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3.07 SOCIETY, CULTURE AND ECONOMY

This section presents information useful to understand and analyze the economic effects in the surrounding area and the potential social effects. In addition to economic impacts, the assessment of environmental justice and impacts to communities provide measures of success used to assess how effectively the proposed activities meet the project’s purpose and need.

Analysis Framework: Statute, Regulation, Forest Plan and Other Direction

Multiple statutes, regulations and executive orders identify the general requirement for the application of economic and social evaluation in support of Forest Service planning and decision making. These include, but are not limited to, the Multiple-Use Sustained Yield Act of 1960 (74 Stat. 215; 16 USC 528-531), National Environmental Policy Act of 1969 (83 Stat. 852; 42 USC 4321, 4331-4335, 4341-4347), and the Planning Act of 1974. In addition, the following guidance also applies:

Executive Order 12898, issued in 1994 orders federal agencies to identify and address any adverse human health and environmental effects of agency programs that disproportionately impact minority and low-income populations. The Order also directs agencies to consider patterns of subsistence hunting and fishing when an agency action may affect fish or wildlife.

The Civil Rights Act of 1964 provides for nondiscrimination in voting, public accommodations, public facilities, public education, federally assisted programs, and equal employment opportunity. Title VI of the Act, Nondiscrimination in Federally Assisted Programs, as amended (42 U.S. C. 2000d through 2000d-6) prohibits discrimination based on race, color, or national origin.

Effects Analysis Methodology

Assumptions Specific to Society, Culture and Economy

1. The Environmental Justice analysis will report what effects might occur to minority and low-income populations. Of particular concern is whether job or income discrimination might occur to these groups in the area during or resulting from the proposed project.

Data Sources

1. IMPLAN - Pro input-output modeling system and 2006 IMPLAN data.
2. National Visitor Use Monitoring (NVUM)

Society, Culture and Economy Indicators

Indicators used in the analysis of economic effects (Table 3.07-1) include jobs and labor income in the economic impact analysis. Non-market values, such as the value of recreation experiences and ecological services, by their nature are difficult to quantify. Direction provided in 40 CFR 1502.23 and Forest Service Handbook 1909.15, (7/6/04) and 22.35 (01/14/05) provides for the use of qualitative analysis to evaluate the effects of these non-market values. The non-market aspects of each proposed activity will be described in other resource sections and specialist reports.

Table 3.07-1 Indicators and Methods

Measures of Success	Analysis Method	Analysis Tool
Employment & Labor Income Impacts	Input-Output Analysis	IMPLAN, 2006
Impacts to area communities	Assess Impacts to area Lifestyle, Attitudes, Values and Beliefs	Discussion in text
Environmental Justice	Examination of area trends and current characteristics	Discussion in text

Society, Culture and Economy Methodology

Economic Effects

Economic effects can be categorized as direct, indirect and induced. Direct effects are changes directly associated with spending by a recreation visitor. Indirect and induced effects are the multiplier effects resulting from subsequent rounds of spending in the local economy.

Input-output analysis was used to estimate the direct, indirect and induced employment and labor income effects stemming from motorized and non-motorized use. Input-output analysis (Hewings 1985) is a means of examining relationships within an economy both between businesses as well as between businesses and final consumers. It captures all monetary market transactions for consumption in a given time period. The resulting mathematical representation allows one to examine the effect of a change in one or several economic activities on an entire economy. This examination is called impact analysis. Input-output analysis requires the identification of an economic impact area. The economic area that surrounds the Stanislaus National Forest used for this jobs and income analysis was four counties in Central California surrounding the Stanislaus National Forest (STF). Mono County to the east was omitted because it would distort the findings. The counties included are Alpine, Calaveras, Mariposa and Tuolumne.

The IMPLAN Pro input-output modeling system and 2006 IMPLAN data (the most recent data available) were used to develop the input-output model for this analysis (IMPLAN Professional 2004). IMPLAN translates changes in final demand for goods and services into resulting changes in economic effects, such as labor income and employment of the affected area's economy. For the economic impact area, employment and labor income estimates were generated that were attributable to all current recreation use (wildlife and non-wildlife activities), motorized, non-motorized and other activities for the STF.

The expenditure and use information collected by the NVUM survey are crucial elements in the economic analysis. As reported earlier, the NVUM survey collects use and expenditure information for various activity types. The expenditure information is collected by twelve activity groups within four trip segments (non-local overnight trips, non-local day trips, local day trips and local overnight trips) (Stynes and White 2005; Stynes and White 2006). The reported spending for each of the spending categories is allocated to the appropriate industry within the IMPLAN model (the allocation process, also referred to as "bridging," was conducted by the USDA Forest Service, Planning Analysis Group in Fort Collins, CO). The bridged IMPLAN files were used to estimate economic effects (e.g., employment and labor income) related to changes in spending (i.e., changes in spending; technically referred to as changes in final demand are caused by changes in use).

Estimated economic effects (full and part-time jobs and labor income) are presented. Estimated economic effects are displayed in the following ways:

1. Direct, and indirect and induced employment and labor income response coefficients by activity type (jobs and labor income per 1,000 visits); and
2. Estimated employment and labor income by motorized and non-motorized activity types.

Jobs and Labor Income

The economic impacts to the local economy affected by the treatments proposed are measured by estimating the employment (full and part-time jobs) and labor income generated by the alternatives. The direct employment and labor income benefit employees and their families and therefore directly affect the local economy. Additional indirect and induced multiplier effects (ripple effects) are generated by the direct activities. Together the direct and multiplier effects comprise the total economic impacts to the local economy.

The assessment of economic impacts attempts to identify potential effects that Forest Service management decisions may have on local, county, and regional economic systems and on people using the natural resources that the STF provides. In particular, would changes in the use of the National Forest for recreation and the amount of change in the designation of Forest roads and trails be large enough or significant enough to cause measurable economic changes? Is the economy of the local area diverse enough and robust enough that the proposed changes will be insignificant or will they be felt in very specific segments of the local economy?

Lifestyles, Attitudes, Values and Beliefs

The description of Lifestyles, Attitudes, Values and Beliefs provides further context to evaluate the alternatives based on concerns and issues held by communities. People may also be interested in or concerned with management issues for reasons other than income or recreational opportunities. Research indicates that people may hold a variety of values towards forests, and that these values may play a critical role in identifying ecosystem management goals, setting the context for decision making, and guiding our choices. A variety of forest values exist and include aesthetic value, cultural value, economic value, historic value, recreational value, and spiritual value (Brown and Reed, 2000). Examination of these Lifestyles, Attitudes, Values and Beliefs may suggest why people value the STF and why potential conflict may exist over travel management related decisions.

National Visitor Use Monitoring (NVUM)

The National Visitor Use Monitoring (NVUM) program provides reliable information about recreation visitors to National Forest system managed lands at the national, regional, and forest level. Information about the quantity and quality of recreation visits is required for National Forest plans, Executive Order 12862 (Setting Customer Service Standards), and implementation of the National Recreation Agenda. To improve public service, the agency's Strategic and Annual Performance Plans require measuring trends in visitor satisfaction and use levels. NVUM information assists Congress, Forest Service leaders, and program managers in making sound decisions that best serve the public and protect valuable natural resources by providing science based, reliable information about the type, quantity, quality and location of recreation use on public lands. The information collected is also important to external customers including state agencies and private industry. NVUM methodology and analysis is explained in detail in the research paper entitled Forest Service National Visitor Use Monitoring Process: Research Method Documentation; English, Kocis, Zarnoch, and Arnold; Southern Research Station; May 2002 (www.fs.fed.us/recreation/programs/nvum).

The STF participated in the National Visitor Use Monitoring (NVUM) project from October 2002 through September 2003 and again from October 2006 to September 2007. Approximately 1,800,000 National Forest visits occur on the STF during each survey period (National Visitor Use Monitoring Report 2004, project record).

Affected Environment

Located between Lake Tahoe and Yosemite National Park, the STF includes portions of four central California counties: Alpine, Calaveras, Mariposa and Tuolumne. These counties are the STF study area as referred to in the following sections. Table 3.07-2 reports the total county size in acres and the proportion of land base that is in the STF.

In relation to some of the metropolitan counties in California, the study area counties have low population densities but are growing faster than the state average. The interactions between the Forest and local communities are important for the social and economic well-being of the area. Alpine county is the least populated county in the state with more than 91% of its land base being National Forest lands. The Stanislaus NF portion includes mostly high elevation lands, much of it within designated Wilderness. The other three counties (Tuolumne, Mariposa and Calaveras) are within the heart of California's historic Mother Lode. The nearby foothill communities date back to the Gold

Rush era. All four counties rely on tourism as a primary source of jobs, and the Forest contributes to the available opportunities along with the following choices: Yosemite National Park, Bureau of Land Management, New Melones Recreation Area, Don Pedro Recreation Area, Calaveras Big Trees State Park, Columbia State Historic Park, Railtown 1897 State Historic Park, and many private providers.

Table 3.07-2 Stanislaus National Forest Lands by County

County	Total Acres	Forest Acres	Percent of County
Alpine	465,030	124,285	27
Calaveras	663,290	75,072	11
Mariposa	934,690	84,456	9
Tuolumne	1,467,300	611,395	42

Although this report focuses on the above four local counties, it is important to mention that a significant amount of the visitation on the Forest is by residents of the California Central Valley and the greater San Francisco Bay Area. These visitors travel a greater distance and stay longer, once they have arrived. Many have second homes or cabins and live in the area for a part of the year. During scoping for the Proposed Action, the local community was interested in this project from a variety of perspectives. Actions that restrict access, as it relates to use of the National Forest, are considered negative by some members of the public, while others strongly feel the need to protect environmental values. Some individuals desire to maintain existing access while also caring about natural resources. They share the Forest Service concern about effectively managing the increasing recreational use.

Background

People have lived in the STF area for thousands of years. Paleo-Indians were the original inhabitants of the Forest and lived 10,000 – 11,000 years ago at the end of the last Ice Age. Since that time, the various native cultures that have lived in this area specialized in their adaptation to locally available resources. Native Americans still collect various plant resources and use certain locations for traditional cultural and religious practices.

The first Euro-American explorers in the area arrived in the early 1800s. The cultural values of the Euro-Americans differed considerably from those of the Indian Americans, and the ecological impacts to the land were often severe. Settlement of the area rapidly increased following the discovery of gold in 1849. Mining operations (and related services), sawmills, and ranching activities transformed the area. Today people in the STF Region derive their livelihood in diverse ways. Ranching is still a component of the community, and many of the families that are ranching today have historic roots in the area. Many of the Native American families are also descended from historic families. The Forest supports employment opportunities from which local residents may generate income. This includes direct employment for the federal agencies, harvest of products from the forest, or employment in the tourism service industry. Residents of the local area identify with the Forest for both recreational and personal values. For example, some recreation cabins have been in the family for generations, and the local ranching communities have historical ties with the forest's resources for production purposes. Many people outside of the local area also have strong ties with the Forest, returning throughout their lives to campsites, hunting areas, and other special places.

Current Population, Growth Trends and Demographics

Population, age and racial distributions of counties are important socioeconomic considerations in land management planning. The following sections highlight demographic trends in the STF study area. Population forecasts provide a projection of future population levels, which may help to indicate the potential for increased pressures for uses and recreational opportunities on the STF. Age distributions provide insights into the socioeconomic dynamic in the local area in terms of assessing the proportion of individuals in the working age group versus retirees and minors who typically use local services in different ways. Similarly, the racial composition of the local area may affect the

cultural uses of public lands. Over the last 35 years, population growth in the STF study area has outpaced that of the state and the nation. From 1970 to 2005 the population grew by 80,208 people, a 188% increase (Figure 3.07-1). The lower graph is indexed to 1970 being 100. A value of 100 indicates that it has not changed since 1970. Population growth is not generally impacted by national recessions.

Figure 3.07-1 Population Trends and Comparisons

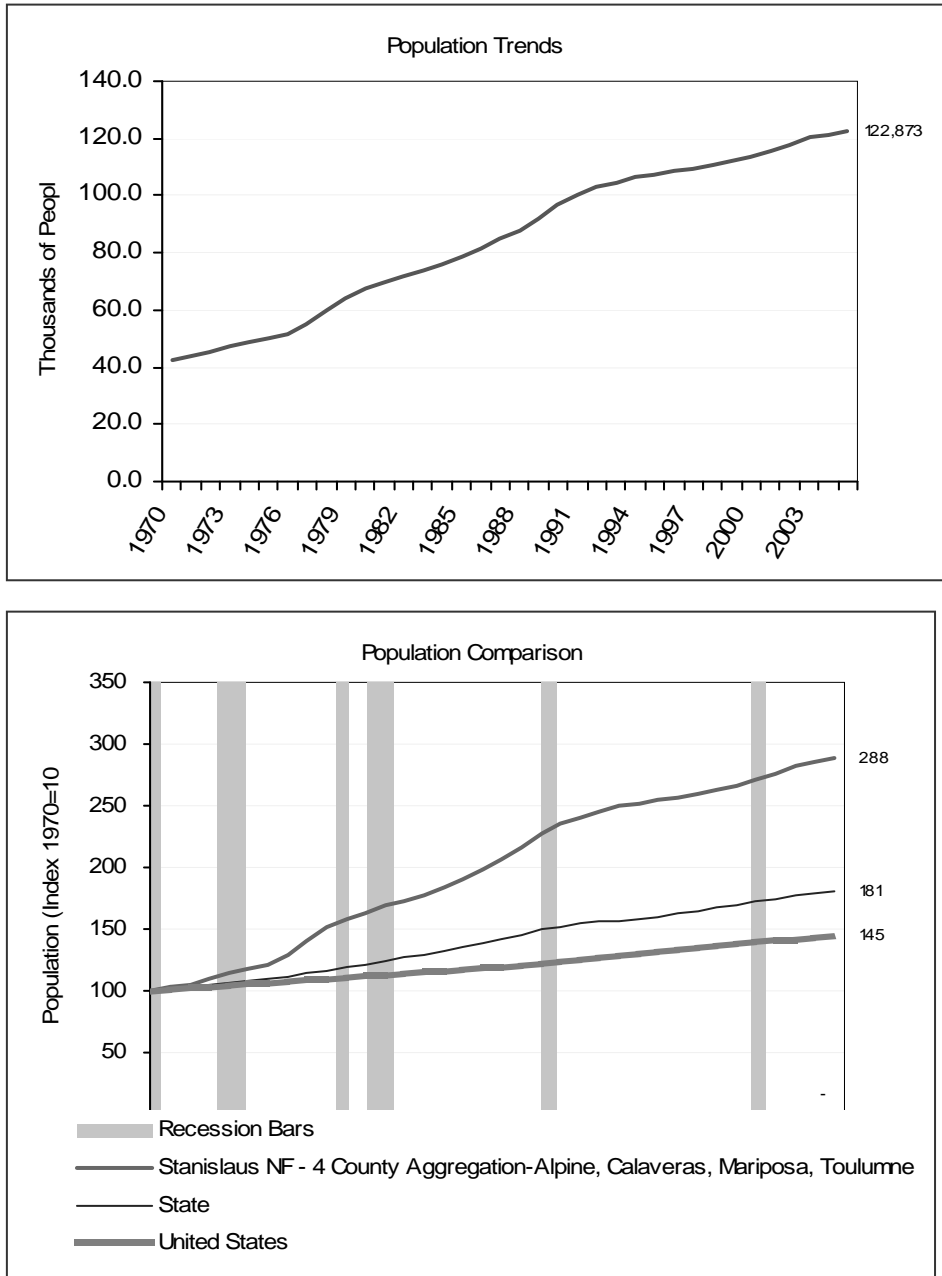


Table 3.07-3 Population Demographics

Totals	Under 20 years	40 - 54 (Baby Boom in 2000)	65 years and over	Median Age	Density (pop/mi ²)

		Number	Share	Number	Share	Number	Share		
Total Population									
2000	113,393	27,119	24%	28,041	25%	20,500	18%	43.5	21
1990	95,869	24,189	25%	17,907	19%	16,261	17%	38.1	18
10 Yr. Change	17,524	2,930	-1%	10,134	6%	4,239	1%	5.4	3
10 Yr Change (%)	18%	12%		57%		26%		14%	18%
2000 Gender Breakout									
Male	58,257	14,232	24%	14,331	25%	9,695	17%	42.1	
Female	55,136	12,887	23%	13,710	25%	10,805	20%	44.9	
Male/Female Split	51% / 49%	52% / 48%		51% / 49%		47% / 53%			

The total population in 2000 was 113,393 people, up 18% from 95,869 in 1990 (Table 3.07-3). The median age of the population has gotten older since 1990. The median age in 2000 is 43.5 years, up from 38.1 years in 1990. The California median age is 33.3 years, significantly lower than the study area. The largest age category is 45 to 49 years old (9,743 people or 8.6% of the total). The age group that has grown the fastest, as a share of total, is 50 to 54 years, up 4,149 people. Their share of total rose by 2.9%. The trend has been towards an increase in average age.

Table 3.07-4 Racial Composition

Total Population by Race		% of Total	California
White	101,856	89.8%	44.4%
Hispanic or Latino (of any race)	8,633	7.6%	34.9%
African American	1,571	1.4%	6.4%
American Indian & Alaska Native	2,527	2.2%	.6%
Asian	866	0.8%	
Native Hawaiian and Other Pacific Islander	152	0.1%	13.3%
Some other race	2,890	2.5%	
Two or more races	3,531	3.1%	

Minority composition in the study area is lower than that of California with the exception of American Indian which is almost 4 times the state average (Table 3.07-4).

Household and personal income of the study area increased over the past several decades. It is likely that this trend will continue, but this does not necessarily mean that income will grow faster than cost of living. During the last 10 years, housing costs have increased more rapidly than income.

In 1999, for every household that made over \$100K, 4.3 households made under \$30K. 10 years earlier, for every household that made over \$100K, 19.2 households made under \$30K. The lower income categories have grown more slowly than the higher income.

Since total personal income includes income from 401(k) plans as well as other non-labor income sources like transfer payments, dividends, and rent, it is possible for per capita income to rise, even if the average wage per job declines over time. In other words, non-labor sources of income can cause per capita income to rise, even if people are earning less per job. Per capita income, adjusted for inflation, has risen from \$19,406 in 1970 to \$28,598 in 2005. In 2005, per capita income was lower than the state (\$36,936) and the nation (\$34,471) (Figure 3.07-3).

Figure 3.07-2 Household Income

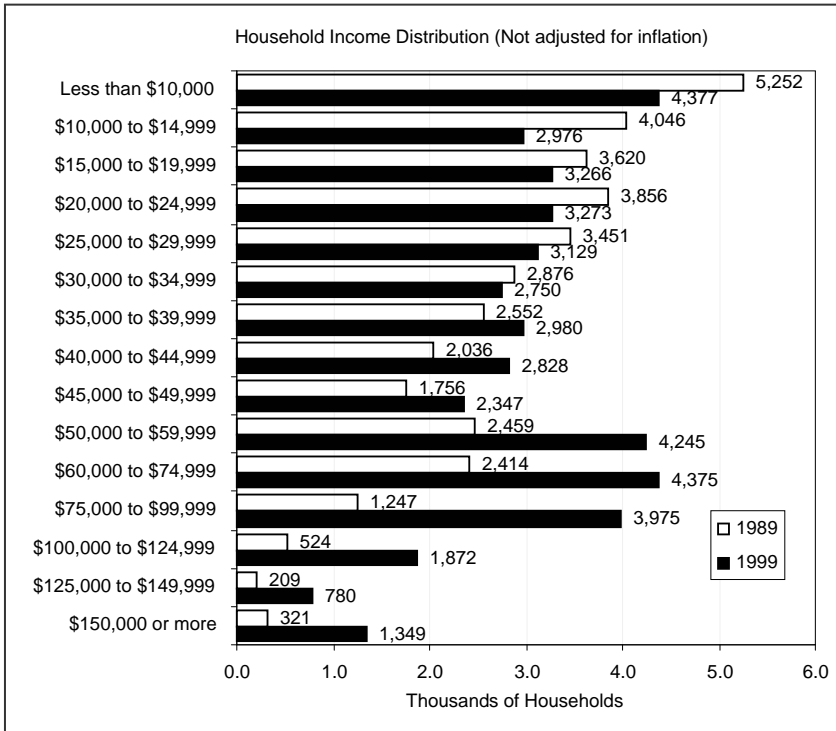
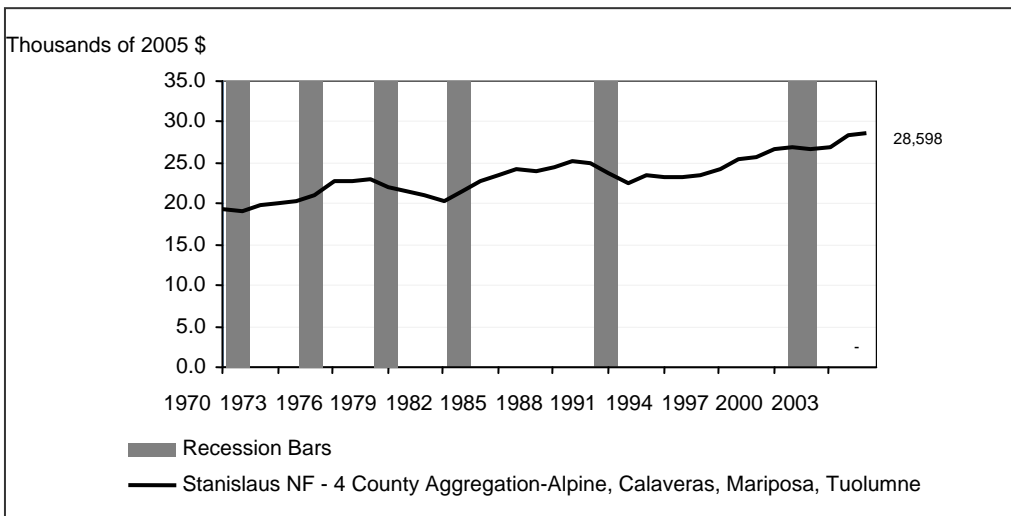


Figure 3.07-3 Per Capita Income



Lifestyles, Attitudes, Beliefs and Values

While local communities are most affected economically by changes as a result of implementing a decision on motorized use, many visitors of the Forest, seeking a variety of benefits, could be affected. These benefits are both direct and indirect and often difficult to predict or measure. Individuals potentially affected may live locally, but often they are not, as previously discussed in the NVUM results.

Lifestyles encompass the way people live and their relationship with the Forest.

The Forest Plan used the following categories to discuss lifestyle differences and social impacts (USDA 1991d):

- Native Americans (local tribes)
- Long Time Residents (ranchers, working families).
- Newcomers and Second Home Residents (retirees)
- Regional Recreationists: Developed Site and Motorized Dispersed (activity oriented).
- Local, Regional and Global Environmentalists

The plan made the following characterizations:

- Native Americans and Long Time residents share values, supporting commodity production/local jobs, hunting, fishing, and firewood gathering. Newcomers and Second home residents value the aesthetic backdrop, amenity values, and recreation opportunities of the Forest.
- Regional Recreationists have similar interests as Newcomers but are less connected to local community life, since they may live far away from the Forest. They come to the Forest setting for a specific activity or set of activities.
- Environmentalists value the integrity of ecosystems and oppose human activities that may impact natural systems.

Comments received as part of public scoping for this project are a reflection of the above categories, covering many points of view and perspectives.

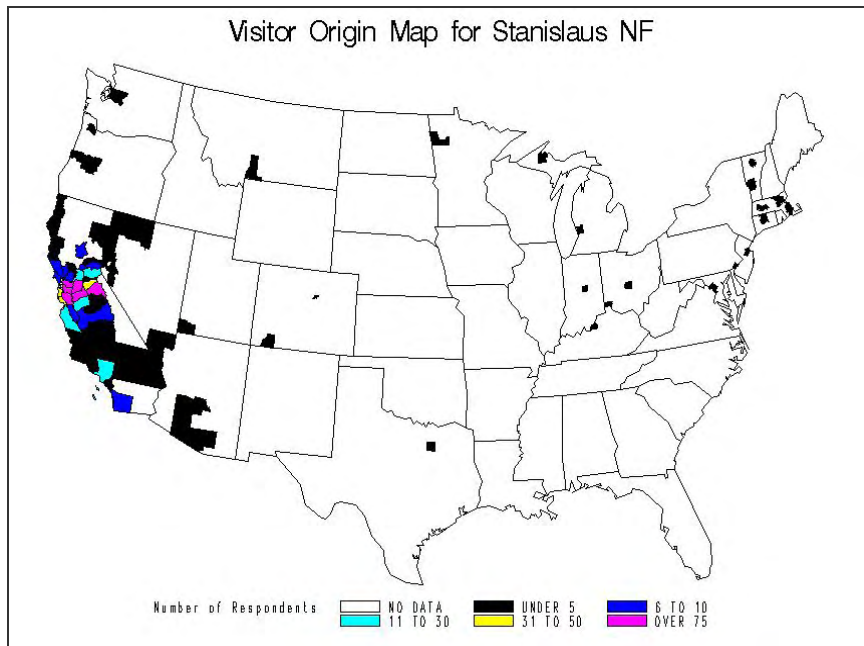
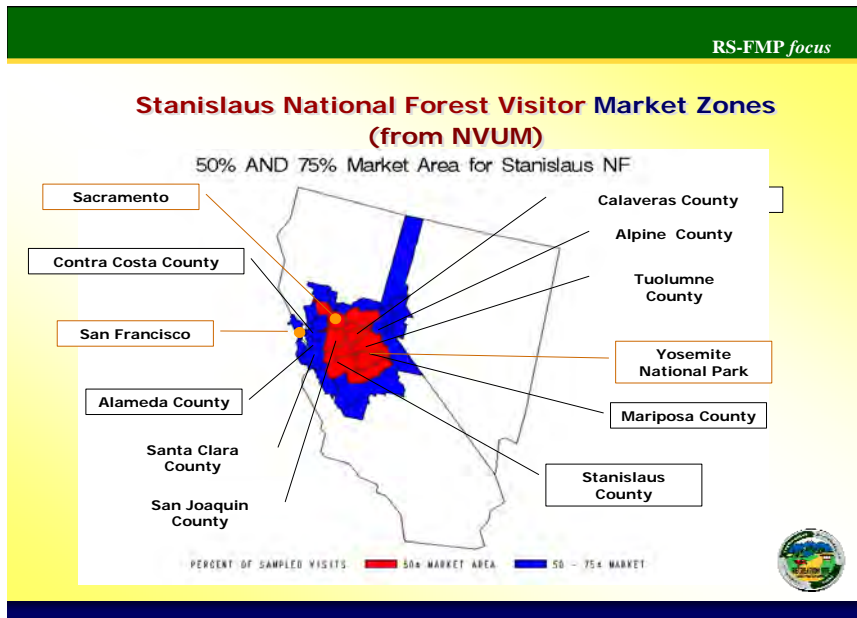
Attitudes, belief and values shape the way people think about the Forest, including perceptions and opinions. The following discussion explores attitudes, beliefs, and values of the individual. Similar to Maslow's hierarchy of motivation (Maslow 1943), people may seek basic and direct utilitarian benefits (gathering firewood/hunting game) at the basic level, or seek spiritual renewal and healing in the grandeur of the high Sierra (self actualization). Most recreation activities occur between these extremes or in combinations. Aesthetics may be based upon the success of the hunt alone, but usually involves factors such as beauty of the setting, companionship, challenge, etc. These secondary setting factors may be more important than the primary motivation, especially if the hunt is not successful. A popular local saying is; "If you're lucky enough to be in the Mountains, you're lucky enough!" The spectacular setting of the Forest adds value to any activity, but almost always a set of several activities are part of the recreation experience, which includes both motorized and non-motorized forms. It is usually not exclusively one or the other.

Place Attachment: Family traditions and memories are often developed while spending time in the mountains. The discovery of "special places" and attachment to them occurs with familiarity. The term "Topophilia" coined by Yfu-Tuan (Tuan 1974) means "love of land". Many authors suggest that repeated experiences in natural landscapes have benefits far beyond the experience alone. Paul Shepard (1998), Terry Tempest Williams (2004) and Kaplan (1993) suggest individuals in modern society needs wild places to maintain health and balance. Once a place has meaning to an individual, family, or group, change is not welcome. Access to these places is an important consideration.

Geo-Touring: The ability to move through the landscape in a motorized vehicle can be an experience unto itself. The cultural geographer Yfu Tuan (1993) suggested that movement through landscapes is a sixth sense, and that speed increases sensation. Tours or trail rides may have qualities similar to places described above.

Freedom and Entitlement: Access to these places and travel through the landscape gives a sense of freedom, which is important in the West and an expression of the Forest Service recreation niche. Motorized access to dispersed recreation activities is uniquely Forest Service. Implementation of access restrictions has been controversial in the past. The Sagebrush Rebellion and Home Rule Movement were partly a response to perceived loss of freedom and independence.

Figure 3.07-4 Visitor Origin Maps



Intrinsic values and environmentalism: As scientific knowledge and understanding of the environment has become more common, an appreciation for the interactions and interdependencies in nature has gained support. Gobster (1999) and others refer to this as an ecological aesthetic, meaning that pleasure is derived by knowing that natural systems are healthy and fit. The deep ecology movement and mother earth “Gaia” beliefs have blended science-based biodiversity and “web of life” knowledge with spiritual and symbolic value. This belief system may be intolerant of motor sports, viewing them as destructive and out of place in pristine wild landscapes.

Sustainable Benefits: The above discussion points out that these benefits derived from recreation activities in the Forest depend on the belief system of the participant. Some people may be intimately

familiar with the Forest while others feel strongly on issues without direct familiarity. Differing “world views” will lead to a different response to any proposed changes through implementation of a decision on motorized use. Due to increasing population, leading to more demand, it will be a challenge to maintain a range of quality opportunities for all visitors. Management strategies are targeted at maintaining maximum choices and minimum conflict between uses while protecting the resource.

Recreation Use

The economic analysis that follows uses the four county STF study area to model the impact of activities, since this is where economic effects of management changes will be felt the most. In contrast, social effects may be felt by visitors that are from the market zone, which is larger than the STF study area. In Figure 3.07-4 on the previous page, the red counties account for 50% of the visitation. The blue counties account for an additional 25%. The remaining 25% is scattered around the country as illustrated in the lower map. The following information is derived from the NVUM surveys and census data.

Figure 3.07-5 breaks down visitation into categories of local, which conforms closely to the STF study zone, and non-local visitors that come from outside the zone. The STF has a very high participation by non-locals for day use and overnight visits.

Figure 3.07-5 Visitor Characteristics: Segmentation of Visitors

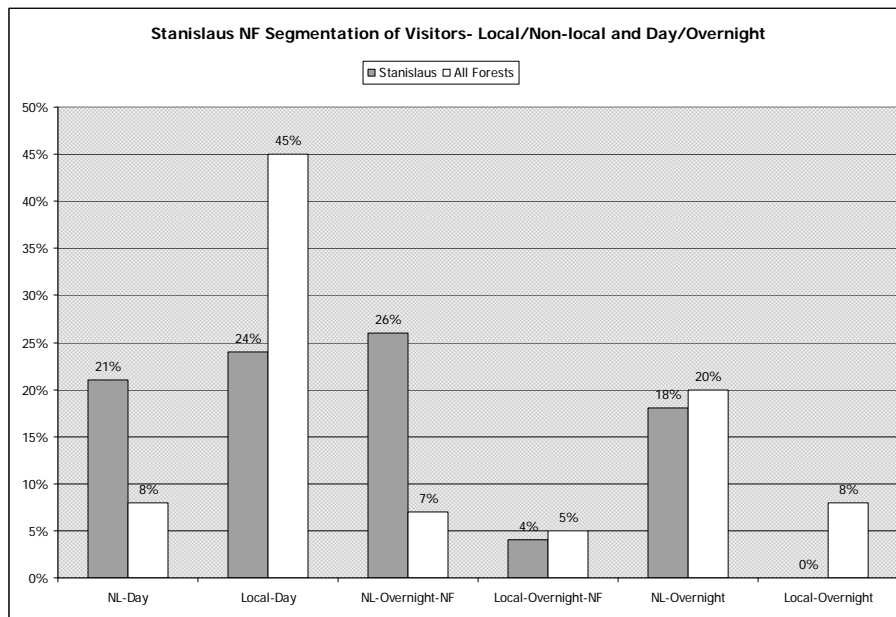


Figure 3.07-6 compares the ethnic makeup of the market zone to actual National Forest visitors. Forest visitors are very close in ethnicity to the make up of the STF study area. Similar to other National Forests, men participate at a higher rate (68.4%) than women (31.6%).

Figure 3.07-6 Visitor Characteristics: Ethnicity

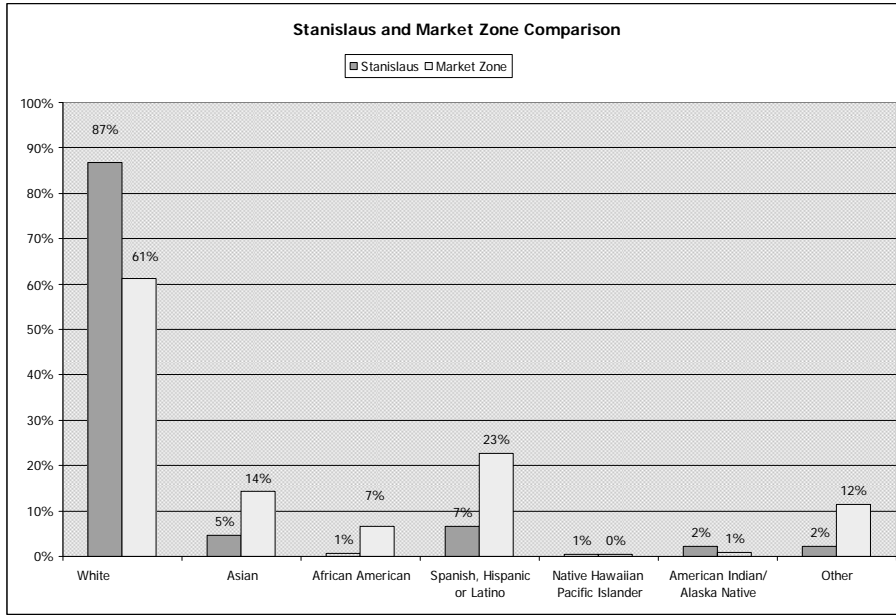
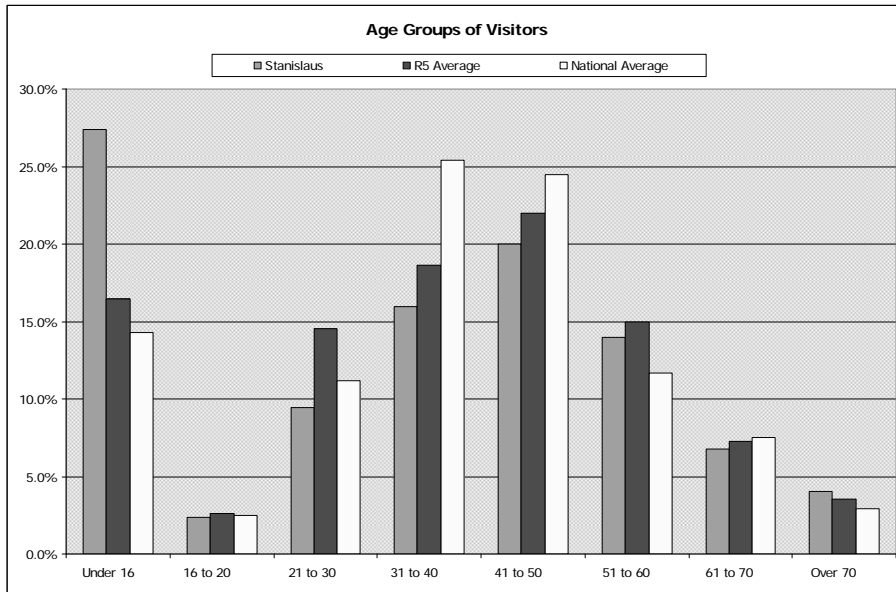


Figure 3.07-7 Visitor Characteristics: Age Distribution



The STF has very high participation by children, almost double the national average.

Activity Types

Table 3.07-5 presents participation rates by activity for the STF during the NVUM survey period. The Total Activity Participation (%) column of the table presents the participation rates by activity. Participation rates will exceed 100% since visitors can participate in multiple activities. The Percent as Main Activity column presents the participation rates in terms of primary activity.

Table 3.07-5 Activity Participation

Activity	Activity Emphasis for Road & Trail Use	Total Activity Participation (%) ¹	Percent as Main Activity (%) ²
Snowmobiling	Motorized	1.5	1.3
Driving for Pleasure	Motorized	15.0	2.0
OHV Use	Motorized	7.3	4.2
Other Motorized Activity	Motorized	0.5	0.5
Motorized Subtotal	7.89		
Hiking / Walking	Non-motorized	36.5	6.2
Bicycling	Non-motorized	5.9	0.9
Other Non-motorized	Non-motorized	18.3	4.1
Cross-country Skiing	Non-motorized	2.1	1.1
Backpacking	Non-motorized	4.3	1.9
Horseback Riding	Non-motorized	1.6	0.3
Non-motorized Subtotal	14.5		
Downhill Skiing	Other	18.1	17.0
Fishing	Other	23.5	10.0
Viewing Natural Features	Other	43.1	5.6
Relaxing	Other	48.5	15.0
Motorized Water Activities	Other	5.9	0.4
Hunting	Other	1.4	1.0
Non-motorized Water	Other	8.7	2.0
Developed Camping	Other	15.9	7.2
Primitive Camping	Other	5.4	0.5
Picnicking	Other	20.6	2.2
Viewing Wildlife	Other	37.6	1.4
Sightseeing	Other	0.0	0.0
No Activity Reported	Other	20.3	21.9
Resort Use	Other	7.1	1.4
Visiting Historic Sites	Other	5.3	0.1
Nature Study	Other	3.2	0.4
Gathering Forest Products	Other	4.5	0.5
Nature Center Activities	Other	5.3	0.1
Other Subtotal	86.8		
Total	109.2		

¹ Survey respondents could select multiple activities so this column may total more than 100%. The number in this column is the percent of survey respondents who indicated participation in this activity.

² Survey respondents were asked to select just one of their activities as their main reason for the forest visit. Some respondents selected more than one, so this column may total more than 100%. The number in this column is the percent of survey respondents who indicated this activity was their main activity.

The primary activity participation rates (Percent as Main Activity) displayed in Table 3.07-5 were used to estimate use by activity emphasis. The emphasis areas were grouped into those emphasizing motorized, non-motorized, and other activities. Motorized activities were those that used motor vehicles on Forest Service roads and trails. Non-motorized activities still used the Forest's roads and trails, but on foot or by non-motorized transportation such as cross country skis or bicycles. All other activities are all the other Forest based activities measured by the NVUM survey that didn't utilize roads or trails to pursue their primary activity. Examples of "other" are downhill skiing, motorized water activities, etc. Motor vehicles may have been used to reach a destination or participate in the activity, but it was not the primary emphasis of the visit.

Table 3.05-7 displays the number of visits for these activities. The number of visits is based on the primary purpose for the visit (Percent as Main Activity) displayed in Table 3.05-6 and the total number of visits of 1,800,000 reported in the STF NVUM report. Visitors were determined to be either local or non-local based on the miles from the visitor's residence to the Forest boundary. If the visitor reported living within 50 miles of the Forest boundary, they are considered local; if over 50 miles, they are considered non-local. It is critically important to distinguish between local and non-local spending as only non-locals bring new money and new economic stimulus into the local community. Local spending is already accounted for in the study area base data. It is currently not possible to predict how locals would have spent money if they didn't have local recreation

opportunities on the National Forest, but it's a safe estimate that much of that money would not have been lost to the local economy. People tend to substitute other local recreation activities or change the time or place for continuing the same activity rather than traveling long distances and incurring high costs to do the same activity. Recreation visits to the STF are divided into local and non-local visitors. If the visitor reported living within 50 miles of the forest boundary, they are considered local; if over 50 miles, they are considered non-local. Results for the STF indicated that approximately 28 percent of recreation visitors were from the local area while 60 percent were non-locals. The remaining 12 percent are classified as non-primary visitors, or those who indicated that recreating on the National Forest was not their primary purpose.

Table 3.07-6 Party-Trips by Activity

Activity	Use (Party-Trips)				
	Non-local Day Use	Non-local Overnight	Local Day use	Local Overnight	Non-Primary activity
Non-motorized					
Hiking/Walking	3,745	7,267	34,410	2,681	2,185
Bicycling	563	1,092	5,170	403	328
Other Non-motorized	2,475	4,801	22,736	1,772	1,444
Cross-country Skiing	647	2,005	4,251	315	72
Backpacking	0	5,369	0	5,826	258
Horseback Riding	182	352	1,668	130	106
Motorized					
Snowmobiling	632	1,032	4,920	922	827
Driving for Pleasure	899	1,089	12,405	429	1,441
OHV Use	3,494	6,137	16,010	4,670	1,026
Other Motorized Activity	383	672	1,753	511	112
Other					
Fishing	8,736	16,573	37,816	6,988	3,025
Hunting	374	1,655	4,625	1,821	236
Viewing Wildlife	915	2,118	3,842	667	1,355
Motorized Water Activities	341	599	1,563	456	100
Non-motorized Water	1,216	2,360	11,174	871	709
Downhill Skiing	18,388	29,759	56,507	8,208	2,839
Developed Camping	521	18,020	764	17,016	2,768
Primitive Camping	0	1,378	0	1,495	66
Resort Use	746	1,760	4,479	1,433	386
Picnicking	1,186	2,795	7,116	2,277	613
Viewing Natural Features	3,558	8,236	14,943	2,594	5,271
Visiting Historic Sites	26	62	159	51	14
Nature Center Activities	64	147	267	46	94
Nature Study	235	544	987	171	348
Relaxing	7,963	18,769	47,776	15,288	4,119
Gathering Forest Products	265	624	1,588	508	137
Sightseeing	0	0	0	0	0
No Activity Reported	11,616	27,380	69,694	22,302	6,008
Subtotal	57,809	136,263	346,851	110,992	29,901

Local and non-local visitors were further divided by those staying overnight on and off the forest and those on day trips. Thus the seven trip type segments are listed below:

1. Visitors who reside greater than 50 miles from visited Forest:
 - Non-local residents on day trips
 - Non-local residents staying overnight on the Forest
 - Non-local residents staying overnight off the Forest

2. Visitors who live within 50 miles of the visited the Forest:

- Local residents on day trips
- Local residents staying overnight on the Forest
- Local residents staying overnight off the Forest
- Non-primary visitors

Table 3.07-6 indicates the most popular non-motorized use are hiking and walking, followed by other Non-motorized (which is primarily swimming). The most popular motorized use is driving for pleasure, followed by OHV use. Hunting is categorized as “other” meaning it is neither motorized nor non-motorized in the following tables. On the STF, evidence suggests that most hunting is motorized and therefore should have been added to the motorized grouping. Hunting has about the same economic influence as snowmobiling. Had this been done, values would be 15-20% higher for motorized category.

Table 3.07-7 indicates that snowmobilers spend the most per visit and backpackers the least. Disregarding these two activities, non-motorized spending is almost double that of motorized for non-locals. Visitors that travel some distance to the Forest spend more per visit than local visitors, primarily because of overnight lodging expenditures. Motorized day use expenditures are generally higher than for non-motorized activities. Non-local overnight visitors engaged in non-motorized activities generally expend more than non-local motorized visitors (except for snowmobiling).

Table 3.07-8 displays the estimated employment and labor income response coefficients (employment and labor income per 1,000 visits) by local and non-local activity types. The response coefficients indicate the number of full and part-time jobs and dollars of labor income per thousand visits by activity type. The response coefficients are useful in: 1) understanding the economic effects tied to a given use level; 2) understanding projected employment effects for various use scenarios (sensitivity analysis); and 3) understanding the differences in employment effects by activity type. The response coefficients in Table 3.07-8 along with the visits presented in Table 3.07-6 were used to estimate the economic effects for local and non-local use by activity type.

Table 3.07-8 indicates the following: First, economic effects tied to local visitation generate lower employment and labor income effects. This is a result of local visitors spending less per visit in comparison to non-local visitors (Table 3.07-7). Second, economic effects vary widely by motorized and non-motorized activity types. The lowest employment effect is tied to local hiking/walking, bicycling, and other non-motorized and horseback riding activities (Note: the economic effects are identical for these categories since they share the same spending profile). Third, the largest economic effect is associated with non-local cross-country skiing, but is followed fairly closely by non-local snowmobiling. In general, economic effects vary by the amount of spending and by the type of activity, but it can not be generalized that motorized or non-motorized activities contribute more or less to the local economy on a per visit basis. It is also important to be careful with the use of response coefficients. They reflect an economic structure that is a snapshot in time, that is, they are not applicable to visitation numbers that are dramatically different from current recreation levels. If recreation activities and/or visits changed radically, the economy would shift as spending patterns changed and these response coefficients would no longer reflect underlying economic processes.

All Other Activities includes Developed Camping, Primitive Camping, Resort Use, Picnicking, Viewing Natural Features, Visiting Historic Sites, Nature Center Activities, Nature Study, Relaxing, Fishing, Hunting, Motorized Water Activities, Non-motorized Water, Downhill Skiing, Gathering Forest Products, Viewing Wildlife, Sightseeing, and No Activity Reported.

Table 3.07-7 Expenditures by Activity

Activity	Expenditures (\$ per visit)				
	Non-local Day Use	Non-local Overnight	Local Day use	Local Overnight	Non-Primary
Non-motorized					
Hiking/Walking	17.62	106.96	11.11	39.55	7.41
Bicycling	17.62	106.96	11.11	39.55	7.41
Other Non-motorized	17.62	106.96	11.11	39.55	7.41
Cross-country Skiing	18.93	119.64	14.78	87.39	13.60
Backpacking	0.00	40.38	0.00	36.15	0.00
Horseback Riding	17.62	106.96	11.11	39.55	7.41
Motorized					
Snowmobiling	49.09	128.80	29.57	68.93	28.33
Driving for Pleasure	17.62	66.54	13.33	42.73	10.00
OHV Use	28.57	64.80	19.00	48.50	14.62
Other Motorized Activity	28.57	64.80	19.00	48.50	14.62
Other					
Fishing	21.00	95.65	20.00	48.00	20.00
Hunting	38.10	116.32	30.00	79.47	25.50
Viewing Wildlife	20.80	82.59	10.80	53.75	10.00
Motorized Water Activities	28.57	64.80	19.00	48.50	14.62
Non-motorized Water	17.62	106.96	11.11	39.55	7.41
Downhill Skiing	36.36	117.93	25.24	89.13	27.89
Developed Camping	0.00	50.36	0.00	41.29	0.00
Primitive Camping	0.00	40.38	0.00	36.15	0.00
Resort Use	18.52	70.36	15.00	49.20	12.41
Picnicking	18.52	70.36	15.00	49.20	12.41
Viewing Natural Features	20.80	82.59	10.80	53.75	10.00
Visiting Historic Sites	18.52	70.36	15.00	49.20	12.41
Nature Center Activities	20.80	82.59	10.80	53.75	10.00
Nature Study	20.80	82.59	10.80	53.75	10.00
Relaxing	18.52	70.36	15.00	49.20	12.41
Gathering Forest Products	18.52	70.36	15.00	49.20	12.41
Sightseeing	0.00	0.00	0.00	0.00	0.00
No Activity Reported	18.52	70.36	15.00	49.20	12.41

Motorized and Non-motorized Use

Table 3.07-9 displays the estimated employment and labor income effects for current use levels reported by NVUM for local and non-local non-motorized and motorized activities. Table 3.07-10 expresses these employment and labor income effects as a percent of total employment and income for each activity. In general, the estimated economic effects are a function of the number of visits and the dollars spent locally by the visitors. For example, non-local visitors typically spend more money per visit than local visitors. Also, activities that draw more visitors will be responsible for more economic activity in comparison to activities that draw fewer visitors, holding constant spending per visit. Given that the analysis is dependent on visitation and expenditure estimates, any changes to these estimates affect the estimated jobs and labor income.

Table 3.07-9 indicates that approximately 97 total average annual jobs in the 4 county area (direct, indirect and induced, full-time, temporary, and part-time) and \$2.6 million total labor income (direct, indirect and induced) are attributable to non-motorized visitation on the STF. The two largest activities among those in the table are hiking/walking and other non-motorized. Together these account for about 11.2% of the jobs and 10.3% of the income generated from the activities analyzed, accounting for about 65 jobs and \$1.7 million in labor income to the four county areas.

Motorized activities were responsible for approximately 46 total jobs (direct, indirect and induced) and \$1.3 million total labor income (direct, indirect and induced). The two largest motorized uses are OHV Use and snowmobiling. These two activities contribute about 6.4% of the jobs from the activities in the table, and provide about 6.0% of the labor income. Together these two activities contribute 37 jobs and provide about \$1.0 million in labor income to the area.

Table 3.07-8 Employment and Labor Income Response Coefficients by Activity Type

Activity	Type	Employment (Jobs per 1,000 Party-Trips)		Labor Income (2006 dollars) (\$ per 1,000 Party-Trips)	
		Direct Effects	Indirect Effects	Direct Effects	Indirect Effects
Non-motorized Use					
Hiking/ Walking, Bicycling, Horseback Riding, Other Non- motorized	Local Day	0	0	\$4,409	\$1,549
	Local OVN	1	0	\$20,561	\$7,896
	Non Local Day	0	0	\$9,462	\$3,105
	Non Local OVN	3	1	\$64,356	\$24,578
	NP	0	0	\$4,409	\$1,549
Backpacking	Local Day	0	0	\$0	\$0
	Local OVN	1	0	\$19,671	\$7,600
	Non Local Day	0	0	\$0	\$0
	Non Local OVN	1	0	\$25,302	\$8,847
	NP	1	0	\$19,671	\$7,600
Motorized Use					
OHV Use	Local Day	0	0	\$7,921	\$2,765
	Local OVN	1	0	\$21,197	\$8,018
	Non Local Day	0	0	\$12,451	\$4,347
	Non Local OVN	1	0	\$35,329	\$13,363
	NP	0	0	\$7,921	\$2,765
Driving	Local Day	0	0	\$4,964	\$1,650
	Local OVN	1	0	\$26,852	\$10,241
	Non Local Day	0	0	\$7,806	\$2,594
	Non Local OVN	2	1	\$44,761	\$17,072
	NP	0	0	\$0	\$0
Snowmobile	Local Day	1	0	\$14,292	\$4,866
	Local OVN	2	1	\$49,206	\$19,230
	Non Local Day	1	0	\$23,666	\$8,332
	Non Local OVN	4	1	\$82,015	\$32,051
	NP	1	0	\$14,292	\$4,866
Cross Country Ski	Local Day	0	0	\$7,880	\$2,963
	Local OVN	2	1	\$53,510	\$21,178
	Non Local Day	1	0	\$12,378	\$4,655
	Non Local OVN	4	1	\$89,189	\$35,299
	NP	0	0	\$4,964	\$1,650
All Other Use					
All Other Activities	Local Day	0	0	\$8,347	\$2,858
	Local OVN	1	0	\$33,917	\$10,756
	Non Local Day	1	0	\$13,973	\$4,561
	Non Local OVN	2	1	\$65,147	\$19,943
	NP	0	0	\$8,347	\$2,858

“All Other Activities” (Table 3.07-7) are significant economic contributors for the activities studied. They provide 422 jobs, or 75% of the jobs from the activities analyzed. Labor income is about \$12.4 million, or 76% of the income generated by all activities.

Table 3.07-10 shows that about 17% of the jobs provided from all activities are from non-motorized use, 8% from motorized use and 75% from “Other Activities.” The contributions to labor income are 16% non-motorized use, 8% motorized use and 76% from “Other Activities.”

Table 3.07-9 Employment and Labor Income Effects by Activity Type

Activity Type	Employment (full & part-time jobs)		Labor Income(2008 dollars)	
	Direct	Indirect & Induced	Direct	Indirect & Induced
Non-Motorized Use				
Backpacking - Local	4	1	\$118,631	\$45,832
Non-local	5	2	\$140,625	\$49,170
Hiking/Walking - Local	9	2	\$214,107	\$77,102
Non-local	22	6	\$520,785	\$196,923
Horseback Riding - Local	0	0	\$10,377	\$3,737
Non-local	1	0	\$25,240	\$9,544
Bicycling - Local	1	0	\$32,168	\$11,584
Non-local	3	1	\$78,244	\$29,586
Cross-country Skiing - Local	2	1	\$52,117	\$19,942
Non-local	8	2	\$193,365	\$76,365
Other Non-motorized - Local	6	2	\$141,470	\$50,945
Non-local	14	4	\$344,105	\$130,116
Total Non-motorized	76	21	\$1,871,236	\$700,845
Subtotal	97	\$2,572,080		
Motorized Use				
OHV Use - Local	9	3	\$233,730	\$84,587
Non-local	10	3	\$269,481	\$100,619
Driving for Pleasure - Local	3	1	\$75,660	\$25,727
Non-local	3	1	\$57,700	\$21,650
Snowmobiling - Local	5	1	\$119,745	\$43,131
Non-local	5	1	\$103,124	\$39,701
Other Motorized Activity - Local	1	0	\$25,599	\$9,264
Non-local	1	0	\$29,515	\$11,020
Total Motorized	36	10	\$914,553	\$335,700
Subtotal	46	\$1,250,253		
All Other Use				
All Other Activities - Local	118	36	\$3,479,854	\$1,170,332
Non-local	207	60	\$5,804,886	\$1,938,891
Total Other	325	97	\$9,284,740	\$3,109,222
Subtotal	422	\$12,393,962		
Grand Total	438	128	\$12,070,529	\$4,145,767
Grand subtotal	566	\$16,216,296		

Table 3.07-12 shows the relationship of jobs and income generated from all recreation activities studied compared to total jobs and income in the 4 county areas. All of the recreation related jobs together only account for about 1.23% of the total jobs in the area, and the income generated is about 0.92% of the total labor income in the area studied. Since only a fraction of the overall recreation use on the Forest is affected, the differences between alternatives are too small for comparison of effects.

Predictions about changes in the study area economy from recreational use on the Forest are difficult to make and would be highly speculative. The Forest Service believes that under all action alternatives, levels of use would be relatively static, although the use patterns may change. For example, even though the overall number of available roads and trails is reduced in all of the action alternatives, the same levels of motorized use would concentrate in the remaining areas. At some point some visitors would no longer attain the experience they desire and would likely seek other areas, off-forest, or not participate in the activity. The effect on economics would be speculative and the point in time when this would occur is speculative. Qualitative factors are discussed in more detail in the lifestyles, attitudes, beliefs, and values section.

Table 3.07-10 Employment and Labor Income Effects by Activity Type

Activity Type	Employment (% of full & part-time jobs)		Labor Income(2008 dollars) % of Total Income	
	Direct	Indirect & Induced	Direct	Indirect & Induced
Non-Motorized Use				
Backpacking - Local	0.8%	0.2%	0.7%	0.3%
Non-local	0.9%	0.3%	0.9%	0.3%
Hiking/Walking - Local	1.5%	0.4%	1.3%	0.5%
Non-local	3.8%	1.0%	3.2%	1.2%
Horseback Riding - Local	0.1%	0.0%	0.1%	0.0%
Non-local	0.2%	0.1%	0.2%	0.1%
Bicycling - Local	0.2%	0.1%	0.2%	0.1%
Non-local	0.6%	0.2%	0.5%	0.2%
Cross-country Skiing - Local	0.4%	0.1%	0.3%	0.1%
Non-local	1.5%	0.4%	1.2%	0.5%
Other Non-motorized - Local	1.0%	0.3%	0.9%	0.3%
Non-local	2.5%	0.7%	2.1%	0.8%
Total Non-motorized	13.5%	3.7%	11.5%	4.3%
Motorized Use				
OHV Use - Local	1.6%	0.5%	1.4%	0.5%
Non-local	1.8%	0.5%	1.7%	0.6%
Driving for Pleasure - Local	0.5%	0.1%	0.5%	0.2%
Non-local	0.4%	0.1%	0.4%	0.1%
Snowmobiling - Local	0.8%	0.2%	0.7%	0.3%
Non-local	0.8%	0.2%	0.6%	0.2%
Other Motorized Activity - Local	0.2%	0.0%	0.2%	0.1%
Non-local	0.2%	0.1%	0.2%	0.1%
Total Motorized	6.4%	1.8%	5.6%	2.1%
All Other Use				
All Other Activities - Local	20.8%	6.4%	21.5%	7.2%
Non-local	36.7%	10.7%	35.8%	12.0%
Total Other	57.5%	17.1%	57.3%	19.2%
Totals	77.4%	22.6%	74.4%	25.6%
	100.0%		100.0%	

Table 3.07-11 Employment and Labor Income Effects

Activity	Type	Employment Effects (full and part time jobs)	Labor Income (2008 \$)
Non-Motorized Use	Local	29	778,012
	Non Local	68	1,794,069
Motorized Use	Local	23	617,443
	Non Local	24	632,810
All Other Use	Local	154	4,650,186
	Non Local	268	7,743,776
Grand Total	Local	206	6,045,641
	Non Local	360	10,170,655
Total for Area		566	16,216,296

Figure 3.07-8 Employment and Labor Income by Activity

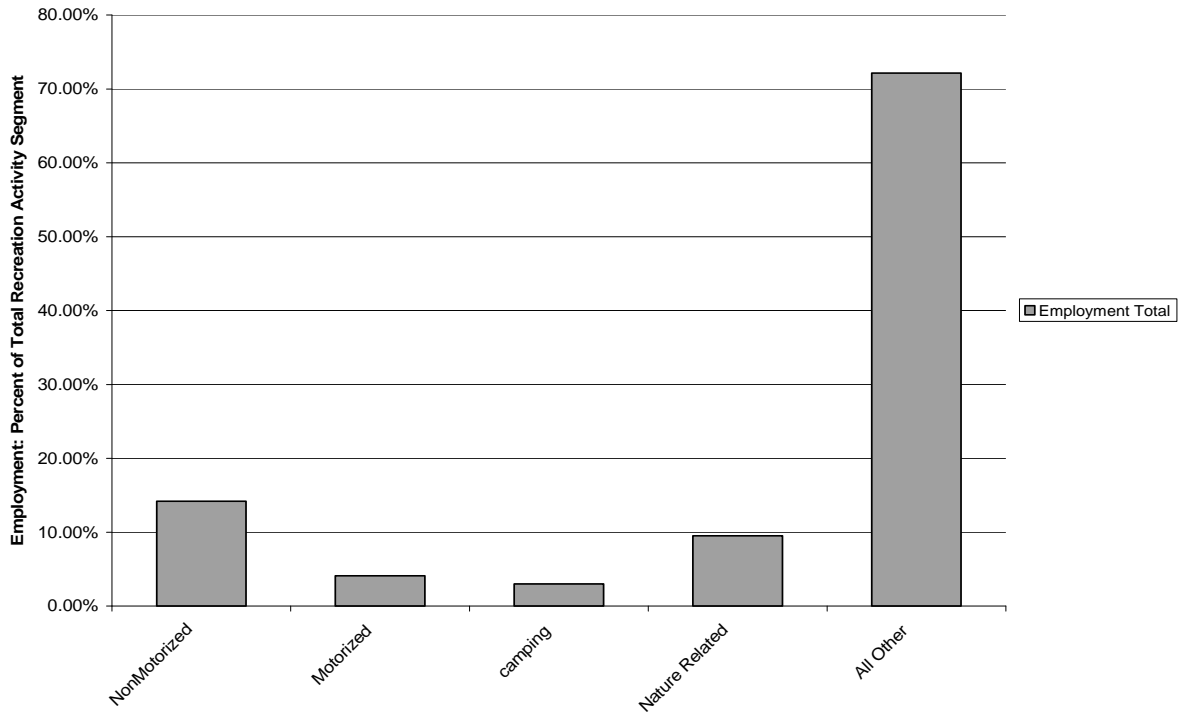


Table 3.07-12 Employment and Labor Income Effects

Activity	Type	Employment Effects (full and part time jobs) Percent of Total Employment	Labor Income (2008 dollars) Percent of Total Labor Income
Non-Motorized			
All Non-Motorized	Local	0.062%	0.043%
	Non Local	0.148%	0.099%
Total Non-Motorized¹	0.213%	0.144%	
Motorized			
All Motorized	Local	0.049%	0.034%
	Non Local	0.051%	0.035%
Total Motorized¹	0.103%	0.071%	
Nature Related			
Fishing	Local	0.056%	0.040%
	Non Local	0.108%	0.075%
Hunting	Local	0.012%	0.008%
	Non Local	0.010%	0.007%
Nature Related	Local	0.013%	0.009%
	Non Local	0.084%	0.055%
Total Nature Related¹	0.290%	0.200%	
All Other			
All Other	Local	0.253%	0.203%
	Non Local	0.378%	0.296%
Total All Other¹	0.641%	0.507%	
Study Area Total	46,179	1,792,717,000	

¹ Percent calculations for Totals included Non-Primary, NP.

Roads and Trails Budget Projections

The road system was largely constructed and maintained in the past as a component of timber sales. The significant reduction in timber harvest has left much of the system without needed maintenance. The current emphasis on fuel reduction will result in limited maintenance in some areas. The roads on the Forest are gradually deteriorating due to surfacing being worn out and/or storm damage. Some of the roads are being encroached upon by brush; and unless the brush is cleared, the roads will eventually become impassable. In some cases vegetation encroachment may result in less sight distance for drivers, which may result in a safety concern over time.

In the past, trail funding has been used primarily to maintain Wilderness trails. Non-motorized trails outside of the Wilderness have received maintenance by several volunteer groups. The value of this service was not available to be reflected in Table 3.07-13. OHV trail maintenance was funded through the California OHV grant program at a higher level prior to 2004. The lack of funding has contributed to an increase in deferred maintenance similar to roads. The Forest is hopeful that it will be competitive in the future for trail maintenance funding through the California OHV grant program. The Forest continues to be competitive in receives law enforcement funding through this program.

Table 3-07-13 Road and Trail Construction and Maintenance Budget

Fiscal Year	Roads Total	Road Maintenance ⁴	Trails Total	OHV Trails Maintenance
FY04	\$575,000	\$345,000	\$117,094	\$16,500 ²
FY05	\$932,336	\$559,400	\$187,000	\$13,000 ¹
				\$30,900 ²
FY06	\$735,000	\$441,000	\$177,227	\$30,000 ³
				\$50,334 ²
FY07	\$842,000	\$505,000	\$71,000	\$53,942 ²
FY08	\$777,000	\$466,200	\$162,000	\$50,000 (est.) ²

¹ OHV State of California grant funding for Operations and Maintenance, included Enforcement and trail maintenance

² A number of trails have been adopted by OHV clubs who provide trail maintenance. This is the annual volunteer dollar value contributed

³ Appropriated amount

⁴ Approximately 40/60 split of funds between planning and road maintenance activities

Appropriated funding has been uneven over the past five years and no prediction or trend is apparent. Appropriated funding alone is not adequate to sustain the system in the long run. If this funding does not increase in the future, the Forest will need to rely on outside funding sources, partnerships, and volunteers to accomplish this work.

Environmental Consequences

The following descriptions by alternative focus on the amount of change that is proposed under each alternative.

Alternative 1 (Proposed Action)

DIRECT AND INDIRECT EFFECTS

This alternative seeks a balance between quality OHV riding opportunity and protection of resources. Compared to Alternative 2, major changes would be felt by some individuals but fewer than Alternatives 3 or 5. Some desirable additions or changes to the exiting road system would occur. Season of use would change, but less than Alternatives 4 or 5. Some established patterns of backcountry travel would be affected. Motorized access to dispersed recreation sites would not continue, except along NFTS routes. New campsites would proliferate over time, impacting land and the driving experience. Social effects will vary by location and the values/preferences of individuals. At the forest scale, opportunities remain for all visitors.

CUMULATIVE EFFECTS

An examination of the past, present or reasonably foreseeable future actions identified in Appendix B (Cumulative Effects Analysis) shows that opportunities for jobs and income to the counties will continue indefinitely. Forest projects such as thinning, shredding, fuels reduction, vegetation management and grazing will continue into the future. Jobs related to those projects will also be available. Forest Service recreation associated businesses (permitted) such as resorts and their associated services of lodging, restaurants and boat rentals; ski areas; organization camps; and, concessionaire managed campgrounds are examples of where jobs would be available to the local community. The additional Payment in Lieu of Taxes (PILT) and Secure Rural Schools Act funding continues to support jobs and spending locally. No actions in this project would jeopardize these funding programs. Future consideration of dispersed recreation access routes (not included in this analysis) would increase the number of NFTS routes available for motorized access and restore historical motorized use.

Alternative 2 (No Action)

DIRECT AND INDIRECT EFFECTS

This alternative would have the least change, but over time would have undesirable effects. Route proliferation, impacts to private land, and inability to enforce/restrict inappropriate use would continue and increase over time. Motorized recreation opportunities and travel for other reasons (firewood gathering, prospecting, etc.) would continue. Since human activities are dispersed, fairly low levels of motorized use occur over expansive areas. Motorized freedom would have few limitations, resulting in conflict with non motorized uses and private land. Enforcement would be ineffective and monitoring of trail conditions difficult. Resource impacts at some locations would not be acceptable. This is the only alternative that would not significantly reduce motorized access to dispersed recreation sites. Season of use would not change.

Although this alternative presents little or no short-term change, this approach is not sustainable given our mission. The quality of the recreation setting and the ability to manage the resource will degrade over time. Conflicts between uses will increase.

CUMULATIVE EFFECTS

Same as Alternative 1.

Alternative 3 (Cross Country Prohibited)

DIRECT AND INDIRECT EFFECTS

This alternative would eliminate cross country travel resulting in the least amount of motorized opportunities and the greatest increase in non-motorized opportunities. This alternative has the greatest degree of change for affecting uses (contrasting with alternative 2). It will affect the most people. Under this alternative, non-street-legal vehicle use would be extremely limited, resulting in concentrated use at the existing NFTS opportunities. Desirable additions or changes to the existing road system would not occur. Season of use would not change, but established patterns of backcountry travel would be affected. Motorized access to dispersed recreation sites would not continue, except along existing NFTS routes.

The implementation of this alternative would have an immediate impact on capacity which will become more severe over time. Since demand would not be met on many areas of the Forest, use would have to go to other locations on the Forest, to other locations off the Forest (if available), or abandon the activity. Dispersed camping sites along NFTS routes would likely proliferate over time, impacting land and the driving experience.

CUMULATIVE EFFECTS

Same as Alternative 1.

Alternative 4 (Recreation)

DIRECT AND INDIRECT EFFECTS

This alternative would emphasize quality OHV riding opportunity while also protecting the resource. Compared to Alternative 2, major changes would be felt by some individuals but fewer than Alternatives 1, 3 or 5. Demand would be met for off-road OHV use without concentrations of use that would change the experience. Some desirable additions or changes to the exiting road system would occur. Season of use would change, allowing a longer season of use than Alternatives 1 or 5. Some established patterns of backcountry travel would be affected, but many route and loop opportunities would continue. Motorized access to dispersed recreation sites would be reduced, but not as much as Alternative 1, 3 or 5. New campsites would proliferate over time, impacting land and the driving experience.

CUMULATIVE EFFECTS

Same as Alternative 1.

Alternative 5 (Resources)

DIRECT AND INDIRECT EFFECTS

This alternative would emphasize resource values and non-motorized forms of recreation over OHV riding opportunity. Compared to Alternatives 2, 3 and 5, fewer changes would be felt by some individuals. Some desirable additions or changes to the exiting road system would occur. Season of use would change, offering fewer restrictions than Alternatives 1 or 4. Many established patterns of backcountry travel would be affected since many proposed routes fail to create loop opportunities. Motorized access to dispersed recreation sites would be limited, and less than Alternatives 1 or 4.

The implementation of this alternative would have an immediate impact on capacity which will become more severe over time. Since demand would not be met on many areas of the Forest, use would have to go to other locations on the Forest, to other locations off the Forest (if available), or abandon the activity. Dispersed camping sites along NFTS routes would likely proliferate over time, impacting land and the driving experience.

CUMULATIVE EFFECTS

Same as Alternative 1.

Summary of Effects Analysis across All Alternatives

While many opportunities on other public lands for non-motorized activities exist, the STF is the major public provider in the area for OHV use and the primary provider of motorized access to dispersed recreation sites. Since these types of use are not allowed or can not be accommodated by the other recreation providers, OHV advocates are justifiably concerned about a potential loss of opportunity. The significance of OHV use on the Forest is discussed in more detail in section 3.04 Recreation Resources. The surge in demand and reduction of capacity (with elimination of routes through or near private land) would potentially translate into one or more of the following change scenarios:

- Higher concentrations of use will occur where allowed, resulting in displacement of non-motorized activities to other areas. Negative impacts would occur to resources at those concentrated locations in Alternatives 3 and 5.
- Many areas will become free of motorized use in Alternatives 3 and 5, less so in 1 and 4.

- Long distance touring opportunities will be reduced as some current loops and interconnected routes lose continuity in Alternatives 3 and 5.
- Degradation in the recreation experience for many off-highway users (more traffic, more dust, more noise and fumes) would occur in Alternatives 3 and 5. This will become more like an OHV park and less like a motorized ride in a natural landscape. Alternatives 1 and 4 would spread out use and possibly be able to better absorb increased use. Alternatives 3 and 5 concentrate OHV use.
- Many familiar routes and special places will not have motorized access in the future. Some routes will have limitations on the type of motorized use. This loss of dispersed access occurs in Alternatives 1, 3, 4, and 5.
- The above effect will be felt more significantly by users of non highway legal vehicles (dirt bikes, ATVs, rock crawlers, etc.).
- The experience of driving for pleasure on forest roads that have mixed uses of ATVs, dirt bikes, rock crawlers and high clearance vehicles such as SUVs, varies between alternatives. Alternatives 1 and 4 have the most mixed use, thereby diminishing driving for pleasure while Alternatives 3 and 5 have the least amount of mixed use. Alternative 2 is difficult to evaluate whether this activity benefits or not.
- The access to motorized camping in undeveloped areas will be concentrated at the designated routes that were able to be analyzed in this project or be relocated along NFTS roadsides. Where this displacement occurs it will degrade both the dispersed camping activity and driving experience for road travelers because of close proximity to the routes.

Motorized access to dispersed recreation sites varies by alternative similar to OHV use, so the two different activities can be lumped together for summary purposes. With the exception of Alternative 2, all alternatives would implement the Travel Management Rule and prepare an MVUM. These actions will result in better understanding of types of use allowed and locations for the opportunity. This will direct motorized activity to specific locations. OHV and non-motorized users will benefit from the clarity and make better choices on where to recreate. Conflicts between the two uses would be less likely, since visitors can plan non-motorized (quiet recreation) activities away from OHV use. These visitors will have more areas available for quiet recreation. Enforcement of unauthorized activity will be easier. Alternative 2 has the most expansive opportunities for motorized use (the least for quiet recreation) followed by 4, 5, 1 and 3.

Economic Effects

The employment and labor income effects stemming from current motorized and non-motorized activities occurring on the STF were estimated. The economic effects of all other types of recreation combined on the Stanislaus NF have also been reported for comparison purposes. Economic effects tied to motorized and non-motorized activities were estimated to address the economic impact issues tied directly to proposed actions associated with motorized use. Also, the marginal economic effects (employment and labor income effects per 1,000 visits) of motorized and non-motorized use are provided. The marginal effects (also called “response coefficients”) are useful for performing sensitivity analyses of various management alternatives.

All of the recreation related jobs together only account for about 1.23% of the total jobs in the area, and the income generated is about 0.92% of the total labor income in the area studied. Since only a fraction of the overall recreation use on the Forest is affected, the differences between alternatives are too small for comparison of effects.

Social Effects

The changes resulting from any of the alternatives, except 2, have the potential to impact the quality of life for some individuals that may be positive or negative. Alternatives with the most change proposed (alt.3 and 5) are most likely to affect people. Nearby residents that live adjacent to the STF

or that visit the Forest frequently, are most likely to be affected. This depends on their location, their values, and the activities that they participate in. Individuals that own vehicles that are not highway legal would be affected most by a reduction in riding opportunity. Displaced motorized recreation from dispersed recreation sites may use developed campgrounds, go elsewhere, or give up the sport. Individuals, families, and small groups will be impacted, but not a predictable effect forest-wide.

Compliance with the Forest Plan and Other Direction

Much of the Forest Plan direction for Recreation (see Appendix C) is intended to sustain high quality recreation opportunities that result in quality recreation experiences. Minimizing conflict between visitors is a primary goal. It is also a goal to make opportunities available to all types of visitors.

Environmental Justice

Environmental Justice (EJ) is an executive order (EO 12898) which requires, in brief, 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.

Potentially affected tribes have been consulted and effects have been considered on their rights and concerns within the analysis of alternatives. American Indian populations will not be disproportionately impacted under any alternative with avoidance of heritage resources, consideration of traditional values, and reasonable access allowed through agreements, permits and recognition of their sovereignty and legal rights. None of the alternatives would have a disproportionate economic impact on any minority or low-income community as the motorized use decisions are spread throughout the forest and do not cause any adverse effect to any particular minority population. The effects to jobs and income within the STF study area are a very small portion of the overall jobs and income (less than 1%). Losses in motorized use are partially compensated for in non-motorized recreational activities as these uses are enhanced. Non motorized access will be a burden to some individuals, particularly those with mobility related disabilities, young children, or heavy objects that would be difficult to transport. Individuals or small groups that have traditionally used motorized access to a “special place” may need to change the way in which they recreate or find another location. The scale of this project has prevented a complete analysis of all motorized dispersed access routes that may be important to individuals, families, or small groups.

The Forest held a series of meetings in several nearby communities during the past several years. This included Sonora, West Point, Groveland, Greeley Hill, Arnold, and Modesto. The route designation process was explained and the public was encouraged to ask questions. The meetings were well-staffed by specialists who interacted one-on-one with interested members of the public. These meetings were attended by advocates of OHV recreation, opponents of OHV recreation, and interested citizens that were aligned with neither point of view. All people were encouraged to provide comments.

At this time, no evidence suggests that actions being considered (in their entirety) have disproportionately high and adverse impact on minority and low-income populations.

Monitoring Recommendations

Develop a system to track comments by individuals as proposed changes are implemented. If evidence appears that the decision is unduly impacting a segment of society, further analysis would be conducted. If warranted, actions may be adjusted to reduce impact to affected individuals or groups. Monitor for the impacts caused by proliferation of campsites along NFTS routes.