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ESTIMATES OF THE POPULATION OF SELECTED EASTERN STANDARD METROPOLITAN AREAS: JULY 1, 1956

(Similar estimates for the Houston, Milwaukee, St. Louis, Washington, Providence, and New Orleans Standard Metropolitan Areas are given in Current Population Reports, Series P-25, Nos. 137, 155, and 156. The estimates for the New York-Northeastern New Jersey Standard Metropolitan Area for July 1, 1956, presented here are not consistent with the estimates for this area for April 1, 1957, given in Current Population Reports, Series P-25, No. 161, since the new estimates are based on more recent data)

This report presents estimates of the population of seven standard metropolitan areas in the East, by constituent counties, for July 1, 1956. These metropolitan areas are: Allentown-Bethlehem-Easton, Pa.; Atlantic City, N. J.; New York-Northeastern New Jersey; Philadelphia, Pa.; Reading, Pa.; Trenton, N. J.; and Wilmington, Del. An estimate is also given for Fairfield County, Conn., which includes the Stamford-Norwalk Standard Metropolitan Area and most of the Bridgeport Standard Metropolitan Area. The estimates relate to the total population resident in each area, i. e., civilian population plus members of the Armed Forces stationed in the area. The estimates were prepared as part of a larger study sponsored by the U. S. Army Corps of Engineers, Philadelphia District, relating to the assessment of future requirements for water in the Delaware River Service Area. The Delaware River Service Area includes all of New Jersey and Delaware, eastern Pennsylvania, southeastern New York, and a small part of Connecticut.

Estimated rates of population growth between 1950 and 1956 in six of the seven metropolitan areas for which figures are shown were not substantially different from the United States average in this period. The United States rate was 11.0 percent, in comparison with

8 to 13 percent for these six areas. The seventh area, the Wilmington Standard Metropolitan Area, had a considerably higher growth rate--29 percent.

Methodology.--Except for the New York portion of the New York-Northeastern New Jersey Standard Metropolitan Area, an average of the results of two procedures was used in developing the 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 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 indicators of total population change.¹

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.

The Census Bureau's component method II involves adding to the population of the area on April 1, 1950, the date of the last census, the natural increase (excess of births over deaths) between 1950 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 of 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; a subsequent emendation of a step in the procedure is described in Series P-25, No. 165.

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's 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's death rate at the estimate date. This procedure assumes that the area's death rate changed by the same percentage between 1950 and the estimate date as the national death rate. 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 first-stage population estimates are then averaged to obtain the final population estimate.³

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

² See, for example, Current Population Reports, Series P-25, No. 165, "Estimates of the Population of States: July 1, 1950 to 1956," November 4, 1957.

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.

politan area and then summed to obtain an estimate of the standard metropolitan area as a whole.

The estimates for the New York portion of the New York-Northeastern New Jersey Standard Metropolitan Area, except Long Beach city in Nassau County, were derived by interpolation between the results of the 1950 Census and the results of special censuses conducted by the Bureau of the Census in these areas as of April 1, 1957. The population of Long Beach city was estimated on the basis of the special census taken in March 1956. The results of the special censuses taken in April 1957 in New York City and the counties of the New York portion of the New York-Northeastern New Jersey Standard Metropolitan Area are as follows:

Area	Population
New York City.....	7,795,471
Nassau ⁴	41,155,139
Rockland.....	113,783
Suffolk.....	528,736
Westchester.....	752,406

The estimates of the population of the New York-Northeastern New Jersey Standard Metropolitan Area, by counties, for July 1, 1956, shown in this report are not consistent with the estimates for this area for April 1, 1957, shown in Current Population Reports, Series P-25, No. 161. The estimates for July 1, 1956, given here are based on final special census figures for New York City and the counties in the New York portion of the metropolitan area which are slightly higher than the preliminary counts available earlier, and on more recent data for the New Jersey portion of the metropolitan area. A revised estimate of the population of the New York-Northeastern New Jersey Standard Metropolitan Area for April 1, 1957, is 14,186,000.

Sources of data.--The basic data necessary to prepare the population estimates presented here, for the areas outside the New York portion of the New York-Northeastern New Jersey Standard Metropolitan Area, 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, and vital statistics were provided by State and local departments of health. Data on the size and distribution of military personnel within the area were obtained from reports of the U. S. Department of Defense.

⁴ Excludes Long Beach city, the special census of which indicated a population of 22,757 as of March 4, 1956.

ESTIMATES OF THE POPULATION OF SELECTED EASTERN STANDARD METROPOLITAN AREAS, BY CONSTITUENT COUNTIES:
JULY 1, 1956

(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 counties	Population		Change, 1950 to 1956		Percent distribution	
	July 1, 1956	April 1, 1950 (census)	Amount	Percent	1956	1950
Allentown-Bethlehem-Easton, Pa.....	476,000	437,824	+38,000	+8.8	100.0	100.0
Pennsylvania portion.....	418,000	383,450	+35,000	+9.1	87.8	87.6
Lehigh County.....	222,000	198,207	+24,000	+12.1	46.6	45.3
Northampton County.....	196,000	185,243	+11,000	+5.9	41.2	42.3
New Jersey portion.....	58,000	54,374	+4,000	+6.5	12.2	12.4
Warren County.....	58,000	54,374	+4,000	+6.5	12.2	12.4
Atlantic City, N. J.....	146,000	132,399	+13,000	+10.0	100.0	100.0
Atlantic County.....	146,000	132,399	+13,000	+10.0	100.0	100.0
New York-Northeastern New Jersey... ¹	14,049,000	12,911,994	+1,137,000	+8.8	100.0	100.0
New York portion.....	10,282,000	9,555,943	+726,000	+7.6	73.2	74.0
New York City.....	7,806,000	7,891,957	-86,000	-1.1	55.6	61.1
Nassau County.....	1,125,000	672,765	+452,000	+67.2	8.0	5.2
Rockland County.....	111,000	89,276	+22,000	+24.5	0.8	0.7
Suffolk County.....	502,000	276,129	+226,000	+81.7	3.6	2.1
Westchester County.....	739,000	625,816	+113,000	+18.1	5.3	4.8
New Jersey portion.....	3,766,000	3,356,051	+410,000	+12.2	26.8	26.0
Bergen County.....	716,000	539,139	+177,000	+32.7	5.1	4.2
Essex County.....	913,000	905,949	+7,000	+0.8	6.5	7.0
Hudson County.....	599,000	647,437	-48,000	-7.5	4.3	5.0
Middlesex County.....	363,000	264,872	+98,000	+37.2	2.6	2.1
Morris County.....	218,000	164,371	+53,000	+32.3	1.5	1.3
Passaic County.....	382,000	337,093	+45,000	+13.3	2.7	2.6
Somerset County.....	116,000	99,052	+17,000	+16.7	0.8	0.8
Union County.....	460,000	398,138	+62,000	+15.7	3.3	3.1
Philadelphia, Pa.....	4,157,000	3,671,048	+486,000	+13.2	100.0	100.0
Pennsylvania portion.....	3,512,000	3,142,668	+369,000	+11.8	84.5	85.6
Bucks County.....	285,000	144,620	+141,000	+97.4	6.9	3.9
Chester County.....	197,000	159,141	+38,000	+23.8	4.7	4.3
Delaware County.....	495,000	414,234	+81,000	+19.5	11.9	11.3
Montgomery County.....	471,000	353,068	+118,000	+33.3	11.3	9.6
Philadelphia County ²	2,064,000	2,071,605	-8,000	-0.4	49.6	56.4
New Jersey portion.....	645,000	528,380	+117,000	+22.1	15.5	14.4
Burlington County.....	179,000	135,910	+43,000	+31.8	4.3	3.7
Camden County.....	352,000	300,743	+51,000	+17.0	8.5	8.2
Gloucester County.....	114,000	91,727	+23,000	+24.6	2.7	2.5
Reading, Pa.....	276,000	255,740	+20,000	+7.8	100.0	100.0
Berks County.....	276,000	255,740	+20,000	+7.8	100.0	100.0
Trenton, N. J.....	253,000	229,781	+23,000	+10.0	100.0	100.0
Mercer County.....	253,000	229,781	+23,000	+10.0	100.0	100.0
Wilmington, Del.....	346,000	268,387	+77,000	+28.9	100.0	100.0
Delaware portion.....	291,000	218,879	+72,000	+32.9	84.1	81.6
New Castle County.....	291,000	218,879	+72,000	+32.9	84.1	81.6
New Jersey portion.....	55,000	49,508	+5,000	+10.8	15.9	18.4
Salem County.....	55,000	49,508	+5,000	+10.8	15.9	18.4
Fairfield County, Conn. ³	590,000	504,342	+85,000	+16.9

¹ A revised estimate for April 1, 1957, superseding the figure given in Current Population Reports, Series P-25, No. 161, is 14,186,000.

² Coterminous with the city of Philadelphia.

³ A metropolitan state economic area which includes the Stamford-Norwalk Standard Metropolitan Area and most of the Bridgeport Standard Metropolitan Area. Estimates for these standard metropolitan areas are not available.