

220 Population Projections

The prediction of future population of a city or county can seem more akin to fortune-telling than science, and what comes to pass often belies past projections. Even efforts grounded in sound scientific method cannot reliably predict births and deaths, and even less accurately anticipate migration patterns. An economic boom or decline can have a significant impact on the results, as could natural or man-made calamities. Although projections made for larger areas than a county can be affected by any of the above occurrences, the smaller the area one attempts to project within, the less reliable the numbers become. Projections developed by a variety of agencies in the early to mid 1970s showed Daviess County gaining anywhere from 20,000 to 34,000 persons between 1975 and 1995, when what really occurred was a population growth of less than 8,000.

OFFICIAL PROJECTIONS

The **Kentucky State Data Center (KSDC)** and its 75-member affiliate network provide training and technical assistance to interested data users in accessing and using Census data. The State Data Center Program is a cooperative effort among the University of Louisville, the Commonwealth of Kentucky and the U.S. Census Bureau.

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. As Kentucky's representative in the Federal-State Cooperative Program for Population Estimates and Projections, KPR, in conjunction with the U.S. Bureau of the Census, is the state's official source of population estimates and forecasts.

This plan will rely on KPR population projections for Daviess County. The KPR projection methodology incorporates a sophisticated model that includes 1) survival rates to adjust for annual mortality, 2) age-specific fertility rates for the survived female population, and 3) net migration rates to adjust the population derived through natural change (births minus deaths). Projections are updated usually every two years and are published in a document called *How Many Kentuckians, Population Forecasts*.

Exhibit 221-TG1 includes KPR's official 1999 projections for Daviess County and Kentucky through the year 2020. A detailed table showing projections by age cohorts and sex is included in Section 230.

According to the KSDC, its 1999 forecasts assume that components of change (mortality, fertility, and migration) will follow along current trends.

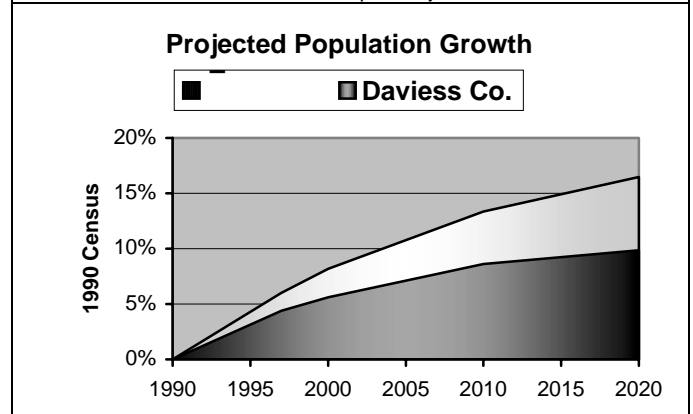
- ♦ Mortality will increase with the aging of the population, but survival rates will remain at their current levels. Annual survival rates derive from five-year statewide averages, 1992-96.
- ♦ Fertility will decrease moderately statewide, but will vary significantly across counties. County birth rates are based on three-year averages, 1994-96.
- ♦ More migrants will enter Kentucky than will exit, but net migration will vary significantly across counties. County net migration rates derive from 1991-96 and apply to the first five projection years. The rates are reduced, if positive, and decreased, if negative, half way to zero over the remaining projection years.

Between 1990 and 2020, the population of Daviess County is projected to grow more slowly than Kentucky, with Daviess County gaining 9.8% in population to 95,771, while Kentucky gains 16.5% in population over the same period. The chart in Exhibit 221-TG1 graphically illustrates this difference.

Exhibit 221-TG1: Population Projections for Daviess County and Kentucky Through 2020

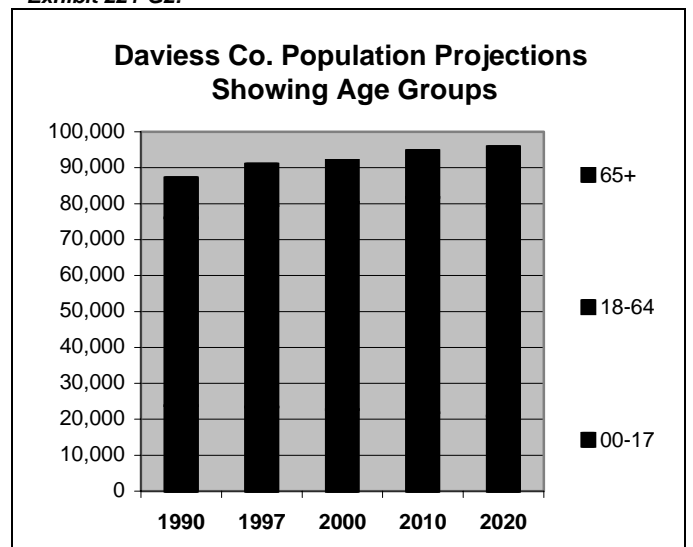
Year	Population	Change Between Periods	Avg. Annual Rate of Change	Number Change from 1990	%age Change from 1990
KENTUCKY					
1990	c 3,686,891	-----	---	-----	---
1997	e 3,908,124	221,233	0.84%	221,233	6.0%
2000	p 3,988,188	80,064	0.68%	301,297	8.2%
2010	p 4,179,649	191,461	0.47%	492,758	13.4%
2020	p 4,294,724	115,075	0.27%	607,833	16.5%
DAVIESS COUNTY					
1990	c 87,189	-----	-----	-----	---
1997	e 91,011	3,822	0.61%	3,822	4.4%
2000	p 92,087	1,076	0.39%	4,898	5.6%
2010	p 94,708	2,621	0.28%	7,519	8.6%
2020	p 95,771	1,063	0.11%	8,582	9.8%

c = Census 4/1 e = Estimate 7/1 p = Projection 7/1



Source: "How Many Kentuckians – 1999 Edition," Kentucky State Data Center, University of Louisville, Jan. 1999

Exhibit 221-G2:



CHANGES IN THE AGE OF THE POPULATION

The population of Kentucky will continue to "gray" as the number of elderly persons increase. In Daviess County between 1990 and 2020 the number of persons aged 65 or over is expected to increase by 5,400 (+49%) to over 16,500 persons. During the same period, the number of persons aged 17 or younger will decline by over 2,800 (-12%) to 20,918. The number of persons 18-64 will increase by 14.7% to nearly 60,000 by 2010, but then will decline to 58,310 by 2020. Exhibit 221-G2 shows this graphically.

PROJECTED POPULATION DISTRIBUTION

In Section 210 we estimated the Daviess County population to be 91,437 at the end of February 1999. By the year 2020, the State Data Center anticipates a population of 95,771, an increase of 4,334 in 21 years. Because these additional people will need housing, jobs and service facilities, it will be necessary to develop additional land area to meet those needs. Where these people will live, work and play in Daviess County will affect the land use plan, and the orderly expansion of development. **Refer to Section 450 for projected populations for neighborhoods and secondary planning areas.**

OWENSBORO GROWTH

Population growth for the City of Owensboro is dependent on two main factors: 1) the annexation of suburban growth at its fringe and 2) redevelopment within the existing corporate limits at higher population densities.

Since 1980, redevelopment activities in older neighborhoods have not resulted in significant increases in dwelling unit or population density. In fact, as discussed in Section 210, with the continuing reduction in the average household size, inner-city neighborhoods have generally been declining in population or have been stabilizing.

Between 1980 and 1999, we estimate that Owensboro *lost* 1,946 persons while the rest of Daviess County *gained* 7,434. However the 1,946-person decline in Owensboro is a net figure. We can understand population shift better if we create two groups of city census tracts – one group for inner-city tracts that were annexed in the past and the other group for fringe tracts where annexation is ongoing. The results are found in Exhibit 222-TG1.

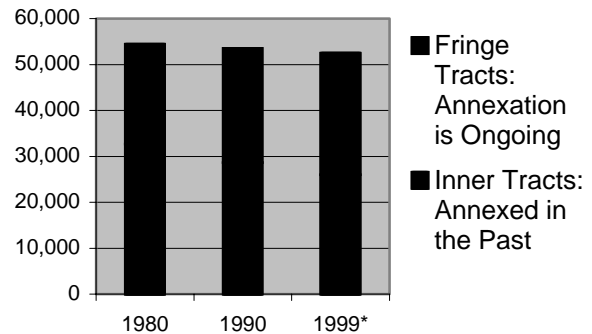
The exhibit makes clear that Owensboro population decline has resulted from loss of inner-city population at a greater rate than gains from annexation of new or existing development in fringe areas. Loss of population in older neighborhoods has resulted both from a decline in average household size and from expansion of non-residential land uses.

Exhibit 222-GT2 shows a population projection range for the City of Owensboro. In 1999, Owensboro contained 61.7% of Daviess County's housing units, down from 66.8% in 1980. The "low" projection assumes this rate of decline will continue. The "high" projection assumes a fixed percentage of future Daviess housing units (61.7%), which may be realistic considering the city's aggressive annexation policy and housing redevelopment strategies. Detailed components of the projection are shown in Exhibit 223-T1.

Exhibit 222-TG1: 1980-1999 Owensboro Population Shift

Census Tract Groups (portions in city)	Owensboro City Population		Period Change	
	1980	1999*	Number	%age
Inner Tracts: Annexed in the Past (1, 2, 3, 4, 5, 7, 8, 12, 14)	32,700	25,981	-6,719	-20.5%
Fringe Tracts: Annexation is Ongoing (6, 9, 10, 11, 13, 16, 17.01, 17.02)	21,750	26,523	+4,773	+21.9%
TOTALS	54,450	52,504	-1,946	-3.6%

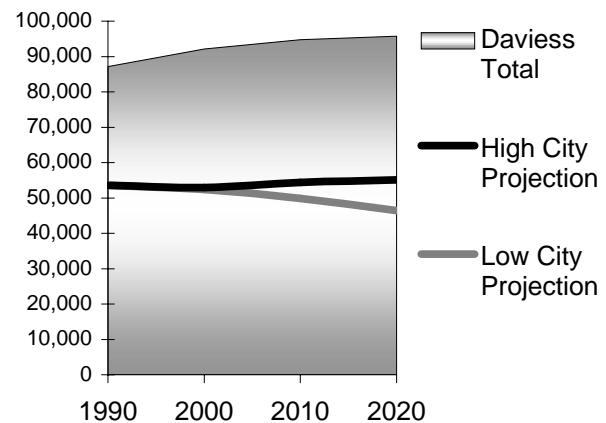
**Owensboro Population Trends
by Census Tract Groups
vs. Annexation**



* 2/28/1999 OMPC estimates

Exhibit 222-GT2: Population Projections for City of Owensboro

**Population Projection Range
for City of Owensboro**



Population Projections	1990c	2000	2010	2020
Low City Projection	53,549	52,396	49,877	46,421
High City Projection	53,549	52,919	54,433	55,080
Daviess Total	87,189	92,087	94,708	95,771
c 1990 Census				

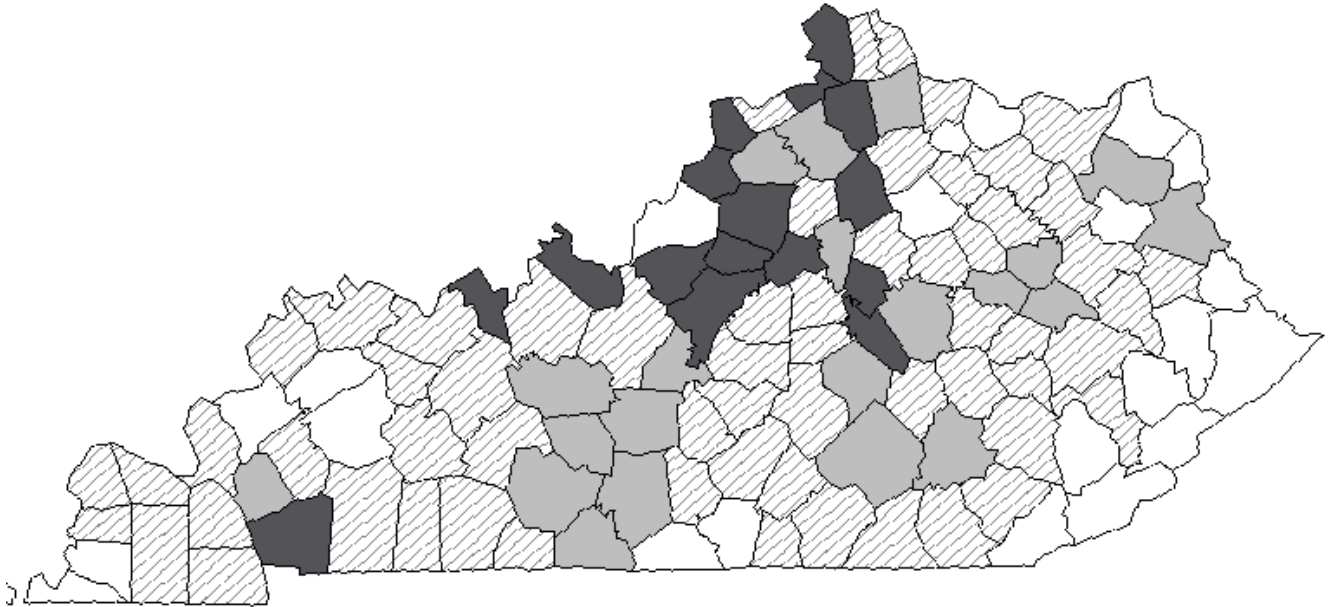
Exhibit 223-T1: Population Projections for Daviess County and the City of Owensboro

	1980 Census 04/01/80	1990 Census 04/01/90	1999 Estimate 02/28/99	2000 Projection 07/01/2000	2010 Projection 07/01/2010	2020 Projection 07/01/2020	DATA - Estimate 02/28/99
DAVIESS TOTAL - State Data Center							
	/ 1999 HUs from BP90S_DU.WB1						
Housing Units	31,665	35,041	39,808	40,321	42,929	44,938	vcalc proj
Occupancy Rate	95.10%	94.28%	92.25%	92.25%	92.25%	92.25%	<calc curr, fixed proj
Households	30,114	33,036	36,724	37,198	39,604	41,457	<State Data Center
Pop/Household	2.80	2.58	2.46	2.44	2.35	2.27	<State Data Center
Household Pop	84,413	85,271	90,208	90,660	93,216	94,139	^calc
Group Qtrs Pop	1,536	1,918	1,245	1,427	1,492	1,632	^vcalc
DAV Pop	85,949	87,189	91,453	92,087	94,708	95,771	<1999 State Data Center
OWENSBORO - OMPC							
% of Dav HUs	66.82%	65.85%	61.69%				^v calc
Low Projection				61.07%	56.40%	51.74%	<extrap chg in % of Dav since 1990
High Projection				61.69%	61.69%	61.69%	<fixed @ curr % of Dav
Housing Units	21,157	23,074	24,558				<1999 HUs from BP90S_DU.WB1
Low Projection				24,623	24,213	23,249	^calc
High Projection				24,875	26,484	27,723	^calc
Occupancy Rate	95.09%	93.92%	91.91%	91.91%	91.91%	91.91%	<curr prop to Dav, proj fixed
Households	20,118	21,672	22,571				^calc
Low Projection				22,630	22,254	21,368	^calc
High Projection				22,862	24,340	25,479	^calc
Pop/Household	2.64	2.39	2.28	2.26	2.18	2.11	<proportionate to Dav
Household Pop	53,086	51,886	51,425				^calc
Low Projection				51,159	48,583	45,006	^calc
High Projection				51,682	53,139	53,665	^calc
Group Qtrs Pop	1,364	1,663	1,079	1,237	1,294	1,415	<proportionate to Dav
OWB Pop	54,450	53,549	52,504				^calc
Low Projection				52,396	49,877	46,421	^calc
High Projection				52,919	54,433	55,080	^calc
% of Dav Pop	63.35%	61.42%	57.41%				^calc
Low Projection				56.90%	52.66%	48.47%	^calc
High Projection				57.47%	57.47%	57.51%	^calc



Exhibit 224-G1: Projected Change in Kentucky Population by County 1990-2020

Total Population



Percent Change, 1990-2020

□ Loss	▨ 0.0-24.9%
■ 25.0-49.9%	■ 50.0% or more

How Many Kentuckians, 1999 Edition

Source: Kentucky State Data Center