Executive Summary

The purpose of this assessment is to profile the social and economic environment surrounding the Kaibab National Forest. The collection and analysis of quantitative and qualitative socioeconomic data in this report will serve as a baseline by which the Kaibab National Forest and the wider public can assess management alternatives developed through the process of forest plan revision. It will do so by facilitating a better understanding of the relationship between public lands and surrounding communities, aiding in the identification of specific forest plan elements capable of responding to socioeconomic trends, and assembling a wide array of information needed to evaluate trade-offs between various forest management alternatives.

A multi-county area of assessment provides a framework for the compiling of social and economic data for this report. The boundaries of the Kaibab National Forest abut the state of Utah and extend into three counties in northern Arizona. The methods of inquiry for this assessment were described in an initial work plan that was reviewed and approved by the Southwest Regional Office of the USDA Forest Service and by forest planners from each of the six national forests in Arizona. The plan identifies socioeconomic indicators, the geographic and temporal scale of analysis, and potential sources of information for each assessment topic. The following section highlights collected information pertaining to each of these seven topics.

Demographic Patterns and Trends

Total population

Three of the five counties within the area of assessment experienced dramatic population growth between 1980 and 2000. The highest rates of increase were seen in Mohave, Washington and Yavapai Counties (247%, 178% and 146% respectively). Population growth within each of these counties far exceeded the rate of increase in overall population for their respective states over the same period. Population growth between 1980 and 2000 was considerably less in Coconino and Kane Counties (55% and 50% respectively). Among individual cities, Prescott Valley, Camp Verde, St. George, Lake Havasu City, and Kingman experienced the greatest increases in total population between 1980 and 2000.

Population age

The increase in individuals age 65 and over was greater than those 18 and under for three of the five counties within the area of assessment. The exceptions were Mohave and Yavapai Counties where the increase in both age groups exceeded those at the state level between 1990 and 2000. The greatest disparity between the growth of the 65-and-over and under-18 populations was reported in Coconino County. The cities of Prescott Valley, Cottonwood, St. George, and Lake Havasu City reported the most significant increases in 65-and-over populations among selected cities within the area of assessment.

Racial/ethnic composition

Washington and Mohave Counties reported dramatic increases in population of individuals of multiple race and Hispanic origin between 1990 and 2000, clearly outpacing increases in the same categories at the state level over the same period. Despite substantial increases in individuals of multiple-race and Hispanic ethnicity, whites remain the predominant racial group in each county within the area of assessment. As of 2000, Coconino County was the most racially diverse within the area of assessment due to its considerable Native American population.

Housing

Increases in total housing and housing density were greatest in Washington County between 1990 and 2000, mirroring similar growth in its overall population. Housing increases were also substantial in

Mohave and Yavapai Counties over the same period. Each of these three counties also saw a significant increase in seasonal housing over the ten-year period. By comparison, Coconino and Kane Counties reported much more moderate increases in housing between 1990 and 2000.

Economic Characteristics and Vitality

Employment

Economic growth for the area of assessment was significant between 1990 and 2000. Washington and Yavapai Counties reported the strongest gains in total full- and part-time employment with especially strong increases in the construction, finance, and real estate sectors. Despite moderate gains in total and full-time employment, Coconino, Mohave, and Kane Counties maintained average rates of unemployment that were greater than those for their respective states or the United States as a whole between 1980 and 2004.

Occupational structure

The occupational structures within three of the five counties within the area of assessment closely resemble those for the states of Arizona and Utah overall. In these areas, management, professional, and related occupations is the dominant occupational category, followed by sales and office occupations as well as service occupations. The exceptions are Mohave and Washington Counties where sales and office occupations are the most common. For each of the counties within the area of assessment, construction, extraction, and maintenance and production, transportation, and material moving, were also among the five most dominant occupational categories.

Income

As a whole, the area of assessment witnessed relatively strong gains in income between 1990 and 2000. Despite these gains, however, each of the counties within the area of assessment maintained levels of per capita and family income that were below average for their respective states as of 2000. Kane County saw the greatest increases in per capita and median family income as well as the largest decreases in individual and family poverty between 1990 and 2000. Although Coconino and Washington Counties saw substantial declines in individual and family poverty, both maintained rates of poverty that were greater than average for their respective states as of 2000.

Natural-resource dependent economic activity

Changes in income from natural resources were particularly dramatic in Coconino and Kane Counties between 1990 and 2000. Data for the both counties show a precipitous decline in income from wood products and processing and a substantial increase in income from special forest products and processing over the period. Kane and Washington Counties reported especially strong increases in tourism employment between 1990 and 2000. Mohave County reported the slightest increase in tourism employment over the same period.

Access and Travel Patterns

Existing federal and state road networks

County and state transportation plans reviewed for this assessment acknowledge that current circulation networks have been developed to fit arising needs but are inadequate for accommodating projected long-term growth. As such, these plans emphasize the need for improved planning through regional approaches linking transportation and land use. According to the Arizona Department of Transportation, projected demographic changes throughout the state will require "major expansions of roadway capacity and the development of transportation options and alternatives to provide acceptable levels of service on Arizona's roadways and maintain circulation" (ADOT 2004b).

Modes of travel and seasonal flows

Travel by motorized vehicle is by far the most dominant mode of travel throughout the states of Arizona and Utah, a trend that is likely to continue given patterns of development in rural areas as well as the expense of developing infrastructure for alternative modes of transportation. Increase in vehicle miles traveled was greatest in Yavapai County between 1990 and 2000—an expected result of population increases over the same period. Peak traffic flow for the area of assessment occurs between the months of June and August, and traffic is lowest from November to February. With respect to internal modes of travel, the greatest increases were reported for off-highway vehicles.

Planned improvements

The Arizona Department of Transportation currently has few plans for road improvements in proximity to the Kaibab National Forest over the next five years. Although county governments throughout the area of assessment envision improvements to arterial road networks, implementation of such plans is dependent on the pace of population growth and the level of transportation infrastructure funding. There are currently no plans to expand the existing network of internal roads in the Kaibab National Forest.

Barriers to access

On external road networks, the greatest barrier to access is likely poor road maintenance resulting from constrained county transportation budgets. Currently, there are few barriers to access within the Kaibab National Forest. The potential exists however, for future access issues resulting from the proximity of forest roads and trails to private property. Information obtained from forest personnel suggests that private land owners throughout the state of Arizona have increasingly sought to limit passage through their property for the purpose of accessing public lands.

Land Use

Land ownership

As a whole, land ownership within the area of assessment differs from overall ownership patterns for the state of Arizona in that it involves relatively large amounts of Native American and Forest Service land. Coconino County has the greatest amount of Native American lands whereas Gila County has far and away the greatest amount of land controlled by the Forest Service. Yavapai County reported the greatest amounts of private and State Trust land, while Gila County reported the smallest amount of land in both these categories.

Land coverage and land use

Shrub and brush rangeland is the predominant land cover in four of the five counties within the area of assessment for the Kaibab National Forest. The lone exception is Coconino County where evergreen forest is the most common type of land cover. Within the area of assessment, Yavapai County reported the highest percentage of residential and industrial land cover while Coconino County reported the greatest amount of commercial and services land cover.

Long range land use plans and local policy environment

County land use within the area of assessment ranges from traditional uses such as ranching in rural areas to denser concentrations of residential, industrial, and commercial uses in and around urban centers. Preservation of open space is a particularly important land use issue given both the public's desire to maintain the "rural character" of county lands and the need to accommodate rapidly growing populations and municipalities. The provision of adequate, affordable infrastructure and sufficient water supplies is also a growing concern for planners, residents, and land managers throughout the region.

Forest Users and Uses

Extractive uses

Historically, extractive uses have played a major role in public land management throughout the area of assessment. National studies show, however, that land uses such as livestock grazing, timber cutting, and mining are being slowly succeeded in policy and management by an emphasis on non-extractive uses. These national trends are supported by information which suggests a similar decline in timber harvesting and livestock grazing on lands managed by the Kaibab National Forest.

Non-extractive uses

Although recreation use has increased steadily since the establishment of the National Forest Service, the increase in recreation over the past few decades has been particularly dramatic. According to National Visitor Use Monitoring data, the Kaibab National Forest received approximately 560,000 visits during fiscal year 2000—a majority of which were male, white, and between the ages of 31 and 70. A significant increase in the use of off-highway vehicles has been identified by the Forest Service as a major component of unmanaged recreational use.

Special uses

A number of special user groups were identified for the Kaibab National Forest including Native American tribes, OHV users, wildlife users, and wilderness users. The management and accommodation of these and other special user groups have involved increasing administrative and political implications in recent years.

Designated Areas and Special Places

Natural, recreational, and interpretive resources

The Kaibab National Forest encompasses considerable natural, recreational, cultural, and interpretive resources including nearly 150 trailheads, camping and picnic sites, fishing, and scenic areas. Although special places are inherently difficult to identify and categorize, the Kaibab National Forest is home to a range of individual places considered special by various user groups. Most importantly, land managed by the KNF includes a number of cultural sites and special places for the various Native American tribes in the region

Issues surrounding identification of special places as cultural resources

Due to the cultural, emotional, and spiritual bonds formed between individuals and specific environments, the identification and management of special places can be rather contentious. Making these tasks more difficult is the fact that the relationships people form with special places often cut across traditional boundaries dividing liberal and conservative political ideologies, extractive and environmentalist interests, and urban and rural user groups. Ultimately, the incorporation of "special places" into revised Forest Plans is best supported by a commitment to primary research and participatory decision making.

Community Relationships

Community involvement with natural resources

The communities surrounding the Kaibab National Forest have long been dependent upon natural resources for commodity production, tourism, and aesthetic enjoyment. A review of state and local newspapers reveals a general interest in the use and management of forest resources with particular attention paid to recreational uses such as hunting and fishing as well as management of wildlife and regional water sources.

Communities of interest and historically underserved communities

The management activities of the Kaibab National Forest must take into account the interests of a growing number of community groups and forest partners. Organizations and individuals influencing forest planning and management represent government agencies, Native American tribes, special advocacy groups, business interests, educational institutions, and the media. Meanwhile, the Forest Service is making a concerted effort to address the needs and desires of historically underserved communities, a fact that is increasingly important to the Kaibab National Forest given the rates of demographic change in the region.

Community-forest interaction

In recent years the Forest Service has placed increasing priority on the social relationships between national forests and surrounding communities. As awareness and commitment to these processes grows, so does the need for forest managers and planners to understand the dynamic linkages between the forest and surrounding communities. Although the concept of community relations is a relatively new component of forest planning, frameworks exist to help planners develop a comprehensive strategy for monitoring and enhancing these relationships.

Key Resource Management Topics

In addition to the initial seven topics of socioeconomic assessment, forest planners identified several issues of growing importance to the management of natural resources within Arizona's national forests. Although these issues are identified throughout previous chapters, this section provides greater detail on the status of policy debates as well as potential implications for forest planning and management.

Findings suggest that changing demographic patterns and forest user trends will surely affect the alternatives considered in the process of Forest Plan revision. In particular, a significant increase in recreational forest uses and the ongoing concern surrounding susceptibility to catastrophic wildfire and invasive species, the environmental and economic sustainability of livestock grazing on public lands, and the effects of human land use on existing open space will likely continue to have a strong impact on future management activities of the Kaibab National Forest.

Given rates of population growth and urban expansion in northern Arizona and southern Utah, the Kaibab National Forest stands to be affected by ongoing debates regarding the management of public land and regional water supplies. Reforms proposed by lawmakers and the Arizona State Land Department are likely to have an impact on the forest given the presence of State Trust land within the area of assessment. Likewise, the role of managing regional watersheds places the Kaibab National Forest at the center of contentious debates over water provision, particularly in light of the ongoing regional drought.

Finally, specific issues under the heading of forest access and travel will undoubtedly affect the future management activities of the Kaibab National Forest. Recent reinterpretation of the "Roadless Rule" has been a particularly controversial issue involving extractive business interests, environmental advocacy groups, and the general public at the local and state level. Additionally, the effort on the part of the Forest Service to respond to a dramatic increase in OHV travel promises to raise concerns from various user groups and to affect natural resource management in the Kaibab National Forest over the coming years.

1. Introduction

1.1 Statement of purpose

The purpose of this assessment is to characterize the social and economic environment of the Kaibab National Forest (KNF) by showing the relationship and linkages between National Forest System land and communities. The information contained in the assessment is intended to help the Forest Service and the public to do the following:

- Better understand the relationship between public lands and communities,
- Aid in identifying specific elements of the current forest plans that may need to be changed, and
- Assemble information needed to evaluate trade-offs between options for future forest management.

Finally, this assessment is intended to be broadly useful as a basis for informed consideration of future alternatives within and beyond the planning process. It does so by clarifying relationships between various socioeconomic characteristics of local communities and natural resource management activities of the Kaibab National Forest.

1.2 Assessment methodology and topics

This assessment of the social and economic environment surrounding the KNF is based entirely on the analysis of secondary research. Secondary research is commonly understood as data which have already been collected and published for different purposes but which may prove useful to any number of other inquiries or applications. Examples of secondary data include demographic and economic information obtained from the United States Census Bureau or through a review of FS documents.

Specific lines of inquiry were identified in the initial Project Work Plan agreed to by the University of Arizona and Region 3 of the USDA Forest Service (USFS) in Albuquerque, New Mexico. This document prescribes the methods of assessment of socioeconomic trends for each of Arizona's six national forests. In addition to individual information elements for each assessment topic, this document identifies the preferred geographic and temporal scales of analysis as well as potential sources of information.

In accordance with the work plan, and following the example of similar socio-economic assessments, this study uses counties as the primary unit of analysis for social and economic data. For each of the national forests in Arizona, the area of assessment consists of all counties adjacent to particular forest boundaries. For the KNF, this includes Coconino, Mohave, and Yavapai Counties in Arizona as well as Kane and Washington Counties in Utah. Where appropriate, social and economic trends for the area of assessment are compared to those for the states of Arizona and Utah. It should be noted, however, that statewide trends for Arizona are significantly influenced by Maricopa County, which was home to nearly sixty percent of the entire state population as of 2000.

In addition to analyzing information at the county and regional levels, this assessment includes data on individual communities of interest to Kaibab NF. The work plan defines communities of interest as those that are proximate to forest boundaries, those which share a stake in the management of the forest, and those communities of access and egress. During the collection of demographic and economic data, the decision was made to collect information on selected Census Designated Places (CDPs) as well as the more commonly used Minor Civil Divisions (MCDs). Inclusion of CDPs provides data for settled population concentrations that are identifiable by name but are not legally incorporated under the laws of the state in which they are located (U.S. Census Bureau 2005).

This report provides a profile of socioeconomic conditions and trends deemed most relevant to natural resource policies in general and the management of Arizona's national forests in particular. Secondary demographic, economic, and social data have been drawn from readily available sources including the U.S. Census Bureau, the U.S. Forest Service Natural Resource Information System (NRIS), the Arizona Department of Transportation (ADOT), county comprehensive plans, and the Minnesota IMPLAN Group (MIG). The information contained in this report is well-suited to serve as a comparative baseline for each of the counties, presenting descriptive data to assist the KNF and local communities in analyzing and monitoring trends most likely to influence the management of forest resources throughout the region.

Specific variables used to profile existing socioeconomic conditions and trends within the geographic area of assessment are based on both explicit and implicit assumptions about relationships between various forest management alternatives and affected communities. The individual topics of assessment and the specific variables have been identified in conjunction with regional and local FS administrators and are similar to measures used in other social assessment studies (Adams-Russell 2004; Leefers, Potter-Witter, and McDonough 2003). The profiles generated through the collection of secondary data will serve as valuable tools for estimating the potential impact of policy changes, resource management activities, and development trends for each of the assessment topics.

1.3 Report organization

The organization of this assessment is based on the collection and analysis of data pertinent to each of seven individual assessment topics. Following this introductory chapter, collected data on selected socioeconomic indicators are provided for each topic. Additionally, each topic is discussed in its historical context as well as its potential implications for forest planning and management. Chapters 2 and 3 provide information on demographic trends and economic characteristics of counties and selected cities within the area of assessment. Chapter 4 discusses the access and travel patterns within the area of assessment, and Chapter 5 examines land use patterns and policies. Chapter 6 uses available secondary data to discuss trends for current forest users and uses. Chapter 7 identifies designated areas and known special places within the Kaibab NF and discusses their importance to forest management. Chapter 8 assesses relationships between the KNF and various communities at the local and regional levels. Chapter 9 offers a brief analysis of key management topics identified by forest planners at the inception of this assessment. The final chapter summarizes major trends within each topical area and discusses their combined relevance to Forest Plan revision. A list of works cited is included in this assessment and a separate, fully.annotated bibliography will be presented to individual forests alongside the assessments.

2. Demographic Patterns and Trends

This section discusses historic and current conditions affecting local populations and illustrates demographic trends for each of the five counties within the area of assessment for Kaibab National Forest (KNF). Data on selected cities within the area of assessment are included in order to illustrate important factors contributing to demographic change for specific populations. Demographic data for both Arizona and Utah are also addressed as a basis for a comparison of trends among the bordering states. Indicators used to assess demographic patterns and trends include total population, racial/ethnic origin, urban versus rural populations, age structure, educational attainment, and housing density.

A review of secondary social data for area of assessment shows that Washington, Mohave, and Yavapai Counties have all undergone considerable growth over the last twenty years, exceeding statewide population growth rates for the same period. Similarly, each of these counties experienced significant increases in their populations of individuals under 18 as well as individuals 65 and over between 1990 and 2000. Most of the urban areas within the region can be characterized as small towns with Flagstaff the only city reporting more than 50,000 residents as of 2000. The last twenty years have also seen significant shifts from a largely rural regional population to one that is predominantly urban. Here again, Washington, Mohave, and Yavapai Counties experienced relatively sharp increases in total housing units as well as housing for seasonal use. Each of the counties became more racially and ethnically diverse between 1990 and 2000 although, with the exception of Coconino County, they remained considerably less diverse than overall state populations.

2.1 Historical context and social characteristics

It is estimated that human activity within the area surrounding the KNF dates back to 8,000 B.C.E. although overall human use in the area was low. Trade routes were developed early across the Kaibab, linking trails that extended from the Rio Grande to the Pacific Ocean (Putt 1995). Early settlement within the area was limited by available surface water; a short growing season; and thin, rocky soils which were ill-suited for agricultural purposes.

Three Native American tribes—the Havasupai, the Hualapai, and the Yavapai—made use of the land for hunting, gathering, and planting limited crops. Early variations of these tribes have been linked to the area as early as 650 C.E. (Martin 1985). Hopi and Zuni tribes also ventured into the Kaibab area from the east to collect medicinal plants, piñon nuts and fuel woods (Putt 1995). Several natural landmarks, including Bill Williams Mountain, Kendrick Mountain, Sitgreaves Mountain, and Red Butte, were considered sacred by earlier Native American Inhabitants.

The entrada of Francisco Vasquez de Coronado in 1540 marked the first significant Spanish interest in the Arizona highlands. On a route that led from western Mexico to central Kansas, Coronado's explorations were primarily motivated by a search for silver and gold. He failed to find it in Arizona, and Spanish interest in the area was largely quelled until the discovery of mineral wealth at the turn of the 17th century (Sheridan 1995). Athapaskan (Apache and Navajo) groups played a major role during this time. In fact, the mountainous regions of Arizona were often referred to as the Apacheria. Apaches formed loosely confederated groups based on matrilineal kinship and thrived on a combination of agriculture, hunting, trade, and raiding. Both Navajos and Apaches absorbed skills and traits from neighboring groups, including the Pueblo peoples and the Spaniards. Through most of Spanish and Anglo colonization, Apache raiders were seen as a major threat to settlers. Nonetheless, by the 1700s, Spanish explorers and missionaries routinely made the trip between Tucson and Santa Fe. The area became, by the 1800s, a driving route for livestock, specifically sheep, primarily by Mormon settlers. Due to limited water sources, overgrazing occurred primarily near standing aquifers. However, with the spread of standing agriculture, the pressures of grazing began to spread across the range (USFS 1999a).

Early exploration of the Kaibab area was initiated in the mid 1540s to search for gold and silver deposits. The Spaniards conducted multiple expeditions through the area over the course of 250 years, and although they gained much knowledge of the area and its resources, they lacked the necessary money and immigrant population to settle and develop the area.

The United States claimed control of the region in the mid 1800s, and the livestock industry found the area most beneficial. The tall, rich grasses in the Kaibab Forest area attracted sheep and cattle farmers. By 1890, John Wesley Powell had submitted a report on the Rocky Mountain Forest region to Congress, stating that the forests within the territory were in a serious state of decline, posing both an economic and environmental threat for the country. After the passing of the General Provision Act of 1891, President Benjamin Harrison signed a proclamation which established the Grand Canyon Forest Reserve. By 1908, shortly after the administration of the forest reserves was transformed from the Department of the Interior to the Department of Agriculture, this area became known as the Kaibab National Forest. In 1934, the Kaibab National Forest was combined with the Tusayan National Forest to make the Kaibab National Forest as we know it today.

The KNF is part of the largest contiguous ponderosa pine forest in the United States. The word Kaibab is a Shivwits Indian word for the region which translates to “lying down mountain.” The original inhabitants of the Colorado Plateau believed that the region’s gently rolling plateaus and volcanic peaks resembled mountains lying on their sides (Tucker and Fitzpatrick 1972). Located in north-central Arizona and bordering the north and south rims of the Grand Canyon, the 1.6 million acres of the KNF provide a striking contrast to the deserts in western and southern Arizona. Topography in the forest consists of rolling hills and several volcanic peaks, most notably Bill Williams Mountain, Sitgreaves Mountain, and Kendrick Mountain, the latter, at 10,418 feet, being the tallest peak in the state. Annual precipitation in the Kaibab Forest area varies at around twelve to twenty inches and occurs predominantly in the form of snow during the winter months (Lowe 1972).

The demographic history of the area surrounding the KNF, and the region as a whole, represents one of sustained and rapid growth. In the period since 1930, the Mountain West has doubled its share of the U.S. population, from 3% to 6.5%. This growth increased dramatically in the 1950s and then reduced again in the 1960s. The pattern was repeated for the next forty years, with alternating decades of intense growth followed by decades of slower growth (Otterstrom and Shumway 2003). Yavapai County has, in general, grown steadily over the past ninety years with the exception of fluctuations during the 1940s and 1950s, Coconino County has itself grown at an average of just above 3% per year over the past fifty years, and over the past century, the counties surrounding the KNF have grown from a total of 29,000 residents to over 535,000 (U.S. Census Bureau 2005, Forstall 1995, Morton 2003). The state of Utah has increased in size from 276,000 residents to over 2.2 million. Arizona has grown from 120,000 residents to well over 5 million—along with Washington, one of only two states to show such a startling demographic expansion (U.S. Census Bureau 2005). The average age in the state of Arizona has been steadily increasing: 31% of the population was under 15 in 1950, but only 22.4% is in the under-15 bracket today. Some of these shifts can be attributed to the region’s amenable climate, relatively affordable property values, and the continued importance of area military bases. Long-term population increases are also supported by seasonal visitors wishing to permanently relocate to environs with increased outdoor opportunities (McHugh and Mings 1996).

The past fifty or sixty years have seen only moderate racial diversification in the two states surrounding the KNF. While the Hispanic population of Arizona has increased from 20.4% to 25.2% of the total population since 1940, African Americans, despite an especially rapid influx in the two decades following WWII and an average population growth rate of 49% per decade, remained static at 3.1% of the population in 2000, only 0.1% above their relative numbers in 1940. The Native American population as a percentage of the total in Arizona, by contrast, has declined significantly over the past five or six decades, falling from 11% in 1940 to 5% in 2000. Utah has fared even worse in terms of its state racial diversity. In 1940, African Americans represented a mere 0.22% of the population, and that amount rose

but a fraction over the following sixty years to 0.79% in 2000. The Native American population has doubled, but this represents only an increase from 0.65% to 1.33% of the population. Residents of Hispanic origins, however, have increased by the largest amount of any racial category in Utah over the period, rising from 0.46% of the population in 1940 to over 9% in 2000 (U.S. Census Bureau 2005). [1]

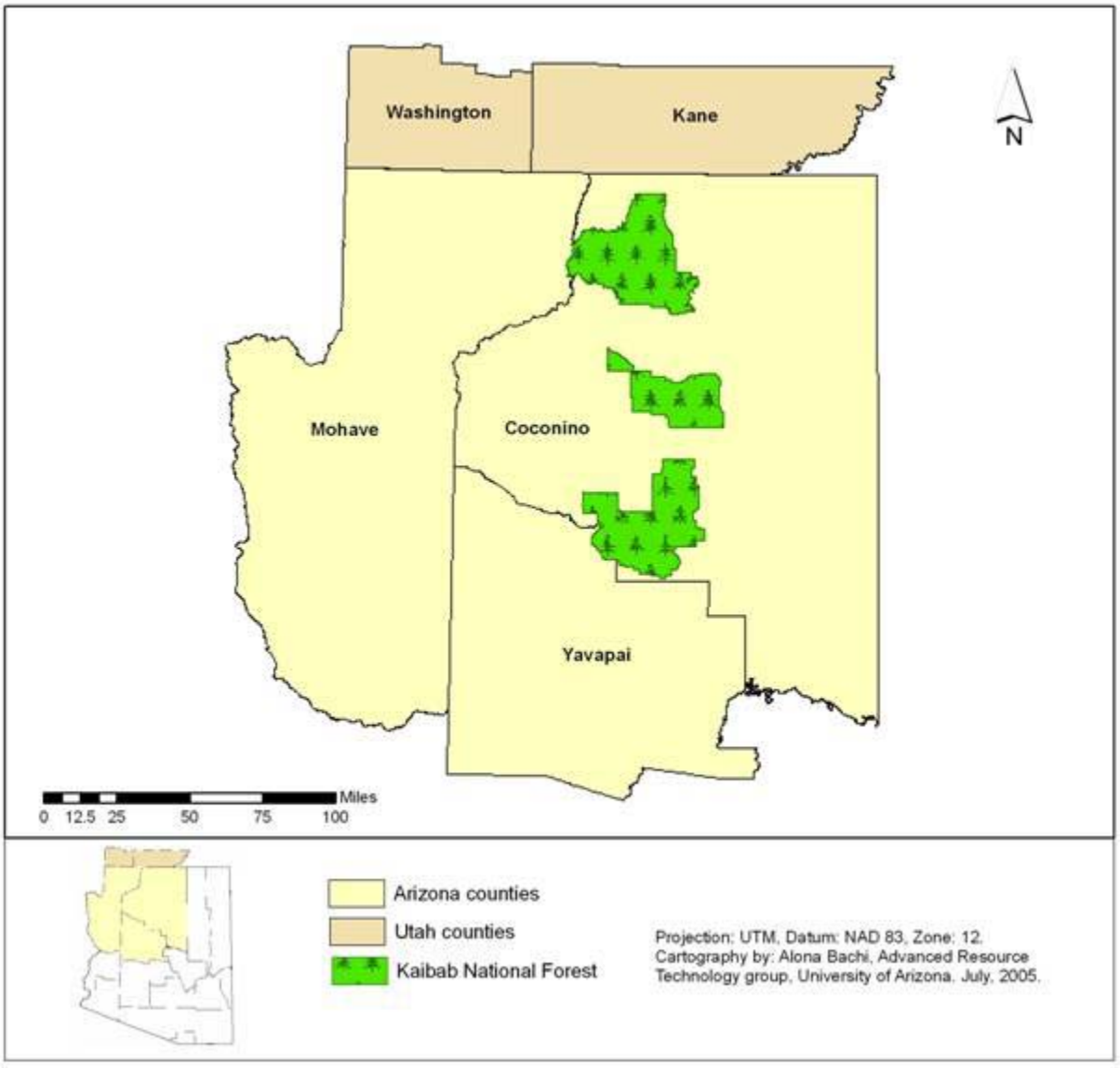


Figure 1. Map of Forest Boundaries and Counties in Area of Assessment

[1] The specific numbers for these historical comparisons are found at http://www.census.gov/population/documentation/twps0056/ in the U.S. Census Bureau website (Tables 17 and 59) and are juxtaposed against the Census 2000 findings.

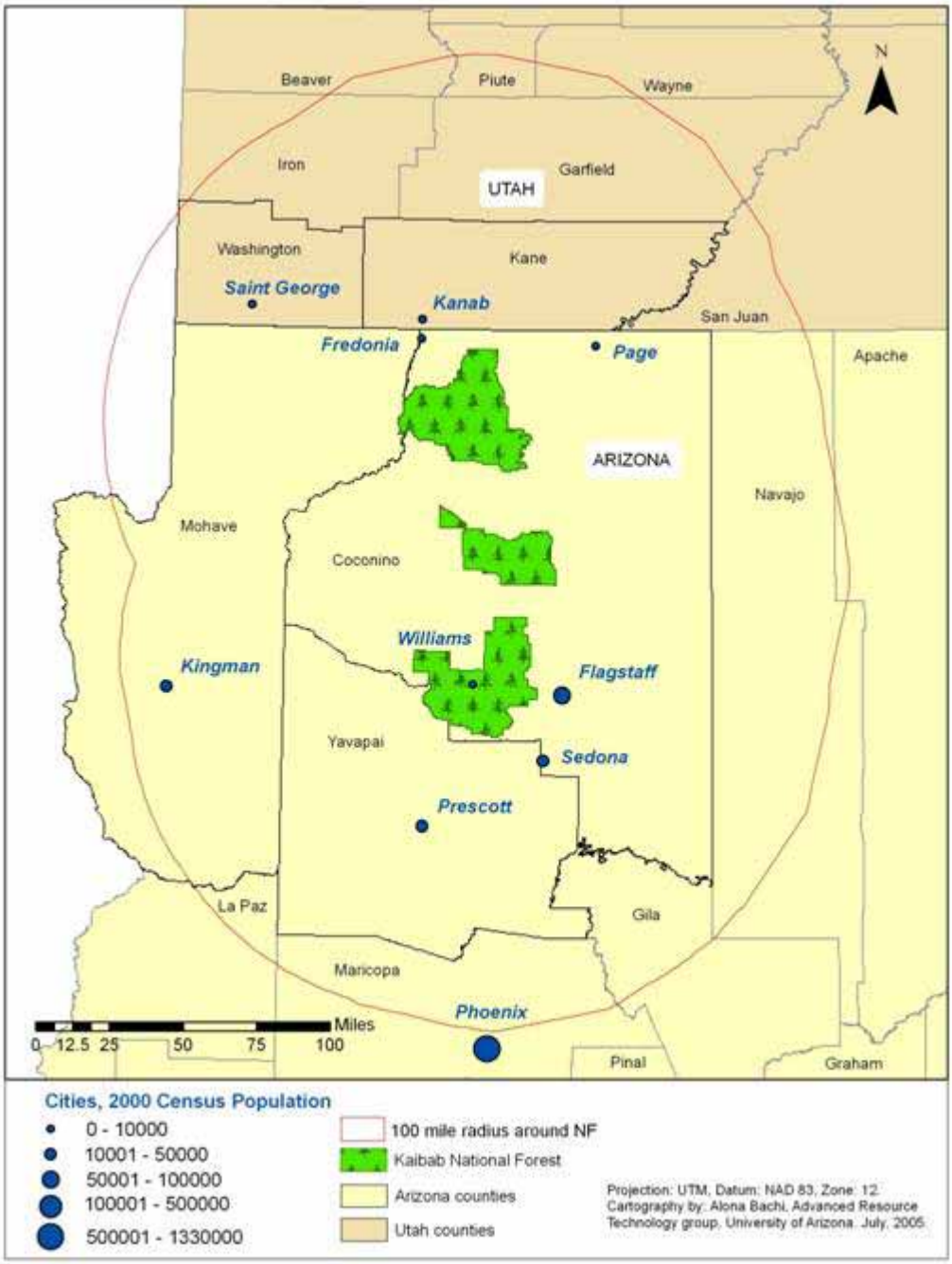


Figure 2. Proximity of Population – Municipalities within 100-Mile Radius

2.2 Population, age structure, net migration, and tourism

Information concerning total land area, U.S. Forest Service acreage, total population, and population density for each of the five counties is presented in Table 1. Data show that Coconino County has both the largest total area and the greatest amount of Forest Service land with well over 3 million acres. Populations range from 167,517 individuals in Yavapai County to 6,046 in Kane County, Utah. Kane County is also the most sparsely populated with 1.51 individuals per square mile while neighboring Washington County, Utah is more densely populated with 20.97 individuals per square mile. Of the selected cities within the area of assessment, Flagstaff is the most populous, followed by St. George, Lake Havasu City, and Prescott.

County and state population changes between 1980 and 2000 are presented in Table 2. Data show that population growth in Washington County over the past two decades has significantly outpaced that of the other counties in the area of assessment as well as exceeding state averages for both Utah and Arizona. The populations of both Yavapai and Mohave Counties also increased considerably, although at a more conservative pace, between 1990 and 2000. Both Coconino and Kane Counties grew at a slower rate than the average within their respective states. Several cities within the area of assessment mirrored strong population growth rates at the county level. Camp Verde, Prescott Valley, Sedona, and St. George experienced particularly large population increases between 1980 and 1990. Between 1990 and 2000, Prescott Valley, Lake Havasu City, Chino Valley, and Page sustained population growth rates in excess of county growth rates over the same period.

Table 3 presents urban and rural population data and percent change by county from the three most recent censuses. Data confirm an overall trend towards urbanization throughout the region over the last two decades. Yavapai and Kane Counties, in particular, underwent significant shifts from predominantly rural areas to largely urban areas between 1980 and 1990. The dramatic shift in Kane County is likely due in part to its limited population and a change in reporting criteria adopted by the U.S. Census Bureau. In 1980, urban populations were defined strictly as those living in urban areas—areas determined according to minimum total population and population density criteria not met at that time by Kanab, the small town that accounted for over half of the county's total population of 6,046 in 2000. In 1990, however, reporting criteria for urban populations was changed to include those living in urban areas as well as those living outside urban areas in the smaller towns and suburbs. This shift likely explains much of the total population growth for Kane County between 1980 and 1990, leading to a somewhat skewed picture of the shift between urban and rural populations. Census data show that between 1990 and 2000, Kane County achieved a roughly even split between very small urban and rural populations. Of all five counties in the area of assessment, Washington County, Utah is the most urban with over 80% of residents living in urban areas as of 2000.

Table 1. Total Area, Total Population, Population Density, and Forest Service Acreage by County and Place

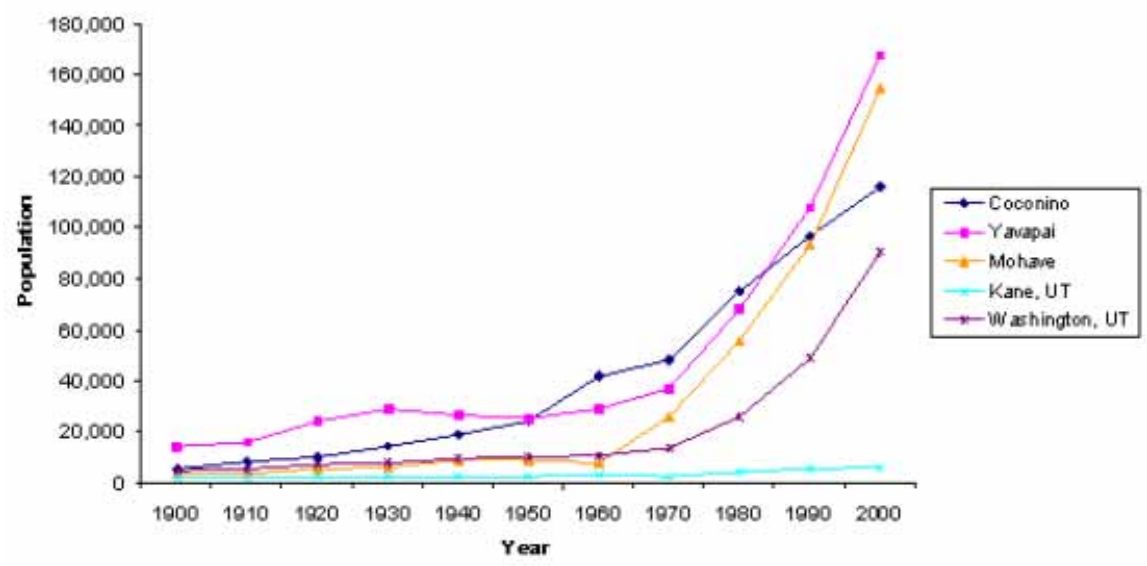
County/Place	Total Area Sq. Miles	2000 population	Pop. Density per sq. mile	USFS Acres
Coconino County	18,661	116,320	6.23	3,275,320
Flagstaff	63.6	52,894	831.67	n/a
Sedona	18.6	10,192	547.96	n/a
Page	16.6	6,809	410.18	n/a
Williams	43.5	2,842	65.33	n/a
Fredonia	7.4	1,036	140.00	n/a
Mohave County	13,312	155,032	11.64	1,704,652
Lake Havasu City	43	41,938	975.30	n/a
Bullhead City	45.2	33,769	747.10	n/a
Kingman	30.0	20,069	668.97	n/a
New Kingman/ Butler	14.6	14,810	1,014.38	n/a
Colorado City	10.5	3,334	317.52	n/a
Yavapai County	8,128	167,517	20.6	5,487
Prescott	37.1	33,938	914.77	n/a
Prescott Valley	31.7	23,535	742.43	n/a
Cottonwood - Verde Village*	8.8	10,610	1,205.68	n/a
Sedona	18.6	10,192	547.96	n/a
Camp Verde	42.6	9,451	221.85	n/a
Cottonwood	10.7	9,179	857.9	n/a
Chino Valley	18.6	7,835	421.24	n/a
Kane County, UT	3,992	6,046	1.51	6,046
Kanab	14.0	3,564	254.57	n/a
Washington County, UT	2,427	90,354	20.97	90,354
St. George	64.4	49,663	771.16	n/a

* Cottonwood - Verde Village is an unincorporated Census Designated Place (CDP)
Source: NRIS - Human Dimensions
http://www.city-data.com/city/Arizona.html

Table 2. Decennial County, Place, and State Populations, 1980-2000 and % Change

County/Place/State	Total Population 1980	1990	2000	1980-1990 % Change	1990-2000 % Change
Coconino County	75,008	96,591	116,320	28.77%	20.43%
Flagstaff	34,743	45,857	52,894	31.99%	15.35%
Sedona	2,266	6,598	6,809	191.17%	3.20%
Page	4,907	7,645	10,192	55.80%	33.32%
Williams	5,368	2,461	2,842	-54.15%	15.48%
Fredonia	1,040	1,197	1,036	15.10%	-13.45%
Mohave County	55,865	93,497	155,032	67.36%	65.81%
Lake Havasu City	15,909	24,363	41,938	53.14%	72.14%
Bullhead City	n/a	n/a	33,769	n/a	n/a
Kingman	9,257	12,722	20,069	37.43%	57.75%
New Kingman/ Butler	n/a	11,627	14,810	n/a	27.38%
Colorado City	n/a	2,355	3,334	n/a	41.57%
Yavapai County	68,145	107,714	167,517	58.07%	55.52%
Prescott	20,055	26,427	33,938	31.77%	28.42%
Prescott Valley	2,284	8,858	23,535	287.83%	165.69%
Cottonwood - Verde Village	n/a	7,037	10,610	n/a	50.77%
Sedona	4,907	7,645	10,192	55.80%	33.32%
Camp Verde	1,125	6,243	9,451	454.93%	51.39%
Cottonwood	4,550	5,918	9,179	30.07%	55.10%
Chino Valley	2,858	4,837	7,835	69.24%	61.98%
Kane County, UT	4,024	5,169	6,046	28.45%	16.97%
Kanab	2,148	3,289	3,564	53.12%	8.36%
Washington County, UT	26,065	48,560	90,354	86.30%	86.07%
St. George	11,350	28,502	49,663	151.12%	74.24%
Arizona	2,718,215	3,665,228	5,130,632	34.84%	39.98%
Utah	1,461,037	1,722,850	2,233,169	17.92%	29.62%

Source: NRIS - Human Dimensions



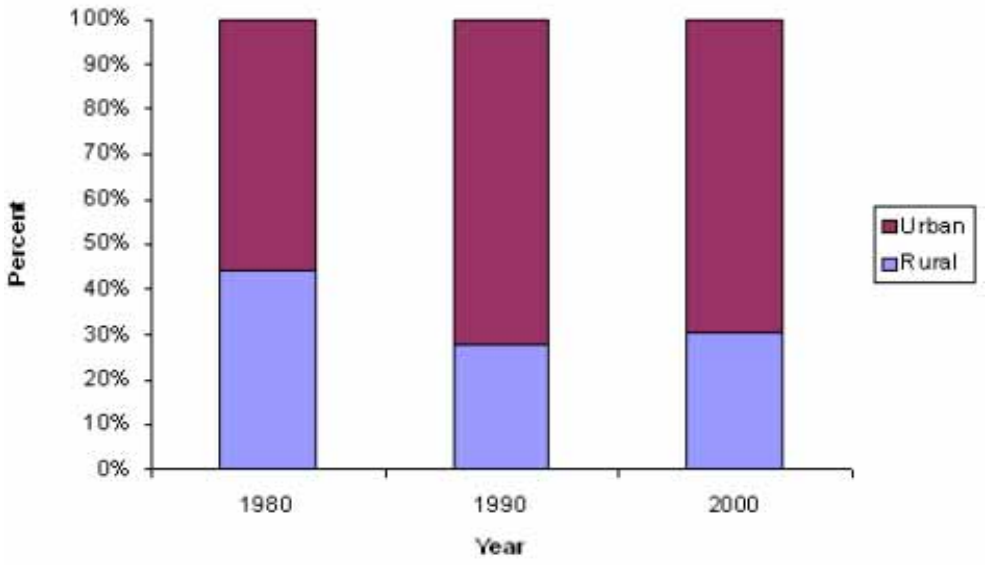
Source: U.S. Bureau of the Census, Census of Population

Figure 3. Five-County Assessment Area Population Change, 1900-2000

Table 3. Urban and Rural County Populations, 1980-2000 and % Change

County		1980* Population	1980* % of Total	1980* % Change	1990 Population	1990 % of Total	1990 % Change	2000 Population	2000 % of Total	2000 % Change
Coconino	Urban	46,473	61.96%	n/a	63,988	66.25%	37.69%	74,462	64.01%	16.37%
	Rural	28,535	38.04%	n/a	32,603	33.75%	14.26%	41,858	35.99%	28.39%
Yavapai	Urban	31,053	45.57%	n/a	70,641	65.58%	127.49%	104,862	62.60%	48.44%
	Rural	37,092	54.43%	n/a	37,073	34.42%	-0.05%	62,655	37.40%	69.00%
Mohave	Urban	35,530	63.60%	n/a	79,957	85.52%	125.04%	117,132	75.55%	46.49%
	Rural	20,335	36.40%	n/a	13,540	14.48%	-33.42%	37,900	24.45%	179.91%
Kane (UT)	Urban	0	0.00%	n/a	3,148	60.90%	n/a	2,782	46.01%	-11.63%
	Rural	4,024	100.00%	n/a	2,021	39.10%	-49.78%	3,264	53.99%	61.50%
Washington (UT)	Urban	14,442	55.41%	n/a	35,898	73.93%	148.57%	72,550	80.30%	102.10%
	Rural	11,623	44.59%	n/a	12,662	26.07%	8.94%	17,804	19.70%	40.61%

*Does not account for farming populations
N.B.: % Total is the percentage of total population. % Change is the percentage of change from prior census year
Source: NRIS - Human Dimensions



Source: NRIS - Human Dimensions

Figure 4. Five-County Assessment Area Urban/Rural Composition, 1980-2000

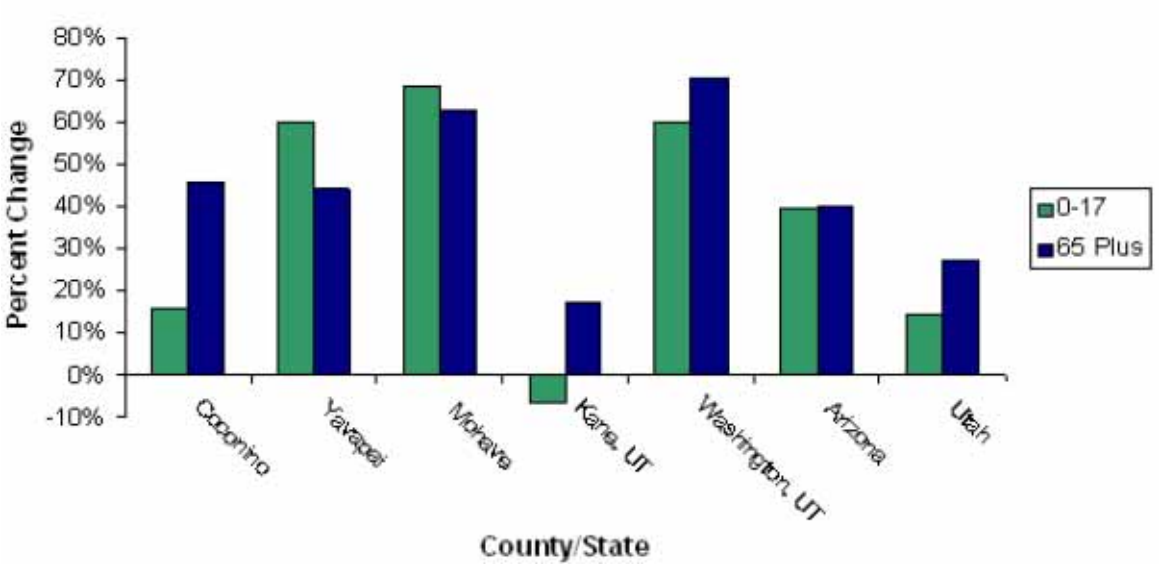
The age structure of populations for the counties and states is presented in Table 4. Data show significant increases in the under-18 populations of Yavapai, Mohave, and Washington Counties, each of which far surpassed the rate of growth for the same cohort within their respective states as a whole. Kane County actually experienced a decline in its under-18 population between 1990 and 2000 and was the only county in the region which did not experience significant growth in the population of individuals 65 and over. Washington and Mohave Counties saw the greatest increase in the 65-and-over population with gains of 70.64% and 62.88% respectively. Of the selected cities within the area of assessment, Prescott Valley and Lake Havasu City saw substantial growth in their under-18 populations between 1990 and 2000. They

were joined by Kingman, Cottonwood, and St. George in experiencing similar increases in the 65-and-over population during the same period.

Table 4. Age Structure of County, Place, and State Populations (under 18 and 65+), 1990-2000 and % Change

	Under 18			65 And Over		
County/Place/State	**1990**	**2000**	**% Change**	**1990**	**2000**	**% Change**
Coconino County	29,624	33,425	12.83%	5,585	8,143	45.80%
Flagstaff	11,321	12,834	13.36%	1,988	2,826	42.15%
Sedona	2,559	2,178	-14.89%	351	432	23.08%
Page	1,098	1,401	27.60%	2,456	2,605	6.07%
Williams	743	847	14.00%	323	316	-2.17%
Fredonia	470	335	-28.72%	72	115	59.72%
Mohave County	21,282	35,860	68.50%	19,479	31,728	62.88%
Lake Havasu City	4,705	8,151	73.24%	5,812	10,695	84.02%
Bullhead City	n/a	7,594	n/a	n/a	6,479	n/a
Kingman	3,402	5,021	47.59%	2,205	3,571	61.95%
New Kingman/ Butler	2,812	3,806	35.35%	2,606	2,846	9.21%
Colorado City	1,571	2,014	28.20%	21	56	166.67%
Yavapai County	22,959	35,403	54.20%	25,517	36,816	44.28%
Prescott	4,645	5,387	15.97%	6,894	9,085	31.78%
Prescott Valley	2,224	6,299	183.23%	1,821	4,045	122.13%
Cottonwood - Verde Village	1,782	2,610	46.46%	1,711	2,324	35.83%
Sedona	1,098	1,401	27.60%	2,456	2,605	6.07%
Camp Verde	1,527	2,265	48.33%	1,365	1,936	41.83%
Cottonwood	1,450	2,149	48.21%	1,478	2,184	47.77%
Chino Valley	1,295	2,079	60.54%	887	1,273	43.52%
Kane County, UT	1,908	1,777	-6.87%	1,251	1,467	17.27%
Kanab	1,226	1,031	-15.91%	507	698	37.67%
Washington County, UT	17,610	28,190	60.08%	13,336	22,756	70.64%
St. George	9,290	14,091	51.68%	5,160	9,566	85.39%
Arizona	978,783	1,366,947	39.66%	477,200	667,839	39.95%
Utah	627,928	718,698	14.46%	149,692	190,222	27.08%

* Verde Village includes Cottonwood CDP
Source: NRIS - Human Dimensions



Source: NRIS - Human Dimensions

Figure 5. Percent Change under-18 and 65+ Populations by County, 1990-2000

Table 5 presents data on net migration for each county for the years 1990 and 2000 as well as the percent change. The data represent numbers of individuals who reported living in a different location five years previously. As such, the 1990 data provide information on location of residence in 1985 and the 2000 data indicate location of residence in 1995. Once again, net migration data show that population growth in Washington and Yavapai Counties has been especially strong, fueled by in-migration of individuals previously living outside the county. Conversely, net migration to Kane County was relatively low between 1990 and 2000. Washington County reports a relatively large increase in the numbers of immigrants from outside the state of Utah, particularly those from the northwestern and southern regions of the United States. Washington, Yavapai, and Mohave Counties also reported significant increases in the number of individuals migrating from "elsewhere" (different countries) over the period.

Historically, the Arizona Office of Tourism (AZOT) has reported visitor statistics by designated tourist region rather than by county. Currently, AZOT collects visitation and economic impact data for seven distinct tourism regions within the state (Figure 6). The area of assessment of Kaibab National Forest is located within the region referred to as the "Canyon Country" Region. The 2003 Profile for the Canyon Country Region reported 3.3 million domestic overnight leisure visitors, representing an 11.5% increase over the 2.96 million domestic overnight leisure visitors reported a decade earlier. This placed the Canyon Country as the third most visited region in the state behind the Valley of the Sun and the Old West tourism regions in terms of the number of domestic overnight visitors. Approximately 82% of Canyon Country visitors came to the area for leisure while the remaining 18% were visiting on business (AZOT 2004a).

In 2002, 28.4% of domestic visitors to the Canyon Country came from within Arizona while 22.1% were visitors from California. New Mexico, Colorado, Texas, and Utah also contributed significant numbers of tourists. AZOT data confirm that Canyon Country is a predominantly outdoor-based activity destination with 62% of visitors engaging in both nature and sight-seeing activities. The attraction of the Grand Canyon is clearly demonstrated by the fact that 54% of the FY2003 tourists in Canyon Country reported visiting National and/or State Parks. The park is easily the top natural tourist attraction in the state with 4.1 million visits reported in 2003. The flow of visitors is greatest during spring and summer with a full 70% of 2002 visits taking place between the months of April and September (AZOT 2004a).

Statistics for overseas visitors are not made available for individual tourism regions; however, AZOT reports that the state of Arizona experienced a 15.3% decline in overseas visitors in 2003 (dropping to

544,000 from 636,000 in 2002) while the U.S. as a whole saw a decline of 4%. The primary countries of origin for overseas visitors to Arizona were the U.K. (18.4%), Germany (16.4%), Mexico (11.0%), Japan (9.1%), and France (8.5%) (AZOT 2004a).

Table 5. Net Migration by County, 1990-2000 and % Change

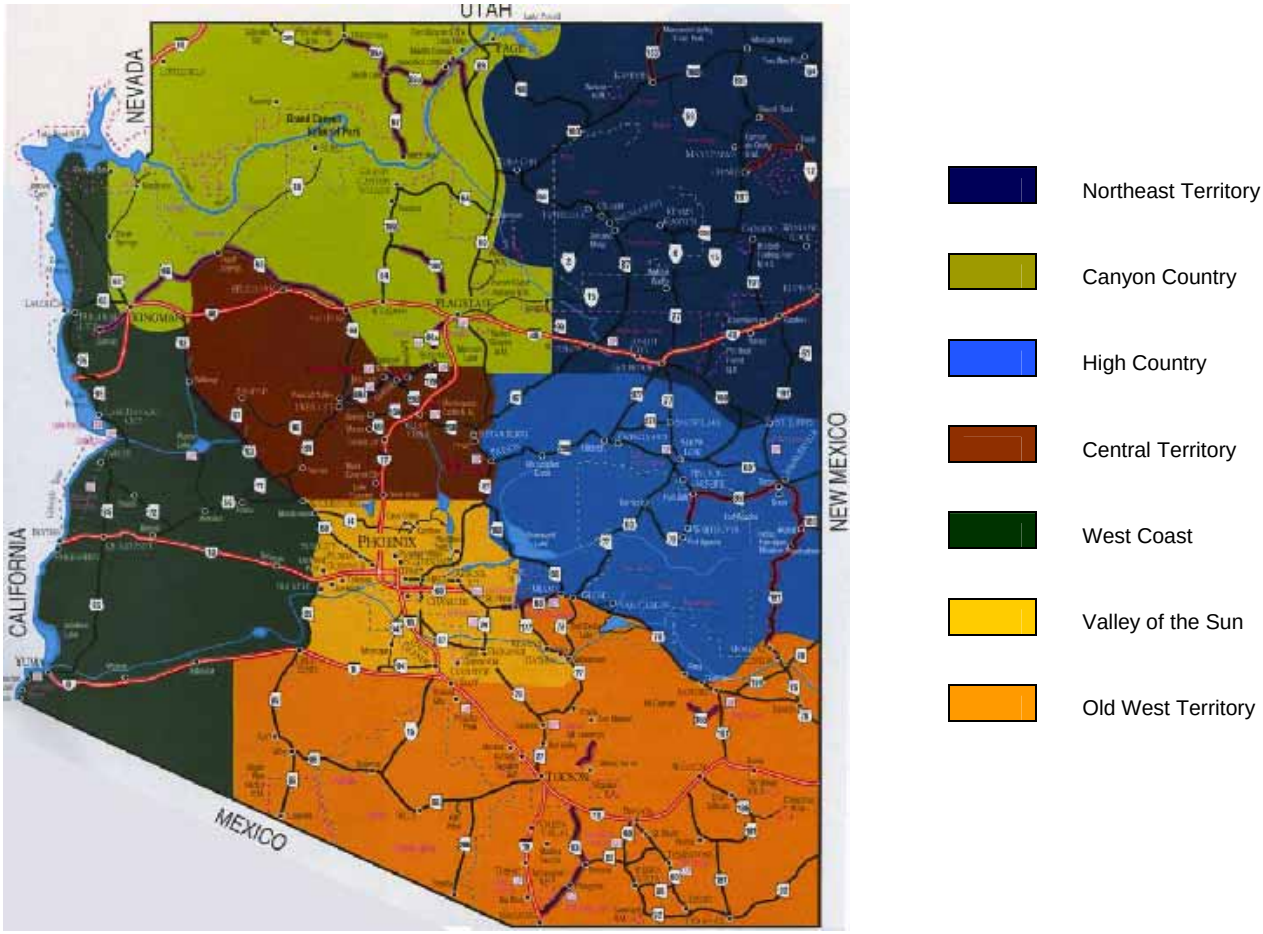
	Coconino County			Mohave County			Yavapai County		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Total*	88,003	107,775	22.47%	87,327	145,803	66.96%	101,667	158,931	56.33%
Same House	36,558	49,841	36.33%	33,433	67,332	101.39%	42,240	70,108	65.98%
Different House	51,445	57,934	12.61%	53,894	78,471	45.60%	59,427	88,823	49.47%
In United States	50,117	56,247	12.23%	53,185	76,439	43.72%	58,759	86,079	46.50%
Same County	21,006	24,801	18.07%	18,154	31,065	71.12%	21,154	34,448	62.84%
Different County	29,111	31,446	8.02%	35,031	45,374	29.53%	37,605	51,631	37.30%
Same State	13,634	14,870	9.07%	4,502	6,082	35.10%	14,513	20,461	40.98%
Different State	15,477	16,576	7.10%	30,529	39,292	28.70%	23,092	31,170	34.98%
Northwest	927	1,658	78.86%	1,149	1,651	43.69%	1,522	2,997	96.91%
Midwest	2,373	3,055	28.74%	4,279	5,511	28.79%	4,374	6,359	45.38%
South	2,755	2,856	3.67%	2,357	2,997	27.15%	3,422	4,419	29.14%
West	9,422	9,007	-4.40%	22,744	29,133	28.09%	13,774	17,395	26.29%
In Puerto Rico	0	7	n/a	0	0	n/a	21	12	-42.86%
Elsewhere	1,307	1,680	28.54%	692	2,032	193.64%	637	2,732	328.89%

	Kane County, UT			Washington County, UT			Arizona		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Total*	4,714	5,636	19.56%	43,970	82,121	86.77%	3,374,806	4,752,724	40.83%
Same House	2,345	3,237	38.04%	19,058	34,909	83.17%	1,454,319	2,103,907	44.67%
Different House	2,369	2,399	1.27%	24,912	47,212	89.52%	1,920,487	2,648,817	37.92%
In United States	2,336	2,341	0.21%	24,689	45,927	86.02%	1,840,216	2,465,345	33.97%
Same County	1,096	646	-41.06%	8,665	19,271	122.40%	1,026,332	1,456,345	41.90%
Different County	1,240	1,695	36.69%	16,024	26,656	66.35%	813,884	1,009,490	24.03%
Same State	323	667	106.50%	8,468	12,880	52.10%	164,063	213,070	29.87%
Different State	917	1,028	12.10%	7,556	13,776	82.32%	649,821	796,420	22.56%
Northwest	10	44	340.00%	79	702	788.61%	63,950	84,288	31.80%
Midwest	70	31	-55.71%	716	1,225	71.09%	179,202	190,720	6.43%
South	18	58	222.22%	669	1,717	156.65%	118,041	140,608	19.12%
West	819	895	9.28%	6,092	10,132	66.32%	288,628	380,804	31.94%
In Puerto Rico	0	0	n/a	8	0	-100.00%	665	1,745	162.41%
Elsewhere	33	58	75.76%	215	1,285	497.67%	78,618	181,237	130.53%

	Utah		
	1990	2000	% Change
Total*	1,553,351	2,023,875	30.29%
Same House	818,356	998,458	22.01%
Different House	734,995	1,025,417	39.51%
In United States	709,378	960,754	35.44%
Same County	409,847	538,410	31.37%
Different County	299,531	422,344	41.00%
Same State	122,460	180,155	47.11%
Different State	177,071	242,189	36.78%
Northwest	8,641	13,498	56.21%
Midwest	20,788	25,944	24.80%
South	28,371	41,848	47.50%
West	119,271	160,899	34.90%
In Puerto Rico	340	452	32.94%
Elsewhere	25,041	64,211	156.42%

* Totals do not include persons under the age of 5

Source:1990- US Census of Population- Social and Economic Characteristics
2000- US Census American Factfinder- http://factfinder.census.gov



Source: Arizona Office of Tourism

Figure 6. Map of Arizona Tourism Regions

2.3 Racial/ethnic composition and educational attainment

Tables 6 and 7 present collected data on the racial and ethnic composition of the population in the five counties as well as the states of Arizona and Utah. Table 6 presents reported numbers and percentage change in individuals of specific racial and ethnic categories between 1990 and 2000. Table 7 represents these racial and ethnic categories according to their proportional representation in the overall county and state populations. As a point of clarification, race and ethnicity are defined as separate concepts by the federal government. People of a specific race may be of any ethnic origin, and people of a specific ethnic origin may be of any race. Race in this section covers the following five groups: White, Black or African American, American Indian and Alaska Native, Asian and Pacific Islander, and Multiple Races. The population of Hispanic origin is defined for federal statistical purposes as another group and may be of any race (Hobbs and Stoops 2002; Leefers, Potter-Witter, and McDonough 2004).

Reported census data may indicate the possibility of an increase in individuals who identify themselves as being both of multiple racial backgrounds and of Hispanic origin. Notably, the decade between 1990 and 2000 saw significant increases in individuals of multiple-race and Hispanic ethnicity for each of the five

counties, mirroring the same trends for the states of Arizona and Utah. Table 6 also shows that growth in multiple-race and Hispanic populations between 1990 and 2000 greatly exceeded the overall population growth rates for each of the five counties and both states. However, despite dramatic increases in both multiple-race and Hispanic populations in Mohave, Kane, and Washington Counties, Table 7 shows that these groups remained minimally represented in comparison to state averages.

Educational attainment for those populations 25 years of age and older is shown for each of the five counties in Table 8. Coconino and Yavapai Counties were near or above state averages in their percentage of high school and college graduates. In contrast, Mohave County fell below the Arizona state average with less than 10% of the 25-and-over population having graduated from college. In keeping with Utah's relatively high educational attainment, both Kane and Washington Counties exhibited high rates of high school and college graduates.

Table 6. Racial/Ethnic Composition of County and State Populations, 1990-2000 and % Change

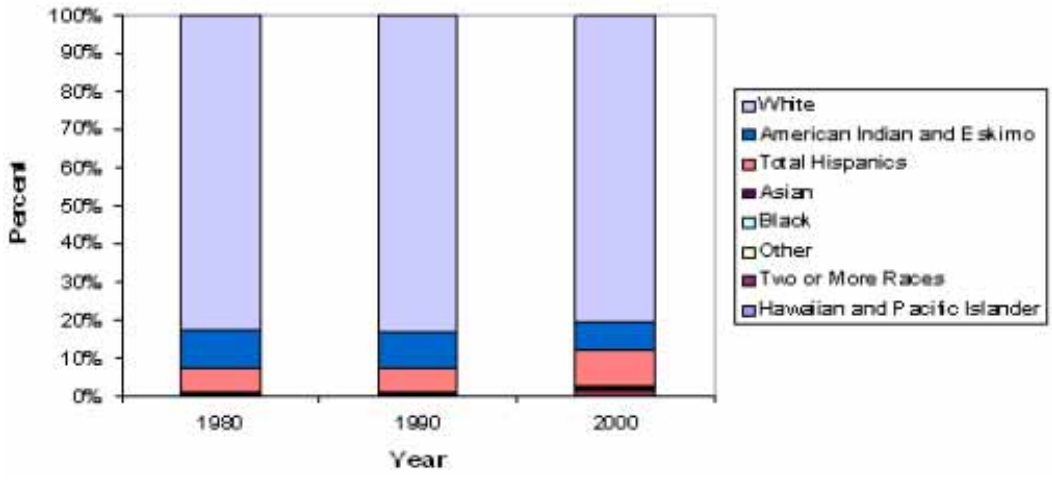
	Coconino County			Yavapai County			Mohave County		
Race/Ethnicity	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
American Indian or Alaska Native	28,270	33,161	17.30%	1,764	2,686	52.27%	2,139	3,733	74.52%
Asian or Pacific Islander	724	1,018	40.61%	492	861	75.00%	668	1,205	80.39%
African American or Black	1,255	1,215	-3.19%	244	655	168.44%	136	833	512.50%
Multiple Races	4,086	7,545	84.65%	2,053	9,254	350.75%	1,466	9,496	547.75%
White	62,256	73,381	17.87%	103,161	153,933	49.22%	89,088	139,616	56.72%
Hispanic	9,768	12,727	30.29%	6,854	16,376	138.93%	4,637	17,182	270.54%
	Kane County, UT			Washington County, UT			Arizona		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
American Indian or Alaska Native	39	94	141.03%	742	1,328	78.98%	204,589	255,879	25.07%
Asian or Pacific Islander	82	16	-80.49%	312	789	152.88%	54,127	98,969	82.85%
African American or Black	10	2	-80.00%	129	186	44.19%	110,062	158,873	44.35%
Multiple Races	10	130	1,200.00%	220	3,508	1,494.55%	328,768	743,300	126.09%
White	5,028	5,804	15.43%	47,157	84,543	79.28%	2,967,682	3,873,611	30.53%
Hispanic	77	140	81.82%	855	4,727	452.87%	680,628	1,295,617	90.36%
	Utah								
	1990	2000	% Change						
American Indian or Alaska Native	24,371	29,684	21.80%						
Asian or Pacific Islander	33,000	52,253	58.34%						
African American or Black	11,079	17,657	59.37%						
Multiple Races	36,974	140,600	280.27%						
White	1,617,426	1,992,975	23.22%						
Hispanic	83,097	201,559	142.56%						

Source: NRIS - Human Dimensions

Table 7. Racial/Ethnic Composition of County and State Populations by Percentage, 1990-2000 and Change

	Coconino County			Yavapai County			Mohave County		
Race/Ethnicity	**1990**	**2000**	**Change**	**1990**	**2000**	**Change**	**1990**	**2000**	**Change**
American Indian or Alaska Native	29.27%	28.51%	-0.76%	1.64%	1.60%	-0.03%	2.29%	2.41%	0.12%
Asian or Pacific Islander	0.75%	0.88%	0.13%	0.46%	0.51%	0.06%	0.71%	0.78%	0.06%
African American or Black	1.30%	1.04%	-0.25%	0.23%	0.39%	0.16%	0.15%	0.54%	0.39%
Multiple Races	4.23%	6.49%	2.26%	1.91%	5.52%	3.62%	1.57%	6.13%	4.56%
White	64.45%	63.09%	-1.37%	95.77%	91.89%	-3.88%	95.28%	90.06%	-5.23%
Percent Non-white	35.55%	36.91%	1.37%	4.23%	8.11%	3.88%	4.72%	9.94%	5.23%
Hispanic	10.11%	10.94%	0.83%	6.36%	9.78%	3.41%	4.96%	11.08%	6.12%
	Kane County, UT			**Washington County, UT**			**Arizona**		
	1990	**2000**	**Change**	**1990**	**2000**	**Change**	**1990**	**2000**	**Change**
American Indian or Alaska Native	0.75%	1.55%	0.80%	1.53%	1.47%	-0.06%	5.58%	4.99%	-0.59%
Asian or Pacific Islander	1.59%	0.26%	-1.32%	0.64%	0.87%	0.23%	1.48%	1.93%	0.45%
African American or Black	0.19%	0.03%	-0.16%	0.27%	0.21%	-0.06%	3.00%	3.10%	0.09%
Multiple Races	0.19%	2.15%	1.96%	0.45%	3.88%	3.43%	8.97%	14.49%	5.52%
White	97.27%	96.00%	-1.27%	97.11%	93.57%	-3.54%	80.97%	75.50%	-5.47%
Percent Non-white	2.73%	4.00%	1.27%	2.89%	6.43%	3.54%	19.03%	24.50%	5.47%
Hispanic	1.49%	2.32%	0.83%	1.76%	5.23%	3.47%	18.57%	25.25%	6.68%
	Utah								
	1990	**2000**	**Change**						
American Indian or Alaska Native	1.41%	1.33%	-0.09%						
Asian or Pacific Islander	1.92%	2.34%	0.42%						
African American or Black	0.64%	0.79%	0.15%						
Multiple Races	2.15%	6.30%	4.15%						
White	93.88%	89.24%	-4.64%						
Percent Non-white	6.12%	10.76%	4.64%						
Hispanic	4.82%	9.03%	4.20%						

Source: NRIS - Human Dimensions
Note: 1990 and 2000 data expressed as a % of total population. Change simply illustrates the trends in proportional representation of various racial/ethnic groups in the overall population.



Source: NRIS - Human Dimensions

Figure 7. Five-County Assessment Area Racial/Ethnic Composition, 1980-2000

Table 8. Educational Attainment for County and State Populations 25-Yrs. Old and Over

	Coconino County		Yavapai County		Mohave County		Kane County, UT	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Population 25 years and over	65,976	100%	120,223	100%	109,347	100%	3,842	100.0%
Less than 9th grade	4,596	6.97%	5,547	4.61%	5,420	5.00%	85	2.2%
9th to 12th grade, no diploma	6,108	9.26%	12,829	10.67%	19,176	17.50%	437	11.4%
High school graduate (includes equivalency)	14,279	21.64%	33,877	28.18%	38,127	34.90%	1,008	26.2%
Some college, no degree	12,159	18.43%	23,660	19.68%	29,644	27.10%	1,240	32.3%
Associate degree	3,891	5.90%	7,940	6.60%	6,125	5.60%	261	6.8%
Bachelor's degree	12,316	18.67%	15,685	13.05%	6,949	6.40%	536	14.0%
Graduate or professional degree	1,090	1.65%	2,021	1.68%	3,906	3.60%	275	7.2%
Percent high school graduate or higher	(x)	83.80%	(x)	84.70%	(x)	77.50%	(x)	86.4%
Percent bachelor's degree or higher	(x)	29.90%	(x)	21.10%	(x)	9.90%	(x)	21.1%

	Washington County, UT		Arizona		Utah	
	Number	Percent	Number	Percent	Number	Percent
Population 25 years and over	51,842	100.0%	3,256,184	100%	1,197,892	100%
Less than 9th grade	1,447	2.8%	254,696	7.82%	38,426	3.20%
9th to 12th grade, no diploma	4,995	9.6%	364,851	11.20%	108,585	9.10%
High school graduate (includes equivalency)	13,847	26.7%	791,904	24.32%	294,426	24.60%
Some college, no degree	16,540	31.9%	859,165	26.39%	348,680	29.10%
Associate degree	4,145	8.0%	219,356	6.74%	94,812	7.90%
Bachelor's degree	7,222	13.9%	493,419	15.15%	213,959	17.90%
Graduate or professional degree	3,646	7.0%	272,793	8.38%	99,004	8.30%
Percent high school graduate or higher	(x)	87.6%	(x)	81.00%	(x)	87.70%
Percent bachelor's degree or higher	(x)	21.0%	(x)	23.50%	(x)	26.10%

Source: U.S. Census Bureau, Census 2000 Summary File
http://www.census.gov/census2000/states/az.html

2.4 Housing characteristics and population projections

Changes in housing characteristics between 1990 and 2000 are shown for both counties and states in Table 9. Total housing units range from a high of 54,805 in Yavapai County to a low of 3,237 in Kane County. Growth in total housing and seasonal housing units between 1990 and 2000 was particularly strong in Mohave and Washington Counties. Likewise, these two counties saw the largest increases in housing density over the same time period. As of 2000, housing density ranged from a high of fifteen houses per square mile in Washington County to a low of less than one house per square mile in neighboring Kane County. Interestingly, Washington and Kane Counties showed the largest increases in median home value over the period with gains of 78.54% and 65.97% respectively. Of the cities included in the assessment, Prescott Valley and Lake Havasu City saw the largest increases in total housing units between 1990 and 2000. Lake Havasu City and St. George also experienced relatively large increases in seasonal housing units over the same period. Median home values in Flagstaff, Chino Valley, Prescott, and Camp Verde increased substantially over the ten-year period.

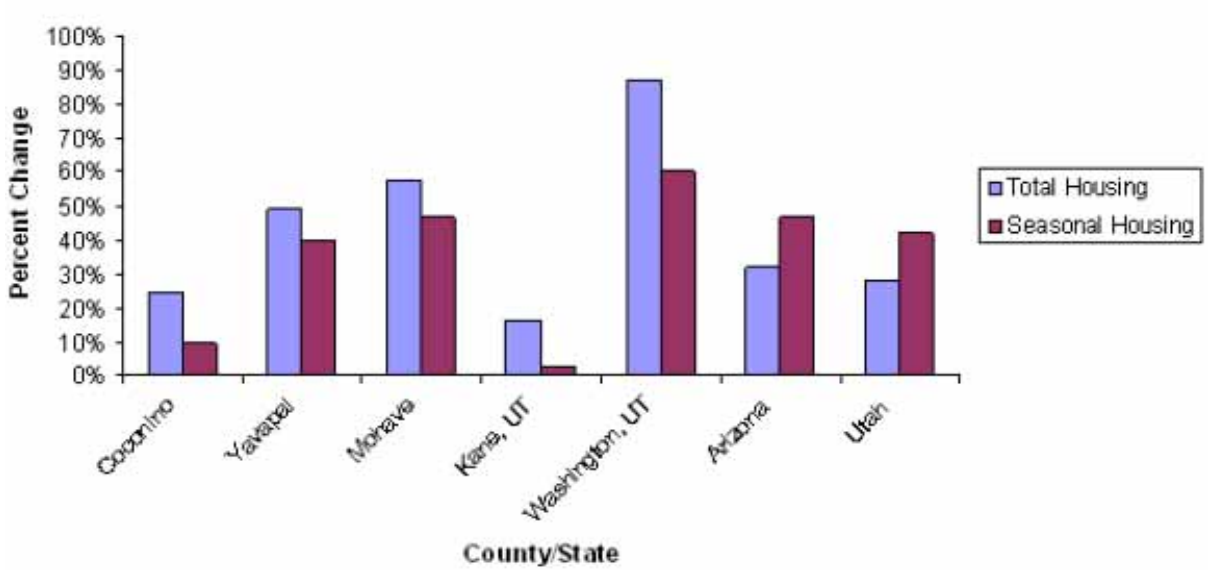
Table 10 suggests that population growth at the county and state level is expected to continue although at somewhat lower rates than were experienced over the last two decades (Table 2). A potential exception to this trend is seen in Kane County, in which population growth is expected to accelerate over and above

the last two decades' rates, promising to outpace statewide population growth through 2030. While the population growth rates of both Mohave and Washington Counties are projected to decline significantly from previous highs, they will remain well above state averages through 2020. Coconino County is expected to see accelerated population growth between 2000 and 2010 before declining significantly over the following two decades.

Table 9. County, Place, and State Housing Characteristics, 1990-2000 and % Change

County/Place/ State	Total Housing Units			Seasonal Housing Units			Housing Density per Sq. Mile			Median Home Value		
	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change	1990	2000	% Change
Coconino County	42,914	53,443	24.54%	8,361	9,155	9.50%	2.30	2.87	24.55%	$82,600	$142,500	72.52%
Flagstaff	16,313	21,430	31.37%	925	977	5.62%	258	337	30.62%	$90,300	$161,000	78.29%
Sedona	2,307	2,606	12.96%	33	76	130.30%	139	157	12.95%	$91,700	$138,600	51.15%
Page	4,658	5,709	22.56%	430	446	3.72%	237	307	29.54%	$159,600	$253,700	58.96%
Williams	1,118	1,224	9.48%	40	52	30.00%	39	28	-28.21%	$64,800	$100,300	54.78%
Fredonia	464	428	-7.76%	7	18	157.14%	91	58	-36.26%	$54,300	$77,900	43.46%
Mohave County	50,822	80,062	57.53%	6,798	9,956	46.45%	4.00	6.00	50.00%	$74,900	$95,300	27.24%
Lake Havasu City	12,845	22,991	78.99%	1,891	3,971	109.99%	298.0	534.0	79.19%	$82,100	$98,500	19.98%
Bullhead City	n/a	18,410	n/a	n/a	2,448	n/a	n/a	407.0	n/a	n/a	$102,500	n/a
Kingman	5,473	8,564	56.48%	85	63	-25.88%	263.0	286.0	8.75%	$63,900	$87,500	36.93%
New Kingman/ Butler	5,148	6,671	29.58%	80	81	1.25%	356.0	456.0	28.09%	$53,900	$71,800	33.21%
Colorado City	307	474	54.40%	0	2	n/a	29.0	45.0	55.17%	$24,900	$99,200	298.39%
Yavapai County	54,805	81,730	49.13%	4,325	6,048	39.84%	7.0	10.0	42.86%	$85,300	$138,000	61.78%
Prescott	13,393	17,431	30.15%	787	1,026	30.37%	414.0	470.0	13.53%	$93,400	$162,700	74.20%
Prescott Valley	3,913	9,481	142.29%	134	162	20.90%	237.0	299.0	26.16%	$64,500	$108,100	67.60%
Verde Village*	3,200	4,327	35.22%	84	43	-48.81%	376.0	493.0	31.12%	$78,000	$114,900	47.31%
Sedona	4,658	5,709	22.56%	430	446	3.72%	237.0	307.0	29.54%	$159,600	$253,700	58.96%
Camp Verde	2,839	3,988	40.47%	179	136	-24.02%	67.0	94.0	40.30%	$75,900	$129,600	70.75%
Cottonwood	2,768	4,386	58.45%	31	55	77.42%	525	411	-21.71%	$61,600	$106,800	73.38%
Chino Valley	2,156	3,251	50.79%	24	56	133.33%	116.0	175.0	50.86%	$76,400	$135,500	77.36%
Kane County, UT	3,237	3,767	16.37%	1,227	1,256	2.36%	0.8	0.9	16.38%	$62,600	$103,900	65.97%
Kanab	1,258	1,483	17.89%	20	64	220.00%	91.0	106.0	16.48%	$64,500	$106,100	64.50%
Washington County, UT	19,523	36,478	86.85%	2,727	4,364	60.03%	8.0	15.0	86.89%	$78,300	$139,800	78.54%
St. George	11,766	21,083	79.19%	1,287	2,505	94.64%	205.0	327.0	59.51%	$84,800	$143,200	68.87%
Arizona	1,659,430	2,189,189	31.92%	96,687	141,965	46.83%	15.00	19.00	26.67%	$79,700	$121,300	52.20%
Utah	598,388	768,594	28.44%	20,888	29,685	42.12%	7.00	9.00	28.57%	$68,700	$146,100	112.66%

* Cottonwood - Verde Village is an unincorporated Census Designated Place (CDP)
Source: NRIS - Human Dimensions



Source: NRIS - Human Dimensions

Figure 8. Percent Change in Total and Seasonal Housing Units by County, 1990-2000

Table 10. County and State Population Projections, 2010-2030 and % Change

County/State	Total Pop. 2000	Projected 2010	% Change	Projected 2020	% Change	Projected 2030	% Change
Coconino County	116,320	147,352	26.68%	169,343	14.92%	189,868	12.12%
Yavapai County	167,517	198,052	18.23%	240849	21.61%	278,426	15.60%
Mohave County	155,032	194,403	25.40%	236,396	21.60%	270,785	14.55%
Kane County (UT)	6,046	8,272	36.82%	11,077	33.91%	13,628	23.03%
Washington County (UT)	90,354	131,880	45.96%	177,354	34.48%	218,840	23.39%
Arizona	5,130,632	6,145,108	19.77%	7,363,604	19.83%	8,621,114	17.08%
Utah	2,233,169	2,787,670	24.83%	3,371,071	20.93%	3,772,042	11.89%

Source: Arizona Department of Commerce - Arizona County Population Projections: 1997-2050
Source: http://www.governor.utah.gov/Projections/EDPT3.xls
http://www.azcommerce.com/prop/eir/population.asp

2.5 Key issues for forest planning and management

Over the past two decades, continued population growth in predominantly rural areas has brought about significant changes in the dynamic relationships between human communities and publicly administered lands throughout Arizona. These changes have occurred amid ongoing resource policy debates concerning fire suppression, forest restoration, water allocation, road construction, and other economically and environmentally pressing issues.

Although population growth in the communities surrounding the KNF has been somewhat slower than in other parts of the state, significant changes in the human populations surrounding the forest are likely to affect not only the quantity of goods and services demanded from public lands but also significantly

influence the character, or quality, of those goods and services. Research shows that areas with an abundance of natural resource-based amenities (mild climate, forested mountains, rivers, lakes, access to hiking and camping, presence of clean air and water) are increasingly attractive to retirement-age populations as well as others seeking to take advantage of the quality of life offered by small, rural communities. In particular, migrants are increasingly attracted to smaller communities with relatively affordable housing, low crime rates, and cultural traditions associated with small, rural towns throughout the mountain west (Booth 2002, McCool and Kruger 2003, Bodio 1997). These demographic shifts are borne out by collected data for Kaibab NF which show substantial increases in population and housing in both Washington and Yavapai Counties as well as increases in both the retirement-age population and the number of seasonal housing units throughout the areas characterized by small, rural towns.

Although the potential for population growth can enhance the economic vitality of rural areas through greater employment opportunities and an expanding tax base, it can also challenge the capacity of rural communities and public land managers to provide for the wide array of services. This is particularly true in areas where potential conflicts in value systems between established community interests and recently arrived immigrants can create friction over natural resource management. For example, the growth in populations seeking natural amenities from forest lands may pit them against traditional commodity interests. Likewise, the dramatic growth in multiple race and Hispanic populations (sometimes referred to as “hidden populations”) may force different demands for public services and may influence the interaction with natural resources in fundamentally different ways than has been the historic norm for the resident population (McCool and Kruger 2003).

Together, these shifts in the demographic makeup of communities surrounding the KNF carry important implications for the development of good relations between management agencies and their local publics. For example, how might agencies contribute to the maintenance of viable resource economies given increasing demands for amenities? Similarly, how does expansion of the wildland-urban interface influence issues such as forest access, water quality, habitat fragmentation, or fire management? Finally, demographic change within forest communities may influence not only the management of natural resources, but also the social and political acceptability of processes used to develop management plans. Land management objectives of new property owners may lead to demands for change in how adjacent federally administered land is managed. In addition, immigrant populations may lack a thorough understanding of underlying community values while at the same time acting on a thorough understanding of planning regulations and methods of influencing political processes (McCool and Kruger 2003, Booth 2002, Wilkinson 1992).