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ESTIMATES OF THE POPULATION OF THE PROVIDENCE STANDARD METROPOLITAN AREA: JULY 1, 1956

(Similar estimates for the Houston, St. Louis, Milwaukee, Washington, D. C., and New Orleans Standard Metropolitan Areas for 1956 are given in Current Population Reports, Series P-25, Nos. 137 and 156)

This report presents estimates of the population of the standard metropolitan area of Providence, Rhode Island, by constituent parts, for July 1, 1956. The estimates relate to the civilian population plus members of the Armed Forces stationed in the area. They were prepared at the request of the Federal Civil Defense Administration as part of a larger study relating to civil defense planning sponsored by that agency.

Methodology.—An average of the results of two procedures was used in developing the current estimates of population shown here. Both methods use the 1950 Census as a base and available current series of figures to estimate the population growth or decline since 1950. The choice of methods was dictated by the scope and quality of the available current data. In general, the averaging technique tends to avoid extreme errors and to reduce the dependence of the results on any one set of indicators.

The methods used were (a) the Census Bureau's component method II, which employs vital statistics to measure natural increase and school enrollment (or school census data) as a basis for estimating net migration; and (b) the vital rates method, which employs data on births and deaths as direct indicators of total population change.¹

¹For an evaluation of several methods of preparing population estimates, including the Census Bureau's component method II and the vital rates method, see: Jacob S. Siegel, Henry S. Shryock, Jr., and Benjamin Greenberg, "Accuracy of Postcensal Estimates of Population for States and Cities," American Sociological Review, Vol. 19, No. 4, August 1954, pp. 440-446; and Henry S. Shryock, Jr., "Development of Postcensal Population Estimates for Local Areas," Regional Income, Vol. 21, in Studies in Income and Wealth, National Bureau of Economic Research, Inc., N.Y., Princeton University Press, 1957.

The Census Bureau's component method II involves adding to the 1950 population of the area the natural increase (excess of births over deaths) between April 1, 1950, the date of the last census, and the estimate date, and adding or subtracting an estimate of the net migration for the same period. The latter estimate is obtained by a comparison of the estimated number of children of elementary school age, based on school enrollment (or school census data) on the estimate date, with the number of children of this same age expected to survive from the appropriate age groups of 1950. The comparison yields an estimate of a net migration rate for children of school age; and this rate, in turn, becomes the basis for estimating net migration for the population of all ages. This method is used by the Bureau of the Census in preparing its annual series of current estimates of State population.² A detailed description of this method was published in Current Population Reports, Series P-25, No. 133.

The vital rates method of estimating current population is based on the assumption that changes in the number of births and deaths in an area reflect changes in the size of the population in which the births and deaths occur. To compute estimates by this procedure, the ratio of the area death rate to the United States rate in 1950 is applied to the United States rate at the estimate date to obtain an estimate of the area death rate at the estimate date. This procedure assumes that the area birth and death rates changed by the same percentage between 1950 and the estimate date as the national birth and death rates. The estimated death rate for the current year is then

²See, for example, Current Population Reports, Series P-25, No. 148, "Estimates of the Population of States and selected outlying areas, July 1, 1950 to 1955," October 19, 1956.

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divided into the current number of deaths of residents of the area to provide a tentative current population estimate for the area. A corresponding figure is derived by a similar type of manipulation of births and birth rates. These two population estimates are then averaged to obtain the final population estimate.³

Estimates were first developed separately for each of the constituent parts of the

³A more detailed discussion of this method is given in: Donald J. Bogue, "A Technique for Making Extensive Population Estimates," Journal of the American Statistical Association, Vol. 45, No. 250, June 1950, pp.149-163; and U. S. Bureau of the Census, Current Population Reports, Series P-25, No. 97, p. 2.

metropolitan area and then summed to obtain an estimate for the standard metropolitan area as a whole. The estimate for the Massachusetts portion of the standard metropolitan area represents an extrapolation of the results of the Massachusetts State census conducted in January 1955. The portion of the standard metropolitan area in Massachusetts is less than 10 percent.

Sources of data.—The basic data necessary to prepare the population estimates presented here were provided primarily by State and local agencies. Thus, school enrollment data were obtained from the State and local departments of education and from the appropriate parochial school officials. Vital statistics were provided by State and local departments of health.

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(Each estimate has been independently rounded to the nearest thousand from figures computed to the last digit; hence, the sums of parts may differ slightly from the totals shown. Percentages are based on unrounded numbers)

Standard metropolitan area and constituent parts	Population		Change, 1950 to 1956		Percent distribution	
	July 1, 1956	April 1, 1950 (census)	Number	Per- cent	1956	1950
Providence standard metropolitan area..	771,000	737,203	+34,000	+4.6	100.0	100.0
Providence city.....	223,000	248,674	-26,000	-10.3	28.9	33.7
Remainder of standard metropolitan area....	548,000	488,529	+60,000	+12.2	71.1	66.3
Rhode Island parts.....	473,000	420,244	+53,000	+12.6	61.3	57.0
Massachusetts parts.....	75,000	68,285	+7,000	+9.9	9.7	9.3