

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. Further, the KSDC estimates the 2018 total population Barren County at 44,176 persons for an 8 year increase of 4.5%. 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.

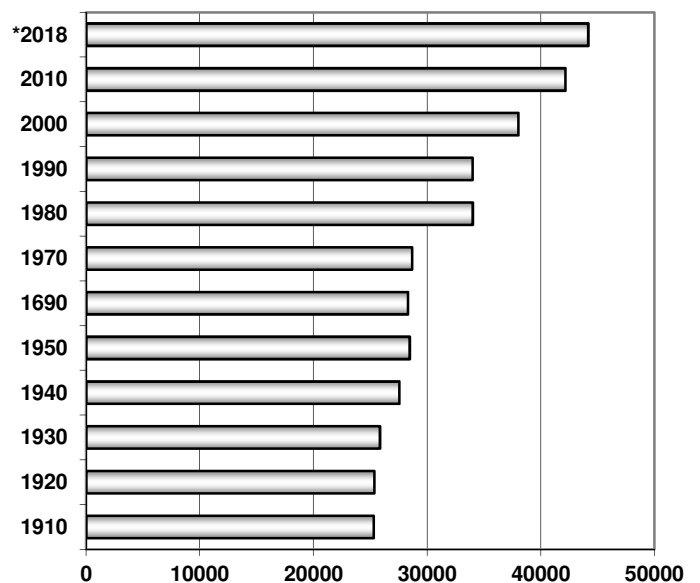
The 2000-2010 decade increase in population could be associated with the regions development of industry and higher education. However, the increase is most likely related to the areas development of technology, transportation infrastructure, and economic development. As seen in Table 3.2, the Barren River Area Development District (BRADD), which encompasses a 10 county area including Barren County, experienced a 7.7% increase in population since 2010.

Table 3.1:
***Population Trends for
Barren County Over a 108-Year Span***

Year	Population	Change Between Periods	Number Change from 1900	% Growth 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	82%
*2018	44,176	2,003	20,979	90%

Source: U.S. Census Bureau, *KY State Data Center Estimates

Figure 3.1:
***Population Trends for
Barren County Over a 108-Year Span***



Source: U.S. Census Bureau, * KY State Data Center Estimates

Table 3.2:
Population Trends for the
BRADD Region Over a 58-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%
*2018	306,780	22,585	136,319	7.7%

Source: U.S. Census Bureau, *KY State Data Center Estimates

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, the three Cities located within Barren County makeup 39.6% of the population while 60.4% is located in the unincorporated area of the County. The largest concentration of population is found in the County Seat of Glasgow.

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.

Table 3.3:
Spatial Distributions
by County and City for 2017

Location	Total	Percent of Total Population
Unincorporated	26,475	60.4%
Glasgow	14,362	32.8%
Cave City	2,411	5.5%
Park City	553	1.3%

Source: KY State Data Center Estimates

Since 1960 Glasgow has experienced a 42.6% growth rate. Except for the period between 1980 and 1990, growth has steadily increased in Glasgow. Cave City, the second largest city, experienced a 70% rate increase during the fifty-seven 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 - 2017

Area	1960	1970	1980	1990	2000	2010	2017	% Change 1960-2017
Barren County	28,303	28,677	34,009	34,001	38,033	42,173	43,801	54.8
Glasgow	10,069	11,301	12,958	12,351	13,019	14,028	14,362	42.6
Cave City	1,418	1,818	2,098	1,953	1,880	2,240	2,411	70.0
Park City	497	567	614	549	517	537	553	11.3
Cities	11,984	13,838	16,019	15,073	15,640	16,805	17,326	44.6
County	16,319	14,839	17,990	18,928	22,363	25,368	26,475	62.2

Source: KY State Data Center Estimates

POPULATION PROJECTION

OFFICIAL PROJECTION DATA CENTERS

Kentucky State Data Center (KSDC)

The Kentucky State Data Center (KSDC) 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 (KPR) 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

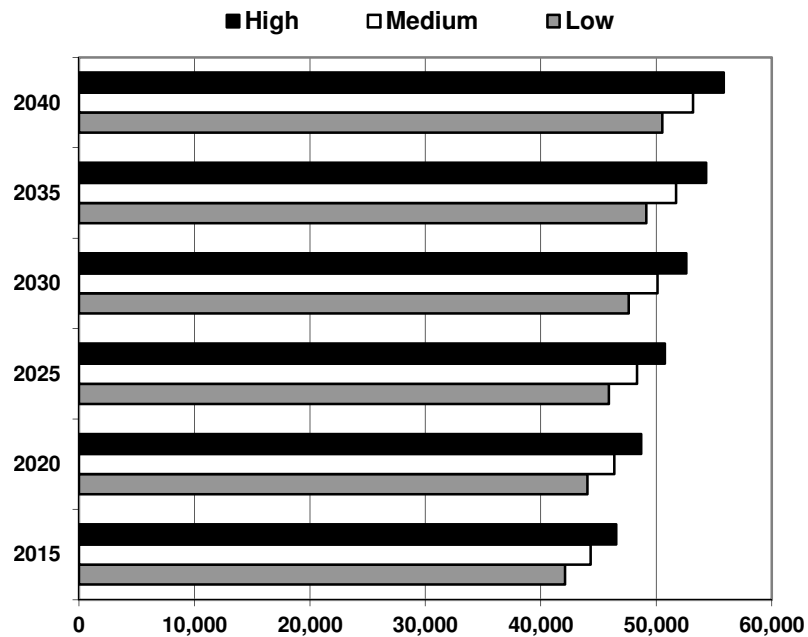
Population projections for Barren County are published by the Kentucky State Data Center. These forecasts are based on the cohort-component method. Assumptions were made for future births, deaths and migration as derived from recent demographic trends by age, gender and race groups. For planning purposes, 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 6.7%. Barren County is projected to grow from 42,173 in 2010 to 50,329 in 2040, representing a 19.3% increase in projected growth, see Table 3.5 and Figure 3.2.

Table 3.5:
Population Projections for Barren County and Kentucky through 2040

Year	Population	Change Between Periods	Number Change from 2010	% Change from 2010
Kentucky				
2010	4,339,367	-----	-----	-----
2020	4,533,464	194,097	194,097	4.5
2030	4,726,382	192,918	387,015	8.9
2040	4,886,381	159,999	547,014	12.6
Barren County				
2010	42,173	-----	-----	-----
2020	45,135	2,962	2,962	7.0
2030	47,943	2,808	5,770	13.7
2040	50,329	2,386	8,156	19.3

Source: Kentucky State Data Center, Vintage 2016 Projections

Figure 3.2:
Population Projections for Barren County



Source: Kentucky State Data Center, 2015

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 2016 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 2016 was 21,220 or 48.5%, while females represented 22,569 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 – 2016 period, the age groups that gained the most in population were the 60 to 64 group and the 55 to 59 group. The greatest gain was in the 60 to 64 cohort, which had a 55.4% increase. The cohort that lost the most within this time period was the 35-44 age group which declined by 9.7%.

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 40.3 in 2017, showing as a whole the population is getting older.

Table 3.6:
Population by Age and Sex 2000 – 2016

Cohorts	2000 Pop.	2010 Pop.	2016 Estimate	% Change 00-16
Total	38,033	42,173	43,789	15.1
Male	18,298	20,464	21,220	16.0
Female	19,735	21,709	22,569	14.4
Under 5	2,432	2,756	2,834	16.5
5-9	2,614	2,760	2,809	7.5
10-14	2,566	2,889	2,916	13.6
15-19	2,587	2,812	2,692	4.0
20-24	2,113	2,238	2,582	22.2
25-34	5,001	5,038	5,259	5.2
35-44	5,964	5,584	5,386	-9.7
45-54	5,171	6,329	5,923	14.5
55-59	2,095	2,720	3,171	51.4
60-64	1,783	2,547	2,771	55.4
65-74	3,010	3,543	4,257	41.4
75-84	1,925	2,120	2,264	17.6
85+	772	837	925	19.8
Median Age	38.0	39.7	*40.3	6.1
20 and over	28,823	31,957	32,538	12.9
Male	13,598	15,289	15,524	14.2
Female	15,225	16,668	17,014	11.7
65 and over	5,707	6,500	7,446	30.5
Male	2,266	2,694	3,184	40.5
Female	3,441	3,806	4,262	23.9

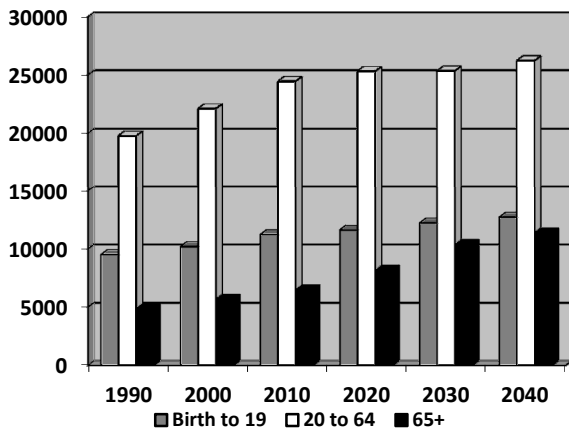
Source: Kentucky State Data Center, U.S. Census Bureau, *Data USA-2017

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 25% of the total population or 12,703 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 23% within Barren County. This is an increase of 4,895 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 1:1.38 (non-producers to producers). Projections indicate a 2020 dependency ratio of 1:1.28; a 2030 dependency ratio of 1:1.12; and a 2040 dependency ratio of 1:1.09. These ratios indicate the number of producers, or those ages 20-64, will be decreasing proportionately to that of the non-producers. Therefore, it is projected that while our resident workforce will be increasing, the dependency demand will be increasing at a faster pace (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	11,626	26	25,332	56	8,177	18
2030	12,205	25	25,353	53	10,385	22
2040	12,703	25	26,231	52	11,395	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.

Table 3.8:
Total Non-White Composition
of Barren County 2000 – 2017

	2000	2010	2017	% Change 2000-2017
African American	1,556	1,627	1,772	13.9
Hispanic	355	1,110	1,395	293.0
Other	56	617	722	1,189.3
Asian/Pacific Islander	155	181	341	120.0
Total	2,122	3,535	4,230	99.3

Source: U.S. Census Bureau, KSDC 2017 Estimate

RACIAL CHARACTERISTICS

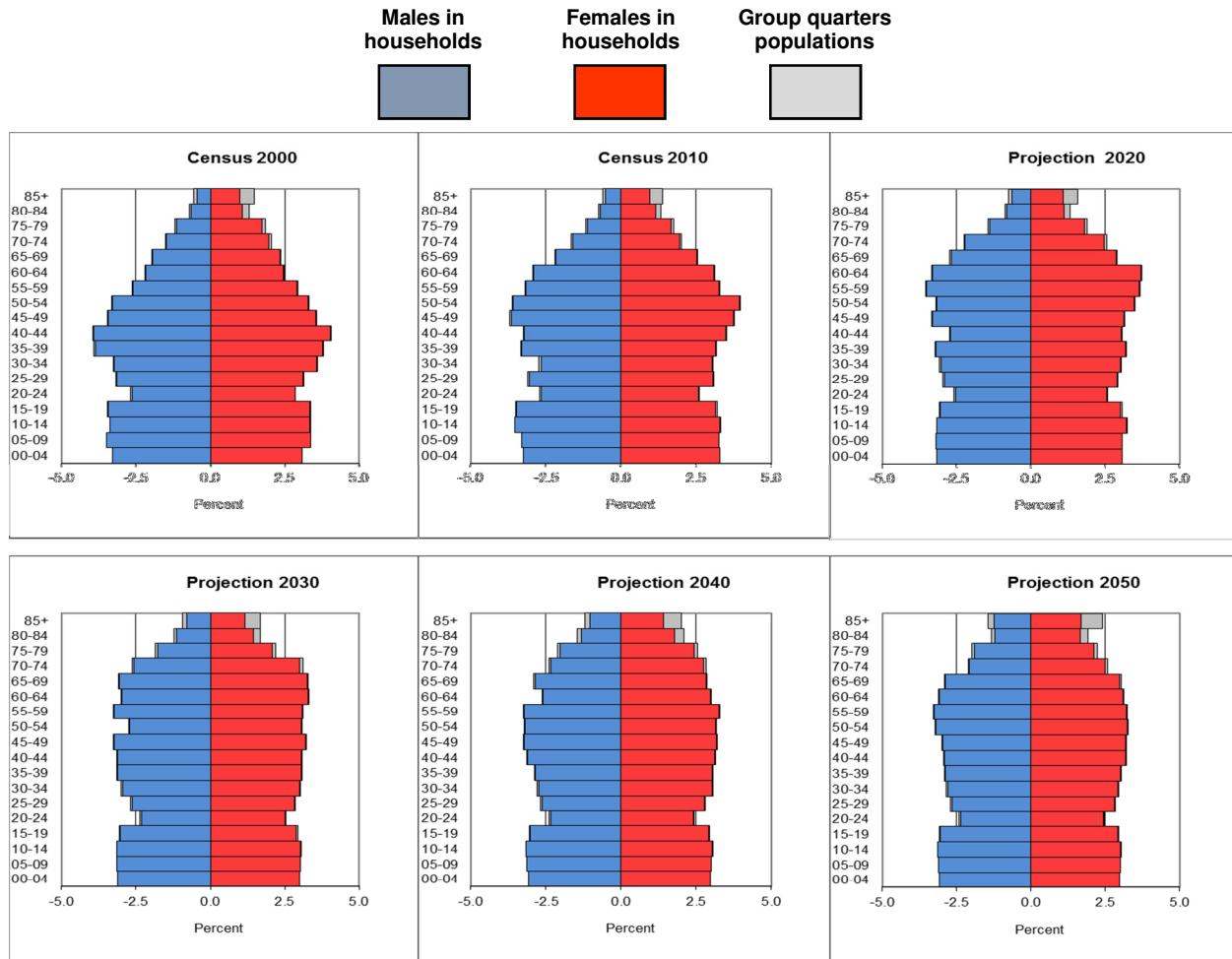
According to the 2010 Census, Barren County’s population is primarily white with 38,638 persons, or 92% of the total population. The 2010 non-white population is comprised of 3,535 persons, or 8% of the total population.

Table 3.8 displays the 2000, 2010 and 2017 non-white population composition for the County and the percentage change for the seventeen 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 2017, on a countywide basis, African Americans comprised the largest percentage of Barren County’s non-white population at 4%. Hispanics were the next largest group at almost 3.2%, followed by Others at 1.6%. Since 2000 the most notable change in the composition is reflected in Others which rose from 56 to 722 or over 1,000%.

Figure 3.4:
Barren County Population Pyramids 2000-2050

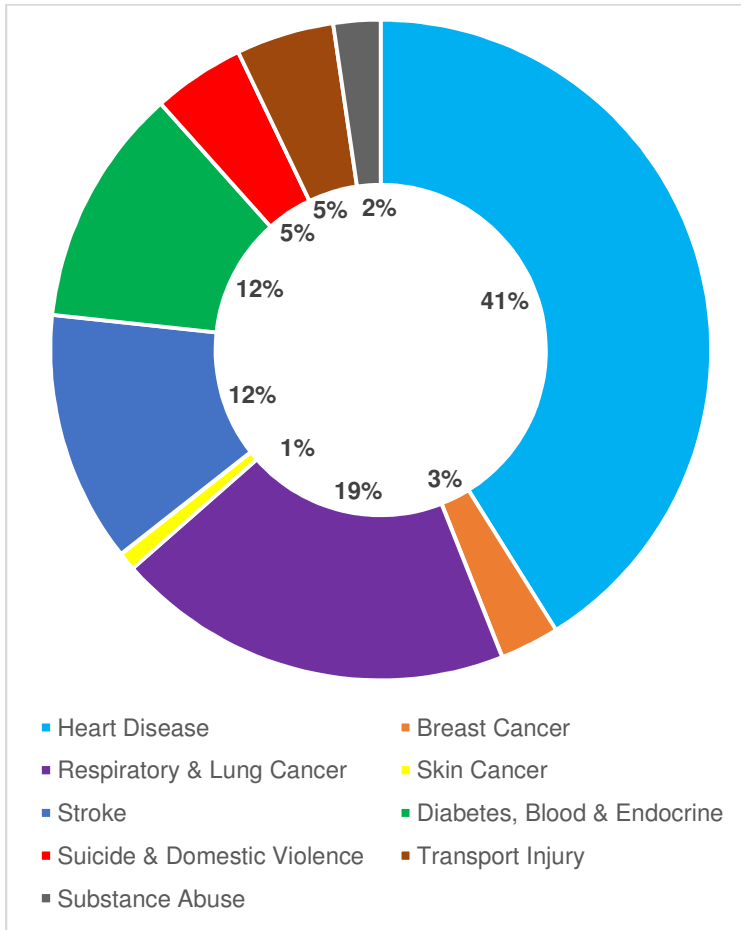


Source: Kentucky State Data Center

VITAL STATISTICS

The leading cause of death for both Kentucky and Barren County is heart disease. In 2014 this disease comprised 41% of Barren County’s deaths. Since 1980, the greatest increase by percentage has been via substance abuse. 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, 2014

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

Table 3.9:
Leading Causes of Death in the United States, Kentucky and Barren County 2014

Cause of Death	Barren County	KY	U.S.	% Change since 1980
Heart Disease				
Male	261.1	235.3	191.5	-48.8
Female	146.7	149.9	124.9	-42.5
Breast Cancer				
Male	0.3	0.3	0.3	-10.7
Female	28.7	27.6	25.9	-0.3
Respiratory & Lung Cancer				
Male	132.3	113.1	67.6	1.6
Female	61.1	67.8	43.8	108.1
Skin Cancer				
Male	5.8	5.6	4.5	65.0
Female	2.7	2.3	1.9	20.4
Stroke				
Male	60.0	55.4	48.8	-56.5
Female	62.3	55.3	47.4	-39.1
Diabetes, Blood & Endocrine Diseases				
Male	67.9	78.4	63.8	48.2
Female	48.1	62.9	49.6	29.2
Suicide & Domestic Violence				
Male	35.9	35.4	30.9	6.3
Female	9.2	10.3	9.0	13.6
Transport Injury				
Male	34.0	29.1	19.8	-21.9
Female	14.2	12.7	8.1	-8.1
Substance Abuse				
Male	14.4	29.1	18.7	383.4
Female	8.7	15.0	8.2	716.1

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 now needs to look at the possible problems of tomorrow and decide on a current course of action to help alleviate the financial, social and political challenges that will occur with an increase in population.