January 27, 1952 Washington 25, D. C. Series P-25, No. 56

PROJECTIONS OF THE POPULATION BY STATES: 1955 AND 1960*

This report presents projections of the population of each region, geographic division, and State, for 1955 and 1960, taking into acm count the 1950 Census totals for these areas. The projections are designed to represent the civilian population of each area plus members of the armed forces who resided in the area at the time of their entry into the armed forces. This type of population cannot be enumerated easily or reliably in a census, but is the type for which the most realistic assumptions can be made as to future chenge and for which the most usem ful projections can be provided. Users of these projections can then develop projections of the resident population of each area by making whatever assumptions as to future military changes they consider appropriate.

These projections are being published at this time, even though they are subject to relam tively large errors, because the demand for figm ures of this kind has been considerable. It is believed that they are reliable enough to serve many important purposes and that persons working in the fields of public planning and market analysis will find them useful.

## SOURCES, NETHODS, AND ASSUMPTIONS

General method.-aA "ratio" method was sem lected after consideration had been given; from the ppint of view of validity and cost, to sevm eral possible methods of projecting State popum lations. Briefly, the ratio method consiets of (1) extrapolating the ratio of (a) the population of the area for which a projection is desired to (b) the population of a larger ares whioh in. cludes the first area and for which acceptable
population projections are already available; and (2) applying the extrapolated ratios to the population projections for the larger area to obtain projections for the smaller area. In preparing the projections for geographic divi. sions shown in this report, the ratio of the division total to the United States total was extrapolated and the extrapolated ratio was apo plied to projections of United States total population; in preparing projections for States, the ratio of the State total to the appropriate division total was extrapolated and the extram polated ratio was applied to the projections of the division total. Regional projections were obtained by combining the appropriate divisional figures. The specific assumptions and procedures used are discussed below.

Specific assumptions and procedures. - First, the ratio of the population of each division to the total population of the United States and the ratio of the population of each State to the total population of its division were computed for each decennial census yeax from the earliest census to 1950. The ratios for 1920 to 1950 are given in table 1 . on the basis of these data, the divisions and States were next divided into the following three groups:

Group I. Those areas for which the ram
tios show a consistent direction of change from 1920 to 1950 .

Group 2. Those areas for which the dim rection of change in the ratios from 1940 to 1950 was the same as from 1930 to 1940 but not as the change from 1920 to 1930 .

Group 3. Those areas for which the dim rection of change in the ratios from 1940 to 1950 was different from that for 1930 to 1940 .

[^0]The following assumptions were then made for each group with respect to the initial annual rate of change in the ratio: ${ }^{1}$

Group 1. The rate of change in the ratio was the same as the average annual rate of change in the ratio for $1920-50,1930-50$, or 1940-50, whichever was the least in absolute value (closest to zero).

Group 2. The rate was the same as the average annual rate for 1930-50 or 1940-50, whichever was the lesser.

Group 3. The rate was one-half of the average annual rate for 1940-50.

The rates of change so determined were assumed in the computations to apply to the period, July 1, 1950, to June 30, 1951. They are shown in table l. It was also assumed that the amual rates of change would decrease linearly to zero in 50 years, that is, by the year 2000-2001. Accordirigly, values for the anmual rates of change assumed to apply to each year, 1951-52 to 1959-60, were obtained by linear interpolation of the initial and terminal values.

Preliminary values of the ratios for July 1 , 1955, and July 1, 1960, were then computed by multiplying the ratios for July 1, 1950, serially by one plus the projected annual rates of change for the appropriate years. ${ }^{2}$ The preliminary proo jecteả rawios for geographic divisions, arad for the states within each division, for 1955 and for 1960, were then adjusted to sum to exactly 100 percent. ${ }^{3}$ The adjusted ratios are shown in table 2. Finally, projections of the population of each division for July 1, 1955 and 1960, were obtained by applying the adjusted ratios for divisions to projections of the total population of the United States (jncluding armed forces overseas) for 1955 and 1960, and projections of

1 The usual formula for the average annual rate of change in a series, say a series of proportions, is $\sqrt[4]{\frac{P_{1}}{P_{0}}}-1$, where $P_{1}$ represents the proportion at the end of the period, $P_{0}$ the proportion at the beginning of the period, and $t$ represents the number of yoars in the period. In order to simplify the procedure, the average annual rate of change was approximated by use of the formula $\frac{2\left(P_{1}-P_{0}\right)}{t\left(P_{1}+P_{0}\right)}$, which gives a satisfactory approximation when $\frac{P_{1}}{P_{0}}$ falls between 0.5 and 1.5 for the $10-$, 20-, and 30-year time spans considered here.

2 That is, each ratio for 1950 was multiplied by one plus the rate of change assumed for 1950-51, the product was multiplied by one plus the rate assumed for 1951-52, and so on. It may be noted that, in computing the average annual rate of change in the various ratios for periods ending in 1950, the value of the ratio on April 1 , 1950, was used; however, in extrapolating the ratios, the initial annual rate of change was applied to an estimate of the ratio for July 1, 1950.
${ }^{3}$ In the case of a few of the areas, this adjustment had the effect of distorting slightly the trend in the ratios originally projected, but no further adjustment was made to eliminate this distortion.
the populetion of each State were then obtained by applying the adjusted state ratios to the projected totels for divisions for these years. By using "Low," "medium," and "high" projections of the totel United stetes population at future dates, threeseries of projections for stetes and divisions were developed for July 1,1955 and 1960. The resulting projections are shown in teble 3.

Defintion of population. - such factors as the chenge in the number of armed forces personnel stationed in each state and overseas, and the movement into and out of the armed forces, can generally be regarded as disturbing the "nommal" trend both of the ratios and of the population figures. The preparation of prow Jections of the civilian population of an area and of the total population resident in the area (the oivilian population plus members of the amed forces stationed there) involves making projections of these military changes. It was deotaed, in the present instance, therefore, to work with, and develop projections for, a more regular and presumably more predictable popula. tion, comprising the civilian population and those members of the amed forces who resided in the area at the time of their entry into the axmed forces. The preparation of this series does not involve making separate projections of military changes, as do the two other types of estimates mentioned. (For all areas combined, this type of figure represents the total population of the United states including armed forces overseas.) Users of these projections who desire projections of tize total population residing in each aree and of the civilian population can develop them from the projections presented here by making whatever assumptions regarding future militery swrength and distribution they consider appropriate, perhaps on the basis of the differm ences between the corresponding types of estimates for some recent date.

The census data for April 1, 1950, and the population estimates for July 1, 1950, used in preparing these projections, were adjusted in accordance with this definttion before the compum tation of ratios. (census data for 1940 and prior years were not adjusted on this basis be cause of the small number of military personnel involved.) Correspondingly, the projected ratios for divisions were applied to projections of the total population of the United States including armed forces overseas to obtain estimates of the population of each division as defined above.

Basic data.-mThese population projections are based on data on the population of states from the various decennial censuses, the figures for 1950 being given in 1950 census of popula. tion, Series $\mathrm{PC}-9$, No. I; estimates of the population of the States for July 1, 1950, published
in Current Population Reports, Series P-25, No. 50; projections of the population of the United states for 1955 and 1960, published in Current Population Reports, Series Pu25, No. 43; and data on the size and distribution of the armed forces for 1950 provided by the Department of Defense.

## IIMITATIONS OF mHE PROJECTIONS

A definite statement as to the reliability of the projections for states, divisions, and regions presented in this report cannot, of course, be given. Suggestive comments can be made, however.

It should be recognized first of all that these projections represent the results of the use of a certain method and a certain set of assumptions; they must be interpreted, there.fore, in the light of this method and these assumptions. Other methods and other reasonable assumptions could have been used which would have produced somewhat different results. The method selected appeared to offer the best results for the limited funds available for preparing the projections.

Since the projections are based on the projections of the total population of the United States published in Ourrent Population Reports, P-25, No. 43, they are affected by the limitam tions of these projections, as described on page 7 of that report. Since, in addition, the projected ratios for each division ard State are subject to some error, the projections for these areas are, on the average, subject to greater error than the national projections.

Within the framework of the present assumptions, the range set py the high and low series gives an indlcation of the range of possible error--probably a minimal one. The high projections for 1960 exceed the low projections by 11.5 percent. If three series of ratios, instead of one, had been used in developing the present series of population projections--a dem sign which seems reasonable and which may be preferred by some--the resulting figures would possibly have had a considerably broader range-too broad perhaps to make the figures practically useful.

To date, no adequate test of the relative validity of various methods of projecting the population of geographic areas within the United States has been made. 4 A preliminary test of this kind is now being made at the Bureau of the Census, and a full description of the design of

[^1]the test and of the results will shortly be published. In general, the test involves project-ing the population of each state from 1930 to 1940 and 1950 by various methods and comparing the results with the 1940 and 1950 Census rew sults. Comparisons were made between projections prepared by such methods as the following: the cohort-survival method; geometric extrapolation; arithmetio extrapolation; and several variations of the ratio method, including the variation employed in this report. ${ }^{5}$ It is beIieved, on the basis of the preliminary results of this test, that, in general, the projections for the States with a relatively large population in 1950 and with relatively little net migration in the recent past are subject to a smaller percent error than the projections for States with a relatively small population and relatively large net migration. Also, the projections for 1955 are, on the average, likely to be considerably more accurate than the projections for 1960. The maximum percentage error shown in the test for any area, for the 10 -year projections, when the particular variation of the ratio method employed in this report was used, was 24 percent (District of Columbia); if the District of Columbia is excluded, the maxtmum was 15 percent.

## RELATED REPORTS

Related estimates. - - Reference has already been made to the 1950 Census data for states and to the estimates of State population for fuly 1 , 1950. Estimates of the total population of States for July 1 of each year, 1940 to 1949, have been published in Current Fopulation Re. ports, Series P-25, No. 47. The projections and current figures given in the present report, however, should not be used in conjunction with these data or other estimates for dates after April 1, 1940, published in other reports in the p-25 series, unless dyfferences in the treatment of the armed forces are taken into account. The figures for the total population of states published in Series P-25, Nos. 47 and 50 , and in Series PC-9, No. I, relate to the civilian population plus armed forces stationed in the area; as indicated earlier, the figures in this report relate to the civilian population plus those members of the armed forces who resided in the area at the time of their entry into military service.

[^2]Related profections. - The latest available projections of the population of the United States as a whole are those published in Current Population Reports, Series P-25, No. 43. This report presents three series of annual figures to 1960 , classified by age and sex. These figa ures were developed on the basis of current esm timates for July l, 1949 ; they do not take the 1950 Census and informetion on subsequent pop= ulation changes into account. On the basis of these recent indications, it is anticipated that as of January 1,1952 , the current estimates of the total population of the United States will. fall about midway between the medium and high projections implied for that date. Although rem vision of these projections may appear desirable on this account, it was not deemed necessary or feasible to carry out a revision at this time for the purpose of preparing these state projections.

Projections of the population of geographic divisions for 1955,1960 , and 1975 were recently prepared by Margaret J. Hagood and JacobS. Siegel. 6 The general method used in preparing those projections is the same as that used in the present report. Because of differences in the basio data used, the speoifio assumptions selected, and the details of computation, howm ever, the corresponding projectionsmothose for divisions in 1955 and 1960 -mare not in exact agreement. The maximum difference, that for the Best South Centrel division in 1980, is about 4 percent; but seven out of the nine divisions show differences under 2 percent. It was cone sidered desirable in preparing the present se xies to make use of the Census Bureau's State estimates for July 1,1950 , which became availm able after the earliex projections were prea pared, as well as to use an approach, in setting up the assumptions for projecting the population ratios, which permitted more precise formulation. The article cited presents, in addition to the basic series mentioned, projections of the agemsex distribution of the population of the foux major geographic regions in 1960.

[^3]
## PROJECTIONS FOR OTHER AREAS AND DATES

Frequentiy, profections of the population of areas other than States or graups of States, or for earlier and later dates than given here, are needed. The method and assumptions used in prem paring the present projeotions cen generally be extended to prepare these additional kinds of figures. If the past rate of growth of the popum lation of an area has paralleled, even roughly, the rate of growth in the State, it may be suf. ficient to use (without extrapolation) the prom portion of the total population of the State in the area, as shown by the 1950 Census or more recent data, in conjunction with the projected State total.

Since it appears that the reliability of projections generally decreases as the size of the area decreases and as the estimate date exm tends further into the future, projections for more than a decade hence of relatively small populations, say of several hundred thousand or less, are probably subject to considerable error. The error may frequently be large enough to render such projections inadequate for most of the uses to which they may be put. Futher. more, it is recommended that projections for more than five or so years into the future not bo attempted for rapidily growing areas with populations of fewer than 50,000 persons. (These limits are somewhat arbitrary, but they may serve as convenient guides until limits are dem veloped by empirical test.) In projecting the population of a geographic area within the United States, particularly a rather small area, direct consideration should be given, insofar as possible, to the economic, industrial, and social structure of the area. For some very small areas, the expansion or contraction of a single industry or even a single firm may be the determining factor in the course of population changes. Any projections should be carefully cheoked for consistency with past trends and for reasonableness in the light of expected future developments, and consideration should be given to the preparation of several projections using different methoãs.

If there is interest in projections of the age-sex distribution of the population of States, the ratio method applied here to project totals or the method described in the Hagood Siegel article cited above for projecting the age-sex distribution of the population of rem gions can be adapted to that purpose.

Table 1. ---COMPUTATION OF THE RATE OF CHANGE TN THE PROPORTION OF THE POPULATION IN GEOGRAPhIC DIVISIONS AND STATES ASSUMED FOR THE INITTAL YEAR OF THE PROJECTION PERIOD
(The sum of the percentages in each distribution shown may not equal. 100.00 because of rounding. percentages for 1920 to 1940 are based directly on data from the decemial censuses; those for 1950 are based on data fron the exclude all other members of the members of the armed forces residing in the area at the time of entry in thext for further explanation)


Table 2.--PERCENLAGE DISTRIbution OF The population of the united states by geogaphic divisions and of the population OF DIVISIONS BY STATES, FOR 1950, AND PROJECTED PERCENTAGES FOR 1955 AND 1960
(The sum of the percentages in each distribution show may not equal 100.00 because of rounding. Figures relate to July 1 . The estimates shown for 1950 are based on estimates of State population published in Current Population Reports, Series P-25, No. 50 , adjusted to include members of the armed forces residing in the area at the time of entry into the armed forces and to exclude ali other members of the armed forces stationed in the area on the eatimate date. The projected percentages for 1955 and 1960 relate to a similar population)


TabIe 3. - PROJECTIONS OF THE POPULATION OF REGIONS, DIVISIONS, AND STATES, FOR 1955 AND 1960, WITH CURRENT FIGURES FOR 1950
(Totals show may differ from the sum of parts shown because of rounding. Figures relate to July 1 and represent the civilian popm ulation of each area plus members of the armed forces who resided in the area at the time of their entry into the armed forces. The estimates shown for 1950 are based on the estimates of State population published in Current Population Reports, Series P-25, No. 50 , adjusted to represent the type of population defined above)

| Region, division, and State | $\begin{gathered} \text { Estimate, } \\ 1950 \end{gathered}$ | Low series |  | Medium series |  | High series |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1955 | 1960 | 1955 | 1960 | 1955 | 1960 |
| United States............. | ${ }^{1} 151,672,000$ | 158,176,000 | 161,679,000 | 161,748,000 | 169,371,000 | 166,179,000 | 180,276,000 |
| RIGGIONS: |  |  |  |  |  |  |  |
| Northeastern States.........g. | 39, 910,000 | 40,893,000 | 41,109,000 | 41,817,000 | 43,064,000 | 42,962,000 | 45,837,000 |
| North Central States.......... | 44,938,000 | 46,268,000 | 46,724,000 | $47,313,000$ | 48,947,000 | 48,609,000 | 52,099,000 |
| The South. ................... | 47,296,000 | 49,243,000 | 50,226,000 | 50,355,000 | 52,615,000 | 51,734,000 | 56,003,000 |
| The West....................... | 19,528,000 | 21,772,000 | 23,620,000 | 22,264,000 | 24, 744,000 | 22,873,000 | 26,337,000 |
| NORTHEASTERN STATES: |  |  |  |  |  |  |  |
| New England.................. | 9,393,000 | 9,611,000 | 9,649,000 | 9,828,000 | 10, 108,000 | 10,097,000 |  |
| Middle Atiantic.............. | 30,517,000 | 31,282,000 | 31,460,000 | 31,989,000 | 32,957,000 | 32,865,000 | 35,079,000 |
| NORTH CENTRAL STATES: |  |  |  |  |  |  |  |
| East North Central........... | 30,686,000 | 31,942,000 | 32,567,000 |  | 34,117,000 | 33,558,000 | $36,313,000$ |
| West North Central........... PHE SOUTH: | 14,252,000 | 14,326,000 | 14,157,000 | 14,650,000 | 14,831,000 | 15,051,000 | $15,785,000$ |
| South Atlantic. ............... | 21, 1.71,000 | 22,363,000 | 23,102,000 | 22,868,000 | 24,201,000 | 23,494,000 | 25,760,000 |
| East South Central........... | 11,552,000 | 11,821,000 | 11,870,000 | 12,088,000 | 12,435,000 | 12,419,000 | 13,236,000 |
| West South Central............ | 14,573,000 | 15,059,000 | 15,253,000 | 15,399,000 | 15,979,000 | 15,821,000 | 17,008,000 |
| THE WEST: |  |  |  |  |  |  |  |
| Mountain | 5,117,000 | $5,465,000$ $26,307,000$ | 5,701,000 $17,919,000$ | 5,588,000 $16,675,000$ | 5,972,000 $18,772,000$ | $5,741,000$ $17,132,000$ | $\begin{array}{r} 6,357,00 \\ 19,981,000 \end{array}$ |

${ }^{1}$ This figure differs slightly from the corresponding figure for the same date published in Current Population Reports, Series p-25, No. 55, whinh includes among the United States armed forces overseas those whose pre-service residence was in a United States Territory or possession.

Table 3. - - PROJECTIONS OF THE POPULATION OF REGIONS, DIVISIONS, AND STATES, FOR 1955 AND 1960, WITH CURRENT FIGURES FOR $1950-$ Cone
(Totals shown may differ from the sum of parts shown because of rounding Figures relate to July 1 and represent the civilian popm ulation of each area plus members of the armed forces who resided in the area at the time of their entry into the arned forces. The estimates shown for 1950 ere based on the estimates of State population published in Current Population Reports; Series Pm25, No. 50, adjusted to represent the type of population defined above)

| Region, division, and State | $\begin{gathered} \text { Estimate, } \\ 1950 \end{gathered}$ | Low series |  | Medium series |  | High sexies |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1955 | 1960 | 1955 | 1960 | 1955 | 1960 |
| NEW ENGTAND: | $\begin{array}{r} 930,000 \\ 541,000 \\ 385,000 \\ 4,728,000 \\ 783,000 \\ 2,026,000 \end{array}$ | $\begin{array}{r} 947,000 \\ 552,000 \\ 384,000 \\ 4,811,000 \\ 799,000 \\ 2,118,000 \end{array}$ | $\begin{array}{r} 946,000 \\ 552,000 \\ 377,000 \\ 4,806,000 \\ 800,000 \\ 2,167,000 \end{array}$ | $\begin{array}{r} 968,000 \\ 564,000 \\ 393,000 \\ 4,920,000 \\ 917,000 \\ 2,166,000 \end{array}$ | $\begin{array}{r} 991,000 \\ 579,000 \\ 395,000 \\ 5,035,000 \\ 838,000 \\ 2,270,000 \end{array}$ | $\begin{array}{r} 995,000 \\ 580,000 \\ 404,000 \\ 5,055,000 \\ 839,000 \\ 2,225,000 \end{array}$ | $\begin{array}{r} 1,055,000 \\ 616,000 \\ 421,000 \\ 5,359,000 \\ 892,000 \\ 2,417,000 \end{array}$ |
| Main ${ }_{\text {M }}$........................** |  |  |  |  |  |  |  |
| New Hampshire.................. |  |  |  |  |  |  |  |
| Vermont........................ |  |  |  |  |  |  |  |
| Massachusetts. |  |  |  |  |  |  |  |
| Rhode Island. |  |  |  |  |  |  |  |
| Connectiout..................s. |  |  |  |  |  |  |  |
| MIDDLE ATAANTC: | $\begin{array}{r} 14,999,000 \\ 4,872,000 \\ 10,646,000 \end{array}$ | $\begin{array}{r} 15,420,000 \\ 5,065,000 \\ 10,798,000 \end{array}$ | $\begin{array}{r} 15,546,000 \\ 5,759,000 \\ 10,755,000 \end{array}$ | $\begin{array}{r} 15,768,000 \\ 5,180,000 \\ 11,041,000 \end{array}$ | $\begin{array}{r} 16,286,000 \\ 5,404,000 \\ 11,266,000 \end{array}$ | $\begin{array}{r} 16,200,000 \\ 5,321,000 \\ 11,344,000 \end{array}$ | $\begin{array}{r} 17,335,000 \\ 5,752,000 \\ 11,992,000 \end{array}$ |
| New York. |  |  |  |  |  |  |  |
| Now Jersey....................... |  |  |  |  |  |  |  |
| Pennsylvania................ |  |  |  |  |  |  |  |
| EAST NORTH CENTPAL: |  |  | 8,508,000 | 8,534,000 | $\begin{aligned} & 8,913,000 \\ & 4,438,000 \end{aligned}$ | 8,767,000 | $\begin{array}{r} 9,487,000 \\ 4,723,000 \\ 10,168,000 \\ 7,905,000 \\ 4,030,000 \end{array}$ |
| Chio............. | 8,016,000 | 8,345,000 | 8,208,000 | 4,245,000 |  | 4,361,000 |  |
| Indiana. | 3,983,000 | 4,151,000 | 9,119,000 | 9,236,000 | 9,553,000 | 9,489,000 |  |
| Illinois | 8,771,000 | 6,032,000 | 7,089,000 | 6,986,000 | 7,427,000 | 7,178,000 |  |
| Michigan | $6,435,000$ $3,481,000$ | 6,832,000 $3,582,000$ | 3,614,000 | 3,663,000 | 3,786,000 | 3,763,000 |  |
| WEST NORTH CENTRAL: | 3,025,000 |  | $\begin{aligned} & 3,078,000 \\ & 2,631,000 \end{aligned}$ |  | $\begin{aligned} & 3,224,000 \\ & 2,756,000 \end{aligned}$ | $\begin{aligned} & 3,236,000 \\ & 2,802,000 \end{aligned}$ | $\begin{aligned} & 3,432,000 \\ & 2,934,000 \end{aligned}$ |
|  |  | 3,080,000 |  |  |  |  |  |
| Minnesota. | 2,659,000 | 2,667,000 |  | 2,728,000 | 4,188,000 | 4,242,000 | 4,457,000 |
| Missouri. |  | 4,037,000 | $\begin{aligned} & 2,631,000 \\ & 3,998,000 \end{aligned}$ | 4,129,000 | $626,000$ | 650,000 | 666,000 |
| North Dakota.................. | $\begin{aligned} & 631,000 \\ & 662,000 \end{aligned}$ | $\begin{aligned} & 619,000 \\ & 657,000 \end{aligned}$ | -598,000 | 671,000 | $\begin{array}{r} 671,000 \\ 1,358,000 \end{array}$ | 690,000 | $\begin{array}{r} 71.5,000 \\ 1,445,000 \end{array}$ |
| South Dakota................... |  |  | 641,000 | 1,361,000 |  |  |  |
| Nebraska. ....................... | $1,345,000$ | 1,936,000 | 1,916,000 | 1,979,000 | 2,007,000 | 2,034,000 | 2,137,000 |
| Kansas. . . . . . . . . . . . . . . . . . . |  |  |  | 1,9\%,000 |  |  |  |
| SOUTH ATLANTIC: | 321,000 | 340,000 | $\begin{array}{r} 351,000 \\ 2,625,000 \end{array}$ | $\begin{array}{r} 347,000 \\ 2,564,000 \end{array}$ | $\begin{array}{r} 368,000 \\ 2,750,000 \end{array}$ | 357,000 | 391,000 |
| Delaware. |  |  |  |  |  | 2,635,000 | 2,927,000 |
| Maryland..................... | $2,336,000$766,000 | 2,508,000 | $\begin{array}{r} 2,625,000 \\ 827,000 \end{array}$ | 2,823,000 | 2,867,000 |  | $\begin{array}{r} 923,000 \\ 4,002,000 \end{array}$ |
| District of Columbia......... |  | 3,465,000 | 3,589,000 | $\begin{aligned} & 3,543,000 \\ & 2,130,000 \end{aligned}$ |  | $3,640,000$ |  |
| Virginia...................... | 3,265,000 |  | 2,086,000 |  |  | 2,188,000 | $\begin{aligned} & 2,326,000 \\ & 4,838,000 \end{aligned}$ |
| West Virginia. |  | 2,082,000 |  | $\begin{aligned} & 2,130,000 \\ & 4,349,000 \end{aligned}$ | $\begin{aligned} & 2,1.85,000 \\ & 4,545,000 \end{aligned}$ | 4,468,000 | $\begin{aligned} & 4,838,000 \\ & 2,468,000 \end{aligned}$ |
| North Carolina. | $\begin{aligned} & 4,078,000 \\ & 2,128,000 \end{aligned}$ | 2,193,000 | 2,214,000 | 4,34,9,000 | $\begin{aligned} & 4,545,000 \\ & 2,319,000 \end{aligned}$ | $2,304,000$ $3,719,000$ | $\begin{aligned} & 2,468,000 \\ & 3,960,000 \end{aligned}$ |
| South Carolina................. |  | $\begin{aligned} & 3,540,000 \\ & 3,177,000 \end{aligned}$ | $\begin{aligned} & 3,552,000 \\ & 3,518,000 \end{aligned}$ | 3,249,000 | $3,721,000$ $3,686,000$ | 3,338,000 |  |
| Georgia...................................... | $\begin{aligned} & 3,458,000 \\ & 2,781,000 \end{aligned}$ |  |  |  | 3,686,000 |  | 3,923,000 |
| LAST SOUTH CENTRAL: | 2,952,000 | 2,996,000 | 2,985,000 | 3,064,000 | $\begin{aligned} & 3,127,000 \\ & 3,669,000 \end{aligned}$ | $\begin{aligned} & 3,1.47,000 \\ & 3,619,000 \end{aligned}$ | $\begin{aligned} & 3,329,000 \\ & 3,905,000 \end{aligned}$ |
|  |  |  |  |  |  |  |  |
| Tennessee. |  | 3,445,000 | $\begin{aligned} & 3,502,000 \\ & 3,202,000 \end{aligned}$ | $\begin{aligned} & 3,522,000 \\ & 320,000 \end{aligned}$ | 3,354,000 |  | $\begin{aligned} & 3,570,000 \\ & 2,432,000 \end{aligned}$ |
| Alabama. | $3,090,000$ $2,190,000$ | 3,205,000 | 2,181,000 | 2,254,000. | 2,284,000 |  |  |
| Mississippi..........ine...... | 2,190,000 | 2,205,000 |  |  |  |  |  |
| WEST SOUTH CENTRAL: | 1,936,000 |  | $\begin{aligned} & 1,887,000 \\ & 2,868,000 \end{aligned}$ | 1,970,000 | $\begin{aligned} & 1,976,000 \\ & 3,005,000 \end{aligned}$ | $\begin{aligned} & 2,024,000 \\ & 2,957,000 \end{aligned}$ | $\begin{aligned} & 2,104,000 \\ & 3,198,000 \\ & 2,418,000 \\ & 9,288,000 \end{aligned}$ |
| Arikansas. |  | 1,927,000 2,815,000 |  |  |  |  |  |
| Iouisiana | 2,704,000 | $\begin{aligned} & 2,227,000 \\ & 8,090,000 \end{aligned}$ |  |  | 2,271,000 | 2,340,000 |  |
| Oklanoma. . . . . . . . . . . . . . . . . . | 7,683,000 |  | $\begin{aligned} & 2,168,000 \\ & 8,30,000 \end{aligned}$ | 8,273,000 | 8,726,000 | 8,500,000 |  |
| Texas.......................... |  |  |  |  |  |  |  |
| MoUnTAIN: | 602,000 | 611,000 | 608,000 |  |  | $\begin{aligned} & 642,000 \\ & 659,000 \end{aligned}$ | 678,000 |
| Montana. |  |  | $\begin{aligned} & 643,000 \\ & 307,000 \end{aligned}$ | $\begin{aligned} & \text { 64, }, 000 \\ & 307,000 \end{aligned}$ | 673,000 |  | $\begin{aligned} & 717,000 \\ & 343,000 \end{aligned}$ |
| Idano......................... | $\begin{aligned} & 599,000 \\ & 287,000 \end{aligned}$ | $\begin{aligned} & 627,000 \\ & 300,000 \end{aligned}$ |  |  | $\begin{array}{r} 322,000 \\ 3,518,000 \end{array}$ | $\begin{aligned} & 659,000 \\ & 316,000 \end{aligned}$ |  |
| Wyoming. . . . . . . . . . . . . . . . . . |  |  | 1,449,000 | 1., 438,000 |  | $\begin{array}{r} 2,478,000 \\ 782,000 \end{array}$ | 1,616,000 |
| Colorado. | 1,335,000 | 1,407,000 |  |  | -224,000 |  | $\begin{array}{r} 877,000 \\ 1,036,000 \\ 876,000 \\ 215,000 \end{array}$ |
| New Mexic | 685,000 | 849,000 | 929,000 | 869,000 | 973,000 | $892,000$ |  |
| Arizona. . . . . . . . . . . . . . . . . ob | 7547,000 | 750,000 | 786,000 | 766,000 | 823,000 | 186,000 |  |
| Utah. ................................ | 158,000 | 177,000 | 192,000 | 181,000 | 202,000 |  |  |
| Nevada........................ ${ }^{\text {a }}$ | 158,000 |  |  |  |  |  |  |
| PACIFIC: |  | $2,554,000$$1,700,000$$12,053,000$ | $\begin{array}{r} 2,709,000 \\ 1,831,000 \\ 13,380,000 \end{array}$ | $\begin{array}{r} 2,612,000 \\ 1,739,000 \\ 12,325,000 \end{array}$ | $\begin{array}{r} 2,838,000 \\ 1,918,000 \\ 14,017,000 \end{array}$ | 2,684,000 17886,000 | 3,020,000 |
| Washington. . . . . . . . . . . . . . . . . | 2,34,000 $1,536,000$ |  |  |  |  | $1,786,000$ $12,663,000$ | 2,041,000 $14,919,000$ |
| Oregon......................... | 10,527,000 |  |  |  |  | 12,663,000 | 14,91,000 |


[^0]:    * Prepared by Helen L. White, formerly statistician in the Estimates and Forecasts Unit of the Population and Housing Division, and Jacob S. Siegel, Chief of the Estimates and Forecasts Unit.
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[^1]:    ${ }^{4}$ A test of limited scope, relating solely to the validity of the ratio method in predicting the population of selected large cities, was recently conducted by Robert C. Schmitt and Albert H. Crosetti and is described in "Accuracy of the Ratio Method for Forcasting City Population," Land Economics, Vo1. XXVII, No. 4, November 1951, pp. 346 -348.

[^2]:    ${ }^{5}$. The cohort-survival method involves projecting the population as enumerated at the last census or as estimated for a current date, by age and sex, to a future date by use of projected birth rates, death rates, and migration. This method is described in detail in current. Population Reports, Series P-25, No. 43. Geometric extrapolation and ari thmetic extrapolation involve, respectively, the assumption of a continuation of the average annual rate and average annual amount of increase in the population as observed in some recent past period.

[^3]:    6 Margaret Jarman Hagood and Jacob S. Siegel, "Projections of the Regional Distribution of the Population of the United States to 1975," Agricultural Economios Research, Vol. III, No. 2, April 1951, pp. 41-52. This article is pertinent also for its brief discussion of the history of projections for geographic areas within the United states, its detailed description of the ratio method, its discussion of other methods, and its selected bibliography bearing ca these subjects.

