

CHAPTER 3 POPULATION

INTRODUCTION

It is essential to study population trends for the County and region in order to better understand future population projections. Although predicting population may be complex and complicated at times, resources such as the Kentucky State Data Center (KSDC) and the Kentucky Population Research (KPR) allow population projecting to be facile. An economic boom or decline can have a significant impact on the results, as could natural or man-made calamities. The Population Element of this plan will be based on the figures and estimates of the KSDC, KPR, and the U.S. Census Bureau.

POPULATION TRENDS

According to the U.S. Department of Commerce, Bureau of the Census, Barren County, as a whole, from 2000 to 2010 grew a total of 18,976 people. That results into a 60% increase in population over a 100-year span. Barren County has had an increase every decade except for two. Between 1950 and 1960 the County experienced a slight decrease in population, going from 28,461 to 28,303 and during 1980 to 1990 decreasing only eight people. During the fifty year period from 1960 to 2010, the County experienced a 32.8% population increase of 13,712 persons. During the most recent decade, 2000 to 2010, the population rose 4,140, representing a 10.9% increase, see Table 3.1 and Figure 3.1.

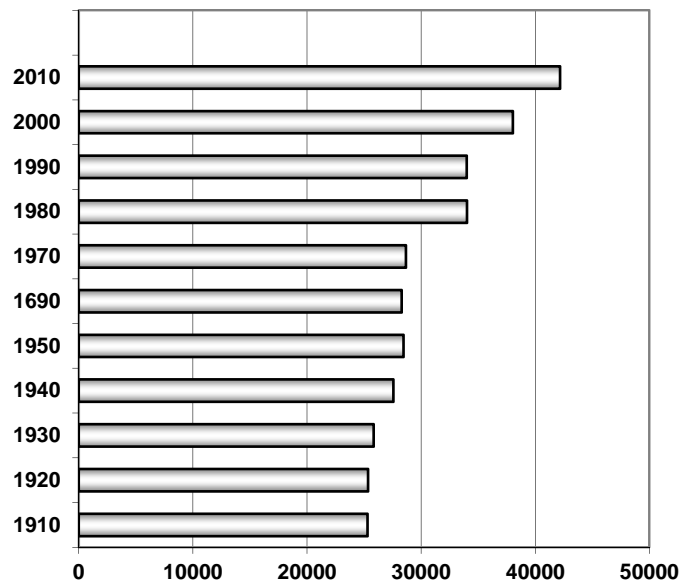
The 2000-2010 decade increase in population could be associated with the regions development of industry and higher education. However, the increase is most likely related to the areas development of technology, transportation infrastructure, and economic development. As seen in Table 3.2, the Barren River Area Development District (BRADD), which encompasses a 10 county area including Barren County, experienced a 10.2% increase in population since 2010.

Table 3.1:
***Population Trends for
Barren County Over a 100-Year Span***

Year	Population	Change Between Periods	Number Change from 1900	% Change from 1900
Barren County				
1910	25,293	-----		-----
1920	25,356	63	2,159	9.3%
1930	25,844	488	2,647	11.4%
1940	27,559	1,715	4,362	18.8%
1950	28,461	902	5,264	22.7%
1960	28,303	-158	5,106	22%
1970	28,677	374	5,480	23.6%
1980	34,009	5,324	10,812	46.7%
1990	34,001	-8	10,804	46.6%
2000	38,033	4,032	14,836	64%
2010	42,173	4,140	18,976	61%

Source: U.S. Census Bureau

Figure 3.1:
***Population Trends for
Barren County Over a 100-Year Span***



Source: U.S. Census Bureau

Table 3.2:
Population Trends for the
BRADD Region Over a 50-Year Span

Year	Population	Change Between Periods	Number Change from 1960	% Change Between Periods
Barren River Area Development District Region				
1960	170,461	-----	-----	-----
1970	186,279	15,818	15,818	9.3%
1980	217,041	30,762	46,580	16.5%
1990	221,719	4,678	51,258	2.2%
2000	255,225	33,506	84,764	15.1%
2010	284,195	28,970	113,734	10.2%

Source: U.S. Census Bureau

An accurate perception of the geographic distribution of the population within Barren County is an important component of the planning process. As seen in Table 3.3, rural and urban spatial distribution shows that the majority of the Cities are urban. The three Cities located within Barren County makeup 39.9% of the population while 60.1% is located in the unincorporated area of the County. The largest concentration of population is found in the County Seat of Glasgow. In addition, the unincorporated urbanized areas around Glasgow have steadily increased in population as well.

Table 3.3:
Rural and Urban Spatial Distributions
by County and City for 2010

Location	Urban	Rural	Total	Percent of Total Population
Unincorporated	177	25,181	25,358	60.1%
Glasgow	12,850	1178	14,028	33.3%
Cave City	1,618	622	2,240	5.3%
Park City	0	517	537	1.3%

Source: U.S. Census Bureau

As expressed earlier, between 1960 and 2010 the County experienced a 49% increase in population. A large percentage of this growth has occurred in the unincorporated areas; however this is a relatively recent occurrence. During the period from 1960 to 1970 the growth was taking place in the Cities,

especially Glasgow and Cave City. However, since 1970 population growth in the unincorporated areas is steadily outpacing that of the Cities.

Since 1960 Glasgow has experienced a 39.3% growth rate. Except for the period between 1980 and 1990, growth has steadily increased in Glasgow. Cave City, the second largest city, experienced a 58% rate increase during the fifty year period. Much of this increase is likely do to available jobs in neighboring Hart County. Park City has seen relatively little increase in population recently after growing early in the period, see Table 3.4.

Table 3.4:
Population Trends of Barren County,
Incorporated Cities and Unincorporated Area
1960 - 2010

Area	1960	1970	1980	1990	2000	2010	% Change 1960-2010
Barren County	28,303	28,677	34,009	34,001	38,033	42,173	49%
Glasgow	10,069	11,301	12,958	12,351	13,019	14,028	39.3%
Cave City	1,418	1,818	2,098	1,953	1,880	2,240	58%
Park City	497	567	614	549	517	537	8%
Incorporated	11,984	13,838	16,019	15,073	15,640	16,805	40.2%
County	16,319	14,839	17,990	18,928	22,363	25,368	55.4%

Source: U.S. Census Bureau

POPULATION PROJECTION

OFFICIAL PROJECTION DATA CENTERS

Kentucky State Data Center (KSDC)

The Kentucky State Data Center is a cooperative effort among the University of Louisville, the Commonwealth of Kentucky and the U.S. Census Bureau in providing training and technical assistance to interested data users.

Kentucky Population Research (KPR)

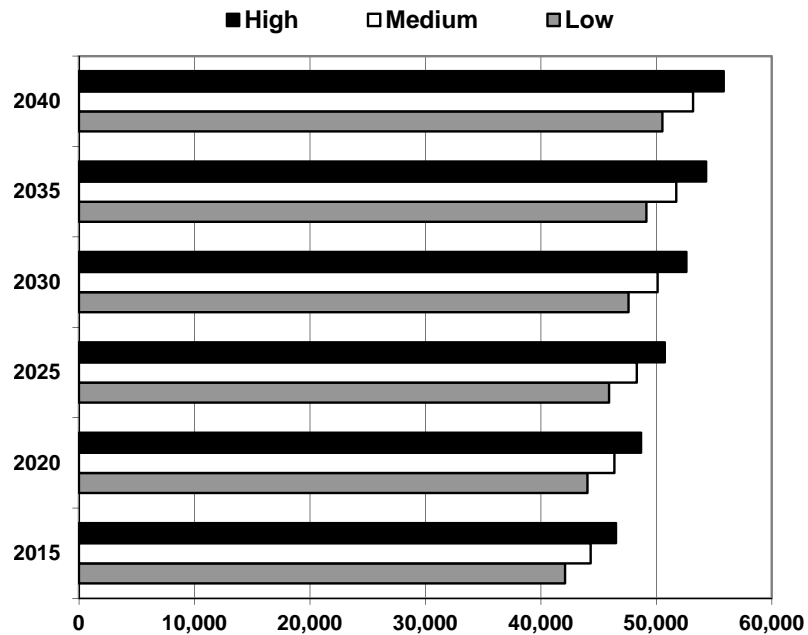
Kentucky Population Research is the applied demographic research program of the University of

Louisville's Urban Studies Institute, providing technical assistance to the Kentucky State Data Center. KPR is Kentucky's representative in the Federal-State Cooperative Program for Population Estimates and Projections. KPR is also in conjunction with the U.S. Census Bureau, the state's official source of population forecasts and estimates.

POPULATION PROJECTION

Population projections for Barren County are published by the Kentucky State Data Center. These forecasts are based on the cohort-component method. Assumptions were made for future births, deaths and migration as derived from recent demographic trends by age, gender and race groups. For planning purposes, the middle range projection series forecast by the Kentucky State Data Center will be utilized. According to the U.S. Census Bureau, Kentucky had a 7.3% increase in population from 2000 to 2010. In relation, Barren County was ahead of the increase for the state by 3.58% for the same decade. Between 2010 and 2040, the population for Barren County is projected to exceed the state in growth by 7.19%. Barren County is projected to grow from 42,173 in 2010 to 53,180 in 2040, representing a 22.6% increase in projected growth, see Table 3.5 and Figure 3.2.

Figure 3.2:
Population Projections for Barren County



Source: Kentucky State Data Center, 2011

Table 3.5:
Population Projections for Barren County and Kentucky through 2030

Year	Population	Change Between Periods	Number Change from 2010	% Change from 2010
Kentucky				
2010	4,339,367	-----	-----	-----
2020	4,672,754	333,387	333,387	7.68%
2030	4,951,178	278,424	611,811	14.01%
2040	5,162,292	211,114	822,925	18.96%
Barren County				
2010	42,173	-----	-----	-----
2020	46,361	4,188	4,188	9.9%
2030	50,105	3,744	7,932	18.8%
2040	53,180	3,073	11,007	26.1%

Source: Kentucky State Data Center, March 2009

BARREN COUNTY GROWTH

The County is being influenced by the rapid growth of neighboring Warren County to the west. Interstate 65 provides good access to jobs for citizens of Barren County, Warren County and neighboring counties as well. With planned development taking place in eastern Warren County and the development of Interstate 66, it is likely people will be moving to Barren County to live, in part due to lower housing costs and the rural character. Barren County population trends are influenced by the same trends affecting the United States overall as well as much of the western civilization. The overall population growth is higher than in the past. As seen in Figure 3.3, birth rates increased in 2010 compared to 2000, while death rates also increased for that period. This trend is expected to continue as shown in Figure 3.3.

GENDER AND AGE CHARACTERISTICS

The age structure for Barren County from 2000 to 2010 is presented in Table 3.6. During 2000 the total amount of males in Barren County was at 48.1% and females represented 51.9%. The total amount of males in the County for 2010 was 20,464 or 48.5%, while females represented 21,709 or 51.5% of the

population. These results show that the population in Barren County is becoming more even in the male-to-female ratio. During the 2000 – 2010 period, the age groups that gained the most in population were the 45 to 64 groups and the over 85 group. The greatest gain was in the 85+ cohort, which had a 47.6% increase. The cohort that lost the most within this time period was the 35-44 age group which declined by 6.4%.

Table 3.6:
Population by Age and Sex 2000 – 2010

Cohorts	2000 Pop.	2010 Pop.	% Change
Total	38,033	42,173	10.8%
Male	18,298	20,464	11.8%
Female	19,735	21,709	10.0%
Under 5	2,432	2,756	13.3%
5-9	2,614	2,760	5.6%
10-14	2,566	2,889	12.6%
15-19	2,587	2,812	8.7%
20-24	2,113	2,238	5.9%
25-34	5,001	5,038	0.7%
35-44	5,964	5,584	-6.4%
45-54	5,171	6,329	22.4%
55-59	2,095	2,720	29.8%
60-64	1,783	2,547	42.8%
65-74	3,010	3,543	17.7%
75-84	1,925	2,120	10.1%
85+	772	837	47.6%
Median Age	38.0	39.7	4.4%
18 and over	28,823	31,957	10.9%
Male	13,598	15,289	12.4%
Female	15,225	16,668	9.5%
21 and over	27,429	30,490	11.2%
65 and over	5,707	6,500	13.9%
Male	2,266	2,694	18.9%
Female	3,441	3,806	10.6%

Source: Kentucky State Data Center and U.S. Census Bureau

An analysis of the cohort projections is also warranted which can identify targeted age group needs and potential issues. In evaluating the projections from the State Data Center, the most notable changes are the decrease in the 35-44 year age group and the slight increase of the 25-34 year

age group. Analysis shows that Barren County’s workforce under age 35 is currently decreasing. This is an important factor economically because cohorts under age 19 and over 65 are considered “Non-Producers” as they are typically out of the workforce due to being school-age or being retired. “Producers” are typically considered in the 20-64 cohorts.

The median age of Barren County has increased in the past decade. Median age is defined as the age which divides the population at the midpoint with two equal size groups, one group younger than the midpoint and the other older. Median age does not indicate a point of concentration in age distribution. The median age for the County in 2000 was 38.0 and rose to 39.7 in 2010, showing as a whole the population is getting older.

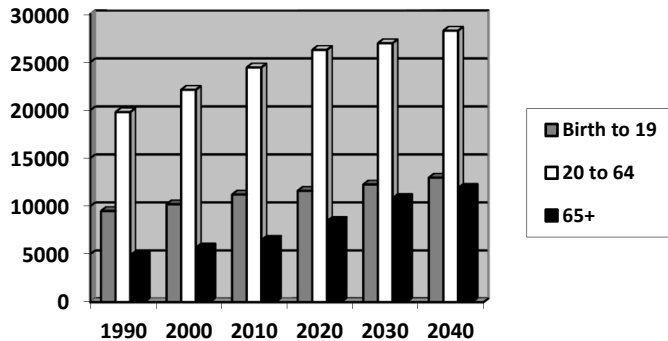
Figure 3.3 presents the Barren County population and projections for the period 1990 – 2040, by age groups into three cohorts, 0-19 years, 20-64 years, and 65 years and older. The 0-19 age cohort has a great significance to the County because of childcare, education, recreation, and other similar needs. The State Data Center projects a steady increase in the 0-19 age group through 2040. In 2010, the 0-19 age cohort comprised 27% of the population, 11,217 persons. By 2040 this cohort is projected to represent 24% of the total population or 12,972 persons.

The State Data Center projects that the State’s population will continue to “gray” as the number of persons over 65 years of age increases. According to the 2010 Census, the percentage of persons 65 years of age and older for the state was 13.3% Barren County was above the state average with 15.4% of the total population within the 65 years and older cohorts. Through the year 2040 the 65 years and older cohort, as a percentage of total population, is projected to increase from 15% to 22% within Barren County. This is an increase of 5,419 persons.

Age dependency ratios are another measure which reflects the composition of Barren County’s population. There are three types of dependency ratios: youth dependency, old age dependency, and total dependency. Youth dependency ratios isolate those under 20, while old age dependency ratios segregate those 65 and older. The total dependency ratio is the relationship of the combined youth and aged population to the intermediate population. This ratio compares the “non-producers” (ages 0-19 and 65+) to the “producers” (20-64). In 2010, Barren County had a total dependency ratio of 1:1.48 (non-producers to producers). Projections indicate a 2020

dependency ratio of 1:1.31; a 2030 dependency ratio of 1:1.16; a 2040 dependency ratio of 1:1.14. These ratios indicate the number of producers, or those ages 20-64, will be increasing. Therefore, it is projected our resident workforce will increase, see Table 3.7.

Figure 3.3:
Barren County Population and Projections
by Age Group 1990 - 2040



Source: Kentucky State Data Center

Table 3.7:
Cohort Population and Projections 2000 - 2040

Year	0 - 19		20 - 64		65 +	
	Total	%	Total	%	Total	%
2000	10,199	27	22,127	58	5,707	15
2010	11,217	27	24,456	58	6,500	15
2020	11,602	25	26,287	57	8,472	18
2030	12,262	24	26,979	54	10,864	22
2040	12,972	24	28,289	53	11,919	23

Source: Kentucky State Data Center and U.S. Census Bureau

POPULATION PYRAMIDS

Population pyramids are visual representations that help to understand the age and gender of a certain population. When several pyramids are used for the past and present decades, it is easier to understand what age cohorts and genders are increasing or decreasing. This knowledge will assist planners to prepare for the future needs of the community. Each pyramid is divided into male and female, and age cohorts of five years starting with birth to four years old and up to the age of 85 and older. This information is important in understanding the population change currently taking place in order to

plan for all elements of the community. When viewing the pyramid, the first observation is the aging of both sexes. Figure 3.4, located on page 6, depicts the population pyramids for Barren County from 2000 through 2050.

RACIAL CHARACTERISTICS

According to the 2010 Census, Barren County's population is primarily white with 40,131 persons, or 95% of the total population. The 2010 non-white population is comprised of 2,042 persons, or 5% of the total population. This was a 1% decrease from the 2000 non-white population of 2,169.

Table 3.8:
Total Non-White Composition
of Barren County 2000 - 2010

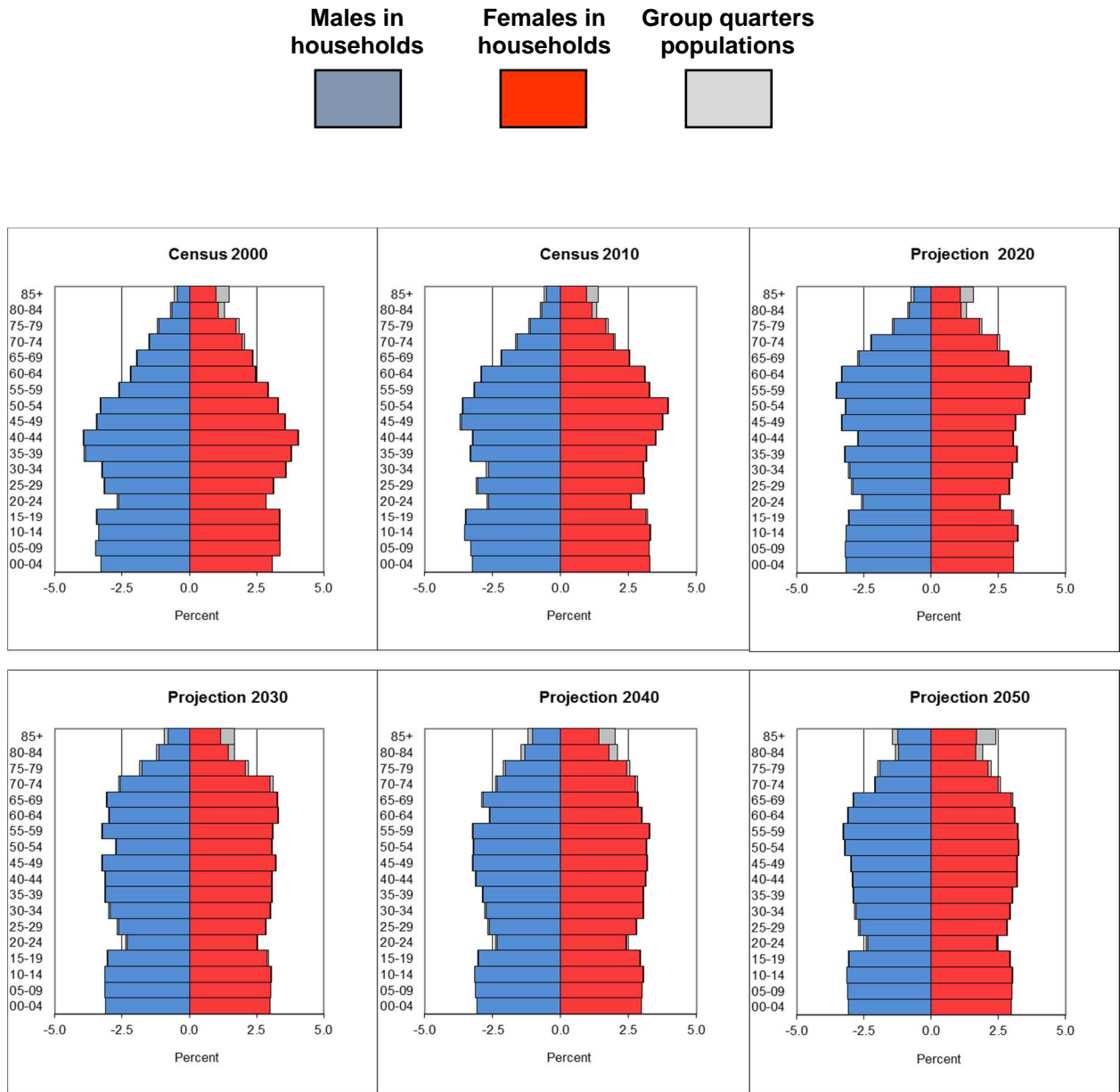
Incorporated Areas	2000 Population	2010 Population	% Change
African American	1,242	1,279	3
Hispanic	202	700	246
American Indian	20	36	80
Asian/Pacific Islander	135	27	-500
Total	1,599	2,042	28
Unincorporated Area			
African American	314	351	11
Hispanic	153	410	168
American Indian	36	53	47
Asian/Pacific Islander	20	6	-70
Total	523	820	57

Source: U.S. Census Bureau

Table 3.8 displays the 2000 and 2010 non-white population composition for the County and cities and the percentage change for the ten year period. Percentage changes are helpful in recognizing trends. However, these figures must be considered with the actual numbers since large percentage increased or decreased can result from minor changes in the raw numbers if the community is smaller.

In 2010, on a countywide basis, African Americans comprised the largest percentage of Barren County's non-white population at 3%. Hispanics were the next largest group at almost 1.65%, followed by American Indians. Since 2000 the most notable change in the composition is reflected in Pacific Islanders which fell from 135 to 27 or 500%.

Figure 3.4:
Barren County Population Pyramids 2000-2010



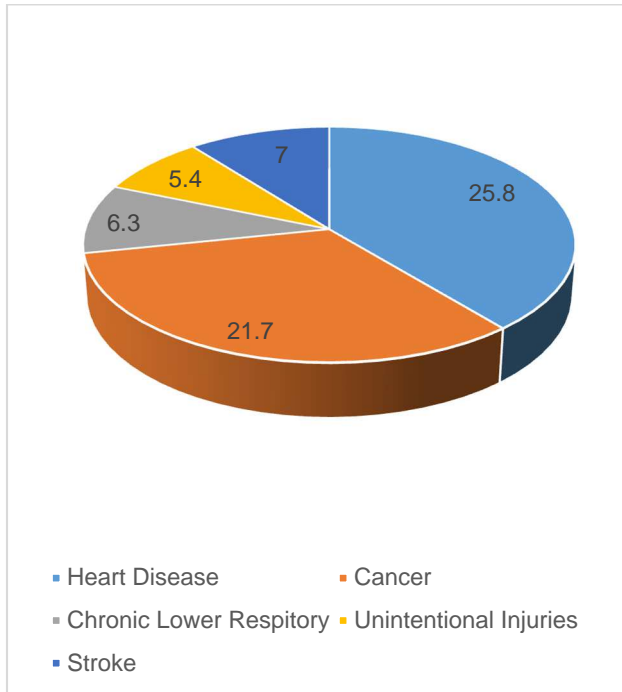
Source: Kentucky State Data Center

VITAL STATISTICS

The leading cause of death for both Kentucky and Barren County is heart disease. In 2011 this disease comprised 25.8% of Barren County’s deaths. For both the State and the County a large percentage of total deaths fall under the “other” category. Numerous maladies are contained within this

category because their individual percentages of total deaths are too small to display graphically. Figure 3.5 breaks down the causes of death for Barren County.

Figure 3.5:
Leading Causes of Deaths in Barren County



Source: Kentucky Cabinet for Health Services, 2011

Table 3.9:
Leading Causes of Death in the United States, Kentucky and Barren County 2011

Cause of Death	Barren County	Kentucky	United States
Heart Disease	216.0	205.6	173.7
Cancer	188.2	195.9	168.6
Respiratory	54.3	63.1	42.7
Injuries	53.7	55.7	38.0
Stroke	60.5	43.1	37.9

* Rate per 100,000 Total Population

Source: Kentucky Cabinet for Health Services

CONCLUSION

As shown in Figure 3.2 and reported by the Kentucky State Data Center, Barren County is expected to increase dramatically in population over the next 30 years. As our population increases, our elderly populations (65+) will increase as well. The population will continue to “gray” and this graying effect will have an impact on development patterns, housing, services, etc. The designation of Interstate 66 through Barren County will create regional growth pressures that will bring more and better paying jobs to our area. This factor will result in a population increase, as more and more people will be moving to reside within Barren County. As our County grows in population so will the demand for additional community facility services. Barren County needs to look at possible problems of tomorrow today and decide on a course of action to help alleviate the problems that will occur with an increase in population.