

Population Estimates and Projections



U.S. Department of Commerce
BUREAU OF THE CENSUS

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Estimates of the Population of Arizona Counties and Metropolitan Areas: July 1, 1977 (Revised) and 1978 (Provisional)

This report presents total population estimates for revised July 1, 1977 and provisional estimates for July 1, 1978 for counties and metropolitan areas in Arizona. These estimates were prepared by the Bureau of the Census as part of its continuing population estimates program. They are consistent in methodology with county estimates for other States jointly prepared by State agencies and the Bureau of the Census through the Federal-State Cooperative Program and published in **Current Population Reports**, Series P-26.

County estimates for July 1, 1971-76 and provisional estimates for July 1, 1977, were published earlier in **Current Population Reports**, Series P-25 or P-26. The provisional estimates in the last cited report are superseded by the numbers published here.

The decision on methodology used in this report was based upon the results of tests of the methods. The Administrative Records method has been tested against special censuses conducted since 1970. The other methods were evaluated against the 1970 census. For a detailed description of the Federal-State Cooperative Program and an analysis of 1970 test results for methods other than the 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. Summary results of tests of the Administrative Records method are presented in **Current Population Reports**, Series P-25, Nos. 649-698, and in detail in Series P-25, No. 699 (forthcoming).

The county estimates shown for July 1, 1977, are based on an average of the following methods, adjusted to agree with the July 1, 1977 State estimate.

1. **The Regression (ratio-correlation) method.**¹ In the Regression method, a multiple regression equation is used to relate changes in a number of different data series to change in the population distribution. The series of data used in the Regression method for Arizona are: a two-year average of resident births (X_1), a two-year average of resident deaths (X_2), and motor vehicle registrations (X_3). The prediction equation used for Arizona is given by:

$$\hat{Y} = -0.1995 + 0.2583X_1 + 0.1333X_2 + 0.7995X_3$$

2. **Component Method II.**¹ This method employs vital statistics to measure natural change and school enrollment to measure net migration. The estimates produced by Component Method II are specific to the population under 65 not residing in group quarters. To this population is added an estimate of the population 65 and over based on the change in Medicare enrollees from 1970 to the estimate date, the institutional and college population, and reported military population living in barracks.
3. **The Administrative Records method.**¹ This is a component method which uses individual Federal income tax returns to measure the intercounty migration of the

¹ More detailed descriptions of the methods 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.

nongroup quarters population and reported birth and death statistics to estimate natural change. The tax returns are matched by Social Security number in the base year and the estimate year to determine the number of persons whose county of residence changed during the estimating period. A net migration rate based on exemptions claimed by the matched cases is then applied to the total population. The resulting estimate is made specific to the nongroup quarters population under age 65 by excluding from the migration computations any data relating to persons 65 years and over as well as persons residing in group quarters. These estimates of migration are then combined with the independent estimates of the population 65 and over used in the Component Method II estimate and the other components of population change—births, deaths, immigration, and the net movement between the military and civilian population.

The provisional July 1, 1978 estimates for counties were developed by adding to the 1977 estimates, the average change between the 1977 and 1978 Component Method II estimates and the corresponding Regression method estimates. All counties were subsequently adjusted to agree with the provisional July 1, 1978 State estimate.

Table 2 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 Federal Statistical Policy and Standards, Department of Commerce. 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 or P-25 report for that particular State.

Corresponding estimates for other States will be published as they become available. The appendix table lists reports published to date for States in the 1977-78 series, together with those published for earlier years.

The 1970 census population for the State and counties shown in the tables reflects all corrections to the census made subsequent to the release of the official State figure. Counties with corrections of more than 500 are Maricopa and Pinal Counties.

The estimates presented in the table 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. Births and deaths are taken from reported vital statistics from April 1, 1970, to December 31, 1977. Net migration is the residual difference between net change and natural change.

Table 1. Estimates of the Population of Arizona Counties: July 1, 1977 and 1978

(STATE ESTIMATES ARE SHOWN TO THE NEAREST THOUSAND, COUNTY ESTIMATES TO THE NEAREST HUNDRED)

COUNTY	JULY 1, 1978 (PROVI- SIONAL)	JULY 1, 1977	APRIL 1, 1970 (CENSUS) ¹	CHANGE, 1970 TO 1977		COMPONENTS OF CHANGE, 1970 TO 1977 ²			
				NUMBER	PERCENT	BIRTHS	DEATHS	NET MIGRATION	
								NUMBER	PERCENT
ARIZONA.....	2,354,000	2,305,000	1,775,399	529,000	29.8	282,000	120,000	367,000	20.7
APACHE.....	48,600	46,900	32,304	14,600	45.3	10,200	2,300	6,800	21.0
COCHISE.....	76,900	76,100	61,918	14,200	23.0	10,800	3,700	7,200	11.6
COCONINO.....	65,900	65,100	48,326	16,800	34.8	10,400	2,100	8,500	17.6
GILA.....	38,200	33,700	29,255	4,400	15.2	4,900	2,200	1,800	6.2
GRAHAM.....	19,500	20,200	16,578	3,700	22.1	2,900	1,100	1,900	11.7
GREENLEE.....	11,700	11,300	10,330	1,000	9.7	2,000	500	-500	-4.4
MARICOPA.....	1,293,200	1,260,400	971,228	289,100	29.8	144,100	64,100	209,200	21.5
MOHAVE ³	41,400	40,500	25,857	14,600	56.4	3,700	2,500	13,400	51.8
NAVAJO.....	62,200	60,800	47,559	13,300	27.9	11,000	2,700	4,900	10.3
PIMA ⁴	461,700	453,700	351,667	102,000	29.0	51,900	24,600	74,700	21.2
PINAL.....	87,500	86,900	68,579	18,300	26.7	12,000	4,500	10,900	15.8
SANTA CRUZ.....	18,100	18,000	13,966	4,000	28.9	2,600	800	2,300	16.5
YAVAPAI.....	58,300	56,800	37,005	19,800	53.5	4,600	4,400	19,600	53.0
YUMA.....	73,600	74,000	60,827	13,200	21.7	11,000	4,000	6,100	10.1

¹THE TOTAL FOR THE STATE SHOWN HERE INCLUDES ALL CORRECTIONS TO THE 1970 CENSUS MADE SUBSEQUENT TO THE RELEASE OF THE OFFICIAL COUNTS. THE OFFICIAL 1970 CENSUS COUNT FOR ARIZONA WAS 1,772,482.²BIRTHS AND DEATHS ARE BASED ON REPORTED VITAL STATISTICS FROM APRIL 1, 1970 TO DECEMBER 31, 1977. NET MIGRATION IS THE DIFFERENCE BETWEEN NET CHANGE AND NATURAL CHANGE.³THE POPULATION OF MOHAVE COUNTY, AS COUNTED IN THE SPECIAL CENSUS ON SEPTEMBER 18, 1974 WAS 35,714. THE ESTIMATES SHOWN HERE HAVE BEEN ADJUSTED TO REFLECT THIS COUNT.⁴THE POPULATION OF PIMA COUNTY, AS COUNTED IN THE SPECIAL CENSUS ON OCTOBER 20, 1975 WAS 449,544. THE ESTIMATES SHOWN HERE HAVE BEEN ADJUSTED TO REFLECT THIS COUNT.**Table 2. Estimates of the Population of Metropolitan Areas and Their Component Counties:
Arizona, July 1, 1977 and 1978**

(SMSA TOTALS ROUNDED INDEPENDENTLY OF COUNTY NUMBERS)

STANDARD METROPOLITAN STATISTICAL AREA AND COUNTY	JULY 1, 1978 (PROVI- SIONAL)	JULY 1, 1977	APRIL 1, 1970 (CENSUS)	CHANGE, 1970 TO 1977		COMPONENTS OF CHANGE, 1970 TO 1977 ¹			
				NUMBER	PERCENT	BIRTHS	DEATHS	NET MIGRATION	
								NUMBER	PERCENT
PHOENIX.....	1,293,200	1,260,400	971,228	289,100	29.8	144,100	64,100	209,200	21.5
MARICOPA.....	1,293,200	1,260,400	971,228	289,100	29.8	144,100	64,100	209,200	21.5
TUCSON.....	461,700	453,700	351,667	102,000	29.0	51,900	24,600	74,700	21.2
PIMA.....	461,700	453,700	351,667	102,000	29.0	51,900	24,600	74,700	21.2
METROPOLITAN.....	1,754,900	1,714,000	1,322,895	391,100	29.6	196,000	88,700	283,900	21.5
NONMETROPOLITAN.....	599,000	590,500	452,504	138,000	30.5	86,000	30,900	82,900	18.3

¹BIRTHS AND DEATHS ARE BASED ON REPORTED VITAL STATISTICS FROM APRIL 1, 1970 TO DECEMBER 31, 1977. NET MIGRATION IS THE DIFFERENCE BETWEEN NET CHANGE AND NATURAL CHANGE.

Appendix

Estimates Published in Series P-26 Since 1975

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

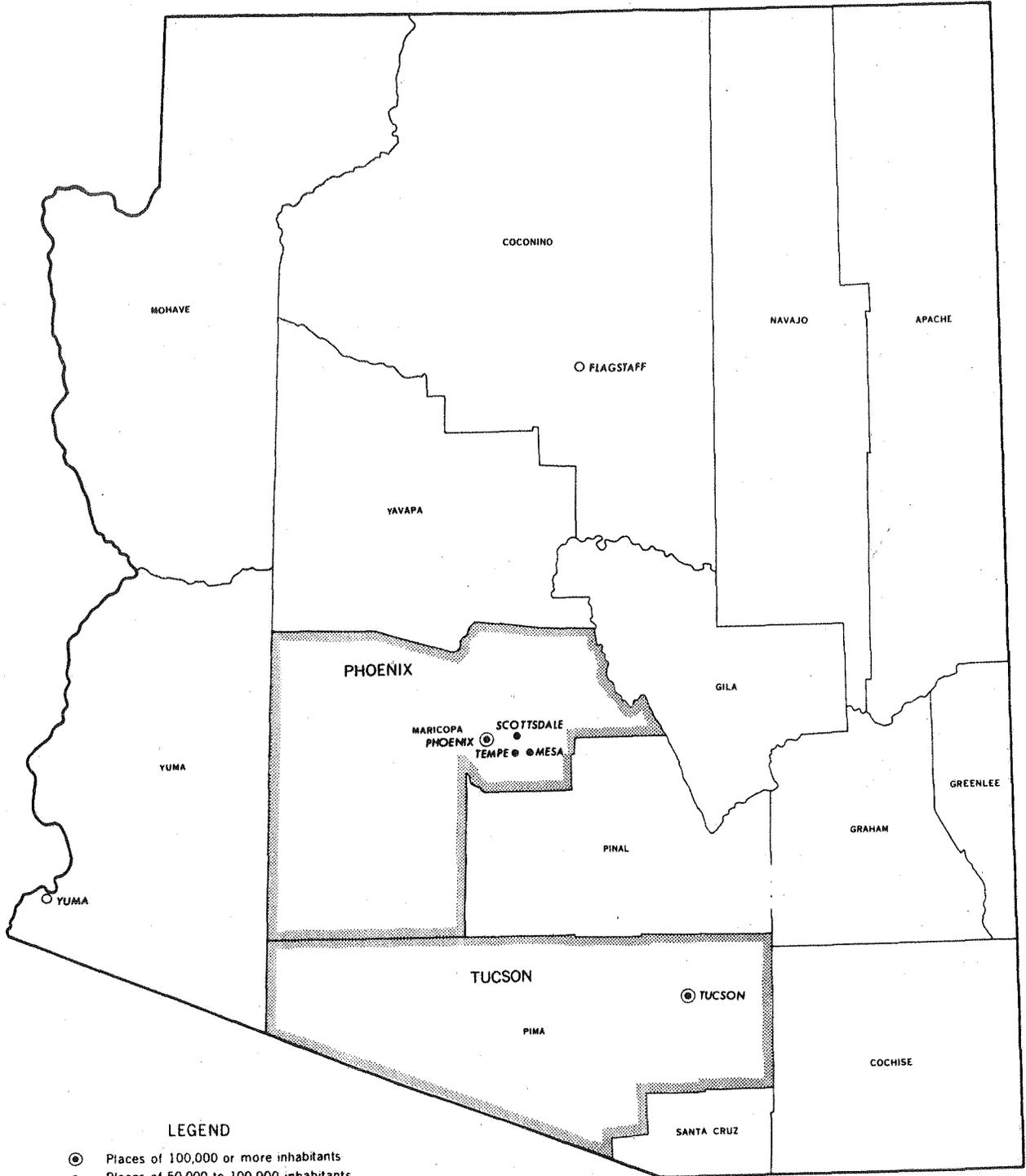
State	Report No.			State	Report No.		
	1977 and provisional 1978	1976 and provisional 1977	1975 and provisional 1976		1977 and provisional 1978	1976 and provisional 1977	1975 and provisional 1976
Alabama.....		77-1	76-1	Montana.....		77-26	76-26
Alaska.....		77-2	(³)	Nebraska.....		77-27	76-27
Arizona.....	(¹)	(²)	76-3	Nevada.....	78-28	77-28	76-28
Arkansas.....		77-4	76-4	New Hampshire....	78-29	77-29	76-29
California.....		77-5	76-5	New Jersey.....		77-30	76-30
Colorado.....		77-6	76-6	New Mexico.....		77-31	76-31
Connecticut.....		77-7	76-7	New York.....		77-32	76-32
Delaware.....	78-8	77-8	76-8	North Carolina...		77-33	76-33
Florida.....		77-9	76-9	North Dakota.....		77-34	76-34
Georgia.....		77-10	76-10	Ohio.....		77-35	76-35
Hawaii.....	78-11	77-11	76-11	Oklahoma.....		77-36	76-36
Idaho.....		77-12	76-12	Oregon.....		77-37	76-37
Illinois.....		77-13	76-13	Pennsylvania.....		77-38	76-38
Indiana.....		77-14	76-14	Rhode Island.....	78-39	77-39	76-39
Iowa.....		77-15	76-15	South Carolina...		77-40	76-40
Kansas.....		77-16	76-16	South Dakota.....	78-41	77-41	76-41
Kentucky.....		77-17	76-17	Tennessee.....		77-42	76-42
Louisiana.....	78-18	77-18	76-18	Texas.....		(²)	(³)
Maine.....	78-19	77-19	76-19	Utah.....		77-44	76-44
Maryland.....		77-20	76-20	Vermont.....	78-45	77-45	76-45
Massachusetts....		(²)	(³)	Virginia.....		77-46	76-46
Michigan.....		77-22	76-22	Washington.....		(²)	(³)
Minnesota.....		77-23	76-23	West Virginia....		77-48	76-48
Mississippi.....		77-24	76-24	Wisconsin.....		77-49	76-49
Missouri.....		77-25	76-25	Wyoming.....	78-50	77-50	76-50
				Puerto Rico.....			76-51

¹County or county equivalent estimates for 1977 and provisional 1978 are published in Series P-25 for the following States: Arizona, No. 804.

²County or county equivalent estimates for 1976 and provisional 1977 are published in Series P-25 for the following States: Arizona, No. 730; Washington, No. 738; Massachusetts, No. 797; and Texas, No. 798.

³County or county equivalent estimates for 1975 and provisional 1976 are published in Series P-25 for the following States: Washington, No. 707; Alaska, No. 712; Massachusetts, No. 715; and Texas, No. 717.

Counties, Metropolitan Areas, and Selected Places: Arizona

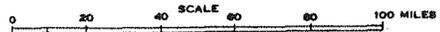


LEGEND

- ⊙ Places of 100,000 or more inhabitants
- Places of 50,000 to 100,000 inhabitants
- Places of 25,000 to 50,000 inhabitants outside SMSA's



Standard Metropolitan
Statistical Areas (SMSA's)



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