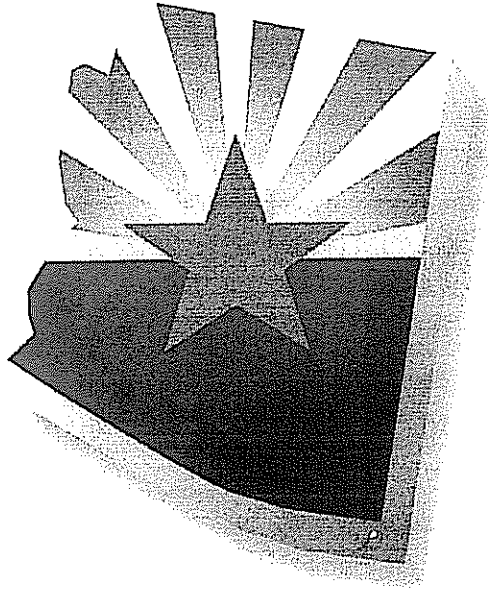


STATEWIDE ECONOMIC STUDY 2002



LONG-TERM ECONOMIC FORECASTS FOR ARIZONA

July 2002

Prepared for the Arizona Department of Commerce

by

Marshall J. Vest
Director, Economic and Business Research
Eller College of Business & Public Administration
University of Arizona
mvest@eller.arizona.edu

ARIZONA STATEWIDE ECONOMIC STUDY 2002: LONG-TERM ECONOMIC FORECASTS FOR ARIZONA

July 2002

Prepared by:

Marshall J. Vest
Director, Economic and Business Research
Eller College of Business & Public Administration
University of Arizona
mvest@eller.arizona.edu

Peer reviewed by the Technical Advisory Committee for Arizona Statewide Economic Study 2002:

Dan Anderson
Assistant Executive Director for Institutional Analysis
Arizona Board of Regents

Brian Cary
Forecast Consultant
Pinnacle West Energy Corporation

Jerry Conover, Ph.D.
Director, Bureau of Business and Economic Research
Northern Arizona University

James B. Nelson
Economic Development Manager
Salt River Project

William P. Patton, Ph.D.
Director of Economic Development
Tucson Electric Power

Tom Rex,
Research Manager
Center for Business Research, L. William Seidman Research
Institute, College of Business, Arizona State University

Carol Sanger
Assistant Deputy Director for
Planning, Research and Policy
Arizona Department of Commerce

Mary Lynn Tischer, Ph.D.
Director, Transportation Planning Division
Arizona Department of Transportation

© 2002 by the Arizona Department of Commerce. This document may be reproduced without restriction provided it is reproduced accurately, is not used in a misleading context, and the author and the Arizona Department of Commerce are given appropriate recognition.

This report was prepared for the Arizona Department of Commerce in conjunction with the 2002 Arizona Statewide Economic Study (SES) with funding from the Commerce and Economic Development Commission. Elements of the SES may be presented independently elsewhere at the author's discretion. The entire body of work comprising the SES will be available on the Internet for an indefinite length of time at <http://www.azcommerce.com/prop/ses.htm>. Inquiries about this report or the SES should be directed to the Office of Economic Information and Research, Arizona Department of Commerce, (602) 280-1300.

The Arizona Department of Commerce has made every reasonable effort to assure the accuracy of the information contained herein, including peer and/or technical review. However, the contents and sources upon which it is based are subject to changes, omissions and errors and the Arizona Department of Commerce accept no responsibility or liability for inaccuracies that may be present. THIS DOCUMENT IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE ARIZONA DEPARTMENT OF COMMERCE PRESENT THE MATERIAL IN THIS REPORT WITHOUT IT OR ANY OF ITS EMPLOYEES MAKING ANY WARRANTY, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, OR ASSUMING ANY LEGAL LIABILITY OR RESPONSIBILITY FOR THE ACCURACY, COMPLETENESS, OR USEFULNESS OF ANY INFORMATION, APPARATUS, PRODUCT, OR PROCESS DISCLOSED, OR REPRESENTING THAT ITS USE WOULD NOT INFRINGE PRIVATELY OWNED RIGHTS. THE USER ASSUMES THE ENTIRE RISK AS TO THE ACCURACY AND THE USE OF THIS DOCUMENT AND ANY RELATED OR LINKED DOCUMENTS.

ARIZONA STATEWIDE ECONOMIC STUDY 2002: LONG-TERM ECONOMIC FORECASTS FOR ARIZONA

July 2002

TABLE OF CONTENTS

Introduction	<i>1</i>
Methodology	<i>1</i>
Analysis.....	<i>1</i>
Arizona.....	<i>1</i>
Metro Area and Sub-State Outlook.....	<i>4</i>

(

(

(

LONG-TERM ECONOMIC FORECASTS FOR ARIZONA

July 2002

Marshall J. Vest, Director, Economic and Business Research, Eller College of Business and Public Administration, University of Arizona

INTRODUCTION

The projections presented here are from the University of Arizona's Forecasting Project. These projections are updated annually and were prepared in August of 2001, before the terrorist strikes shook the economy. Although near-term will vary from what we now forecast, long-term projections do not vary significantly.

Projections are prepared for the Phoenix and Tucson metro areas as well as the state as a whole, but do not include projections for other Arizona counties. Included are measures such as employment by industry, personal income by industry and source, retail sales, housing permits, net migration and population.

Since these forecasts were prepared, population estimates for the period of 1990-2001 have been officially revised, as have employment and personal income estimates for the past 2-3 years. Therefore, the population estimates for recent years contained here do not coincide with those presented in the Demographics Report of the Statewide Economic Study. Moreover, the projections for future periods also will not match exactly – nor should they -- as they are prepared by different means. However, the estimates are relatively close, which provides some comfort as to their plausibility.

A new set of projects that incorporates all revisions up to the time of preparation may be accessed after September 15, 2002 at <http://ebr.eller.arizona.edu/>

METHODOLOGY

These projections are prepared with econometric models that have been routinely used to forecast the Arizona economy for the past two decades. Please note that the design of the models does not allow derivation of "balance of state" results by subtracting the results for the two metros. DRI-WEFA, a national economic forecasting and consulting firm, provides national forecasts that are used in the process.

The projections for population use historical data from the Arizona Department of Economic Security (DES), but the forecasts differ. DES projections are produced using different methods than used here, but the two approaches produce very similar numbers.

ANALYSIS

ARIZONA

During the 1990s, the top five states for population growth were Nevada, Arizona, Colorado, Utah and Idaho, respectively. Arizona is the largest of these five states, with a mid-year 2000 population of 5.1 million.

During the twentieth century, four of the fastest-growing states were all located in the west, except for Florida. Arizona ranked second only to Nevada, followed by Florida, California and Washington (Figure 1).

FIGURE 1

ARIZONA IS ONE OF THE FASTEST-GROWING STATES Population Growth During the Twentieth Century		
Period	Rank	Top Five States
1900-2000	2	NV,AZ,FL,CA,WA
1900-1910	7	WA,OK,ID,NV,ND
1910-1920	1	AZ,CA,MT,WY,DC
1920-1930	4	CA,FL,MI,AZ,NJ
1930-1940	7	DC,FL,NM,NV,CA
1940-1950	2	CA,AZ,FL,NV,OR
1950-1960	4	FL,NV,AK,AZ,CA
1960-1970	3	NV,FL,AZ,AK,CA
1970-1980	2	NV,AZ,FL,WY,UT
1980-1990	3	NV,AK,AZ,FL,CA
1990-2000	2	NV,AZ,CO,UT,ID

Source: Statistical Abstract of the United States

At the beginning of the 20th century, only 124,000 people called Arizona home. Since then, Arizona has consistently ranked among the fastest-growing states, failing to make the top five in only two decades: 1900-10 and the 1930's. Arizona ranked seventh in both decades. Over the past century, Arizona's population growth has averaged 3.8% per year. The fastest growth recorded, 5.7% per year, came during the 1950's.

During the decade of the 1990s, Arizona added more than 1.4 million residents. This represents a much larger gain than that of the 1980s (989,000) or the 1970s (944,000). By mid-year 2000, 5.150 million persons called Arizona home. Arizona is now the 20th largest state in the nation, behind Maryland and Wisconsin. The population increase resulted in the gain of two new seats in the U.S. House of Representatives (from six to eight) in 2000.

During the five-year period from 2001-2006, Arizona will experience significant additional growth:

- Arizona's population will increase by 717,700 (to more than six million), representing 143,500 new residents (or 2.5%) per year.
- Some 309,800 new jobs will be created, or 62,000 per year. Job growth will average 2.6% (compared to 3.9% during the 1980s and 3.1% from 1996-2001. Recession in 2001 lowers the projected increase).
- Personal income will grow by an average 5.1% annually, and will exceed \$178 billion in the year 2006.
- Average annual wages will rise at a 4.0% annual rate and approach \$40,800 by 2006.
- Per capita income (PCI) will rise to over \$29,700, an annual increase of 3.5%.

By the year 2026, Arizona will be home to some 9.4 million people, compared to 5.3 million today (Figure 2). Phoenix will account for 5.9 million and Tucson 1.4 million. In 2026, Arizona will have roughly the same population as Michigan and New Jersey (the nation's 8th and 9th largest states) have today.

FIGURE 2

FORECASTS TO 2026					
	2006	2011	2016	2021	2026
Arizona					
W&S Employment (000s)	2,622	2,954	3,470	4,044	4,699
Population (000s)	6,012	6,747	7,597	8,495	9,445
Personal Income (\$ millions)	178,752	228,820	312,149	428,435	591,143
Retail Sales (\$ millions)	72,508	89,526	121,583	164,630	223,927
Phoenix-Mesa MA					
W&S Employment (000s)	1,851	2,045	2,375	2,737	3,145
Population (000s)	3,819	4,260	4,784	5,335	5,914
Personal Income (\$ millions)	128,559	163,997	233,110	331,368	465,235
Retail Sales (\$ millions)	51,689	62,716	88,023	122,988	170,516
Tucson Metro Area					
W&S Employment (000s)	402	440	492	548	604
Population (000s)	983	1,073	1,175	1,274	1,364
Personal Income (\$ millions)	29,203	37,481	51,222	69,982	93,949
Retail Sales (\$ millions)	11,276	13,891	18,166	23,676	30,429

Population growth varies significantly over the business cycle. During the recession in the early 90's, Arizona's population increased by less than 90,000 per year. Over the past five years, annual increases have ranged 145,000-155,000. The forecast calls for continued high levels approaching 145,000 over the next five years, before returning to "trend line" with increases of nearly 190,000 in the year 2026. Arizona's resident population should break the six million mark in 2006, seven million in 2013, and eight million in 2018. Job creation likewise is expected to slow during the next several years, before accelerating to "trend growth."

To house Arizona's new residents, approximately 60,000 new housing units each year (on average) will need to be constructed. Roughly 40,000 of those will be single-family units.

Per capita income in 2026 will exceed \$62,000. In these projections, Arizona PCI as a percentage of national PCI is expected to continue its long slide, falling to 66% in 2026, compared to 85% today. In real terms, PCI is expected to grow by 1.0% per year over the next 25 years, about half the national rate. This reflects continuing large increases in population, driven by the increasing importance of retirees and growth of low-paying population-serving jobs. In the year 2026, total personal income will approach \$600 billion.

With population expected to grow by 2.3% per year and employment to increase at a 2.9% annual rate, the state's employment to population ratio will continue to increase. While less than one-fourth of the population in 1960 was employed, by 2001 that ratio reached 43.5%. By the year 2026, nearly one-half of the population will be working.

The composition of employment across industries is expected to change in ways suggested by historical trends. The narrowly-defined services sector (primarily health, legal, business services, personal services, hotels, advertising agencies and other professional services) will continue to account for an increasing share of the employment base, rising to more than 35% of all jobs by 2026, compared to 32% today. Trade also will increase its share by four full percentage points, to 27%.

Increasing shares in services and trade will come at the expense of government and manufacturing. Government is expected to slide to 13% in 2018 from 16% today, and manufacturing jobs will account for only 8.7% down from the current 9.3%. Construction will fall in importance from 7.3% today to 6.0% in 2026. The remaining sectors will continue to represent approximately the same portion of the economy as they do today.

METRO AREA AND SUB-STATE OUTLOOK

The Phoenix-Mesa metro area has transformed into a very large and diversified economy, serving a region that transcends Arizona's borders. With a mid-year 2001 population of 3.4 million in its metro area, Phoenix is the "mega-city" of the southwest. During the next five years, some 461,000 additional people will be added - about 92,000 per year. Roughly 37,000 new housing units each year will be needed to house these new residents.

By the year 2026, almost six million persons will live in the Phoenix-Mesa metro area, which includes Maricopa and Pinal Counties. That's about the size of the Philadelphia/Wilmington/Atlantic City and Boston/Worcester/Lawrence metro areas are today, the nation's 6th and 7th largest. Today, the Phoenix-Mesa metro area ranks as the 14th largest.

As the nation's 58th largest metro area, Tucson (Pima County) will continue to grow about half as fast as Phoenix. Its population is expected to rise from 886,000 today to 983,000 by 2006 - an average increase of 19,400 per year. Nearly 8,000 new housing units per year will be needed. By the year 2026, Tucson's population is projected to exceed 1.36 million.

No forecasts are produced for Arizona's remaining twelve counties, but we can generalize about the future of "rural" Arizona. (Actually, six of Arizona's fifteen counties today are considered to contain metropolitan areas). All of Arizona is closely tied to the "Phoenix city-state." As the major mega-city of the southwest, Phoenix is the center of commerce, and all other areas have important and varied roles that compliment the metro Phoenix core. Tucson, for example, can play a role as gateway to Latin America and as the center for research and development activities.

We can expect "rural" Arizona to continue to grow for a variety of reasons. Communities that developed because of natural resource industries, such as copper mining, agriculture, and timbering, will adapt by diversifying their economic base. Many will focus on tourism or become summer (or winter) retreats for city dwellers. Second homes and retirement communities also will grow in importance. A few communities will be able to attract export-based services or manufacturing. Some may become home for "lone eagles," or those professionals who can operate anywhere given a computer and Internet service. Some communities will wither and become modern day ghost towns.

By and large, new businesses are expected to continue to locate in the urban areas, where needed services, infrastructure and skilled labor are plentiful. The major challenge for rural communities is to identify their possible roles in the city-state, given their assets.