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

(Similar estimates for the Houston, St. Louis, Milwaukee, Washington, D. C., and Providence Standard Metropolitan Areas for 1956 are given in Current Population Reports, Series P-25, Nos. 137 and 155)

This report presents estimates of the population of the standard metropolitan area of New Orleans, Louisiana, 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.--Several relatively standard procedures were used in developing the current estimates of population shown here. All the 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, in order to avoid extreme errors and to reduce the dependence of the results on any one set of indicators, an average of the results of several independent methods was employed.

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, (b) the vital rates method, which employs data on births and deaths as direct indicators of total population change, (c) the dwelling unit method, in which the change in the number of occupied dwelling units since the last census is estimated from one or more series and this, in turn, is used to estimate the change in the population of the area, and (d) the composite method, which involves the use of school data and vital statistics to measure different population age groups which are then summed to obtain an estimate of total population.[1]

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

[1] For 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.

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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 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]

The dwelling unit method of estimating population rests on the assumption that changes in the number of dwelling units in an area reflect changes in the number of inhabitants. The estimate of change in the number of dwelling units between 1950 and the estimate date is derived from data on building permits issued and demolitions authorized (or from data on electric and gas utility connections in residential units). (In some instances, such data may be supplemented by land use surveys and by data from tax assessment records.) However, changes in the population depend not only on changes in the number of dwelling units but also on changes in vacancy rates and in the number of persons per occupied dwelling unit. It is desirable, therefore, to take into account possible changes in these factors between the benchmark date and the estimate date. In the absence of direct information relating to such changes, however, 1950 Census values may be used. Thus, 1950 vacancy rates were assumed here in the estimates prepared by this technique. Allowances were made, however, for postcensal changes in the number of persons per occupied dwelling unit. Some decline in average size of households between 1950 and 1956 was assumed in the estimate for New Orleans city on the basis of the 1940-50 trends.

Multiplying the estimated number of occupied dwelling units by the estimated number of persons per occupied dwelling unit on the estimate date gives the estimated population in households on the estimate date. It was necessary, therefore, as a final step to add in an allowance for the population in quasi households (hotels, large rooming houses, institutions, and the like). For present purposes, the 1950 quasi-household population was used inasmuch as there were no indications that any substantial changes had occurred in the size of this segment of the population.

The dwelling unit technique is beset with many hazards, and extreme care has to be exercised in its application. Its use here was limited to one area (New Orleans city) where the basic data appeared to be reliable and complete.

The composite method of estimating population makes use of three series of data--births, deaths, and school enrollment--to estimate the population of the various age segments to which these basic indicators are most applicable. School enrollment is used to estimate the population of school age, the number of births is used to estimate the number of females 15 to 44 years of age, and the number of deaths is used to measure the size of the population 45 and over. Thus, each series covers a particular age group, and

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[2] See, 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.

[3] A 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, August 6, 1954.

summing the separate age estimates yields an estimate of the total population.[4]

A brief description of the method, as applied here, is as follows:

1. Population under 5 years: This estimate is based on the number of births for the 5-year period preceding the estimate date, plus an allowance for deaths using appropriate survival rates and for net migration using the "school age" migration rate as a guide. (This migration rate was obtained in connection with the computation of component method II described above.)

2. Population 5 to 14 years: The procedure described above under component method II, involving school enrollment data, was used.

3. Population 15 to 44 years: An estimate of the female population 15 to 44 years of age was obtained by the use of data on births and birth rates, roughly along the lines of the vital rates method outlined above. In this instance, however, the births are related to the female population 15 to 44 years of age rather than to the total population, and estimates of the number of females in this age group are obtained. The corresponding number of males 15 to 44 years was obtained by applying the sex ratio (ratio of males to females) of this group, as shown by the 1950 Census, to the estimated number of females 15 to 44 years on the estimate date.

4. Population 45 years and over: Deaths of persons 45 and over, by age, and death rates for the corresponding ages were used to derive the estimates for this group. Current death rates were developed and applied along the lines of the vital rates method. It is desirable to work with several age groups to reduce the variation in death rates between 1950 and 1956 resulting from changes in age composition within the group 45 and over in this period. Computations were made separately for the age groups 45 to 54 years, 55 to 64 years, and 65 years and over.

The estimate for New Orleans city is based on the average of all four procedures described above. The estimates for Jefferson and St. Bernard Parishes represent the average of component method II, the vital rates method, and the composite method. Estimates were first developed separately for each of the constituent parts of the metropolitan area and then summed to obtain an estimate for the standard metropolitan area as a whole.

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. Data on residential building permits and demolitions were, in general, obtained from such secondary sources as city and county planning commissions and chambers of commerce. Such secondary sources were resorted to where the data were already compiled in a form convenient for these purposes.

[4] A detailed discussion of the composite method is given in: Donald J. Bogue and Beverly Duncan, A composite Method for Estimating Postcensal Population of Small Areas, by Age, Sex, and Color, paper read at the Third Annual Conference on Business Research, Chicago, Ill., April 13-14 (unpublished). A detailed application of the method is illustrated in: State of Illinois, Department of Public Health, Bureau of Statistics, Health Statistics Bulletin, Special Release No. 23, Springfield, Ill., September 1956.

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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	Percent	1956	1950
New Orleans Standard Metropolitan Area..	779,000	685,405	+94,000	+13.7	100.0	100.0
New Orleans city[1].....	602,000	570,445	+31,000	+5.5	77.2	83.2
Remainder of standard metropolitan area.....	178,000	114,960	+63,000	+54.6	22.8	16.8
Jefferson Parish.....	157,000	103,873	+53,000	+50.7	20.1	15.2
St. Bernard Parish.....	21,000	11,087	+10,000	+90.2	2.7	1.6

[1] Coextensive with Orleans Parish.