

4.14. SOCIOECONOMICS

4.14.1. SUMMARY AND GENERAL ASSUMPTIONS

This analysis of impacts to socioeconomics is based on BLM-related management changes that would occur under the Proposed RMP and each of the alternatives. If impacts to some aspect of the socioeconomic situation are not mentioned in this analysis, then a negligible effect should be assumed. This analysis focuses on the socioeconomic aspects of several key resources: lands and realty, minerals, recreation, livestock and grazing, paleontology, VRM, wild horses, wildlife and fisheries, and woodlands.

4.14.1.1. PROPORTIONAL IMPACTS

Based on the information presented in Chapter 3, certain counties rely more heavily on various market sectors of the economy. Counties with a higher proportion of oil, gas, and mineral leases on BLM-administered lands would experience impacts to minerals of proportionally greater magnitude than the rest of the VPA. Similarly, counties with a higher proportion of BLM-administered lands dedicated to recreation, and thus to tourism, would experience more impacts to recreation/tourism than other counties in that market sector. Based on this concept, the following is assumed about the counties within the study area:

- Effects of minerals management will be greater in Uintah and Duchesne Counties, where the economy is largely driven by this industry.
- Effects of recreation management will be greater in Daggett County, where recreation and tourism are the driving forces in the economy.

4.14.1.2. QUALITATIVE VERSUS QUANTITATIVE DATA

Economic impacts are considered with respect to each major sector of the economy in the VPA. Where quantitative data is available, a more detailed analysis is shown. Where quantitative data is not available, a qualitative analysis is performed based on the best available data.

Many human, community impacts cannot be measured in economic terms. Such impacts are analyzed here as social impacts and include detractions from existing lifestyles, quality of life, sense of place, community values, and unjust or unfair impacts or burdens on minority and low-income populations (i.e., environmental justice).

4.14.2. IMPACTS COMMON TO THE PROPOSED RMP AND ALL ALTERNATIVES

The following sections discuss, by resource, the impacts common to the Proposed RMP and all alternatives that may have a measurable effect on socioeconomics.

4.14.2.1. LIVESTOCK AND GRAZING MANAGEMENT

As noted in Section 3.8 in Chapter 3, demand for animal unit months (AUMs) for livestock grazing has never outpaced the allocation of AUMs. Within the VPA, 146,220 animal unit months (AUMs) are allocated for livestock, but active permitted use for the 160 allotments is currently 137,897 AUMs. The demand for forage resources by livestock (the total average actual use) for the past 10 years was only 78,500 AUMs. Comprehensive grazing allotment information is summarized in Appendix L. Because the Proposed RMP and each of the alternatives exceeds the recent demand for AUMs (except for Alternatives C and E which propose slightly less than the 78,500 AUMs average actual use with 77,294 proposed AUMs), the socioeconomic impact would be similar across alternatives and the Proposed RMP. See Section 4.14.3.1 for more details.

According to comments received during the scoping process and the Utah Public Lands Study conducted in 2007 by Utah State University (See Appendix J), Uintah and Duchesne Counties have expressed the desire to remain largely agricultural, specifically in the grazing industry. Preserving the agricultural lifestyle is made possible by the Proposed RMPs and each of the alternatives' forage decisions; the allocation of AUMs under the Proposed RMP and each of the alternatives would allow ranchers to maintain current practices and to maintain the agricultural lifestyle that characterizes the communities in Uintah and Duchesne Counties. Under the Proposed RMP and all alternatives, the ranching communities, which possess a rich culture and history in the planning area, would not be adversely impacted by livestock and grazing management decisions.

4.14.2.2. LANDS AND REALTY

Under the Proposed RMP and all alternatives, actions involving acquisition, use, disposal, and adjustment of land resources, as well as land exchanges, have the potential to impact the planning area's social and economic conditions. Management decisions pertaining to lands and realty would result in a long-term, beneficial effect on the social and economic goals of the communities in the VPA because such decisions would be made in an attempt to maximize the use of the land in the vicinity of these communities. The growth and development of lands resulting from realty actions within the VPA would be in compliance with other goals and objectives in this RMP and other guiding documents (see Section 1.5 and Section 4.06). The BLM would continue to grant reasonable access to SITLA lands and other inholdings as required by law.

4.14.2.3. MINERALS

The following analysis is based on the assumption that the demand for oil and gas resources will remain high over the next 20 years, and that private industry will continue to respond to demand. Should the demand for oil, gas and minerals subside, it is possible that the wells proposed in the Proposed RMP and each of the alternatives would not be developed. Based on the trend of well development outlined in the Mineral Potential Report, a maximum of 6,530 wells is predicted for development over the next 15-20 years (BLM, 2002). Given the amount of predicted wells to be developed over the life of the plan and the subsequent revenues, it is likely that minerals

development would have the greatest impact on local revenues when compared to other BLM management areas such as recreation or forage.

While minerals development would be restricted by the management actions under the Proposed RMP and each alternative, market demand, and industry trends, major development is still projected. Assuming the continuation of the trend in well development, the number of jobs available in this industry would increase, which in turn would increase overall prosperity in the region, because wages in this sector of the economy are typically higher than service or government-related jobs. Increasing jobs would also likely increase the population in the region and create an in-migration to the communities near these jobs. Increased population, in turn, increases the need for social services and infrastructure.

Throughout the VPA, the development of oil shale is speculative at this time and is not susceptible to analysis in this EIS/RMP. If such development should occur the actions would require site-specific NEPA analysis.

Developing alternative sources of energy (i.e., wind, solar, and geothermal energy) would have both short-term and long-term, beneficial effects on local economies. Short-term benefits would take the form of jobs necessary for the construction phases of these energy projects whereas long-term benefits would take the form of job necessary to for the maintenance and operation of the project facilities. Development of alternative sources of energy would further benefit local communities by augmenting the supply of electrical power in the area.

4.14.2.4. RECREATION

Expanding infrastructure for recreational activities would provide a long-term, beneficial impact by creating a better environment for recreation and drawing more visitors to the area, and consequently increasing traveler spending. Increasing recreational opportunities in the VPA would also increase jobs and potentially population, as the demand for retail services would likely increase with greater opportunities for recreation and tourism. In general, therefore, growth in the recreation industry would be a socioeconomic benefit, as it would contribute to the overall prosperity in the communities impacted by BLM management decisions. However, some of the recreation-based employment is not year round, as tourism rates decline in the winter months.

An increase in population resulting from recreation-based employment in the area would increase the need for infrastructure and social services in the communities of the VPA. Impacts resulting from an increase in recreation and the need for additional infrastructure would be minor and short-term.

Tourism generates tax revenue that is used to support the local community, which would potentially decrease if visitation decreases. If tourism and recreation decreased due to the loss of land to other uses (such as mineral development), the tax revenue from tourism in the local community would likely decrease. A decrease in recreation activities would cause a decrease in visitor spending in the region, thus decreasing the tourism economy and the number of dollars spent on local goods and services.

4.14.3. PROPOSED RMP AND ALTERNATIVES IMPACTS

4.14.3.1. IMPACTS OF LIVESTOCK AND GRAZING MANAGEMENT ON SOCIOECONOMICS

4.14.3.1.1. PROPOSED RMP

Because the amount of AUMs under the Proposed RMP (138,402 AUMs) differ less than 5% from Alternative D (No Action) (146,220 AUMs) socioeconomic impacts would be similar to current conditions.

4.14.3.1.2. ALTERNATIVE A

Impacts to socioeconomic conditions would be nearly identical to the Proposed RMP and Alternative D (No Action) as the amount of available AUMs differs by less than 1% with 137,383 AUMs allocated for livestock grazing under Alternative A.

4.14.3.1.3. ALTERNATIVE B

Under Alternative B 139,163 AUMs would be available for permitted use. Because this is just a 5% decrease in AUMs from Alternative D (No Action), socioeconomic impacts to the ranching community would be similar to current conditions.

4.14.3.1.4. ALTERNATIVES C AND E

Under Alternatives C and E 77,294 AUMs would be available for permitted use. This is a 47% decrease in AUMs from Alternative D (No Action). However, a 47% decrease in AUMs is likely to have a negligible adverse impact on the social and economic conditions related to livestock grazing. As noted in Section 3.8 the total average actual use of the AUMs over the past 10 years has been around 78,500 in contrast to the 146,161 total AUMs currently allocated for livestock. Under Alternatives C and E the 77,294 AUMs fall just slightly below the total average actual use.

4.14.3.1.5. ALTERNATIVE D (NO ACTION)

Under Alternative D (No Action), 146,220 AUMs are available for permitted use. Under this alternative impacts to the social and economic conditions of the ranching communities in the VPA would be identical to current conditions. Because the demand for AUMs is not anticipated to exceed the supply under current conditions, a loss of income and decline in social well being is not anticipated for ranchers and their families resulting from a loss of available AUMs on public land.

4.14.3.2. IMPACTS OF MINERALS DEVELOPMENT ON ECONOMIC CONDITIONS

Because of undefined market and non-market factors, the following analysis is based on simplified assumptions used to quantify general estimates of development costs, employment, production, and production revenue. Where available, separate data is used for the development

and completion of oil wells, in contrast to natural gas wells. Otherwise, data from the Utah Energy Office (UEO) on the drilling of a natural gas well is used. The direct and indirect effects of the Proposed RMP and each alternative are based on the following assumptions (in addition to the assumptions described in the Minerals section of this chapter):

Development Costs – A single natural gas well in the Mesaverde Group would have a total drilling and completion cost of approximately \$2,035,891, according to the UEO (UEO 2004). Much of this cost is determined by how easily the commodity can be extracted from the geologic formation. In this case, the Mesaverde Group hosting the natural gas is several thousand feet thick and is composed of interbedded shales, sands, and coals. Throughout Uintah and Duchesne Counties, the subsurface top of the group ranges between 7,500 feet and 9,200 feet, and the base of the group ranges between 10,200 feet and 12,500 feet. A well depth of 12,000 feet was used by UEO to calculate well costs. Of the total drilling and completion costs, approximately \$1,647,000 (or 80% of the total cost of the well) is assumed to be spent in Uintah and Duchesne Counties, allocated to various local and regional industries and economic sectors, including retail and wholesale trade, construction, services, transportation, and public utilities.

Employment – Using recent data from the State of Utah, it is possible to project the numbers of jobs likely to be created by drilling and completing a well in the Uinta Basin. A study done by the Utah Energy Office (UEO, 2004) estimated the number of jobs in all sectors that drilling and completing a single well in the Basin would create, which UEO estimated at 14.8. The study cautions that the projection is for a single well; additional wells would likely use the most of these same employees. Table 4.14.1 confirms this likelihood. As of 2006, for example (the most recent year for which complete data is available), the number of employees per well in Uintah County was 0.67. For the five years prior to this, the ratio varied from a low of 0.463 to the 0.67 reported for 2006. Similarly, one can compute the number of additional employees in the industry in Uintah County in relationship to the number of new wells drilled. Although the numbers vary somewhat from year to year, Table 4.14.1 shows that the highest multiple was in 2006 at 1.267 additional employees per new producing well brought on-line; the average for all positive years was 1.03. This data is not inconsistent with the UEO study, which estimated that most of the new job creation would be in the services, retail and wholesale trades, with only 1.7 of the 14.8 projected new jobs in the oil and gas industry. The recent lower numbers are likely due to economies of scale resulting from large-scale development. If all wells, including dry holes, were included, the ratio would be less. These results should not be surprising, in that the industry can quickly relocate crews to new drilling platforms as wells are drilled and completed. Once completed, relatively few employees can oversee the operation of numerous wells and associated infrastructure.

As stated above, the UEO study projected an additional non-oil and gas jobs that a single well would create at 13.1 jobs (14.8 total minus 1.7 specific to oil and gas). The information from UEO assumes that employment for 14.8 individuals is required for one well and it would require 14.8 employees for each well thereafter. The numbers used from report do not take into account that one employee may be able to complete the tasks required for numerous wells, for example a clerk in a retail store could accommodate the needs of several oil and gas employees. In other words, one cannot assume a strictly multiplicative increase for additional wells. This is borne out

by a recent study done for the State of Utah by the University of Utah¹³. This study estimated total employment in the Uinta Basin at 19,852 employees. Of this total, the study estimates that 9,835 jobs were directly or indirectly related to the oil and gas industry, with direct employment of 3,959. This suggests a multiplier effect of 2.48 (9835/3959). Although a significant economic impact in itself, this is considerable less than the multiplier suggested by the earlier UEO study. Once again, this can be explained by the fact that the UEO study estimated the impact of a single well, which misses the economies of scale which result from large-scale development of the type currently experienced in the Uinta Basin. Given this recent State-provided data, subsequent analysis in this section will assume 1.26 direct and 2.48 indirect jobs created per additional well drilled over the life of the plan (2006 data). Wage data from the same study, average wages for employees in the oil and gas industry in the Uinta Basin were \$65,482 in 2006; average wages for all other jobs were \$30,607. Combining this data, the analysis which follows will assume that each new well could create 3.74 jobs, generating \$158,412 wage income annually. These numbers are based on producing wells, rather than wells drilled. Given that not all exploration efforts are successful, the actual economic impact per well drilled, based on the RFD, will probably be lower.

Table 4.14.1. Producing Wells and Employment in the Oil and Gas Industry-Uintah County, 2001-2006

Year	Producing Wells ¹⁴	Employment ¹⁵	Oil and Gas Employment per Well	Change in Well Numbers	Change in Employment	Ratio of Change in Employment to Change in Wells
2001	2650	1376	0.519			
2002	2867	1327	0.463	217	-49	-0.226
2003	3119	1564	0.501	252	237	0.940
2004	3471	1830	0.527	352	266	0.756
2005	3875	2254	0.582	404	424	1.050
2006	4452	2985	0.670	577	731	1.267

Production – The average value of oil, gas, and CBNG in the region is multiplied by that region's production (based on the potential for well development under the Proposed RMP and each alternative) to achieve a long-term sales figure for the region.

As stated in Chapter 3, the Geologic and Engineering Team in the BLM VFO estimated that 6,530 wells could be drilled in the VPA during the planning period. Of these wells, approximately 31% (or 2,055) would be oil, 67% (or 4,345) would be gas, and 2% (or 130) would be CBNG. Given the total number of wells under the Proposed RMP and each alternative,

¹³ Source: The Structure and Economic Impact of Utah's Oil and Gas Exploration and Production Industry Phase I - The Uinta Basin, Bureau of Economic and Business Research, University of Utah, November, 2007)

¹⁴ Source: State of Utah, Division of Oil, Gas and Mining

¹⁵ Source: US Bureau of Labor Statistics, Quarterly Census of Employment and Wages (as reported in *The Structure and Economic Impact of Utah's Oil and Gas Exploration and Production Industry Phase I - The Uinta Basin*, Bureau of Economic and Business Research, University of Utah, November, 2007)

the percentages have been used to estimate the different types of wells that could be developed (Table 4.14.2).

Table 4.14.2. Estimated Number of Wells under the Proposed RMP and Each Alternative, by Resource Type

	Proposed RMP	Alternative A	Alternative B	Alternative C	Alternative D (No Action) ¹⁶	Alternative E
Oil	1,655	1,655	2,015	1,979	1,858	1,957
Gas	4,216	4,216	4,250	4,130	3,886	4,037
CBNG	124	124	126	116	112	114
Total	6,342	6,342	6,391	6,224	5,856	6,118

According to the Energy Information Administration (EIA), the current-day oil price is \$60.78 per 42-gallon barrel of oil (EIA 2006). In 2004, the average yearly production per oil well in Utah was 7,141 barrels of oil. Therefore, assuming that 7,141 barrels are recovered, potential recovery value per oil well is \$434,030 ($7,141 \times \60.78). The life of each well is estimated to be 15-20 years. The rate of production per oil well declines approximately 10% per year after the initial year. Therefore, recovery value per well would begin at \$434,030 and decrease 10% per year throughout the life of the well.

According to the EIA, the current-day natural gas price is \$7.28 per thousand cubic feet (Mcf) (EIA 2006). The UEO report assumes 200 million cubic feet of gas will be produced from a single well over a 1-year period. Therefore, assuming that 200 million cubic feet of natural gas is recovered, potential recovery value per natural gas well is \$1.46 million per year ($200,000,000 \times \$7.28/1,000$). The life of each well is estimated to be 25 years. The rate of production declines approximately 10% per year after the initial year, according to the UEO. Therefore, the recovery value per well would begin at \$1.46 million and decline 10% per year throughout the life of the well.

The natural gas derived from CBNG development accounts for approximately 7% of total natural gas production in the U.S. (MSU 2003). In the VPA, the anticipated production of natural gas from CBNG is approximately 2% of all natural gas (Table 4.14.2). Given the low number of CBNG wells predicted for the area, a detailed socioeconomic analysis of the well production is not provided.

Fiscal Impacts - The drilling and completion of wells in the VPA would have an impact on local and state governments due to services provided and tax and other revenue received. According to the UEO report, the drilling and completion of a single well in the Uinta Basin would result in gross state revenue growth of \$74,134. Approximately 26% (or \$19,352) of the state revenue is estimated to come from general sales tax. Sales tax in Uintah, Duchesne, and Daggett Counties is 6.5, 6.0 and 6.0 respectively. Oil and gas development generates sales tax for local economies by

¹⁶ Alternative D does not include the split-estate lands within the Hill Creek Extension. Therefore, less wells would be predicted for development when compared to the action alternatives. See Section 4.8.1.1 for more detail on split-estate lands.

purchasing local goods and services. The industry workers spend their earnings in local communities, thereby adding to the sales tax revenue. Other tax revenues contributing to the state and local economy would come from general sales tax, as well as individual income tax, education charges, motor fuel sales tax, and corporate income tax (UEO 2004).

Individual income tax and employee retirement are also large components of gross state revenues. Other charges and revenue, such as education charges, motor fuel sales tax, and corporate income tax, would contribute to smaller portions of gross state revenue. Local gross revenues would grow by \$45,974 per well including other charges and revenue, utility and liquor store revenue, and general sales tax. Local governments also receive property tax revenues (ad valorem tax) of \$3,216 per well (UEO 2004).

The estimated ad valorem taxes for each commodity type are based on productions, assessed values, and current tax rates. Ad valorem taxes assessed on property associated with oil and gas operations generate tax revenue for the counties in which production takes place; with respect to this RMP, the greater number of producing wells in the VPA, the greater the generation of property taxes associated with oil and gas extraction assets. The projected ad valorem tax revenue for the Proposed RMP and each alternative is provided in the sections below.

Tax and royalty revenue would be realized for the life of the well, with diminishing returns after maximum production is reached in the first year. The severance tax and royalty revenue generated from natural resource development depends on the amount of the commodity produced. Given the uncertainty of both the geology and the market, the quantification of revenue here is somewhat speculative.

The total revenue is allocated to the federal government (Minerals Management Service). Of the total 10% pays administrative fees, 45% is allocated to the federal government (into Reclamation and General Funds), 45% is paid to the state, and the state then redistributes 40% of the royalty back to the county of origin (BLM 2005). The majority of the balance is used to fund other local projects, such as water projects of recreation facilities.

Royalty revenue to the federal, state, and county governments equals approximately 12.5% of production revenue. Assuming the recovery value for one oil well is \$434,030 per year, royalty revenues would be \$54,253.75 per well at maximum production ($\$434,030 \times 0.125$). If the recovery value for one natural gas well is \$1.46 million per year, royalty revenues would be \$182,500 per well at maximum production ($\$1.46 \text{ million} \times 0.125$). Because the number of natural gas wells to be drilled in the planning area is more than double the amount of oil wells across all alternatives and the Proposed RMP, the following analysis will use recovery value of natural gas wells only. As the reader can see from the revenues listed above, natural gas revenues are higher per well than oil, thus suggesting that overall recovery and revenues would be lower if oil wells were substituted for gas wells. The analysis also assumes that all of the wells under the Proposed RMP and each alternative would be producing at maximum production and operating at the same time.

The severance taxes collected on minerals production are distributed within the state according to a formula published in the Utah State statutes. Severance tax revenues are distributed to a

variety of state and local entities, including the state's general fund, the state highway fund, counties, cities, and towns. Local government entities within the VPA would benefit from only a percentage of severance taxes collected on production within the VPA. However, these entities would also benefit from severance taxes collected on minerals production occurring in other parts of the state (BLM 2003).

In 2002, the severance tax rate for oil and gas development on Utah lands was 3% of the value, up to and including the first \$13 per barrel of oil and \$1.50 per MCF of natural gas, and 5% of the value above these prices. In Utah, it is estimated that two-thirds of the oil and gas severance tax is due to natural gas production (University of Utah 2003).

It is assumed that the greatest amount of oil and gas activity within the planning area would generate the greatest amount of sales tax revenue for counties and local communities. Because it not possible to accurately distinguish, in most cases, between sales tax revenue from oil and gas-related versus tourism the analysis of sales tax contributions is qualitative. Sales tax revenues are included in the analysis below under state and local revenues based on development costs.

4.14.3.2.1. PROPOSED RMP

Under the Proposed RMP, 1,916,936 acres would be open to CBNG, oil, and gas development under Standard Stipulations, Timing and Controlled Surface Use, and No Surface Occupancy categories of CBNG and oil and gas development. The total predicted number of wells developed would be 6,342. Of the 6,342 total predicted wells, 1,655 would be oil, 4,216 would be gas, and 124 would be CBNG.

Assuming that the drilling and completion of one well would create 3.74 jobs (see section 4.14.3.1), under the Proposed RMP, there would be 23,719 jobs resulting from 6,342 wells ($14.8 \times 6,342$), or 1,185 jobs annually if distributed evenly over 20 years (assuming that all 6,342 wells were in operation at the same time). Increases in the number of potential wells that could be developed under the Proposed RMP would have a long-term direct, beneficial effect on jobs, with an increase of approximately 1,817 jobs throughout the life of the RMP in comparison to Alternative D (No Action). However, increasing jobs in this sector may increase the region's dependency on this industry, which consequently increases the risk of economic downturn due to a bust cycle in oil and gas development.

With an annual estimated wage income at \$158,412 per well (see section 4.14.3.1, Proposed RMP would result in \$1 billion dollars in wage income over the life of the plan or approximately \$50.2 million annually.

Minerals decisions under the Proposed RMP would increase the costs of developing the total predicted oil and gas wells by \$0.1 billion, when compared to Alternative D (No Action). Such development would potentially create a total cost of development of \$12.9 billion over 20 years ($2,035,891 \times 6,342$ wells), or approximately \$645.6 million over one year ($(2,035,891 \times 6,342) \div 20$). Increases in the total number of potential wells from current management practices would have a long-term, beneficial effect on state and local revenues. Gross state revenue generated as a result of development costs is estimated to be \$470.2 million with the drilling and completion

of all wells under the Proposed RMP ($\$74,134 \times 6,342$ wells). Local revenue is estimated to be $\$291.6$ million with the completion of all wells ($\$45,974 \times 6,342$). Sales tax contributions from oil and gas developers and their employees would be slightly less (49 less predicted wells) than Alternative B, which has the greatest number of potential wells and greater than Alternative D (No Action), which has 486 less wells than the Proposed RMP. Ad valorem tax revenues for the Proposed RMP would total $\$20,395,872$ ($6,342 \times 3,216$).

In comparison to Alternative D (No Action), royalties paid to the state and counties from oil and gas sales on federal lands (including mineral lease revenue, and severance taxes) would increase in proportion to the increase in production, which would be a long-term beneficial effect on economics in the region. Royalty and tax revenue paid to the state and local governments resulting from oil and gas development would increase by 7.6% compared to Alternative D (No Action).

Annual recovery value for 6,342 wells under the Proposed RMP is 1.157 billion dollars ($182,500 \times 6,342$), of this 45% or 520.8 million dollars ($1,157,415,000 \times .45$) would be royalty revenue for the federal government and 40% or 462.9 million dollars ($1,157,415,000 \times .40$) in royalty revenue would be distributed back to the counties. An increased number of wells could have a long-term direct adverse impact on the tourism sector of the economy by reducing contiguous areas available for outdoor recreation, and affecting the quality of recreational experiences from visual intrusion and fragmented areas and trails. Tourism generates tax revenue that is used to support the local community, which would decrease if visitation decreases. Reducing outdoor recreation opportunity and quality could also effect employment in this sector.

An additional potential impact to state revenues is the potential loss to SITLA from not being able to lease or develop lands bordered all or in part by non-WSA lands with wilderness characteristics. The value of these lands for oil and gas leasing and/or development may be reduced if all or portions of public lands bordering these state lands are closed to new oil and gas leasing. This in turn could reduce the monies collected by the state (through SITLA), including royalties and severance taxes. These impacts can be estimated using current data, and incorporating several assumptions. If one assumes that SITLA lands whose perimeter is more than 50% bounded by BLM acreage closed to new oil and gas leasing, as a result of implementing the Proposed RMP, would be unavailable for development, and using the projections of the RFD, one can project that less than one well (0.27) would not be drilled over the life of the plan. Using data provided by the State of Utah, royalty payments to wells on SITLA lands averaged $\$57,065$ as of early 2008. Severance taxes averaged $\$9,335$ for all wells, regardless of land ownership. Multiplying these figures by the wells assumed that would not be drilled, the fiscal loss to the state would total $\$15,361$ in royalties and $\$2,513$ in severance taxes in any one year that such wells were not in operation. The more years a well was in operation over the life of the plan, the economic impacts would be proportionately greater

4.14.3.2.2. ALTERNATIVE A

Under Alternative A the amount of wells is identical to the Proposed RMP (6,342); therefore, impacts to socioeconomics would be the same as discussed above in Section 4.14.3.2.1 Proposed RMP.

4.14.3.2.3. ALTERNATIVE B

Alternative B would open 1,914,000 acres in the Standard Stipulations, Timing and Controlled Surface Use, and No Surface Occupancy categories for CBNG and oil and gas development. The total number of predicted wells would be 6,391. Of the 6,391 total predicted wells, 2,015 would be oil, 4,205 would be gas, and 126 would be CBNG.

Assuming that the drilling and completion of one well would create 3.74 jobs, under Alternative B, there would be 23,902 jobs resulting from 6,391 wells, or 1,195 jobs annually if distributed evenly over 20 years (assuming that all 6,391 wells were in operation at the same time). Increases in the number of potential wells under Alternative B would have a long-term direct beneficial effect on jobs. An increase of 369 potential wells over Alternative D (No Action) would result in an increase of approximately 2,000 jobs in this industry over 20 years, or approximately 100 jobs in one year. However, increasing jobs in this sector may increase the region's dependency on this industry, which consequently increases the risk of economic downturn due to a bust cycle in oil and gas development.

With an annual estimated wage income at \$158,412 per well, Alternative B would result in \$1.01 billion dollars in wage income over the life of the plan or approximately \$50.6 million annually.

Minerals decisions under Alternative B would increase the costs of developing the total predicted oil and gas wells by \$1.1 billion, compared to Alternative D (No Action). Such development would potentially create a total cost of development of \$13.0 billion over 20 years, or approximately \$650.9 million over one year.

An increase in the total number of potential wells from current management practices would have a long-term, beneficial effect on state and local revenue. Gross state revenue generated as a result of development costs is estimated to be \$473.8 million with the drilling and completion of 6,391 wells under Alternative B. Local revenue is estimated to be \$293.8 million with the completion of all wells under Alternative B. Ad valorem tax revenues for the Alternative B would total \$20,553,456. Sales tax contributions from oil and gas developers and their employees would be greatest under Alternative B because the greatest amount of wells and employees needed to operate these wells would be anticipated under this alternative.

In comparison to Alternative D (No Action), royalties paid to the state and counties from oil and gas sales on federal lands (including mineral lease revenue and severance taxes) would increase in proportion to the increase in production, which would be a long-term, beneficial effect on economics in the region. Royalty and tax revenue paid to the state and local governments resulting from oil and gas development would increase by 8.3% compared to Alternative D (No Action).

Annual recovery value for 6,391 wells under Alternative B would be \$1.166 billion, of this 45% or \$524.8 million would be royalty revenue for the federal government and 40% or \$466.5 million in royalty revenue would be distributed back to the counties. Federal and local royalty revenues would be greatest under Alternative B, thus having the most substantial beneficial impact on effected economies when compared to the other alternatives.

An increased number of wells could have a long-term direct adverse impact on the tourism sector of the economy by reducing contiguous areas available for outdoor recreation, and affecting the quality of recreational experiences from visual intrusion and fragmented areas and trails. Tourism generates tax revenue that is used to support the local community, which would decrease if visitation decreases. Reducing outdoor recreation opportunity and quality could also effect employment in this sector.

4.14.3.2.4. ALTERNATIVE C

Alternative C would open 1,914,000 acres in the Standard Stipulations, Timing and Controlled Surface Use, and No Surface Occupancy categories for CBNG and oil and gas development. The total number of predicted wells under Alternative C would be 6,225. Of the 6,225 total predicted wells, 1,979 would be oil, 4,130 would be gas, and 116 would be CBNG.

Assuming that the drilling and completion of one well would create 3.74 jobs, under Alternative C, there would be 23,277 jobs resulting from 6,225 wells, or 1,163 jobs annually if distributed evenly over 20 years (assuming that all 6,225 wells were in operation at the same time). Increases in the number of potential wells under Alternative C would have a long-term direct beneficial effect on jobs compared to Alternative D (No Action), as Alternative C would potentially increase the jobs in this industry by approximately 1,376 over 20 years, and approximately 68 jobs in one year. However, increasing jobs in this sector may increase the region's dependency on this industry, which consequently increases the risk of economic downturn due to a bust cycle in oil and gas development.

With an annual estimated wage income at \$158,412 per well, Alternative C would result in \$986 million dollars in wage income over the life of the plan or approximately \$49.3 million annually.

Minerals decisions under Alternative C would increase the costs of developing the total predicted oil and gas wells by \$0.8 billion, compared to Alternative D (No Action). Such development would potentially create a total cost of development of \$12.7 billion over 20 years, or approximately \$633.7 million over one year.

An increase in the total number of potential wells from current management practices would have a long-term, beneficial effect on state and local revenue. Gross state revenue generated as a result of development costs is estimated to be \$461.5 million with the drilling and completion of 6,225 wells under Alternative C. Local revenue is estimated to be \$286.2 million with the completion of all wells under Alternative C. Ad valorem tax revenues for the Alternative C would total \$20,016,384. Sales tax contributions from oil and gas developers and their employees would be slightly than Alternatives A and B because the total amount of predicted wells is 117 less than Proposed RMP and 166 less than Alternative B. With 369 more wells proposed than Alternative D (No Action), sales tax revenues would be greater under Alternative C.

In comparison to Alternative D (No Action), royalties paid to the state and counties from oil and gas sales on federal lands (including mineral lease revenue and severance taxes) would increase in proportion to the increase in production, which would be a long-term, beneficial effect on

economics in the region. Royalty and tax revenue paid to the state and local governments resulting from oil and gas development would increase by 5.9% compared to Alternative D (No Action).

Annual recovery value for 6,225 wells under the Proposed RMP is \$1.136 billion, of this 45% or \$511.2 million would be royalty revenue for the federal government and 40% or \$454.4 million in royalty revenue would be distributed back to the counties. The overall contributions from royalty revenues under Alternative C would be greater than Alternative D (No Action), but slightly less than Alternatives A and B.

4.14.3.2.5. ALTERNATIVE D (NO ACTION)

Alternative D (No Action) would open 1,725,500 acres in the Standard Stipulations, Timing and Controlled Surface Use, and No Surface Occupancy categories for CBNG and oil and gas development.¹⁷ A total of 5,856 wells is predicted under this alternative. The total number of newly created jobs would be approximately 19,910 over 20 years, or 995 if distributed evenly over a 20-year period (assuming that all 5,856 wells were in operation at the same time). With an annual estimated wage income at \$158,412 per well, Alternative D (No Action) would result in \$927.6 million dollars in wage income over the life of the plan or approximately \$46.4 million annually.

Of the 5,856 total predicted wells, 1,858 would be oil, 3,886 would be gas, and 112 would be CBNG. Total development costs under Alternative D (No Action) would be \$11.9 billion over a 20-year period, or approximately \$596.1 million over one year. Gross state revenue from oil and gas development costs would be estimated to be \$434.1 million with the drilling and completion of the 5,856 wells predicted under Alternative D (No Action), and local revenue is estimated to be \$269.2 million. Ad valorem tax revenues for the Alternative D (No Action) would total \$18,832,896. Sales tax contributions from oil and gas developers and their employees would be substantially less under Alternative D (No Action), compared to Alternative B (maximum amount of wells) , because 535 less wells would require fewer employees and overall development costs within the planning area.

Annual recovery value for 5,856 wells under Alternative D (No Action) is \$1.068 billion, of this 45% or \$480.9 million would be royalty revenue for the federal government and 40% or \$427.4 million in royalty revenue would be distributed back to the counties. This alternative would generate the least amount of royalty revenues compared to all of the alternatives. Under Alternative D (No Action), royalties paid to the state and counties from oil and gas sales on federal lands (including mineral lease revenue and severance taxes) would be the least of the five alternatives (this is because the Hill Creek Extension [188,500 acres] is not included in the total acreage calculations of Alternative D, No Action).

4.14.3.2.6. ALTERNATIVE E

Alternative E would open 1,914,000 acres in the Standard Stipulations, Timing and Controlled Surface Use, and No Surface Occupancy categories for CBNG and oil and gas development. The total number of predicted wells under Alternative E would be 6,118. Of the 6,118 total predicted wells, 1,957 would be oil, 4,037 would be gas, and 114 would be CBNG.

Assuming that the drilling and completion of one well would create 3.74 jobs; under Alternative E, there would be 22,881 jobs resulting from 6,118 wells, or 1,144 jobs annually if distributed evenly over 20 years (assuming that all 6,118 wells were in operation at the same time). Increases in the number of potential wells under Alternative E would have a long-term direct beneficial effect on jobs compared to Alternative D (No Action), as Alternative E would potentially increase the jobs in this industry by approximately 979 over 20 years, and approximately 49 jobs in one year. However, increasing jobs in this sector may increase the region's dependency on this industry, which consequently increases the risk of economic downturn due to a bust cycle in oil and gas development.

With an annual estimated wage income at \$158,412 per well, Alternative E would result in \$969.1 million dollars in wage income over the life of the plan or approximately \$48.4 million annually.

Minerals decisions under Alternative E would increase the costs of developing the total predicted oil and gas wells by \$0.6 billion, compared to Alternative D (No Action). Such development would potentially create a total cost of development of \$12.5 billion over 20 years, or approximately \$623 million over one year.

An increase in the total number of potential wells from current management practices would have a long-term, beneficial effect on state and local revenue. Gross state revenue generated as a result of development costs is estimated to be \$453.6 million with the drilling and completion of 6,118 wells under Alternative E. Local revenue is estimated to be \$281.3 million with the completion of all wells under Alternative E. Ad valorem tax revenues for the Alternative E would total \$19,675,488. Sales tax contributions from oil and gas developers and their employees would be slightly less than Alternative C because the total amount of predicted wells is 106 less than Alternative C. With 262 more wells proposed than Alternative D (No Action), sales tax revenues would be greater under Alternative E.

In comparison to Alternative D (No Action), royalties paid to the state and counties from oil and gas sales on federal lands (including mineral lease revenue and severance taxes) would increase in proportion to the increase in production, which would be a long-term, beneficial effect on economics in the region. Royalty and tax revenue paid to the state and local governments resulting from oil and gas development would increase by 4.5% compared to Alternative (No Action).

Annual recovery value for 6,118 wells under Alternative E is \$1.116 billion, of this 45% or \$502.4 million would be royalty revenue for the federal government and 40% or \$446.6 million in royalty revenue would be distributed back to the counties. The overall contributions from

royalty revenues under Alternative E would be greater than Alternative D (No Action), but slightly less than Alternative C.

An additional potential impact to state revenues is the potential loss to SITLA from not being able to lease or develop lands bordered all or in part by non-WSA lands with wilderness characteristics. The value of these lands for oil and gas leasing and/or development may be reduced if all or portions of public lands bordering these state lands are closed to new oil and gas leasing. This in turn could reduce the monies collected by the state (through SITLA), including royalties and severance taxes. These impacts can be estimated using current data, and incorporating several assumptions. If one assumes that SITLA lands whose perimeter is more than 50% bounded by BLM acreage closed to new oil and gas leasing, as a result of implementing Alternative E, would be unavailable for development, and using the projections of the RFD, one can project that over twenty-four wells (24.49) would not be drilled over the life of the plan. Using data provided by the State of Utah, royalty payments to wells on SITLA lands averaged \$57,065 as of early 2008. Severance taxes averaged \$9,335 for all wells, regardless of land ownership. Multiplying these figures by the wells assumed that would not be drilled, the fiscal loss to the state would total \$1,425,379 in royalties and \$233,171 in severance taxes in any year in which all 24.49 wells would have been in operation. This amount could increase over the life of the plan, as it is likely that some fraction of these wells would be in operation in several (or even all) years of the plan.

The following table summarizes the effects of oil and gas development on the regional economy.

Table 4.14.3. Summary of the Impacts of Oil and Gas Development in the VPA

	Proposed RMP	Alternative A	Alternative B	Alternative C	Alternative D (No Action)*	Alternative E
Predicted Wells						
Total Acreage	1,916,936	1,914,000	1,914,000	1,914,000	1,725,500	1,914,000
Acreage Open	1,727,194	1,850,162	1,861,450	1,685,754	1,672,960	1,358,454
% of Total Acreage Open	90%	96%	97%	88%	97%	71%
Total Well Potential	6,342	6,342	6,391	6,224	5,856	6,118
Jobs (Based on 3.74 jobs per Well)						
Total Jobs over 20 Years	23,719	23,719	23,902	23,277	19,910	22,881
Jobs per Year (if distributed evenly over 20 years)	1,185	1,185	1,195	1,163	995	1,144
Annual Wage Income (Based on \$158,412)						
Total Income Over 20 Years	1.00 billion	1.00 billion	1.01 billion	986.0 million	969.1 million	969.1

Table 4.14.3. Summary of the Impacts of Oil and Gas Development in the VPA

	Proposed RMP	Alternative A	Alternative B	Alternative C	Alternative D (No Action)*	Alternative E
Total Income Per Year (if distributed evenly over 20 years; millions of dollars)	50.2	50.2	50.6	49.3	46.4	48.4
Development Costs (Based on Average \$2,035,891 Development Cost per Well)**						
Development Cost over 20 Years (billions of dollars)	12.9	12.9	13.0	12.7	11.9	12.5
Development Cost per Year (if distributed evenly over 20 years; millions of dollars)	645.6	645.6	650.6	633.7	596.1	623
Ad Valorem Tax Revenue						
Total Ad Valorem Tax per well over 20 years (millions of dollars)	20.4	20.4	20.5	20.0	18.8	19.6
Total Recovery Value Annually***						
Recovery Value based on wells per alternative and the Proposed RMP (billions)	1.157	1.157	1.166	1.136	1.068	1.116
Gross Annual Royalty Revenue ***						
Federal Revenue (millions of dollars)	520.8	520.8	524.8	511.2	480.9	502.4
County Revenue (millions of dollars)	462.9	462.9	466.5	454.4	427.4	446.6

*The Hill Creek Extension (188,500 acres) was not leased in the Book Cliffs RMP and therefore is not included in the total acreage calculations of Alternative D (No Action).

** Development costs do include a portion of the income effects from employment, as such this leads to some double-counting

***Assuming wells are producing at maximum production.

Data for development costs, ad valorem taxes, and projected gross revenue from UEO 2004 Final Report.

4.14.3.3. IMPACTS OF MINERALS DEVELOPMENT ON SOCIAL CONDITIONS

Social well-being in communities is often disrupted during boom periods, characterized by extreme growth rates that can double population in a decade or less. Studies in natural resource driven communities—including in Utah—have found that disruptive social effects may not last once stability is re-established (Smith et al. 2001). The rapid population growth that can fuel these disruptive social effects, however, has not occurred to date in the planning area. State of Utah population estimates put the overall population growth for the three counties comprising the planning area at approximately 10% from 2000–2006. Conversely, the State of Utah as a whole grew 14.1% in the same period, a rate of growth 40% higher than the planning area. The rate of population growth in the planning area may be understated, as it does not include transient workers. Even if all employees in the minerals industry in Uinta Basin were transient (an unlikely scenario), population growth would still not approach the levels cited in the Smith et al study.

Another negative social impact often mentioned as a consequence of a boom environment is an increase in crime, presumably due to a more transient workforce which may not share many local values. This, however, has not occurred within the planning area. Table 4.14.4 shows crime indices as reported by the State of Utah for the State as a whole and for Uintah County and Vernal City, areas which presumably feel most of the impact from any increase in crime resulting from a boom in minerals development.

As Table 4.14.4 indicates, Uintah County as a whole has consistently reported lower crime than the State of Utah as a whole. Vernal City reported higher crime rates than both the state and the county up to 1985. Since 2000, however, Vernal City's reported crime rate has been very similar to the State of Utah, and lower from 2003-2005. This data suggests that an increase in crime, although not outside the realm of possibility in the future, has not yet occurred.

Table 4.14.4. Reported Crime Indices for State of Utah, Uintah County and Vernal City, 1980-2005

Year	State	Uintah	Vernal
1980	5,880.6	1,974.6	10,177.2
1985	5,317.3	1,843.4	8,505.8
1990	5,659.9	231.9	9,738.1
1995	6,090.8	2,523.3	8,383.7
2000	4,476.1	1,758.2	4,491.3
2001	4,243.0	1,832.8	5,561.2
2002	4,452.4	1,558.4	5,986.8
2003	6,640.4	1,527.3	5,113.1
2004	9,831.7	2,149.0	7,682.7
2005	6,054.9	2,070.5	3,984.4

Data sources:
<http://www.justice.utah.gov/Research/Crime/CrimeRate.pdf>;
<http://bci.utah.gov/Stats/StatsHome.html>

A major factor that could alleviate or even mask a decline in social well-being is the recognition that the area has come to depend more on oil and gas development over the recent past. The Smith et al study concludes that even communities which suffer social disruptions due to minerals booms tend to recover quickly once the boom has ended.

4.14.3.4. IMPACTS OF NON-WSA LANDS WITH WILDERNESS CHARACTERISTICS DECISIONS ON SOCIOECONOMICS

4.14.3.4.1. PROPOSED RMP

Under the Proposed RMP, 106,178 acres lands would be managed for the protection of non-WSA lands with wilderness characteristics. Managing the 106,178 acres (15 areas) to maintain their wilderness characteristics could have potential beneficial *or* adverse impacts on socioeconomics depending on the resource impacted. Impacts to resources as a result of management prescriptions for non-WSA lands with wilderness characteristics not listed in the sections below are anticipated to have negligible impacts to socioeconomics.

4.14.3.4.1.1. Livestock Grazing

Under the Proposed RMP livestock grazing would not be permitted in Desolation Canyon non-WSA lands with wilderness characteristics. The absence of grazing would likely improve riparian conditions and watershed values over time. Improving the natural condition of the area would sustain the setting necessary to support wilderness-related recreation opportunities (e.g., hiking, backpacking, river floating, hunting, and wildlife viewing). Improving the recreation opportunities (and overall quality of the visitor experience) within the Nine Mile area could lead to an increase in tourism and subsequent tourist related spending in the surrounding communities, thus having a beneficial impact on the local economies.

Because the amount of AUMs area identical under Alternative D (No Action) and the Proposed RMP, regardless of the designation of non-WSA lands with wilderness characteristics, adverse impacts to the ranching community would not be likely.

4.14.3.4.1.2. Minerals

All or parts (between 70% and 100%) of 13 non-WSA lands with wilderness characteristics, totaling up to 162,844 acres, would lose their natural characteristics and opportunities for solitude and primitive recreation due to surface disturbance and the presence and noise of people and equipment during exploration for and development of oil and gas resources in the VPA. See Section 4.10.2.5.1.1 for which areas would be impacted. Given the existing leases in the area, resource potential, and past production it is likely that all of these areas would lose their wilderness potential. This could have an adverse effect on visitors to the area who are seeking opportunities for solitude and primitive recreation activities.

Under the Proposed RMP 106,178 acres (15 areas) of lands non-WSA lands with wilderness characteristics would be managed to maintain their primitive nature. As such, these areas would

be closed to future mineral leasing and minerals disposal. Because the desired location of future oil and gas wells is not known, it is not possible to quantify the amount of wells and subsequent revenue that would not be generated as a result of the closure. However, with a total of 1,640,569 acres open to mineral development under the Proposed RMP only 6% would be closed to development as a result of the non-WSA lands with wilderness characteristics management restrictions. The loss of revenue based on a 6% decrease in the number of wells drilled over the life of the RMP would likely be negligible to the local economies.

4.14.3.4.1.3. Lands and Realty

Under the Proposed RMP, non-WSA lands with wilderness characteristics managed to protect their wilderness characteristics would be managed as ROW avoidance areas. Avoidance from future ROW development for pipelines and power lines would prevent surface disturbance and the placement of human-made structures on the land and protect the natural characteristics of the landscape. The protection and enhancement of opportunities to participate in unconfined and primitive recreation would likely contribute to a positive visitor experience, should the visitor be seeking these types of opportunities.

Section 4.9.2 states that lands and realty decisions would have minor to negligible impacts on mineral development (a potential revenue-generating resource for the VPA) regardless of alternative selected. Consequently, an adverse impact to socioeconomics from the management of non-WSA lands with wilderness characteristics is not anticipated.

4.14.3.4.1.4. Recreation

Under the Proposed RMP, 106,178 acres of non-WSA lands with wilderness characteristics would shift the focus of recreation to primitive and unconfined activities (e.g., hiking, backpacking, river floating, hunting, and wildlife viewing), opportunities for solitude, and the settings needed to achieve these opportunities. Coupled with the lands managed for their wilderness characteristics, SRMAs would generally retain the natural characteristics of the landscape, allowing minor development consistent with VRM Class II objectives. Retaining a natural setting would support opportunities for solitude and primitive forms of recreation. The long-term management of lands to retain their natural characteristics would likely have beneficial impacts on visitor experience, tourist-related revenues to local communities, and increase the likelihood that visitors would return to the area for a similar experience. See Section 4.12.2.6.1 for details on recreation management decisions.

Proposed management stipulations for non-WSA lands with wilderness characteristics would limit OHV use to designated routes, which would adversely reduce the recreational opportunities for motorized and mechanized recreation within these areas. Visitors to the area seeking motorized experiences would have fewer opportunities for these types of experiences as 75,845 acres would be closed to OHV use. However, with 6,202 acres designated as "open" for cross-country travel and 1,643,475 designated as "limited" to OHV travel, less than 4% of the VPA would be closed to OHV travel as a result of the non-WSA lands with wilderness characteristics management practices.

Managing lands for wilderness characteristics may have some positive economic benefits to the local economy, above and beyond recreation benefits to individual users of these areas. There is an extensive body of literature which argues that protecting lands as wilderness provides local, regional and national economic benefits. A paper prepared by the United State Forest Service (Bowker et al. 2005) summarizes some of the more relevant research on this topic. For example, some research suggests that private property located next to or near protected lands increases in value due to this proximity. Other research suggests that areas with protected lands are more likely to attract higher income individuals, as well as businesses, who value the types of recreation activities provided in protected areas. Still other research argues that certain types of high-dollar recreation, such as hunting, are enhanced by wilderness protection. Whereas most of these studies have focused on the benefits accruing to designated wilderness, it is possible that the same arguments may be applicable to non-WSA lands with wilderness characteristics.

4.14.3.4.2. ALTERNATIVES A- D

In these alternatives, it is not proposed to protect wilderness characteristics outside of designated WSAs. There would be a beneficial impact to socioeconomics by allowing a greater area to be developed for oil and gas and other resource extractions. This benefit would be somewhat offset by loss of recreational opportunities and the resulting economic benefits.

4.14.3.4.2.1. Alternative E

The impacts to socioeconomics from management of lands to maintain the wilderness characteristics of the non-WSA lands with wilderness characteristics would be the same as those described for the Proposed RMP, but it would affect more acres, including all of the non-WSA lands with wilderness characteristics. Under Alternative E, all 25 non-WSA lands with wilderness characteristics, totaling 277,596 acres would be managed to maintain their wilderness characteristics. See Section 4.01.2.14.3 for management prescription details.

Protecting wilderness characteristics limits activities that would impair them. Specifically, mineral development and extraction would be limited as a result of protecting wilderness characteristics. Oil and gas development would be limited to that which could be accomplished with no surface occupancy (i.e., directional drilling). The areas would also be closed to mineral material disposal, although locatable mineral entry and development would still be allowed.

Protection of wilderness characteristics would have minor to substantial, negative impacts upon extraction and development, as they would exclude lands from minerals development and lower the number of locations where potential wells could be drilled. The lower number of locations could indirectly lead to a lower yield and commercial supply of oil and natural gas and fewer royalties paid to the federal government and/or the State of Utah. An approximate monetary impact would be difficult to speculate because desired future locations of development in proposed non-WSA lands with wilderness characteristics is unknown. However, with a total 1,499,491 acres open for mineral development under Alternative E, 15% of the land in the VPA would be closed to mineral development. In general, and with specific regard to management of lands for wilderness characteristics, Alternative E would have the greatest potential for a

decrease in federal, state, and local revenues compared to the other Action Alternatives and the Proposed RMP.

4.14.3.5. EFFECT OF PALEONTOLOGY ON SOCIOECONOMICS

Management actions for paleontological resources would have negligible impacts on socioeconomic resources because the recreational and scientific collection of fossils, as well as the protection of these resources would be similar to current conditions and are the same for the Proposed RMP and across all alternatives. Personal collection of invertebrate and plant fossils would be allowed throughout the VPA. The recreational collection of vertebrate fossils, as well as of noteworthy invertebrate and plant fossils, is already prohibited within the VPA. Therefore, the recreational collection of fossils from BLM-administered lands would have minimal impacts on the local economy. The economic contributions, including sales and hotel tax revenue, from scientific collection would also be negligible under the Proposed RMP and all alternatives.

Additional information on fossils and collecting rules would be provided to the public through websites, publications, and personal contacts would occur under the Proposed RMP and all alternatives. Educational information regarding the paleontological resources could attract tourists to the local area.

Areas found rare and significant invertebrate and plant fossils would be closed to hobby collection under the Proposed RMP and all alternatives. This management decision could adversely impact those hobbyists currently allowed to pursue such collection.

4.14.3.6. IMPACTS OF RECREATION ON SOCIOECONOMICS

The relationship between changes in decisions pertaining to recreation use and the economic impacts associated with those changes is difficult to quantify. In this analysis, assumptions regarding this relationship include:

- Increasing recreation opportunities could positively affect visitation, which in turn could affect traveler spending at local businesses and overall spending in the region.
- Improving the recreation experience would have a beneficial effect on the social aspects of recreation and potentially increase visitation.
- From a social perspective, improving the quality of the recreation experience could also improve quality-of-life factors for local residents by providing greater recreational opportunity.
- A portion of the tourism related tax dollars, such as transient room tax and restaurant tax, comes from oil and gas development related services (lodging, food, and other services for mining sector employees). Although it is nearly impossible to extract whether a tourist dollar was generated from a tourist or a temporary mining employee, both are beneficial to the retail and service sectors of the local economy. A decrease in temporary oil and gas-related jobs may lead to a decrease in "tourism-related" revenue for the county. On the other hand, a decrease in oil and gas-related jobs could lead to an increase in actual tourism-related revenue.

- Special Recreation Management Areas (SRMAs) are also intended to reduce user conflict as the BLM manages them more broadly for a specific recreational experience in comparison to focus areas. Each SRMA has been previously identified as an area where recreation impacts or management concerns occur. SRMAs would still allow for other recreational uses within their boundaries but emphasize particular recreation opportunities that lie within the SRMA. See Section 4.12.2.6.1.2 for the focus of each SRMA.

4.14.3.6.1. PROPOSED RMP

Recreation decisions under the Proposed RMP would have long-term, indirect, beneficial effects to socioeconomics, as they would establish new recreational activities, expand and improve current recreational facilities, and limit other uses above and beyond recreation decisions under Alternative D (No Action). The effects would potentially include increased visitation, which would translate into an increase in overall tourist spending in surrounding communities.

The Proposed RMP is most likely to provide an increase in the demand for a range of recreation/tourism-associated goods and services and the number of jobs related to the tourism industry when compared to the all alternatives. Long-term, indirect beneficial effects to local residents would also occur: local residents would have the opportunity to enjoy a larger number of recreational sites, and they would have a higher quality recreational experience in those recreational areas.

4.14.3.6.1.1. Backcountry Byways

Under the Proposed RMP three existing roads would be proposed as backcountry byways. Seep Ridge, Book Cliff Divide, and Atachee Ridge would provide opportunities for backcountry sightseeing, scenic driving, and educational interpretation of the area. Expanding the range of recreation and educational opportunities for visitors to the area would likely contribute to an increase in positive visitor experience. A positive recreational experience could contribute to an increase in the amount of recreationists to the area, potential return visitors, and increases in tourism-related spending in the local communities. Thus, the designation of Backcountry Byways under the Proposed RMP could have beneficial impacts to the social and economic conditions.

4.14.3.6.1.2. SRMAs

The Proposed RMP would beneficially increase the combined acreage of SRMAs from 87,931 acres under current management to 133,560 acres. Each of the SRMAs would manage for the type and range of recreational activities and opportunities that lie within a given SRMA. Under the Proposed RMP seven SRMAs would be designated and a range of opportunities would be emphasized within the SRMAs. For example, the Blue Mountain SRMA (42,729 acres) would be managed with an emphasis on OHV use, special recreation activities, and competitive events. Fantasy Canyon (69 acres) would be managed to emphasize self-guided touring and hiking. See Section 4.12.2.6.1.2 for details on SRMAs management emphases. SRMAs in the VPA would emphasize recreation opportunities for a range of user groups. Because it is assumed that the SRMAs are managed to reduce user conflict, it is likely that the diverse range of recreationists

would have positive visitor experiences. The positive experiences could lead to an increase in tourism over the area in the short and long-term and therefore increased spending in the local communities. Also, local outfitters specializing to recreation activities could benefit from the designation of SRMAs as their services would be needed to serve the recreational visitor.

4.14.3.6.1.3. Non-WSA Lands with Wilderness Characteristics

The Proposed RMP would manage 15 areas totaling 106,178 acres to ensure their wilderness characteristics. The protection of these areas provides opportunities for primitive and unconfined recreation. These additional opportunities may produce both social benefits for the recreationists who desire such opportunities. An increase in recreationists seeking this type of experience or return recreationists to the area could have positive economic impacts on local economies with regard to tourist-generated sales and tax revenues. Local recreation outfitters may also benefit from recreationists seeking guided excursions in the 15 areas.

Conversely, those recreationists enjoying unlimited motorized access may suffer negative social impacts as they would not be able to recreate in the 15 areas with wilderness characteristics. This could have an adverse impact on local sales and tax revenues generated from tourists visiting the planning area.

4.14.3.6.1.4. Trails

Up to 400 miles of non-motorized trails used for hiking, horseback riding, and mountain biking would be signed, improved or developed under the Proposed RMP, compared to 50 miles under Alternative D (No Action). With a substantial increase in trails, compared to Alternative D (No Action), those seeking hiking, and/or riding opportunities would have numerous opportunities for recreation. Drawing more hiker, bikers, and horseback riders to the area could have positive impact on the local economy as more recreation-related spending would take place.

Under the Proposed RMP, up to 800 miles of motorized routes would be signed, improved, and/or developed. In contrast, Alternative D (No Action) does not specify the development of any new motorized trails and the Red Mountain Trail is currently the only designated motorized trail. The additional number of trail miles would reduce the density of OHV users, increase user safety, and reduce user conflicts. The designation would also alleviate strains on trails currently used for a variety of recreational activities and would potentially reduce overland OHV use. It is anticipated that the overall reduction on user conflicts and increased trail-riding opportunities for OHV users would lead to improved visitor experiences for OHV users as well as those individuals who choose non-motorized travel on existing trails. Positive visitor experiences for all groups could lead to an increase in tourist-related revenues for the local communities.

4.14.3.6.2. ALTERNATIVE A

Many recreation decisions under Alternative A closely resemble the recreational opportunities provided in the Proposed RMP. The amount of Backcountry Byways, trails, and cabins proposed under Alternative A are identical to the Proposed RMP, therefore impacts to socioeconomics would be identical.

Under Alternative A 499,588 acres would be designated as SRMAs. This is a 568% increase from Alternative D (No Action). The increase of 411,660 SRMA-managed acres within the VPA would be the result of expand the existing Browns Park and Nine Mile SRMAs by 71,233 acres (the 24,259-acre Red Mountain-Dry Fork SRMA would remain the same size), with the remaining acreage encompassing the proposed White River, Blue Mountain and Book Cliffs SRMAs. Special Recreation Management Area-designated acreage would comprise 29% of the 1,725,512 acres of BLM administered lands within the VPA. Each of the 6 SRMAs would be managed for range of recreational opportunities and activities. See Section 4.12.2.6 for recreation emphasis per SRMA.

In comparison to Alternative D (No Action), this alternative would have more beneficial impacts on recreational opportunities because more area would be managed under SRMAs to protect recreation resources and provide opportunities for a range of recreational activities. In addition, user conflict would likely be substantially reduced when compared to Alternative D (No Action). The reduction in user conflict would result in increases in visitor satisfaction. Increases in visitor satisfaction could lead to an increase in tourists seeking a specific recreation experiences and repeat visitors to the area. Tourist-related business and a range of recreation outfitters could experience long-term beneficial impacts under Alternative A.

4.14.3.6.3. ALTERNATIVE B

Recreation decisions under Alternative B closely match the recreational opportunities provided in Alternative D (No Action), the current trend in the economics associated with tourism would continue (described below under Alternative D). However, Alternative B would establish Backcountry Byways similar to the Proposed RMP. Alternative B would provide slightly fewer opportunities for recreation than the Proposed RMP, therefore having slightly less beneficial long-term direct and indirect social and economic impacts. Identical to Alternative D (No Action), four SRMAs would continue to be managed for their cultural, scenic, cultural, wildlife and/or recreational values. Alternative B, similar to Alternative D (No Action), would provide less of a demand for recreation/tourism associated goods and services in the local economies, compared to the Proposed RMP. Local residents would have less of an opportunity to enjoy the increased recreational sites and thus, possibly providing a lesser-quality recreational experience to the Proposed RMP.

Under Alternative B 400 miles of non-motorized trails would not be developed under this alternative. This could lead to increases in user conflicts between user groups and a decrease in visitor satisfaction which could, in turn, adversely impact tourist-spending at the local level.

4.14.3.6.4. ALTERNATIVE C

Recreation decisions under Alternative C are similar to the Proposed RMP and would have similar long-term, beneficial effects to socioeconomics. However, under Alternative C Backcountry Byways would not be designated, thus adversely limiting recreational scenic driving in the VPA. Alternative C would provide more potential for increased, tourism-related visitation and contribution to the economic conditions of the region than Alternatives B and D, but less than the Proposed RMP.

4.14.3.6.5. ALTERNATIVE D (NO ACTION)

The long-term direct effects of Alternative D (No Action) would be the continuation of current visitation patterns and trends and a continuation of the existing contribution of tourism to the local economy. Current recreation opportunities in the three counties support over 2.5 million visitors annually (based on regional visitation counts), total traveler spending of \$99.5 million annually, and a total tax benefit to the three counties of approximately \$2.08 million per year. A total of 2,580 jobs are attributable to the recreation/tourism sector within the three counties (Utah Department of Travel Development 2004).

Given the increase in OHV use in the VPA and across the state, conflicts between user groups would like increase over time. An increase in user conflicts would like result in a degradation of visitor experience. Dissatisfaction with recreation opportunities could lead to adverse long-term impacts to the tourism-based revenues generated in local communities.

4.14.3.6.6. ALTERNATIVE E

With 277,596 acres in 25 areas of non-WSA lands with wilderness characteristics to be managed to protect wilderness characteristics, Alternative E would provide the greatest amount of opportunities for primitive and unconfined recreation. These recreation opportunities would have the potential to produce the greatest amount of social benefits to those seeking solitude and quiet travel. In addition, under Alternative E local outfitters and local economies could benefit from recreation patrons visiting the planning area.

On the other hand, those enjoying unlimited motorized access would be most adversely impacted under Alternative E. The inability to access an additional 277,596 acres may negatively impact their recreation experience and discourage visitation to the area. Potential sales and tax revenues from motorized users in local communities could decrease under Alternative E.

Eight SRMAs focusing on a range of recreational opportunities would be designated under Alternative E. However, with an emphasis on 277,596 acres of non-WSA lands with wilderness characteristics the focus would shift to recreation to primitive and unconfined activities (e.g., hiking, backpacking, river floating, hunting, and wildlife viewing), opportunities for solitude, and the settings needed to achieve these opportunities.

Similar to the Proposed RMP, 400 miles of non-motorized trails would be signed, improved or developed. Providing additional opportunities for hiking, biking, and horseback riding would accommodate demand and reduce user densities on current trails. Increasing trail-usage opportunities has the potential to increase tourism-related spending by drawing additional and repeat trail-users to communities in or near the VPA.

Under Alternative E, no motorized trails would be improved or developed. The lack of trails produced under this alternative could lead in increases in user conflicts on existing trails, potentially decreasing visitor safety and satisfaction.

4.14.3.7. IMPACTS OF SPECIAL DESIGNATIONS ON SOCIOECONOMICS**4.14.3.7.1. PROPOSED RMP AND ALTERNATIVES A–E****4.14.3.7.1.1. ACECs**

Protecting the specific, identified relevance and importance values of ACECs limits activities that are considered incompatible with specific values and resources of concern. Specifically, mineral development and extraction would be limited as a result of ACEC designations. It is important to note the ACEC designation does not completely restrict development. Standard stipulations, and controlled surface use is permitted in areas that do not compromise the values or resources of concern. Mineral development with no surface occupancy (i.e., directional drilling) is also permitted within ACECs. Table 4.14.4 shows the number of acres under NSO and Closed leasing categories within the proposed ACECs for the Proposed RMP and each alternative.

The designations of ACECs would have minor to substantial, negative impacts upon minerals resource extraction and development. The designation would exclude lands from minerals development and lower the number of locations where potential wells could be drilled, especially under Alternatives C and E which would designate 681,310 acres. Alternative A proposes 345,400 acres designated as ACECs. The Proposed RMP would have the least amount of acres(131,700) designated as ACECs and therefore greatest potential of minerals development.

The lower number of locations could indirectly lead to a lower yield and commercial supply of oil and natural gas and fewer royalties paid to the federal government and/or the State of Utah. An approximate monetary impact would be difficult to estimate because desired future locations of development in proposed ACECs sites are unknown.

Table 4.14.5. Minerals Leasing Restrictions Acreages within Proposed ACECs, for the Proposed RMP and each Alternative

	Proposed RMP	Alternative A	Alternative B	Alternative C	Alternative D (No Action)	Alternative E
Total	83,539	83,539	23,390	257,006	47,167	261,602

Under the Proposed RMP and Alternatives A–D OHV use would be allowed in ACECs on designated routes. Alternative E would close OHV use in those portions of ACECs in which wilderness characteristics would be protected. Allowing OHV access within ACEC designations would be beneficial in the long-term for socioeconomics because opportunities would remain available for recreational access. Revenue generated in local communities by OHV users would be similar to current conditions.

When compared to Alternatives A–E, visitors to the area seeking opportunities for primitive travel and solitude would have fewest opportunities under the Proposed RMP. Fewer opportunities for primitive travel may mean visitors would choose not to visit the area and patronize local businesses. Local outfitters who specialize in backcountry, non-motorized travel

could be adversely impacted with the designation of fewer ACECs. See Section 4.16.1 for areas and acres of ACECs designated by the Proposed RMP and all alternatives.

4.14.3.7.1.2. Wild and Scenic River Designation

The Proposed RMP recommends 52 river miles of Wild and Scenic River (WSR) designations. Alternative B and D also recommend 52 miles to be designated as WSR. Alternative A recommends 86 total river miles and Alternatives C and E recommends 216 river miles be designated as WSRs. See Section 4.16.2 for locations of proposed WSR designations.

Management prescriptions for mineral activities in riparian and floodplains within WSR designations do not allow surface occupancy. Therefore, Alternative E would most adversely impact mineral resource extraction and development, as it proposes the greatest amount of river miles as WSR and lower number of locations where wells could be drilled. This lower number of locations could potentially lead to a lower yield of oil and natural gas and fewer royalties paid to the federal government and/or the State of Utah.

The designation of WSRs under the Proposed RMP and all alternatives could potentially lead to an increase in tourism revenue to the BLM and local communities, thus having long-term beneficial impact on the local economies. The designation of rivers and/or river segments could attract more people to the area who enjoy the type of recreation that often accompanies these designations (including high scenic qualities and opportunities for solitude). The increase in tourism based on river recreation could lead to increased revenue to local river running companies, increased permit revenue, and increase in tourist dollars spent within nearby communities. Alternatives A, C, and E would have the greatest potential to increase tourism revenue for river-based recreation based on the amount of river miles determined suitable for WSR designation.

Under the Proposed RMP and Alternatives A, B, C, and E all eligible river segments would be in a limited or closed OHV category, with most of the segments limited. River corridors would largely be protected from disturbance related to OHV activity. Under Alternative D (No Action) river corridors remain in an open category for OHV use, which could exacerbate user conflicts and decrease wilderness experience for river runners and other who prefer non-motorized recreation along river corridors. Alternative D would provide OHV users with the greatest amount of access to river corridors.

4.14.3.8. IMPACTS OF TRAVEL DECISIONS ON SOCIOECONOMICS

4.14.3.8.1. PROPOSED RMP

Under the Proposed RMP, areas within the VPA designated as Open to OHV cross-country travel would be limited to approximately 6,202 acres (a decrease of approximately 781,657 acres when compared to Alternative D, No Action). The impacts of limiting the number of open-designated acres would be long-term direct and indirect, adverse and beneficial on recreation. Long-term direct adverse effects would include the reduction in opportunities for OHV cross-country recreation-related travel. However, this loss would be offset by the 800 miles of trails

proposed for OHV use in the Proposed RMP. The decrease in acres designated as "open" leads to fewer opportunities for OHV travel, as such these recreationists may reduce their visitation to the area.

Areas designated as Limited to Designated Routes for OHV travel would be increased to 1,643,475 acres (an increase of 756,200 acres compared to current management in Alternative D, No Action), which would have direct long-term beneficial impacts on recreation by increasing the level of OHV management within the VPA. This would have direct beneficial impacts on recreation by reducing recreational resource-use conflicts. Under the Proposed RMP, OHV travel limited to designated routes would include the 106,178 acres of non-WSA lands with wilderness characteristics. Reducing user conflicts will likely result in more positive visitor experiences in the long and short-term.

Designating areas as Closed to OHV travel would be increased from 50,388 acres (under Alternative D) to 75,845 acres (an increase of 25,457 acres) and the miles of designated routes would increase from zero miles under existing conditions (Alternative D, No Action) to 4,860 miles. This increase in designated closed OHV routes would have direct long-term beneficial impacts on other non-motorized recreational opportunities activities by reducing recreation resource-use conflicts, and by reducing the OHV-related disturbances to soil, water, and wildlife habitat resources. Visitation by recreationists preferring non-motorized travel may increase within the VPA under the Proposed RMP.

4.14.3.8.2. ALTERNATIVE A

Impacts under Alternative A would be identical to the Proposed RMP as the designation of routes and closed areas are the same.

4.14.3.8.3. ALTERNATIVE B

The effects of Alternative B would be similar to those described under the Proposed RMP, for areas open to OHV travel. Areas closed to OHV travel would increase to a total of 60,187 acres (an increase of 9,799 acres compared to Alternative D, No Action). However, it is the least amount of all the action alternatives which would give OHV users the greatest opportunity for OHV travel on designated routes. Alternative B would have long-term beneficial impacts on other recreation resources similar to those described under the Proposed RMP.

4.14.3.8.4. ALTERNATIVE C

Alternative C would be the most restrictive to OHV use and provide the greatest amount of opportunities for non-motorized recreation. Areas closed to OHV travel would be increased from 50,388 acres (under Alternative D, No Action) to 366,559 acres. Areas designated as limited to designated routes for OHV travel would be increased to 1,353,529 acres, allowing for increased use in a more managed setting, and potentially sustaining the existing levels of OHV use.

A decrease in the number of acres available for OHV use would have long-term beneficial impacts on other non-motorized forms of recreation by reducing resource-user conflicts and by

enhancing and/or protecting recreation resources as described under the Proposed RMP. However, those recreationists who enjoy the OHV experience would have fewer opportunities for recreation and may reduce their visitation and patronization to the area.

4.14.3.8.5. ALTERNATIVE D (NO ACTION)

Current management practices designate a total of 787,859 acres as open to cross-country OHV travel, 887,275 acres as limited to designated routes, and 50,388 acres as closed to OHV use. No OHV routes would be designated under this alternative. Travel management under current conditions would be less restrictive to OHV users when compared to the action alternatives, but would maintain the current adverse impacts to natural and cultural resources and to non-motorized users, as discussed above. Continued adverse impacts to non-motorized users, as well as the natural and cultural resources could have long-term adverse impacts to tourism and tourist-related spending the area.

4.14.3.8.6. ALTERNATIVE E

Under Alternative E, 5,434 acres would be open to cross-country OHV travel, the same as under Alternatives B and C and a reduction of 782,425 acres from Alternative D (No Action). Under this alternative, motorized travel would be focused on designated routes, not cross-country. Although the experience of cross-country driving would be limited to 5,434 acres, motorized travel for access and recreation would still be available on 4,654 miles of road and trails.

There are 228 miles of routes that exist in the non-WSA lands with wilderness characteristics. Under this alternative, these routes would be closed to motorized travel, foreclosing the opportunity for backcountry driving, vehicle-supported camping, and other motorized forms of recreation.

OHV users would be most adversely impacted by the travel limitations of Alternative E. Although they may reduce visitation to the area, recreationists who enjoy non-motorized travel may increase visitation to the area over the short and long-term.

4.14.3.9. IMPACTS OF VISUAL RESOURCE MANAGEMENT DECISIONS ON SOCIOECONOMICS

The demand for a range of recreation opportunities would not be limited as a result of VRM (Visual Resource Management) classifications; therefore, impacts to socioeconomics from recreational visitation would be minor under the Proposed RMP and all alternatives. Opportunities for recreation with high levels of scenic quality (VRM Class I and Class II) would remain throughout Wilderness Study Areas (WSAs), Areas of Critical Environmental Concern (ACECs), Special Recreation Management Areas (SRMAs), and along eligible Wild and Scenic river segments. See Section 4.14.3.6 for more details on recreation impacts to socioeconomics.

The proposed designation of VRM Class acreages for the Proposed RMP and each of the alternatives are tabulated below in Table 4.14.6. Alternatives C and E provide the most benefit to tourists to the area who value scenic vistas. These alternatives could lead to a greater potential for increased and repeat tourists to the area who enjoy high levels of scenic quality. The large

amounts of VRM Class I and II could have adverse impacts to local industries that would have to spend more money mitigating for scenic quality disturbances.

Under the Proposed RMP, approximately 106,178 acres of non-WSA lands with wilderness characteristics would be managed under VRM Class II objectives in order to preserve their wilderness characteristics and values, which would have long term, preservation-related, beneficial impacts on scenic quality and visual resources.

Alternatives B and D would provide the least amount of VRM Class I and II acreages. Tourists enjoying high levels of visual quality would be most adversely impacted by these alternatives. Adverse impacts to industries resulting from visual mitigation would be least under these Alternatives.

Under Alternative E, approximately 277,596 acres of non-WSA lands with wilderness characteristics would be managed under VRM Class I objectives in order to preserve their wilderness characteristics and values (see Table 4.19.3). Based on these visual management objectives, Alternative E would provide the highest degree of protection to scenic quality under VRM I and II, followed by Alternative C, then Alternatives A and the Proposed RMP. Alternatives B and Alternative D (No Action) would provide the least protection to scenic quality under combined VRM I and II acreages.

Table 4.14.6. VRM Class Acreages for the Proposed RMP and all Alternatives

VRM Class	Proposed RMP	Alternative A	Alternative B	Alternative C	Alternative D (No Action)	Alternative E
VRM I and	57,776	63,136	52,764	145,781	53,086	334,516
VRM II	231,911	294,773	114,030	362,660	113,686	259,694
VRM III	786,612	716,186	199,179	580,846	199,192	535,586
VRM IV	643,641	645,845	1,353,967	630,653	1,353,976	590,144
Total	1,719,940	1,719,940	1,719,940	1,719,940	1,719,940	1,719,940
VRM I and II	289,687	357,909	166,794	508,441	166,772	594,210
VRM III and IV	1,430,253	1,362,031	1,553,146	1,211,499	1,553,168	1,125,730

4.14.3.10. IMPACTS OF WILD HORSES ON SOCIOECONOMICS

4.14.3.10.1. PROPOSED RMP AND ALTERNATIVE B

No wild horses would be maintained within the VPA under the Proposed RMP and Alternative B. The national constituency for the wild horse and burro program would be adversely impacted under the Proposed RMP and Alternative B. It is possible that the group's sense of "well-being" will be harmed by this decision. In addition, those who enjoy the sight of these animals may be less likely to visit the planning area.

4.14.3.10.2. ALTERNATIVES A, C, AND E

Those who enjoy the presence of the wild horse and burros in the VPA would benefit most under these alternatives. The greatest amount of protection to their habitat would be protected under these alternatives. Those who enjoy the sight of the animals may be more likely to visit the planning area and contribute to the local economy.

4.14.3.10.3. ALTERNATIVE D (NO ACTION)

Alternative D (No Action) would maintain current levels of adverse indirect, long-term impacts on wild horses in the HA and HMAs. Sense of well-being to those who support the animals would be maintained at current levels. Current contributions to the local economy from related tourists would remain the same.

4.14.3.11. IMPACTS OF WILDLIFE AND FISHERIES ON SOCIOECONOMICS

To the extent that habitat and forage would be protected for the emigration and/or reintroduction of Rocky Mountain Bighorn Sheep and moose populations, those who enjoy hunting and wildlife viewing would be beneficially impacted. Alternatives A, C, and E that implement the greatest amount of habitat and forage protection would be the most beneficial to hunting guides and outfitters in the VPA.

4.14.3.12. IMPACTS OF WOODLAND AND FORESTS ON SOCIOECONOMICS

Woodland management actions common to the Proposed RMP and all alternatives would have negligible impacts on the social and economic conditions of communities in Uintah, Duchesne, and Daggett counties, because the private and commercial use of woodland products is not a substantial contributor to the local economy. However, the forest and woodland could have potential beneficial impacts to public health and safety as the risk of catastrophic fire would be reduced. Also, to the extent the woodland and timber harvesting contributes to the overall health of local forests, benefits to wildlife and corresponding benefits to those who enjoy viewing or hunting could benefit.

4.14.4. SUMMARY**4.14.4.1. PROPOSED RMP**

The Proposed RMP provides the second greatest opportunities for minerals development and the subsequent generation of royalties and revenues when compared to the alternatives. Although the potential increase in revenues related to minerals development would have beneficial impacts on the local economy, adverse impacts to recreation may occur with user conflicts and a decrease in visitor satisfaction.

However, with 15 areas of non-WSA lands with wilderness characteristics (106,178 acres) to be managed to preserve wilderness qualities, recreationists seeking solitude and opportunities for primitive recreation would have areas available to meet their needs. In addition, the increase in SRMA acreage would also recreationists focused recreation areas. The increase in SRMAs and

management of non-WSA lands with wilderness characteristics would have long-term beneficial impacts on socioeconomics as SRMA and non-WSA lands with wilderness characteristics would likely reduce user conflicts and increase visitor satisfaction.

A decrease in areas designated as "open" to OHV travel and an increase in the areas designated as "closed," compared to Alternative D (No Action), could have adverse impacts on motorized recreationists. Decreases in opportunities for "cross-country" travel and increase in closed areas may result in decreases in visitor satisfaction for the user group and a potential loss of revenue generated by this group.

Impacts to socioeconomics from other resources including livestock, wood harvest, paleontology, visual resource management, lands and realty would likely have negligible impacts to socioeconomic conditions under the Proposed RMP as well as the other alternatives given that the resource is not a substantial contributor to the local economy or changes resulting from the Proposed RMP or any of the alternatives would not likely have measurable beneficial or adverse impacts.

4.14.4.2. ALTERNATIVE B

This alternative would permit the most acres within the VPA for minerals development which would provide the greatest potential related revenue and royalties. This alternative would have the most adverse impacts to recreation resources due to the large number of acres available for oil and gas leasing. For visitors seeking opportunities for primitive travel and solitude, this alternative would have the greatest amount of long-term adverse effects. This could result in long-term decreases in tourist-based revenue for local communities. Impacts to OHV users would be similar to those under the Proposed RMP.

4.14.4.3. ALTERNATIVE C

Alternative C would have the least amount of acreage open for mineral development among the action alternatives. Consequently, the amount of revenues and royalties would be less under Alternative C. Limits of OHV travel would be greatest under this alternative, producing adverse impacts on mechanized recreational opportunities.

This alternative would have the most beneficial impacts on recreation. Designation of additional ACECs and eligibility designations of Wild and Scenic River segments would have beneficial impacts on recreation. Designation of the most acreage for SRMA management (522,604) would have major beneficial impacts on all forms of recreation. Long-term positive impacts on recreation users would likely result in increases to the local economy in terms of tourist-related spending.

4.14.4.4. ALTERNATIVE D (NO ACTION)

Because Alternative (No Action) does not include the Hill Creek Extension (more than 180,000 acres), the total amount of wells to be developed over the life of the plan, and subsequent revenue generated from the wells, would be the least of all the alternatives. Resource decisions

regarding minerals development would be less restrictive than those made for Alternatives C and E, more restrictive than Alternative A, and only slightly more restrictive than Alternative B.

Recreation decisions under Alternative B closely match the recreational opportunities provided in Alternative D (No Action), the current trend in the economics associated with tourism would continue. However, it is likely the due to an increase in OHV use, user conflicts will escalate and visitor experiences would be degraded. Thus, a reduction in tourist-related spending could decrease.

4.14.4.5. ALTERNATIVE E

The focus of this alternative would be the protection of non-WSA lands with wilderness characteristics. That protection would have substantial beneficial impacts on primitive and non-mechanized recreation activities, but it would exclude OHV use on 228 miles of routes and activities dependent on developed sites (e.g., campground and interpretive facilities). Recreationists seeking primitive recreation activities would benefit most from this alternative, which may result in long-term increases in visitor spending as overall visitation would increase and visitors would return to the area for similar experiences. Conversely, those seeking motorized recreation opportunities would have fewer opportunities for recreation. A potential for a decrease in revenues from this group would be greatest under Alternative E.

Minerals development and the revenue generated from them would be most adversely impacted under this alternative as the percentage of land open for development is nearly 30% less.

4.14.5. UNAVOIDABLE ADVERSE IMPACTS

There would be no unavoidable, adverse impacts to socioeconomics.

4.14.6. SHORT-TERM USES VERSUS LONG-TERM PRODUCTIVITY

There are no foreseeable impacts for short-term use versus long-term productivity.

4.14.7. IRREVERSIBLE AND IRRETRIEVABLE IMPACTS

There are no foreseeable irreversible or irretrievable impacts to socioeconomics.