

## APPENDIX E: CUMULATIVE EFFECTS



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### INTRODUCTION

This appendix is intended to set the stage for the cumulative effects analyses described in chapter 3 for each resource topic. A cumulative impact refers to an impact on the environment which results from the incremental impact of the proposed action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR §1508.7).

Reasonably foreseeable future actions, for purposes of this analysis, were determined to be those that are already authorized, contained in draft or final plans, or budgeted for implementation. They do not include highly speculative actions, such as proposed legislation, regulations that may not be approved, or projects for which resources have not been allocated.

Past actions have contributed to existing conditions and trends in Colorado’s roadless areas. They are reflected in the descriptions of affected environment for each resource topic in chapter 3. Therefore, past actions are not itemized in this appendix.

Table E-1 lists the past, present, and reasonably foreseeable actions (including programs and regulations that permit or prohibit actions), which are known to occur or likely to occur in roadless areas in Colorado or adjacent to roadless areas. The listed actions are those the interdisciplinary team identified that may combine with the effects of the road construction, tree-cutting, and other specific actions allowed or projected in roadless areas under each roadless area management alternative. Additionally, the table summarizes the environmental effects that may have additive effects when considered together with the direct/indirect effects of the alternatives. These potential cumulative actions and their associated potential effects in roadless areas were used to evaluate the cumulative effects described in each section of chapter 3.

**Table E-1. Actions that may contribute to cumulative effects**

Ongoing or foreseeable action	Key ongoing or foreseeable effects
<b>Ground-disturbing activities</b>	
Past wildfire suppression	Increased hazardous fuels
Increase in oil and gas operations	Increase in roads, decrease in air quality
Increase in coal mining operations	Increase in roads, decrease in air quality
Increase in locatable mineral development	Increase in roads
Increased recreation use including hunting and fishing	Increase in invasive plants; increase in human-caused wildfires; soil disturbance and sedimentation; disturbance to wildlife and plant habitat/species

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Ongoing or foreseeable action	Key ongoing or foreseeable effects
Livestock grazing within or outside of roadless areas	Reduced grass cover; increased soil disturbance; reduced water quality
Prescribed burning within or outside of roadless areas	Reduced live and dead fuels; reduced risk of high-severity wildfire; increased nutrient cycling and new plant generation; smoke production; increase in invasive plants.
Tree cutting outside of roadless areas	Reduced stand density; increased skid roads, landings, disturbed soil, erosion, sediment, invasive plants; habitat/species disturbance; increased resistance to crown fire and insect and disease outbreaks
<b>Trends that may affect roadless areas</b>	
Population growth – new homes and infrastructure on lands around NFS	Increase in human-caused wildfires; fish and wildlife habitat/species disturbance and fragmentation; soil and water quality impacts; increase in roads to private property; decrease in scenic quality surrounding NFS lands; increase in invasive species; increase in need for water, reduced long-term water supply
Decrease in open space	Areas without development are important for maintaining resources (outdoor recreation, clean water and air, forest products, etc.)
Increase in invasive species	Limits effectiveness of habitat improvements or efforts for species recovery
Insect and disease activity in Colorado	In 2009 in Colorado: over 2.9 million acres of pine forests are infested with mountain pine beetle; approximately 435,000 acres of spruce forest infested with spruce beetle; 277,000 acres infested with Douglas-fir beetle; 184,000 acres infested with western balsam bark beetle activity; 382,000 acres infested with western spruce budworm activity; and 342,000 acres of aspen damaged by aspen dieback and mortality. These acres are within and outside of roadless areas. Insect and disease activity results in accumulation of hazardous fuels and risk and severity of wildfire.
<b>Programmatic actions and/or policies</b>	
Forest plans	Forest plan management area direction prescribes permissible activities within roadless areas.
Forest plan revisions	One of the eight forest plans are in revision with three additional forest plans soon to be revised; increased restrictions on road construction and tree-cutting may be imposed in future updated plans
Southern Rockies Lynx Amendment	This amendment affects all forests in Colorado, other than the Manti-La Sal. The Southern Rockies Lynx Amendment conserves and promotes recovery of Canada lynx, which could further restrict circumstances allowing road construction and tree cutting in roadless areas
Travel Management Rule	Designate roads, areas, and motorized trails as open or closed to motorized vehicles likely leading to fewer roads open for public use
Healthy Forest Restoration Act of 2003 (P.L. 108-148, HFRA)	Provisions expediting hazardous fuel reduction and forest restoration projects at the wildland-urban interface or on land under a community wildfire protection plan
Executive Order 13443- Facilitation of Hunting Heritage and Wildlife Conservation	Directs the agency to facilitate the expansion and enhancement of hunting opportunities where appropriate to address declining trends; actions taken to enhance game species and habitat may interact with roadless management alternatives
Energy Policy Act of 2005, and Western Energy Corridor ROD	Federal agencies are prepared an EIS with proposed energy corridor designations (oil, gas, hydrogen pipelines, electricity transmission and distribution facilities) in the western United States; no proposed corridors pass through roadless areas in Colorado

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Ongoing or foreseeable action	Key ongoing or foreseeable effects
Idaho Roadless Rule	The Idaho Roadless Rule was published on October 16, 2008. The Idaho Roadless Rule places Idaho's 9.3 million acres of IRAs into five themes, ranging from passive to more active management. The Idaho Rule and the Colorado Rule are not connected actions; however, they may each incrementally affect the management of roadless areas at the national scale, in relation to the 2001 Roadless Rule.
Legal uncertainty surrounding the 2001 Roadless Rule	The agency is waiting on the outcome of the government's appeal to the Tenth Circuit in the <i>Wyoming</i> case before considering if other courses of actions are warranted. Currently, the Administrative Procedure Act (§553(e)) and Departmental regulations at 7 Code of Federal Regulations (CFR) 1.28 petitioning procedures used by the States of Idaho and Colorado are available to any state or territory which contain NFS roadless areas. It is anticipated that any individual state petition submitted to the Secretary of Agriculture would be limited to the areas within the state and would not overlap into other states. The content and outcome of any of these petitions are too speculative to be analyzed at this time and would be analyzed as part of any rulemaking effort for that state. At this time, the agency is not working on any national or state-specific rulemaking for roadless areas other than the proposed Colorado Roadless Rule.

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<sup>1</sup> Numerous other laws, regulations, executive orders, policies and initiatives can indirectly influence federal land management including roadless area management. Those selected in this appendix are considered the most relevant in terms of their potential cumulative effects in association with the alternatives that are the subject of this EIS.

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