



Population Estimates and Projections

U.S. DEPARTMENT OF COMMERCE • Social and Economic Statistics Administration • BUREAU OF THE CENSUS

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ESTIMATES OF THE POPULATION OF MARYLAND COUNTIES AND METROPOLITAN AREAS: JULY 1, 1973 AND 1974

This report presents population estimates for July 1, 1973 and provisional estimates for July 1, 1974, for counties and metropolitan areas in Maryland. These estimates were prepared by the Bureau of the Census as part of its continuing population estimates program. They are consistent in methodological approach with county estimates for other States jointly prepared by State agencies and the Bureau of the Census under the auspices of the Federal-State Cooperative Program and published in **Current Population Reports**, Series P-26.

County estimates for July 1, 1971, July 1, 1972, and provisional estimates for July 1, 1973, were published earlier in **Current Population Reports**, Series P-25, Nos. 517 and 530. The provisional estimates in the last cited report are superseded by the numbers published here.

This report introduces an additional estimating procedure using administrative records, made possible by the availability of a new data source. Because of the resultant change in weighting of methods and changes in input data in other methods used, estimates shown here may not always be comparable with those for the earlier years.

The methods used have been tested against the 1970 census and recent special censuses. A decision on current methodology was made by the Bureau of the Census on the basis of the tests. For a more detailed description of the Federal-State Cooperative Program and an analysis of 1970 test results for methods other than the recently developed Administrative Records

method, see **Current Population Reports**, Series P-26, No. 21, "Federal-State Cooperative Program for Local Population Estimates: Test Results—April 1, 1970," April 1973. Results of a test of the Administrative Records method will be presented in a forthcoming Series P-25 report.¹

The estimates shown for July 1, 1973, are based on an average of the following methods, adjusted to agree with the July 1, 1973 State estimate published in Series P-25, No. 533.

1. **The Regression (ratio-correlation) method.** In the Regression method a multiple regression equation is used to relate changes in a number of different data series to change in population distribution.² The series of data used in the Regression method for Maryland are: two-year average of resident births (X_1), two-year average of resident deaths (X_2), total enrollment in grades 1 through 12 (X_3), auto registration (X_4), and

¹ Results of earlier studies were given in "Use of Administrative Records for Small-Area Population Estimates," by Meyer Zitter and David L. Word; a paper presented at the Annual Meeting of Population Association of America, New Orleans, Louisiana, April 27, 1974. A copy of this paper can be obtained by writing Chief, Population Division, Bureau of the Census, Washington, D.C. 20233.

² Descriptions of methodologies are given in **Current Population Reports**, Series P-25, Nos. 427 and 520. Modifications made to the methodologies for the current series will be given in forthcoming reports in Series P-25.

individual State income tax returns (X_5). The prediction equation for Maryland for the 1970's is given by

$$\hat{Y} = 0.0202 + 0.2202X_1 - 0.0158X_2 + 0.4915X_3 \\ + 0.2411X_4 + 0.0415X_5$$

2. **Component Method II.** This method employs vital statistics to measure natural increase and school enrollment to measure net migration. The estimates made by the Census Bureau's Component Method II are specific to the civilian population under 65. To this population is added an estimate of the population 65 and over based on Medicare statistics and an estimate of the resident military population based on station strength statistics.²

3. **The Administrative Records method.** This newly developed component method uses administrative records (in this instance individual Federal income tax returns) to measure civilian intercounty migration and reported vital statistics to estimate natural increase.³ The tax returns are matched for the successive periods to determine the number of persons whose county of residence changed during the estimating period. A net migration rate based on the number of taxpayers changing residence is derived; this rate is then assumed to apply to the total population. This estimate is made specific to the civilian population under age 65 by excluding from the migration computations data relating to persons 65 years and over. These estimates are then combined with independent estimates of the population 65 and over based on Medicare statistics. The other components of population change—births, deaths, immigration, net movement between the Armed Forces and civilian population, and resident military population—are identical with Component Method II (described above).

The provisional July 1, 1974 estimates for large metropolitan counties were developed by adding the average change between 1973 and 1974 estimates based on Component Method II and the Housing Unit method to the 1973 estimates. In the **Housing Unit method** the estimates of the population are based on

estimates of the housing inventory. Changes in the housing inventory are derived from data on building permits issued and demolition records, or on data on electric meter connections. The provisional July 1, 1974 estimates for the remaining counties were developed by adding the change between 1973 and 1974 Component Method II estimates to the 1973 estimates. All counties were subsequently adjusted to agree with the provisional July 1, 1974 State estimate published in **Current Population Reports**, Series P-25, No. 533.

Table 2 of this report presents estimates of the population of metropolitan areas and metropolitan counties in the State. The titles and definitions of the standard metropolitan statistical areas (SMSA's) are those currently defined by the Office of Management and Budget, Executive Office of the President. Where an SMSA falls in more than one State (indicated in the SMSA title) information on the other State parts of the area can be obtained by referring to the P-26 report for the other States.

The 1973 estimates published in this report are the same as those shown for counties in **Current Population Reports**, Series P-25, No. 565. The estimates for counties, incorporated places, and other general purpose governments published in that report were used as the basis for the distribution of funds under the State and Local Fiscal Assistance Act of 1972. See that report for a description of methods, assumptions, and limitations of the estimates.

Estimates corresponding to those presented in this report for other States will be published in either Series P-26 or Series P-25 as they become available. The appendix table shows reports published to date for States in the 1973-74 series, together with those published earlier in the decade.

The 1970 census total for the State shown on the table may differ slightly from the sum of the counties because of corrections made subsequent to the release of the official State figure. All county populations for 1970 reflect the most recent corrections in the census count. Counties with corrections of more than 500 are Anne Arundel, Baltimore, and Prince Georges.

The estimates presented in the tables have been rounded to the nearest hundred without being adjusted to the State total, which was independently rounded to the nearest thousand. Percentages are based on unrounded numbers.

² See footnote 2 on page 1.

³ For a discussion of this methodology see Donald E. Starsinic, "Development of Population Estimates for Revenue Sharing Areas," in U.S. Bureau of the Census, **Census Tract Papers**, Series GE-40, No. 10; and Zitter and Word, *op cit*.

**Table 1. ESTIMATES OF THE POPULATION OF MARYLAND COUNTIES:
JULY 1, 1973 AND JULY 1, 1974**

(State estimates are shown to the nearest thousand, county estimates to the nearest hundred)

County	July 1, 1974 (provi- sional)	July 1, 1973	April 1, 1970 (census) ¹	Change, 1970 to 1974		Components of change, 1970 to 1974 ²			
				Number	Percent	Births	Deaths	Net migration	
								Number	Percent
Maryland.....	4,094,000	4,074,000	3,922,399	171,000	4.3	256,000	139,000	54,000	1.4
Allegany.....	83,600	83,700	84,044	-500	-0.6	4,900	4,300	-1,100	-1.3
Anne Arundel.....	337,100	327,900	298,042	39,000	13.1	20,400	8,300	26,900	9.0
Baltimore.....	632,500	630,600	620,409	12,100	2.0	33,600	20,400	-1,000	-0.2
Calvert.....	24,900	23,700	20,682	4,200	20.3	1,800	900	3,300	16.1
Caroline.....	20,800	20,600	19,781	1,000	5.1	1,200	1,100	900	4.6
Carroll.....	79,500	76,600	69,006	10,500	15.2	4,400	2,600	8,600	12.5
Cecil.....	56,300	55,400	53,291	3,000	5.7	4,100	1,800	700	1.4
Charles.....	59,200	56,200	47,678	11,600	24.2	4,100	1,400	8,800	18.4
Dorchester.....	29,200	29,500	29,405	-200	-0.7	1,700	1,700	-200	-0.6
Frederick.....	94,300	91,900	84,927	9,400	11.0	5,800	3,400	6,900	8.1
Garrett.....	23,200	23,400	21,476	1,700	7.9	1,600	900	1,000	4.9
Harford.....	134,200	130,000	115,378	18,800	16.3	8,800	3,000	13,000	11.3
Howard.....	93,000	85,200	62,394	30,600	49.1	4,500	1,700	27,800	44.5
Kent.....	16,800	16,700	16,146	600	3.8	900	800	500	3.2
Montgomery.....	560,300	554,400	522,809	37,500	7.2	30,100	13,500	20,900	4.0
Prince Georges.....	679,200	688,800	661,719	17,400	2.6	50,400	14,300	-18,700	-2.8
Queen Annes.....	19,600	19,300	18,422	1,200	6.6	1,000	900	1,100	6.2
St. Marys.....	51,200	49,200	47,388	3,800	8.0	4,500	1,300	600	1.2
Somerset.....	19,300	18,900	18,924	400	2.0	1,100	1,200	400	2.2
Talbot.....	25,200	24,900	23,682	1,500	6.3	1,200	1,300	1,600	6.6
Washington.....	106,400	106,200	103,829	2,600	2.5	6,500	4,200	300	0.3
Wicomico.....	57,900	57,100	54,236	3,700	6.7	3,500	2,600	2,800	5.1
Worcester.....	26,100	25,900	24,442	1,700	6.8	1,500	1,300	1,500	6.1
INDEPENDENT CITY									
Baltimore.....	864,100	877,800	905,787	-41,700	-4.6	57,900	46,600	-53,000	-5.9

¹Total does not agree with the sum of the counties due to corrections made to the county populations after release of the official State counts.

²Births and deaths are based on reported vital statistics from April 1, 1970 to December 31, 1973, with extrapolations to June 30, 1974. Net migration is the difference between net change and natural increase.

Table 2. ESTIMATES OF THE POPULATION OF METROPOLITAN AREAS AND THEIR COMPONENT COUNTIES: MARYLAND, JULY 1, 1973 AND 1974

(SMSA totals rounded independently of county numbers)

Standard metropolitan statistical area and county	July 1, 1974 (provisional)	July 1, 1973	April 1, 1970 (census)	Change, 1970 to 1974		Components of change, 1970 to 1974 ¹			
				Number	Percent	Births	Deaths	Net migration	
								Number	Percent
BALTIMORE, MD.....	2,140,400	2,128,200	2,071,016	69,400	3.3	129,700	82,600	22,300	1.1
Anne Arundel.....	337,100	327,900	298,042	39,000	13.1	20,400	8,300	26,900	9.0
Baltimore.....	632,500	630,600	620,409	12,100	2.0	33,600	20,400	-1,000	-0.2
Carroll.....	79,500	76,600	69,006	10,500	15.2	4,400	2,600	8,600	12.5
Hartford.....	134,200	130,000	115,378	18,800	16.3	8,800	3,000	13,000	11.3
Howard.....	93,000	85,200	62,394	30,600	49.1	4,500	1,700	27,800	44.5
Baltimore city.....	864,100	877,800	905,787	-41,700	-4.6	57,900	46,600	-53,000	-5.9
WASHINGTON, D.C. -									
MD.-VA. (Md. portion).....	1,298,700	1,299,300	1,232,242	66,500	5.1	84,700	29,200	11,000	0.9
Charles.....	59,200	56,200	47,678	11,600	24.2	4,100	1,400	8,800	18.4
Montgomery.....	560,300	554,400	522,809	37,500	7.2	30,100	13,500	20,900	4.0
Prince Georges.....	679,200	688,800	661,719	17,400	2.6	50,400	14,300	-18,700	-2.8
WILMINGTON, DEL. -									
N.J.-MD. (Md. portion).....	56,300	55,400	53,291	3,000	5.7	4,100	1,800	700	1.4
Cecil.....	56,300	55,400	53,291	3,000	5.7	4,100	1,800	700	1.4

¹Births and deaths are based on reported vital statistics from April 1, 1970, to December 31, 1973, with extrapolations to June 30, 1974. Net migration is the difference between net change and natural increase.

APPENDIX

ESTIMATES PUBLISHED IN SERIES P-26 REPORTS SINCE 1970

(Reports issued under the Federal-State Cooperative Program for Population Estimates, jointly prepared by the Bureau of the Census and designated State agencies)

State	Report No.			State	Report No.		
	1973 and provisional 1974	1972 and provisional 1973	1971 and provisional 1972		1973 and provisional 1974	1972 and provisional 1973	1971 and provisional 1972
Ala.....		76	48	Mont.....		53	19
Alaska.....		(²)	(³)	Nebr.....	104	58	25
Ariz.....	94	50	*11	Nev.....		67	29
Ark.....		70	33	N. H.....		52	18
Calif.....		(²)	*41	N. J.....		82	20
Colo.....	103	62	17	N. Mex.....		85	(³)
Conn.....		79	(³)	N. Y.....		(²)	(³)
Del.....		57	15	N. C.....		68	44
Fla.....		90	46	N. Dak.....	102	60	(³)
Ga.....		92	37	Ohio.....		80	*40
Hawaii.....	105	56	23	Okla.....		63	24
Idaho.....		51	9	Oreg.....		74	(³)
Ill.....		78	27	Pa.....		93	*39
Ind.....		75	14	R. I.....	98	65	22
Iowa.....		72	31	S. C.....		71	34
Kans.....		64	43	S. Dak.....	101	61	*12
Ky.....		84	35	Tenn.....		83	47
La.....	97	54	*16	Tex.....		(²)	(³)
Maine.....	99	59	28	Utah.....	96	55	10
Md.....	(¹)	(²)	(³)	Vt.....	95	49	*13
Mass.....		91	42	Va.....		88	36
Mich.....		69	32	Wash.....		66	(³)
Minn.....		87	38	W. Va.....		89	30
Miss.....		86	(³)	Wis.....		81	26
Mo.....		77	45	Wyo.....	100	73	(³)

*First year only. For second year, see Series P-25, No. 517.

¹County estimates for Maryland are published in Series P-25, No. 596.

²County or county equivalent estimates are published in Series P-25 for the following States: Alaska, No. 531; California, No. 532; Maryland, No. 530; New York, No. 527; and Texas, No. 535.

³County estimates for this State for 1971 and provisional 1972 are published in Series P-25, No. 517.

COUNTIES, METROPOLITAN AREAS, AND SELECTED PLACES: MARYLAND

