

SECTION II

POPULATION

INTRODUCTION

One of the most difficult aspects of planning for long-range community development is the requirement for maintaining realistic scale throughout the planning process. Just as overstatement of need could result in potentially costly over-sizing of public infrastructure, under estimation of future requirements can result in an inability to serve newly developing regions of the community due to under sizing of the initial stages of infrastructure development.

In this regard, study and analysis of past, present and future population characteristics provides one of the more dependable means of scaling long-range planning recommendations as all aspects of the community are in direct proportion to the size of the population to be accommodated. Because individuals within the population have common desires and aspirations, knowledge of probable future population levels allows prediction and the projection of potential long-range need for institutions, facilities, and community infrastructure.

Toward these ends, it is the purpose of the population study to review past and present demographic trends for the Clearwater community and the extraterritorial planning jurisdiction with the object of establishing a future population forecast for use in the planning program.

FACTORS OF DEMOGRAPHIC CHANGE

The overall population of the community will grow or decline over time in response to both social and economic influences, although of the two, economic conditions represent the primary factor of change. When local and regional economic conditions are strong, and jobs are available, the population will expand due to people entering the community, which is termed in-migration. The reverse or out-migration, is typical where economic decline results in people leaving the community to seek employment in other areas.

The second great factor of population change, which is also closely tied to general economic conditions, is natural increase, that is, the difference between resident births and deaths. Like migration patterns, natural increase factors can be either positive or negative. In a healthy economic climate, the community will typically experience both a net in-migration pattern, and at the same time a natural increase due to generally elevated birth rates.

Although economic opportunity is the dominant factor in population change, many other factors also influence individual decisions about place of residence. It is the purpose of this section of the planning study to review and analyze these influences as a means of developing a foundation for estimating probable future community population levels over the 20-year planning period.

DEMOGRAPHIC AND TRENDS IN THE POPULATION OF THE STATE

Throughout the state of Kansas, the surrounding Midwestern states, and the nation as a whole, there has been a continuing trend toward urbanization of the population as ever increasing percentages of area residents were counted as citizens of incorporated towns and cities. Due partly to decreasing manpower requirements of area farms and ranches, this process has also been closely tied to the economic opportunity available in the form of jobs in area communities. As the rural population expanded dramatically during the 19th century on response to succeeding waves of settlement following the Civil War, there developed a corresponding need for centers where commodities could be bought and sold and supplies purchased. These early centers of commerce and transportation established the seeds of the urbanization process which continued largely unabated throughout most of the 20th century.

Concerning state-wide patterns of urbanization, the following table summarizes demographic trends by decade for the period 1860 to 2000.

**TABLE 2
POPULATION OF KANSAS, URBAN AND RURAL***

Census Year	State	Percent Change	Urban	Percent Change	Rural	Percent Change	Percent of Total	
							Urban	Rural
1860**	107,206	—	10,045	—	97,161	—	9.4	90.6
1870	364,339	239.9	51,870	416.4	312,529	221.7	14.2	85.8
1880	996,096	173.4	104,956	102.3	891,140	185.1	10.5	89.5
1890	1,428,108	43.4	269,539	156.8	1,158,569	30.0	18.9	81.1
1900	1,470,495	3.0	329,696	22.3	1,140,799	- 1.5	22.4	77.6
1910	1,690,949	15.0	492,312	49.3	1,198,637	5.1	29.1	70.9
1920	1,769,257	4.6	616,485	25.2	1,152,772	- 3.8	34.8	65.2
1930	1,880,999	6.3	729,834	18.4	1,151,165	- 0.1	38.8	61.2
1940	1,801,028	- 4.3	753,941	3.3	1,047,087	- 9.0	41.9	58.1
1950***	1,905,299	5.8	993,220	31.7	912,079	- 12.9	52.1	47.9
1960	2,178,611	14.3	1,328,741	33.8	849,870	- 6.8	61.0	39.0
1970	2,246,578	3.1	1,484,870	11.8	761,708	- 10.4	66.1	33.9
1980	2,363,679	5.2	1,575,899	6.1	787,780	3.4	66.7	33.3
1990	2,477,574	4.8	1,712,564	8.7	765,010	- 2.9	69.1	30.9
2000	2,688,418	8.5	1,920,081	12.1	768,337	0.4	71.4	28.6

* *Source: U.S. Department of Commerce, Bureau of the Census*

** *Population of that part of Kansas Territory lying within present limits of the State*

*** *New definition of urban area*

The table shows that the portion of the overall population classified as urban has increased in each decade since 1860, while the rural population demonstrated a pattern of growth prior to 1900 followed by losses over much of the present century. Expressed as percentages of the total, the urban population has continued to expand throughout most of the 130-year period while the rural population has declined.

HISTORICAL PATTERNS IN THE LOCAL POPULATION

Concerning historic trends in the county population, the following table summarizes demographic patterns since 1890.

TABLE 3
DEMOGRAPHIC PATTERNS, 1890-2000*
Sedgwick County, Kansas

Year	Population	Number Change	Percent Change
1890	43,626	----	----
1900	44,037	+411	+0.9
1910	73,095	+2,958	+6.7
1920	92,234	+19,139	+26.2
1930	136,330	+44,096	+47.8
1940	143,311	+6,981	+5.1
1950	222,290	+78,979	55.1
1960	343,231	+120,941	+54.4
1970	350,694	+7,463	+2.2
1980	367,088	+16,394	+4.7
1990	403,662	+36,574	+10.0
2000	452,869	+49,207	+12.2

Source: U.S. Department of Commerce, Bureau of the Census

The demographic history of Sedgwick County is substantially different from that of most other Kansas counties, demonstrating an unbroken pattern of continuing population expansion. Since 1890, the population has increased by over 400,000, or by more than 900 percent, with major increments of growth occurring between 1920 and 1930, and between 1940 and 1960. Even during the 1930's, a decade when most other counties experienced mild to substantial population losses, Sedgwick County grew by over 5 percent. This was also true during the 1890's when the county population enlarged by about 1 percent.

This phenomenal population growth has been due to the equally phenomenal enlargement in the economy of the region which has continued to create large numbers of new jobs resulting in a long term pattern of major net in-migration. These effects have fueled the establishment and growth of several cities in addition to Wichita, and have impacted, as well, all surrounding counties and most communities within commuting distance.

Among the communities affected by the economic expansion in the Wichita/Sedgwick County metropolitan area is the city of Clearwater. A summary of demographic change between 1890 and 2000 in the City is outlined in the following table.

TABLE 4
MUNICIPAL POPULATION TRENDS, 1890 – 2000*
City of Clearwater, Kansas

Year	Population	Number Change	Percent Change
1890	408	—	—
1900	368	-40	-9.8
1910	569	+201	+54.6
1920	647	+7.8	+13.7
1930	669	+22	+3.4
1940	591	-78	-11.7
1950	647	+56	+9.5
1960	1,073	+426	+65.8
1970	1,435	+362	+33.7
1980	1,684	+249	+17.4
1990	1,875	+191	+11.3
2000	2,178	+303	+16.2

* *Source: U.S. Department of Commerce, Bureau of the Census*

The statistical summary shows that the population of Clearwater has enlarged by over 430 percent since 1890, with much of this expansion, over 86 percent, occurring since 1950. There were only two decades when the city recorded losses in population. These were between 1890 and 1900, and again between 1930 and 1940. Both were periods of severe and prolonged drought coupled with collapse of the national economy which resulted in massive population shifts across the central plains and beyond. Few cities and counties escaped population loss, and many in the far western region of the state suffered more than 50 percent depletion of the population during the 1890's and again in the 1930's. For the Clearwater community these conditions resulted in a population decline of 9.8 percent between 1890 and 1900, and 11.7 percent between 1930 and 1940.

Except for these two periods, the population of the city has enlarged in each decade with substantial expansion occurring between 1950 and 1970. The greatest period of growth was between 1950 and 1960 when the population of the city enlarged by 426 which represented an expansion of over 65 percent. This pattern of population growth has continued with an expansion of over 16 percent occurring between 1990 and 2000. It is likely that this pattern of growth will continue to some extent for the foreseeable future if the general economic condition of Wichita and the metropolitan area remains strong.

Concerning the relationship between Clearwater and Sedgwick County, the following table indicates a percentage comparison since 1890.

TABLE 5
CITY AND COUNTY POPULATION TRENDS*
City of Clearwater/Sedgwick County, Kansas

Year	City Population	County Population	City as Percent of County
1890	408	43,626	0.9
1900	368	44,037	0.8
1910	569	73,095	0.8
1920	647	92,234	0.7
1930	669	136,330	0.5
1940	591	143,311	0.4
1950	647	222,290	0.3
1960	1,073	343,231	0.3
1970	1,435	350,694	0.4
1980	1,684	367,088	0.5
1990	1,875	403,662	0.5
2000	2,178	452,869	0.5

**Source: U.S. Department of Commerce, Bureau of the Census*

The table indicates that the City of Clearwater has represented less than one percent of the Sedgwick County population total over the years, but has remained at about one-half of one percent over most of the past 70 years. These numbers show that the municipal population has generally expanded in proportion to the overall county population which provides one measurement of the economic spillover from the great expansion in the Wichita/Sedgwick county metropolitan area. In this context, a major portion of the expansion in the municipal population since 1940 has likely been due to the strong job market available in the adjacent metropolitan area. It is probable that this relationship will continue for the foreseeable future.

COUNTY POPULATION CHARACTERISTICS

A summary of general population characteristics as recorded by the federal decennial census of 2000 are noted in the following table.

TABLE 6
SUMMARY POPULATION CHARACTERISTICS, 2000*
Sedgwick County

Total Population	452,869
Percent Black	10.0
Percent Spanish Origin	8.0
Percent Under 20 Years	30.8
Percent 10 to 64 Years	57.8
Percent 65 Years and Over	11.4
Median Age	33.6
Population in Group Quarters	6,278
Number of Households	176,444
Persons Per Household	2.53
Average Family Size	3.14

**Source: U.S. Department of Commerce, Bureau of the Census*

As of 2000, Sedgwick County contained over 450,000 residents of which 10 percent were black and 8 percent were of Spanish origin. Persons of Spanish origin may be of any race. Nearly a third of the population of the county was under 20 years of age while those 65 and over accounted for less than 12 percent. That portion of the population aged 20 to 64, which are the prime working years, represented nearly 58 percent of the total 2000 population. The median age as of the 2000 decennial census was 33.6 years.

Concerning living accommodations, 6,278 individuals or 1.4 percent of the countywide population were residents of group quarters in 2000, while the remainder of the population were located in 176,444 households. The average number of persons per household was set at 2.53, while the average family size was 3.14.

These numbers indicate the strong presence of large numbers of persons in the primary working years, which in turn, suggests a strong and continuing pattern of net in-migration due to the historically strong job market in the metropolitan area.

The City of Wichita is, of course, the primary component of the overall countywide population, however, the numbers of small incorporated cities and unincorporated settlement areas also contribute to the overall demographic pattern of Sedgwick County.

DEMOGRAPHIC PATTERNS IN THE CITY POPULATION

Summary demographic patterns in the population of Clearwater are outlined in the following table.

TABLE 7
GENERAL POPULATION CHARACTERISTICS*
City of Clearwater

Item	1990	2000	Percent Change
Population	1,875	2,178	+16.2
Percent Black	0.1	0.3	---
Percent Spanish Origin	0.5	1.1	---
Percent Under 20 years	33.9	33.9	---
Percent 20 to 64 Years	51.0	51.1	---
Percent 65 Years and Over	15.1	15.0	---
Median Age	34.6	35.3	+2.0
Population in Group Quarters	58	60	+3.4
Number of Households	673	773	+14.9
Persons Per Household	2.70	2.74	+1.5
Average Family Size	3.17	3.15	-0.6

**Source: U.S. Department of Commerce, Bureau of the Census*

The general population statistics show that within the overall patterns of increase in the municipal population during the 90's, the numbers of minorities expanded as did most other components. The population in group quarters grew by 3.4 percent while the number of households enlarged by nearly 15 percent. The average number of persons per household increased from 2.70 to 2.74 while the average family size decreased from 3.17 in 1990 to 3.15 in 2000.

Concerning major population age groups, all remained stable with no change in the under 20 group and only slight change in the percentages of population aged 20 to 64 and 65 years and over. The median age, however, continued to increase, enlarging from 34.6 in 1990 to 35.3 in 2000, indicating a general aging process which is noticeable in most population groups in recent years.

A summary of age specific information from the federal decennial census for the population of Clearwater is outlined in the following table.

TABLE 8
POPULATION AGE GROUP COMPOSITION*
City of Clearwater, 1990 - 2000

Population Component	1990	2000	Percent Change
Under 5	154	177	+14.9
5 to 14	331	412	+24.5
15 to 24	204	244	+19.6
25 to 34	261	245	-6.1
35 to 44	280	351	+25.4
45 to 54	210	255	+21.4
55 to 65	152	166	+9.2
65 to 74	144	138	-4.2
75 to 84	95	135	+42.1
85 Years & Over	44	55	+25.0
Male	866	1,038	+19.9
Female	1,009	1,140	+13.0

**Source: U.S. Department of Commerce, Bureau of the Census*

The age group census data show that over the decade of the 90's there were substantial changes in several of the individual age groups. Substantial increases were recorded for the 5 to 15, 35 to 44, 45 to 54, 75 to 84, and the 85 and over age groups, while small decreases in numbers were recorded for the 25 to 34 and the 65 to 74 age groups. Additionally, over the period the male portion of the local population increased by nearly 20 percent, while the female segment increased by 13 percent.

These numbers tend to show substantial strength of population numbers in the middle productive working years with a growing percentage representation by population in the very old age categories. These are also general indicators of the beneficial economic circumstances of the 90's which resulted in a broad pattern of growth and development in the City and throughout the surrounding area.

BIRTH AND DEATH RATES

The background reviews of historical patterns and trends in the population of the City and County show that while the effects of migration are primary among the causes of demographic change, prevailing short- and long-range trends are also impacted by patterns of natural increase. Defined as the net difference between births and deaths in the resident population, natural increase may be either positive or negative in its impact to overall population trends.

While natural increase statistics are typically not available for small communities, such data is available for the county as a whole, which provides a broad indication of general trends in most locations across the county. In this context, the following table summarizes natural increase trends for Sedgwick County in recent years.

TABLE 9
EFFECTS OF NATURAL INCREASE*
Sedgwick County, 1980-2001

Year	Live Births	Rate Per 1000 Population	Deaths	Rate Per 1000 Population	Natural Increase
1980	7,094	19.4	2,717	7.4	4,377
1985	7,251	18.7	2,982	7.7	4,269
1986	9,268	18.6	2,968	7.6	4,300
1987	7,274	18.4	2,951	7.5	4,323
1988	7,491	18.6	3,024	7.5	4,467
1989	7,474	18.4	3,060	7.5	4,414
1990	7,496	18.2	3,071	7.6	4,425
1991	7,550	18.1	3,149	7.7	4,401
1992	7,580	18.3	3,165	7.7	4,415
1993	7,463	17.8	3,252	7.8	4,211
1994	7,248	17.3	3,260	7.8	3,988
1995	7,022	16.7	3,400	8.1	3,622
1996	6,949	16.4	3,442	8.1	3,507
1997	7,209	16.4	3,434	7.8	3,775
1998	7,468	16.7	3,640	8.1	3,828
1999	7,548	16.7	3,477	7.7	4,077
2000	7,838	17.3	3,626	8.0	4,212
2001	7,423	16.3	3,684	8.1	3,736

**Source: Annual Summary of Vital Statistics, Selected Years, Kansas Department of Health and Environment*

The table shows that natural increase has been very positive throughout the period with yearly increases ranging from 3,507 to 4,467 and averaging 4,130 per year throughout the period. These figures indicate a potential natural increase of 44,461 before factoring for actual survival rates for the decade between 1990 and 2000. While the countywide experience is likely somewhat stronger with regard to natural increase factors than the population of Clearwater, it is also likely that natural increase has been positive to some extent in the population of the City as well. This influence coupled with a pattern of net in-migration has resulted in the strong increases registered in both the county and city population during the decade of the 90's.

FUTURE POPULATION FORECAST

Trends and patterns in short- and long-range population characteristics over the 20-year planning period will emerge in response to a range of influences, both economic and social. Because these influences are difficult to anticipate accurately, forecasting future population levels is an imprecise process at best, resulting in need to consider several different assumptions in order to bracket the possibilities.

In this respect, the background information shows that both natural increase and migration have been strongly positive in the countywide pattern of population growth in recent years, and that this is likely also true for the population of Clearwater. However, as economic conditions vary, there will be resultant variations in emerging demographic patterns for both the county and the city.

Based on differing assumptions about future conditions, the following table outlines a series of short- and long-range forecasts, each a possibility during the planning period depending upon which set of assumptions ultimately prevails.

TABLE 10
FUTURE POPULATION FORECAST, 2005 - 2025
City of Clearwater

Forecast	2000	2005	2010	2015	2020	2025
City Trend Line						
• Since 1940	2,178	2,914	3,383	4,214	5,251	6,544
• Since 1970	2,178	2,370	2,578	2,857	3,108	3,383
• Since 1990	2,178	2,289	2,407	2,764	2,992	3,237
Cohort Method 1	2,178	2,289	2,407	2,845	3,461	4,395
Cohort Method 2	2,178	2,525	2,904	3,630	4,995	5,785
Cohort Method 3	2,178	2,649	3,718	5,825	7,088	8,624

The forecasts all indicate the probability of continuing population growth but at widely varying rates, based on differing assumptions about the local and regional economy. As shown in the table, the forecasts range from continuation of a slow steady increase typical of demographic patterns in recent years, to a condition of rapid population growth as could occur in a period of strong economic expansion. These wide variations in the range of forecast possibilities serve as general indicators of the complicated nature of population change and the difficulty of predicting future demographic patterns and trends.

Regarding the trend line forecasts, if the trend since 1940 were to prevail, an increase of over 200 percent would result, while continuation of the trend since 1970 would result in a growth of a little over 55 percent. Continuation of the trend since 1990, however, would result in a population expansion of about 48 percent over the 20 year planning period.

The three cohort forecasts were developed utilizing varied assumptions about birth, death and migration rates. These rates were varied throughout the planning period to reflect potential variations in the strength of the local and regional economy. Accordingly, the forecasts range from a mild growth pattern to a condition of very strong and sustained expansion fueled by rapid economic growth.

Forecast number 1 is based on birth rates per thousand population ranging from 12 to 16, and migration rates ranging from mildly negative to mildly positive. These trends approximate recent trends and would result in a population of about 3,400 by the year 2020, growing to over 4,000 by 2025. These trends would be representative of a pattern of slow but sustained growth throughout the planning period.

Cohort forecast number II is based on birth rates of 11 to 13 per thousand, death rates of 8 to 11, with migration rates remaining mildly to moderately positive over the period. These trends reflect generally improving economic conditions and would result in a 2020 population of just under 5,000 and a 2025 population of about 5,700. This growth pattern would be somewhat stronger than recent trends, but less than the overall average municipal growth rate since 1940.

Cohort forecast number III is based on birth rates of 11 to 14 per thousand, death rates of 7 to 9 per thousand, with migration rates ranging from mildly to strongly positive. These patterns are more typical of the growth trends of the 50's and 60's and would result in a very strong and sustained population growth resulting in a population of over 7,000 by the year 2020, and about 8,600 by 2025. Such a growth pattern is unlikely except under unusual economic circumstances such as occurred in the years immediately following World War II.

These forecasts indicate a wide range of potential demographic patterns depending upon which set of economic circumstances ultimately prevails. Based on recent trends and expectations about future conditions, cohort forecasts I or II would appear to be the most realistic for use in the planning program.

SUMMARY

As indicated by the wide range of potential future population levels, many internal and external influences will impact population growth patterns during the planning period. Some of these are within the influence of the City, however, in the regional metropolitan context, most of the basic economic influences will center on the future condition of the Wichita/Sedgwick County job market. If the Wichita metro area economy maintains strength, the population of the City will likely continue to expand at or above historical rates.

Across time during the planning period, actual population patterns will be considerable more sporadic than the smooth growth predicted by the mathematically derived estimates. The City may grow quickly, only to record little expansion for a time, followed by another short- or long-term pattern. The accumulative impacts of these actions, however, are observable as trends, which can point to a broad general direction. Such trends should be closely monitored, and the population estimates adjusted if necessary. Although unlikely, a massive local and/or regional economic decline would necessitate a downward adjustment of the lower range estimates, just as an extremely strong economic surge could indicate a need for upward adjustment of the high estimates. Monitoring population trends and maintenance of the population estimates is one of the primary responsibilities of the Planning Commission within the scope of the continuing planning process.