

Social and Economic Specialist Report

Motorized Travel Plan
Dixie National Forest

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Affected Environment section written by Noelle L. Meier and C. Kenton Call
Effects Analysis section written by C. Kenton Call

Chapter 3: Affected Environment

3.1. Introduction

As recreation and social resources are closely related, this document may refer to the Recreation and Scenery Specialist Report and other specialist reports prepared for the Motorized Travel Plan. The social and economic resources themselves are intertwined to an extent that it is difficult to discuss them separately.

The motorized travel plan will make travel management decisions for all four ranger districts on the Dixie National Forest (Cedar City, Escalante, Pine Valley, and Powell), and the Teasdale portion of the Fremont River Ranger District, administered by the Fishlake National Forest.

The National Environmental Policy Act requires integrated use of the natural and the social sciences in all planning and decision-making that affect the human environment. The human environment includes the natural and physical environment and the relationship of people to that environment. Changes in the availability or in the permitted uses of forest resources—such as the designation of motorized routes—can be of great importance to residents of affected communities, to commercial users, to recreationists, and to the public at large. Social impact analysis uses social science information and methodologies to identify the effects of proposed actions on these forest publics. In compliance with FSH 1709.11, Chapter 30, this social and economic specialist report incorporates the social impact analysis tools found in the agency's Economic and Social Analysis Handbook (FSH 1909.17).

Some social and economic conditions and trends are quantifiable with numbers. Others, particularly the social conditions and trends, are made from qualitative observations. Those conditions and trends that we can tie to numbers often tell different stories depending upon how those numbers are viewed. Additional social research would be helpful to better understand the social resources in the project area. For instance, there is no known reliable research to show why people are moving to Iron and Washington counties at such a rapid rate. Future research could help identify the role of public lands in the lives of residents and visitors to the communities adjacent to the Dixie National Forest and the Fishlake National Forest.¹

In order to paint a well-balanced picture of the affected environment, several different sources of information have been considered, including reports from the Utah Bureau for Economic Research, Utah State University, the Utah Governor's Office of Planning and Budget, and Headwaters Economics. While the numbers may be slightly different from one report to the next, the general trends and conditions are validated by looking at these various sources of data.

¹ The 2006 Utah State Legislature funded a study by Utah State University (USU). USU may provide new information for social conditions and trends.

For the purposes of this document, the term all-terrain vehicle (ATV) will refer to vehicles 50 inches and less in width. The terms off-highway vehicle (OHV) and off-road vehicle (ORV) are often used interchangeably to describe a broad class of vehicles that include snowmobiles, ATVs, side-by-side utility vehicles, motorcycles, full-sized high-clearance 4x4s, or other vehicles capable of travel over unimproved terrain.

The Land and Resource Management Plan for the Dixie National Forest (referred to as the Forest Plan), uses the term ORV to describe this category of vehicle use as it pertains to recreational opportunities (USDA 1986). In the Code of Federal Regulations (CFR), 36 CFR Parts 212, 251, 261, and 295 Travel Management; Designated Routes and Areas for Motor Vehicle Use; Final Rule (hereinafter referred to as the "Final Travel Rule") uses the term OHV. In this document, where a specific vehicle is referenced, its proper name is used, such as ATV or snowmobile. The terms OHV or ORV are not to be confused as referring to cross-country travel off designated roads or trails. Cross-country (or overland or off-road or trail travel) will be carefully specified whenever described in this report.

3.1.1. Common Social and Economic Conditions

The following conditions and trends are common throughout southwestern Utah. Often these conditions and trends follow state and national trends for rural areas or for growing urban areas. Many of these trends are explored further at the individual county level in the profiles found in section 3.2.1 beginning on page 9.

3.1.1.1. Forest Roads and Trails Contribute to Quality of Life

The Dixie National Forest is associated with quality of life values for a variety of people. Among other contributions

- Homeowners and visitors value the scenery and nearby recreation opportunities the Forest provides,
- Permitted ranchers utilize the Forest to provide grazing for sheep and cattle,
- Vegetation is managed through a variety of projects that include commercial logging,
- Communities and private landowners benefit from a number of special use authorizations that facilitate including water improvements, roads, and utilities,
- Game species populations are largely managed through seasonal hunting by the public, and
- Commercial recreation opportunities are permitted to occur on the Forest, such as skiing, resorts, and guided recreation.

Roads and/or trails are used for all these activities.

3.1.1.2. Forest Roads and Trails Provide Visitor Access to Numerous Destinations

The landownership patterns in the counties in the analysis area are dominated by federal land. Compared to times past, less of the area's economic base is reliant on resource extraction and gathering of forest products. Recreation and tourism are becoming the major industry in Garfield, Iron, and Kane counties, and federal land provides much of that opportunity.

Visitors are not drawn solely to the Dixie National Forest, but also to national parks, national monuments, and national recreation areas such as Zion, Bryce Canyon, Cedar Breaks, Capitol

Reef, Lake Powell, and Grand Staircase-Escalante, as well as numerous private and state recreation destinations. The Zone of Influence (ZOI) for this specialist report includes numerous destinations for millions of visitors who are likely to spend time on the Dixie National Forest, either simply passing through on the way to off-forest attractions or enjoying the scenic quality and recreation opportunities of the Forest. The transportation network of roads and trails is critical to these counties for recreation and tourism.

3.1.1.3. National Visitor Use Monitoring

Since the Forest Plan was released in 1986, recreation and tourism levels on the Dixie National Forest have shown a dramatic increase, paralleling or exceeding statewide trends during this same period. According to the National Visitor Use Monitoring results for the Dixie National Forest (USDA 2004), the Forest received 773,789 visits in 2003. Visits to the Dixie National Forest are often associated with visits to surrounding national and state parks and other recreation and travel opportunities. The Dixie National Forest's proximity to several parks, its location near Interstates 15 and 70 between major western population centers, and a growing resident and transient population are contributing to swelling trends in Forest visitation. For more information on National Visitor Use Monitoring numbers, please refer to the Recreation and Scenery Specialist Report.

3.1.1.4. Extraordinary Population Growth

Utah is the fifth fastest-growing state in the nation (State of Utah 2006). Washington and Iron were the two fastest growing counties in the state in 2004-05, with growth rates of 8.4 percent and 6.4 percent, respectively (State of Utah 2006). Washington and Iron counties, in fact, were two of the fastest growing counties in the country (U.S. Census Bureau 2005a). With the exception of Kane County, with growth at 2.6 percent, other counties in the project area are below the state average growth rate of 2.0 percent in 2005: Garfield (1.7 percent), Piute (0.1 percent), and Wayne (-0.6 percent) (State of Utah 2006). The metropolitan areas that tend to supply large amounts of Forest users – namely Salt Lake City and Las Vegas, Nevada – continue to see explosive growth (State of Utah 2006, U.S. Census Bureau 2005a).

According to the most recent population projections, the following condition and trend exist across the State of Utah.

Condition: As of July 1, 2005, the State of Utah has an estimated population of 2,528,926 people. The State has added about 282,000 additional residents since 2000 (State of Utah 2005a). In 2005, the counties in the project area had a population of 253,341.

Trend: The State projects a population of over four million by 2030 (State of Utah 2005a). In 2030, the State projects a population of 566,504 in the project area counties. Counties in the Southwest area² are expected to grow at a 3.4 percent rate from 2000-2050. Counties in the Central area³ are expected to grow below the state average of 1.8 percent from 2000-2050 at a rate of 1.2 percent. The Southwest counties are most closely associated with the Dixie National Forest. Their projected growth rates from 2000-2050 are:

- Beaver, 2.1 percent,
- Garfield, 1.0 percent,
- Iron, 2.3 percent,

² Five County Association of Governments.

³ Six County Association of Governments.

- Kane, 1.4 percent, and
- Washington, 3.9 percent.

The projected growth rates from 2000-2050 for the Central counties (most closely associated with the Fishlake National Forest) are:

- Juab, 1.5 percent,
- Millard, 1.7 percent,
- Piute, 0.7 percent,
- Sanpete, 1.0 percent,
- Sevier, 0.9 percent, and
- Wayne, 1.2 percent.

3.1.1.5. The Population is Getting Older and More Wealthy, But Utah Still Has the Country's Youngest Population

As the baby boom generation reaches retirement in better health than any previous generation, Utah residents are living longer and have greater wealth than generations in the past. Utah is also the youngest state in the country and will likely remain so in the foreseeable future.

Condition: Life expectancy for Utah residents in 2000 was 78.7 years old. As a percentage of the total population, the 60-plus age cohort is 11.3 percent of the total population (State of Utah 2005a). In 2005, the median population age for the State of Utah was 28.5. By this measure, Utah has by far the youngest state population (the next closest state is Texas at 33.2). The national median age is 36.4 (U.S. Census Bureau 2005b).

Trend: Life expectancy in 2030 is projected to be 82.9. As a percentage of total population, the 60-plus age cohort is projected to be 17 percent of the total population. In spite of the growth of the retirement population, the projected median population age for Utah will only increase to 32.5 by 2030 (State of Utah 2005a). The projected U.S. median age in 2030 is 39.0 (State of Utah 2005b).

This condition and trend is true for the State of Utah, but it may be a bit misleading for some areas in the region. For instance, the St. George area has a large allure as a major retirement center. Washington County has a median age of 31.0, which makes it the tenth oldest county in the state; this median age will likely increase with time. Interestingly, Iron County, north of St. George, has the third most youthful population in the state. Finally, many of the smaller agriculturally-oriented rural communities may see a trend toward aging populations as youth from these areas move to urban areas for education and career opportunities. For instance, Garfield, Wayne, Piute, and Kane counties have four of the seven highest median ages in the state (State of Utah 2003, State of Utah 2005a⁴).

3.1.1.6. New Economic Engines are Emerging

Many traditional sources of economic income such as natural resources and mining are projected to lose their share of the state economic output. These shifts are largely due to the pie getting bigger (growth in the economy) and not necessarily due to a decrease in outputs in these sectors. Professional business, education, and health services are projected to grow. This is part of a larger trend in the western U.S. (Rasker and Holmes 2003).

⁴ This is found in the additional detailed demographic and economic tables. See table located at <http://governor.utah.gov/dea/LongTermProjections.html> entitled Age Group by Area and Gender.

Past experience suggests that these changes can be difficult in rural communities. It is important to note that “traditional” and “new” economic sectors are not mutually exclusive. For instance, mining and logging can coexist with recreation and tourism economies.

Ultimately, both the state and local economies will face pressure from global forces and will need to become more robust, demonstrate more ingenuity, and become more diverse to meet the challenges that are bound to emerge. The Forest Service will continue to be one of many important contributors to local economies.

Condition: In 2005, according to the State of Utah, the Natural Resource and Mining sector comprised 2 percent of the Utah economy (31,459 jobs), Professional and Business Services took a 13 percent share (181,034 jobs), and Education and Health Services took an 11 percent share (134,218 jobs) (State of Utah 2005b).

Trend: The State of Utah projects that Natural Resources and Mining will reduce to 1 percent (29,463 jobs) of the Utah economy by 2050. Professional and Business Services will increase to 16 percent (556,671 jobs), and Education and Health Services will increase to 24 percent (801,429 jobs) (State of Utah 2005b). There is a relatively constant number of jobs in Natural Resources and Mining. There is also a massive increase in jobs in the Professional and Business Services and Education and Health Care Services sectors of the economy.

3.1.1.7. Rural Character and Retention of Agricultural Lands and Traditions

Most of the project area has historically been rural in character. Discussions with local elected officials and planning participants suggest that many local people are concerned about the loss of agricultural lands and associated traditional livelihoods such as ranching, farming, and other natural resource-based economic endeavors. Forest lands will continue to provide opportunities for rural communities to have a “working” connection with the land through the continuation of traditional livelihoods, but larger, global trends may nonetheless make traditional lifestyles and occupations increasingly difficult to maintain. Based on the experience of other western states, this is a trend that extends beyond Utah (Rasker and Holmes 2003).

Condition: There is a desire to retain rural traditions and lifestyles, as well as a “working” connection with the land. The Forest Service will continue to provide opportunities to earn a livelihood from the land.

Trend: Rising land prices and globalization make traditional industries such as farming and ranching a more difficult way to make a living in the future.⁵ Even if the Forest continues to provide opportunities for traditional livelihoods, there seems to be a downward trend in the number of individuals who will choose to compete in an increasingly more competitive global market.

3.1.1.8. Second Homes

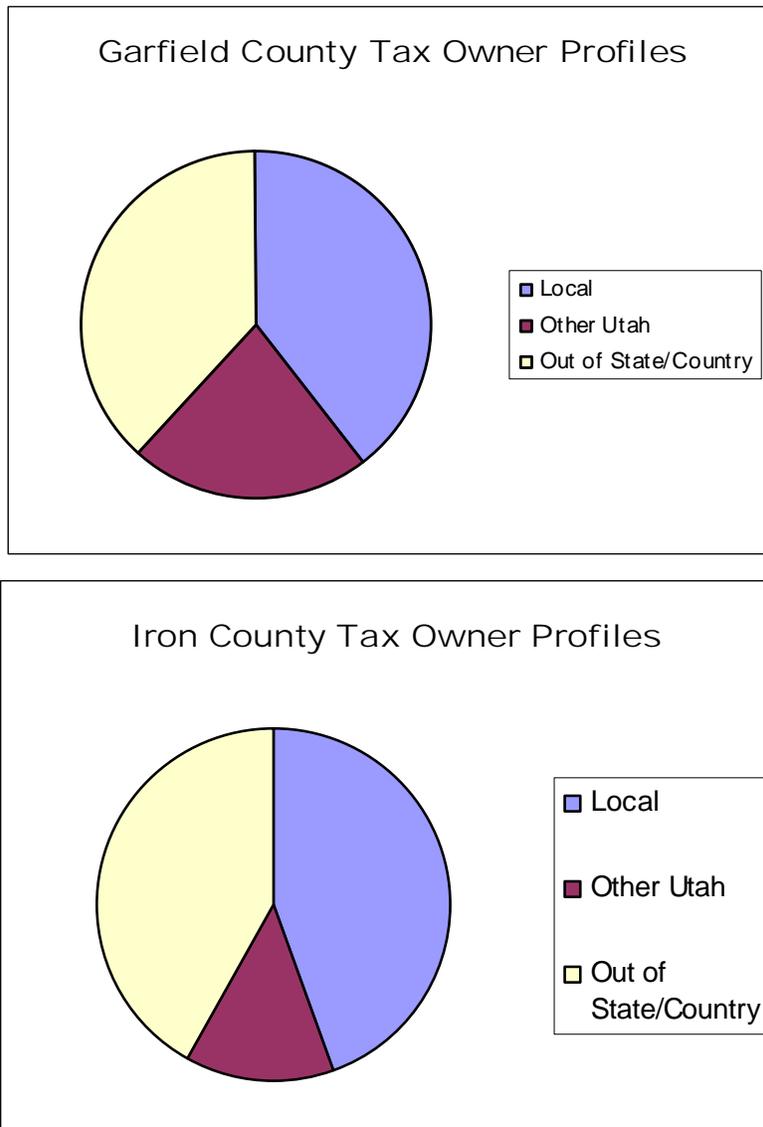
Across the country, communities and counties that are near National Forest System lands have become more attractive to second home buyers (Rasker and Holmes 2003). These

⁵ Globalization is an economic trend. As more markets are open to free trade and economic discourse, places that can produce products (e.g., beef or timber) cheaper and more efficiently will win the market competition.

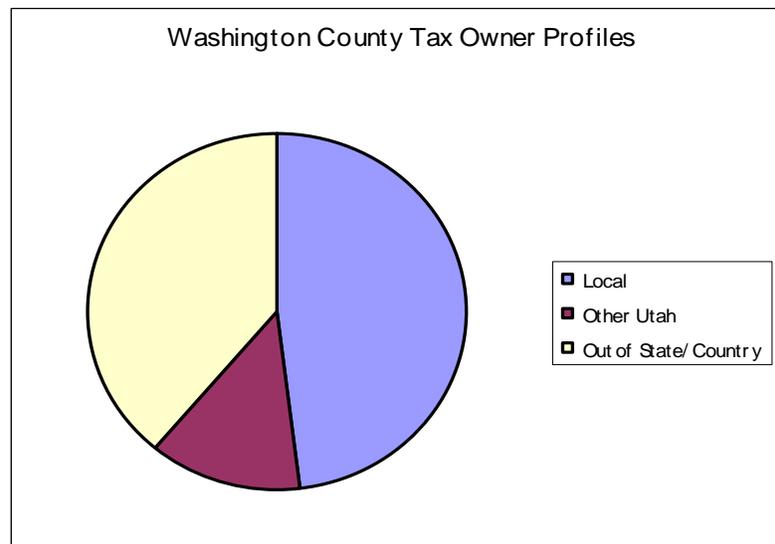
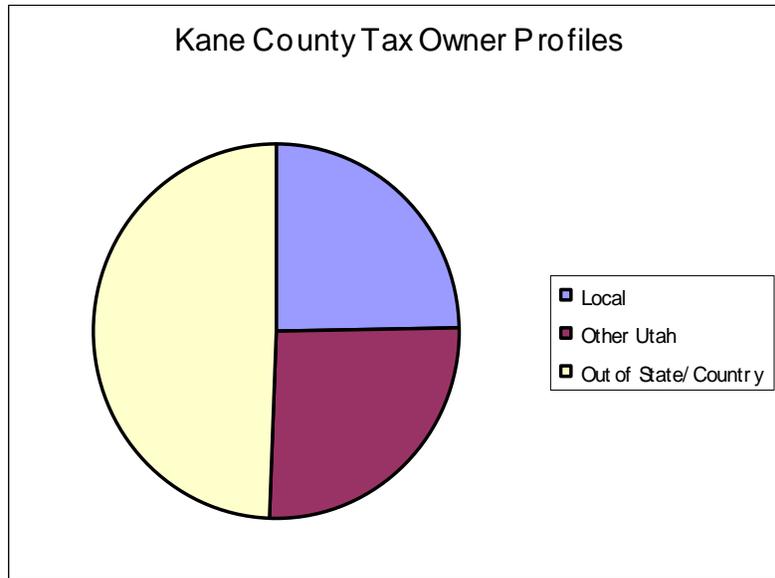
homeowners play a role in the economy through the purchase of goods and services from the immediate area and contributions to the local tax base. At the same time, they contribute to an increase in use on the Forest, particularly for the purpose of outdoor recreation.

A recent study by the Utah Rural Development Council of tax records in the Five County Association of Government area details this condition. As shown in Diagram 1, out-of-county and out-of-state/out-of-country landowners make up a large percentage of county property tax payers. It is expected that this trend will continue in the future. Of the five counties, only information for the four counties within the project area are shown below.⁶ No second home ownership data is available for Piute County or Wayne County.

Diagram 1. County Property Taxpayers



⁶ None of the project area is located within Beaver County, the fifth county in the association.



3.1.1.9. There Are a Wide Variety of Groups Interested in Motorized Travel Planning

During scoping for this project the Forest Service received comments from many organized groups and clubs. There are many different perspectives on the social and economic factors that are worth exploring with relation to this project. Some groups want to see more ATV recreation, while other groups are more interested in seeing less ATV recreation. Some groups are more concerned about county and community economic vitality and how it relates to ATV recreation and ATV-related businesses, while others favor economic strategies promoting tourism and enjoyment of non-motorized recreation opportunities. Many groups and individuals expressed a concern over how any new designated route system would be enforced.

3.2. Analysis Area

The analysis area for this project is the same as the Dixie National Forest Primary Zone of Influence (ZOI) for the social and economic environment, as described in the Environmental Impact Statement for the Forest Plan (USDA 1986). The ZOI is comprised of a six county area: Garfield, Iron, Kane, Piute, Washington, and Wayne counties. The boundaries of the Dixie National Forest are within these counties and the economies of these counties may potentially be affected by Forest actions (USDA 1986, p III-1).

Because of variation between communities' economic bases, the ZOI is further broken down into analysis units by county. Garfield, Iron, Kane, Piute, Washington, and Wayne counties are analysis units comprising the affected environment for this project.

3.2.1. Garfield County Analysis Unit

Landownership: According to a 2005 county agriculture profile published by the Utah State University Economics Department, Garfield County is 5,174 square miles in area, with 89 percent of the county held in federal government ownership (32 percent [1,072,511 acres] being Dixie National Forest-administered land) (Godfrey 2005). The majority of the federally-owned land in the county is under the jurisdiction of the Forest Service and the Bureau of Land Management (BLM), and the majority of that is within Grand Staircase-Escalante National Monument. The county also contains parts of Glen Canyon National Recreation Area and Capitol Reef and Bryce Canyon national parks. There are only about 170,000 acres of private land in the county. Public lands provide both challenges and opportunities for economic development in the county.

Population: The county is sparsely populated and is only projected to grow at a 1.0 percent rate between 2005 and 2050, a rate below the state average. The 2006 population estimate was 4,534 (U.S. Census Bureau 2007). The following communities are located within the Garfield County analysis unit and are near National Forest System lands: Antimony, Boulder, Cannonville, Escalante, Hatch, Henrieville, Panguitch, Panguitch Lake, Tropic, and Widstoe. Panguitch is the county seat. A large population of second homes exists within the county, particularly around Panguitch Lake.

Major Employers: Major employers in Garfield County include Ruby's Inn Incorporated, Garfield County School District and other various levels of government, South Central Utah Telephone, Garfield Memorial Hospital/Clinic, Skyline Forest Resources, Bryce Canyon Resort, Clarkes Country Market, Offshore Marina Inc., Bryce Canyon Pines, New Western Motel, and Garkane Power Association (Department of Workforce Services 2007). Over 60 percent of firms in Garfield County have between one and four employees; firms with 20 or more employees make up only about 6 percent of the economy (Headwaters 2007a).

Farming and Ranching: Net farm income in the county has been negative since 1994.⁷ In other words, production expenses have exceeded gross income. In 2005, 79 percent of cash

⁷ Farm income figures presented reflect income from farming *enterprises* (income of the business). The term "farm" includes farming and ranching, but not agricultural services such as soil preparation services and veterinarian services.

receipts came from livestock and products, while less than 10 percent came from crops (Headwaters 2007a).

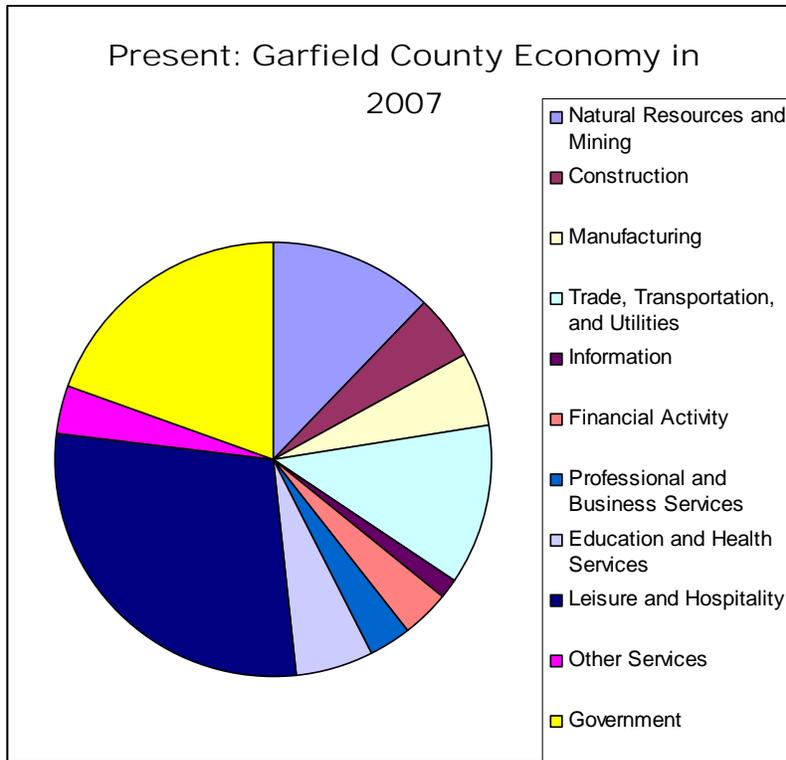
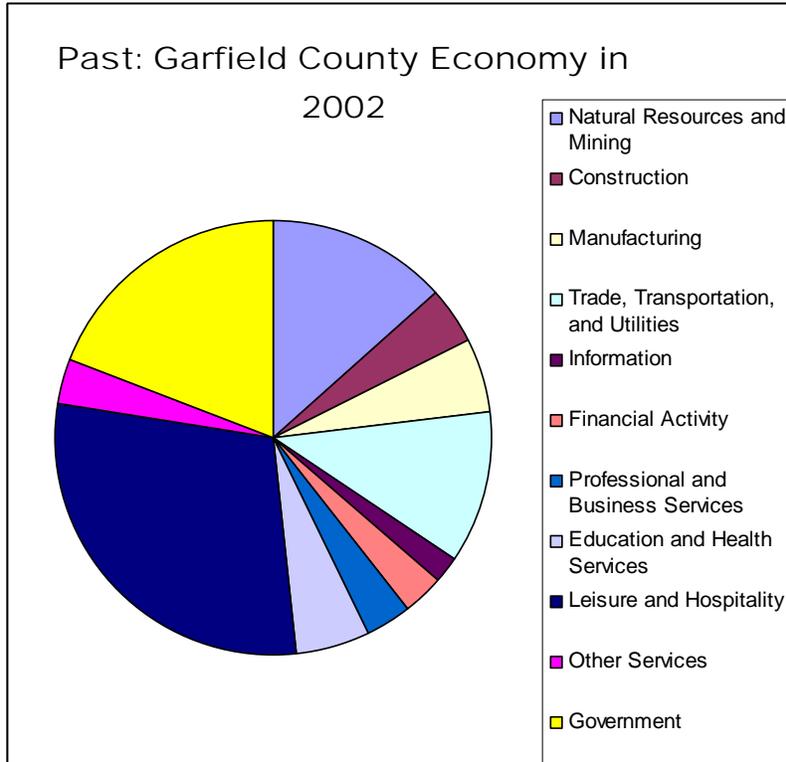
Economic Sectors: As illustrated in Table 1 on page 10, the major source of employment in Garfield County in the category of non-farm industry was the Leisure and Hospitality sector, providing 888 jobs and 29.1 percent of total non-farm employment in 2002. The Government sector, including public education, was the next largest source of employment, contributing 587 jobs and 19.2 percent of total non-farm employment. Manufacturing currently plays a much smaller role in the local economy than in the past, likely due to the closure of the Kaibab Industries timber manufacturing operation in Panguitch, which had been the largest employer there since the 1970s. Farm employment accounted for 357 jobs in 2001, or 11.5 percent of total employment (Bureau of Economic and Business Research 2001). All sectors of the economy (with the exception of Natural Resources and Mining) are expected to grow, with the biggest growth in Education and Health Services and Government.

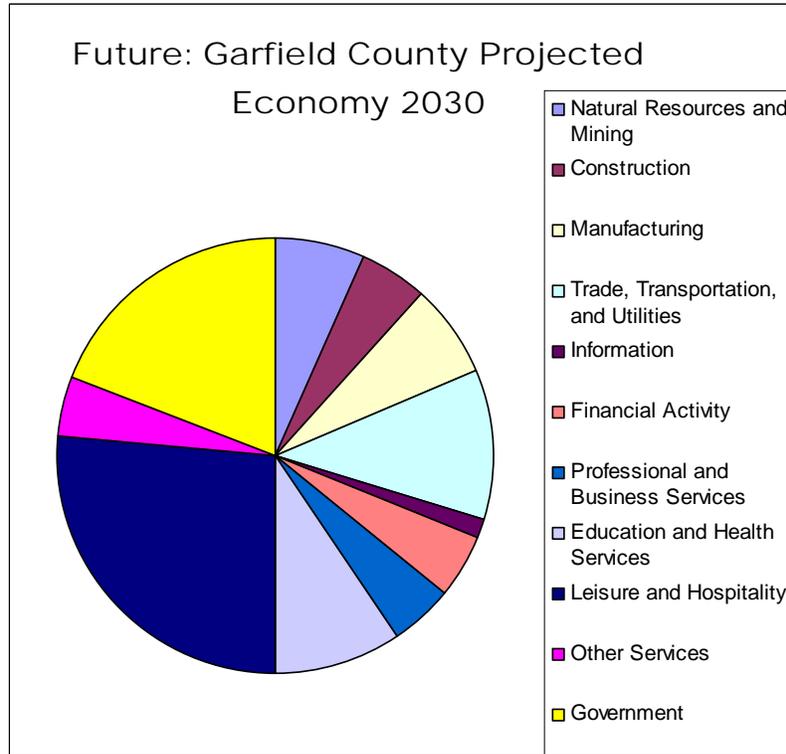
A note about Tables 1-6: Employment in a given year is computed as the annual average of 12 monthly observations and is the number of wage and salary jobs plus the numbers of sole proprietorships and of members of partnerships except for limited partners. NAICS stands for the North American Industry Classification System.

Table 1. Employment by Area and NAICS Category in Garfield County, 2002-2030 (Non-Farm)

Garfield County				
NAICS Sector	Number of Jobs per Year			
	2002	2007	2020	2030
Natural Resources and Mining	410	363	323	288
Construction	123	135	183	210
Manufacturing	174	168	233	300
Trade, Transportation and Utilities	349	347	425	468
Information	53	45	56	64
Financial Activity	100	102	157	203
Professional and Business Services	99	96	149	203
Education and Health Services	172	169	275	399
Leisure and Hospitality	888	839	1,017	1,130
Other Services	100	109	159	197
Government	587	574	737	816
Total	3,055	2,947	3,714	4,278

Diagram 2. Garfield County Economy – Past, Present, and Future (Number of Jobs by Sector)





According to a 2003 Utah Bureau of Economic Analysis Report, Garfield County residents had one of the five lowest levels of total personal income in the state (UBEA 2003). Additionally, Garfield County had the second highest unemployment rate (10.8 percent) in the state according to 2003 Utah Department of Workforce Services information, exceeded only by Emery County's 11.0 percent unemployment rate (UDWS 2003). Slow job growth and unemployment are recurrent problems for the county. Traditionally, county residents have relied primarily upon ranching and timber. While there is a desire to retain these traditional sources of economic opportunity, services related to recreation and tourism are growing quickly in the county. Services are projected to increase from a 30.1 percent share in the Garfield County economy in 2005 to a 37.8 percent share in 2030 (State of Utah 2003).

Wages and Employment: The highest paying sector (which is less than 1 percent of total employment) is Natural Resources and Mining, where the average job pays \$43,449 per year. In contrast, the largest employment sector, Leisure and Hospitality (which represents 39 percent of total employment), pays on average \$14,321 per year. Finally, public sector wages exceeded private sector wages in the county by 57.4 percent (Headwaters 2007a).

Economic Diversity and Specialization: One measure of economic success and resilience is economic diversity or lack of specialization. Diverse economies are better able to withstand change and financial stress. Conversely, communities that rely heavily on a few industries are more economically vulnerable to disruptions. Garfield County has a specialized economy with heavy reliance (in comparison with state and national averages) upon Accommodation and Food Services, as well as on Agriculture, Forestry, Fishing, and Hunting. In comparison to state and national averages, Garfield County needs more economic activity in the Manufacturing and Professional, Scientific, and Technical Services parts of the economy. Overall, according to the

Environmental Profile System (EPS)⁸ developed by Headwaters Economics, Garfield County earned a specialization score of 489, whereas an economy structured identically to the entire U.S. would have scored a 0 (Headwaters 2007a).

Other Issues: According to Garfield County, the growth in the recreation and tourism industries has not been strong enough to provide the economic growth that has been achieved in more diverse parts of the state (Bremner 2006). While these services (mostly related to leisure and hospitality) represent the largest sector in the Garfield County economy, government jobs (the sector ranked second) make up a much higher percentage of payroll wages (State of Utah 2003). There is a perception that leisure and hospitality jobs will not pay as much as jobs in other more traditional sectors.⁹ According to the Garfield County Engineer, “. . . Garfield County is struggling economically. Schools are showing declining enrollment, and additional natural resource based industries have been all but eliminated in the county. . . Garfield County is struggling and unless changes [in land management and opportunities] are made relatively soon, things will get tougher” (Bremner 2006).

Civil Society, Economic Development, and Forest Facilities: While many of the local ATV clubs use areas within Garfield County, there are no known organized ATV clubs located within Garfield County proper. Over the past several years, the Garfield County Trails Committee has been meeting to work on trails projects across the county.¹⁰ Participants come from a variety of user perspectives, and interest in the group seems to continue to grow. Trail use seems to be a very important issue to county residents. There is a large ATV rally held near Bryce Canyon yearly that brings in visitors to use the ATV trails in the county. In the past there have been several fundraising and social events (called “poker runs”) in Hatch and Escalante that involved ATVs (Quitter 2007, Fischer 2007).

According to the Yellow Pages and county staff, there are a few businesses that provide ATV services in the county (Qwest 2007). Most users bring their ATVs to the county. Most county residents purchase their ATVs from outside the county. There are several Forest-permitted ATV outfitter and guides located in Garfield County. There is no county ordinance or policy

⁸ The EPS Economic Diversity Index documents one measure of specialization based on employment data from the 2000 Census. For this index, the number of employees in each two-digit industry is first divided by the number of employees in the county. This fraction is then squared for the given industry. Results for all industries in the county are then summed. This means that the more even the distribution of employees across all possible industries, the smaller the score. Small scores imply greater diversity and large scores imply specialization (Environmental Assessment, South Belts Travel Plan, Townsend Ranger District, Helena National Forest, September 7, 2007).

⁹ In the book *Visions of the Grand Staircase-Escalante* (compiled at the time of the Grand Staircase-Escalante National Monument planning process in the 1990s), Gail Blattenberger and David Kiefer acknowledge, “[m]inimum wages plus tips at Ruby’s Inn are what the locals [in Garfield County] envisage from the service industry, but high tech service enterprises are also viable given an investment in communications infrastructure.” Blattenberger and Kiefer suggest that while based on past performance, “economic well-being” is clearly an issue in Kane and Garfield counties, “[e]xtractive industries are not an optimal or even a viable solution to the economic situation in these counties.” Furthermore, “change will certainly come to these economies” and be met with “resistance (because of) the desire for a land-based economy (which is) seen as crucial to the quality of life in the rural West.” According to the authors, the key is to “find ways of preserving our land-based Western heritage and lifestyle (which are so important to rural residents) along with the natural treasures of the countryside.” Roughly 10 years later, we seem to face the same conditions, trends, attitudes, fears, opportunities, and challenges (Blattenberger and Kiefer 1998).

¹⁰ The Committee is funded by the county, but does not speak for the county in federal planning (Quitter 2007).

related specifically to the promotion of ATVs for the purposes of economic development (Fischer 2007).¹¹

There are several recreation facilities on the Forest within the county that are designed for ATV use, including Pine Lake and Kings Creek campgrounds and the Casto Canyon and Great Western trails.

3.2.2. Iron County Analysis Unit

Landownership: Iron County has the largest acreage of available private lands of all the counties in the project area. Nonetheless, according to a 2005 county agriculture profile published by the Utah State University Economics Department, 57 percent of the county's 3,298 square miles are held in federal government ownership. Twelve percent of that total, 263,354 acres, is administered by the Dixie National Forest (Godfrey 2005). The majority of the federally-owned land is under the jurisdiction of the Forest Service and the BLM, with a small portion under the jurisdiction of the National Park Service in Zion National Park and Cedar Breaks National Monument. Iron County is one of the fastest growing areas of the state.

Population: From 2004 to 2005 Iron County grew at a rate of 6.4 percent (exceeded only by its neighbor to the south, Washington County, which grew at 8.4 percent) (State of Utah 2006). In a press release to announce these growth rates, the Governor stated,

The southwestern counties of Washington and Iron, where the urban cities of St. George and Cedar City are located, experienced rapid growth in 2005. These are considered high amenity counties, offering a diversity of educational, tourism, retirement, and economic opportunities for local residents. Both Iron and Washington counties experienced population growth over twice the state rate in 2005 (State of Utah 2005c).

The population in Iron County is projected to grow from 40,212 in 2005 to 103,920 in 2050 – a 2.3 percent increase (one-half a percent above the statewide projection). Cedar City, Iron County's largest community, was estimated to have a population of 25,665 in 2006 (UDWS 2007). Cedar City was recently named as one of the ten fastest growing cities between 10,000 and 50,000 in population in the U.S, according to a Salt Lake Tribune article (April 5, 2007). The following communities are located within the Iron County analysis unit and are near National Forest System lands: Beryl Junction, Brian Head, Cedar City, Enoch, Fort Hamilton, Hamlin Valley, Kannaraville, Modena, New Castle, Paragonah, Parowan, and Summit. Parowan is the county seat

Major Employers: Major employers in Iron County include Southern Utah University, various levels of government, local schools, Wal-Mart, Convergys (a business marketing firm), Valley View Medical Center, Smead Manufacturing, AMPAC, GENPAK, other light industry and manufacturing companies, construction businesses, and service sector businesses, many related to tourism (UDWS 2007). About 60 percent of firms in Iron County have between one and four employees; firms with 20 or more employees make up about 10 percent of the economy (Headwaters 2007b).

Farming and Ranching: Net farm income has been positive since the mid-1980s. In 2005, net farm income was about \$50 million. In other words, gross income has exceeded production

¹¹ The County is currently revising their General Plan. Among the revisions is the development of a county economic development strategy. This strategy may include provisions related to ATVs.

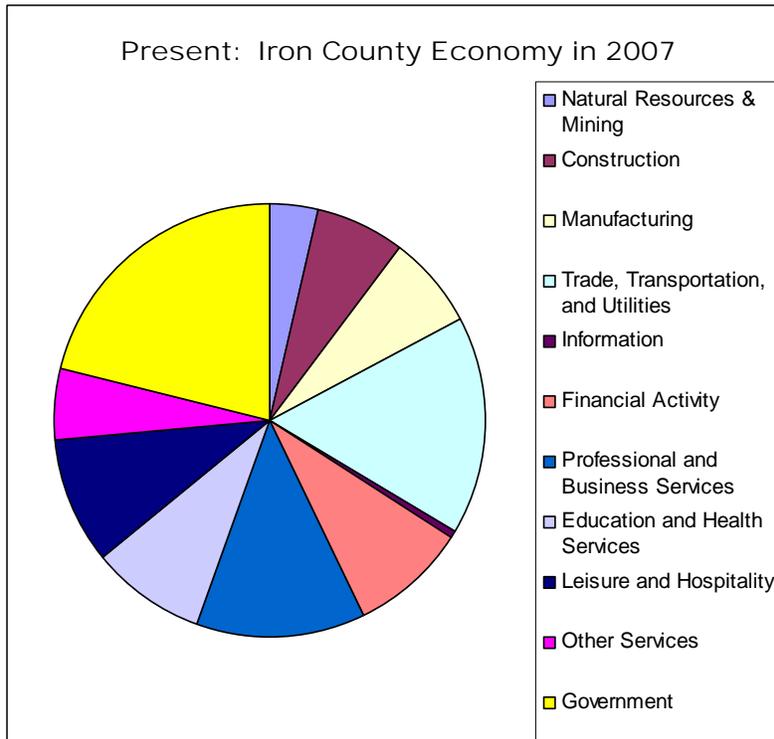
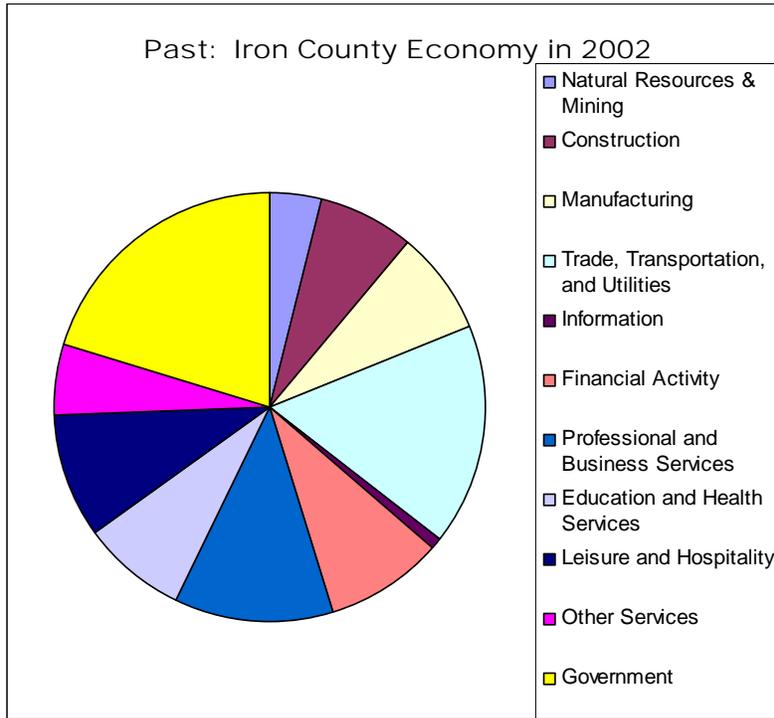
expenses. In 2005, about 60 percent of cash receipts came from livestock and products and about 40 percent of cash receipts came from crops (Headwaters 2007b).

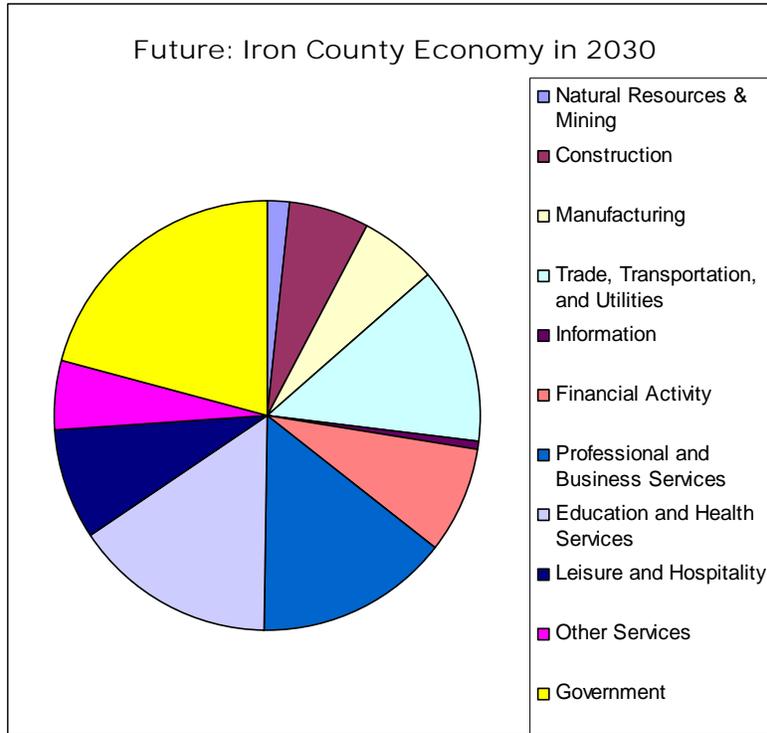
Economic Sectors: As illustrated in Table 2 below, in the category of non-farm industry, the major source of employment in Iron County was the Government sector, including public education, providing 3,897 jobs and 20.2 percent of total non-farm employment in 2002. The Trade, Transportation, and Utilities sector was the next largest source of employment, contributing 3,181 jobs and 16.5 percent of total non-farm employment. Farm employment accounted for 590 jobs in 2001, or 3.1 percent of total employment (Bureau of Economic and Business Research 2001). Large growth is expected in the Trade, Transportation, and Utilities, Professional and Business Services, Education and Health Services, and Government sectors. The Natural Resources and Mining sector is expected to see a decrease in jobs in the future.

Table 2. Employment by Area and NAICS Category in Iron County, 2002-2030 (Non-Farm)

Iron County				
NAICS Sector	Number of Jobs per Year			
	2002	2007	2020	2030
Natural Resources and Mining	751	801	759	713
Construction	1,366	1,500	2,293	2,572
Manufacturing	1,547	1,577	2,027	2,433
Trade, Transportation, and Utilities	3,181	3,741	5,018	5,675
Information	150	144	157	154
Financial Activity	1,714	1,951	2,849	3,411
Professional and Business Services	2,301	2,869	4,798	6,268
Education and Health Services	1,519	1,985	4,059	6,428
Leisure and Hospitality	1,802	2,104	2,992	3,476
Other Services	1,031	1,209	1,800	2,173
Government	3,897	4,779	7,545	8,816
Total	19,259	22,660	34,297	42,119

Diagram 3. Iron County Economy – Past, Present, and Future (Number of Jobs by Sector)





Wages and Employment: The highest paying sector (which is about 3 percent of total employment) is the Federal Government sector, where the average job pays \$53,349 per year. In contrast, the largest employment sector, Trade, Transportation, and Utilities (which represents about 19 percent of total employment), pays on average \$22,735 per year. Finally, public sector wages exceeded private sector wages in the county by 43.5 percent (Headwaters 2007b).

Economic Diversity and Specialization: Iron County has a roughly average economy with an over-reliance (in comparison with state and national averages) upon Education Services and Construction. In order to align itself with state and national averages, Iron County needs more economic activity in the Health Care and Social Assistance and Professional, Scientific, and Technical Services parts of the economy. Overall, Iron County earned a specialization score of 118, whereas an economy structured identically to the entire U.S. would have scored a 0 (Headwaters 2007b).

Other Issues: County businesses have learned to leverage their unique geographic location in close proximity to several national parks and other public lands, and the presence of Southern Utah University, the Utah Summer Games, and the Utah Shakespearean Festival, to support economic development and growth. Visitors to the area are major contributors to local income and employment. There is concern that rapid growth in Iron County (and areas south of Iron County, such as Washington County and Clark County, Nevada) may compromise the high quality of life that county residents have come to appreciate.

Despite a robust economy and high growth rate, Iron County continues to struggle with issues of poverty. According to *People and the Forests*, the Iron County poverty rate in 1999 was double

that of the state rate. Furthermore, in the period from 1989 to 1999, Iron County saw its poverty rate increase, while the state saw a decrease of the population in poverty (State of Utah 2003).

Civil Society, Economic Development, and Forest Facilities: There are several active ATV clubs and groups in Iron County, including the Brian Head OHV Association, Duck Creek ATV Club, and Cedar Mountain Trailblazers (Erickson 2007). Many of these clubs spend time on the Cedar City Ranger District. Brian Head Town has sponsored many snowmobile events in the past and anticipates sponsoring ATV related events in the future (Leigh 2007). Duck Creek Days, which takes place in Iron and Kane counties, has a large ATV element. Almost 30,000 people attend this event every year.

According to the Yellow Pages, there are many ATV-related businesses in Iron County, including ATV sales, rentals, and repair/parts businesses. There is no county ordinance or policy related specifically to the promotion of ATVs for the purposes of economic development (Dangerfield 2007).

While there are many roads and trails open to ATVs in the county, there are no specific facilities and campgrounds designed for ATVs on the National Forest System lands. The Three Peaks Recreation Area, on BLM land west of Cedar City, is used extensively by ATVs.

3.2.3. Kane County Analysis Unit

Landownership: Kane County, like Garfield County, is dominated by federal land, the majority of which is managed by the BLM. According to a 2005 county agriculture profile published by the Utah State University Economics Department, Kane County is 3,992 square miles in area, with 83 percent of the county held in federal government ownership (5 percent [143,664 acres] being Dixie National Forest-administered land) (Godfrey 2005). The majority of the federally-owned land is under the jurisdiction of the Forest Service and the BLM. The county includes portions of Grand Staircase-Escalante National Monument, Bryce Canyon and Zion national parks, and Glen Canyon National Recreation Area.¹²

Population: Kane County experienced a 2.6 percent growth rate in 2004-05, exceeding the State's rate of 2.0 percent (State of Utah 2006a). State population projections anticipate that Kane County will continue to grow at 1.4 percent from 2005 to 2050, below the state average of 1.8 percent (State of Utah 2005a). The Kane County Commission believes that this projection is very low. The Commission believes that they are seeing a great deal of spillover growth from Washington County. Additionally, the Commission suggests that rapid growth in neighboring Fredonia, Arizona, should be noted as Kanab and Fredonia are in such close proximity that residents of the areas compete for the same jobs and other resources (Hulet 2006). Nonetheless, much of the growth in Kane County will likely be found in areas adjacent to or surrounded by National Forest System lands. Duck Creek Village, one of the largest communities surrounded by the Dixie National Forest, continues to grow rapidly, creating challenges for both the county and the Forest Service.¹³ The 2006 population estimate of the

¹² In addition to the approximately 125,000 acres of Dixie National Forest in Kane County, the county maintains a close relationship with the Kaibab National Forest located directly across the state border in Arizona.

¹³ "A substantial amount of lands in the higher elevation forest lands have been developed for recreation homes and cabins, and many are being used year-round," explains the 1999 Kane County General Plan. That plan states that the county does not intend to provide municipal level services to these areas.

county was 6,532 (U.S. Census Bureau 2007). The following communities are located within the Kane County analysis unit and are near National Forest System lands: Alton, Big Water, Duck Creek Village, Glendale, Kanab, Mt. Carmel, and Orderville. Kanab is the county seat. A large number of second homes exist within the county, particularly around Duck Creek.

Major Employers: Major employers in Kane County include Best Friends Animal Sanctuary, Kane County Schools, Aramark (Lake Powell Resorts), Kane County Hospital, various levels of government, numerous motels and resorts, and service sector businesses (UDWS 2007). About 70 percent of firms in Kane County have between one and four employees; firms with 20 or more employees make up only about 7 percent of the economy (Headwaters 2007c).

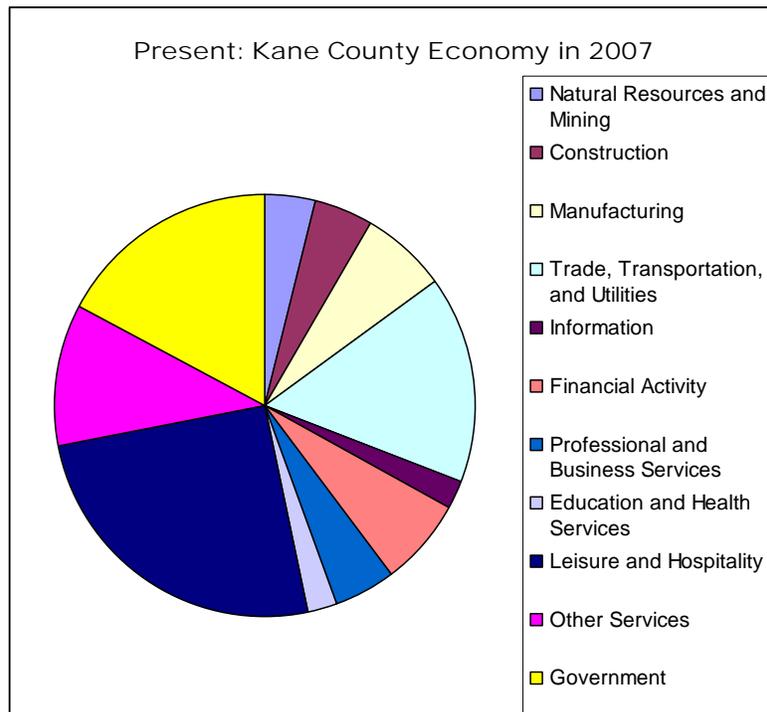
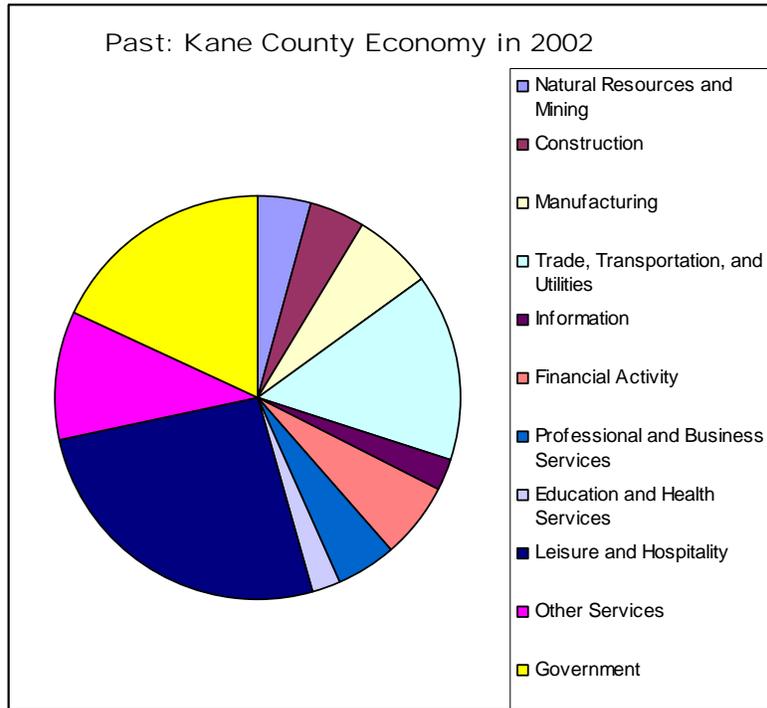
Farming and Ranching: Net farm income been variable over time in Kane County. In 2005, net farm income was negative. In 2005, 72 percent of cash receipts also came from livestock and products, while less than 10 percent came from crops (Headwaters 2007c).

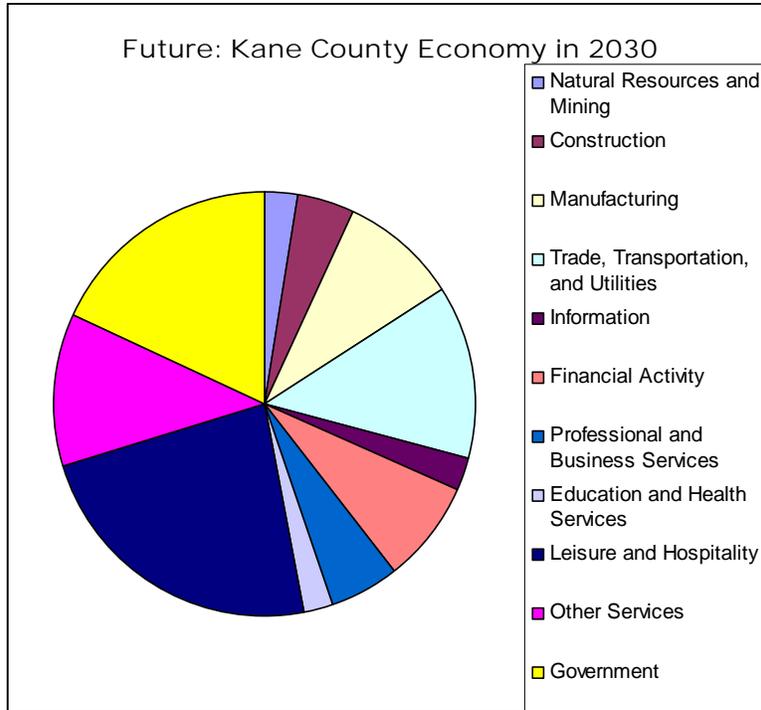
Economic Sectors: As illustrated in Table 3 in the category of non-farm industry, the major source of employment in Kane County was the *Leisure and Hospitality* sector, providing 1,058 jobs and 26 percent of total non-farm employment in 2002. The *Government* sector, including public education, was the next largest source of employment, contributing 732 jobs and 18 percent of total non-farm employment. Farm employment accounted for 180 jobs in 2001, or 4.4 percent of total employment (Bureau of Economic and Business Research 2001). Long-term growth projections predict growth in all sectors; however, future projections are not available for *Natural Resources and Mining*. This sector could follow the general downward trend seen in other counties; however, the prospects of developing the Alton Coal Field may contribute to a large increase in this sector in the future.

Table 3. Employment by Area and NAICS Category in Kane County, 2002-2030 (Non-Farm)

Kane County				
NAICS Sector	Number of Jobs per Year			
	2002	2007	2020	2030
Natural Resources and Mining	172	NA	NA	NA
Construction	181	187	258	289
Manufacturing	261	295	436	579
Trade, Transportation, and Utilities	606	681	808	869
Information	98	99	138	172
Financial Activity	256	293	415	509
Professional and Business Services	192	202	271	343
Education and Health Services	89	101	149	203
Leisure and Hospitality	1,058	1,102	1,357	1,525
Other Services	424	463	626	753
Government	732	754	1,039	1,191
Total	4,069	4,177	5,449	6,433

Diagram 4. Kane County Economy Past, Present, and Future (Number of Jobs by Sector)





Some of the economic fortunes of Kane County seem to be improving. Kane County had one of the higher percent changes in the state in personal income from 2000 to 2003 (UBEA 2003). Some – including the Kane County Commission – suggest that this number is heavily influenced by retirees. They also suggest that annual income and working wages are going down in the county, an issue of much concern for the County Commission (Hulet 2006). As with many other counties in the project area, Kane County is projected to rely more heavily upon the service sector in the future. As in Garfield County, the leisure and hospitality sector provides the most jobs in the county, but the government sector makes the largest contribution to payroll wages (State of Utah 2003).

Wages and Employment: The highest paying sector (which is about 3 percent of total employment) is *State Government*, where the average job pays \$46,202 per year. In contrast, the largest employment sector, *Leisure and Hospitality* (which accounts for about 29 percent of total employment), pays on average \$14,431 per year. Finally, public sector wages exceeded private sector wages in the county by 40.4 percent (Headwaters 2007c).

Economic Diversity and Specialization: Kane County has a somewhat specialized economy with heavy reliance (in comparison with state and national averages) upon *Accommodation and Food Services*. In order to align itself with state and national averages, Kane County needs more economic activity in the *Manufacturing* and *Health Care and Social Assistance* parts of the economy. Overall, Kane County earned a specialization score of 252, whereas an economy structured identically to the entire U.S. would have scored a 0 (Headwaters 2007c).

Civil Society, Economic Development, and Forest Facilities: There are several active ATV clubs and groups in Kane County, including the Duck Creek ATV Club, the Canyon Country 4x4 Club, and the Utah-Arizona ATV Club (Kane County Travel Council website). Duck Creek Days, which takes place in Iron and Kane counties, has a large ATV element. Almost 30,000

people attend this event every year. According to the Yellow Pages, there are a small number of ATV-related businesses in Kane County, including sales, rentals, and repair and parts businesses.

While there are many roads and trails open to ATVs in the county, there are no specific facilities and campgrounds designed for ATVs on Forest Service lands in the county. Residents in the Duck Creek area and the communities of Long Valley (Alton, Orderville, Mount Carmel, and Glendale) can easily access the Dixie National Forest, while residents in Kanab are closer to the Kaibab National Forest in Arizona.

3.2.4. Piute County Analysis Unit

Landownership: Piute County is the sixth smallest county by land area and the second smallest by population. According to a 2005 county agriculture profile published by the Utah State University Economics Department, Piute County is 758 square miles in area, with 74 percent of the county held in federal government ownership (0.57 percent [2,774 acres] is Dixie National Forest administered land) (Godfrey 2005). The majority of the federally-owned land is under the jurisdiction of the Forest Service and the BLM. The county shares the unique Tushar Mountains with Beaver and Sevier counties.

Population: While population actually decreased from 1990 to 2002, the county is projected to sustain a population growth rate of about 0.7 percent from 2005 to 2005 (State of Utah 2003; State of Utah 2005a). The 2004-05 rate of growth was 0.1 percent, the fifth most modest rate of growth in the state (exceeding only Rich, Wayne, Emery, and Carbon counties) (State of Utah 2006a). The 2006 population estimate was 1,347 (U.S. Census Bureau 2007). The following communities are located within the Piute County analysis unit and are near National Forest System lands: Circleville, Junction, Kingston, and Marysvale. Junction is the county seat

Major Employers: Major employers in Piute County include Piute County Schools, Dalton Brothers Trucking, Storm Ridge Ranch School, Big Rock Candy Mountain Resort, The Tomato Vine, Butch Cassidy's Hideout, Backcountry Construction, Paiute Trail Resort, various levels of government, and service sector businesses (UDWS 2007). Firm size fluctuates frequently in Piute County; the largest group of firms has between one and four employees. The largest growth in firms has been seen in the five-to-nine employee category. Firms with 20 or more employees represent 12 percent of the economy (Headwaters 2007d).

Farming and Ranching: Net farm income has been very strong since the mid-1980s. In other words, gross income has exceeded production expenses. In 2005, net farm income in Piute County was over \$5 million. In 2005, 84 percent of cash receipts came from livestock and products, while about 6 percent came from crops (Headwaters 2007d).

Economic Sectors: As illustrated in Table 4 in the category of non-farm industry, the major source of employment in Piute County was the *Natural Resources and Mining* sector, providing 168 jobs and 35 percent of total non-farm employment in 2002. The *Government* sector, including public education, was the next largest source of employment, contributing 139 jobs and 29 percent of total non-farm employment. Farm employment accounted for 175 jobs in 2001, or 32.8 percent of total employment (Bureau of Economic and Business Research 2001). The Piute County economy is very small and therefore long-term projections are very difficult. The most clear trend in this economy is a move away from *Natural Resources and Mining* and an increase in *Government* sector jobs.

Table 4. Employment by Area and NAICS Category in Piute County, 2002-2030 (Non-Farm)

Piute County				
NAICS Sector	Number of Jobs per Year			
	2002	2007	2020	2030
Natural Resources and Mining	168	174	173	141
Construction	53	54	75	76
Manufacturing	2	2	5	6
Trade, Transportation, and Utilities	39	39	49	50
Information	NA	NA	NA	NA
Financial Activity	17	19	29	32
Professional and Business Services	21	21	29	34
Education and Health Services	1	1	3	3
Leisure and Hospitality	39	39	56	62
Other Services	NA	NA	NA	NA
Government	139	131	181	185
Total	479	480	600	589

Residents of Piute County have the second lowest total personal income in the state. Recent data collected by the Bureau of Economic Analysis, however, suggest an upturn in personal income numbers for the county. From 2000 to 2003, Piute County saw personal income numbers increase by 6 percent, the fourth fastest rate in the state. This increase was exceeded only by Uintah, Washington, and Rich counties, in that order (UBEA 2003).

Though government is the largest sector of the Piute County economy, agriculture has traditionally occupied a large percentage of the economy. In 1980, agricultural employment made up 31.4 percent of the economy. By 2002, agriculture's share had increased to 34.9 percent. By 2030, however, agriculture is projected to decline to 23.9 percent. Small business, government, services, transportation, and public utilities are largely expected to make up the difference for the decline in agriculture (State of Utah 2003). Because many agriculture jobs do not tend to pay well, many county residents hold multiple jobs (Piute County Commission 2006).

Wages and Employment: The highest paying sector (which is almost 10 percent of total employment) is *State Government*, where the average job pays \$54,136 per year. In contrast, the largest employment sector, *Local Government* (which accounts for about 37 percent of total employment), pays on average \$19,523 per year. Finally, public sector wages exceeded private sector wages in the county by 13.4 percent (Headwaters 2007d).

Economic Diversity and Specialization: Piute County has a highly specialized economy with heavy reliance (in comparison with state and national averages) upon *Agriculture, Forestry, Fishing, and Hunting* and *Educational Services*. In order to align itself with state and national averages, Piute County needs more economic activity in the *Manufacturing and Professional, Scientific, and Technical Services* parts of the economy. Overall, Piute County earned a specialization score of 578, whereas an economy structured identically to the entire U.S. would have scored a 0 (Headwaters 2007d).

Other Issues: Unlike many other counties, future projections for service growth in Piute County are modest (State of Utah 2003). While county poverty numbers far exceed state averages, the county has seen recently a decrease in poverty (State of Utah 2003). In the past, mining was a large part of the Piute County economy. If market conditions were to change, mineral development could become a larger contributing sector in the Piute County economy. Recreation along the Paiute ATV Trail located predominantly on the Fishlake National Forest is perceived to be a big contributor to the Piute County economy (Piute County Commission 2006). Marysvale has become a regional center for motorized recreation. According to the Piute County Tourism and Recreation Plan, the county views the promotion of tourism while maintaining quality of life and rural character as a major economic development challenge.

Civil Society, Economic Development, and Forest Facilities: The National ATV Jamboree (based out of Fillmore) and the Rocky Mountain Jamboree bring many visitors to Piute County every year. Visitors come primarily to ride the Paiute ATV Trail (located on the Fishlake National Forest and neighboring BLM lands).

According to the Yellow Pages, there are several ATV-related businesses in Piute County. The county (through the Piute County Travel Council) and local communities (Circleville, Junction, and Marysvale) have actively promoted ATV Tourism (www.piute.org).

There are no roads or trails in Piute County on the Dixie National Forest.

3.2.5. Washington County Analysis Unit

Landownership: According to a 2005 county agriculture profile published by the Utah State University Economics Department, Washington County is 2,427 square miles in area, with 75 percent of the county held in federal government ownership (26 percent [408,365 acres] is Dixie National Forest administered land) (Godfrey 2005). The majority of the federally-owned land is under the jurisdiction of the Forest Service and the BLM, and a portion is managed as Zion National Park. The lack of future developable private lands to accommodate projected growth is a major issue for county leaders (Washington County Commission 2006).

Population: Due to mild winter weather and the quality of life offered by the area, which includes proximity to public lands,¹⁴ Washington County has been the fastest growing county in the state and one of the fastest in the country for the past several years (U.S. Census Bureau 2005a). Growth is spread across the county. Annual growth rates for the communities of Washington, Hurricane, Ivins, and Santa Clara from 2000 to 2002 exceeded 10 percent, surpassing even St. George (State of Utah 2005d). From 2004 to 2005 the county grew at a rate of 8.4 percent (State of Utah 2006a). The county is projected to sustain a 3.9 percent growth rate through 2050, with total population projected to increase from 125,010 people in 2005 to 607,334 people by 2050 (State of Utah 2005a).

Much of the growth in recent years is due to migration of retiring baby-boomers. Increased conflict over the availability of private land, water, and open space will be a key trend in this area (State of Utah 2003, Washington County Commission 2006). The 2006 population estimate for the St. George metropolitan area was 126,312 (U.S. Census Bureau 2007). St. George proper, Washington County's largest community, was estimated to have a population of

¹⁴ It is unclear how much of an impact the proximity to National Forest System lands contributes to bringing people to relocate in the region. This is an area for future research.

67,614 in 2006 (UDWS 2007). The population of St. George was estimated to be 91,104 in 2000. The U.S. Census Bureau named St. George as the fastest-growing U.S. metro area, having grown by roughly 40 percent since 2000 (U.S. Census Bureau 2007).

The following communities located within the Washington County analysis unit are nearby National Forest System lands: Central, Enterprise, Grafton, Gunlock, Hilldale, Hurricane, Ivins, LaVerkin, Leeds, New Harmony, Pine Valley, Pinto, Pintura, Rockville, Santa Clara, Shivwits, Silver Reef, Springdale, St. George, Toquerville, Veyo, Virgin, and Washington. St. George is the county seat.

Major Employers: Major employers in Washington County include Washington County schools, Intermountain Health Care, Wal-Mart, Dixie State College, various levels of government, SkyWest Airlines, Cabinetec, Sunrock Corp., trucking, light industry and manufacturing companies, and numerous retail and service sector businesses (UDWS 2007). Firm sizes have not changed much in the last 25 years; firms with 1-4 employees represent about 60 percent of the economy and large firms of 20 or more employees make up about 10 percent of the economy (Headwaters 2007e).

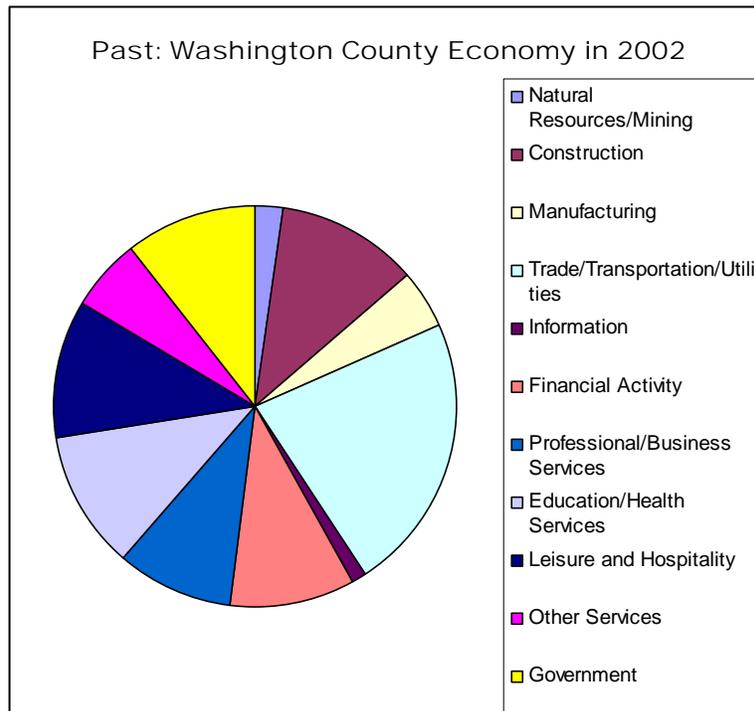
Farming and Ranching: Net farm income has been negative the early 1990s. In other words, production expenses have exceeded gross income. In 2005, 57 percent of cash receipts came from livestock and products, while about 21 percent came from crops (Headwaters 2007e).

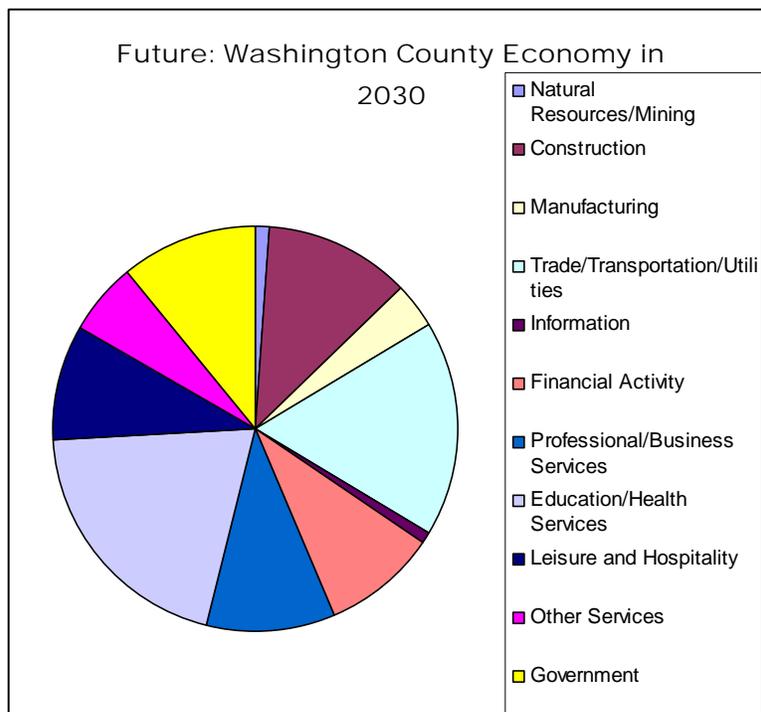
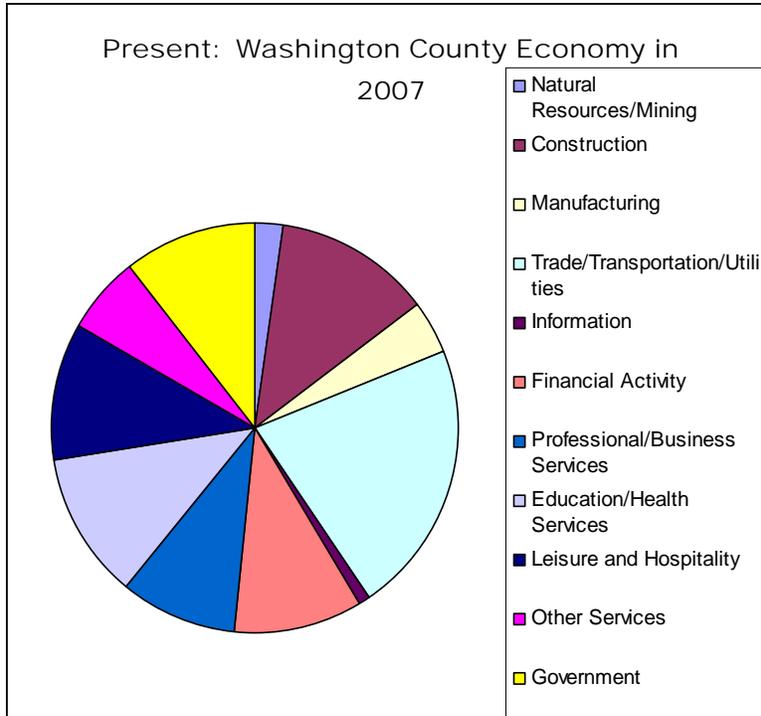
Economic Sectors: As illustrated in Table 5 in the category of non-farm industry, the major source of employment in Washington County was the *Trade, Transportation, and Utilities* sector, providing 11,575 jobs and 23 percent of total non-farm employment in 2002. The *Construction* sector was the next largest source of employment, contributing 5,795 jobs and 11 percent of total non-farm employment. Farm employment accounted for 545 jobs in 2001, or 1 percent of total employment (Bureau of Economic and Business Research 2001). Major growth is expected in about every sector, with *Education and Health Services, Trade, Transportation, and Utilities, Professional and Business Services, and Government* leading the increases. Correspondingly, the *Natural Resources and Mining* sector will grow, but will take up a smaller percentage of the economic pie as the economy grows rapidly.

Table 5. Employment by Area and NAICS Category in Washington County, 2002-2030 (Non-Farm)

Washington County				
NAICS Sector	Number of Jobs per Year			
	2002	2007	2020	2030
Natural Resources and Mining	1,162	1,455	1,745	2,087
Construction	5,795	8,746	14,689	19,714
Manufacturing	2,383	2,901	4,520	6,227
Trade, Transportation, and Utilities	11,575	15,111	22,605	29,583
Information	581	696	1,048	1,378
Financial Activity	5,075	7,080	11,511	15,556
Professional and Business Services	4,774	6,426	11,828	17,862
Education and Health Services	5,715	8,025	18,489	34,553
Leisure and Hospitality	5,675	7,695	12,019	15,914
Other Services	3,033	4,154	6,985	9,744
Government	5,337	7,377	13,527	18,638
Total	51,105	69,666	118,966	171,256

Diagram 5: Washington County Economy Past, Present, and Future (Number of Jobs by Sector)





The *Trade, Transportation, and Utilities* sector is currently the largest industry in Washington County (State of Utah 2003). In the period from 1980 to 2002, as the economy grew in other areas (the service sector doubled), many traditional industries like farming and ranching saw their share of the county economy decrease. In fact, *Agriculture* went from almost 5 percent of the economy to 1 percent (State of Utah 2003).

Between 2005 and 2030, government employment will likely remain the same and services will continue to grow, while traditional industries will likely continue to struggle. *Health and Education Services* are expected to grow to meet the demands of increased population (State of Utah 2003).

Wages and Employment: The highest paying sector (which is about one percent of total employment) is *Federal Government* where the average job pays \$47,279 per year. In contrast, the largest employment sector, *Trade, Transportation, and Utilities* (which accounts for about 24 percent of total employment), pays on average \$27,610 per year. Finally, public sector wages exceeded private sector wages in the county by 16.9 percent (Headwaters 2007e).

Economic Diversity and Specialization: Washington County has a roughly average economy with over reliance (in comparison with state and national averages) upon *Construction, Retail Trade, and Accommodation and Food Services*. In comparison to state and national averages, Washington County needs more economic activity in the *Manufacturing* part of the economy. Overall, Washington County earned a specialization score of 161, whereas an economy structured identically to the entire U.S. would have scored a 0 (Headwaters 2007e).

Other Issues: Like Iron County, Washington County has a high job growth rate (Utah Business 2006) and a relatively diverse economic base. Per capita income in Washington County more closely approaches state averages than other counties in the project area (State of Utah 2003). Low wages in the tourism industry are a concern for county officials (Washington County Commission 2006). Despite being below state averages for wage income, Washington County residents, buoyed by retirees, have the fifth highest total personal income in the state. Total personal income increased at the second fastest rate (exceeded only by Uintah County) in the state during the period from 2000 to 2003 (UBEA 2003).

Civil Society, Economic Development, and Forest Facilities: The Tri-State ATV Club is located in Washington County. This club sponsors the annual Tri-State ATV Jamboree. Several communities in Washington County (Hurricane, Enterprise, Diamond Valley, and Pine Valley [for residents]) are active in promoting ATV recreation opportunities for residents and visitors (Gardner 2007).

According to the Yellow Pages, there are several ATV-related businesses in Washington County including sales, rental, and repair and parts. There is no county ordinance or policy related specifically to the promotion of ATVs for the purposes of economic development (Gardner 2007).

Residents of the county enjoy ATV recreation on lands throughout the county. The Honeycomb Rocks Campground on the Pine Valley Ranger District has been designed to accommodate ATV use.

3.2.6. Wayne County Analysis Unit

Landownership: Wayne County has the second highest percentage of federal land of any county in the state. According to a 2005 county agriculture profile published by the Utah State University Economics Department, Wayne County is 2,460 square miles in area, with 85 percent held in federal government ownership (5 percent [79,845 acres] is Dixie National Forest administered land) (Godfrey 2005). The majority of the federally-owned land is under the

jurisdiction of the Forest Service and the BLM, including parts of Glen Canyon National Recreation Area and Capitol Reef National Park. The county contains the second fewest acres of private land in the state, trailing only Daggett County (which is four times smaller than Wayne County) by about 8,000 acres.

Population: From 2004 to 2005, Wayne County was only one of three counties to register negative population growth. The county had a -0.6 percent growth rate, the lowest in the state (State of Utah 2006). However, from 2005 to 2050, the county is projected to almost double in population and grow at a 1.2 percent growth rate (State of Utah 2005a). The 2006 population estimate was 2,544 (U.S. Census Bureau 2007b). The following communities are located within the Piute County analysis unit and are near National Forest System lands: Bicknell, Fremont, Fruita, Grover, Hanksville, Loa, Lyman, Teasdale, and Torrey. Loa is the county seat.

Major Employers: Major employers in Wayne County include Aspen Ranch/ Achievement Academy, Wayne County schools, various levels of government, Garkane Power Association, several construction businesses, and a number of service sector businesses such as restaurants and motels (UDWS 2007). While small firms of 1-4 employees are the largest contributors to the county economy, there has been growth in firms employing between 10-49 employees (Headwaters 2007f).

Farming and Ranching: Net farm income has been positive since the 1970s. In 2005, net farm income was around \$2 million. In 2005, 85 percent of cash receipts came from livestock and products, while around 7 percent came from crops (Headwaters 2007f).

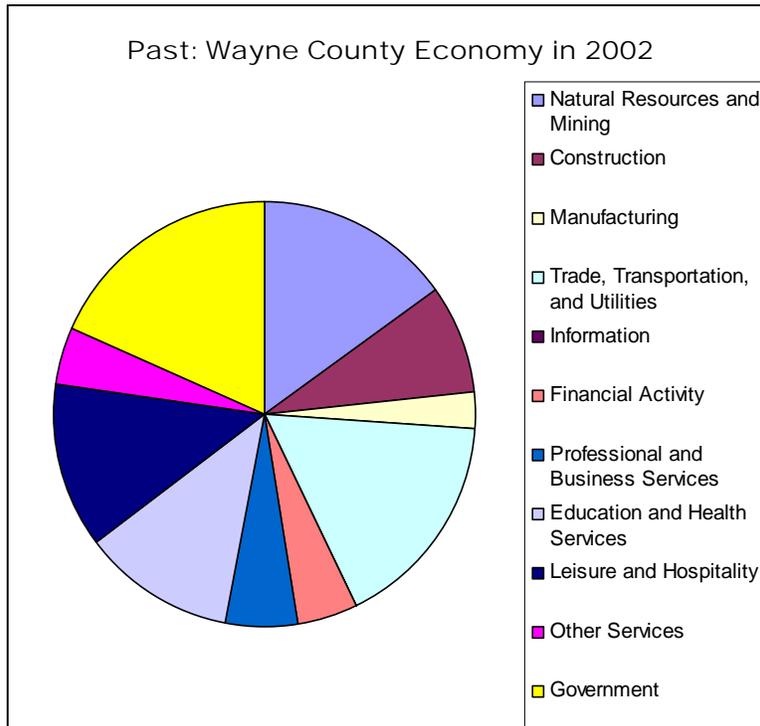
Economic Sectors: As illustrated in Table 6 in the category of non-farm industry, the major source of employment in Wayne County was the *Government* sector, including public education, providing 305 jobs and 18 percent of total non-farm employment in 2002. The *Trade, Transportation, and Utilities* sector was the next largest source of employment, contributing 276 jobs and 17 percent of total non-farm employment. Farm employment accounted for 250 jobs in 2001, or 15 percent of total employment (Bureau of Economic and Business Research 2001).

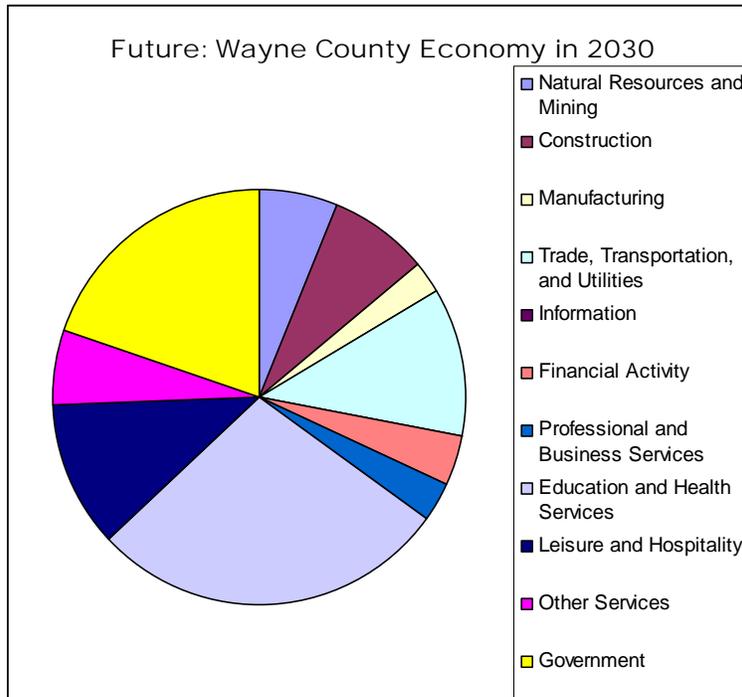
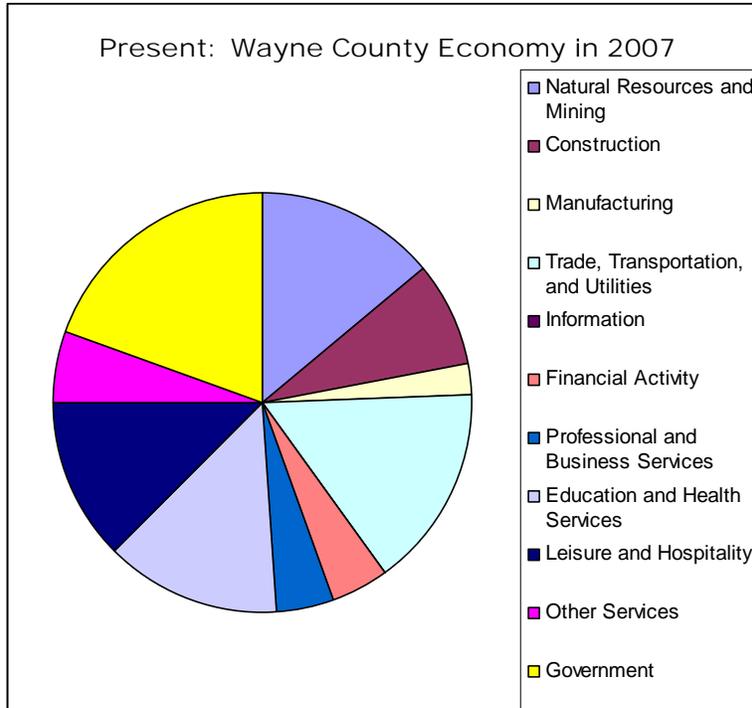
Several of the economic sectors, including *Natural Resources and Mining, Trade, Transportation, and Utilities*, and *Professional and Business Services*, are expected to see decreases in the number of jobs in the future, while the *Education and Health Services* sector is expected to see the greatest growth.

Table 6. Employment by Area and NAICS Category in Wayne County, 2002-2030 (Non-Farm)

Wayne County				
NAICS Sector	Number of Jobs per Year			
	2002	2007	2020	2030
Natural Resources and Mining	251	206	161	124
Construction	138	121	153	160
Manufacturing	47	40	47	52
Trade, Transportation, and Utilities	276	233	244	239
Information	NA	NA	NA	NA
Financial Activity	77	67	74	77
Professional and Business Services	92	65	65	63
Education and Health Services	193	205	380	570
Leisure and Hospitality	210	184	218	234
Other Services	73	84	106	121
Government	305	292	372	402
Total	1,662	1,497	1,820	2,042

Diagram 6: Wayne County Economy Past, Present, and Future (Number of Jobs by Sector)





Education and Health Services is the largest sector in the Wayne County economy. This sector is buoyed by the presence of Aspen Health Services' Aspen Achievement Academy, a wilderness therapy program that is a major county employer. Headquartered in Loa, the program operates on BLM and National Forest System lands. *Government* is the second largest sector in the county. Since 1980 agriculture has decreased dramatically and services have increased, a trend that is projected to continue into 2030. In 1980, agriculture made up

26.9 percent of the economy, while services took only a 3.5 percent share. By 2002, agriculture had declined to 13.8 percent and services had increased to 24.9 percent. In 2030, agriculture is projected to take a 6.5 percent share, while services will have increased to 30.3 percent (State of Utah 2003). This increase is visible in the increasingly popular tourist venues of Torrey at the gateway to Capitol Reef National Park.

Wages and Employment: The highest paying sector (which is almost 3 percent of total employment) is *State Government*, where the average job pays \$46,241 per year. In contrast, the largest employment sector, *Education and Health Services*, which accounts for about 29 percent of total employment, pays on average \$26,580 per year. Finally, public sector wages exceeded private sector wages in the county by 32.9 percent (Headwaters 2007f).

Economic Diversity and Specialization: Wayne County has a specialized economy with heavy reliance (in comparison with state and national averages) upon *Agriculture, Forestry, Fishing, and Hunting* and *Accommodation and Food Services*. In comparison to state and national averages, Wayne County needs more economic activity in the *Manufacturing* and *Professional, Scientific, and Technical Services* parts of the economy. Overall, Wayne County earned a specialization score of 436, whereas an economy structured identically to the entire U.S. would have scored a 0 (Headwaters 2007f).

Other Issues: While agriculture continues to decline, it is an important part of the county's traditions and customs. Many county residents work multiple jobs to keep the traditions of the past alive. The Wayne County General Plan emphasizes tourism promotion as an important economic development tool; however, there is concern over preserving quality of life while implementing this strategy. The Wayne County Economic Development Office recently administered a Business Expansion and Retention Program survey to local tourism industry businesses. Ninety-three percent of the businesses surveyed "reported that public lands have an affect on their business." Businesses reported that "much of the tourism in the county is directly related to public land access" (Wayne County 2006).

Wayne County continues to struggle with issues of poverty. The county's 1999 poverty rates exceeded 15 percent, almost one and one-half times the state average (State of Utah 2003). Total personal income in Wayne County is the fourth lowest in the state. Growth rates of total personal income were second to last in the state from 2000 to 2003 (UBEA 2003).

Civil Society, Economic Development, and Forest Facilities: Although many county residents own ATVs and enjoy ATV recreation, there are no known organized groups in Wayne County (Torgerson 2007). County residents primarily use the Richfield Ranger District on the Fishlake National Forest, and the Fremont River Ranger District, which is now administered wholly by the Fishlake, but half of which is being addressed in this travel management plan.

County residents purchase and repair their ATVs out-of-county. There is one ATV outfitter/guide operating in Wayne County. Portions of the Great Western Trail in the county are used by ATVs.

3.3. Summary

The Dixie National Forest resources and transportation system (roads and trails) contribute to many quality of life features that are important to local communities and visitors to the area. National Visitor Use Monitoring data shows that the Dixie National Forest is receiving visitors

from the local areas as well as exploding urban centers. Areas on the west side of the Forest are characterized by fast growth, while areas on the east side continue historically sluggish growth. In comparison with national averages, area populations are remaining relatively young and are becoming more wealthy. Service sectors are growing throughout the area, while the *Natural Resources and Mining* sector is declining across the area. Much of the area around the Forest has had a historically rural character, but in many places this rural character is changing. Finally, there is a large population of second home owners in the area.

The following table summarizes the county profiles.

Table 7. Affected Environment Summary by County

County	Landownership (% of Total Land in County)	Population	Major Employers (Types)	Farming & Ranching	Largest Sector	Growth Sector	Best Wages	Diversification	Civil Society, Economic Development, & Facilities	Second Homes
Garfield	1,072,511 acres (89% federal; 32% Dixie NF)	Low growth	Utilities; Hospital; Hotels; Schools; Sawmill	Poor performance	Leisure/ Hospitality; Government	Education; Health; Government	Natural Resources & Mining	Low	No groups; a few events; outfitter/ guides; several forest facilities	61% of all county property owners
Iron	263,354 acres (57% federal; 12% Dixie NF)	High growth	University; Government; Retail; Schools; Health Care; Manufacturing; Construction; Services	Excellent performance	Government; Trade, Transportation, & Utilities	Trade, Transportation, & Utilities; Professional & Business Services; Education & Health Services; Government	Federal Government	High	Several groups; a couple events; many businesses	56% of all county property owners
Kane	143,664 acres (83% federal; 5% Dixie NF)	Moderately high growth	Animal Sanctuary; Schools; Concessionaire; Hospital; Government; Hotels; Services	Variable performance	Leisure and Hospitality; Government; Education	All sectors (slowly)	State Government	Somewhat low	A few groups; a few events; a few businesses	75% of all county property owners
Piute	2,774 acres (74% federal; 0.57% Dixie NF) (with much more on Fishlake NF)	Slow to negative growth	Trucking; Schools; Hotels; Government; Services	Strong performance	Natural Resources & Mining; Government	Government	State Government	Very low	Several businesses	Not available
Washington	408,365 acres (75% federal; 26% Dixie NF)	Very high growth	Schools; Health Care; Retail; College; Government; Airlines; Trucking; Manufacturing	Poor performance	Trade, Transportation, & Utilities; Construction	All sectors, led by Education & Health Services; Trade; Professional Business; Government	Federal Government	High	A group; a few events; several businesses; one forest facility	52% of all county property owners
Wayne	79,845 acres (85% federal; 5% Dixie NF) (with much more on Fishlake NF)	Low growth	Education; Schools; Government; Utilities; Hotels	Strong performance	Government; Trade, Transportation, & Utilities	Education; Health Services	State Government	Low	No groups; no events; no businesses	Not available

Chapter 4. Effects Analysis

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4.1. Introduction

Due to a lack of sufficient data, most observations in this section are qualitative. Additional social research and economic data would be needed to better understand impacts on social and economic conditions due to this Motorized Travel Planning effort.¹⁵

4.1.1. Alternatives

The following table provides an overview of each alternative, showing:

- Total open miles,
- Total closed miles, and
- Total miles.

In order to better understand social and economic effects, we will focus on Total Open Miles versus Total Closed Miles. This comparison best shows what would change from the affected environment by alternative.

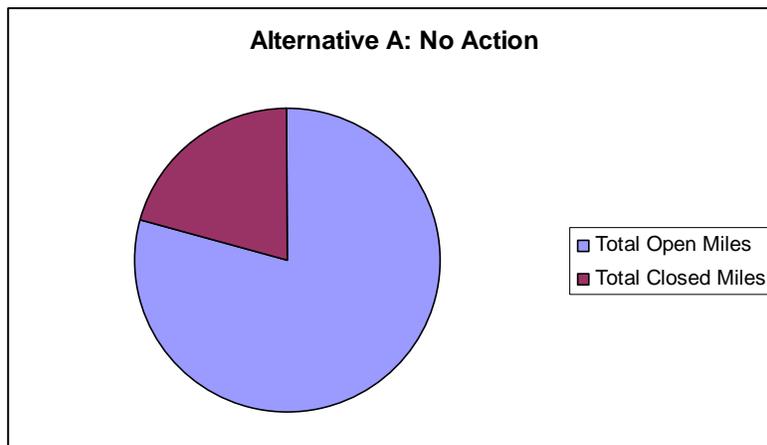
¹⁵ Some of this information related to social preferences and economic data may be available soon. Utah State University will soon publish results of several surveys and special studies related to public lands use in the State of Utah. The study was funded by the Utah State Legislature to help provide some perspective on the impact questions explored in this chapter.

Table 8. Total Open Miles Versus Total Close Miles by Alternative

District	Designation	A	B	C	D	E
		Miles	Miles	Miles	Miles	Miles
Cedar City	Total Open Miles	1058	463	533	689	1063
	Total Closed Miles	394	948	855	749	396
	Total District Miles	1452	1411	1388	1438	1459
Escalante	Total Open Miles	789	340	363	426	920
	Total Closed Miles	385	639	730	685	258
	Total District Miles	1174	979	1093	1111	1178
Pine Valley	Total Open Miles	675	215	255	457	693
	Total Closed Miles	24	435	355	221	8
	Total District Miles	699	650	610	678	701
Powell	Total Open Miles	1069	339	372	565	1169
	Total Closed Miles	126	825	750	598	31
	Total District Miles	1195	1164	1122	1163	1182
Fremont River (Teasdale)	Total Open Miles	442	178	202	304	482
	Total Closed Miles	134	371	350	243	97
	Total District Miles	576	549	552	547	579
Forest-wide	Total Open Miles	4033	1535	1725	2441	4327
	Total Closed Miles	1063	3337	3040	2496	790
	Total Miles	5096	4872	4765	4937	5117

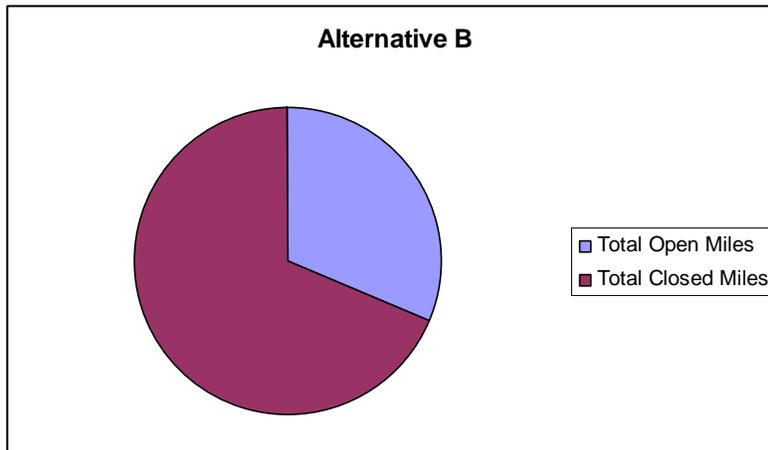
In order to better describe each alternative visually, the following pie charts depict the ratio of roads and trails that would be open and included in each alternative versus those roads and trails that would be closed (system) or no longer available for public use (non-system).

Diagram 7. Total Open and Closed Miles – Alternative A



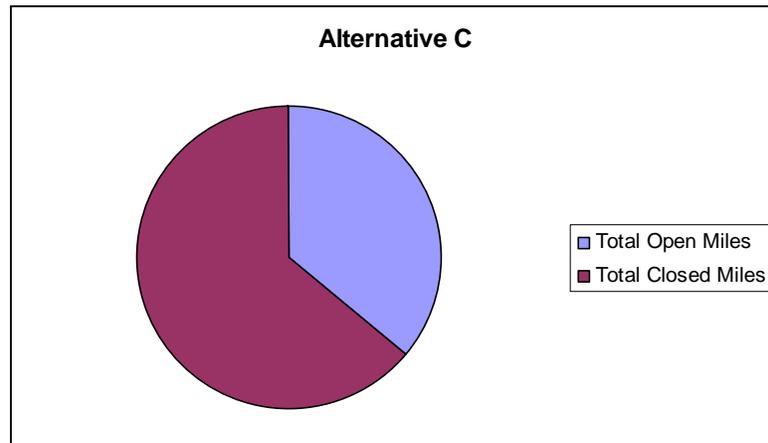
In Alternative A, only those areas where roads and trails have been designated through previous decisions would be closed to cross country travel. Since a large portion of the Forest would be available to cross country travel. This is the most access friendly alternative.

Diagram 8. Total Open and Closed Miles – Alternative B



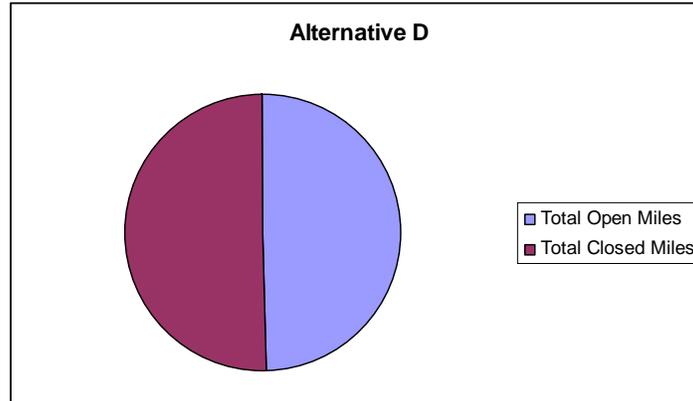
In Alternative B, about two-thirds of the currently available (authorized and unauthorized) roads and trails on the forest would be closed to the public. This is the most access restrictive alternative. 1,534 miles would still be open to the public in this alternative. Many of the closed roads and trails would continue to be used for non-motorized users.

Diagram 9. Total Open and Closed Miles – Alternative C



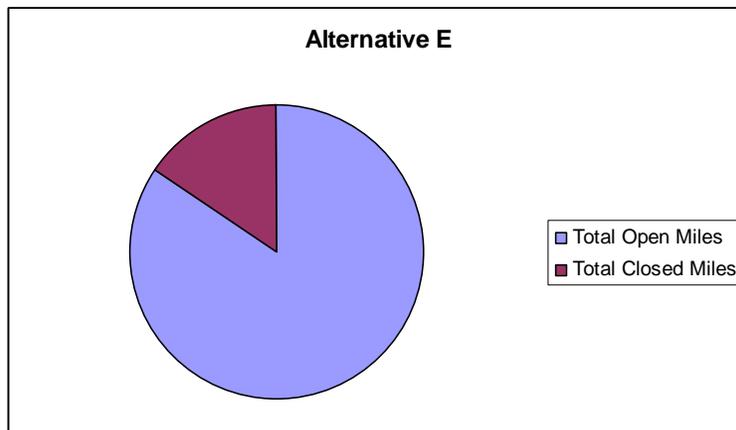
In Alternative C, over half of the currently available roads and trails on the forest would be closed to the public. This is the second most access restrictive alternative. 1,725 miles would still be open to the public in this alternative. Many of the closed roads and trails would continue to be used for administrative use or for non-motorized users.

Diagram 10. Total Open and Closed Miles – Alternative D



In Alternative D, about half of the currently available roads and trails on the Forest would be closed to the public. This is the second most access friendly alternative. This alternative is closest to the proposed action that was viewed by the public during scoping. It allows continued use on roads and trails of “social importance.” 2,441 miles would still be open to the public in this alternative. Many of the roads and trails that would otherwise be used in Alternative C or B for administrative uses or by non-motorized users would be available to the public in this alternative.

Diagram 11. Total Open and Closed Miles – Alternative E



In Alternative E, most of the roads and trails would remain open to the public. This alternative is the most access friendly alternative. 4,327 roads and trails would be open to the public in this alternative. Many of the roads and trails that would be closed in Alternatives B, C, and D that would enhance non-motorized uses and provide for administrative use would be used for motorized uses in this alternative.

While some of the alternatives will result in the closure of many miles, most of the miles being closed across the alternatives do not change the overall landscape character because they are duplicative or short routes off main routes.

For this analysis we will look at the following ranger districts on the Forest to understand effects for the following counties:

- Garfield County – Cedar City, Powell, Escalante, Fremont River
- Iron County – Cedar City, Pine Valley
- Kane County – Cedar City, Powell
- Piute County – Powell, Escalante
- Washington County – Pine Valley
- Wayne County – Fremont River, Escalante

Ranger district boundaries do not often align with county boundaries. Therefore, for instance, while there are parts of the Cedar City and Powell Ranger Districts in Kane County, there is only 143,664 acres of Dixie National Forest. This is only a small portion of the land base of these districts. Therefore a number describing the open and closed roads and trails combined on these districts does not all relate to Kane County. Nonetheless, the open and closed roads and trails have been aggregated by district and county to best understand the alternatives at the unit level of a county.

Table 9. Disposition of Routes at County Unit Level by Alternative

Garfield County (Cedar City, Powell, Escalante, Fremont River)					
	A	B	C	D	E
<i>Open</i>	3,358	1,320	1,470	1,984	3,634
<i>Closed</i>	1,039	2,783	2,685	2,275	782

Iron County (Cedar City, Pine Valley)					
	A	B	C	D	E
<i>Open</i>	1733	678	788	1146	1756
<i>Closed</i>	418	1383	1210	970	404

Kane County (Cedar City, Powell)					
	A	B	C	D	E
<i>Open</i>	2127	802	905	1254	2232
<i>Closed</i>	520	1773	1605	1347	427

Washington County (Pine Valley)					
	A	B	C	D	E
<i>Open</i>	675	215	255	457	693
<i>Closed</i>	24	435	355	221	8

Wayne County (Escalante, Fremont River)					
	A	B	C	D	E
<i>Open</i>	1231	518	565	730	1402
<i>Closed</i>	519	1010	1080	928	355

4.1.2. Trends That Are Likely to Continue Regardless of Alternative

The following conditions and trends are common throughout southwestern Utah. Often these conditions and trends follow state and national trends for rural areas or for growing urban areas. Many of these trends are explored further at the individual county level in the impact profiles found in section 4.2.1.

Trends that are likely to continue regardless of alternative include the following.

- Forest lands contribute to quality of life for visitors and residents.
- Forest roads and trails provide access to numerous recreation and tourist destinations throughout southwestern Utah.
- Forest roads and trails will be used by increasing numbers of visitors from exploding urban areas in proximity to the forest.
- Forest roads and trails will be used by the increasingly wealthy and relatively young generation of people living near the forest.
- Economies will continue to move away from natural resources and mining and into a variety of service and professional sectors.
- Local communities will continue to engage in dialogue and discussion about how to address issues of growth (particularly how to retain tradition and culture in the face of pressure to change).
- As more of America reaches retirement age and has more wealth to spend, areas near forests can expect to be attractive second home owners.
- Finally, a wide variety of user groups and interest groups will be interested in forest management issues and particularly in issues of access management.

4.1.3. Conditions That Are Not Likely to Be Impacted By Alternative

4.1.3.1. Population

Areas on the west side of the Forest are projected to grow rapidly, while areas on the east side of the Forest are projected to grow at rates below the state and national averages. It is unclear why this population growth is happening in some areas, but not in others. Areas on the west side of the forest have greater access to the I-15 corridor, better airports, institutes of higher education, better health care options, and more cultural offerings. None of the alternatives will likely have any discernable impact upon these growth patterns. It is important to note, however, that growth in some areas may mean that more visitors will seek recreation opportunities of all kinds on national forest system administered lands.

4.1.3.2. Farming and Ranching

Farming operations do not rely upon Federal lands or use of the forest ATV roads and trails. Ranching operations may use forest lands by permit, but they do not rely upon ATV use. Permits may allow periodic use of roads and trails not otherwise available for public use (administrative use). Garfield and Washington counties have experienced poor performance in the farming and ranching sectors. The other counties in the project area have experienced either moderate to good success in this sector. A designated route system, regardless of alternative, will not have an impact on these operations.

4.1.4. Impacts Common to All Alternatives

4.1.4.1. Second Homes

A significant portion of property owners in the project area are not from the project area. These “second home” owners may occupy their property/home for portions of the year, but are not around year round. This social dynamic creates challenges for local government (provision of services, inclusion in policy dialogues, education) and Federal managers (education of users, wildfire prevention and protection, enforcement of regulations). Many of these part-time residents could become full-time residents as the baby boom generation retires. Future challenges remain for local and Federal government in educating these forest users and community members about proper use of forest roads and trails. All alternatives will need to consider strategies for educating these unique forest users. Cooperative efforts between local government officials and Federal managers are likely to be the most successful.

4.1.4.1. There Will Continue to be a Wide Variety of Groups Interested in Motorized Travel Planning

The Travel Management Rule closed all National Forests to cross-country travel in that all travel is restricted to designated routes and areas. The Motorized Travel Plan will create a designated route system. User groups and interest groups along with individuals will continue to be interested in motorized travel planning decisions. Preferences will vary from group to group and individual to individual. There will always be interest in more motorized roads and trails. Conversely, there will always be interest in more non-motorized opportunities.

4.2. Analysis Area

The analysis area is the same as the Dixie National Forest Primary Zone of Influence (ZOI) for the social and economic environment, as described in the Environmental Impact Statement for the Forest Plan (1986). The ZOI is comprised of a six-county area including the following counties: Garfield, Iron, Kane, Piute, Washington, and Wayne. The boundaries of the Dixie National Forest lie within these counties and the economies of these counties may potentially be affected by Forest actions (EIS, III-1).

Because of variation between communities’ economic bases, the ZOI is further broken down into analysis units by county. Garfield, Iron, Kane, Piute, Washington, and Wayne Counties are analysis units comprising the affected environment for this project.

In order to better understand the potential effects to social and economic resources by alternative and by analysis unit, the issues of landownership, economic sectors (combining major employers, wages/employment, and economic sectors), economic diversity and specialization, and civil society, economic development, and forest facilities will be explored further.

4.2.1. Garfield County Analysis Unit

Garfield County (Cedar City, Powell, Escalante, Fremont River)					
	A	B	C	D	E
<i>Open</i>	3358	1320	1470	1984	3634
<i>Closed</i>	1039	2783	2685	2275	782

Potential Impact Issues

Landownership: Garfield County is dominated by federal land. National Forest System lands account for over one million acres of the county (about 32 percent of the county’s land). These lands provide a multitude of benefits to the county, but reduce the property taxes that the county can collect. Furthermore, the county provides service such as search and rescue over a large land base. All decisions on federal lands that dominate the county at least indirectly impact the county in positive and negative ways. Even in the least access oriented alternative, there will still be 1,320 miles of roads and trails open to public use on the one million acres of forest land in the county.

Economic Sectors (major employers, wages/employment, and economic sectors): Some of Garfield County’s largest employers provide direct services to residents and visitors using roads and trails on forest lands. These residents and visitors engage in a variety of recreation and sightseeing activities on these lands. It is difficult to determine how the mix of open versus closed roads and trails by alternative will impact these businesses.

The largest sector in the county economy, *Leisure and Hospitality*, is also one of the more modest paying sectors. *Leisure and Hospitality* businesses could be impacted by the mix of closed versus open roads and trails. Since visitors engage in a variety of activities, it is not clear what this impact would be. The projected growth sectors in the economy, *Government* and *Education and Health Services*, do not directly relate to roads and trails.

Economic Diversity and Specialization: Garfield County’s economy is specialized. It might rely too heavily on *Accommodation and Food Services* and *Agriculture, Forestry, Fishing, and Hunting*. As mentioned previously, since some visitor and resident preferences could be displaced by others (e.g., people move from an interest in motorized trails to hiking trails), it is difficult to understand how each alternative would Garfield County economically. Any economy, however, that is specialized will be more vulnerable to change and disruption. Disruption can also create opportunity for more diversification.

Civil Society, Economic Development, and Forest Facilities: There is significant interest in roads and trails in Garfield County. There are a few organized events that could be impacted by this decision, however, these events are conducted on trail systems (near Bryce Canyon) and in areas (towns) that either have already been developed or are outside of the scope of this decision (not Forest Service lands). A very small contingent of businesses in the county rely directly upon ATV recreation. The majority of ATV specific recreation opportunities (e.g., campgrounds and special trails) on the Dixie National Forest are located in Garfield County. Changes to the mix of open and closed roads and trails could impact a few events and small businesses.

Impacts by Alternative

Alternative A: No impacts.

Alternative B: Under this alternative there would be greater pressure on the economy to change and provide services to non-motorized visitors. As motorized recreation opportunities are limited, more effort would be necessary to resolve the conflicting interests of trails users across the county. This alternative would have the highest chance of creating a disruption to the social and economic conditions in Garfield County.

Alternative C: Under this alternative, there would be more motorized opportunities available than in Alternative B, but not as many as in Alternatives A, D, and E. It would have the second highest potential disruption to social and economic conditions in Garfield County.

Alternative D: Under this alternative, there would not likely be much impact upon the aspects of the economic and social resources in Garfield County. There would, however, possibly be some impact on those businesses that depend upon visitors interested in non-motorized recreation.

Alternative E: Under this alternative, there would be a very large number of motorized roads and trails open to the public. This could create some positive impacts to businesses that deal directly with recreation vehicle sales, rental, and repair. Provision of motorized opportunities at this scale could, however, create a disincentive for other visitors (non-motorized) to come to the county. This could have negative economic implications for many county businesses.

4.2.2. Iron County Analysis Unit

Iron County (Cedar City, Pine Valley)					
	A	B	C	D	E
<i>Open</i>	1733	678	788	1146	1756
<i>Closed</i>	418	1383	1210	970	404

Potential Impact Issues

Landownership: National Forest System lands account for over a quarter of a million acres of the county (about 12 percent of the county's land). Relative to other jurisdictions and private lands, there are not as many forest lands as in other counties. These lands provide a multitude of benefits to the county, but reduce the property taxes that the county can collect. Furthermore, the county provides service such as search and rescue over a large land base. All decisions on Federal lands that dominate the county at least indirectly impact the county in positive and negative ways. Even in the least access oriented alternative, there will still be 678 miles of roads and trails open to public use on forest lands.

Economic Sectors (major employers, wages/employment, and economic sectors): Iron County has a large economy. Most of the retail, sales/rental, and repair businesses servicing motorized visitors in the plan area are located in Iron County. County residents and visitors engage in a variety of recreation and sightseeing activities on these lands. It is difficult to determine how the mix of open versus closed roads and trails by alternative will impact these businesses.

None of the largest sectors in the Iron County economy rely heavily upon motorized recreation. While some businesses could be impacted by the mix of closed versus open roads and trails visitors to the area engage in a variety of activities, it is not clear what this impact would be.

Impacts to sectors could be localized at the individual business level, but would likely have no discernable impact to the broad economy.

Economic Diversity and Specialization: Iron County’s economy is very diverse. It is not vulnerable to any of the changes that would come from the Motorized Travel Plan decision.

Civil Society, Economic Development, and Forest Facilities: There are several organized ATV clubs in Iron County. There are also some organized events that cater to motorized travel recreationists. In even the most restrictive alternative, there would still be 678 miles of roads and trails open to the public. There could be some impact on clubs and local events. With a diverse population, however, it is not clear that these negative impacts on a few people and events would not potentially create positive impacts elsewhere (e.g., formation of other user groups or events/festivals for non-motorized recreation).

Impacts by Alternative

Alternative A: No impacts.

Alternative B: Under this alternative, the reduction of roads and trails open to the public could impact the organized groups and ATV events in Iron County. This alternative would have the largest impact on those activities. Overall, however, economic and social resources in Iron County are not likely to be impacted regardless of the alternative.

Alternative C: The impacts under this alternative would be slightly less than Alternative B, but otherwise similar.

Alternative D: This alternative would not negatively impact ATV clubs or events. Non-motorized users and businesses that depend upon their patronage could be impacted.

Alternative E: Under this alternative, the provision of a large amount of motorized roads and trails could impact the sectors of the economy that depend upon other types of trail users (e.g., hiking and mountain biking). Overall, however, economic and social resources in Iron County are not likely to be impacted regardless of the alternative.

4.2.3. Kane County Analysis Unit

Kane County (Cedar City, Powell)					
	A	B	C	D	E
<i>Open</i>	2127	802	905	1254	2232
<i>Closed</i>	520	1773	1605	1347	427

Potential Impact Issues

Landownership: Kane County is dominated by federal land. National Forest System lands, however, only account for a small portion of the federal total (5 percent, or 143,664 acres). These lands provide a multitude of benefits to the county, but reduce the property taxes that the county can collect. Furthermore, the county provides service such as search and rescue over a large land base. All decisions on federal lands that dominate the county at least indirectly impact the county in positive and negative ways. Even in the least access oriented alternative, there will still be 802 miles of roads and trails open to public.

Economic Sectors (major employers, wages/employment, and economic sectors): Some of Kane County's largest employers provide direct services to residents and visitors using roads and trails on forest lands. These residents and visitors engage in a variety of recreation and sightseeing activities on these lands. It is difficult to determine how the mix of open versus closed roads and trails by alternative will impact these businesses.

The largest sector in the county economy, *Leisure and Hospitality*, is also one of the more modest paying sectors. *Leisure and Hospitality* businesses could be impacted by the mix of closed versus open roads and trails. Since visitors engage in a variety of activities, it is not clear what this impact would be. The projected growth sectors in the economy, *Government* and *Education and Health Services*, do not directly relate to roads and trails.

Economic Diversity and Specialization: Kane County's economy is somewhat specialized. It might rely too heavily on *Accommodation and Food Services*. As mentioned previously, since some visitor and resident preferences could be displaced by others (e.g., people move from an interest in motorized trails to hiking trails), it is difficult to understand how each alternative would impact Kane County economically. Any economy, however, that is specialized will be more vulnerable to change and disruption. Disruption can also create opportunity for more diversification. Kane County's economy is more diverse than Garfield or Wayne County.

Civil Society, Economic Development, and Forest Facilities: There are several active motorized recreation clubs in Kane County. Additionally, there are a few organized events that could be impacted by this decision. A very small contingent of businesses in the county rely directly upon ATV recreation. Changes to the mix of open and closed roads and trails could impact a few events and small businesses.

Impacts by Alternative

Alternative A: No impacts.

Alternative B: Under this alternative there would be greater pressure on the economy to change and provide services to non-motorized visitors. As motorize recreation opportunities are limited, more effort would be necessary to resolve the conflicting interests of trails users across the county. This alternative would have the highest chance of creating a disruption to the social and economic conditions in Kane County.

Alternative C: Under this alternative, there would be more motorized opportunities available than in Alternative B, but not as many as in Alternatives A, D, and E. It would have the second highest potential disruption to social and economic conditions in Kane County.

Alternative D: Under this alternative, there would not likely be much impact upon the aspects of the economic and social resources in Kane County. There would, however, possibly be some impact on those businesses that depend upon visitors interested in non-motorized recreation.

Alternative E: Under this alternative, there would be a very large number of motorized roads and trails open to the public. This could create some positive impacts to businesses that deal directly with recreation vehicle sales, rental, and repair. Provision of motorized opportunities at this scale could, however, create a disincentive for other visitors (non-motorized) to come to the county. This could have negative economic implications for many county businesses.

4.2.4. Piute County Analysis Unit

Since Dixie National Forest lands make up only about a half of one percent of Piute County's land base and there are no identified roads or trails on these acres, there will be no social or economic effects regardless of alternative.

4.2.5. Washington County Analysis Unit

Washington County (Pine Valley)					
	A	B	C	D	E
<i>Open</i>	675	215	255	457	693
<i>Closed</i>	24	435	355	221	8

Potential Impact Issues

Landownership: National Forest System lands account for 408,365 acres of the county (about 26 percent of the county's land). These lands provide a multitude of benefits to the county, but reduce the property taxes that the county can collect. Furthermore, the county provides service such as search and rescue over a large land base. All decisions on Federal lands that dominate the county at least indirectly impact the county in positive and negative ways. Even in the least access oriented alternative, there will still be 215 miles of roads and trails open to public use on forest lands.

Economic Sectors (major employers, wages/employment, and economic sectors): Washington County has a large economy. Retail, sales/rental, and repair businesses servicing motorized visitors in the plan area are located in Washington County. It is difficult to determine how the mix of open versus closed roads and trails by alternative will impact these businesses. These businesses represent a very small piece of the Washington County economy.

None of the largest sectors in the Washington County economy are dependent upon motorized recreation. While some businesses could be impacted by the mix of closed versus open roads and trails visitors to the area engage in a variety of activities, it is not clear what this impact would be.

Impacts to sectors could be localized at the individual business level, but would likely have no discernable impact to the broad economy.

Economic Diversity and Specialization: Washington County’s economy is very diverse. It is not vulnerable to any of the changes that would come from the Motorized Travel Plan decision.

Civil Society, Economic Development, and Forest Facilities: There is one known very active ATV club in Washington County. This group sponsors a yearly ATV Jamboree that brings in many visitors to the area. There could be some impact on clubs and local events. With a diverse population, however, it is not clear that these negative impacts on a few people and events would not potentially create positive impacts elsewhere (e.g., formation of other user groups or events/festivals for non-motorized recreation).

Impacts by Alternative

Alternative A: No impacts.

Alternative B: Under this alternative, the reduction of roads and trails open to the public could impact the organized groups and ATV events in Washington County. This alternative would have the largest impact on those activities. Overall, however, economic and social resources in Washington County are not likely to be impacted regardless of the alternative.

Alternative C: The impacts under this alternative would be slightly less than Alternative B, but otherwise similar.

Alternative D: This alternative would not negatively impact ATV clubs or events. Non-motorized users and businesses that depend upon their patronage could be impacted.

Alternative E: Under this alternative, the provision of a large amount of motorized roads and trails could impact the sectors of the economy that depend upon other types of trail users (e.g., hiking and mountain biking). Overall, however, economic and social resources in Washington County are not likely to be impacted regardless of the alternative.

4.2.6. Wayne County Analysis Unit

Wayne County (Escalante, Fremont River)					
	A	B	C	D	E
<i>Open</i>	1231	518	565	730	1402
<i>Closed</i>	519	1010	1080	928	355

Potential Impact Issues

Landownership: Wayne County is dominated by Federal land. Dixie National Forest lands account for 79,845 acres (about 5 percent of the county’s land). These lands provide a multitude of benefits to the county, but reduce the property taxes that the county can collect. Furthermore, the county provides service such as search and rescue over a large land base. All decisions on Federal lands that dominate the county at least indirectly impact the county in positive and negative ways. Even in the least access oriented alternative, there will still be 518 miles of roads and trails open to public use on the one million acres of forest land in the county.

Economic Sectors (major employers, wages/employment, and economic sectors):

Businesses providing visitor services are a major employer in Wayne County. Some of these visitors engage in motorized recreation on forest roads and trails. It is difficult to determine how the mix of open versus closed roads and trails by alternative will impact these businesses.

Unlike Kane and Garfield counties, the *Leisure and Hospitality* sector is not dominant in Wayne County. Nonetheless, *Leisure and Hospitality* businesses could be impacted by the mix of closed versus open roads and trails. Since visitors engage in a variety of activities, it is not clear what this impact would be. The projected growth sectors in the economy, *Education and Health Services*, does not directly relate to roads and trails.

Economic Diversity and Specialization: Wayne County's economy is specialized. It might rely too heavily on *Accommodation and Food Services* and *Agriculture, Forestry, Fishing, and Hunting*. As mentioned previously, since some visitor and resident preferences could be displaced by others (e.g., people move from an interest in motorized trails to hiking trails), it is difficult to understand how each alternative would Wayne County economically. Any economy, however, that is specialized will be more vulnerable to change and disruption. Disruption can also create opportunity for more diversification.

Civil Society, Economic Development, and Forest Facilities: There are no known ATV clubs or events in Wayne County. A very small contingent of businesses in the county depend upon ATV recreation. Changes to the mix of open and closed roads and trails could impact a few events and small businesses.

Impacts by Alternative

Alternative A: No impacts.

Alternative B: This alternative would represent the biggest change from the current use patterns. Since the Wayne County economy is very specialized and vulnerable to disruptions, this alternative would have the greatest potential impact on the county economic and social resources. Impacts would be less than Kane County and Garfield County, however, because there are no clubs, events, and only a few businesses that depend upon motorized recreation in the county.

Alternative C: Under this alternative, there would be more motorized opportunities available than in Alternative B, but not as many as in Alternatives A, D, and E. It would have the second highest potential disruption to social and economic conditions in Wayne County.

Alternative D: Under this alternative, there would not likely be much impact upon the aspects of the economic and social resources in Wayne County. There would, however, possibly be some impact on those businesses that depend upon visitors interested in non-motorized recreation.

Alternative E: Under this alternative, there would be a very large number of motorized roads and trails open to the public. Provision of motorized opportunities at this scale could, however, create a disincentive for other visitors (non-motorized) to come to the county. This could have negative economic implications for many county businesses.

4.3. Summary

While none of the alternatives are likely to impact the social and economic resources in the plan area very much, the highest potential impacts would likely be seen in Garfield County because of the high number of forest acres in the county, the focus of the economy (*Hospitality and Leisure*), planned events, and some small businesses that cater to motorized recreation use. Kane County would likely see the second largest potential impact for similar reasons, but doesn't have the same forest acreage as Garfield County. Wayne County could see the third highest potential impact largely due to the county's reliance upon tourism. Groups and organized events in Iron and Washington counties could be impacted, but the overall impact upon social or economic resources in these counties would be minimal regardless of the alternative. There are potential impacts on non-motorized uses and businesses that cater to these users across all alternatives. Finally, Alternative B and Alternative E would have the highest potential to impact social and economic resources because they would provide a mix of motorized and non-motorized uses on trails and roads that would be either weighted towards motorized or non-motorized at the expense of other users.

The following table summarizes the impacts by county.

Table 10. Summary of Social and Economic Impacts by County by Alternative

County	Impacts by Alternative				
	A	B	C	D	E
Garfield	No impacts	Highest Potential Impact due to acreage, focus of economy, events, and economic specialization	Similar to B, but of lesser magnitude	Not much impact	Potential impacts on other recreation use (e.g., non-motorized)
Iron	No impacts	Limited impact on clubs, events, and a small portion of businesses	Limited impact	Not much impact	Potential impact on other recreation use
Kane	No impacts	Moderate impact possible due to focus of economy, clubs, and economic specialization	Similar to B, but of lesser magnitude	Not much impact	Potential impact on other recreation use
Piute	No impacts	No impacts	No impacts	No impacts	No impacts
Washington	No impacts	Limited impact on clubs, events, and small portion of businesses	Limited impact	Not much impact	Potential impact on other recreation use
Wayne	No impacts	Moderate impact due to focus of economy and economic specialization	Similar to B, but of lesser magnitude	Not much impact	Potential impact on other recreation use
All counties	No impacts	Highest potential impacts in Garfield, Kane, Wayne counties (in that order) due to clubs, events, focus of economy, and a few businesses	Some impact on Garfield, Kane, and Wayne, but not as high as Alt A	Not much impact	Potential impact on other recreation use

4.4. Cumulative Effects

The cumulative effects area for the social and economic resource is the same as the cumulative effects area for the Recreation analysis: the southern half of the State of Utah (the six counties analyzed in the direct and indirect effects and Beaver, Millard, and Sevier counties), the two nearest contiguous counties in Arizona (Coconino and Mohave), and the two nearest contiguous counties in Nevada (Clark and Lincoln).

The eight categories below were considered in the cumulative effects analysis.

1. **Utilities.** Requests to construct new utility corridors or conduct activities within existing corridors to respond to increasing growth and demand will continue. One example is the

Dixie National Forest's recent Notice of Intent to prepare an EIS to analyze the construction, operation, and maintenance of a new transmission line from Tropic to Hatch (USDA 2008). The electric transmission line is proposed to provide energy to Garfield and Kane counties to meet current and projected demand. Because future utility-related actions will be addressed through site-specific NEPA analysis (which would assess the need for temporary and long-term motorized access for construction, operation, and maintenance), there would be no cumulative effects on the social and economic resources from utility operations under any alternative.

2. **Oil and Gas.** Current oil, gas, and other mineral activity on the Forest is mostly limited to mineral materials (gravel and cinder pits) and a small number of gas wells on the Escalante Ranger District. Demand for mineral materials is generally limited to UDOT for winter road maintenance, some personal use, and some administrative use. None of the alternatives would affect the availability of mineral materials to the public, other governments or agencies, or the Forest Service itself. Both the Dixie and Fishlake National Forests are preparing oil and gas leasing EISs, with a potential increase in that activity once decisions have been made (the Dixie decision will apply to the Cedar City, Escalante, Pine Valley, and Powell ranger districts, and the Fishlake decision will apply to the entire Fremont River Ranger District). Both EISs address reasonable foreseeable development scenarios that include new road construction and reconstruction for exploration, development, and production. None of the alternatives in this motorized travel plan would affect the decisions made in either EIS.
3. **Transportation.** All action alternatives would add varying mileages of unauthorized routes to the system to provide private property and permittee access, although motorized access can continue to be authorized through permit for all permitted uses on the Forest. As all alternatives provide an adequate transportation system for Forest Service administrative uses and permitted uses, there would be no cumulative effects on the social and economic resources of the area from any alternative.
4. **Recreation.** As discussed above under *Direct and Indirect Effects*, negative impacts to the current social and economic conditions of Garfield, Kane, and Wayne counties are greatest under Alternative B and, to a lesser extent, Alternative C. However, there are no impacts to the greater social and economic cumulative effects area under any alternative as the impacts to Garfield, Kane, and Wayne counties are absorbed by the other counties' more diversified economies, broader economy foci, and land ownership patterns (U.S. Census Bureau 2005a, 2005b, 2005c, 2005d, 2005e, 2005f, 2005g).
5. **Vegetation Treatments.** All alternatives would provide adequate access for all future planned vegetation treatments. Access to timber sales and stewardship contracts would not be affected by any of the alternatives, and the site-specific analysis conducted prior to any treatments would identify if any additional roads or trails were needed as part of the project.
6. **Land Exchanges and Easements.** There are no foreseeable land exchanges or easements that would result in cumulative effects to the social and economic resources in the cumulative effects area.
7. **Special Use Permits.** The minor differences between alternatives regarding firewood collection is discussed in the *Vegetation and Fire and Fuels Specialist Report*. As this use would continue to be administered through special use permit, there is no appreciable difference between alternatives given the availability of firewood. Most who collect firewood on the Forest are residents of the counties in which the Dixie National Forest is located. The same is true for other personal use collections like Christmas tree permits and post and pole permits. Commercial special use permits would continue to be analyzed on a case-by-case basis; there would be no change for these activities between alternatives in the cumulative effects area.

8. **Grazing.** Livestock grazing is expected to continue at current at the present level under all alternatives. Any motorized access needed above that provided by the travel system under any alternative can be authorized through the permit process. No effect on the social and economic resource in conjunction with grazing is expected or likely.

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