the basic method utilized in this projection to analyze enrollment trends and subsequent results. It is the most frequently utilized method of enrollment forecasting. In the cohort survival method, the number of students is calculated based on the survival rates of students as they move from one grade to the next and is upgraded as actual enrollment data becomes available. The result is a linear forecast projected from the last data point. The cohort survival technique of forecasting provides a limited assessment of future enrollments because it is based on historic data, but when combined with other demographic data they provide a more balanced and accurate projection of anticipated enrollments. The difference between the number of students generated by historic events including birth rates, compared to those generated by new housing development and in-out migration, creates the changes in school enrollments.

To accomplish our projections we reviewed data gathered from state, town and school officials that enabled us to draw significant conclusions relative to future

school enrollments and future school space needs in Madison. The accuracy of these projections can only be determined by comparing them with actual enrollments as the future evolves.

For the purpose of this report the following information was reviewed:

- 1) Enrollment Reports from school years 2005-06 through 2014-15, supplied by the Madison School Department and the Connecticut Department of Education
- 2) Birth data: i.e. births to Madison residents supplied by the Madison Town Clerk and by the Connecticut Dept. of Public Health, Registry of Vital Statistics
- 3) Number of housing permits annually from 2004 through 2014 supplied by the Madison Town Planner.
- 4) Information relative to new and proposed housing developments and sub-divisions were supplied by the Madison Town Planner.
- 5) Information relative to the Madison real estate market and relevant market data was gleaned from Zillow and from personal discussions with local real estate brokers.

### **GRADE GROUPINGS**

Different grade groupings were used for this analysis to afford us the opportunity to look at the possible impact of increased enrollments at different grade levels.

These groupings are:

Elementary grades    K - 4  
Middle School grades 5 – 8  
High School grades    9 – 12

## BIRTH DATA

The Town Clerk's Office and the Connecticut Department of Public Health, Registry of Vital Statistics provided the birth data utilized in this analysis. It reflects births to residents of Madison, whose children might be expected to attend the Madison Public Schools. **(Table I)** We have primarily used the data provided by the state's Registry of Vital Statistics, which tends to be more complete in terms of all births to Madison residents no matter where the birth occurred. Unfortunately state records are available only up to 2011. As a result it is necessary to adjust the town clerk's birth figures to anticipate additional births to Madison residents that take place elsewhere but have yet to be reported to the Town.

From January 2005 through December 31, 2011 there were a total of 741 (as per Registry of Vital Statistics) children born to residents of Madison, an average of 106 births per year. For the years 2012 through 2014 adjusted numbers from the Town clerk show total births of 265 or an average of 88 births to Madison residents. Births from 2015 through 2020 were estimated by using the average of each of the previous five years of birth data. (rolling 5 yr. average) This method tends to even out the natural peaks and valleys that occur in annual births over a number of years.

The average number of births varied from a high of 130 reported births in 2005 to a low of 85 reported births in 2013, which was the lowest number of reported births in the period studied. We have projected an average annual birth rate of 93 births for the period from 2015 through 2020 which is slightly higher than the previous few years reflecting a better economic climate plus an anticipated influx of younger families of child bearing years. We have factored this number into our projections.

**Table I**

**Births to Madison Residents**

| <b>Year</b> | <b>Births</b> | <b>Diff.</b> | <b>% of Diff.</b> |
|-------------|---------------|--------------|-------------------|
| 2020        | 92            | 0            | 0.0%              |
| 2019        | 92            | 0            | 0.0%              |
| 2018        | 92            | -1           | -1.1%             |
| 2017        | 93            | 0            | 0.0%              |
| 2016        | 93            | -1           | -1.1%             |
| 2015        | 94            | 1            | 1.1%              |
| 2014        | 93            | 8            | 9.4%              |
| 2013        | 85            | -2           | -2.3%             |
| 2012        | 87            | -24          | -21.6%            |
| 2011        | 111           | 25           | 29.1%             |
| 2010        | 86            | 1            | 1.2%              |
| 2009        | 85            | -19          | -18.3%            |
| 2008        | 104           | 7            | 7.2%              |
| 2007        | 97            | -31          | -24.2%            |
| 2006        | 128           | -2           | -1.5%             |
| 2005        | 130           | 0            |                   |

- Notes:**
- 1) Birth data from 2005-2011 from CT Dept. of Public Health Bureau of Vital Statistics
  - 2) Birth data from 2012 - 2014 from Madison Town Clerk (adjusted)
  - 3) Birth data from 2015-2020 estimated based on a five year rolling average

## HOUSING PERMITS & NEW DEVELOPMENT

A meeting with the Madison town planner, David Anderson, provided information relative to permits issued for new housing units from 2004 through November 2014. **(Table II)**

Through this period a total of 323 permits for single family housing units were issued. The average annual number of permits for this period was 29 permits. There were no senior housing units permitted and at this point there are no plans for the construction of dedicated senior (over 55) housing. To date 2004 was the busiest year with a total of 52 permits. The number of new homes constructed in Madison has decreased sharply over the years. 2011 showed the lowest number of new home permits with 14, likely due to the problems in the national financial markets. Though there appears to be a slight rebound, permitting for new housing remains low. Also, according to the town planner there are few large tracts of land remaining for new housing development in Madison. There is also a large unsold inventory of existing homes. It is likely there will be only sporadic development until this inventory has been substantially reduced. (See "Madison Real Estate Market") As a result of these factors we anticipate the rate of new development in Madison will remain low.

Information from the Town Planner's Office **(Table III)** shows that Madison presently has a total of 50 housing units either under construction, or with construction about to begin. Of these 38 are condo units and 2 are rental units. 40 are single family homes. Using a multiplier of students per housing unit as determined by the US Census Bureau, **(Charts 1 & 2)** we projected that an additional 14 children can be anticipated in the Madison Public Schools from this construction.

**Table II**

**Madison Housing  
Permits**

| <b>Year</b>                  | <b>Housing Units<br/># of Permits</b> | <b>Senior Hsng<br/>Permits (55+)</b> |
|------------------------------|---------------------------------------|--------------------------------------|
| <b>2004</b>                  | 52                                    |                                      |
| <b>2005</b>                  | 48                                    |                                      |
| <b>2006</b>                  | 50                                    |                                      |
| <b>2007</b>                  | 36                                    |                                      |
| <b>2008</b>                  | 34                                    |                                      |
| <b>2009</b>                  | 15                                    |                                      |
| <b>2010</b>                  | <b>17</b>                             |                                      |
| <b>2011</b>                  | 14                                    |                                      |
| <b>2012</b>                  | 25                                    |                                      |
| <b>2013</b>                  | 17                                    |                                      |
| <b>2014 (a/o Dec.2015)</b>   | 15                                    |                                      |
|                              | <b>Total</b>                          |                                      |
| <b>Avg. Annual # Permits</b> | <b>323</b>                            | <b>0</b>                             |
|                              | <b>29</b>                             |                                      |





Chart 1

Average School Enrollment Per Unit by Housing Type  
(As per U.S. Census Bureau)

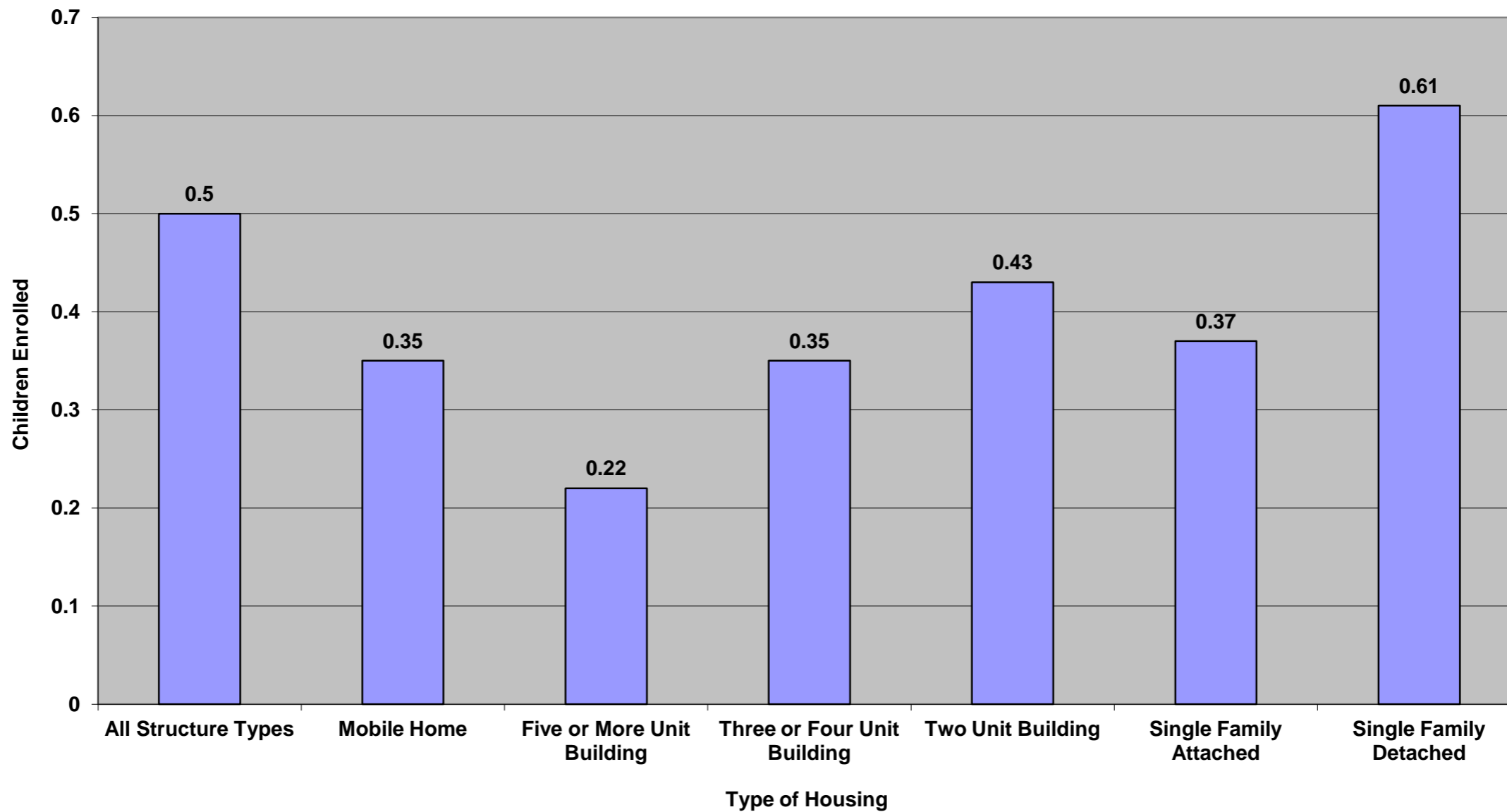
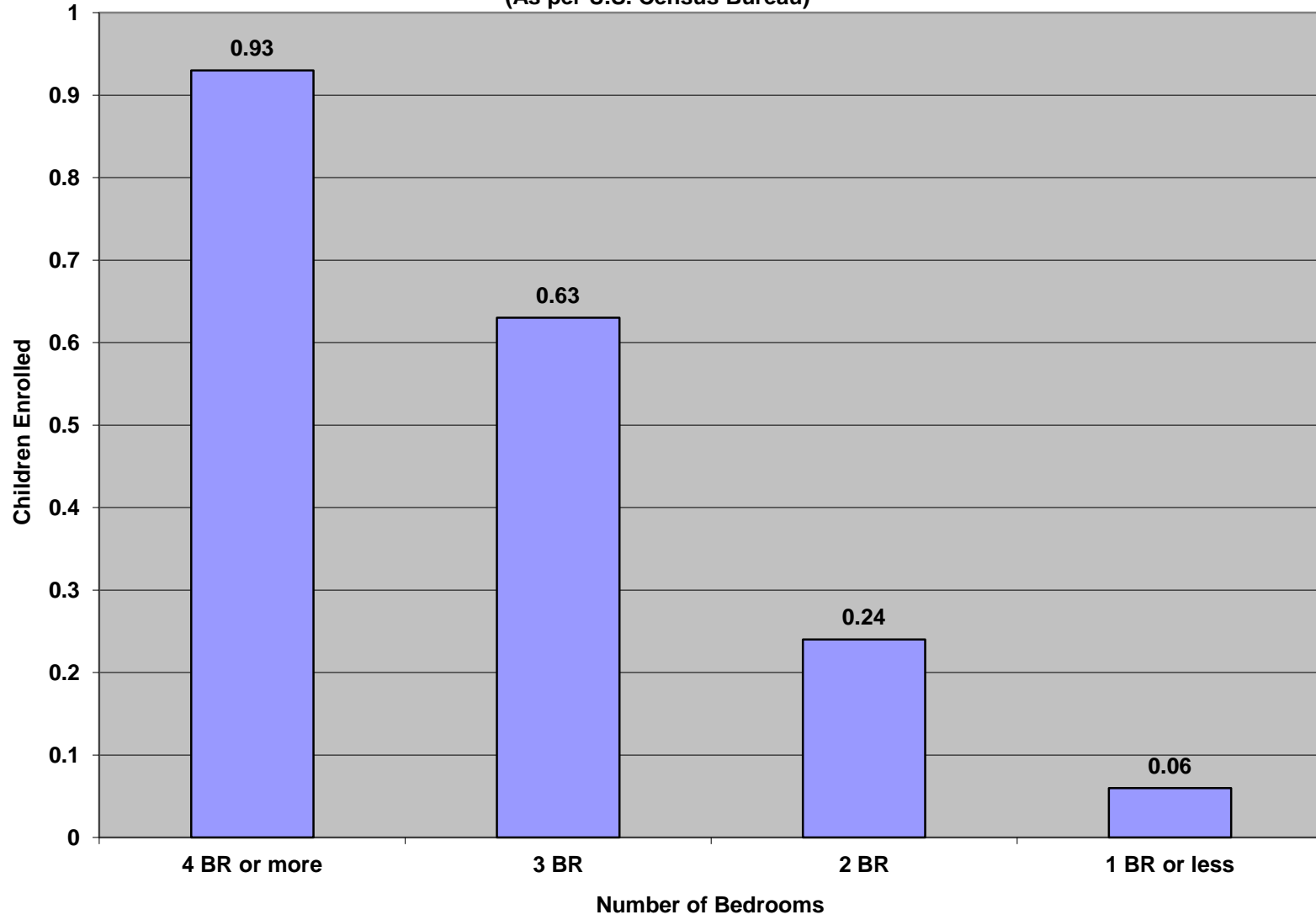


Chart 2

Avg. School Enrollment Per Unit by Number of Bedrooms  
(As per U.S. Census Bureau)



We made the assumption this construction will be completed within 2 years and that there will be similar limited development in future years. Additional students coming into the schools will be through in-migration: i.e. families with school age children moving into town.

As a result we have added 2 children per grade into our projections and beginning in 2019-20 we added an additional child per grade as we assume the real estate market will improve and the town, beginning to address its senior population, will provide dedicated senior housing that will open up homes presently occupied by seniors for families with school age children.

### **POPULATION DATA**

Figures from the U.S. Census Bureau for the 2000 census show Madison's population at 17,858 an increase of 2,373 or 15.3% over the 1990 census figure of 15,485. Census figures for 2010 show that Madison's population increased further to 18,269 an increase of 411 residents or 2.3%. **(Table IV)**

Data from the Connecticut Department of Economic and Community Development show Madison's population growth slowing over the next several years; 18,239 in 2011, 18,291 in 2012 and 18,297 in 2013. This data reflects stagnation in growth, (less than 1%) since the last census which translates into an aging population where the median age has risen to 45.8 yrs. considerably higher than the state average. Data from the 2010 census showed 6,971 occupied dwellings in Madison. Only 2, 496 of these households or 35.8% had individuals under 18 years of age but there were 2,303 households or 33.0% with residents 65 years and older. Also there were 4, 418 children between the ages of 5 years and 19 years living in Madison households which translates into 0.63 children per household.

**Table IV**

**MADISON POPULATION DATA**

| <b>Year</b> | <b>Actual</b> | <b># Change</b> | <b>% Change</b> |
|-------------|---------------|-----------------|-----------------|
| <b>1990</b> | 15,485        | -----           | -----           |
| <b>2000</b> | 17,858        | 2373            | 15.3%           |
| <b>2010</b> | 18,269        | 411             | 2.3%            |
| <b>2011</b> | 18239         | -30             | -0.2%           |
| <b>2012</b> | 18,291        | 52              | 0.3%            |
| <b>2013</b> | 18,297        | 6               | 0.03%           |

**NOTE:** 1) Population figures 1990 -2010 from U.S. Census Bureau  
2) Population data 2011-2013 from Connecticut Dept.of Economic & Community Delopment

**PROJECTED MADISON POPULATION**

| <b>Year</b> | <b>Proj. Pop.</b> | <b>Proj, Age 0-4</b> | <b>% of Pop</b> | <b>Proj. age 5-19</b> | <b>% of Pop</b> | <b>Proj. age 65+</b> | <b>% of Pop</b> |
|-------------|-------------------|----------------------|-----------------|-----------------------|-----------------|----------------------|-----------------|
| <b>2015</b> | 18136             | 382                  | 2.1%            | 4218                  | 23.3%           | 3979                 | 21.9%           |
| <b>2020</b> | 18037             | 393                  | 2.2%            | 3332                  | 18.5%           | 4442                 | 24.6%           |
| <b>2025</b> | 17783             | 551                  | 3.1%            | 2603                  | 14.6%           | 5120                 | 28.8%           |

**NOTE:** 1) Projected data from Connecticut State Data Center @ UCONN and CERCE

A projection of future population of the town completed by the Connecticut State Data Center and the Connecticut Economic Research Center (CERCE) for 2015 shows a total of 21.9 % of the general population over 65 while the population of residents ages 5-19 falls to 23.3%. Projections for 2020 and 2025 show a further decline in the total population going forward while the percentage of residents over 65 becomes a larger percentage of the general population and the percentage of residents in the 5-19 age bracket also declines. This is a classic picture of an insular aging community that has not acted to encourage the influx of a younger population of child bearing age.

It can be assumed that within the range of years covered by this study, a portion of these residents will alter their living arrangements and many senior homeowners will sell or move out of their current homes. These homes will normally be older, smaller and somewhat less expensive than newer homes and well suited to younger families with school age children. We anticipate these homes will be reoccupied with children of school age. While we cannot quantify this population we project in-migration of new families with school age children and limited new development will somewhat offset students matriculating from the school system thereby slowing, but not reversing, the overall decline in school populations.

## **MADISON REAL ESTATE MARKET**

Discussions with several local real estate agents in Madison yielded information that as of November the real estate market remained relatively slow with a substantial inventory of unsold homes. The Zillow web site shows that as of December 12, 2014 there were approximately 336 properties on the market with an additional 44 being in some stage of foreclosure. Entering a traditionally slow real estate period in New England it is not entirely surprising to find the market relatively stagnant. That, plus the price distribution for the property, does not appear to be consumer friendly for families with school age children nor conducive to attracting that type of buyer. As of October 2014 the median value of homes listed for sale in Madison was \$449,950 with home prices having risen 1.8% over the past year. The median list price per square foot in Madison is \$214 which is 43.6% higher than the New Haven Metro average of \$149 per square foot.

Of the 380 listed properties 259 or 68.2% are priced at \$300,000 or above. 190 or 50% are priced at \$400,000 or above. 148 or 39% are priced above \$500,000 and 82 listings or 21.6% are priced above \$750,000. In addition the Madison tax rate also imposes a burden that might be a deterrent for some families. Although mortgage rates are relatively low, tightened banking restrictions on credit and the percentage of down payment required, may be forcing younger families to seek homes in other more affordable locations.

A report issued by the Madison Planning and Zoning Commission in November 2013 should be referenced. It provides pertinent information relative to the town's planning and thinking about Madison real estate development in future years. In the section titled "Manage Residential Development, " page 44, the section titled

“Continue These Policies” recommends: a) Maintain the existing single family residential density pattern of Madison and b) Discourage multi-family (and/or higher density) developments in areas outside Madison Center unless there is some significant community benefit that will result.”

Page 46 of the same report under the heading “Diversity of Madison’s Housing Portfolio,” in the paragraph titled “Housing for an Aging Population” states, “As more (residents) live longer lives, it can be anticipated that there will be a growing need for elderly housing for people with limited economic means. A number of seniors are feeling like they are being ‘squeezed out’ of a community where they have spent much of their life.” A further reading of the report, on page 47, the paragraph headed, “Housing Which is More Affordable” states, “Since the average housing value in Madison is higher than other communities, Madison should consider strategies which might enhance the ability of younger people and families with modest incomes to be able to live here.”

It appears as though Madison, although late to the game, is beginning to seriously think about the affordability of its real estate for young and growing families as well as providing alternative housing for those residents who have outgrown their homes, either physically or financially, but would like to remain residents of the town. Not to take action will result in a continuing decline in school population, an aging general population and a stagnating community. Only through a continuing infusion of new, younger, more vital residents will Madison remain the progressive town it has become.

## **ANALYSIS OF DATA**

Formulating long-range enrollment projections requires the development of a set of assumptions around which we build a statistical framework. We have developed a list of assumptions on birth rates, housing development, population, real estate and other factors we believe are essential to an accurate analysis.

### **MADISON ASSUMPTIONS**

- 1) Birth rates have been projected based upon historic data provided by the Connecticut Dept. of Vital Statistics and the Town Clerk's Office through 2014. From 2015 forward we have used an average birth rate (rolling average) based on the average of each of the previous five years.
- 2) Actual student enrollments from 2005-06 through 2014-15 have been provided by the Madison Schools and have been used as the basis for the cohort survival method of school population projection.
- 3) Using information supplied by the Madison Planning Director we used the actual number of permits issued for new dwellings from 2004 through Nov. 2014. The average number of new dwelling permits issued for that period was 29 units per year. From 2009 through November 2014 only 103 permits were issued, an average of only 17 housing permits per year, reflecting a major downturn in new home construction.
- 4) Information supplied by the Madison Planning Director shows a total of 50 residential units presently either under construction, approved for construction or in the planning stage. We have projected that this housing will come on line within the next two years and have projected a similar rate of development will continue through the period covered by this study. Using U.S. census multipliers we have projected the number of school age children we expect to be generated by this housing.



5) We anticipate that within the next five years the Town of Madison will act to develop housing for its resident senior population. We have projected that in 2019-20, when we assume this housing will begin to come on line there will be a greater availability of senior owned homes which will likely be smaller, older, and more affordable for younger families with school age children.

### **METHODOLOGY**

The most commonly used method for projecting student enrollments is a mathematical algorithm known as “cohort survival.” This method of analysis takes the birth rate of a community, factors in the historic number of children that enter the public school system and tracks the number of students in the cohort as they progress through the various grades from kindergarten through grade 12. The percent of students in the cohort who historically “survive” from one grade to the next provides the basis of projecting future enrollments. Cohort survival ratios factor in historic enrollments assuming that other factors, i.e. births, in-migration, new housing starts, will remain the same.

The cohort survival algorithm creates a projection based only upon the historic past, and fails to take into consideration outside elements such as socio-economic factors that ultimately affect student enrollments. To get a complete picture of what a community and school district will look like in the future additional data must be factored into the projection and the foundation of data on which the projection is based must be broadened.

Using actual enrollments submitted by the Madison Public Schools for each school year beginning in 2005-2006, plus the most recent enrollments as of October 2014, and birth rates, a ratio of grade to grade survival was developed. **(Table V).** Cohort survival factors in historic enrollments assuming that all other

Table V

Madison Public Schools Enrollment Projection

Cohort Survival Only

Actual

| School Yr. | Kind | Gr. 1 | Gr. 2 | Gr. 3 | Gr. 4 | Gr. 5 | Gr. 6 | Gr. 7 | Gr. 8 | Gr. 9 | Gr. 10 | Gr. 11 | Gr. 12 | Total |
|------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|-------|
| 2005-06    | 253  | 258   | 278   | 295   | 289   | 317   | 324   | 317   | 312   | 310   | 333    | 279    | 269    | 3834  |
| 2006-07    | 208  | 273   | 271   | 290   | 300   | 304   | 333   | 328   | 321   | 310   | 303    | 326    | 271    | 3838  |
| 2007-08    | 206  | 237   | 276   | 273   | 295   | 293   | 307   | 322   | 323   | 324   | 300    | 294    | 319    | 3769  |
| 2008-09    | 200  | 246   | 239   | 285   | 277   | 297   | 296   | 313   | 326   | 340   | 310    | 289    | 291    | 3709  |
| 2009-10    | 167  | 230   | 256   | 234   | 289   | 285   | 302   | 296   | 312   | 329   | 330    | 317    | 288    | 3635  |
| 2010-11    | 135  | 188   | 245   | 255   | 246   | 288   | 300   | 310   | 306   | 321   | 326    | 337    | 306    | 3563  |
| 2011-12    | 143  | 163   | 191   | 256   | 255   | 254   | 287   | 292   | 313   | 310   | 302    | 317    | 328    | 3411  |
| 2012-13    | 147  | 176   | 167   | 203   | 259   | 269   | 264   | 294   | 297   | 314   | 311    | 311    | 319    | 3331  |
| 2013-14    | 153  | 162   | 178   | 181   | 207   | 267   | 279   | 268   | 292   | 308   | 312    | 318    | 313    | 3238  |
| 2014-15    | 134  | 171   | 168   | 190   | 188   | 213   | 275   | 286   | 267   | 308   | 299    | 305    | 317    | 3121  |

Cohort Survival Only

Projected

|         |     |     |     |     |     |     |     |     |     |     |     |     |     |      |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| 2015-16 | 131 | 154 | 175 | 180 | 195 | 195 | 220 | 281 | 287 | 276 | 305 | 302 | 306 | 3007 |
| 2016-17 | 169 | 151 | 158 | 187 | 184 | 202 | 202 | 225 | 282 | 296 | 273 | 308 | 303 | 2940 |
| 2017-18 | 132 | 194 | 155 | 169 | 191 | 191 | 209 | 206 | 225 | 291 | 293 | 276 | 309 | 2841 |
| 2018-19 | 129 | 152 | 199 | 166 | 173 | 198 | 198 | 213 | 206 | 232 | 288 | 296 | 277 | 2727 |
| 2019-20 | 137 | 148 | 156 | 213 | 170 | 180 | 205 | 202 | 213 | 213 | 229 | 291 | 297 | 2654 |
| 2020-21 | 141 | 158 | 152 | 167 | 218 | 176 | 186 | 209 | 202 | 220 | 211 | 231 | 292 | 2563 |
| 2021-22 | 143 | 162 | 162 | 163 | 171 | 226 | 182 | 190 | 209 | 208 | 218 | 213 | 232 | 2479 |
| 2022-23 | 141 | 164 | 166 | 174 | 167 | 177 | 234 | 186 | 190 | 216 | 206 | 220 | 214 | 2455 |
| 2023-24 | 141 | 162 | 168 | 178 | 178 | 173 | 183 | 239 | 186 | 196 | 214 | 208 | 221 | 2447 |
| 2024-25 | 140 | 162 | 166 | 180 | 182 | 185 | 179 | 187 | 239 | 192 | 194 | 216 | 209 | 2431 |
| 2025-26 | 140 | 161 | 166 | 178 | 184 | 189 | 191 | 183 | 187 | 247 | 190 | 196 | 217 | 2429 |

Table V cont'd.

| School Yr.                           | Cohort Survival Only |           |           | Actual | # Diff | %Diff   |
|--------------------------------------|----------------------|-----------|-----------|--------|--------|---------|
|                                      | Gr K - 4             | Gr. 5 - 8 | Gr. 9 -12 | Total  |        |         |
| 2005-06                              | 1373                 | 1270      | 1191      | 3834   |        |         |
| 2006-07                              | 1342                 | 1286      | 1210      | 3838   | 4      | 0.10%   |
| 2007-08                              | 1287                 | 1245      | 1237      | 3769   | -69    | -1.80%  |
| 2008-09                              | 1247                 | 1232      | 1230      | 3709   | -60    | -1.60%  |
| 2009-10                              | 1176                 | 1195      | 1264      | 3635   | -74    | -2.00%  |
| 2010-11                              | 1069                 | 1204      | 1290      | 3563   | -72    | -2.00%  |
| 2011-12                              | 1008                 | 1146      | 1257      | 3411   | -152   | -4.30%  |
| 2012-13                              | 952                  | 1124      | 1255      | 3331   | -80    | -2.30%  |
| 2013-14                              | 881                  | 1106      | 1251      | 3238   | -93    | -2.80%  |
| 2014-15                              | 851                  | 1041      | 1229      | 3121   | -117   | -3.60%  |
| Actual Students Lost 2005-06-2014-15 |                      |           |           |        | -713   | -18.60% |
| Actual Avg. students lost per yr.    |                      |           |           |        | -71.3  | -1.90%  |

| School Yr.                              | Cohort Survival Only |           |           | Projected | # Diff | %Diff   |
|---|----------------------|-----------|-----------|-----------|--------|---------|
|   | Gr K - 4             | Gr. 5 - 8 | Gr. 9 -12 | Total     |        |         |
| 2015-16                                 | 835                  | 983       | 1189      | 3007      | -114   | -3.70%  |
| 2016-17                                 | 849                  | 911       | 1180      | 2940      | -67    | -2.20%  |
| 2017-18                                 | 841                  | 831       | 1169      | 2841      | -99    | -3.40%  |
| 2018-19                                 | 819                  | 815       | 1093      | 2727      | -114   | -4.00%  |
| 2019-20                                 | 824                  | 800       | 1030      | 2654      | -73    | -2.70%  |
| 2020-21                                 | 836                  | 773       | 954       | 2563      | -91    | -3.40%  |
| 2021-22                                 | 801                  | 807       | 871       | 2479      | -84    | -3.30%  |
| 2022-23                                 | 812                  | 787       | 856       | 2455      | -24    | -1.00%  |
| 2023-24                                 | 827                  | 781       | 839       | 2447      | -8     | -0.30%  |
| 2024-25                                 | 830                  | 790       | 811       | 2431      | -16    | -0.70%  |
| 2025-26                                 | 829                  | 750       | 850       | 2429      | -2     | -0.10%  |
| Projected Students Lost 2015-16-2025-26 |                      |           |           |           | -578   | -19.20% |
| Projected Avg. students lost per yr.    |                      |           |           |           | -52.5  | -1.70%  |

factors such as births, in-migration, new housing starts, etc. will remain in the future as they have been in the past.

Actual enrollment numbers show a decline in the student population from 3,834 students in the 2005-06 school year to 3,121 students in the 2014-15 school year, a loss of 713 students or almost 19% of the total student body. Relying solely on cohort survival numbers we find enrollments projected to fall from 3,007 in 2015-16 to 2,429 in 2025-26, a further drop of 578 students or 19.2%. Realizing this is only a portion of the total picture, we have adjusted our data to incorporate projected birth rates and allowances for new housing development and a limited revival to the Madison real estate market.

When the adjusted data is factored into the projections, we project the total number of students in the school system will continue to fall but at a decreasing rate from the 2014-15 level of 3,121 to 2,617 students in the 2025-2026 school year. This is a projected decrease of 504 students or 16.1%. **(Table V-A)**

The continuing decline in Madison's student population reflects a relatively stagnant birth rate due to an aging population, limited new development with few areas available for major housing development, a saturated real estate market not priced attractively for younger families with school age children, and since 2005-06 a steady history of more students leaving the school system through graduation than entering the school system in the elementary grades.

When the number of births to Town residents and the number of children registering for Kindergarten five years later is compared **(Table VI)**, there is a consistent pattern of more children enrolling in Madison's kindergarten than were born to residents of the Town. In 2010-11, based on actual enrollment figures,



**Table VI**

**Births to Madison Residents vs. Kindergarten Enrollments**

| <b>Year</b> | <b>Births To<br/>Madison<br/>Residents</b> | <b>Kinder. Entry<br/>Year (5 yrs.<br/>after birth)</b> | <b>No. Kind.<br/>Students<br/>Enrolled</b> |           | <b>No, Kind.<br/>Students<br/>Enrolled<br/>Over Births</b> | <b>% Kind.<br/>Students<br/>Enrolled over<br/>Births</b> |
|-------------|--|--|--|-----------|--|--|
| <b>2019</b> | 92   | 2024-25  | 143  | Projected | 51   | <b>55.4%</b>   |
| <b>2018</b> | 92   | 2023-24  | 145  | Projected | 53   | 57.6%  |
| <b>2017</b> | 93   | 2022-23  | 144  | Projected | 51   | 54.8%  |
| <b>2016</b> | 93   | 2021-22  | 146  | Projected | 53   | 57.0%  |
| <b>2015</b> | 94   | 2020-21  | 144  | Projected | 50   | 53.2%  |
| <b>2014</b> | 93   | 2019-20  | 140  | Projected | 47   | 50.5%  |
| <b>2013</b> | 85   | 2018-19  | 131  | Projected | 46   | 54.1%  |
| <b>2012</b> | 87   | 2017-18  | 134  | Projected | 47   | 54.0%  |
| <b>2011</b> | 111  | 2016-17  | 171  | Projected | 60   | 54.1%  |
| <b>2010</b> | 86   | 2015-16  | 133  | Projected | 47   | 54.7%  |
| <b>2009</b> | 85   | 2014-15  | 134  | Actual    | 49   | 57.6%  |
| <b>2008</b> | 104  | 2013-14  | 153  | Actual    | 49   | 47.1%  |
| <b>2007</b> | 97   | 2012-13  | 147  | Actual    | 50   | 51.5%  |
| <b>2006</b> | 128  | 2011-12  | 143  | Actual    | 15   | 11.7%  |
| <b>2005</b> | 130  | 2010-11  | 135  | Actual    | 5  | 3.8%   |

- Notes:**
- 1) Birth data from 2005-2011 from CT Dept. of Public Health Bureau of Vital Statistics
  - 2) Birth data from 2012 - 2014 from Madison Town Clerk (adjusted)
  - 3) Birth data from 2015-2020 estimated based on a five year rolling average
  - 4) Actual kindergarten enrollment 2010-11 to 2014-15 from Madison Public Schools
  - 5) Projected kindergarten enrollment from 2015-16 to 2024-25 from enrollment projections

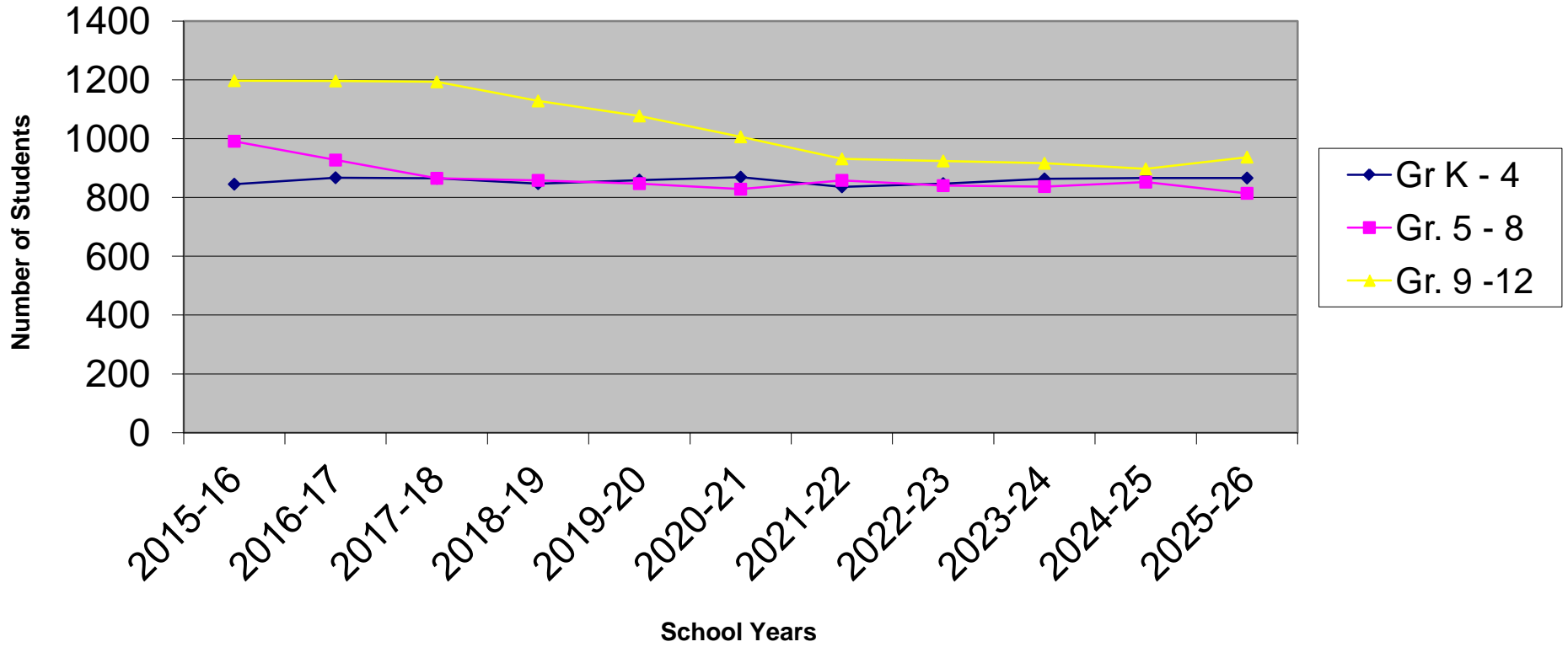
5 more children or 3.8% enrolled in Madison's kindergarten than were born to residents. In the ensuing years that discrepancy has grown to the point where the school department is showing 50% or more enrollees in kindergarten than were born to residents of the town. We project the number of children enrolling in Madison's kindergarten will remain in the +50% range as birth rate remains relatively stagnant and new families move into the town, but not in sufficient numbers to offset the loss in students graduating from the system.

Between 2015-16 and 2025-26 enrollments in the various grade configurations are projected to shrink at each grade level with the exception of grades K-4 where we expect to see a leveling off of the decline and a slight upward trend beginning approximately in the 2022-23 school year. Middle school and high school enrollments will continue to contract as smaller elementary enrollments work their way through the system. **Chart 3** shows the enrollment progression at each grade level from 2015-16 through 2025-26.

### **VOCATIONAL, PAROCHIAL & PRIVATE SCHOOL ENROLLMENTS**

We reviewed parochial, private and other public school (technical, regional, magnet, vocational, SPED, and other) enrollments in relation to total school enrollments. **(Table VII)** Reviewing this data from 2003-04 to the present we sought to establish a trend in terms of students attending schools other than the Madison Public Schools. During this period the percentage of students attending Madison Public Schools averaged over 94.7% of total school children (not including those years for which complete data was not available). The highest percentage of students attending all other schools was 6.4% in the 2004-05 school year. This is not a significant drain from the student pool and the impact on total MPS enrollments is minimal

Chart 3  
Madison Enrollment Projections





**Table VII**

**Other Schools Enrolling Madison Resident Students**

| School Year    | Parochial<br>Schools | Private Schools     | Regional,<br>Magnet, Vocational<br>, Technical, SPED,<br>other | Enrolled<br>Madison<br>Public Schools | Total<br>Madison<br>Students | % of Students Attending<br>MPS |
|----------------|----------------------|---------------------|--|---------------------------------------|------------------------------|--------------------------------|
|                |                      | No data<br>supplied |  |                                       |                              |                                |
| <b>2014-15</b> | 58                   | supplied            | 17   | 3121                                  | 3196                         | Incomplete Data                |
| <b>2013-14</b> | 74                   | 67                  | 15   | 3238                                  | 3394                         | 95.4%                          |
|                |                      | No data<br>supplied |  |                                       |                              |                                |
| <b>2012-13</b> | 97                   | supplied            | 11   | 3331                                  | 3439                         | Incomplete Data                |
|                |                      | No data<br>supplied |  |                                       |                              |                                |
| <b>2011-12</b> | No data supplied     | supplied            | 13   | 3411                                  | 3424                         | Incomplete Data                |
| <b>2010-11</b> | 107                  | 90                  | 10   | 3563                                  | 3680                         | 96.8%                          |
| <b>2009-10</b> | 102                  | 94                  | 11   | 3637                                  | 3844                         | 94.6%                          |
| <b>2008-09</b> | 111                  | 102                 | 24   | 3709                                  | 3946                         | 94.0%                          |
| <b>2007-08</b> | 123                  | 100                 | 24   | 3769                                  | 4016                         | 93.8%                          |
| <b>2006-07</b> | 115                  | 89                  | 33   | 3840                                  | 4077                         | 94.2%                          |
| <b>2005-06</b> | 105                  | 90                  | 49   | 3834                                  | 4078                         | 94.0%                          |
| <b>2004-05</b> | 116                  | 86                  | 55   | 3777                                  | 4034                         | 93.6%                          |
| <b>2003-04</b> | 41                   | 95                  | 30   | 3715                                  | 3881                         | 95.7%                          |

- Notes:**
- 1) Data supplied by the Connecticut Department of Education and the Madison Public Schools
  - 2) PK enrollments have been deleted from the data
  - 3) 2005-06 Shoreline Christian data missing
  - 4) 2011-12 No data supplied
  - 5) 2012-13 Country School data missing
  - 6) 2013-14 Shoreline Christian School closed
  - 7) 2014-15 Country School data missing

Because of the high quality of the Madison Public Schools, the large majority of Madison parents are obviously not motivated to put their children into private or parochial schools. We anticipate these enrollments will remain relatively stable for the foreseeable future with the percentage of students attending Madison Schools staying in the mid 90% bracket.

However, we have recently seen a number of parochial schools close as churches seek to consolidate their educational facilities and reduce the drain on finances. There is no indication of that happening in the immediate future but there remains the possibility of some parochial facilities, (such as Shoreline Christian) closing which could have some future impact on Madison's schools.

### **SUMMARY**

Our projections, based upon data from a variety of sources, are open to interpretation, as are all such projections. We cannot accurately predict and can only project the birth rate of residents, although births to Town residents can be expected to remain relatively constant unless there is a substantial influx of younger families. New development will continue to be constrained by limited space available for new housing. In-migration of students from outside the Town will tend to mitigate some of the enrollment decline we have seen in the past several years but this too will be limited by a high priced real estate market that might cause young families with school age children or young couples seeking to start a family to consider housing options in other more affordable communities.. Our projections show that enrollment losses will continue but at a slowing rate as some limited new development and a renewed interest in senior housing hopefully opens up homes, presently occupied by seniors, for resale to younger families.

Madison, with a strong and highly rated educational program is very attractive community for parents or prospective parents. Madison also provides a high standard of living its residents are loathe to abandon. The issue is not one of the schools doing a better job, but of the town doing a better job to identify and address the needs of its residents, particularly its senior residents who will comprise a major and growing segment of its population. The 2013 report of the Madison Planning and Zoning commission indicates recognition of the problem but to date there does not appear to be a firm plan for a resolution.

This projection is intended to put into perspective the space needs of the Madison Public Schools based upon enrollments, birth rates, in/out migration, new development and other relevant demographic data. In a projection of this type there are always unforeseen factors that cannot be anticipated. We have utilized the most recent information available. However, data, from which assumptions were derived and projections developed, may change. If the data on which we based our projections changes then the projections must change. It is therefore recommended that future development in Madison, both social and economic, be closely monitored for significant shifts.

This document and the enrollments projected for specific years should be considered a guideline rather than a firm forecast and reviews of the enrollment projections should be done on a regular basis.

A question that must always be associated with, "How many students are we going to have?" is the question, "Are the current educational facilities going to be adequate to accommodate these students?" Therefore other questions must be answered; such as the condition of existing space, whether such space meets

state standards and how space requirements will impact the quality of education and the ability of the schools to support a diversified and comprehensive educational program. The School Department is acting wisely as it examines its options to accommodate its school population.

To do less will ultimately limit the ability of the Madison School Dept. to maintain the high quality of its educational program.