

MOTORIZED TRAVEL MANAGEMENT PROJECT

DRAFT SOCIAL AND ECONOMIC SPECIALIST REPORT

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For

Okanogan-Wenatchee National Forest

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Introduction

Social and economic elements, which are interrelated and interdependent with ecological elements, comprise the human dimensions component of the ecosystem. The purpose of this analysis is to inform the decision-making process through disclosing the current economic effects of motorized and non-motorized recreation activities and the potential impacts to the public from the alternatives. The social effects are described qualitatively in the Recreation Specialist Report.

The implications of resource management decisions for the Okanogan-Wenatchee National Forest (Okanogan-Wenatchee National Forest) Motorized Travel Management project to the social and economic uses and values are of interest to residents of the project area and users of the area. These people have made their interests known through organized groups and personal efforts. It is these interests and concerns that have helped identify the issues connected with the proposed action.

Regulatory Framework

Relevant Laws and Regulations

The National Environmental Policy Act of 1969 (NEPA) requires that when economic or social and natural or physical environmental effects are interrelated, the environmental analysis will discuss all of these effects on the human environment (40 CFR 1508.14).

The Final Travel Management Rule was published in the Federal Register on November 9, 2005. This Rule requires that all national forests and grasslands designate roads, trails, and areas that are open to motor vehicle use on a Motor Vehicle Use Map (MVUM). Motor vehicle use off designated roads and trails and outside designated areas would then be prohibited by regulation (36 CFR 261.13). The MVUM is to be updated and published as needed, as travel planning will be an ongoing process. The rule also contains provisions for limited motor vehicle use within a specified distance of designated roads, referred to as corridors, in order to access dispersed camping.

Forest Plan Direction

The Okanogan National Forest and Wenatchee National Forest Land and Resource Management Plans (Forest Plans) do not contain social and economic goals and desired future conditions, although the plans do provide management direction on related topics including timber management, recreation, visual resources, and cultural resources, which are covered in other resource areas.

Forest Service Policy

Forest Service policy regarding social and economic analysis is contained in FSM 1970.3, FSM 1970.6, FSM 1972.2, 1973.2. Here is an excerpt from FSM 1970.3:

1. Social and economic evaluations are conducted by or in concurrence with subject matter experts and in collaboration with the responsible line officer.
2. Social and economic evaluations:

- a. Utilize generally accepted methods, practices and data relevant to the planning process and decision, and
 - b. Describe results and recommendations in clearly understandable language addressing decisions to be made.
3. To the extent appropriate, social and economic evaluations should utilize consistent data and evaluation methodologies in order to facilitate comparisons.
4. Desired social and economic conditions are evaluated using collaborative processes.

Best Available Science

Research on recreation use is based on National Visitor Use Monitoring (NVUM) data gathered for the Okanogan-Wenatchee National Forest from October 2009 to September 2010. This survey has been repeated every 5 years on the Forest, beginning in 2000. The 2009/2010 survey is the most current. The NVUM is the only Forest-wide source of recreation use data available. It is important to note that the NVUM data is valid at the Forest level only, and is not applicable at a finer scale. Further, the data represents one year of recreation use estimates, and survey results may have been affected by an abnormally low snow year, a long fire season and site closures that were not anticipated. It is important to note that the NVUM data is valid at the Forest level only, and is not applicable at a finer scale. NVUM data is the best available science for economic analysis of national forest effects to local economies.

Methods and Rationale

Information on population characteristics, employment, and income assists in identifying the potential need for specific management activities and is useful in identifying the potential effects of proposed activities. This demographic information, taken from the 2010 census data (www.census.gov), is presented in aggregate and by county to show the unique qualities and characteristics of each county.

Because the demographic characteristics of the counties vary substantially, presenting disaggregated county-level data alongside the study area-wide assessment is important. In the aggregated data, trends in King County dominate, potentially masking trends in smaller counties. Disaggregation ensures that the differences among counties may be analyzed. However, due to data limitations, counties are the smallest available unit of measure. Therefore, within-county changes, including community-level, are not analyzed in this report.

Input-output analysis (Hewings 1985) was used to estimate the economic effects stemming from motorized and non-motorized use. Input-output analysis is a means of examining relationships within an economy both between businesses as well as between businesses and consumers. The analysis captures all monetary market transactions for consumption in a given time period. The resulting mathematical representation allows for the examination 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 Okanogan-Wenatchee National Forest used for this jobs and income analysis was Chelan, Kittitas, Okanogan, Skagit and Yakima, Ferry, King, Snohomish, Benton, Douglas, and Grant Counties. The rationale for choosing

these counties for the impact area is described in more detail in the Analysis Area and Boundary Rationale section of this report.

While the individual economies of each county have unique qualities and characteristics, they do not exist in a vacuum. They are complex, dynamic, and interconnected. The decision to use county aggregates as the basis for the economic analysis was made by Forest Service economists to more accurately reflect the economic impacts of a travel management decision region-wide. Another reason that the economic analysis in this environmental assessment was not narrowed to the county level is that Forest Service modeling and data is less accurate at smaller scales. The Forest level is generally the smallest unit of analysis.

IMPLAN 3.0, an input-output modeling system, and 2010 IMPLAN data were used to develop the input-output model for this analysis. IMPLAN (Impact Analysis for Planning) translates changes in final demand for goods and services into resulting changes in economic effects, such as labor income and employment in the impact area. For the Okanogan-Wenatchee National Forest area, employment and labor income estimates attributable to all current recreation use and other activities were generated.

The expenditure and use information collected by the Forest Service NVUM survey are critical elements in the economic analysis. 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, 2008). The reported spending for each of the spending categories is allocated to the appropriate industry within the IMPLAN model. The allocation process referred to as “bridging,” was conducted by the planning and analysis group in Fort Collins, Colorado. The bridged IMPLAN files were used to estimate economic effects such as employment and labor income related to changes in spending. These changes in spending are technically referred to as changes in final demand. They are caused by changes in use.

While the visitation numbers are the results of Forest-level NVUM estimates, the estimates for expenditures are based on averages. Because only one-third of NVUM samples include spending questions, average spending by OHV visitors to all national forests is used to calculate expenditures. This method avoids producing statistically unreliable visitor spending estimates in most cases (Stynes and White 2010).

Analysis Area and Boundary Rationale

The Okanogan-Wenatchee National Forest extends into parts of four counties in Washington State (Chelan, Kittitas, Okanogan, and Yakima) as well as a very small portion of one more (Skagit). This analysis provides a description of the social and economic environment and trends in the four counties plus six other counties in the area surrounding the Okanogan-Wenatchee National Forest. The other six are: Ferry, King, Snohomish, Benton, Douglas, and Grant. National Forest System (NFS) land covers approximately six million acres of the land, which accounts for 31 percent of the land within the eleven county study area.

All eleven counties are included because the Okanogan-Wenatchee National Forest, like other national forests, caters to a regional population including those metropolitan areas within reach of the Forest. These sub-regions are part of what Forest Service researcher, Ken Cordell, terms a recreational “market zone” (Cordell, 1999). The study area stretches beyond the four central counties of the Okanogan-Wenatchee National Forest to include the metropolitan area of Seattle in the market zone as well as the other counties in the region of direct social and economic relationships.

Existing Condition

Introduction

This section examines the population and demographic trends, general economic data, as well as recreation use and economic contributions of motorized and non-motorized forest uses.

Population Trends

In 2010, the latest census available, the population of the eleven-county planning area was nearly 3.5 million. As Table 1 below reveals, county populations within the study area vary dramatically, from a low of 7,551 in Ferry County to nearly two million in King County. In the aggregated data, trends in King County dominate, masking changes in relatively smaller counties. The disaggregated data in Table 1 allows for the analysis of the differences among counties.

As Table 1 shows, the study area, in aggregate, has grown more quickly than the nation, which grew by nearly 10 percent in the past decade. The population of the study area has grown nearly 13 percent. Looking at the trends for individual counties tells a different story. There is considerable variation among them. Benton County grew by 23 percent. Douglas, Snohomish, and Grant also grew quickly. Ferry and Okanogan counties’ population grew by only about 4 percent. Chelan and Yakima counties also grew slightly more slowly than the nation.

Table 1–Current population and growth trends (2010)

Geography	Population	
	2010	% change 2000-2010
Chelan County	72,453	8.8 %
Kittitas County	40,915	14.1%
Okanogan County	41,120	3.9%
Yakima County	243,231	9.3%
Ferry County	7,551	4.0%
King County	1,931,249	11.2%
Skagit County	116,901	13.5%
Snohomish County	713,335	17.7%
Benton County	175,177	23.0%
Douglas County	38,431	17.9%
Grant County	89,120	19.3%

Eleven county aggregate	3,469,483	12.9%
Washington State	6,724,540	14.1%
United States	308,745,538	9.7%

Source: US Census Bureau State and County Quick Facts (<http://quickfacts.census.gov/qfd/states/53/53017.html>)

Increases in population can increase user demands on existing travel routes, access, and recreation opportunities (Cordell and Overdeest 2001). When the increase is primarily through migration into the study area, it can also increase demand for a different combination of uses and level of those uses. For example, baby boomers living in urban areas of Washington are likely to have different values and recreation patterns than people living in small communities in central Washington. When large numbers of baby boomers move from Washington to eastern Washington, the difference in values between the newcomers and those of the long-time residents of the community may lead to friction in the community. The addition of new users with different values has the potential to result in conflict. People with different values often have different behaviors, which also may lead to conflict.

While high population growth rates may lead to economic growth and diversity, they may also strain community capacity, including physical and civil infrastructure. The remaining analysis will seek to add context and clarity to trends and potential issues in these counties and the study area as a whole.

Population Density

Population density can serve as an indicator for a number of socioeconomic factors of interest – urbanization, availability of open space, and socioeconomic diversity. More densely populated areas are generally more urban, diverse, and offer better access to infrastructure. In contrast, less densely populated areas provide more open space, which may offer amenity values to residents and visitors.

Table 2 gives population densities in the study area. King County far exceeds the population density of the rest of the counties in the planning area; the next most densely populated county is Snohomish County, which is one of the fastest growing counties in Washington. Washington is a relatively densely populated state – it is more densely populated than the national as a whole. However, several counties in western Washington, including King County, are primarily responsible for the state’s high density. King County, which includes the Seattle metropolitan area, has more than 900 people per square mile. Ferry and Okanogan counties have extremely low population densities. In Ferry County, there are fewer than four people per square mile. Ferry and Okanogan are among the least dense counties in the state. These counties are both located in northcentral Washington.

Table 2– Population density (2010)

Location	People/square mile
Chelan County	24.8
Kittitas County	17.8

Location	People/square mile
Okanogan County	7.8
Yakima County	56.6
Ferry County	3.4
King County	912.9
Skagit County	67.5
Snohomish County	341.8
Benton County	103.0
Douglas County	21.1
Grant County	33.3
Eleven county study area	144.5
Washington State	101.2
United States	87.4

Source: US Census Bureau, Census 2010, Fact Finder 2

Age

Median age can reveal information relevant to travel management decisions. Areas with a large proportion of retirees may have different needs and preferences than communities populated primarily with working age families. Table 3 provides the median age by county as well as the state and national averages.

Table 3—Median age (2010)

Geography	Total	Male	Female
Washington State	37.3	36.2	38.3
Benton	35.6	34.6	36.6
Chelan	39.3	38.1	40.5
Douglas	36.8	35.9	37.7
Ferry	47.3	46.5	48.1
Grant	32.1	31.3	32.9
King	37.1	36.3	37.9
Kittitas	31.9	30.5	33.2
Okanogan	42.9	41.9	43.8
Skagit	40.1	39.1	41.3
Snohomish	37.1	36.1	38.1
Yakima	32.2	31.3	33.2

Source: US Census Bureau, Census 2010, Fact Finder 2, File Name DP-10.

In general, the median age in the study area is about the same as the state and the nation. However, substantial variation exists among counties. Kittitas County is relatively young (median age 31.9), likely related to the presence of Central Washington University in Ellensburg, where approximately 8,000

students are enrolled (CWU-OIR-2009). In contrast, Ferry county’s residents are, on average, relatively old (47.3). This suggests that this has relatively high proportions of retirees and comparatively few young adults and families with children at home.

Per Capita Income

Per capita income (income per person in a population) is a key indicator of the socioeconomic well-being of a county. High per capita income may signal greater job opportunities, highly skilled residents, greater economic resiliency, and well developed infrastructure. Table 4 provides data on per capita income for 1990 and 2009 (both in 2009 U.S. Dollars).¹ Per capita income increased in every county in the planning area during the 19-year period. For some counties in the planning area, however, per capita income is markedly lower than the state average. Average per capita income in the eleven-county planning area is approximately 83 percent of the state figures. While average per capita personal income is well above the state average in King County, all of the other counties in the planning area are below the state average, except Snohomish. Despite the gains in per capita income since 1990, more than half of the counties in the study area have not grown at a comparable rate to the state.

Table 4—Per capita personal income (inflation adjusted to 2009 dollars) ²

Area	1990	2009	Percent Change
Washington State total	\$32,234	\$42,870	33%
Benton, WA	\$29,127	\$38,307	32%
Chelan, WA	\$28,011	\$35,237	26%
Douglas, WA	\$24,315	\$29,565	22%
Ferry, WA	\$20,347	\$25,284	24%
Grant, WA	\$23,918	\$29,025	21%
King, WA	\$41,259	\$56,904	38%
Kittitas, WA	\$24,206	\$32,149	33%
Okanogan, WA	\$23,225	\$32,136	38%
Skagit, WA	\$28,873	\$38,225	32%
Snohomish, WA	\$31,286	\$43,616	39%
Yakima, WA	\$25,326	\$31,265	23%
11 County Average	\$27,263	\$35,610	31%

Source: Bureau of Economic Analysis Table CA1-3

<http://www.bea.gov/iTable/iTable.cfm?ReqID=70&step=1&isuri=1&acrdn=5>

Note: Adjusted using BLS Inflation Calculator <http://data.bls.gov/cgi-bin/cpicalc.pl>

¹ Per capita income data for 2010 were not available at the time this draft was written.

² The original data are not inflation adjusted, the BLS Consumer Price Index inflation calculator is used to compare between years (<http://data.bls.gov/cgi-bin/cpicalc.pl>).

Earnings per Job

Per capita personal income offers an incomplete picture of the economic health of an area. Table 5 and Table 6 present data on earnings per job. In all of the counties in the planning area except Ferry, earnings per job increased by 15-40 percent. Whereas Ferry County's per capita personal income grew by 24 percent between 1990 and 2009, earnings per job decreased by 2 percent from 1990 to 2010. More precisely, earnings per job decreased by 12 percent from 1990 to 2000 then rose by 10 percent between 2000 and 2010.

Increasing per capita income coupled with decreasing earnings per job is possible, since employment income is only one element of personal income. Non-labor income, which includes rent, transfer payments, and dividend payments, is included in calculations of personal per capita income, but not earnings per job. In Ferry County, the increase in per capita income may be due to increasing numbers of retirees, whose income comes from non-labor sources. Income from retirees can enable per capita income to increase even as earnings per job stagnate or decrease.

Table 5—Earnings per job (adjusted to 2010 dollars)

Area	Year		
	1990	2000	2010
Washington State total	\$38,176	\$47,544	\$49,354
Benton, WA	\$40,775	\$44,493	\$50,732
Chelan, WA	\$28,853	\$33,490	\$34,512
Douglas, WA	\$23,866	\$29,645	\$31,674
Ferry, WA	\$34,440	\$30,477	\$33,623
Grant, WA	\$29,170	\$30,918	\$35,655
King, WA	\$43,783	\$60,258	\$61,146
Kittitas, WA	\$27,159	\$29,320	\$32,339
Okanogan, WA	\$24,178	\$27,057	\$27,814
Skagit, WA	\$31,299	\$35,356	\$38,146
Snohomish, WA	\$39,966	\$44,467	\$48,681
Yakima, WA	\$27,897	\$32,577	\$34,524

Table 6—Earnings per job trends (percentages based on figures adjusted to 2010 dollars)

Area	Percent change	Percent change	Percent change
	1990 - 2000	2000- 2010	1990 - 2010
Washington State total	25%	4%	29%
Benton, WA	9%	14%	24%
Chelan, WA	16%	3%	20%
Douglas, WA	24%	7%	33%
Ferry, WA	-12%	10%	-2%
Grant, WA	6%	15%	22%
King, WA	38%	1%	40%

Kittitas, WA	8%	10%	19%
Okanogan, WA	12%	3%	15%
Skagit, WA	13%	8%	22%
Snohomish, WA	11%	9%	22%
Yakima, WA	17%	6%	24%

An increase in retirees is important for travel management planning. The values of retirees may be different than those of the long-time members of the community. Retirees and long-time residents may have different beliefs about the appropriate use of national forests and may use them for different types of recreation.

Decreases in earnings per job and per capita income may also affect planning area residents' perceptions of economic health and their attitudes toward travel management planning. Long-time residents who are extremely concerned about jobs are more likely to favor management actions that maintain or create jobs. Retirees, on the other hand, may be less concerned with job loss.

Unemployment

The unemployment rate provides insight into the relationship between residents' skills and employment opportunities. The natural rate of unemployment has been posited to be around 5 percent. This is called the natural rate because the rate allows for movement between jobs and industries, but does not signal broad economic distress. During the recession, the national unemployment rate has been about 10 percent, although it is currently (May 2015) at 5.5% nationally (Bureau of Labor Statistics, <http://data.bls.gov/timeseries/LNS14000000>).

Washington's unemployment rate has converged with the national rate in the middle of the 2000s. The average unemployment rate for the eleven-county area is slightly higher than that of the state. However, the average unemployment rate for the planning area obscures the diversity among counties. Five of the counties (Benton, Chelan, Douglas, King, and Kittitas) had lower rates of unemployment than the state. On the other hand, six of the counties (Ferry, Grant, Okanogan, Skagit, Snohomish, and Yakima) had unemployment rates that exceeded that of the state. Ferry had the highest unemployment rate in the State. Because employment is a primary source of personal income, employment and unemployment have major impacts on consumer spending and overall economic health. A breakdown of unemployment rates by county between 2001 and 2010 is shown in Table 7.

Table 7—Unemployment rates by county

Annual	Benton	Chelan	Douglas	Ferry	Grant	King	Kittitas	Okanogan	Skagit	Snohomish	Yakima	Eleven-county average	Washington
2001	5.7	8.1	7.3	11.2	8.9	5.1	6.6	9.9	7.1	5.3	9.4	7.7	6.2
2002	6.3	8.7	7.6	10.6	9.5	6.1	7.2	10.1	8.3	7.0	9.6	8.3	7.3
2003	6.9	8.4	7.7	13.5	9.3	6.2	7.7	9.5	8.2	7.1	9.6	8.6	7.4
2004	6.0	6.9	6.3	10.7	8.2	5.2	6.9	7.9	6.9	5.8	8.5	7.2	6.2
2005	5.7	5.9	5.4	9.1	7.2	4.7	5.9	7.1	5.9	5.1	7.4	6.3	5.5

2006	5.7	5.1	5	9.2	6.5	4.2	5.2	6.6	5.1	4.6	6.8	5.8	4.9
2007	4.8	4.9	4.7	7.9	5.7	3.9	4.8	6.2	4.7	4.3	6.2	5.3	4.6
2008	5.0	5.5	5.3	8.8	6.4	4.7	5.9	6.4	5.7	5.5	6.8	6.0	5.5
2009	7.2	8	8	13.3	9.9	8.5	9.1	9.6	10.1	9.9	8.9	9.3	9.3
2010	7.2	8.6	8.2	14.4	10.5	8.8	9.2	10.3	10.4	10.3	9.7	9.8	9.6

Source: Bureau of Labor Statistics Local Area Unemployment (<http://data.bls.gov/cgi-bin/dsrv?la>)

Recreation Use

Between October 2009 and September 2010 (USFS 2010), the National Visitor Use Monitoring (NVUM) survey was conducted on the Okanogan-Wenatchee National Forest.³ The second column in Table 8 shows the total proportion of people participating in an activity, including those visitors who participated in multiple activities on their visit to the Forest. As shown in the table, only 2 percent of all people who recreate on the Okanogan-Wenatchee National Forest ride OHVs. NVUM respondents also identify a single activity that they consider their primary activity on their visit to the Forest. The survey found that only 0.9 percent of people who recreate on the Okanogan-Wenatchee National Forest travel to the forest for the primary purpose of riding OHVs.⁴ It is important to note, however, that NVUM does not have statistically significant figures for recreation activities that have low percentages of participation, including OHV use on the Okanogan-Wenatchee National Forest.

The NVUM study design, including the days and locations in the sample pool, also affects the accuracy of the OHV visitation figures. If some of the OHV use occurs at one or two sites that did not have enough sampling days during the NVUM sample period, OHV use would be underestimated. The sampling does appear to have missed some high-use areas for OHV use on the Okanogan-Wenatchee National Forest. For example, the 2010 NVUM data showed 0 percent participation in OHV use as a primary activity on the Okanogan portion of the Okanogan-Wenatchee National Forest, but ranger district managers observe that the trails in the Sawtooth backcountry and routes in the Granite Mountain Trail system have consistent OHV use (Yankoviak, et al, 2016).

Data from the 2010 National Visitor Monitoring study indicated that 5.5 percent of visitors to the engaged in dispersed (primitive) camping during their visit. Big-game hunting has historically been a popular activity on the Forest during designated hunting seasons, and is often associated with camping at dispersed sites during the fall season. Results of the 2010 NVUM study indicate that 4.2 percent of visitors to Forest engaged in big game hunting during their Forest visit (see 8).

While the NVUM sampling may have missed some high-use areas for OHV use specifically, the data does show almost twice as many visitors engage in non-motorized recreation activities than those who choose motorized recreation activities (Yankoviak, et al, 2015). An estimated 32 percent of visitors (440,496 individuals) to the Forest engaged in motorized use during their visit (including driving for pleasure, OHV use, motorized trail use and other motorized activities), while approximately 53 percent of visitors (722,304 individuals) engaged in non-motorized activities(which includes backpacking,

³ For a complete description of methodology, background, and summary data from other Forests and national statistics, visit the NVUM website at: www.fs.fed.us/recreation/programs/nvum.

⁴ Non-primary represents visitors who reported that the main reason for their current trip was for some purpose other than visiting the national forest.

hiking/walking, horseback riding, bicycling, and other non-motorized activities). Only 9 percent of respondents engaged in motorized use as their primary activity, as compared to 18 percent who primarily engaged in non-motorized activities (Yankoriak, et al, 2016).

For more information on recreation and recreation trends, see the Recreation Specialist’s Report, section on National and Regional Recreation Trends.

Table 8–Activity participation on the Okanogan-Wenatchee National Forest (USFS 2010)

Total Estimated Visits FY2010: 1,368,000*			
Activity	Total Estimated Activity Participation (%)**	Total No. of Participants	Reported as primary activity (%)
Hiking / walking	44.0	601,920	13.3
Viewing natural features	39.4	538,992	9.9
Relaxing	31.4	429,552	6.1
Viewing wildlife	30.5	417,240	1.4
Driving for pleasure	25.7	351,576	5.1
Downhill skiing	15.6	213,408	14.4
Developed camping	14.6	199,728	8.3
Fishing	12.8	175,104	5.2
Cross-country skiing	11.5	157,320	9.5
Picnicking	10.6	145,008	0.3
Gathering forest products	10.2	139,536	6.2
Nature study	6.0	82,080	0.0
Primitive camping	5.5	75,240	3.1
Motorized trail activity	4.4	60,192	2.5
Resort use	4.3	58,824	1.7
Hunting	4.2	57,456	4.2
Some other activity	3.2	43,776	2.0
Other non-motorized	3.0	41,040	1.3
Bicycling	2.4	32,832	0.8
Backpacking	2.1	28,728	1.1
OHV use	2.0	27,360	0.9
Nature center activities	1.6	21,888	0.3
Visiting historic sites	1.5	20,520	0.0
Snowmobiling	1.5	20,520	1.4
Horseback riding	1.3	17,784	1.3

Other motorized activity	0.1	1,368	0.0
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*The 90 percent confidence interval width was plus or minus 15 percent for this sample.

**Survey respondents could select multiple activities so this column may total more than 100 percent.

Economic Contributions of Recreation Use

One of the main elements in travel planning is the economic contributions of recreation uses. This section discusses the economic contributions of current recreation uses.

Except for the recreation areas that charge an entry fee, National Forest recreation is a non-market good. Non-market goods are those that are not exchanged in markets, but clearly provide great value to society. Economic ties between recreation on National Forest System lands and local communities are estimated by tracking how visitors spend their money in local businesses and by estimating how much those businesses spend on materials and wages in order to provide goods and services to the recreationists. One-third of the NVUM questionnaires ask visitors how much they spent in local communities and on what goods and services. The spending information is reported by visitor characteristics such as whether they were local residents or non-locals and whether they were just day users or if they spent the night. These survey categories have the highest effect on how recreationists spend their money and who in the local economy enjoys the economic benefit.⁵

Recreation visits to the national forests, including visits for OHV use, impact local economies. Some communities have looked to recreation as a source of income as commodity production of timber and other resources have declined. As part of the process for determining economic impact, NVUM identifies average spending of individual visitors and total spending associated with recreation use.⁶

The spending that occurs on all recreation trips is greatly influenced by the type of recreation trip taken. Visitors on overnight trips generally have to purchase more food during their trip, in restaurants and grocery stores than visitors on day trips. Visitors who have not traveled far from home to the recreation location usually spend less than visitors traveling longer distances, especially on items such as fuel and food.

The IMPLAN model uses 2010 data to construct the regional impact area. This impact area covers the eleven counties described in previous sections. Visitor expenditures from NVUM are matched to corresponding economic sectors in the model. The economic effects attributable to Okanogan-Wenatchee National Forest recreation visitor spending that stem from the private sector are shown below in five activity groups (see Table 10). For each activity group, the annual average contribution to jobs and income in the eleven-county impact study area is estimated using the following categories: local primary visits; non-local primary visits; and non-primary visits. The NVUM survey defines local visitors as individuals traveling from within 50 miles of national forest recreation sites, while non-local

⁵ Stynes, Dan and Eric White. Spending Profiles of National Forest Visitors, Round 2 Update. March, 2010

⁶ National Visitor Use Monitoring Results, February 2009, Data collected CY2000 and FY 2005, USDA Forest Service, Region 6, Okanogan National Forest, updated February 10, 2009, p. 1.

visitors are those traveling more than 50 miles. Local visits consist mostly of day visits; while non-local visits usually involve a day trip or an overnight stay in the area. Recreation visitor spending is greatly influenced by the type of visit. Whether the visit is local or non-local and whether it is a day trip or overnight trip is more important economically than the activity type (White and Stynes 2008). For this reason, the economic contributions are calculated and reported (Table 10) by local and non-local visitors.

The non-motorized group includes backpacking, hiking/walking, horseback riding, bicycling, cross-country skiing and 'other non-motorized' recreation. The motorized group includes OHV use, driving for pleasure, snowmobiling and 'other motorized' activities. Nature related recreation consists of fishing, hunting, viewing wildlife, viewing natural features, nature center activities, nature study and 'other nature-related' activities. Downhill skiing is shown in its own group in this analysis since it had the highest primary activity participation rate. The last category, 'all other', consists of the recreation activities not included in the other four categories: motorized water activities, non-motorized water activities, developed camping, primitive camping, resort use, picnicking, visiting historic sites, relaxing, gathering forest products and sightseeing.

The number of jobs that IMPLAN® reports includes both full and part-time wage and salary employees, as well as self-employed workers. The number of jobs is reported as an annual average, which is consistent with the reporting convention that Bureau of Labor Statistics and other employment reporting systems. Total labor income includes all forms of employment income such as wages, benefits and proprietor income. Spending from all non-local visitors supports approximately 579 jobs and \$22 million in labor earnings within the eleven-county area. Local visitor spending supported approximately 274 jobs and \$10 million in labor earnings. Visitor spending from all non-motorized use (local and non-local) supports approximately 208 jobs and \$8 million in labor earnings. Visitor spending from all motorized use (local and non-local) supports approximately 42 jobs and 1.6 million in labor earnings (Table 9).

Table 9—Estimated income and labor income effects for all recreation use reported by NVUM

Recreation Activity Group	Employment Effects (full and part time jobs)			Labor Income (2010 dollars)		
	Local	Non-Local	NP	Local	Non-Local	NP
Visits						
Non-Motorized	66	142	8	\$2,573,347	\$5,427,725	\$295,395
Motorized	15	27	5	\$574,573	\$1,012,153	\$173,678
Nature Related	52	114	11	\$2,056,971	\$4,446,143	\$429,079
Downhill Skiing	61	135	12	\$2,400,738	\$5,283,710	\$454,969
All Other	80	161	8	\$3,263,085	\$6,366,839	\$315,689
Total	274	579	44	\$10,868,713	\$22,536,571	\$1,668,810

Figures for jobs and income related to OHV use on the Okanogan-Wenatchee National Forest are only rough estimates. As mentioned in the previous section, at the forest-level, NVUM does not have statistically significant figures for recreation activities that have low percentages of participation, including OHV use. The NVUM study design, including the days and locations in the sample pool, also affects the OHV visitation figures. Some of the OHV use may occur at one or two sites that did not have enough sampling days leading to an underestimation of OHV use. If the recreation use is underestimated, the estimates for jobs and income will also be underestimated. The rough estimates for the economic contributions of OHV visits are approximately 6 jobs and \$240,000 in labor earnings for the study area (see Table 10).

Table 10—Estimated employment and labor income effects from OHV use

Visits	Employment effects (full and part time jobs)			Labor income (2010 dollars)		
	Local	Non-local	Non- primary	Local	Non-local	Non-primary
OHV	3	3	0	\$105,576	\$135,405	--

While NVUM does not have statistically significant figures for recreation activities that have low percentages of participation, figures for the sum total for all recreation activities are statistically significant. In 2010, visitor spending from all recreation visits to the Okanogan-Wenatchee National Forest contributed close to 900 jobs and approximately \$35 million in labor earnings to the private sector in the eleven-county impact area (see Table 9 above). It is important to note that all of these jobs and labor earnings constituted a very minor portion of the area economy, as displayed in Table 11.

Table 9—Current role of Okanogan-Wenatchee National Forest’s recreation visitors spending to the local economy (eleven-county impact area)

Industry	Employment (jobs)		Labor income (2010 dollars)	
	Eleven-county area totals	Okanogan-Wenatchee National Forest recreation contribution	Eleven-county area totals	Okanogan-Wenatchee National Forest recreation contribution
Agriculture	66,554	23	\$2,686,721,329	\$401,680
Mining	1,443	3	\$82,618,831	\$444,241
Utilities	2,076	3	\$258,276,850	\$447,836
Construction	113,501	6	\$7,258,512,009	\$345,606
Manufacturing	181,023	47	\$16,809,279,161	\$2,996,578
Wholesale trade	82,677	35	\$6,771,769,043	\$2,600,416
Transportation & warehousing	209,628	37	\$7,642,918,472	\$1,807,844
Retail trade	62,953	119	\$4,079,262,701	\$3,218,315
Information	90,428	14	\$12,306,616,120	\$1,335,862
Finance & insurance	112,592	26	\$8,043,433,807	\$2,228,376
Real estate & rental & leasing	107,518	29	\$2,383,222,946	\$871,951
Professional, scientific, & technical services	199,588	37	\$16,278,033,157	\$2,743,350
Management of companies	25,822	8	\$3,159,496,582	\$913,086
Admin, waste management & remediation services	110,531	44	\$5,158,500,885	\$1,424,116
Educational services	38,976	8	\$1,275,503,632	\$267,957
Health care & social assistance	205,160	43	\$11,837,564,972	\$2,076,519
Arts, entertainment, and recreation	55,047	71	\$1,151,211,672	\$2,041,100
Accommodation & food services	139,582	298	\$3,149,775,139	\$6,996,243
Other services	114,529	31	\$4,327,539,993	\$851,691
Government	294,183	15	\$19,883,878,651	\$1,061,329

Total	2,213,812	897	\$134,544,135,952	\$35,074,094
FS contribution (Percent of Total)	---	0.04%	---	0.03%

The eleven-county economy supports a total of 2.2 million full and part time jobs in 2010. These jobs generate \$134 billion in labor income. Figure 1 shows the distribution of the area's employment; Figure 2 shows the distribution of the area's labor income. The retail trade sectors each comprise about 3 percent of the employment and labor income. The arts, entertainment and recreation sectors make up 2 percent of the employment and 1 percent of the labor income, while the accommodation and food services sectors make up 6 percent of the employment and 2 percent of the labor income in the local economy. In comparison, visitor spending by recreation visitors to the Okanogan-Wenatchee National Forest in 2010 only contributed 0.04 percent of all employment and 0.03 percent of all labor income in the eleven-county area.

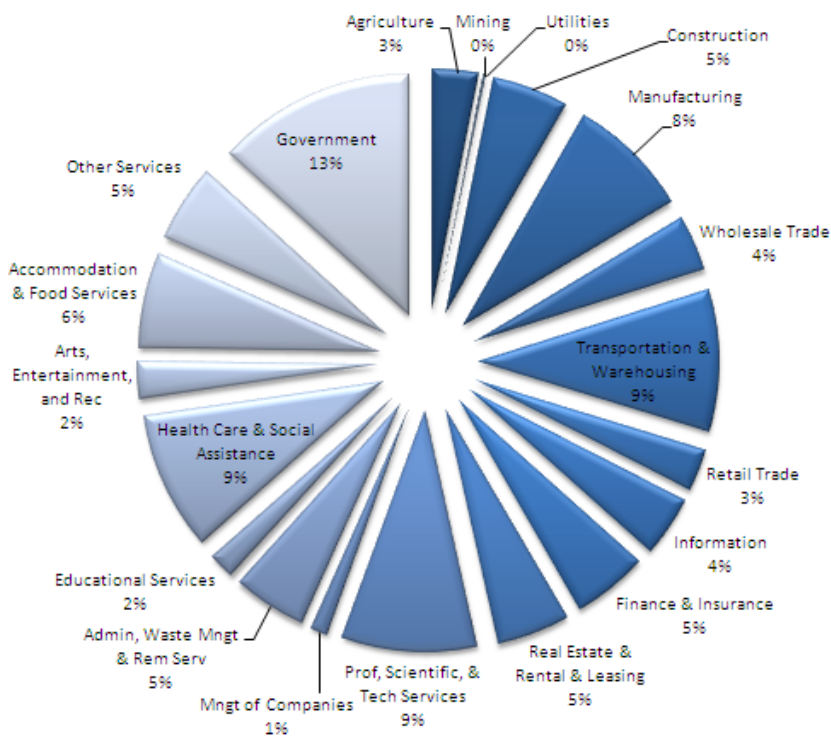


Figure 1. Local industry employment distribution

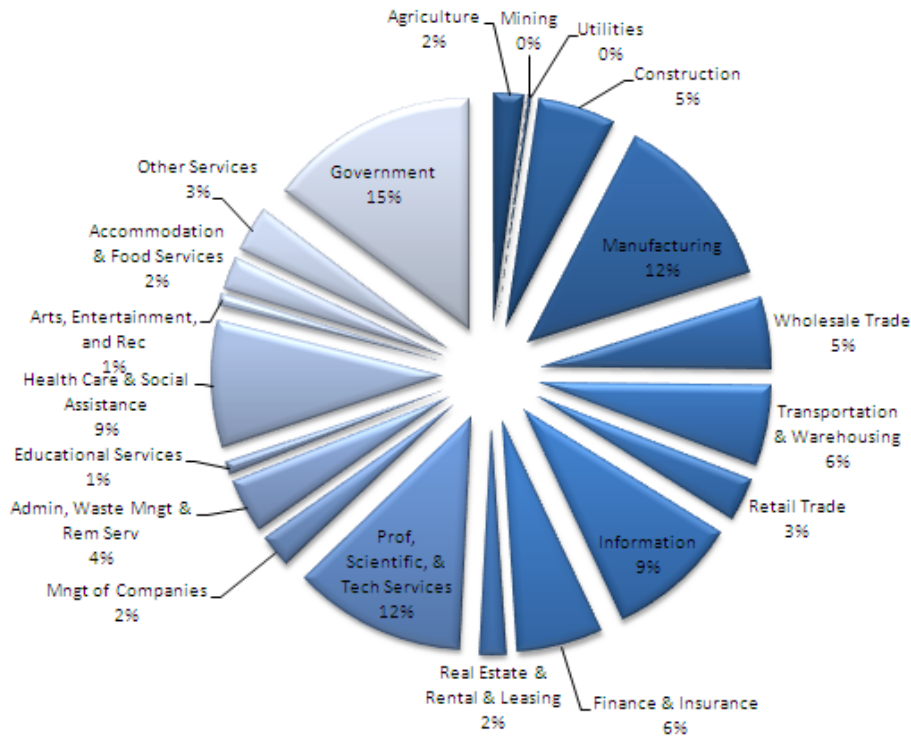


Figure 2. Local industry labor income distribution

Communities of Interest

Four communities of interest were identified in the public scoping process. A community of interest is a group of people who share a common interest in work, leisure, or other values, such as a club, occupational category, or church. They are not easily defined by a particular geographical area. A community of interest is different than a community of place, which is a group of people bound together by an identifiable location, such as a town, county, or watershed.

The communities of interest discussed in this report are OHV/Motor vehicle users, non-motorized users, aging and less physically able population, and county governments. The concerns held by the members of one community of interest are often also held by members of other communities. Table 12 displays the four communities of interest and the values and issues involved.

Table 10—Values and issues listed by community of interest

Community of interest	Concerns/preferences
OHV/motor vehicle users	<ul style="list-style-type: none"> Access OHV access opportunity Family experience Hunting/gathering Dispersed Camping Safety/crowding
Non-motorized users	<ul style="list-style-type: none"> Backpacking Hunting Camping Viewing Safety/crowding Access Noise/dust Environmental condition Disturbance
Aging and less physically able population	<ul style="list-style-type: none"> Access Game retrieval Camping Viewing Safety/crowding
County governments	<ul style="list-style-type: none"> Economic impacts Social impacts

Environmental Consequences

Direct and Indirect Effects on Economic Contributions of Recreation Use for All Alternatives

There is no difference in the economic contributions among alternatives because the projections in the number of people engaging in different recreation activities are the same for all alternatives. Alternatives B, C, and D could cause a reduction in the number of people visiting the forest for motorized recreation activities, without statistically reliable projections showing how the number of people will change from the existing condition, or between alternatives, it is not possible to estimate changes in expenditures or the resulting changes in jobs and income for any of the action alternatives.

Direct and Indirect Effects on Communities of Interest

This section discusses the direct and indirect effects on the four communities of interest identified in the scoping process and described in the Communities of Interest section above. The following narratives identify the main qualitative differences among each alternative for the communities of interest. It is important to note that the concerns and preferences associated with each community and the effects of alternatives on the members of a community are not absolute. People belong to more than one community of interest. Within communities, members often have diverse values, attitudes, and beliefs in addition to those that they hold in common.

OHV/Motor Vehicle Users

The OHV/motor vehicle community in general has the same concerns and preferences as other user groups that access the Okanogan-Wenatchee National Forest. These preferences include the opportunity to hunt, fish, camp, and enjoy the natural surrounds individually or in groups. One of the main differences between this community and the community of non-motorized users is the method used to access their activities. The concerns of the OHV/motor vehicle users are directly related to the access available for OHV use, especially the miles of routes available for motorized use as well as the area available for cross-country travel. Based on these concerns, the alternatives with the greatest number of cross country acres and miles of road or trail open to OHV use would support their preferences by providing opportunities to ride OHVs. Greater number of acres and miles for OHV use means more solitude and safety; it also means less crowding for OHV users.

The number of acres available for cross-country travel off designated routes is an important difference between the no action and the action alternatives. For OHV/motor vehicle users, the number of acres available affects opportunities for finding solitude, hunting, retrieving game, and accessing sites not connected to the road and trail system. Alternative A, the no action alternative, would not change any designations and would not prohibit motorized cross-country travel. Use of unauthorized routes and maintenance level 1 roads would continue on approximately 675,000 acres of land and 2,557 miles of maintenance level 1 roads that are currently open to motorized use and are level and open enough for cross-country use. All action alternatives would prohibit cross-country travel off of the existing designated motorized system. Of the 675,000 acres currently open to cross-country travel, only 33

acres at Moon and Funny Rocks would be designated as areas open for motorized use in each of the action alternatives. As a result of the prohibition on cross-country travel, all maintenance level 1 roads that are not already designated as motorized trails would be closed to motorized vehicles, and all unauthorized trails would be closed to motorized vehicles.

The OHV community would gain approximately 350 miles of road that would be opened to WATVs with Alternative B and D. These miles would be divided between 6 routes that would link communities, and tie into non-National Forest System roads and trails currently open to WATVs. This would partially offset the loss of OHV opportunities with the closure of cross-country travel, however would only benefit riders with vehicles outfitted and licences to be considered WATVs.

Non-motorized Users and Environmental Advocacy Groups

Many of the concerns and preferences of the non-motorized use community are the same as other recreation visitors to the Okanogan-Wenatchee National Forest. The major difference is their strong preference to access and use the Okanogan-Wenatchee National Forest through non-motorized means. A quiet experience, without noise from motorized vehicles, is a key preference for this group.

Like the non-motorized users, the environmental advocacy group community expressed concerns related to the condition of the environment, environmental disturbance to plants and animals, and existence value. Existence value is a term used by economists to describe the value that individuals may attach to the mere knowledge of the existence of something, as opposed to having direct use of that thing. This group believes that cross-country OHV travel designated routes has the potential to harm the natural environment.

The impacts on the preferences of the non-motorized users and the members of the environmental advocacy groups are inversely related to the amount of access available for OHVs use and acres designated for cross-country travel. Based on this inverse relationship, all action alternatives greatly improve non-motorized users recreational experience because all action alternatives would prohibit cross-country travel on 2.6 million acres, of which 675,000 acres are currently level and open enough for cross-country travel; only 33 acres of designated cross-country travel would continue. All action alternatives would improve safety, reduce noise and dust impacts, and increase opportunities for quiet and solitude except in the 33 acres of designated area of Moon and Funny Rocks. Recreational experience by non-motorized users within corridors would remain unchanged within corridors because of proximity to roads (all corridors are within 300' of roads). Most non-motorized users would reach these dispersed camping areas by vehicle.

Aging and Less Physically Able Population

The impacts of the alternatives on the aging and the less physically able population are similar to those of the OHV/motor vehicle community. The primary difference is that members of this group may have limited opportunities for non-motorized use access as an alternative to motorized use. Large decreases in motor vehicle access, including OHV use and access within corridors, may result in the displacement of these users. Like OHV users, the impacts on the preferences of these people are directly related to access available for OHV use. The aging and less physically able population may also currently rely on

cross-country travel for retrieving game and gathering other forest products. Based on these relationships, all action alternatives would equally reduce cross-country access on 675,000 acres.

Limiting motorized access to dispersed camping in Alternatives B, C, and D could also impact the aging and less physically able. People would be restricted to using established routes only, and not be permitted to drive vehicles closer than 100 feet to water. The corridors in Alternative B would allow people to drive to approximately 56% of the established campsites, while Alternative C would allow access to 40% of the sites, and Alternative D, approximately 70% of the sites. All alternatives would limit the ability of aging and less physically able people to access established campsites, with Alternative C having the greatest potential of substantially limiting opportunities for this population.

County Governments

Analysis of the impacts to the interests represented by county governments reflects broader economic and social impacts of the alternatives on the project area population in general and identifies additional indirect effects of the alternatives. Changes in the type and quality of the opportunities and activities associated with access and travel on the Okanogan-Wenatchee National Forest may affect the types and amounts of purchases of goods and services from businesses in the area as well as the jobs and income that businesses provide. A change in the management direction and the support for or against the management change can create conflict and affect community cohesion. Loss in economic activity or community cohesion may impact local government and local residents.

As discussed above, using input-output modeling shows no discernible difference among all of the alternatives in terms of economic contributions. There is no difference in the economic contributions among alternatives because there are no statistically reliable projections for how the number of people recreating on the forest would change with any alternative. . Without reliable projections, it is not possible to estimate changes in expenditures or the resulting changes in jobs and income for any of the action alternatives.

Since the amount of displacement or change in the type of activity is not predictable, access to camping within corridors and changes in cross-country travel are used to show how the alternatives differ with regard to the potential for economic change. The potential for change is important because some of the towns in the project area are under economic stress as described in the Per Capita Income, Earnings Per Job, and Unemployment sections. The loss or gain of a single job is relevant.

While it is not possible to predict what the overall economic impacts to the study area would be under any of the action alternatives, all action alternatives have equal potential for a negative economic impact on businesses which support or are dependent on motorized activities when compared to the no-action alternative. Conversely, all action alternatives have equal potential for a positive economic impact on those businesses which support non-motorized users. The potential positive impacts on those businesses which support non-motorized activities may compensate or do more than compensate for the negative impacts on businesses that support motorized activities.

Changes in dispersed camping opportunities is also an important difference between the no-action and action alternatives. Currently, motorized access for dispersed camping is occurring in a fairly unregulated pattern, with people driving off open roads to established or new dispersed campsites. A 2010 survey of the dispersed campsites located 1,115 unauthorized access routes to dispersed sites scattered along roads across the forest. Alternative A would not change this, so people would be able to continue driving motorized vehicles to all established campsites, regardless of their distance from roads, or closeness to water.

Alternatives B, C, and D would designate corridors for motorized access to dispersed camping. People would be allowed to drive motorized vehicles on established access routes only within the corridors, and would be prohibited from driving further than 300 feet from the open system road, and not closer than 100 feet to water. Alternative D would designate corridors on all open roads, so all existing access routes would be open to motorized vehicles for the purpose of access dispersed campsites. People would not be able to drive all the way to some establishes, however. Approximately 30% of the established campsites are located further than 300 feet from roads, or closer than 100 feet to water, so people would only be allowed to drive directly to approximately 70% of the established dispersed campsites.

Alterantives B and C would designate corridors on only a portion of the open road network. In Alternative B, direct motorized access would be available for approximately 56% of established sites. Alternative C would allow direct motorized access to approximately 40% of established sites.

None of the alternatives would put any limitations on dispersed camping itself, but limiting motorized access to the dispersed campsites could displace campers, and potentially reduce the number of people engaging in this activity. Alternative C has the greatest potential for displacement because direct motorized access would be allowed to approximately 40% of the established campsites. There are no stastically valid estimates of the actual effect any of the action alternatives would have on the number of people visiting the area.

Economic benefits to businesses from motorized dispersed camping would be highest in Alternative A (which does not restrict such camping), followed by Alternative D. Alternative C would have the lowest economic benefit. . Alternative B would have a moderate economic benefit compared to the other alternatives. .

Cumulative Effects

The spatial boundary for this analysis is the eleven-county study area, along with some discussion of the trends across the Pacific Northwest. The temporal boundary goes back over 100 years to road and trail construction for the purpose of timber harvest, mining, and European settlement. Motorized travel on the Forest is expected to continue in perpetuity because this project establishes a management approach of open to motorized access where designated on the MVUM for the Forest. However, Forest Plan Revision and recommendations brought forward as proposed actions from minimum roads analysis currently being conducted across the Forest are likely to affect future travel management direction

within 10 years. Therefore, this analysis uses 10 years as the practical future temporal boundary of this project's effects.

The national forests surrounding the eleven-county study area are either in the process of travel management planning or implementing existing Travel Management Plans. The Bureau of Land Management and Washington State land management agencies also have made decisions to designate routes for OHV use. All of the new decisions and the implementation of past land use and travel management decisions are generally resulting in fewer opportunities for cross-country OHV uses and fewer miles of open routes for OHV use. The past decisions include the establishment of wilderness areas and other areas that prohibit motor vehicle recreation, reducing any previous motor vehicle access to the Okanogan-Wenatchee National Forest. Although these past decisions are not part of current planning for the Okanogan-Wenatchee National Forest Motorized Travel Management project, they are relevant because the project would incrementally change the effects of these past actions. All Alternatives eliminate cross-country access except on 33 acres.

None of the action alternatives would adopt any unauthorized routes currently being used. It is unknown how many unauthorized routes are present on the Forest. However, using GIS analysis under the current Forest Plans, it has been estimated that approximately 675,000 acres are in land allocations that currently do not prohibit cross-country travel, and are flat and vegetation free enough to accommodate cross-country travel, although use of existing routes within corridors would be permitted (limited by distance from roads and proximity to water). All but 33 acres of this would no longer be available for cross-country travel. This would substantially reduce opportunities for motorized users and increase the qualities that non-motorized users value in all alternatives.

The cumulative effects of limiting OHV use in all action alternatives and the ongoing and reasonably foreseeable future actions would be a decrease in motorized access across the Okanogan-Wenatchee National Forest. The addition of the WATV routes would partially off-set this loss, but only for drivers with vehicles licensed as WATVs. The cumulative effect would be an increase in the qualities of the recreational opportunities valued by non-motorized users.

On a larger scale, OHV opportunities are being reduced cumulatively by travel management decisions on other national forest lands and other public lands throughout the Pacific Northwest. These reductions in opportunities would displace some users from currently accessed areas, roads, and trails. What is not known is whether the reduced OHV opportunities would also reduce the overall amount of OHV use, or the current use would just become concentrated into the smaller system where OHV opportunities are authorized. If the overall use is reduced, neither the magnitude of this reduction nor the location of these reductions is predictable. Without this knowledge, making reliable predictions about the social and economic cumulative effects based on reduced use is not possible. If the current levels of OHV use from areas outside of the Okanogan-Wenatchee National Forest are concentrated into smaller areas on the Forest, safety concerns and potentially lower quality OHV experiences could result. Conversely, as OHV opportunities are reduced across the region resulting in increasing non-motorized opportunities, the quality of the experience for these users may be improved.

In sum, the cumulative social and economic impacts of all of the action alternatives are similar and are not quantifiable.

Compliance Laws, Regulations and Management Direction

This analysis complies with NEPA in discussing economic and social effects that are relevant to the interrelated natural and physical effects of this project.

Environmental Justice Regulatory Framework

In 1994, President Clinton issued Executive Order 12898. This order mandates that all federal agencies analyze the potential for their actions to disproportionately affect minority and low-income populations. The Council on Environmental Quality (CEQ) issued supplemental guidance to assist agencies' compliance (CEQ 1997). The CEQ suggests the following criteria for identifying potential Environmental Justice populations:

- *“Minority population: Minority populations should be identified where either: (a) the minority population of the affected area exceeds 50 percent or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis...”*
- *“Low-income population: Low-income populations in an affected area should be identified with the annual statistical poverty thresholds from the Bureau of the Census’ Current Population Reports, Series P-60 on Income and Poverty. In identifying low-income populations, agencies may consider as a community either a group of individuals living in geographic proximity to one another, or a set of individuals (such as migrant workers or Native Americans), where either type of group experiences common conditions of environmental exposure or effect.”*

Existing Condition

Understanding the racial composition and poverty characteristics of the surrounding area helps to identify whether there are environmental justice concerns.

Minorities

According to the 2010 U.S. Census data reported in Table 13 below, it is suggested that Hispanic and Native American populations meet the Environmental Justice criterion as a minority population meaningfully greater than the general population. Therefore, decision makers in the planning area should give particular consideration to the potential impacts of management actions on those ethnic groups.

Table 13 shows the ethnic mix of the population in the study area. In all eleven counties, whites are the most numerous ethnic group. In Ferry, Skagit, Okanogan, and Yakima counties, the percentage of American Indians is higher than the state and the nation. The population of American Indians is above 10 percent in Okanogan and Ferry counties. In Yakima County, the population of American Indians is 4.3 percent. Relative to the state and the nation, American Indians/Alaska Natives are found in higher proportion in much of the study area.

The total of non-White people in Yakima County is about 36 percent. The non-White population of the state is approximately 22 percent. More than a quarter of Yakima’s population identifies as “Some Other Race.” This category includes races other than White alone, American Indian alone, Black or African American alone, Asian alone, or Native Hawaiian and Pacific Island alone.

Hispanic populations of several counties in the study area are relatively high. In the state of Washington, more than 11 percent of the population is Hispanic or Latino. In the U.S., more than 16 percent of the population is Hispanic or Latino. The Hispanic populations of Chelan, Okanogan, Yakima, Benton, Douglas, Grant, and Skagit are higher than the state. Grant and Yakima counties have the highest populations; Grant is approximately 38 percent; and, Yakima is 45 percent Hispanic or Latino.

Table 11–Population by race (2010)

Geography	White (one race)	Black or African American (one race)	American Indian and Alaska Native (one race)	Asian (One Race)	Native Hawaiian and other Pacific Islander (one race)	Some other race (one race)	Two or more races (one race)	Hispanic or Latino (of any race)
Percentage								
Washington	77.3	3.6	1.5	7.2	0.6	5.2	4.7	11.2
Benton	82.4	1.3	0.9	2.7	0.1	9	3.6	18.7
Chelan	79.3	0.3	1	0.8	0.1	15.7	2.7	25.8
Douglas	79.6	0.3	1.1	0.7	0.1	15.6	2.6	28.7
Ferry	76.3	0.3	16.7	0.7	0.1	1.2	4.8	3.4
Grant	72.8	1.1	1.2	0.9	0.1	20.4	3.5	38.3
King	68.7	6.2	0.8	14.6	0.8	3.9	5	8.9
Kittitas	89.3	0.9	1	2	0.1	3.7	3	7.6
Okanogan	73.9	0.4	11.4	0.6	0.1	10.1	3.5	17.6
Skagit County	83.4	0.7	2.2	1.8	0.2	8.7	3.2	16.9
Snohomish	78.4	2.5	1.4	8.9	0.4	3.8	4.6	9
Yakima	63.7	1	4.3	1.1	0.1	26.1	3.7	45
Eleven- county area	77.1	1.4	3.8	3.2	0.2	10.7	3.7	20

Source: US Census Bureau, Census 2010, Fact Finder 2, File Name DP-10.

Note: Individuals may identify as a member of more than one race, therefore, totals will not sum to 100 percent.

Nearly 17 percent of Ferry County’s population identifies itself as American Indian or Alaska Native. The Okanogan-Wenatchee completed government-to-government consultation on the Travel Management proposed action with the Confederated Tribes of the Colville Reservation and the Yakama Nation. Neither tribe expressed concerns, or identified issues or values that may be affected by the proposed action. Okanogan and Yakima counties also have relatively large American Indian/Alaska Native populations. Forty-five percent of the population of Yakima County identified itself as Hispanic or Latino. Yakima is also a majority-minority county, which means that racial and ethnic minorities account for more than 50 percent of the population.

In most of the counties in the planning area, except King county, there are fewer individuals identifying as Black/African American or Asian. Nevertheless, the diversity between counties highlights the importance of analyzing environmental justice issues on a county-by-county basis.

Poverty

Table 14 reports the number of individuals below the poverty level and poverty rates in 2010. Poverty rates in the study area are relatively high. The average poverty rate for the nation is 13.8 percent. The average poverty rate for the state is 12 percent. Benton, Douglas, Ferry, Grant, Kittitas, Okanogan, and Yakima all have poverty rates that are higher than the state. Kittitas, Yakima, Okanogan, Grant and Ferry have the highest poverty rates, with about one-fifth of the population living in poverty. Each of these instances is highlighted in Table 14. The relatively high rates of poverty across the planning area highlights the importance of considering potential Environmental Justice impacts in the decision-making process.

Ferry and Okanogan counties are among the counties with the highest poverty rates. These counties also have the highest percentages of American Indian/Alaska native residents, suggesting overlap between race and poverty. None of the alternatives would interfere with subsistence gathering on the Forest because the Travel Management Rule recognizes valid existing rights and will not modify those rights, nor take away any statutory or treaty rights.

Table 12–Poverty rates (2010 estimate)

Geography	Percent below poverty level
Washington	12.1
Benton	12.7
Chelan	11.5
Douglas	14.3
Ferry	20.8
Grant	20.4
King	10.2
Kittitas	21.2
Okanogan	19.5
Skagit	11.7

Snohomish	8.4
Yakima	21.8

Source: US Census Bureau, Census 2010, Fact Finder 2, File Name DP-10.

Table 15 displays the poverty rate by race and ethnicity for each of the eleven counties and Washington State. As the table reveals, the poverty rate often varies substantially across races and ethnicities. In all considered geographies, non-Hispanic white residents experience the lowest levels of poverty in the study area. Overall, the table indicates a strong correlation between minority status and poverty in the planning area.

Black/African American and Latino/Hispanic residents of Ferry County have the highest rates of poverty reported among all races or ethnicities in the study area. The poverty rate is 100 percent for the 58 Black/African American residents of Ferry County. The poverty rate is 56 percent for the 221 Latino/Hispanic residents of Ferry County. In total, the poverty rate exceeds 25 percent in 32 instances in the planning area. Each of these instances is highlighted in Table 15.

Table 13–Poverty by race and ethnicity (2010 estimate)

Geography	One race							Hispanic or Latino origin (of any race)
	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian and Other Pacific Islander	Some other race	Two or more races	
Washington	10.5	24.1	26.3	10.6	18.6	27.1	15.5	25.1
Benton	10.4	13.7	36.7	10.2	10.2	29.8	16.4	30.3
Chelan	10.6	17.4	7.5	17.8	25	26.9	4.4	15.8
Douglas	10.1	5.7	9.7	16.3	41.4	30.6	19	28.3
Ferry	17.2	100	28.5	11.5	41.9	96.5	21.1	56.1
Grant	16.5	35.5	27.6	4.2	0	32.5	21.9	31.6
King	8	26.7	24	10	20	20.1	12.4	20.3
Kittitas	19.8	42.2	53	29.3	0	34.8	24.9	36.1
Okanogan	17	2.6	33.2	9.5	57.4	19.9	34.6	25.7
Skagit	9.5	24	37.6	14.7	11.4	31.5	13.9	24.2
Snohomish	7.6	15.7	16.8	8.5	14.6	16.6	11.2	17.9
Yakima	19.1	22.4	29.3	9.7	49.3	31.7	18.5	33.1

Source: US Census Bureau, Census 2010, Fact Finder 2, File Name DP-1

In the study area for the Okanogan-Wenatchee National Forest Travel Management project, several of the counties have minority populations that are greater than the state of Washington. Several of the counties also have poverty rates which are higher than the state. The disproportionately high numbers of minorities, Hispanic and Latino people as well as Tribal people, and people living in poverty, trigger an environmental justice analysis.

Environmental Consequences

A review of the alternatives, however, demonstrates that the economic effects are negligible for the entire population. There are immeasurably small effects to jobs and income in the impact area studied. And, OHV use generates a small portion of the overall jobs and income, less than 1 percent. Therefore, the impacts are similar for the groups identified by the Environmental Justice Executive Order. In terms of social effects, none of the alternatives would have a disproportionate effect on any minority or low-income community as the travel management decisions are spread throughout the Forest and do not cause any adverse environmental effect to any particular community.

Potentially affected Tribes have been consulted and effects considered on their rights and concerns within the analysis of alternatives. The American Indian population would 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.

Compliance Laws, Regulations and Management Direction

This analysis is provided consistent with the Executive Order for Environmental Justice.

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