Corning-Painted Post Area School District

POPULATION AND ENROLLMENT FORECASTS, 2008 - 2018

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EXECUTIVE SUMMARY

1. The Corning-Painted Post district's fertility rates over the life of the forecasts are below replacement levels. (TFR of 1.83 vs. Replacement TFR of 2.1)

2. Most in-migration to the district occurs in the 0-to-10 and 25-to-40 age groups.

3. The 18-to-24 year old population continues to leave the district, going to college or moving to other urban areas.

4. The primary factor causing the district's enrollment to decline is the continued and growing rate of out-migration in the 18-to-24 year old age group and the slowing in-migration of younger families.

5. Changes in year-to-year enrollment (particularly before 2014) largely will be due to smaller cohorts entering and moving through the system in conjunction with larger cohorts leaving the system.

6. As in-migration of young families continues and smaller grade cohorts enter into the school system, total enrollment will continue to decline. However, enrollment will decrease at a slower rate than during the last several years of the forecasts, particularly after 2014.

7. As the district continues to have less new home construction, the rate and magnitude of existing home sales will become the increasingly dominant factor affecting the amount of population and enrollment change.

8. Total enrollment is forecasted to decrease by 292 students, or -5.5%, between 2008-09 and 2013-14. Total enrollment will decline 59 students, or -1.2%, from 2013-14 to 2018-19.

INTRODUCTION

By demographic principle, distinctions are made between projections and forecasts. A projection extrapolates the past (and present) into the future with little or no attempt to take into account any factors that may impact the extrapolation (e.g., changes in fertility rates, housing patterns or migration patterns) while a forecast results when a projection is modified by reasoning to take into account the aforementioned factors.

To maximize the use of this study as a planning tool, the ultimate goal is not simply to project the past into the future, but rather to assess various factors' impact on the future. The future growth of each school district is influenced by a variety of factors. Not all factors will influence the entire school district at the same level. Some may affect different areas at dissimilar magnitudes and rates causing changes at varying points of time within the same district. Forecaster's judgment based on a thorough and intimate study of the district has been used to modify the demographic trends and factors to more accurately predict likely changes. Therefore, strictly speaking, this study is a forecast, not a projection; and the amount of modification of the demographic trends varies between different areas of the district as well as within the timeframe of the forecast.

The calculation of population forecasts of any type, and particularly for smaller populations such as a school district or its attendance areas, realistic suppositions must be made as to what the future will bring in terms of age specific fertility rates and residents' demographic behavior at certain points of the life course. The demographic

history of the school district and its interplay with the social and economic history of the area is the starting point and basis of most of these suppositions particularly on key factors such as the age structure of the area. The unique nature of each district's and attendance area's demographic composition and rate of change over time must be assessed and understood to be factors throughout the life of the forecast series. Moreover, no two populations, particularly at the school district and attendance area level, have exactly the same characteristics.

The first part of the report will examine the assumptions made in calculating the population forecasts for the Corning-Painted Post Area School District. The remainder of the report is an explanation and analysis of the district's population forecasts and how they will affect the district's grade level enrollment forecasts.

ASSUMPTIONS

For these forecasts, the mortality probabilities are held constant at the levels calculated for the year 2000. While the number of deaths in an area are impacted by and will change given the proportion of the local population over age 65, in the absence of an extraordinary event such as a natural disaster or a breakthrough in the treatment of heart disease, death rates rarely move rapidly in any direction, particularly at the school district or attendance area level. Thus, significant changes are not foreseen in district's mortality rates between now and the year 2018. Any increases forecasted in the number of deaths will be due an increase in the number of residents aged 65 and older.

Similarly, fertility rates are assumed to stay fairly constant for the life of the

forecasts. Like mortality rates, age specific fertility rates rarely change quickly or dramatically, particularly in small areas. In fact the vast majority of year to year change in an area's number of births is due to changes in the number of women in child bearing ages (particularly ages 20-29) rather than any fluctuation in an area's fertility rate.

The total fertility rate (TFR), the average number of births a woman will have in her lifetime, is estimated to be 1.83 for the total district for the ten years of the population forecasts. The age specific fertility rates are also held constant for all areas for the life of the forecast. A TFR of 2.1 births per woman is considered to be the theoretical "replacement level" of fertility necessary for a population to remain constant in the absence of in-migration. Therefore, over the course of the forecast period, fertility will not be sufficient, in the absence of migration, to maintain the current level of population within the Corning-Painted Post Area School District.

A close examination of data for Corning-Painted Post Area School District has shown the age specific pattern of net migration will be nearly constant throughout the life of the forecasts. While the number of migrants has changed in past years for the Corning-Painted Post area (and will change again), the basic age pattern of the migrants has stayed nearly the same over the last 20 years. Based on the analysis of data it is safe to assume this trend to remain unchanged into the future. This pattern of migration shows most of the local out-migration occurring in the 18-to-24 year old age group, as young adults leave the area to go to college or move to other urban areas. The second group of migrants is those householders aged 65 and older who are downsizing and moving to smaller homes. Most of the local in-migration occurs in the 0-to-10 and 25-to-40 age groups, primarily consisting of younger adults and their

children.

As Corning-Painted Post Area School District is not currently contemplating any drastic changes to its structure, the forecasts also assume the current economic, political, infrastructure (with a few notable exceptions), social, and environmental factors of the district and its attendance areas will remain the same through the year 2017.

Below is a list of assumptions and issues that are specific to the Corning-Painted Post area. These issues have been used to modify the forecast models to more accurately predict the impact of these factors on each areas population change. Specifically, the forecasts for the Corning-Painted Post Area school district assume that throughout the study period:

a. There will be no short term economic recovery in the next 18 months and the national, state or regional economy does not go into deep recession at anytime during the 10 years of the forecasts;
b. Interest rates have reached an historic low, and will not fluctuate more than one percentage point in the short term; the interest rate for a 30 year fixed home mortgage stays below 7%;
c. The rate of mortgage approval stays at 1999-2002 levels and lenders do not return to “sub prime” mortgage practices.
d. The rate of housing foreclosures does not exceed 125% of the 2005-2007 average of Corning-Painted Post area for any year in the forecasts.
e. All currently planned, platted and approved housing developments are built out and completed by 2015. All housing units constructed are occupied by 2018.
f. The number of exist home sales in the district that are a results of “distress sales”

(homes worth less than the current mortgage value) will not exceed 20% of total homes sales in the district for any given year.

g. The unemployment rates for the Corning-Painted Post area will remain below 7.5% for the 10 years of the forecasts.
h. The inflation rate for gasoline will stay below 5% per year for the 10 years of the forecasts.
i. There will be no building moratorium within the district;
j. Business within the district and the Greater Corning-Painted Post area will remain viable,
k. Housing turnover rates (sale of existing homes in the district) will remain at their current levels. The majority of existing home sales are made by home owners over the age of 55.
l. Private school attendance rates will remain constant; and
m. The rate of student transfers between the district's schools remains constant.

If a major employer in the district or in the Greater Corning-Painted Post area either moves out of the area or expands its operations, the population forecasts would need to be adjusted to reflect the changes brought about by the change in economic and employment conditions. The same holds true for any type of natural disaster, major change in the local infrastructure (e.g., highway construction, water and sewer expansion, etc.), further economic downturn, additional weakness in the housing market or any instance or situation that causes rapid and dramatic change that could not be foreseen at the time of the forecasts.

The high proportion of high school graduates from the Corning-Painted Post Area School District that continue on to college or move to urban areas outside of the district for employment is a significant demographic factor. Their departure is a major reason for the extremely high out-migration in the 18-to-24 age group and was taken into account when calculating these forecasts. The out-migration of graduating high school seniors is expected to continue over the period of the forecasts, and the rate of out-migration has been forecasted to remain the same over the life of the forecast series. Given that the district will have progressively larger graduation classes over the next 10 years, the number of out migrants from the district will increase.

Finally, all demographic trends (i.e., births, deaths, and migration) are assumed to be linear in nature and annualized over the forecast period. For example, if 1,000 births are forecasted for a 5-year period, a roughly equal number, or proportion of the births are assumed to occur every year, approximately 200 per year. Actual year-to-year variations do and will occur, but overall year to year trends are expected to be constant.

DATA

The data used for the forecasts come from a variety of sources. Enrollments-by-grade and attendance center were provided by the Corning-Painted Post Area School District for school years 2004-2005 to 2008-09. Birth and death data were obtained from the New York State Department of Health for the years 2000 through 2006. Age Specific fertility rates are calculated from the age distribution found in the 2000 Census results for the district and it's attendance areas. The net migration values were

calculated using Internal Revenue Service migration reports for the years 2000 through 2006. The data used for the calculation of migration models came from the United States Bureau of the Census, 1995 to 2000, and the models were assigned using an economic-demographic system. The base age-sex population counts used are from the results of the 2000 Census.

To develop the forecast models, past migration patterns, current birth patterns, the magnitude of net migration, the distribution of the population by age and sex, the rate and type of existing housing unit sales, and future housing unit construction are considered to be primary variables. In addition, the change in household size relative to the age structure of the forecast area was addressed. While there was a substantial drop in the average household size in the Corning-Painted Post area as well as most other areas of the state during the previous 20 years, the rate of this decline has been forecasted to slow over the next ten years.

METHODOLOGY

The population forecasts presented in this report are the result of using the Cohort-Component Method of population forecasting (Siegel, and Swanson, 2004: 561-601) (Smith et. al. 2004). As stated in the **INTRODUCTION**, the difference between a projection and a forecast is in the use of explicit judgment based upon the unique features of the area under study. Strictly speaking, a cohort-component projection refers to the future population that would result if a mathematical extrapolation of historical trends were applied to the components of change (i.e., births, deaths, and

migration). Conversely, a cohort-component forecast refers to the future population that is expected because of a studied and purposeful selection of the components of change believed to be critical factors of influence in each specific area.

Five sets of data are required to generate population and enrollment forecasts. These five data sets are:

a. a base-year population (here, the 2000 Census population for the Corning-Painted Post Area School District and its attendance areas);

b. a set of age-specific fertility rates for each attendance area to be used over the forecast period;

c. a set of age-specific survival (mortality) rates for each attendance area;

d. a set of age-specific migration rates for each attendance area; and

e. the historical enrollment figures by grade.

The most significant and difficult aspect of producing enrollment forecasts is the generation of the population forecasts in which the school age population (and enrollment) is embedded. In turn, the most difficult aspect of generating the population forecasts is found in deriving the rates of change in fertility, mortality, and migration. From the standpoint of demographic analysis, the Corning-Painted Post Area School District and its eight elementary attendance center districts are classified as “small area” populations (as compared to the population of the state of New York or to that of the United States). Small area population forecasts are more difficult to calculate because local variations in fertility, mortality, and migration may be more irregular than those at the state or national scale. Especially difficult to project are migration rates for local

areas, because changes in the area's socioeconomic characteristics can quickly change current patterns (Peters and Larkin, 2002.)

The population forecasts for Corning-Painted Post Area School District were calculated using a cohort-component method with the populations divided into male and female groups by five-year age cohorts that range from 0-to-4 years of age to 85 years of age and older (85+). Age- and sex-specific fertility, mortality, and migration models were constructed to specifically reflect the demographic characteristics of Corning-Painted Post Area School District's attendance center districts and the total school district.

The enrollment forecasts were calculated using a modified average survivorship method. Average survivor rates (i.e., the proportion of students who progress from one grade level to the next given the average amount of net migration for that grade level) over the previous five years of year-to-year enrollment data were calculated for grades two through twelve.

The survivorship rates were modified, or adjusted, to reflect the average rate of forecasted in-migration of 5-to-9 and 10-to-14 year olds to each of the attendance centers in Corning-Painted Post Area School District for the period 2000 to 2005. These survivorship rates then were adjusted to reflect the forecasted changes in age-specific migration the district should experience over the next five years. These modified survivorship rates were used to project the enrollment of grades 2 through 12 for the period 2005 to 2010. The survivorship rates were adjusted again for the period 2010 to 2015 to reflect the predicted changes in the amount of age-specific migration in the districts for the period.

The forecasted enrollments for kindergarten and first grade are derived from the 5-to-9 year old population of the age-sex population forecast at the elementary attendance center district level. This procedure allows the changes in the incoming grade sizes to be factors of forecasted population change and not an extrapolation of previous class sizes. Given the potentially large amount of variation in Kindergarten enrollment due to parental choice, changes in the state's minimum age requirement, and differing district policies on allowing children to start Kindergarten early, first grade enrollment is deemed to be a more accurate and reliable starting point for the forecasts. (McKibben, 1996) The level of the accuracy for both the population and enrollment forecasts at the school district level is estimated to be $\pm$2.0% for the life of the forecasts.

RESULTS AND ANALYSIS OF THE POPULATION FORECASTS

From 2005 to 2015, the populations of Corning-Painted Post Area School District, the state of New York, and the United States are forecasted to change as follows; Corning-Painted Post Area School District will grow by 0.7 %, Steuben County will decline by -1.4%, New York will increase by 1.2%; and the United States increase by 11.1% (see Table 1).

Table 1: Forecasted Population Change, 2005 to 2015

	2005	2010	2015	10-Year Change
U.S. (in millions)	296	312	329	11.1%
New York	19,263,000	19,388,000	19,498,000	1.2%
Steuben County	97,430	96,790	96,070	-1.4%
C-PPASD	33,310	33,470	33,540	0.7%

A number of general demographic factors will influence the growth rate of the Corning-Painted Post Area School District during this period, and include the following:

a. The Baby Boom generation will have passed through prime childbearing ages by 2003, thereby reducing the overall proportion of the population at risk of having children;

b. The remaining population in childbearing ages (women ages 15-45) will have fewer children;

c. The 18-to-24 year old population, in prime childbearing ages, will continue to leave the area to go to college or to other urban areas, with the magnitude of this out-migration flow slowly increasing; and,

d. The district will experience continued increase in housing stock, with an average of 50 new units being built each year through 2010. New housing construction will continue after that point however housing starts will only average 30 per year until 2018.

The Corning-Painted Post Area School District will continue to experience significant in-migration (movement of new young families into the district) over the next 10 years. However, the size and age structure of the pool of potential in-migrants will change and the effects of the in-migration of families on population growth will be greatly offset by the continued steady growing out-migration of young adults as graduating seniors continue to leave the district.

From 2005 to 2010, the Corning-Painted Post Area School District's population is forecasted to increase by 160, or 0.5%, to 33,470. From 2010 to 2015, the population is forecasted to continue to increase by an additional 130 persons or 0.4%. During the ten years of the forecasts, five of the eight elementary attendance areas are forecasted to increase in population with the growth rates ranging from 2.1% in the Erwin Valley area to 4.6% in the Gregg area (See Table 2 for population forecast results of each elementary attendance area). The Severn and Smith areas will experience population declines of 0.5% and 6.9% respectively over the next 10 years. The population of the Winfield area will show no change. However it is important to note that most attendance areas will experience a decline in their growth rates after 2010.

While all elementary areas will see some amount of gross in-migration, (primarily in the 0-to-14 and 25-to-40 age groups,) all areas also will continue to see gross out-migration. This out-migration primarily will be young adults, 18-to-24 years old, as graduating seniors continue to leave the district to go to college or seek employment in larger urban areas

Table 2: Forecasted Elementary Districts Population Change, 2005 to 2015

	2005	2010	*2005-2010 Change*	2015	*2010-2015 Change*	***2005-2015 Change***
Carder	6,810	6,930	*1.7%*	7,010	*1.2%*	*2.9%*
Erwin Valley	4,230	4,310	*1.9%*	4,320	*0.2%*	*2.1%*
Gregg	3,880	3,990	*2.8%*	4,060	*1.8%*	*4.6%*
Lindley	2,000	2,050	*2.4%*	2,070	*1.0%*	*3.5%*
Phillips	2,580	2,630	*1.9%*	2,640	*0.4%*	*2.3%*
Severn	6,370	6,380	*0.2%*	6,340	*-0.6%*	*-0.5%*
Smith	4,960	4,700	*-5.5%*	4,620	*-1.7%*	*-6.9%*
Winfield	2,480	2,480	*0.0%*	2,480	*0.0%*	*0.0%*
Total	**33,310**	**33,470**	***0.5%***	**33,540**	***0.2%***	***0.7%***

As stated in the **ASSUMPTIONS** and emphasized above, the impact of the high proportion of high school graduates that leave the district to continue on to college or to seek employment in large urban areas is significant to the size and structure of the future population of the district. Up to 70% of all births occur to women between the ages of 20 and 29. As the graduating seniors continue leave the district, the number of women at risk of childbirth during the next decade declines. Consequently, even though the district's fertility rate is just slightly below the state average, the small number of women in the district in prime child bearing ages will keep the number of births growing at a modest rate despite the county having a rapidly growing population. This will require the district to become quite dependant on the in-migration of children just to maintain current grade cohort sizes, let alone experience enrollment growth rates similar to those seen the last 10 years.

As a general rule of thumb, for every two seniors that leave the district, one new household must move into the district to replace the young adults that have left and to

replace the lost potential fertility. Over the course of the forecast period, the average number of graduating seniors will be approximately 400 per year and at least 75% of them will move out of the district within three years of graduation. Using the general rule, approximately 150 new families will be required to move into the district every year or 1,500 new families for the ten-year study period to replace the graduating seniors and their lost fertility. It is forecasted that the impact of the steadily increasing out-migration of young adults will continue to be somewhat offset by young family (30-40 year old householders) in-migration and that the total number of births will be decline modestly throughout the forecast period.

Table 3: Household Characteristics by Elementary Districts, 2000 Census

	HH w/ Pop Under 18	% HH w/ Pop Under 18	Total Households	Household Population	Persons Per Household
Carder	907	33.5%	2,710	6,669	2.46
Erwin Valley	626	39.6%	1,582	4,015	2.54
Gregg	483	26.9%	1,795	3,807	2.12
Lindley	280	40.3%	695	1,906	2.74
Phillips	351	34.9%	1,005	2,533	2.52
Severn	852	31.8%	2,681	6,255	2.33
Smith	650	29.7%	2,189	5,084	2.32
Winfield	380	39.7%	956	2,454	2.57
Total	**4,529**	**33.3%**	**13,613**	**32,723**	**2.40**

Another factor that needs to be considered is the birth dynamics of the last twenty years. An examination of national birth trends shows there was a large "Baby Boomlet" born between 1980 and 1995. This Boomlet was nearly as large as the Baby Boom of the 1950s and 1960s. However, unlike the Baby Boom, the Boomlet was a regional and not a national phenomenon (McKibben, et. al. 1999). Because New York

experienced only a modest Baby Boomlet, (particularly in the western part of the state) most of the expected enrollment growth will have to result from in-migration and not from an increase in the grade cohort size.

Clearly, the dominant factor that has affected the population growth rates of Corning-Painted Post over the last 20 years has been the number and pace of new homes constructed. However, the dynamics of this in migration flow are more complex than many realize. While it is true that the households moving into these new housing units bring many school age (particularly elementary) children into the district, they also bring many preschool age children as well (the Erwin Valley area is an excellent example of the trend). Consequently, the full impact of the growth in new home construction is not seen immediately in elementary enrollment as it takes three to seven years for all of the children to age into the schools. This is a key issue since the number of births in Corning-Painted Post is insufficient to maintain current enrollment levels. The number of women living in the county ages 20-29 (prime child bearing ages) is too small to produce birth cohorts that are the same size as those currently in the elementary grades.

Of additional concern are the issues of the district's aging population and the growing number of "empty nest" households, particularly in the Lindley and Severn attendance areas. For example, after the last school age child leaves high school, the household becomes an "empty nest" and most likely will not send any more children to the school system. In most cases, it takes 20 to 30 years before all original (or first time) occupants of a housing area move out and are replaced by new, young families with children.

Table 4: Householder Characteristics by Elementary Districts, 2000 Census

	Percentage of Householders aged 35-54	Percentage of Householders aged 65+	Percentage of Householders Who Own Homes
Carder	44.4%	19.9%	72.1%
Erwin Valley	46.3%	21.8%	68.8%
Gregg	36.8%	27.7%	55.4%
Lindley	47.5%	17.0%	87.8%
Phillips	41.3%	27.5%	84.0%
Severn	41.8%	26.8%	66.4%
Smith	38.1%	32.5%	76.7%
Winfield	43.7%	20.5%	69.1%
Total	**42.0%**	**25.0%**	**70.6%**

This principle also applies to children leaving elementary school and moving on the middle schools or high schools . Households can still have school age children in the district's school, but also in effect be "empty nest" of elementary age children.

As a result of the "empty nest" syndrome, the many attendance areas in Corning-Painted Post area will see a steady rise in the median age of their populations, even while the district as a whole continues to attract some new young families. It should be noted that many of these "childless" households are single persons and/or elderly.

Consequently, even if many of these housing units "turnover" and attract households of similar characteristics, they will add little to the number of school age children in the district. Furthermore, many of the empty nest households will "down size" to smaller households (frequently moving to elder friendly housing units) within the district. In these cases new housing units may be built in an area, yet there is no corresponding increase in school enrollment.

Table 5: Single Person Households and Single Person Households over age 65 by Elementary Districts, 2000 Census

	Percentage of Single Person Households	Percentage of Single Person Households that are 65+
Carder	27.7%	30.4%
Erwin Valley	26.2%	44.2%
Gregg	40.2%	38.3%
Lindley	17.3%	37.5%
Phillips	23.5%	50.0%
Severn	32.0%	45.2%
Smith	31.0%	54.3%
Winfield	26.4%	34.9%
Total	**29.6%**	**42.0%**

There are several additional factors that are responsible for the difference between growth in population and growth in housing stock. Included among these factors are: people building new "move up" homes in the same area or district, (an important point since the children in move up homes tend to be of middle or high school age); children moving out of their parents homes and establishing residence in the same area; the increase in single-individual households; and divorce, with both parents remaining in the same area.

RESULTS AND ANALYSIS OF ENROLLMENT FORECASTS

Elementary Enrollment

The total elementary enrollment of the district is forecasted to decrease from 2,342 in 2008 to 2,293 in 2012, a drop of 51 students or -2.1%. From 2013 to 2018, elementary enrollment is expected to decline by 168 students to 2,125. This would represent a -7.3% decrease over the five-year period. Seven of the current eight elementary attendance areas will experience a net decline in enrollment over the next ten years, with Gregg attendance area experiencing an 11.6% increase.

However, examining the amount of enrollment change over the 10 year period tends to mask a significant amount of variation in the enrollment trends during this time span. From 2008 to 2013, only four attendance areas will see a true decrease in student populations while the remaining areas will have will see enrollment increase. After 2013 this trend completely changes as all of the elementary attendance areas show a net decline in students for the period 2013 to 2018.

The reason for this accelerated downturn in elementary enrollment pattern is the convergence of the effects of three factors, all occurring roughly in 2012. These factors are the cohort sizes in the elementary grades becoming unequal, the slow down in the number new homes/existing homes sold and the rise in the number of empty nest households. Each of these factors will contribute in part to the decline in elementary enrollment after 2012.

Table 6: Total Elementary Enrollment, 2008, 2013, 2018

	2008	2013	2008-2013 Change	2018	2013-2018 Change	2008-2018 Change
Carder	476	484	*1.7%*	464	*-4.1%*	*-2.5%*
Erwin Valley	419	436	*4.1%*	381	*-12.6%*	*-9.1%*
Gregg	224	261	*16.5%*	250	*-4.2%*	*11.6%*
Lindley	144	150	*4.2%*	135	*-10.0%*	*-6.3%*
Phillips	193	185	*-4.1%*	169	*-8.6%*	*-12.4%*
Severn	396	386	*-2.5%*	358	*-7.3%*	*-9.6%*
Smith	271	210	*-22.5%*	201	*-4.3%*	*-25.8%*
Winfield	219	181	*-17.4%*	167	*-7.7%*	*-23.7%*
Total	**2,342**	**2,293**	***-2.1%***	**2,125**	***-7.3%***	***-9.3%***

Over the last several years, one of the main reason elementary enrollment was changing at a modest pace was due to the fact that the number of children entering Kindergarten and 1st grade was roughly the same size as the number leaving elementary school after completing 5th grade. After 2013, the number of students in 5th grade will be over 365 each year as opposed to the 350 average the district will experience over the next five years. Thus even if the rate of population growth continued at the same pace as the 2000-2005 period, the rate of elementary enrollment growth would have slowed down as the number of students leaving grade 5 increases each year.

The second factor is the slow down in the housing construction and home sales industry. While it is true that the Corning-Painted Post Metropolitan Area housing market has done much better than the national trends the last 2 years, it is not immune the effects of a tightening of the mortgage market and in increasingly restrictive lending practices. Corning-Painted Post, like most areas of the county saw the number of

existing and new home sales jump significantly in 2003 to 2006 as the expansion of sub-prime mortgage practices allowed many people to purchase new homes. Given the turmoil the collapse of the sub prime market has caused, it can be assumed that there will not be a return to these lending practices anytime in the near future. Consequently, Corning-Painted Post (like most suburban areas in the country) will see the number of existing and new homes sales drop back to the levels experienced before the sub prime boom.

The third factor is the number of households in the district that don't have any children under the age of 18 and that will be "turning over" in the next ten years. Most of the households that currently have elementary aged children living in them also don't plan on having any more children. Hence, these households will not contribute to the number of elementary children in the district until the current occupants move out of the housing units.

The demographic factors that will become the most influential over the next ten years are the growth rate of empty nest household in the attendance areas, the number of sales of new homes, the rate and magnitude of existing housing unit "turn over," the relative size of the elementary and pre-school age cohorts and each area's fertility rate. Each of these factors will vary in the scale of their influence and timing of impact on the enrollment trends of any particular elementary area.

Attendance areas that are currently experiencing a rise in empty nest households tend to be the same areas that are not the recipients of any large sustained new housing construction. Thus, areas like Smith and Severn will see net declines in elementary enrollment. While these areas will continue to see net in migration of

families, it will not be at a sufficient rate to maintain current attendance levels.

As more elementary attendance areas become completely dependent upon existing home sales to attract new families, the overall elementary enrollment trend of the district will decline. Areas such as Lindley and Erwin Valley will see their elementary enrollments peak by the end of the decade and then slowly decline. Thus, the best primary short- and long-term indicator for enrollment change in most of the attendance area will be the year-to-year rate of housing turnover. If the Total Fertility Rates of all the attendance areas remain at their current low levels (and they are forecasted to do so) they will insure that enrollments will continue to see slowing growth (or outright declines) even if the level of net out-migration is greatly reduced.

It is important to note that not all new housing construction results in an increase in elementary enrollment. Frequently in cases where the new home construction is primarily move up houses (priced $417,000 or higher) the impact on enrollment is felt more at the middle and high school levels than at the elementary level. These homes are usually purchased by families who have completed their childbearing and the children they do have tend to be ages 10 and older.

Yet, equally important are the factors of housing turn-over and "family formation." Areas with existing homes that have a large proportion of housing units owned by their residents and have a large proportion of their homeowners age 65 or older are prime candidates to experience a growing amount of housing turn-over. In the Corning-Painted Post Area school district, areas such as Phillips Elementary is an excellent example of this trend. This area, which would normally see a dramatic drop in their enrollment numbers as the number of households with school age children decline, will

see a more moderate changes in their student populations as young families move into formerly empty nest housing units.

Additionally, areas that are characterized by the relatively high percentage of rental housing units and large concentrations of young adults will experience an increase in student enrollment. In these cases, young adults or the newly married, move to these areas and establish households. Because the population is in prime child bearing ages, these areas also have both a high absolute number of births and a higher than the district average birth rate. Later, as family size increases, these families often move to single family homes--usually moderately priced single family homes in other parts of the school district.

Consequently, the Gregg Elementary area and other sub-attendance areas with similar characteristics, serve as feeder areas for outlying attendance areas in the district. This internal migration flow is far more important in determining future enrollment trends than the construction of new single family homes since an average of five existing homes are sold for every new home built. Indeed, a close examination of the year to year trends in the family formation areas will serve as an excellent bellwether for short and medium term changes in areas that depend on in-migration for enrollment growth.

However with the slowdown in housing sales and the implementation of new “restrictive” lending practices, the internal out migration from areas like Gregg Elementary to other parts of the district has been dramatically slowed. Children who in past years would have been born while their parents lived in the Gregg area but started school after the parents had moved to another area will be staying in the Gregg

attendance area longer. Thus, this area, with it's reduced out migration (and not necessarily with increased in migration) will see its total enrollment increase, at least over the next 5 years.

Middle School Enrollment

The total middle school enrollment for the district is forecasted to decline from 1,205 in 2008 to 1,135 in 2013, a 70 student or 5.8% decrease. Between 2013 and 2018 middle school enrollment is forecasted to grow to 1,165, an increase of 30 students or 2.6%. The difference in the size of the individual grade cohorts and the aging of students through the school system are the primary reasons why the middle school enrollment trends deviate from those of the elementary grades.

There are currently smaller grade cohorts enrolled in the elementary school grades compared to those in the middle schools' grade cohorts. As these elementary school cohorts "age" into middle school and smaller middle school cohorts age into high school, they decrease the overall middle school enrollment level. Note how the size of the incoming 6th grade class is usually smaller than the previous year's 8th grade class, which has now moved on the high school. As long as this "bubble" in the enrollment pattern exists, there will be to some degree, an decrease in middle school enrollment, at least until the 2013-2014 school year.

After the 2013-2014 school year, this cohort trend reverses. There will then be larger grade cohorts entering the middle school grades compared to those leaving. The result is a modest level of increased middle school enrollment until 2018. This trend will most likely continue beyond the end of the forecasts series ending some time after

2020.

These enrollment trends will not be consistent among the middle school attendance areas. The Corning Free Academy will experience a relatively smaller decline in middle school enrollment over the next five years. The elementary areas that feed into C.F.A. are those that will experience the smallest amount of cohort differential over the next five years. There is a more modest difference in the sizes of the elementary and middle school grade cohort in this area hence the bubble effect is not nearly as pronounced. Northside Middle School will see an enrollment pattern that has a steeper decline than the overall district middle school enrollment trends over the next five years. As the smaller elementary cohorts enter middle school, enrollments will decline sharply. But as will be seen at the district level, as soon as this deficit passes through the middle school grades by 2013, enrollment begins to slowly rise.

High School Enrollment

Enrollment at the high school level is forecasted to drop from 1,807 in 2008 to 1,634 in 2013, an decrease of 173 students or 9.6%. After 2013, the high school enrollment trend will reverse and begin to show growth. The net result for the five-year period 2013-to-2018 will be an increase of 79 students to 1,713 or 4.8%. West High School will see a net decrease in enrollment during the 2008 to 2018 period of 97 students or 10.6%. East High School will remain virtually unchanged, increasing 3 students or 0.4% over the next 10 years.

The aforementioned effects of changes in cohort size on middle school

enrollment are also affecting the growth patterns of the high school population. Until the current deficit of students passes through the high school grades, there will be continued decline at the district's high schools. It is important to note that the vast majority of the future high school enrollment growth after 2014 will be a result of students aging into those grades. Specifically, students who already live in the district (and not in- migration of students ages 14 to 18) will be the primary cause of the forecasted increase in high school enrollment.

Additionally, as was the case in the middle schools, the growth in enrollment at the high school level is not distributed evenly across the different schools. High schools whose middle school feeders have a large deficit of students moving through them (in this case West High School) will be the ones experiencing the largest enrollment decline. The main difference is that the growth in the high school enrollment will continue throughout the remained of the forecasts, peaking sometime around the year 2020.

High school enrollment is the most difficult of all the grade levels to project. The reason for this is the varying and constantly changing dropout rates, particularly in grades 10 and 11. For these forecasts the dropout rates for each high school were calculated for each grade over the last five years. These five-year averages were then held constant for the life of the forecast. The effects of any policy changes dealing with any school's drop out rates (the current No Child Left Behind program is an excellent example) will need to be added or subtracted from the forecast results.

REFERENCES

McKibben, J.

The Impact of Policy Changes on Forecasting for School Districts. Population Research and Policy Review, Vol. 15, No. 5-6, December 1996

McKibben, J., M. Gann, and K. Faust.

The Baby Boomlet's Role in Future College Enrollment. American Demographics, June 1999.

Peters, G. and R. Larkin

Population Geography. 7th Edition. Dubuque, IA: Kendall Hunt Publishing. 2002.

Siegel, J. and D. Swanson

The Methods and Materials of Demography: Second Edition, Academic Press: New York, New York. 2004.

Smith, S., J. Tayman and D. Swanson

State and Local Population Projections, Academic Press, New York, New York. 2001.