



Giant Sequoia National Monument Specialist Report

Signature: _____

Date: _____

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SOCIOECONOMICS REPORT

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Introduction

This overview explores the social and economic conditions within the areas influenced by the Monument including Fresno, Kern and Tulare Counties located in the San Joaquin Valley. By understanding the overall social and economic conditions within this area of influence, better decisions concerning social and economic well-being of those affected can be made. What follows is a summary of the sections contained within this social and economic overview.

Three-County Socioeconomic Profile

To place the area of influence in context with the larger Sierra Nevada region, a brief synopsis of key social and economic facts is presented. Following this synopsis is a socioeconomic profile of Fresno, Kern, and Tulare Counties. This three-county socioeconomic profile will discuss population demographics, housing, educational attainment, personal income sources, unemployment, major economic sectors related to public lands, economic specialization, development in the Wildland Urban Interface (WUI), and transfer payments to counties. This information will help address the following questions, “Where national forest lands are involved, what activities or conditions occur on adjacent lands and what are their ties to the Monument” and “What portion of county government revenues depend on agency activities”?

Major Natural Resource Economic Sectors

Next, the major natural resource economic sectors in the three-county area, including timber, mining, agriculture, and travel and tourism will be considered. This section will explore job trends, share of the economy attributed to each sector, differences among counties, and a breakdown of the different types of activity within each sector. An analysis of the Forest Service contribution to these sectors will also be discussed. The information presented in this section will help address several questions: “Who uses the resources of the Monument?” “Does the Monument supply a large portion of each user’s need for goods and services?” and “Are other local businesses and industries indirectly linked to agency programs?”

Gateway Communities

While socioeconomic differences exist among the three counties, differences also exist among the smaller communities adjacent to the Monument. Activities in the Monument have the potential to affect those communities frequently referred to as “gateway communities.” Gateway communities are defined as (adapted from the National Park Service 2006):

Communities that exist in close proximity to a unit of the National Forest System whose residents and elected officials are often affected by the decisions made in the course of managing the Monument. Because of this, there are shared interests and concerns regarding decisions. Gateway communities usually offer food, lodging, and other services to Monument visitors. They also provide opportunities for employee housing, and a convenient location to purchase goods and services essential to national monument administration.

This section will assess the following gateway communities for their unique social and economic characteristics: Springville, Wofford Heights, Lake Isabella, Squaw Valley, Porterville, Kernville, and the Tule River Indian Reservation. While other communities such as Glenville, California Hot Springs, Camp Nelson, Posey, and Dunlap also meet this definition, data are not available from the U.S. Census to discuss

them specifically (that is, they are not classified as “census designated places”). This section will consider the question, “What is the current capacity of gateway communities for improving economic development opportunities associated with the Monument?”

Public Values, Beliefs, and Attitudes

Knowledge about public values, beliefs, and attitudes relevant to management of the Monument is important to understanding the linkages among the forest, surrounding communities, and other stakeholders, including the national public. This section will address people’s orientations to nature and public lands management, and specifically answers the question, “What types of public land opportunities or benefits are viewed as the most desirable in the Monument?”

Environmental Justice

Another important component of this social and economic overview is consideration of potential environmental justice and civil rights issues. Environmental justice means that, to the greatest extent practicable and permitted by law, all populations are provided the opportunity to comment before decisions are made, are allowed to share in the benefits of, are not excluded from, and are not affected in a disproportionately high and adverse manner by, government programs and activities affecting human health or the environment.⁽¹⁾ This section will consider indicators of poverty, race, ethnicity, poverty by race, age distribution, language, and education. This section helps to address the questions, “Does everyone have the opportunity to participate in decisions affecting the Monument?” and “Are the distribution of potential harms and benefits related to the Monument more prevalent for any identifiable subgroup than another?”

Affected Environment

Area of Influence

Key Sierra Nevada Facts(Sierra Nevada Conservancy Revised Strategic Plan, March 2009):⁽²⁾

- The Sierra Nevada is the third fastest growing region in California. Some estimates predict the population will triple by 2040. The area is experiencing rapid retiree and commuter resident growth, and large intermittent recreational populations that increase resource pressures.
- For some time, the Sierra Nevada's economy has been diversifying from primarily a resource-based economy to one increasingly dependent on tourism and related services; specialized goods and services tied to the state economy; and health, financial, and other services needed by the growing population.
- Many parts of the region face significant threats from natural disaster, in particular the risk of catastrophic fire.
- There is increasing conflict over various land use decisions in certain portions of the region and over regional resource conservation strategies.

¹ As defined in U.S. Department of Agriculture, Departmental Regulation 5600-2, dated December 15, 1997.

² The Sierra Nevada Conservancy Revised Strategic Plan can be viewed and downloaded at: http://www.sierranevada.ca.gov/docs/SNC_Strategic_Plan_3-5-09.pdf.

- In some Sierra communities there is a lack of affordable housing, declining personal income, low literacy rates, and outdated communications infrastructure.
- In some subregions there are a growing number of children living in poverty.

More specifically, the Monument is located within the Sequoia National Forest in the southern portion of the Sierra Nevada region. The outer boundaries of the area encompass approximately 328,315 acres of federal land within Fresno, Tulare, and Kern Counties. The monument is located in two parcels bisected by the Sequoia National Park. The northern boundary is the Kings River. The southern parcel is entirely in Tulare County. The eastern boundary is the North Fork of the Kern River.

The San Joaquin Valley counties of Fresno, Tulare, and Kern are most affected by management decisions in the Monument and comprise the area of influence. The Monument is easily accessed by Highways 65, 155, 180, and 190, as well as by several less direct routes. While only a few acres of the Monument lie within Kern County, it is easily accessed via Highway 178 and the Kern River Valley. The Sequoia National Forest (including the northern section of the Giant Sequoia National Monument) is classified as an "urban" forest since it is within 50 miles of the Fresno/Clovis metropolitan area with a population center of more than a million persons (Dwyer and Chavez 2005). The Monument is administered by the Sequoia National Forest Supervisor's Office located in Porterville in Tulare County. There are about 266 full time forest employees and a large contingent of temporary workers during the fire season. Historically, the Sequoia National Forest has been a strong producer of timber that contributed to local mills along with supplies from privately owned lands. In recent years, national forest timber harvests have declined, but the Monument has emerged as a primary recreation destination for residents of adjacent communities as well as for visitors from the nearby urban areas of Fresno, Clovis, Bakersfield, and Visalia.

Fresno, Tulare, and Kern County Socioeconomic Profile

This three-county socioeconomic profile will discuss population demographics, age demographics, hispanic demographics, housing, educational attainment, personal income sources, unemployment, major economic sectors related to public lands, economic specialization, development in the wildland urban intermix (WUI), and transfer payments to counties. The primary sources of information in this section were derived from the 2008 version of the Economic Profile System (EPS) and the Economic Profile System Community (EPSC) (www.headwaterseconomics.org).⁽³⁾ Another important source document was *The State of the Sierra* (Sierra Business Council 2007) published by the Sierra Business Council in partnership with the Sierra Nevada Conservancy.

Population Demographics

The Sierra Business Council stated (2007):

Throughout the Sierra Nevada, population growth is the driving force of change. Increased population is the origin of the variety of changes and needs occurring in the Sierra Nevada: home construction, changing land uses from agricultural or forestry to commercial and residential, demands for infrastructure improvements such as schools, roads, and utilities, and employment opportunities (page 16).

3 Databases used for EPS and EPSC profiles are from: Bureau of the Census including county business patterns; Bureau of Labor Statistics; and the Regional Economic Information System (REIS) of the Bureau of Economic Analysis, U.S. Department of Commerce.

Population growth in the three-county area is no exception: from 1970 to 2006, the population grew by 1,136,986 people, a 122 percent increase in population. At an annual rate, this represents an increase of 2.2 percent. To put these numbers in perspective, over the past 36 years population growth in the three-county area has outpaced that of California and the nation, 122 percent versus 81 percent and 41 percent respectively. It is important to note that these numbers only account for full-time residents, not the growing number of visitors and second homeowners who also stay in the area.

A comprehensive assessment of population demographics in the three-county area can be found in, *A Profile of the Environmental Justice in Three-county Study Area* by Headwaters Economics (2008g).⁽⁴⁾ This assessment includes information on race, ethnicity, age, gender, and tribal affiliation among other attributes. Also, the sections contained in this document on environmental justice and civil rights will provide a more detailed summary of population demographics in the three-county area.

Age Demographics

Another parallel trend between the three-county area and the Sierra Nevada as a whole is an increasingly older population without a complementary increase in the next generation of residents. The age group that has grown the fastest from 1990 to 2000, as a share of the total population, is 45 to 54 years of age across the three counties. As this baby boom generation continues to age, a corresponding increase in economic sectors such as health and human services will be required (Sierra Business Council 2007). Yet the younger generation, ages 25 -34, make up an increasingly smaller proportion of the area's population. The Sierra Business Council notes that, "Members of this age bracket often are at the beginning stages of a career, frequently have young children, and lack much disposable income. Combining these factors with the escalating costs of housing in the Sierra Nevada makes the region less hospitable to them" (2007 page 18). They further note that "...the percentage of school-aged children in the Sierra Nevada continues to lag behind the state, and with public funding tied to school enrollment our school systems may suffer. This trend perpetuates itself by making the region less welcoming to younger generations and families" (Sierra Business Council 2007 page 18).

Hispanic Demographics

Another key demographic trend is the increasing Hispanic or Latino population in the three-county area. In the 2000 census, California was 47 percent non-Hispanic white and 32 percent Hispanic. Most of the central San Joaquin Valley had even higher Hispanic percentages--about 38 percent in Kern County; 44 percent in Fresno, Kings and Madera Counties; 45 percent in Merced County; and a majority of 51 percent in Tulare County. Yet, according to a 2002 Sequoia and Kings Canyon National Park survey, Hispanics were not visiting national parks at the same rate as non-Hispanics. Only 10 percent of visitors to Sequoia and Kings Canyon National Parks were of Hispanic descent, according to the 2002 survey.⁽⁵⁾ While Hispanics represent about 44 percent of Fresno County's population, only 8 percent of visitors to Yosemite in 2005 were Hispanic.⁽⁶⁾

In addition to ethnic differences in visitation to national parks, another study conducted in 2000 indicated the following possible differences between non-white and white ethnic groups when camping (Dean Runyan Associates 2000, page 52):

4 This assessment can be viewed and downloaded at <http://www.headwaterseconomics.org/sequoia.php>.

5 National Parks Conservation Association [n.d.], accessed on October 21, 2009, from http://www.npca.org/familyday/NPFD09_Fact_Sheet.pdf

6 National Parks Conservation Association [n.d.], accessed on October 21, 2009, from http://www.npca.org/familyday/NPFD09_Fact_Sheet.pdf

- White campers take more overnight camping trips and have longer stays.
- Non-white campers are more than twice as likely to travel to the campground in an auto, van, or truck with a tent.
- Non-white campers are with family and friends slightly more often.
- White campers are much more likely to have no children along on camping trips.
- Non-white campers are an average of 5.9 years younger than white campers.
- Non-white campers are more than twice as likely to participate in fresh water fishing.
- White campers use guidebooks almost twice as often as non-white campers; non-white campers rely more on information from friends/relatives compared to white campers.
- Regarding conditions required for taking more camping trips, twice as many non-white campers would prefer more participation of family/friends as compared to white campers.⁽⁷⁾

These demographic trends are important considerations to the development of a Monument plan. Key to understanding these changing needs and desires is the active engagement of these communities in the planning process.

Housing

The Sierra Business Council suggests that, “With population the dominant driver of change in the Sierra Nevada, home prices may be the most immediate indicator of the region’s rapid growth” (2007, page 19). This is certainly true in the three-county area. The owner-occupied-Housing Affordability Index is one way to measure whether the median family can afford the median priced house.⁽⁸⁾ Based on the index values for all three counties in the year 2000, the median family can afford the median house, as shown in the following table.⁽⁹⁾ This is in sharp contrast to the state as a whole, and the Sierra Nevada region in general, where the index value suggests that the median family cannot afford the median house (Sierra Business Council 2007). It should be noted that these findings do not take into account the most recent recession. Yet, population growth and earnings per job (both up 2.2 percent) during the previous recovery (2001-2006) in the three-county area outpaced both California and the United States. This suggests that the three-county area weathered the previous recession fairly well and may likely do the same as it moves through the current recession. Housing affordability and the likely ability to recover from recession are both indicators that the three-county area will continue to grow at a rapid pace. Population growth, land-use change, and development patterns will continue to put pressure on existing agriculture, forestry and open space lands. Accompanying this growth will be increased use of the Monument and the potential for greater impacts from increasing population and development.

7 This study was a cooperative project of the California Roundtable on Recreation, Parks and Tourism, and California Tourism. Non-white ethnic groups were aggregated because the quantity of responses from individual non-white ethnic groups was too small for reporting purposes.

8 The Housing Affordability Index figures assume a 20 percent down payment and that no more than 25 percent of a family's income goes to paying the mortgage. It is based on an interest rate of 10.01 percent in 1990 and 8.03 percent in 2000.

9 EPSC Profiles for California and each County 2008.

Table 1 Housing Affordability Index for California and Three-Counties: Kern, Fresno, and Tulare

	California	Kern	Fresno	Tulare
Housing Affordability Index in 2000 (100 or above means that the median family can afford the median house.)	89	149	130	131

Educational Attainment⁽¹⁰⁾

It is well-recognized that adults with higher levels of education have greater employment options than less-educated adults. Employment opportunities with the Forest Service encompass a range of educational levels, yet opportunities for higher wage, professional-level positions require positive education requirements beyond high school. Also, the Sierra Business Council noted that, "...entrepreneurs look for places to grow their businesses, they are attracted to places with more highly educated populations, indicating the quality and diversity of the labor pool" (2007, page 23).

The three-county area has a higher percentage of residents 25 years and older (34 percent) with less than a high school degree than either the state (23 percent) or the nation (20 percent). In contrast, California has a lower percentage of high school graduates (20 percent) than either the three-county area (23 percent) or the nation (29 percent). The percentage of residents 25 and older with some college (21-23 percent) or an associate degree (6-7 percent) are consistent throughout the nation, state, and three-county area. The state and the nation have a relatively higher concentration of bachelor (16-17 percent) and graduate degrees (9 percent) than the three-county area (10 percent and 4 percent, respectively).

Because a full third of the residents in the three-county area have less than a high school diploma, public outreach and access to information concerning the Monument should be easily obtainable through a wide-variety of sources and presented in clear, bi-lingual language and visual representations. Particular attention for reaching this group should be focused on visual and audio mediums, such as television and radio, and not on printed sources (Chavez et al. 2008, Roberts et al. 2009).

Personal Income Sources

Personal income is calculated as the sum of wages and salary disbursements, other labor income, proprietors' income, rental income, personal dividend income, personal interest income, and transfer payments to persons. A comprehensive view of personal income sources shows how and where an area makes its money.

Average Earnings per Job⁽¹¹⁾

This statistic is calculated by dividing the total wages earned by the total number of workers. The average earnings per job, adjusted for inflation, have risen from \$37,530 in 1970 to \$41,854 in 2006. In comparison, in 2006, the average earnings per job in the three-county area (\$41,854) were lower than in the state (\$54,828) and the nation (\$47,286). It is important to note that this statistic includes full- and part-time employment. The comparative decline in wages from the state and the nation is due in part to higher levels of seasonal employment in the three-county area, as shown in the following table.⁽¹²⁾ The potential for increased levels of recreation opportunities within the Monument may lead to an increase in tourism throughout or within

10 Data obtained for educational attainment came from EPSC profiles for the United States, California, and each County, 2008

11 Data for average earnings per job from EPS – 3 County Aggregation Profile, 2008, page 14.

12 EPSC profiles for the United States, California, and each County 2008.

certain sectors of the three-county area. Yet, an increase in tourism has the potential to further the decline in earnings due to the increase in seasonal (part-time) workers.

Table 2 Percent Seasonal Workers in the United States, California, and Three-Counties: Kern, Fresno, and Tulare

	U.S.	California	Kern	Fresno	Tulare
	Percent				
Seasonal workers (fewer than 40 weeks/year)	20.9	21.9	28.4	28.7	30.5

Commuting Share of Total Income⁽¹³⁾

As explained by the Sierra Business Council (2007, page 24), “Commute wages are earned outside a person’s county of residence. People commute when they prefer to live elsewhere from where they work, they can’t afford to live where they work, or they can’t find appropriate work where they live.” Commuting data suggests that Tulare County is a bedroom community. In other words, income derived from people commuting out of the county to work exceeds the income from people commuting into the county. The net difference represents 2.2 percent of total income in the county.

In contrast, commuting data suggest that Fresno and Kern Counties are employment hubs. In other words, the income derived from people commuting into the county to work exceeds the income from people commuting out of the county. The net difference represents 1.0 percent of total income in each county.

These trends suggest that a portion of people in Tulare County are commuting to employment hubs in either Fresno or Kern Counties, particularly in jobs related to finance, professional, education, health, and social service sectors.⁽¹⁴⁾ It is expected that this trend will continue as the population expands and the baby boom generation continues to age – both become more dependent on service sectors provided in employment hubs.

Non-Labor Income⁽¹⁵⁾

The term “non-labor income” consists of dividends, interest, and rent as well as transfer payments. Transfer payments refer to payments from government to individuals such as Medicare, Social Security, unemployment compensation, disability insurance payments and welfare. These sources of income can buffer the local economy against downturns in regional or seasonal industries such as timber and tourism. As the Sierra Business Council acknowledges, this type of income can also “...disconnect[s] residents from local economic fortunes” (2007, page 25).

As a percentage of total personal income in 2006, 32.6 percent came from non-labor sources in the three-county area. This percentage ranks close to the state average (30.4 percent) and the national average (31.6 percent). Within transfer payments, medical payments across the United States were the fastest growing source of income, likely due to increasing medical costs (Sierra Business Council 2007, page 25). In 2006, welfare represented 18.5 percent of transfer payments, and 3.8 percent of personal income. This is down from 1970 and down from 1980, indicating that levels of poverty have steadily decreased from 1970 to 2006.

13 EPS profiles for each County 2008, page 20.

14 EPS – Differences between Counties 2008, page 2

15 Data for non-labor income from EPS profiles for the United States, California, and 3-County Aggregate 2008, page 10

Importantly, much of this transfer income belongs to the baby boom generation. It is possible that as this generation passes on, in large part over the next 25-30 years, this income will be transferred through inheritance and taxes, potentially outside the area. This could leave the three-county area more vulnerable to national and state-wide fluctuations in a global economy.

Unemployment⁽¹⁶⁾

In 2007, the unemployment rate was 8.6 percent in the three-county area, compared to 5.4 percent in the state and 4.6 percent in the nation. In 2009, the annual average unemployment rate rose in all states. The U.S. jobless rate rose 3.5 percentage points in 2009 from the prior year to 9.3 percent nation-wide.⁽¹⁷⁾ In California, the average annual unemployment rate in 2009 rose 4.2 percentage points from the prior year to 11.4 percent. For the period February 2009 through March 2010 the unemployment rates were 15.7 percent in Fresno County; 14.3 percent in Kern County; and 16.1 percent in Tulare County. Since 1990, the unemployment rate in the three-county area varied from a low of 8.0 percent in 2006 to a high of 16.2 percent in 1993. Importantly, the unemployment rate throughout the San Joaquin Valley is consistently higher than the state or the nation as a result of the seasonality of the agricultural economic sector.

Unemployment has obvious and well-documented links to economic disadvantage. Further, unemployment among youth not only causes current hardship, but may also hinder future economic success. This is because unemployed youth are not able to gain experience and on-the-job training and because a history of joblessness signals that the individual may not have the qualities that are valued in the labor market.⁽¹⁸⁾

Major Economic Sectors Related to Public Lands⁽¹⁹⁾

The primary economic sectors associated with public lands include: timber-related, mining, and travel and tourism. As illustrated in the following figure, the total share of these sectors is consistent with those in the state and the nation except for Kern County, where the share of mining (3 percent) is higher than Tulare or Fresno Counties (0 percent), the state (0 percent), or the nation (0 percent). The major economic sectors related to public lands combined represent a small proportion of jobs (6 percent) in the three-county area compared to all other jobs (94 percent). This combined percentage of major economic sectors related to public lands is consistent with both the state (6 percent) and the nation (5 percent). A more thorough discussion of the potential impacts to these economic sectors directly attributable to the Giant Sequoia National Monument can be found in the following section, Major Natural Resource Economic Sectors.

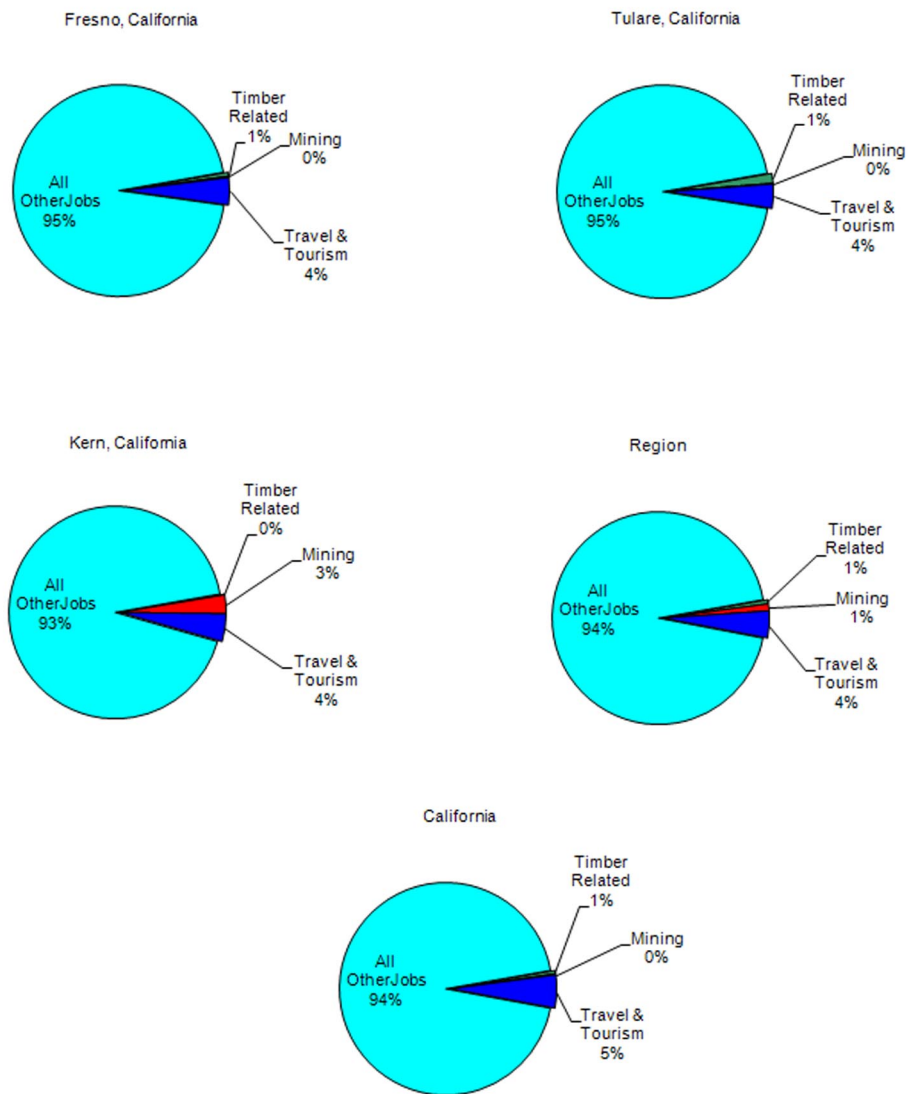
16 Data for unemployment from EPS – 3 County Aggregation Profile, 2008, p.19

17 Data for 2009 unemployment from U.S. Bureau of Labor Statistics, Division of Labor Force Statistics, <http://www.bls.gov/cps/>

18 Unemployment Encyclopedia 2009, accessed on September 10, 2009, from <http://family.jrank.org/pages/1724/Unemployment-Consequences-Unemployment.html>

19 Data for major economic sectors related to public lands from Economic Profile System Analyst (EPSA) Profile for Major Sectors Related to Public Lands in Three-County Study Area, 2008, page 4.

Figure 1 EPSA Profile for major Sectors Related to Public Lands in the Three-County Study Area 2008



Economic Specialization⁽²⁰⁾

Counties heavily reliant on only a few industries may be economically vulnerable to changes in the global economy. By using the composition of sectors within the U.S. economy as a benchmark for economic diversity, a comparison can be drawn to the relative diversity of the three-county area. In so doing, the sectors that most diverge from the U.S. norm are:

- Over-reliance on agriculture, forestry, fishing, and hunting (9.7 percent in the three-county area compared to 1.5 percent in the U.S.);
- Under-reliance on manufacturing (7.7 percent in the three-county area compared to 14.1 percent in the U.S.);
- Under-reliance on professional, scientific, and technical services (3.4 percent in the three-county area compared to 5.9 percent in the U.S.);
- Over-reliance on public administration (7.1 percent in the three-county area compared to 4.8 percent in the U.S.).

According to the Sierra Business Council (2007, page 27),

Traditional natural resource extraction industries continue to decline in economic importance in the Sierra Nevada. Creating and sustaining natural resource industries within the region through biomass energy production and carbon sequestration would [improve] financial wealth while maintaining or improving natural and social wealth.

The proposed activities within the Giant Sequoia National Monument have the potential to generate sustainable opportunities in these new industries, potentially assisting in the diversification of the local economy.

Wildland Urban Intermix (WUI)

According to Headwaters Economics (2007):

More and more people are building homes in the western "wildland urban interface", the forested areas where housing borders undeveloped public lands. With more homes built in forested areas, it has become increasingly expensive to fight the inevitable wildfires that are part of life in the arid West.⁽²¹⁾

Further, a Headwater Economics study of development in the western United States along the WUI concluded:⁽²²⁾

- Only 14 percent of forested western private land adjacent to public land is currently developed for residential use. Based on current growth trends, there is tremendous potential for future development on the remaining 86 percent.

20 Data for specialization from EPS – 3 County Aggregation Profile, 2008, p.23

21 accessed on September 11, 2009, at <http://www.headwaterseconomics.org/wildfire/#cht>

22 2007, accessed on September 11, 2009, at <http://www.headwaterseconomics.org/wildfire/#cht>

- If homes were built in 50 percent of the forested areas where private land borders public land, annual firefighting costs could range from \$2.3 billion to \$4.3 billion per year. By way of comparison, the U.S. Forest Service's annual budget is approximately \$4.5 billion.
- One in five homes in the WUI is a second home or cabin, compared to one in twenty-five homes on other western private lands.

Within the three-county area, Fresno (42 percent) and Tulare (22 percent) Counties exceed the percentage developed in the West and the state (17 percent): Kern County is consistent with the West-wide average (14 percent), as shown in the table below. Also, the three-county area has a much higher percentage of second homes (46-79 percent) than either the state (19 percent) or West-wide (21 percent), as shown in the following table.

Table 3 Development in the WUI

	Developed Square Miles	Undeveloped Square Miles	Percent Developed	Homes	Percent Second Homes
West-wide	3,290.0	20,350.1	14	915,071	21
California	871.8	4,257.0	17	341,175	19
Fresno County	20.7	28.5	42	3,351	62
Kern County	5.2	33.4	14	2,633	46
Tulare County	9.8	35.1	22	2,264	79

Specifically, the Sequoia National Forest is adjacent to 41 “communities at risk” from wildfire. Thirteen of these communities have community wildfire protection plans (CWPPs) in place. The communities of Kennedy Meadows, Pine Mountain, and Alder Creek are currently in the process of developing a CWPP. The majority of these communities are serviced by the following Fire Safe Councils: Sequoia, Alder Creek, Kern Valley, and Highway 180.

It should be noted that the Sierra Nevada Forest Plan Amendment Final Environmental Impact Statement, Record of Decision (USDA Forest Service 2001e) defines the WUI more specifically as the Urban Wildland Intermix Zone, including both “defense” and “threat” zones.⁽²³⁾ The specificity of these zones changes the actual number of structures potentially affected, thus the data presented here are for comparative purposes only.

In addition to on-going Forest Service and other government-assisted wildland fire protection measures, these higher-than-average numbers in the three-county area suggest additional measures could assist in protecting these developing areas from wildfire. Additional measures could include: appropriate zoning, wildfire protection ordinances, volunteer fire departments, and additional fire safe councils and community wildfire protection plans.

23 See 2001 Sierra Nevada Forest Plan Amendment, FEIS, ROD, Appendix A, pp. 46-47, for a detailed definition of “defense” and “threat” zones.

Transfer Payments to Counties (Secure Rural Schools)⁽²⁴⁾

Secure Rural Schools, Fiscal Years (FY) 2000-2007

The Secure Rural Schools and Community Self-Determination Act of 2000 (SRS) (PL 106-393) was enacted to provide transitional assistance to rural counties affected by the decline in revenue from timber harvests in federal lands. Traditionally, these counties relied on a share of receipts from timber harvests to supplement local funding for school systems and roads. Funding from SRS has been used to support more than 4,400 rural schools and to help maintain county road systems. In addition, SRS has authorized the establishment of more than 55 resource advisory committees (RACs) in 13 states, which has increased the level of interaction among the Forest Service, local governments, and citizens, resulting in broader support and understanding of our mission. RACs have implemented more than 4,500 resource projects on national forests, grasslands, and adjacent non-federal lands, with a value of \$185,000,000 from SRS funds and leveraged funds of over \$192 million dollars.

Secure Rural Schools, Fiscal Years (FY) 2008-2011

On October 3, 2008, the Secure Rural Schools and Community Self-Determination Act of 2000 was reauthorized as part of Public Law 110-343. The new Secure Rural Schools Act has some significant changes from the original law. A county electing to receive a share of the Secure Rural Schools state payment also was requested to allocate between 15 to 20 percent of its share for one or more of the following purposes: projects under Title II of the Act; projects under Title III; or the Treasury of the United States (county allocations).

Title I. Secure payments for state and counties containing federal land. The Title I portion of the state payment must be used for roads and schools in the manner provided for by state statute.

Title II. Special projects on federal land. Title II funds may be used for the for protection, restoration, and enhancement of fish and wildlife habitat, and other resource objectives consistent with the Secure Rural Schools Act on federal land and on non-federal land where projects would benefit the resources on federal land.

The purposes of the Secure Rural Schools Act include making additional investments in, and creating employment opportunities through projects that:

- Improve the maintenance of existing infrastructure
- Implement stewardship objectives that enhance forest ecosystems and
- Restore and improve land health and water quality

The funds may be used for projects that enjoy broad based support and have objectives that may include:

- Road, trail, and infrastructure maintenance or obliteration

24 For more information on Secure Rural Schools Act go to <http://www.fs.fed.us/srs/>.

- Soil productivity improvement
- Improvements in forest ecosystem health
- Watershed restoration and maintenance
- The restoration, maintenance, and improvement of wildlife and fish habitat
- The control of noxious and exotic weeds and
- The re-establishment of native species

Planning and implementing the projects should help improve cooperative relationships among the people who use and care for federal land and the agencies that manage the federal land.

Title III. County funds. Title III funds may be used to carry out activities under the Firewise Communities program, to reimburse the county for search and rescue and other emergency services, and to develop community wildfire protection plans.

On January 15, 2009, the Forest Service began distributing more than \$477 million to 41 states and Puerto Rico for improvements to public schools, roads, and stewardship projects. These payments include 25 percent payments, special acts payments, and Secure Rural Schools payments. The 2008 Secure Rural Schools payment and projected payments for FY 2009-2011 can be found in the following table for Fresno, Kern, and Tulare Counties.⁽²⁵⁾

Table 4 2008 Secure Rural Schools payment and projected payments for FY 2009-2011

State	Eligible County	Transition Payment	Projected Transition Payment	Projected Transition Payment	Projected County Share of State Payment	Projected Total State or Transition Payment
		FY 2008	FY 2009	FY 2010	FY 2011	2008-2011
CA	Fresno	\$2,559,116	\$2,303,205	\$2,075,728	\$2,093,420	\$9,031,469
CA	Kern	\$402,898	\$362,608	\$326,795	\$616,284	\$1,708,584
CA	Tulare	\$1,010,700	\$909,630	\$819,790	\$1,707,359	\$4,447,479

Finally, under the new legislation, all three counties have elected to use a resource advisory committee (RAC) to recommend special projects on federal land. Fresno County will continue use of its existing RAC, while Tulare and Kern Counties are in the process of forming a joint RAC. Once appointed by the Secretary of Agriculture, the RAC will solicit projects for 2 years of implementation. RACs were established as a provision of the Secure Rural Schools and Community Self-Determination Act of 2000 under Title II (see above). By law the 4-year term, 15-member committee is composed of a wide representation of national forest interests.⁽²⁶⁾

25 <http://www.fs.fed.us/srs/>

26 More information on the Secure Rural Schools Act, RACs, or transition payments can be found at the following website: <http://www.fs.fed.us/srs/>.

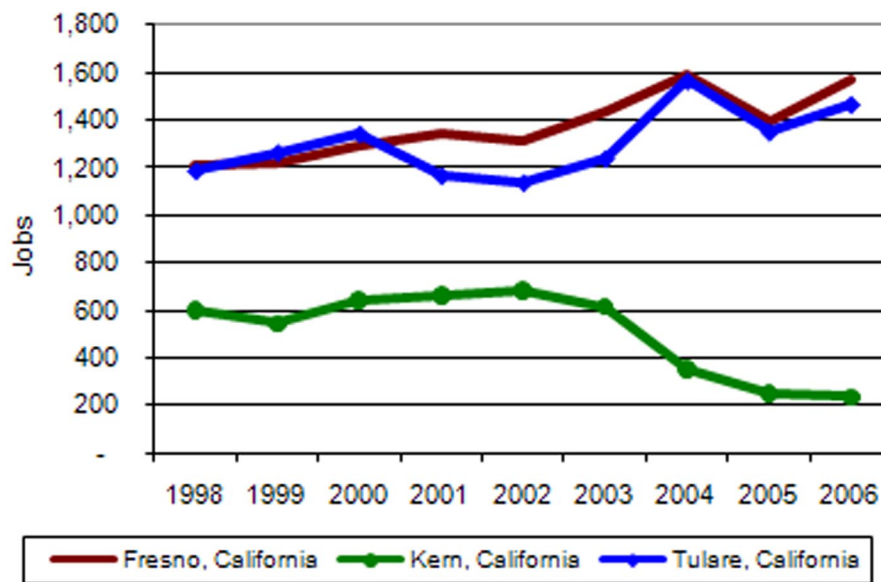
Major Natural Resource Economic Sectors

This section will explore job trends, share of the economy attributed to each sector, differences among counties, and, where applicable, a breakdown of the different types of activity within each sector. Finally an assessment of the Forest Service contribution to these sectors will be presented.

Timber⁽²⁷⁾

From 1998 to 2006 the number of timber-related jobs in the three-county study area exhibited a small upward trend, as shown in the figure below. Since 1986, of all private jobs added to the three-county economy, about 1 in 420 was timber-related. Since 1986, the share of timber-related jobs as a share of the total private employment varied from a low of 0.6 percent in 2005 to a high of 1.2 percent in 1987. All the gain was in Fresno and Tulare counties, with some jobs lost in Kern County in the same period.

Figure 2 Timber-Related Jobs

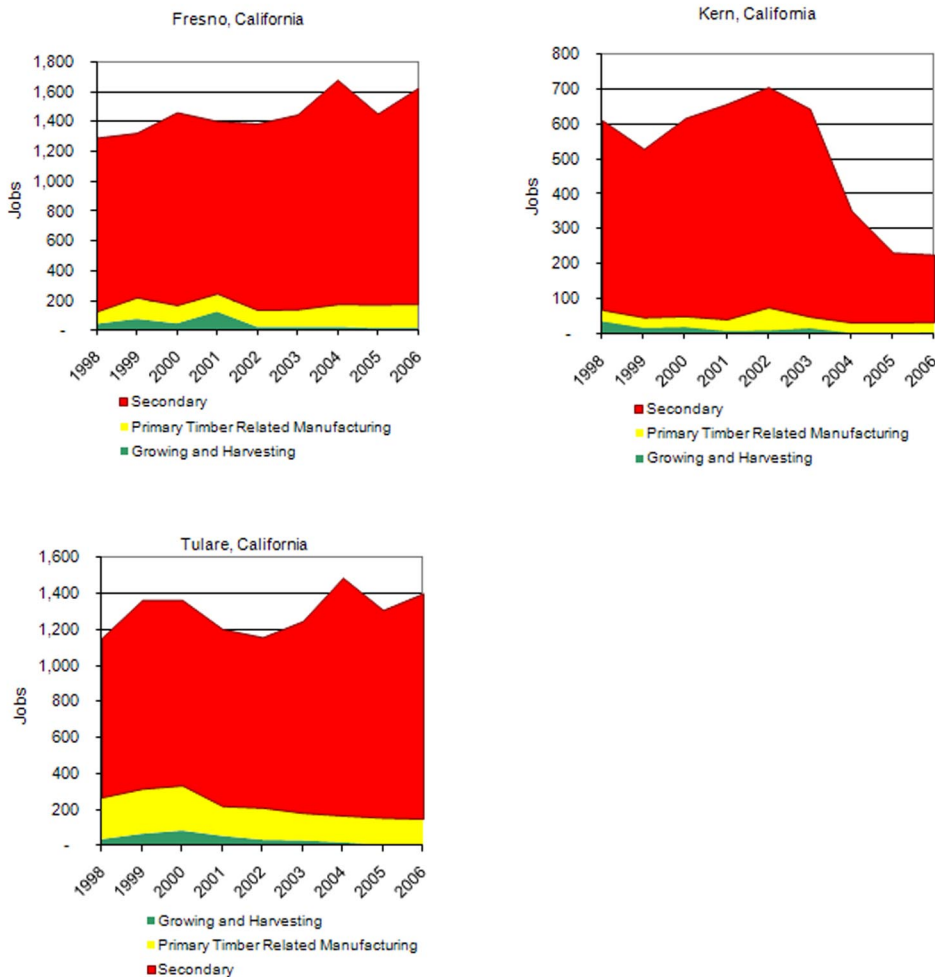


To look at differences within the timber-related employment, this section breaks that employment into three categories: (1) "growing and harvesting" are jobs directly related to logging and forestry. These jobs typically are in the forest; (2) "primary manufacturing" includes the manufacturing that generally takes raw logs and does the first stage of processing (e.g., sawmills and paper mills); (3) "secondary manufacturing" includes manufacturing that generally takes the output from the primary manufacturing and produces finished products. As shown in the figures below,⁽²⁸⁾ these jobs tend to yield the most income per log and are often located far from the source of the logs.

27 Data from EPSA -A Profile of the Timber Industry in 3 County Study Area, 2008.

28 Lines are stacked to sum to total timber related jobs.

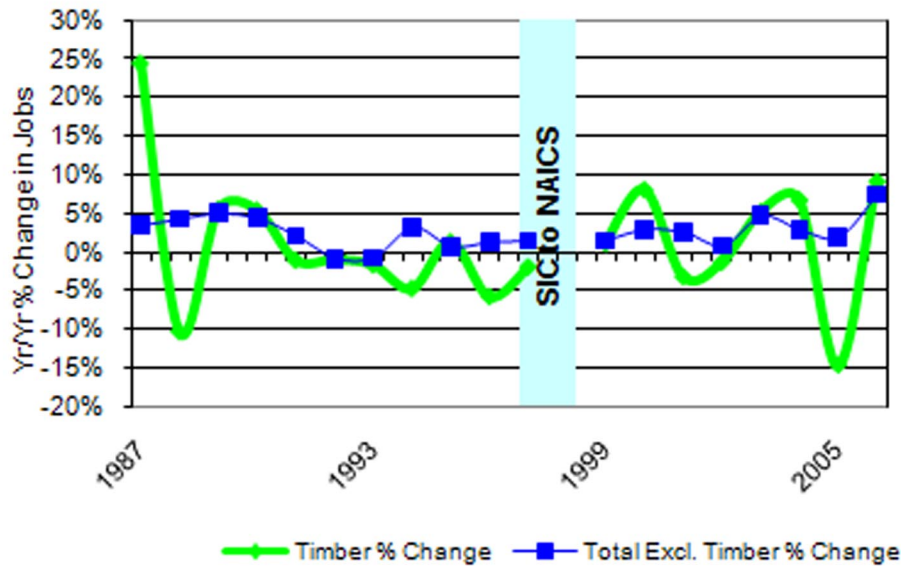
Figure 3 Timber Jobs by Stage of Processing Over Time, 1998-2006



Total timber jobs in Fresno and Tulare Counties were high compared to the national average, ranking in the top 6.0 percent of all counties. With about 0.1 percent of its employment in timber jobs, Kern County still ranks near the upper third of all U.S. counties. The largest number of jobs in all three counties is in secondary timber-related employment. One can see a steady decline in the growing and harvesting category.

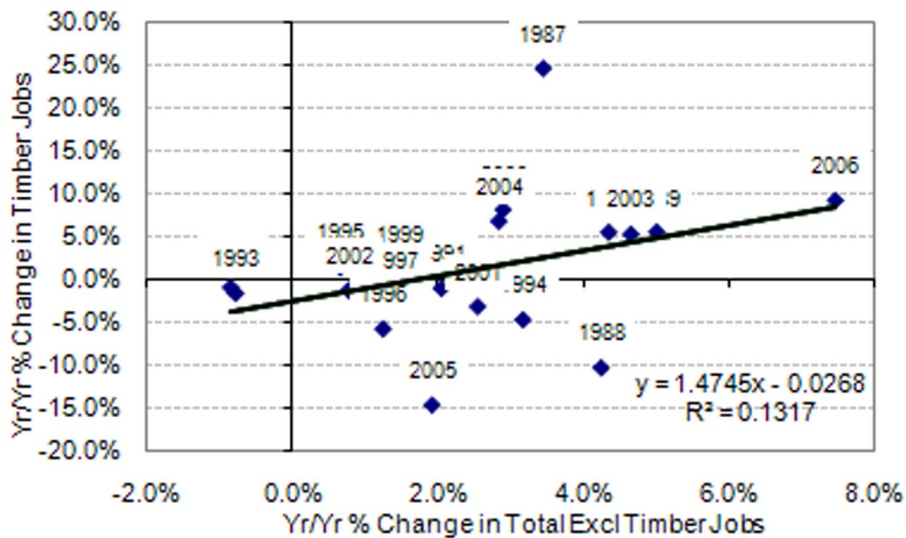
The figure below shows the year-to-year volatility of the timber industry (in green) compared to the rest of the economy (in blue), from 1987 to 2005. It is clear that the timber sector has experienced more variation from year to year than the economy as a whole.

Figure 4 Percent Change in Timber vs. Total Excluding Timber



The figure below plots the percentage change in timber jobs against the percentage change in total jobs excluding timber. When there is a strong relationship, the dots should cluster along a line (straight or perhaps curved). Each observation (dot) is labeled with the year that it represents. This also plots the results of a statistical test—a regression analysis. An R-squared (RSQ) statistic of 1.0 means there is a perfect linear relationship between the timber industry and the rest of the economy; a small RSQ means there is no statistically significant relationship. A linear relationship between timber jobs and total jobs excluding timber is extremely weak (RSQ = 0.13).

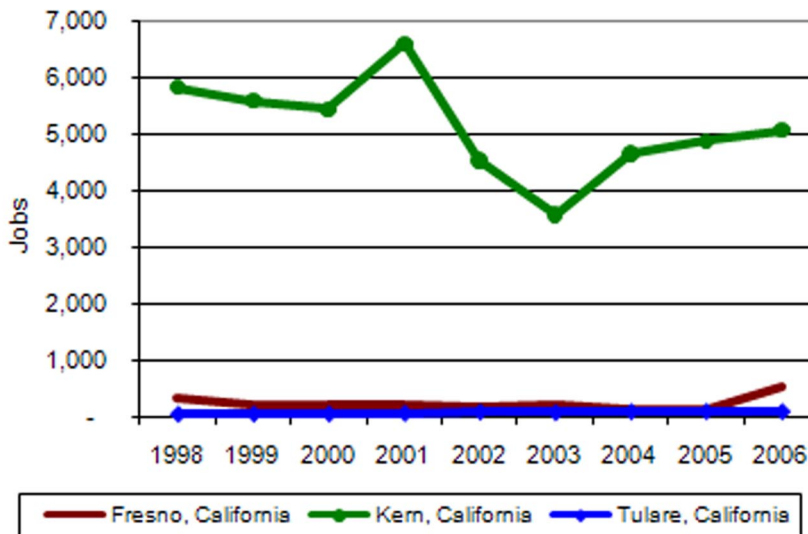
Figure 5 Percent Change in Timber vs. Total Excluding Timber



Mining Data ⁽²⁹⁾

From 1998 to 2006 the number of mining-related jobs in the three-county study area declined by roughly 8 percent (see figure below). Since 1986, the share of mining-related jobs as a share of the total private employment varied from a low of 0.8 percent in 2003 to a high of 3.5 percent in 1986. All the gain was in Fresno and Tulare Counties, with some jobs lost in Kern County in the same period.

Figure 6 Mining Jobs



Total mining jobs in Fresno and Tulare counties were roughly at or slightly above the national average. With about 2 percent of its employment in mining jobs, Kern County ranks in the top 1 percent of U.S. counties. Most of these jobs are in oil and gas extraction and not connected to either the national forest or the Monument. Even while losing jobs in this sector, Kern County still ranks number 8 nationally for mining employment.

Travel and Tourism ⁽³⁰⁾

Travel- and tourism-related jobs are defined as the proportion of the county's (or region's) jobs that are in industries likely to be closely associated with travel and tourism. For example, some part of the transportation industry is in charter buses, shuttle services, and similar sectors. A portion of these sectors is assumed to be travel-related and not local use. Likewise, the retail trade industry includes sectors such as gasoline stations, where only part of the activity can be attributed to travel and tourism.⁽³¹⁾

According to county business patterns, in 2006, just over 4 percent of the jobs in the three-county area were in travel and tourism. By comparison, travel- and tourism-related jobs in the United States accounted for 4.9 percent of the national economy (excludes proprietors and government). As displayed in the figure below, from 1998 to 2006, travel and tourism employment in the three-county study area has grown by 15 percent,

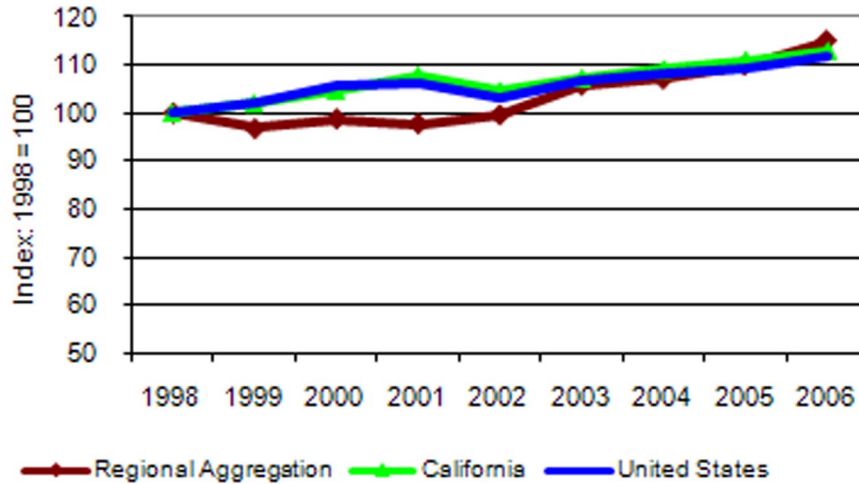
29 EPSA -A Profile of the Mining Industry in 3 County Study Area, 2008.

30 Data from EPSA -A Profile of the Travel and Tourism in 3 County Study Area, 2008.

31 To see the Bureau of Economic Analysis (BEA) description of the travel and tourism industry, see: <http://www.bea.gov/industry/iedguide.htm#ttsa>. For a methodology paper on this technique, see: http://www.bea.gov/scb/pdf/2009/06%20June/0609_travel-text.pdf.

faster than the state or the nation. This growth rate, while impressive, is still almost half that of all private jobs excluding travel and tourism which grew by nearly 28 percent over the same period.

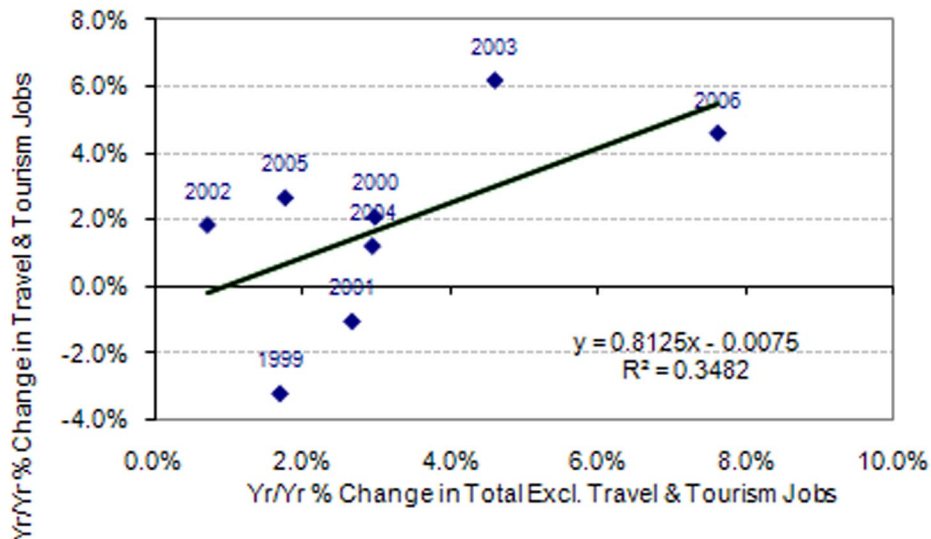
Figure 7 Travel and Tourism Jobs



For the same period, all three counties gained travel- and tourism-related jobs. The share of tourism-related jobs as a share of the total private employment varied from a high of 4.5 percent in 1998 to a low of 4.1 percent in 2006 and generally declined. Close to 42 percent of these jobs are in “food service and drinking places” and 11 percent in retail excluding gasoline stations. Together, the three-county study area accounts for just over 3 percent of California’s travel and tourism jobs.

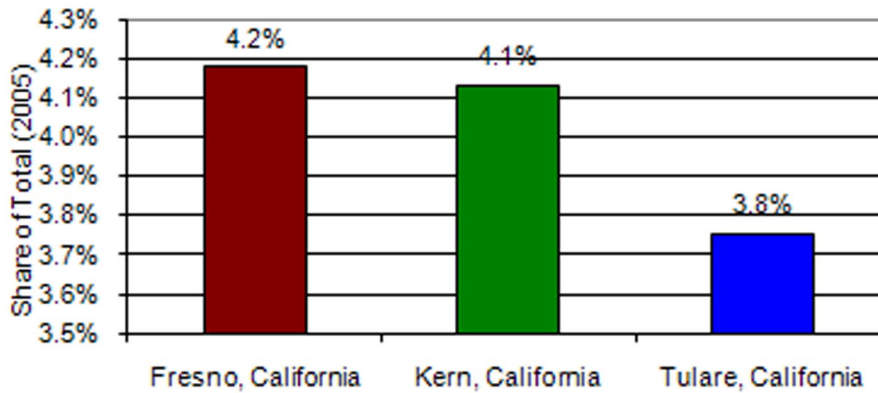
The following scatter chart plots the percentage change in travel and tourism jobs against the percentage change in total jobs excluding travel and tourism. A linear relationship between travel and tourism jobs and total jobs excluding travel and tourism is weak ($RSQ = 0.35$) but stronger than that for timber-related jobs.

Figure 8 Percent Change in Travel & Tourism vs. Total Excluding Travel & Tourism



Travel and tourism jobs in Fresno County were high compared to the national average, ranking in the top 4 percent of all counties (shown below). With about 4 percent of its employment in these jobs, Kern County ranks in the top 6 percent of all U.S. counties and Tulare County ranks in the top 10 percent.

Figure 9 Travel and Tourism Share of Total Employment, 2006



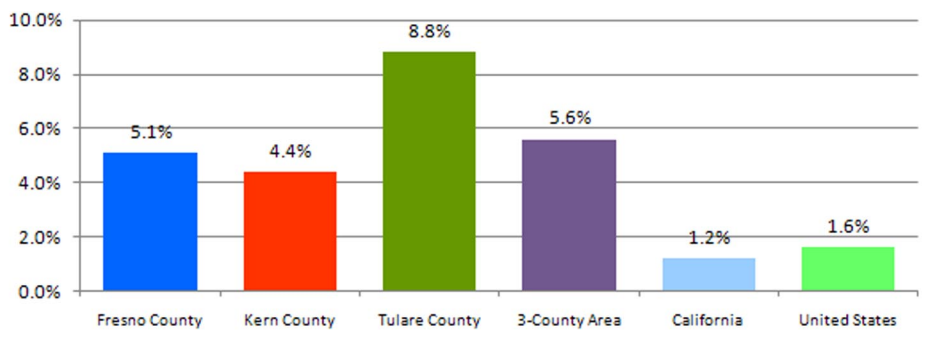
Agriculture⁽³²⁾

The three-county study area ranks among the top five California counties in terms of volume of inventory and production in the following sectors: cattle and calves, almonds, grapes, corn for silage, all vegetables, sheep and lambs, colonies of bees, oranges, and tomatoes. The area has witnessed a major increase in the volume of cattle and calves since the early 1990s, with dairy cattle increasing over three and a half times while beef show a slight decline. Sheep numbers also are in decline.

The three-county area is unique in that farmers’ net income has been positive since the early 1970s. The volatility in net income is strongly influenced by income from crops; any changes in livestock appear to be less important annually.

Agriculture’s share of total jobs, as shown in the following figure, is higher than timber, mining, and travel/tourism combined.

Figure 10 Agriculture Jobs, Share of Total



32 Data from EPSA -A Profile of Agriculture in 3 County Study Area, 2008

Forest Service Contribution

A portion of the economic activity in the three-county area is associated with industries dependent on the use of natural resources within the national forest. The table below includes the direct, indirect, and induced effects of the linkages in the economy. For example, a job as a logger would be a direct effect; the indirect effects would be the jobs created by the logger's need for rigging, gasoline, saws, and the like. The induced effects are what happens to the logger's wages as well as the wages from the saw shop and the gas station.

The following table is the result of IMPLAN/FEAST analysis. IMPLAN is a proprietary system of software and databases produced by Minnesota IMPLAN Group. IMPLAN uses a variety of data sources including:

- U.S. Bureau of Economic Analysis Benchmark Input/Output Accounts of the US
- U.S. Bureau of Economic Analysis Output Estimates
- U.S. Bureau of Economic Analysis Regional Economic Information System (REIS) Program
- U.S. Bureau of Labor Statistics Covered Employment and Wages (ES202) Program
- U.S. Bureau of Labor Statistics Consumer Expenditure Survey
- U.S. Census Bureau County Business Patterns
- U.S. Census Bureau Decennial Census and Population Surveys
- U.S. Census Bureau Economic Censuses and Surveys
- U.S. Department of Agriculture Crop and Livestock Statistics
- U.S. Geological Survey

FEAST is a national Forest Service application which takes the IMPLAN description of the linkages in an economy and adds information specific to Forest Service management to arrive at the Forest Service contribution to that economy. Data include:

- Forest Service Cut and Sold Report
- Forest Service Authorized use for a permit reports (grazing)
- Forest Service National Visitor Use Monitoring reports
- Census of Agriculture reports
- Mill Surveys
- Forest Service Full Time Equivalent (FTE) employment figures
- Forest Service budgets

Table 5 Current Role of Forest Service-Related Contributions to the Area Economy

Industry	Employment (jobs)		Labor Income (thousands of 2008 dollars)	
	Area Totals	FS-Related	Area Totals	FS-Related
Agriculture	159,433	61	4,698,104.10	1,511
Mining	10,290	2	1,246,666.60	424
Utilities	4,054	2	601,376.40	274
Construction	68,018	32	3,864,102.20	1,838
Manufacturing	55,211	29	3,251,478.80	1,476
Wholesale trade	30,546	43	1,845,495.40	2,604
Transportation and warehousing	35,377	23	1,968,696.50	1,242
Retail trade	96,430	122	3,111,047.20	3,827
Information	8,544	11	573,782.80	611
Finance and insurance	26,817	20	1,487,478.90	1,155
Real estate, and rental and leasing	23,344	28	718,293.70	797
Professional, scientific, and technical services	39,428	29	2,081,775.50	1,331
Management of companies	6,819	5	406,822.50	318
Administration, waste management, and remedial services	50,724	31	1,355,542.00	809
Educational services	8,295	6	180,920.90	136
Health care and social assistance	87,117	50	3,883,728.00	2,317
Arts, entertainment, and recreation	9,328	51	179,083.90	1,149
Accommodation and food services	54,559	316	966,172.70	6,070
Other services	57,967	32	1,378,015.00	747
Government	148,843	545	9,739,458.50	18,707
Total	981,144	1,438	43,538,042	47,343
FS as Percent of Total	---	0.15	---	0.11

Gateway Communities⁽³³⁾

While socioeconomic differences exist among the three counties, differences also exist among the smaller communities adjacent to the Monument. Activities in the Monument have the potential to affect those communities frequently referred to as “gateway communities.”

This section will assess the following gateway communities for their unique social and economic characteristics: Springville, Porterville, Tule River Indian Reservation, Squaw Valley, Wofford Heights, Lake Isabella, and Kernville. For each of these communities, the following characteristics are summarized: demographics (race, ethnicity, and age), housing, employment by industry (top 10), place of work, method of commute, specialization index, and source of income. It should be noted that the term “tourism” incorporates a cross-section of categories of employment by industry type; refer to the Travel and Tourism section above for a complete description.

To begin, a comparison of characteristics among the gateway communities, Kern County, Fresno County, Tulare County, the state and nation will be presented from the 2000 census. These comparisons provide an indication of key differences between and among gateway communities.

Demographics

The demographic patterns considered include: median age, largest age category, percent by race, and percent Hispanic or Latino of any race, as shown in the following table. Generally, residents of gateway communities are predominately white and older (88.3 percent or higher white and a median age range of 46.1 to 58.3). Notable exceptions occur on the Tule River Indian Reservation (87.5 percent American Indian or Alaska Native and a median age of 25.8) and Porterville (32.7 percent some other race and a median age of 28.6). Hispanic or Latino populations are greatest in the three-county area and the city of Porterville, ranging from 38.4 percent to 54.5 percent.

Table 6 Comparison of Demographics

Demographics	United States	California	Fresno Co.	Kern Co.	Tulare Co.	Porterville	Springville	Squaw Valley	Tule River Indian R.	Lake Isabella	Kernville	Wofford Heights
Median age	35.3	33.3	29.9	30.6	29.2	28.6	46.1	43.5	25.8	46	52.1	58.3
Largest age Category	35 to 39	35 to 39	5 to 9	5 to 9	5 to 9	5 to 9	45 to 49	50 to 54	10 to 14	10 to 14	15 to 19	70 to 74
% White	75.1	59.5	54.3	61.6	58.1	54.8	94.1	88.3	6.2	90.4	90.6	93.3
% Black or African American	12.3	6.7	5.3	6	1.6	1.3	0.1	1.4	0	0.1	1.2	0.1
% American Indian or Alaska Native	0.9	1	1.6	1.5	1.6	1.7	0.5	2.4	87.5	1.9	2.1	1.2
% Asian	3.6	10.9	8.1	3.4	3.3	4.6	0.3	0.6	0.2	0.8	0.7	0.7

33 Unless otherwise noted, data for each of the listed gateway communities was accessed on October 21, 2009 from “Profiles for Selected Towns Near the Forest (2000 Census Designated Places)” <http://www.headwaterseconomics.org/sequoia.php>.

Demographics	United States	California	Fresno Co.	Kern Co.	Tulare Co.	Porterville	Springville	Squaw Valley	Tule River Indian R.	Lake Isabella	Kernville	Wofford Heights
% Pacific Islander	0.1	0.3	0.1	0.1	0.1	0.2	0	0.2	0	0.1	0.1	0
% Some other race	5.5	16.8	25.9	23.2	30.8	32.7	1.8	4.8	4.8	2.5	2.2	1.4
% Two or more races	2.4	4.7	4.7	4.1	4.6	4.7	3.2	2.3	1.4	4.2	3.2	3.3
% Hispanic or Latino (of any race)	12.5	32.4	44	38.4	50.8	54.5	5.6	12.2	21.6	6.8	8.2	6.2

Housing

Housing patterns considered include: percent of housing units occupied; percent owner occupied or for sale; percent renter occupied or for rent; and percent seasonal, recreational or occasional use (i.e., second home), as shown in the following table. The highest percentage of housing units occupied is in the state (94.2 percent) while the lowest is in the communities of Lake Isabella, Kernville, and Wofford Heights (70.4 percent, 66.1 percent, and 58.4 percent respectively). These same three communities also have the greatest percentage of seasonal, recreational, or occasional use: Lake Isabella, 15.1 percent; Kernville, 28 percent; and Wofford Heights, 29.4 percent. Two communities, Squaw Valley (77.7 percent) and the Tule River Indian Reservation (67.6 percent), have a greater percentage of owner occupied or units for sale than the nation (61.3 percent). Fresno County (43 percent) and the communities of Porterville (44 percent) and Springville (48 percent) have a greater percentage of renter occupied or units for rent than the state (42.1 percent).

Table 7 Comparison of Housing

Housing	United States	California	Fresno Co.	Kern Co.	Tulare Co.	Porterville	Springville	Squaw Valley	Tule River Indian R.	Lake Isabella	Kernville	Wofford Heights
% Housing units occupied	91	94.2	93.4	90.1	92.3	93.6	88.7	88.4	88.8	70.4	66.1	58.4
% Owner occupied or for sale	61.3	54.3	53.6	57.4	57.8	53.9	47.6	77.7	67.6	50.4	51.2	52
% Renter occupied or for rent	33	42.1	43	37.2	37.7	44	48	13.8	21.8	26.7	18.2	11.6
% Seasonal, recreational, or occasional use	3.1	1.9	1.3	2.5	2.3	0.4	3.3	5.6	0.0	15.1	28	29.4

Place of Work

Where residents worked and the time spent commuting included: percent of residents who worked in town, and percent commute time under 20 minutes. The communities of Kernville (34 percent), Wofford Heights (24 percent), Springville (24 percent), and Squaw Valley (6 percent) had a smaller percentage of residents who worked in town than either the state (36 percent) or the nation (42 percent). The percentage of residents with a commute time of 20 minutes or less was greatest in Porterville (64 percent), Kernville (61 percent), and Lake Isabella (59 percent). It should be noted that the commuting distance between the communities of Lake Isabella, Wofford Heights, and Kernville is 20 minutes. The percent of residents with a commute time of 20 minutes or less was least in Squaw Valley (9 percent).

Table 8 Comparison of Place of Work

Place of Work and Method of Commute	United States	California	Fresno Co.	Kern Co.	Tulare Co	Porterville	Springville	Squaw Valley	Tule River Indian R.	Lake Isabella	Kernville	Wofford Heights
% Residents who worked in town	42	36	59	50	44	57	24	6	-(1)	56	34	50
% Commute time under 20 minutes	44	39	50	54	55	64	32	9	51	59	61	54

1. No data available.

Economic Specialization

A diversified regional economy is defined as an economy that has an industrial mix similar to the nation’s. A specialized economy is heavily focused in particular industries. Such specialization may lead to greater variation in labor demand (relative to the nation) if businesses in the same major industry group tend to expand or contract at the same time. The Index of Industrial Specialization indicates the degree of specialization in a given area. The more diverse the economy is, the lower the index value. As shown in the following table, the Tule River Indian Reservation (1455) and Kernville (1028) had the highest index values compared to the nation (789) indicating a greater level of industrial specialization. In Kernville, the education, health and social service sector employed the highest percentage of workers (26 percent), with the majority of these jobs attributable to Camp Owen, a non-secure juvenile forestry camp. On the Tule River Indian Reservation both the education, health and social service sector (27 percent); and the arts, entertainment, recreation, accommodation, and food service sector (24 percent) employed the greatest percentage of workers (a primary employer is the Eagle Mountain Casino).

Table 9 Comparison of Specialization

	United States	California	Fresno Co.	Kern Co.	Tulare Co.	Porterville	Springville	Squaw Valley	Tule River Indian R.	Lake Isabella	Kernville	Wofford Heights
Index of Industrial Specialization	789	746	752	692	840	930	928	750	1,455	913	1,028	911

Sources of Income

Sources of income considered include: labor earnings (wages and self-employed); retirement, social security, or from investments; and public assistance programs, shown in the following table. The communities of Lake Isabella (51.6 percent), Kernville (55.6 percent), and Wofford Heights (41.1 percent) had the lowest percentage of labor earnings while the Tule River Indian Reservation (82.1 percent) had the highest. All gateway communities had a higher percentage of income earned through retirement, social security, or investment than the nation (17 percent). Receiving at least twice the amount of public assistance than the state (0.4 percent) were Fresno County (0.9 percent), Tulare County (0.9 percent), Porterville (1.3 percent), Springville (0.9 percent), Squaw Valley (1.2 percent), and the Tule River Indian Reservation (3.5 percent).

Table 10 Comparison of Sources of Income

Sources of Income	United States	California	Fresno Co.	Kern Co.	Tulare Co.	Porterville	Springville	Squaw Valley	Tule River Indian R.	Lake Isabella	Kernville	Wofford Heights
% Labor earnings	80.4	81.4	79.8	79.7	79.6	77.7	58.1	70.4	82.1	51.6	55.6	41.1
% Retirement, social security, or from investments	17	15.8	15.6	16.1	15.6	17.1	36.8	22.6	11.8	39.8	39.6	52.9
% Public assistance	0.2	0.4	0.9	0.7	0.9	1.3	0.9	1.2	3.5	0.2	0.1	0.4

Springville

The Chamber of Commerce website for the community of Springville⁽³⁴⁾ states, “Welcome to Springville: Gateway to the Giant Sequoia National Monument.” Springville is a census-designated place (CDP) located in Tulare County, California. The population was 1,109 at the time of the 2000 census.

Demographics

As of the 2000 census the racial makeup of the CDP was 94.14 percent white, 0.09 percent African American, 0.54 percent Native American, 0.27 percent Asian, 1.80 percent from other races, and 3.16 percent from two or more races. Hispanic or Latino of any race was 5.59 percent of the population. The median age in 2000 was 46.1 years of age and the largest age category was 45-49 years old (98 people or 8.8 percent of the population).

Housing

In 2000, of the 613 total housing units 88.7 percent were occupied; 47.6 percent of the housing units were owner occupied or for sale, while 48 percent were renter occupied or for rent; 3.3 percent of the housing units were vacant for use as seasonal, recreational, or occasional use (e.g., second homes). Guest lodging is available and includes several bed and breakfast inns as well as guest ranches (Springville Chamber of Commerce 2009, accessed on October 21, 2009, from <http://springville.ca.us/businessstour.html>).

Employment by Industry

The following table illustrates the top 10 categories of employment by industry type for the community of Springville in the year 2000. The education, health, and social service sector employed the largest percent of residents (34 percent).

Table 11 Top 10 Categories of Employment by Industry Type in Springville

	Number	Percent
1) Educational, health, and social services	129	34
2) Construction	32	8
3) Other services (except public administration)	28	7
4) Finance, insurance, real estate, and rental and leasing	28	7
5) Transportation and warehousing, and utilities	25	7
6) Professional, scientific, management, administration, and waste management services	24	6
7) Retail trade	22	6
8) Public administration	20	5

34 2009, accessed on October 21, 2009, from <http://www.springville.ca.us/>.

	Number	Percent
9) Arts, entertainment, recreation, accommodation, and food services	19	5
10) Agriculture, forestry, fishing and hunting, and mining	19	5
Total of top 10	346	91

Place of Work

As of 2000, 24 percent of residents worked in Springville while 76 percent of residents worked outside the community. Thirty-two percent of residents experienced a commute time of less than 20 minutes.

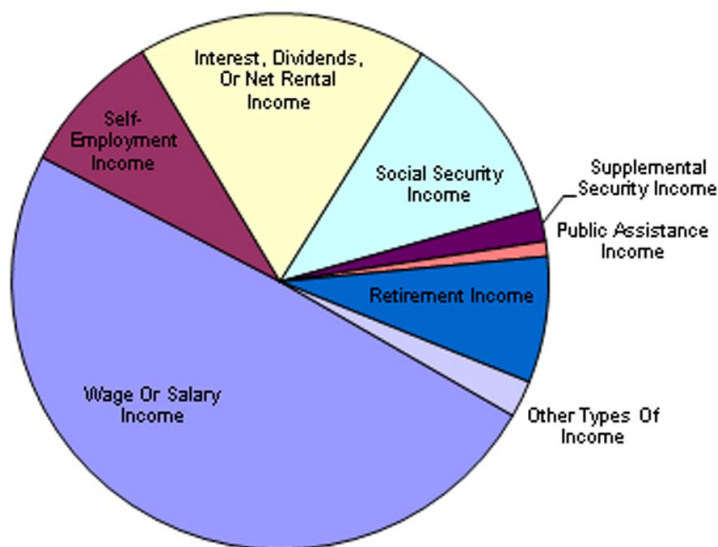
Specialization Index

The Index of Industrial Specialization indicates the degree of specialization in a given area. The more diverse the economy is, the lower the index value. An over-dependence on a narrow range of industries can be detrimental in terms of employment, activity, and workers’ displacement. The index in 2000 was 928 for Springville compared to 789 in the United States.

Sources of Income

In the following figure, 58.1 percent of income in Springville was from labor earnings (wages and self-employed income); 36.8 percent of income was from retirement, social security, or from investments; and 0.9 percent income came from public assistance programs.

Figure 11 Sources of Income in Springville



Porterville

According to Wikipedia, the free on-line encyclopedia,⁽³⁵⁾ "Porterville is located in the foothills of the Sierra Nevadas, and many of the town's inhabitants are intimately familiar with the upper regions of the hills. There is also a large man-made body of water, Lake Success, which finds much use for recreation and revelry when in season."

Porterville is a city in Tulare County, California. The population was 39,615 at the time of the 2000 census. The current population is listed as 52,056 on the City of Porterville's website.⁽³⁶⁾ The city's population grew dramatically as the city annexed many properties and unincorporated areas in and around Porterville.⁽³⁷⁾ Porterville is considered part of the Census Bureau's designation of the Visalia-Porterville metropolitan statistical area.

Demographics

As of the 2000 census, the racial makeup of the city was 49.75 percent white, 1.28 percent African American, 1.73 percent Native American, 4.63 percent Asian, 0.15 percent Pacific Islander, 32.71 percent from other races, and 4.75 percent from two or more races. Hispanic or Latino of any race was 54.45 percent of the population. The median age in 2000 was 28.6 years of age and the largest age category was 5 to 9 years old (3,919 people or 9.9 percent of the population).

Housing

In 2000, of the 12,691 total housing units 93.6 percent were occupied. 53.9 percent of the housing units were owner occupied or for sale while 44 percent were renter occupied or for rent; 0.4 percent of the housing units were vacant for use as seasonal, recreational, or occasional use (e.g. second homes). Guest lodging is available in a number of hotels and motels in and around the city.

Employment by Industry

The following table illustrates the top 10 categories of employment by industry type for the city of Porterville in the year 2000. The education, health, and social service sector employed the largest percent of residents (28 percent). Major employers include the Porterville Developmental Center, the Porterville public schools, and the Sierra View District Hospital.⁽³⁸⁾ Retail trade and agriculture were the second and third largest employers at 13 percent and 11 percent respectively. Major retail trade and agriculture employers include Wal-Mart and Foster Farms.⁽³⁹⁾

Table 12 Top 10 Categories of Employment by Industry Type in Porterville

	Number	Percent
1) Educational, health, and social services	3,984	28
2) Retail trade	1,769	13
3) Agriculture, forestry, fishing and hunting, and mining	1,588	11

35 Accessed on October 14, 2009, from <http://en.wikipedia.org/wiki/>

36 2008, accessed on October 14, 2009, from <http://www.chooseporterville.com>

37 Wikipedia 2009, accessed on October 14, 2009, from http://en.wikipedia.org/wiki/Porterville,_California

38 City of Porterville 2008, accessed on October 14, 2009, from <http://www.chooseporterville.com>

39 City of Porterville 2008, accessed on October 14, 2009, from <http://www.chooseporterville.com>

	Number	Percent
4) Manufacturing	1,079	8
5) Arts, entertainment, recreation, accommodation, and food services	954	7
6) Public administration	900	6
7) Wholesale trade	734	5
8) Other services (except public administration)	728	5
9) Professional, scientific, management, administration, and waste management services	665	5
10) Construction	649	5
Total of top 10	13,050	92

Place of Work

As of 2000, 57 percent of residents worked in Porterville while 43 percent of residents worked outside of the city. Sixty-four percent of residents experienced a commute time of less than 20 minutes.

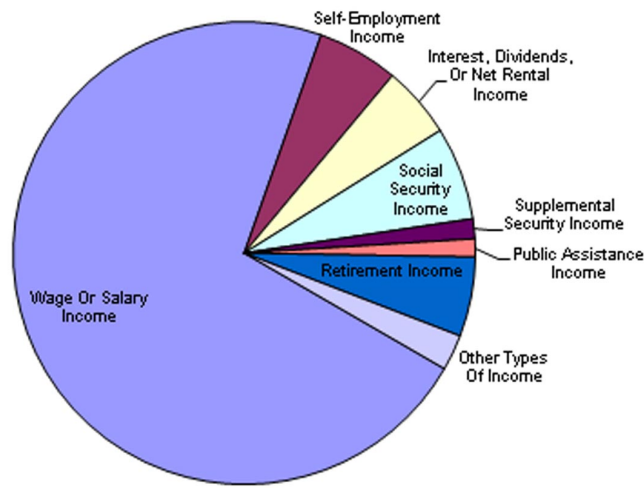
Specialization Index

The Index of Industrial Specialization indicates the degree of specialization in a given area. The more diverse the economy is, the lower the index value. An over-dependence on a narrow range of industries can be detrimental in terms of employment, activity, and workers’ displacement. The index in 2000 was 930 for Porterville compared to 789 in the United States.

Sources of income

In Porterville, 77.7 percent of income was from labor earnings (wages and self-employed income); 17.1 percent of income was from retirement, social security, or from investments; and 1.3 percent income came from public assistance programs (shown below).

Figure 12 Sources of Income in Porterville



Tule River Indian Reservation

The Tule River Indian Tribe's official website states,

Established in 1873, the Tule River Indian Reservation is estimated to cover almost 85 square miles of rugged foothill lands of the Sierra Nevada Mountains. The reservation is located in a remote rural area approximately 20 miles from the nearest town of Porterville. The two nearest cities of size are Fresno, approximately 70 miles north of Porterville and Bakersfield, which is approximately 50 miles south of Porterville. The reservation is accessible only by one winding paved road that follows the meandering South Fork of the Tule River. It is isolated in a rugged setting that allows for privacy and for development independent from urban or recreational sprawl.⁽⁴⁰⁾

At the time of the 2000 census, 566 tribal members lived on the reservation.

Demographics

As of the 2000 census the racial makeup of the reservation was 87.5 percent Native American, 6.2 percent white, 0.2 percent Asian, 4.8 percent from other races, and 1.4 percent from two or more races. Hispanic or Latino of any race was 21.6 percent of the population. The median age in 2000 was 25.8 years of age and the largest age category was 10 to 14 years old (60 people or 10.6 percent of the population).

Housing

In 2000, of the 179 total housing units 88.8 percent were occupied; 67.6 percent of the housing units were owner occupied or for sale; and 21.8 percent were renter occupied or for rent. Zero percent of the housing units were vacant for use as seasonal, recreational, or occasional use (e.g., second homes).

40 Tule River Indian Reservation 2009, accessed on October 14, 2009 from <http://www.tulrivertribe-nsn.gov/index.php>

Employment by Industry

The following table illustrates the top 10 categories of employment by industry type for the Tule River Indian Tribe in the year 2000. The education, health, and social service sector employed the largest percent of residents (27 percent). The Tule River Tribe has three enterprises that contribute to their self-sufficiency, including: the Eagle Mountain Casino, Tule River Aero Industries, and the Eagle Feather Trading Post.⁽⁴¹⁾

Table 13 Top 10 Categories of Employment by Industry Type on the Tule River Indian Reservation

	Number	Percent
1) Educational, health, and social services	48	27
2) Arts, entertainment, recreation, accommodation, and food services	43	24
3) Public administration	18	10
4) Retail trade	14	8
5) Agriculture, forestry, fishing and hunting, and mining	14	8
6) Construction	12	7
7) Professional, scientific, management, administration, and waste management services	10	6
8) Finance, insurance, real estate, and rental and leasing	6	3
9) Transportation and warehousing, and utilities	6	3
10) Other services (except public administration)	5	3
Total of top 10	176	# ⁽¹⁾

1. No data available.

Place of Work

Fifty-one percent of residents experienced a commute time of less than 20 minutes.

Specialization Index

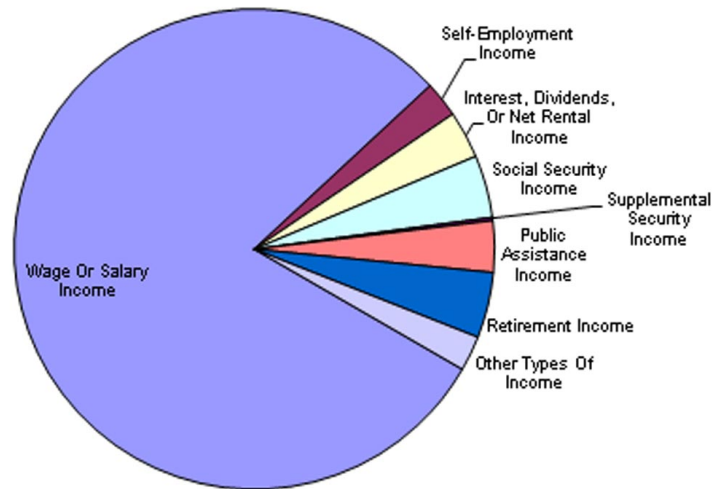
The Index of Industrial Specialization indicates the degree of specialization in a given area. The more diverse the economy is, the lower the index value. An over-dependence on a narrow range of industries can be detrimental in terms of employment, activity, and workers’ displacement. The index in 2000 was 1455 for the Tule River Indian Reservation compared to 789 in the United States. On the Tule River Indian Reservation both the education, health and social service sector (27 percent), and the arts, entertainment, recreation, accommodation, and food service sector (24 percent) employed the greatest percentage of workers (a primary employer is the Eagle Mountain Casino).

41 Tule River Indian Reservation 2009, accessed on October 15, 2009, from <http://www.tulerivertribe-nsn.gov/enterprises>

Sources of Income

On the Tule River Indian Reservation, 82.1 percent of income was from labor earnings (wages and self-employed income); 11.8 percent of income was from retirement, social security, or from investments; and 3.5 percent income came from public assistance programs (see below).

Figure 13 Sources of Income on the Tule River Indian Reservation



Squaw Valley

Squaw Valley is a sparsely populated, rural area in the Sierra Nevada foothills in Fresno County, California. The population was 2,691 at the time of the 2000 census. The population in 2007 was listed as 3,016 on the City-data.com website for Squaw Valley.⁽⁴²⁾ The closest town is Orange Cove, 3 miles south-southwest, and the closet city is Visalia, approximately 26 miles south-southwest with a population of more than 91,000.

Demographics

As of the 2000 census the racial makeup of the community was 88.3 percent white, 1.4 percent African American, 2.4 percent Native American, 0.6 percent Asian, 0.2 percent Pacific Islander, 4.8 percent from other races, and 2.3 percent from two or more races. Hispanic or Latino of any race was 12.2 percent of the population. The median age in 2000 was 43.5 years of age and the largest age category was 50 to 54 years old (257 people or 9.6 percent of the population).

42 2009, accessed on October 15, 2009, from <http://www.city-data.com/city/Squaw-Valley-California.html>

Housing

In 2000, of the 1160 total housing units 88.4 percent were occupied; 77.7 percent of the housing units were owner occupied or for sale; and 13.8 percent were renter occupied or for rent. Some 5.6 percent of the housing units were vacant for use as seasonal, recreational, or occasional use (e.g. second homes). Limited guest lodging is available in Squaw Valley although additional hotels and motels are available in the nearby towns of Miramonte and Dunlap.

Employment by Industry

The table below illustrates the top 10 categories of employment by industry type for the community of Squaw Valley in the year 2000. The education, health, and social service sector employed the largest percent of residents (19 percent).

Table 14 Top 10 Categories of Employment by Industry Type in Squaw Valley

	Number	Percent
1) Educational, health, and social services	191	19
2) Public administration	123	12
3) Construction	106	10
4) Transportation and warehousing, and utilities:	94	9
5) Retail trade	93	9
6) Wholesale trade	68	7
7) Professional, scientific, management, administration, and waste management services	65	6
8) Manufacturing	61	6
9) Arts, entertainment, recreation, accommodation, and food services	57	6
10) Finance, insurance, real estate, and rental and leasing:	48	5
Total of top 10	906	89

Place of Work

As of 2000, 6 percent of residents worked in Squaw Valley while 94 percent of residents worked outside of the community. Nine percent of residents experienced a commute time of less than 20 minutes.

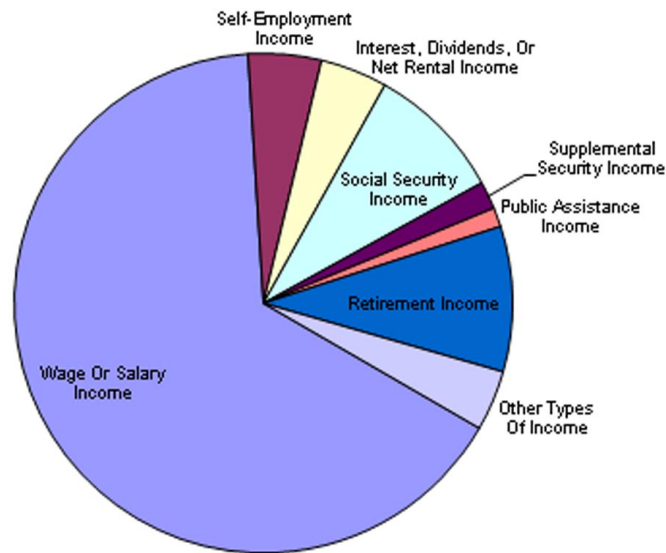
Specialization Index

The Index of Industrial Specialization indicates the degree of specialization in a given area. The more diverse the economy is, the lower the index value. An over-dependence on a narrow range of industries can be detrimental in terms of employment, activity, and workers' displacement. The index in 2000 was 750 for Squaw Valley compared to 789 in the United States.

Sources of Income

In Squaw Valley, 70.4 percent of income was from labor earnings (wages and self-employed income); 22.6 percent of income was from retirement, social security, or from investments; and 1.2 percent income came from public assistance programs (figure below).

Figure 14 Sources of Income in Squaw Valley



Wofford Heights

I.L. Wofford founded the community as a resort in 1948.⁽⁴³⁾ Today, Wofford Heights is a small retirement village on the edge of Lake Isabella and the Sequoia National Forest. Wofford Heights is a census-designated place (CDP) in Kern County, California. The community is located 3.5 miles south-southwest of Kernville, at an elevation of 2,684 feet. The population was 2,276 at the time of the 2000 census.

Demographics

As of the 2000 census the racial makeup of the community was 93.3 percent white, 0.1 percent African American, 1.2 percent Native American, 0.7 percent Asian, 0 percent Pacific Islander, 1.4 percent from other races, and 3.3 percent from two or more races. Hispanic or Latino of any race was 6.2 percent of the population. The median age in 2000 was 58.3 years of age and the largest age category was 70 to 74 years old (241 people or 10.6 percent of the population).

43 Wikipedia 2009, accessed on October 15, 2009, from http://en.wikipedia.org/wiki/Wofford_Heights,_California

Housing

In 2000, of the 1,989 total housing units 58.4 percent were occupied; 52 percent of the housing units were owner occupied or for sale; and 11.6 percent were renter occupied or for rent. Some 29.4 percent of the housing units were vacant for use as seasonal, recreational, or occasional use (e.g., second homes). Guest lodging, vacation rentals, and camping are available in Wofford Heights as well as in the surrounding communities of Kernville and Lake Isabella.

Employment by Industry

The table below illustrates the top 10 categories of employment by industry type for the community of Wofford Heights in the year 2000. The education, health, and social service sector employed the largest percent of residents (23 percent).

Table 15 Top 10 Categories of Employment by Industry Type in Wofford Heights

	Number	Percent
1) Educational, health, and social services	128	23
2) Construction	84	15
3) Arts, entertainment, recreation, accommodation, and food services	75	14
4) Retail trade	55	10
5) Manufacturing	48	9
6) Professional, scientific, management, administration, and waste management services	40	7
7) Agriculture, forestry, fishing and hunting, and mining	35	6
8) Transportation and warehousing, and utilities	33	6
9) Public administration	18	3
10) Finance, insurance, real estate, and rental and leasing	16	3
Total of top 10	532	97

Place of Work

As of 2000, 24 percent of residents worked in Wofford Heights while 76 percent of residents worked outside of the community. Forty-seven percent of residents experienced a commute time of less than 20 minutes.

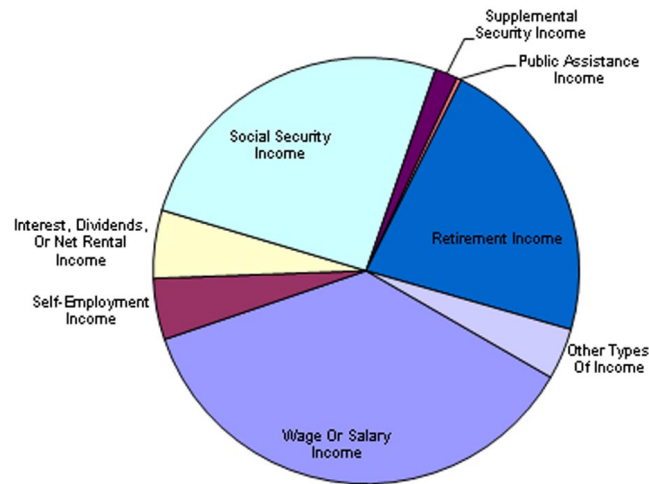
Specialization Index

The Index of Industrial Specialization indicates the degree of specialization in a given area. The more diverse the economy is, the lower the index value. An over-dependence on a narrow range of industries can be detrimental in terms of employment, activity, and workers’ displacement. The index in 2000 was 911 for Wofford Heights compared to 789 in the United States.

Sources of Income

In Wofford Heights, 41.1 percent of income was from labor earnings (wages and self-employed income); 52.9 percent of income was from retirement, social security, or from investments; and 0.4 percent income came from public assistance programs (figure below).

Figure 15 Sources of Income in Wofford Heights



Lake Isabella

Lake Isabella is a census-designated place (CDP) in Kern County, California, located near Kernville, CA. Lake Isabella is located 35 miles (56 km) east-northeast of Bakersfield, at an elevation of 2,513 feet. Lake Isabella was created by a dam on the Kern River in 1953 and sits at the confluence of the North and South Forks of the Kern River.⁽⁴⁴⁾ The population was 3,315 at the time of the 2000 census.

Demographics

As of the 2000 census the racial makeup of the community was 90.4 percent white, 0.1 percent African American, 1.9 percent Native American, 0.8 percent Asian, 0.1 percent Pacific Islander, 2.5 percent from other races, and 4.2 percent from two or more races. Hispanic or Latino of any race was 6.8 percent of the population. The median age in 2000 was 46 years of age and the largest age category was 10 to 14 years old (248 people or 7.5 percent of the population).

Housing

In 2000, of the 2,168 total housing units 70.4 percent were occupied; 50.4 percent of the housing units were owner occupied or for sale; and 26.7 percent were renter occupied or for rent. Some 15.1 percent of the housing units were vacant for use as seasonal, recreational, or occasional use (e.g., second homes). Guest lodging, vacation rentals, and camping are available at Lake Isabella as well as in the surrounding communities of Kernville, Wofford Heights, and Alta Sierra.

44 Wikipedia 2009, accessed on October 15, 2009, from http://en.wikipedia.org/wiki/Lake_Isabella,_California

Employment by Industry

The following table illustrates the categories of employment by industry type for the community of Lake Isabella in the year 2000. The education, health, and social service sector employed the largest percent of residents (24 percent).

Table 16 Top 10 Categories of Employment by Industry Type in Lake Isabella

	Number	Percent
1) Educational, health, and social services	203	24
2) Retail trade	131	15
3) Arts, entertainment, recreation, accommodation, and food services	92	11
4) Professional, scientific, management, administration, and waste management services	68	8
5) Transportation and warehousing, and utilities	60	7
6) Construction	57	7
7) Other services (except public administration)	56	7
8) Finance, insurance, real estate, and rental and leasing	54	6
9) Manufacturing	44	5
10) Public administration	34	4
Total of top 10	799	93

Place of Work

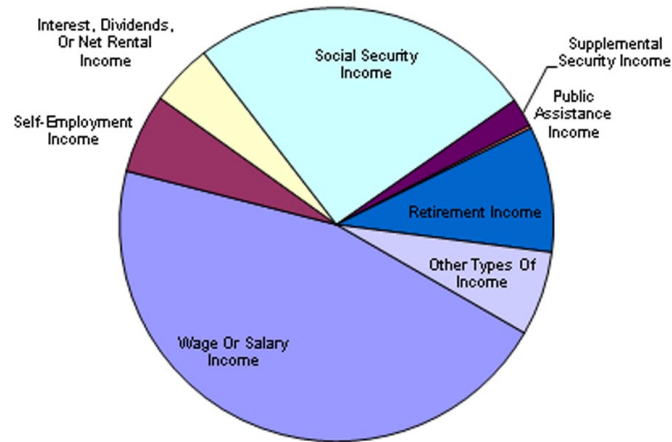
As of 2000, 56 percent of residents worked in Lake Isabella, while 44 percent of residents worked outside of the community. Fifty-nine percent of residents experienced a commute time of less than 20 minutes.

Specialization Index

The Index of Industrial Specialization indicates the degree of specialization in a given area. The more diverse the economy is, the lower the index value. An over-dependence on a narrow range of industries can be detrimental in terms of employment, activity, and workers’ displacement. The index in 2000 was 913 for Lake Isabella compared to 789 in the United States.

Sources of Income

In Lake Isabella, 51.6 percent of income was from labor earnings (wages and self-employed income); 39.8 percent of income was from retirement, social security, or from investments; and 0.2 percent income came from public assistance programs (figure below).

Figure 16 Sources of Income in Lake Isabella

Kernville

Kernville is a census-designated place (CDP) in Kern County, California. Kernville is located 42 miles northeast of Bakersfield, at an elevation of 2667 feet. The Kern River, Kernville, and the Kern Valley they occupy were named after artist and topographer Edward M. Kern, who was a part a group of settlers led by Captain Joseph Reddeford Walker in 1845-46.⁽⁴⁵⁾ Today, Kernville supports a tourist industry centered on the white water rapids of the Kern River. The population was 1,736 at the time of the 2000 census.

Demographics

As of the 2000 census the racial makeup of the community was 90.6 percent white, 1.2 percent African American, 2.1 percent Native American, 0.7 percent Asian, 0.1 percent Pacific Islander, 2.2 percent from other races, and 3.2 percent from two or more races. Hispanic or Latino of any race was 8.2 percent of the population. The median age in 2000 was 52.1 years of age and the largest age category was 15 to 19 years old (179 people or 10.3 percent of the population). The large size of this age category is attributable to wards of Camp Owen, a non-secure juvenile forestry camp.

Housing

In 2000, of the 1,210 total housing units 66.1 percent were occupied; 51.2 percent of the housing units were owner occupied or for sale; and 18.2 percent were renter occupied or for rent. Twenty-eight percent of the housing units were vacant for use as seasonal, recreational, or occasional use (e.g. second homes). Guest lodging, vacation rentals, and camping are available in Kernville as well as in the surrounding communities of Lake Isabella, Kernville, Wofford Heights, and Alta Sierra.

45 Wikipedia 2009, accessed on October 15, 2009, from http://en.wikipedia.org/wiki/Kernville,_CA

Employment by Industry

The table below illustrates the top 10 categories of employment by industry type for the community of Kernville in the year 2000. The education, health, and social service sector employed the largest percent of residents (26 percent).

Table 17 Top 10 Categories of Employment by Industry Type in Kernville

	Number	Percent
1) Educational, health, and social services	129	26
2) Public administration	60	12
3) Retail trade	59	12
4) Construction	58	11
5) Other services (except public administration)	54	11
6) Arts, entertainment, recreation, accommodation and food services:	37	7
7) Agriculture, forestry, fishing and hunting, and mining	33	7
8) Wholesale trade	31	6
9) Finance, insurance, real estate, and rental and leasing:	22	4
10) Manufacturing	22	4
Total of top 10	505	### ⁽¹⁾

1. No data available.

Place of Work

As of 2000, 34 percent of residents worked in Kernville, while 66 percent of residents worked outside of the community. Sixty-one percent of residents experienced a commute time of less than 20 minutes.

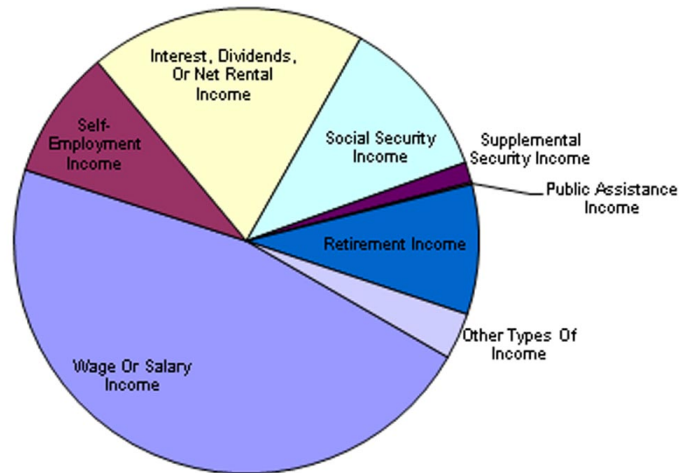
Specialization Index

The Index of Industrial Specialization indicates the degree of specialization in a given area. The more diverse the economy is, the lower the index value. An over-dependence on a narrow range of industries can be detrimental in terms of employment, activity, and workers’ displacement. The index in 2000 was 1,028 for Kernville compared to 789 in the United States. In Kernville, the education, health, and social service sector employed the highest percentage of workers (26 percent), with the majority of these jobs attributable to Camp Owen, a non-secure juvenile forestry camp.

Sources of Income

In Kernville, 55.6 percent of income was from labor earnings (wages and self-employed income); 39.6 percent of income was from retirement, social security, or from investments; and 0.1 percent income came from public assistance programs (figure below).

Figure 17 Sources of Income in Kernville



Public Values, Beliefs, and Attitudes

Our values, beliefs, and attitudes are the force behind almost any decisionmaking activity. According to RFP Evaluation Centers (2009), “They are responsible for the perceived discrepancy between the present and a desirable state. Values are articulated in a goal, which is often the first step in a formal decision process. This goal may be put forth by an individual (decisionmaker) or by a group of people.”

On the Sequoia National Forest, a third-party neutral facilitator hired by the U.S. Institute for Environmental Conflict Resolution interviewed stakeholders and Forest Service staff over the course of a year to understand issues and develop goals for the Giant Sequoia National Monument management plan. Identified goals (that is, criteria) formed the basis of a decision process or framework for evaluating alternatives. These sometimes competing goals include: protecting individual objects, protecting ecosystems, managing fire processes, fostering socio-economics, increasing enjoyment of the monument, reducing cost, creating a compelling plan, and complying with the law. Each of these goals was further refined through a series of meetings and workshops to describe the key components of each goal (that is, sub-criteria).⁽⁴⁶⁾ For example, the goal to foster socioeconomics was refined to include the sub-criteria: gateway economic development, diversity of opportunities, protecting communities from fire, connecting people to place, strengthening partnerships, and research, inventory and analysis.⁽⁴⁷⁾

The decision framework is essentially a multi-criteria decision support tool used to evaluate each alternative for its importance (values) and for its performance (ratings). The use of a multi-criteria decision support tool is not new and has been used by decisionmakers in a variety of situations to assist in reaching the best decision given complex and often competing criteria (Saaty 1992B). The International Society on Multiple Criteria Decision Making defines Multi-Criteria Decision Making (MCDM) as, “The study of methods and procedures by which concerns about multiple conflicting criteria can be formally incorporated into the management

46 Workshops included: Sequoia National Forest leadership team meeting in August, 2008; four public meetings with the Sequoia Monument Recreation Council, focusing primarily on the goal “increase enjoyment of the monument;” and three public meetings focused on vegetation management.

47 Decision framework dated June 15, 2009.

planning process" (RFP Evaluation Centers 2009). RFP Evaluation Centers (2009) offer further background on this decision process:

Decision Theory. Decision analysis looks at the paradigm in which an individual decision maker (or decision group) contemplates a choice of action in an uncertain environment. The theory of decision analysis is designed to help the individual make a choice among a set of pre-specified alternatives. The decision making process relies on information about the alternatives. The quality of information in any decision situation can run the whole gamut from scientifically-derived hard data to subjective interpretations, from certainty about decision outcomes (deterministic information) to uncertain outcomes represented by probabilities and fuzzy numbers. This diversity in type and quality of information about a decision problem calls for methods and techniques that can assist in information processing. Ultimately, these methods and techniques (MCDM) may lead to better decisions.

Running concurrently with the scoping period was a public opportunity to use the Values and Interest-Based Explorer (VIBE) model (See the Public Involvement section of Chapter 1 of this FEIS). The table below shows the decision framework for the scoping period. Opportunity for comment on the decision framework was further extended to stakeholders through four additional public meetings held in April 2009.

Table 18 Decision Framework from General Scoping

Goal	Criteria	Sub-criteria
What matters to you?	Protect individual objects	Geology (spires, domes, caves)
		Individually named Giant Sequoia
		Individual historic objects
		Individual threatened and endangered species
	Protect ecosystems	Mixed conifer
		Mixed conifer emphasizing groves
		Oak
		Caves
	Manage processes	Air quality (including effects on plants)
		Fire process
		Species shift
		Climate change
	Increase enjoyment of the Monument	Promotes diversity of users
		Promotes diversity of uses
		Provides access
		Protects resources
Connects people to others and across generations		

Goal	Criteria	Sub-criteria
		Connects people to the land and its history
	Foster socio-economics	Supports gateway economic development
		Provides a diversity of opportunities
		Strengthens partnerships, Enjoys broad support
		Protects communities from fire
		Protects human health
		Supports connection of all to place
		Reduce cost of development and implementation
	Is cost-effective to administer	
	Monitoring is cost-effective	
	Course-corrects	
	Create compelling plan	Strengthens partnerships (agency)
		Creates/reinforces identity of the Monument
		Is practical and believable
		Works cross-boundary
		Engenders strong support from community
		Attracts resources
		Holds Forest Service accountable
	Comply with the law	Meets Endangered Species Act requirements
		Meets Clean Air Act requirements
		Complies with other statutes
		Satisfies the MSA
		Complies with the Clinton proclamation
		Meets Forest Service rules and regulations
		Is consistent with other applicable plans

The results of these general scoping efforts are summarized below.⁽⁴⁸⁾ A website using the MCDS format will also be available during the comment period for this FEIS and will let the public compare the alternatives considered in detail based on their values, interests and beliefs.

48 Fox Mediation and InfoHarvest on behalf of the U.S. Institute for Environmental Conflict Resolution, June 2009.

Table 19 Results of Comments Registered on Framework Criteria (VIBE)

Criteria	Value Scale					
	All That Matters	Really Matters	One Thing That Matters	Does Not Much Matter	Could Hardly Care Less	Is a Sideboard
Protect individual objects	6	21	41	9	3	1
Protect ecosystems	8	41	25	5	1	1
Manage processes	4	27	34	12	3	1
Increase enjoyment of the monument	7	40	25	6	2	1
Foster socio-economics	3	18	36	15	8	1
Reduce cost of development and implementation	5	19	36	16	3	2
Create a compelling plan	3	28	37	7	5	1

After the Sequoia National Forest interdisciplinary team analyzed public comment, preliminary alternatives were developed. Also, based on the comments received, several changes were proposed to the decision framework including: adding hydrology as a process; establishing fire as a criterion; and refining sub-criteria for “create a compelling plan” (shown in the table below).⁽⁴⁹⁾ Preliminary alternatives and the updated decision framework were shared in public meetings held on June 18, 19, and 20, 2009.

Table 20 Decision Framework for Draft EIS Scoping Period

Goal	Criteria	Sub-criteria
What matters to you?	Protect individual objects	Geology (spires, domes, caves)
		Individually named Giant Sequoia
		Individual cultural resources
		Individual threatened and endangered species
	Increase ecosystem health	Diversity of flora and fauna species
		Resilience to disturbance
		Mixed conifer
		Mixed conifer emphasizing groves
		Hardwoods (oak and savanna)
		Caves
		Hydrologic systems

49 U.S. Institute for Environmental Conflict Resolution, June 2009.

Goal	Criteria	Sub-criteria
	Manage/allow fire	Increase efforts to restore natural fire processes
		Protect objects out WUIs, groves, and at-risk habitat
		Protect objects in WUIs, groves, and at-risk habitat
		No "unwanted" fire
		Minimize impacts of AQ on people
		Effect on aesthetics (scenery)
		Protect human safety outside WUI
		Protect human safety in WUI
	Increase enjoyment of the Monument	Enjoy the objects of interest
		Promote diversity of users
		Promote diversity of uses
		Provide access
		Connect people to others and across generations
		Connect people to the land (places)
	Foster socio-economics	Support gateway economic development
		Provide for diverse economic opportunities
		Protect communities from fire
		Support connection of all to place
		Is cost-effective to administer, research, and monitor
		Develop cost offsets
	Create a cost-effective plan	Is cost-effective to administer, research, and monitor
		Develop cost offsets
	Create a feasible plan	Engender individual support
		Engender broad community support
		Provide clear Forest Service Requirements
	Comply with legal requirements	Mediated Settlement Agreement analysis obligation
		Proclamations (Bush and Clinton)
		Laws, regulations, and policies

Affected Environment-Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, provides that,

Each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

This section contains an analysis of the following indicators to describe the composition of the area: race, ethnicity, age distribution, education, language, and poverty.

Composition of the Area of Influence (Fresno, Kern, and Tulare Counties)⁽⁵⁰⁾

Race

The population of the three-county area has increased at a rapid pace over the past 40 years, growing by 122 percent from 1970 to 2006 alone. (See the following tables and figures for population data). At an annual rate, this represents an increase of 2.2 percent, out-pacing both California and the nation. The racial distribution of the region is shown in the following table and figure (population by race in the region). Within the region, the greatest share of the population is in the white alone racial category (57.7 percent). The lowest share of the population is in the Native Hawaiian and other Pacific Islander alone (0.1 percent) racial category. Black or African American populations in Fresno and Tulare counties are at least 20 percent lower than in the state. Asian and Native Hawaiian and other Pacific Islander populations are also at least 20 percent lower than in the state. American Indian and Alaska Native, and the census category “some other race” exceed the value for the state by at least 20 percent.

Table 21 Population in the Region (2000)

Geography	Population
Fresno CA	799,407
Kern CA	661,645
Tulare CA	368,021

Table 22 Population by Race in the Region (2000)

Race or Ethnicity	Population	Share of Total
All races	1,829,073	
White alone	1,055,377	58
Black or African American alone	87,987	5

50 Source for data in this section: U.S. Census, U.S. Department of Commerce, 2001. U.S. Census Bureau, Census 2000, Washington D.C.

Race or Ethnicity	Population	Share of Total
American Indian alone	28,526	2
Asian alone	98,648	5
Native Hawaiian and other Pacific Is. alone	2,380	0
Some other race	473,988	26
Two or more races	82,167	4

Ethnicity

Data on Hispanics are not listed here but are provided below in the following figures. It is important to note that Hispanics can be of any race (as measured by the census, "Hispanic" is a cultural identity, and not a race). Within the region, Tulare County has the greatest share of people who are Hispanic or Latino (50.8 percent). The lowest Hispanic or Latino population is in Kern county (38.4 percent). In the region as a whole, 43.3 percent are Hispanic or Latino. Within the region, the black or African American alone category has the greatest share of people who are Hispanic or Latino (35.0 percent). The lowest Hispanic or Latino population is in the white alone (15.1 percent) category.

Table 23 Population by Race (2000)

	Fresno CA	Kern CA	Tulare CA	Region	California	United States
White alone	434,045	407,581	213,751	1,055,377	20,170,059	211,460,626
Black or African American alone	42,337	39,798	5,852	87,987	2,263,882	34,658,190
American Indian alone	12,790	9,999	5,737	28,526	333,346	2,475,956
Asian alone	64,362	22,268	12,018	98,648	3,697,513	10,242,998
Native Hawaiian and other Pacific Is. alone	1,000	972	408	2,380	116,961	398,835
Some other race	207,061	153,610	113,317	473,988	5,682,241	15,359,073
Two or more races	37,812	27,417	16,938	82,167	1,607,646	6,826,228
All races	799,407	661,645	368,021	1,829,073	33,871,648	281,421,906
Percent of Total						
White alone	54	62	58	58	60	75
Black or African American alone	5	6	2	5	7	12
American Indian alone	2	2	2	2	1	1
Asian alone	8	3	3	5	11	4

	Fresno CA	Kern CA	Tulare CA	Region	California	United States
Native Hawaiian and other Pacific Is. alone	0	0	0	0	0	0
Some other race	26	23	31	26	17	5
Two or more races	5	4	5	4	5	2

Figure 18 Population by race (2000)

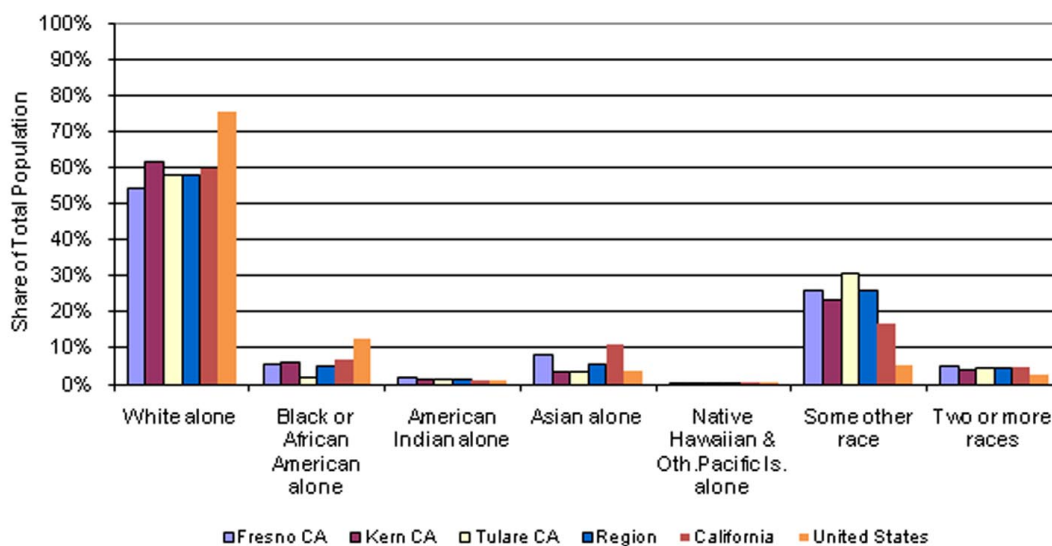


Table 24 Hispanic Population in the Region (2000)

Geography	Hispanic Population	Percent of Total Population
Fresno CA	351,636	44
Kern CA	254,036	38
Tulare CA	186,846	51
Region	792,518	43
California	10,966,556	32
United States	35,305,818	13

Table 25 Hispanic Population by Race in the Region (2000)

Race or Ethnicity	Population	Percent of Total Population
Hispanic or Latino (of any race)	1,036,555	43

Race or Ethnicity	Population	Percent of Total Population
White alone	256,749	15
Black or African American alone	4,729	35
American Indian alone	13,407	31
Asian alone	2,985	32
Native Hawaiian and other Pacific Islander alone	713	23
Some other race alone	471,104	33
Two or more races	42,831	25
Not Hispanic or Latino	1,036,555	31

In addition to Census specified American Indian tribes and areas (the following tables), the Sequoia National Forest Tribal Relations Program Manager maintains and shares among interested parties an updated, local tribal contact list. This list currently includes: federally recognized tribes, including the Tule River Indian Reservation, Santa Rosa Rancheria Tachi-Yokuts, Bishop Paiute Tribe; non-federally recognized tribes, including the Tubatulabals of Kern Valley, Dunlap Band of Mono Indians, Wuksachi-Michahai Tribe, Kern Valley Indian Council, Wukchumni Tribal Council, Traditional Choinumni Tribe, Kings River Choinumni Farm Tribe, California Choinumni Tribal Project, and; tribal groups, organizations and interested parties, including the Sierra Nevada Native American Coalition, Kern River Paiute Council, Eshom Gathering – Davis Clan, Monache Intertribal Association, California Indian Basketweavers Association (CIBA) and Tule River – Yokut Archeological Advisory Team (YAAT). This list is not meant to be exclusive nor exhaustive and will be continuously updated to reflect changing conditions. For more information, see the Tribal and Native American Interests section of this chapter.

Table 26 Number of People Who Are American Indian and Alaska Native Alone or in Combination with One or More Races and With One or More Tribes Reported For Selected Tribes (2000)

	Fresno CA	Kern CA	Tulare CA	Region	California	United States
Total tribes tallied	20,999	18,080	9,565	48,644	648,200	4,230,356
American Indian tribes, specified	12,471	11,389	5,834	29,694	401,788	2,852,380
Apache	690	544	238	1,472	21,599	96,833
Blackfeet	234	326	91	651	14,310	85,750
Cherokee	2,791	3,681	1,394	7,866	97,838	729,533
Cheyenne	43	43	33	119	1,668	18,204
Chickasaw	151	190	84	425	4,145	38,351
Chippewa	116	109	39	264	7,166	149,669
Choctaw	688	1,069	483	2,240	21,011	158,774
Colville	4	6	6	16	305	9,393

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	Fresno CA	Kern CA	Tulare CA	Region	California	United States
Comanche	104	108	41	253	2,948	19,376
Cree	24	29	18	71	1,268	7,734
Creek	280	245	77	602	5,416	71,310
Crow	32	16	2	50	893	13,394
Delaware	30	23	10	63	1,331	16,341
Houma	3	3	-	6	133	8,713
Iroquois	110	97	22	229	5,975	80,822
Kiowa	18	29	13	60	811	12,242
Latin American Indians	2,536	1,350	963	4,849	63,293	180,940
Lumbee	17	27	19	63	796	57,868
Menominee	2	-	9	11	319	9,840
Navajo	305	322	79	706	14,348	298,197
Osage	54	59	19	132	2,212	15,897
Ottawa	8	29	6	43	631	10,677
Paiute	102	620	55	777	4,979	13,532
Pima	48	74	30	152	1,772	11,493
Potawatomi	114	107	63	284	2,640	25,595
Pueblo	86	93	54	233	7,552	74,085
Puget Sound Salish	33	12	2	47	611	14,631
Seminole	71	63	48	182	2,855	27,431
Shoshone	36	70	39	145	2,118	12,026
Sioux	202	209	121	532	12,428	153,360
Tohono O'Odham	93	32	22	147	1,909	20,087
Ute	6	6	14	26	993	10,385
Yakama	11	11	2	24	403	10,851
Yaqui	367	239	115	721	7,304	22,412
Yuman	24	12	25	61	2,784	8,976
All other tribes	3,038	1,536	1,598	6,172	85,024	357,658
American Indian tribes; not specified	1,283	1,143	526	2,952	33,440	195,902

	Fresno CA	Kern CA	Tulare CA	Region	California	United States
Alaska Native tribes; specified	57	65	26	148	4,433	116,915
Alaska Athabaskan	6	13	2	21	560	18,838
Aleut	8	16	-	24	995	16,978
Eskimo	25	13	8	46	1,252	54,761
Tlingit-Haida	15	22	16	53	1,393	22,365
All other tribes	3	1	-	4	233	3,973
Alaska Native tribes; not specified	12	7	8	27	497	8,702
American Indian or Alaska Native tribes; not specified	7,176	5,476	3,171	15,823	208,042	1,056,457

Table 27 Population in American Indian Areas by County

American Indian Areas ⁽¹⁾	County	Total	White	African American	American Indian	Asian	Native Hawaiian and other Pac. Is.	Some Other Race	Two or More Races	Not Hispanic or Latino	Hispanic or Latino
Big Sandy Rancheria	Fresno	98	14	0	77	0	0	0	7	83	15
Cold Springs Rancheria	Fresno	193	3	0	177	0	0	2	11	160	33
Table Mountain Rancheria	Fresno	11	2	0	1	0	0	8	0	3	8
Tule River Indian Reservation	Tulare	566	35	0	495	1	0	27	8	444	122

1. Data Source: Census 2000 SF1 Tables 7,8, and 13

Age Distribution

The following figure shows the age distribution by race for the three-county area, while the figure after that shows the age distribution of the total population by geography. The white population, 60 years of age and higher, are more than 50 percent higher, or 1.5 times, the percentage of the total population in that age category in the three-county area. As this generation continues to age, a corresponding increase in economic sectors such as health and human services will be required (Sierra Business Council 2007). The largest proportion of the population in the three-county area is found in the age group 10 to 19 years of age, but the generation aged 25 -34 makes up an increasingly smaller proportion of the area’s population. The Sierra Business Council notes that, “Members of this age bracket often are at the beginning stages of a career, frequently have young children, and lack much disposable income. Combining these factors with the escalating costs of housing in the Sierra Nevada makes the region less hospitable to them” (2007, page 18).

Figure 19 Age Distribution of Each Race in the Region, 2000

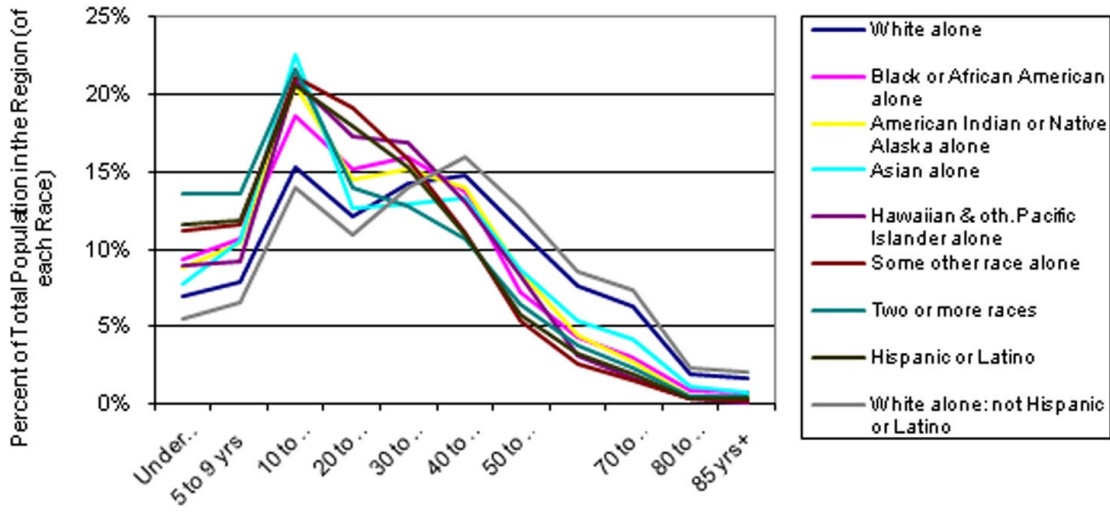
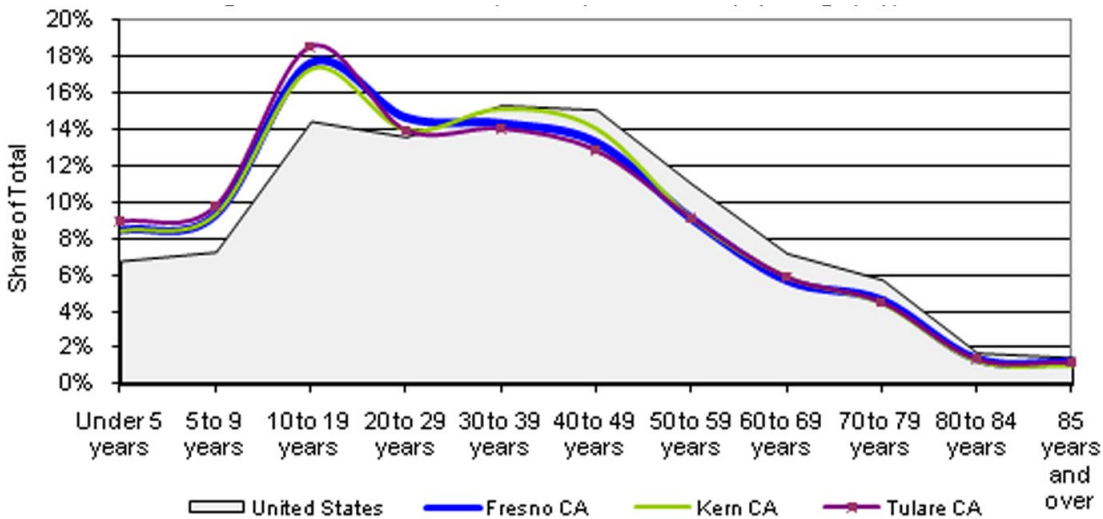


Figure 20 Age Distribution of Total Population by Geography



Education

It is well recognized that adults with higher levels of education have greater employment options than less-educated adults. The Sierra Business Council noted that, "...entrepreneurs look for places to grow their businesses; they are attracted to places with more highly educated populations, indicating the quality and diversity of the labor pool" (2007, page 23).

The three-county area has a higher percentage of residents 25 years and older (36 percent) with less than a high school degree than either the state (27 percent) or the nation (23 percent) (see the following table and figure). The percentage of residents 25 and older with some college (21-23 percent) or an associate degree (6-7 percent) are consistent throughout the nation, state, and three-county area. The state and the nation have a relatively higher concentration of bachelor degrees or higher (29 percent) than the three-county area (16 percent) (see the following table and figure).

Within the three-county area, Fresno has the greatest share of people with a college education (18 percent). The lowest college education level is in Tulare County (12 percent). In the three-county area as a whole, 16 percent are college educated. The table and figure below illustrate the number of adults in each race in the three-county area (25 years and older) with a bachelor’s degree or higher. Within the three-county area, the Asian-alone racial category has the greatest number of college educated adults (25 percent). The smallest number of people with a college education is in the “some other” race category (3 percent). A table and figure below show the number of Adults in each race in the region (25 yrs+) without a high school diploma (2000). Within the three-county area, Tulare County has the greatest share of people without a high school education (41 percent). The lowest share of people without a high school education is in Fresno County (34 percent). In the three-county area as a whole, 36 percent are without a high school diploma. Within the three-county area, the “some other” race category has the greatest share of people without a high school education (61 percent). The lowest share of people without a high school education is in white alone; not Hispanic/Latino category (17 percent).

Table 28 Number of Adults (25 years and older) without a High School Diploma (2000)

Geography	Number of Adults	Percent of Total Population
Fresno CA	147,937	34
Kern CA	120,981	35
Tulare CA	78,512	41
Region	347,430	36
California	4,942,743	27
United States		23

Table 29 Number of Adults (25 Years and Older) with a Bachelor Degree or Higher, 2000

Geography	Number of Adults	Percent of Total Population
Fresno CA	79,927	18
Kern CA	51,869	15
Tulare CA	23,560	12
Region	155,356	16
California	5,669,966	29
United States		29

Table 30 Number of Adults in Each Race in the Region (25 Years and Older) with a Bachelor Degree or Higher, 2000

Race or Ethnicity	Number of Adults	Percent of Total Population
All races	155,356	16
White alone	125,552	19

Race or Ethnicity	Number of Adults	Percent of Total Population
Black or African American alone	4,415	9
American Indian alone	953	7
Asian alone	12,806	25
Native Hawaiian and other Pacific Is. alone	132	15
Some other race	7,220	3
Two or more races	4,278	11
Hispanic or Latino	16,937	5
White alone; not Hispanic/Latino	117,059	21

Table 31 Number of Adults in each Race in the Region (25 yrs+) without a High School Diploma (2000)

Race or Ethnicity	Number of Adults	Percent of Population
All races	347,430	36
White alone	160,556	24
Black or African American alone	12,585	27
American Indian alone	5,424	38
Asian alone	19,638	38
Native Hawaiian and other Pacific Is. alone	244	28
Some other race	134,182	61
Two or more races	14,801	38
Hispanic or Latino	216,209	58
White alone; not Hispanic/Latino	91,056	17

Language

The table below illustrates the share of the population who speak English either “not well” or “not at all.” Consistent with the state and nation, the following populations in each of the three counties who speak English “not well/not at all” by greater than 15 percent include: the Asian alone racial category (21 percent), the “some other” racial category (24 percent), and the Hispanic or Latino population (24 percent).

Table 32 Number of People (5 Years and Older) who Speak English “Not Well” or “Not At All”, 2000

	Fresno CA	Kern CA	Tulare CA	Region	California	United States
White alone	24,432	17,998	14,353	56,783	1,119,313	4,834,786
Black or African American alone	297	535	208	1,040	21,727	332,146

	Fresno CA	Kern CA	Tulare CA	Region	California	United States
American Indian alone	1,181	613	292	2,086	24,581	95,627
Asian alone	13,454	3,481	2,262	19,197	643,393	1,615,278
Native Hawaiian and other Pacific Islander alone	7	24	31	62	5,811	17,937
Some other race	42,810	33,427	27,515	103,752	1,373,437	3,516,626
Two or more races	4,595	2,723	2,232	9,550	168,648	574,451
Hispanic or Latino	69,391	53,108	43,004	165,503	2,458,967	7,472,225
White alone; not Hispanic/Latino	2,397	1,430	1,212	5,039	188,107	1,394,197
All races	86,776	58,801	46,893	192,470	3,356,910	10,986,851
Percent of Total						
White alone	6	5	7	6	6	2
Black or African American alone	1	2	4	1	1	1
American Indian alone	10	7	7	9	9	4
Asian alone	23	17	20	21	19	17
Native Hawaiian and other Pacific Islander alone	1	3	12	4	6	5
Some other race	23	24	27	24	27	25
Two or more races	13	11	15	13	11	9
Hispanic or Latino	22	24	26	24	25	24
White alone; not Hispanic/Latino	1	0	1	1	1	1
All races	12	10	14	11	11	4

Poverty

The table below reveals how the races' poverty rates compare to each other and to the state and nation. The number of people living under poverty for all races (combined) in each of the three counties is greater than 20 percent, compared to 14 percent in the state and 12 percent across the nation. Also, the number of people living under poverty in each racial category within the three-county area, except "white alone" (15 percent), is also above 20 percent, from a low of 23 percent in the Native Hawaiian and other Pacific Islander racial category to a high of 35 percent in the Black or African American racial category.

Table 33 Number of People Living Under the Poverty Level, 1999

	Fresno CA	Kern CA	Tulare CA	Region	California	United States
All races	179,085	130,949	86,572	396,606	4,706,130	33,899,812

	Fresno CA	Kern CA	Tulare CA	Region	California	United States
White alone	61,409	58,766	35,182	155,357	2,059,640	18,847,674
Black or African American alone	13,035	11,472	2,118	26,625	470,155	8,146,146
American Indian alone	4,286	2,184	1,498	7,968	66,635	607,734
Asian alone	24,436	3,142	3,019	30,597	466,431	1,257,237
Native Hawaiian and other Pacific Islander alone	190	116	89	395	17,484	64,558
Some other race	65,747	48,410	40,094	154,251	1,345,522	3,687,589
Two or more races	9,982	6,859	4,572	21,413	280,263	1,288,874
Hispanic or Latino	105,608	75,075	62,011	242,694	2,377,589	7,797,874
White alone; not Hispanic/Latino	30,277	37,938	17,688	85,903	1,209,577	15,414,119
Percent of Total						
All races	23	21	24	22	14	12
White alone	14	15	17	15	10	9
Black or African American alone	34	36	37	35	22	25
American Indian alone	34	25	32	31	22	26
Asian alone	39	15	25	32	13	13
Native Hawaiian and other Pacific Islander alone	30	15	33	23	16	18
Some other race	32	33	35	33	24	24
Two or more races	25	24	27	25	17	18
Hispanic or Latino	31	31	34	31	22	23
White alone; not Hispanic/Latino	10	12	12	11	8	8

Environmental Effects

This social impact analysis is a component of the environmental analysis process that uses social science information and methodology to determine how the proposed actions affect humans. To understand the overall impact of the proposed actions within the Monument, it is important to explore the social and economic conditions within the area of influence, including: Fresno, Kern and Tulare Counties. By understanding the effects of the proposed actions within the Monument in context with the overall social and economic conditions of the area of influence as discussed in Chapter 3, better decisions concerning social and economic well-being of those affected can be made.

In this section the direct, indirect, and cumulative effects concerning the social and economic condition within the area of influence will be addressed. Specific metrics to be addressed include: Forest Service

contribution to the economy within the area of influence, potential for gateway community development, and environmental justice and civil rights.

The “Public Values, Beliefs and Attitudes” section of Chapter 3 discussed the importance of understanding public issues and developing goals, or criteria, for evaluating alternatives against them. One important goal identified by stakeholders was “fostering socioeconomics.” Two key metrics associated with this goal include: supports gateway economic development and provides for diverse economic opportunities (other metrics for this goal can be found elsewhere in this chapter). Before assessing the alternatives against these metrics it is important to place them within the context of the existing condition as described in the socioeconomic section in Chapter 3. Chapter 3 highlighted key aspects of the three-county area including changing demographics in urban areas, increased population growth, double-digit unemployment rates associated with the latest economic downturn, and a growing emphasis on the health and social service economic sector. The scale and scope of these changes simply overwhelm the current role of Forest Service-related contributions to the area’s economy, which represents a mere 0.11 percent of the labor income across all economic sectors in the three-county area. It follows then; that regardless of the alternative selected, the economic impact to the area of influence has the potential to remain less than one percent. This does not mean potential differences amongst alternatives are unimportant, particularly to gateway communities, yet these economic and social realities form the backdrop for considering the scale and scope of potential changes resulting from the proposed actions on the Monument.

In addition to the social and economic uncertainties facing the three-county area is the capacity for communities to respond to these changing conditions. This is particularly true for gateway communities within the area of influence. Monitoring changes in demographic patterns can assist both communities and the Monument in remaining responsive to changing societal needs over time. Monitoring gateway community capacity for economic development could include the indicators covered in Chapter 3: housing, employment by industry, the index of industrial specialization, place of work, and source of income. While not exhaustive, these indicators are readily available and will be updated in the 2010 U.S. Census, allowing for tracking changes over time.

Chapter 3 also highlighted the role of transfer payments to counties through the re-authorized Secure Rural Schools and Community Self-Determination Act (P.L. 110-343). While the alternative selected may influence the type of projects recommended by a Resource Advisory Committee (RAC), the individual projects are site-specific and beyond the scope of this document. The total available dollars authorized by the Act through Fiscal Year 2011 is unrelated to the Monument EIS and Plan and does not vary across alternatives. Key to this legislation is that through planning and implementing projects, cooperative relationships among people that use and care for Federal land and the agencies that manage Federal land will improve.

Environmental Justice and Civil Rights

Based on the civil rights analysis presented below, the alternatives are not likely to result in civil rights impacts to Forest Service employees or customers of its programs. Also, based on the subsequent environmental justice analysis, the alternatives are not likely to result in disparate human health or environmental effects to minority communities, low-income communities, or Indian tribes.

Direct Effects

Because the alternatives do not result in specific actions, they are not likely to result in any direct effects to the social and economic condition within the area of influence.

Indirect Effects

To assist in addressing the indirect effects of the proposed actions the following questions will be answered for the three county study area:

1. What are the variables in the management Alternatives (e.g., how the alternatives respond to recreation demand, fiber production, etc.) that may have potential economic consequences?

Potential changes in the Forest Service economic contribution across the alternatives are based on qualitative indicators such as the ability to accommodate day-use and picnic facilities as described in “Effects on Recreation” in this Chapter, fiber production, and changes in Forest Service budget and number of employees. While mining is an important natural resource sector for the 3 county area, currently there is no authorized mineral extraction on the Monument nor will any of the alternatives allow mineral extraction on the Monument. Therefore, none of the alternatives will change the Forest Service’s contribution to the mining sector of the study area economy. In addition, none of the alternatives will impel changes to the grazing program; the Forest Service contribution to the economy due to grazing will not change.

2. How are the estimated present values of economic benefit and economic cost to different stakeholders (e.g., USFS, local businesses, local government, etc.) in the domains of interest (monument, local rural communities, and region) expected to change based on the different management Alternatives?

It must be noted that overarching any potential for indirect and cumulative effects resulting from the proposed alternatives is the expected growth in population throughout the state of California. This increase in population, unaided, will have greater potential for increasing economic growth within the area of influence than any of the proposed alternatives.

The population in the San Joaquin Valley alone is expected to grow by 60 percent between 2000 and 2020 (SJAPCD, 2009). Projections by the California Department of Finance show that by 2050 Kern and Fresno counties will be among the 10 most populous counties in California. The same report shows Kern and Tulare counties among the fastest growing counties in the same period. Hispanics are projected to be the majority in all three counties by 2050.⁽⁵¹⁾ These county-wide trends are driven by rapid changes in the San Joaquin Valley. The gateway communities in the mountainous eastern parts of the counties have, in the past, had a different dynamic. If past trends continue, these gateway communities will continue to be slower growing, predominantly white and somewhat older than the rest of their respective counties.

At this time, it is not possible to quantify changes to the number and type of recreation visits to the Monument caused by any particular alternative. So changes to the Forest Service contribution to the economy attributable to recreation are too speculative to be quantified. Projected demographic trends discussed above will influence

51 State of California, Department of Finance *Population Projections for California and Its Counties 2000-2050*, Sacramento, California, July 2007.

the potential change in future recreation demand, especially changing tastes for developed recreation opportunities. The National Visitor Use Monitoring program can provide a snapshot of demand as well as the level of satisfaction among recreationists in the Monument (for more information please refer to Appendix D, “Recreation Demand Analysis”). This program then can assist in addressing uncertainties relating to changing recreation needs.

None of the action alternatives include a quantified change in the Sequoia National Forest budget or manpower, so the Forest Service contribution to the local economy due to direct government activity like contracting, rent, or Forest Service salaries used in the economy will not change.

In summary, none of the action alternatives will change the Forest Service’s relative contribution to the study area economy in a measurable way.

3. What is the usefulness of different methods to ensure objects of interest are protected from human uses?

The effectiveness of these methods will be determined on a site specific basis and could include a variety of techniques including the use of best management practices, etc. Likewise, cost will also be evaluated at the project level. Please refer to “Effects on Recreation” in this Chapter for a more thorough discussion.

Gateway Community Development

Gateway communities are a subset of the study area economy. To see the potential effects of changes in Forest Service management, this section focuses on who is expected to benefit from the changes described in the previous section.

While socioeconomic differences exist among the three counties, differences also exist among the gateway communities adjacent to the Monument as described in Chapter 3. Yet while differences exist, there are also similarities. For example, the “educational, health and social services” category of employment is the largest employer for all gateway communities analyzed, ranging from a low of 19 percent in Squaw Valley to a high of 34 percent in Springville. Because of the expected population growth and aging population it is probable this job sector will continue to grow the fastest and remain the largest employer among gateway communities. None of the proposed alternatives are expected to increase economic growth in this large, fast growing job sector.

Changes in management of the Monument may afford opportunity for growth in certain sectors in the gateway communities. The “arts, entertainment, recreation, accommodation and food services” job sector, for example, may be most influenced by the proposed alternatives based on human use and recreation facilities encouraged both within and outside the Monument. Among the gateway communities analyzed, this job sector currently ranges from a low of 5 percent in Springville to a high of 24 percent on the Tule River Indian Reservation. This job sector on the Tule River Indian Reservation is primarily attributable to the Eagle Mountain Casino and will likely be little influenced by the proposed alternatives. Again, most of the potential for economic growth in this sector will come from the expected increase in population. Variations among the alternatives may lead to a greater potential for economic growth in gateway communities as described in the effects on recreation section in this chapter.

In addition to creating economic opportunity, it is important to consider the ability, or capacity, of a gateway community to take advantage of those opportunities. In other words, growth potential may also be affected by a gateway community’s capacity for adapting to changing conditions. For example, only 6 percent of the

population in Squaw Valley currently works in the community; the remaining 94 percent work outside of the community. This means there is a lack of available labor to capitalize on potential growth opportunities. The ability of a gateway community then, to take advantage of increased recreation potential may depend, in part, on their capacity to adapt to changing conditions and opportunities. For additional discussion on gateway community development see the effects on recreation section in this chapter.

Although all of the alternatives would promote economic growth in the “arts, entertainment, recreation, accommodation and food services” job sector to some degree, Alternatives B, C, and F are particularly designed to promote tourism. With less development in the Monument, Alternative D would likely attract a different type of tourist than the other alternatives, and most tourist services would be located outside the monument. Alternatives B, C, D, and F would all encourage gateway community development in the “arts, entertainment, recreation, accommodation and food services” job sector (see also effects on recreation in this chapter for additional information).

Concessionaires, private resorts, and other commercial development would continue to have opportunities in the Monument to some degree, depending on the alternative. Potential new development is possible in Alternatives B, C, and F, in particular. No new development would occur until site specific project environmental analysis is completed. New lodges, restaurants, and visitor centers are examples of the kinds of new development that could occur. In Alternative C, new developed facilities would be located near existing roads. In Alternative D, no new lodges, resorts, or organizational camps would be authorized or constructed within the Monument; such development would be encouraged outside the Monument. Alternatives B, C, D, and F would all encourage gateway community development.

Outfitter-guides would continue to have opportunities in all alternatives, although limitations may be placed on where they can provide services and what kinds of activities they can offer. For example, mountain bike rentals or guided trips would be limited in Alternative C, due to the prohibition of mountain bikes on trails. Alternative D may have fewer trails designated for mountain bike use than Alternatives A, B, E, and F, which could also result in fewer opportunities for mountain bike outfitter-guides (see effects on recreation in this chapter for addition information).

Cumulative Effects

Cumulative effects are a composite of the current condition and the potential direct and indirect effects of the proposed alternatives. Because no direct effects are expected from the proposed alternatives the cumulative effects on the social and economic condition within the area of influence are the same as the indirect effects described above.

Environmental Justice

The federal government has a unique legal and political relationship with Indian tribal governments, established through and confirmed by the Constitution of the United States, treaties, statutes, executive orders, and judicial decisions. In recognition of that special relationship, the staff on the Sequoia National Forest is charged with engaging in regular and meaningful consultation and collaboration with tribal officials in the development of the Monument plan.

The Monument shares a boundary with the Tule River Indian Reservation. In addition to ongoing formal consultation with tribal officials, the staff of the Sequoia National Forest has endeavored to meet on an ongoing basis with tribal leaders and members to better understand tribal implications of the proposed actions

on the Monument. The results of these interactions are summarized to illustrate, from a tribal perspective, their ongoing needs and the potential for human health and environmental effects from the proposed action. Finally, proposed mitigation (i.e., Tribal Fuels Emphasis Treatment Area (TFETA)) to protect cultural and natural resources on the reservation will be discussed.

The last section of this analysis will talk about the public involvement and scoping activities to date, including potential mitigation measures for future activities.

Human Health Effects⁽⁵²⁾

Cumulative Effects

Air pollution is one of the most serious problems that threaten this area. This region has some of the worst air quality in the nation when compared with other areas where national forests are located. Air pollution threatens the health and welfare of the public, natural resources and, staff alike.

Most of the Sequoia National Monument air pollution originates in the San Joaquin Valley and is transported into this forest by prevailing winds (Blumental, et al. 1985, Lehrman, et al. 1994, Shair 1987, Tracer Technologies 1992, Roberts et al. 1991, Zabik and Seiber 1993). Unlike many other states, California has few large stationary sources of air pollution; mobile, area, and small stationary sources emit the majority of the state's pollutants.

Nitrogen oxide (NO_x) is a key ingredient in PM_{2.5} and ozone formation. About 75 percent of the NO_x in this area come from mobile sources (San Joaquin Valley Air Pollution Control District 2009). The problem will only get worse. The population in the San Joaquin Valley is expected to grow by 60 percent between 2000 and 2020 (SJAPCD 2009). Population growth leads to an increase in vehicle activity. A society that prefers to be spaced apart from each other (spread out) and car dependent with the highest population growth in the state means more people will generally drive more, which will lead to more air pollution problems.

Significant amounts of the Asian aerosols have been observed at high elevation mountain sites in the western United States (VanCuren and Cahill 2002, VanCuren 2003, Liu et al. 2003). Pollutants from

Asia are a regular component of the troposphere over the western North America. They are more pronounced during the spring and to a lesser extent during the summer. Owing to reasons described previously, pollutants from intercontinental transport contribute to some of the PM and ozone problems in the Sequoia National Monument during the spring and summer times.

Prescribed and Wildland Fire

Smoke from prescribed burning and wildland fires could potentially affect air quality and is a concern because of its potential effect on human health and visibility. The smoke could potentially affect visitors to the Monument and residents in surrounding communities.

When considering the use of prescribed burning to restore the natural role of fire in ecosystems and reduce fuels, the effects of smoke from wildfire and prescribed burning must be considered. In spite of their ecological benefits, prescribed fires, as well as natural fires, produce gases and aerosols that have instantaneous and

52 Information in this section was provided by the Pacific Southwest Regional air quality specialist; refer to the air quality section of the FEIS for detailed information.

long-term effects on air quality (Fang 1999). The extent of these effects depends on fire size, fuel composition and physical and chemical characteristics of the events (Kasischke and Penner 2004).

Fires emit large amounts of particulate matter (PM₁₀ and PM_{2.5}) and carbon monoxide, as well as nitrous oxides (NO_x) and volatile organic compounds (VOCs), which are precursors to ozone. Other constituents of smoke (gases and chemicals) such as polycyclic aromatic hydrocarbons (PAHs) may also enter the lungs. Some components, such as benzo-a-pyrene and aldehydes, can be carcinogenic.

Wildfires result in greater emissions per acre when compared to prescribed burns, commonly exceeding ambient air quality standards. They also often occur under conditions of high temperature and low humidity, when high concentrations of ozone are most likely. Prescribed burning reduces existing fuels, thus decreasing the fire hazard and the risk of high intensity wildfire and decreasing the quantity of fuels available to be consumed in a wildfire. However, infrequent large-scale wildfire will still occur naturally in some vegetation types. There are concerns about the amount of smoke and how it will disperse and whether the prescribed burns would result in fewer impacts to air quality than would occur with a wildland fire.

The primary benefit of a prescribed fire program is in modifying the sizes and types of fires that occur within a particular geographic region. With prescribed fire, it is possible to replace large, high-intensity wildland fires characterized by high fuel consumption and high total emissions with smaller, lower-intensity prescribed fires characterized by lower fuel consumption and lower total emissions. But this decrease in wildland fire emissions typically comes at the expense of higher prescribed fire emissions.

Sites, including the Tule River Indian Reservation, at elevation higher than 400 meters seem to be below current national air quality standards. These findings indicate that locations in the Giant Sequoia National Monument, which form part of the San Joaquin Air Basin, are under attainment or are cleaner than urban locations. Further, these data suggest that elevation (including location) and time of the year are good management tools for fire. This information coupled with the small sizes of prescribed fires may prevent hazardous impacts to air quality.

Environmental Effects

Environmental effects may include ecological, cultural, economic, or social impacts on minority communities, low-income communities, or Indian tribes when those impacts are interrelated to impacts on the natural or physical environment.

Indian Tribes' Patterns of Subsistence Consumption for Fish, Vegetation, and/or Wildlife

Tribes within the three-county area routinely gather natural resources for food gathering or basket weaving materials as well as hunt and fish as they have done historically. Most of these activities are done on a seasonal basis. Input received during past tribal forums⁽⁵³⁾ concerning the proposed actions suggested there would be no impacts to these historical subsistence consumption patterns.

Protection of Cultural, Historic, and Natural Areas

Based on notes and comments captured at past Tribal Forums from tribal meeting participants, sensitive areas are currently protected. There are no known incidents where an important cultural, historic and/or natural area was unprotected and/or damaged in recent years. Although tribes have expressed concerns about

53 Tribal forums were held on the following dates: January 14, 2009, April 30, 2009 and August 19, 2009, and are held on a quarterly basis.

the protection of cultural resources, these resources are protected under a variety of strict federal laws which include: the Antiquities Act of 1906, National Historic Preservation Act (NHPA), the Native American Graves Protection and Repatriation Act (NAGPRA), the Archaeological Resources Protection Act (ARPA), and others. These laws will be adhered to equally through all alternatives.⁽⁵⁴⁾

Detailed feedback was received from the Tule River Indian Reservation Tribal Council concerning protection of the reservation from unwanted fire. To mitigate these concerns, the interdisciplinary team and representatives from the tribe developed the Tribal Fuels Emphasis Treatment Area (TFETA), an area along the eastern boundary of the Tule River Indian Reservation. Proposed fuels treatments in the TFETA would focus on protecting the reservation and its watersheds from severe fire effects. Emphasis on protecting the reservation and the nearby watershed is consistent with the forest's government-to-government relationship and the Tribal Forest Protection Act 2005. The first priority for fuels reduction treatments within the TFETA would be within 1/4 mile of the Monument/reservation boundary or in the Long Canyon area within the mapped area. The TFETA is proposed in Alternatives B, C, and F.

Mitigation and Tracking Measures

Mitigation measures include steps to reduce or eliminate the impact associated with a proposed agency action. This environmental justice analysis demonstrates the need for the Giant Sequoia National Monument staff to mitigate potential linguistic barriers, particularly within the limited-English speaking segment of the Hispanic community, to ensure full and active participation in the monument planning process. In addition to translating crucial portions of the EIS where appropriate, the Forest Service should provide translation, where practicable and appropriate, of the Record of Decision in non-technical, plain language for limited-English speakers.

Further, a partnership strategy designed to promote active outreach and relationship building to all communities within the area of influence has been included in the Management Plan. Implementation of the partnership strategy should be monitored and evaluated to ensure effective outreach to potentially affected groups has occurred. The following steps may be considered for future site-specific projects, as appropriate, in developing an innovative partnership strategy:

- Translation of major documents (or summaries thereof), provision of translators at meetings, or other efforts as appropriate to ensure that limited-English speakers potentially affected by a proposed action have an understanding of the proposed action and its potential impacts;
- Provision of opportunities for limited-English speaking members of the affected public to provide comments throughout the NEPA process;
- Provision of opportunities for public participation through means other than written communication, such as personal interviews or use of audio or video recording devices to capture oral comments;
- Use of different meeting sizes or formats, or variation on the type and number of media used, so that communications are tailored to the particular community or population;

54 Refer to cultural resource section of the FEIS for additional information.

- Use of locations and facilities that are local, convenient, and accessible to disabled individuals, low-income and minority communities, and Indian tribes; and
- Assistance to hearing-impaired or sight-impaired individuals.

Civil Rights

Civil Rights Impact Analysis (CRIA) is an analytical process used to determine the scope, intensity, direction, duration, and significance of the effects of an agency's proposed employment and program policies, actions and decisions. It is Forest Service policy that the responsible official examines all proposed policy actions for civil rights impacts and takes one of the following actions (FSM 1730.3):

1. Prepare a CRIA and statement of its finding for any proposed policy, organizational action, or decisions which may have a major civil right impact or;
2. Document the determination that a CRIA and statement of findings are not needed.

The following section on Civil Rights provides the data to demonstrate that a CRIA is not needed for the Giant Sequoia National Monument.

Disparate impact, a theory of discrimination, has been applied to the Giant Sequoia National Monument planning process in order to reveal any such negative effects that may unfairly and inequitably impact beneficiaries regarding program development, administration, and delivery. ⁽⁵⁵⁾The objectives of this review and analysis are to prevent disparate treatment and minimize discrimination against minorities, women and persons with disabilities and to ensure compliance with all civil rights statutes, Federal regulations, and USDA policies and procedures.

Persons with Disabilities

Some comments received during the Giant Sequoia National Monument planning process expressed concern that changes to motorized access would prevent future access to National Forest System lands for those with disabilities. In response to these comments, a review of the project alternatives has been conducted to ensure that they apply equally to all groups. Therefore, the management plan is not discriminatory towards persons with disabilities, because it applies equally to all groups.

Under section 504 of the Rehabilitation Act of 1973, no person with a disability can be denied participation in a federal program that is available to all other people solely because of his or her disability. There is no legal requirement to allow people with disabilities use of motor vehicles on roads, trails, or other areas that are closed to motor vehicles. Restrictions on motor vehicle use that are applied consistently to everyone are not discriminatory.

Effects of actions outlined under this plan will be distributed evenly amongst the population since access on routes designated or route closure do not prohibit or inhibit use on the basis of race, color, sex, national origin, religion, age, disability, or marital or familial status. In addition, under all alternatives, individuals

55 For more information on disparate impact theory, see "The Evolution of Disparate Impact Theory of Discrimination," *Harvard Journal of Legislation*, vol. 44 2007 (http://www.law.harvard.edu/students/orgs/jol/vol44_2/gordon.pdf).

with disabilities could request a permit to travel on closed roads consistent with the Rehabilitation Act of 1973. Such access would be considered on a case-by-case basis by the Sequoia National Forest.

Study Area Demographics

In the 2000 census survey, people were defined as having a disability if one or more of the following conditions were true:

- They were aged 5 or older and responded “yes” to a sensory, physical, mental, or self-care disability.
- They were aged 16 years or older and responded “yes” to a disability affecting going outside the home.
- They were between the ages of 16 and 64 and responded “yes” to an employment disability.

The percent of people with disabilities in the U.S. was 15.1 in 2006, compared to 12.9 in California and 15.7, 15.9, and 13.8 in Fresno, Kern, and Tulare Counties, respectively, as shown in the following table. These percentages indicate that the numbers of people with disabilities in the three-county area are similar to those of the nation and slightly higher than the state.

Table 34 Percent Persons with Disabilities in the United States, California, and Fresno, Kern, and Tulare Counties

	Total Disabilities ⁽⁵⁶⁾	Percent Population with Disability
United States	41,259,809	15.1
California	4,283,468	12.9
Fresno County	125,731	15.7
Kern County	108,342	15.9
Tulare County	51,747	13.8

The percentage of people 65 years and older in the United States was 12.4 in 2006, compared to 10.8 in California and 9.6, 8.7, and 9.2 in Fresno, Kern, and Tulare Counties respectively, shown below. These percentages indicate the percentage of the population 65 years of age and older was slightly less in the three-county study area than either the state or the nation. While these percentages reflect Fresno, Kern, and Tulare counties as a whole, they do not recognize population differences among the gateway communities within the three-county area.

Table 35 Percent Persons 65 years of Age and Older in the United States, California, and Fresno, Kern, and Tulare Counties

	Total Population (5 Years and Older)	Percent Total Population (65 Years and Older)
United States	273,835,465	12.4

56 Total disabilities tallied for the civilian non-institutionalized population 5 years and over with disabilities. Data extracted from the 2006 American Community Survey, United States Census.

	Total Population (5 Years and Older)	Percent Total Population (65 Years and Older)
California	33,211,121	10.8
Fresno County	800,681	9.6
Kern County	682,195	8.7
Tulare County	375,717	9.2

Civil Rights Monitoring and Evaluation

Any projects will be implemented only after an appropriate level of environmental analysis is completed and the decision documented. Project-level environmental analysis will be completed with adequate public involvement that will consider access and concerns for minorities, women, persons with disabilities, and low income populations.

- Continue to consult early and often with Tribal Governments regarding Special Areas of Historic Tribal Significance for implementation of the Monument management plan.
- Continue to design management planning and public involvement opportunities that consider access concerns from minorities, women, persons with disabilities, and low income populations.

Review of the Public Involvement Process

The Sequoia National Forest civil rights officer reviewed the location of public meetings and concluded that all meetings and opportunities were in compliance with Section 504 of the Rehabilitation Act of 1973.

Determination That A CRIA Is Not Needed

The Notice of Intent (NOI) initiating the scoping process was published in the Federal Register on March 18, 2009.

The forest received more than 120 emails and letters during the public scoping period. The interdisciplinary team analyzed over 550 total comments derived from these emails and letters using an established analytical process known as content analysis. Comments are made by those who are interested in specific issues, favor an alternative, have concerns over the plan or analysis, or other concerns. People self-select to participate and are not required to provide any information concerning individual demographic information.

Based on public comment, there were no issues raised that would suggest, or from which one may infer, that implementation of the Monument Plan will affect groups or classes of persons negatively because of one or more prohibited bases.

Groups and classes of persons have been reviewed within this section of the FEIS. No groups or classes of persons were found to be disproportionately negatively affected by this management decision. This management decision applies equally to all members of the public; therefore, it is not discriminatory to any person or group.

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