ROADLESS AREA CONSERVATION: NATIONAL FOREST SYSTEM LANDS IN COLORADO, Final Rule

Opportunities for Small Entities

March 21, 2012

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Executive Summary

The final rule has been considered in light of Executive Order 13272 (E. O. 13272) regarding proper consideration of small entities and the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), which amended the Regulatory Flexibility Act (5 U.S.C. 601 et. seq.). The Forest Service has determined that this action will not have a significant economic impact on a substantial number of small entities as defined by the E.O. 13272 and SBREFA, because the final rule does not subject small entities to regulatory requirements. Therefore, an initial regulatory flexibility analysis is not required for this final rule.

This report summarizes small entity effects of the final Colorado Roadless Rule (final rule) and Alternative 4 (a modified version of the rule with additional upper tier acreage) in comparison to baseline conditions represented by the 2001 Roadless Rule (2001 rule). The assumption regarding baseline conditions is consistent with the 10th US Circuit Court of Appeals mandate (2012) lifting a prior US District Court injunction of the 2001 rule, thereby re-installing the 2001 rule, as of the date of publication of this report. A third alternative, the Forest Plans Alternative (or simply 'forest plans'), would establish a state-specific roadless rule for Colorado that would exempt inventoried roadless areas on NFS lands in Colorado from the 2001 Roadless Rule. Though the 2001 rule represents baseline conditions, the final rule (and Alternative 4) are compared to both the 2001 rule, as well as the forest plans alternative, to fully understand the impacts of this action. The Final Environmental Impact Statement (FEIS) for this action refers to these alternatives as follows: Alternative 1 - the 2001 rule (No Action); Alternative 2 - the final rule; Alternative 3 – forest plans; and Alternative 4 – the modified rule.

For small businesses affiliated with most industry sectors involved with activities in roadless areas (e.g., coal, oil and gas), there are minimal differences between the final rule and baseline conditions (i.e., 2001 rule). As a result, there is little or no potential for significant adverse economic impacts to small businesses under the final rule relative to baseline conditions.

There are about 1,390 recreation special use permits currently authorized within NFS lands in Colorado of which a large majority are small businesses, and 1,066 (77%) are associated with outfitter and guide permits, some of which are likely to operate within roadless areas. However, there is no difference between alternatives with respect to recreation special use authorizations in roadless areas, because limitations on road construction and tree cutting under any alternative would not be likely to affect ability to obtain or use recreation use authorizations. Impacts under the final rule compared to baseline conditions are not expected to be significant due to the small percentage of acreage affected and roads constructed per year spread across more than 4 million acres of CRAs. It is also noted that a significant percentage of road construction and tree cutting activity will occur within or near the CPZs where primitive or semi-primitive settings may already be affected. Flat budgets imply that the percentage of harvest from roadless areas may change under the alternatives, but aggregate volumes across all NFS land are expected to remain relatively unchanged, on average, implying little potential for adverse impacts to small entities.

For leasable minerals associated energy resources (coal, oil and gas), changes in output are projected across alternatives. More than 95 percent of the firms associated with these sectors can be classified as small as defined by Small Business Administration standards. Any changes in oil

and gas, or coal development or production can therefore have an effect on small business opportunities in these sectors. A five county region has been defined to model the economic impacts associated with energy resources (Delta, Garfield, Mesa, Montrose, and Rio Blanco counties). A total of 355 firms associated with oil and gas, and coal development and extraction are estimated to be located within this region, of which 95% are likely to be small (337 firms). However, energy resource sector jobs within this five county area, supported annually by projected activity within roadless areas, are estimated to increase from 2,100 under the 2001 rule alternative to 2,300 jobs under the final rule (as well as alternative 4). Estimated jobs supported decrease from 2,400 under the forest plans alternative to 2,300 under the final rule. Labor income increases by a similar degree from $147 million per year under the 2001 rule to $164 million under the final rule; estimated labor income decreases from $169 million under forest plans to $164 million under the final rule. Estimated job and labor income contributions are equivalent for the final rule and Alternative 4. These results indicate that the final rule will not have significant adverse impacts to small entities associated with energy resource development and extraction relative to the2001 rule baseline conditions.

For all other economic sectors considered, changes in resource outputs are not projected to be significant to the extent that adverse impacts to small entities could occur in aggregate or within regions.

Among 64 counties in the state of Colorado, 36 counties (56%) are considered to be small governments (population less than 50,000). These 36 counties are considered to be small rural counties having NFS lands within roadless areas. Five counties are energy (coal, oil and gas) producing counties (where mineral activity are physically located). These five counties (Delta, Garfield, Gunnison, Mesa, and Pitkin) are expected to be the counties most likely to benefit from mineral lease payments and revenue sharing under the proposed rule (as well as Alternative 4), and Alternative 3. Mineral activity could also occur in Montrose County, but changes in mineral lease payments would be minimal under the alternatives. All of these counties, with the exception of Mesa can be considered small governments (population less than 50,000). The small population counties within the energy impact area (i.e., Delta, Garfield, Gunnison, and Pitkin), are forecast to receive increases in aggregate payments associated with property tax receipts, severance tax distributions, and federal royalty distributions from coal, and oil and gas production under the final rule relative to the 2001 Roadless Rule. There are slight decreases in aggregate payments to the small population counties under the final rule, relative to Alternative 3 (aggregate payments decrease from $4.9 million to $4.7 million per year). Payments associated with the Secure Rural Schools and Self Determination Act and Payments in Lieu of Taxes are not expected to change significantly, or any decreases would be largely offset by increases in federal mineral lease payments.

Under the final rule, as compared to forest plans, the potential opportunities for fuel treatments near at-risk communities (i.e., within CPZs) may increase for two 'small population' counties and decrease for one county (i.e., populations less than 50,000). In contrast, potential opportunities for fuel treatments near at-risk communities may increase for ten 'small population' counties and decrease for one county under the final rule compared to baseline conditions (2001 rule or Alternative 1). These results indicate that adverse impacts to small governments, in association

with protection of values at risk from wildfire, are not likely, when comparing the final rule with baseline conditions.

Therefore, for small governments, including counties with small populations and at-risk-communities from wildfire within those counties, opportunities for revenue sharing, as well as protection of values-at-risk are not expected to significantly decrease under the final rule relative to baseline conditions. Mitigation measures associated with existing programs and laws regarding revenue sharing with counties and small business shares or set-asides will continue to apply.

Background and Compliance Requirements under RFA and SBREFA

This report summarizes information and analysis regarding the effects of the final Colorado Roadless rule (i.e., final rule)[1], as evaluated in the final Environmental Impact Statement (FEIS) (USDA Forest Service, 2011) on small entities in the context of requirements under the Regulatory Flexibility Act.

The Regulatory Flexibility Act (RFA, 5 U.S.C. et seq., Public Law 96-354) as amended by the Small Business Regulatory Flexibility Enforcement Fairness Act of 1996 (SBREFA) generally requires an agency to prepare a regulatory flexibility analysis describing the impact of the regulatory action on small entities as part of the rulemaking. This is required of any rule subject to notice and comment requirements under the Administrative Procedures Act (APA) or any other statute unless the agency certifies that the rule will not have a "significant impact on a substantial number of small entities"[2]. The RFA acknowledges that small entities have limited resources and makes it the responsibility of the regulating Federal agency to avoid burdening such entities unnecessarily. If, based on an initial assessment, a regulation is likely to have a significant economic impact on a substantial number of small entities, the RFA requires a regulatory flexibility analysis (Initial Regulatory Flexibility Analysis (IFRA) for proposed rules, Final or FRFA analysis for final rules).

The RFA requires analysis of a rule's economic impact on the small entities that *will be subject to the rule's requirements*; rules that do not establish requirements applicable to small entities are thus not susceptible to RFA analysis. It is also noted that the Act states that the purpose of analysis is to identify and address regulatory alternatives "which *minimize* any significant economic impact of the proposed rule on small entities" (sections 603 and 604, emphasis added). Consequently, rules that relieve regulatory burden, or otherwise have a positive economic effect on small entities subject to the rule, should not require an IFRA or FRFA.

The final rule is programmatic in nature and intended to guide future development of proposed actions in roadless areas. The final rule is intended to provide greater management flexibility under certain circumstances to address unique and local land management challenges, while continuing to conserve roadless values and characteristics. This rule does not authorize the implementation of any ground-disturbing activities, but rather it describes circumstances under which certain activities may be allowed or restricted in roadless areas. Because the final rule does not directly subject small entities to regulatory requirements, the Forest Service does not believe that the Regulatory Flexibility Act and subsequent amendments (SBREFA) apply to the final rule. However, given public interest in the final rule's effects on small entities, including rural counties and economies, and efforts to be consistent with related rule-making analysis in

[1] The final rule may be referred to as Alternative 2 in documents related to the final EIS (USDA Forest Service, 2010a).

[2] Small entities include small businesses (as defined by US Small Business Administration (SBA) size standards regarding number of employees or annual receipts, by North American Industrial Classification System (NAICS) codes), small organizations ("not-for-profit enterprise which is independently owned and operated and is not dominant in its field"), and small governments (government of city, county, town, school district or special district with a population of less than 50,000).

the past[3], this document characterizes the adverse indirect effects or reasonably foreseeable losses in potential small entity opportunities associated with the alternatives. For details about the analysis of small entity opportunities associated with the initial proposed rule, see USDA Forest Service (2008a).

Purpose and Need

The Department, the Forest Service, and the State of Colorado agree there is a need to provide management direction for the conservation of roadless area characteristics within roadless areas in Colorado. In its petition to the Secretary of Agriculture, the State of Colorado indicated a need to develop state-specific regulations for the management of Colorado's roadless areas for the following reasons:

1. Roadless areas are important because they are, among other things, sources of drinking water, important fish and wildlife habitat, semi-primitive or primitive recreation areas, and naturally appearing landscapes. There is a need to provide for the conservation and management of roadless area characteristics.
2. As recognized in the 2001 Roadless Rule, timber cutting, sale or removal and road construction/reconstruction have the greatest likelihood of altering and fragmenting landscapes, resulting in immediate, long-term loss of roadless area characteristics and there is a need to generally prohibit these activities in roadless areas. Since the 2001 Roadless Rule was promulgated, some have argued that linear construction zones also need to be restricted.
3. In addition to the concerns articulated in the 2001 Roadless Rule, there is a need to accommodate state-specific situations and concerns in Colorado's roadless areas. These include the following:
    a. reducing the risk of wildfire to communities and municipal water supply systems;
    b. facilitating exploration and development of coal resources in the North Fork coal mining area;
    c. permitting construction and maintenance of water conveyance structures;
    d. permitting access to current and future electrical power lines;
    e. accommodating existing permitted or allocated ski areas; and
    f. There is a need to ensure that Colorado roadless areas are accurately mapped.

Roadless area characteristics and values, as defined in the 2001 rule preamble (66 FR 3244) and referred to in the final Colorado Roadless Rule, are summarized as follows:

- High quality or undisturbed soil, water, or air.
- Sources of public drinking water.
- Diversity of plant and animal communities.

[3] A Regulatory Flexibility Analysis was completed in association with the 2001 Roadless Area Conservation Rule due to suggestions by the SBA (USDA Forest Service 2001).

- Habitat for threatened, endangered, proposed, candidate, and sensitive species, and for those species dependent on large, undisturbed areas of land.
- Primitive, semi-primitive motorized, and semi-primitive non-motorized.
- Reference landscapes.
- Natural-appearing landscapes with high scenic quality.
- Traditional cultural properties and sacred sites.

Other locally identified unique characteristics (e.g., uncommon geological formations, unique wetland complexes, unique social/cultural/historical characteristics, areas prized for collection of non-timber forest products, or exceptional hunting and fishing opportunities).

Final Rule and Alternatives[4]

The four alternatives analyzed in detail are::

- **Baseline condition – 2001 rule: The 2001 Roadless Area Conservation Rule (2001 Roadless Rule; also referred to as Alternative 1 in the FEIS)**[5]. All provisions of the 2001 Rule are in place, and the 2001 inventory is utilized. Any leases issued since promulgation of the 2001 Rule would be valid. This baseline condition would establish general prohibitions on tree cutting, sale and removal and road construction/reconstruction within IRAs, while permitting some of those activities under certain exceptions. This baseline condition does not include any prohibitions on LCZs and does not include an upper tier category.
- **The Final rule: Final Colorado Roadless Rule (Final Rule; also referred to as Alternative 2 in the FEIS)**. The final rule is based on the revised petition submitted by the State of Colorado to the Secretary of Agriculture. The Colorado Roadless Rule establishes general prohibitions on tree cutting, sale, or removal; road construction and reconstruction; and linear construction zones (LCZs), within CRAs, while permitting those activities under certain exceptions to address needs specific to Colorado.
- **Forest Plans or Forest Plan Direction (also referred to as Alternative 3 in the FEIS).** This alternative would establish a state-specific roadless rule for Colorado that would exempt inventoried roadless areas on NFS lands in Colorado from the 2001 Roadless Rule.
- **Alternative 4: Colorado Roadless Rule with Public Proposed Upper Tier (referred to as Alternative 4 in the FEIS).**

  Alternative 4 reflects the same substantive management direction as examined in the final rule, but would apply the more protective upper tier restrictions to a higher percentage of CRA lands. Alternative 4 has the same general prohibitions and exception as the final rule on tree cutting, sale or removal; road construction and reconstruction; and linear

[4] The assumption regarding baseline conditions is consistent with the 10th US Circuit Court of Appeals mandate (2012) lifting a prior US District Court injunction of the 2001 rule, thereby re-installing the 2001 rule, as of the date of publication of this report..

5 "2001 Roadless Rule" is described in the Federal Register, Vol. 66, No 9, pages 3244 - 3273

construction zones within CRAs. As with the final rule, substantially altered acres have been removed from the CRA mapped areas. Some, but not all of the the final rule upper tier acres are upper tier acres in Alternative 4. Under this alternative, some lands covered by existing oil and gas leases that do not expressly prohibit roads are included as CRA upper tier acres. The upper tier acres included in Alternative 4 also contain areas adjacent to communities at risk to wildfire.

Though the 2001 rule represents baseline conditions, the final rule (and Alternative 4) are compared to both the 2001 rule, as well as the forest plans alternative to fully understand the impacts of this action.

Changes Between the Revised Draft EIS (2010) and the Final EIS (2011)

The following changes have been made to the Colorado Roadless Rule between the RDEIS and the FEIS:

- The amount of upper tier acres was increased from 562,200 acres in the RDEIS to 1,219,200 acres. Generally areas within 0.5 to1.5 miles of a community at risk (described as a community protection zone or CPZ) were dropped from upper tier designation to ensure communities could conduct hazardous fuel reduction projects for community protection. In addition, areas were added to upper tier to help offset the exceptions for Colorado-specific issues and concerns .
- The North Fork coal mining area was changed from 19,600 acres in the RDEIS to 19,100 acres. Two small areas totaling about 500 acres were dropped because they were incorrectly mapped and contain no recoverable coal.
- An exception to allow for temporary road construction in upper tier was added to account for public health and safety in cases of imminent threat of flood, fire, or other potential catastrophic event that without intervention, would cause the loss of life or property. This could include a situation in which a dam within upper tier that, without intervention, could fail, may be allowed access with a temporary road for reconstruction activities.
- In the proposed rule from the RDEIS, administrative corrections and modifications could only be made to the CRA boundary and not the upper tier boundary. The ability to make administrative corrections to upper tier boundaries has been added to account for clerical errors, mapping errors or changes in mapping technologies.
- A provision requiring future oil and gas leases in upper tier to have a no surface occupancy (NSO) stipulation has been added. This provision was added to further restrict activities within upper tier that have the potential to adversely impact roadless area characteristics.
- The definition of a pre-existing water court decree was changed to address initial applications filed before the promulgation of the rule. This change was made in recognition that many water rights may take multiple years to adjudicate.

For details about prior changes to the rule, see the RDEIS (USDA Forest Service, 2010).

General Methodology and Assumptions

This report summarizes analysis of potential small entity opportunities associated with four alternatives summarized in the previous section (Final Rule and Alternatives). For a discussion about the overall impacts to employment and labor income across all entities, the reader is referred to the FEIS (USDA Forest Service, 2011) and the Regulatory Impact Analysis for the final rule (USDA Forest Service 2011a).

This report begins by describing small business characteristics for Colorado in general, as well as for specific industry sectors affected by the final rule. The analyses in this report then address (1) opportunities for small businesses associated with industry sectors projected to experience substantial effects under the final rule (i.e., leasable minerals associated with energy production), (2) opportunities for revenue sharing as it affects small governments (i.e., counties), and (3) opportunities for small governments (i.e., counties) to benefit from tree-cutting (e.g., wildfire hazard reduction).

Methods used to examine the impacts to small business opportunities associated with leasable minerals related to energy production (coal, oil and gas) rely on estimates of jobs and labor income contributed by projected mineral outputs under the alternatives. These measures are generated using economic impact analysis. Economic impact analysis is used to evaluate potential direct, indirect and induced effects on the economy. Economic impacts are often estimated using input-output analysis. Input-output analysis is a means of examining relationships within an economy, both between businesses and between businesses and final consumers. It captures all monetary market transactions for consumption in a given time period. The resulting mathematical representation allows one to examine the effect of a change in one or several economic activities on the economy within a defined region (e.g., Economic Area), all else constant. This examination is called impact analysis. The IMPLAN modeling framework (Minnesota IMPLAN Group, 2008) is used to derive response coefficients that translate changes in final demand for goods and services (e.g., changes in timber harvested, changes in tons of leasable minerals extracted) into resulting changes in economic effects, such as labor income and employment of the affected area's economy. The IMPLAN modeling system allows the user to build regional economic models for Economic Areas for a particular year and derive response coefficients specific to these areas. The regional model for this analysis uses 2009 IMPLAN data. Impact modeling and modeling results are presented in detail within the Social and Economic Specialist Report for this final rule (USDA Forest Service, 2011b) and FEIS. For additional detail, see Leasable Minerals: Coal, Oil and Gas section.

For other industry sectors, changes in resource outputs are not projected to be significant to the extent that adverse impacts to small entities could occur. These resource areas include locatable and saleable minerals, recreational special use permits, livestock, and timber or wood products. As such, impacts to small entities are not significant for these sectors. Analysis of these sectors is limited to a summary of effects from the FEIS and brief description of small entity characteristics.

For calculating impacts to revenue-sharing opportunities, estimated leasable mineral output values (from the economic impact model described above), by activity and alternative, have been

allocated by county based on acres leased and/or available on which roads are allowed, as presented in the Energy Minerals section of the FEIS. The analysis focuses on five counties where mineral extraction from roadless areas is projected to occur (Delta, Garfield, Gunnison, Mesa, and Pitkin counties). All counties have populations of less than 50,000 with the exception of Mesa county. For details about methods see "Local Governments: Mineral Lease Payments" section.

Methods for examining the potential impacts to small governments or communities focus on assessing opportunities for tree-cutting activities to contribute to fuel reductions and subsequent protection of values at risk associated with the wildland urban interface (WUI). Counties examined include those with populations of less than 50,000. The analysis first identifies the Colorado Roadless Areas (CRAs) and inventoried roadless areas (IRAs)[6] where tree-cutting, in association with fuel treatments, is project to be likely. The extent to which these 'potential' treatment areas (measured in acres) overlap with community protection zones (CPZs) is used as an indicator of potential opportunities for protecting values at risk, by county (USDA Forest Service, 2011c). It should be noted that acreage projections about tree-cutting likelihoods are represent the area within specific roadless area unit boundaries and do not indicate the extent of projected tree-cutting activities (methodology for soliciting likelihood projections is described in the RDEIS). Roadless areas (CRAs and IRAs) are mapped to counties using the results of GIS overlays. For additional details about the methods used to characterize hazardous fuel reduction impacts, see "Local Governments: Fuel Treatments".

Information Used

Information regarding small entities are obtained primarily from the State of Colorado (DOLA, 2006) and the United States Small Business Administration (SBA) profile for Colorado (SBA 2006). Criteria for defining small businesses are obtained from SBA's Table of Small Business Size Standards (SBA 2006a). Other sources of information are discussed in respective resource sections below and include:

- USDA Forest Service's Small Business Share Recomputation Forms and Cumulative Set-aside Program Analysis worksheets, by Forest, and
- USDA Forest Service's Special Uses Database (SUDS), last updated Fall, 2006.

The activity projections and other details about resource-specific effects associated with the final rule are often based on analyses presented in the FEIS for the final rule (USDA Forest Service 2011) as well as separate resource *Specialist Reports* (e.g., Economics (USDA Forest Service 2011b)) completed to support the FEIS. As such, this report makes frequent reference to the FEIS and Regulatory Impact Analysis for the final rule (USDA Forest Service, 2011a) to avoid the burden of reproducing data and analyses already presented in other supporting documentation; the reader is encouraged to review those reports for details about environmental effects.

[6] Areas not designated as roadless under the Colorado Roadless rule but included as roadless under the 2001 Rule and the forest plan alternatives.

Small Business Characteristics in Colorado: General

Colorado had an estimated total of 550,100 small businesses, including non-employer firms, in 2006, based on a general standard of 500 employees[7] (SBA, 2006). It is estimated that 153,400 out of 156,900 firms with employees (97.8%) in Colorado were small businesses in 2006. Similarly, 100% of firms classified as Agriculture, Forestry, Fishing and Hunting and 93% of firms classified under Mining were estimated to be small businesses.

Information about employers and average employment per employer from Colorado Department of Local Affairs for 2006 (DOLA, 2006) indicates that 99.8% of employers (i.e., firms) are potentially small businesses (<500 employees). The number of firms in sectors related to forestry and wood products in Colorado include: 51 in forestry (NAICS 113, including logging); 44 in forestry services (NAICS 1153); 277 in wood products manufacturing (NAICS 321, including sawmills, recognizing that only two mills are currently operating in Colorado); 72 in paper and related manufacturing (NAICS 322). The number of firms in sectors related to dispersed recreation (e.g., outfitters and guides) in Colorado include: 40 in sightseeing transportation (NAICS 487) and 1,651 in recreation industries (NAICS 713). Firm numbers associated with leasable minerals are presented in the section "Leasable Minerals". As indicated above, a vast majority of these firms are expected to fall within the SBA criteria for small businesses.

The extent to which these firms are affected by the final rule and/or the potential significance of economic impacts are discussed in resource-specific sections below. It is important to note that this type of data (e.g., DOLA, 2006) focuses on firms and not necessarily ownership; a given firm or employer may be owned by a larger parent corporation or entity that would exceed the small business standards and disqualify the establishment from being classified as small business. As such, this data is more reliable than data regarding establishments[8] but is still likely to overestimate numbers of small businesses. Additional details about sector-specific small business conditions are noted in some sections below.

Small Entity Opportunities: Description and Effects Analysis

Small entity opportunities (e.g., small business, small governments) are analyzed for resource areas or economic sectors where reasonably foreseeable effects are projected to be significant as described in respective resource area sections within the FEIS. Reasonably foreseeable effects and/or jobs and income are not expected to vary appreciably across alternatives for the following resource areas: (1) timber harvest or the wood products industry , (2) locatable minerals (i.e., minerals regulated under the General Mining Law of 1872), (3) saleable minerals (e.g., sand, stone, gravel), (4) livestock grazing, or (5) special uses, including recreation and skiing. Based on the information presented in the FEIS, it is unlikely that effects or changes related to these resource areas will have a "significant impact on a substantial number of small entities". As a

[7] 500 employees is adopted as a conservative and generic standard in this case, recognizing that standards vary by industry classification according to current Small Business Administration direction (See SBA 2006), recognizing that standards for different sectors vary (e.g., employment standards are 750 for pulp, paper and paperboard mills); some standards are specified in terms of average annual receipts (e.g., Forestry Services (NAICS 1153)).
[8] A firm may consist of or own one or more physical establishments within a region or state of interest.

consequence, the analysis in this report will focus on small business and small government opportunities related to the minerals (energy) output, mineral lease payments (revenue sharing), and small community/county opportunities associated with fuel treatments.

Leasable Minerals: Coal, Oil and Gas

This section addresses the effects of the alternatives on the exploration and development of leaseable minerals (energy resources) in the roadless areas in Colorado. The leasable minerals that occur in roadless areas in Colorado are natural gas, oil, coal, and geothermal resources, where geologic conditions are conducive to their occurrence. These leasable minerals are collectively referred to as energy resources. Background information about energy sectors is summarized below; this information is taken from more detailed discussion in the Leasable Minerals and Economic sections of the FEIS.

Description

Two prominent areas of known and high potential unconventional natural gas in Colorado are the Piceance and Paradox Basins. Including conventional and unconventional gas fields, Colorado is the seventh largest gas producing state in the nation. Coal production in the state is dominated by mines in four counties: Routt, Moffat, Delta and Gunnison. Reserves under roadless areas are found only in Gunnison county.

The industry sectors directly or indirectly affiliated with the oil, gas, and coal are described in Table 1. More than 95 percent of the firms associated with these sectors can be classified as small as defined by Small Business Administration standards (SBA, 2006). Any changes in oil, gas, or coal development or production can therefore have an effect on small business opportunities in these sectors. A substantial number of firms are located within the energy minerals economic area used to model job and income effects; 337 out of 355 are estimated to be small firms (95%).

Table 1 – Energy Minerals Sectors: Firm Numbers and Small Business Standards

Name	NAICS	Total Number of Firms		Small Bus. Standard.
		State	Energy Economic Area	
Oil and Gas Extraction	211	457	57	500 employees
Bituminous Coal Mining	2121	17	6	500 employees
Drilling Oil and Gas Wells	21311	77	36	$6.5 million
Support Activities for Oil and Gas Operations	213112	542	256	1,500 employees
TOTAL		1093	355	

Source: Employment and wages data (2006), by firm, by NAICS for Colorado counties obtained from J. Westkott, Colorado Department of Local Affairs (DOLA, 2006). NAICS sectors are derived from production functions used to characterize the energy minerals sector within the IMPLAN energy minerals economic model (see Economic section of the draft EIS (USDA Forest Service, 2008a).
NAICS = North American Industrial Classification System
Energy Economic Area = Delta, Garfield, Mesa, Montrose, and Rio Blanco counties

Small Business Standards are thresholds for determining if a business is small with respect to employment size or annual sales receipts (SBA, 2006).

Analysis of Opportunities: Coal, Oil and Gas

Natural gas and coal industry sectors, potentially affected by roadless area management, are located primarily in five western slope counties: Delta, Garfield, Mesa, Montrose, and Rio Blanco. The physical locations of natural gas and coal resources are found in other counties around the state of Colorado, but these locations are either 1) not affected by roadless management alternatives or 2) are isolated with somewhat small deposits. Pitkin and Gunnison Counties are exceptions to this characterization.

Important natural gas and coal resources associated with roadless areas are located in the northwest corners of Pitkin and Gunnison Counties[9]. Development of these resources would likely impact jobs and labor income in the five counties noted above rather than in the counties where the deposits are located. Labor and material flows to the resource locations, as well as production transport after extraction, are far more likely to impact Mesa, Garfield, and Delta Counties instead of Pitkin and Gunnison Counties. Two coal mining operations in Gunnison County currently provide a good example of these flows. Nearly all employees working at the mines live in Delta, Montrose, and Mesa Counties. All the coal is transported out of the area down the North Fork Valley by rail.

For the reasons cited above, the economic impacts for oil, gas and coal are modeled using only Delta, Garfield, Mesa, Montrose, and Rio Blanco Counties. The model[10], has been adjusted to fully account for all coal mining operations in Gunnison County. The counties included in the economic impacts model do not necessarily coincide with counties likely to benefit from mineral lease payments (i.e., counties where deposits are physically located – Delta, Garfield, Gunnison, Mesa, Pitkin); different sets of counties are modeled for different types of impact analysis endpoints. The Energy Roadless model area includes a variety of communities, ranging from small towns – such as Somerset – to the economic center of western Colorado – Grand Junction. The energy minerals economic impact model relies on annual production value to estimate employment (jobs/year) and labor income ($/year) contributed or supported by reasonably foreseeable projections of annual oil, gas, and coal production values.

The effects of the alternatives on the production of oil are relatively inconsequential compared to effects on natural gas. Estimates of ultimate natural gas recovery over a 30 year period (i.e., average well life), as reported in the energy minerals section in Chapter 3 of the FEIS (USDA Forest Service, 2011), aggregated across roadless areas for the GMUG, White River, and San Juan National Forests, are 1,276 billion cubic feet (BCFG) for alternative 1 (2001 Rule – baseline conditions), 2 (final rule) and 4 (modified final rule), and 1,384 BCFG for Alternative 3 (forest plans).

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[9] Other counties within the San Juan basin (e.g., Archuleta, Mineral) have gas reserves and roadless area boundaries that change by alternative in Archuleta. However, oil and gas development is not projected to vary by alternative in the San Juan basin (see Energy and Minerals section of the FEIS (USDA Forest Service, 2011)).

[10] The model is developed using IMPLAN and is based on economic data from 2009. For details about the economic model development and application, see Economic section of the FEIS (USDA Forest Service, 2011).

Under the Forest Plans alternative, road construction and reconstruction for oil and gas development would be allowed in IRAs in conjunction with existing *and future* oil and gas leases whose terms allow surface occupancy and roads, recognizing that some forest plans identify areas within IRAs that are not available for leasing (for a full discussion about restrictions on oil and gas development, see Chapter 3 of the FEIS). Additional production opportunities associated with future leases under the Forest Plans alternative account for estimates of increased production on the GMUG and White River NFs, when compared to production under the other alternatives. Additional production for these two forests is due to increased well development on lands currently unleased in roadless areas common to both IRAs and CRAs.

When gas production is added for the two forests for which gas production is estimated to vary across alternatives (i.e., GMUG and White River NFs), and divided by 30 years (average life of a well), annual production is estimated to be approximately 35 BCFG/yr for the 2001 Rule, ,the final rule and Alternative 4, and slightly greater for the no-action alternative (forest plans) at approximately 39 BCFG/yr. Annual oil production is similarly estimated to be 1,750 barrels/yr for Alternatives 1, 2, and 4 and 4,200 barrels/yr under Alternative 3 based on total production values (GMUG NF only) reported in the minerals section of the FEIS divided by 30 years. The value of gas and oil production is estimated by multiplying annual production by 2006 prices ($3.61/Mcf and $53.62/bo) as cited by the Colorado Oil and Gas Conservation Commission Price Indices for Calendar year 2009. Prices from 2009 are consistent with the economic impact model used to create the job and income multipliers based on 2009 data.

While oil and gas extraction in roadless areas is characterized by changes in annual production, coal extraction in roadless areas is characterized by constant production over differing lengths of time. The accessible coal reserves that vary by alternative and are discussed in the Energy Minerals section of the FEIS are gross totals of potentially recoverable reserves within roadless areas. Gross reserves are estimated at a coarse scale without benefit of specific exploration data, and are based on estimations made by the USGS, as noted in the Energy Minerals section of the FEIS. The estimated gross reserves are used to estimate average annual production across the three mines currently operating with leases on GMUG National Forest land[11] over the next 15 years for each alternative (USDA Forest Service, 2011; 2011b). The analysis yields the following scenario for estimating economic impacts beyond current leased operations:

- Alternative 1 would have an additonal 5 years of operations at one mine, ending in 2026.
- Alternatives 2/4 would have an additonal 39 years of operations at two mines, ending in 2060.
- Alternative 3 would have an additional 60 years of operations at two mines, ending in 2081.

Average annual coal production during the 15-year analysis period is estimated to be 8.5 million tons per year under Alternative 1 and 9.9 million tons per year under Alternatives 2/4 and 3;

[11] Production is summed across the three mines (i.e., Bowie No 2+3, Elk Creek, and West Elk mines) to capture aggregate production for the North Fork coal area, even though changes in recoverable reserves from roadless areas within the GMUG National Forest are projected to occur for only two of the mines (Elk Creek and West Elk).

these production rates are multiplied by $36.71/ton (2009$)[12] to estimate output value which is used to estimate economic impacts

All economic impacts are shown in Table 3. Results are expressed on an average annual basis over the 15-year analysis period. Impacts are estimated based on the values of oil, gas, and coal production levels discussed above.

Table 3 shows the direct, indirect, and induced effects for employment and labor income by alternative. Direct effects are realized by the extraction and drilling companies from the sale of oil, natural gas, coal, and well drilling services. Indirect effects are realized by local companies that provide goods and services to the extraction and drilling industries. Induced effects result from local spending of employee income paid by the companies directly and indirectly affected by extraction and well drilling activities.

Alternative 3 has the largest total effects on output, employment, and labor income contributions associated with oil, gas, and coal related activities. Alternatives 2/4 has the next largest effects. Compared with Alternative 3, average production levels would be lower by about 4 percent annually, and average employment would be lower by about 3 percent annually, and average income would be lower by about 2 percent annually. Alternative 1 has the smallest effects; compared with Alternative 3, average production, employment, and labor income would all be lower by 13 percent annually over the 15 year analysis period under Alternative 1.

Coal would provide about three-fourths of mineral-related employment and labor income under all alternatives. Coal would also provide about 60 percent of the production value under all alternatives.

Economic impacts displayed in Table 2 are generally smaller than those presented in the RDEIS. These changes are the result of substantially different economic conditions and updated data sources. The recession year of 2009 saw considerable changes in the price of natural gas (down) and coal (up) compared with 2006. Price changes alone profoundly affected estimates of production value, especially for natural gas. Revisions of worker productivity and compensation rates have reduced employment and income generally, but with notable consequences in natural gas extraction. A fully updated set of coal mine lives and development assumptions altered the direct effects of coal employment. New estimates of goods and services purchased locally by both businesses and households have substantially diminished indirect and induced effects across all mineral activity.

These results suggest there is little potential for significant impacts to a substantial number of small businesses associated with the mineral leasing sectors (see Table 2) under the final rule with employment and income contributions being approximately 2% to 3% less under the final rule (and Alternative 4) compared to forest plans (Alternative 3). The estimated reduction in employment and income under the 2001 Rule alternative (baseline conditions), compared to Alternative 3, is greater at approximately 13%, with the largest portion of this reduction of the reduction attributable to decreases in coal production. Decreases in coal production are projected to occur at two mines (Elk Creek and West Elk). The operators for these two mines are firms

[12] Price of Colorado coal from US Department of Energy, Energy Information Administration. Annual Coal Report 2009 (Table 30). Prices from 2009 are consistent with the economic impact model used to create the job and income multipliers based on 2009 data, as noted in the economic section in Chapter 3 of the FEIS.

included in the coal mining sector NAICS 2121, however, these operators are subsidiaries of parent companies (CGS, 2008), each of which employ more than 500 employees and therefore exceed the criterion for small business classification. As a consequence, there is little potential for significant impacts to small businesses associated with the coal mining sector under the 2001 Rule.

Value of production, employment, and labor income for coal, oil, gas, and aggregated for these three sectors are all equal to or higher under the final rule and Alternative 4 when compared to the 2001 rule baseline conditions, suggesting that there is little potential for adverse impacts to small entities in these sectors under the final rule.

Table 2. Average annual economic impacts by alternative for energy mineral activity in the energy roadless model area, 2012-2026 (2009 dollars) (1)

	Value of Production ($ millions)			Employment (jobs)			Labor Income ($ millions)		
Activity/Effects	Alt 1	Alts 2 & 4	Alt 3	Alt 1	Alts 2 & 4	Alt 3	Alt 1	Alts 2 & 4	Alt 3
Oil & Gas Drilling									
Direct	107.0	107.0	121.0	164	164	185	12.6	12.6	14.2
Indirect	16.3	16.3	18.4	113	113	127	6.0	6.0	6.8
Induced	9.8	9.8	11.1	91	91	103	3.3	3.3	3.7
Total	133.1	133.1	150.4	367	367	415	21.9	21.9	24.7
Oil & Gas Production									
Direct	126.3	126.3	139.5	46	46	51	5.5	5.5	6.1
Indirect	15.6	15.6	17.2	102	102	113	5.7	5.7	6.3
Induced	5.5	5.5	6.1	52	52	57	1.8	1.8	2.0
Total	147.5	147.5	162.8	200	200	221	13.1	13.1	14.4
Coal Production									
Direct	312.9	362.3	362.3	752	871	871	78.4	90.8	90.8
Indirect	54.6	63.2	63.2	318	368	368	17.8	20.6	20.6
Induced	46.5	53.9	53.9	433	502	502	15.6	18.0	18.0
Total	414.1	479.3	479.3	1,504	1,741	1,741	111.8	129.4	129.4
Total Energy Minerals									
Direct	546.3	595.6	622.7	962	1080	1106	96.5	108.9	111.1
Indirect	86.5	95.1	98.8	533	583	609	29.5	32.3	33.7
Induced	61.9	69.2	71.1	576	644	661	20.7	23.1	23.7
Total	694.6	759.9	792.6	2,071	2,308	2,376	146.7	164.3	168.5

Analysis of Opportunities: Geothermal

The extent of Colorado's geothermal resource potential has yet to be assessed fully, and there is no definitive data indicating where and to what extent geothermal resources might occur in the roadless areas.

Currently, there are no geothermal leases or operations on NFS lands in Colorado. Only one application (on the GMUG NF) has been submitted and it is located outside of roadless areas. A national BLM-Forest Service programmatic EIS currently underway will address NFS lands that have potential for geothermal resources, and provide the basis for future geothermal leasing availability analyses and decisions on NFS lands in Colorado and other states.

Because roading in roadless areas would be prohibited under the 2001 rule (baseline), the final rule, and Alternative 4, and roads are assumed to be necessary for the development of geothermal resources, these resources would not be developed under these alternatives and potential economic impacts would be of equal magnitude. Under the forest plans alternative, responsible officials could allow development of geothermal resources in IRAs to the extent that land management plans would allow for such activities in IRAs. Specific geothermal assessment information is insufficient to quantify or even qualify the extent and location of possible development.

Based on these observations, there is no evidence to suggest that the final rule or Alternative 4 will create significant adverse impacts to small entities in association with geothermal development, relative to the 2001 rule baseline conditions. The potential for small business opportunities would be higher under forest plans, relative to the final rule, but there is little information to indicate that future development would be likely, particularly within the 15 year planning time frame.

Other Resource Areas

Wood Products and Forestry Services Sectors

The National Forests in Colorado sold approximately 200 million board feet (MMBF) annually from the 1950s through the 1980s. The level decreased to approximately 50 MMBF annually between 1995 and 2005. Commercial timber products (outputs) coming from roadless areas may vary by alternative as a function of treatment, but the forest program levels are expected to remain unaffected by the final rule. Program budget levels were assumed to remain constant across alternatives for all resources. The implication of this is that timber program output levels across all National Forests lands in Colorado would also remain unaffected by the alternatives, varying only by location of tree-cutting. The proportion of cutting activity occurring within versus outside of roadless areas will vary across alternatives, but overall economic impacts are unchanged.

The potential sustainable supply of timber from NFS lands within Colorado (i.e., Allowable Sale Quantity (ASQ)) is currently 145.4 million board feet (MMBF) annually (as averaged over a decade). Potential reductions in long-term sustainable supply of timber volume range from 20% under the final rule and Alternative 4 which is lower than a reduction of 23% estimated for the

2001 rule (see Vegetation Management section within the FEIS for details). Sustainable supplies of timber are therefore estimated to be 116 MMBF under the final rule (and Alternative 4) and 112 MMBF under the 2001 rule, both of which are well above actual timber volumes sold from 2000-2009 (i.e., 69.2 MMBF). These results imply that timber supplies outside of roadless areas are available to substitute for decreases in timber availability within roadless areas under all alternatives considered.

Overall, the volume differences across alternatives are not anticipated to result in significant impacts to the wood products and forest service sectors[13].
Small business purchases are in compliance with small business set aside shares for units where tree-cutting may be more likely to occur in roadless areas across the alternatives (e.g., Pike San Isabel, Arapahoe, Rio Grande, and Routt) (USDA Forest Service, 2005a). It is also noted that there are only two mills currently operating in Colorado, one located in Montrose county, the other in Delta county (USDA Forest Service, 2005).

Based on this evidence, significant adverse economic impacts to substantial numbers of small businesses within the wood products sector are not projected to occur under the final rule or Alternative 4, relative to the 2001 rule.

Saleable Minerals

Saleable minerals are common varieties of sand, stone, gravel, soil, and clay. Generally, they are widespread and of low value, primarily used for construction or landscape materials. Opportunities for saleable minerals production would not likely differ by alternative because little to no saleable mineral operations would likely occur in the roadless areas.

Locatable Minerals

For locatable minerals, the construction and reconstruction of roads reasonable and necessary for exploration and development would be allowed under the General Mining Law of 1872. As such, the final rule is not expected to have an impact on small business opportunities associated with locatable minerals.

Livestock Sector

Livestock grazing is managed in portions of many of the roadless areas. In addition to actively grazed allotments (lands allocated to grazing management), there are a number of vacant allotments where there is no current grazing permit in effect, but where livestock grazing may be permitted in the future. Permitted livestock may include cattle, sheep, or other kinds of livestock such as horses. Authorized livestock grazing use occurs less extensively in the roadless areas compared to many other portions of the NFs and national grasslands in Colorado due to forage cover type.

[13] Sectors include NAICS codes 113 (forestry), 1133 (logging), 1153 (Forstry Services), 321 (sawmills) and 322 (paper, pulp, and paperboard. Two Colorado mills are currently in operation and located in Montrose and Delta counties (USDA Forest Service, 2011a).

Under the 2001 Rule, the final rule (Alternative 2), and Alternative 4, road construction exceptions do not exist for the purpose of livestock grazing. However, those who have grazing permits for allotments in roadless areas have been effectively managing their livestock in those areas over long time periods without the necessity of additional roads. They typically rely on pack and saddle stock to manage the livestock and maintain their range improvement structures. Range management personnel on the NFs in Colorado do not foresee a need for additional roads in roadless areas in support of livestock grazing management in those areas over the next 15 years under any alternative (see "Other Resources and Services" in the Regulatory Impact Analysis (USDA Forest Service, 2011a).

Road and tree-cutting activities can affect rangeland vegetation and result in detrimental effects to livestock management. However, under any of the alternatives, there would be a low likelihood that the projected new roads would significantly affect authorized livestock management use in the roadless areas. Recent tree-cutting activities such as for fuel reduction or forest health treatments have not typically resulted in significant adverse impacts on permitted grazing management in those affected allotments. While the Forest Plans alternative would pose the highest potential for adverse impacts on livestock grazing management in roadless area allotments, there would be no substantial difference in risk to livestock operations under any of the alternatives. Under all alternatives the risk would be low for the potential tree-cutting activities to result in significant adverse impacts on livestock management in roadless areas.

Based on these conditions, significant economic impacts to small businesses are not expected to occur under the final rule for the livestock sector.

Special Uses

Recreational Uses, Ski Areas

Recreation special use authorizations consist of permits, leases, or other written instruments that authorize a range of commercial recreational activities, both motorized and non-motorized, in dispersed and developed recreation settings. Generally, there is little infrastructure aside from existing developed sites that is needed for the permitted activity – with the exception of hut systems.

There are about 1,390 recreation special use permits currently authorized in NFS lands in Colorado of which the majority are small businesses, and 1,066 (77%) are associated with outfitter and guide permits, some of which are likely to operate within roadless areas (Region-2 INFRA-SUA database April 2008). These permits include outfitter and guides for hunting, fishing rafting, backpacking, sightseeing, jeep tours, day hiking, ATV tours, and educational tours, as well as hut systems, educational camps, resorts/lodges, recreation events, and others.

There is little difference between alternatives with respect to recreation special use authorizations in roadless areas, because limitations on roading and tree-cutting under any alternative would not be likely to affect ability to obtain or use a recreation use authorization. Because the 2001 rule, the final rule, and Alternative 4 do not allow for roading to facilitate recreation activities, the special use authorizations in IRAs or CRAs would be limited to uses that do not need new roads. Under Alternative 3 (Forest Plans), recreation use authorizations could include activities

facilitated by new roads in IRAs or CRAs, however, as noted in the "Recreation" section of the FEIS, few or no new roads are currently projected for recreation in roadless areas over the next 15 years under the Forest Plans alternative (or other alternatives).

It is likely that projected construction of of roads (the majority of which will be termporary) and tree-cutting within the roadless analysis area per year under the final rule will change some of the semi-primitive recreation opportunity spectrum (ROS) settings toward roaded natural settings, implying a change in the feeling of solitude and remoteness for some period of time. These effects may have adverse impacts on the capacity for some outfitters and guides to provide a quality outdoor experience. However, these effects are expected to be less than the effects from projected road construction and tree-cutting activity under forest plans and only slightly greater than effects under the 2001 rule baseline conditions. These effects are also spread out across 4 million acres of CRAs, and additional areas are added to CRAs under the final rule, thereby increasing the level of protection of areas currently known to have roadless characteristics. Correspondingly, hunting and fishing opportunities likely would not change in areas where tree cutting and associated road construction occurs because of the dispersed nature of these activities and the large amount of NFS lands not altered by these activities under the final rule. As a consequence, it is unlikely that the adverse impacts to special use permit holders reliant upon dispersed or primitive recreation settings will be significant. Given that the final rule is programmatic and does not specify project locations, and given the lack of GIS data to adequately locate special permit holders within roadless areas, the number of special use permits adversely affected cannot be estimated.

Projected levels of tree-cutting and road construction under the final rule, Alternative 4, and the 2001 ruleare lower compared to forest plans, implying lower likelihood of adverse effects, compared to forest plans.

Based on these projections and observations, there is little potential for decreases in small business opportunities associated with dispersed or developed recreation, and impacts to small entities in the recreation sector are not expected to be significant under the final rule.

Under the final rule as well as Alternative 4, the ski areas that are currently in IRAs would not be included in the CRAs. Road construction and tree-cutting in those ski areas would therefore be allowed as prescribed in forest plans, ski area master plans, and/or project-level NEPA documents. This area would include a total of 6,550 acres under current permits within IRA boundaries and an additional 1,710 acres in areas withdrawn from IRAs, for a total of 8,260 acres across 13 ski areas. More of these ski areas would therefore have the potential for further development and expansion, compared to the conditions under the 2001 rule where permissions for road construction would be limited to the 6,550 acres under permit (and excluded in all other IRAs). Under the forest plan alternative the potential to add roads, cut trees, and develop more ski facilities in the ski areas would be the same as under the final rule and Alternative 4. However, under forest plans, ski areas could potentially build roads in order to expand their permit boundary in any direction, without a rule-related roadless area constraint, thereby providing potentially greater opportunities compared to the final rule. Under the final rule, Alternative 4, as well as the 2001 rule, ski area development can occur without road construction in roadless areas.

Based on these observations, there is little potential for decreases in small business opportunities associated with dispersed or developed recreation or associated special use permittees, including ski operations, and economic impacts to small entities in the recreation sector are not expected to be significant under the final rule.

Other Special Uses

In Colorado, there are approximately 3,900 lands-related special use authorizations on NFS lands authorized to individuals, business entities, State and local governments, and other Federal agencies (for detailed discussion of special uses, see Lands – Special Use Authorizations in chapter 3 of the DEIS). These uses include roads, reservoirs, weather and climate monitoring stations, communication lines and sites (for cellphone, radio, television, microwave, or other transmissions), railroads, service buildings of all types, electric transmission and distribution lines, oil and gas pipelines, ditches and other water conveyance facilities (see Recreation and Ski Areas sections for specials uses associated with recreation). A large number of these authorizations may involve small business or governments.

The Agency anticipates an increase in proposals for new reservoirs and associated water conveyance systems on NFS lands in the future. There is also the potential for proposals for new microwave, radio, or television communication facilities on NFS lands in roadless areas.

Incidental tree removal occurs in roadless areas as needed to support special use authorizations for pipelines, utilities, water conveyance systems, and all other needs. Incidental tree-cutting would continue to be allowed in roadless areas under all alternatives.

No alternative revokes, suspends or modifies any permit or other legal instrument authorizing the occupancy and use of NFS lands prior to the effective date of the rule. Forest plan direction that discourages or restricts the location of certain SUA facilities is followed in all alternatives and does not vary by alternative. SUAs evaluated in the FEIS include oil and gas pipelines from sources located outside of roadless areas, electric power lines and telecommunications facilities, water conveyance structures, and a fourth category of all other land uses (including renewable energy facilities such as wind and solar. The aggregate effect of alternatives on all types of SUAs are discussed in this report (see the FEIS for details about different SUA types).

There are existing oil and gas leases within and on lands adjacent to IRAs and CRAs. Pipelines are a necessary component of infrastructure for production and transportation of natural gas and fulfillment of lease rights. Construction or reconstruction of pipelines for existing leases within roadless areas does not vary by alternative. Natural gas pipeline mileage across roadless areas is projected to be approximately six miles under the forest plans alternative. The final rule would restrict pipeline construction in roadless areas, and these restrictions could result in an increase of about 10 miles of additional total natural gas pipeline compared with Alternative 3. Analysis of transmission natural gas pipeline operations in the U.S. indicates that labor and material costs average approximately $85,000 per mile per year. Consequently, the increase in the distribution of natural gas would be $850,000 per year greater under the final rule, Alternative 4, as well as the 2001 rule baseline condition (implying no difference in estimated increases in distribution

costs between the final rule and baseline conditions). This amount represents less than 0.2 percent of total pipeline industry output in Colorado and less than 0.1 percent of energy sector (oil and gas drilling, production. and pipelines) output in Colorado (USDA Forest Service, 2011a). This share of the energy sector is well below the E.O. 13211 criterion for adverse effects of one percent.

Electrical power lines and telecommunication lines currently are located in IRAs and CRAs. The agency will continue to receive proposals as energy sources are identified and developed.

As water needs increase throughout the country and drought cycles continue, holders are asking for authorization to expand and enlarge existing reservoirs and water conveyance structures. The agency also anticipates an increase in proposals for new reservoirs and the associated water conveyance systems on NFS lands. The location of water conveyance structures is only limited by forest plan direction and does not vary by alternative. What does change by alternative is how the water conveyance structures are constructed, reconstructed or maintained. Three of the alternatives allow for road construction for at least some of the future water conveyance structure SUAs. All of the alternatives allow for linear construction zones for at least some of the future water conveyance structure SUAs.

As alternative energy sources are explored, proposals for wind energy testing and eventual build out, and solar facilities may become more prevalent. Proposals for wind, solar, and geothermal development seem to focus on NFS lands adjacent to private land that is already being developed on ridge tops and on the National Grasslands. Subject to forest plan direction, wind and solar facilities, and other SUA uses could be allowed under all alternatives. Depending on the alternative, road construction to these facilities may or may not be allowed. Depending on the alternative, a linear construction zone may or may not be allowed for the construction or maintenance of these facilities.

Special use authorizations for oil and gas pipelines, electrical and telecommunications lines, and water conveyances issued prior to the effective date of this rule are unaffected under all alternatives. However, under Alternative 1, future authorizations (i.e., after the effective date of this rule) would generally prohibit roads but allow linear construction zones (LCZs), including for oil and gas pipelines from lease areas outside of IRAs. Approximately 4.7 miles of LCZs per year are projected under Alternative 1 (all of which are in IRAs) for these types of special use authorizations. Opportunities for future authorizations related to these types of uses are similar for Alternatives 2 and 4, however allowances for LCZs are more limiting – including the requirement that LCZs be allowed only if it can be shown that greater environmental damage would occur by constructing lines or conveyances around CRAs. Alternatives 2 and 4 also prohibit LCZ and road construction for other types of future special use authorizations (i.e., other than OG pipelines, electrical/telecommunication lines, and water conveyances). Similar to Alternative 1, 4.7 miles of LCZs per year are projected under Alternatives 2 and 4 (of which 3.3 miles are in CRAs). Road and LCZ construction would generally be allowed for a variety of future special use authorizations under Alternative 3, except where prohibited under management plans. Approximately 5.1 miles of LCZs per year are projected for the analysis area under Alternative 3. These relatively small differences in projected miles of LCZs per year suggested that alternatives will not have significant impacts on substantial numbers of businesses.

Economic impacts to small entities associated with non-recreational special uses are not expected to be significant based on the evidence above, including the small differences in projected miles of LCZs.

Local Governments

Among the 64 counties in the state of Colorado, 36 counties (56%) are considered to be small governments (population less than 50,000) and also have NFS lands within IRAs/CRAs. The extent to which these counties are impacted by the final rule is discussed in sections below.

Mineral Lease Payments and Revenue Sharing

Sizeable revenues accrue to State and local governments from the production of energy resources on Federal lands. These revenues are important contributions to the fiscal health of small and large governmental entities alike. Royalties of 12.5 percent are paid on production value from Federal mineral leases. Half of these revenues are paid to the states where production originated. In Colorado, these revenues are allocated to a variety of State funds, including the State Public School Fund, and to local jurisdictions where employees of mining companies reside.

State and local taxes are also levied on the extraction of Federal minerals. County assessors determine the taxable value of both production and equipment then apply local mill levies to calculate property taxes due. Property tax revenues by county originating only from energy mineral activity could not be obtained for this report.

The State of Colorado imposes a severance tax that applies to energy minerals, as well as other mineral production. These revenues are distributed among state funds and local jurisdictions in a way similar to Federal mineral lease payments.

Analysis of Alternatives

Federal mineral lease payments, property taxes, and severance taxes have been estimated using the methods outlined in the economic section of the FEIS. Payments are estimated for Delta, Garfield, Gunnison, Mesa, and Pitkin counties (all of which can be considered small entities with the exception of Mesa) due to the presence of roadless areas where the likelihood of energy minerals activity is projected to change across alternatives[14].

Tables 4 through 6 show the estimated average annual State and local government revenues derived from energy mineral activity in roadless areas. For property taxes, only revenue based on production is estimated. Personal and other real property may vary by alternative, but estimates for these could not be made.

Revenue effects from oil and gas range from $13.1 million in Alternatives 1, 2, and 4 to $14.5 million in Alternative 3. Colorado’s share of Federal mineral lease royalties are about three

[14] The list of counties included in the energy impacts model differs from the list of counties that are projected to experience changes in mineral lease payments due to the fact that the location of employees associated with energy sector jobs does not coincide exactly with the physical location of mineral activity in roadless areas responsible for determining lease payments.

times larger than either severance or property tax receipts in all alternatives. Generally, property tax revenues account for the largest share of local government receipts when production occurs in the county. Other counties across Colorado share severance tax receipts and Federal mineral lease royalties through allocations directed by Colorado statute and executed by the Colorado Department of Local Affairs. Mesa County is projected to have the largest number of wells and natural gas production, and thus garners the largest share of local government revenues.

Revenue effects from coal range from $15.7 million in Alternatives 1 to $18.1 million in Alternatives 2, 3, and 4. Colorado's share of Federal mineral lease royalties for coal are generally five times larger than severance tax receipts and eleven times larger than property tax receipts in all alternatives. Generally, property tax revenues account for the largest share of local government receipts when production occurs in the county. Other counties across Colorado share severance tax receipts and Federal mineral lease royalties through allocations directed by Colorado statute and executed by the Colorado Department of Local Affairs. Gunnison County contains the vast majority of coal reserves, and therefore is projected to garner the largest share of local government revenues.

Among 64 counties in the state of Colorado, 36 counties (56%) are considered to be small governments (population less than 50,000). These 36 counties are considered to be small rural counties having NFS lands within roadless areas. Six counties are energy (coal, oil and gas) producing counties. These six counties (Delta, Garfield, Gunnison, Mesa, Montrose, and Pitkin) are expected to be the counties most likely to benefit from mineral lease payments and revenue sharing under the final rule (as well as Alternative 4), and Alternative 3. Changes in mineral lease payments would be minimal in Montrose County. All of these counties, with the exception of Mesa can be considered small governments (population less than 50,000). The small population counties within the energy impact area (i.e., Delta, Garfield, Gunnison, and Pitkin), are forecast to receive increases in aggregate payments associated with property tax receipts, severance tax distributions, and federal royalty distributions from coal, and oil and gas production under the final rule relative to the 2001 Roadless Rule. There are slight decreases in aggregate payments to the small population counties under the final rule, relative to Alternative 3 (aggregate payments decrease from $4.9 million to $4.7 million per year).

For the four small population counties (i.e., Delta, Garfield, Gunnison, and Pitkin), increases in total payments and taxes received from oil, gas, and coal under the final rule (and Alternative 4) compared to the 2001 rule baseline conditions range from no change to an increase of $200,000 per year per county, or an increase of 0% to 9% of baseline payments and taxes per county. Decreases in total payments and taxes per county under the final rule (and Alternative 4) compared to the forest plans range from $27,000 to $66,000 per year (3% to 11% decrease).

Payments associated with the Secure Rural Schools and Self Determination Act (SRSA) and Payments in Lieu of Taxes (PILT) are not expected to change significantly, or any decreases would be largely offset by increases in federal mineral lease payments for these counties, as well as the remaining 31 small population counties with IRA or CRA land.

Based on these results, counties affected by mineral lease payments are forecast to receive only slightly lower payments and tax revenue from coal, oil, and gas production, as well as state distributions of severance taxes and federal royalties under the final rule (and Alternative 4) as compared to the forest plan alternative, suggesting little potential for adverse economic impacts to small governments associated with mineral lease payments. Total payments and taxes increase

under the final rule compared to the 2001 rule baseline conditions.

Table 4 - Alternative 1 (2001 Rule; Baseline Conditions) – Average annual Federal mineral lease production, payments, and related tax revenues from roadless areas, 2012-2026 (thousands of 2009 dollars per year)

	Energy-Affected Counties						
Description	Delta	Garfield	Gunnison	Mesa	Pitkin	All Other Counties	State Total
O&G Production Value	$3,338	$11,817	$41,562	$46,743	$22,863	$0	$126,324
Local property tax receipts (production only)	$100	$311	$1,086	$1,009	$392	$0	***$2,898***
State severance tax receipts							***$2,526***
Federal mineral lease royalties							
Retained by U.S.							$8,053
Paid to Colorado							***$7,737***
*State distribution of severance tax & Federal royalties**							
Public schools							$3,869
State trust, water, & grant funds							$4,469
Direct distribution to counties/cities/towns	$109	$341	$98	$189	$0	$1,189	$1,926
Total payments & tax receipts from oil & gas	$209	$652	$1,183	$1,197	$392	$1,189	***$13,161***
Coal Production Value	$47,723	$0	$264,312	$0	$0	$0	$312,035
Local property tax receipts (production only)	$150	$0	$1,003	$0	$0	$0	***$1,153***
State severance tax receipts							***$2,295***
Federal mineral lease royalties							
Retained by U.S.							$12,731
Paid to Colorado							***$12,232***
*State distribution of severance tax & Federal royalties**							
Public schools							$9,422
State trust, water, & grant funds							$10,635
Direct distribution to counties/cities/towns	$164	$500	$143	$266	$0	$1,717	$2,791
Total payments & taxes from coal	$314	$500	$1,146	$266	$0	$1,717	***$15,679***
Aggregate payments to small pop counties	***$523***	***$1,152***	***$2,329***		***$392***		***$4,396***

Table 5 - Alternatives 2 (Final Rule) and 4 (Proposed Action with additional upper tier) – Average annual Federal mineral lease production, payments, and related tax revenues from roadless areas, 2012-2026 (thousands of 2009 dollars)

	Energy-Affected Counties						
Description	Delta	Garfield	Gunnison	Mesa	Pitkin	All Other Counties	State Total
O&G Production Value	$3,338	$11,817	$41,562	$46,743	$22,863	$0	$126,324
Local property tax receipts (production only)	$100	$311	$1,086	$1,009	$392	$0	***$2,898***
State severance tax receipts							***$2,526***
Federal mineral lease royalties							
Retained by U.S.							$8,053
Paid to Colorado							***$7,737***
*State distribution of severance tax & Federal royalties**							
Public schools							$3,869
State trust, water, & grant funds							$4,469
Direct distribution to counties/cities/towns	$109	$341	$98	$189	$0	$1,189	$1,926
Total payments & tax receipts from oil & gas	$209	$652	$1,183	$1,197	$392	$1,189	***$13,161***
Coal Production Value	$47,723	$0	$312,035	$0	$0	$0	$359,758
Local property tax receipts (production only)	$150	$0	$1,184	$0	$0	$0	***$1,334***
State severance tax receipts							***$2,646***
Federal mineral lease royalties							
Retained by U.S.							$14,678
Paid to Colorado							***$14,103***
*State distribution of severance tax & Federal royalties**							
Public schools							$7,051
State trust, water, & grant funds							$6,480
Direct distribution to counties/cities/towns	$190	$577	$164	$307	$0	$1,976	$3,217
Total payments & tax receipts from coal	$340	$577	$1,348	$307	$0	$1,976	***$18,082***
Aggregate payments to small pop counties	***$549***	***$1,229***	***$2,531***		***$392***		***$4,701***

Table 6 - Alternative 3 (Forest Plans) – Average annual Federal mineral lease production, payments, and related tax revenues from roadless areas, 2012-2026 (thousands of 2009 dollars)

Description	Energy-Affected Counties					All Other Counties	State Total
	Delta	Garfield	Gunnison	Mesa	Pitkin		
O&G Production Value	$3,855	$13,345	$43,671	$52,792	$25,812	$0	$139,475
Local property tax receipts (production only)	$116	$351	$1,141	$1,139	$442	$0	***$3,190***
State severance tax receipts							***$2,789***
Federal mineral lease royalties							
Retained by U.S.							$8,892
Paid to Colorado							***$8,543***
*State distribution of severance tax & Federal royalties**							
Public schools							$4,271
State trust, water, & grant funds							$4,934
Direct distribution to counties/cities/towns	$120	$377	$108	$208	$0	$1,314	$2,127
Total payments & tax receipts from oil & gas	$236	$728	$1,249	$1,348	$442	$1,314	***$14,522***
Coal Production Value	$47,723	$0	$312,035	$0	$0	$0	$359,758
Local property tax receipts (production only)	$150	$0	$1,184	$0	$0	$0	***$1,334***
State severance tax receipts							***$2,646***
Federal mineral lease royalties							
Retained by U.S.							$14,678
Paid to Colorado							***$14,103***
*State distribution of severance tax & Federal royalties**							
Public schools							$7,051
State trust, water, & grant funds							$6,480
Direct distribution to counties/cities/towns	$190	$577	$164	$307	$0	$1,976	$3,217
Total payments & tax receipts from coal	$340	$577	$1,348	$307	$0	$1,976	***$18,082***
Aggregate payments to small pop counties	***$576***	***$1,305***	***$2,597***		***$442***		***$4,920***

Fuels Treatments

A number of communities, many of which are small or in counties with small populations (pop<50,000), have become susceptible to natural disturbances, such as mountain pine beetle infestations, drought, and wildfire. The values at risk from disturbances can include such things as citizen health, reliable water and power supplies, infrastructure (both public and private), business activity, and general quality of life. Community infrastructure is the most visible and quantifiable value at risk. Homes, schools, retail shops, office buildings, libraries, hospitals, and police stations are just a few examples of infrastructure at risk of wildfire loss.

A national concern for community losses from wildfire prompted Congress to pass the Healthy Forests Restoration Act of 2003 (HFRA). In the act, an area known as the Wildland Urban Interface (WUI) was defined. This land is defined as an area within or adjacent to an at-risk community that is identified in recommendations to the Secretary in a community wildfire protection plan (CWPP).

At-risk communities (ARCs) are generally those with homes or other structures with basic infrastructure and services (such as utilities and roads), in or adjacent to Federal land, in which conditions are conducive to a large-scale wildfire that may cause a significant threat to human life or property. In Colorado, there are currently 1,712 at-risk communities listed in the Federal Register (66 FR 751). For analysis purposes, housing density information from the National Forests on the Edge (FOTE) (see USDA Forest Service, 2011) analysis is used as a proxy for communities-at-risk. The FOTE data maps communities at-risk in Colorado in the year 2000 and projects the communities at risk in the year 2030, based on projections of housing growth.

Census blocks identified as Rural II or Exurban/Urban (i.e., lands with 17 or more housing units per square mile) were buffered with an area defined as the “community protection zone” (CPZ). CPZ and WUI are used interchangeably in this analysis. The CPZ extends one-half mile from the boundary of an at-risk community, and up to one additional mile if any land exhibits one or more of the following characteristics:

- Has a sustained steep slope that creates the potential for wildfire behavior endangering the at-risk community;
- Has a geographic feature that aids in creating an effective fire break, such as a road or a ridge top; or
- Is in condition class 3 as defined by HFRA.

The delineation of the CPZ around communities was determined using the 0.5 mile default distance and 1.5 miles as the maximum CPZ distance. Approximately 6% and 25% of the roadless acres are within 0.5 mile and 1.5 mile respectively of the FOTE 2000 ARCs. Over 30% of the roadless acres on three National Forests, the Arapaho Roosevelt, Pike San Isabel and White River, are within 1½ miles of the FOTE 2000 at-risk communities.

By 2030, it is projected that 35% or greater of the roadless acres on each of the forests will be within 1½ miles of the FOTE 2030 at-risk communities. Within 1 ½ miles of the 2000 FOTE at-

risk communities, approximately 43% of the IRA and CRA acreage is in Condition Class 2; and 15% of the IRA acreage and 16% of the CRA acreage is in Condition Class 3. These areas are generally in need of some type of fuel treatment to reduce the wildland fire threat to the public and firefighters, as well as to reduce the hazard to communities, municipal water supplies, and other local resources. As a measure of potential effects, each alternative was evaluated to determine the impact it would have on the ability to conduct hazardous fuels reduction treatments in the WUI/CPZ and the resulting impact on wildland fire management.

National forest field personnel in Colorado projected the likelihood of mechanical fuel treatments in each roadless area under each alternative (USDA Forest Service, 2011). The purpose of these treatments would be to reduce the risk of losses from wildfire in nearby at-risk communities. The likelihood ranged from "none" to "low" to "high". Table 7 shows the CPZ land area, by county with small populations (i.e., <50,000), that overlaps with roadless areas (i.e., CRAs and/or IRAs) where likelihood of treatments are projected to be low to high. High potential is defined as only the "high" likelihood projected by forest personnel. "Potential" does not mean that these acres will be treated – that depends on project funding, overall fuel treatment priorities both in and outside of roadless areas, and other factors. However, Table 7 provides a cursory indication of potential opportunities for reducing wildfire risks to at-risk communities by county.

Table 8 provides a comparison of potential treatment acres between each alternative and Alternative 3 (forest plans). When looking at only those counties with small populations, this table shows that there are few differences between the final rule and forest plans ; areas of potential fuel treatment in CPZs increases for two counties and decreases for one county under the final rule relative to forest plans. In contrast, the results show that potential opportunities for fuel treatments may increase for ten 'small population' counties and decrease for one small population county under the final rule compared to the 2001 rule baseline conditions. Areas of potential fuel treatment in CPZs increase for only one small population county and decreases for ten under Alternative 4 compared to forest plans (Alternative 3). In contrast, areas of potential fuel treatment increase for seven small population counties and decrease for four under Alternative 4 compared to the 2001 rule baseline conditions.

Table 7. Potential Fuel Treatment Acres in the Community Protection Zone within 0.5 and 1.5 miles of At-Risk Communities, by County

County	Pop. Small? (<50k)	At-Risk-Community CPZ Area (Acres) that could benefit from WUI Treatments (1)							
		Alternative 1		Alternative 2		Alternative 3		Alternative 4	
		CPZ Area (2)	CPZ Area where Potential is Higher (3)	CPZ Area (2)	CPZ Area where Potential is Higher (3)	CPZ Area (2)	CPZ Area where Potential is Higher (3)	CPZ Area (2)	CPZ Area where Potential is Higher (3)
ARCHULETA	YES	2785 to 18743	2785 to 18743	2785 to 18743	2785 to 18743	2785 to 18743	2785 to 18743	1493 to 5708	1493 to 5708
BOULDER	0	0 to 5089	0 to 3908	0 to 5089	0 to 3908	0 to 5089	0 to 3908	0 to 5089	0 to 3908
CHAFFEE	YES	941 to 3944	941 to 3944	3700 to 11891	3700 to 11891	3700 to 11891	3700 to 11891	410 to 5725	410 to 1649
CLEAR CREEK	YES	3049 to 13886	0 to 0	3049 to 13886	0 to 0	3049 to 13886	0 to 0	3049 to 13886	0 to 0
COSTILLA	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
CUSTER	YES	0 to 0	0 to 0	4301 to 12997	4301 to 12997	4301 to 12997	4301 to 12997	2123 to 6540	0 to 175
DELTA	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
DOLORES	YES	853 to 1911	0 to 0	853 to 1911	0 to 0	853 to 1911	0 to 0	1347 to 1908	0 to 0
DOUGLAS	0	2449 to 10165	2449 to 10165	2506 to 11794	2506 to 11794	2506 to 11794	2506 to 11794	2506 to 11794	2506 to 11794
EAGLE	YES	0 to 0	0 to 0	13278 to 25332	2195 to 5027	13278 to 25332	0 to 0	3528 to 0	0 to 0
EL PASO	0	0 to 0	0 to 0	0 to 883	0 to 883	0 to 883	0 to 883	0 to 883	0 to 883
FREMONT	YES	0 to 0	0 to 0	1092 to 3640	1092 to 3640	1092 to 3640	1092 to 3640	1083 to 3593	0 to 0
GARFIELD	YES	0 to 0	0 to 0	542 to 2141	0 to 0	542 to 2141	0 to 0	0 to 0	0 to 0
GILPIN	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
GRAND	YES	2580 to 13975	150 to 2820	2430 to 11960	0 to 805	2580 to 13975	150 to 2820	2430 to 11714	0 to 559
GUNNISON	YES	78 to 1185	78 to 1185	933 to 2551	78 to 1185	933 to 2551	78 to 1185	78 to 1185	78 to 1185
HINSDALE	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
HUERFANO	YES	0 to 0	0 to 0	1693 to 6550	1693 to 6550	1693 to 6550	1693 to 6550	136 to 2560	136 to 2560
JEFFERSON	0	467 to 4425	467 to 4425	467 to 4425	467 to 4425	467 to 4425	467 to 4425	467 to 4425	467 to 4425
LA PLATA	YES	17633 to 69556	16736 to 66727	17633 to 69556	16736 to 66727	17633 to 69556	16736 to 66727	8323 to 20708	8323 to 20708
LAKE	YES	256 to 273	256 to 273	256 to 273	256 to 273	256 to 273	256 to 273	256 to 273	256 to 273
LARIMER	0	22492 to 61712	14278 to 35539	22492 to 61712	14278 to 35539	22492 to 61712	14278 to 35539	21016 to 58846	14275 to 35534
LAS ANIMAS	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
MESA	0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
MINERAL	YES	0 to 471	0 to 471	0 to 471	0 to 471	0 to 471	0 to 471	0 to 0	0 to 0
MOFFAT	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
MONTEZUMA	YES	3982 to 22857	0 to 0	3982 to 22857	0 to 0	3982 to 22857	0 to 0	5670 to 22813	0 to 0
MONTROSE	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
OURAY	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
PARK	YES	1070 to 5829	1070 to 5829	8239 to 29683	8239 to 29683	8239 to 29683	8239 to 29683	8206 to 25560	4239 to 9886
PITKIN	YES	0 to 0	0 to 0	11318 to 36279	0 to 0	9912 to 33922	0 to 0	901 to 17618	0 to 0
PUEBLO	0	0 to 0	0 to 0	2907 to 9436	1605 to 5644	2907 to 9436	2907 to 9436	0 to 269	0 to 269
RIO BLANCO	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
RIO GRANDE	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
ROUTT	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
SAGUACHE	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
SAN JUAN	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
SAN MIGUEL	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
SUMMIT	YES	166 to 1361	0 to 0	2158 to 8969	166 to 1361	2158 to 8969	166 to 1361	1130 to 3079	0 to 0
Grand Total		58801 to 235381	39209 to 154029	106614 to 373028	60096 to 221546	105358 to 372686	59354 to 222325	64152 to 224175	32184 to 99517
"Small Counties"		33393 to 153991	22016 to 99992	78242 to 279690	41241 to 159353	76986 to 279348	39196 to 156341	40163 to 142870	14935 to 42703

1) All counties have populations less than 50,000. Potential means there is some likelihood of tree-cutting for the purpose of fuel treatment.

2) Number of Colorado Roadless Area acres that overlap with Community Protection Zones for at-risk communities where the likelihood of tree cutting for the purpose of fuel treatment is projected to be "low" or "high" by forest units in the most recent roadless area activity projection survey (completed summer, 2010)

3)Number of Colorado Roadless Area acres that overlap with Community Protection Zones for at-risk communities where the likelihood of tree cutting for the purpose of fuel treatment is projected to be "high" by forest units in the most recent roadless area activity projection survey (completed summer, 2010)

Table 8. Potential Fuel Treatment Acres in the CPZs within 0.5 and 1.5 miles of At-Risk Communities Compared to Alternative 3, by County

County	Pop. Small? (<50k)	CPZ Areas (Acres) for At-Risk-Communities (ARCs) where potential for treatment may increase (1)					
		Alt 1 vs. Alt 3		Alt 2 vs. Alt 3		Alt 4 vs. Alt 3	
		CPZ Area (2)	CPZ Area where Potential is Higher (3)	CPZ Area (2)	CPZ Area where Potential is Higher (3)	CPZ Area (2)	CPZ Area where Potential is Higher (3)
ARCHULETA	YES	0 to 0	0 to 0	0 to 0	0 to 0	-1291 to -13035	-1291 to -13035
BOULDER	0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
CHAFFEE	YES	-2760 to -7947	-2760 to -7947	0 to 0	0 to 0	-3290 to -6166	-3290 to -10242
CLEAR CREEK	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
COSTILLA	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
CUSTER	YES	-4301 to -12997	-4301 to -12997	0 to 0	0 to 0	-2179 to -6457	-4301 to -12822
DELTA	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
DOLORES	YES	0 to 0	0 to 0	0 to 0	0 to 0	494 to -3	0 to 0
DOUGLAS	0	-57 to -1629	-57 to -1629	0 to 0	0 to 0	0 to 0	0 to 0
EAGLE	YES	-13278 to -25332	0 to 0	0 to 0	2195 to 5027	-9750 to -25332	0 to 0
EL PASO	0	0 to -883	0 to -883	0 to 0	0 to 0	0 to 0	0 to 0
FREMONT	YES	-1092 to -3640	-1092 to -3640	0 to 0	0 to 0	-9 to -47	-1092 to -3640
GARFIELD	YES	-542 to -2141	0 to 0	0 to 0	0 to 0	-542 to -2141	0 to 0
GILPIN	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
GRAND	YES	0 to 0	0 to 0	-150 to -2015	-150 to -2015	-150 to -2261	-150 to -2261
GUNNISON	YES	-854 to -1366	0 to 0	0 to 0	0 to 0	-854 to -1366	0 to 0
HINSDALE	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
HUERFANO	YES	-1693 to -6550	-1693 to -6550	0 to 0	0 to 0	-1557 to -3990	-1557 to -3990
JEFFERSON	0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
LA PLATA	YES	0 to 0	0 to 0	0 to 0	0 to 0	-9309 to -48848	-8412 to -46019
LAKE	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
LARIMER	0	0 to 0	0 to 0	0 to 0	0 to 0	-1475 to -2866	-2 to -5
LAS ANIMAS	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
MESA	0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
MINERAL	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to -471	0 to -471
MOFFAT	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
MONTEZUMA	YES	0 to 0	0 to 0	0 to 0	0 to 0	1688 to -43	0 to 0
MONTROSE	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
OURAY	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
PARK	YES	-7169 to -23853	-7169 to -23853	0 to 0	0 to 0	-33 to -4123	-4000 to -19797
PITKIN	YES	-9912 to -33922	0 to 0	1406 to 2357	0 to 0	-9011 to -16304	0 to 0
PUEBLO	0	-2907 to -9436	-2907 to -9436	0 to 0	-1302 to -3792	-2907 to -9167	-2907 to -9167
RIO BLANCO	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
RIO GRANDE	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
ROUTT	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
SAGUACHE	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
SAN JUAN	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
SAN MIGUEL	YES	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0	0 to 0
SUMMIT	YES	-1992 to -7607	-166 to -1361	0 to 0	0 to 0	-1028 to -5890	-166 to -1361
GRAND TOTAL		-46557 to -137304	-20145 to -68296	1256 to 342	742 to -779	-41206 to -148511	-27170 to -122808
"Small Counties"		-43593 to -125355	-17181 to -56348	1256 to 342	2045 to 3012	-36821 to -136477	-24259 to -113638

1. Ranges reflect numbers of CRA acres located within 0.5 to 1.5 miles of ARCs (i.e., overlap with CPZs).
2. Increase in 'potential' is assumed to occur if the likelihood of tree-cutting in association with WUI treatments changes from "little or no" likelihood to "low" or "high" likelihood in CRAs that overlap with CPZs (as specified by Forest Units in the most recent CRA activity projections survey).
3. Increase in potential is assumed to occur if the likelihood of tree-cutting in association with WUI treatments changes from "little or no" or "Low" likelihood to "High" likelihood in CRAs that overlap with CPZs (as specified by Forest units in the most recent CRA activity projection surveys (summer, 2010).

Table 8 (continued)

County	Pop. Small? (<50k)	CPZ Areas (Acres) for At-Risk-Communities (ARCs) where potential for treatment may increase (1)			
		Alt 2 vs. Alt 1		Alt 4 vs. Alt 1	
		CPZ Area (2)	CPZ Area where Potential is Higher (3)	CPZ Area (2)	CPZ Area where Potential is Higher (3)
ARCHULETA	YES	0 to 0	0 to 0	-1291 to -13035	-1291 to -13035
BOULDER	0	0 to 0	0 to 0	0 to 0	0 to 0
CHAFFEE	YES	2760 to 7947	2760 to 7947	-530 to 1781	-530 to -2295
CLEAR CREEK	YES	0 to 0	0 to 0	0 to 0	0 to 0
COSTILLA	YES	0 to 0	0 to 0	0 to 0	0 to 0
CUSTER	YES	4301 to 12997	4301 to 12997	2123 to 6540	0 to 175
DELTA	YES	0 to 0	0 to 0	0 to 0	0 to 0
DOLORES	YES	0 to 0	0 to 0	494 to -3	0 to 0
DOUGLAS	0	57 to 1629	57 to 1629	57 to 1629	57 to 1629
EAGLE	YES	13278 to 25332	2195 to 5027	3528 to 0	0 to 0
EL PASO	0	0 to 883	0 to 883	0 to 883	0 to 883
FREMONT	YES	1092 to 3640	1092 to 3640	1083 to 3593	0 to 0
GARFIELD	YES	542 to 2141	0 to 0	0 to 0	0 to 0
GILPIN	YES	0 to 0	0 to 0	0 to 0	0 to 0
GRAND	YES	-150 to -2015	-150 to -2015	-150 to -2261	-150 to -2261
GUNNISON	YES	854 to 1366	0 to 0	0 to 0	0 to 0
HINSDALE	YES	0 to 0	0 to 0	0 to 0	0 to 0
HUERFANO	YES	1693 to 6550	1693 to 6550	136 to 2560	136 to 2560
JEFFERSON	0	0 to 0	0 to 0	0 to 0	0 to 0
LA PLATA	YES	0 to 0	0 to 0	-9309 to -48848	-8412 to -46019
LAKE	YES	0 to 0	0 to 0	0 to 0	0 to 0
LARIMER	0	0 to 0	0 to 0	-1475 to -2866	-2 to -5
LAS ANIMAS	YES	0 to 0	0 to 0	0 to 0	0 to 0
MESA	0	0 to 0	0 to 0	0 to 0	0 to 0
MINERAL	YES	0 to 0	0 to 0	0 to -471	0 to -471
MOFFAT	YES	0 to 0	0 to 0	0 to 0	0 to 0
MONTEZUMA	YES	0 to 0	0 to 0	1688 to -43	0 to 0
MONTROSE	YES	0 to 0	0 to 0	0 to 0	0 to 0
OURAY	YES	0 to 0	0 to 0	0 to 0	0 to 0
PARK	YES	7169 to 23853	7169 to 23853	7136 to 19730	3168 to 4057
PITKIN	YES	11318 to 36279	0 to 0	901 to 17618	0 to 0
PUEBLO	0	2907 to 9436	1605 to 5644	0 to 269	0 to 269
RIO BLANCO	YES	0 to 0	0 to 0	0 to 0	0 to 0
RIO GRANDE	YES	0 to 0	0 to 0	0 to 0	0 to 0
ROUTT	YES	0 to 0	0 to 0	0 to 0	0 to 0
SAGUACHE	YES	0 to 0	0 to 0	0 to 0	0 to 0
SAN JUAN	YES	0 to 0	0 to 0	0 to 0	0 to 0
SAN MIGUEL	YES	0 to 0	0 to 0	0 to 0	0 to 0
SUMMIT	YES	1992 to 7607	166 to 1361	964 to 1717	0 to 0
GRAND TOTAL		47813 to 137646	20887 to 67517	5351 to -11207	-7025 to -54512
"Small Counties"		44849 to 125697	19226 to 59360	6773 to -11122	-7079 to -57289

The results above indicate that adverse impacts to small (county) governments, in association with providing opportunities for protection of values at risk from wildfire within the WUI are not likely under the final rule, when compared to the 2001 rule baseline conditions, nor with the forest plans alternative. Similarly, adverse impacts to small governments are limited to a small number of counties under Alternative 4 when compared to the 2001 rule. There may be some potential exists for adverse impacts to small county governments under Alternative 4 when compared to forest plans.

Mitigation Measures for Small Entities

Mitigation measures associated with existing programs and laws regarding leasable minerals revenue sharing with counties as well as Forest Service small business shares or set-asides for timber will continue to apply.

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ACRONYMS

BLM	United States, Department of Interior, Bureau of Land Management
bo	Barrel of oil
CCF	Hundred cubic feet of timber
CPZ	Community protection zone (as it applies to wildfire management)
DOLA	Colorado Department of Local Affairs
EIS	Environmental Impact Statement
LCZ	Linear construction zone (for utility lines etc.)
MBF	Thousand board feet of timber
Mcf	1,000 cubic feet of gas
MMBF	Million board feet of timber
NAICS	North American Industrial Classification System
NEPA	National Environmental Policy Act
NF	National Forest
NFS	National Forest System
PILT	Payments in Lieu of Taxes
RDEIS	Revised draft environmental impact statement
ROS	Recreational Opportunity Spectrum
SBA	United States Small Business Administration
SRSA	Secure Rural Schools and Self Determination Act