

# Population Growth and Migration in Alaska

By Greg Williams

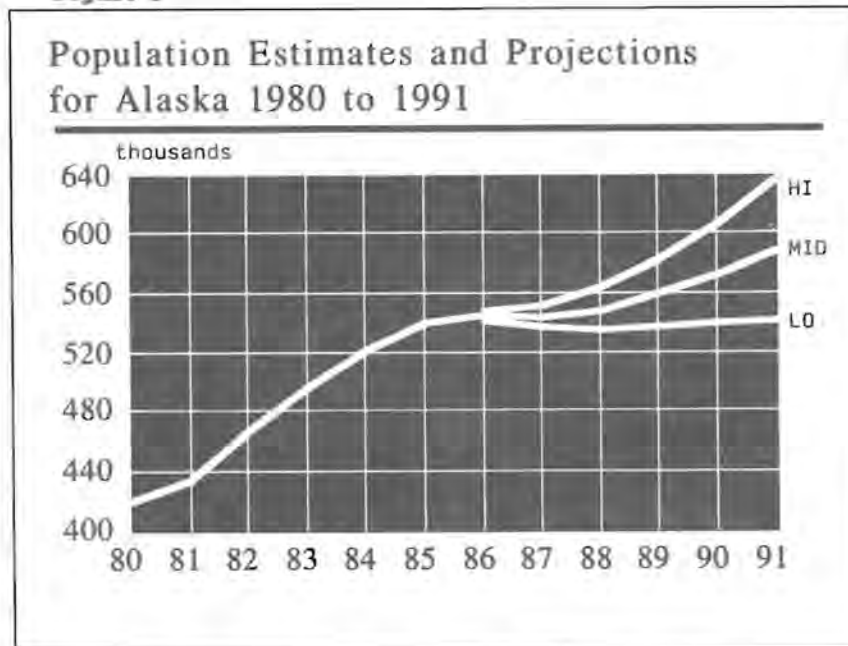
## Population Trends

The first half of the 1980s has been among the most rapid periods of growth in Alaska's history. The population of Alaska in 1986 is 30% greater than in 1980 and almost four times what it was in 1950, just 36 years ago. Projections of the change in Alaska's population for the last half of the 1980s will be drastically different from that experienced in the first half of the decade (Figure 1).

While no official estimate exists yet for 1986, Alaska's population is projected to be between 542,200 and 548,600 for July 1, 1986. This represents a combination of two trends: a gain of between 10,500 and 10,600 persons through natural increase and a loss of between 1,500 and 8,000 persons through migration. A wide range between the high and low assumptions of net migration is assumed because of the uncertainty of the Alaska economy.

The growth of Alaska's population in the period from July 1986 to July 1987 should be similar to that for the post pipeline period of 1977-78.

Figure 1



A real loss of population is projected in 1986-87 from 1985-86. For July 1, 1987, the population is projected to be between 537,100 and 548,600. Again, Alaska should gain 10,200-10,700 persons through natural increase and lose between 7,800 and 15,200 persons through migration. The best estimate is a migration loss of about 12,000 by July 1987. Population projections from 1986 through 1991 are shown in Table 2.

U.S. Census Bureau estimates show slightly less growth than our estimates in the 1980-1985 period because the U.S. Census Bureau does not attempt to adjust for what we estimate was a 3.6% census error in Alaska in 1980. Even by Census Bureau standards, however, Matanuska-Susitna Borough was the fastest growing county in America during that period. The Kenai Peninsula Borough ranked number 4 and Kodiak number 15.

The population estimate for the United States on July 1, 1985 was 238,740,000. The Department of Labor estimates Alaska's population on July 1, 1985 was 539,600 or .23% of the U.S. population. At this population, Alaska would rank 49th among the 50 states and the District of Columbia. Alaska's population would exceed that of Vermont and Wyoming.

### **Components of Population Change**

There are two ways in which the population of an area changes: natural increase and net migration (Figure 2).

#### *Natural Increase*

Natural increase is a function of births and deaths in a population. It is the relatively stable component of population change and a very important element which can be counted on in the growth of Alaska's population. Natural increase produces growth in the state's population equal to approximately 2% every year.

Alaskan births are currently equivalent to about 2.4% of the population and deaths are equivalent to .39% of the population. The net growth, as a result of natural increase, is 2.04% per year. No matter what happens to the migration to and from Alaska during the remainder of the 1980s, Alaska will add between 9,000 and 11,000 persons to its population each year through natural increase. Between July 1, 1984 and July 1, 1985, 12,667 persons were born in Alaska and 2,024 persons died, for a net natural increase of 10,653 persons.

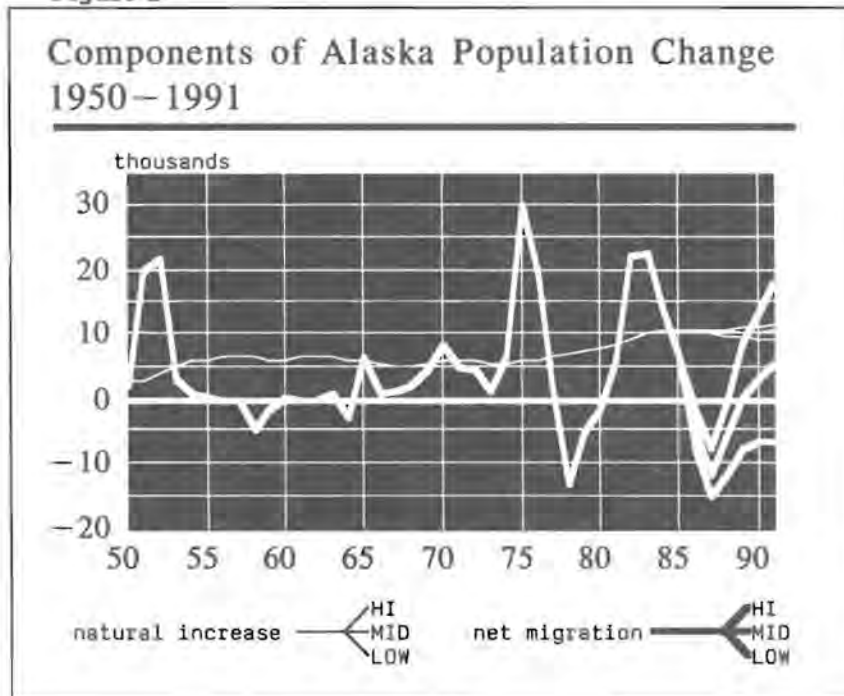
The Alaska Department of Labor has recently completed a set of unabridged life tables which show life expectancy by year by age, race and sex for 1977-83 (Table 1). Life expectancy in Alaska at birth in 1980 was as follows: white males, 69.8 years; white females, 77.5 years; Na-

tive males, 61.3 years; Native females, 71.3 years.

In comparison, life expectancy for the U.S. in 1980 was: white males, 70.7 years; white females, 78.1 years; other race males, 65.3 years; other race females, 73.6 years. Nationwide life expectancy has increased between 1970 and 80 by about 2.7 years for whites and about 4.2 years for other races. Life expectancy for Alaska Native males is less than that of Alaska white males by 8.5 years and life expectancy for Alaska Native females is less than their white counterparts by 6.2 years.

Alaska currently has the highest birth rate in America. While current fertility fluctuates depending on a variety of social and economic factors, the general trend in births does not generally change pace or direction rapidly. In 1985, the Total Fertility Rate for Alaska was 2.42 compared to 1.87 for the U.S. as a whole. This rate controls for differences in the age structure of the two populations and can be interpreted as the average number of children a woman of childbearing age would have if she were to continue to bear children at the same rate as women in these ages are currently bearing children. A completed fertility of 2.1 is considered to be replacement or zero population growth.

Figure 2



The amount of growth of the population due to natural increase also means that the *net balance* of migration would have to decline by 9,000-11,000 per year for Alaska to lose population. Historically, this has happened in only one year (1977-78) since 1949. It will probably happen again in 1986-87 and possibly 1987-88 depending on the condition of Alaska's economy. The trend in the individual components of natural increase are also of interest.

### *Migration*

Migration is the volatile component in Alaska's population fluctuations, often changing dramatically from one year to the next. The most common migration statistic reported is "net" migration. Until the last couple of years net migration information was all that was available and net migration was used in almost all population models. This information was frequently derived as a residual population change between censuses after births and deaths were accounted for.

The latest models use data on "gross" migration. This allows the independent analysis of migration into Alaska as well as analysis of migration out of the state. Generally, gross migration flows are substantially higher than net flows. If 10,000 persons move into an area and 8,000 persons move out of an area the net balance is 2,000 persons but the gross movement of persons is 18,000.

Some businesses such as real estate that benefit from the turnover of property are more interested in the total turnover of persons than the net gain or loss. Other businesses, such as personal services, judge only the net increase or decrease in persons as reflective of changes in demand for their business. The overall growth or decline of population however depends on the net balance of population rather than the gross movement.

Alaska is a state with a high gross migration. A large number of persons normally move to Alaska or from Alaska in any given year. For example between 1984 and 1985, it is estimated that some 48,600 persons moved to Alaska from outside the state. At the same time some 41,700 persons left Alaska. The net balance of migration was 6,900.

Trends in the net balance of migration can be as a result of a change in either in-migration or out-migration. Trends in in-migration to Alaska in the 1980s show a downturn from about 60,100 in 1981-82 to about 48,600 in 1984-85. Migration from Alaska, on the other hand, has been relatively less volatile so far in the 1980s, increasing from a low of about 36,000 in 1982-83 to a high of about 41,700 in 1984-85.

While the level of out-migration has increased, the recent slowdown in growth is not so much a matter of people leaving the state at an

increasing rate as it is a slowdown in the number of persons moving to Alaska from the rest of the nation. This makes it appear that more persons are leaving, because those who would normally leave are no longer being replaced as rapidly as in the past.

While the exact proportion is not known, military and military dependents probably account for less than 20% of the gross migration to and from the state. In some census areas military migration accounts for substantially more of the migration.

The levels of in-migration and out-migration chosen in the current series of population projections represent a combination of recent trends in migration to and from the state, as well as an evaluation of historic levels of in-migration and out-migration consistent with a range of economic conditions. The end result is three series of net migration, shown in Table 2, which approximate the range of economic conditions which may potentially occur during the next five years in Alaska.

The middle level migration scenario assumes a slight rise in migration from Alaska in 1985-86 and a continued decline in migration to Alaska (begun in 1982) through the 1986-87 period. This decline is followed by a gradual return to migration levels comparable to those experienced during 1981 and 1985 when there was an average annual rate of growth in the population of about 3.3%.

While this projection would show a net loss of migrants in 1985-86, 1986-87, and 1987-88, only in 1986-87 would the loss be substantial enough to outstrip natural increase and produce a decline in the state's population.

This scenario represents a "bust" followed by a return to conditions similar to those which occurred from the late 1960s and early 1970s, prior to pipeline construction.

The low series assumes that the current trends in migration to and from the state continue into 1987 and that a period of economic hardship continues through 1991, producing a continued net loss of migrants through the entire projection period. While this is a possibility it seems unlikely that the current downturn would continue for that period of time.

The impact of the worse case would be to hold the state's population at approximately its current level through 1991. In its extreme, this represents a long term "bust" scenario. There is no example of this extreme a net loss of migrants in Alaska since World War II, and it seems unlikely that this extreme will be met or exceeded during the next five years.

The high series assumes an optimistic case. It assumes the current trend in migration through 1987 followed by a more rapid recovery by 1989, and a return to positive economic conditions by 1990-91 achieved through a return of oil or a combination of other sectors to levels seen in about 1984.

This case represents a short term bust followed by a return to moderate "boom" conditions. The conditions needed for this scenario assume that the decline in the price of oil is a temporary phenomena and/or that another major project or combination of state, national, or international economic conditions will cause a return to moderate economic growth in the state.

A wide range between the high and low assumptions of net migration is assumed, given the uncertainty as to the future course of the state's economy. These assumptions have been chosen in part because of the wide range of possible outcomes in the near term, and in part to show what the demographic impact of these extremes would be for planning purposes. It is unlikely that conditions will be better or worse than the extremes set forth here.

As shown in Table 2, major increases due to migration have occurred in three periods. The first was in 1951-1952, the second was in 1975-76 and the third was in 1982-1984. (There was a minor period of moderate in-migration in about 1970.) Historically, there were net losses of migrants in 1978-80, 1956-59 and 1964.

In only 10 of the last 36 years has the average annual rate of growth been over 4%. During 17 of the last 36 years, the average annual rate of increase has been under 3%. Thus the current slowdown in growth is not at all out of character with the post World War II period.

It should be remembered that the larger the population, the less impact a given "boom" or "bust" has upon it. It is worth noting that the average annual rate of change in the population of the U.S., as a whole, has been under 2% since 1950, and under 1% since 1980, and the decline in the rate of growth is projected to continue.

### **Projected Growth**

In the middle series, Alaska's population would increase from 539,600 persons in 1985 to 588,300 in 1991 (Figure 1 and Table 2). Most of this growth would occur after 1989. During the 1986-1988 period, population growth in the middle series would be less rapid than it has been in the past (under 1% per year with a small loss in 1987). The U.S. rate of growth during the 1980s has been, and is projected to be, about 0.92 percent per year.

In the low series, population would decline from a high of 542,200 in 1986 to low of 535,000 in 1988, and increase again to 541,800 by 1991. In the high series, the population would reach 563,100 by 1988 and then increase to 636,700 by 1991. Even in the high series, however, the average annual rate of growth does not reach 5% by 1991.

A more detailed discussion of Alaska population trends, migration and the population of census areas and places is available in *Alaska Population Projections* and *Alaska Population Overview* currently available from the Alaska Department of Labor. If you are currently on our mailing list the publication will automatically be sent to you. If you are not on our mail list and would like to be, or if you wish to receive a copy of these reports, contact: Research and Analysis Section, Alaska Department of Labor, P.O. Box 25501, Juneau, AK 99802-5501, or phone (907) 465-4500.

**Table 1**  
**Life Expectancy at Birth**  
**by Race and Sex**  
**Alaska and the United States**  
**1970-80**

Life Expectancy at Birth (Years)	Total		White		Alaska Natives (U.S. Other Races)	
	Total	Male Female	Total	Male Female	Total	Male Female
Alaska						
1970	69.3	66.1	74.0	n/a	n/a	n/a
1980	72.1	68.8	76.5	73.1	69.8	77.5
				65.7	61.3	71.3
United States						
1970	70.9	67.1	74.8	71.7	68.0	75.6
1980	73.7	70.0	77.5	74.4	70.7	78.1
				65.3	61.1	69.4
				69.3	65.3	73.6

Source: *Alaska Life Tables for 1977-83*, Demographic Report No. 1, Alaska Department of Labor, Research and Analysis, 1986.

Table 2  
Annual Components of Population Growth for Alaska  
1950-91

Year	July 1 Population			Average Annual Rate of Increase			Population Change			Natural Increase			Net Migration		
	Low	Middle	High	Low	Middle	High	Low	Middle	High	Low	Middle	High	Low	Middle	High
1949		132,600													
1950		137,100			3.34			4,500				2,400			2,100
1951		160,000			15.42			22,900				2,800			20,100
1952		185,500			14.76			25,500				3,820			21,680
1953		193,300			4.38			8,300				4,990			3,310
1954		200,100			3.20			6,300				5,670			630
1955		206,500			3.15			6,400				5,990			410
1956		212,400			2.82			5,900				6,260			-360
1957		218,600			2.88			6,200				6,490			-290
1958		220,100			0.68			1,500				6,250			-4,750
1959		224,000			1.76			3,900				5,660			-1,760
1960		230,400			2.82			6,400				6,040			360
1961		236,700			2.70			6,300				6,260			40
1962		242,800			2.84			6,100				6,320			-220
1963		249,900			2.88			7,100				6,350			750
1964		253,200			1.31			3,300				6,100			-2,800
1965		265,200			4.63			12,000				5,780			6,220
1966		271,500			2.35			6,300				5,490			810



1967		277,900			2.33				6,400			5,110			1,290
1968		284,900			2.49				7,000			5,033			1,987
1969		294,600			3.36				9,700			5,340			4,360
1970		308,500			4.61				13,900			5,850			8,040
1971		319,600			3.53				11,100			5,990			5,110
1972		329,800			3.14				10,200			5,665			4,535
1973		336,400			1.96				6,600			5,310			1,290
1974		348,100			3.43				11,700			5,365			6,335
1975		384,100			9.83				36,000			5,765			30,235
1976		409,800			6.47				25,700			6,122			19,578
1977		418,000			1.98				8,200			6,532			1,668
1978		411,600			-1.54				-6,400			6,956			-13,356
1979		413,700			0.51				2,100			7,334			-8,234
1980		419,800			1.46				6,100			7,664			-1,564
1981		433,900			3.28				14,000			8,088			5,912
1982		465,200			6.99				31,400			9,026			22,374
1983		497,600			6.73				32,400			9,876			22,524
1984		522,000			4.79				24,400			10,376			14,024
1985		539,600			3.32				17,600			10,653			6,947
1986	542,151	545,200	548,562	0.47	1.03	1.65	2.581	5,600	8,962	10,589	10,528	10,466	-8,038	-4,928	-1,504
1987	537,080	543,903	551,506	-0.94	-0.24	0.54	-5,071	-1,297	2,944	10,253	10,502	10,605	-15,324	-11,799	-7,661
1988	534,940	548,497	563,068	-0.40	0.84	2.07	-2,140	4,594	11,562	9,754	10,330	10,707	-11,894	-5,736	855
1989	536,848	559,077	582,546	0.36	1.91	3.40	1,908	10,580	19,478	9,458	10,263	10,882	-7,890	317	8,596
1990	539,375	572,346	607,030	0.47	2.38	4.12	2,527	13,269	24,484	5,182	10,156	11,212	-6,855	3113	13,272
1991	541,754	588,315	636,683	0.44	2.75	4.77	2,379	15,969	29,683	8,974	10,425	11,645	-6,595	5544	18,008

Alaska Department of Labor, Research &amp; Analysis, 1986