NEW POPULATION PROJECTIONS FOR THE UNITED STATES, ARIZONA AND ARIZONA COUNTIES

A Report from the Office of the University Economist

January 2013

Tom Rex, M.B.A.
Associate Director, Center for Competitiveness and Prosperity Research;
and Manager of Research Initiatives, Office of the University Economist

Center for Competitiveness and Prosperity Research
L. William Seidman Research Institute
W. P. Carey School of Business
Arizona State University
Box 874011
Tempe, Arizona 85287-4011

(480) 965-5362
FAX: (480) 965-5458
EMAIL: Tom.Rex@asu.edu
wpcarey.asu.edu/research/competitiveness-prosperity-research
economist.asu.edu

ASU W. P. CAREY SCHOOL of BUSINESS
ARIZONA STATE UNIVERSITY

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INTRODUCTION

In December 2012, the Arizona Department of Administration's Office of Employment and Population Statistics (OEPS) released population projections for Arizona and Arizona counties (http://azstats.gov/population-projections.aspx), updating forecasts last issued in 2006 by the Arizona Department of Economic Security (DES). (Less detailed predictions for subcounty areas in Arizona will be released in mid-2013.) The U.S. Department of Commerce's Census Bureau also released population projections for the nation in December 2012 (http://www.census.gov/population/projections/), updating those issued in 2008 and 2009. The new projections from each agency are based on the results of the 2010 decennial census; the forecasts start in 2012 and go through 2050 for Arizona and through 2060 for the nation.

For the first time, projections for Arizona and its counties are available for high and low series as well as for a middle series. Though the Census Bureau historically has released alternative scenarios for the nation, at this time only the middle series is available.

The components of the projected change over time are available from each agency. For the nation, the components are net natural change (births less deaths) and net international migration. For Arizona and the counties, net domestic migration also is a component.

Each agency's projections are available by age group and gender. Forecasts also have been produced by race/ethnicity — the first time such predictions have been available for Arizona.

For the nation, the Census Bureau has released a number of summary tables. Most provide results every five years, beginning in 2015. The age distribution is available for five-year age groups as well as for broad categories. In addition to the summary tables, a large data file is available that provides annual projections from 2012 through 2060 by single year of age, gender, and race/ethnicity. However, the components of change are not provided by age or gender.

For Arizona and the counties, each table produced by the OEPS is available by year from 2012 through 2050. In addition to population by year, population change by component is available. Other tables include population by gender and age (five-year age groups and single year of age through age 19) and population by race/ethnicity. The age distribution by race/ethnicity is not available since the number of people in many of the cells (for example, Native Americans between 55 and 59 years of age in Mohave County) is quite small. The components of change are not provided by age, gender, or race/ethnicity.

Following a short review of the national projections, the focus of this paper is the projections for Arizona and its counties. The new predictions are compared to the last two series of "official" state projections issued by the DES in 1997 and 2006. Comparisons also are made to the national projections. Users are reminded that though considerable effort was expended by the OEPS and the Census Bureau in making these forecasts, the future is unknowable. Actual population growth will be different from the projected figures and may be closer to one of the alternative series than to the middle series. The uncertainty naturally is larger for Arizona and its counties than for the nation, due to their lesser population and questions regarding net domestic migration flows. However, even the national projections could prove to be substantially different from actual growth.

PROJECTIONS OF THE UNITED STATES POPULATION

The new national population projections released by the Census Bureau represent a middle series and update the middle series issued in 2008. The new projections indicate substantially less population growth over the 2010-to-2050 period — 38 million, or 30 percent, less — than in the 2008 series. In the absence of any significant change in the nation's immigration policy, this is a strikingly large modification in projections issued only four years apart and illustrates the uncertainty regarding future activity even in a measure as broad as the nation's population.

In 2009, the Census Bureau supplemented the projections made in 2008 with three alternative projection series — high, low, and constant — based on differing assumptions regarding the amount of net international migration. Net natural change also differs by scenario. Population growth is lowest in the constant scenario (see Table 1). The population change in the new series issued in 2012 is roughly equivalent to the change in the constant series issued in 2009. The new forecasts of net international migration are somewhat higher than those in the constant scenario but the number of births in the new series is lower than in the 2009 series. (The number of deaths in the new series is slightly lower).

For perspective, actual national population growth was 28.0 million in the 1950s, 23.9 million in the 1960s, 23.2 million during the 1970s, 22.2 million during the 1980s, 32.7 million during the 1990s, and 27.3 million during the 2000s. Thus, even nationally, population growth has varied over time. The new projections indicate that the population change in the current and following decade will be less than in the two prior decades but higher than in the 1970s and 1980s. Growth is projected to slow in the 2030s and 2040s.

The variations in the national population change over the last three decades were entirely due to fluctuations in net international migration, which rose from about 5 million during the 1980s to more than 15 million during the 1990s, then dropped back to about 10 million in the 2000s. The higher number during the 1990s and into the 2000s primarily was due to a surge in undocumented immigration that occurred between the early 1990s and the mid-2000s. The new projections indicate that net international migration will be less than 10 million in the current decade, then rise over time (see Table 2).

Even though net international migration is expected to rise over time, total population change is projected to decline. The new national projections indicate that net natural change will lower significantly over time. Net natural change rose substantially from the 1970s to the 1980s to

TABLE 1
PROJECTIONS OF NATIONAL POPULATION CHANGE BY DECADE BY SCENARIO (Numbers in Thousands)

	Middle, 2012	Middle, 2008	Constant, 2009	Low, 2009	High, 2009
2010-20	24,566	31,154	26,216	28,554	34,183
2020-30	24,575	32,117	24,284	28,847	35,925
2030-40	21,545	32,150	21,144	28,173	36,786
2040-50	19,787	33,354	18,977	28,698	38,778

Source: U.S. Department of Commerce, Census Bureau, projections issued in 2008, 2009 and 2012.

TABLE 2
PROJECTIONS OF NATIONAL POPULATION CHANGE BY DECADE BY COMPONENT (Numbers in Thousands)

Decade	Numeric Change	Net International Migration	Net Natural Change	Births	Deaths
2010-20*	24,566	8,554	16,012	42,353	26,339
2020-30	24,575	10,355	14,220	44,130	29,915
2030-40	21,545	11,582	9,963	45,199	35,238
2040-50	19,787	11,920	7,867	47,347	39,480

* The components are estimated for this decade since the Census Bureau does not provide the component information for all years.

Source: Calculated from U.S. Department of Commerce, Census Bureau, projections issued in 2012.

around 17 million, but then held steady in the 1990s and 2000s. Large declines are anticipated in the coming decades, with the net natural change in the 2040-to-2050 decade projected to be less than half the figure of the 2000s. Though the number of births is expected to continue to rise, deaths are projected to increase more rapidly due to the aging of the U.S. population.

PROJECTIONS OF THE POPULATION IN ARIZONA

The population projections issued by the DES in 1997 were generated in the midst of a strong economic expansion in which numeric population growth was at record levels. The projections indicated that the numeric population growth in Arizona throughout the projection period (1997 to 2050) would be higher than in the period prior to the mid-1990s but that the population change would not rise much over the projection period, as seen in Table 3.

In reality, population gains during the 1990s were even higher than the DES estimated/projected in 1997; the forecast of the 2000 population was almost 200,000 too low. The population change during the 1990s was 530,000 (56 percent) higher than in the highest prior decade (see Table 4). The 1997 projection of population growth between 2000 and 2010 was only 70,000 too low.

In 2006, when the DES updated their projections, Arizona was in an unprecedented boom period. Rather than recognizing that this boom would be short-lived, population growth in Arizona was projected to remain at the boom levels for a couple of decades, with the projected growth during the 2010s and 2020s much higher than in the 1997 projection series. After that, growth was projected to slow considerably, with the numeric population gain in the 2040s lower than projected in 1997.

The DES in 2006 overestimated the growth that was occurring and did not foresee that the unprecedented boom would end in the worst recession since the Great Depression. Its forecast of population change between 2000 and 2010 was 587,000 (47 percent) too high. Instead of record population growth by a wide margin as projected, the actual population gain during the 2000s was 223,000 (15 percent) less than in the 1990s.

The new OEPS projections have been generated during a period of a weak economic recovery following a long and deep recession. Population growth so far in the current decade has been minimal and nearly all analysts expect economic and population growth in Arizona to remain subpar for at least a couple more years. Thus, the projected population change in the middle series during the current decade (less than 1.1 million) is less than the increase that occurred during the prior decade and is lower than the projected population change in the 1997 and especially 2006 series.

In the new OEPS projections, the annual numeric population change rises rapidly in the middle series over the next four years, then stabilizes at a level not much less than the average actual

TABLE 3
PROJECTIONS OF ARIZONA POPULATION CHANGE BY DECADE BY SERIES (Numbers in Thousands)

			Issued in 2012		
Decade	**Issued in 1997**	**Issued in 2006**	**Low**	**Middle**	**High**
2010-20	1,219	1,780	824	1,084	1,297
2020-30	1,258	1,568	931	1,367	1,721
2030-40	1,243	1,346	841	1,366	1,817
2040-50	1,307	1,137	711	1,344	1,928

Sources: Arizona Department of Administration, Office of Employment and Population Statistics (2012) and Arizona Department of Economic Security (1997 and 2006).

TABLE 4
ACTUAL AND PROJECTED POPULATION CHANGE IN ARIZONA BY DECADE (Numbers in Thousands)

Decade	**Arizona**	**Sun Corridor***	**Balance****	**Metro Phoenix**	**Metro Tucson**
Actual^:					
1950-60	553	476	77	351	124
1960-70	473	400	74	314	86
1970-80	943	740	203	560	180
1980-90	946	774	173	639	135
1990-2000	1,476	1,190	275	1,013	177
2000-10	1,253	1,078	184	941	137
Projected^^:					
2010-20	1,084	919	165	800	119
2020-30	1,367	1,184	184	1,041	143
2030-40	1,366	1,205	160	1,069	137
2040-50	1,344	1,194	150	1,056	139

* Metro Phoenix (Maricopa and Pinal counties) and Metro Tucson (Pima County)
** Balance of state: the other 12 counties
^ Based on decennial census counts as of April 1
^^ Middle scenario projections as of mid-year

Sources: U.S. Department of Commerce, Census Bureau (actual) and Arizona Department of Administration, Office of Employment and Population Statistics (projections).

gain of the 1990s, which was the greatest in the state's history. The projected annual population increase is higher than in the 1997 projection series in every year from 2016 through 2049. Relative to the 2006 projection series, annual population gains in the new middle projection series are much lower over the next few years and remain lower through 2034 but become substantially higher in the 2040s.

In the high series produced by the OEPS, population gains in the near term rise much more substantially than in the middle series. The annual increases in the high series accelerate throughout the forecast period. As a result, in the high series, the population gain during the current decade surpasses the figure for the prior decade, with advances in subsequent decades far in excess of the record of the 1990s. In contrast, population gains in the low series do not rise as much in the near term. After 2020, annual population increases in the low series gradually lower throughout the projection period. The projected population gain in the 2020s is close to the actual increases during the 1970s and 1980s.

As seen in Table 4, the middle series projections for metropolitan Phoenix (Maricopa and Pinal counties) are out of line with those for the rest of the state. In metro Phoenix, population growth in the 2020s, 2030s and 2040s is projected to be slightly higher than the record during the 1990s. In contrast, gains in metro Tucson (Pima County) and in the balance of the state (the 12 less populous counties) are projected to remain well below the record levels of the 1970s and 1990s, generally comparable to the advances during the 1980s and 2000s.

The record population growth experienced in metro Phoenix during the 1990s — 59 percent higher than in the next highest preceding decade — was in line with record population gains nationally. Immigration, particularly undocumented immigration, surged in response to job openings in the United States that were not being filled by U.S.-born residents. Those aging into the workforce during the 1990s were born during the "baby bust" of the 1970s. The number of births from 1972 through 1978 was nearly 7 million (23 percent) less than during the last seven years of the baby boom (1958 through 1964), creating a worker shortage. This shortage was aggravated by the longest economic expansion on record (from 1991 into 2001), which featured considerable job growth.

As seen in Chart 1, the metro Phoenix area's share of the nation's numeric population gain gradually increased from the 1970s through the 2000s. Despite the Phoenix area's record population growth during the 1990s, its share of the nation's population change did not rise more than the trend. In contrast, the record population growth projected in metro Phoenix from the 2020s through 2040s would occur at a time when national population gains are slowing. Thus, the Phoenix area would receive sharply higher shares of the nation's population change in the middle series. In contrast, the share in the rest of the state would rise only modestly over the next four decades, back to the level of the 1980s and 1990s.

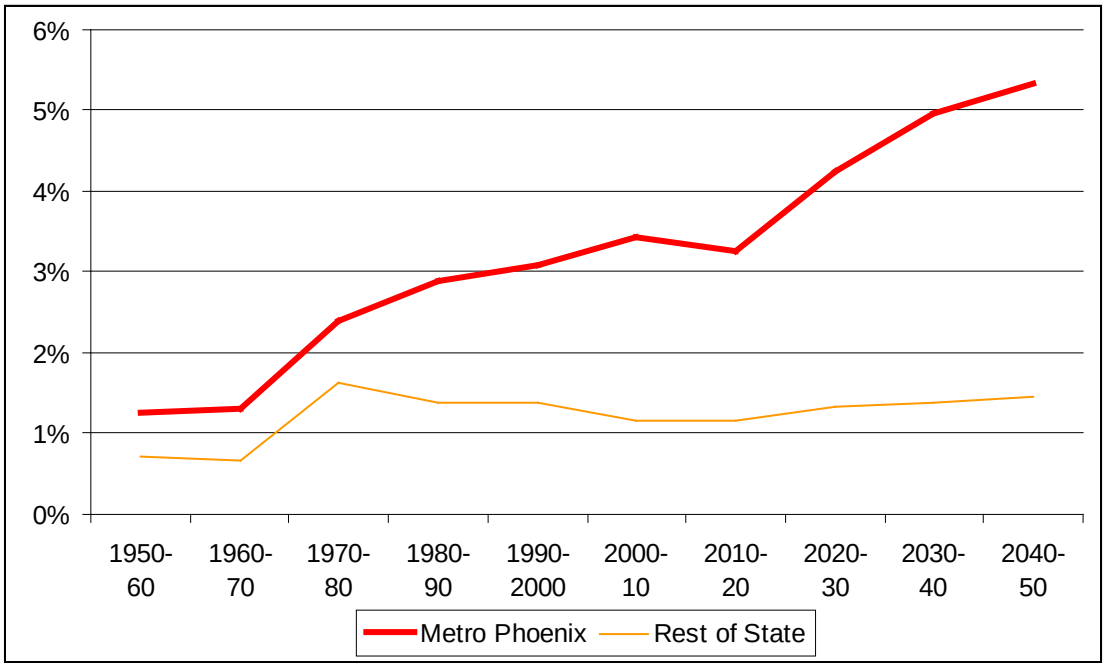
While the Phoenix area's share of the nation's net natural change will rise based on the middle series projections, most of the increase in the area's share of the nation's population change will result from its net migration. As discussed later, the retirement-aged population is projected by the OEPS to increase slightly less rapidly than the national average. Thus, the surge in net migration necessary for metro Phoenix's share of the nation's population change to rise as

projected is forecast to occur in the working-age population. For the working-age population to increase so considerably, the Phoenix area's share of the nation's employment growth must also climb substantially. Thus, economic development in the Phoenix area will have to be much more successful than at any time in its past. It is not at all clear which base (export) economic activities will drive this accelerated economic growth.

Moreover, if metro Phoenix were to continue to grow at a record pace through 2050, this would extend the period of significant population growth as a share of the national total to eight consecutive decades. Only the nation's three largest metro areas have had such an extended period of rapid growth.

Thus, while the middle series projections for most of Arizona appear to be reasonable, caution is urged in using the middle series for metro Phoenix. Historical population change and the projected figures for the middle and low series are shown in Chart 2. Projected growth in the low series is comparable to the gains realized during the 1970s and 1980s. Over the 40-year projection period, the population change in the low series is 1.3 million less than in the middle series. It might be reasonable to assume that population gains in the Phoenix area will be between those of the low and middle scenarios.

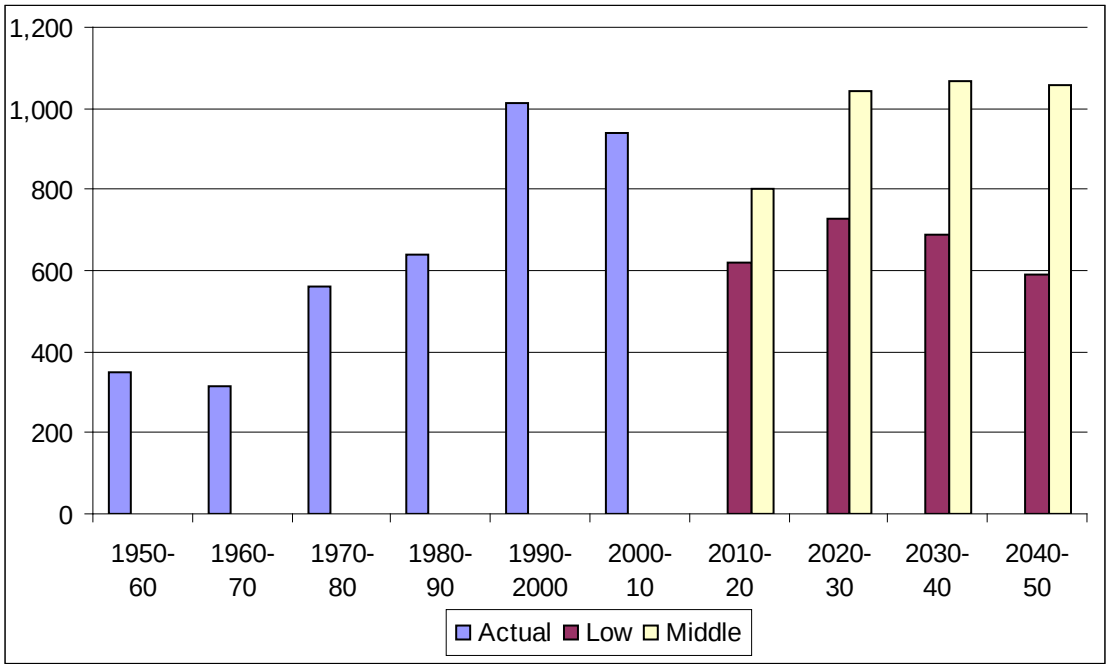
CHART 1
ACTUAL AND PROJECTED SHARE OF THE NATIONAL POPULATION CHANGE IN ARIZONA



Note: 1950 through 2010 based on decennial census counts; 2010 through 2050 based on middle series projections.

Sources: U.S. Department of Commerce, Census Bureau (decennial censuses and national projections) and Arizona Department of Administration, Office of Employment and Population Statistics (Arizona projections).

CHART 2
ACTUAL AND PROJECTED POPULATION CHANGE IN METROPOLITAN PHOENIX
(Numbers in Thousands)



Note: 1950 through 2010 based on decennial census counts; 2010 through 2050 based on low and middle series projections.

Sources: U.S. Department of Commerce, Census Bureau (decennial censuses) and Arizona Department of Administration, Office of Employment and Population Statistics (projections).

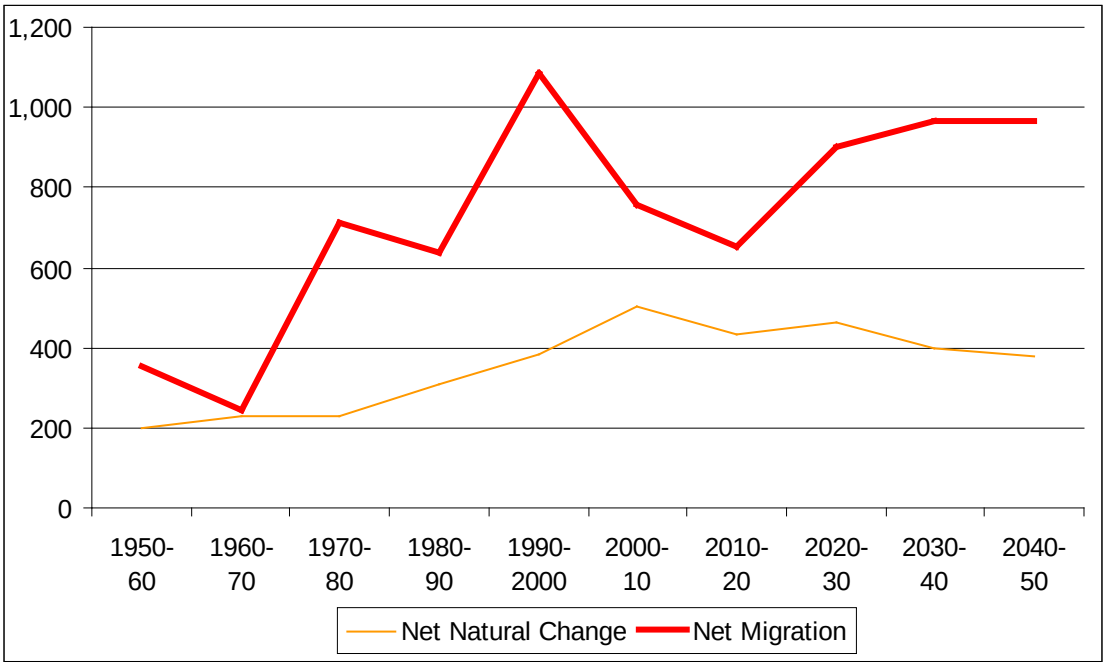
Population Change by Component

Population change consists of two components — net natural change and net migration — each of which can have a negative or positive value. Net natural change consists of two subcomponents: births and deaths.

For subnational areas, net migration sometimes is divided into two subcomponents: net domestic migration and net international migration. The problem with this split is that reliable data on net international migration do not exist — reliable estimates of the number of undocumented immigrants and of emigrants (people moving from the United States) are not available. Even a direct measure of total net migration does not exist. Its value over a 10-year period can be determined by subtracting the net natural change from the total population change between two decennial census counts.

Net migration and net natural change in Arizona are shown in Chart 3. In every decade since the 1970s, net natural change has been substantially less than net migration. Net natural change is expected to slowly decline from the peak that occurred in the last decade, but by the 2040s is projected to only drop back to the level of the 1990s. Due to weak economic conditions in the

CHART 3
ACTUAL AND PROJECTED NET MIGRATION AND NET NATURAL CHANGE IN ARIZONA (Numbers in Thousands)



Note: 1950 through 2010 based on decennial census counts and records of births and deaths; 2010 through 2050 based on middle series projections.

Sources: U.S. Department of Commerce, Census Bureau (decennial censuses), Arizona Department of Health Services (births and deaths) and Arizona Department of Administration, Office of Employment and Population Statistics (projections).

first half of the current decade, net migration for the decade is expected to drop back to the level of the 1980s but subsequently is projected to rise back to near the 1990s peak.

The projected figures for each component and subcomponent of population change are shown for Arizona for the low, middle and high series in Table 5. The following discussion pertains to the middle series.

The net natural change in the current decade is projected to be less than in the last decade, largely due to a lesser number of births. The number of births has dropped significantly in recent years. While the low occurred in 2011, the 2007 peak figure is not expected to be reached again until 2019. The decrease in births primarily can be traced to the poor economy, but Hispanic birth rates independent of economic conditions also have decreased. Births are projected to continue to increase in number throughout the projection period. However, the number of deaths will rise more rapidly than births, due to the aging of the population, such that net natural change is projected to decline after the mid-2020s.

Total net migration currently is at a low level due to the weak economy, but as the economy improves over the next few years, net migration is expected to rise significantly. After this

TABLE 5
PROJECTIONS OF ARIZONA POPULATION CHANGE BY DECADE, COMPONENT AND SERIES (Numbers in Thousands)

	Low	Middle	High	Low	Middle	High	Low	Middle	High
	Population Change			Net Natural Change			Total Net Migration		
2010-20	824	1,084	1,297	370	432	481	454	651	816
2020-30	931	1,367	1,721	301	465	592	629	902	1,129
2030-40	841	1,366	1,817	166	399	606	675	967	1,211
2040-50	711	1,344	1,928	36	377	717	675	967	1,211
	Births			Deaths					
2010-20	882	946	996	513	514	515			
2020-30	972	1,148	1,285	670	683	693			
2030-40	1,019	1,280	1,507	853	881	901			
2040-50	1,034	1,424	1,793	998	1,047	1,075			
	Net Domestic Migration			Net International Migration					
2010-20	301	473	612	153	179	204			
2020-30	450	635	776	180	267	353			
2030-40	468	632	721	207	335	490			
2040-50	442	589	600	233	378	611			

Source: Arizona Department of Administration, Office of Employment and Population Statistics.

cyclical recovery, net migration is forecast to trend up slowly into the mid-2030s before stabilizing. Each of the two subcomponents of net migration is projected to rise into the mid-2030s. After that, net domestic migration is expected to lower somewhat but net international migration is forecast to continue to rise through 2050.

The net international migration figures include only a small number of net undocumented immigrants, in part due to Arizona's efforts to limit their number, primarily through the employer sanctions law. Legal immigration is assumed to continue to rise — the average during the 2000s was twice as high in the prior several years. However, the projected rate of increase in net international migration in Arizona is higher than the projected national increase, meaning that an ever-increasing share of the nation's immigrants would come to Arizona, with the bulk settling in metro Phoenix. Thus, the assumptions regarding net international migration to the Phoenix area contribute to the relatively high projected population growth in the Phoenix area.

County Projections

For each of Arizona's 15 counties as well as for selected aggregations of counties, the actual population change in each of the last six decades is compared to the projected growth in the new middle series during the next four decades in Table 6. Net natural change and net migration also are displayed. The average of the 40-year projection period is compared to the average of the last 40 years. In Table 7, the projected population changes in the new middle series is compared to the figures from the projection series issued in 1997 and 2006.

In several counties, historical population changes by decade have been highly erratic, largely due to fluctuations in net migration. These variations in net migration primarily result from swings in local economic conditions. Few nonretirees can move to/remain in a county without a job.

Since conditions in neighboring counties often are similar, the following summary by county/aggregation of counties is organized geographically:

Metro Phoenix. Since substantial housing was built in Pinal County in the 2000s, with most of the residents commuting into Maricopa County to work, these two counties are now closely linked. Generally, the two-county Phoenix metro area should be examined. The population change in the metro area was progressively greater from the 1970s through the 1990s, but the change in the 2000s was less than in the 1990s. Growth in the current decade is expected to be lower than in the 2000s due to the slow population growth early in the decade, as the economy gradually recovers from a deep and long recession. After that, annual population gains are projected to be slightly higher than the average of the 1990s — the greatest growth on record.

TABLE 6
ACTUAL AND PROJECTED POPULATION CHANGE, NET NATURAL CHANGE, AND NET MIGRATION BY DECADE BY COUNTY (Numbers in Thousands)

	Pop Chg	Net Natural Chg	Net Migra-tion	Pop Chg	Net Natural Chg	Net Migra-tion	Pop Chg	Net Natural Chg	Net Migra-tion
Actual^:		**Arizona**			**Sun Corridor**			**Balance of State**	
1950-60	552.6	198.1	354.5	475.6	142.9	332.7	77.0	55.2	21.8
1960-70	473.2	230.3	242.9	399.6	162.6	237.0	77.6	67.7	5.9
1970-80	943.0	231.3	711.7	740.1	163.4	576.7	202.9	67.9	135.0
1980-90	947.0	308.9	638.1	773.9	239.5	534.5	173.1	69.4	103.6
1990-2000	1,465.4	381.7	1,083.7	1,190.2	307.2	883.2	275.2	74.5	200.5
2000-10	1,261.4	503.7	757.7	1,077.5	437.9	639.7	183.9	65.8	118.0
1970-2010#	*1,154.2*	*356.4*	*797.8*	*945.5*	*287.0*	*658.6*	*208.8*	*69.4*	*139.3*
Projected^^:									
2010-20	1,083.6	432.2	651.4	918.7	382.6	536.0	164.9	49.6	115.4
2020-30	1,367.8	465.5	902.0	1.183.9	433.9	750.0	183.9	31.6	152.0
2030-40	1,365.4	398.6	967.1	1,205.3	399.1	806.2	160.1	-0.5	160.9
2040-50	1,341.3	377.1	967.1	1,194.1	387.9	806.2	150.2	-10.8	160.9
2010-50#	*1,290.3*	*418.3*	*871.9*	*1,125.4*	*400.9*	*724.6*	*164.9*	*17.4*	*147.3*
Actual^:		**Metro Phoenix**			**Maricopa**			**Pinal**	
1950-60	351.2	103.1	248.1	331.7	89.3	242.4	19.5	13.8	5.7
1960-70	313.6	124.2	189.4	307.7	113.1	194.6	5.9	11.1	-5.2
1970-80	560.3	128.8	435.5	538.0	114.6	423.4	22.3	10.2	12.1
1980-90	638.5	190.9	447.7	613.0	180.4	432.7	25.5	10.5	15.0
1990-2000	1,013.3	259.5	754.0	950.0	250.6	699.5	63.3	8.9	54.5
2000-10	941.0	385.1	555.9	745.0	364.2	380.8	196.0	20.9	175.1
1970-2010#	*788.3*	*240.1*	*548.3*	*711.5*	*227.5*	*484.1*	*76.8*	*12.6*	*64.2*
Projected^^:									
2010-20	799.8	339.6	460.2	682.9	308.4	374.5	116.9	31.2	85.7
2020-30	1,040.8	390.9	650.0	852.5	342.5	510.1	188.3	48.4	139.9
2030-40	1,068.8	368.8	700.0	815.4	399.9	515.6	253.4	68.9	184.4
2040-50	1,055.6	355.6	700.0	750.4	268.5	481.9	305.2	87.1	218.1
2010-50#	*991.2*	*363.7*	*627.5*	*775.3*	*304.8*	*470.5*	*215.9*	*58.9*	*157.0*

(continued)

TABLE 6 (Continued)
ACTUAL AND PROJECTED POPULATION CHANGE, NET NATURAL CHANGE, AND NET MIGRATION BY DECADE BY COUNTY (Numbers in Thousands)

	Pop Chg	Net Natural Chg	Net Migra-tion	Pop Chg	Net Natural Chg	Net Migra-tion	Pop Chg	Net Natural Chg	Net Migra-tion
Actual^:	**Metro Tucson (Pima)**			**Santa Cruz**			**Cochise**		
1950-60	124.4	39.8	84.6	1.5	1.8	-0.4	23.6	7.1	16.5
1960-70	86.0	38.4	47.6	3.2	2.2	1.0	6.9	9.9	-3.1
1970-80	179.8	38.6	141.2	6.5	2.6	3.9	23.8	9.7	14.1
1980-90	135.4	48.6	86.8	9.2	3.8	5.4	11.9	8.4	3.5
1990-2000	176.9	47.7	129.2	8.7	6.1	2.6	20.1	7.7	12.4
2000-10	136.5	52.8	83.8	9.0	5.4	3.7	13.6	6.7	6.9
1970-2010#	*159.2*	*46.9*	*110.3*	*8.4*	*4.5*	*3.9*	*17.4*	*8.1*	*9.2*
Projected^^:									
2010-20	118.9	43.0	75.8	8.2	4.7	3.5	11.0	7.2	3.8
2020-30	143.1	43.0	100.0	8.5	4.6	3.8	15.3	7.2	8.1
2030-40	136.5	30.3	106.2	7.2	3.1	4.1	15.7	7.1	8.5
2040-50	138.5	32.3	106.2	6.5	2.4	4.1	18.9	10.4	8.5
2010-50#	*134.2*	*37.2*	*97.1*	*7.6*	*3.7*	*3.9*	*15.2*	*8.0*	*7.3*
Actual^:	**Graham**			**Greenlee**			**Gila**		
1950-60	1.1	2.6	-1.5	-1.3	3.1	-4.4	1.6	5.0	-3.5
1960-70	2.5	2.2	0.4	-1.2	1.4	-2.6	3.5	4.5	-1.0
1970-80	6.3	2.5	3.8	1.1	2.0	-0.9	7.8	3.5	4.3
1980-90	3.7	2.4	1.3	-3.4	1.1	-4.5	3.1	2.5	0.6
1990-2000	6.9	2.0	4.9	0.5	0.9	-0.3	11.1	1.3	9.9
2000-10	3.7	2.5	1.3	-0.1	0.5	-0.6	2.3	0.4	1.9
1970-2010#	*5.2*	*2.4*	*2.8*	*-0.5*	*1.1*	*-1.6*	*6.1*	*1.9*	*4.2*
Projected^^:									
2010-20	3.9	3.4	0.6	0.1	0.6	-0.6	2.1	-0.2	2.3
2020-30	5.4	3.9	1.5	0.1	0.7	-0.6	1.8	-1.0	2.8
2030-40	5.3	3.6	1.7	-0.0	0.6	-0.6	1.3	-1.5	2.8
2040-50	5.3	3.7	1.7	-0.1	0.5	-0.6	2.2	-0.6	2.8
2010-50#	*5.0*	*3.6*	*1.4*	*0.0*	*0.6*	*-0.6*	*1.8*	*-0.8*	*2.7*
Actual^:	**Apache**			**Navajo**			**Coconino**		
1950-60	2.7	8.0	-5.4	8.5	8.0	0.5	17.9	7.7	10.2
1960-70	1.9	12.0	-10.1	9.6	11.8	-2.2	6.5	11.6	-5.2
1970-80	19.8	11.4	8.4	20.1	12.0	8.1	26.7	11.8	14.8
1980-90	9.5	11.0	-1.5	10.0	13.2	-3.2	21.6	14.7	7.1
1990-2000	7.8	10.8	-2.9	19.8	11.8	8.0	19.7	13.6	6.1
2000-10	2.1	7.2	-5.1	10.0	10.3	-0.3	18.1	13.6	4.5
1970-2010#	*9.8*	*10.1*	*-0.3*	*15.0*	*11.8*	*3.2*	*21.5*	*13.4*	*8.1*
Projected^^:									
2010-20	1.8	4.4	-2.6	9.1	8.3	0.8	9.6	10.7	-1.1
2020-30	-0.6	2.1	-2.7	9.2	6.3	2.9	10.1	8.1	2.0
2030-40	-3.7	-0.9	-2.8	6.2	3.3	2.9	7.0	4.8	2.2
2040-50	-5.5	-2.7	-2.8	4.6	1.7	2.9	5.7	3.5	2.2
2010-50#	*-2.0*	*0.7*	*-2.7*	*7.3*	*4.9*	*2.4*	*8.1*	*6.8*	*1.3*

(continued)

TABLE 6 (Continued)
ACTUAL AND PROJECTED POPULATION CHANGE, NET NATURAL CHANGE, AND NET MIGRATION BY DECADE BY COUNTY (Numbers in Thousands)

	Pop Chg	Net Natural Chg	Net Migra-tion	Pop Chg	Net Natural Chg	Net Migra-tion	Pop Chg	Net Natural Chg	Net Migra-tion
Actual:		**Yavapai**			**Mohave**				
1950-60	3.9	1.9	2.0	-0.8	1.0	-1.8			
1960-70	8.1	0.8	7.3	18.1	1.6	16.5			
1970-80	31.1	0.5	30.7	30.3	1.8	28.2			
1980-90	39.6	-0.2	39.8	37.6	0.8	36.9			
1990-2000	59.8	-1.7	61.5	61.5	2.4	59.1			
2000-10	43.5	-1.2	44.7	45.2	-0.1	45.3			
1970-2010#	*43.5*	*-0.6*	*44.2*	*43.6*	*1.2*	*42.4*			
Projected^^:									
2010-20	37.0	-7.6	44.6	40.9	-5.9	46.8			
2020-30	41.5	-15.2	56.7	44.6	-13.2	57.7			
2030-40	32.5	-27.6	60.0	37.2	-23.7	60.9			
2040-50	24.6	-35.4	60.0	29.4	-31.6	60.9			
2010-50#	*33.9*	*-21.4*	*55.4*	*38.0*	*-18.6*	*56.6*			
Actual:		**La Paz***		**La Paz plus Yuma**				**Yuma***	
1950-60				18.2	8.7	9.6			
1960-70				14.6	8.7	5.9			
1970-80				29.7	9.9	19.8			
1980-90	0.8	-0.1	0.9	30.1	11.9	18.2	29.3	12.0	17.3
1990-2000	5.9	0.1	5.8	59.0	19.8	39.2	53.1	19.7	33.4
2000-10	0.8	0.2	0.6	36.5	21.0	15.6	35.7	20.8	15.0
1970-2010#				*38.8*	*15.7*	*23.2*			
Projected^^:									
2010-20	1.1	-0.1	1.2	41.2	23.9	17.3	40.1	24.0	16.1
2020-30	1.0	-0.3	1.3	47.8	28.2	19.7	46.8	28.5	18.4
2030-40	0.9	-0.4	1.3	51.7	30.6	21.2	50.8	31.0	19.9
2040-50	1.2	-0.1	1.3	58.4	37.2	21.2	57.2	37.3	19.9
2010-50#	*1.1*	*-0.2*	*1.3*	*49.8*	*30.0*	*19.9*	*48.7*	*30.2*	*18.6*

Notes:

Average by decade

* The original Yuma County was divided into La Paz and Yuma counties on January 1, 1983.

Population change: Historical change calculated as the difference in decennial census counts as of April 1; projections are as of mid-year.

Net natural change: For the 1950s, 1960s and 1970s, the figures are for the calendar year, calculated from Arizona Department of Health Services births and deaths. For the 1980s, 1990s and 2000s, the data are from the Arizona Department of Administration, Office of Employment and Population Statistics.

Net Migration: Calculated as the difference between population change and net natural change.

Sources: U.S. Department of Commerce, Census Bureau (decennial censuses), Arizona Department of Health Services (births and deaths) and Arizona Department of Administration, Office of Employment and Population Statistics (projections).

TABLE 7
POPULATION CHANGE BY DECADE BY COUNTY: COMPARISON OF PROJECTIONS ISSUED IN 1997, 2006 AND 2012 (Numbers in Thousands)

	1997	2006	2012	1997	2006	2012	1997	2006	2012
		Arizona			**Sun Corridor**			**Balance of State**	
2010-20	1,218.5	1,779.8	1,083.4	1,012.6	1,504.9	918.5	205.9	274.9	164.9
2020-30	1,257.5	1,568.0	1,367.8	1,065.3	1,345.1	1,184.1	192.2	222.9	183.7
2030-40	1,242.5	1,346.0	1,365.4	1,073.1	1,174.6	1,205.2	169.4	171.4	160.2
2040-50	1,307.4	1,137.3	1,344.3	1,132.6	996.0	1,194.3	174.8	141.3	150.0
2010-50	*5,025.9*	*5,831.1*	*5,161.0*	*4,283.6*	*5,020.6*	*4,502.0*	*742.3*	*810.5*	*659.0*
		Metro Phoenix			**Maricopa**			**Pinal**	
2010-20	838.0	1,303.7	799.7	806.5	1,058.6	682.9	31.5	245.1	116.9
2020-30	899.2	1,174.6	1,041.0	874.7	931.9	852.6	24.5	242.7	188.4
2030-40	922.8	1,031.0	1,068.7	905.4	801.7	815.4	17.4	229.3	253.3
2040-50	984.0	873.0	1,055.7	968.5	651.8	750.4	15.5	221.2	305.3
2010-50	*3,644.0*	*4,382.3*	*3,965.0*	*3,555.1*	*3,444.0*	*3,101.2*	*88.9*	*938.3*	*863.8*
		Metro Tucson (Pima)			**Santa Cruz**			**Cochise**	
2010-20	174.6	201.2	118.9	8.9	11.5	8.2	13.0	23.7	11.0
2020-30	166.1	170.5	143.1	9.4	9.3	8.5	10.0	18.0	15.3
2030-40	150.3	143.6	136.5	9.4	7.5	7.2	7.4	13.5	15.7
2040-50	148.6	123.0	138.6	10.6	6.2	6.4	7.2	11.6	18.9
2010-50	*639.6*	*638.3*	*537.0*	*38.3*	*34.5*	*30.3*	*37.6*	*66.8*	*60.9*
		Graham			**Greenlee**			**Gila**	
2010-20	7.2	3.7	3.9	0.7	-0.0	0.1	6.2	6.6	2.1
2020-30	6.7	3.5	5.4	0.7	0.1	0.1	5.6	5.5	1.8
2030-40	6.1	3.0	5.3	0.7	0.3	-0.1	3.8	4.3	1.2
2040-50	5.7	2.3	5.3	0.7	0.5	-0.1	3.5	4.1	2.2
2010-50	*25.7*	*12.5*	*19.9*	*2.8*	*0.9*	*0.0*	*19.1*	*20.5*	*7.4*
		Apache			**Navajo**			**Coconino**	
2010-20	9.2	8.3	1.8	11.9	23.8	9.1	21.9	17.8	9.6
2020-30	8.9	6.9	-0.6	11.6	18.6	9.2	20.6	14.5	10.1
2030-40	9.0	5.8	-3.7	10.8	14.5	6.3	21.7	13.1	6.9
2040-50	9.5	5.0	-5.5	13.0	12.3	4.6	24.1	11.2	5.7
2010-50	*36.6*	*26.0*	*-8.0*	*47.3*	*69.2*	*29.2*	*88.3*	*56.6*	*32.3*
		Yavapai			**Mohave**				
2010-20	42.7	63.6	37.0	42.0	60.3	40.9			
2020-30	37.6	50.2	41.5	34.4	48.9	44.6			
2030-40	27.3	35.5	32.5	24.2	37.4	37.2			
2040-50	25.8	27.7	24.7	22.0	32.7	29.4			
2010-50	*133.4*	*177.0*	*135.7*	*122.6*	*179.3*	*152.1*			
		La Paz			**Yuma**				
2010-20	4.0	2.9	1.1	38.2	52.6	40.1			
2020-30	2.9	2.6	1.0	44.0	44.8	46.8			
2030-40	1.9	1.6	0.9	47.0	35.1	50.8			
2040-50	1.7	1.2	1.2	51.1	26.3	57.2			
2010-50	*10.5*	*8.3*	*4.2*	*180.3*	*158.8*	*195.0*			

Source: Arizona Department of Administration, Office of Employment and Population Statistics (2012) and Arizona Department of Economic Security (1997 and 2006).

Relative to the 1990s, net migration in the 2000s was 200,000 lower, but net natural increase was more than 100,000 higher. Net migration and net natural change each is forecast to be less in the current decade than in the preceding decade. Net migration in the following three decades is projected to be much higher, so that the average for the 40-year projection period is 14 percent higher than the average of the last 40 years. Net natural change in the 2020s is expected to increase to the level of the 2000s, then drop back only a little.

Relative to the 1997 and 2006 projections, the total population change in the new middle series is less in the 2010s but higher in the 2030s and 2040s. Over the 40 years, the projected gain in the new series is roughly 300,000 higher than in the 1997 series but some 400,000 less than in the 2006 series. Net migration over the 40 years is somewhat less in the new series than in the two prior projections. Net natural change is higher than the 1997 series but less than the 2006 series.

Maricopa versus Pinal. Historically, population growth in the two-county metro Phoenix area overwhelming occurred in Maricopa County, which accounted for more than 93 percent of the total in each decade from 1950 through 2000. Maricopa's share dropped to 78 percent in the 2000s. According to the annual population estimates of the OEPS, Maricopa's share of the metro area's change between 2005 and 2012 was only 69 percent. Yet the new forecast indicates that Maricopa's share will be 85 percent in the current decade and still will be 71 percent in the 2040s.

Similarly, Maricopa County received at least 92 percent of the net migrants to Metro Phoenix before 2000, but the proportion dropped to 69 percent in the 2000s. The new projections assume that Maricopa's share of net migration will bounce back to 81 percent in the current decade, then gradually lower, not again reaching 69 percent until the 2040s. Net migration to Pinal County in the 2010s is projected to be less than half of the amount in the 2000s, while only a 2 percent decline is projected in Maricopa County. It is not until the 2030s that net migration to Pinal County returns to the level of the 2000s.

Compared to the 2006 projection, net migration to Pinal County is lower in the new projection series in each decade, with the four-decade total 31 percent lower. In contrast, just as much net migration to Maricopa County over the 40 years is projected in the new series as in the 2006 series.

Thus, the concern expressed earlier that the middle series for metro Phoenix might be unrealistically high really is a caution regarding its use for Maricopa County. The middle series projection for Pinal County is conservative.

Pima. Population gains in Pima County (metro Tucson) were highest in the 1970s and 1990s. The projection for the current decade is for the lowest gain since the 1960s, followed in the next three decades by increases slightly larger than those in the 1980s and 2000s, but less than in the 1970s and 1990s.

Projected net migration rises in the 2020s from the low level of the 2010s, then stabilizes. Over the next 40 years, it is 12 percent lower than over the last four decades. Net natural change is

expected to remain below the levels of the 1980-to-2010 period, with a significant drop in the 2030s as the population ages.

In the new series, projected population growth through the 2030s is lower than in the 1997 and 2006 projections. The new projections show net migration throughout the 40 years significantly lower than in the 1997 and 2006 series, each of which assumed that net migration in each decade would exceed the historical decadal record. However, the net natural change is higher in the new series than in the two prior series.

Santa Cruz. Numeric population gains were nearly equal in each of the last three decades. The new projections indicate that the change will be nearly as high in the 2010s and 2020s, then drop off a little. Net migration to Santa Cruz County peaked in the 1980s. Net migration is expected to be similar to that during the 2000s, averaging the same in the next 40 years as in the last 40 years. Net natural change peaked during the 1990s. Some decline in net natural change is forecast throughout the projection period.

Projected population growth in the new series is somewhat less than in the 1997 and 2006 series through 2040. The new projections include greater net migration over the 40-year period, but much lower levels of net natural change than the 1997 and 2006 projections.

Cochise. Population growth in Cochise County has fluctuated over time, highest in the 1950s and 1970s and nearly as high in the 1990s. The new projections indicate that gains in the current decade will be a little lower, but the increases in the subsequent decades will be higher, than those in the 2000s. Net migration is projected to be relatively low in the current decade but then higher than in the 2000s. Average net migration over the 40 years is 21 percent less than in the last 40 years. Net natural change has declined over the last two decades, but is expected to hold steady before rising in the 2040s.

Projected population growth over the next 40 years is almost as high in the new series as in the 2006 series, and substantially higher than in the 1997 series. The net migration forecast is much lower than in the 2006 series and only a little higher than that of the 1997 series. However, net natural change is much higher than in either of the two prior series.

Graham. Like Cochise County, Graham County's historical population gains have varied, with the highest figures in the 1970s and 1990s. In the new series, the projected gains in each decade are less than in the peak decades but higher than in the 1980s and 2000s. Net migration is forecast to go from less than the 2000s figure in the 2010s to somewhat higher thereafter, but the 40-year average is just half that of the last 40 years. Net natural change is projected to accelerate.

The projected population change in each decade in the new series is higher than in the 2006 series but less than in the 1997 series. The net migration projection is less than in either of the preceding series, but net natural change generally is higher, particularly relative to the 2006 series.

Greenlee. In most decades, particularly in the 1980s, the population in Greenlee County has declined. Like its neighboring counties, the best periods were the 1970s and 1990s, in which

small population gains were realized. Very slight population gains are forecast for the 2010s and 2020s, with equally slight declines occurring in the subsequent decades. Net migration is expected to be consistently negative, similar to the situation in the 2000s. Net natural change is projected to be slightly higher than in the 2000s.

The projected population change in the new series is less than in the two previous series, especially 1997, due to greater net out-migration. Net natural change is similar to the 2006 series.

Gila. As in the other counties in the region, population gains were strongest in the 1970s and 1990s. The projected gains in the new series are similar to those in the 2000s. Net migration is forecast to be a little higher than in the 2000s, but 36 percent less than in the last 40 years, which included strong gains during the 1990s. The small net natural increase of the 2000s is expected to turn into net natural decreases.

The projected population growth in the new series is considerably less than in the 1997 and 2006 series. Much lower net migration is offset partially by lesser net natural decrease.

Apache. Population growth was the highest in the 1970s, the only decade of the last six in which net in-migration occurred. The population change during the 2000s was much lower than in the 1970-to-2000 period, similar to the 1950s and 1960s. Net natural change has been substantial, but began to lower in the 2000s. In the new projections, net out-migration is expected to continue, while net natural increase drops sharply and becomes net natural decrease. The population change in the 2010s is similar to the 2000s, but the population is projected to decrease after that.

The new projections are much lower than those of 1997 and 2006, which forecast population gains to be in the mid-range of the historical record. The big difference is in net natural change. While net out-migration in the new series is greater than in the 2006 series, it is not as severe as in the 1997 series.

Navajo. Population change was much greater during the 1970s and 1990s than in the other decades. Net migration was positive in those decades, but negative or near zero in the other decades. Net natural change has been strong but has declined in the last two decades. In the new projections, net natural change continues to lower. Net in-migration is projected — less than in the two peak decades but higher than in the other decades. The new projections call for population gains close to 9,000 for each of the next two decades, not much different from the amount in four of the last six decades, with growth subsequently slowing.

The new projections are much lower than those from 1997 and especially 2006. Net in-migration is similar to the 1997 series but much lower than the inexplicably high figures of the 2006 series. Net natural change in the new projections is much lower than in the preceding projections.

Coconino. Table 6 displays the population change based on decennial census counts, but the residents of a large dormitory at Northern Arizona University were not counted in Coconino County in 2000 — meaning that net migration during the 1990s was understated while the gain in the 2000s was overstated. The county has experienced net in-migration since the 1970s, but

the amount during the 2000s adjusted for the error in the census count was much lower than in the three prior decades. Thus, while the projected average amount of net migration in the new series is far below the historical average, it is not much less than in the 2000s. Net natural increase is projected to lower considerably from historical levels. Projected population growth by decade is considerably less than in five of the last six decades.

The new projections are much lower than those of 1997 and 2006. Net natural change is about half the amount in the two prior series. Net migration is comparable to the 2006 series, but much less than in the 1997 series.

Yavapai. The county has experienced substantial population growth since the 1970s, peaking in the 1990s. Since 1980, all of Yavapai County's population growth has been due to net in-migration. The net natural change was slightly negative in each of the last three decades, reflecting the high median age of residents, largely the result of so many retirees moving to the county. Net migration steadily rose through the 1990s, but dropped back during the 2000s. In the new projections, net migration rises over time back to the level of the 1990s. It averages 25 percent more than over the last four decades. However, the net natural decrease is expected to grow significantly, causing population growth to slow after the 2020s.

The new forecast is similar to that of 1997 for both net migration and net natural change. The 2006 projections included greater net migration.

Mohave. The situation in Mohave County is remarkably similar to that in Yavapai County, with comparable amounts of net migration and net natural change over the last four decades. The new forecast for Mohave County is very similar to the projections for Yavapai County.

In the new projections, population growth is higher than in the 1997 series but less than in the 2006 series. Net migration is considerably higher than in the 1997 projections but a little less than in the 2006 projections. The magnitude of net natural decrease is greatest in the new series.

La Paz and Yuma. Population growth in the two-county area accelerated in the 1970s and was by far the highest during the 1990s. Net migration was much higher during the 1990s, and net natural change also rose. The new projections call for net migration below the 1990s peak but similar to the other three recent decades. Net natural change is projected to continue to rise such that the population change by the 2040s approaches the 1990s peak.

La Paz. Population gains in La Paz County are projected to remain near the low level of the 2000s throughout the projection period. Net migration is expected to be somewhat higher than in the 2000s, but the small net natural increase during that decade is expected to shift to a net natural decrease in coming decades.

Projected population growth in the new series is less than in the 1997 and 2006 series. Net migration is considerably less but the net natural decrease is not expected to be as large as in the preceding series.

Yuma. The population change in Yuma County is expected to rise over time from the 2000-to-2010 figure, surpassing the record of the 1990s in the 2040s. Most of the acceleration is expected to come from net natural change; the rise in net migration is modest, with the figures staying well below the 1990s peak.

Throughout the projection period, population gains in the new series are somewhat higher than in the 1997 series. Relative to the 2006 series, the projected increase shifts from lower in the 2010s to substantially more in the 2030s and 2040s. The 2006 series forecast considerably higher net migration but much less net natural change than the 1997 or 2012 series.

Population by Age

Using broad age groupings, the age distribution in Arizona as reported in the 2010 census is shown in Table 8. Compared to the national average, Arizona had a higher proportion of children and those of retirement age, with fewer working-age adults, particularly between the ages of 45 and 64.

Both in Arizona and nationally, the only age group expected to have a higher share in 2050 than in 2010 is the 65-or-older group. In 2050 relative to the national average, Arizona is projected to still have a higher share of children and a lesser share of adults 25-to-64 years old. Arizona also is projected to have a higher share in the 15-to-24 age group, but its share of those 65 or older is not expected to be any higher than the U.S. average. From 1990 through 2010, Arizona's share of the population 65 or older was slightly greater than the national average.

Using the international definition of dependency ratio — dependents are those under 15 and those 65 or older — Arizona's dependency ratio in 2010 was 54 (54 dependents per 100 people between the ages of 15 and 64). This was higher than the national average of 49. Due to the aging of the population, the dependency ratio is expected to rise, reaching 66.6 in Arizona and 63.6 nationally in 2050.

TABLE 8
ACTUAL AND PROJECTED SHARE OF POPULATION FOR SELECTED AGE GROUPS, ARIZONA

	Arizona			Difference From Nation		
	2010	2050	Change	2010	2050	Change
0-14	21.25%	19.02%	-2.23	1.42	1.07	-0.35
15-24	14.14	13.20	-0.94	0.01	1.17	1.16
25-44	26.26	24.73	-1.53	-0.35	-0.69	-0.34
45-64	24.54	22.09	-2.45	-1.86	-1.57	0.29
65+	13.80	20.95	7.15	0.75	0.01	-0.74
0-14 plus 65+	35.05	39.97	4.92	2.17	1.08	-1.09

Sources: U.S. Department of Commerce, Census Bureau, 2010 decennial census, and Arizona Department of Administration, Office of Employment and Population Statistics, 2050 projection (middle series).

A closer look at the age distribution, by five-year age groups by decade from 2000 through 2050, is presented in Table 9. In 2010, Arizona had a higher-than-average share in each of the age groups for children, particularly among those younger than 10. Shares also were higher in Arizona among those 65-to-79 years old. The shares in Arizona were below average in each of the age groups between 40 and 59.

TABLE 9
ACTUAL AND PROJECTED SHARE OF POPULATION BY FIVE-YEAR AGE GROUP, ARIZONA

	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44
Share									
2000	7.45%	7.60%	7.37%	7.17%	7.07%	7.29%	7.18%	7.65%	7.33%
2010	7.13	7.10	7.02	7.22	6.92	6.88	6.52	6.50	6.36
2020	6.86	6.26	6.62	7.03	7.20	6.79	6.10	6.20	5.89
2030	6.82	6.62	6.36	6.19	6.83	6.73	6.56	6.27	5.58
2040	6.52	6.46	6.47	6.60	6.61	6.08	6.40	6.39	6.16
2050	6.43	6.31	6.28	6.49	6.71	6.50	6.26	5.86	6.11
2010-50 Change	-0.70	-0.79	-0.74	-0.73	-0.21	-0.38	-0.26	-0.64	-0.25
Share Relative to National Average									
2000	0.64	0.30	0.08	-0.01	0.33	0.40	-0.11	-0.42	-0.64
2010	0.59	0.51	0.32	0.08	-0.07	0.05	0.05	-0.04	-0.41
2020	0.33	-0.12	0.45	0.80	0.72	-0.21	-0.76	-0.35	-0.21
2030	0.61	0.36	0.12	0.07	0.71	0.39	0.05	-0.54	0.05
2040	0.47	0.44	0.45	0.50	0.43	-0.28	0.10	0.07	-0.16
2050	0.40	0.31	0.36	0.58	0.59	0.12	-0.23	-0.52	-0.06
2010-50 Change	-0.19	-0.20	0.04	0.50	0.66	0.07	-0.28	-0.48	0.35

	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	>=85
Share									
2000	6.47	5.77	4.65	3.97	3.68	3.41	2.81	1.78	1.34
2010	6.68	6.50	5.87	5.49	4.43	3.36	2.54	1.85	1.62
2020	5.84	5.71	6.08	6.03	5.44	4.64	3.17	2.09	2.03
2030	5.62	5.32	5.32	5.30	5.70	5.27	4.04	2.89	2.59
2040	5.81	5.14	5.23	5.03	5.04	4.70	4.34	3.41	3.60
2050	6.02	5.76	5.44	4.87	4.97	4.51	3.93	3.15	4.39
2010-50 Change	-0.66	-0.74	-0.43	-0.62	0.54	1.15	1.39	1.30	2.77
Share Relative to National Average									
2000	-0.67	-0.48	-0.14	0.13	0.29	0.26	0.17	0.02	-0.17
2010	-0.68	-0.72	-0.50	0.04	0.40	0.35	0.17	-0.01	-0.16
2020	-0.15	-0.42	-0.43	-0.26	0.0.	0.22	0.17	0.15	0.03
2030	-0.50	-0.28	-0.09	-0.13	0.10	0.10	-0.07	-0.04	0.09
2040	-0.66	-0.96	-0.40	-0.03	0.28	0.13	-0.04	-0.14	-0.11
2050	-0.05	-0.21	-0.59	-0.72	-0.07	0.16	0.12	-0.09	-0.11
2010-50 Change	0.63	0.51	-0.09	-0.76	-0.47	-0.19	-0.05	-0.08	0.05

Sources: U.S. Department of Commerce, Census Bureau, decennial censuses (2000 and 2010) and Arizona Department of Administration, Office of Employment and Population Statistics, projections (middle series, 2020 through 2050).

Between 2010 and 2050, the share is projected to fall in Arizona in every age group under 65 and to rise in each of the older age groups, particularly in the 85-or-older group. Still, the share in 2050 in each age group under the age of 35 will be greater than 6 percent while the share will be less than 6 percent in each age group 50 or older. The projected change in share generally will be similar to the national average in each of the age groups.

The age distribution in 2010 varied widely by county. Some counties had high shares of retirees while others had high shares of children, relative to the national average. Substantial changes in the age distribution relative to the national average are projected in several of the less populous counties between 2010 and 2050. For example, Mohave County historically has had a high share of retirees, but its retirement-age share in 2050 is projected to be only average. While the projections by age for Arizona look reasonable, caution is recommended in using the projected age distributions in the less populous counties.

The OEPS publishes projections by single year of age for those under the age of 20. This allows schools to plan for enrollment changes and allows a detailed look at the 16-to-19 age group, when individuals enter the workforce and begin college. The projections by single year of age are shown in Chart 4. The number of Arizonans of each of these ages is projected to generally rise through the early 2020s but then decline for three successive years. After that, the numbers are expected to increase substantially through 2050. In contrast, as a share of the total population, the number of individuals from 16-to-19 years of age is projected to generally decline through the late 2020s. Following some recovery in share, the shares are expected to flatten and then begin to decline in the late 2040s.

Population by Race and Ethnicity

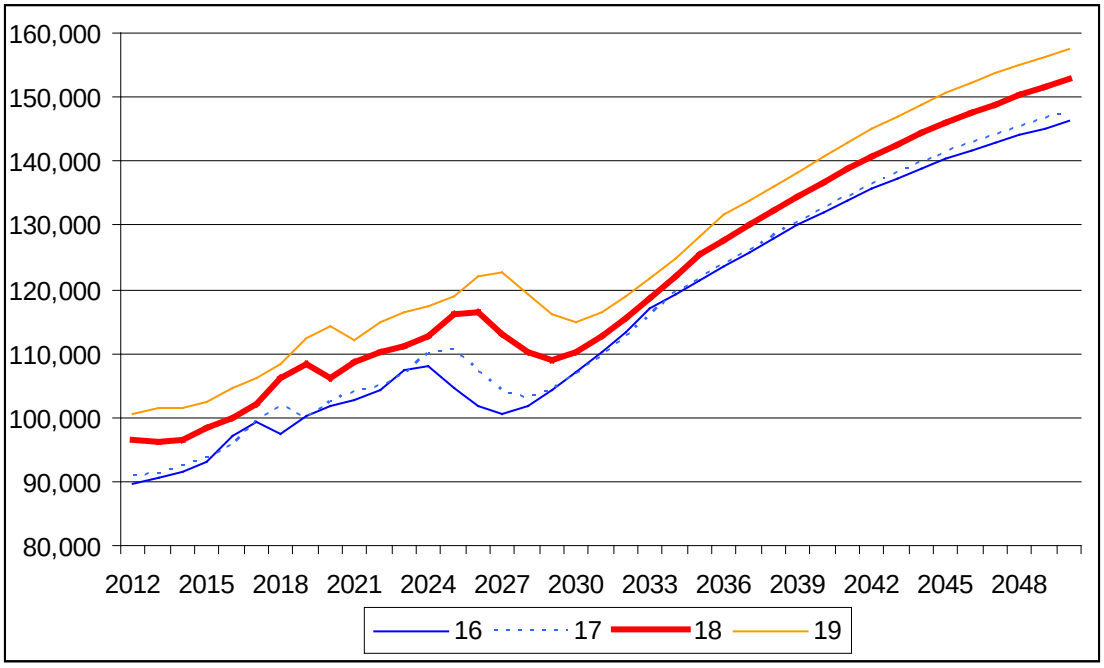
The OEPS has projected the population of Hispanics and of non-Hispanics by each of five racial groups — white, black, Native American, Asian and Pacific Islander, and other (which includes those of two or more races). Caution is urged in using these projections by race and ethnicity since there are numerous challenges in making such projections:

- Some of the racial groups are small in number in Arizona. Whenever a population is small, the accuracy of estimates and projections is lower.
- Reliable figures on the number of residents by race and ethnicity are available only once every 10 years from the decennial censuses. It is difficult to make projections with such limited historical data.
- Since birth rates, death rates, and migration rates vary by race/ethnicity, each of these components must be projected for each racial/ethnic group. Reliable historical data are not always available. Existing trends may change in the future in different ways across the groups.
- Undocumented immigration has had a large effect on the racial/ethnic composition, but reliable data on undocumented immigration are not available.

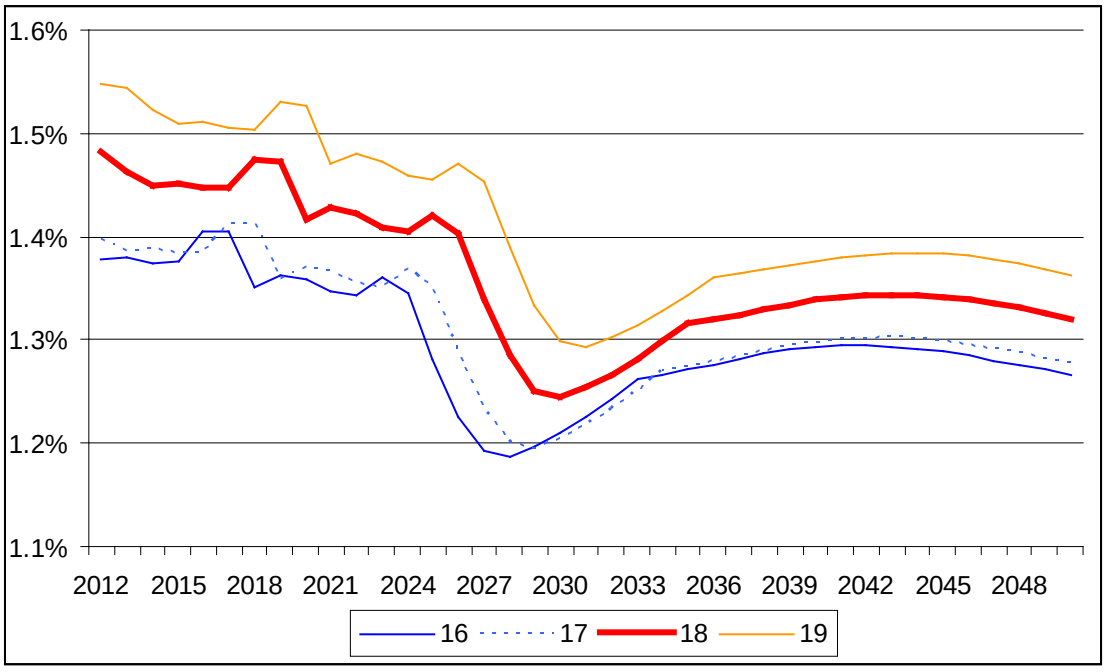
Expressed as shares of the overall population, the racial/ethnic data from the 2000 and 2010 censuses are compared to the middle series projections for 2020 through 2050 for Arizona in Table 10. The change in the share over each 10-year period also is shown, with comparisons of Arizona's shares and changes in shares compared to the national average.

CHART 4
PROJECTIONS OF THE POPULATION AGES 16 TO 19 IN ARIZONA

NUMBER



SHARE OF TOTAL POPULATION



Source: Arizona Department of Administration, Office of Employment and Population Statistics.

Arizona's racial/ethnic distribution in 2010 was considerably different from the national average, with a much higher share of Hispanics, a higher share of non-Hispanic Native Americans, and a lesser share in each of the other non-Hispanic groups. Between 2000 and 2010, the share increased for Hispanics and non-Hispanic blacks, Asians/Pacific Islanders, and others, but the share of non-Hispanic whites fell substantially. The shares of Hispanics and non-Hispanic Asians/Pacific Islanders are projected to continue to rise through 2050, while the non-Hispanic white share continues to fall. The proportion of non-Hispanic whites drops below 50 percent in 2028 and falls to below the Hispanic share in 2047, but the Hispanic share remains less than 50 percent in 2050.

TABLE 10
ACTUAL AND PROJECTED SHARE OF POPULATION BY RACE/ETHNICITY, ARIZONA

		Non-Hispanic				
	Hispanic	White	Black	Native American	Asian*	Other
Share						
2000	25.3%	63.8%	2.9%	4.5%	1.8%	1.6%
2010	29.6	57.8	3.7	4.0	2.9	1.9
2020	33.4	53.4	3.8	3.9	3.4	2.0
2030	37.3	49.0	3.9	3.7	4.0	2.1
2040	40.8	45.0	3.9	3.4	4.6	2.2
2050	43.9	41.6	3.9	3.1	5.2	2.2
Share Relative to National Average						
2000	12.8	-5.3	-9.2	3.8	-1.9	-0.2
2010	13.3	-5.9	-8.5	3.3	-2.0	-0.2
2020	14.3	-6.3	-8.7	3.2	-2.2	-0.3
2030	15.4	-6.5	-8.8	3.0	-2.3	-0.7
2040	15.8	-6.0	-8.9	2.7	-2.4	-1.2
2050	16.0	-5.0	-9.1	2.4	-2.4	-1.9
Change in Share						
2000-10	4.3	-6.0	0.8	-0.5	1.1	0.3
2010-20	3.8	-4.4	0.1	-0.1	0.5	0.1
2020-30	3.9	-4.4	0.1	-0.2	0.6	0.1
2030-40	3.5	-4.0	0.0	-0.3	0.6	0.1
2040-50	3.1	-3.4	0.0	-0.3	0.6	0.0
Change in Share Relative to National Average						
2000-10	0.5	-0.6	0.7	-0.5	-0.1	0.0
2010-20	1.0	-0.4	-0.2	-0.1	-0.2	-0.1
2020-30	1.1	-0.2	-0.1	-0.2	-0.1	-0.4
2030-40	0.4	0.5	-0.1	-0.3	-0.1	-0.5
2040-50	0.2	1.0	-0.2	-0.3	0.0	-0.7

* Includes Pacific Islanders

Sources: U.S. Department of Commerce, Census Bureau, decennial censuses (2000 and 2010) and Arizona Department of Administration, Office of Employment and Population Statistics, projections (middle series, 2020 through 2050).

The racial/ethnic composition in 2010 varied widely across Arizona's counties. These variations generally are expected to persist. Considerable caution is recommended in the use of the racial/ethnic projections in the less populous counties.