



Grand Staircase-Escalante National Monument and Kanab-Escalante Planning Area Proposed Resource Management Plans and Final Environmental Impact Statement

Executive Summary

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BLM Mission

It is the mission of the Bureau of Land Management to sustain health, diversity, and productivity of the public lands for use and enjoyment of present and future generations.

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**U.S. Department of the Interior
Bureau of Land Management
Grand Staircase Escalante National Monument, Utah**

August 2019

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Abbreviations-Acronyms

Term	Definition
ACEC	Area of Critical Environmental Concern
AUM	Animal unit month
BLM	Bureau of Land Management
BMP	Best management practice
CFR	Code of Federal Regulations
CO	Carbon monoxide
CO ₂	Carbon dioxide
EC	Escalante Canyons Unit
EIS	Environmental Impact Statement

Term	Definition
ERMA	Extensive Recreation Management Area
ESA	Endangered Species Act
FLPMA	Federal Land Policy and Management Act of 1976
FMP	Fire Management Plan
GHG	Greenhouse gas
GS	Grand Staircase
GSENM	Grand Staircase-Escalante National Monument
HA	Herd area
KEPA	Kanab-Escalante Planning Area
KP	Kaiparowits Unit
MMP	Monument Management Plan
MZ	Management Zone
N/A	Not applicable
NAAQS	National Ambient Air Quality Standard
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NO ₂	Nitrogen dioxide
NO _x	Nitrogen oxides
NPS	National Park Service
NRA	National Recreation Area
NTMC	National Trail Management Corridor
OHV	Off-highway vehicle
OSNHT	Old Spanish National Historic Trail
PEIS	Programmatic Environmental Impact Statement
PFYC	Potential Fossil Yield Classification
PSD	Prevention of Significant Deterioration
R&I	Relevant and important
RMP	Resource Management Plan
RMZ	Recreation Management Zone
ROD	Record of Decision
ROW	Right-of-way
SIL	Significant Impact Level
SRMA	Special Recreation Management Area
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
VOC	Volatile organic compound
VRI	Visual Resource Inventory
VRM	Visual Resource Management
WSA	Wilderness Study Area

Executive Summary

Introduction

This Final Environmental Impact Statement (EIS) analyzes the environmental effects for four distinct Resource Management Plans (RMPs): an RMP for each of the Grand Staircase-Escalante National Monument (GSENM) units—Grand Staircase, Kaiparowits, and Escalante Canyons—and an RMP for Federal lands previously included in the monument that were excluded from the boundaries by Presidential Proclamation 9682 (i.e., Kanab-Escalante Planning Area [KEPA] lands).

The Planning Area encompasses approximately 1.86 million acres of Federal land, including lands originally designated under Presidential Proclamation 6920 on September 18, 1996, and lands added to the monument through subsequent legislated boundary adjustments and land exchanges. On December 4, 2017, President Trump issued Presidential Proclamation 9682 modifying GSENM and excluding from designation and reservation approximately 861,974 acres of Bureau of Land Management (BLM)-administered surface land. Lands that remain part of GSENM (1,003,863 acres) are included in three units, known as the Grand Staircase (209,993 acres), Kaiparowits (551,034 acres), and Escalante Canyons (242,836 acres) units. KEPA is composed of the Federal lands that Proclamation 9682 excluded from the national monument (861,974 acres) (Map 1).

Purpose and Need

The purpose of a land use plan is to ensure BLM-administered surface lands are managed in accordance with the Federal Land Policy and Management Act of 1976 (FLPMA), which requires that the BLM “develop, maintain, and when appropriate, revise land-use plans” (43 United States Code [U.S.C.] 1712(a)). The purpose of these RMPs is to provide the allocation of resources and a comprehensive framework for the BLM’s management of the public lands within the separate Planning Areas pursuant to the multiple-use and sustained yield mandates of FLPMA and the specific direction in Presidential Proclamation 6920, as modified by Presidential Proclamation 9682. For the lands that remain within GSENM, the new RMPs will implement the modifications included in Presidential Proclamation 9682 and provide the proper care and management of the “object[s] of antiquity” and “objects of historic or scientific interest” (16 U.S.C. 431–433) that were identified in Presidential Proclamation 6920, as modified by Presidential Proclamation 9682. These objects are also identified in Appendix E (*Grand Staircase-Escalante National Monument Objects and Resource Values*) of this Final EIS. For lands excluded from GSENM by Presidential Proclamation 9682 (i.e., KEPA lands), the new RMP will implement the President’s vision that the lands are managed for multiple use, consistent with other applicable legal requirements.

Presidential Proclamation 9682 required the preparation of an RMP for each of the three units within GSENM. Once the BLM approves the RMPs, it will revise the existing GSENM plan and replace the management from the existing plan for the BLM-administered lands within the monument. The proclamation also modified the boundaries of GSENM and both modified and clarified the management direction for the monument. In light of the boundary modifications and other changed conditions since the preparation of the existing Approved Monument Management Plan (MMP) and Record of Decision (ROD) (BLM 2000), a new plan is also needed

to determine appropriate management actions for lands that are no longer part of GSENM (i.e., KEPA lands).

Public Involvement

The formal scoping period began on January 16, 2018, with the publication of the notice of intent in the *Federal Register*. The scoping period ran through April 13, 2018, and the BLM held two public scoping meetings during this time. The BLM received 120,061 comment submissions from the public during and after the official public scoping period. Of the 120,061 submissions, 8,437 were individual comments, 111,532 were form letters, and 92 were duplicate submissions. Refer to the scoping report for more information about the results of the scoping process (BLM 2018a).

The GSENM/KEPA Draft RMPs/EIS was released on August 17, 2018, with a revised document released on August 31, 2018. Release of the Draft RMPs/EIS initiated a public comment period that ran through November 30, 2018. During the comment period, the BLM hosted two public meetings in October 2018 in Escalante and Kanab, Utah. Each meeting was held in an open-house format to encourage one-on-one discussion between the public and BLM staff. The BLM answered questions, provided information, and encouraged meeting attendees to submit comments. A total of 197 people attended the meetings. Chapter 4, *Consultation and Coordination*, of the Proposed RMPs/Final EIS contains additional information regarding the public comment meetings and other public outreach and participation opportunities that occurred throughout the development of the RMPs/EIS.

The BLM received written comments on the Draft RMPs/EIS by mail, email, electronic submission through the BLM's Comment Analysis and Response Application (CARA), and submissions at the public meetings. The BLM also received oral comments transcribed at the public meetings.

Consultation and Coordination

This section summarizes the consultation and coordination efforts undertaken by the BLM throughout the RMPs/EIS process. The BLM coordinates with a variety of organizations who have interests in the Planning Area during the land use planning process. These organizations are largely tribal and other governmental bodies with responsibility for creating, administering, and monitoring policy on public lands within the Planning Area. Refer to Chapter 4 (*Consultation and Coordination*) for more details on public outreach, consultation, and coordination efforts throughout the preparation of the RMPs/EIS.

Cooperating Agencies

The BLM invited 11 State and Federal agencies and two counties to be cooperating agencies; of these, five signed formal memoranda of understanding with the BLM to share knowledge and resources throughout development of the RMPs/EIS. Additionally, the BLM invited the following seven federally recognized Native American tribes to participate as cooperating agencies: Kaibab Band of Paiute Indians, Navajo Nation, Paiute Indian Tribe of Utah, Pueblo of Zuni, the Hopi Tribe, Pueblo of San Felipe, and the Uintah and Ouray Ute Tribe. The Kaibab Band of Paiute Indians and Pueblo of San Felipe accepted the invitation to be cooperating agencies.

The BLM held initial cooperating agency meetings from May 8 through May 11, 2018, to familiarize cooperators with the RMP development process and to develop alternatives. The

BLM held another workshop with the cooperating agencies on May 29 and May 30, 2018, for them to comment on and further refine the alternatives. Following release of the Draft RMPs/EIS, the BLM hosted a meeting with cooperating agencies on February 12 and 13, 2019, to solicit input on the Proposed Plans. During the RMPs/EIS process, the BLM provided cooperating agencies opportunities to review administrative draft versions of the RMPs/EIS and other information including review of the administrative draft RMPs/EIS and the administrative draft of the Proposed RMPs/Final EIS. The BLM continued to work with cooperating agencies throughout the process to refine and finalize content.

Native American Tribes

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, requires Federal agencies to coordinate and consult on a government-to-government basis with sovereign Native American tribal governments whose interests may be directly and substantially affected by activities on federally administered lands. Consultation with federally recognized Native American tribes is also required under the National Environmental Policy Act (NEPA), FLPMA, and Presidential Proclamation 9682. The BLM invited seven tribes to participate as cooperating agencies. The Kaibab Band of Paiute Indians and Pueblo of San Felipe accepted the invitation to be cooperating agencies.

In July 2018, the BLM initiated government-to-government consultation with ten Native American tribes: the Kaibab Band of Paiute Indians, the Hopi Tribe, the Navajo Nation, the Paiute Indian Tribe of Utah, the Pueblo of Acoma, the Pueblo of Tesuque, the Pueblo of San Felipe, the Pueblo of Zuni, the San Juan Southern Paiute Tribe, and the Uintah and Ouray Ute Tribe. The Pueblo of San Felipe later agreed to be a cooperating agency on December 4, 2018. The Shivwits Band of the Paiute Indians and the Pueblo of San Felipe expressed interest in future consultation and meetings. The BLM has continued to engage and consult with all interested tribes throughout the planning process.

Prior to the completion of the Final EIS, the BLM extended an offer to meet with each of the interested tribes to provide an update and discuss any concerns they might have. None of the contacted tribes accepted the BLM's offer for this additional consultation.

U.S. Fish and Wildlife Service

Presidential Proclamation 9682 directs the BLM to consult with other Federal land management agencies in the local area during the development of the RMPs. Endangered Species Act (ESA) Section 7 consultation between the BLM and the U.S. Fish and Wildlife Service (USFWS) is ongoing. Under ESA Section 7(a)(2), the BLM must ensure that the proposed action is not likely to jeopardize the continued existence of federally listed threatened and endangered species or adversely modify designated critical habitat. Following development of the Proposed Plans identified in these RMPs/EIS, the BLM coordinated with the USFWS to develop a Biological Assessment. The BLM will submit the Biological Assessment and initiate formal consultation with the USFWS as required under ESA Section 7(a)(2). Following USFWS review of the Biological Assessment, the USFWS will prepare a Biological Opinion that will be integrated into the ROD, as appropriate.

State Historic Preservation Officer Consultation

During preparation of these RMPs/EIS, the BLM coordinated with State agencies, local counties, the State Historic Preservation Officer (SHPO), and other consulting parties in

compliance with Section 106 of the National Historic Preservation Act. The SHPO is included as a cooperating agency within the Memorandum of Agreement with the State of Utah and the Public Lands Policy Coordination Office. The Public Lands Policy Coordination Office is responsible for coordinating and commenting on all proposals for Utah’s public lands. The BLM, in conversation with the SHPO, determined that the BLM can meet Section 106 coordination requirements through the NEPA process, as provided by 36 Code of Federal Regulations (CFR) 800.8. The National Park Service (NPS) will be designated as a co-lead Federal agency to serve as the agency official responsible for fulfilling its collective responsibilities under Section 106 of the National Historic Preservation Act pursuant to 36 CFR 800.2(a) when GSENM-administered grazing undertakings occur within the Glen Canyon National Recreation Area’s boundary on both BLM and NPS lands. The designation will be documented in the environmental record prepared for NEPA and during Section 106 consultation. Where such future actions have the potential to cause effects on historic properties on lands under the jurisdiction of the NPS, Glen Canyon National Recreation Area will remain responsible for making determinations of eligibility, assessment of effects, and treatment of effects for those properties. Additionally, the BLM will be the agency responsible for complying with Section 106 of the National Historic Preservation Act on BLM-administered surface lands and the NPS will be the responsible agency on Glen Canyon National Recreation Area lands.

In addition to government-to-government consultation, the BLM invited 16 consulting parties to participate in the Section 106 process to provide input on historic properties that may be affected by proposed decisions and to provide other input. Refer to Chapter 2, Section 4.3.3.2, *State Historic Preservation Officer Consultation*, for a full list of parties invited to participate in the Section 106 process.

Planning Issues

Planning issues are related to concerns or controversies about existing and potential land and resource allocations; levels of resource use, production, and protection; and related management practices. During the scoping period, the BLM solicited comments from the public, organizations, tribal governments, and Federal, State, and local agencies to identify potential issues to be analyzed in detail in the EIS. BLM resource specialists and cooperating agency input also identified management issues and concerns. Table ES-1 identifies the primary issues identified during public and agency scoping, by resource.

Table ES-1. Issues Identified during Scoping, by Resource

Issues Identified during Scoping
Air Quality and Climate
What would be the potential impacts on air quality and climate change from management activities in the Planning Area?
Cultural Resources
How will the BLM address the conflicts between other land uses (such as recreation activities, OHV use, mineral development, and livestock grazing) and protection and preservation of cultural resources?
How will the BLM address the increasing demand of recreational use centered on cultural heritage?
Will the BLM provide Native Americans access to public lands for their traditional uses and practices?

Issues Identified during Scoping

Biological Resources

What impacts would resource uses (e.g., livestock grazing, recreation activities, OHV use, mineral development) have on vegetation in the Planning Area?

How will the BLM determine the appropriate levels and methods of vegetation management?

Will the BLM establish objectives to manage that habitat for special status species, such as Kodachrome bladderpod, Jones cycladenia, and Ute ladies'-tresses?

What would be the impact of other resource uses (e.g., livestock grazing, recreation activities, OHV use, mineral development) and drought on wildlife species and their habitat?

Will the BLM establish objectives to manage habitat for special status species such as Mexican spotted owl, southwestern willow flycatcher, California condor, and Kanab ambersnail?

Lands with Wilderness Characteristics

Will the BLM identify lands with wilderness characteristics and develop appropriate management allocations to manage for those characteristics as a priority?

Paleontological Resources and Geology

Will the BLM identify measures to reduce potential impacts on paleontological resources from resource uses such as mineral development, OHV use, and recreational use?

Will the BLM identify appropriate opportunities for study and preservation of important paleontological resources?

Soil Resources and Water Resources

How will the BLM protect, maintain, and restore soils, riparian areas, and watersheds with respect to potential impacts from increased recreation use, livestock grazing, mineral development, and other resource uses?

Fire and Fuels

How will the BLM address wildland fire and fuels management and its potential impacts on other resources in the Planning Area?

Visual Resources, Night Skies, and Natural Soundscapes

How will the BLM protect the Planning Area's visual resources?

How will the BLM protect the Planning Area's dark sky values?

How will the BLM protect the Planning Area's soundscape values?

Forestry and Woodland Products

How will the BLM address access to woodland products for subsistence and traditional uses, as well as for commercial harvesting and forest management?

Lands and Realty and Renewable Energy

What lands in the Planning Area will be identified for retention, disposal, and acquisition, as well as potential rights-of-way and utility corridors?

How will the BLM address potential impacts on private inholdings and adjacent private lands?

Livestock Grazing

How will the BLM determine which areas should be open or closed to livestock grazing, and what should be the proper AUM levels for allotments?

How will the BLM determine proper rangeland health management levels and practices?

How can the BLM address permittees' ability to improve and maintain fences, water facilities, etc.?

How can the BLM reduce conflicts between grazing and other resource uses?

Issues Identified during Scoping

Minerals

What lands in the Planning Area will be made available for mineral development, and what would be the potential impacts of that development?

Recreation

Can recreational use in both high-use and low-use areas be managed to provide recreation opportunities while minimizing conflicts with other resource values and uses (e.g., protection of sensitive resources, livestock grazing, vegetation management, and minerals management)?

Will the BLM determine the proper level of developed recreational facilities to address increased visitation while maintaining opportunities for primitive recreation and protecting sensitive resources?

How can visitation and the permit system be managed to promote the optimum recreation experience and resolve issues caused by growing recreation use?

How will the BLM resolve recreation-related human health and safety problems, such as disposal of human waste, protection of water quality, and road safety?

How can the transportation system in the Planning Area be managed to provide an appropriate level of access for a variety of user groups, such as hikers, cyclists, OHV users, equestrians, and aircraft pilots?

Travel Management

How should the transportation system in the Planning Area be managed to accommodate increased visitation while protecting sensitive Planning Area resources?

Wilderness Study Areas and other Special Designations

How will the BLM manage the 16 existing WSAs in the Planning Area?

Will the BLM revise existing designations in the Planning Area or propose new designations, including ACECs, Wild and Scenic Rivers, National Trails, and Research Natural Areas?

Social and Economic

How will management of the Planning Area affect local economies?

Process

How will State and local authorities, recreational groups, environmental groups, the GSENM Advisory Committee, or other management boards and stakeholders contribute to the planning process and ongoing management of the Planning Area?

How will Native American Tribes be included in the planning process?

How will information about the planning process be disseminated to the public, and how will meaningful public input on the planning process be facilitated?

Will the BLM coordinate with nearby management entities, such as the National Park Service and state and local governments, to ensure that Planning Area management is consistent with other existing management plans?

Source: BLM 2018a

BLM – Bureau of Land Management, OHV – off-highway vehicle, AUM – animal unit month, WSA – Wilderness Study Area, ACEC – Area of Critical Environmental Concern, GSENM – Grand Staircase-Escalante National Monument

Alternatives

In accordance with the requirements of NEPA, as amended (42 U.S.C. 4321 et seq.), the BLM sought cooperating agency and public input in the development of a range of reasonable alternatives. The EIS analyzes five alternatives in detail, each varying in context and intensity of potential management, including a no action alternative (Alternative A).

An overview of the key decisions associated with each alternative is provided below. Refer to Chapter 2 (*Alternatives*) for a complete description of the alternatives. All of the alternatives ensure the proper care and management of the monument objects identified in Presidential Proclamation 6920, as modified by Presidential Proclamation 9682.

The alternatives also include management for the allotments and permits that the BLM administers in the Glen Canyon National Recreation Area to inform subsequent NPS decision making.

Alternative A (No Action Alternative/Current Management)

Alternative A (No Action) is the continuation of existing management under the GSENM MMP, and thus limits the potential for certain resource uses to the extent that it is consistent with Presidential Proclamation 9682. Under Presidential Proclamation 9682, lands within KEPA are no longer withdrawn from mineral location, entry, disposal, or leasing. This alternative is the most restrictive of travel (fewest acres designated as off-highway vehicle [OHV] open), lands and realty actions (e.g., rights-of-way [ROWs]), and mineral development. The age of the plan means it provides limited proactive management decisions to address resource issues (e.g., limited opportunities for vegetation treatments or habitat restoration). This alternative applies limited other special designations management due to the overlapping national monument designation (e.g., there are no Areas of Critical Environmental Concern [ACECs]).

Alternative B

Alternative B emphasizes conservation of physical, biological, cultural, and visual resources, and lands with wilderness characteristics in both GSENM and KEPA, with constraints on resource uses. Compared to other action alternatives, Alternative B conserves the most land area for physical, biological, and cultural resources; designates the most ACECs (14); and imposes additional restrictions on large group and OHV/mechanized recreation, and energy and mineral development in KEPA. While the overall restrictions under Alternative B are similar to those under Alternative A, it also includes additional specific proactive management to address resource conflicts (e.g., closing riparian areas to surface-disturbing activities) and conditions (e.g., allowing the development of certain new habitat treatments).

Alternative C

Alternative C facilitates more resource uses within KEPA than Alternative A and designates nine Special Recreation Management Areas (SRMAs) and five ACECs. Alternative C also emphasizes reasonable constraints on resource uses in GSENM and KEPA to reduce impacts on resource values and monument objects. Constraints under Alternative C balance the need to maintain areas as open and available for multiple uses with the need to conserve land for physical, biological, and cultural resources.

Alternative D (Preferred Alternative)

Alternative D emphasizes resource uses within KEPA and reduces constraints while ensuring the proper care and management of monument objects within GSENM and maintaining compliance with existing laws and regulations designed to protect physical, biological, cultural, and visual resources. Compared to other alternatives, Alternative D conserves the least land area for physical, biological, and cultural resources; designates no ACECs or SRMAs; and is the least restrictive to energy and mineral development in KEPA.

Alternative E (Proposed Plans)

Alternative E was developed in response to comments received on the Draft RMPs/EIS, cooperating agency input, and input from the Utah State Resource Advisory Council. Similar to Alternative D, Alternative E would emphasize resource use and reduce constraints while ensuring the proper care and management of monument objects. Unlike Alternative D, Alternative E includes five SRMAs, two Extensive Recreation Management Areas (ERMAs), and nine Recreation Management Zones (RMZs). Alternative E also includes OHV closures and allows more flexibility for group size limitations in certain areas for the protection of other resources. In addition, Alternative E would prohibit casual collection of common invertebrate and plant paleontological resources and mineral resources in GSENM compared to Alternative D, where casual collection would be allowed in specially designated and posted areas. Alternative E would also include a wider National Historic Trail Management Corridor (0.5 mile on either side of the centerline) rather than the 330-foot-wide corridor for Alternative D.

Environmental Consequences

Alternative A, No Action, is the continuation of existing management under the GSENM Approved MMP and ROD (BLM 2000), to the extent that the MMP is consistent with Presidential Proclamation 9682. Where an inconsistency exists, the specific direction in Proclamation 9682 applies. Alternative A would limit the potential of some resource uses across the public lands in the Planning Area including those lands now outside of the monument. Maintaining the current restrictions and constraints on resource uses such as lands and realty actions and mineral development would generally conserve physical, biological, cultural, visual, and other resources in the Planning Area. However, the restrictions and constraints under current management would limit resource uses in the Planning Area, especially mineral and energy development in KEPA. In addition, this alternative applies limited special designation allocations (e.g., ACECs in KEPA) and management across the Planning Area.

Among the action alternatives, Alternative B applies the most restrictions and constraints on resource use on public lands in the Planning Area. As a result, Alternative B would generally conserve physical, biological, cultural, visual, and other resources but limit resource uses such as mineral development and ROWs. Placing restrictions and constraints on mineral development in KEPA; limiting OHV use in most areas; reducing areas available for grazing and allocated animal unit months (AUMs); and excluding large areas from ROW and renewable energy development would result in adverse impacts on these resource uses but would generally benefit soil, water, vegetation, wildlife, special status species, cultural resources, and visual resources. In addition, restrictions and constraints on resource uses would benefit primitive recreational use and the maintenance of wilderness characteristics. Alternative B generally includes the greatest amount and acreage of special designations and allocations for the protection of resources including designating 14 ACECs in KEPA and managing the most lands for the protection of wilderness characteristics. Based on restrictions and constraints on resource uses, Alternative B is most likely to reduce the potential for management conflicts and associated impacts on lands adjacent to the Planning Area.

Alternative C generally provides for less conservation of physical, biological, cultural, visual, and other resources than Alternative A and Alternative B. Alternative C imposes fewer constraints on resource uses and applies targeted management and restrictions to address resource conflicts. Alternative C has fewer special designations and allocations for the protection of

resources, compared to Alternative B, including less area designated as ACECs in KEPA and less area specifically managed for the protection of wilderness characteristics. Fewer restrictions under Alternative C could increase opportunities for resource use activities compared to Alternative A and Alternative B. Alternative C also has the most area designated as SRMAs or RMZs. Alternative C would allow opportunities to maintain areas as open and available for multiple uses while also protecting resources on public lands within KEPA and ensuring the proper care and management of monument objects and values within GSENM.

Alternatives D and E provide for the proper care and management of monument objects and values and protect physical, biological, cultural, visual, and other resources to the extent required by existing laws, regulations, and agency guidance, but generally manage resource uses less restrictively than the other alternatives. Managing more public lands in KEPA as available for mineral and renewable energy development, as well as other ROW development and increasing acres available for grazing and allocated AUMs in KEPA and GSENM would have fewer adverse impacts on these resource use activities than the other alternatives. Increased resource use under alternatives D and E could increase economic effects such as employment, labor income, and industry activity compared to the other alternatives. Because fewer management actions under alternatives D and E emphasize conservation of resources, alternatives D and E may increase the potential for adverse effects on resources compared to alternatives A, B, and C. Alternatives D and E have the least amount of special designations and allocations that would protect or maintain resource values and designate no ACECs in KEPA, and do not specifically manage lands for wilderness characteristics. While Alternative D does not designate any SRMAs for targeted recreational opportunities, Alternative E manages Calf Creek, Burr Trail, Hole-in-the-Rock Road, Skutumpah, and Paria Canyons Vermilion Cliffs as SRMAs. Based on the increased potential for development and resource use, especially in KEPA, alternatives D and E are most likely to increase the potential for management conflicts and associated impacts on lands adjacent to the Planning Area. However, alternatives D and E would provide for more resource uses compared to the other alternatives and may provide more management flexibility by including less prescriptive management than the other alternatives.

Table ES-2 and Table ES-3 further summarize and compare potential environmental consequences from implementing the management alternatives. Table ES-2 provides a comparison of effects by alternative for lands within GSENM, while Table ES-2 provides a high-level overview of the key effects of each alternative for KEPA. For a detailed description of potential impacts and comparison across alternatives, refer to Chapter 3, *Affected Environment and Environmental Consequences*. The impacts analysis and the summary of impacts in Table ES-2 and Table ES-2 incorporate standard practices and best management practices described in Appendix G, *Best Management Practices*. Reclamation efforts will be applied to surface disturbance under all alternatives to reduce long-term impacts.

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Table ES-2. Summary Comparison of Environmental Consequences by Alternative for Grand Staircase Escalante National Monument Units

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Resources					
Air Quality					
Emissions from mineral development	Emissions from mineral development in GSENM would be limited to those developments that existed prior to the original GSENM designation (i.e., valid existing rights). Due to the relatively limited amount of valid existing rights in GSENM, emissions from mineral development would be negligible.				
Emissions from non-mineral activities	Existing non-mineral development activities in GSENM would be continued; therefore, emissions under Alternative A are expected to be minimal. Under Alternative A, emissions of criteria pollutants and hazardous air pollutants could result from wildfire and prescribed fire events. Livestock grazing and related management activities could generate emissions of GHGs, criteria pollutants, and fugitive dust. Livestock grazing would continue in GSENM on 941,007 acres at existing approved utilization levels. OHV use on routes open for public use in GSENM could emit particulate matter, CO, NO _x , and fugitive dust.	Emissions associated with livestock grazing are expected to be similar to those of Alternative A, but to a lesser degree due to the 714,408 acres available for grazing in GSENM under Alternative B. Emissions from OHV use would likely be similar under all alternatives. Overall emissions in GSENM associated with non-minerals activities are expected to be minimal under Alternative B.	Alternative C increases the acreage available for livestock grazing compared to alternatives A and B (942,179 acres). As a result, Alternative C could increase the potential for emissions in GSENM from livestock grazing. Emissions from OHV use would likely be similar under all alternatives.	Alternative D provides the most acres as available for livestock grazing (991,874 acres). As a result, Alternative D could increase the potential for emissions in GSENM from livestock grazing compared to the other alternatives. Emissions from OHV use would likely be similar under all alternatives.	Same as Alternative D.
NAAQS, PSD Significant Impact Levels, and visibility	Based on the continued withdrawal of GSENM from mineral entry, location, selection, sale, and leasing, there would be no anticipated violation of NAAQS, exceedance of Class I SILs, or anticipated visibility impacts in Class I or nearby Sensitive Class II areas associated with BLM management and associated resource use in GSENM.				
Cultural Resources					
Surface disturbance impacts	Surface disturbance could result in impacts on cultural resources through physical alteration or damage, moving cultural materials from their original positions (in situ) prior to scientific documentation, altering the characteristics of the environment that contribute to the significance of a cultural resource, introducing visual or audible elements out of character with the property or altering its setting, and physically exposing the resource to the extent that it deteriorates or is destroyed. Discretionary activities that would result in large-scale surface disturbance (e.g., solar energy development, leasable and salable mineral development) are restricted or prohibited under the existing MMP (BLM 2000); as a result, limited impacts on cultural resources from	Similar impacts as those of Alternative A, although to a slightly lesser degree due to management of lands with wilderness characteristics (180,095 acres). Alternative B generally increases research and other protection measures that would reduce potential surface disturbance impacts in GSENM compared to other alternatives.	Similar impacts as those of alternatives A and B, although to a slightly greater degree due to reduced constraints on resource uses and management of fewer lands with wilderness characteristics (57,995 acres).	Similar impacts as those of alternatives A, B, and C, although to a slightly greater degree due to fewer constraints on resource uses, not managing for lands with wilderness characteristics, and fewer resource-/area-specific protective measures that could reduce potential impacts on cultural resources from surface disturbance.	Same as Alternative D.

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	surface-disturbing activities are anticipated under Alternative A. BLM-permitted activities under any alternative are subject to NHPA Section 106, which means that BLM management and subsequent site-specific permitting must avoid, minimize, or mitigate direct and indirect impacts on historic properties.				
Indirect impacts from increased access	Indirect impacts could result from the development of facilities and infrastructure, increased access to previously remote or difficult to get to areas resulting in looting and vandalism, opening areas to camping or OHV use, and activities and resource uses that increase the potential for damage to or erosion effects on cultural sites. Discretionary actions that could increase visitation and access to new areas (e.g., the creation of new routes) are heavily restricted under the existing MMP (BLM 2000); as a result, limited new impacts on cultural resources from increased access are anticipated under Alternative A.	Similar impacts as those of Alternative A though to a lesser degree due to an increase of recreation management areas and management of lands with wilderness characteristics (180,095 acres) that include restrictions on travel and public access in GSENM.	Similar impacts as those of alternatives A and B, though to a slightly greater degree due to a reduction in OHV closed areas, and a smaller area managed for the protection of wilderness characteristics (57,995 acres).	Similar impacts as those of alternatives A, B, and C, though to a slightly greater degree due to managing all areas as OHV limited and not managing any lands with wilderness characteristics, allowing the highest degree of access.	Same as Alternative D.
Monument objects	Alternative A is generally anticipated to result in preservation, protection, and scientific research of monument objects due to restrictions on allowable development and surface disturbance. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of cultural resource monument objects through the application of BMPs for the protection of cultural resources as identified in Appendix G, <i>Best Management Practices</i> ; monitoring strategies for cultural resources described in Appendix I, <i>Monitoring Strategy</i> ; and tools for cultural resource site protection identified in Appendix J, <i>Cultural Resources</i> .	Same as Alternative A, except cultural resources monument objects will be assigned use categories, such as public, scientific, and traditional use. Dance Hall Rock within the Kaiparowits Unit will be assigned to public use. Under all action alternatives, the BLM will develop a Cultural Resource Management Plan and cultural resource monument objects will be assigned use categories, such as public, scientific, and traditional use. The criteria in Appendix J, <i>Cultural Resources</i> , will be used to assign cultural sites and cultural resource monument objects to the appropriate classifications.	Same as Alternative B except that increased potential for public access to Dance Hall Rock may result in greater impacts on cultural and natural resources in the vicinity of Dance Hall Rock.	Same as Alternative C.	Same as Alternative C, except proactive management for designated camping would result in fewer long-term impacts on cultural resources from dispersed camping and OHV activity.

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Native American use	No permit requirements for collection for traditional or personal use.	Non-commercial traditional use collection allowed without a permit. Free permit required for personal use collection.	Non-commercial traditional use allowed through free permits.	Non-commercial traditional use collection allowed without a permit.	Same as Alternative D.
Fish, Wildlife, and Special Status Species					
Surface disturbance and habitat alteration impacts	Surface-disturbing activities can result in impacts on fish and wildlife and special status species through habitat alteration, including the loss of vegetation used for sheltering, breeding, or foraging. Surface-disturbing activities are restricted under the existing MMP (BLM 2000), and generally prohibited in special status species habitat. Such restrictions under Alternative A would reduce harm to species and habitats. In addition, where the BLM allows a surface-disturbing action, site-specific conditions are evaluated and BMPs are applied to further reduce harm.	Similar impacts as those of Alternative A, though to a slightly lesser degree due to the management of lands with wilderness characteristics (180,095 acres), which would further support the maintenance of large blocks of contiguous habitat.	Similar impacts as those of alternatives A and B, though to a slightly greater degree due to management of fewer lands with wilderness characteristics compared to Alternative B (57,995 acres).	Similar impacts as those of alternatives A, B, and C, though to a slightly greater degree due to fewer restrictions on surface-disturbing activities and not managing for lands with wilderness characteristics.	Same as Alternative D.
Human activity and disturbance impacts	Human activity and disturbance can result in impacts on fish and wildlife and special status species through temporary noise and visual disturbance associated with light recreational use or permanent displacement of fish and wildlife and special status species from frequent heavy use or permanent habitat alterations. Alternative A also disallows rock climbing in areas of known special status bird and raptor nesting, and prohibits or relocates trails, parking areas, and other recreation facilities in special status plant species' habitat. The application of BMPs limits the potential for impacts from human activity and disturbance.	Impacts on fish and wildlife and special status species from human activity and disturbance would be similar to those of Alternative A, though to a slightly lesser degree due to the increased potential for targeted management of recreation through the designation of seven SRMAs (670,343 acres) and six RMZs (17,654 acres). Alternative B designates the most SRMAs and RMZs in GSENM and applies the most resource-specific protective measures that could reduce potential fish and wildlife and special status species disturbance or displacement impacts.	Potential impacts would be similar to those of Alternative B but to a greater degree. Alternative C designates the same SRMAs and RMZs in GSENM but manages these areas for larger group sizes and with fewer restrictions on competitive events and OHV use than does Alternative B, thereby increasing the potential for fish and wildlife and special status species disturbance or displacement impacts.	Alternative D manages GSENM as an ERMA with several RMZs; management in these areas generally allows larger group sizes and fewer restrictions on competitive events and OHV use than either Alternative B or Alternative C. Alternative D applies the least restrictive resource-specific protective measures of any alternative, which would increase the potential for fish and wildlife and special status species disturbance or displacement impacts.	Same as Alternative D, except Alternative E manages Calf Creek, Burr Trail, Hole-in-the-Rock Road, and Skutumpah as SRMAs and group size limits could be adjusted within WSAs on a case-by-case basis, potentially reducing fish, wildlife, and special status species disturbance or displacement impacts.
Habitat restoration impacts	Vegetation treatments can result in long-term habitat maintenance and/or improvement impacts on fish and wildlife and special status species through reduction of soil loss, improvement of crucial big game habitat, restoration of ecological function, or increased forage production. Alternative A manages habitats for the recovery or reestablishment of native	Impacts on fish and wildlife and special status species from habitat restoration activities would be similar to those of Alternative A, though to a slightly greater degree, as Alternative B provides increased flexibility for various vegetation treatments and habitat restoration activities in GSENM. As a result, the potential for short-term habitat alteration and long-term habitat maintenance and/or	Alternative C would result in impacts on fish and wildlife and special status species from habitat restoration activities similar to those of Alternative B but to a slightly greater degree in both the short and long term. Alternative C manages habitats for the recovery or reestablishment of both native and naturalized species and allows increased flexibility for various vegetation treatments and habitat	Alternative D would increase the potential for short-term habitat alteration impacts and would increase the potential for long-term habitat maintenance and/or improvement impacts on fish and wildlife and special status species in GSENM compared to the other alternatives. Alternative D manages habitats for the recovery or reestablishment of native, naturalized, and introduced species	Same as Alternative D.

Grand Staircase-Escalante National Monument Units					
Impact, Resource, or Management	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	species populations. Alternative A would reduce the potential for short- and long-term impacts in GSENM by prohibiting management-prescribed fires and prohibiting reseeding or surface-disturbing restoration strategies in areas with special status plant species to allow for natural vegetative restoration. As a result, both habitat maintenance and/or improvement and habitat alteration impacts on fish and wildlife and special status species would be minimal.	improvement impacts would be greater compared to Alternative A.	restoration activities in GSENM compared to alternatives A and B. Alternative C increases the potential to affect resources on adjacent NPS lands by managing for naturalized species. Introduced or nonnative species would be removed from lands directly adjacent or in close proximity to NPS lands under Alternative C; therefore, impacts on NPS lands are expected to be minimal.	and allows increased flexibility for various vegetation treatments and habitat restoration activities compared to other alternatives. Alternative D increases the potential to affect resources on adjacent NPS lands compared to Alternative C by managing for naturalized and introduced species. Impacts on NPS lands are expected to be greater under Alternative D, especially if management is not consistent with NPS management and objectives.	
Monument objects	Alternative A would result in the conservation, protection, and restoration of fish and wildlife-related monument objects in GSENM due to protective measures applied to water resources and riparian areas. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management fish and wildlife-related monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of monument objects through the application of BMPs as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies as described in Appendix I, <i>Monitoring Strategy</i> .	Same as Alternative A. All alternatives generally limit the extent of surface disturbance in GSENM (e.g., ROW exclusion, withdrawn from mineral entry), and thus impacts on fish and wildlife objects are expected to be minimal.	Similar impacts as those of alternatives A and B on fish and wildlife-related monument objects in GSENM, but to a slightly lesser degree. All alternatives generally limit the extent of surface disturbance in GSENM (e.g., ROW exclusion, withdrawn from mineral entry), and thus impacts on fish and wildlife objects are expected to be minimal. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of fish and wildlife-related monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of monument objects through the application of BMPs as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies as described in Appendix I, <i>Monitoring Strategy</i> .	Similar impacts as those of Alternative C on fish and wildlife-related monument objects in GSENM, but to a slightly lesser degree. All alternatives generally limit the extent of surface disturbance in GSENM (e.g., ROW exclusion, withdrawn from mineral entry), and thus impacts on fish and wildlife objects are expected to be minimal. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management fish and wildlife-related monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of monument objects through the application of BMPs as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies as described in Appendix I, <i>Monitoring Strategy</i> .	Same as Alternative D.
Lands with Wilderness Characteristics					
Lands managed for wilderness characteristics and impacts on wilderness characteristics	0 acres ROW development, vegetation treatments, OHV access, and VRM could result in impacts on one or more components of wilderness characteristics. Development activities that could affect wilderness characteristics (e.g., the creation of new routes or mineral materials development) are heavily restricted or prohibited under the existing MMP	180,095 acres (Map 6) • EC: 48,294 acres • KP: 113,654 acres • GS: 18,147 acres Alternative B specifically manages 180,095 acres of lands with wilderness characteristics to protect, preserve, or maintain their wilderness characteristics, reducing adverse impacts by preserving or improving wilderness characteristics. Alternative	57,995 acres (Map 7) • EC: 14,664 acres • KP: 31,515 acres • GS: 11,816 acres Impacts would be similar to those of alternatives A and B, but to a slightly greater degree. Alternative C applies fewer constraints on development and resource uses in GSENM than do alternatives A and B. While Alternative C manages 57,995 acres of lands with	0 acres Impacts would be similar to those of alternatives A, B, and C, but to a greater degree. Alternative D does not apply any provisions to lands with wilderness characteristics specifically to maintain, protect, and preserve their wilderness characteristics. Restrictions associated with GSENM designation would reduce adverse impacts on	0 acres Same as Alternative D.

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	(BLM 2000); as a result, limited new adverse impacts on wilderness characteristics are anticipated under Alternative A in GSENM. The potential for impacts from human presence would be further reduced where lands with wilderness characteristics overlap Primitive or Outback zones.	B applies resource use restrictions to all lands with wilderness characteristics in GSENM to maintain, protect, and preserve their wilderness characteristics.	wilderness characteristics to maintain, protect, and preserve their wilderness characteristics, those not specifically managed could experience development or levels of use that degrade one or more components of wilderness characteristics (size, naturalness, etc.). Restrictions associated with GSENM designation would reduce adverse impacts on wilderness characteristics across the monument units.	wilderness characteristics across the monument units.	
Paleontological Resources					
Surface disturbance impacts	Surface disturbance could result in impacts on paleontological resources from management decisions that open areas to surface-disturbing activities in geologic units with PFYC 3 to 5. In general, due to GSENM's status and limitations on mineral development and other resource uses, surface disturbance and associated impacts on cultural resources are expected to be minimal. Potential impacts on paleontological resources would be greatest within the Kaiparowits Unit compared to the other units due to the higher concentration of discovered paleontological resources and the higher PFYC rating in this unit.	Similar impacts as those of Alternative A though to a lesser degree due to an increase of area managed as lands with wilderness characteristics in GSENM. Alternative B would generally increase research and other protection measures that would reduce potential surface disturbance impacts in GSENM compared to other alternatives. Potential impacts on paleontological resources would be greatest within the Kaiparowits Unit compared to the other units due to the higher concentration of discovered paleontological resources and the higher PFYC rating in this unit.	Similar impacts as those of Alternative B, though to a greater degree due to reduced constraints on resource uses and smaller area managed for the protection of wilderness characteristics (57,995 acres). Potential impacts on paleontological resources would be greatest within the Kaiparowits Unit compared to the other units due to the higher concentration of discovered paleontological resources and the higher PFYC rating in this unit.	Similar types of impacts on paleontological resources from surface disturbance as those of the other alternatives, though to a greater degree due to fewer constraints on resource uses, no areas managed for the protection of wilderness characteristics, and fewer resource-/area-specific protective measures. Potential impacts on paleontological resources would be greatest within the Kaiparowits Unit compared to the other units due to the higher concentration of discovered paleontological resources and the higher PFYC rating in this unit.	Same as Alternative D.
Public access and collection	Public access to PFYC 3 to 5 geologic units could potentially affect paleontological resources by increasing the likelihood of vandalism and unlawful collection. Opening routes for public use and increasing recreation opportunities could increase potential for impacts. Casual collection could result in the loss of paleontological resources over time; however, Alternative A prohibits the casual collection of paleontological resources within GSENM units. Potential impacts on paleontological resources would be greatest in the Kaiparowits Unit compared to the other units due to the higher concentration of discovered paleontological resources and the higher PFYC rating in this unit.	Similar impacts as those of Alternative A though to a lesser degree due to an increase of recreation management areas and management of lands with wilderness characteristics (180,095 acres) that include restrictions on travel and public access in GSENM. Potential impacts on paleontological resources would be greatest within the Kaiparowits Unit compared to the other units due to the higher concentration of discovered paleontological resources and the higher PFYC rating in this unit.	Similar impacts as those of Alternative B, though to a greater degree due to fewer areas being closed to OHV travel, a smaller area managed for the protection of wilderness characteristics (57,995 acres), and opening two areas to casual collection. Casual collection of paleontological resources would be allowed within portions of Cottonwood Canyon Road and the Straight Cliffs along Fiftymile Mountain (Map 11). Potential impacts on paleontological resources would be greatest within the Kaiparowits Unit compared to the other units due to the higher concentration of discovered paleontological resources and the higher PFYC rating in this unit.	Similar types of impacts on paleontological resources as those of Alternative C, though to a greater degree due to fewer constraints on travel (0 acres closed to OHV use), no areas managed for the protection of wilderness characteristics, and fewer recreation management areas that could reduce potential impacts from public access. Similar casual collection areas as Alternative C, limited to surface collection. Potential impacts on paleontological resources would be greatest within the Kaiparowits Unit compared to the other units due to the higher concentration of discovered paleontological resources and the higher PFYC rating in this unit.	Reduced impacts compared to Alternative D because casual collection would be prohibited in GSENM, which would reduce potential impacts from collection in GSENM. In addition, the OHV closure in the No Man's Mesa RNA (1,464 acres) would reduce potential impacts from access and OHV use in this area.

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Impacts on adjacent private and NPS lands	Public access or opportunities for casual collection within GSENM could result in potential impacts on adjacent private lands or lands managed by Glen Canyon NRA through inadvertent casual collection or damage to resources on non-BLM lands. However, Alternative A prohibits the casual collection of paleontological resources within GSENM units. Potential impacts would be greatest on lands adjacent to the Kaiparowits and Escalante Canyons Units due to the higher concentration of discovered paleontological resources, the higher PFYC rating, and the amount of Glen Canyon NRA lands bordering these units.	Similar impacts as those of Alternative A though to a lesser degree due to an increase of recreation management areas and management of lands with wilderness characteristics (180,095 acres) that includes restrictions on travel and public access in GSENM. Potential impacts would be greatest on lands adjacent to the Kaiparowits and Escalante Canyons Units due to the higher concentration of discovered paleontological resources, the higher PFYC rating, and the amount of Glen Canyon NRA lands bordering these units.	Similar impacts as those of Alternative B, though to a greater degree due to an increase of areas open to casual collection and a reduction of recreation management areas, areas closed to OHV travel, and areas managed for the protection of wilderness characteristics (57,995 acres). Potential impacts would be greatest on lands adjacent to the Kaiparowits and Escalante Canyons Units due to the higher concentration of discovered paleontological resources, the higher PFYC rating, and the amount of Glen Canyon NRA lands bordering these units.	Similar types of impacts as those of Alternative C, though to a greater degree due to fewer constraints on travel (0 acres closed to OHV use), no areas managed for the protection of wilderness characteristics, and fewer recreation management areas that could reduce potential impacts on paleontological resources from public access. Potential impacts would be greatest on lands adjacent to the Kaiparowits and Escalante Canyons Units due to the higher concentration of discovered paleontological resources, the higher PFYC rating, and the amount of Glen Canyon NRA lands bordering these units.	Same as Alternative D.
Proactive management impacts	No similar action.	A Paleontological Resource Management Plan would be developed for certain lands in GSENM monument units and would create additional capacity for research, scientific understanding, and opportunity for the collection, curation, and protection of paleontological resources.			
Monument objects	Alternative A would result in minimal impacts on paleontological resource monument objects due to decreased potential for resource use and increased protection of resources that could afford protection to paleontological resource monument objects. Alternative A would also prohibit the casual collection of paleontological and mineral resources, including petrified wood, across the entirety of GSENM. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of paleontological resource monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of paleontological resource monument objects, by requiring proactive paleontological resource inventories and pre-disturbance inventories.	Same as Alternative A. In addition, this alternative would provide for the proper care and management of paleontological monument objects by requiring proactive paleontological resource inventories and pre-disturbance inventories. Additionally, this alternative requires application of appropriate BMPs for the protection of paleontological resources as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies for paleontological resources described in Appendix I, <i>Monitoring Strategy</i> .	Similar but greater potential for impacts on monument objects than other alternatives by allowing for greater access and more limited development in GSENM. This alternative allows for the casual collection of common invertebrate and plant paleontological resources in two designated and posted collection areas. While casual collection would be restricted to common invertebrate and plant paleontological resources, some inadvertent loss of specimens other than common invertebrate and plant specimens is possible. Casual collection in these areas would involve surface collection. Digging or excavation (i.e., surface disturbance) would not be allowed. This alternatives generally limits the extent of surface disturbance in GSENM, and thus is anticipated to provide for the proper care and management of paleontological resource monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative would provide for the proper care and management of paleontological monument objects by requiring proactive paleontological resource inventories and pre-disturbance	Same as Alternative C.	Same as Alternative B.

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
			inventories. Additionally, this alternative requires application of appropriate BMPs for the protection of paleontological resources as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies for paleontological resources described in Appendix I, <i>Monitoring Strategy</i> .		
Soil and Water Resources					
Surface disturbance impacts	Surface disturbance could result in impacts on soil and water resources through a decrease in vegetation, soil compaction, and increased runoff from vegetation treatments; installation or maintenance of livestock grazing range improvements; ROW and renewable energy development; development and maintenance of routes and trails; and recreation activities. The BLM will apply procedures to protect soils from accelerated or unnatural erosion in any ground-disturbing activity. The effects of activities such as grazing developments, mineral exploration or development, or water developments will be analyzed through the preparation of project-specific NEPA documents.	Similar impacts as those of Alternative A though to a lesser degree due to increased constraints on surface-disturbing activities, resource uses, and adaptive management to minimize degradation on pastures with more than 5% of soils with moderate soil degradation susceptibility, and an increased area managed for wilderness characteristics (180,095 acres).	Similar impacts as those of alternatives A and B, though to a greater degree due to reduced constraints on surface-disturbing activities and resource uses, and a smaller area managed for the protection of wilderness characteristics (57,995 acres).	Similar types of impacts on soil and water resources from surface disturbance as those of the other alternatives, though to a greater degree due to fewer constraints on resource uses, no areas managed for the protection of wilderness characteristics, and fewer resource-/area-specific protective measures that could reduce potential impacts on soil and water resources from surface disturbance.	Same as Alternative D.
Vegetation treatment impacts	Vegetation removal from mechanical vegetation treatments and prescribed fires could result in short-term impacts on soil and water resources through a decrease in vegetation, soil compaction, and increased surface runoff. Chemical treatments could increase the potential for surface- and groundwater contamination. Long-term impacts could include the potential for maintaining native plant communities, increasing vegetative cover, and enhancing fire resilience. Alternative A would reduce the potential for short-term impacts due to emphasis on natural processes and would limit potential long-term beneficial impacts due to limited ability to implement a full range of vegetation treatment options.	Impacts on soil and water resources from vegetation treatments would be similar to those of Alternative A, though slightly less in the short term and long term due to prohibiting treatments unless necessary for the protection of life or property.	Potential impacts similar to those of Alternative B but to a greater degree in both the short term and long term. Alternative C would allow all methods of vegetation treatments and tools, except chaining, resulting in the potential for greater surface disturbance and vegetation removal in the short term, but greater soil productivity and water infiltration in the long term compared to Alternative B.	Alternative D would increase the potential for short-term impacts on soil and water resources from vegetation treatments compared to the other alternatives by allowing the full range of vegetation treatment methods and prioritizing treatments in areas where removal of woodland products would improve rangeland health, wildlife habitat, and forage. Long-term impacts would be similar to those of Alternative C but to a slightly lesser extent by not specifically designing treatments to benefit soil and water resources.	Same as Alternative D.
Monument objects	Potential impacts on biological soil crusts could occur through surface-disturbing activities or disruptive	Potential types of impacts on biological soil crusts would be similar to those of Alternative A, but reduced because	Similar impacts as those of Alternative A, though to a greater degree due to reduced constraints on surface-	Similar types of impacts on biological soil crusts from surface disturbance as those of the other alternatives, though	Same as Alternative D.

Grand Staircase-Escalante National Monument Units					
Impact, Resource, or Management	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	<p>activities that damage or destroy soil crusts, alter runoff and infiltration rates, or otherwise increase the potential for water and wind erosion. Alternative A considers the potential impacts on biological soil crusts prior to any ground-disturbing activity to identify measures to avoid impacts on their function, health, and distribution. Long-term research toward preservation and restoration of soils will be part of an adaptive management framework.</p> <p>This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of biological soil crust monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of biological soil crust monument objects through site-specific permitting compliance and steps taken to avoid impacts on their function or additional stipulations, mitigation, and adaptive management. Monitoring strategies for soils and vegetation described in Appendix I, <i>Monitoring Strategy</i>, would also ensure the proper care and management of biological soil crust monument objects.</p>	<p>Alternative B would implement management decisions that allow less resource use and contain larger areas of special designations that could limit the extent of surface-disturbing activities. Alternative B would also use exclosures and fencing to protect sites with biological soil crusts to further reduce potential impacts.</p>	<p>disturbing activities and resource uses, and a smaller area managed for special designations (e.g., 57,995 acres of wilderness characteristics). However, all alternatives generally limit the extent of surface disturbance in GSENM. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of biological soil crust monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of biological soil crust monument objects through application of soil and water BMPs identified in Appendix G, <i>Best Management Practices</i>, that would further reduce the potential for impacts on biological soil crusts. Under all alternatives, the potential effects of surface-disturbing activities on biological soil crusts will be considered during site-specific permitting and steps would be taken to avoid impacts on their function or additional stipulations, mitigation, and adaptive management could be applied.</p> <p>Monitoring strategies for soils and vegetation described in Appendix I, <i>Monitoring Strategy</i>, would also ensure the proper care and management of biological soil crust monument objects.</p>	<p>to a greater degree due to fewer constraints on resource uses, no areas managed for the protection of wilderness characteristics, and fewer resource-/area-specific protective measures that could reduce potential impacts on biological soil crusts from surface disturbance. However, all alternatives generally limit the extent of surface disturbance in GSENM. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of biological soil crust monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of biological soil crust monument objects through application of soil and water BMPs identified in Appendix G, <i>Best Management Practices</i>, that would further reduce the potential for impacts on biological soil crusts. Under all alternatives, the potential effects of surface-disturbing activities on biological soil crusts will be considered during site-specific permitting and steps would be taken to avoid impacts on their function or additional stipulations, mitigation, and adaptive management could be applied.</p> <p>Monitoring strategies for soils and vegetation described in Appendix I, <i>Monitoring Strategy</i>, would also ensure the proper care and management of biological soil crust monument objects.</p>	
Vegetation and Fire and Fuels Management					
Surface disturbance impacts	<p>Surface disturbance could result in impacts on vegetation in the short term from the direct removal of vegetation. The potential for long-term impacts includes the permanent loss of desirable vegetation from the development of permanent features such as utility ROWs, renewable energy facilities, roads, and recreation sites. In general, due to GSENM's status and limitations on mineral development and other resource uses, surface</p>	<p>Similar impacts as those of Alternative A though to a lesser degree due to increased area managed for wilderness characteristics (180,095 acres). Alternative B would also generally increase other protection measures that would reduce potential surface disturbance impacts in GSENM compared to other alternatives.</p>	<p>Similar impacts as those of Alternative B, though to a greater degree due to reduced constraints on resource uses and fewer areas managed for the protection of wilderness characteristics (57,995 acres).</p>	<p>Similar types of impacts on vegetation from surface disturbance as those of the other alternatives, though to a greater degree due to fewer constraints on resource uses, no areas managed for the protection of wilderness characteristics, and fewer resource-/area-specific protective measures that could reduce potential impacts from surface disturbance.</p>	<p>Same as Alternative D.</p>

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	disturbance and associated impacts on vegetation are expected to be minimal.				
Noxious weeds, invasive plant species, and pests and diseases	Introduction and spread of noxious weed and invasive plant seeds or vegetative materials can occur as a result of reclamation and seeding projects, wildlife use, livestock movement, OHV travel, wind, or water from an area of infestation to an area not previously infested. In general, due to GSENM's status and limitations on mineral development and other resource uses, surface disturbance and associated impacts from the introduction and spread of noxious weeds and invasive plant species are expected to be limited. However, limiting the ability to implement the full range of available management to treat noxious weeds, invasive plant species, and pests would reduce short-term surface disturbance of vegetation communities during treatment, but could result in long-term impacts if infestations spread.	Potential impacts would be similar to those of Alternative A, but to a greater degree. Alternative B only allows vegetation treatments in limited circumstances but would not allow the use of machinery, reducing potential introduction and spread of noxious weeds and invasive plant species, but further limiting methods for their control if infestations spread. Alternative B would also generally increase other protection measures that would reduce potential surface disturbance impacts in GSENM compared to other alternatives.	Greater potential for short-term impacts (establishment and spread of noxious weeds and invasive plant species) compared to Alternative B by allowing a broader range of treatment methods, creating more surface disturbance, and allowing the use of desirable nonnative species in limited situations as long as they support ecological objectives and protect resources (e.g., stabilize soils), and the probability of success or adapted seed availability is low. Greater potential for the long-term control of noxious weeds and invasive plant species due to implementation of a full range of vegetation treatment options.	Similar to Alternative C, but greatest potential for short-term impacts and long-term impacts by permitting the broadest range of vegetation treatment options.	Same as Alternative D.
Monument objects	Surface disturbance could result in impacts on unique and endemic vegetation communities, as well as relict plant communities and hanging gardens from the direct removal of vegetation, or habitat alterations in areas supporting these vegetative communities. Surveys for endemic plant species may also be required during site-specific permitting in areas where there are known or likely occurrences of endemic plants. Alternative A would also protect hanging gardens that occur within WSAs by limiting group size to 12-25 people. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of biological and ecological resource monument objects by limiting new development and disturbance in GSENM.	Similar to Alternative A, but fewer impacts due to prohibiting surface-disturbing activities and permanent facilities within 0.5 mile of riparian and wetland areas, offering greater protection to riparian areas where hanging gardens occur. Within WSAs, Alternative B would also limit group size to 8 people, resulting in the greatest protection of riparian habitats and hanging gardens in these areas. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of biological and ecological resource monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of biological and ecological resource monument objects through the application of BMPs as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies as	Similar to Alternative B, but greater potential impacts on relict plant communities and hanging gardens than that of Alternative B by allowing surface-disturbing activities that occur at least 330 feet from riparian areas and allowing larger group sizes and pack animals. Compared to Alternative B, Alternative C would provide less protection for hanging gardens within WSAs by limiting group size to 12 people. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of biological and ecological resource monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of biological and ecological resource monument objects through the application of BMPs as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies as	Similar to Alternative C, but less protection for hanging gardens within WSAs by limiting group size to 25 people. However, this alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of biological and ecological resource monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of biological and ecological resource monument objects through the application of BMPs as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies as described in Appendix I, <i>Monitoring Strategy</i> .	Similar to Alternative D, Alternative E would limit group size to 25 people within WSAs, but it would allow more flexibility by adjusting group size limits on a case-by-case basis for consistency with group size limits on adjacent lands (e.g., NPS land and KFO land). This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of biological and ecological resource monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of biological and ecological resource monument objects through the application of BMPs as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies as described in Appendix I, <i>Monitoring Strategy</i> .

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
		described in Appendix I, <i>Monitoring Strategy</i> .	described in Appendix I, <i>Monitoring Strategy</i> .		
Impacts on fire and fuels management	Potential for impacts due to an emphasis on natural processes and restrictions on resource uses that affect fire and fuels management.	Similar to Alternative A, but greater potential for impacts because resource management actions would have greater impacts on suppression tactics and wildfire management.	Similar to Alternative B, but to a lesser degree as a result of allowing additional suppression tactics and wildfire management.	Similar to Alternative C, but to a lesser degree as a result of fewer resource use restrictions that affect fire and fuels management.	Same as Alternative D.
FMP impacts	No similar action.	The BLM would revise the existing FMP to address a spectrum of management strategies including wildfire suppression, wildland fire use, prescribed fire, non-fire fuel treatments, and emergency stabilization and rehabilitation. The revised FMP would result in long-term, indirect impacts by creating a document that provides for clear fire management direction that is compliant with national and interagency direction.			
Visual Resources, Night Skies, and Natural Soundscapes					
Proposed VRM classes	<p>VRM Class I: 0 acres</p> <p>VRM Class II: 751,240 acres</p> <ul style="list-style-type: none"> • EC: 210,221 acres • KP: 341,374 acres • GS: 199,645 acres <p>VRM Class III: 251,642 acres</p> <ul style="list-style-type: none"> • EC: 32,066 acres • KP: 209,409 acres • GS: 10,166 acres <p>VRM Class IV: 0 acres (Map 22)</p> <p>Alternative A would provide protection of existing visual resources and areas with high scenic quality at the landscape level by managing the majority of GSENM units as VRM Class II. Potential for direct and indirect adverse impacts from areas designated as VRM Class III than lands classified as VRI Class II because the significance of the impact or the change in landscape character could be greater in a VRI Class II area versus a VRI Class III area.</p>	<p>VRM Class I: 851,413 acres</p> <ul style="list-style-type: none"> • EC: 233,123 acres • KP: 525,424 acres • GS: 92,866 acres <p>VRM Class II: 120,295 acres</p> <ul style="list-style-type: none"> • EC: 9,573 acres • KP: 15,700 acres • GS: 95,022 acres <p>VRM Class III: 32,040 acres</p> <ul style="list-style-type: none"> • EC: 103 acres • KP: 9,867 acres • GS: 22,071 acres <p>VRM Class IV: 0 acres (Map 23)</p> <p>Alternative B is the most protective of existing visual resources by assigning VRM Class I and II objectives to the largest area of inventoried Class II, III, or IV lands.</p>	<p>VRM Class I: 671,452 acres</p> <ul style="list-style-type: none"> • EC: 184,826 acres • KP: 411,888 acres • GS: 74,738 acres <p>VRM Class II: 237,580 acres</p> <ul style="list-style-type: none"> • EC: 53,359 acres • KP: 73,609 acres • GS: 110,612 acres <p>VRM Class III: 26,776 acres</p> <ul style="list-style-type: none"> • EC: 4,607 acres • KP: 7,863 acres • GS: 14,306 acres <p>VRM Class IV: 67,854 acres</p> <ul style="list-style-type: none"> • EC: 0 acres • KP: 57,602 acres • GS: 10,251 acres <p>(Map 24)</p> <p>Similar types of impacts as alternatives A and B, but fewer protections for existing visual resources by assigning fewer VRM Class I and II objectives to areas of inventoried Class II, III, or IV lands.</p>	<p>VRM Class I: 671,452 acres</p> <ul style="list-style-type: none"> • EC: 184,826 acres • KP: 411,888 acres • GS: 74,738 acres <p>VRM Class II: 217,149 acres</p> <ul style="list-style-type: none"> • EC: 51,929 acres • KP: 55,816 acres • GS: 109,404 acres <p>VRM Class III: 36,857 acres</p> <ul style="list-style-type: none"> • EC: 6,031 acres • KP: 15,491 acres • GS: 15,531 acres <p>VRM Class IV: 78,173 acres</p> <ul style="list-style-type: none"> • EC: 0 acres • KP: 67,907 acres • GS: 10,266 acres <p>(Map 25)</p> <p>Similar types of impacts as Alternative C, but fewer protections for existing visual resources by assigning fewer VRM Class II objectives to areas of inventoried Class II, III, or IV lands.</p>	<p>VRM Class I: 671,452 acres</p> <ul style="list-style-type: none"> • EC: 184,826 acres • KP: 411,888 acres • GS: 74,738 acres <p>VRM Class II: 217,110 acres</p> <ul style="list-style-type: none"> • EC: 51,929 acres • KP: 55,816 acres • GS: 109,365 acres <p>VRM Class III: 36,896 acres</p> <ul style="list-style-type: none"> • EC: 6,031 acres • KP: 15,335 acres • GS: 15,531 acres <p>VRM Class IV: 78,173 acres</p> <ul style="list-style-type: none"> • EC: 0 acres • KP: 67,907 acres • GS: 10,266 acres <p>(Map 26)</p> <p>Same as Alternative D.</p>
Visual resource and night skies impacts	Management of other program areas could result in impacts on visual resources and dark night skies through surface disturbance, changes in vegetation, allowance of infrastructure or facilities development, or inadvertent creation of light pollution. Alternative A maintains existing VRM class designations. In general, resource uses and activities are limited in GSENM due to the monument status; therefore, minimal impacts on visual	Impacts on visual resources and dark night skies from resource uses and management of other program areas would be similar to those of Alternative A, though to a lesser degree. Alternative B would require interpretive materials/programs to be developed to educate and engage the public about visual resources and night skies, and would also inventory and monitor night skies in partnership with local stakeholders. Alternative B would	Potential impacts would be similar to those of Alternative B but to a greater degree. Alternative C also designates a smaller OSNHT corridor (3,358 acres) in GSENM.	Alternative D would manage the smallest OSNHT corridor (454 acres) in GSENM and would not designate scenic byway and backway corridors.	Same as Alternative D except the OSNHT corridor would be 0.5 mile wide compared to the 330-foot-wide corridor for Alternative D.

Grand Staircase-Escalante National Monument Units					
Impact, Resource, or Management	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	resources and dark night skies are expected.	designate an OSNHT corridor (14,991 acres) in GSENM along with other special designations such as scenic byway and backway corridors, wild and scenic river corridors, and WSAs that are managed as VRM Class I or II. Management of these special designations would generally reduce the potential for impacts on visual resources and dark night skies.			
Monument objects	Alternative A would provide protection of scenic values and objects by managing the majority of GSENM units as VRM Class I and by applying constraints on resource uses and activities in GSENM. This alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of visual resource monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of monument objects through application of appropriate BMPs for the protection of visual resources as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies for visual resources described in Appendix I, <i>Monitoring Strategy</i> .	Same as Alternative A.	Similar to Alternative B, but increased potential for impacts on scenic values and objects compared to the other alternatives due to fewer restrictions on resource uses that could affect scenic values and objects. However, this alternative generally limits the extent of surface disturbance in GSENM, and thus is anticipated to support the proper care and management of visual resource monument objects by limiting new development and disturbance in GSENM. Additionally, this alternative provides for the proper care and management of monument objects through application of appropriate BMPs for the protection of visual resources as identified in Appendix G, <i>Best Management Practices</i> , and monitoring strategies for visual resources described in Appendix I, <i>Monitoring Strategy</i> .	Same as Alternative C.	Same as Alternative C.
Natural soundscapes impacts	Surface disturbance and resource use activities that result in an increase of intrusive sounds could affect the preservation of natural soundscapes. In general, resource use activities are limited in GSENM due to the monument status; therefore, impacts are expected to be minimal.	Impacts on natural soundscapes in GSENM would be similar to those of Alternative A, but to a slightly lesser degree. Alternative B would require interpretive materials/programs to be developed to educate and engage the public about natural soundscapes and would also inventory and monitor natural soundscapes in partnership with local stakeholders.	Potential impacts on natural soundscapes would be similar to those of Alternative B but to a greater degree. Alternative C designates more areas as limited to OHV use in GSENM (942,317 acres) and increases human activity, which increases the potential for intrusive sounds and the potential to affect natural soundscapes on NPS lands adjacent to the Planning Area.	Alternative D designates the greatest area as limited to OHV use in GSENM (1,003,814 acres), which increases the potential for intrusive sounds. Increased human activity also increases the potential to affect natural soundscapes on NPS lands adjacent to the Planning Area.	Similar to Alternative D.
Wild Horses					
Impacts on wild horses or HAs	No expected direct or indirect impacts on wild horses or the HAs that intersect the Planning Area. The Moody-Wagon Box Mesa HA does not currently support any wild horses and Harvey's Fear HA is within a WSA, is extremely remote, and has an appropriate management level of zero horses (Map 32). The BLM would conduct population surveys of wild horses within Planning Area HAs every 3 to 4 years, which would help inform future BLM decisions for herd management within the Planning Area.				

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Resource Uses					
Forestry and Woodland Products					
Limits or restrictions on forest and woodland harvest	Potential impacts on forest and woodland harvest by prohibiting commercial and non-commercial harvesting within GSENM. Commercial fuelwood cutting would be limited and authorized in two designated areas in GSENM: Rock Springs Bench area and Buckskin Mountain area.	Same as Alternative A, but greater potential impacts because all areas within GSENM would be closed to commercial fuelwood harvesting, post cutting, and Christmas tree cutting.	Reduced potential for impacts compared to alternatives A and B by allowing commercial timber harvesting for the purposes of promoting or sustaining forest health across the entirety of GSENM units. Alternative C would also allow commercial and non-commercial fuelwood harvesting, post cutting, and Christmas tree cutting except in WSAs and areas posted or signed as closed.	Same as Alternative C.	Same as Alternative C except Alternative E would also allow non-commercial timber harvesting.
Vegetation treatment impacts	Potential impacts from vegetation treatments on forests and woodlands could result from surface-disturbing activities and removal of vegetation. Long-term potential impacts on forests and woodlands could result from restoration. Alternative A allows the use of machinery unless limited by management for other resources or allocations and generally applies greater restrictions on treatments that could benefit woodland stands and the production of woodland products in the long term.	Similar to Alternative A, but fewer short-term and long-term impacts by allowing vegetation treatments only in limited circumstances.	Similar to Alternative B, but greater potential for short-term and long-term impacts by allowing all vegetation treatment methods except chaining. Treatments would be designed to promote overall land health, potentially resulting in additional long-term benefits to forestry and woodland products than the other alternatives.	Similar to Alternative C, but increased potential for short-term and potential decrease in long-term impacts by prioritizing treatments in areas where removal of woodland products would improve rangeland health, wildlife habitat, and forage.	Same as Alternative D.
Lands and Realty					
ROWs	ROW Avoidance: 181,864 acres ROW Exclusion: 821,949 acres (Map 35) ROW exclusion areas would typically not be available for the location of ROWs, which could result in adverse impacts on locating utility infrastructure, communications facilities, and other ROWs. ROW avoidance areas may require special design or siting requirements and could adversely affect costs of implementation. Areas available for ROW development would have direct and indirect, short- and long-term, beneficial impacts on lands and realty by accommodating desired placement of facilities, accommodating access and efficient energy supply, and minimizing additional costs.	ROW Avoidance: 22,155 acres ROW Exclusion: 981,660 acres (Map 36) Similar types of impacts as Alternative A but beneficial impacts would be increased due to fewer exclusion areas and more area available to ROWs.	ROW Avoidance: 195,419 acres ROW Exclusion: 762,660 acres (Map 37) Similar types of impacts as Alternative B but beneficial impacts would be increased due to fewer exclusion areas and more area available to ROWs.	ROW Avoidance: 132,357 acres ROW Exclusion: 671,574 acres (Map 38) Similar types of impacts as Alternative C but beneficial impacts would be increased due to fewer exclusion areas and more area available to ROWs.	ROW Avoidance: 132,019 acres ROW Exclusion: 671,574 acres (Map 39) Similar impacts as Alternative D.
Utility-scale renewable energy development	Prohibit (i.e., exclude) utility-scale renewable energy development in GSENM.				

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Land tenure adjustments	All Federal lands within the boundaries of GSENM are withdrawn from sale and disposition under the public land laws. Lands within GSENM could be considered for land exchanges and acquisitions so long as the current owner is a willing participant, the action is in the public interest, and the action is in accordance with other management goals and objectives. The action must also result in a net gain of objects and values within GSENM.				
Withdrawal from mineral entry, location, selection, sale, leasing, or other disposition under the public land laws	All Federal lands and interests in lands within the boundaries of GSENM are withdrawn from mineral entry, location, selection, sale, leasing, or other disposition under the public land laws.				
Private land access routes	Only one access route per private land parcel would be authorized in GSENM unless public safety or local ordinances warrant additional routes. Impacts on GSENM are expected to be minimal, as private landowners must coordinate the development of access routes across public lands during implementation-level planning.				
Livestock Grazing					
Land available for livestock grazing and stocking rates	<p>Available for livestock grazing: 941,007 acres</p> <ul style="list-style-type: none"> • EC: 187,669 acres • KP: 546,711 acres • GS: 206,627 acres (Map 55) <p>Changes to the allotments made available for livestock grazing could result in impacts on livestock grazing through direct loss of forage and ability to distribute livestock, loss of access to water sources, an increased need for construction of fences, or a need for permittees to alter the size of their grazing operations.</p> <p>Alternative A allocates reserve common allotments for use in facilitating research in grazing methods and for use while existing allotments are rested.</p>	<p>Available for livestock grazing: 714,408 acres</p> <ul style="list-style-type: none"> • EC: 112,340 acres • KP: 421,649 acres • GS: 180,419 acres (Map 56) <p>Impacts on livestock grazing would be similar to those of Alternative A, though to a greater degree due to the decrease in available acres and active AUMs and more restrictive grazing management compared to Alternative A including monitoring and rest-rotation grazing requirements. Under Alternative B, reserve common allotments would be unavailable for livestock grazing.</p>	<p>Available for livestock grazing: 942,179 acres</p> <ul style="list-style-type: none"> • EC: 189,609 acres • KP: 544,338 acres • GS: 208,233 acres (Map 57) <p>Potential impacts on livestock grazing would be similar to those of Alternative A due to the similar stocking rates and amount of land available for livestock grazing. Alternative C allocates more areas as reserve common allotments. Alternative C also designates reference sites for use in improving livestock grazing management, but to a lesser degree than Alternative B.</p>	<p>Available for livestock grazing: 991,874 acres</p> <ul style="list-style-type: none"> • EC: 236,680 acres • KP: 546,960 acres • GS: 208,233 acres (Map 58) <p>Alternative D would decrease the potential for impacts on livestock grazing from changes in available allotments compared to the other alternatives. Under Alternative D, acres available for grazing and active AUMs are increased and reserve common allotments would be allocated as available for grazing as regular permits. Alternative D designates reference sites but to a lesser degree than the other alternatives.</p>	Same as Alternative D.
Range improvements impacts	<p>Constructing range improvements and general management to protect rangeland health could have short-term impacts on livestock grazing by reducing forage availability, restricting livestock distribution, or limiting the season of use. Range improvements could also have the long-term impacts of promoting healthy forage and opening up forage in areas that may not usually be available to livestock. The need for and extent of range improvements is considered on a case-by-case basis under Alternative A, but priority is given to rangeland improvement projects and land treatments that offer the best opportunity for achieving the BLM <i>Utah Standards for Rangeland Health</i> (BLM 1997). Alternative A allows the use of</p>	<p>Short- and long-term impacts on livestock grazing from range improvements would be similar to those of Alternative A, though to a lesser degree. Alternative B does not allow vegetation treatments, water developments, or other range improvements for the primary purpose of increasing forage for livestock. Alternative B also suspends livestock grazing when the BLM <i>Utah Standards for Rangeland Health</i> (BLM 1997) are not met, which would have direct impacts on livestock grazing.</p>	<p>Potential impacts on livestock grazing would be similar to but greater than those of alternatives A and B, both in the short and long term. Maintenance and development of new structural and nonstructural range improvements are allowed under Alternative C to meet the demand for livestock forage, which increases the potential for both short- and long-term livestock grazing impacts. Alternative C also allows for the use of native and nonnative plants in range improvement activities. NPS management does not support the use of nonnative species for nonstructural range improvements in Glen Canyon NRA, which limits the potential to open up additional forage on these allotments.</p>	<p>Alternative D would result in similar types of impacts as those of Alternative C, but would increase the potential for impacts from range improvements compared to the other alternatives. Alternative D provides the most flexibility in range improvement activities compared to the other alternatives, which increases the potential for both short- and long-term livestock grazing impacts. Alternative D would consider measures consistent with the protection of Glen Canyon resources, values, and purposes to reduce the potential impact on resources in the adjacent Glen Canyon NRA.</p>	Same as Alternative D.

Grand Staircase-Escalante National Monument Units					
Impact, Resource, or Management	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	native plants in range improvement activities. Overall, Alternative A is expected to limit both short- and long-term impacts on livestock grazing from range improvements.		Alternative C increases the potential to affect resources in the adjacent Glen Canyon NRA, managed by NPS.		
Surface disturbance impacts	Surface disturbance from resource uses or recreation activities could result in impacts on livestock grazing through disturbance of soils, reductions in forage, increased potential for the spread and establishment of nonnative invasive species, decreased access to water sources, and disturbance to livestock from increased human presence. Alternative A manages recreation in GSENM through five established SRMAs (553,020 acres). Due to GSENM's status and limitations on mineral development and other resource uses, surface disturbance and associated impacts on vegetation are expected to be minimal.	Impacts on livestock grazing from surface disturbance would be similar to those of Alternative A, though to a lesser degree. Alternative B generally increases protective measures that would reduce potential surface disturbance impacts in GSENM compared to the other alternatives and establishes seven SRMAs (670,343 acres) and six RMZs (17,654 acres).	Potential impacts on livestock grazing from surface disturbance would be similar to those of alternatives A and B, but to a greater degree. Alternative C would designate 670,343 acres as SRMAs and 18,271 acres as RMZs compared to Alternative B, would provide less targeted recreation management within these areas, and would generally have reduced constraints on resource uses, which increases the potential for impacts on livestock grazing.	Alternative D increases the potential for impacts on livestock grazing from surface disturbance compared to the other alternatives. Alternative D places the fewest constraints on resource uses of the alternatives and manages GSENM as an ERMA, which provides greater potential for impacts from resource uses and recreation activities compared to the other alternatives.	Same as Alternative D.
Minerals					
Mineral leasing and coal	All Federal lands and interests in lands within the boundaries of GSENM are withdrawn from mineral entry, location, selection, sale, leasing, or other disposition under the public land laws, subject to valid exiting rights. The only valid existing rights for leasable minerals in GSENM are suspended oil and gas leases; there are no valid existing rights for coal mining. As a result, mineral leasing in GSENM would be negligible and coal mining would not occur. In addition, Division D, Title IV, Section 408 of the Consolidated Appropriations Act 2019 currently prohibits preleasing, leasing, and related activities under the Mineral Leasing Act on any lands that were included within GSENM as of January 20, 2001.				
Mineral materials disposal impacts	The disposal of mineral materials is excluded from GSENM.				
Locatable mineral impacts from withdrawals	All Federal lands and interests in lands within the boundaries of GSENM are withdrawn from mineral entry, location, selection, sale, leasing, or other disposition under the public land laws subject to valid existing rights.				
Recreation and Visitor Services					
Recreation Management Areas	The management of existing SRMAs under Alternative A would generally have beneficial impacts on recreation by providing targeted management for unique/important recreation opportunities and settings. The use of four distinct MZs to manage recreational setting, group size, and opportunities benefits recreationists by directing them toward areas that meet their desired recreation outcomes. SRMAs and MZs were established shortly after GSENM designation, and may not be sufficient to address current (increased) levels of visitation and desired opportunities/settings. 5 SRMAs with 0 RMZs (553,021 acres in GSENM), 0 ERMAs, 4 MZs.	Similar beneficial impacts on desired recreation outcome to those of Alternative A, but to a greater degree due to more SRMAs/RMZs and additional, targeted management to address current levels of visitation and desired opportunities/settings. Recreation Management Areas emphasize non-motorized, primitive, and small-group recreation, with some areas for motorized, frontcountry, and large-group recreation. 7 SRMAs with 6 RMZs (670,343 acres in GSENM), 1 ERMA (333,556 acres in GSENM).	Similar beneficial impacts on desired recreation outcome to those of Alternative A, but to a greater degree due to more SRMAs/RMZs and additional, targeted management to address current levels of visitation and desired opportunities/settings. Recreation Management Areas include expanded opportunities for motorized, frontcountry, and large-group recreation compared to Alternative B. 7 SRMAs, 6 RMZs (670,343 acres in GSENM), 1 ERMA (333,556 acres in GSENM).	Fewer beneficial impacts on management of recreation opportunities and settings compared to the other alternatives, due to fewer SRMAs/RMZs. Managing the majority of the Planning Area as an ERMA would allow management to address recreation use, demand, or visitor services needs, but not to the extent as under other alternatives, which include more specific, targeted management for recreation opportunities and settings. 0 SRMAs with 3 RMZs (13,392 acres in GSENM), 1 ERMA (990,202 acres in GSENM).	Similar beneficial impacts on desired recreation outcome to those of Alternative D, but to a greater degree due to more SRMAs/RMZs. 3 SRMAs (14,397 acres in GSENM) and 1 ERMA (987,198 acres in GSENM) with 7 RMZs.

Grand Staircase-Escalante National Monument Units					
Impact, Resource, or Management	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Group sizes	Group size based on management in various zones. In general, group size of 25 people in the Passage and Outback Zones and 12 people in the Primitive Zone.	Group sizes vary in each SRMA but are generally smaller than under the other alternatives. Group size limit of 8 people in WSAs. Group sizes above these limits could be approved by the authorized officer or through permit. Reduced group sizes may result in greater beneficial impacts on recreationists seeking a more primitive recreation experience.	Group sizes vary in each SRMA but are generally greater than under Alternative B. Group size limit of 12 people in WSAs. Group sizes above these limits could be approved by the authorized officer or through permit. Similar beneficial impacts on recreationists as those under Alternative B.	Group size limit of 25 people in WSAs. Outside of WSAs, group size limits of 50 people. Group sizes above these limits could be approved by the authorized officer or through permit. Larger group size limits under Alternative D could result in greater adverse impacts on recreationists seeking a primitive experience, and greater beneficial impacts on recreationists that favor a more social recreation experience.	Same WSA group size limits as those under Alternative D, except on a case-by-case basis group size limits, where applicable, could be adjusted within WSAs for consistency with group size limits on adjacent lands (e.g., NPS land, KFO land). Group size limits of 25–50 people in SRMAs/RMZs and 50 people in ERMAs. Similar impacts on recreationists as those under Alternative D, but more flexibility within WSAs.
Visitor use restrictions in Recreation Management Areas	Limited existing decisions on permits for organized events, campfire restrictions, permitting systems for overnight camping, parking restrictions, human waste management, burn restrictions for waste wood and debris, and vending at recreation sites. Limited decisions and increased visitation because GSENM designation could lead to environmental damage and user conflicts that affect recreation settings and outcomes.	Decreased potential for degradation of recreation settings and outcomes compared to Alternative A due to management in Recreation Management Areas that sets limits on organized events, imposes campfire restrictions and bans burning waste wood, imposes permitting systems for overnight camping in select areas, and applies human waste management solutions. Management would reduce environmental damage and user conflicts that affect recreation settings and outcomes compared to Alternative A.	Similar reduction in adverse impacts on recreation settings and outcomes due to reduced environmental damage and user conflicts as management under Alternative B, but to a lesser degree. Similar but less-restrictive management would allow activities in Recreation Management Areas with fewer constraints than under Alternative B.	Similar reduction in adverse impacts on recreation settings and outcomes due to reduced environmental damage and user conflicts as management under alternatives B and C, but to a lesser degree. Similar but less-restrictive management would allow activities in Recreation Management Areas with fewer constraints than under alternatives B and C. Reduced constraints under Alternative D could benefit those seeking social and large-group experiences to a greater extent than management under alternatives B and C.	Similar reduction in adverse impacts on recreation settings and outcomes due to reduced environmental damage and user conflicts as management under Alternative D, but to a lesser degree. SRMAs under Alternative E would include specific measurable recreation outcomes, and more prescriptive management on allowable recreation activities, experiences, and associated management and allocations decisions than Alternative D.
Transportation and Access					
OHV area designations	Managed consistent with the current transportation route map. All OHV and mechanized travel within the Planning Area is limited to designated routes (43 CFR 8340) outside the Primitive Zone, and the Primitive Zone is closed to OHV and mechanized travel unless designated for an administrative or authorized use. Potential for adverse impacts on transportation and access for OHVs and limited beneficial impacts for recreational users seeking open OHV areas.	Open: 0 acres Limited: 154,321 acres Closed: 849,493 acres Similar types of impacts as Alternative A, but greater potential for adverse impacts on transportation and access for OHVs due to scale of OHV closures. Greatest beneficial impacts on recreational users seeking pristine or quiet-use recreation opportunities.	Open: 0 acres Limited: 942,317 acres Closed: 61,499 acres Similar types of impacts as Alternative B, but fewer adverse impacts on transportation and access for OHVs due to fewer OHV closures. Greater beneficial impacts for OHV users due to greater OHV limited designations.	Open: 0 acres Limited: 1,003,814 acres Closed: 0 acres Similar types of impacts as Alternative C, but greater beneficial impacts for OHV users due to no OHV closures.	Open: 0 acres Limited: 1,002,350 acres Closed: 1,464 acres Similar types of impacts as Alternative D, but slightly fewer beneficial impacts for OHV users due to OHV closures.
Routes	Managed consistent with the current transportation route map. No new routes included on the route map.	Managed consistent with the current transportation route map. No new routes included on the route map.	Managed consistent with the current transportation route map. No new routes included on the route map.	Managed consistent with the current transportation route map except that the following routes would be added: V-Road, Inchworm Arch Road, and Flagpoint Road (off 532) (Map 82). These additional routes are currently used by local residents and their inclusion on the transportation route map would be beneficial to these users	Managed consistent with the current transportation route map except that the following routes would be added: V-Road and Inchworm Arch Road (Map 83). For Alternative E, the Inchworm Arch Road would include a re-route to avoid identified archaeological sites.

Grand Staircase-Escalante National Monument Units					
Impact, Resource, or Management	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
				by allowing continued and legal access.	
ACECs					
R&I values	There are no ACECs designated in GSENM. Protections afforded by GSENM status and other overlapping designations management (e.g., WSAs) would generally provide adequate protection for R&I values, so no special management is required.				
National Historic Trails					
Impacts on the nature and purposes of the OSNHT	Surface-disturbing activities could cause damage to or destruction of important Federal protection components and cultural resources associated with the OSNHT. Alternative A does not establish an NTMC for the OSNHT. Impacts could occur due to permanent loss of trail traces, associated cultural resources, opportunities for vicarious experiences, and setting and scenic values caused by the development of permanent features and surface-disturbing activities, including vegetation treatments and fire management activities. Impacts from surface-disturbing activities that could affect the recreation experiences and scenic values within the corridors would be similar across GSENM units due to similar management in the three units.	Impacts on the OSNHT from surface disturbance would be similar to those of Alternative A, though to a lesser degree due to establishing a 3-mile NTMC on either side of the OSNHT centerline, which would reduce potential impacts by prohibiting new surface-disturbing activities within 14,991 acres of GSENM. Alternative B also manages a larger portion of the NTMC under VRM Class I and Class II objectives and includes the most acres of protective restrictions due to special designations, further reducing potential impacts on OSNHT resources. Alternative B would manage 180,095 acres to protect and preserve wilderness characteristics.	Potential impacts would be similar to those of Alternative B, but to a greater degree. Alternative C would establish an OSNHT NTMC to include lands up to 0.5 mile from the OSNHT centerline (3,359 acres within GSENM), would manage a smaller portion of the NTMC under VRM Class I and Class II objectives, and would include fewer acres of protective restrictions due to special designations. Similar to Alternative A, potential impacts would be most pronounced in the Box of the Paria high potential segment of the OSNHT. Alternative C would manage 57,995 acres to protect and preserve wilderness characteristics.	Alternative D would increase the potential for impacts on OSNHT resources because it establishes the shortest and narrowest NTMC (300 feet on either side of the OSNHT, encompassing 454 acres within GSENM), and would manage Federal protection components by allowing discretionary uses beyond the NTMC that are compatible with the nature, purpose, and settings of the Box of the Paria high potential segment. Alternative D would also manage a smaller portion of the NTMC under VRM Class I and Class II objectives and would include the fewest acres of protective restrictions due to special designations.	Potential impacts would be similar to those described for Alternative D though to a lesser degree, as Alternative E establishes a wider NTMC (0.5 mile on either side of the OSNHT centerline, encompassing 3,358 acres in GSENM) than Alternative D and increases the acreage of the NTMC managed for VRM Class I and Class II objectives.
Scenic Routes					
Impacts on scenic routes	VRM class designation, vegetation treatments, surface disturbance, and resource use activities could affect scenic routes by increasing the level of visual contrast in the area or changing the landscape character. Alternative A manages corridors along National and State scenic byways and backways and scenic drives according to the designated VRM objectives. Impacts on scenic routes are therefore expected to be largely dependent on the VRM classification of the surrounding area. In general, resource use activities are limited in GSENM due to the monument status. Therefore, impacts on scenic route resources are expected to be minimal and are expected to be similar across the three GSENM units due to similar VRM management in these areas.	Impacts on scenic routes would be similar to those of Alternative A, though to a lesser degree. Alternative B manages corridors along designated scenic byways and backways extending for 3 miles or within the viewshed on either side of centerline, whichever is less, as VRM Class II (Map 87), which decreases the potential for impacts on visual contrast.	Potential impacts on scenic routes would be similar to those of Alternative B but to a greater degree. Alternative C manages corridors along designated scenic byways and backways extending for 1 mile or within the viewshed on either side of centerline, whichever is less, as VRM Class II (Map 87).	Alternative D does not apply specific VRM management to scenic route corridors in GSENM. As a result, Alternative D would increase the potential for impacts on scenic routes from visual contrast and alteration of landscape character.	Same as Alternative D.

Impact, Resource, or Management	Grand Staircase-Escalante National Monument Units				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Wild and Scenic Rivers					
Suitable river corridor impacts	Use of OHVs could affect suitable river corridors by increasing the potential for erosion that could degrade water quality. Suitable segments in GSENM are managed for preservation of outstandingly remarkable values. Overall, impacts on suitable river corridors are expected to be low.	Impacts on suitable river corridors would be similar to those of Alternative A, but to a slightly lower degree, as Alternative B closes wild river segments to OHV use.	Same as Alternative B.	Alternative D increases potential for impacts on suitable river corridors in GSENM compared to other alternatives. Impacts would be similar to those of alternatives B and C, but to a greater degree, as Alternative D allows for OHV use along all suitable river corridors.	Same as Alternative D.
Wilderness Study Areas					
Impacts on WSAs	Potential impacts by allowing access for OHV and mechanized travel via routes in the WSA, which could affect opportunities for solitude or primitive and unconfined recreation. Vegetation treatments could have impacts on opportunities for solitude over the short term, but may result in long-term impacts in WSAs if they meet VRM Class I objectives. Alternative A maintains and protects WSAs by closing a portion of WSAs to OHV use. Although no specific vegetation treatment management is applied for WSAs under Alternative A, limited treatment options would result in limited potential for short-term and long-term impacts.	Similar types of impacts as those of Alternative A, but greater potential for protecting and enhancing wilderness characteristics and increased opportunities for solitude or primitive and unconfined recreation by closing all WSAs to OHV use. Alternative B prohibits all vegetation treatments in WSAs, except where necessary to restore human impacts or to restore vegetation to characteristic conditions, which could reduce short-term impacts but increase long-term impacts compared to Alternative A.	Similar types of impacts as those of Alternative B, but fewer potential protections for opportunities for solitude or primitive and unconfined recreation by limiting OHV use across 15 WSAs wholly or partially located in GSENM, with a closure to OHV use in the Steep Creek WSA. Alternative C would allow vegetation manipulation through a broad range of treatment options, resulting in greater potential for short-term and long-term impacts in WSAs.	Decreased potential for protecting and enhancing wilderness characteristics and decreased opportunities for solitude or primitive and unconfined recreation by not closing any WSAs to OHV use; all WSAs would be managed as OHV limited areas within WSAs. The use of nonnative species (consistent with applicable BLM WSA policy) under Alternative D could increase the potential to affect naturalness, but may increase flexibility in managing vegetation treatments and restoration in WSAs compared to the other alternatives.	Same as Alternative D.
Social and Economic Considerations					
Total economic effect	BLM management of livestock grazing, recreation, and forestry in GSENM could affect economic conditions in Garfield and Kane Counties. Economic effects could include changes in employment, labor income, and overall industry activity. Modeled annual economic effects associated with BLM GSENM management include 548 jobs supported, \$9.7 million in labor income, and \$31.2 million in industry activity supported.	Similar impacts as described for Alternative A, though to a lesser degree due to the reduction in grazing activity. Total modeled annual economic effects associated with BLM GSENM management under Alternative B include 537 jobs supported, \$9.7 million in labor income, and \$30.8 million in industry activity supported.	Similar impacts as described for Alternative B, though to a slightly greater degree due primarily to increased livestock grazing. Total modeled annual economic effects associated with BLM GSENM management under Alternative C include 540 jobs supported, \$9.7 million in labor income, and \$30.9 million in industry activity supported.	Increased potential for economic effects compared to the other alternatives due primarily to increased livestock grazing. Total modeled annual economic effects associated with BLM GSENM management under Alternative D include 549 jobs supported, \$9.7 million in labor income, and \$31.3 million in industry activity supported.	Same as Alternative D.
Nonmarket values	BLM management in GSENM could result in a variety of impacts on nonmarket values, including impacts on nonmarket use values, non-use values, Special Designation and enhancement values, tribal uses and values, ecosystem service values, and social values. Due to the generally protective nature of management afforded by monument status, impacts on nonmarket values are expected to be minimal.				
Environmental Justice	Impacts are not anticipated to disproportionately affect identified minority or low-income populations differently than the general population in the analysis area.				

ACEC – Area of Critical Environmental Concern, AUM – animal unit month, BLM – Bureau of Land Management, BMP – best management practice, CFR – Code of Federal Regulations, CO – carbon monoxide, CO₂ – carbon dioxide, EC – Escalante Canyons Unit, EIS – Environmental Impact Statement, ERMA – Extensive Recreation Management Area, FLPMA – Federal Land Policy and Management Act, FMP – Fire Management Plan, GHG – greenhouse gas, GS – Grand Staircase, GSENM – Grand Staircase-Escalante National Monument, HA – herd area, KEPA – Kanab-Escalante Planning Area, KFO – Kanab Field Office, KP – Kaiparowits Unit, MMP – Monument Management Plan, MZ – Management Zone, N/A – not applicable, NAAQS – National Ambient Air Quality Standard, NEPA – National Environmental Policy Act, NHPA – National Historic Preservation Act, NO₂ – nitrogen dioxide, NO_x – nitrogen oxides, NPS – National Park Service, NRA – National Recreation Area, NTMC – National Trail Management Corridor, OHV – off-highway vehicle, OSNHT – Old Spanish National Historic Trail, PEIS – Programmatic Environmental Impact Statement, PFYC – Potential Fossil Yield Classification, PSD – Prevention of Significant Deterioration, R&I – relevant and important, RMZ – Recreation Management Zone, ROW – right-of-way, SIL – Significant Impact Level, SRMA – Special Recreation Management Area, VOC – volatile organic compound, VRI – Visual Resource Inventory, VRM – Visual Resource Management, WSA – Wilderness Study Area

Table ES-3. Summary Comparison of Environmental Consequences by Alternative for the Kanab-Escalante Planning Area

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Resources					
Air Quality					
Emissions from mineral development	Mineral leasing and mineral materials disposal would not occur in KEPA. Locatable mineral development in KEPA would increase emissions of particulate matter, fugitive dust, NO _x , CO ₂ , and other pollutants from mine development and production and mine-related vehicle use. However, due to the limited size or quality of locatable mineral deposits as well as their remote location, development in KEPA will likely be limited to alabaster mining (BLM 2018c). As a result, emissions from mineral development under Alternative A are expected to be minimal.	Mineral leasing and mineral materials disposal would result in increased particulate matter, fugitive dust, NO _x , CO ₂ , VOCs, and other pollutants from development, production, and mineral-related traffic. Emissions associated with locatable mineral development are expected to be similar to those under Alternative A, but to a lesser degree due to the 506,995 acres of recommended locatable mineral withdrawals in KEPA under Alternative B. As a result, overall emissions associated with mineral development are expected to be minimal under Alternative B.	Alternative C reduces the extent of mineral constraints and the area recommended for locatable mineral withdrawal in KEPA (213,705 acres). As a result, Alternative C could increase the potential for mineral development and mineral-related emissions.	Alternative D places the fewest constraints on mineral leasing and mineral materials disposal and decreases the area recommended for locatable mineral withdrawal (0 acres). As a result, Alternative D could increase the potential for mineral-related emissions compared to the other alternatives. Refer to Appendix M, <i>Air Quality Technical Support Document</i> , for more information on emissions inventory calculations and air quality modeling for mineral development.	Same as Alternative D.
Emissions from non-mineral activities	Existing non-mineral development activities in KEPA would be continued; therefore, emissions under Alternative A are expected to be minimal. Under Alternative A, emissions of criteria pollutants and hazardous air pollutants could result from wildfire and prescribed fire events. Livestock grazing and related management activities could generate emissions of GHGs, criteria pollutants, and fugitive dust. Livestock grazing would continue in KEPA on 831,566 acres at existing approved utilization levels. OHV use on routes open for public use in KEPA could emit particulate matter, CO, NO _x , and fugitive dust.	Emissions associated with livestock grazing are expected to be similar to those of Alternative A, but to a lesser degree due to the 675,684 acres available for grazing in KEPA under Alternative B. Emissions from OHV use would likely be similar under all alternatives. Overall emissions in KEPA associated with non-mineral activities are expected to be minimal under Alternative B.	Alternative C increases the acreage available for livestock grazing compared to alternatives A and B (844,200 acres). As a result, Alternative C could increase the potential for emissions in KEPA from livestock grazing. Emissions from OHV use would likely be similar under all alternatives.	Alternative D provides the most acres as available for livestock grazing (848,424 acres) in KEPA. As a result, Alternative D could increase the potential for emissions in KEPA from livestock grazing compared to the other alternatives. Emissions from OHV use would likely be similar under all alternatives.	Same as Alternative D.
NAAQS	Due to the limited extent of mineral development, there would be no anticipated exceedances of NAAQS associated with BLM management and associated resource use in KEPA.	Same as Alternative A.	Same as Alternative A.	Air quality modeling indicates that the development of the reasonably foreseeable mineral projects could contribute to a short-term localized exceedance of the NO ₂ NAAQS. Due to the short duration of activities that would lead to this modeled exceedance of NO ₂ , it is not likely that mineral development activities would result in an NAAQS violation. Refer to Appendix M, <i>Air Quality Technical Support Document</i> , for more information.	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
PSD Significant Impact Levels	Due to the limited extent of the reasonably foreseeable mineral development activities, no exceedances of the Class I SILs are anticipated.				
Visibility	Potential impacts on visibility from reasonably foreseeable mineral development in the Planning Area are expected to be below the applicable Federal Land Manager's Air Quality Related Values Work Group project level thresholds for Class I areas and sensitive Class II areas (e.g., Bryce Canyon) (Map 2).	Same as Alternative A.	Same as Alternative A.	Minerals activity under Alternative D has the potential to produce a perceptible plume in contrast with the sky and terrain in Bryce Canyon National Park. This could occur as a result of the overlap between oil and gas completion activities and days of adverse meteorological conditions and therefore would be a rare occurrence. No anticipated impacts from reductions in visibility are expected in other nearby Class I or Sensitive Class II areas assessed in the modeling (Map 2). Refer to Appendix M, <i>Air Quality Technical Support Document</i> , for more information.	Same as Alternative D.
Cultural Resources					
Surface disturbance impacts	<p>Surface disturbance could result in impacts on cultural resources through physical alteration or damage, moving cultural materials from their original positions (in situ) prior to scientific documentation, altering the characteristics of the environment that contribute to the significance of a cultural resource, introducing visual or audible elements out of character with the property or altering its setting, and physically exposing the resource to the extent that it deteriorates or is destroyed.</p> <p>Discretionary activities that would result in large-scale surface disturbance (e.g., renewable energy, leasable and salable mineral development) are heavily restricted or prohibited under the existing MMP (BLM 2000); as a result, limited impacts on cultural resources from surface-disturbing activities are anticipated under Alternative A.</p> <p>BLM-permitted activities under any alternative are subject to NHPA Section 106, which means that BLM management and subsequent site-specific permitting must avoid, minimize, or mitigate direct and indirect impacts on historic properties.</p>	<p>Impacts on cultural resources from surface disturbance would be similar to those of Alternative A, though to a slightly greater degree due to the increased potential for mineral development and other resource use in KEPA.</p> <p>Alternative B designates the largest number of ACECs (14 ACECs), including six ACECs with cultural resource R&I values. Management to reduce impacts on cultural resources in these ACECs could reduce impacts in these areas.</p> <p>Designation and management of areas that reduce surface disturbance potential, including managing lands with wilderness characteristics (379,427 acres), and resource-/area-specific protective measures and research that could reduce potential impacts.</p>	<p>Similar impacts from surface disturbance as those of alternatives A and B but to a greater degree. Alternative C applies fewer constraints on mineral development and other resource uses, and designates only five ACECs, four of which include cultural resource R&I values. Alternative C manages a smaller area for its wilderness characteristics (34,757 acres) and generally applies fewer resource-/area-specific protective measures to reduce potential impacts than does Alternative B.</p>	<p>Alternative D places the fewest constraints on mineral development and other resource uses. Alternative D does not designate ACECs and does not specifically manage any lands with wilderness characteristics that would reduce impacts on cultural resources. Alternative D generally applies the fewest resource-/area-specific protective measures that could reduce potential impacts of any alternative. However, Alternative D may result in greater potential for the identification of new cultural resources, as Alternative D increases the potential for surface-disturbing activities that require pre-disturbance cultural surveys, which could identify new cultural resource sites.</p>	<p>Same as Alternative D.</p> <p>Alternative E would reduce potential impacts on cultural resources from OHV travel in the Little Desert OHV open area, as the open area would include 116 acres under Alternative E, compared to 2,528 acres under Alternative D.</p>

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Indirect impacts from increased access	Indirect impacts could result from the development of facilities and infrastructure, increased access to previously remote or difficult to get to areas resulting in looting and vandalism, opening areas to camping or OHV use, and activities and resource uses that increase the potential for damage to or erosion effects on cultural sites. Discretionary actions that could increase visitation and access to new areas (e.g., the creation of new routes) are heavily restricted under the existing MMP (BLM 2000); as a result, limited new impacts on cultural resources from increased access are anticipated under Alternative A.	Similar impacts as those of Alternative A, though to a slightly greater degree due to the increased potential for access and development in KEPA compared to Alternative A. Alternative B would place restrictions on resource uses across the largest area, reducing potential indirect impacts on cultural resources compared to other alternatives.	Similar impacts as those under Alternative B, but to a greater degree. Alternative C would allow greater access and development in KEPA and place fewer restrictions on resource uses than Alternative B.	Alternative D would increase the potential for indirect impacts by allowing the most access and development in KEPA, while also placing the fewest restrictions on resource uses.	Same as Alternative D.
Native American use	No permit requirements for collection for traditional or personal use.	Non-commercial traditional use collection allowed without a permit. Free permit required for personal use collection.	Non-commercial traditional use allowed through free permits.	Non-commercial traditional use collection allowed without a permit.	Same as Alternative D.
Fish, Wildlife, and Special Status Species					
Surface disturbance and habitat alteration impacts	Surface-disturbing activities can result in impacts on fish and wildlife and special status species through habitat alteration, including the loss of vegetation used for sheltering, breeding, or foraging. Surface-disturbing activities are generally restricted under the existing MMP (BLM 2000), and generally prohibited in special status species habitat. Such restrictions under Alternative A would reduce harm to species and habitats. In addition, where the BLM allows a surface-disturbing action, site-specific conditions are evaluated and BMPs are applied to further reduce harm.	Similar impacts on fish and wildlife and special status species from surface disturbance or habitat alteration as those of Alternative A, but to a slightly greater degree due to the increased potential for mineral development and other resource use in KEPA compared to Alternative A. Alternative B designates the most ACECs (14 ACECs), including ten ACECs with fish and wildlife or natural process or system R&I values, and manages the largest area of lands for wilderness characteristics (379,427 acres).	Similar impacts on fish and wildlife and special status species from surface disturbance or habitat alteration as those of alternatives A and B, but to a greater degree. Alternative C applies fewer constraints on mineral development and other resource uses, designates only five ACECs (including four with fish and wildlife or natural process or system R&I values), and manages a smaller area of lands with wilderness characteristics (34,757 acres).	Alternative D would increase the potential for impacts on fish and wildlife and special status species from surface disturbance or habitat alteration compared to the other alternatives. Alternative D places the fewest constraints on mineral development and other resource uses that can cause surface disturbance. In addition, Alternative D neither designates any ACECs nor manages any lands with wilderness characteristics.	Same as Alternative D.
Human activity and disturbance impacts	Human activity and disturbance can result in impacts on fish and wildlife and special status species through temporary noise and visual disturbance associated with light recreational use or permanent displacement of fish and wildlife and special status species from frequent heavy use or permanent habitat alterations. Alternative A provides targeted management of recreation in KEPA by	Impacts on fish and wildlife and special status species from human activity and disturbance would be similar to those of Alternative A, though to a lesser degree due to the increased potential for targeted management of recreation through the designation of nine SRMAs (519,421 acres) and five RMZs (16,997 acres). Alternative B designates the most SRMAs and RMZs in KEPA and applies the most resource-specific protective	Impacts would be similar to those of Alternative B, but to a greater degree. Alternative C designates the same SRMAs and RMZs in KEPA, but manages these areas for larger group sizes and with fewer restrictions on competitive events and OHV use than does Alternative B. Alternative C applies fewer resource-specific protective measures than alternatives A and B, thereby increasing the potential for fish and wildlife and	Alternative D manages KEPA as an ERMA with several RMZs; management in these areas generally allows larger group sizes and with fewer restrictions on competitive events and OHV use than either Alternative B or Alternative C. Alternative D applies the least restrictive resource-specific protective measures of any alternative, which would increase the potential for fish	Same as Alternative D, except Alternative E manages Calf Creek, Burr Trail, Hole-in-the-Rock Road, and Skutumpah as SRMAs and group size limits could be adjusted within WSAs on a case-by-case basis, potentially reducing fish, wildlife, and special status species disturbance or displacement impacts.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	managing six SRMAs (486,629 acres). Alternative A also disallows rock climbing in areas of known special status bird and raptor nesting, and prohibits or relocates trails, parking areas, and other recreation facilities in special status plant species' habitat. The application of BMPs limits the potential for impacts from human activity and disturbance.	measures that could reduce potential fish and wildlife and special status species disturbance or displacement impacts.	special status species disturbance or displacement impacts.	and wildlife and special status species disturbance or displacement impacts.	
Habitat restoration impacts	Vegetation treatments can result in long-term habitat maintenance and/or improvement impacts on fish and wildlife and special status species through reduction of soil loss, improvement of crucial big game habitat, restoration of ecological function, or increased forage production. Alternative A manages habitats for the recovery or reestablishment of native species populations. Alternative A would reduce the potential for short- and long-term impacts in KEPA by prohibiting management-prescribed fires and prohibiting reseeding or surface-disturbing restoration strategies in areas with special status plant species to allow for natural vegetative restoration. As a result, both habitat maintenance and/or improvement and habitat alteration impacts on fish and wildlife and special status species would be minimal.	Impacts on fish and wildlife and special status species from habitat restoration activities would be similar to those of Alternative A, though to a greater degree. Alternative B provides increased flexibility for various vegetation treatments and habitat restoration activities in KEPA. As a result, the potential for short-term habitat alteration and long-term habitat maintenance and/or improvement impacts would be greater compared to Alternative A.	Alternative C would result in impacts on fish and wildlife and special status species from habitat restoration activities similar to those of Alternative B but to a greater degree in both the short and long term. Alternative C manages habitats for the recovery or reestablishment of both native and naturalized species and allows increased flexibility for various vegetation treatments and habitat restoration activities in KEPA compared to alternatives A and B. Alternative C increases the potential to affect resources on adjacent NPS lands by managing for naturalized species. Introduced or nonnative species would be removed from lands directly adjacent or in close proximity to NPS lands under Alternative C; therefore, impacts on NPS lands are expected to be minimal.	Alternative D would increase the potential for short-term habitat alteration impacts and would increase the potential for long-term habitat maintenance and/or improvement impacts on fish and wildlife and special status species in KEPA compared to the other alternatives. Alternative D manages habitats for the recovery or reestablishment of native, naturalized, and introduced species and allows increased flexibility for various vegetation treatments and habitat restoration activities compared to other alternatives. Alternative D increases the potential to affect resources on adjacent NPS lands compared to Alternative C by managing for naturalized and introduced species. Impacts on NPS lands are expected to be greater under Alternative D, especially if management is not consistent with NPS management and objectives.	Same as Alternative D.
Lands with Wilderness Characteristics					
Lands managed for wilderness characteristics	Alternative A manages 0 acres for wilderness characteristics. Mineral resource development, ROW development, vegetation treatments, OHV access, and VRM can result in impacts on one or more components of wilderness characteristics. Development activities that could affect wilderness characteristics (e.g., the creation of new routes or mineral materials development) are heavily restricted or prohibited under the existing MMP (BLM 2000); as a result, limited new adverse impacts on wilderness characteristics are anticipated under Alternative A. The	Alternative B specifically manages 379,427 acres of lands with wilderness characteristics to protect, preserve, or maintain their wilderness characteristics, reducing adverse impacts by preserving or improving wilderness characteristics (Map 6). Alternative B applies resource use restrictions to all lands with wilderness characteristics in KEPA to maintain, protect, and preserve their wilderness characteristics.	Alternative C manages 34,757 acres of lands with wilderness characteristics to protect, preserve, or maintain their wilderness characteristics, reducing adverse impacts by preserving or improving wilderness characteristics (Map 7). Impacts would be similar to those of Alternative B, but to a greater degree. Alternative C applies fewer constraints on mineral development and other resource uses in KEPA than do alternatives A and B. While Alternative C manages select lands with wilderness characteristics (34,757	Alternative D manages 0 acres for wilderness characteristics and does not apply any specific provisions to maintain, protect, and preserve their wilderness characteristics. In addition, Alternative D applies the fewest constraints on mineral development and other resource uses in KEPA. Impacts on wilderness characteristics would be greater under Alternative D than under alternatives A, B, or C.	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	potential for impacts from human presence would be further reduced where lands with wilderness characteristics overlap Primitive or Outback zones.		acres) to maintain, protect, and preserve their wilderness characteristics, those not specifically managed could experience development or levels of use that degrade one or more components of wilderness characteristics (size, naturalness, etc.).		
Paleontological Resources					
Surface disturbance impacts	Surface disturbance could result in impacts on paleontological resources from management decisions that open areas to surface-disturbing activities in geologic units with PFYC 3 to 5. Destruction of paleontological resources could result from surface-disturbing activities as well as ongoing operations of facilities constructed within a given project area.	Impacts on paleontological resources from surface disturbance would be similar to those of Alternative A, but to a greater degree. Alternative B opens KEPA to mineral development and other uses, which could result in impacts from inadvertent damage of paleontological resources from surface-disturbing activities. However, Alternative B designates the greatest acreage of ACECs for which paleontological resources are an R&l value (103,567 acres). Management to reduce impacts on paleontological resources in these ACECs would reduce impacts in these areas compared to other alternatives. Management of lands with wilderness characteristics (379,427 acres) and certain recreation management areas that limit surface disturbance could protect paleontological resources by imposing constraints on resource uses. All alternatives are subject to BMPs during site-specific permitting and contain 209,707 acres of WSA lands that have embedded surface disturbance restrictions.	Potential impacts would be similar to those of Alternative B but to a greater degree due to increased availability of areas to development activities. Alternative C would have fewer constraints on mineral development and other resource uses and fewer ACECs for which paleontological resources are an R&l value (51,558 acres) compared to Alternative B. Alternative C would also manage fewer areas for wilderness characteristics (34,757 acres), and apply generally fewer resource-/area-specific protective measures that could reduce potential impacts. All alternatives are subject to BMPs during site-specific permitting and contain 209,707 acres of WSA lands that have embedded surface disturbance restrictions.	Alternative D would increase the potential for impacts on paleontological resources from surface disturbance compared to the other alternatives. Alternative D would place the fewest constraints on mineral development and other resource uses. Alternative D would not manage any ACECs or lands with wilderness characteristics, and would generally have the fewest resource-/area-specific protective measures that could reduce potential impacts. Alternative D may result in a greater potential for the identification of new paleontological resources by requiring pre-disturbance paleontological inventories prior to surface disturbance. All alternatives are subject to BMPs during site-specific permitting and contain 209,707 acres of WSA lands that have embedded surface disturbance restrictions.	Same as Alternative D.
Public access and collection	Public access to PFYC 3 to 5 geologic units could potentially affect paleontological resources by increasing the likelihood of vandalism and unlawful collecting. Opening routes for public use and increasing recreation opportunities could increase potential for impacts. Casual collection could result in the loss of paleontological resources over time; however, Alternative A prohibits the casual collection of paleontological resources within KEPA.	The potential for public access and casual collection to affect paleontological resources would be similar to that of Alternative A but less due to the designation of ACECs for the protection of paleontological resources (103,567 acres), and travel restrictions imposed within recreation management areas, WSAs, and lands managed for wilderness characteristics.	The potential for public access and casual collection to affect paleontological resources would be greater than that of Alternative B due to a smaller area designated as ACECs for the protection of paleontological resources (51,558 acres) and because Alternative C allows OHV travel in WSAs and lands with wilderness characteristics. Alternative C also allows for casual collection except in certain areas designated as closed (Map 11).	The potential for public access and casual collection to affect paleontological resources would be similar to that of Alternative C, but greater because Alternative D would place fewer restrictions on travel and recreation, and would not manage any ACECs for the protection of paleontological resources. Alternative D also allows casual collection with fewer restrictions over a larger area of KEPA than Alternative C (Map 12).	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Impacts on adjacent private and NPS lands	Public access or opportunities for casual collection within KEPA could result in potential impacts on adjacent private lands or lands managed by Glen Canyon NRA through inadvertent casual collection or damage to resources on non-BLM lands. However, Alternative A prohibits the casual collection of paleontological resources within KEPA.	The potential for public access and casual collection to affect resources on adjacent non-BLM lands would be similar to that of Alternative A but less due to travel and access restrictions imposed within recreation management areas, WSAs, and lands managed for wilderness characteristics.	The potential for public access and casual collection to affect resources on adjacent non-BLM lands would be greater than that of Alternative B due to fewer travel and access restrictions imposed within recreation management areas, WSAs, and lands managed for wilderness characteristics. Alternative C also allows for casual collection except in certain areas designated as closed (Map 11).	The potential for public access and casual collection to affect resources on adjacent non-BLM lands would be similar to that of Alternative C, but greater because Alternative D would place the fewest restrictions on travel and recreation. Alternative D also allows casual collection with fewer restrictions over a larger area of KEPA than Alternative C (Map 12).	Same as Alternative D.
Proactive management impacts	No similar action.	A Paleontological Resource Management Plan would be developed for certain lands in KEPA and would create additional capacity for research, scientific understanding, and opportunity for the collection, curation, and protection of paleontological resources.			
Soil and Water Resources					
Surface disturbance impacts	Surface disturbance could result in impacts on soil and water resources through a decrease in vegetation, soil compaction, and increased runoff from vegetation treatments; installation or maintenance of livestock grazing range improvements; ROW and renewable energy development; development and maintenance of routes and trails; and recreation activities.	Impacts on soil and water resources from surface disturbance would be similar to those of Alternative A, though slightly less due to prohibition of surface-disturbing activities and ROW exclusion on fragile or sensitive soils and the requirement to stabilize slopes greater than 5%. Surface-disturbing activities would be prohibited on slopes greater than 30% and within Drinking Water Source Protection Zones/culinary water sources.	Potential impacts similar to those of Alternative B but to a greater degree. Alternative C would allow surface-disturbing activities and ROW avoidance on fragile or sensitive soils with development of a soil health and restoration plan with site-specific mitigation measures. Alternative C would require stabilization of soils and minimization of water runoff for slopes greater than 10%. Surface-disturbing activities would be prohibited on slopes greater than 30% and would allow surface-disturbing activities within Drinking Water Source Protection Zones/culinary water sources where the disturbance does not degrade the resource.	Alternative D would increase the potential for impacts on soil and water resources from surface disturbance compared to the other alternatives. Alternative D would generally allow the greatest amount of surface-disturbing activities and would require measures to stabilize soils and minimize surface water runoff for slopes greater than 15%.	Same as Alternative D.
Vegetation treatment impacts	Vegetation removal from mechanical vegetation treatments and prescribed fires could result in short-term impacts on soil and water resources through a decrease in vegetation, soil compaction, and increased surface runoff. Chemical treatments could increase the potential for surface- and groundwater contamination. Long-term impacts could include the potential for maintaining native plant communities, increasing vegetative cover, and enhancing fire resilience. Alternative A would reduce the potential for short-term impacts due to emphasis on natural processes and would limit potential long-term beneficial impacts due to limited ability to implement a	Impacts on soil and water resources from vegetation treatments would be similar to those of Alternative A, though slightly less in the short term and long term due to prohibiting treatments unless necessary for the protection of life or property.	Potential impacts similar to those of Alternative B but to a greater degree in both the short term and long term. Alternative C would allow all methods of vegetation treatments and tools, except chaining, resulting in the potential for greater surface disturbance and vegetation removal in the short term, but greater soil productivity and water infiltration in the long term compared to Alternative B.	Alternative D would increase the potential for short-term impacts on soil and water resources from vegetation treatments compared to the other alternatives by allowing the full range of vegetation treatment methods and prioritizing treatments in areas where removal of woodland products would improve rangeland health, improve wildlife habitat, and improve forage. Long-term impacts would be similar to those of Alternative C but to a slightly lesser extent by not specifically designing treatments to benefit soil and water resources.	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	full range of vegetation treatment options.				
Vegetation and Fire and Fuels Management					
Surface disturbance impacts	Surface disturbance could result in impacts on vegetation in the short term from the direct removal of vegetation, including harvest of live plant material, harvest of seeds, and consumption of plant materials by livestock and wildlife. The potential for long-term impacts includes the permanent loss of desirable vegetation from the development of permanent features such as utility ROWs, renewable energy facilities, roads, and recreation sites. Alternative A would limit surface disturbance within KEPA by closing KEPA to mineral leasing; establishing 457,361 acres of ROW exclusion and 405,071 acres of ROW avoidance; closing 6,722 acres to livestock grazing; and managing 0 acres as VRM Class I and 520,620 acres as VRM Class II.	Impacts on vegetation from surface disturbance would be similar to those of Alternative A, though less by establishing 787,484 acres of ROW exclusion and 74,947 acres of ROW avoidance; closing 175,032 acres to livestock grazing; and managing 589,074 acres as VRM Class I and 197,159 acres as VRM Class II. Alternative B would designate the greatest amount of ACECs (14), which would reduce surface disturbance impacts in these areas. Potential impacts on vegetation would be reduced through designation and management of areas that reduce surface disturbance potential, including managing lands with wilderness characteristics (379,427 acres), and resource-/area-specific protective measures.	Potential impacts would be similar to those of Alternative B but to a greater degree. Alternative C would have fewer constraints on mineral development and other resource uses and fewer ACECs designated (five ACECs). Alternative C would also manage less area of ROW exclusion (324,677 acres), VRM Class I (209,707 acres), unavailable for livestock grazing (9,612 acres), and wilderness characteristics (34,757 acres), and have generally fewer resource-/area-specific protective measures that could reduce potential impacts.	Alternative D would increase the potential for impacts on vegetation from surface disturbance compared to the other alternatives. Alternative D would place the fewest constraints on mineral development and other resource uses. Alternative D would not manage any ACECs, would not manage any lands with wilderness characteristics, and would generally have the fewest resource-/area-specific protective measures that could reduce potential impacts.	Same as Alternative D.
Noxious weeds, invasive plant species, and pests and diseases	Introduction and spread of noxious weed and invasive plant seeds or vegetative materials can occur as a result of reclamation and seeding projects, wildlife use, livestock movement, OHV travel, wind, or water from an area of infestation to an area not previously infested. Alternative A allows only the use of native plants during restoration and would allow the use of machinery to control areas of noxious weeds and invasive plant species presenting a substantial threat to resources. Limiting the ability to implement the full range of available management to treat noxious weeds, invasive plant species, and pests would reduce short-term surface disturbance of vegetation communities during treatment, but could result in long-term impacts if infestations spread.	Potential impacts would be similar to those of Alternative A, but to a greater degree. Alternative B only allows vegetation treatments in limited circumstances but would not allow the use of machinery, reducing potential introduction and spread of noxious weeds and invasive plant species, but further limiting methods for their control if infestations spread.	Greater potential for short-term impacts (establishment and spread of noxious weeds and invasive plant species) compared to Alternative B by allowing a broader range of treatment methods, creating more surface disturbance, allowing the use of desirable nonnative species in limited situations as long as they support ecological objectives and protect resources (e.g., stabilize soils), and the probability of success or adapted seed availability is low. Greater potential for the long-term control of noxious weeds and invasive plant species due to implementation of a full range of vegetation treatment options.	Similar to Alternative C, but greatest potential for short-term impacts and long-term impacts by permitting the broadest range of vegetation treatment options.	Same as Alternative D.
Impacts on fire and fuels management	Potential for impacts due to an emphasis on natural processes and restrictions on resource uses that affect fire and fuels management.	Similar impacts as those of Alternative A, but greater due to the designation of 14 ACECs, which could limit fire suppression actions if roads are closed and reclaimed to protect values of the ACECs. Increased potential for wildfire	Similar impacts as those of Alternative B, but to a lesser degree due to the reduction in ACEC designations and fewer areas managed as SRMAs and RMZs.	Similar impacts as those of Alternative C, but to a lesser degree as a result of allowing the widest range of suppression tactics and wildfire management and by applying the	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
		ignitions in SRMAs and RMZs due to increased acreage of these areas, where both concentrated and dispersed recreational uses increase the likelihood of unintended ignitions.		fewest resource use restrictions that affect fire and fuels management.	
FMP impacts	No similar action.	The BLM would revise the existing FMP to address a spectrum of management strategies including wildfire suppression, wildland fire use, prescribed fire, non-fire fuel treatments, and emergency stabilization and rehabilitation. The revised FMP would result in long-term, indirect impacts by creating a document that provides for clear fire management direction that is compliant with national and interagency direction.			
Visual Resources, Night Skies, and Natural Soundscapes					
Proposed VRM classes	VRM Class I: 0 acres VRM Class II: 520,620 acres VRM Class III: 339,815 acres VRM Class IV: 0 acres (Map 22) Alternative A would provide protection of existing visual resources and areas with high scenic quality at the landscape level by managing the majority of KEPA as VRM Class II. Potential for direct and indirect adverse impacts from areas designated as VRM Class III than lands classified as VRI Class II because the significance of the impact or the change in landscape character could be greater in a VRI Class II area versus a VRI Class III area.	VRM Class I: 589,074 acres VRM Class II: 197,159 acres VRM Class III: 37,860 acres VRM Class IV: 38,232 acres (Map 23) Alternative B is the most protective of existing visual resources by assigning VRM Class I and II objectives to the largest area of inventoried Class II, III, or IV lands.	VRM Class I: 209,707 acres VRM Class II: 419,081 acres VRM Class III: 131,474 acres VRM Class IV: 101,995 acres (Map 24) Similar types of impacts as alternatives A and B, but fewer protections for existing visual resources by assigning fewer VRM Class I objectives to areas of inventoried Class II, III, or IV lands.	VRM Class I: 209,707 acres VRM Class II: 207,011 acres VRM Class III: 308,320 acres VRM Class IV: 137,207 acres (Map 25) Similar types of impacts as Alternative C, but fewer protections for existing visual resources by assigning fewer VRM Class II objectives to areas of inventoried Class II, III, or IV lands.	VRM Class I: 209,707 acres VRM Class II: 205,347 acres VRM Class III: 310,031 acres VRM Class IV: 137,159 acres (Map 26) Similar to Alternative D.
Visual resource and night skies impacts	Management of other program areas could result in impacts on visual resources and dark night skies through surface disturbance, changes in vegetation, allowance of infrastructure or facilities development, or inadvertent creation of light pollution. Alternative A maintains existing VRM class designations and restricts resource uses and activities in KEPA; therefore, minimal impacts on visual resources and dark night skies are expected.	Impacts on visual resources and dark night skies from resource uses and management of other program areas would be similar to those of Alternative A, though to a lesser degree. Alternative B would require interpretive materials/programs to be developed to educate and engage the public about visual resources and night skies, and would also inventory and monitor night skies in partnership with local stakeholders. Alternative B would designate an OSNHT corridor (61,256 acres) along with other special designations such as scenic byway and backway corridors, wild and scenic river corridors, and WSAs that are managed as VRM Class I or II. Management of these special designations would generally reduce the potential for impacts on visual resources and dark night skies.	Potential impacts would be similar to those of Alternative B but to a greater degree. Alternative C places fewer constraints on resource uses in KEPA. Alternative C also designates a smaller OSNHT corridor (17,879 acres). Alternative C increases the potential to affect visual resources on adjacent NPS lands, as some KEPA lands within the viewsheds of Capitol Reef and Bryce Canyon National Parks are managed as VRM Class III and IV (Map 24). BLM management of these areas could increase the potential for visual contrast or light pollution that would affect night skies, viewers, and viewsheds from NPS lands.	Alternative D contains the fewest special designations and restrictions on resource uses that could increase light pollution in KEPA. Alternative D would manage the smallest OSNHT corridor (1,409 acres) and would not designate scenic byway and backway corridors. Alternative D increases the potential to affect visual resources on adjacent NPS lands, as some KEPA lands within the viewsheds of Capitol Reef are managed as VRM Class III and lands adjacent to Bryce Canyon National Parks are managed as VRM Class III and IV (Map 25). BLM management of these areas could increase the potential for visual contrast or light pollution that would affect night skies, viewers, and viewsheds from NPS lands.	Same as Alternative D except that potential impacts on visual resources along the OSNHT would be reduced due to Alternative E having a wider corridor (0.5 mile wide compared to the 330-foot-wide corridor for Alternative D).

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Natural soundscapes impacts	Surface disturbance and resource use activities that result in an increase of intrusive sounds could affect the preservation of natural soundscapes. Alternative A applies restrictions on resource use activities in KEPA that would be protective of natural soundscapes, so impacts are expected to be minimal.	Impacts on natural soundscapes in KEPA would be similar to those of Alternative A, but to a slightly lesser degree. Alternative B would require interpretive materials/programs to be developed to educate and engage the public about natural soundscapes and would also inventory and monitor natural soundscapes in partnership with local stakeholders.	Potential impacts on natural soundscapes would be similar to those of Alternative B but to a greater degree. Alternative C places fewer constraints on resource use activities in KEPA and designates more areas as open or limited to OHV use (858,963 acres), which increases the potential for intrusive sounds. Alternative C increases potential for human activity in KEPA, which also increases the potential to affect natural soundscapes on NPS lands adjacent to the Planning Area.	Alternative D would place the fewest constraints on resource uses in KEPA and designates the greatest area as open or limited to OHV use (862,226 acres), which increases the potential for intrusive sounds. Alternative D increases development potential and potential for human activity in KEPA compared to Alternative C, which also increases the potential to affect natural soundscapes on NPS lands adjacent to the Planning Area.	Same as Alternative D.
Wild Horses					
Impacts on wild horses or HAs	No expected direct or indirect impacts on wild horses or the HAs that intersect the Planning Area. The Moody-Wagon Box Mesa HA does not currently support any wild horses and Harvey's Fear HA is within a WSA, is extremely remote, and has an appropriate management level of zero horses (Map 32). The BLM would conduct population surveys of wild horses within Planning Area HAs every 3 to 4 years, which would help inform future BLM decisions for herd management within the Planning Area.				
Resource Uses					
Forestry and Woodland Products					
Limits or restrictions on forest and woodland harvest	Potential impacts on forestry and woodland products could result in areas where fuelwood cutting or the distribution of commercial wood-cutting permits is specifically prohibited. Impacts could also result from surface disturbance restrictions intended to protect other resources or resources uses, resulting in the reduction of lands available for forest and woodland harvesting activities.	Similar to Alternative A, but fewer potential impacts due to fewer restrictions on commercial and non-commercial timber harvesting within KEPA for the purposes of promoting or sustaining forest health. However, surface-disturbing activities would be prohibited within certain special status species habitats, fragile or sensitive soil areas, Drinking Water Source Protection Zones, and the OSNHT NTMC, limiting the areas where surface-disturbing activities associated with harvesting forest and woodland products could occur. Alternative B also prohibits fuelwood cutting in all special status plant species habitat.	Similar to Alternative B, but fewer potential impacts by allowing commercial timber harvesting within KEPA for the purposes of promoting or sustaining forest health. Commercial and non-commercial fuelwood harvesting, post cutting, and Christmas tree cutting would be allowed across the entirety of KEPA under Alternative C. Alternative C also includes comparatively fewer resource use and development restrictions, and allows fuelwood cutting in habitat for BLM sensitive plant species within KEPA, if the BLM determines during site-specific assessment that no habitat degradation would occur.	Same as Alternative C.	Same as Alternative C except Alternative E would also allow non-commercial timber harvesting.
Vegetation treatment impacts	Potential impacts from vegetation treatments on forests and woodlands could result from surface-disturbing activities and removal of vegetation. Long-term potential impacts on forests and woodlands could result from restoration. Alternative A allows the use of machinery unless limited by management for other resources or allocations and generally applies greater restrictions on treatments that could benefit woodland stands and the	Similar to Alternative A, but fewer short-term and long-term impacts by allowing vegetation treatments only in limited circumstances.	Similar to Alternative B, but greater potential for short-term and long-term impacts by allowing all vegetation treatment methods except chaining. Treatments would be designed to promote overall land health, potentially resulting in additional long-term benefits to forestry and woodland products than the other alternatives.	Similar to Alternative C, but increased potential for short-term and potential decrease in long-term impacts by prioritizing treatments in areas where removal of woodland products would improve rangeland health, improve wildlife habitat, and improve forage.	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	production of woodland products in the long term.				
Lands and Realty					
ROWS	ROW Avoidance: 405,071 acres ROW Exclusion: 457,361 acres (Map 35) ROW exclusion areas would typically not be available for the location of ROWs, which could result in adverse impacts on locating utility infrastructure, communications facilities, and other ROWs. ROW avoidance areas may require special design or siting requirements and could adversely affect costs of implementation. Areas available for ROW development would have direct and indirect, short- and long-term, beneficial impacts on lands and realty by accommodating desired placement of facilities, accommodating access and efficient energy supply, and minimizing additional costs.	ROW Avoidance: 74,947 acres ROW Exclusion: 787,484 acres (Map 36) Similar types of impacts as Alternative A but beneficial impacts would be increased due to fewer exclusion areas and more area available to ROWs.	ROW Avoidance: 337,963 acres ROW Exclusion: 324,677 acres (Map 37) Similar types of impacts as Alternative B but beneficial impacts would be increased due to fewer exclusion areas and more area available to ROWs.	ROW Avoidance: 198,531 acres ROW Exclusion: 212,235 acres (Map 38) Similar types of impacts as Alternative C but beneficial impacts would be increased due to fewer exclusion areas and more area available to ROWs.	ROW Avoidance: 222,065 acres ROW Exclusion: 209,707 acres (Map 39) Similar impacts as Alternative D.
Utility-scale solar	Not available (i.e., excluded) for solar development (Map 49).	Manage 862,431 acres as utility-scale solar energy exclusion areas (Map 50). Manage 0 acres as utility-scale solar energy variance areas (Map 50). Do not designate any solar energy zones (designated leasing areas) for utility-scale solar energy development.	Manage 862,431 acres as utility-scale solar energy exclusion areas (Map 51). Manage 0 acres as utility-scale solar energy variance areas (Map 51). Do not designate any solar energy zones (designated leasing areas) for utility-scale solar energy development.	Manage 859,959 acres as utility-scale solar energy exclusion areas (Map 52). Manage 2,472 acres as utility-scale solar energy variance areas (Map 52). Do not designate any solar energy zones (designated leasing areas) for utility-scale solar energy development.	Same as Alternative D (Map 53).
Utility-scale wind development	No similar action (Map 44).	Manage 839,216 acres as utility-scale wind energy exclusion areas (Map 45). Manage 23,215 acres as available for potential utility-scale wind energy development (Map 45). Do not designate any designated leasing areas for utility-scale wind energy development.	Manage 715,190 acres as utility-scale wind energy exclusion areas (Map 46). Manage 147,241 acres as available for potential utility-scale wind energy development (Map 46). Do not designate any designated leasing areas for utility-scale wind energy development.	Manage 220,980 acres as utility-scale wind energy exclusion areas (Map 47). Manage 641,451 acres as available for potential utility-scale wind energy development (Map 47). Do not designate any designated leasing areas for utility-scale wind energy development.	Manage 229,960 acres as utility-scale wind energy exclusion areas (Map 48). Manage 632,471 acres as utility-scale wind energy variance areas (Map 48). Do not designate any designated leasing areas for utility-scale wind energy development.
Land tenure adjustments	Land exchanges and acquisitions could be considered in KEPA so long as the current owner is a willing participant, the action is in the public interest, and the action is in accordance with other management goals and objectives. No lands are identified for disposal by FLPMA Section 203 sale; therefore, impacts from land tenure adjustments are expected to be minimal. All land exchanges and acquisitions would be subject to valid existing rights.				
Withdrawal from mineral entry, location, selection, sale, leasing, or other disposition under the public land laws	New area recommended for withdrawal: 0 acres. (Map 40)	New area recommended for withdrawal: 506,995 acres. (Map 41)	New area recommended for withdrawal: 213,705 acres. (Map 42)	New area recommended for withdrawal: 0 acres. (Map 43)	New area recommended for withdrawal: 0 acres. (Map 43)
Livestock Grazing					
Land available for livestock grazing and stocking rates	Available for livestock grazing: 831,566 acres (Map 55)	Available for livestock grazing: 675,684 acres (Map 56)	Available for livestock grazing: 844,200 acres (Map 57)	Available for livestock grazing: 848,424 acres (Map 58)	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	<p>Changes to the allotments made available for livestock grazing could result in impacts on livestock grazing through direct loss of forage and ability to distribute livestock, loss of access to water sources, an increased need for construction of fences, or a need for permittees to alter the size of their grazing operations.</p> <p>Alternative A allocates reserve common allotments for use in facilitating research in grazing methods and for use while existing allotments are rested.</p>	<p>Impacts on livestock grazing would be similar to those of Alternative A, though to a greater degree due to the decrease in available acres and active AUMs and more restrictive grazing management compared to Alternative A including monitoring and rest-rotation grazing requirements. Under Alternative B, reserve common allotments would be unavailable for livestock grazing.</p>	<p>Potential impacts on livestock grazing would be similar to those of Alternative A due to the similar stocking rates and amount of land available for livestock grazing. Alternative C allocates more areas as reserve common allotments. Alternative C also designates reference sites for use in improving livestock grazing management, but to a lesser degree than Alternative B.</p>	<p>Alternative D would decrease the potential for impacts on livestock grazing from changes in available allotments compared to the other alternatives. Under Alternative D, acres available for grazing and active AUMs are increased and reserve common allotments would be allocated as available for grazing as regular permits. Alternative D designates reference sites but to a lesser degree than the other alternatives.</p>	
Range improvements impacts	<p>Constructing range improvements and general management to protect rangeland health could have short-term impacts on livestock grazing by reducing forage availability, restricting livestock distribution, or limiting the season of use. Range improvements could also have the long-term impacts of promoting healthy forage and opening up forage in areas that may not usually be available to livestock.</p> <p>The need for and extent of range improvements is considered on a case-by-case basis under Alternative A, but priority is given to rangeland improvement projects and land treatments that offer the best opportunity for achieving the BLM <i>Utah Standards for Rangeland Health</i> (BLM 1997). Alternative A allows the use of native plants in range improvement activities. Overall, Alternative A is expected to limit both short- and long-term impacts on livestock grazing from range improvements.</p>	<p>Short- and long-term impacts on livestock grazing from range improvements would be similar to those of Alternative A, though to a lesser degree. Alternative B does not allow vegetation treatments, water developments, or other range improvements for the primary purpose of increasing forage for livestock. Alternative B also suspends livestock grazing when the BLM <i>Utah Standards for Rangeland Health</i> (BLM 1997) are not met, which would have direct impacts on livestock grazing.</p>	<p>Potential impacts on livestock grazing would be similar to but greater than those of alternatives A and B, both in the short and long term. Maintenance and development of new structural and nonstructural range improvements are allowed under Alternative C to meet the demand for livestock forage, which increases the potential for both short- and long-term livestock grazing impacts. Alternative C also allows for the use of native and nonnative plants in range improvement activities. NPS management does not support the use of nonnative species for nonstructural range improvements in Glen Canyon NRA, which limits the potential to open up additional forage on these allotments.</p> <p>Alternative C increases the potential to affect resources in the adjacent Glen Canyon NRA, managed by NPS.</p>	<p>Alternative D would result in similar types of impacts as those of Alternative C, but would increase the potential for impacts from range improvements compared to the other alternatives. Alternative D provides the most flexibility in range improvement activities compared to the other alternatives, which increases the potential for both short- and long-term livestock grazing impacts.</p> <p>Alternative D would consider measures consistent with the protection of Glen Canyon resources, values, and purposes to reduce the potential impact on resources in the adjacent Glen Canyon NRA.</p>	Same as Alternative D.
Surface disturbance impacts	<p>Surface disturbance from resource uses or recreation activities could result in impacts on livestock grazing through disturbance of soils, reductions in forage, increased potential for the spread and establishment of nonnative invasive species, decreased access to water sources, and disturbance to livestock from increased human presence.</p> <p>Under Alternative A, KEPA is closed to mineral leasing and 457,361 acres of ROW exclusion. Recreation is managed</p>	<p>Impacts on livestock grazing from surface disturbance would be similar to those of Alternative A, though to a lesser degree. While parts of KEPA are opened to mineral leasing, Alternative B establishes 787,484 acres as ROW exclusion and establishes the most special designations, including nine SRMAs (519,422 acres) and four RMZs (16,996 acres). Management of the surface-disturbing activities would decrease the potential for soil disturbance or forage-related impacts.</p>	<p>Potential impacts on livestock grazing from surface disturbance would be similar to those of alternatives A and B, but to a greater degree. Alternative C imposes fewer constraints on mineral development and other resource uses and establishes 324,677 acres as ROW exclusion. Alternative C would designate 519,422 acres in nine SRMAs and 84,298 acres in five RMZs compared to Alternative B.</p>	<p>Alternative D increases the potential for impacts on livestock grazing from surface disturbance compared to the other alternatives. Alternative D places the fewest constraints on mineral development and other resource uses, establishes 212,235 acres as ROW exclusion, and manages KEPA as an ERMA, which provides greater potential for impacts from resource uses and recreation activities compared to the other alternatives.</p>	Same as Alternative D, except that Alternative E manages 209,707 acres as ROW exclusion areas.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	through six established SRMAs (486,629 acres). As a result, impacts on livestock grazing from surface disturbance are expected to be minimal.				
Minerals					
Mineral leasing stipulations	Moderate constraints: 0 acres Major constraints: 0 acres Closed to mineral leasing: 861,538 acres (Map 60) Alternative A would close all lands in KEPA to mineral leasing, resulting in direct short- and long-term adverse impacts on the availability of mineral materials resources.	Moderate constraints: 32,420 acres Major constraints: 237,945 acres Closed to mineral leasing: 591,531 acres (Map 61) Mineral leasing constraints under Alternative B could result in direct, adverse impacts on minerals including the temporary or permanent loss of opportunity for mineral exploration and development in KEPA.	Moderate constraints: 374,772 acres Major constraints: 276,113 acres Closed to mineral leasing: 210,891 acres (Map 62) Similar types of impacts as Alternative B but adverse impacts would be decreased due to fewer mineral leasing constraints.	Moderate constraints: 547,102 acres Major constraints: 104,972 acres Closed to mineral leasing: 209,699 acres (Map 63) Similar types of impacts as Alternative C but adverse impacts would be decreased due to fewer mineral leasing constraints.	Moderate constraints: 529,898 acres Major constraints: 120,990 acres Closed to mineral leasing: 210,885 acres (Map 64) Similar impacts as Alternative D.
Coal unsuitability	KEPA is closed to surface coal mining operations under Alternative A.	Impacts on coal mining in KEPA would be less than under Alternative A. Approximately 75,076 acres of KEPA would be closed to surface coal mining operations based on coal unsuitability criteria (43 CFR 3461) (Map 65). Additional areas could be found suitable or unsuitable for surface coal mining operations based on site-specific analysis.			
Mineral materials disposal impacts	Open to mineral materials disposal: 0 acres Closed to mineral materials disposal: 868,385 acres Closed to commercial mineral materials disposal: 868,385 acres	Open to mineral materials disposal: 0 acres Closed to mineral materials disposal: 674,105 acres Closed to exclusive pits, open to community pits of 5 acres or fewer of unclaimed area: 187,434 acres (Map 66)	Open to mineral materials disposal: 387,308 acres Closed to mineral materials disposal: 153,258 acres Closed to exclusive pits, open to community pits of 5 acres or fewer of unclaimed area: 320,972 acres (Map 67)	Open to mineral materials disposal: 635,952 acres Closed to mineral materials disposal: 225,586 acres (Map 68)	Open to mineral materials disposal: 591,507 acres Closed to mineral materials disposal: 213,802 acres Closed to exclusive pits, open to community pits of 5 acres or fewer of unclaimed area: 56,229 acres (Map 69)
Locatable mineral impacts from withdrawals	New area recommended for withdrawal: 0 acres	New area recommended for withdrawal: 506,995 acres.	New area recommended for withdrawal: 213,705 acres.	New area recommended for withdrawal: 0 acres.	New area recommended for withdrawal: 0 acres.
Recreation and Visitor Services					
Recreation Management Areas	The management of existing SRMAs under Alternative A would generally have beneficial impacts on recreation by providing targeted management for unique/important recreation opportunities and settings. The use of four distinct MZs to manage recreational setting, group size, and opportunities benefits recreationists by directing them toward areas that meet their desired recreation outcomes. SRMAs and MZs were established shortly after GSENM designation, and may not be sufficient to address current (increased) levels of visitation and desired opportunities/settings. 6 SRMAs with 0 RMZs (486,629 acres in GSENM), 0 ERMAs, 4 MZs.	Similar beneficial impacts on desired recreation outcome to those of Alternative A, but to a greater degree due to more SRMAs/RMZs and additional, targeted management to address current levels of visitation and desired opportunities/settings. Recreation Management Areas emphasize non-motorized, primitive, and small-group recreation, with some areas for motorized, frontcountry, and large-group recreation. 9 SRMAs with 4 RMZs (519,422 acres in KEPA), 1 ERMA (343,138 acres in KEPA).	Similar beneficial impacts on desired recreation outcome to those of Alternative A, but to a greater degree due to more SRMAs/RMZs and additional, targeted management to address current levels of visitation and desired opportunities/settings. Recreation Management Areas include expanded opportunities for motorized, frontcountry, and large-group recreation compared to Alternative B. 9 SRMAs with 5 RMZs (519,422 acres in KEPA), 1 ERMA (345,138 in KEPA).	Fewer beneficial impacts on management of recreation opportunities and settings compared to the other alternatives, due to fewer SRMAs/RMZs. Managing the majority of the Planning Area as an ERMA would allow management to address recreation use, demand, or visitor services needs, but not to the extent as under other alternatives, which include more specific, targeted management for recreation opportunities and settings. 0 SRMAs, 1 ERMA (845,428 acres in KEPA), 3 RMZs (16,741 acres in KEPA).	Similar beneficial impacts on desired recreation outcome to those of Alternative D, but to a greater degree due to more SRMAs/RMZs. 4 SRMAs (47,442 acres in KEPA) and 1 ERMA (805,907 in KEPA) with 5 RMZs.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
Group sizes	Group size is based on management in various zones. In general, group size of 25 people in the Passage and Outback Zones and 12 people in the Primitive Zone.	Group sizes vary in each SRMA but are generally smaller than under other alternatives. Group size limit of 8 people in WSAs. Group sizes above these limits could be approved by the authorized officer or through permit. Reduced group sizes may result in greater beneficial impacts on recreationists seeking a more primitive recreation experience.	Group sizes vary in each SRMA but are generally greater than under Alternative B. Group size limit of 12 people in WSAs. Group sizes above these limits could be approved by the authorized officer or through permit. Similar beneficial impacts on recreationists as Alternative B.	Group size limit of 25 people in WSAs. Outside of WSAs, group size limits of 50 people. Group sizes above these limits could be approved by the authorized officer or through permit. Larger group size limits under Alternative D could result in greater adverse impacts on recreationists seeking a primitive experience, and greater beneficial impacts on recreationists that favor a more social recreation experience.	Same WSA group size limits as those under Alternative D, except on a case-by-case basis group size limits, where applicable, could be adjusted within WSAs for consistency with group size limits on adjacent lands (e.g., NPS land, KFO land). Group size limits of 25–50 people in SRMAs/RMZs and 50 people in ERMAs. Similar impacts on recreationists as Alternative D, but more flexibility within WSAs.
Visitor use restrictions in Recreation Management Areas	Limited existing decisions on permits for organized events, campfire restrictions, permitting systems for overnight camping, parking restrictions, human waste management, burn restrictions for waste wood and debris, and vending at recreation sites. Limited decisions and increased visitation because GSENM designation could lead to environmental damage and user conflicts that affect recreation settings and outcomes.	Decreased potential for degradation of recreation settings and outcomes compared to Alternative A due to management in Recreation Management Areas that sets limits on organized events, imposes campfire restrictions and bans burning waste wood, imposes permitting systems for overnight camping in select areas, and applies human waste management solutions. Management would reduce environmental damage and user conflicts that affect recreation settings and outcomes compared to Alternative A.	Similar reduction in adverse impacts on recreation settings and outcomes due to reduced environmental damage and user conflicts as management under Alternative B, but to a lesser degree. Similar but less-restrictive management would allow activities in Recreation Management Areas with fewer constraints than under Alternative B.	Similar reduction in adverse impacts on recreation settings and outcomes due to reduced environmental damage and user conflicts as management under alternatives B and C, but to a lesser degree. Similar but less-restrictive management would allow activities in Recreation Management Areas with fewer constraints than under alternatives B and C. Reduced constraints under Alternative D could benefit those seeking social and large-group experiences to a greater extent than management under alternatives B and C.	Similar reduction in adverse impacts on recreation settings and outcomes due to reduced environmental damage and user conflicts as management under Alternative D, but to a lesser degree. SRMAs under Alternative E would include specific measureable recreation outcomes, and more prescriptive management on allowable recreation activities, experiences, and associated management and allocations decisions than Alternative D.
Transportation and Access					
OHV area designations	Open: 0 acres Limited: 417,536 acres Closed: 444,476 acres All OHV and mechanized travel within the Planning Area is limited to designated routes (43 CFR 8340) outside the Primitive Zone, and the Primitive Zone is closed to OHV and mechanized travel unless designated for an administrative or authorized use. Potential for adverse impacts on transportation and access for OHVs and limited beneficial impacts for recreational users seeking open OHV areas.	Open: 0 acres Limited: 294,634 acres Closed: 567,631 acres Similar types of impacts as Alternative A, but greater potential for adverse impacts on transportation and access for OHVs due to scale of OHV closures. Greatest beneficial impacts on recreational users seeking pristine or quiet-use recreation opportunities.	Open: 116 acres (located in KEPA) Limited: 858,847 acres Closed: 3,302 acres Similar types of impacts as Alternative B, but fewer adverse impacts on transportation and access for OHVs due to fewer OHV closures. Greater beneficial impacts for OHV users due to greater OHV limited designations.	Open: 2,528 acres (located in KEPA) Limited: 859,738 acres Closed: 0 acres Similar types of impacts as Alternative C, but greater beneficial impacts for OHV users due to no OHV closures.	Open: 116 acres (located in KEPA) Limited: 862,150 Closed: 0 acres Similar types of impacts as Alternative D, but slightly fewer beneficial impacts for OHV users due to fewer open OHV areas.
Routes	Managed consistent with the current transportation route map. No new routes included on the route map.				
ACECs					
R&I values	Potential impacts on identified R&I values, as there are 0 ACECs designated under Alternative A. While no ACECs are designated in Alternative A, some nominated ACECs overlap with	Protection of R&I values through the designation of all 14 nominated ACECs (308,682 acres) (Map 84), the greatest constraints and limitations on resource use in the ACECs, and resource-specific	Protection of R&I values through the designation of 5 nominated ACECs (130,995 acres) (Map 85), generally moderate constraints and limitations on resource use in the ACECs, and	No specific protection of R&I values through ACEC designation or management. Protection of R&I values would be afforded by other planning decisions and allocations (e.g., VRM	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	Primitive or Outback Zones, which would provide protection to identified R&l values.	management actions for the protection of R&l values in ACECs. Additional protection of R&l values afforded by overlapping WSAs, SRMAs, lands with wilderness characteristics, and other designations. Measures would be taken under all action alternatives to avoid impacts on unique specimens if surface-disturbing activities uncover paleontological resources, as well as to proactively manage scientifically important fossils through development and implementation of a Paleontological RMP in PFYC 4 and 5 areas.	resource-specific management actions for the protection of R&l values. There are no WSA overlaps for Alternative C ACECs, but protection of R&l values would be afforded by WSAs, lands managed for wilderness characteristics, and other designations that overlap the ACECs that were nominated but not carried forward under Alternative C.	and ROW allocations) or other designations (e.g., WSAs) that overlap nominated ACECs that were nominated but not carried forward under Alternative D.	
National Historic Trails					
Impacts on the nature and purposes of the OSNHT	Surface-disturbing activities could cause damage to or destruction of important Federal protection components and cultural resources associated with the OSNHT. Alternative A does not establish an NTMC for the OSNHT. Impacts could occur due to the permanent loss of trail traces, associated cultural resources, opportunities for vicarious experiences, and setting and scenic values caused by the development of permanent features (such as utility ROWs, renewable energy facilities, mineral leasing sites, and recreation sites) and certain types of surface-disturbing activities, including vegetation treatments and fire management activities. Potential impacts would be most pronounced in the Box of the Paria high potential segment of the OSNHT.	Impacts on the OSNHT from surface disturbance would be similar to those of Alternative A, though to a lesser degree due to establishing a 3-mile NTMC on either side of the OSNHT centerline, which would reduce potential impacts by prohibiting new surface-disturbing activities within 61,256 acres of KEPA. Alternative B also manages a larger portion of the NTMC under VRM Class I and Class II objectives and includes the most acres of protective restrictions due to special designations and lands with wilderness characteristics managed to protect and preserve their wilderness characteristics, further reducing potential impacts on OSNHT resources.	Potential impacts would be similar to those of Alternative B but to a greater degree. Alternative C would establish an OSNHT NTMC to include lands up to 0.5 mile from the OSNHT centerline (17,879 acres within KEPA), would manage a smaller portion of the NTMC under VRM Class I and Class II objectives, and would include fewer acres of protective restrictions due to special designations and lands with wilderness characteristics. Similar to Alternative A, potential impacts would be most pronounced in the Box of the Paria high potential segment of the OSNHT.	Alternative D would increase the potential for impacts on OSNHT resources because it establishes the shortest and narrowest NTMC (300 feet on either side of the OSNHT, encompassing 1,409 acres within KEPA), and would manage Federal protection components by allowing discretionary uses beyond the NTMC that are compatible with the nature, purpose, and settings of the Box of the Paria high potential segment. Alternative D would also manage the smallest portion of the NTMC under VRM Class I and Class II objectives, would include the fewest acres of protective restrictions due to special designations, and would not manage lands with wilderness characteristics to protect and preserve their wilderness characteristics.	Potential impacts would be similar to those described for Alternative D though to a lesser degree, as Alternative E establishes a wider NTMC (0.5 mile on either side of the OSNHT centerline, encompassing 10,843 acres in KEPA) than Alternative D and increases the acreage of the NTMC managed for VRM Class I and Class II objectives.
Scenic Routes					
Impacts on scenic routes	VRM class designation, vegetation treatments, surface disturbance, and resource use activities could affect scenic routes by increasing the level of visual contrast in the area or changing the landscape character. Alternative A limits resource use activities in KEPA, but manages corridors along National and State scenic byways and backways and scenic drives according to the designated VRM objectives. Impacts on scenic routes are therefore expected to	Impacts on scenic routes would be similar to those of Alternative A, though to a lesser degree. Alternative B manages corridors along designated scenic byways and backways extending for 3 miles or within the viewshed on either side of centerline, whichever is less, as VRM Class II (Map 87), which decreases the potential for impacts on visual contrast. Alternative B also decreases the potential to affect landscape character by applying	Potential impacts on scenic routes would be similar to those of Alternative B but to a greater degree. Alternative C manages corridors along designated scenic byways and backways extending for 1 mile or within the viewshed on either side of centerline, whichever is less, as VRM Class II (Map 87). Alternative C applies fewer resource use constraints in KEPA than alternatives A or B.	Alternative D does not apply specific VRM management to scenic route corridors and applies the fewest constraints on resource uses in KEPA compared to the other alternatives. As a result, Alternative D would increase the potential for impacts on scenic routes from visual contrast and alteration of landscape character.	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	be largely dependent on the VRM classification of the surrounding area.	greater constraints on resource uses in KEPA.			
Wild and Scenic Rivers					
Suitable river corridor impacts	Use of OHVs could affect suitable river corridors by increasing the potential for erosion that could degrade water quality. Suitable segments in KEPA are managed for preservation of outstandingly remarkable values. Overall, impacts on suitable river corridors are expected to be low.	Impacts on suitable river corridors would be similar to those of Alternative A, but to a slightly lower degree as Alternative B closes wild river segments to OHV use and closes suitable wild or scenic river corridors to mineral materials disposal.	Impacts on suitable river corridors would be similar to those of Alternative B, but to a slightly greater degree. Alternative C allows mineral materials disposal along recreational river segments in KEPA.	Alternative D increases potential for impacts on suitable river corridors in KEPA compared to other alternatives. Impacts would be similar to those of Alternative C, but to a greater degree, as Alternative D allows for OHV use along all suitable river corridors.	Same as Alternative D.
Wilderness Study Areas					
Impacts on WSAs	Potential impacts by allowing access for OHV and mechanized travel via routes in the WSA, which could affect opportunities for solitude or primitive and unconfined recreation. Vegetation treatments could have impacts on opportunities for solitude over the short term, but may result in long-term impacts in WSAs if they meet VRM Class I objectives. Although no specific vegetation treatment management is applied for WSAs under Alternative A, limited treatment options would result in limited potential for short-term and long-term impacts.	Similar types of impacts as those of Alternative A, but greater potential for protecting and enhancing wilderness characteristics and increased opportunities for solitude or primitive and unconfined recreation by closing all WSAs to OHV use. Alternative B prohibits all vegetation treatments in WSAs, except where necessary to restore human impacts or to restore vegetation to characteristic conditions, which could reduce short-term impacts but increase long-term impacts compared to Alternative A.	Similar types of impacts as those of Alternative B, but fewer potential protections for opportunities for solitude or primitive and unconfined recreation by limiting OHV use across 14 WSAs wholly or partially located in KEPA. Alternative C would allow vegetation manipulation through a broad range of treatment options, resulting in greater potential for short-term and long-term impacts in WSAs.	Decreased potential for protecting and enhancing wilderness characteristics and decreased opportunities for solitude or primitive and unconfined recreation by not closing any WSAs to OHV use; all WSAs would be managed as OHV limited areas within WSAs. The use of nonnative species (consistent with applicable BLM WSA policy) under Alternative D could increase the potential to affect naturalness, but may increase flexibility in managing vegetation treatments and restoration in WSAs compared to the other alternatives.	Same as Alternative D.
Social and Economic Considerations					
Total economic effect	BLM management of minerals, livestock grazing, recreation, and forestry in KEPA could affect economic conditions in Garfield and Kane Counties. Economic effects could include changes in employment, labor income, and overall industry activity. Total modeled annual economic effects associated with BLM KEPA management under Alternative A includes 404 jobs supported, \$7 million in labor income, and \$23.5 million in industry activity supported.	Similar impacts as described for Alternative A, though to a lesser degree due to the reduction in grazing activity. Total modeled annual economic effects associated with BLM KEPA management under Alternative B includes 396 jobs supported, \$7.0 million in labor income, and \$23.4 million in industry activity supported.	Similar impacts as described for Alternative B, though to a greater degree due to increased potential for mineral development, forest product harvesting, and increased livestock grazing. Total modeled annual economic effects associated with BLM KEPA management under Alternative C includes 405 jobs supported, \$7.2 million in labor income, and \$24.3 million in industry activity supported.	Increased potential for economic effects compared to the other alternatives due to the highest potential for mineral development, forest product harvesting, and increased livestock grazing. Total modeled annual economic effects associated with BLM KEPA management under Alternative D includes 503 jobs supported, \$8.6 million in labor income, and \$38.4 million in industry activity supported.	Same as Alternative D.
Nonmarket values	BLM management in KEPA could result in a variety of impacts on nonmarket values, including impacts on nonmarket use values, non-use values, Special Designation and enhancement values, tribal uses and values, ecosystem service values, and social values. Due to the generally protective nature of Alternative A management,	Similar impacts on nonmarket use values and social values as those of Alternative A. Due to increased potential for development in KEPA, Alternative B could increase potential adverse nonmarket impacts on non-use values, enhancement values, ecosystem service values, and tribal use values. However, due to the	Alternative C would increase the potential for beneficial impacts on nonmarket use values and social values by increasing the potential for historic uses (e.g., grazing) and increasing the potential for other resource uses in KEPA (e.g., mineral development). However, due to increased resource use, Alternative C	Alternative D would increase the potential for beneficial impacts on nonmarket use values and social values by increasing the potential for historic uses (e.g., grazing) and increasing the potential for other resource uses in KEPA (e.g., mineral development). However, due to the highest level of anticipated resource	Same as Alternative D.

Impact, Resource, or Management	Kanab-Escalante Planning Area				
	Alternative A	Alternative B	Alternative C	Alternative D (Preferred Alternative)	Alternative E (Proposed Plans)
	impacts on nonmarket values are expected to be minimal.	generally protective nature of Alternative B, these impacts are expected to be minimal.	would increase potential impacts on non-use values, enhancement values, ecosystem service values, and tribal use values compared to Alternative B.	use, Alternative D would increase potential impacts on non-use values, enhancement values, ecosystem service values, and tribal use values compared to the other alternatives.	
Environmental Justice	Impacts are not anticipated to disproportionately affect identified minority or low-income populations differently than the general population in analysis area.				

ACEC – Area of Critical Environmental Concern, AUM – animal unit month, BLM – Bureau of Land Management, BMP – best management practice, CFR – Code of Federal Regulations, CO – carbon monoxide, CO₂ – carbon dioxide, EIS – Environmental Impact Statement, ERMA – Extensive Recreation Management Area, FLPMA – Federal Land Policy and Management Act, FMP – Fire Management Plan, GHG – greenhouse gas, GSENM – Grand Staircase-Escalante National Monument, HA – herd area, KEPA – Kanab-Escalante Planning Area, KFO – Kanab Field Office, MMP – Monument Management Plan, MZ – Management Zone, N/A – not applicable, NAAQS – National Ambient Air Quality Standard, NEPA – National Environmental Policy Act, NHPA – National Historic Preservation Act, NO₂ – nitrogen dioxide, NO_x – nitrogen oxides, NPS – National Park Service, NRA – National Recreation Area, NTMC – National Trail Management Corridor, OHV – off-highway vehicle, OSNHT – Old Spanish National Historic Trail, PEIS – Programmatic Environmental Impact Statement, PFYC – Potential Fossil Yield Classification, PSD – Prevention of Significant Deterioration, R&I – relevant and important, RMZ – Recreation Management Zone, ROW – right-of-way, SIL – Significant Impact Level, SRMA – Special Recreation Management Area, VOC – volatile organic compound, VRI – Visual Resource Inventory, VRM – Visual Resource Management, WSA – Wilderness Study Area

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