# K-12 Enrollment Forecast 2005 to 2030

Rocky Hill Public Schools, Rocky Hill, CT

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## Background

This report responds to a request in August 2007 from Rocky Hill Public Schools. The Connecticut State Data Center (CtSDC) is the official provider of population projections for the State of Connecticut. CtSDC has no vested interest in the final decision of the Rocky Hill School Board.

## Summary

The town of Rocky Hill experienced a spike in population growth from 2000 through 2005. By 2006, population growth in Rocky Hill had slowed to 50 new residents from a high of 240 new residents in 2002. This spike in population growth coincided with a spike in new single-family home construction. The number of new occupancy permits (single-family) peaked at 99, in 2002. Through November 2007 (01/01 to 11/30), Rocky Hill issued only 12 new occupancy permits.

Total enrollment (K-12) is currently at a historic peak of 2,556. The grade K-5 population grew from 1,117, in 2001, to a peak of 1,198, in 2006. However, in 2007, the K-5 population **dropped** to 1,188. In contrast, for the 2007-2008 academic year, enrollment in grades 6-8 and 9-12 grew. This is suggests that earlier K-5 populations are matriculating through the school system and are being replaced by smaller populations. This trend is consistent with state and national demographic trends.

The CtSDC forecast anticipates that Rocky Hill's enrollment has crested and will remain at current levels through the 2009-2010 academic year, with peak enrollment of approximately 2,559 (K-12), only three more than in 2007. The CtSDC forecast sees enrollment (K-12) dropping after 2010-2011, reaching a low of approximately 2,400 in 2020. An alternative forecast from Dr. Peter Prowda projects a peak of 2,770 in 2015. Neither forecast, CtSDC nor Prowda, projects enrollment (K-12) exceeding the enrollment capacity of 3,000 for Rocky Hill schools.

Prowda's approach uses short-term enrollment data. In contrast, the CtSDC methodology relies on long-term demographic trends, reaching back to 1990. It is our understanding that Prowda's methodology, when he was employed by the CT State Department of Education, was used for short-term forecasts with yearly revisions, helping to make staffing decisions. Such a methodology is inappropriate for long-term forecasts that lay the foundation for capital projects.

Prowda's forecast presumes population growth will continue at the same pace as experienced from 2001 through 2005. This pattern of growth was anomalous and has already changed. It resulted from both a surge in new home construction and a broader, but brief, growth spurt in the state's population. New home construction has now plummeted, population growth has stagnated, and the national economy is leaning towards (or is in) recession. Specific to Rocky Hill, Nationwide Insurance recently announced the closure of offices in Rocky Hill, a decision that may impact the town's public school population.

This analysis argues that Rocky Hill Public Schools should **defer** the decision to expand classroom capacity until the **2010-2011** school year. Developments in the next two years should clarify trends in both population and the economy.

# The Regional Economy

The Connecticut economy has not generated net new jobs for nearly twenty years. The latest employment forecast from the Connecticut Center for Economic Analysis (CCEA), at the University of Connecticut, anticipates job losses through the end of 2009. The most recent forecast from the Connecticut Department of Labor anticipates job losses in the Hartford labor market – which includes Rocky Hill. As of March 2008, there has been a rapidly deteriorating national economy, a crisis in mortgage markets, and collapsing consumer confidence. There is nothing in regional economic and employment forecasts to suggest Rocky Hill will see significant population growth in the next few years.

Connecticut has been losing more young adults than many other states. Both statewide and Hartford County projections forecast a shrinking working-age population. This population cohort creates new households and gives birth to the school-age population. Consequently, independent of the current economic malaise, long-term demographic trends argue against future significant growth in the school-age population in Rocky Hill - as in most Connecticut towns.

# Rocky Hill Resident Population

Chart 1 (below) shows that Rocky Hill reached a peak of ninety-nine new home occupancy permits in 2002. By 2007, the number of single-family households (not age 55+) occupying new homes had dropped to 12, which represents a *drop* of 88% from the peak in 2002.
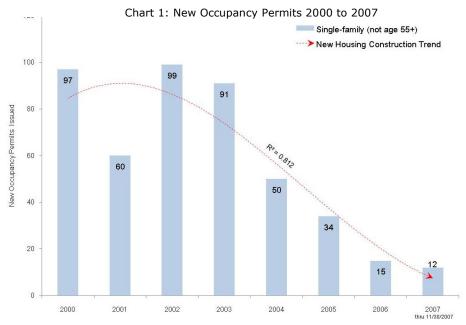


Chart 1: New Occupancy Permits 2000 to 2007

Chart 2 (below) illustrates the yearly *change* in population in Rocky Hill from 2000 to 2006. The largest single-year growth was in 2002 when 240 new residents were added. This corresponds with the number of occupancy permits issued in 2002 (Chart 1). By 2006, population growth dropped to 50 new residents. This is an 80% *drop* in new residents from the high of 2002. The falling growth trend for new occupancy permits (Chart 1) closely matches that for new residents (Chart 2).

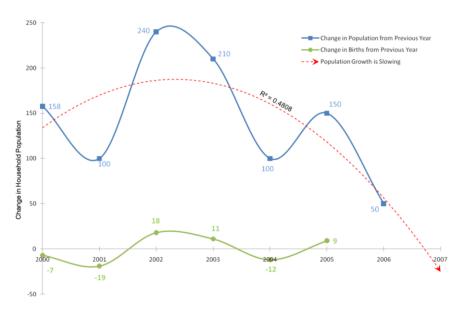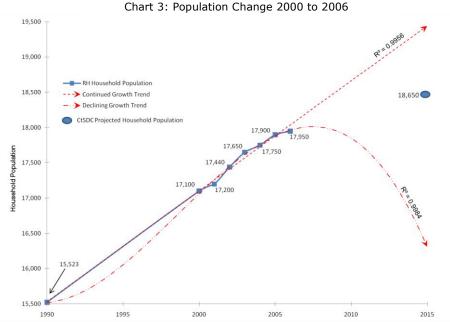Chart 2: Population Change 2000 to 2006



Chart 2 (above) also shows that births parallel housing and population trends. In 2003, Rocky Hill peaked in resident births with 200 births (29 more than in 2001). However, in 2004 there were 12 *fewer* births (188) than in 2003.

Chart 3 (below) illustrates the growth in Rocky Hill's household population from 1990 to 2006 (2007 counts are not available). There are two hypothetical, and divergent, purely statistical forecasts. In the "Continued Growth Trend", population growth would follow the trend from 1990 to 2006, reaching approximately 19,500 by 2015. Alternatively, in the "Declining Growth Trend" population growth would crest and reach a peak of approximately 18,100 in 2008.

These two forecasts (Continued Growth and Declining Growth) are typical of the purely statistical methodology on which Prowda relies. Such approaches use information that describes the local situation without regard for external factors.

Chart 3: Population Change 2000 to 2006



The article (right) illustrates the consequences of using local short-term trends (Cohort-Survival) for long-term forecasts. For this reason, demographic experts do not commonly use Cohort-Survival methodology to calculate long-term forecasts.

In contrast, the CtSDC forecasting methodology builds off a broad set of data extending beyond the town limits of Rocky Hill. CtSDC uses Cohort-Component methodology which is widely used by expert demographers. CtSDC forecasts growth in Rocky Hill's population, but at a slower pace than previously experienced, with household population reaching approximately 18,650 in 2015. However, the future population of Rocky Hill will be much older than the current population, and thus have fewer children per household.[1]

Calculating the household population needed to support forecasted school enrollment offers a useful check on the reliability of a forecast. Prowda's enrollment peaks at 2,770 in 2015. This enrollment would require a household population of approximately 19,200. This is near the top end of possible population growth (Chart 3) and requires adding 139 new residents annually, which is far above the current trend.

The Hartford Courant, March 24 2008



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[1] The population projection for Rocky Hill is available at: (http://ctsdc.uconn.edu/Projections-Towns/CT_RockyHill_2000to2030_PopProjections.xls

Similarly, Rocky Hill would need to add, on average, 62 new single-family households (not age 55+) each year from 2008 through 2015.  Again, this is inconsistent with current experience and conditions in the housing and mortgage markets.  Furthermore, Rocky Hill has had only three years (2000, 2002, and 2003) since 2000 (Chart 1, page 3) in which more than 60 new occupancy permits were issued.  Rocky Hill has issued a yearly average of 57 (median of 55) new occupancy permits from 2000 through 2007.

There is no long-term historical evidence to support the enrollment growth required by the Prowda forecast.

# Rocky Hill Public School Enrollment

Chart 4 (below) compares forecasted enrollment figures from CtSDC and Prowda. Please note the margin-of-error associated with the forecasts.
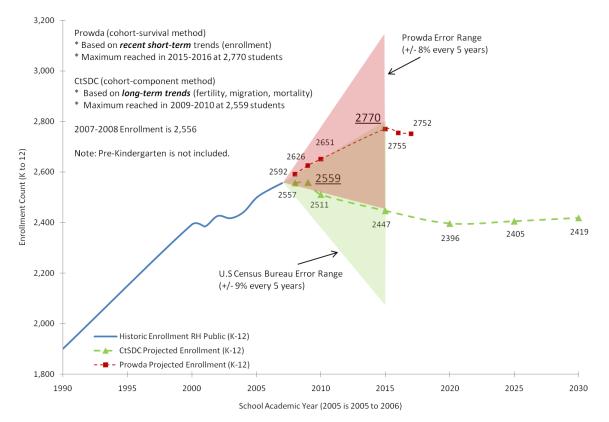
Chart 4: Forecast K-12 Public School Enrollment



CtSDC forecasts the K-12 population will peak at 2,559 in 2009. This follows from growth trends 1990 to 2005 and takes into account established long-term demographic trends.

Prowda forecasts the K-12 population will peak at 2,770 in 2015. This outcome presumes the 2000-2005 growth trend continues. Chart 1 (page 3) and Chart 2 (page 3) show this assumption is difficult to defend as the 2000-2005 growth spike in Rocky Hill has ended. Furthermore, the regional economic outlook does not support a presumption of a significant increase in housing construction.

Chart 5 (below) supports the projected drop in K-12 enrollments CtSDC projects. Of the six towns that adjoin Rocky Hill, only Glastonbury experienced increased enrollment from October 2006 to October 2007. There was a net loss of 22 among these seven towns. Consistent with this pattern, from October 2006 to October 2007, 67% (131 out of 196) of Connecticut's public schools districts had no growth or negative enrollment change. Statewide, public school enrollment (PK to 12) dropped 3,995 from October 2006 to October 2007.[2]  CtSDC forecasts that the age cohort 0-19 will decline statewide by 75,000 from 2000 to 2030.
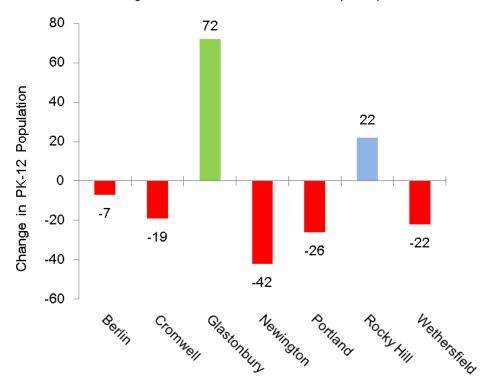
Chart 5: Change in PK-12 Enrollment 2006 to 2007 (Oct. 1)



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[2] Counts from preliminary enrollment data from the CT State Department of Education.

# Conclusions

There is no demographic data or forecasted economic growth currently available suggesting Rocky Hill Public Schools will outgrow its current enrollment capacity of 3,000. Furthermore, well-accepted demographic methodologies, relying on long-term trends, forecast Rocky Hill Public Schools experiencing a decline in enrollment beginning with the 2010-2011 school year.

This analysis from the CtSDC anticipates little growth in enrollments in the short term and a decline in the longer term, and thus foresees no need to expand the capacity of the Rocky Hill school system. However, Rocky Hill schools may need new or updated facilities to provide the quality of instructional environment needed for their school-age population, an issue to which this study does not speak.

Respectfully Submitted By:

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